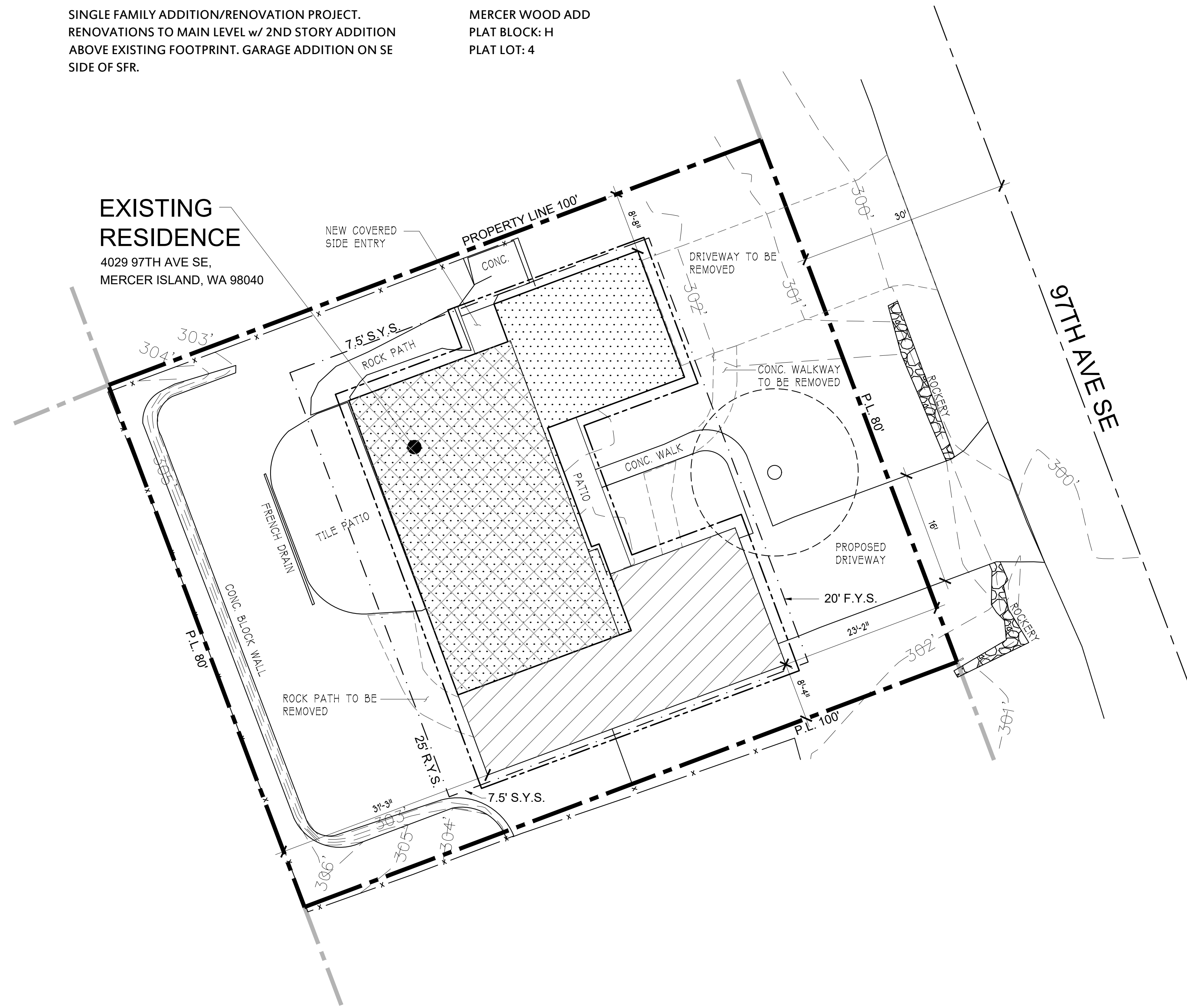


PROJECT DESCRIPTION

SINGLE FAMILY ADDITION/RENOVATION PROJECT.
 RENOVATIONS TO MAIN LEVEL w/ 2ND STORY ADDITION
 ABOVE EXISTING FOOTPRINT. GARAGE ADDITION ON SE
 SIDE OF SFR.

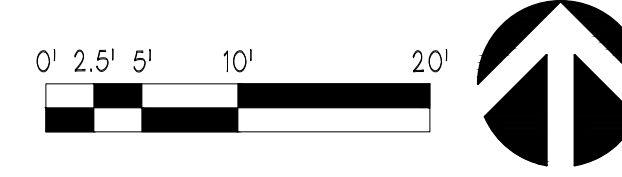
LEGAL DESCRIPTION

MERCER WOOD ADD
 PLAT BLOCK: H
 PLAT LOT: 4



SITE PLAN

SCALE 22X34 1" = 10'-0"
 SCALE 11X17 1" = 20'-0"



SHEET INDEX

- C1.1 SITE PLAN & PROJECT INFO
- C1.2 ZONING INFORMATION
- C-1.00 CIVIL GENERAL NOTES
- C-2.00 TESC PLAN
- C-3.00 DRAINAGE & GRADATION PLAN
- C-4.00 CIVIL DETAILS
- A1.1 GENERAL NOTES & WINDOW & DOOR SCHEDULE
- A2.1 MAIN FLOOR PLANS
- A2.2 UPPER FLOOR PLAN
- A2.3 ROOF PLAN
- A3.1 ELEVATIONS
- A3.2 ELEVATIONS
- A4.1 BUILDING SECTIONS
- A4.2 BUILDING SECTIONS
- A4.3 BUILDING SECTIONS
- A4.4 BUILDING SECTIONS
- A5.1 ARCHITECTURAL DETAILS
- S-0.0 STRUCTURAL NOTES
- S-1.0 FOUNDATION PLAN
- S-2.0 2ND FLOOR FRAMING PLAN
- S-3.0 ROOF FRAMING PLAN
- SD-1 FOUNDATION DETAILS
- SD-2 STRUCTURAL DETAILS
- SD-3 STRUCTURAL DETAILS

LEGEND

- PROPERTY LINE OF PROPOSED PROJECT
- PROPERTY LINE OF ADJACENT PROPERTIES
- CONTOUR LINE - 1' ELEVATION CHANGE
- EXISTING SFR
- MAIN LEVEL ADDITION
- UPPER LEVEL ADDITION
- STRUCTURE OR SURFACE TO BE REMOVED
- CENTER LINE OF STREET
- EDGE OF CONCRETE
- ROOF OUTLINE
- PROPERTY SETBACK
- EXISTING FENCE
- EXISTING TREES/FOLIAGE
- PRIMARY ENTRANCE

PROJECT INFORMATION

OWNER ATWAL AVNEET SINGH+GHUMMAN
 JURISDICTION MERCER ISLAND
 PARCEL NUMBER 545600-0020
 ZONING R-8.4
 YEAR BUILT 1955
 LOT AREA 8,000 SQFT

YARD CALCULATIONS

REAR YARD = 25 FEET REQUIRED
 REAR YARD = 25'
 FRONT YARD = 20 FEET REQUIRED
 FRONT YARD = 20'
 SIDE YARD = 15 FEET SUM REQUIRED
 SIDE YARD = X'
 MAX HEIGHT = 30 FEET TO TOP OF HIGHEST ROOF POINT

REV	DATE	DESCRIPTION
0	04.04.23	PERMIT SUBMITTAL



206.432.1111
 WWW.YENDES.COM

APPROVAL STAMP

ENGINEER STAMP

A RESIDENTIAL REMODEL & ADDITION
4029 MERCER ISLAND
 AVNEET ATWAL
 4029 97TH AVE SE
 MERCER ISLAND, WA

**SITE PLAN
 & PROJECT INFO**

JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

C1.1

SFR (MEASURED TO OUTSIDE OF STUD WALL)

CONDITIONED SPACE	EXISTING/RENO	NEW	TOTAL
MAIN LEVEL	1528 SQ-FT	0 SQ-FT	1528 SQ-FT
UPPER LEVEL	0 SQ-FT	1113 SQ-FT	1113 SQ-FT
TOTAL	1528 SQ-FT	1113 SQ-FT	2641 SQ-FT

UNCONDITIONED SPACE	EXISTING/RENO	NEW	TOTAL
MECH ROOM	0 SQ-FT	44 SQ-FT	44 SQ-FT
FRONT PATIO	66 SQ-FT	43 SQ-FT	109 SQ-FT
COVERED SIDE ENTRY	0 SQ-FT	27 SQ-FT	27 SQ-FT
GARAGE	0 SQ-FT	684 SQ-FT	684 SQ-FT
TOTAL	66 SQ-FT	798 SQ-FT	864 SQ-FT

AREA TABULATIONS OF PROPOSED PLAN

LOT COVERAGE

	EXISTING	NEW	TOTAL
SFR ROOF	1872 SQ-FT	762 SQ-FT	2634 SQ-FT
DRIVEWAY	333 SQ-FT	348 SQ-FT	681 SQ-FT
COVERED PATIOS	0 SQ-FT	93 SQ-FT	93 SQ-FT
TOTAL	2205 SQ-FT	1203 SQ-FT	3408 SQ-FT

REMOVED DRIVEWAY 333 SQ-FT

MAX LOT COVERAGE = (8000 * 40%) = 3200 SQ-FT (MAX)
 PROPOSED LOT COVERAGE = (2205-333) + 1203 = 3075 < 3200 (OK)

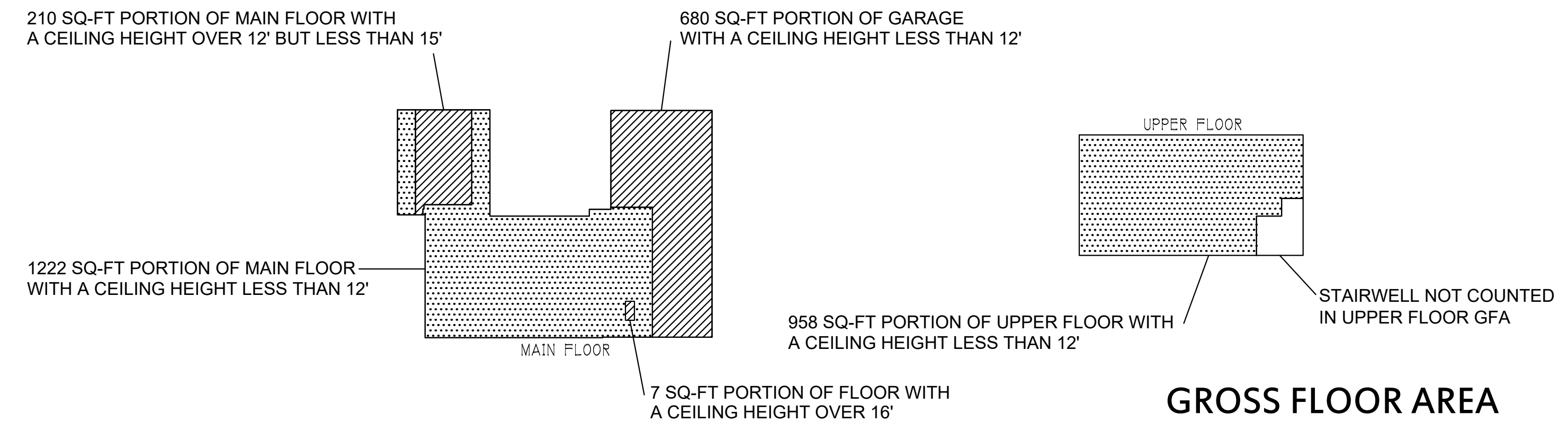
HARDSCAPE

	EXISTING	NEW	TOTAL
UNCOVERED PATIO	382 SQ-FT	0 SQ-FT	382 SQ-FT
WALKWAYS	246 SQ-FT	47 SQ-FT	293 SQ-FT
RETAINING WALL	177 SQ-FT	0 SQ-FT	177 SQ-FT
TOTAL	805 SQ-FT	47 SQ-FT	852 SQ-FT

REMOVED WALKWAY 38 SQ-FT

MAX HARDSCAPE = (8000 * 9%) + 1.6% BORROWED FROM LOT COVERAGE = 848 SQ-FT (MAX)
 PROPOSED LOT COVERAGE = (805-38) + 47 = 814 < 848 (OK)

LOT COVERAGE AND HARDSCAPE

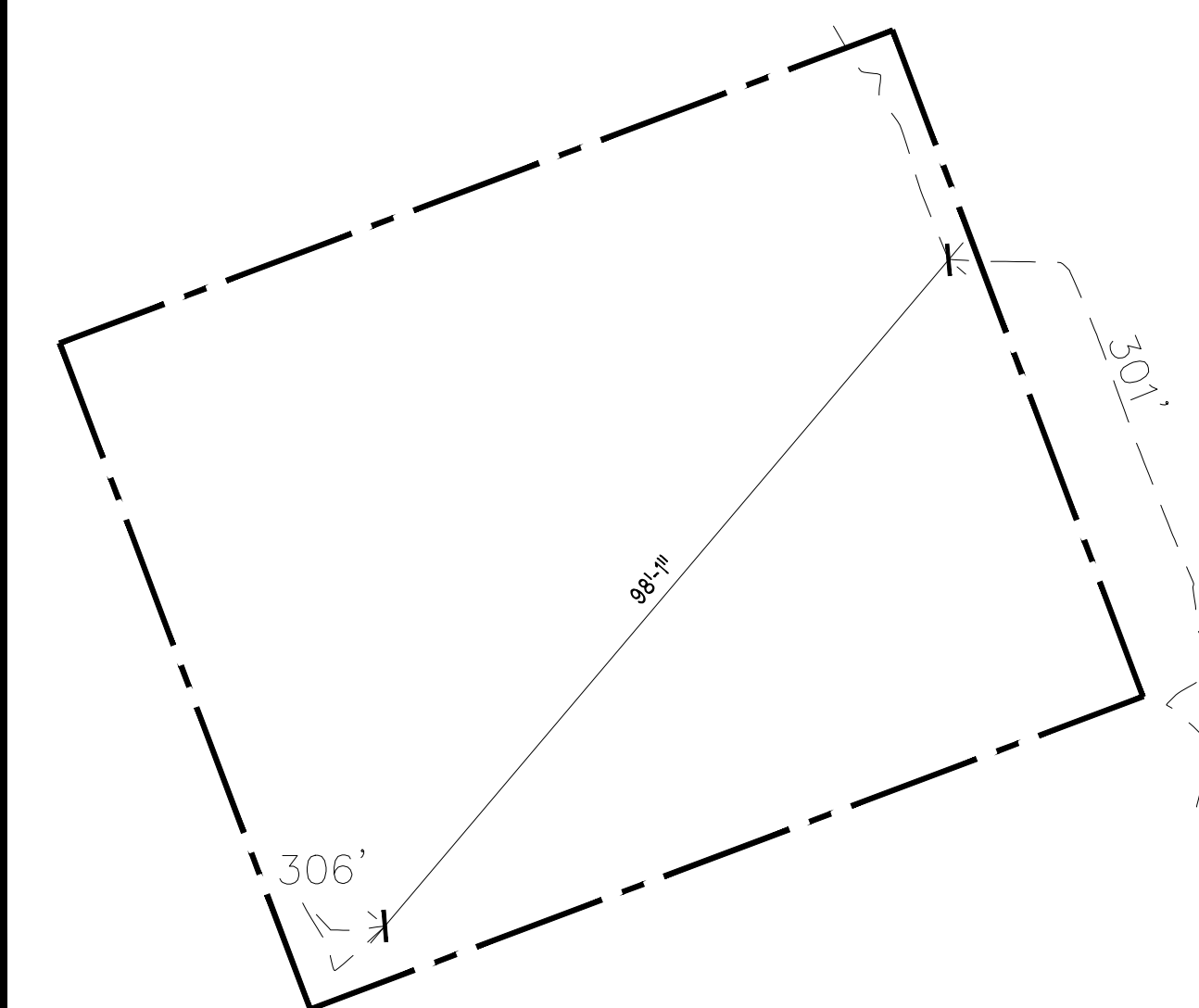


GROSS FLOOR AREA

TOTAL LOT AREA	8000 SQ-FT
MAIN w/ CEILING < 12'	1902 SQ-FT
UPPER w/ CEILING < 12'	958 SQ-FT
TOTAL	2860 SQ-FT
MAIN w/ CEILING > 12'	210 SQ-FT
210 x 1.5	315 SQ-FT
MAIN w/ CEILING > 16'	7 SQ-FT
7 x 2	14 SQ-FT
TOTAL = 2860 + 315 + 14 =	3189 SQ-FT

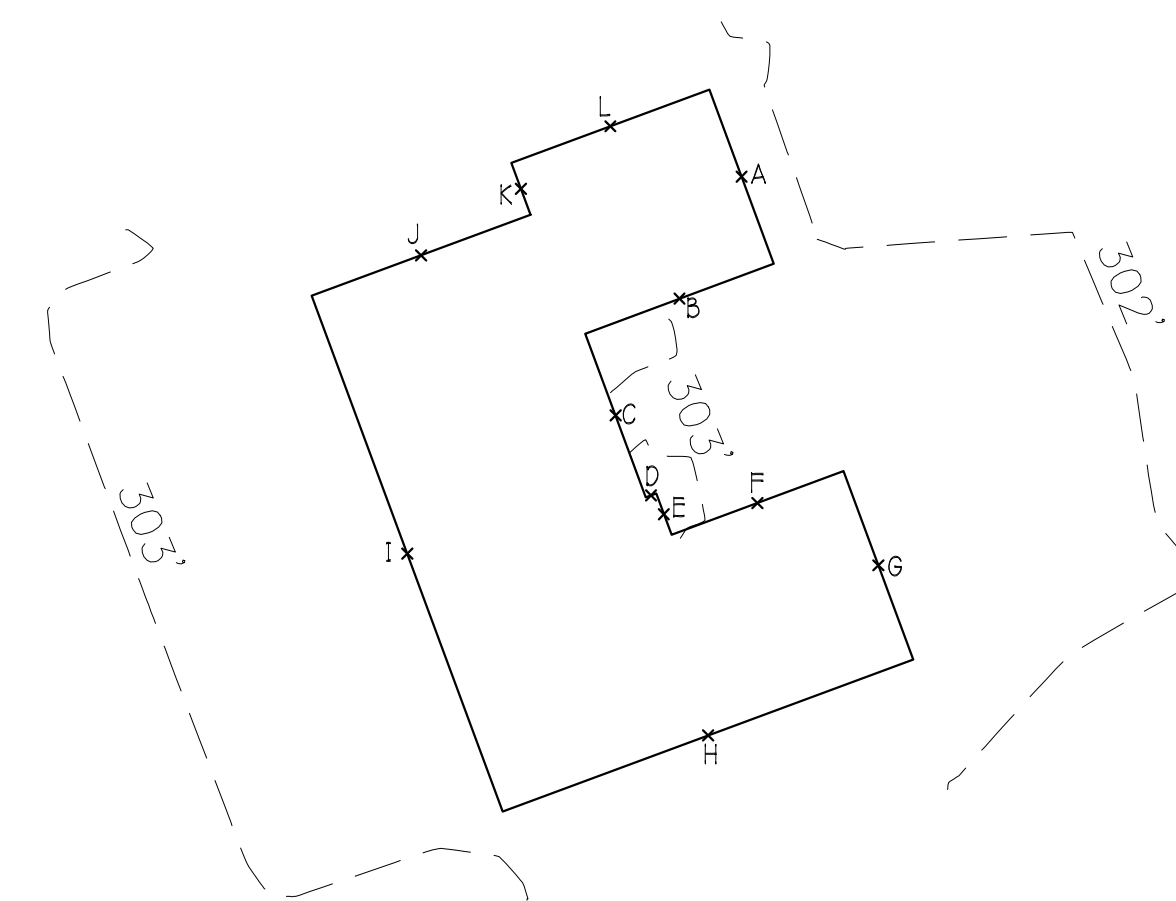
ALLOWABLE GFA = 8000 * 40% = 3200 SQ-FT
 PROPOSED GFA = 3189 SQ-FT

GFA CALCULATION & DIAGRAM



HIGHEST ELEVATION 306 FT
 LOWEST ELEVATION 301 FT
 ELEVATION DIFFERENCE 5 FT
 HORIZONTAL DIFFERENCE 98 FT
 LOT SLOPE = (5 / 98) * 100 = 5.1%

LOT SLOPE DIAGRAM & CALCULATION



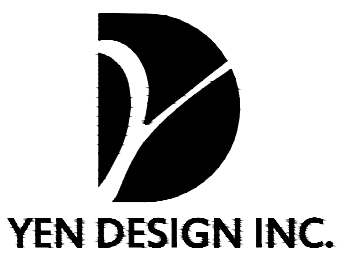
AVERAGE GRADE CALCULATION AND HEIGHT

AVERAGE BUILDING ELEVATION CALCULATION		
MIDPOINT ELEVATION	EXTERIOR WALL LENGTH	X * x
A = 302.289388	a = 18.92	5718.308
B = 302.8489583	b = 20.89583333	6328.281
C = 302.95	c = 18.83	5705.558
D = 303.05	d = 1.333333333	404.0667
E = 303.05	e = 4.083333333	1237.454
F = 302.8779297	f = 19.5625	5925.049
G = 302.5784505	g = 20.91666667	6328.933
H = 302.5084635	h = 45.60416667	13795.65
I = 302.6539714	i = 57.29166667	17339.55
J = 302.5013021	j = 24.16666667	7310.448
K = 302.4179688	k = 5.458333333	1650.698
L = 302.2516276	l = 21.4375	6479.519
	258.50	78223.51

Formula 1:

$$\frac{78223.51252}{258.5} = 302.6054643$$

REV	DATE	DESCRIPTION
0	04.04.23	PERMIT SUBMITTAL



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APPROVAL STAMP

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ZONING INFORMATION

JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

C1.2

CLEARING AND GRADING STANDARD NOTES

1. ALL CLEARING & GRADING CONSTRUCTION MUST BE IN ACCORDANCE WITH CITY OF MERCER ISLAND CLEARING & GRADING CODE; CLEARING & GRADING EROSION CONTROL STANDARD; LAND USE CODE; UNIFORM BUILDING CODE; PERMIT CONDITIONS; AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND STANDARDS. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED ACCORDING TO THESE REQUIREMENTS. ANY VARIANCE FROM ADOPTED EROSION STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF MERCER ISLAND PUBLIC WORKS AND COMMUNITY DEVELOPMENT (PCD) PRIOR TO CONSTRUCTION.

IT IS THE SOLE RESPONSIBILITY OF THE APPLICANT AND THE PROFESSIONAL CIVIL ENGINEER TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS WILL BE AT NO ADDITIONAL COST OR LIABILITY TO THE COB. ALL DETAILS FOR STRUCTURAL WALLS, ROCKERIES OVER FOUR FEET IN HEIGHT, GEOGRID REINFORCED ROCKERIES, AND GEOGRID REINFORCED MODULAR BLOCK WALLS MUST BE STAMPED BY A PROFESSIONAL ENGINEER.

2. A COPY OF THE APPROVED PLANS MUST BE ON-SITE DURING CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION.

3. ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.

4. THE AREA TO BE CLEARED AND GRADED MUST FLAGGED BY THE CONTRACTOR AND APPROVED BY THE CLEARING & GRADING INSPECTOR PRIOR TO BEGINNING ANY WORK ON THE SITE.

5. A REINFORCED SILT FENCE MUST BE INSTALLED AS SHOWN ON THE APPROVED PLANS OR PER THE CLEARING & GRADING INSPECTOR, ALONG SLOPE CONTOURS AND DOWN SLOPE FROM THE BUILDING SITE.

6. A HARD-SURFACE CONSTRUCTION ACCESS PAD IS REQUIRED. THIS PAD MUST REMAIN IN THE PLACE UNTIL PAVING IS INSTALLED.

7. CLEARING WILL BE LIMITED TO THE AREAS WITHIN THE APPROVED DISTURBANCE LIMITS. EXPOSED SOILS MUST BE COVERED AT THE END OF EACH WORKING DAY WHEN WORKING FROM OCTOBER 1ST THROUGH APRIL 30. FROM MAY THROUGH SEPTEMBER 30, EXPOSED SOILS MUST BE COVERED AT THE END OF EACH CONSTRUCTION WEEK AND ALSO AT THE THREAT OF RAIN.

8. ANY EXCAVATED MATERIAL REMOVED FROM THE CONSTRUCTION SITE AND DEPOSITED ON THE PROPERTY WITHIN THE CITY LIMITS MUST BE DONE IN COMPLIANCE WITH VALID CLEARING & GRADING PERMIT. LOCATIONS FOR THE MOBILIZATION AREA AND STOCKPILED MATERIALS MUST APPROVED BY THE CLEARING & GRADING INSPECTOR AT LEAST 24 HOURS IN ADVANCE OF ANY STOCKPIILING.

9. TO REDUCE THE POTENTIAL FOR EROSION OF EXPOSED SOILS, OR WHEN RAINY SEASON CONSTRUCTION IS PERMITTED, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPs) ARE REQUIRED:

* PRESERVED NATURAL VEGETATION FOR AS LONG AS POSSIBLE OR AS REQUIRED BY THE CLEARING & GRADING INSPECTOR.

* PROTECT EXPOSED SOIL USING PLASTIC (EC-14), EROSION CONTROL BLANKETS, STRAW OR MULCH (COB GUIDE TO MULCH, RATES, AND USE CHART), OR AS DIRECTED BY THE CLEARING & GRADING INSPECTOR.

* INSTALL CATCH BASIN INSERTS AS REQUIRED BY THE CLEARING & GRADING INSPECTOR OR PERMIT CONDITIONS OF APPROVAL.

* INSTALL A TEMPORARY SEDIMENT POND, A SERIES OF SEDIMENTATION TANKS, TEMPORARY FILTER VAULTS, OR OTHER SEDIMENT CONTROL FACILITIES. INSTALLATION OF EXPOSED AGGREGATE SURFACES REQUIRES A SEPARATE EFFLUENT COLLECTION POND ON -SITE.

10. FINAL SITE GRADING MUST DIRECT DRAINAGE AWAY FROM ALL BUILDING STRUCTURES AT MINIMUM 2% SLOPE, PER UNIFORM BUILDING CODE.

11. THE CONTRACTOR MUST MAINTAIN A SWEEPER ON -SITE DURING EARTHWORK AND IMMEDIATELY REMOVE SOIL THAT HAS BEEN TRACKED ONTO PAVED AREAS AS RESULT OF CONSTRUCTION.

12. A PUBLIC INFORMATION SIGN LISTING 24-HOUR EMERGENCY NUMBER FOR THE CITY AND THE CONTRACTOR MAY BE PROVIDED TO THE APPLICANT AT THE TIME THE CLEARING & GRADING PERMIT IS ISSUED. THE APPLICANT MUST POST THE SIGN AT THE PROJECT SITE IN FULL VIEW OF THE PUBLIC AND THE CONTRACTORS, AND IT MUST REMAIN POSTED UNTIL FINAL SIGN -OFF BY THE CLEARING & GRADING INSPECTOR.

13. TURBIDITY MONITORING MAY BE REQUIRED AS A OF CLEARING & GRADING PERMIT APPROVAL. IF REQUIRED, MONITORING MUST BE PERFORMED IN ACCORDANCE WITH THE APPROVED TURBIDITY MONITORING PLAN AND AS DIRECTED BY THE CLEARING & GRADING INSPECTOR. MONITORING MUST DURING SITE (EARTHWORK) CONSTRUCTION UNTIL THE FINAL SIGN - OFF BY THE CLEARING & GRADING INSPECTOR.

14. ANY PROJECT THAT IS SUBJECTED TO RAINY SEASON RESTRICTIONS WILL NOT BE ALLOWED TO PERFORM CLEARING & GRADING ACTIVITIES WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER. THE RAINY SEASON EXTENDS FROM NOVEMBER 1ST THROUGH APRIL 30.

RESTORATION NOTES

- Surface restoration of existing asphalt pavement shall be as required by the right-of-way use permit.
- The Contractor shall restore the Right-of-Way and existing public storm drainage easement(s) after construction to a condition equal or better than condition prior to entry. The Contractor shall furnish a signed release from all affected property owners after restoration has been completed.

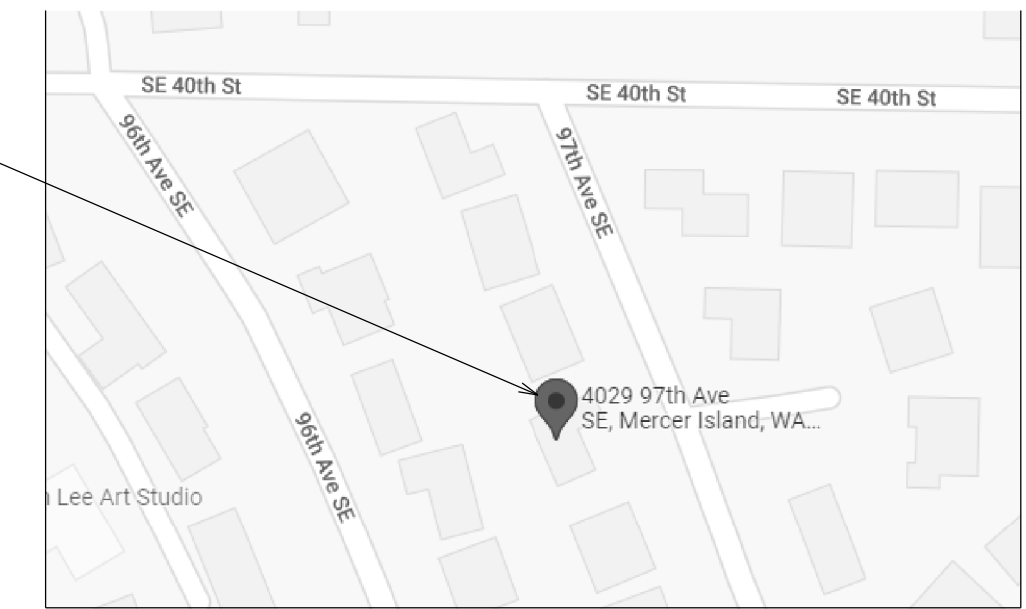
UTILITY NOTES

- The locations of all existing utilities shown hereon have been established by field survey or obtained from available records and should therefore be considered approximate only and not necessarily complete. It is the sole responsibility of the excavator to independently verify the accuracy of all utility locations shown, and to further discover and avoid any other utilities not shown here on which may be affected by the implementation of this plan. Immediately notify the responsible Professional Engineer if a conflict exists.
- Call 1-800-424-5555, or 8-1-1, 72 hours before construction for utility locates.
- The Contractor shall maintain a minimum of five feet (5) horizontal separation between all water and storm drainage lines. Any conflict shall be reported to the Utility and the Professional Engineer prior to construction.
- Avoid crossing water or sewer mains at highly acute angles. The smallest angle measure between utilities should be 45 degrees.
- It shall be the Contractors responsibility to ensure that no conflicts exist between storm drainage lines and proposed or existing utilities prior to construction.
- At points where existing thrust blocking is found, minimum clearance between concrete blocking and other buried utilities or structures shall be 5 feet.
- Where a new utility line crosses below an existing AC main, the AC pipe shall be replaced with DI pipe to 3 feet past each side of the trench as shown on Standard Detail W-8. Alternatively, where directed by the Utility, the trench shall be backfilled with controlled density fill (CDF, aka flowable fill) from bottom of trench to bottom of AC main.

STORM DRAINAGE NOTES

- Storm pipe shall be PVC conforming to ASTM D-3034 SDR35 or ASTM F-679. Bedding and backfill shall be as shown in the Standard Details.
- The footing drainage system and the roof downspout system shall not be interconnected and shall separately convey collected flows to the conveyance system or to on-site storm water facilities.
- Prior to final inspection and acceptance of storm drainage work, pipes and storm drain structures shall be cleaned and flushed. Any obstructions to flow within the storm drain system, (such as rubble, mortar and wedged debris), shall be removed at the nearest structure. Wash water of any sort shall not be discharged to the storm drain system or surface waters.
- Ends of each storm drain stub at the property line shall be capped and located with an 8' long 2" x 4" board, embedded to the stub cap and extending at least 3 feet above grade, and marked permanently "STORM". A copper 12 ga. locate wire firmly attached. The stub depth shall be indicated on the marker.
- All grates in roadways shall be ductile iron, bolt-locking, vane grates per the Standard Details. Structures in traffic lanes outside of the curb line which do not collect runoff shall be fitted with round, bolt-locking solid covers. Off-street structures which do not collect runoff shall be fitted with bolt-locking solid covers.
- Vegetation/landscaping in the detention pond, bioretention facility, vegetated roof and/or drainage swale(s) are an integral part of the runoff treatment system for the project. Such drainage facilities will not be accepted until plantings are established.
- All new manholes shall have a minimum inside diameter of 48" and shall conform to the Standard Details. All new catch basins shall conform to the Standard Details.
- Side storm stations are referenced from nearest downstream manhole/ catch basin.
- All testing and connections to existing mains shall be done in the presence of a representative of the City of Mercer Island Utilities Department.
- All public storm drains shall be air tested and have a video inspection performed prior to acceptance (see #23 below). Storm main constructed with flexible pipe shall be deflection tested with a mandrel prior to acceptance.
- Storm stubs shall be tested for acceptance at the same time the main storm is tested.
- All manholes/ catch basins in unpaved areas shall include a concrete seal around adjustment rings per Standard Details.
- All storm main extensions within the public right-of-way or in easements must be staked by a surveyor licensed in Washington State for line and grade and cut sheets provided to the Professional Engineer, prior to starting construction.
- Storm drainage mainlines, stubs and fittings shall be constructed using the same pipe material and manufacturer. Connections between stubs and the mainline will be made with a tee fitting. Tee fitting shall be from same manufacturer as pipe. Cut-in connections are only allowed when connecting a new stub to an existing mainline.
- Manholes, catch basins and vaults are considered to be permit-required confined spaces. Entry into these spaces shall be in accordance with Chapter 296-809 WAC.
- Placement of surface appurtenances (MH lids, valve lids, etc.) in tire tracks of traffic lanes shall be avoided whenever possible.
- The Contractor shall perform a video inspection and provide a DVD of the storm pipe interior for the City's review. The video shall provide a minimum of 14 lines per millimeter resolution and cover the entire length of the applicable pipe. The camera shall be moved through the pipe at a uniform rate (=30 ft/min), stopping when necessary to ensure proper documentation of the pipe condition. The video shall be taken after installation and cleaning to insure that no defects exist. The project will not be accepted until all defects have been repaired.
- Clearly label public and private systems on the plans. Private systems shall be marked private and shall be maintained by the property owner(s).
- All concrete structures (vaults, catch basins, manholes, oil/water separators, etc.) shall be vacuum tested.
- Manholes, catch basins and inlets in easements shall be constructed to provide a stable, level grade for a minimum radius of 2.5 feet around the center of the access opening to accommodate confined space entry equipment.
- Tops of manholes/ catch basins within public right-of-way shall not be adjusted to final grade until after paving.
- Contractor shall adjust all manhole/ catch basin rims to flush with final finished grades, unless otherwise shown.
- Contractor shall install, at all connections to existing downstream manholes/catch basins, screens or plugs to prevent foreign materials from entering existing storm drainage system. Screens or plugs shall remain in place throughout the duration of the construction and shall be removed along with collected debris at the time of final inspection and in the presence of a representative of the City of Bellevue Utilities Department.
- Before commencement of trenching, the Contractor shall provide filter fabric for all downhill storm drain inlets and catch basins, which will receive runoff from the project site. The contractor shall periodically inspect the condition of all filter fabric and replace as necessary.
- Minimum cover over storm drainage pipe shall be 2 feet, unless otherwise shown.
- Redirect sheet flow, block drain inlets and/or curb openings in pavement and install flow diversion measures to prevent construction silt laden runoff and debris from entering excavations and finish surfaces for bioretention facilities and permeable pavements.
- Where amended soils, bioretention facilities, and permeable pavements are installed, these areas shall be protected at all times from being over-compacted. If areas become compacted, remediate and till soil in accordance with the City's Project Representatives requirements at no additional cost in order to restore the systems ability to infiltrate.

PROPOSED PROJECT SITE



VICINITY MAP

NTS

LEGAL DESCRIPTION

MERCER WOOD ADD

PARCEL NUMBER: 5456000020

PROPERTY OWNER: ATWAL AVNEET SINGH & GHUMMAN
4029 97TH AVE SE
MERCER ISLAND, WA 98040

PROJECT ENGINEER: STEVE WU
8822 NE 178TH ST
BOTHELL, WA 98011
TEL: 206-795-5674

FIELD BOOK: _____
SURVEYED: _____
SURVEY BASE MAP: _____
DESIGN ENTERED: **J.W**
DESIGNED: **S.W**
CHECKED: **S.W**



TANDEM ENGINEERING CONSULTANT INC
8822 NE 178TH ST
BOTHELL, WA 98011
(206) 795-5674

GENERAL NOTES

ATWAL'S RESIDENCE
4029 97TH AVE SE
MERCER ISLAND WA 98040

SHEET
1
OF
4
SHEETS

C-1.00

GENERAL TESC NOTES

Temporary erosion and sedimentation control facilities (TESC) (including but not limited to temporary construction entrance, catch basin protection, silt fence installation, interceptor ditches, sedimentation ponds and straw bales) must be in place and Inspected by the City of Mercer Island prior to demolition, clearing/grading, etc. Spoil piles shall be kept covered. All City streets shall be kept free of mud and construction debris. TESC facilities shall be maintained until final landscaping is completed. No sediment-laden water shall enter Lake Washington, the public storm drain system, water courses, sensitive areas or the adjacent properties. Not all of these facilities may be identified on this plan but may be required during construction. Contractor will adhere to additional requirements as conditions warrant and the project progresses, including cleaning of downstream catch basins and drainage facilities of sediment from this project.

