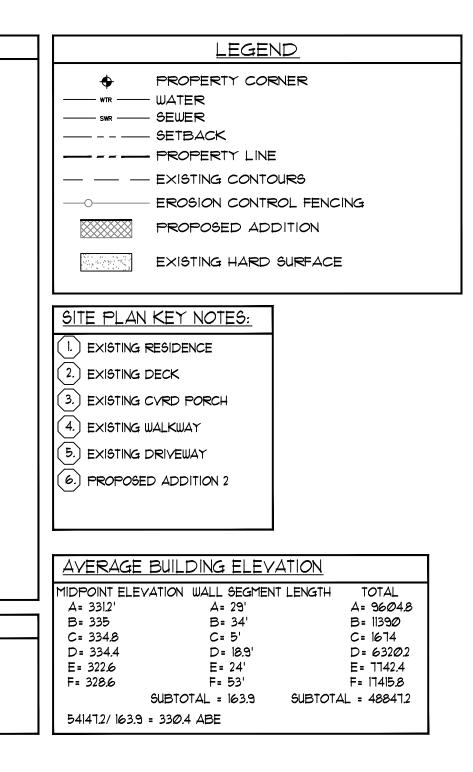
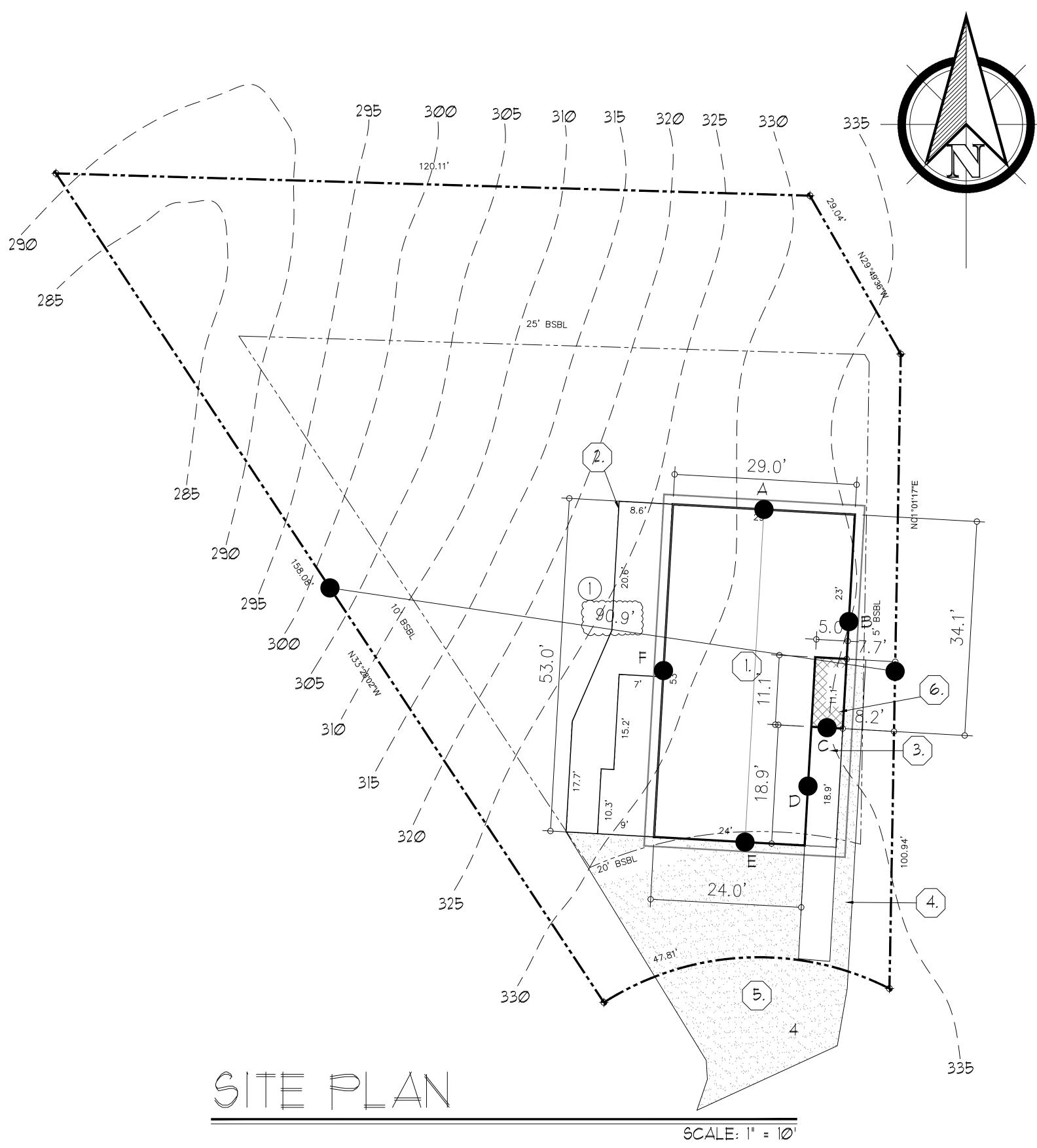
<u>ZONING ANA</u>	LYSIS
<u>PROPERTY INFO</u> PLAN <sup>®</sup> 22104 SITE PLAN ADDRESS: 4701 88TH AVE SE, MERCER I PARCEL ® 275700-0060 ZONE: R-36	ISLAND, WA <b>38040</b>
<u>SETBACKS:</u> FRONT 20' SIDES 5'/10' REAR 25'	
GROSS FLOOR AREA MAX.: 40% 11224 X 40% = 4,489.6 MAX. GFA	
STRUCTURE IMPERVIOU EXIST. MAIN RESIDENCE: PROPOSED ADDITION: EXIST. DECK: EXIST. CVRD PORCH: SUBTOTAL	<u>16</u> 1499 SQFT 55 SQFT 591 SQFT <u>95 SQFT</u> 224Ø SQFT
WITH OVERHANG:	1793 SQFT
<u>HARDSURFACE IMPER hardsurface:</u> subtotal	<u>∨IOUS:</u> <u>666 SQFT</u> 666 SQFT
<u>SUBTOTALS:</u> TOTAL IMPERVIOUS: TOTAL LOT AREA: BUILDING: IMPERV % TOTAL IMPERV %	2906 SQFT 11,224 SQFT 18.9% 29,8%
LEGAL DESCRIPTION: GILBERT ADD PLat Block: Plat Lot: 6	
LOT SLOPE CALC	CULATION
HIGHEST ELEVATION POINT OF LOWEST ELEVATION POINT OF I ELEVATION DIFFERENCE: HORIZONTAL DISTANCE: LOT SLOPE:	