PLAN NOTES

- Approval of this temporary erosion and sedimentation control (TESC) plan does not constitute an approval of permanent road or drainage design.
- The implementation of these TESC plans and the construction, maintenance, replacement, and upgrading of these TESC facilities is the responsibility of the owner/agent and/or their contractor until all construction is approved.
- The boundaries of the clearing limits shown on this plan shall be clearly flagged by a continuous length of survey tape (or fencing, if required) prior to construction. During the construction period, no disturbance beyond the clearing limits shall be permitted. The clearing limits shall be maintained by the owner/agent and/or their contractor for the duration of construction.
- The TESC facilities shown on this plan must be constructed prior to or in conjunction with all clearing and grading so as to ensure that the transport of sediment to surface waters, drainage systems, and adjacent properties is minimized.
- The TESC facilities shown on this plan are the minimum requirements for anticipated site conditions. During the construction period, these TESC facilities shall be upgraded as needed for unexpected storm events and modified to account for changing site conditions (e.g., additional sump pumps, relocation of ditches, hay bales and silt fences, etc.).
- The TESC facilities shall be inspected daily by the owner/agent and/or their contractor and maintained to ensure continued proper functioning. Written records shall be kept of weekly reviews of the TESC facilities during the wet season (Oct. 1 to April 30) and of monthly reviews during the dry season (May 1 to Sept. 30).
- Any areas of exposed soils, including roadway embankments, that will not be disturbed for two days during the wet season (Oct. 1 to April 30) or seven days during the dry season (May 1 to Sept. 30), shall be immediately stabilized with approved TESC methods (e.g., seeding, mulching, plastic cover, etc.).
- Any area needing TESC measures that do not require immediate attention shall be addressed within fifteen (15) days.
- The TESC facilities on inactive sites shall be inspected and maintained a minimum of once a month or within forty-eight (48) hours following a storm event.
- At no time shall more than one (1) foot of sediment be allowed to accumulate within a catch basin. All catch basins and conveyance lines shall be cleaned prior to final grading and/or paving. The cleaning operation shall not flush sediment-laden water into the downstream system.
- Stabilized construction entrances and roads shall be installed at the beginning of construction and maintained for the duration of the project. Additional measures, such as wash pads and sediment traps, may be required to ensure that all paved areas are kept clean for the duration of the project.
- Any permanent flow control facility used as a temporary settling basin shall be modified with the necessary temporary erosion control measures and shall provide adequate storage capacity.
- Where straw mulch for temporary erosion control is required, it shall be applied at a minimum thickness of 2 to 3 inches.
- Prior to the beginning of the wet season (Oct. 1), all disturbed areas shall be reviewed to identify which ones can be seeded in preparation for the winter rains. Disturbed areas shall be seeded within one week of the beginning of the wet season. The City can require seeding of additional areas in order to protect surface waters, adjacent properties, or drainage facilities.

Construction Sequence:

- Hold an onsite pre-construction meeting.
- Flag or fence clearing limits.
- Install catch basin protection, if required.
- Grade and install construction entrance(s).
- Install perimeter protection (silt fence, brush barrier, etc.).
- Construct sediment pond(s) and/or trap(s).
- Construct surface water controls (interceptor dikes, pipe slope drains, etc.) simultaneously with clearing and grading for project development.
- Maintain TESC measures in accordance with City standards and manufacturer's recommendations.
- Relocate surface water controls or TESC measures, or install new measures so that as site conditions change, the TESC is always in accordance with the City of Mercer Island Temporary Erosion and Sedimentation Control Requirements.
- Cover all areas that will be un-worked for more than two days during the wet season (Oct. 1 to April 30) or seven days during the dry season (May 1 to Sept. 30) with straw, wood fiber mulch, compost, plastic sheeting, or equivalent.
- Stabilize all areas within seven days of reaching final grade.
- Seed or sod any areas to remain un-worked for more than 30 days.
- Upon completion of the project, stabilize all disturbed areas and remove TESC measures if appropriate.

Reference: King County Surface Water Design Manual Appendix D - 10.3

TREE PROTECTION NOTES

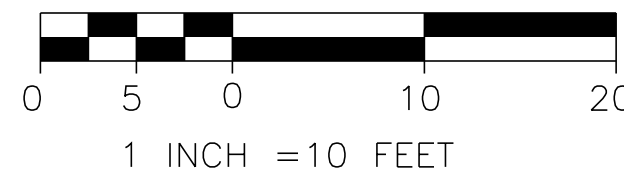
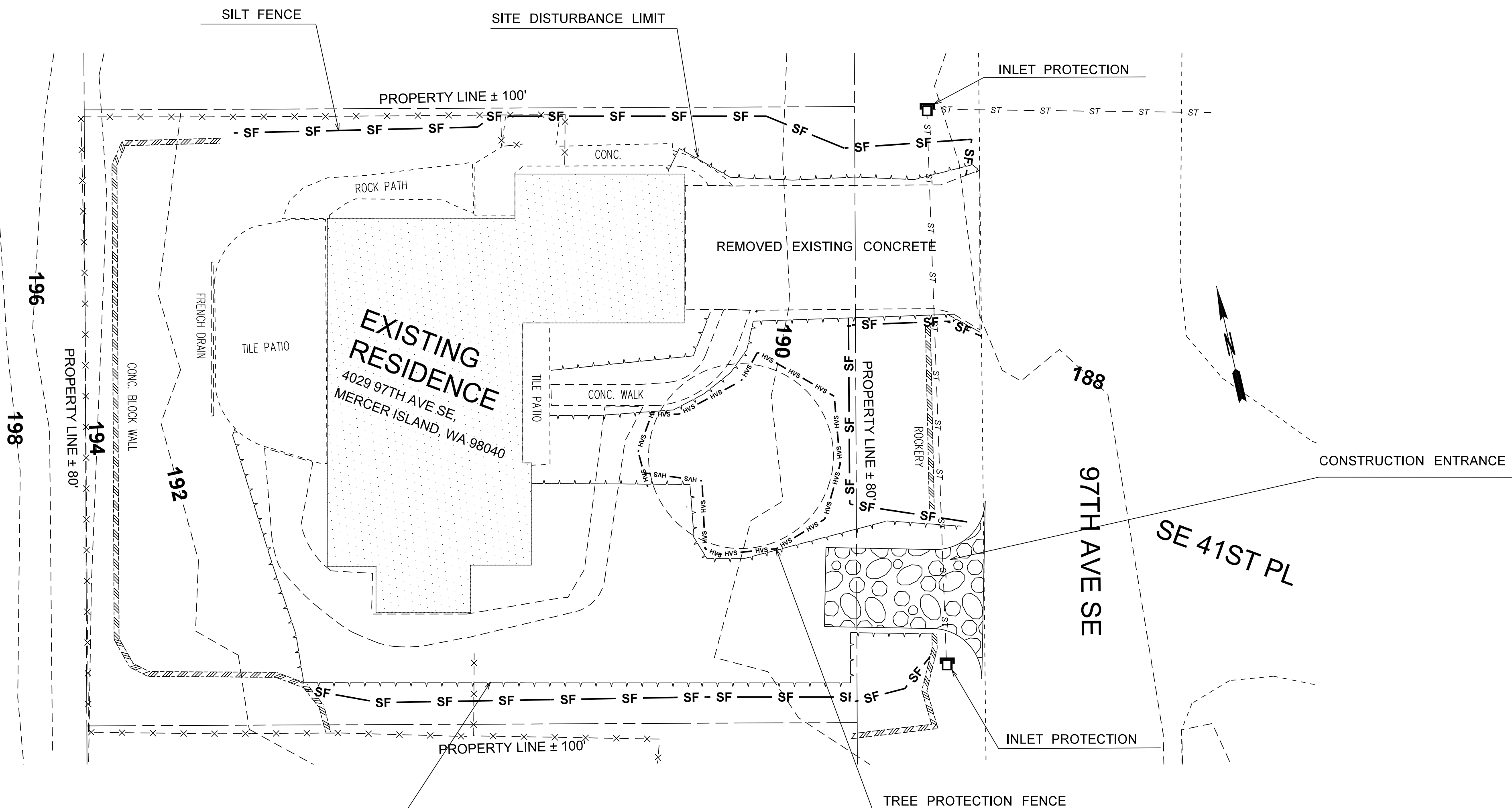
Avoid the following conditions during construction:

- Allowing run off or spillage of damaging materials into the approved Tree Protected Zone.
- Storing construction materials or portable toilets, stockpiling of soil, or parking or driving vehicles within the TPZ.
- Cutting, breaking, skinning, or bruising roots, branches, or trunks without first obtaining authorization from the Project Arborist.
- Discharging exhaust into foliage.
- Securing cable, chain, or rope to trees or shrubs.
- Trenching, digging, tunneling or otherwise excavating within the TPZ of the tree(s) without first obtaining authorization from the Project Arborist. Periodically inspect during construction - at four-week intervals - to assess and monitor the effectiveness of the TPP and provide recommendations for any additional care or treatment. More frequent may be required based on the TPP.

The following activities should be observed and inspected by the project arborist during the construction phase to ensure compliance with the approved TPP:

- Only excavation by hand or compressed air shall be allowed within the TPZ of trees. Machine trenching shall not be allowed.

- In order to avoid injury to tree roots, when a trenching machine is being used outside of the TPZ of trees, and roots are encountered smaller than 2", the wall of the trench adjacent to the trees shall be hand trimmed, making clear, clean cuts through the roots. All damaged, torn and cut roots shall be given a clean cut to remove ragged edges, which promote decay. Trenches shall be filled within 24 hours, but where this is not possible, the side of the trench adjacent to the trees shall be kept shaded with four layers of dampened, untreated burlap, wetted as frequently as necessary to keep the burlap wet. Roots 2" or larger, when encountered, shall be reported immediately to the Project Arborist, who will decide whether the Contractor may cut the root as mentioned above or shall excavate by hand or with compressed air under the root. All exposed roots are to be protected with dampened burlap.
- Route pipes outside of the TPZ of a protected tree to avoid conflict with roots. Where it is not possible to reroute pipes or trenches, bore or tunnel beneath the TPZ of the tree. The boring shall take place not less than 3" below the surface of the soil in order to avoid encountering feeder roots. All boring equipment must be staged outside of the TPZ.
- All grade changes adjacent to the TPZ of a significant tree shall be supervised by the Project Arborist. Cuts or Fills of soil that are adjacent to the TPZ will have a retaining wall system designed in consultation with the Project Arborist and approved in writing by City Staff.
- Any damage due to construction activities shall be reported to the Project Arborist and City Staff within six hours so that remedial action can be taken.
- The Project Arborist shall be responsible for the preservation of the designated trees. Should the builder fail to follow the tree protection specifications, it shall be the responsibility of the Project Arborist to report the matter to City Staff as an issue of non-compliance.



EXPOSED & STOCKPILES SOIL BMP'S

All exposed and unworked soils shall be stabilized per the following criteria:
 From October 1 to April 30, no exposed and unworked soils shall remain unstabilized (exposed) for more than two days. Non-erodible, clean, granular base materials shall be applied to stabilize all trafficked areas.
 From May 1 to September 30, no exposed and unworked soils on slopes shall remain unstabilized (exposed) for more than seven days.
 Exposed and unworked soils will be stabilized with the application of effective BMPs to prevent erosion throughout the life of the project. The specific BMPs will be used on this project include:

- Preserving natural vegetation
- Sodding
- Topsoil
- Mulching
- Check dam
- Soil binding using polyacrylamide
- Wattles
- Biodegradable erosion control blanket
- Compost blanket
- Stabilized construction entrance
- Plastic covering
- Construction road stabilization
- Seeding and planting
- Dust Control
- Bonded Fiber Matrix
- Mechanically Bonded Fiber Matrix

Seeding and mulching will be used to stabilize soils throughout the project following excavation and grading as well as other disturbed areas. During dry weather construction periods, the contractor will provide project specific dust control measures, as needed. Cut and fill slopes will be stabilized as soon as possible and soil stockpiles will be temporarily covered with plastic sheeting to prevent short-term erosion. All stockpiled soils will be stabilized from erosion, protected with sediment trapping measures, and where possible, be located away from storm drain inlets, waterways, and drainage channels.

LEGEND

- EXISTING ROCK WALL [Symbol]
- SILT FENCE - SF - SF - SF [Symbol]
- EDGE EXISTING PAVEMENT [Symbol]
- EXISTING PROPERTY LINE [Symbol]
- SITE DISTURBANCE LIMIT [Symbol]
- TREE PROTECTION FENCE [Symbol]
- TREE DRIP LINES [Symbol]

Construction Sequence:



Know what's below. Call before you dig.

FIELD BOOK: _____
 SURVEYED: _____
 SURVEY BASE MAP: _____
 DESIGN ENTERED: **J.W**
 DESIGNED: **S.W**
 CHECKED: **S.W**



TANDEM ENGINEERING CONSULTANT INC
 8822 NE 178TH ST
 BOTHELL, WA 98011
 (206) 795-5674

TESC PLAN

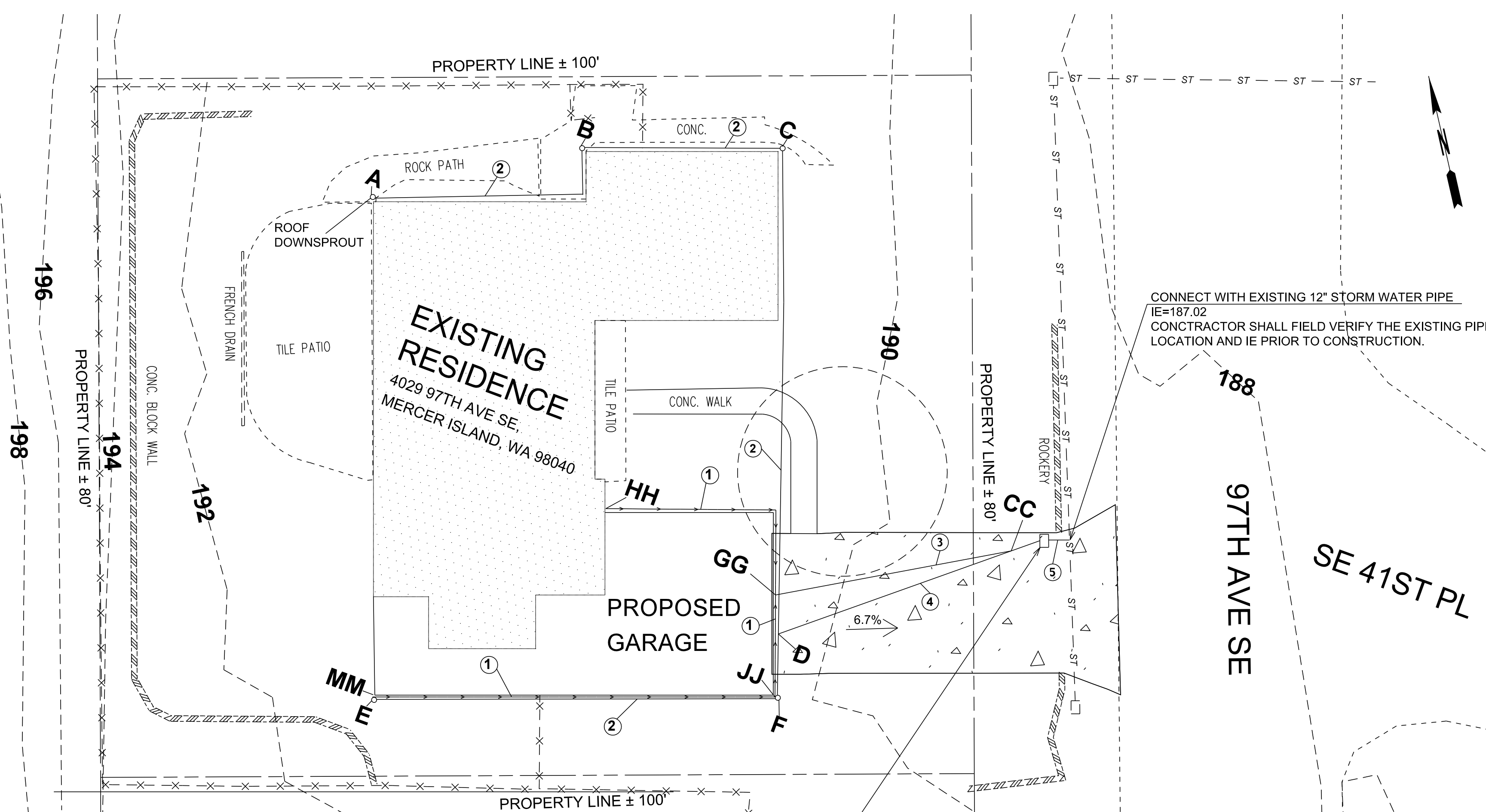
ATWAL'S RESIDENCE
 4029 97TH AVE SE
 MERCER ISLAND WA 98040

SHEET
2
 OF
4
 SHEETS

C-2.00

LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING STORM LINE
- PROPOSED FOOTING DRAIN
- EXISTING LOT LINE
- TREE DRIP LINES



ROOF DRAIN			
ELE.POINT	INVERT	LENGTH	S
A	191	30	2.0%
B	190.4	25	2.0%
C	189.9	64	2.0%
D	188.62	32	2.0%
CB	187.98		
E	190.6	46	4.0%
F	188.8	8	2.0%
D	188.62		

PERFORATED FOOTING DRAIN			
ELE.POINT	INVERT	LENGTH	S
MM	189.0	46	1%
JJ	188.5	12	1%
GG	188.4	29	1%
CC	188.1		
HH	189.0	30	
GG	188.4		2.0%

STORM DRAIN NOTES

- ① 4" FOOTING DRAIN MIN 1% GRADE (ASTM D-3034 PVC)
- ② 4" ROOF DRAIN MIN 2% GRADE (ASTM D-3034 PVC)
- ③ 4" STORM DRAIN, PVC, L=29.0', S=1.0%, (ASTM D-3034 PVC)
- ④ 4" STORM DRAIN, L=32.0', S=2.0% (ASTM D-3034 PVC)
- ⑤ 6" PVC STORM DRAIN, MIN 2% GRADE (ASTM D-3034 PVC)

Post Construction 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 structure 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

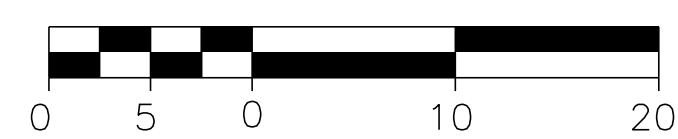
3. Use compost and other materials that meet these organic content requirements:

a. The organic content for "pre-approved" amendment rates can be met only using compost meeting the compost specification for BMP T7.30: Bioretention Cells, Swales, and Planter Boxes (p.959), 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.

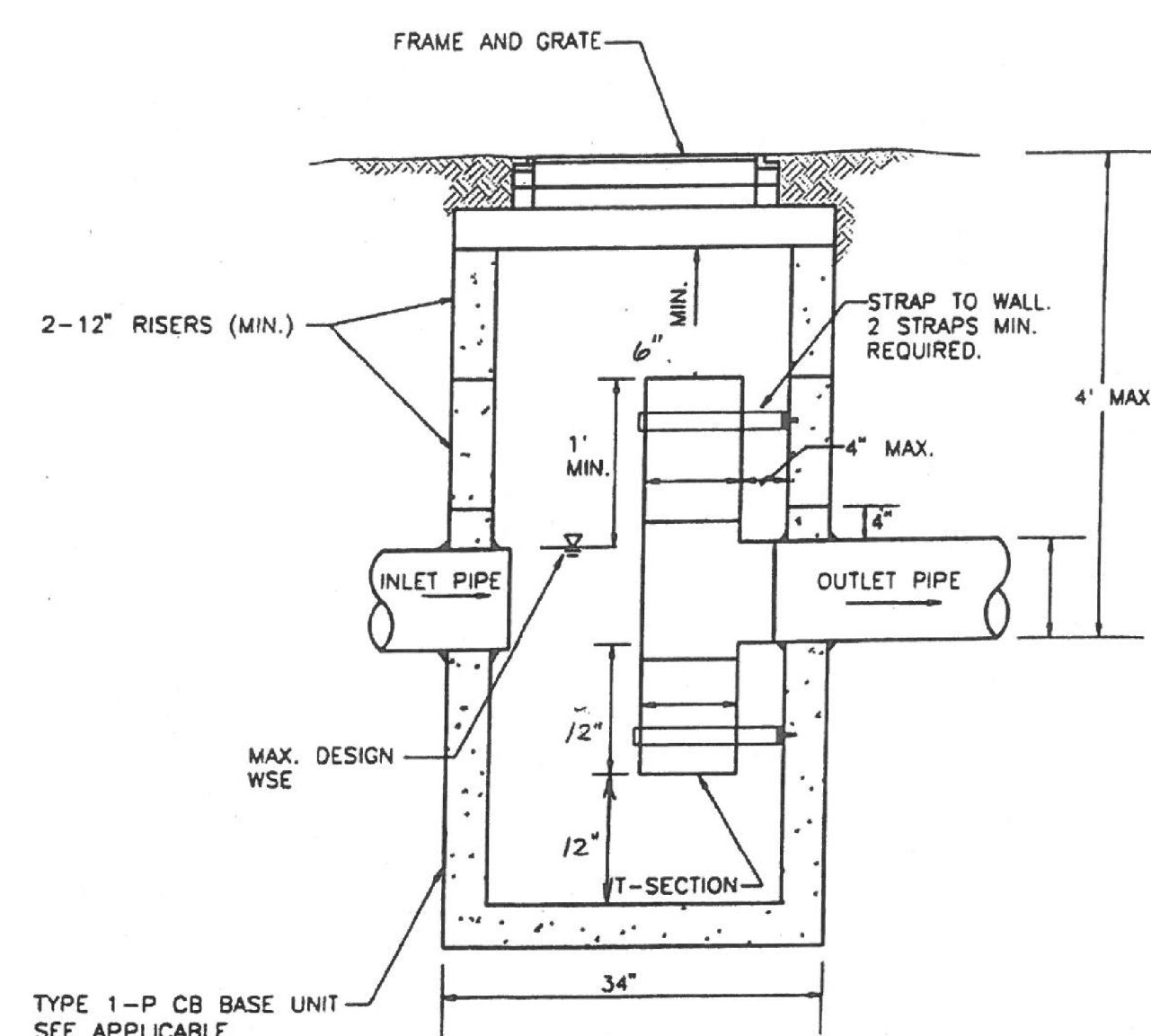
b. Calculated amendment rates may be met through use of composted material meeting (a.) above; or other organic materials amended to meet the carbon to nitrogen ratio requirements, and not exceeding the contaminant limits identified in Table 220-B, Testing Parameters, in WAC 173-350-220.

Maintenance

1. Establish soil quality and depth toward the end of construction and once established, protect from compaction, such as from large machinery use, and from erosion.
2. Plant vegetation and mulch the amended soil area after installation.
3. Leave plant debris or its equivalent on the soil surface to replenish organic matter.
4. Reduce and adjust, where possible, the use of irrigation, fertilizers, herbicides and pesticides, rather than continuing to implement formerly established practices.



PROPOSED CB TYPE 1, OIL/WATER SEPARATE
RIM=188.90
IE(W)=187.98
IE(E)=187.60
SEE DETAIL



TYPE 1-P CB BASE UNIT
SEE APPLICABLE STANDARD DETAILS. CONFORMS TO WASH. STATE APWA/WSDOT STANDARD SPECIFICATIONS AND STANDARD PLAN.

CATCH BASIN TYPE I WITH OIL/WATER SEPARATED
NTS

NOTE
NO EXCAVATION ENCROACHMENT INTO TREE DRIP LINE

EXISTING UTILITIES ARE FOR REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES TO AVOID CONFLICTS.



FIELD BOOK:	
SURVEYED:	
SURVEY BASE MAP:	
DESIGN ENTERED:	J.W
DESIGNED:	S.W
CHECKED:	S.W



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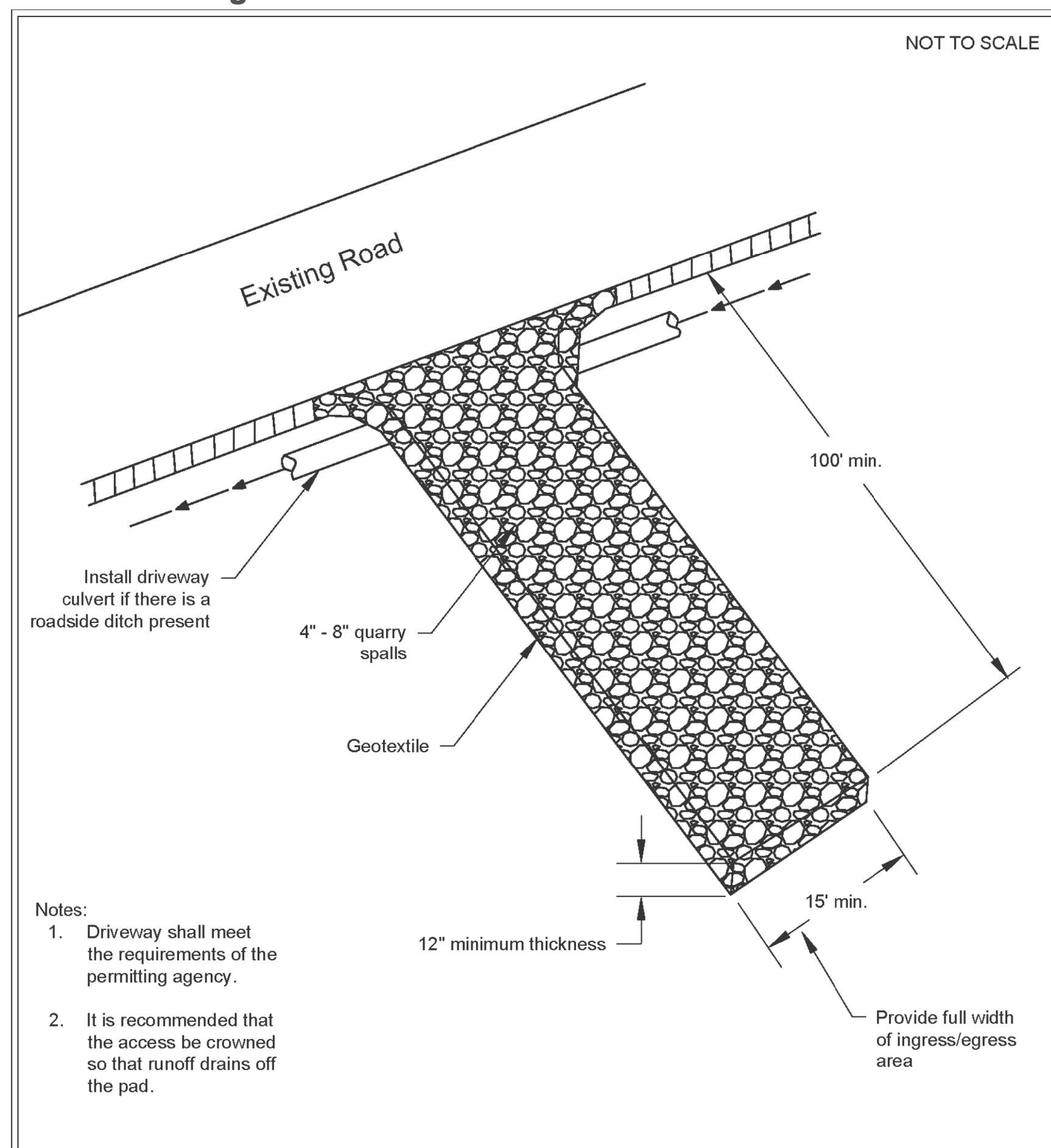
DRAINAGE & GRADATION PLAN

ATWAL'S RESIDENCE
4029 97TH AVE SE
MERCER ISLAND WA 98040

SHEET
3
OF
4
SHEETS

C-3.00

Figure II-3.1: Stabilized Construction Access



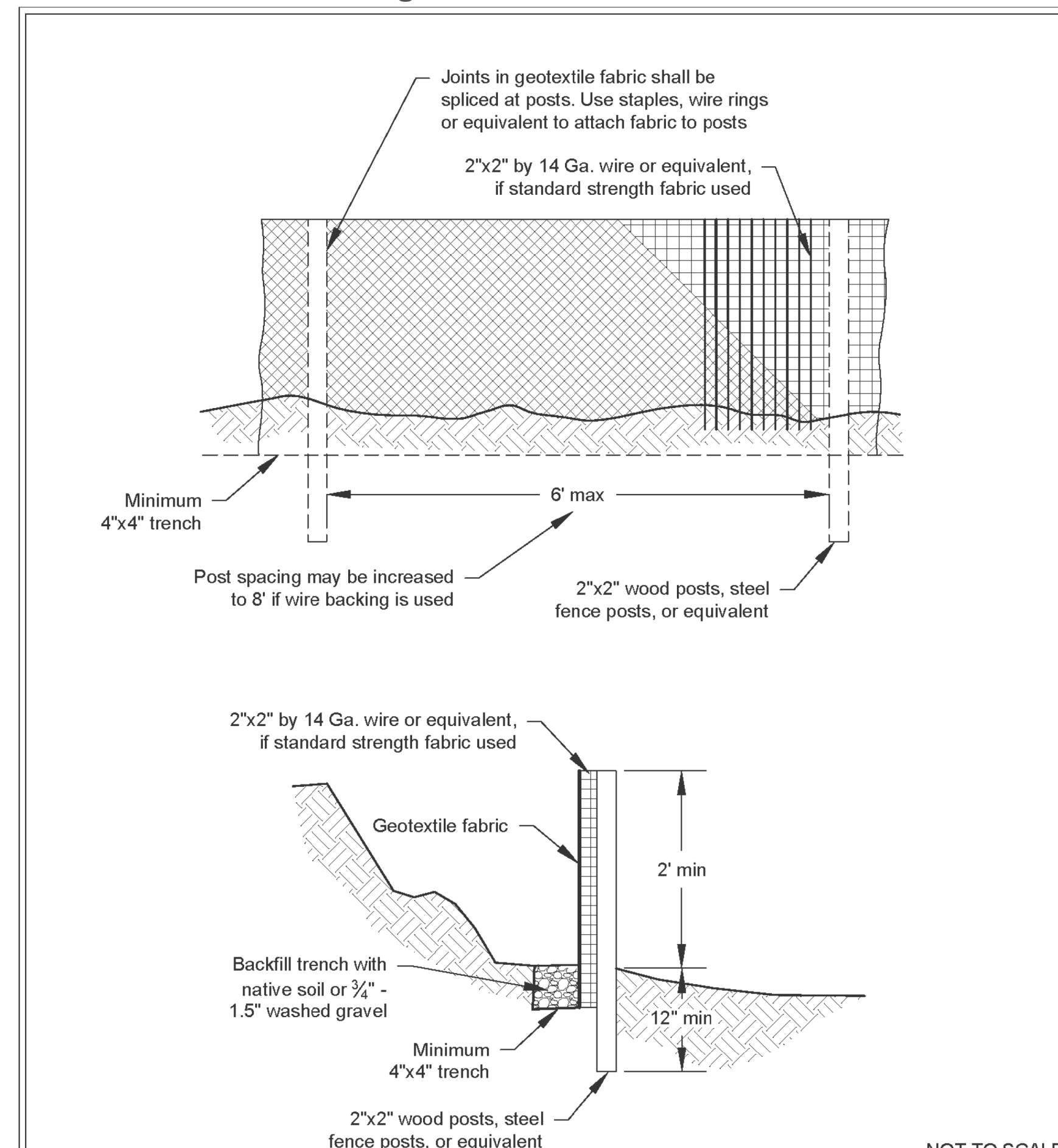
Stabilized Construction Access

Revised June 2018

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State of Washington

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Figure II-3.22: Silt Fence



Silt Fence

Revised July 2017

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State of Washington

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FIELD BOOK:	
SURVEYED:	
SURVEY BASE MAP:	
DESIGN ENTERED:	J.W
DESIGNED:	S.W
CHECKED:	S.W

DETAILS

ATWAL'S RESIDENCE
4029 97TH AVE SE
MERCER ISLAND WA 98040

GENERAL NOTES

CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING THE WORK.
WORK SHALL COMPLY WITH THE FOLLOWING CODES:
2018 INTERNATIONAL RESIDENTIAL CODE
2018 WASHINGTON ENERGY CODE
OTHER CODES APPLICABLE BY JURISDICTION.

AIR SEALING:

- 1. ALL PLUMBING, ELECTRICAL, AND HVAC PENETRATIONS IN FLOOR, WALLS, AND CEILINGS ARE CAULKED AND SEALED.
- 2. WHERE PENETRATIONS NEED A FIRESTOP, DISCUSS WITH BUILDING OFFICIAL.
- 3. ELECTRICAL OUTLET AND LIGHT SWITCH BOXES ON EXTERIOR WALLS MUST BE SEALED AT THE BACK OF THE RECEPTACLE OR SEALED WITH FACEPLATE GASKETS.
- 4. SEAL RIM JOIST BETWEEN HEATED FLOORS OR USE PRODUCT LIKE "TYVEK" ON EXTERIOR.
- 5. VAPOR BARRIER SHALL BE EITHER FACE STAPLED BATTS, 4 MIL. VISQUEEN OR AN APPROVED VAPOR BARRIER PAINT.

SEPARATION BETWEEN DWELLING AND GARAGE/CARPORIT:

- a. NO SEPARATION REQUIRED IF ENTIRELY OPEN ON 2 OR MORE SIDES AND NO ENCLOSED USES. [OPEN DECKS ABOVE ARE OKAY. NON-RATED WALLS AND OPENABLE WINDOWS BETWEEN THE DWELLING AND CARPORT ARE OKAY].
- b. MINIMUM 1/2" GWB ON GARAGE/CARPORIT SIDE OF WALLS REQUIRED FOR ALL GARAGES/CARPORITS NOT COVERED BY 1A ABOVE.
- c. 1-HOUR FIRE RATED WALL REQUIRED IF LESS THAN 5 FEET FROM PROPERTY LINE (NO OPENINGS ALLOWED LESS THAN 3' FROM PROPERTY LINE, 25% MAXIMUM OPENINGS BETWEEN 3' AND 5' TO PROPERTY LINE) OVERHANGS MUST BE A MINIMUM 2' FROM PROPERTY LINE, EXCEPT STEEL GUTTER ALLOWED CLOSER AND 5/8" GWB SHEATHING REQUIRED ON UNDERSIDE WHEN 5' OR LESS FROM PROPERTY LINE.

EGRESS WINDOWS: REQUIRED FOR 1 WINDOW/BEDROOM OR SLEEPING AREA [BELOW 4TH FLOOR] AND 1 WINDOW/BASEMENT.

- a. MIN. NET CLEAR AREA = 5.7 SQ. FT., [MIN. 3'0" x 4'6" IF DOUBLE HUNG OR 4'0" x 3'6" WINDOW IF SLIDER], 5.0 SQ. FT. IF SILL HEIGHT IS WITHIN 44" OF GRADE [ABOVE OR BELOW].
- b. MIN. NET CLEAR OPENING WIDTH = 20"; MIN. NET CLEAR OPENING HEIGHT = 24"
- c. MAX. SILL HEIGHT = 44"

REQUIRED GLAZING FOR HABITABLE ROOMS:

- a. MIN. GLAZED EXTERIOR OPENING AREA = 8% OF FLOOR AREA.
- b. GLAZED OPENINGS NOT REQUIRED WHERE PERMANENTLY INSTALLED ARTIFICIAL LIGHT IS PROVIDED.
- c. OK IF OPENINGS ARE BELOW DECK & ROOFED PORCHES w/MIN. CEILING HEIGHT OF 7 FT. [LONG SIDE 65% OPEN].

MECHANICAL/VENTILATION: REQUIRED FOR HABITABLE ROOMS OF ADDITIONS AND ALTERATIONS MORE THAN 500 SQ. FT. OR THAT INCLUDE A KITCHEN, BATHROOM AND OTHER AREAS WHERE COOKING ODOR OR EXCESS WATER VAPOR WILL BE PRODUCED.

- a. MIN. 50 CFM FOR BATHROOM AND LAUNDRY; MIN. 100 CFM FOR KITCHEN.
- b. MIN. AIR INTAKE OPENINGS = 4 SQ. IN. PER ROOM.
- c. WHOLE HOUSE FAN MUST OPERATE AS SPECIFIED IN IRC M1505.4

SMOKE ALARMS: REQUIRED INSIDE AND OUTSIDE OF SLEEPING AREAS AND ON ALL FLOORS. DIRECT WIRING IS REQUIRED FOR SMOKE DETECTORS, UNLESS REMOVAL OF INTERIOR WALL OR CEILING FINISHES IS NECESSARY TO INSTALL THE WIRING.

CARBON MONOXIDE ALARMS: REQUIRED OUTSIDE SLEEPING AREAS AND ON ALL FLOORS, UNLESS WORK ONLY INVOLVES EXTERIOR SURFACES OF THE BUILDING.

STAIR REQUIREMENTS: [APPLIES TO ALL R-3 STAIRS AND R-2 PRIVATE STAIRWAYS]:

- a. MIN. WIDTH = 36"
- b. MAX. HEIGHT/RISE = 7-3/4"; MIN. TREAD RUN = 10"
- c. MIN. HEADROOM = 6'8"
- d. HANDRAIL 34"-38" ABOVE TREAD NOSING [RETURN ENDS]
- e. HANDRAIL GRASP DIMENSION: MIN. 1-1/4", MAX. 2"
- f. WINDING STAIRS:
 - 1. MIN. TREAD RUN AT NARROWEST POINT = 6"
 - 2. MIN. TREAD RUN 12" FROM NAORROWEST POINT = 10"
- g. SPIRAL STAIRS:
 - 1. MIN. CLEAR WALKING AREA WIDTH = 26"
 - 2. MIN. TREAD RUN 12" FROM NARROWEST POINT = 7-1/2" / MAX. RISER HEIGHT = 9-1/2"
 - 3. MIN. HEADROOM = 6'6"

CEILING HEIGHT IN ADDITIONS AND ALTERATIONS:

- a. MIN. 7'0" FOR NEW CONSTRUCTION OR ADDITIONS
- b. ROOMS WITH SLOPED CEILINGS REQUIRE MINIMUM CEILING HEIGHT IN 1/2 OF THE AREA. [PORTIONS OF THE ROOM WITH CEILING HEIGHT LESS THAN 5 FT. DO NOT COUNT IN TOTAL AREA].