THIS PLOT PLAN IS PREPARED TO SHOW THE DIMENSIONAL RELATIONSHIP FROM BUILDING FOUNDATION TO PROPERTY LINE, IT IS NOT A SURVEY. IT IS BASED OFF ONLINE JURISDICTION COUNTY MAPS AND SITE OBSERVATION. ALL CONSTRUCTION SHALL BE CONSISTENT WITH CITY STANDARDS. CONTRACTOR SHALL VERIFY WITH CITY ON APPROVED IMPROVEMENTS PLANS & BETTER PRACTICE MANAGEMENT PRACTICES











## SITE WORK

#### GENERAL

UNLESS A SOILS INVESTIGATION BY A QUALIFIED SOILS ENGINEER IS PROVIDED, FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING UI500 PSF. EXTERIOR FOOTINGS SHALL BEAR 18" (MINIMUM) BELOW FINISHED GRADE. ALL FOOTINGS TO BEAR ON FIRM UNDISTURBED EARTH BELOW ORGANIC SURFACE SOILS. BACKFILL TO BE THOROUGHLY COMPACTED. BOLT HEADS AND NUTS BEARING AGAINGT WOOD TO BE PROVIDED WITH 1/4"X3"X3" PLATE WASHERS. WOOD BEARING ON OR INSTALLED WITHIN I' OF MASONRY OR CONCRETE TO BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE.

FOUNDATION SILL BOLTS TO BE 5/8" DIAMETER AT 6'-0" O.C. UN.O. WITH MIN. 1" EMBEDMENT METAL FRAMING CONNECTORS TO BE MANUFACTURED BY SIMPSON STRONG-TIE OR USP STRUCTURAL CONNECTORS

### CARPENTRY

#### <u>GENERAL</u>

ALL NAILING TO COMPLY WITH REQUIREMENTS OF IRC TABLE R602.3(1)(2)(3) SUPPORTS AND FASTENERS USED TO ATTACH GYPSUM BOARD AND GYPSUM PANEL PRODUCTS SHALL COMPLY WITH TABLE R102.3.5 GYPSUM SHEATHING SHALL BE ATTACHED TO EXTERIOR WALLS IN ACCORDANCE WITH TABLE R602.3(1) GYPSUM BOARD AND GYPSUM PANEL PRODUCTS SHALL BE APPLIED AT RIGHT ANGLES OR PARALLEL TO FRAMING MEMBERS, ALL EDGES AND ENDS OF GYPSUM BOARD AND GYPSUM PANEL PRODUCTS SHALL OCCUR ON THE FRAMING MEMBERS, EXCEPT THOSE EDGES AND ENDS THAT ARE PERPENDICULAR TO THE FRAMING MEMBERS. INTERIOR GYPSUM BOARD SHALL NOT BE INSTALLED WHERE IT IS DIRECTLY EXPOSED TO THE WEATHER OR WATER

#### FASTENTERS

WSRC R317.3 FASTENERS, INCLUDING NUTS AND WASHERS, AND CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED WOOD AND FIRE-RETARDANT-TREATED WOOD SHALL BE IN ACCORDANCE WITH THIS SECTION. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM AI53. STAINLESS STEEL DRIVEN FASTENERS SHALL BE IN ACCORDANCE WITH THE MATERIAL REQUIREMENTS OF ASTM F1661.

#### R317.3.1 FASTENERS FOR PRESERVATIVE-TREATED WOOD

FASTENERS, INCLUDING NUTS AND WASHERS, FOR PRESERVATIVE-TREATED WOOD SHALL BE OF HOT-DIPPED. ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. STAPLES SHALL BE OF STAINLESS STELL, COATING TYPES AND WEIGHTS FOR CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED WOOD SHALL BE IN ACCORDANCE WITH THE CONNECTOR MANUFACTURER'S RECOMMENDATIONS. IN THE ABSENCE OF MANUFACTURER'S RECOMMENDATIONS, NOT LESS THAN ASTM A653 TYPE GI85 ZINC-COATED GALVANIZED STEEL, OR EQUIVALENT, SHALL BE USED,

#### EXCEPTIONS:

- 1/2-INCH-DIAMETER (12.1) OR GREATER STEEL BOLTS.
- FASTENERS OTHER THAN NAILS, STAPLES AND TIMBER RIVETS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B695. CLASS 555 MINIMUM. 3. PLAIN CARBON STEEL FASTENERS IN SBX/DOT AND ZINC BORATE PRESERVATIVE TREATED WOOD IN AN
- INTERIOR, DRY ENVIRONMENT SHALL BE PERMITTED.
- 8" MIN. CLEARANCE BETWEEN WOOD AND EARTH.
- 12" MIN. CLEARANCE BETWEEN FLOOR BEAMS AND EARTH. 18" MIN. CLEARANCE BETWEEN FLOOR JOIST AND EARTH.

#### FASTENERS

ALL NAILS SPECIFIED ON THIS PLAN SHALL BE COMMON OR GALVANIZED BOX (UNLESS NOTED OTHERWISE) OF THE DIAMETER AND LENGTH LISTED BELOW OR AS PER APPENDIX L OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) 8d COMMON (0.131" DIA., 2-1/2" LENGTH), 8d BOX (0.113" DIA, 2-1/2" LONG), 10d COMMON (0.148" DIA,, 3" LONG) 10d BOX (0.128" DIA,, 3" LENGTH), 16d COMMON (0.162" DIA, 3-1/2" LONG), 16d SINKER (0.148 DIA, 3-1/4" LONG) 5d COOLER (0.086" DIA., 1-5/8" LONG ), 6d COOLER (0.092" DIA., 1-7/8" LONG)

#### LUMBER GRADES

FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN PRODUCTS ASSOCIATION OR THE WEST COST LUMBER INSPECTION BUREAU. ALL SAUN LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY AND SHALL HAVE THE FOLLOWING UNADJUSTED DESIGN MINIMUM PROPERTIES:

JOISTS:	WOOD TYPE:
2×4	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi
2×6 OR LARGER	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=13000000psi
BEAM	
4×	DF-L #2 - Fb=900 psi, Fv=180 psi, Fc=1350 psi, E=1600000psi
6X OR LARGER	DF-L #2 - Fb=875 psi, Fv=170 psi, Fc=600 psi, E=13000000psi
<u>STUDS</u>	
2×4	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=13000000psi
2×6 OR LARGER	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi
POSTS	
4×4	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=13000000psi
4×6 OR LARGER	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=13000000psi
6×6 OR LARGER	DF-L #1 - Fb=1200 psi, Fv=170 psi, Fc=1000 psi, E=1600000psi

#### <u>GLUED-LAMINATED BEAM (GLB)</u>

SHALL BE 24F-V4 FOR SINGLE SPANS \$ 24F-V8 FOR CONTINUOUS OR CANTILEVER SPANS WITH THE FOLLOWING MINIMUM PROPERTIES:

Fb = 2,400 PSI, Fv = 165 PSI, Fc = 650 PSI (PERPENDICULAR), E = 1,800,000 PSI.

ENGINEERED WOOD BEAMS AND I-JOIST

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND SPECIFICATIONS FOR APPROVAL BY BUILDING OFFICIAL. DESIGN, FABRICATION AND ERECTION IN ACCORDANCE WITH THE LATEST ICC EVALUATION REPORT.

BEAMS DESIGNATED AS "PSL" SHALL HAVE THE MINIMUM PROPERTIES:

Fb = 2,900 PSI, Fv = 290 PSI, Fc = 150 PSI (PERPENDICULAR), E = 2,000,000 PSI.

BEAMS DESIGNATED AS "LVL" SHALL HAVE THE MINIMUM PROPERTIES: Fb = 2,600 PSI, Fv = 285 PSI, Fc = 150 PSI (PERPENDICULAR), E = 1,300,000 PSI.

BEAMS DESIGNATED AS "LSL" SHALL HAVE THE MINIMUM PROPERTIES: Fb = 1,700 PSI, Fv = 400 PSI, Fc = 680 PSI (PERPENDICULAR), E = 1,300,000 PSI.

CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS.

DEFLECTION SHALL BE LIMTED AS FOLLOWS: FLOOR LIVE LOAD MAXIMUM = L/480, FLOOR TOTAL LOAD MAXIMUM = L/240.

#### WINDOW INSTALLATION

WINDOWS SHALL BE INSTALLED AND FINISHED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, WRITTEN INSTALLATION INSTRUCTIONS SHALL BE PROVIDED BY THE MANUFACTURER FOR EACH WINDOW,

# INSULATION AND MOISTURE PROTECTION

#### GENERAL

MAINTAIN I' CLEARANCE ABOVE INSULATION FOR FREE AIR FLOW, INSULATION BAFFLES TO EXTEND 6" ABOVE BATT INSULATION INSULATION BAFFLES TO EXTEND 12" ABOVE LOOSE FILL INSULATION INSULATE BEHIND TUBS/SHOWERS, PARTITIONS AND CORNERS FACE-STAPLE FACED BATTS FRICTION-FIT UNFACED BATTS USE 4 MIL POLY VAPOR RETARDER AT EXTERIOR WALLS R-10 INSULATION UNDER ELECTRIC WATER HEATERS,

#### INSULATION MATERIALS

INSULATION MATERIAL, INCLUDING FACINGS, SUCH AS VAPOR RETARDERS OR VAPOR PERMEABLE MEMBRANES INSTALLED WITHIN FLOOR-CEILING ASSEMBLIES, ROOF-CEILING ASSEMBLIES, WALL ASSEMBLIES, CRAWL SPACES, AND ATTICS SHALL HAVE A FLAME-SPREAD INDEX NOT TO EXCEED 25 WITH AN ACCOMPANYING SMOKE-DEVELOPED INDEX NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH ASTM E 84

EXCEPTIONS:

1. WHEN SUCH MATERIAL ARE INSTALLED IN CONCEALED SPACES, THE FLAME-SPREAD AND SMOKE-DEVELOPEMENT LIMITATIONS DO NOT APPLY TO THE FACINGS, PROVIDED THAT THE FACING IS INSTALLED IN SUBSTANTIAL CONTACT WITH THE UNEXPOSED SURFACE OF THE CEILING, FLOOR, OR WALL FINISH. 2. CELLULOSE LOOSE-FILL INSULATION, WHICH IS NOT SPRAY APPLIED, COMPLYING WITH THE REQUIREMENTS OF IRC R302.10.3, SHALL ONLY BE REQUIRED TO MEET THE SMOKE-DEVELOPED INDEX OF NOT MORE THAN 45Ø.