INSULATION:

- 1. FACED BATTS ARE LAPPED AND FACE STAPLED AT FRAMING MEMBERS.
- 2. ALL EXTERIOR WALL CAVITIES ARE FILLED WITH UNCOMPRESSED INSULATION, INCLUDING ALL CAVITIES ISOLATED DURING FRAMING, WIRING, AND PLUMBING.
- 3. ALL RECESSED FIXTURES IN EXTERIOR WALLS HAVE RIGID BOARD INSULATION BEHIND THEM.
- 4. UNDERFLOOR INSULATION IS SUPPORTED BY LATH, TWINE, OR OTHER NON-COMPRESSING MEANS.
- 5. ATTIC ACCESS IS BAFFLED, WEATHER-STRIPPED AND INSULATED.

FOUNDATION LOCATION: PROPERTY CORNERS MUST BE ACCURATELY DETERMINED AND INDICATED ON SITE FOR FOUNDATION INSPECTION. A SURVEY MAY BE REQUIRED. FENCE LOCATIONS WILL NOT BE ACCEPTED AS ESTABLISHING PROPERTY CORNERS.

OTHER REQUIREMENTS:

- a. GUARDRAILS: MUST BE AT LEAST 36" HT. W/ LESS THAN 4" SPACING BETWEEN INTERMEDIATE MEMBERS (42" MIN. HT. FOR R-2 EXTERIOR).
- b. FLOORINGS: BOTTOM MIN. 12" ABOVE EXPOSED GROUND IN CRAWL SPACE, TOP OF FOUNDATION WALL MIN. 6" ABOVE GRADE.
- c. CONCRETE SLABS ON GRADE: 3-1/2" MIN. THICKNESSES.
- d. PIER BLOCKS: MIN. 12" X 12" SIZE, RESTING ON CONCRETE PAD MIN. 12" BELOW GRADE.
- e. FOUNDATION WALLS: PROVIDE ONE (1) #4 REBAR TOP AND BOTTOM AND AT ALL WINDOWS/DOOR OPENINGS. LIMIT 4' MAX. BACKFILL.
- f. FOUNDATION ANCHOR BOLTS: MIN. 1/2" x 10", 6 FT. ON CENTER MAX. WITH TWO (2) BOLTS PER PIECE OF PLATE AND AT LEAST ONE (1) BOLT WITH 12" AT END OF EACH PIECE [REQUIRED FOR NEW CONSTRUCTION].
- g. ALL STRUCTURAL SOFTWOOD PLYWOOD, PARTICLE BOARD, WAFER BOARD, AND OSB BOARD ARE STAMPED WITH EXPOSURE '1' OR 'EXTERIOR'.
- h. WATER HEATER STORAGE TANK LABELED AS MEETING 1987 NAT'L APPLIANCE ENERGY CONSERVATION ACT. ASHRAE STANDARD 90A-1980 INSULATION TO R-16 OR R-10 PAD IF LOCATED OVER UNINSULATED SLAB.
- i. INSULATE HOT AND COLD WATER PIPES TO R-3 IN UNHEATED AREAS. [INSULATION FOR HOT WATER PIPE, BOTH WITHIN AND OUTSIDE CONDITIONED SPACE, SHALL HAVE A MIN R-VALUE OF R-3 PER WSEC R403.5.3]
- j. SHOWER REGULATOR TO LIMIT HOT WATER DISCHARGE TO 2.5 GPM.
- k. WOODSTOVES AND FIREPLACES HAVE TIGHT FITTING DOORS, OUTSIDE COMBUSTION AIR DUCTED TO FIREBOX WITH ACCESSIBLE DAMPER, MIN 6 SQ IN FREE VENT AREA. TIGHT FITTING FLUE DAMPERS REQ'D.
- l. ALL GAS AND OIL COMBUSTION APPLIANCES HAVE A DIRECT VENT OR FORCED DRAFT VENTING.
- m. RECESSED LIGHTS ARE I.C. RATED, DOUBLE WALL CAN LIGHTS OR WITHIN SEALED WPGWB BOX-IN.
- n. CONTRACTOR TO PROVIDE (1) 16"x24" MINIMUM CRAWL SPACE ACCESS INTO NEW CRAWL SPACE AREA THAT IS ACCESSIBLE FROM EITHER THE OUTSIDE OR FROM THE EXISTING CRAWLSPACE AREA. OTHERWISE CONTRACTOR IS TO PROVIDE (1) 18"x24" MINIMUM CRAWL SPACE ENTRANCE THROUGH MAIN LEVEL FLOOR FRAMING THAT ACCESSES NEW CRAWL SPACE AREA.
- o. A CERTIFICATE IS REQUIRED TO BE POSTED WITHIN 3' OF THE ELECTRICAL PANEL PER WSEC R401.3 AND INCLUDE THE FOLLOWING: PREDOMINATE R-VALUES, U-VALUES OF FENESTRATION, RESULTS FROM DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING, AND EFFICIENCIES OF HEATING/COOLING/WATER HEATING EQUIPMENT.
- p. A MIN OF 90 PERCENT OF PERMANENTLY INSTALLED LAMPS IN INTERIOR AND EXTERIOR LIGHTING FIXTURES MUST BE HIGH-EFFICIENCY LAMPS PER WSEC R404.1

INSULATION

INSULATION AND FENESTRATION REQUIREMENTS R402.1.1	
CLIMATE ZONE	5 AND MARINE 4
FENESTRATION U-FACTOR [U]	0.30
SKYLIGHT U-FACTOR [U]	0.50
CEILING R-VALUE [R]	49
WOOD FRAME WALL R-VALUE [R]	21 INT
FLOOR R-VALUE	30
BELOW-GRADE WALL R-VALUE [C]	10/15/21 INT-5TB
SLAB R-VALUE & DEPTH [d]	10, 2FT

FOR SI: 1 FOOT = 304.8 MM, C1 = CONTINUOUS INSULATION, INT = INTERMEDIATE FRAMING.

- 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. THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS.
- c. "10/15/21 +5TB" MEANS R-10 CONTINUOUS INSULATION ON THE EXTERIOR OF THE WALL, OR R-15 CONTINUOUS INSULATION ON THE INTERIOR OF THE WALL, OR R-21 CAVITY INSULATION PLUS A THERMAL BREAK BETWEEN THE SLAB AND THE BASEMENT WALL AT THE INTERIOR OF THE BASEMENT WALL. "10/15/21 +5TB" SHALL BE PERMITTED TO BE MET WITH R-13 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE WALL. "5TB" MEANS R-5 THERMAL BREAK BETWEEN FLOOR SLAB AND BASEMENT WALL.
- d. R-10 CONTINUOUS INSULATION IS REQUIRED UNDER HEATED SLAB ON GRADE FLOORS. SEE R402.2.9.1.
- e. FOR SINGLE RAFTER- OR JOIST-VAULTED CEILINGS, THE INSULATION MAY BE REDUCED TO R-38 IF THE PULL INSULATION DEPTH EXTENDS OVER THE TOP PLATE OF THE EXTERIOR WALL.
- f. R-7.5 CONTINUOUS INSULATION INSTALLED OVER AN EXISTING SLAB IS DEEMED TO BE EQUIVALENT TO THE REQUIRED PERIMETER SLAB INSULATION WHEN APPLIED TO EXISTING SLABS COMPLYING WITH SECTION R503.1.1. IF FOAM PLASTIC IS USED, IT SHALL MEET THE REQUIREMENTS FOR THERMAL BARRIERS PROTECTING FOAM PLASTICS.
- g. FOR LOG STRUCTURES DEVELOPED IN COMPLIANCE WITH STANDARD ICC 400, LOG WALLS SHALL MEET THE REQUIREMENTS FOR CLIMATE ZONE 5 OF ICC 400.

h. INT. [INTERMEDIATE FRAMING] DENOTES FRAMING AND INSULATION AS DESCRIBED IN SECTION A103.2.2 INCLUDING STANDARD FRAMING 16 INCHES ON CENTER, 78 PERCENT OF THE WALL CAVITY INSULATED AND HEADERS INSULATED WITH A MINIMUM OF R-10 INSULATION.

MECHANICAL/VENTILATION

LOCAL EXHAUST REQUIREMENTS M1505.4.4[1]	
AREAS TO BE EXHAUSTED	EXHAUST RATES
KITCHENS	100 CFM INTERMITTENT OR 30 CFM CONTINUOUS
BATHROOMS/TOILET ROOMS	50 CFM INTERMITTENT OR 20 CFM CONTINUOUS

WHOLE-HOUSE MECHANICAL VENTILATION AIRFLOW RATE M1505.4.3[1]

DWELLING UNIT FLOOR AREA (SQARE FEET)	NUMBER OF BEDROOMS				
	0-1	2	3	4	5 OR MORE
	AIRFLOW IN CFM				
<500	30	30	35	45	50
501-1000	30	35	40	50	55
1001-1500	30	40	45	55	60
1501-2000	35	45	50	60	65
2001-2500	40	50	55	65	70
2501-3000	45	55	60	70	75
3001-3500	50	60	65	75	80
3501-4000	55	65	70	80	85
4001-4500	60	70	75	85	90
4501-5000	65	75	80	90	95

INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS M1505.4.3[2]

RUN-TIME % IN EACH 4-HOUR SEGMENT	50%	66%	75%	100%
FACTOR	2	1.5	1.3	1.0

BATHROOMS, TOILET ROOMS, AND KITCHENS SHALL INCLUDE A LOCAL EXHAUST SYSTEM. SUCH LOCAL EXHAUST SYSTEMS SHALL HAVE THE CAPACITY TO EXHAUST THE MINIMUM AIRFLOW RATE IN ACCORDANCE WITH TABLE M1505.4.4[1]. FANS REQUIRED BY THIS SECTION SHALL BE PROVIDED WITH CONTROLS THAT ENABLE MANUAL OVERRIDE OR AUTOMATIC OCCUPANCY SENSOR, HUMIDITY SENSOR OR POLLUTANT SENSOR CONTROLS. AN "ON/OFF" SWITCH SHALL MEET THIS REQUIREMENT FOR MANUAL CONTROLS. MANUAL FAN CONTROLS SHALL BE READILY ACCESSIBLE IN THE ROOM SERVED BY THE FAN.

- 1. EXHAUST FANS SHALL MEET THE FOLLOWING CRITERIA:
 - EXHAUST FANS SHALL BE TESTED AND RATED IN ACCORDANCE WITH THE AIRFLOW AND SOUND RATING PROCEDURES OF THE HOME VENTILATING INSTITUTE [HVI 915, HVI LOUDNESS TESTING AND RATING PROCEDURE; HVI 916, HVI AIRFLOW TEST PROCEDURE; AND HVI 920, HVI PRODUCT PERFORMANCE CERTIFICATION PROCEDURE]. EXCEPTION WHERE A RANGE HOOD OR DOWN DRAFT EXHAUST FAN IS USED FOR LOCAL EXHAUST FOR A KITCHEN, THE DEVICE IS NOT REQUIRED TO BE RATED PER THESE STANDARDS.
 - FAN AIRFLOW RATING AND DUCT SYSTEM SHALL BE DESIGNED AND INSTALLED TO DELIVER AT LEAST THE EXHAUST AIRFLOW REQUIRED BY TABLE M1505.4.4[1]. THE AIRFLOWS REQUIRED REFER TO THE DELIVERED AIRFLOW OF THE SYSTEM AS INSTALLED AND TESTED USING A FLOW HOOD, FLOW GRID, OR OTHER AIRFLOW MEASUREMENT DEVICE. LOCAL EXHAUST SYSTEMS SHALL BE TESTED, BALANCED AND VERIFIED TO PROVIDE A FLOW RATE NOT LESS THAN THE MINIMUM REQUIRED BY THIS SECTION.
 - DESIGN AND INSTALLATION OF THE SYSTEM OR EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 - FAN AIRFLOW RATING AND DUCT SYSTEM SHALL BE DESIGNED AND INSTALLED TO DELIVER AT LEAST THE EXHAUST AIRFLOW REQUIRED BY TABLE M1505.4.4[1].
- 2. WHOLE-HOUSE VENTILATION USING EXHAUST FANS MUST COMPLY WITH:
 - IRC M1505.4: EACH DWELLING UNIT SHALL BE EQUIPPED WITH A VENTILATION SYSTEM. THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS M1505.4.1 THROUGH M1505.4.4.
 - WHOLE-HOUSE VENTILATION FANS SHALL BE RATED FOR SOUND AT NO LESS THAN THE MINIMUM AIRFLOW RATE REQUIRED BY SECTION M1505.4.3.1. VENTILATION FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 10 SONE. THIS SOUND RATING SHALL BE AT A MINIMUM OF 0.1 IN. W.C. [25 PA] STATIC PRESSURE IN ACCORDANCE WITH HVI PROCEDURES SPECIFIED IN SECTIONS M1505.4.1.2 AND M1505.4.1.3.
 - DUCTS MUST BE LEAK TESTED IN ACCORDANCE WITH WSU RS-33 USING THE MAXIMUM DUCT LEAKAGE RATES SPECIFIED. DUCT TIGHTNESS MUST BE VERIFIED BY EITHER A POST-CONSTRUCTION TEST OR ROUGH - IN TEST PER WSEC R403.3.3. TOTAL LEAKAGE MUST BE LESS THAN OR EQUAL TO 4 CFM PER 100 SQ-FT OF CONDITIONED FLOOR AREA WHEN TESTED AT A PRESSURE DIFFERENTIAL OF 0.1" W.G. [25 PA] ACROSS THE ENTIRE SYSTEM.

4. PER IRC M1503.6, WHERE ONE OR MORE GAS, LIQUID OR SOLID FUEL-BURNING APPLIANCE THAT IS NEITHER DIRECT-VENT NOR USES A MECHANICAL DRAFT VENTING SYSTEM IS LOCATED WITHIN A DWELLING UNIT'S AIR BARRIER, EACH EXHAUST SYSTEM CAPABLE OF EXHAUSTING IN EXCESS OF 400 CUBIC FEET PER MINUTE [0.19 M3/S] SHALL BE MECHANICALLY OR PASSIVELY PROVIDED WITH MAKEUP AIR AT A RATE APPROXIMATELY EQUAL TO THE EXHAUST AIR RATE. SUCH MAKEUP AIR SYSTEMS SHALL BE EQUIPPED WITH NOT FEWER THAN ONE DAMPER COMPLYING WITH SECTION M1503.6.2.

5. WHERE A CLOSET IS DESIGNED FOR THE INSTALLATION OF A CLOTHES DRYER, AN OPENING HAVING AN AREA OF NOT LESS THAN 100 SQ. INCHES SHALL BE PROVIDED IN THE CLOSET ENCLOSURE OR MAKEUP AIR SHALL BE PROVIDED BY OTHER APPROVED MEANS PER 5MC 504.6.

Vertical Fenestration (Windows and doors)

Component Description	Ref.	U-factor
W1 - F - SAFETY	WSEC	0.30
W2 - XO - EGRESS	WSEC	0.30
W3 - XO	WSEC	0.30
W4 - XO	WSEC	0.30
W5 - XO - EGRESS	WSEC	0.30
W6 - XO	WSEC	0.30
W7 - XO	WSEC	0.30
W8 - XO	WSEC	0.30

ACTUAL SIZE		Area	UA					
Width	Height							
Qt.	Feet	Feet	Feet					
1	3	0	7	0	1	0	21.0	6.30
1	9	0	6	0	3	2	54.0	16.20
2	2	4	3	0	5	2	14.0	4.20
1	3	0	3	0	5	2	9.0	2.70
2	6	0	6	0	3	2	72.0	21.60
4	4	0	7	0	2	2	112.0	33.60
1	4	0	6	0	8	5	24.0	7.20
2	2	4	5	6	3	2	25.7	7.70

Sum of Vertical Fenestration Area and UA

331.7	99.50
	0.30

Vertical Fenestration Area Weighted U = UA/Area

W9 - C	WSEC	N/A
D1 - GARAGE	WSEC	N/A
D2 - SOLID	WSEC	N/A

1	4	0	2	0	4	8	8.0	N/A
1	16	0	7	0	0	0	112.0	N/A
1	3	0	6	8	0	0	20.0	N/A

SAFETY GLAZING FOR EXISTING OPENING REPLACEMENT:

- 1. GLAZING IN DOORS: SAFETY GLAZING IS REQUIRED IN FIXED AND OPERABLE PANELS OF SWINGING, SLIDING, AND BIFOLD DOORS. SAFETY GLAZING IS NOT REQUIRED IN A DOOR IF THE GLAZED OPENINGS DO NOT ALLOW THE PASSAGE OF A 3 INCH SPHERE, OR THE GLAZING IN THE DOOR IS DECORATIVE.
- 2. GLAZING ADJACENT TO DOORS: GLAZING ADJACENT TO DOORS IS REQUIRED IN THE FOLLOWING LOCATIONS IF THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE: WITHIN 24 INCHES OF EITHER SIDE OF THE DOOR IF GLAZING IS IN THE SAME PLANE AS THE DOOR, OR IF GLAZING IS IN A WALL PERPENDICULAR TO THE DOOR WITHIN 24 INCHES ON THE HINGE SIDE OF AN INSWING DOOR. SAFETY GLAZING IS NOT REQUIRED IF THERE IS AN INTERVENING WALL OR PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING.
- 3. GLAZING IN WINDOWS: SAFETY GLAZING IN WINDOWS IS REQUIRED IF THE INDIVIDUAL PANEL MEETS ALL OF THE FOLLOWING REQUIREMENTS:
 - EXPOSED AREA OF THE INDIVIDUAL PANEL IS GREATER THAN 9 SQUARE FEET.
 - THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES FROM THE FLOOR.
 - THE TOP EDGE OF THE GLAZING IS MORE THAN 36 INCHES ABOVE THE FLOOR.
 - THERE IS A WALKING SURFACE WITHIN 36 INCHES, MEASURED HORIZONTALLY, FROM THE GLAZING.EXCEPTIONS
 - * DECORATIVE GLAZING
 - * WHERE A HORIZONTAL RAIL CAPABLE OF RESISTING 50 PLF OF FORCE WITHOUT MAKING CONTACT WITH THE GLASS IS INSTALLED ON THE ACCESSIBLE SIDE OF THE GLAZING 34-38 INCHES ABOVE WALKING SURFACE.
- 4. GLAZING IN RAILINGS AND GUARDS: ALL GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, IS REQUIRED TO BE SAFETY GLAZING.
- 5. GLAZING AND WET SURFACE: GLAZING IN WALLS, ENCLOSURES, OR FENCES AROUND SHOWERS, BATHTUBS, POOLS, HOT TUBS, SPAS, SAUNAS, AND STEAM ROOMS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES FROM THE STANDING OR WALKING SURFACE IS REQUIRED TO BE SAFETY GLAZING. SAFETY GLAZING IS NOT REQUIRED WHERE THE GLAZING IS MORE THAN 60 INCHES, HORIZONTALLY, FROM THE EDGE OF THE WATER.

REFER TO IRC SECTION 312.2 FOR ADDITIONAL WINDOW FALL PROTECTION REQUIREMENTS.

WINDOW & DOOR SCHEDULE NOTES:

- 1. XO = SLIDER, SH = SINGLE HUNG, DH = DOUBLE HUNG, FH = PICTURE, C = CASEMENT
- 2. IF CONTRACTOR DECIDES TO REPLACE WINDOWS, THEY MUST MEET ENERGY PERFORMANCE STANDARDS, HEAT TREATMENT REQUIREMENTS AND EGRESS.
- 3. ALL WINDOWS SHALL BE NFRC CERTIFIED.
- 4. CONTRACTOR TO VERIFY EGRESS AND HEAT TREATMENT REQUIREMENTS WITH WINDOW & DOOR MANUFACTURER.
- 5. EGRESS WINDOWS SIZED FOR "MILGARD STYLE LINE" SERIES WINDOWS. CONTRACTOR TO VERIFY EGRESS REQUIREMENTS IF A DIFFERENT MANUFACTURER / MODEL IS CHOSEN.

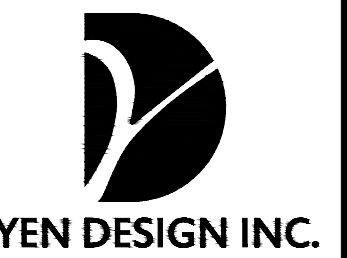
WASHINGTON STATE ENERGY CREDIT CALCULATION:
1113 SF OF NEW HEATED FLOOR AREA, 3 CREDITS REQ'D.

ENERGY CREDITS CHOSEN:

2.0: HEAT PUMP: 1 CREDIT

3.6: HIGH EFFICIENCY HVAC: 2 CREDITS
DUCTLESS SPLIT SYSTEM HEAT PUMPS WITH NO ELECTRIC RESISTANCE HEATING IN THE PRIMARY LIVING AREAS. A DUCTLESS HEAT PUMP SYSTEM WITH A MINIMUM HSPF OF 10 SHALL BE SIZED AND INSTALLED TO PROVIDE HEAT TO ENTIRE DWELLING UNIT AT THE DESIGN OUTDOOR TEMPERATURE.

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GENERAL NOTES &
WINDOW & DOOR
SCHEDULE

JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A1.1

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MAIN FLOOR PLANS

JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A2.1

PLAN KEYNOTES

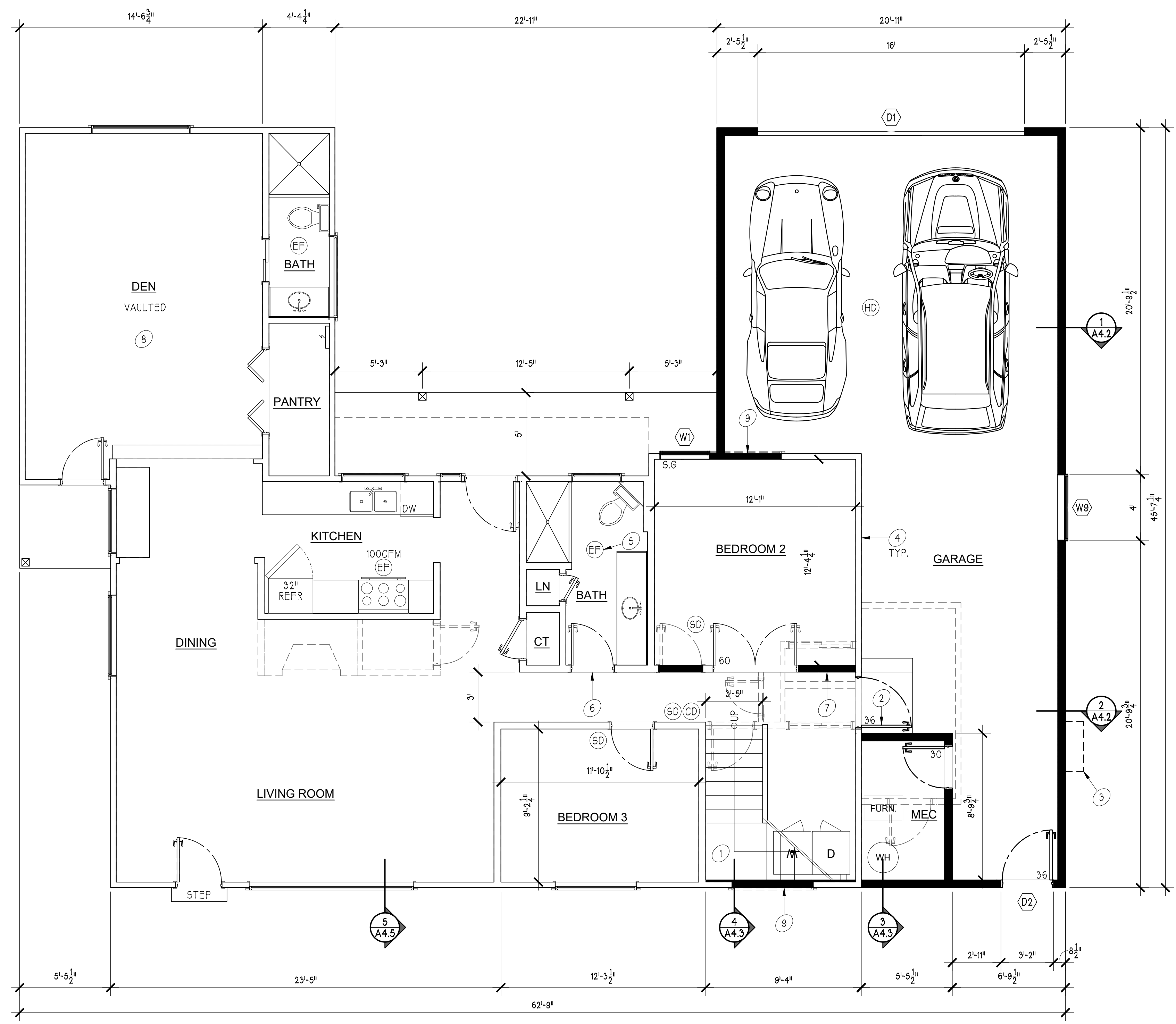
1. STAIR PER 5/A5.1
2. DOOR TO BE 1-3/8" SOLID-CORE WOOD, 1-3/8" SOLID OR HONEYCOMB STEEL, OR 20 MIN. RATED DOOR WITH A SELF-CLOSING DEVICE. SEE SHEET A1.1 FOR ADDITIONAL REQUIREMENT ON SEPARATION BETWEEN DWELLING AND GARAGE.
3. WALL MOUNTED HVAC CONDENSER.
4. MIN. 1/2" GYPSUM WALLBOARD AT GARAGE WALLS & 5/8" TYPE X GYPSUM BOARD ON CEILING SEPARATING THE GARAGE FROM THE DWELLING.
5. 75 CFM CONTINUOUS WHOLE HOUSE FAN AT 0.25" WATER GAUGE WITH A SONE RATING OF 1.0 OR LESS MEASURED AT 0.1 INCHES WATER GAUGE. IF FAN IS TO BE INTERMITTENT, APPLY VENTILATION RATE FACTOR PER IRC M1507.3.3(2) ON PAGE A1.1
6. DOOR SHALL BE LOUVERED OR UNDERCUT TO A MINIMUM OF 1/2 INCH ABOVE THE SURFACE OF THE FINISH FLOOR COVERING.
7. NEW INTERIOR STUD WALL PER 1/A5.1
8. DEN TO NEW VAULTED ROOF ASSEMBLY PER STRUCTURAL PLANS.
9. INFILLED WINDOW/DOOR PER 4/A5.1

LEGEND

- NEW STUD WALL.
- EXISTING WALL TO REMAIN
- INDICATES REFERENCE TO KEYNOTES SEE KEYNOTES ON THIS SHEET FOR BALANCE OF INFORMATION
- SMOKE DETECTOR
- CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP.
- HEAT DETECTOR. TO BE CONNECTED TO ALARM SYSTEM OR SMOKE DETECTOR WITHIN DWELLING.
- EXHAUST FAN (INTERMITTENT) 50 CFM U.N.O.
- SEE DOOR AND WINDOW SCHEDULE ON SHEET A1.1 FOR DETAILED INFO. SEE 2/A5.1 FOR FRAMING INFO & 3/A5.1 FOR INSULATION INFO.
- WINDOW TO BE SAFETY GLAZING

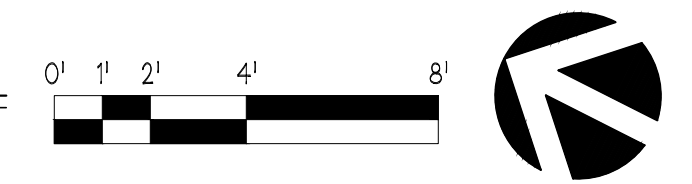
GENERAL NOTES

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- CONTRACTOR TO VERIFY ALL STRUCTURAL LOAD PATHS AND EXISTING SHEAR / BRACED WALL LOCATIONS BEFORE REMOVING ANY WALLS. STRUCTURAL DEVIATIONS FROM THE PLAN SHOULD BE VERIFIED BY A STRUCTURAL ENGINEER OR BUILDING INSPECTOR. YEN DESIGN IS TO BE CONTACTED IF ACTUAL EXISTING FRAMING CONDITIONS VARY FROM PLAN ASSUMPTIONS AFTER CEILING WALL COVERINGS ARE REMOVED.
- SEE SHEET A1.1 FOR COMMON CODE REQUIREMENTS.
- CARBON MONOXIDE DETECTORS SHALL BE INSTALLED ON ALL LEVELS OF THE DWELLING AND PLACED IN PROXIMITY TO SLEEPING AREAS. CO DETECTORS TO BE INTERCONNECTED.
- SMOKE DETECTORS SHALL BE INSTALLED ON ALL LEVELS OF THE DWELLING AND WITHIN EACH SLEEPING AREA. DIRECT WIRING REQUIRED. SMOKE DETECTORS TO BE INTERCONNECTED.
- VERIFY WINDOW & DOOR ROUGH OPENING SIZES WITH WINDOW & DOOR MANUFACTURER.
- ALL DIMENSIONS TO STUD WALL.
- CONTRACTOR TO VFY ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION.
- CONTRACTOR TO DETERMINE & VERIFY ALL WASTE DIVERSION REQUIREMENTS PER THE LOCAL JURISDICTION. CONTRACTOR MAY BE REQUIRED TO REQUEST LEED REPORTS FROM RECEIVING FACILITIES.
- DOORS WITHOUT PLACEMENT DIMENSIONS WILL BE 3" OFF WALL OR ON CENTER, AS APPROPRIATE.
- EXHAUST FANS IN UPPER LEVEL TO BE VENTED THROUGH ROOF.
- CONTRACTOR TO VERIFY EXHAUST POINTS ARE NOT LESS THAN 3' FROM PROPERTY LINES, 3' FROM OPERABLE OPENINGS INTO THE BUILDING, AND 10' FROM MECHANICAL AIR INTAKES.



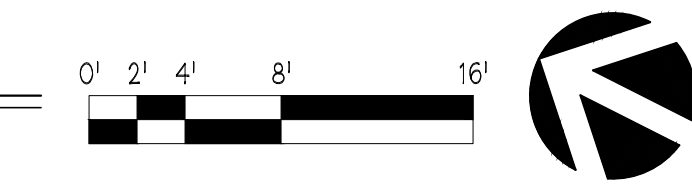
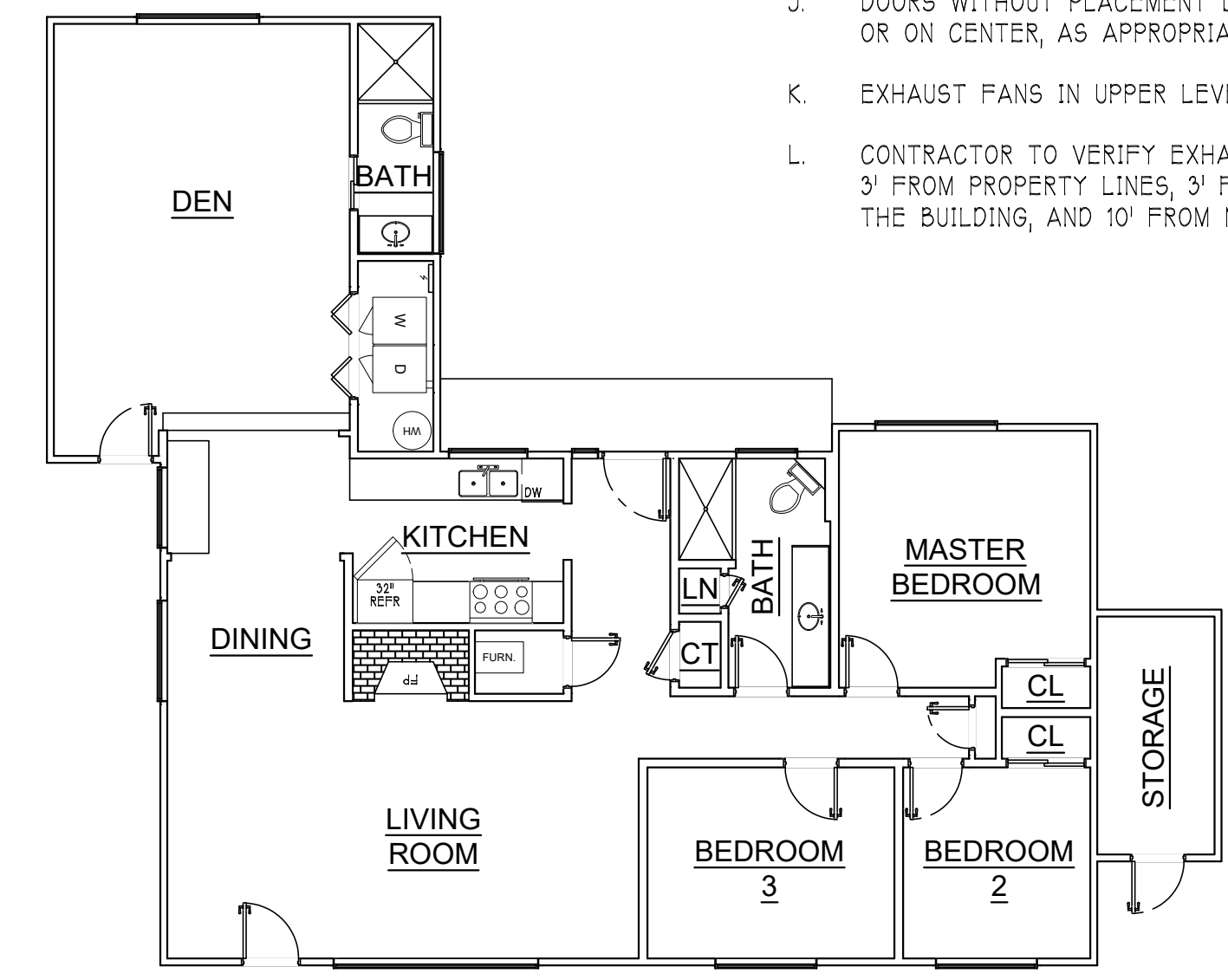
PROPOSED MAIN FLOOR PLAN

22x34: SCALE 1/4" = 1'-0"
11x17: SCALE 1/8" = 1'-0"



EXISTING MAIN FLOOR PLAN

22x34: SCALE 1/8" = 1'-0"
11x17: SCALE 1/16" = 1'-0"



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MERCER ISLAND, WA

UPPER FLOOR PLAN

JOB NO. 21-0405
HALF SCALE 11x17
FULL SCALE 22x34
SHEET

A2.2

PLAN KEYNOTES

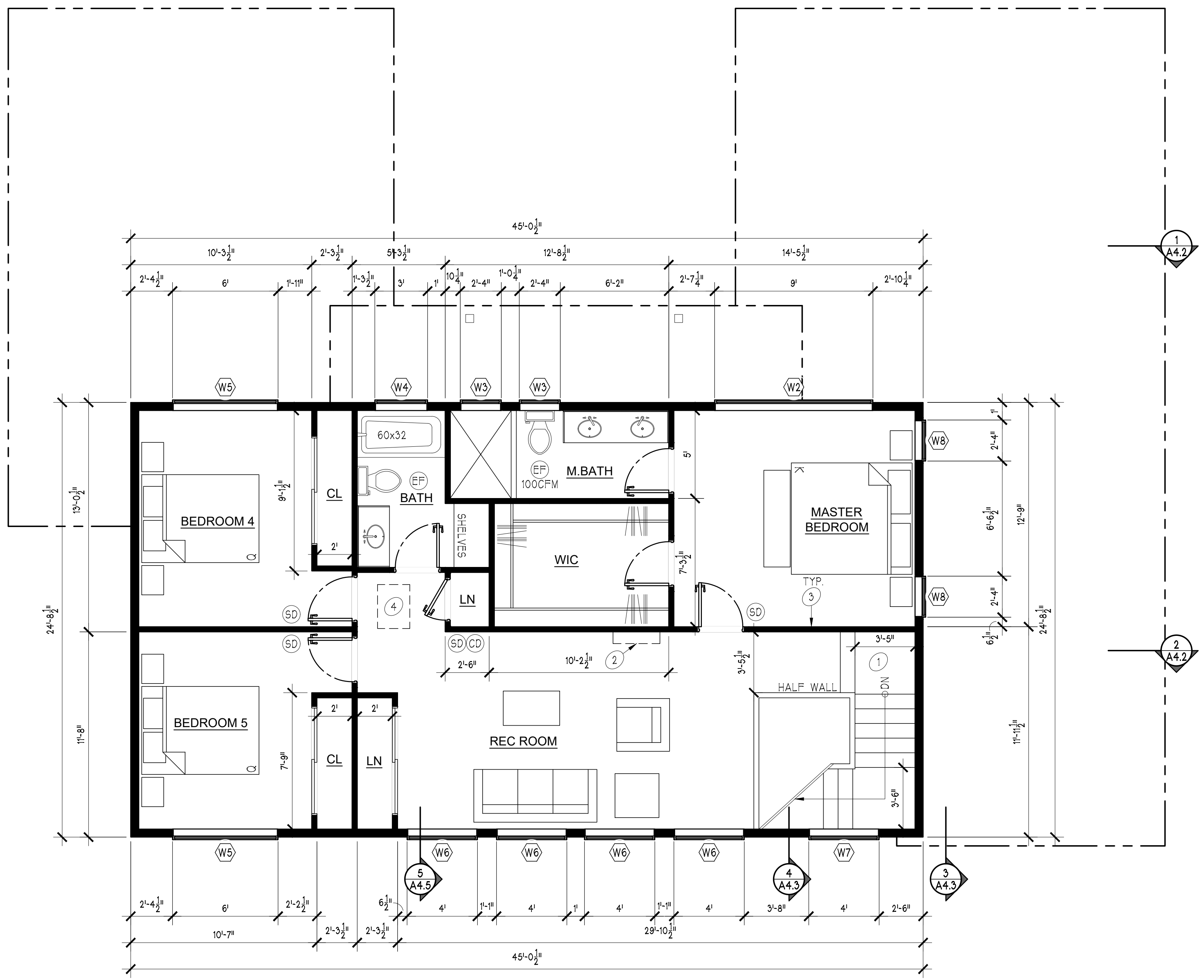
1. STAIR PER 5/A5.1
2. AIR HANDLER FOR MINI SPLIT SYSTEM LOCATION. TO BE PRIMARY HEAT SOURCE. ELECTRIC WALL HEATERS TO BE INSTALLED IN OTHER HABITABLE/BATH ROOMS AS NEEDED. SEE SHEET A11 FOR BALANCE OF INFO.
3. NEW INTERIOR STUD WALL PER 1/A5.1
4. ATTIC ACCESS DOOR TO BE A MIN OF 22"x30"