#### INFILTRATION CONTROL

EXTERIOR JOINTS AROUND WINDOWS AND DOOR FRAMES, PENETRATIONS IN FLOORS, ROOFS AND WALLS AND ALL SIMILAR OPENINGS SHALL BE SEALED, CAULKED, GASKETED OR WEATHERSTRIPPED TO LIMIT AIR LEAKAGE.

## VAPOR BARRIERS / GROUND COVERS AND AT EXTERIOR WALLS.

IN ALL CRAWL SPACES. THE GROUND COVER SHALL BE OVERLAPPED ONE FOOT AT EACH JOINT AND SHALL EXTEND TO THE FOUNDATION WALL.

#### WALL FLASHING

APPROVED CORROGION-REGISTANT FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDING STRUCTURAL FRAMING COMPONENTS. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH AND SHALL BE INSTALLED TO PREVENT WATER FROM REENTERING THE EXTERIOR WALL ENVELOPE. APPROVED CORROSION-RESISTANT FLASHINGS SHALL BE INSTALLED AT ALL OF THE FOLLOWING LOCATIONS:

1. AT TOP OF ALL EXTERIOR WINDOW AND DOOR OPENINGS IN SUCH A MANNER AS TO BE LEAKPROOF, EXCEPT THAT SELF-FLASHING WINDOWS HAVING A CONTINUOUS LAP OF NOT LESS THAN 1-1/8" (28 mm) OVER THE SHEATHING MATERIAL AROUND THE PERIMETER OF THE OPENING, INCLUDING CORNERS, DOO NOT REQUIRE ADDITIONAL FLASHING: JAMB FLASHING MAY ALSO BE OMITTED WHEN SPECIFICALLY APPROVED BY THE BUILDING OFFICIAL.

2. AT THE INTERSECTION OF CHIMNEYS OR OTHER MASONRY CONSTRUCTION WITH FRAME OR STUCCO WALLS, WITH PROJECTING LIPS ON BOTH SIDES UNDER STUCCO OPENINGS.

3. UNDER AND AT THE ENDS OF MASONRY, WOOD, OR METAL COPINGS AND SILLS.

- 4. CONTINUOUSLY ABOVE ALLPROJECTING WOOD TRIM.
- CONSTRUCTION.
- 6. AT WALL AND ROOF INTERSECTIONS. 1. AT BUILT-IN GUTTERS.

# DRAFTSTOPPING & FIRE BLOCKING

DRAFTSTOPPING IN COMBUSTIBLE CONSTRUCTION WHERE THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR-CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACES DOES NOT EXCEED 1,000 SQUARE FEET (92,9 M2), DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS, WHERE THE ASSEMBLY IS ENCLOSED BY A FLOOR MEMBRANCE ABOVE AND A CEILING MEMBRANE BELOW, DRAFTSTOPPING SHALL BE PROVIDED IN FLOOR-CEILING ASSEMBLIES UNDER THE FOLLOWING CIRCUMSTANCES:

1. CEILING IS SUSPENDED UNDER THE FLOOR FRAMING.

2. FLOOR FRAMING IS CONSTRUCTED OF TRUSS-TYPE OPEN-WEB OR PERFORATED MEMBERS. WSRC R302.12.1 DRAFTSTOPPING MATERIALS SHALL BE NOT LESS THAN 1/2-INCH (12.7) GYPSUM BOARD, 3/8-INCH (9.5) WOOD STRUCTURAL PANELS OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. DRAFTSTOPPING SHALL BE INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL. THE INTEGRITY OF THE DRAFTSTOPS SHALL BE MAINTAINED.

#### FIREB<u>LOCKING</u>

FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:

1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS AS FOLLOWS: 1.1. VERTICALLY AT THE CEILING AND FLOOR LEVELS. 1.2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10ft

2. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, AND COVE CEILINGS. 3. UNDER-STAIR PROTECTION, ENCLOSED SPACE UNDER STAIRS THAT IS ACCESSED BY A DOOR OR ACCESS PANEL SHALL HAVE WALLS, UNDER-STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE

WITH !" GYPSUM BOARD 4. AT OPENINGS AROUND VENTS, PIPES, AND DUCTS AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION.

5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES 6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPERATION.