LEGEND

- NEW STUD WALL.
- ROOF OUTLINE BELOW
- ⊕ INDICATES REFERENCE TO KEYNOTES SEE KEYNOTES ON THIS SHEET FOR BALANCE OF INFORMATION
- ⊙(SD) SMOKE DETECTOR
- ⊙(CD) CARBON MONOXIDE DETECTOR WITH BATTERY BACKUP.
- ⊙(HD) HEAT DETECTOR. TO BE CONNECTED TO ALARM SYSTEM OR SMOKE DETECTOR WITHIN DWELLING.
- ⊙(EF) EXHAUST FAN (INTERMITTENT) 50 CFM U.N.O.
- ⊕ SEE DOOR AND WINDOW SCHEDULE ON SHEET A11 FOR DETAILED INFO. SEE 1/A5.1 FOR FRAMING INFO & 3/A5.1 FOR INSULATION INFO.
- S.G. WINDOW TO BE SAFETY GLAZING

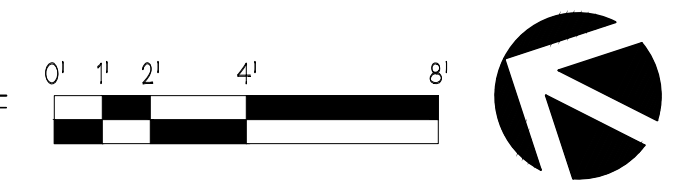
GENERAL NOTES

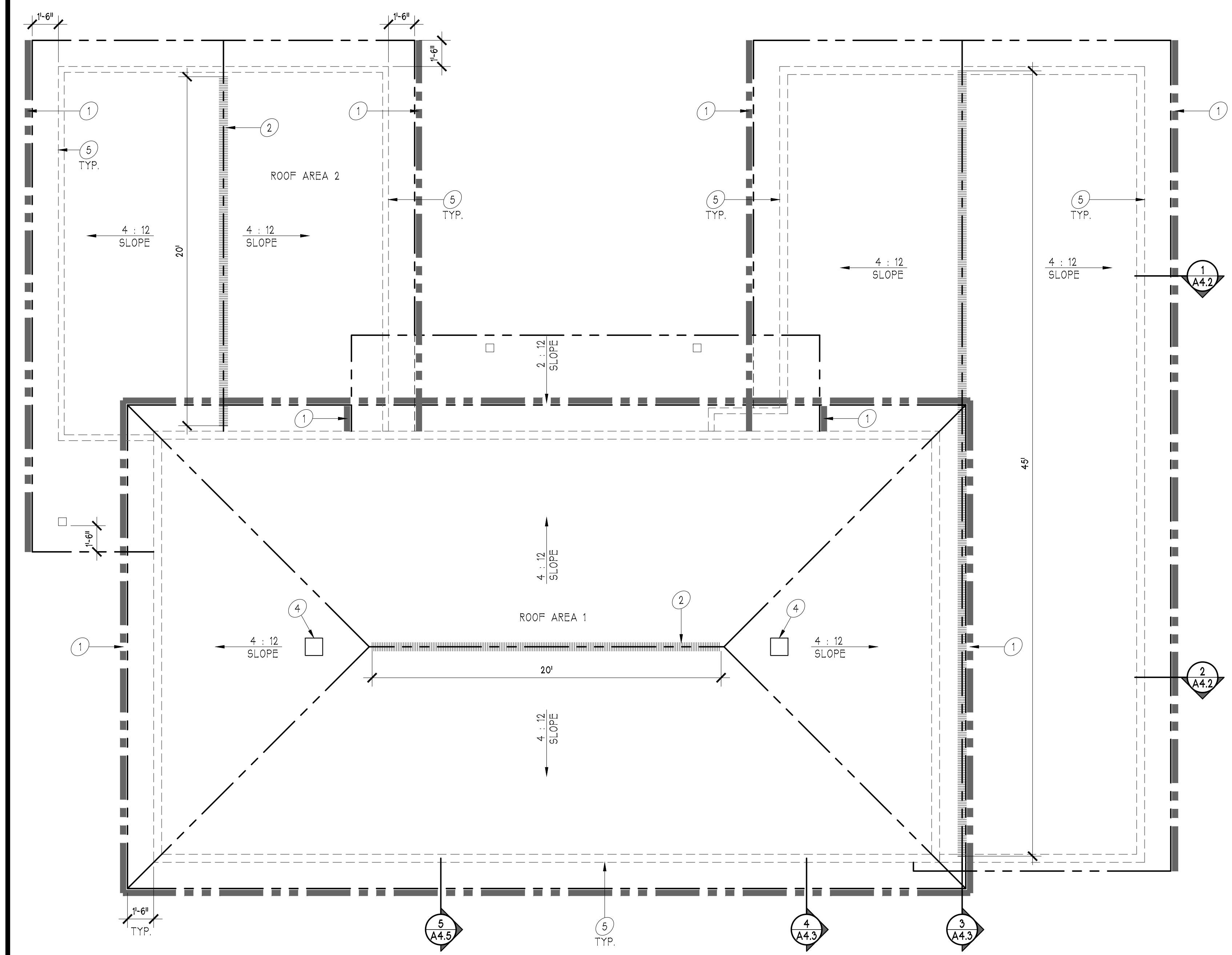
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- SEE SHEET A11 FOR COMMON CODE REQUIREMENTS.
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- SMOKE DETECTORS SHALL BE INSTALLED ON ALL LEVELS OF THE DWELLING AND WITHIN EACH SLEEPING AREA. DIRECT WIRING REQUIRED. SMOKE DETECTORS TO BE INTERCONNECTED.
- VERIFY WINDOW & DOOR ROUGH OPENING SIZES WITH WINDOW & DOOR MANUFACTURER.
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- CONTRACTOR TO VFY ALL DIMENSIONS ON SITE PRIOR TO CONSTRUCTION.
- CONTRACTOR TO DETERMINE & VERIFY ALL WASTE DIVERSION REQUIREMENTS PER THE LOCAL JURISDICTION. CONTRACTOR MAY BE REQUIRED TO REQUEST LEED REPORTS FROM RECEIVING FACILITIES.
- DOORS WITHOUT PLACEMENT DIMENSIONS WILL BE 3" OFF WALL OR ON CENTER, AS APPROPRIATE.
- EXHAUST FANS IN UPPER LEVEL TO BE VENTED THROUGH ROOF.
- CONTRACTOR TO VERIFY EXHAUST POINTS ARE NOT LESS THAN 3' FROM PROPERTY LINES, 3' FROM OPERABLE OPENINGS INTO THE BUILDING, AND 10' FROM MECHANICAL AIR INTAKES.



PROPOSED UPPER FLOOR PLAN

22x34: SCALE 1/4" = 1'-0"
11x17: SCALE 1/8" = 1'-0"





PLAN KEYNOTES

1. DOWN SPOUT LOCATION. SEE DWC PLAN FOR MORE INFO.
2. (20 LINEAR FT) RIDGE EXHAUST VENT LOCATION. INSTALLATION PER MANUFACTURER'S SPECIFICATION. (6 SQ-IN NFVA PER LINEAR FOOT = 120 TOTAL)
3. (45 LINEAR FT) RIDGE EXHAUST VENT LOCATION. INSTALLATION PER MANUFACTURER'S SPECIFICATION. (6 SQ-IN NFVA PER LINEAR FOOT = 270 TOTAL)
4. REQUIRED PV-14-C1-BL ROOF VENT WITH A MIN NET CLEAR OPENING OF 144 SQ-IN
5. PROVIDE VENTED BLOCKS AT OVERHANGS IN EACH BAY. (3) 2" HOLES IN EACH BLOCK.

LEGEND

- STRUCTURE BELOW
- - - - - ROOF LINE
- ▬▬▬▬▬ GUTTER
- ▬▬▬▬▬ ROOF VENT
- ⊕ # INDICATES REFERENCE TO KEYNOTES SEE KEYNOTES ON THIS SHEET FOR BALANCE OF INFORMATION

GENERAL NOTES

- PLANS MUST BE APPROVED BY THE GOVERNING BUILDING OFFICIAL OR PROFESSIONAL ENGINEER PRIOR TO WORK COMMENCING.
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- CONTRACTOR TO VERIFY EXHAUST POINTS ARE NOT LESS THAN 3' FROM PROPERTY LINES, 3' FROM OPERABLE OPENINGS INTO THE BUILDING, AND 10' FROM MECHANICAL AIR INTAKES.

ROOF VENT CALC.

ROOF AREA 1:
 $\frac{110 \text{ SQ-FT}}{300 \text{ SQ-FT}} = 3.71 \text{ SQ-FT OR } 535 \text{ SQ-IN OF NET CLEAR AREA ATTIC ATTIC VENTILATION.}$

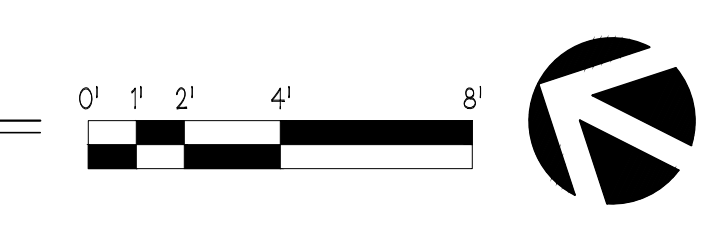
ROOF AREA 2:
 $\frac{388 \text{ SQ-FT}}{300 \text{ SQ-FT}} = 1.33 \text{ SQ-FT OR } 192 \text{ SQ-IN OF NET CLEAR AREA ATTIC ATTIC VENTILATION.}$

ROOF AREA 3:
 $\frac{723 \text{ SQ-FT}}{300 \text{ SQ-FT}} = 2.44 \text{ SQ-FT OR } 352 \text{ SQ-IN OF NET CLEAR AREA ATTIC ATTIC VENTILATION.}$

VENTILATION OF ALL BAY SPACES OVER HEATED AREAS TO BE DISTRIBUTED AS SUCH:
 1/2 GABLE, ROOF JACK, OR RIDGE VENTING
 1/2 BIRD BLOCK OR SOFFIT VENTING.

PROPOSED ROOF PLAN

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"



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ROOF PLAN

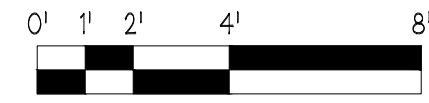
JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A2.3



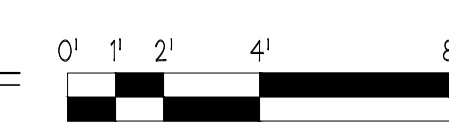
NORTH-EAST ELEVATION

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"

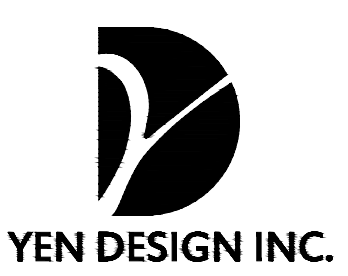


SOUTH-WEST ELEVATION

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"



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ELEVATIONS

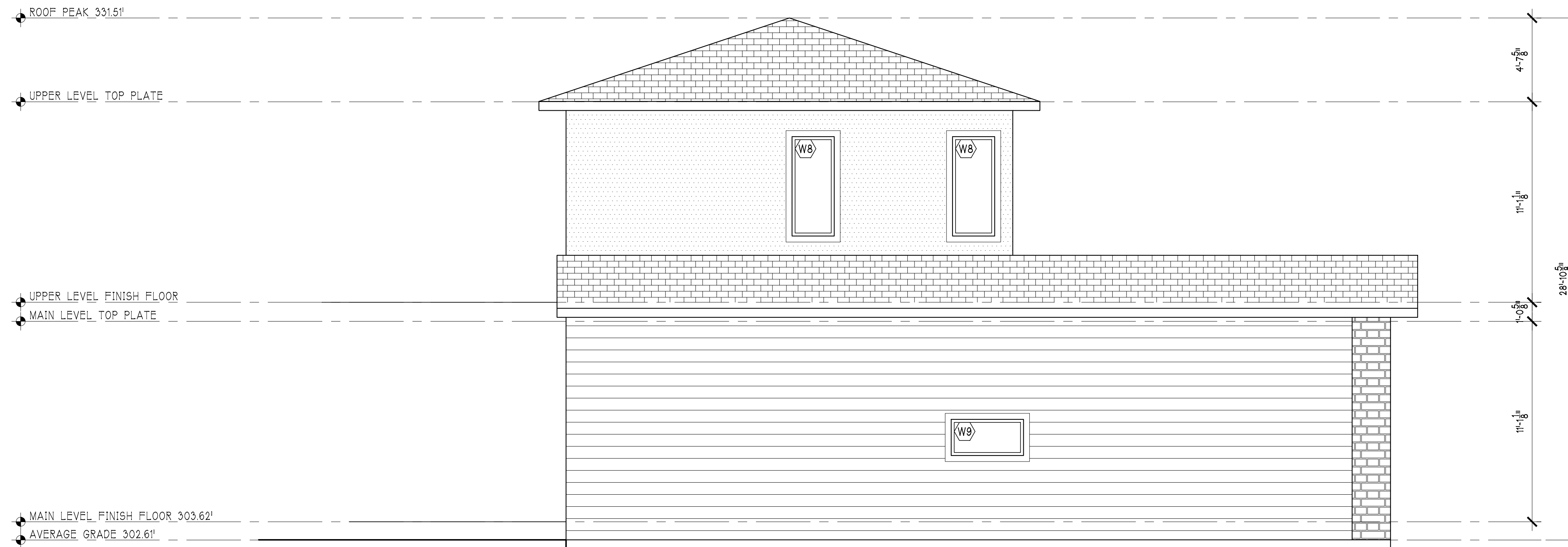
JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A3.1



NORTH-WEST ELEVATION

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"



SOUTH-EAST ELEVATION

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"



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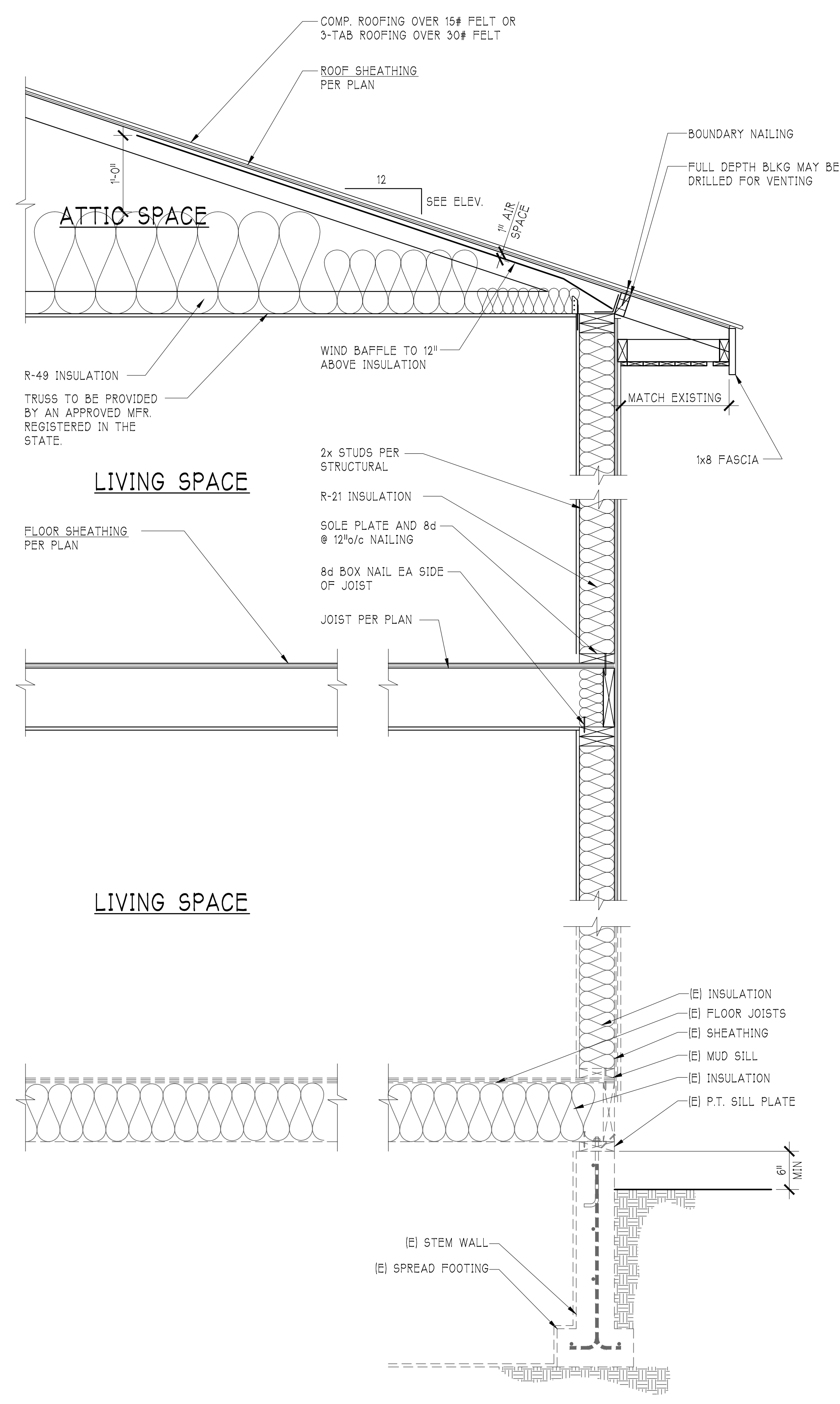
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ELEVATIONS

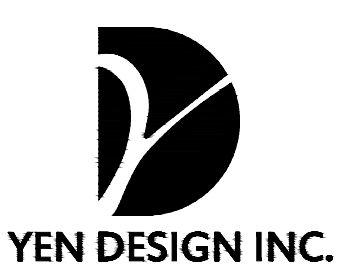
JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A3.2

STRUCTURAL ELEMENTS ARE FOR REFERENCE ONLY. IF DISCREPANCIES OCCUR, STRUCTURAL DRAWINGS GOVERN DESIGN.



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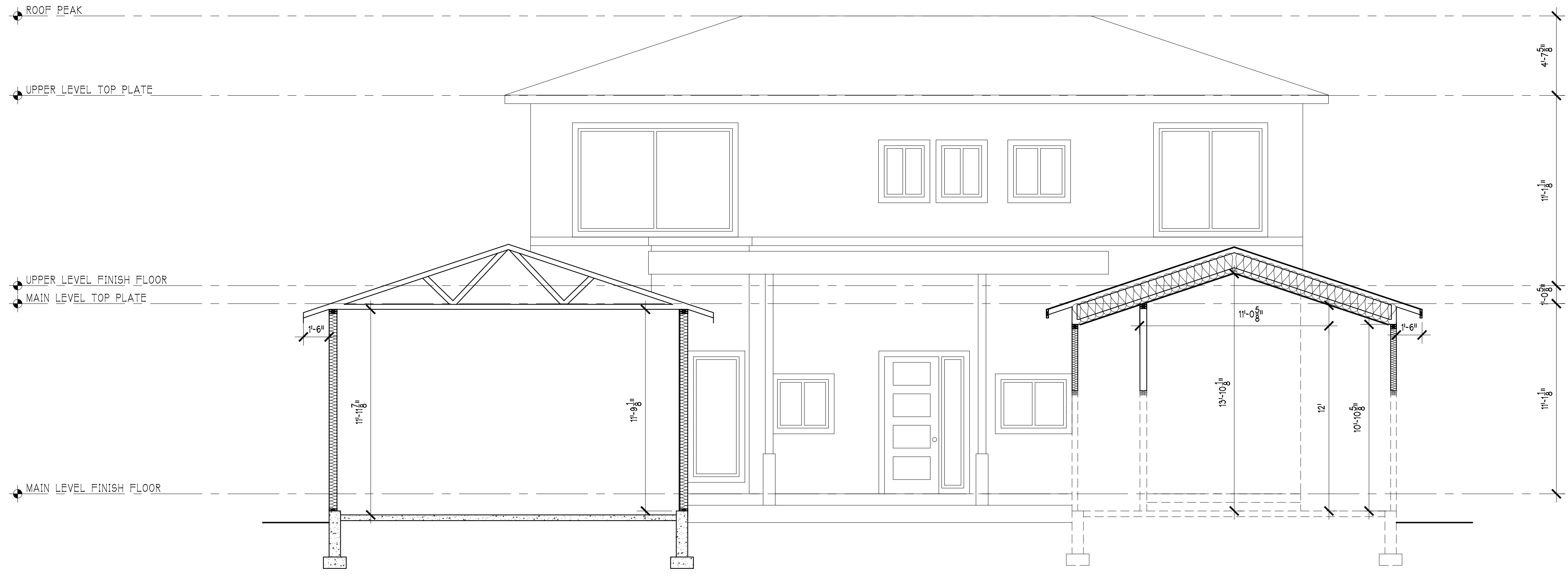
A RESIDENTIAL REMODEL & ADDITION
4029 MERCER ISLAND
AVENUE ATWAL
4029 97TH AVE SE
MERCER ISLAND, WA

BUILDING SECTIONS

JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

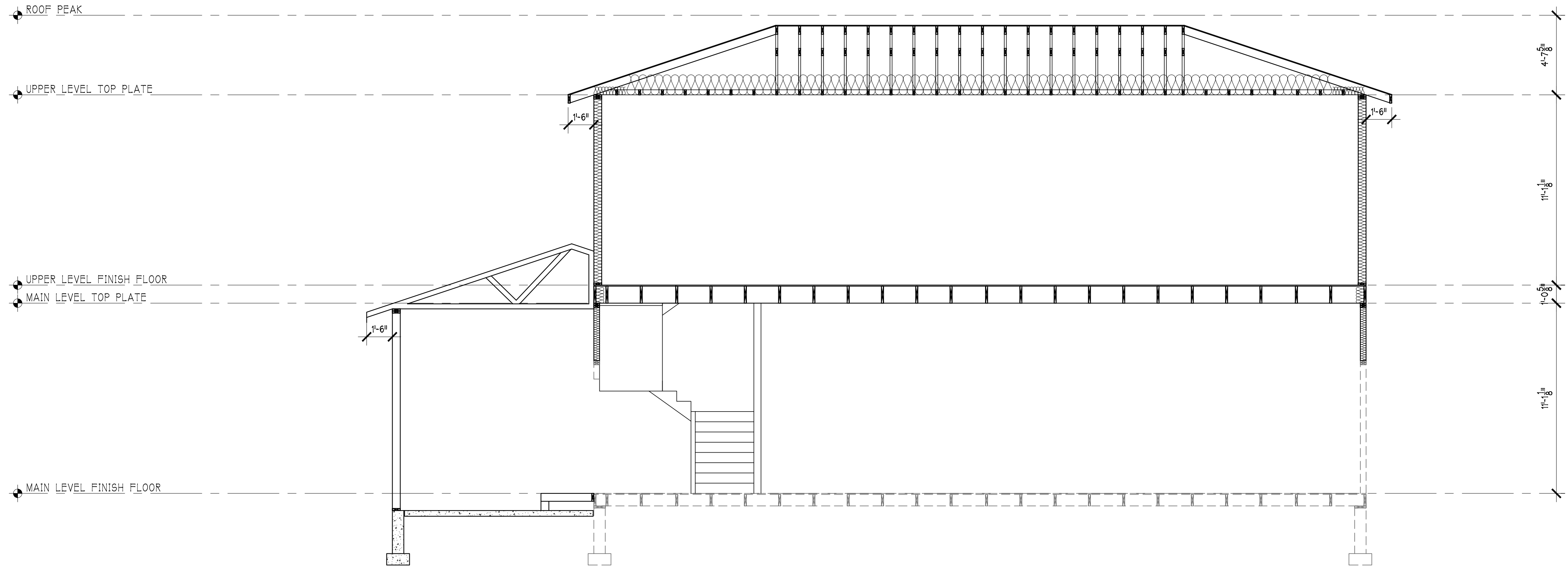
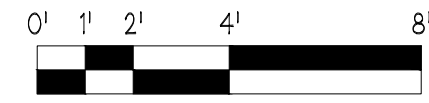
A4.1

1 TYP ADDITION WALL SECTION
A4.1 22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 2/8"=1'-0"



SECTION 1

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"



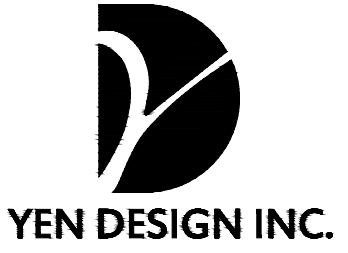
SECTION 2

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"



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REV	DATE	DESCRIPTION
0	04.04.23	PERMIT SUBMITTAL



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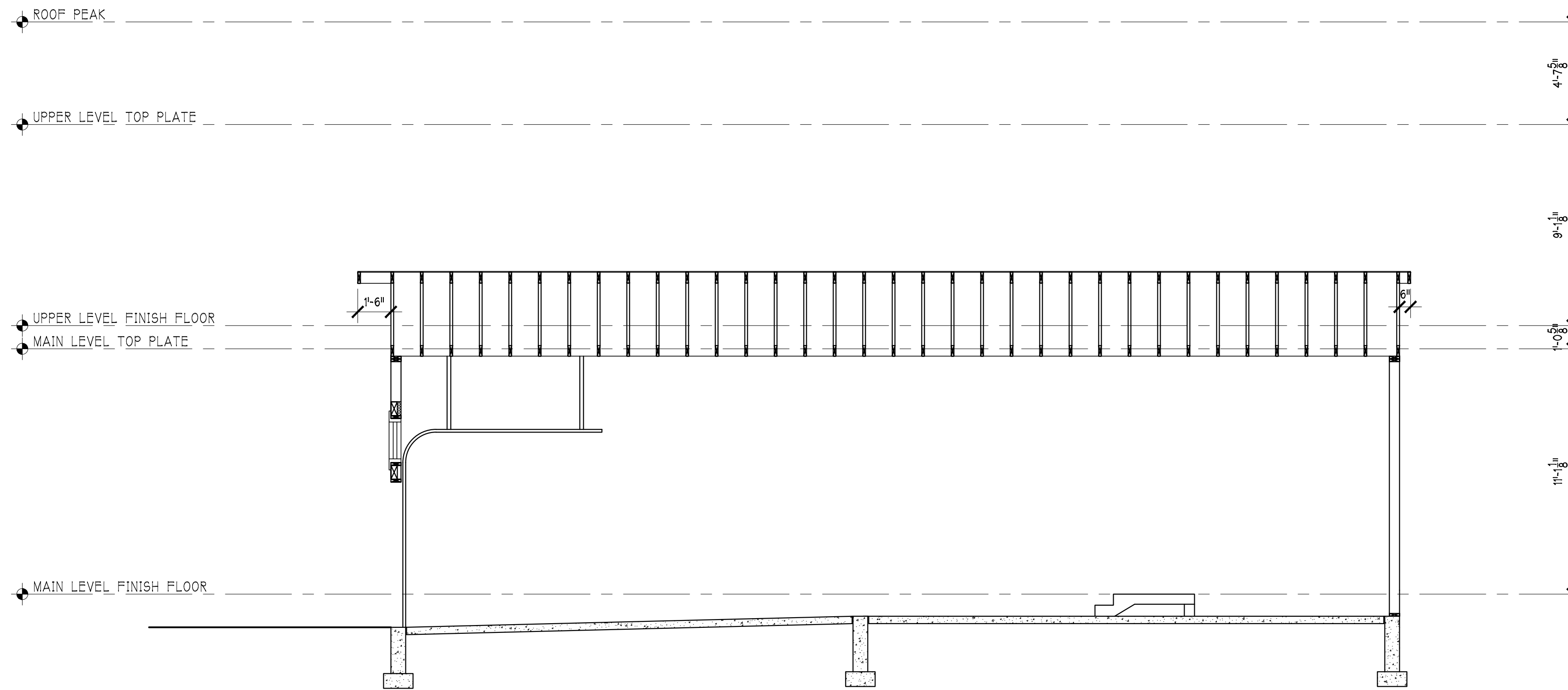
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BUILDING SECTIONS

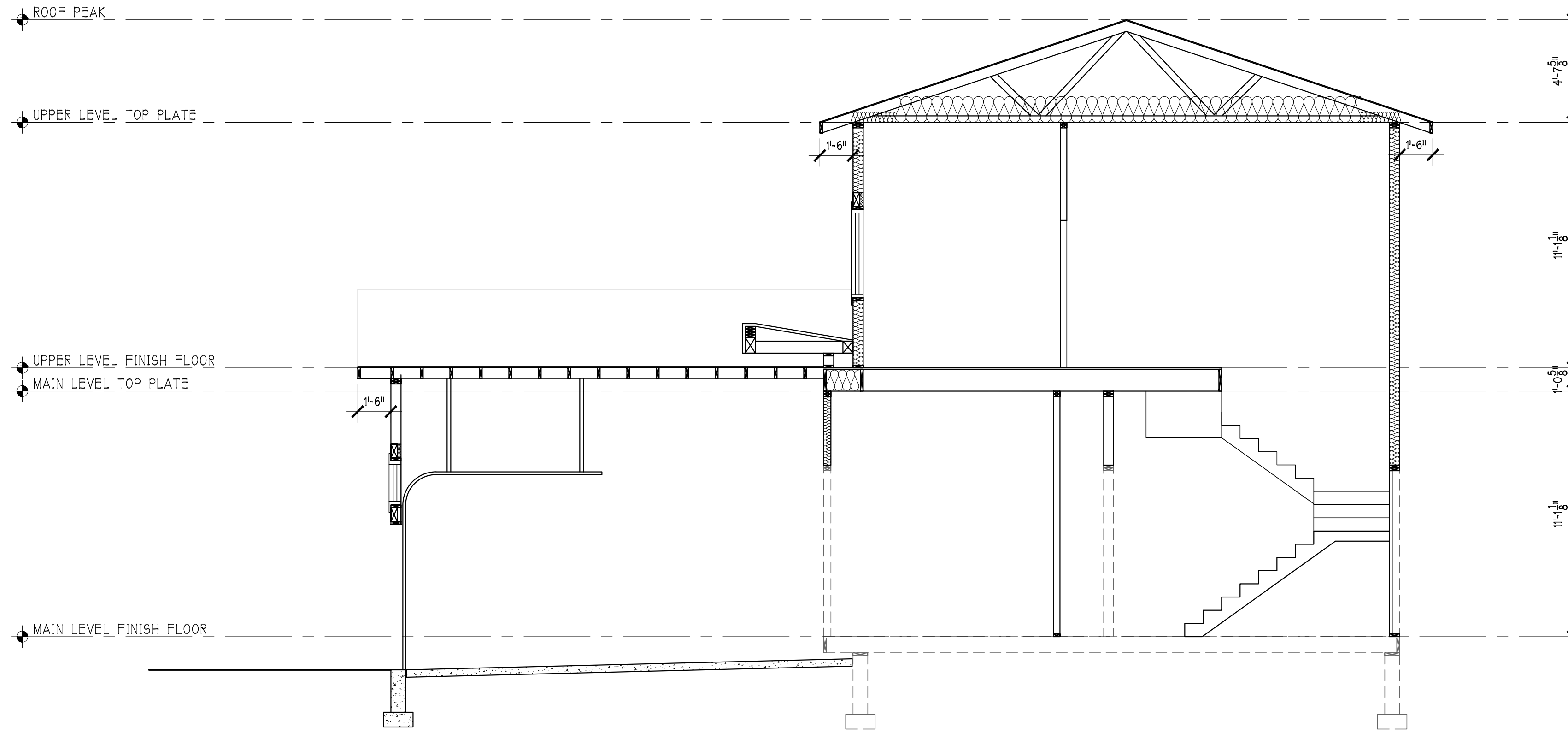
JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

A4.2



SECTION 3

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"

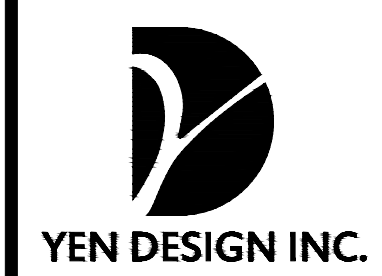


SECTION 4

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"

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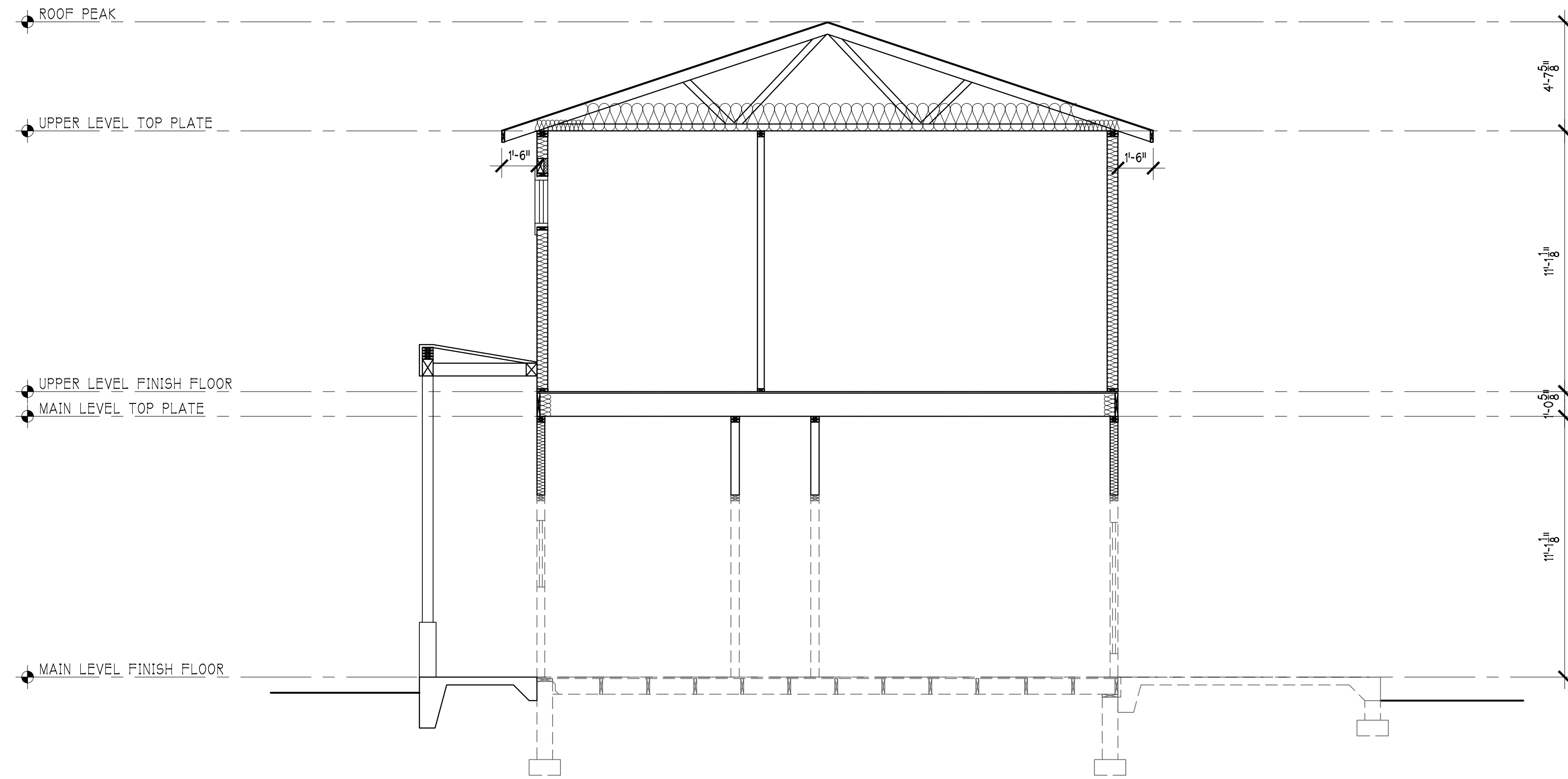
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BUILDING SECTIONS

JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

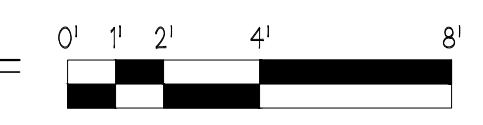
A4.3



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SECTION 5

22x34: SCALE 1/4" = 1'-0"
 11x17: SCALE 1/8" = 1'-0"