## FOUNDATION WATERPROOFING & DAMPROOFING

#### DAMPROOFING

WSRC R406.2 IN AREAS WHERE A HIGH WATER TABLE OR OTHER SEVERE SOIL-WATER CONDITIONS ARE KNOWN TO EXIST. EXTERIOR FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE WATERPROOFED FROM THE HIGHER OF (a) THE TOP OF THE FOOTING OR (b) 6 INCHES (152 MM) BELOW THE TOP OF THE BASEMENT FLOOR, TO THE FINISHED GRADE, WALLS SHALL BE WATERPROOFED IN ACCORDANCE WITH ONE OF THE FOLLOWING:

TWO-PLY HOT-MOPPED FELTS

- FIFTY-FIVE-POUND ROLL ROOFING
- SIX-MIL POLYVINYL CHLORIDE. SIX-MIL POLYETHYLENE.
- FORTY-MIL POLYMER-MODIFIED ASPHALT.
- SIXTY-MIL FLEXIBLE POLYMER CEMENT.
- SIXTY-MIL SOLVENT-FREE LIQUID-APPLIED SYNTHETIC RUBBER

# DAMPROOFING (CONTINUED

#### WATERPROOFING

IN AREAS WHERE HIGH WATER TABLE OR OTHER SEVERE SOIL-WATER CONDITIONS ARE KNOWN TO EXIST, EXTERIOR FOUNDATION WALLS THAT RETAIN EARTH OR ENCLOSE INTERIOR SPACES AND FLOORS BELOW GRADE SHALL BE WATERPROOFED FROM THE TOP OF FOOTING TO FINISHED GRADE, WALLS SHALL BE WATERPROOFED IN ACCORDANCE WITH ONE OF THE FOLLOWING.

- 1. 2-PLY HOT MOPPED FELT 2.55 POUND ROOF ROLLING
- 3. 6-MIL POLYVINYL CHLORIDE
- 4.6-MIL POLYETHYLENE 5. 40-MIL POLYMER-MODIFIED ASPHALT
- 6.60-MIL FLEXIBLE POLYMER CEMENT 1. 1 CEMENT-BASED, FIBER-REINFORCED, WATERPROOF COATING 8. 60-MIL SOLVANT-FREE, LIQUID-APPLIED SYNTHETIC RUBBER

EXCEPTION: ORGANIC-SOLVANT-BASED PRODUCTS SUCH AS HYDROCARBONS, CHLORINATED HYDROCARBONS, KETONS AND ESTERS SHALL NOT BE USED FOR ICF WALLS WITH EXPANDED POLYSTYRENE FOAM MATERIAL. USE OF PLASTIC ROOFING CEMENTS, ACRYLIC COATINGS, LATEX COATINGS, MORTARS AND PARGINGS TO SEAL ICF WALLS IS PERMITTED. COLD-SETTING ASPHALT OR HOT ASPHALT SHALL CONFORM TO TYPE C OF ASTM D 449. HOT ASPHALT SHALL BE APPLIED AT A TEMPERATURE OF LESS THAN 200 DEG. F. ALL JOINTS IN MEMBRANE WATERPROOFING SHALL BE LAPPED AND SEALED WITH AN ADHESIVE COMPATIBLE WITH THE MEMBRANE.

# DOORS, WINDOWS AND SKYLIGHTS

GENERAL ALL SKYLIGHTS AND SKY WALLS TO BE LAMINATED GLASS UNLESS NOTED OTHERWISE. BEDROOM EMERGENCY EGRESS WINDOWS SHALL HAVE MINIMUM NET CLEAR OPENING OF 5.7 SQ. FT. WITH MINIMUM NET CLEAR OPENING WIDTH OF 20" AND MINIMUM NET CLEAR OPENING HEIGHT OF 24". FINISHED SILL HEIGHT SHALL BE MAXIMUM 44" ABOVE FLOOR. MEASURED FROM THE FINISHED FLOOR TO THE BOTTOM OF THE CLEAR OPENING. WSRC R103.8.5 FLASHING SHALL BE LOCATED BENEATH THE FIRST COURSE OF MAGONRY ABOVE FINISHED GROUND LEVEL AOVE THE FOUNDATION WALL OR SLAB AND AT OTHER POINTS OF SUPPORT, INCLUDING STRUCTURAL FLOORS, SHELF ANGLES AND LINTELS WHERE MASONRY VENEERS ARE DESIGNED.

PROPOSED SINGLE FAMILY DWELLING AND REMODELS & ADDITIONS SHALL CONFORM TO THE FOLLOWING CODES: 2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL RESIDENTIAL CODE 2018 UNIFORM PLUMBING CODE 2018 WASHINGTON STATE ENERGY CODE 2018 WASHINGTON STATE AMENDMENTS

AN APPROVED VAPOR BARRIER SHALL BE PROPERLY INSTALLED IN ROOF DECKS, IN ENCLOSED CEILING SPACES A GROUND COVER OF 6 MIL (0,006") BLACK POLYETHYLENE OR EQUIVALENT SHALL BE LAID OVER THE GROUND

5. WHERE EXTERIOR PORCHES, DECKS, OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOOD

ONE-EIGHTH-INCH CEMENT-BASED, FIBER-REINFORCED, WATERPROOF COATING

FOUNDATION WATERPROOFING

# MECHANICAL

HEATING EQUIPMENT

MI401.1 HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND THE REQUIREMENTS OF THIS CODE. VENTILATION

MI505.4.4 LOCAL EXHAUST RATES. LOCAL EXHAUST SYSTEMS SHALL BE DESIGNED TO HAVE THE CAPACITY TO EXHAUGT THE MINIMUM AIRFLOW RATE DETERMINED IN ACCORDANCE WITH TABLE MI505.4.4

> MINIMUM REQUIRED LOCAL EXHAUST RATES FOR ONE-AND TWO-FAMILY DWELLINGS PER WSRC 2018 TABLE M1505.4.4(1

AREA TO BE EXHAUSTED	EXHAUSTED RATES		
AREA TO DE EXHAUSTED	INTERMITTENT	CONTINUOUS	
KITCHENS	100 CFM	30 CFM	
BATHROOMS - TOILET ROOMS	50 CFM	20 CFM	

FOR 51: INCH = 25.4 MM, I FOOT = 304.8 MM, I CUBIC FOOT PER MINUTE = 0.0004719 m /s. 1 INCH WATER GAGE=249 PA

#### 2018 WASHINGTON STATE ENERGY CODE - R403.6.

WHOLE HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY, MECHANICAL VENTILATION SYSTEM FANS SHALL MEET THE EFFICACY REQUIREMENTS OF TABLE R403.6.1. EXCEPTION: WHERE AN AIR HANDLER THAT IS INTEGRAL TO THE TESTED AND LISTED HVAC EQUIPMENT IS USED TO PROVIDE WHOLE HOUSEVENTILATION, THE AIR HANDLER SHALL BE POWERED BY AN ELECTRONICALLY COMMUTED MOTOR.