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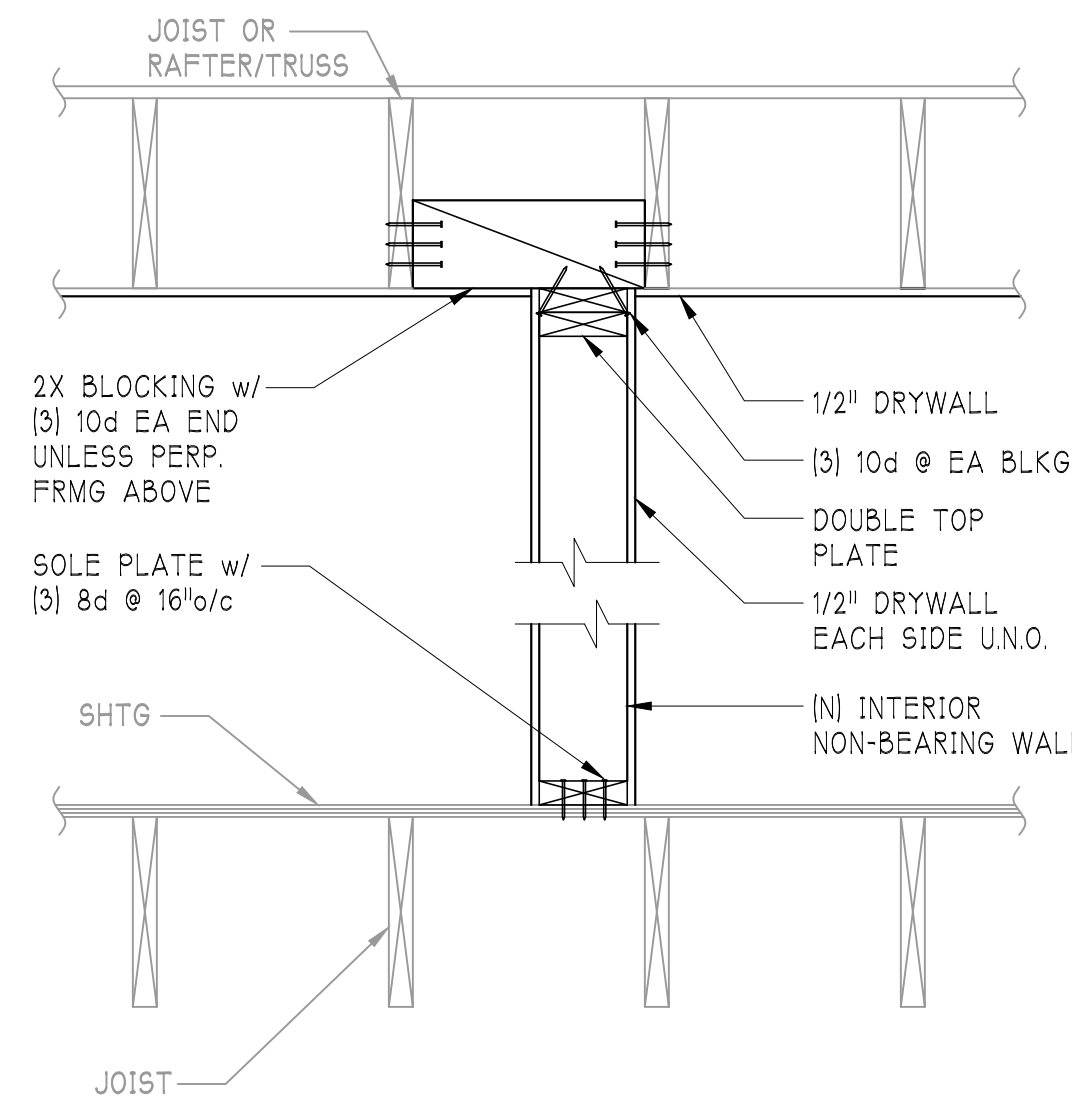
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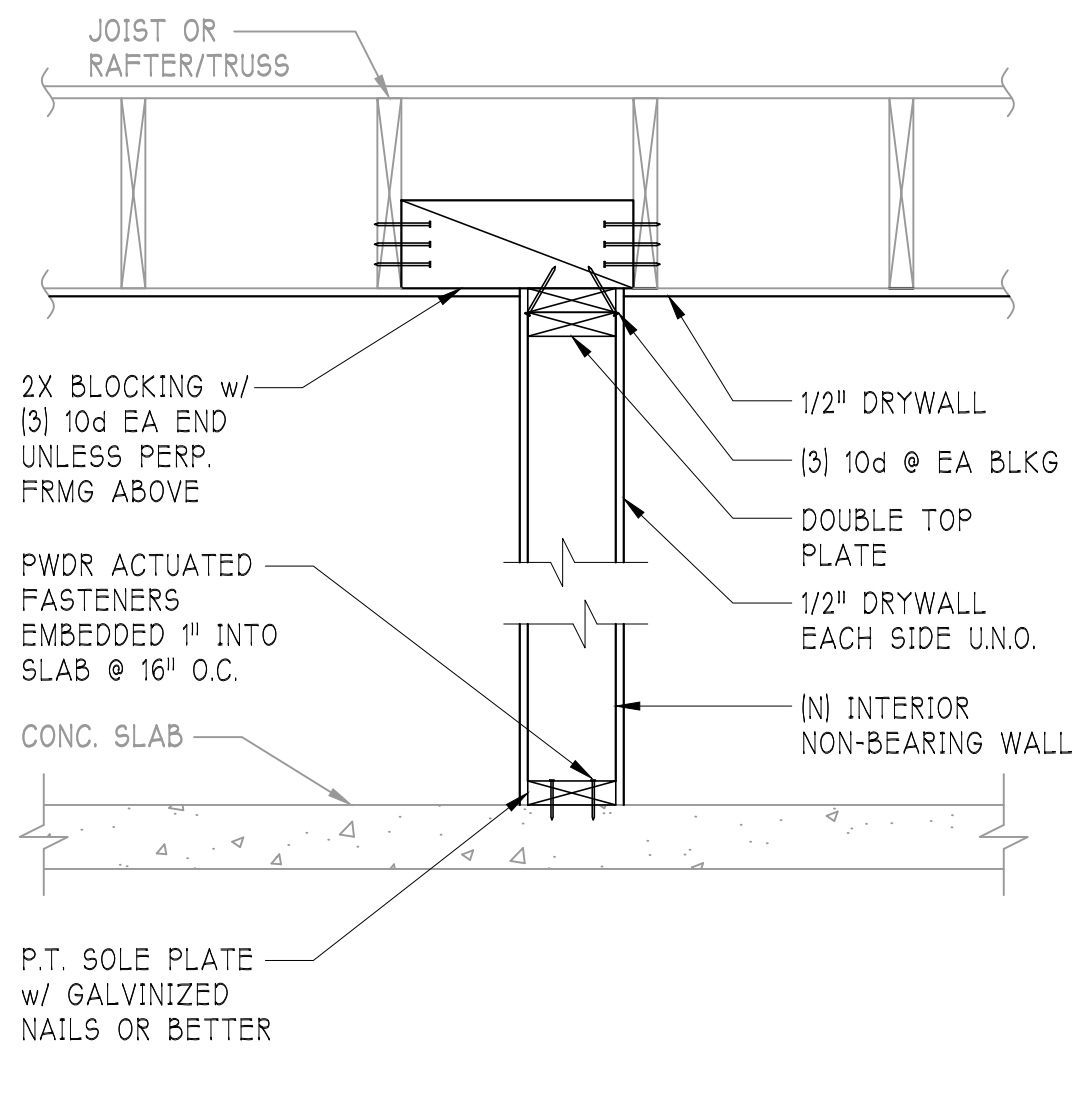
BUILDING SECTIONS

JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	

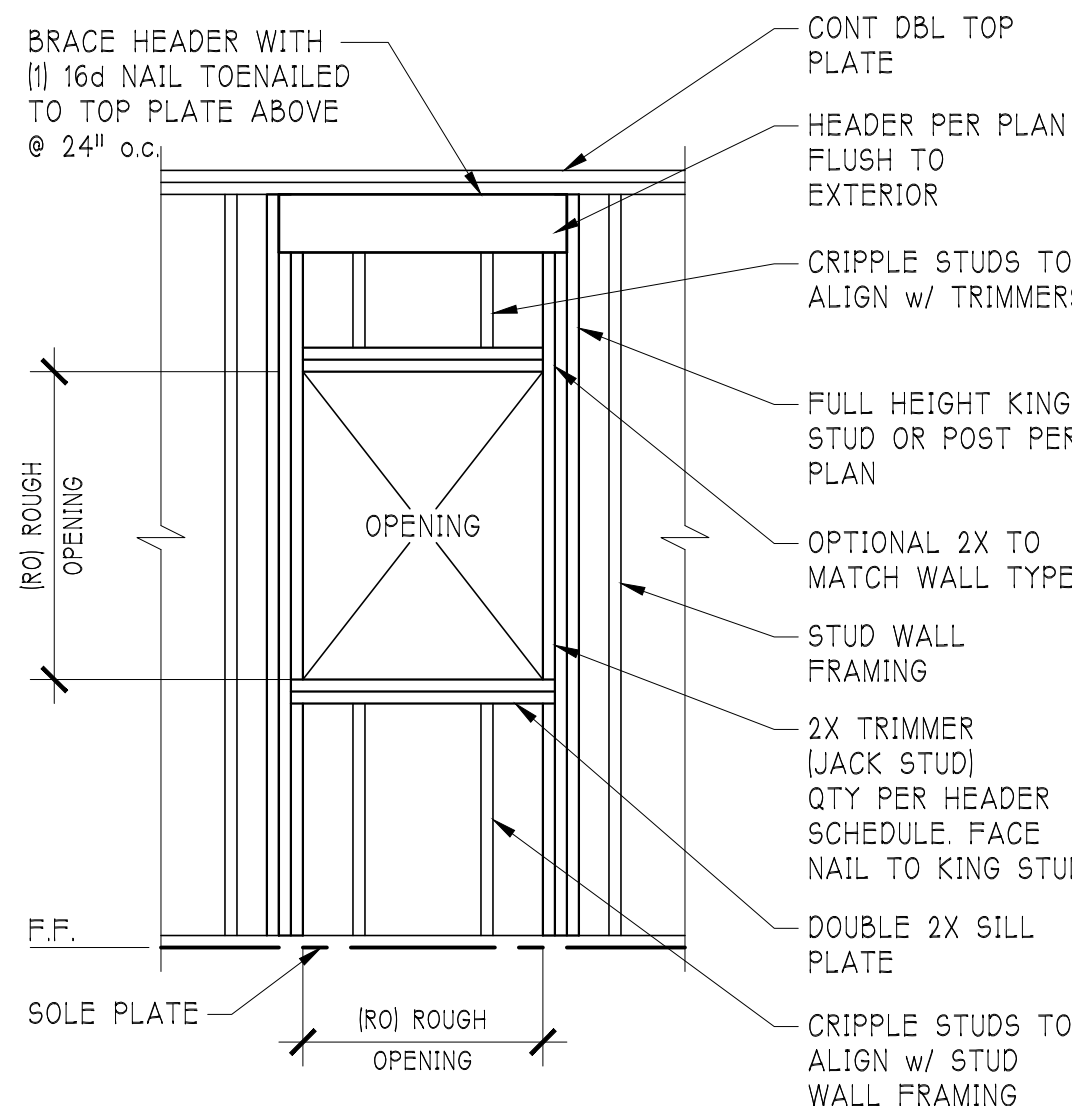
A4.4



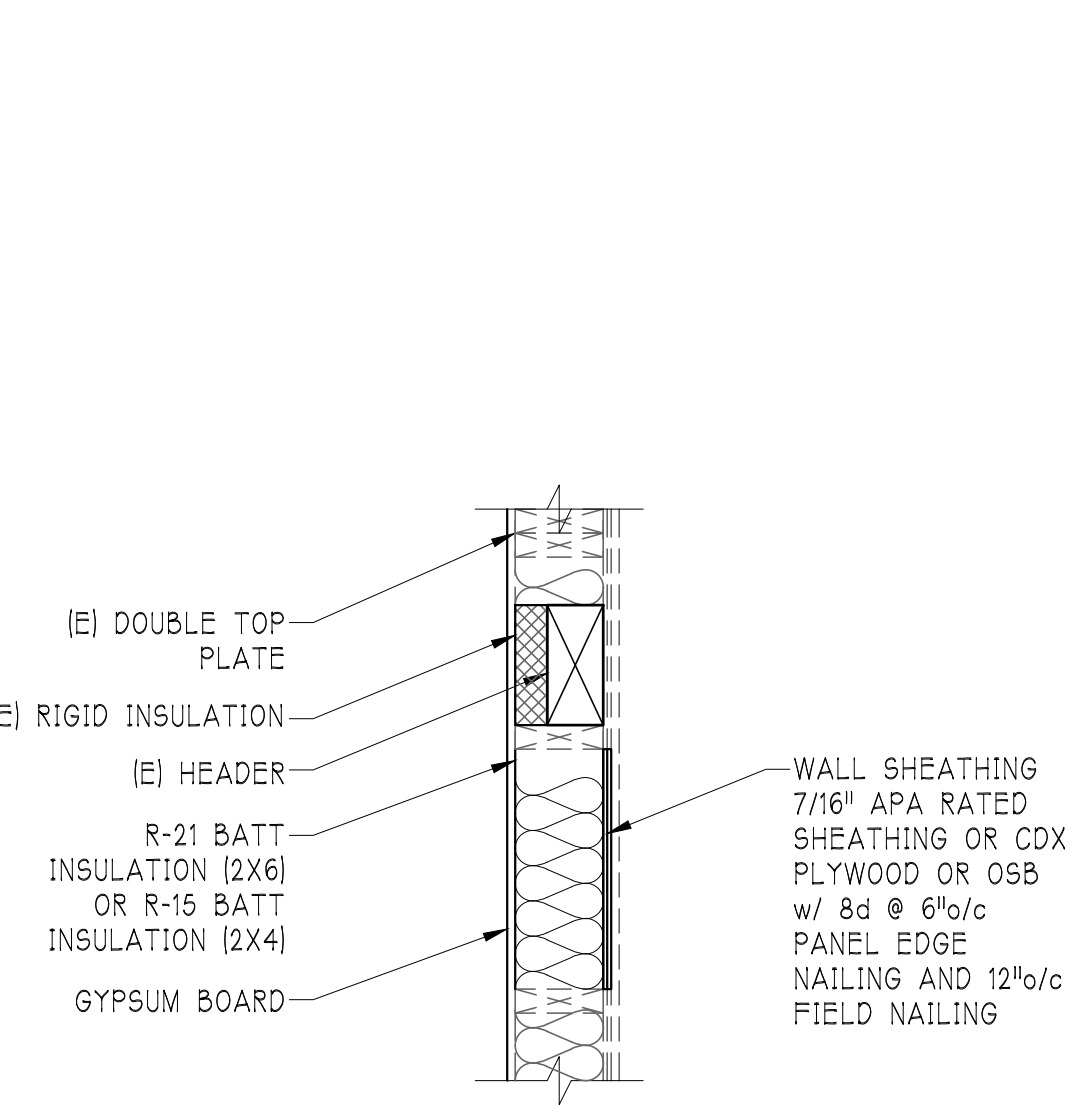
1 NEW INTERIOR WALL SECTION
A5.1 SCALE: 1"=1'-0"



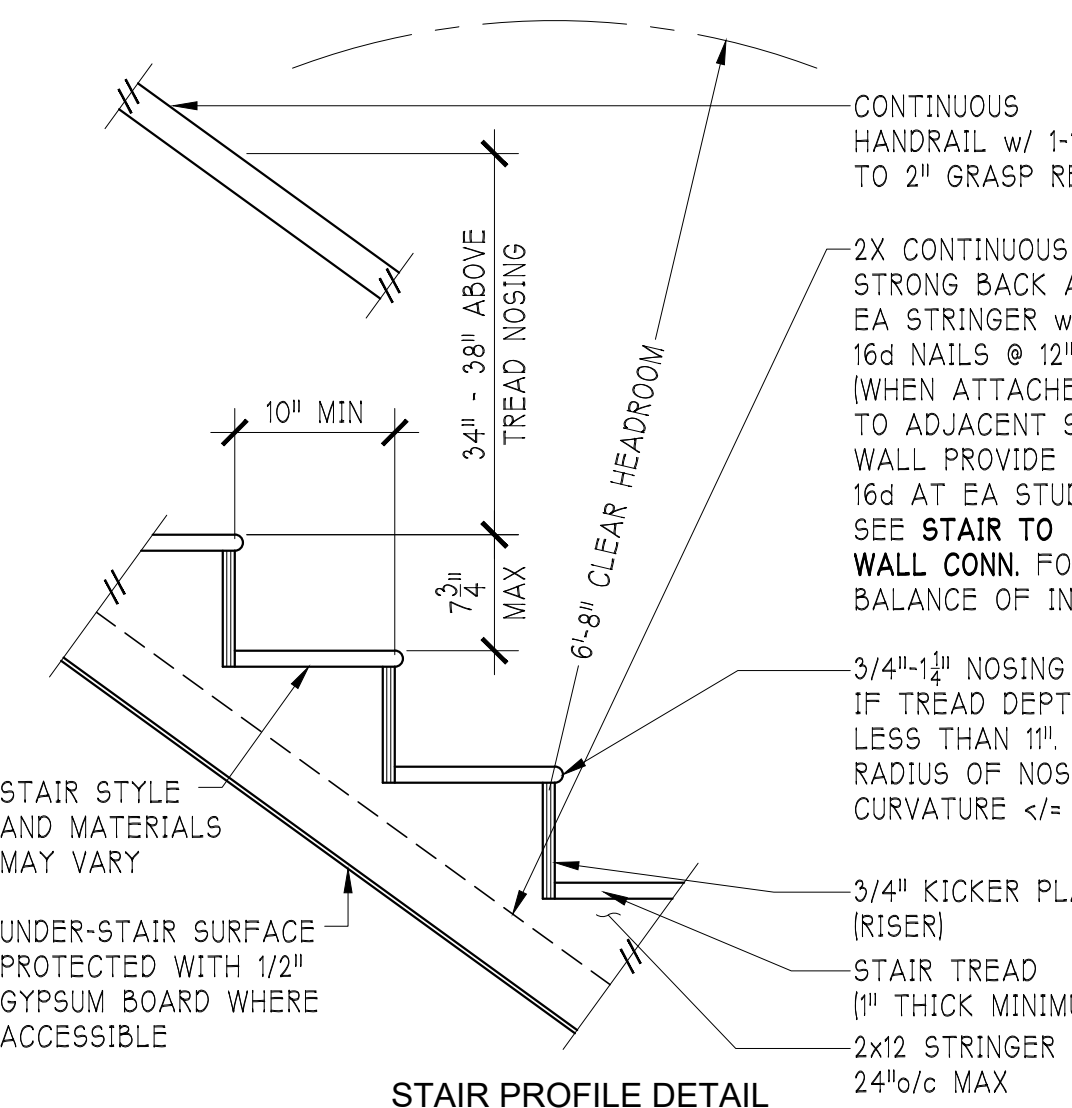
2 TYP. OPENING FRAMING
A5.1 SCALE: 1/2"=1'-0"



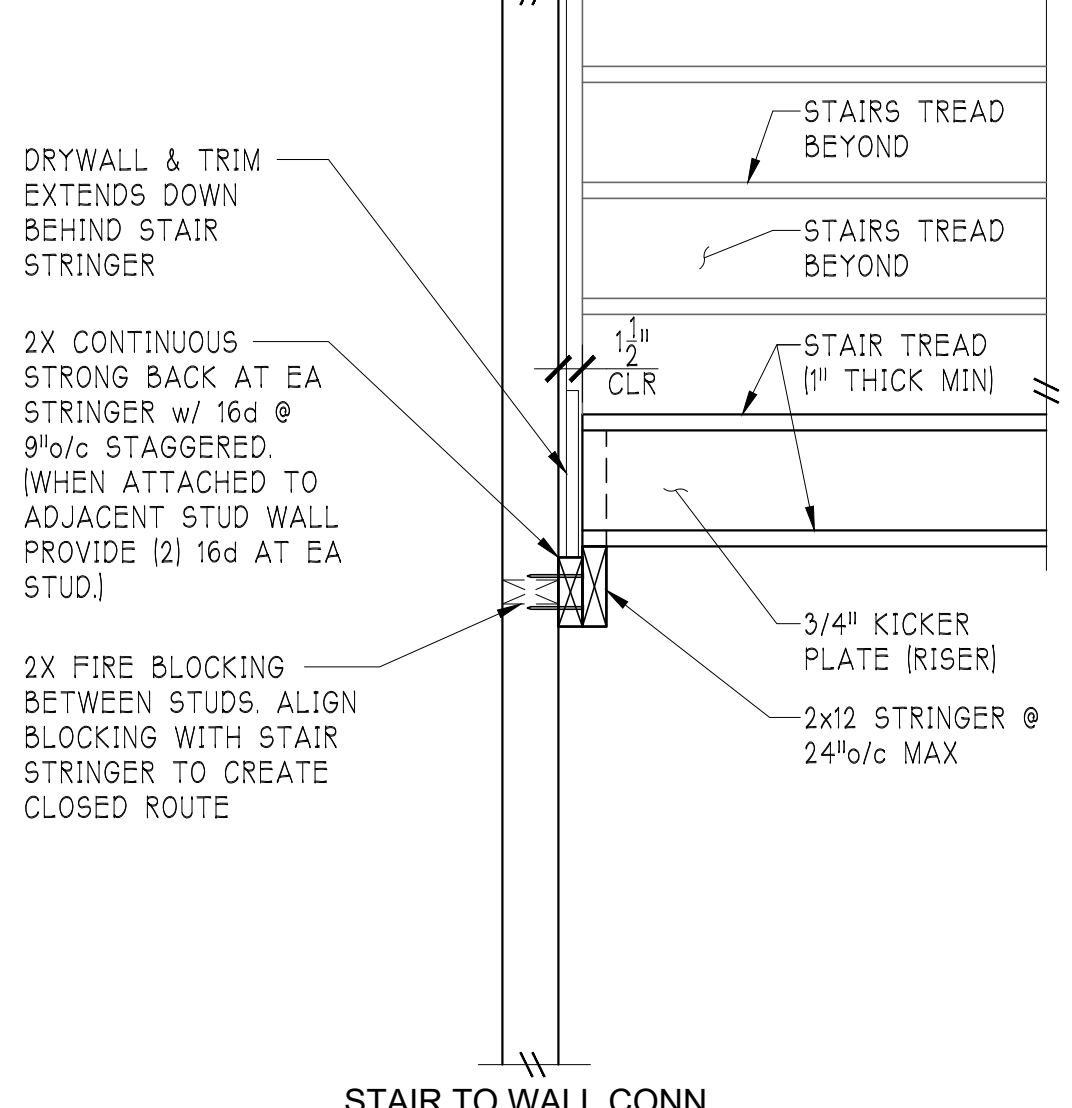
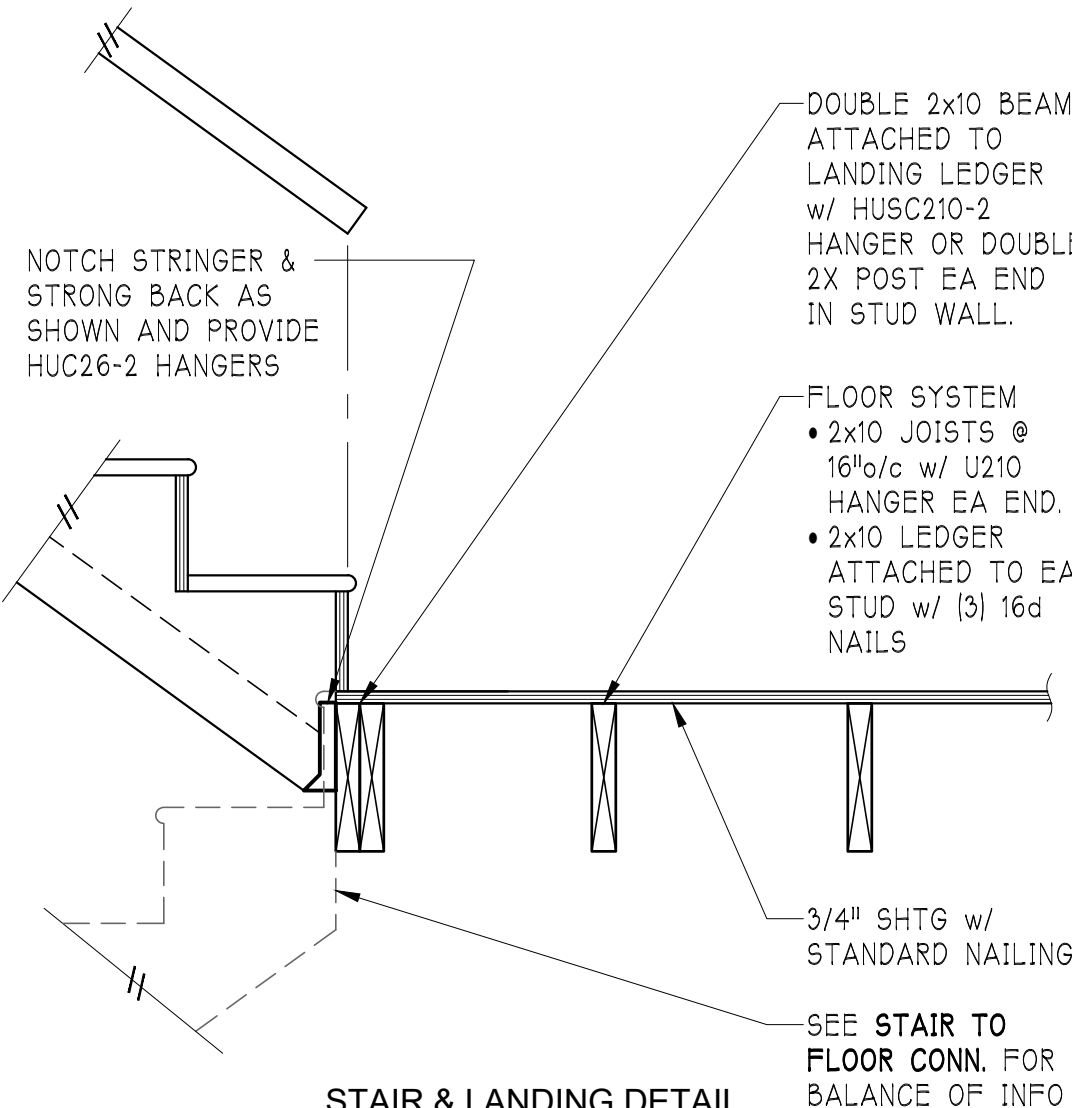
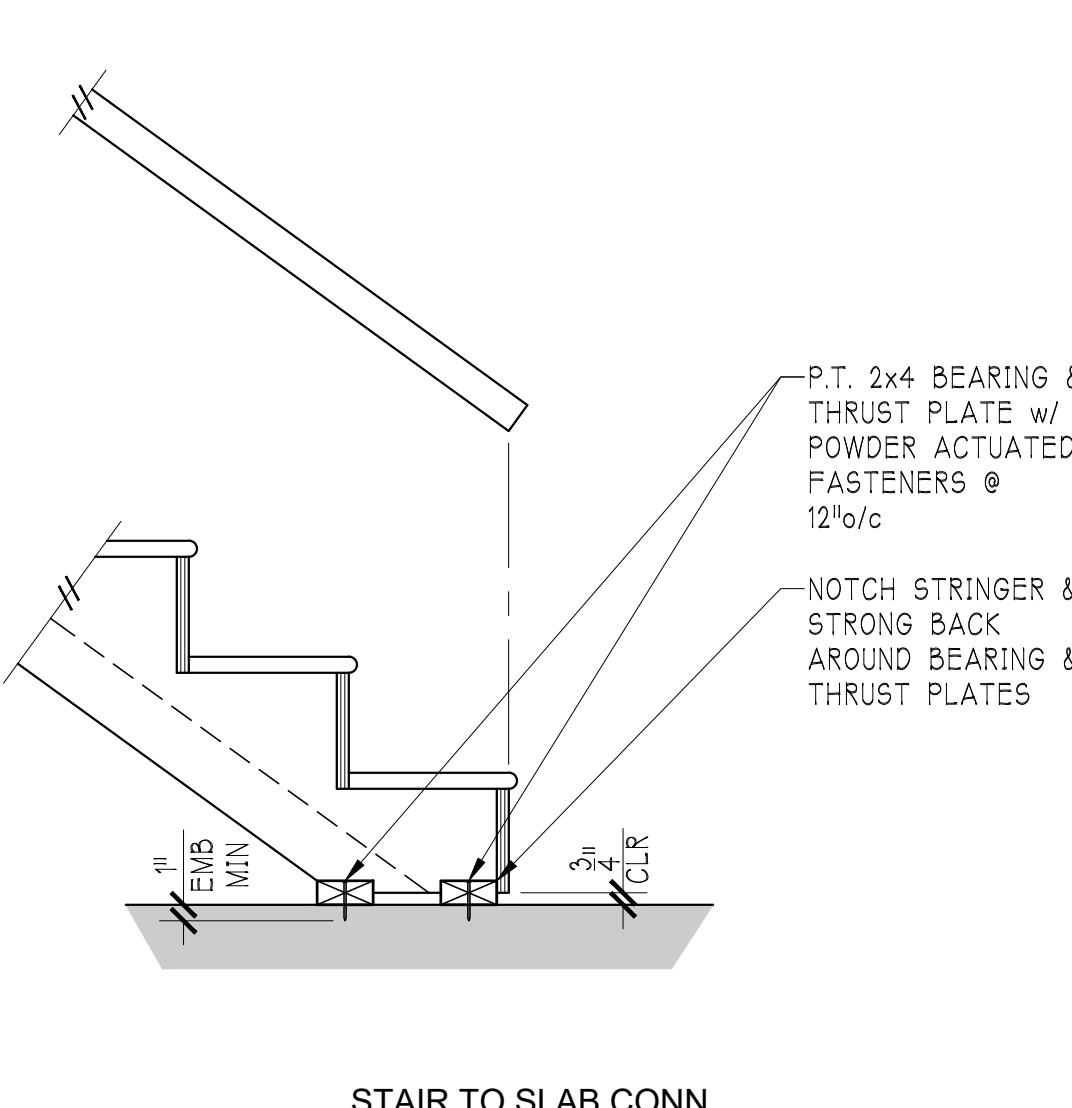
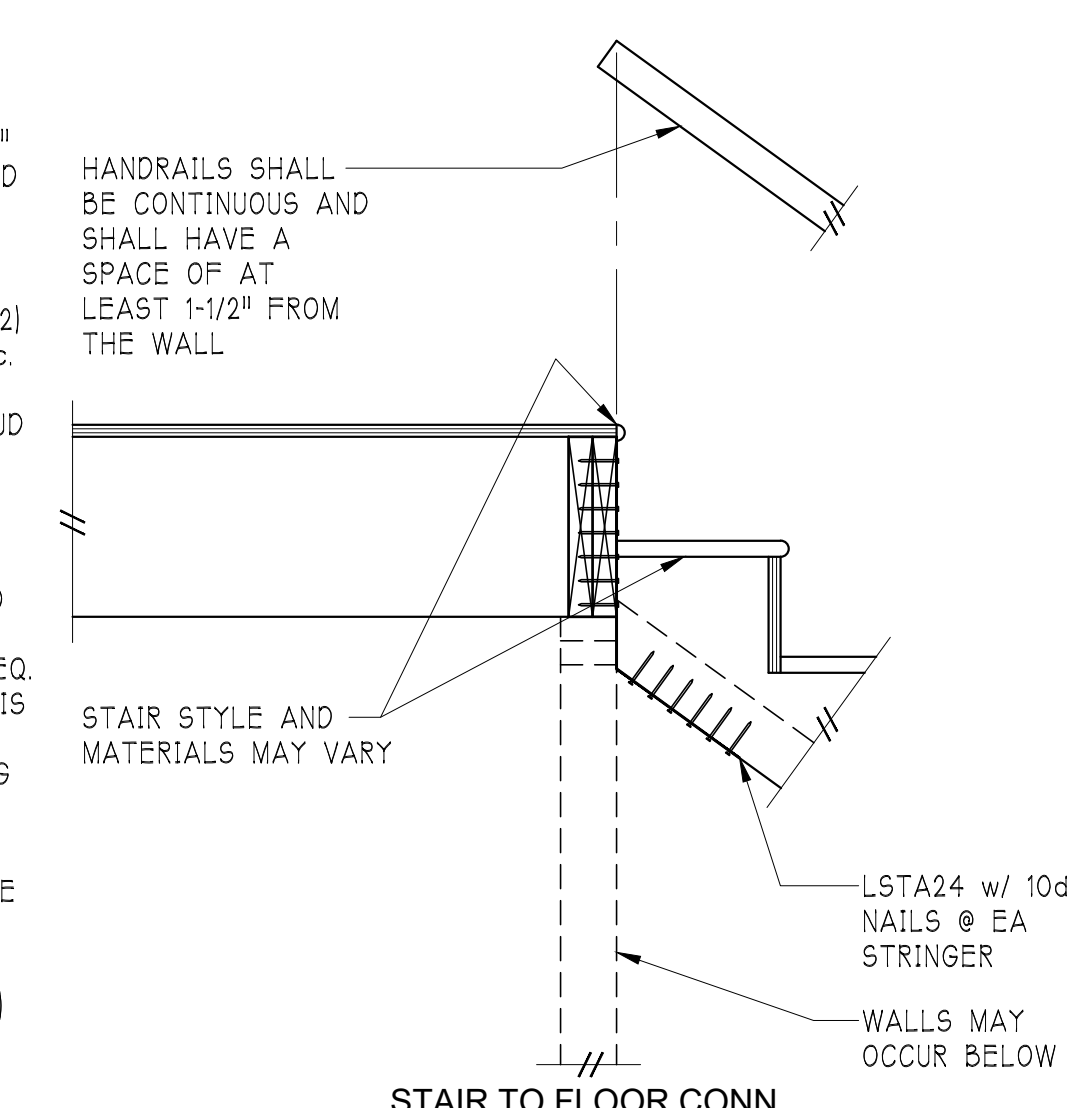
3 WINDOW SECTION
A5.1 SCALE: 1"=1'-0"



4 INFILLED WINDOW SECTION
A5.1 SCALE: 1"=1'-0"



5 TYPICAL STAIR DETAILS
A5.1 SCALE: 1"=1'-0"



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MERCER ISLAND, WA

ARCHITECTURAL DETAILS

JOB NO.	21-0405
HALF SCALE	11x17
FULL SCALE	22x34
SHEET	A5.1

STRUCTURAL ELEMENTS ARE FOR REFERENCE ONLY. IF DISCREPANCIES OCCUR, STRUCTURAL DRAWINGS GOVERN DESIGN.

SLAB ON GRADE
4" CONC. SLAB ON 6 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL.

PORCH SLAB
3½" CONC. SLAB ON GRADE ON 95% COMPACTED FILL/VIRGIN SOIL OR STRUCTURAL SLAB PER FOUNDATION DETAILS (REQUIRED IF COMPACTED FILL IS NOT PROVIDED)

GARAGE SLAB
4" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL.

GENERAL STRUCTURAL NOTES

FOUNDATION

- DESIGN IS BASED ON 2018 INTERNATIONAL RESIDENTIAL CODE & 2018 IBC.
- DESIGN LOADS:
SOIL: 2,000 PSF ALLOWABLE BEARING PRESSURE PER GEOTECH REPORT DATED 11/24/22 BY NELSON GEOTECHNICAL ASSOCIATES, INC.
- CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN 28 DAYS, UNO.:
F_c = 2500 psi: FOUNDATION WALLS*
2500 psi: FOOTINGS*
2500 psi: INTERIOR SLABS ON GRADE
3500 psi: GARAGE & EXT. SLABS ON GRADE
f_y = 60,000 psi
- UTILIZE 5% SACK 2500 PSI CONCRETE MIXES THAT ARE EQUIVALENT TO 3000 PSI CONCRETE FOR WEATHERING POTENTIAL.
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 1% AIR ENTRAINMENT.
- FOUNDATION WALL DESIGN IS BASED ON BACKFILL SOIL CLASSIFICATIONS OF SC, MC-CL, OR CL (60 pc1) SOIL.
- TYPICAL REINFORCEMENT DETAILS: LAP ALL REBAR 24" MIN; BEND BARS AND LAP AT CORNERS; PROVIDE 6" HOOK INTO SUPPORTING FOOTINGS WHEN FOOTINGS INTERSECT; PROVIDE 3" MINIMUM COVER AT THE BOTTOM BARS AND 1 1/2" COVER AT THE SIDES.
- FOUNDATION WALLS SHALL BE BRACED, PRIOR TO BACKFILLING, BY EITHER ADEQUATE TEMPORARY BRACING OR INSTALLATION OF FIRST FLOOR DECK.
- ALL FOOTINGS SHALL BEAR BELOW FROST LINE. CONSULT SOILS REPORT/LOCAL MUNICIPALITY FOR MINIMUM DEPTH BELOW GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP. (5'-0" O.C.)
- FASTEN SILL PLATES TO FOUNDATION WALLS WITH ½" DIA. ANCHOR BOLTS w/ MIN. 3"x3"x¼" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN ½" OF EXTERIOR EDGE OF SILL PLATE) & NUTS @ 6'-0" O.C. @ 2-STORY & 4'-0" O.C. @ 3-STORY CONDITIONS w/ 1" MIN. EMBEDMENT INTO CONC. PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS, UNO. (SEE FND. DETAILS).
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR MASONRY FOUNDATION SHALL BE PRESERVATIVE TREATED HEM FIR #2.
- BUILDER TO VERIFY CORROSION-RESISTANCE COMPATIBILITY OF HARDWARE & FASTENERS IN CONTACT W/ PRESERVATIVE-TREATED WOOD. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORDINATE.
- ARCH/BUILDER TO VERIFY ALL DIMENSIONS.

LOADING AND DESIGN PARAMETERS

GRAVITY DESIGN LOADS:

DEAD LOAD (PSF):	
ROOF:	
ROOF TRUSS TOP CHORD:	7
ROOF TRUSS BOTTOM CHORD:	10
ROOF RAFTERS (2x):	10
FLOOR JOIST (1-1JOIST):	10
TILE LOAD:	10
LIVE LOAD (PSF):	
RESIDENTIAL LIVING AREAS:	20
RESIDENTIAL SLEEPING AREAS:	40
EXTERIOR DECK:	30
SNOW LOAD:	60
GROUND SNOW LOAD (P) (PSF):	25
FLAT ROOF SNOW LOAD (R) (PSF):	25
SNOW EXPOSURE FACTOR (C _e):	0.4
SNOW LOAD IMPORTANCE FACTOR (I):	1.2
THERMAL FACTOR (C _t):	1.0

LATERAL DESIGN LOADS:

WIND LOAD (IBC 609):	
SPEED (V) (MPH):	100
WIND RISK CATEGORY:	II
IMPORTANCE FACTOR (I _w):	1.0
EXPOSURE CATEGORY:	B
INTERNAL PRESSURE COEFF. (GC _w):	-0.18
TOPOGRAPHIC FACTOR (K _{zt}):	1.30
SEISMIC LOAD (IBC 1601):	
SEISMIC RISK CATEGORY:	II
SEISMIC IMPORTANCE FACTOR (I _s):	1.0
MAPPED SPECTRAL RESPONSE:	
S _s = 1.406	S ₁ = 0.484
SITE CLASS:	D (DEFAULT)
SPECTRAL RESPONSE COEFF.:	
S ₁ = 1.25	S _{m1} = 0.540
SEISMIC DESIGN CATEGORY:	D
BASIC SEISMIC-FORCE-RESISTING SYS:	
LIGHT FRAMED WALLS:	
w/ WOOD STRUCTURAL PANELS:	
ULTIMATE BASE SHEAR:	
TRANS: 11.0K	LONG: 11.0K
SEISMIC RESPONSE COEFF. (C _d):	
TRANS: 0.13	LONG: 0.13
RESPONSE MODIFICATION FACTOR (R):	
TRANS: 6.5	LONG: 6.5
ANALYSIS PROCEDURE USED:	
EQUIVALENT LATERAL FORCE:	

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO; FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON HTT4 HOLD-DOWN

* UTILIZE SIMPSON "SET-XP" EPOXY SYSTEM TO FASTEN ½" DIA. THREADED ROD INTO CONCRETE FOUNDATION. PROVIDE 10" MIN. EMBEDMENT INTO CONCRETE. INSTALL PER MANUF. RECOMMENDATIONS. DO NOT LOCATE ANCHORS WITHIN 1 ¼" OF EDGE OF FOUNDATION. SPECIAL INSPECTIONS REQ'D FOR EPOXY INSTALLATIONS

LATERAL BRACING NOTES

THIS ADDITION HAS BEEN ENGINEERED TO RESIST LATERAL FORCES RESULTING FROM: 100 MPH WIND SPEED, EXP. B (ASCE 7-16 WIND MAP, PER IRC R301.2.1.1) RISK CAT. 2 & SEISMIC CAT. D.

110 MPH WIND IN 2018 IRC MAP
ENGINEERED DESIGN WAS COMPLETED PER 2018 IBC (SECTION 1609) & ASCE 7-16, AS PERMITTED BY R301.3 OF THE 2018 IRC. ACCORDINGLY, THIS ADDITION, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES, AND DOES NOT NEED TO CONFORM TO THE PRESCRIPTIVE PROVISIONS OF R602.10.

STANDARD EXTERIOR WALL SHEATHING SPECIFICATIONS

- ¾" OSB OR 1½" PLYWOOD:
FASTEN SHEATHING w/ 2½"x0.131" NAILS @ 6" O.C. AT ALL SUPPORTED PANEL EDGES AND 12" O.C. IN THE PANEL FIELD. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THIS SPECIFICATION UNO. ON FLANS.

3" O.C. EDGE NAILING (INVERSE NOTED ON PLANS)

- ¾" OSB OR 1½" PLYWOOD:
ONLY AT LOCATIONS INDICATED ON PLANS - SHEATH WALL SHOWN WITH ¾" OSB. FASTEN SHEATHING w/ 2½"x0.131" NAILS @ 3" O.C. AT EDGES AND 12" O.C. AT CENTER. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE AND 3" O.C. FASTENING.

- NOTES:**
- LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" O.C.
 - ALL SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES FASTENED TOGETHER w/ 3"x0.131" NAILS @ 8" O.C. USE (12.89"x0.135" NAILS AT EACH LAP SPlice, (6) EACH SIDE OF JOINT (TYP. UNO.)
 - ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
 - ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.
 - WHERE OSB/PLYWOOD SHEATHING IS APPLIED TO BOTH FACES OF A SHEAR WALL, PANEL JOINT SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.) OR SHEARWALL ABOVE (S.W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" O.C. EDGE NAILING
- INDICATES AREA OF ROOF OVERFRAMING
- JL METAL HANGER
- INDICATES POST ABOVE, PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLD-DOWN

GENERAL STRUCTURAL NOTES

DESIGN PARAMETERS

- DESIGN IS BASED ON 2018 INTERNATIONAL RESIDENTIAL CODE & 2018 IBC.
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.

GENERAL BRACING

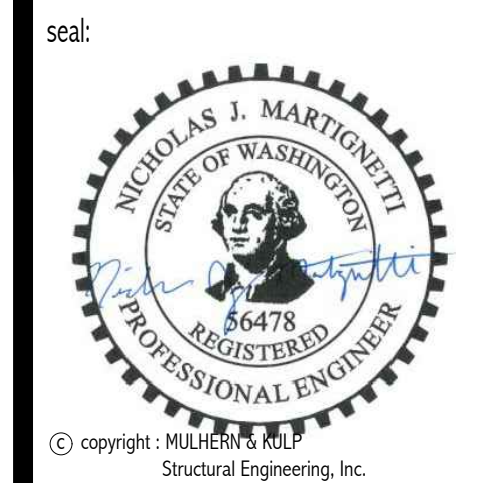
- EXTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (w/ DOUBLE TOP PLATE) HEM FIR (HF) #2 GRADE LUMBER, OR BETTER, UNO.
- INTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (w/ DOUBLE TOP PLATE) HEM FIR (HF) #2 GRADE LUMBER, OR BETTER, UNO.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x STUD GRADE MEMBERS SPACED @ 24" O.C. (MAX.)
- ALL WALLS TALLER THEN TYP. PLATE HEIGHT SHALL BE CONSIDERED BALLOON FRAMED & SHALL BE CONSTRUCTED FROM FLOOR TO UNDERSIDE OF FRAMING AT NEXT LEVEL. B.F. WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) HEM FIR (HF) #2 GRADE LUMBER, OR BETTER.
- ALL HEADERS SHALL BE SUPPORTED BY (1)2x JACK STUD @ (1)2x KING STUD, MINIMUM.
- THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED UNO.
- ALL 2x6 AND LARGER SOLID SAWN BEAMS/HEADERS SHALL BE HEM FIR #2 (HF #2) OR BETTER. ALL 4x6 AND LARGER SOLID SAWN LUMBER SHALL BE DOUG FIR #2 (DF #2) OR BETTER.
- ALL FRAMING LUMBER SHALL BE KILN DRIED TO 15% MC (KD-15).
- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN GENERAL NOTES, IN DETAILS, OR ON PLANS. ALL NAILS SPECIFIED ARE MIN. DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- FASTEN ALL BEAMS TO COLUMNS w/ (4) 3"x0.131" TOENAILS (MIN), TYP. UNO.
- FACE NAIL MULTI-PLY 2x BEAMS & HEADERS w/ 3-ROWS OF 3"x0.131" NAILS (MIN) @ 12" O.C. STAGGERED. APPLY NAILING FROM BOTH FACES @ 3-PLY OR MORE CONDITIONS, UTILIZE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- ALL MEMBERS SPECIFIED AS MULTI-PLY 1½" SHALL BE FASTENED TOGETHER PER MANUFACTURER, EQUIVALENT WIDTH SOLID MATERIAL MAY BE USED AS EQUAL.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS & HOLD-DOWNS CONTINUOUS TO FOUNDATION/BEARINGS, BLOCKING TO MATCH POST ABOVE.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. UNO.

FLOOR FRAMING

- 1-JOISTS SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA AND SHALL RUN CONTINUOUS OVER SUPPORTS WHEREVER POSSIBLE. ALL LOADS SHOWN ON PLAN FOR MANUF. DESIGNS ARE ASD LEVEL LOADS, UNO. (EXCLUDES STONE/MARBLE OR HOT BED CONSTRUCTED FLOORS - CONTACT MKR FOR EXCLUDED DESIGNS).
- ALL METAL 1-JOIST HANGERS SHALL BE SPECIFIED BY 1-JOIST/TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- 1-JOIST SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED "STURD-I-FLOOR" 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS w/ GLUE AND 2 ½" x 0.131" NAILS @ 6" O.C. @ PANEL EDGES & @ 12" O.C. FIELD.
- ALL FLUSH CONNECTIONS SHALL BE CONNECTED WITH HANGER APPROPRIATE FOR MEMBER SIZE UNO.
- FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS w/ ½" LONG NAILS.

ROOF FRAMING

- FASTEN EACH ROOF TRUSS TO TOP PLATE w/ (3) 3"x0.131" TOENAILS (MIN) & (1) SIMPSON H25T CLIP @ ALL BEARING POINTS. PROVIDE (2) SIMPSON H25T CLIPS AT 2-PLY GIRDER TRUSSES & 3-PLY GIRDER TRUSSES AT ALL BEARING POINTS.
- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/6 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS w/ 2 ½" x 0.131" NAILS @ 6" O.C. AT PANEL EDGES & @ 12" O.C. AT INTERMEDIATE SUPPORTS. ROOF SHEATHING SHALL EXTEND BELOW ALL INSTANCES OF OVERFRAMING. BLOCKING SHALL BE INSTALLED AS REQUIRED TO LIMIT ROOF SHEATHING SPANS TO 24" MAX.
- WITHIN 48" OF ALL ROOF EDGES, RIDGES, & HIPs FASTEN ROOF SHEATHING FIELDS PER EDGE NAILING SPEC.
- ALL METAL HANGERS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- ROOF TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- ROOF TRUSS SHOP DRAWINGS & CALCULATIONS SHALL BE PREPARED BY A WASHINGTON STATE LICENSED ENGINEER AND SHALL BE DESIGNED FOR UNBALANCED SNOW LOADS PER ASCE 7-16, SECTION 7.6.
- ERECT AND INSTALL ROOF TRUSSES PER WTC & TP1'S EC51 1-09 GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.
- FASTEN OVER-FRAMED TRUSS SETS TO TRUSSES BELOW w/ (2) 3"x0.131" TOENAILS AT EA. TRUSS.
- SUPPORT PORCH & SHORT SPAN ROOF TRUSSES (UP TO 6' TRUSS) w/ 2x6 LEDGER FASTENED TO FRAMING w/ (3) 3"x0.131" NAILS @ 16" O.C.
- FASTEN ALL INTERIOR NON-BEARING PARTITION WALLS TO TRUSS BOTTOM CHORD ABOVE WITH SIMPSON STC CLIPS AT 24" O.C. MAX. PROVIDE BLOCKING BETWEEN THE TRUSS BOTTOM CHORDS AS REQUIRED FOR THE PARALLEL CONDITIONS.



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7720 Trade Street, Suite 350, San Diego, CA 92121
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M&K project number:
251-22033

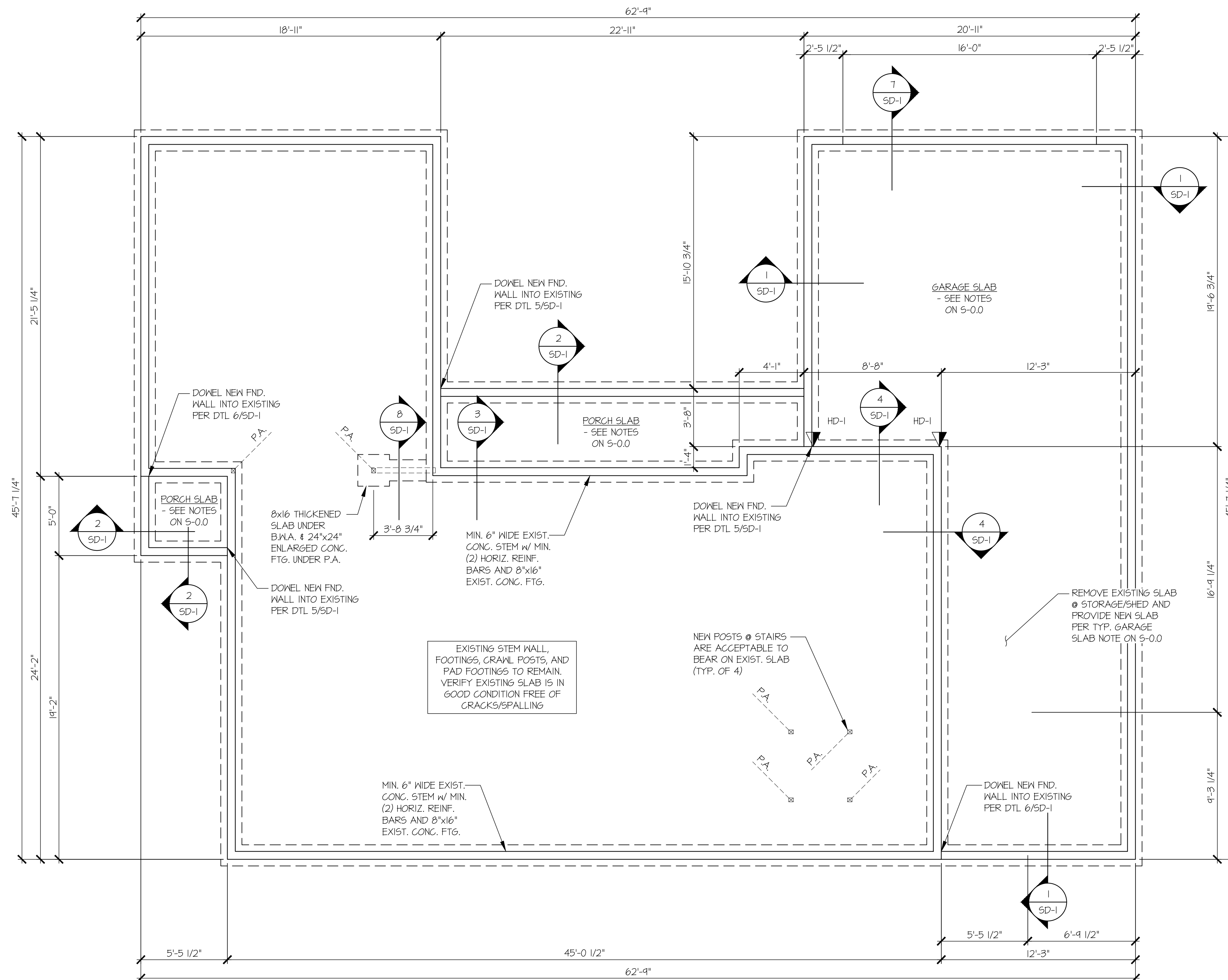
project mgr: NJM
drawn by: SAS
issue date: 11-04-22

REVISIONS:
date: initial:

YEN DESIGN

STRUCTURAL NOTES
4029 97TH AVE SE
MERCER ISLAND, WA

sheet:
S-O-O



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

CONTACT M&K IF ANY EXISTING CONDITIONS DIFFER FROM THOSE SHOWN/ASSUMED (TYP.)

LEGEND

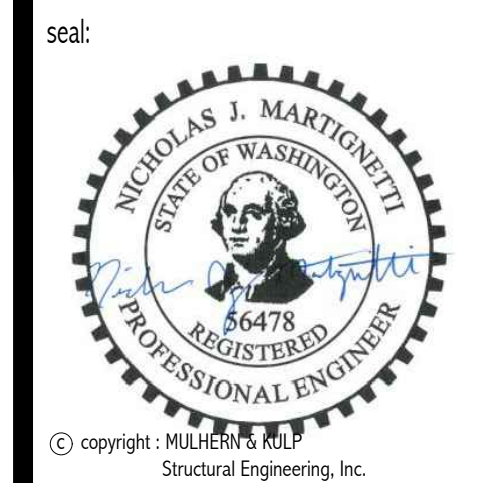
- ▬ INTERIOR BEARING WALL
- - - BEARING WALL ABOVE (B/A), OR SHEARWALL ABOVE (S/A)
- ▬ BEAM / HEADER
- - - INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- INDICATES AREA OF ROOF OVERFRAMING
- JL METAL HANGER
- * INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- ▴ INDICATES HOLD-DOWN.

REFER TO S-0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
▴ HD-1	SIMPSON HTT4 HOLD-DOWN

* UTILIZE SIMPSON "SET-XP" EPOXY SYSTEM TO FASTEN 3/8" DIA. THREADED ROD INTO CONCRETE FOUNDATION. PROVIDE 10" MIN. EMBEDMENT INTO CONCRETE. INSTALL PER MANUF. RECOMMENDATIONS. DO NOT LOCATE ANCHORS WITHIN 1 3/4" OF EDGE OF FOUNDATION. SPECIAL INSPECTIONS REQ'D FOR EPOXY INSTALLATIONS



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M&K project number: 251-22033

project mgr: NJM
drawn by: SAS
issue date: 11-04-22

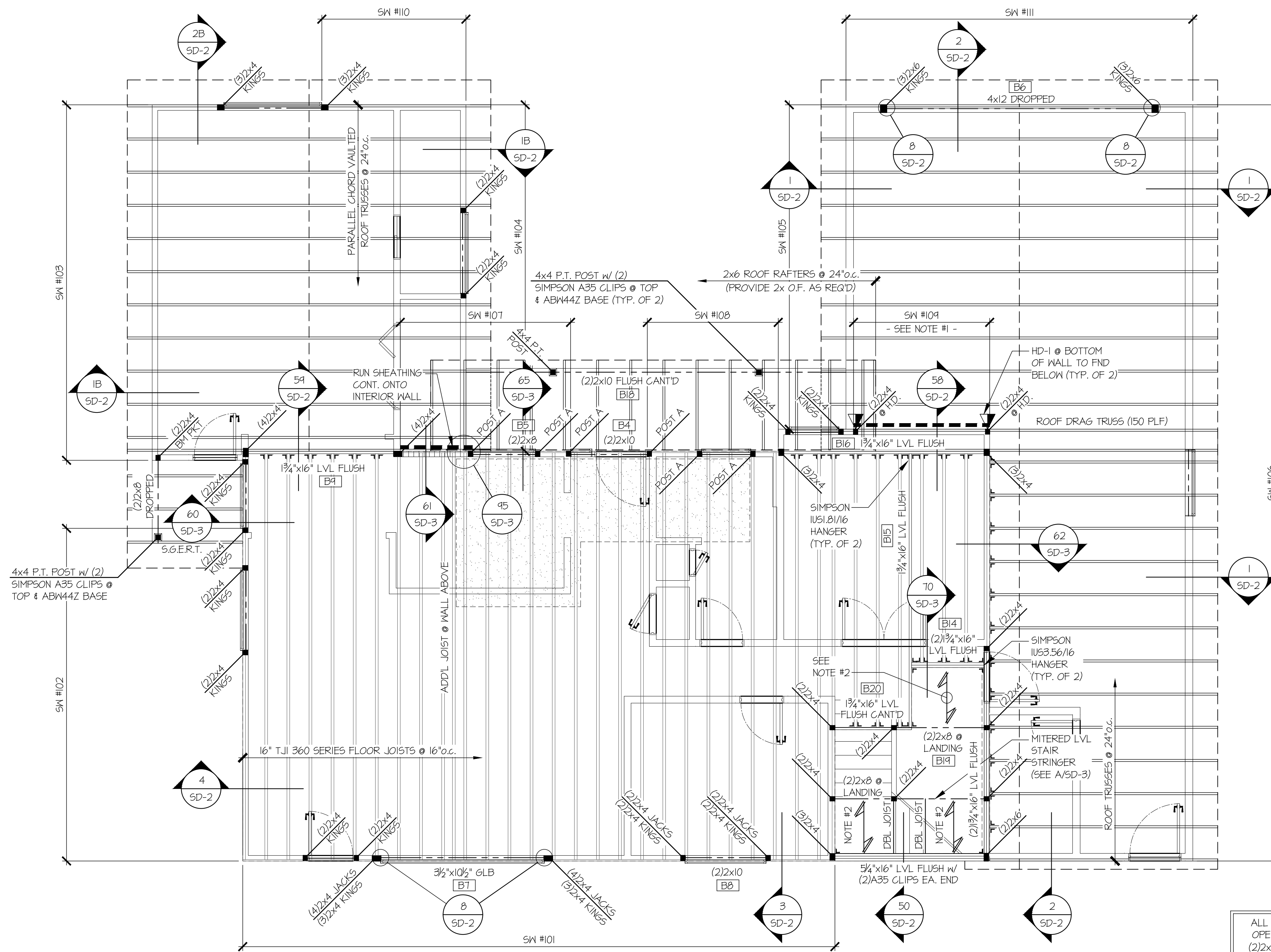
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YEN DESIGN

FOUNDATION PLAN
4029 97TH AVE SE
MERCER ISLAND, WA

sheet: S-1.0



1 2ND FLOOR FRAMING PLAN
SCALE: 1/4"=1'-0"

LEGEND

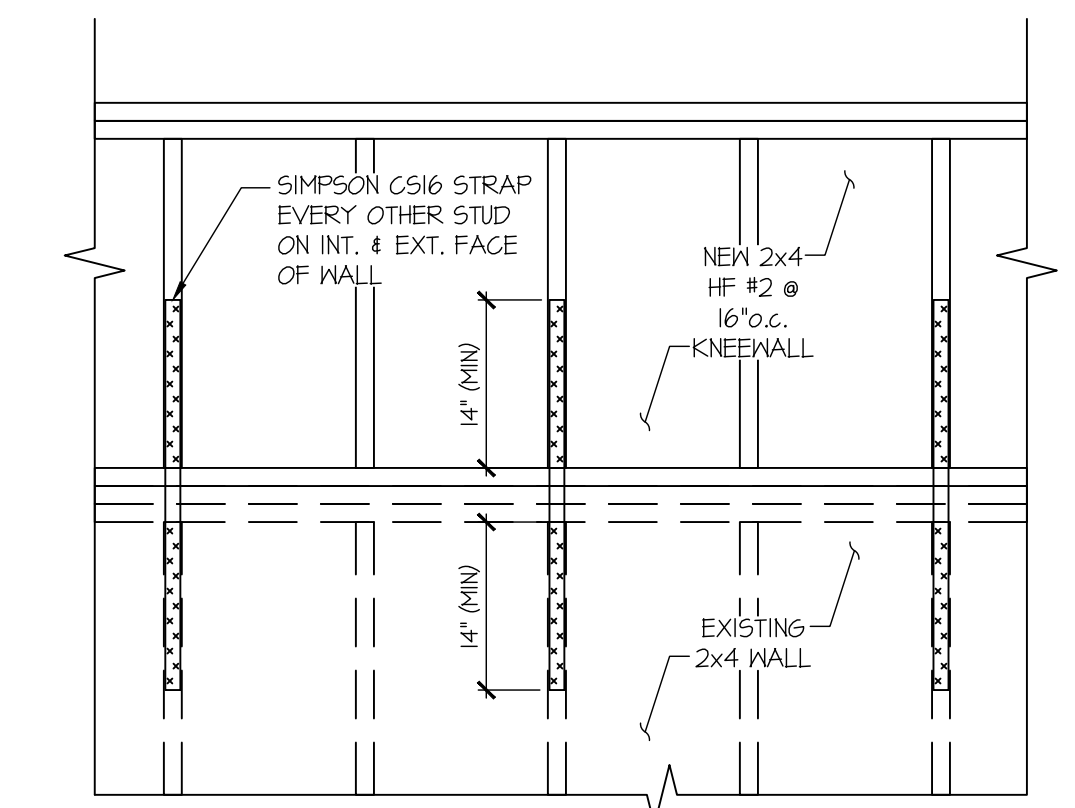
- ◻ INTERIOR BEARING WALL
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- BEAM / HEADER
- ▬ INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- ◻ INDICATES AREA OF ROOF OVERFRAMING
- JL METAL HANGER
- * INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- ▶ INDICATES HOLD-DOWN.

REFER TO S-0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

HOLD-DOWN SCHEDULE

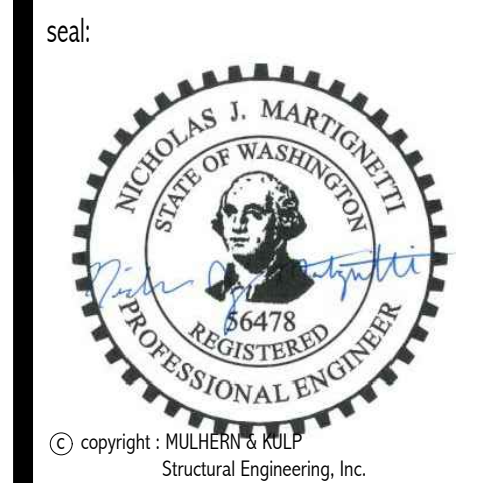
SYMBOL	SPECIFICATION
▶	SD-1 SIMPSON HTT4 HOLD-DOWN
▶	SD-2 SIMPSON HTT4 HOLD-DOWN
▶	SD-3 SIMPSON HTT4 HOLD-DOWN

* UTILIZE SIMPSON "SET-XP" EPOXY SYSTEM TO FASTEN 3/8" DIA. THREADED ROD INTO CONCRETE FOUNDATION. PROVIDE 10" MIN. EMBEDMENT INTO CONCRETE. INSTALL PER MANUF. RECOMMENDATIONS. DO NOT LOCATE ANCHORS WITHIN 1 3/4" OF EDGE OF FOUNDATION. SPECIAL INSPECTIONS REQ'D FOR EPOXY INSTALLATIONS.



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

- B13**
ALL HDRS @ EXT. OPENINGS TO BE (2)2x6 (TYP. U.N.O.)
- NOTE #1:** PROVIDE 3/8" OSB OR PLYWOOD SHEATHING PER STANDARD EXT. WALL SHEATHING SPEC (SEE NOTES ON S-0.0)
- NOTE #2:** PROVIDE 2x8 LANDING JOISTS @ 16" o.c. w/ SIMPSON IUS26 HANGERS (TYP.) PROVIDE 2x8 LEDGER AT PERIMETER AS REQ'D FASTENED TO BM STUDS w/ (3)3"x0.131" NAILS @ 16" o.c.
- POST A:** (2)2x4 JACKS & (2)2x4 KING (TYP. OF 6)
- ALL STUDS NOTED ON PLAN ARE TO BE NEW FULL HT STUDS
- EXISTING 1ST FLOOR WALLS SHALL HAVE A NEW 2x4 HF #2 @ 16" o.c. KNEEWALL BUILT ATOP THE EXISTING 2x4 WALLS TO THE NEW 1ST FLOOR PLATE HEIGHT. EVERY OTHER EXISTING STUD SHALL BE STRAPPED TO THE NEW KNEEWALL STUD ABOVE WITH A SIMPSON CS16 STRAP w/ 14" END LENGTH ON EA. STUD AT THE INT. & EXT. FACE OF WALL (SEE DETAIL 2/5-2.0)
- CONTACT MKK IF ANY EXISTING CONDITIONS DIFFER FROM THOSE SHOWN/ASSUMED (TYP.)



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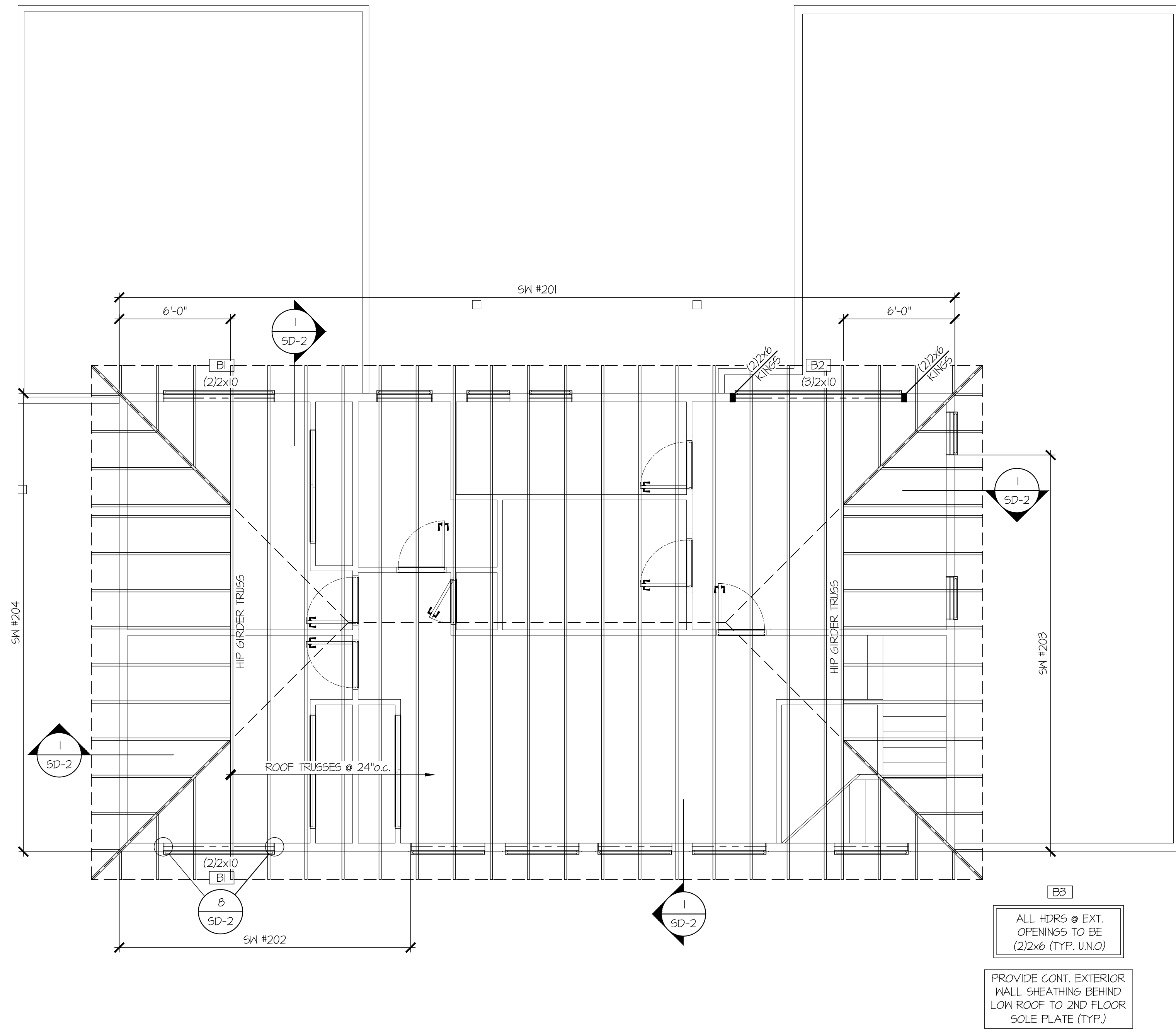
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drawn by: SAS
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2ND FLOOR FRAMING PLAN
4029 97TH AVE SE
MERCER ISLAND, WA

sheet: **S-2.0**



1 ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B/A), OR SHEARWALL ABOVE (S/A)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- INDICATES AREA OF ROOF OVERFRAMING
- JL METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLD-DOWN.

REFER TO S-0.0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES



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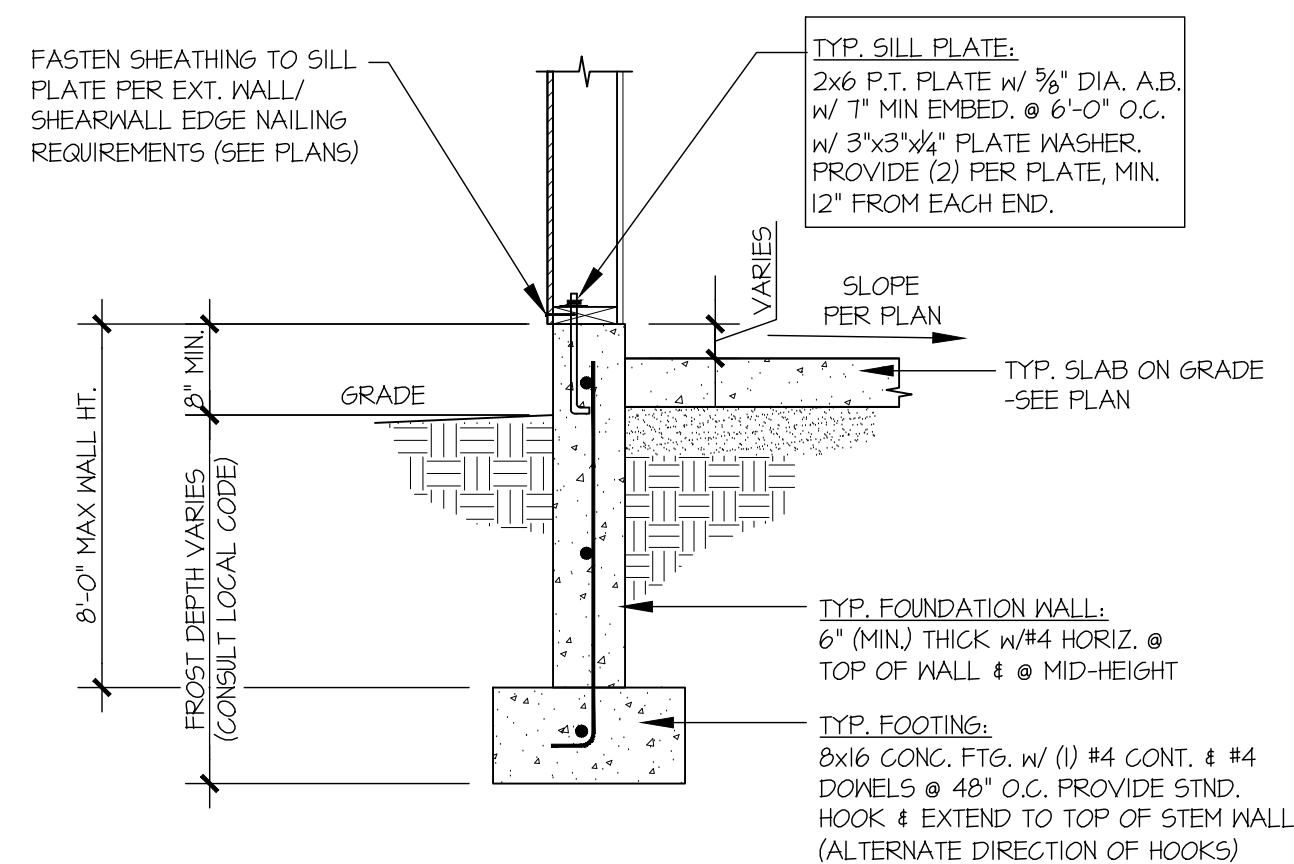
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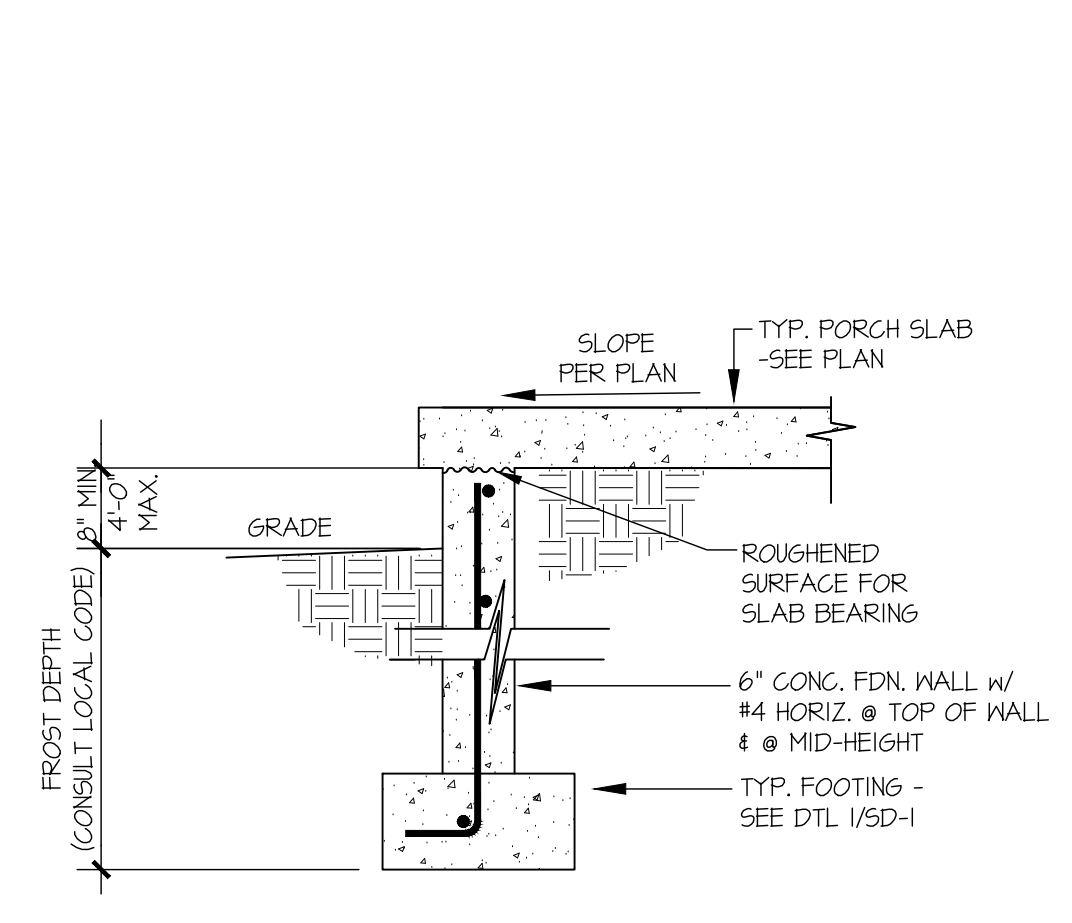
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ROOF FRAMING PLAN
4029 97TH AVE SE
MERCER ISLAND, WA