#### <u>TABLE R403.6.</u> MECHANICAL VENTILATION SYSTEM FAN EFFICACY

AIR FLOW RATE MAXIMUM (CFM)
ANY
ANY
ANY
\ <b>3</b> Ø
ANY
-

## MECHANICAL VENTILATION IRC SECTION 1505

#### MI505.4.4 LOCAL EXHAUST RATES

LOCAL EXHAUST SYSTEMS SHALL BE DESIGNED TO HAVE THE CAPACITY TO EXHAUST THE MINIMUM AIRFLOW RATE DETERMINED IN ACCORDANCE WITH TABLE MI505.4.4

### MI505.4 WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM.

WHALE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED INACCORDANCE WITH SECTIONS M15Ø5.4.1 THROUGH M15Ø5.4.4

#### MI505.4.1 SYSTEM DESIGN

THE WHOLE-HOUSE VENTILATION SYSTEM SHALL CONSIST OF ONE OR MORE SUPPLY OR EXHAUST FANS, OR A COMBINATION OF SUCH, AND ASSOCIATED DUCTS AND CONTROLS. LOCAL EXHAUST OR SUPPLY FANS ARE PERMITTED TO SERVE AS SUCH A SYSTEM, OUTDOOR AIR DUCTS CONNECTED TO THE RETURN SIDE OF AN AIR HANDLER SHALL BE CONSIDERED AS PROVIDING SUPPLY VENTILATION

#### MI505.4.2 SYSTEM CONTROLS

THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR AT A CONTINUOUS RATE AS DETERMINED IN ACCORDANCE WITH TABLE MI5/05,4,3(1) OR EQUATION 15-1 VENTILATION RATE IN CUBIC FEET PER MINUTE = (0.01 x TOTAL SQUARE FOOT AREA OF HOUSE) + 7.5 X (NUMBER OF BEDROOMS + 1)

MI505.4.3 MECHANICAL VENTILATION RATE

THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR AT A CONTINUOUS RATE AS DETERMINED IN ACCORDANCE WITH TABLE MI505.4.3(1) OR EQUATION 15-1 VENTILATION RATE IN CUBIC FEET PER MINUTE = (0.01 x TOTAL SQUARE FOOT AREA OF HOUSE) + 7.5 X (NUMBER OF BEDROOMS + 1)

EXCEPTION: THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM IS PERMITTED TO OPERATE INTERMITTENTLY WHERE THE SYSTEM HAS CONTROLS THAT ENABLE OPERATION FOR NOT LESS THAN 25 PERCENT OF EACH 4-HOUR SEGMENT AND THE VENTILATION RATE PRESCRIBED IN TALE MI505.4.3(1) IS MULTIPLIED BY THE FACTOR DETERMINED IN ACCORDANCE WITH TABLE MI5/05.4, 3(2).

TABLE R1505.4.3(1)

CONINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM

#### AIRFLOW RATE REQUIREMENTS

DWELLING UNIT	NUMBER OF BEDROOMS				
FLOOR AREA	Ø-1	2	3	4	5 OR MORE
(SQUARE FEET)		AIR	FLOW IN CFM	·	
,500	3Ø	3Ø	35	45	50
501-1,000	3Ø	35	40	50	55
1,001-1,500	3Ø	40	45	55	60
1,501-2,000	35	45	50	60	65
2,001-2,500	40	50	55	65	٦Ø
2,501-3,000	45	55	60	70	75
3,001-3,500	50	60	65	75	80
3,501-4,000	55	65	٦Ø	8Ø	85
4,001-4,500	60	٦Ø	75	85	90
4,501-5,000	65	75	80	90	95

TABLE MI505.4.3(2) SYSTEM COEFFICIENT

SYSTEM TYPE	DISTRIBUTED	NOT DISTRIBUTED
BALANCED	1 <i>.</i> Ø	1.25
NOT BALANCED	1.25	1.5

#### TABLE M1505,4,3(3)

INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS TABLE MI50543(3)

		• •		
RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	50%	66%	75%	100%
FACTOR	2	1,5	1.3	(1.0)

FOR VENTILATION SYSTEM RUN TIME VALUES BETWEEN THOSE GIVEN, THE FACTORS ARE PERMITTED TO BE DETERMINED BY INTERPOLATION. EXTRAPOLATION BEYOND THE TABLE IS PROHIBITED.

DUCT LEAKAGE PROTECTION: DUCTS SHALL BE LEAK TESTED IN ACCORDANCE WITH WSU RS-33,

USING THE MAXIMUM DUCT LEAKAGE RATES SPECIFIED.

BUILDING AIR LEAKEAGE TESTING 2018 WSEC SEC. 402.4.1.2

THE BUILDING OR DWELLING UNIT SHALL BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE OF NOT EXCEEDIING 5 AIR CHANGES PER HOUR. TESTING SHALL BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF Ø.2 INCHES W.G. FOR THIS TEST ONLY, THE VOLUME OF THE HOME SHALL BE THE CONDITIONED FLOOR AREA IN FT2 MULTIPLIED BY 8.5 FEET. WHERE REQUIRED BY THE CODE OFFICIAL, TESTING SHALL BE CONDUCTED BY AN APPROVED THIRD PARTY. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTION THE TEST AND PROVIDED TO THE CODE OFFICIAL, TESTING SHALL BE PERFORMED AT ANY TIME AFTER CREATION OF ALL PENETRATIONS OF THE BUILDING THERMAL ENVELOPE. ONCE VISUAL INSPECTION HAS CONFIRMED SEALING (SEE TABLE R402.4.1.1), OPERABLE WINDOWS AND DOORS MANUFACTURED BY SMALL BUSINESS SHALL BE PERMITTED TO BE SEALED OFF AT THE FRAME PRIOR TO THE TES.

## MPERATURE CONTRO!

AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EACH SEPARATE HEATING AND COOLING SYSTEM IRC SECTION R303.10. THE THERMOSTAT SHALL ALLOW FOR, AT A MINIMUM, A 5-2 PROGRAMMABLE SCHEDULE (WEEKDAYS/WEEKENDS) AND BE CAPABLE OF PROVIDING AT LEAST TWO PROGRAMMABLE SETBACK/GETUP PERIODS PER DAY.

2018 WASHINGTON STATE ENERGY CODE - TABLE 402.1 THE BUILDING THERMAL ENVELOPE SHALL MEET THE REQUIREMENTS OF TABLE R402.1.1 BASED ON THE CLIMATE ZONE SPECIFIED IN CHAPTER 3

FENESTRATION U-FACTOR		CEILING		FRAMED	WALL	SLAB ON
VERTICAL	SKYLIGHT	W/ ATTIC	FRAMED WALL	FLOOR	BELOW GRADE	GRADE
0.30	Ø.5Ø	R-49	R-21	R-38	R-10/15/21 INT + 5TB	R-10 2'

#### WSRC 1505.4.4(1) MINIMUM LOCAL EXHAUST RATES

VENTILATION SCHEDULE			
VENTILATION R	VENTILATION REQUIREMENTS OF IRC TABLE WSRC MI505.4.4		
SYMBOL			
- <b>-</b>	KITCHENS	100 CFM INTERMITTENT OR 30 CFM CONTINUOUS	
2	BATHROOMS-TOILET ROOMS	MECHANICAL EXHAUST CAPACITY OF 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS	

WSRC 403.6.1 WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM



EACH DWELLING UNIT SHALL BE EQUIPPED WITH A VENTILATION SYSTEM. THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS MI505.4.1 THROUGH MI505.4.4

#### MI505.4.1. SYSTEM DESIGN

THE WHOLE-HOUSE VENTILATION SYSTEM SHALL CONSIST OF ONE OR MORE SUPPLY FANS, ONE OR MORE EXHAUST FANS, OR AN ERV/HRY WITH INTEGRAL FANS, ASSOCIATED DUCTS AND CONTROLS. WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM WITH SUPPLY AND EXHAUST FANS

MI505.4.1.1 WHOLE-HOUSE SYSTEM COMPONENT REQUIREMENTS THE WHOLE-HOUSE VENTILATION SUPPLY AND EXHAUST FANS SPECIFIED IN THIS SECTION SHALL HAVE A MINIMUM EFFICACY AS PRESCRIBED IN THE WASHINGTON STATE ENERGY CODE, DESIGN AND INSTALLATION OF THE SYSTEM OR EQUIPMENT SHALL BE CARRIED OUT IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS. WHOLE-HOUSE VENTILATION FANS SHALL BE RATED FOR SOUND AT NO LESS THAN THE MINIMUM AIRFLOW RATE REQUIRED, FANS SHALL BE RATED FOR SOUND AT A MAXIMUM OF 1.0 SONE. THIS SOUND SHALL BE AT A MINIMUM OF Ø.1 IN. W.C. (35PA) STATIC PRESSURE IN ACCORDANCE WITH HVI PROCEDURES SPECIFIED EXCEPTION: HVAC AIR HANDLERS, ERV/HRV UNITS, AND REMOTE-MOUNTED FANS NEED NOT MEET THE SOUND

REQUIREMENTS. TO BE CONSIDERED FOR THIS EXCEPTION, A REMOTE-MOUNTED FAN MUST BE MOUNTED OUTSIDE THE HABITABLE SPACES, BATHROOMS, TOILETS, AND HALLWAYS, AND THERE MUST BE AT LEAST 4 FEET OF DUCTWORK BETWEEN THE FAN AND THE INTAKE GRILLE. THE WHOLE HOUSE SUPPLY FAN SHALL PROVIDE DUCTED OUTDOOR VENTILATION AIR TO EACH HABITABLE SPACE WITHIN THE RESIDENTIAL UNIT.