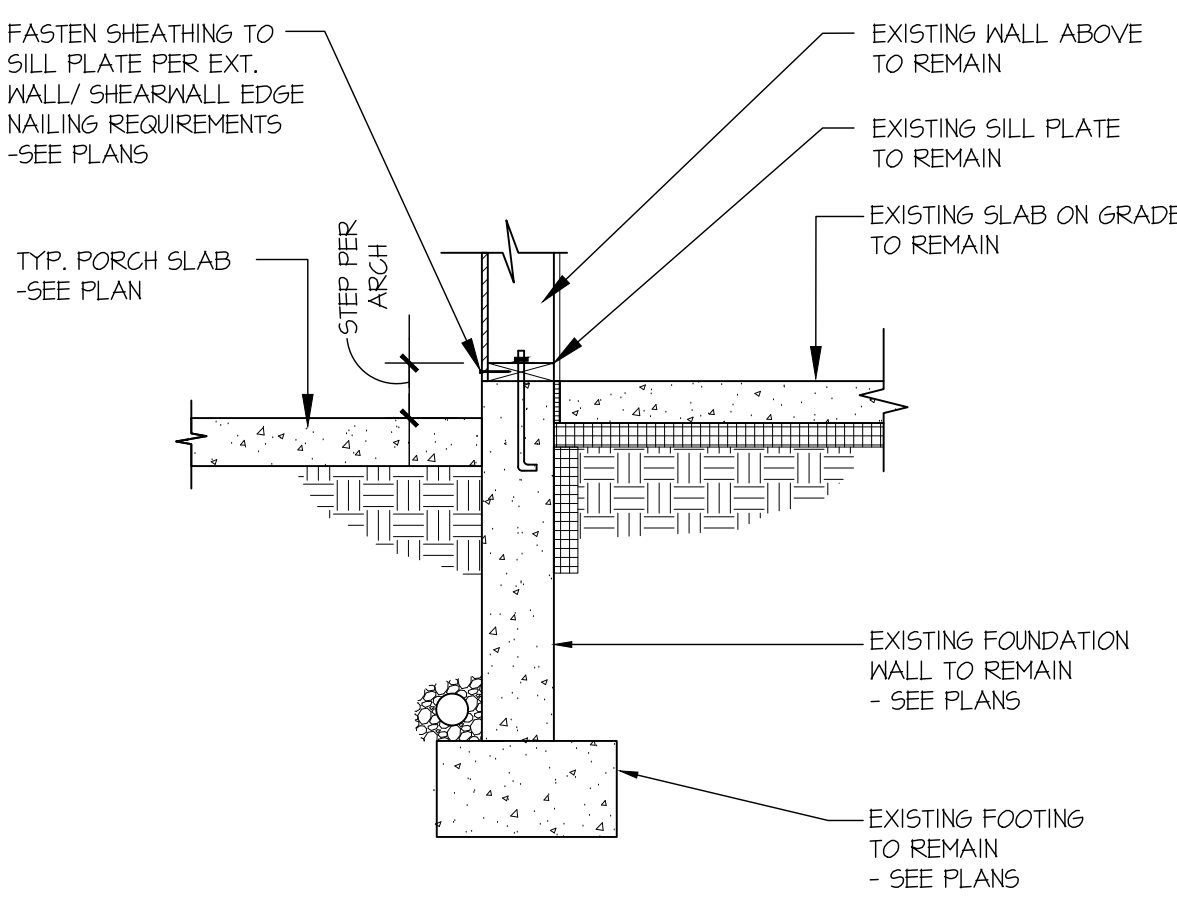
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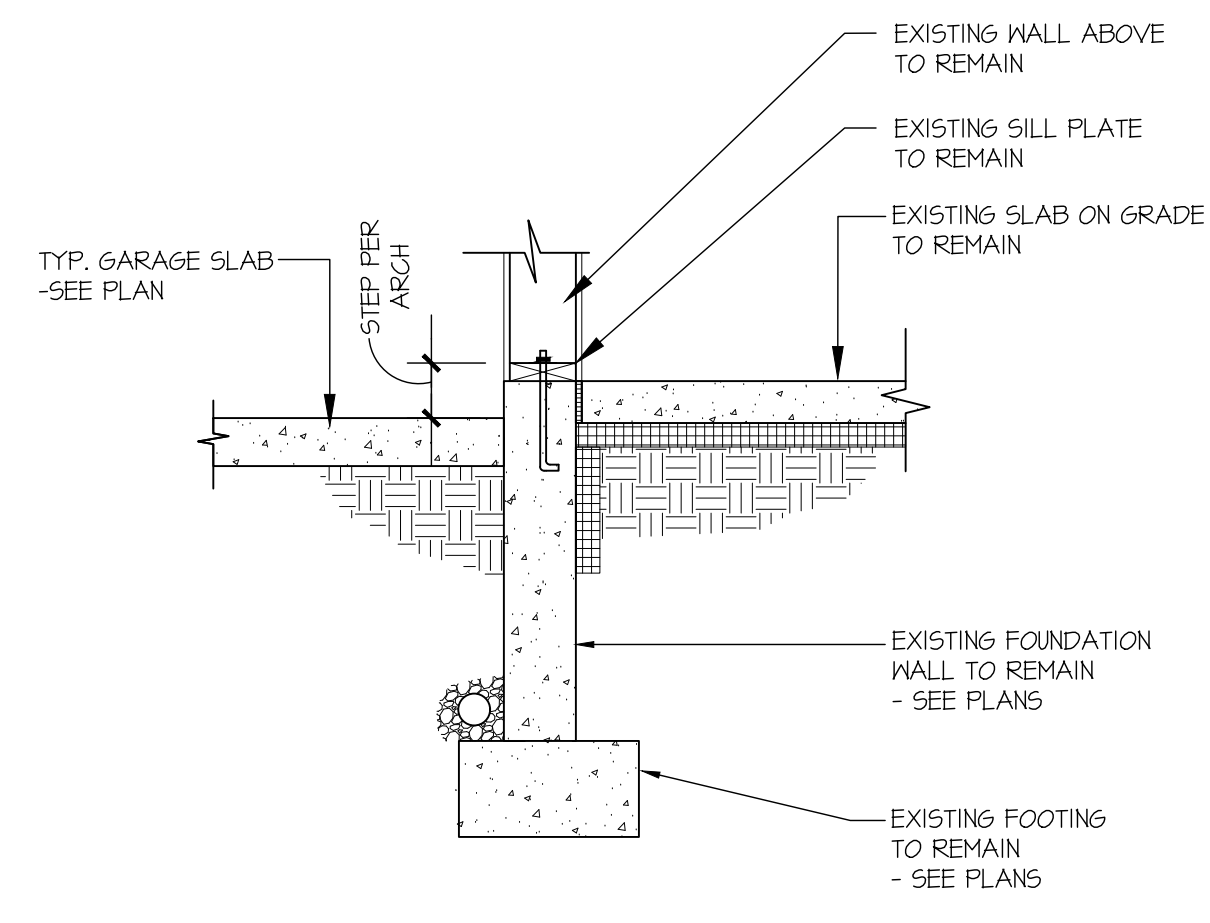
1 SECTION
SCALE: 3/4"=1'-0"



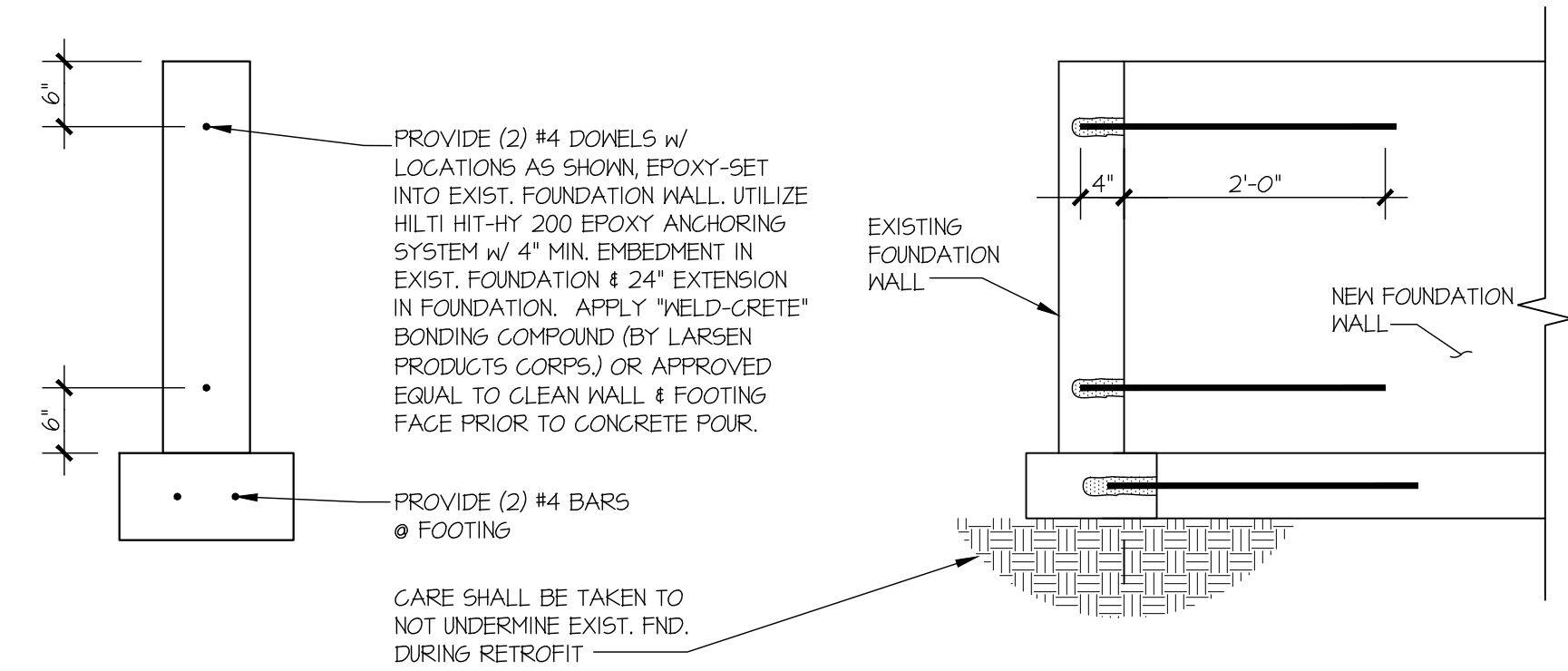
2 SECTION
SCALE: 3/4"=1'-0"



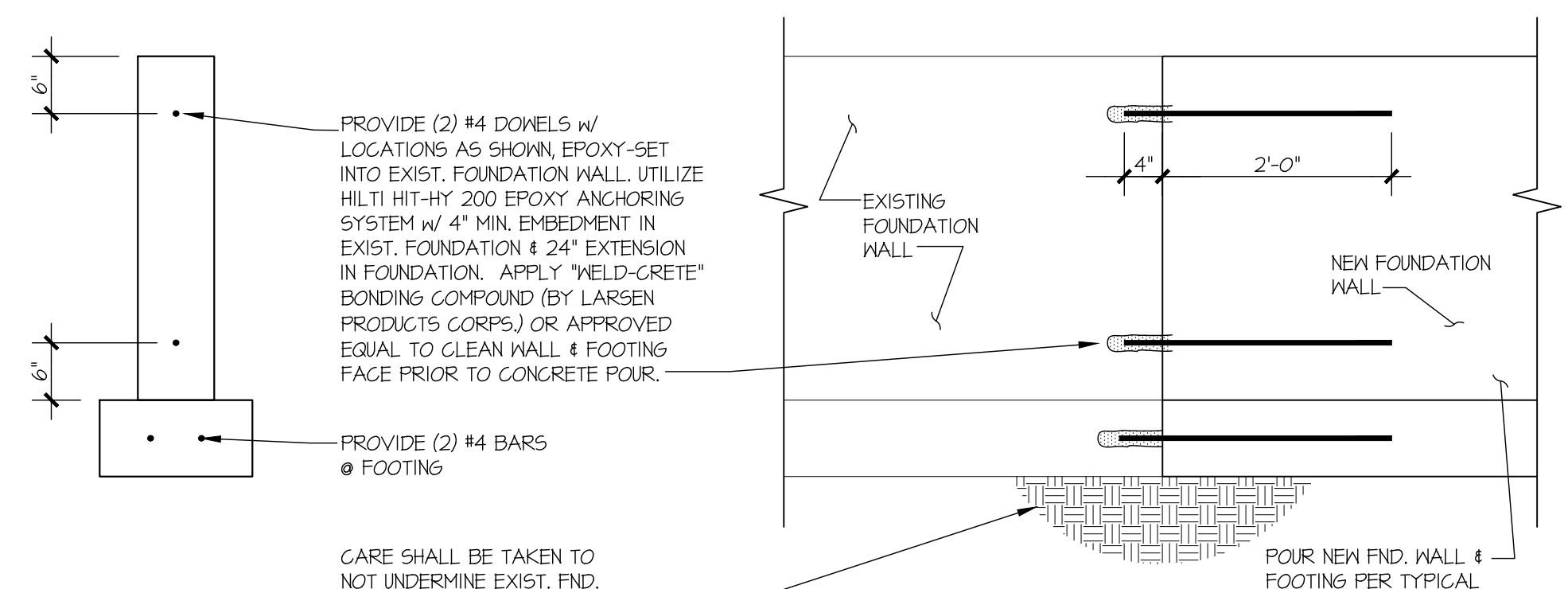
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SCALE: 3/4"=1'-0"



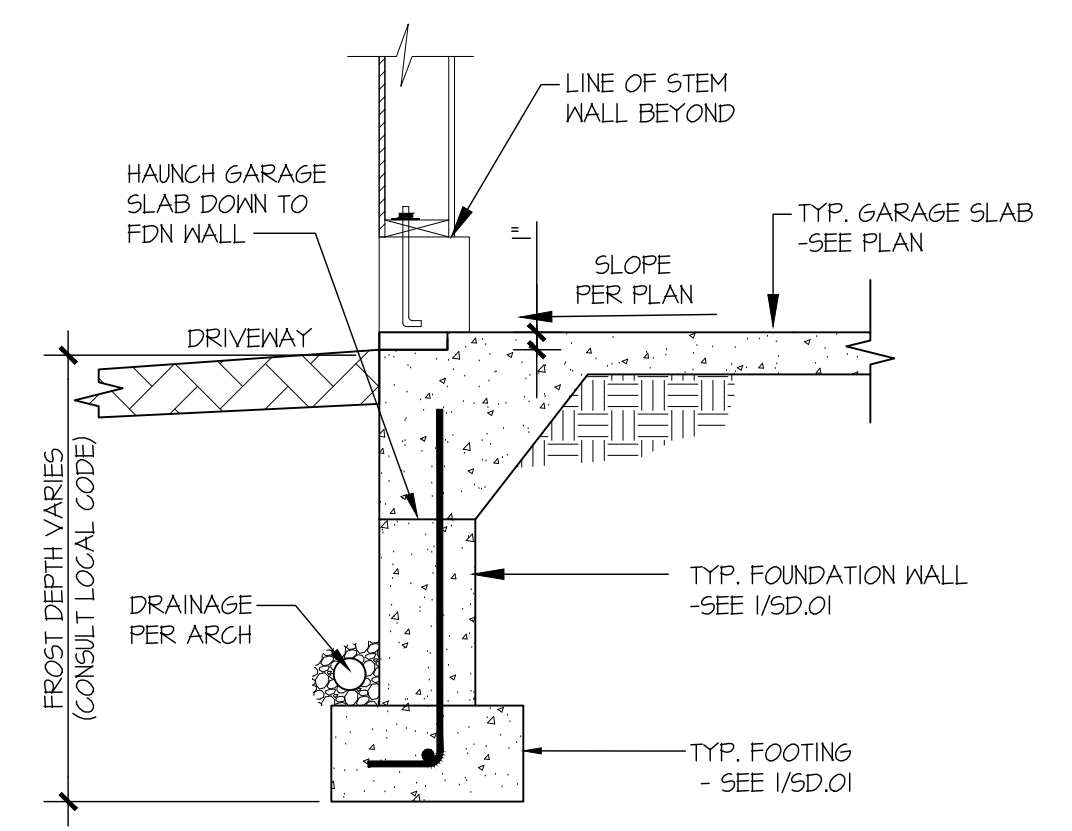
4 SECTION
SCALE: 3/4"=1'-0"



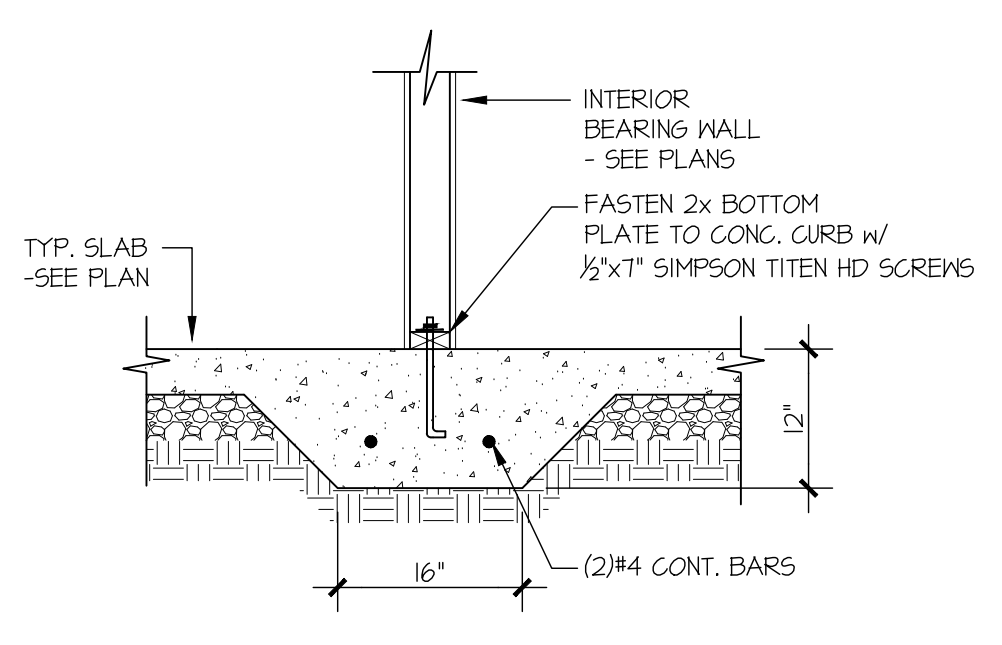
5 TYPICAL FOUNDATION RETROFIT DETAIL
SCALE: 1/2"=1'-0"



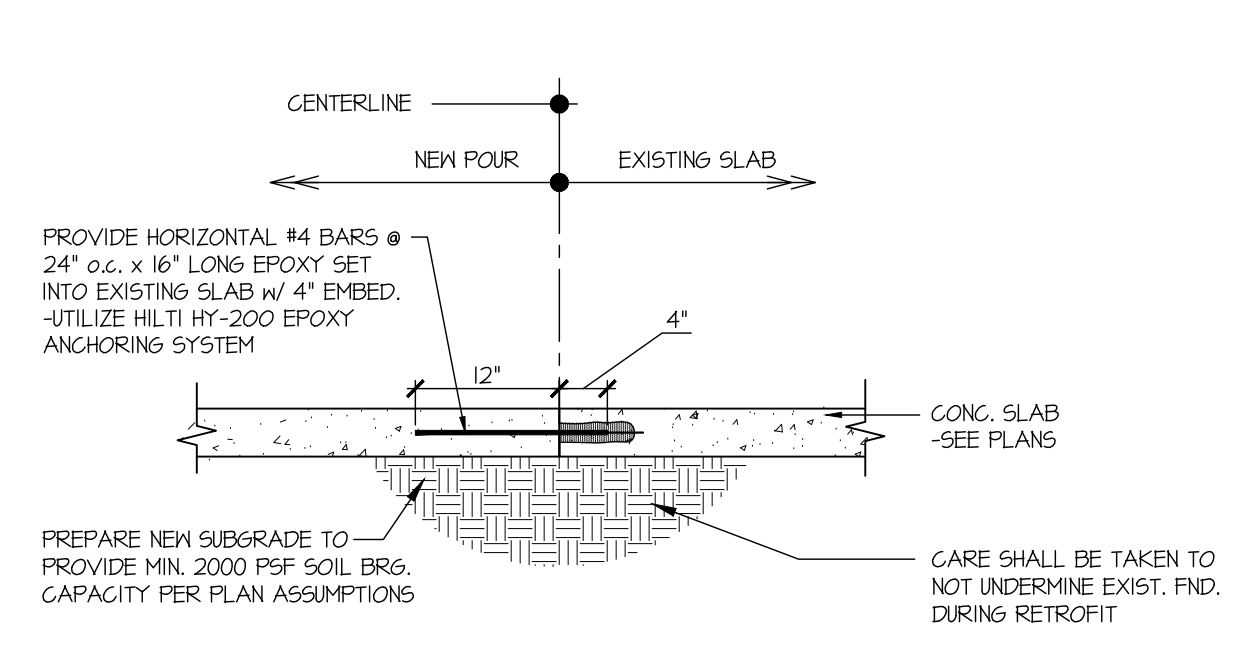
6 TYPICAL FOUNDATION RETROFIT DETAIL
SCALE: 1/2"=1'-0"



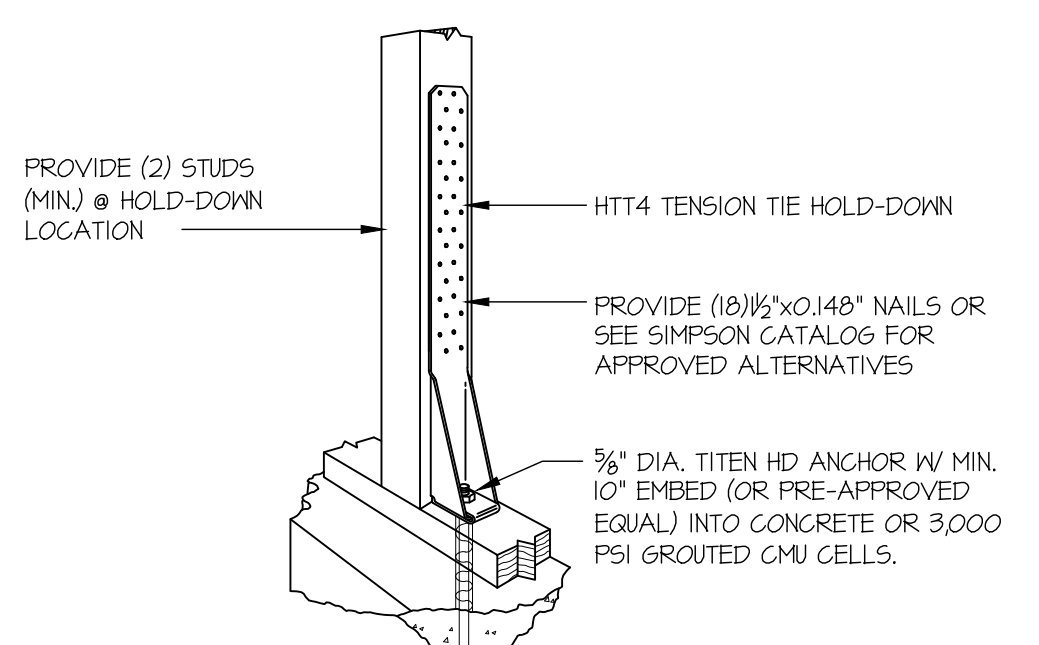
7 TYPICAL CONCRETE FDN. @ GARAGE DOOR OPENING
SCALE: 3/4"=1'-0"



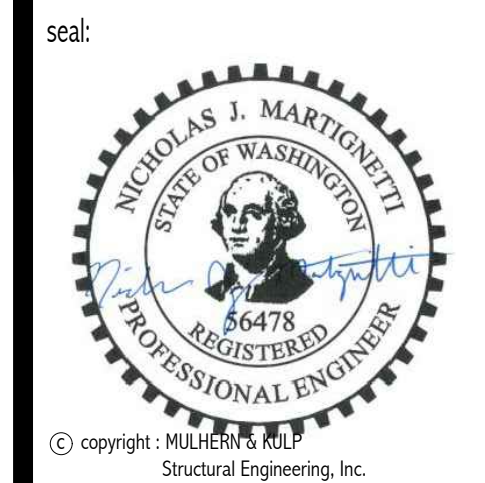
8 TYPICAL THICKENED SLAB @ INTERIOR BEARING WALL
SCALE: 3/4"=1'-0"



9 NEW SLAB TO EXIST SLAB CONNECTION
SCALE: 3/4"=1'-0"



A TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE
SIMPSON HIT4 SHOWN @ SLAB



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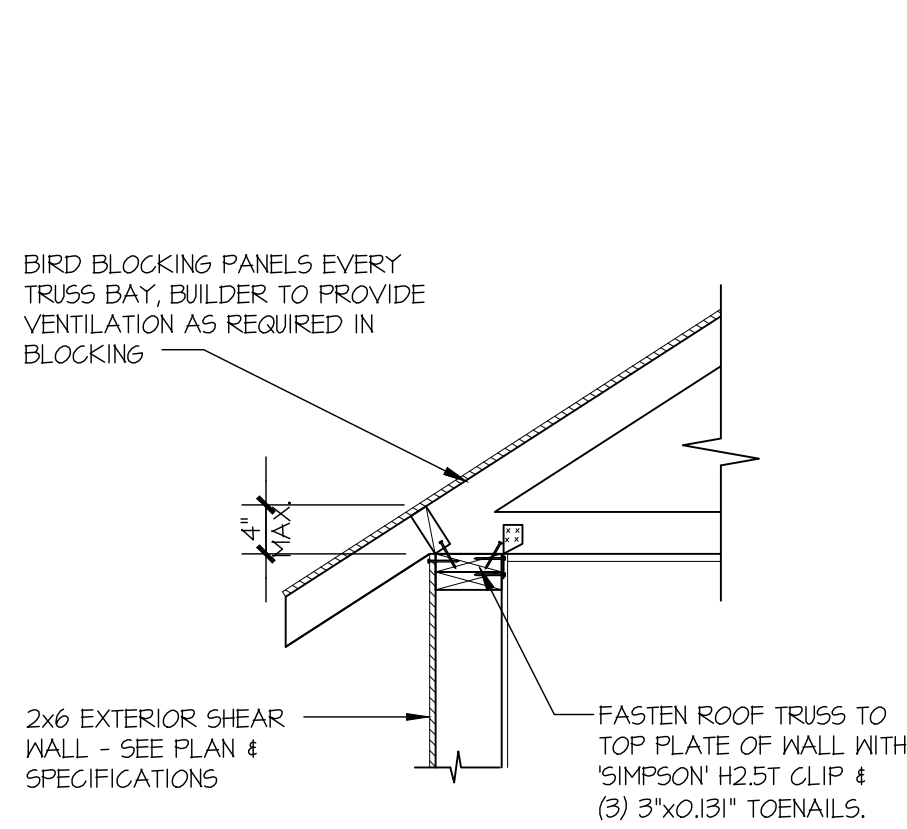
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drawn by: SAS
issue date: 11-04-22

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date: initial:

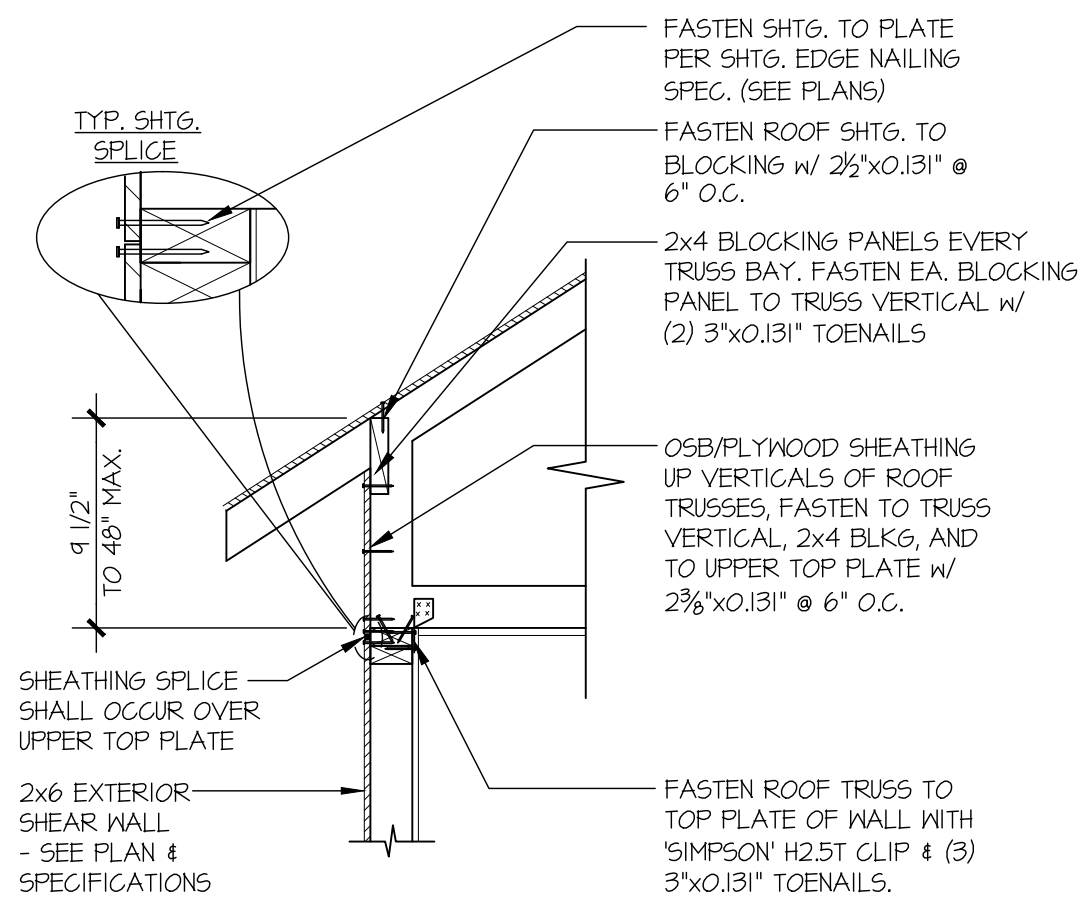
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FOUNDATION DETAILS
4029 97TH AVE SE
MERCER ISLAND, WA

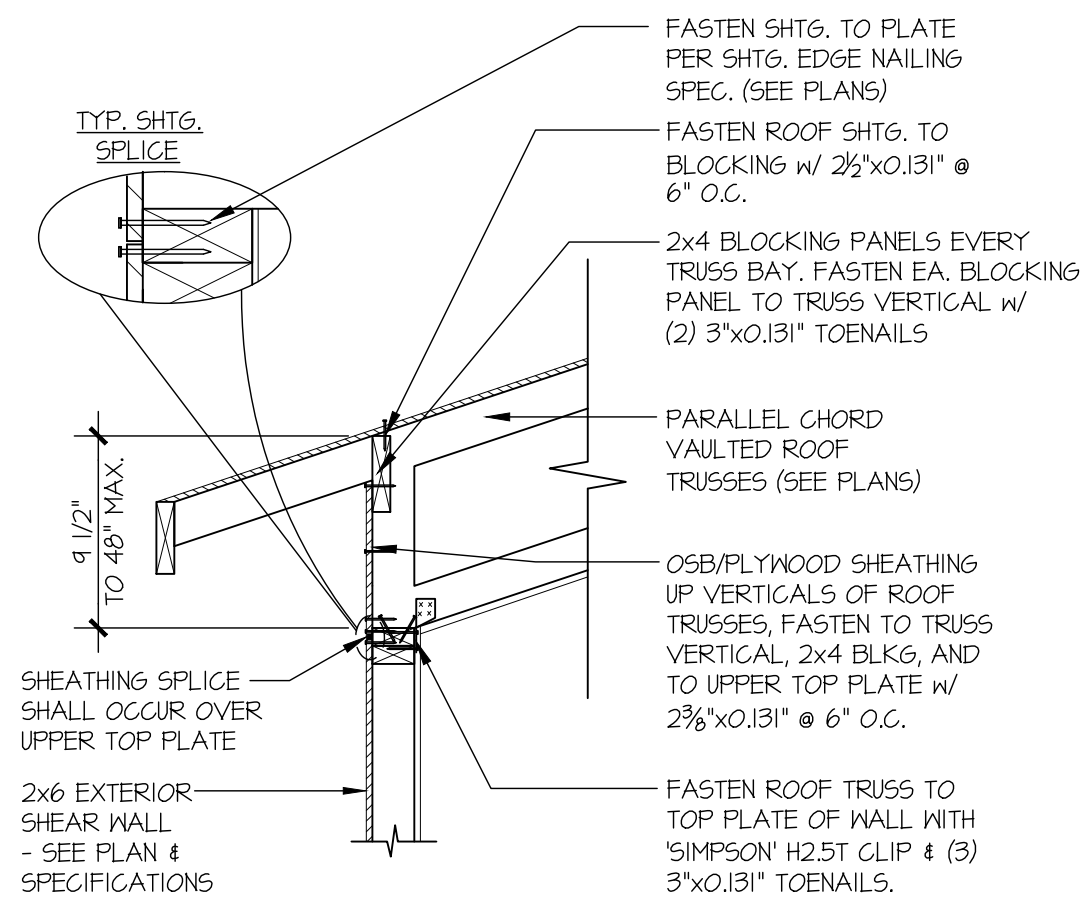
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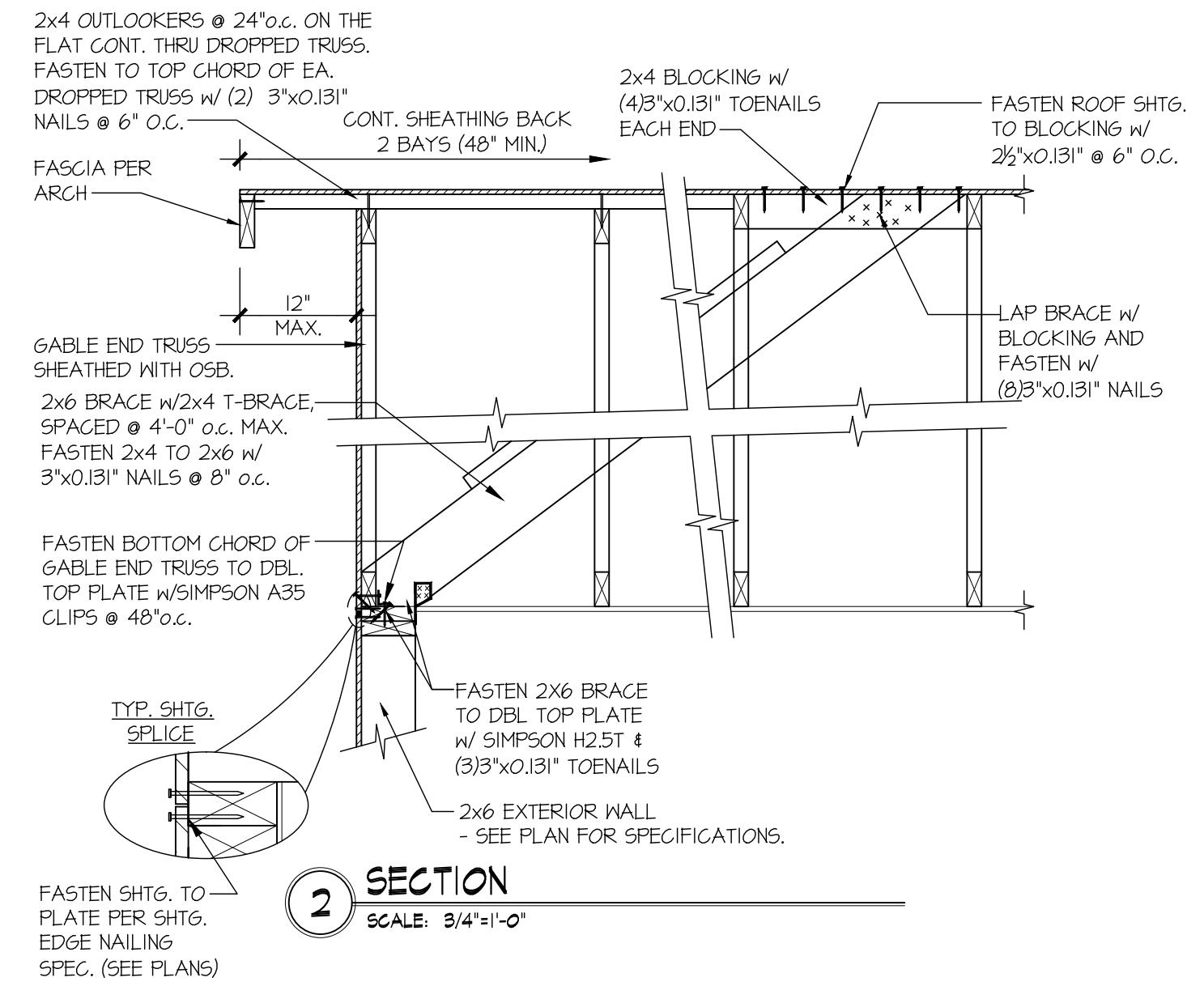
1 SECTION
SCALE: 3/4"=1'-0"
HEEL HEIGHT LESS THAN 4"



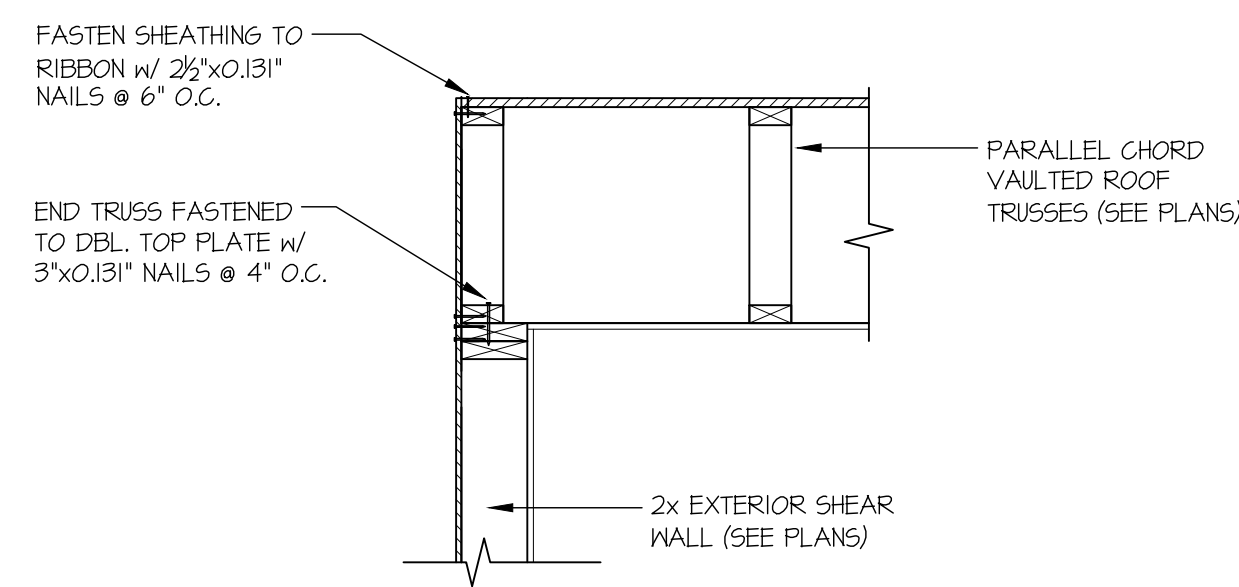
1A SECTION
SCALE: 3/4"=1'-0"
HEEL HEIGHT UP TO 48" MAX.



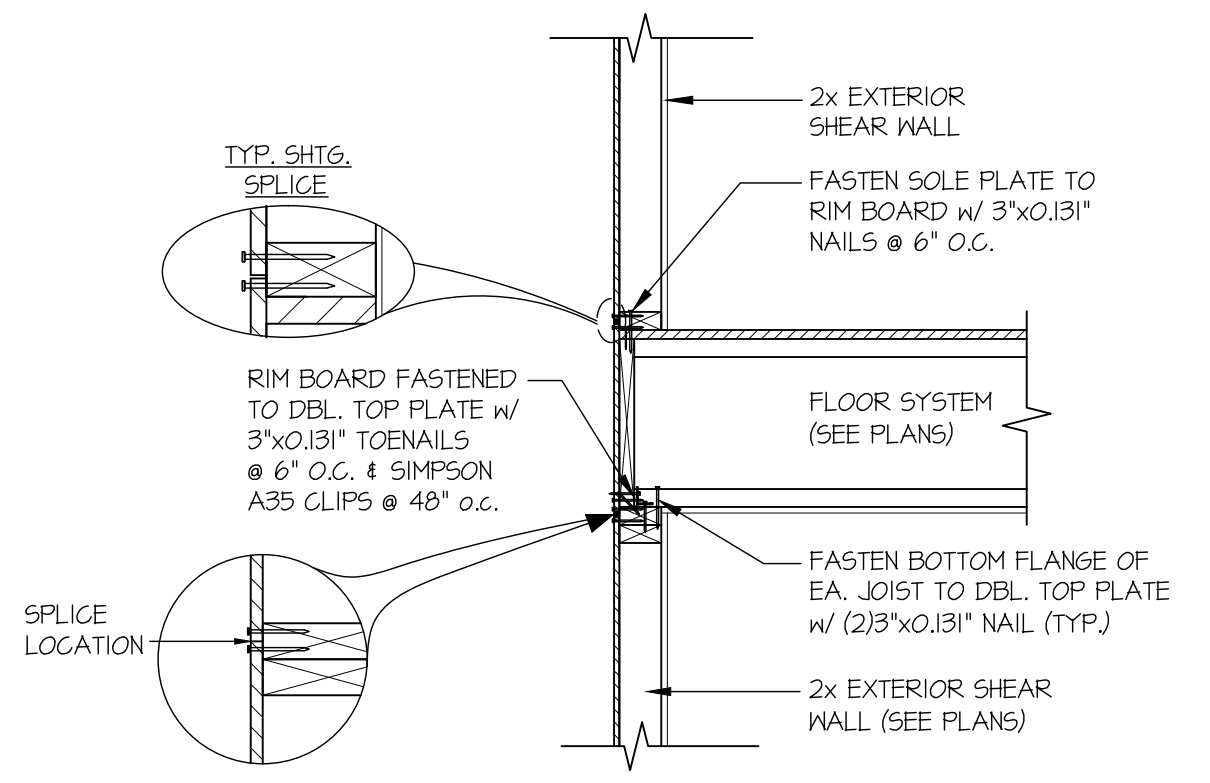
1B SECTION
SCALE: 3/4"=1'-0"



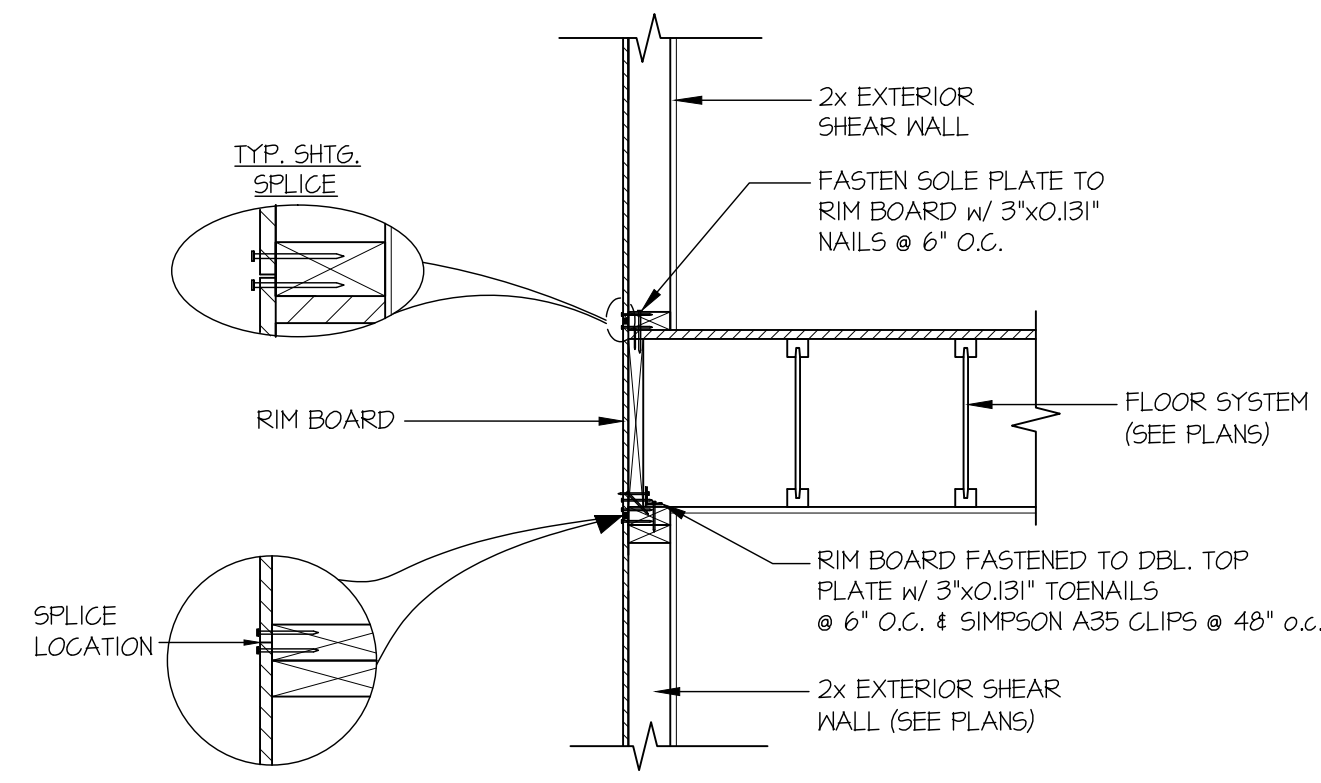
2 SECTION
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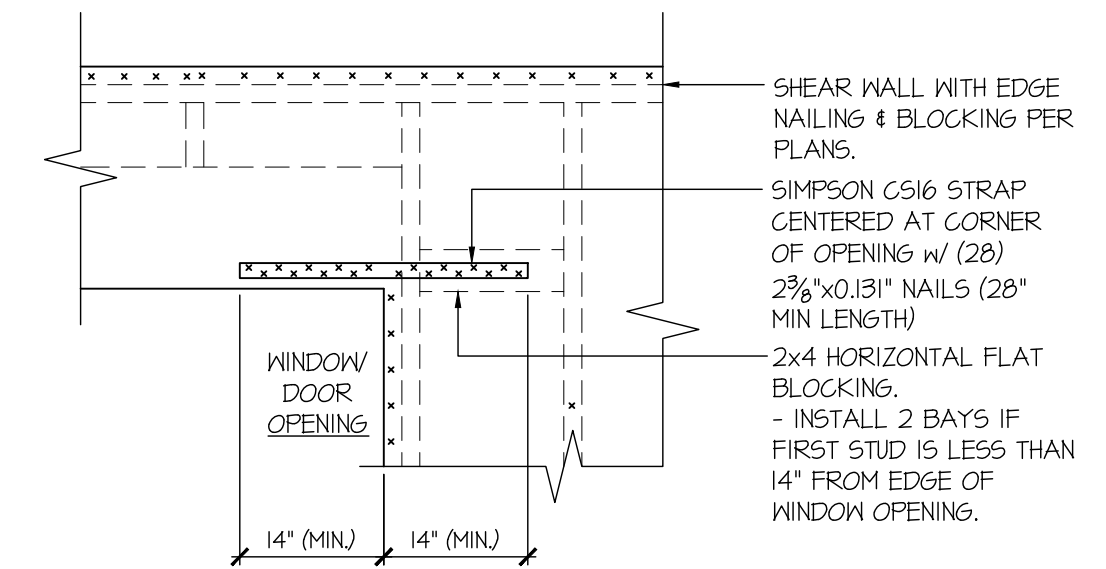
2B SECTION
SCALE: 3/4"=1'-0"



3 SECTION
SCALE: 3/4"=1'-0"
PERPENDICULAR FRAMING

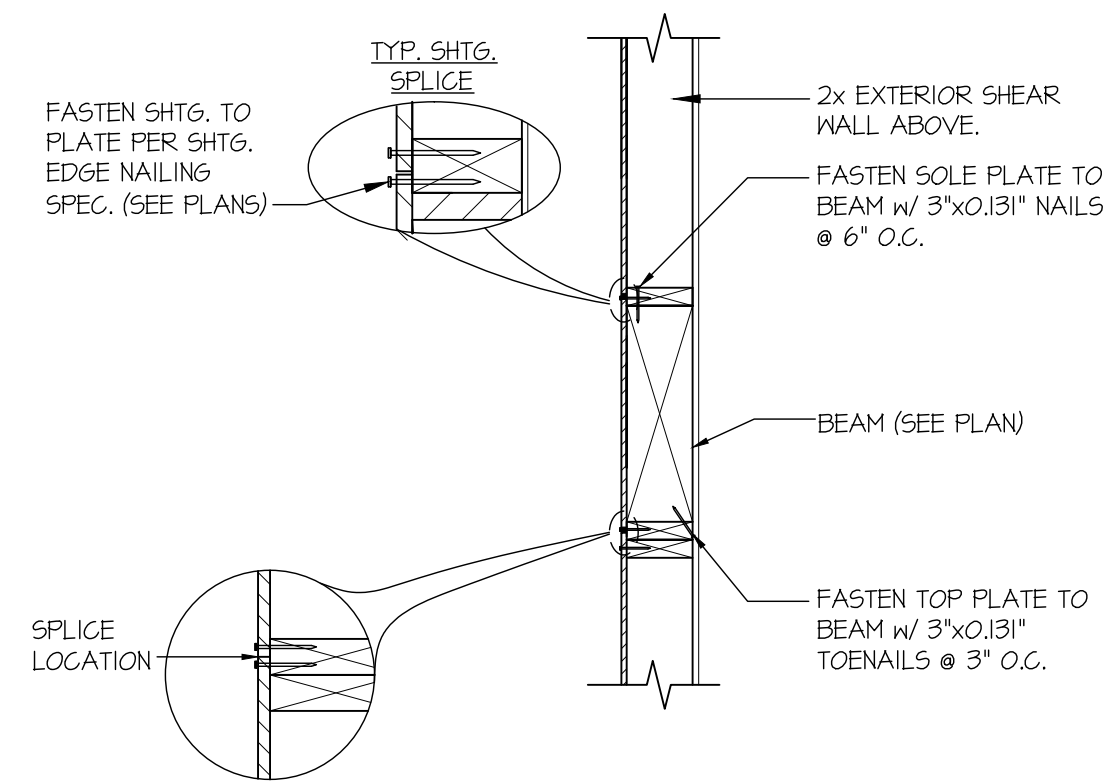


4 SECTION
SCALE: 3/4"=1'-0"
PARALLEL FRAMING

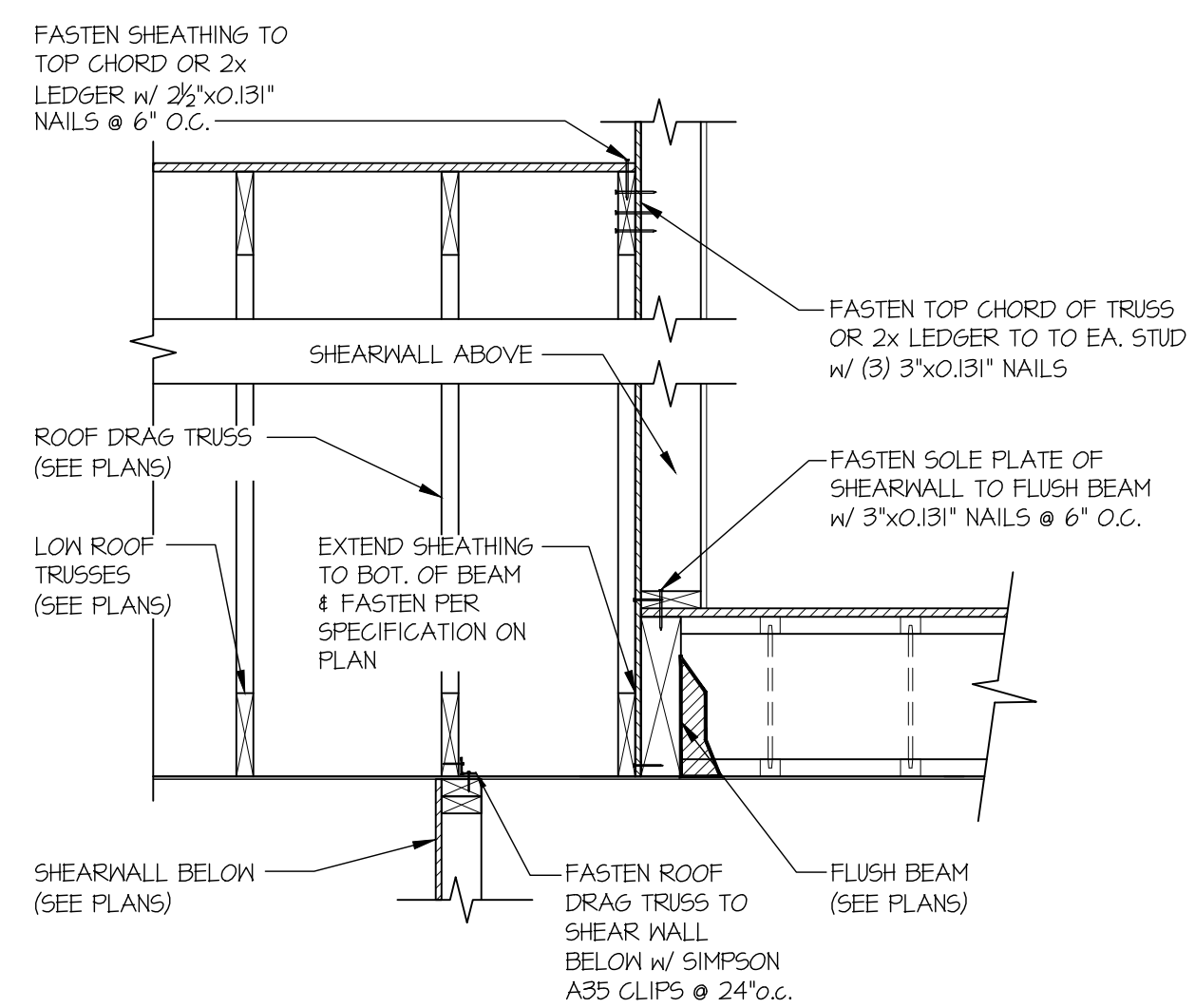


- NOT REQUIRED WHERE PORTAL FRAMES ARE SPECIFIED (I.E. GARAGE DOORS - SEE PLANS).
- DETAIL SIMILAR AT BOTTOM CORNERS OF WINDOWS.
- ONLY REQUIRED WHERE SPECIFIED ON STRUCTURAL PLANS.

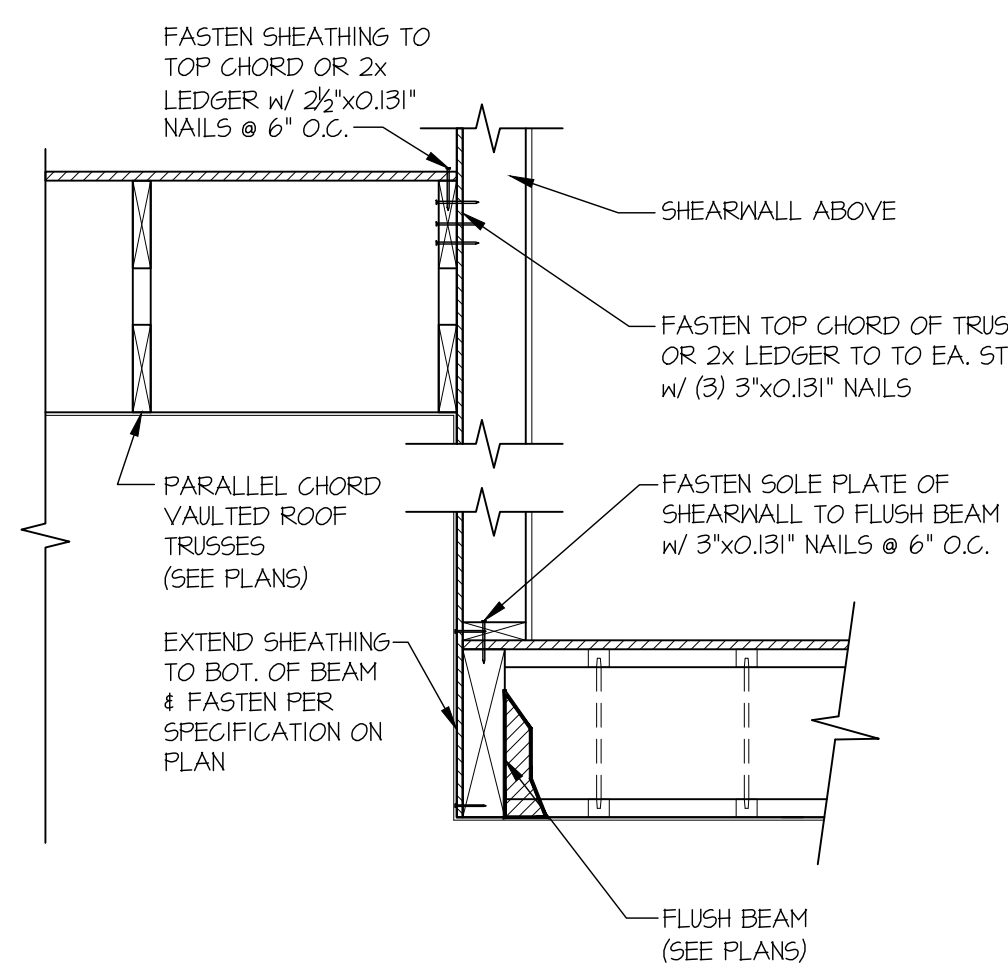
5 EXT. WALL & INT. SHEARWALL OPENING ELEVATION
SCALE: NTS



50 SECTION
SCALE: 3/4"=1'-0"



58 SECTION
SCALE: 3/4"=1'-0"



59 SECTION
SCALE: 3/4"=1'-0"



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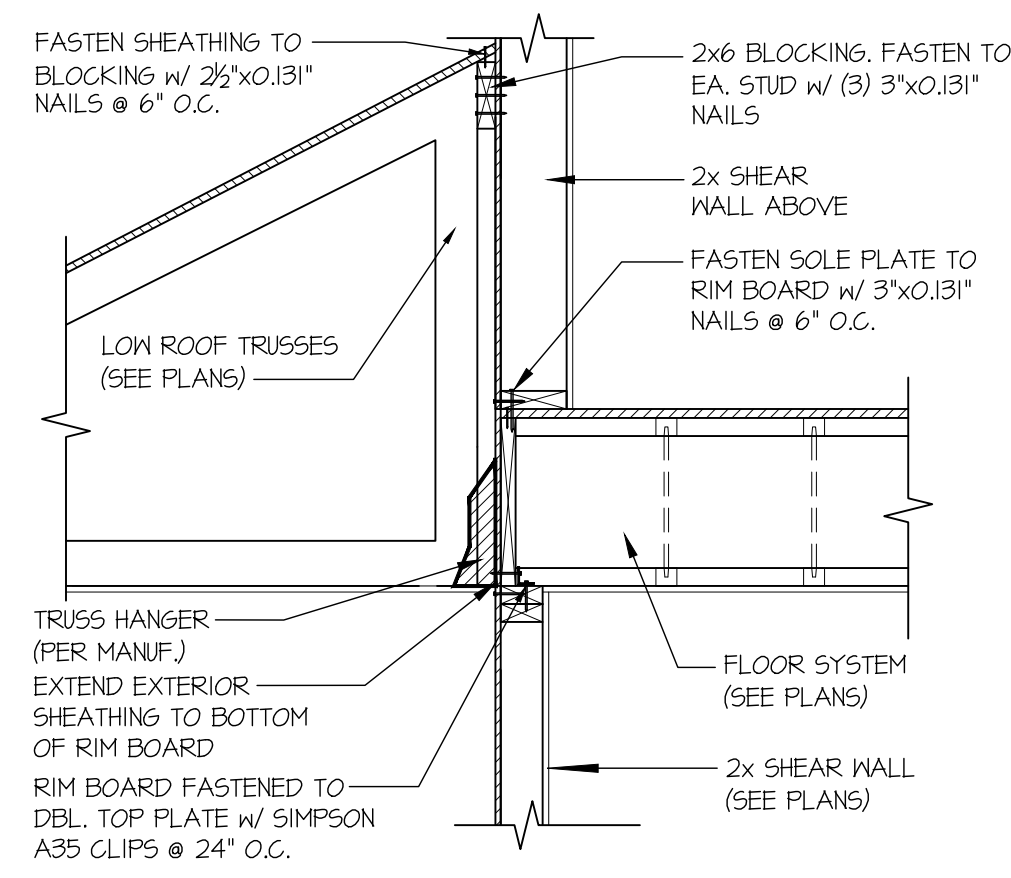
project mgr: **NJM**
drawn by: **SAS**
issue date: **11-04-22**

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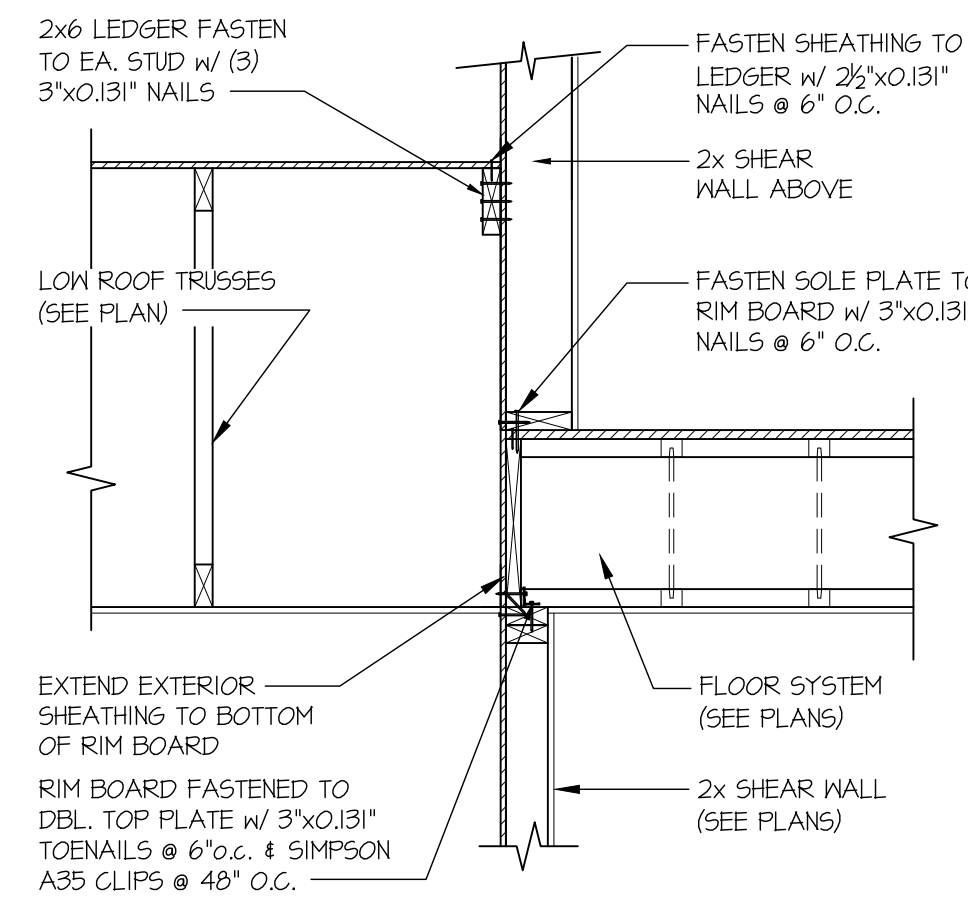
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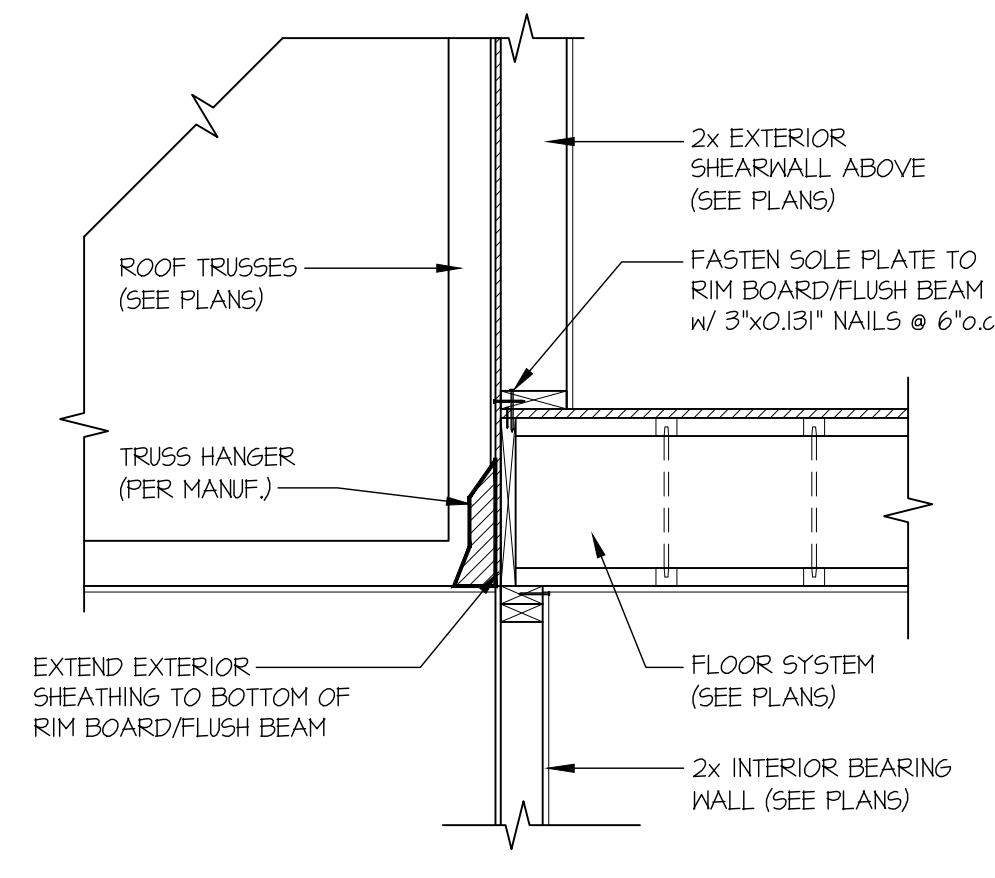
STRUCTURAL DETAILS
4029 97TH AVE SE
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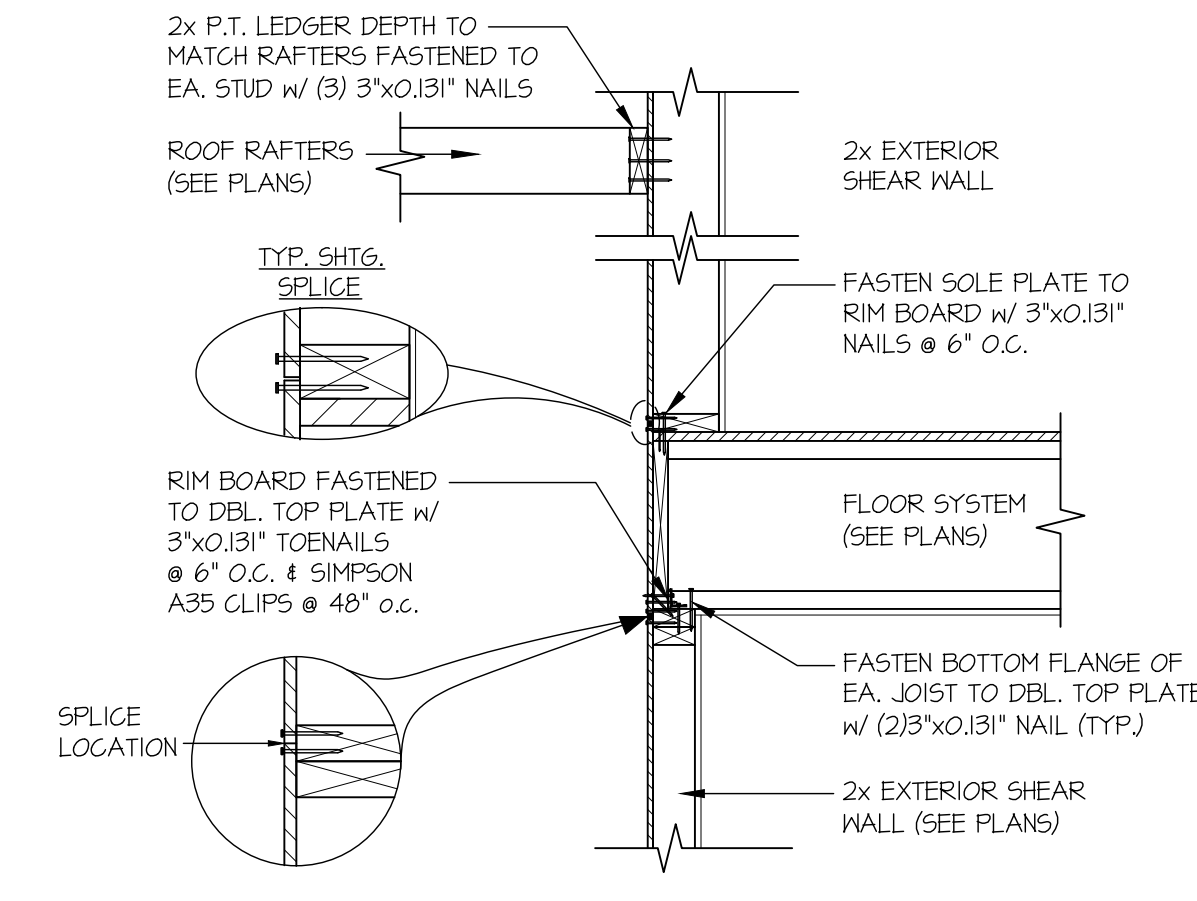
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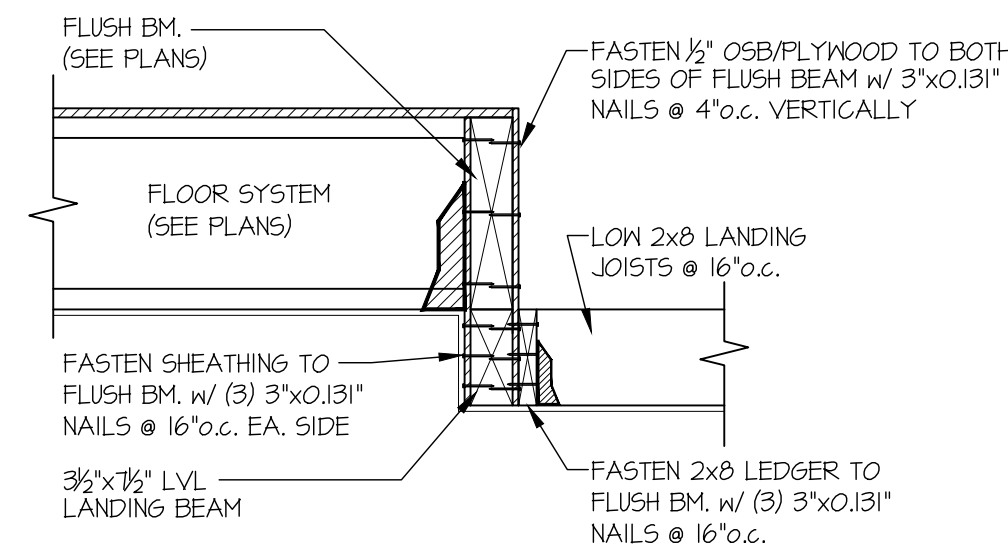
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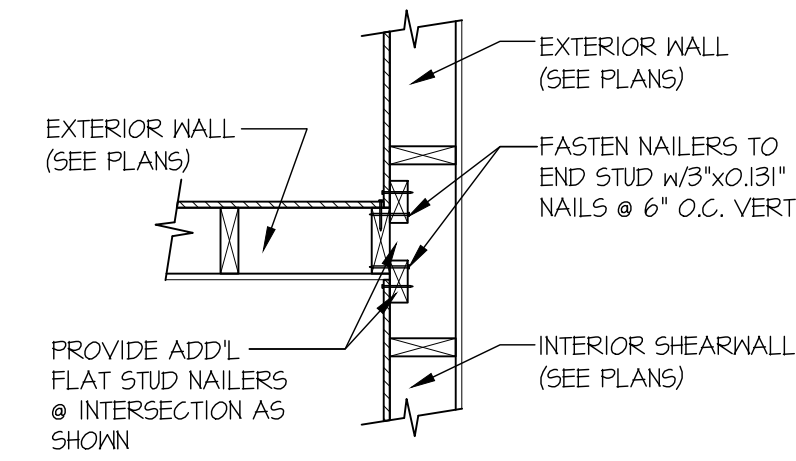
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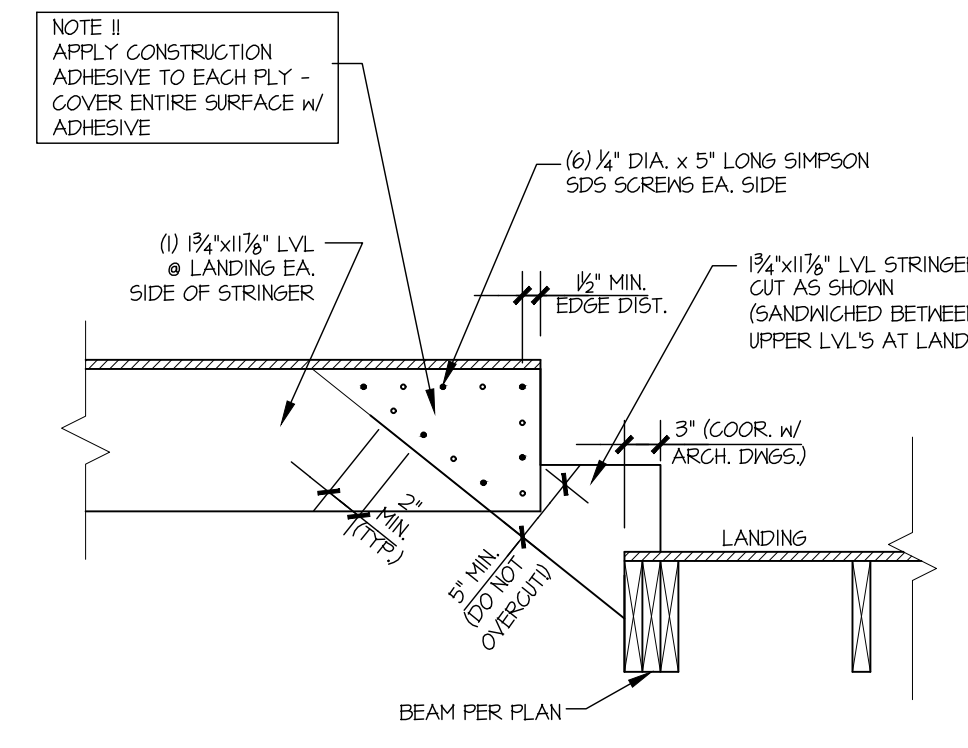
65 SECTION
SCALE: 3/4"=1'-0"



70 SECTION
SCALE: 3/4"=1'-0"



95 SHEAR TRANSFER DETAIL @ INTERSECTING INT. SHEARWALL
SCALE: 3/4"=1'-0" SHTG. ON SAME FACE



A MITERED STAIR STRINGER DETAIL
SCALE: 1"=1'-0"



seal:
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STRUCTURAL DETAILS
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sheet:
SD-3