EXCEPTION: INTERIOR JOINING SPACES PROVIDED WITH A 30 CFM (0.0141 M 3/6) WHOLE-HOUSE TRANSFER FAN OR A PERMANENT OPENING WITH AN AREA OF NOT LEGG THAN & PERCENT OF THE FLOOR AREA OF THE INTERIOR ADJOINING SPACE BUT NOT LEGS THAN 25 SQUARE FEET. DO NOT REQUIRE DUCTED OUTDOOR VENTILATION AIR TO BE SUPPLIED DIRECTLY TO THE SPACE. WHOLE-HOUSE TRANSFER FANS SHALL MEET THE SONE RATING OF SECTION MI505.4.1.1 AND SHALL HAVE WHOLE-HOUSE VENTILATION CONTROLS THAT COMPLY WITH SECTION MI505.4.2

# DRILLING AND NOTCHING STUDS.

#### W<u>SRC R6Ø2.6</u> I. NOTCHING, ANY STUD IN AN EXTERIOR WALL OR BEARING PARTITION MAY BE CUT OR NOTHCED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. STUDS IN NONBEARING PARTITIONS SHALL BE PERMITTED TO BE NOTCHED TO A DEPTH NOT TO EXCEED 40 PERCENT OF A SINGLE STUD WIDTH.

2. DRILLING. ANY STUD SHALL PERMITTED TO BE BORED OR DRILLED, PROVIDED THAT THE DIAMETER OF THE RESULTING HOLE IS NOT MORE THAN 60 PERCENT OF THE STUD WIDTH, THE EDGE OF THE HOLE IS NOT MORE THATN 5/8 INCH TO THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A CUT OR NOTCH. STUDS LOCATED IN EXTERIOR WALLS OR BEARING PARTITIONS DRILLED OVER 40 PERCENT AND UP TO 60 PERCENT SHALL BE DOUBLED WITH NOT MORE THAN TWO SUCCESSIVE DOUBLED STUDS BORED.

-EXCEPTION: USE OF APPROVED STUD SHOES IS PERMITTED WHERE THEY ARE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

R602.6.1 DRILLING AND NOTCHING OF TOP PLATE. WHEN PIPING OR DUCTWORK IS PLACED IN OR PARTLY IN AN EXTERIOR WALL OR INTERIOR LOAD BEARING WALL, NECESSITATING CUTTING, DRILLING OR NOTCHING OF THE TOP PLATE BY MORE THAN 50 PERCENT OF ITS WIDTH, A GALVANIZED METAL TIE OF NOT LESS THAN 0.054 INCH THICK (1.37mm) (16 ga) AND 1 1/2 INCHES (38mm) WIDE SHALL BE FASTENED ACROSS AND TO THE PLATE AT EACH SIDE OF THE OPENING WITH NOT LESS THAN EIGHT 10d (0.148 INCH DIAMETER) NAILS HAVING A MINIMUM LENGTH OF 1  $\frac{1}{2}$ INCHES AT EACH SIDE OR EQUIVALENT. THE METAL TIE MUST EXTEND NOT LESS 6 INCHES PAST THE OPENING,

-EXCEPTION: WHEN THE ENTIRE SIDE OF THE WALL WITH THE NOTCH OR CUT IS COVERED BY WOOD STRUCTURAL PANEL SHEATHING.

R602.6 DRILLING AND NOTCHING STUDS. DRILLING AND NOTCHING OF STUDS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

1. NOTCHING, ANY STUD IN AN EXTERIOR WALL OR BEARING PARTITION SHALL BE PERMITTED TO BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. STUDS IN NONBEARING PARTITIONS SHALL BE PERMITTED TO BE NOTCHED TO A DEPTH NOT TO EXCEED 40 PERCENT OF A SINGLE STUD WIDTH.

2. DRILLING, ANY STUD SHALL BE PERMITTED TO BE BORED OR DRILLED, PROVIDED THAT THE DIAMETER OF THE RESULTING HOLE IS NOT MORE THAN 60 PERCENT OF THE STUD WIDTH, THE EDGE OF THE HOLE IS NOT MORE THAN  $\frac{5}{6}$ " INCH (16MM) TO THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A CUT OR NOTCH. STUDS LOCATED IN EXTERIOR WALLS OR BEARING PARTITIONS DRILLED OVER 40 PERCENT AND UP TO 60 PERCENT SHALL BE DOUBLED WITH NOT MORE THAN TWO SUCCESSIVE DOUBLED STUDS BORED.

EXCEPTION: USE OF APPROVED STUD SHOES IS PERMITTED WHERE THEY ARE INSATLLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

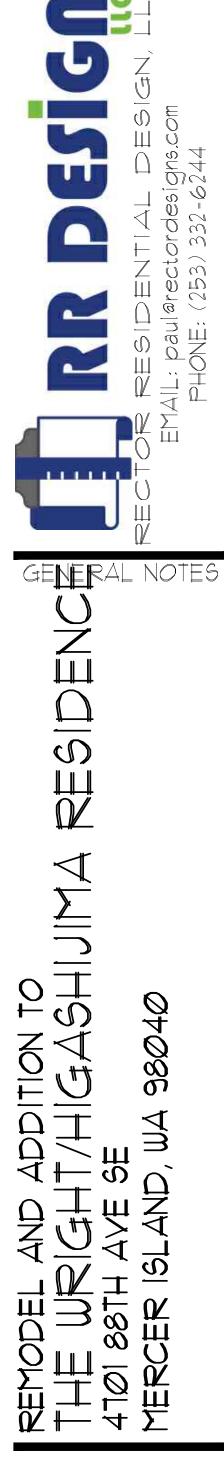
## LIGHTING

LIGHTING EQUIPMENT: NOT LESS THAN 90% OF LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICACY LAMPS.

LIGHTING EQUIPMENT. FUEL GAS LIGHTING SYSTEMS SHALL NOT HAVE CONTINUOUSLY BURNING PILOT LIGHTS.

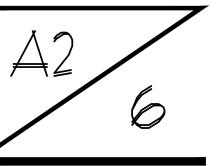
## CERTIFICATE

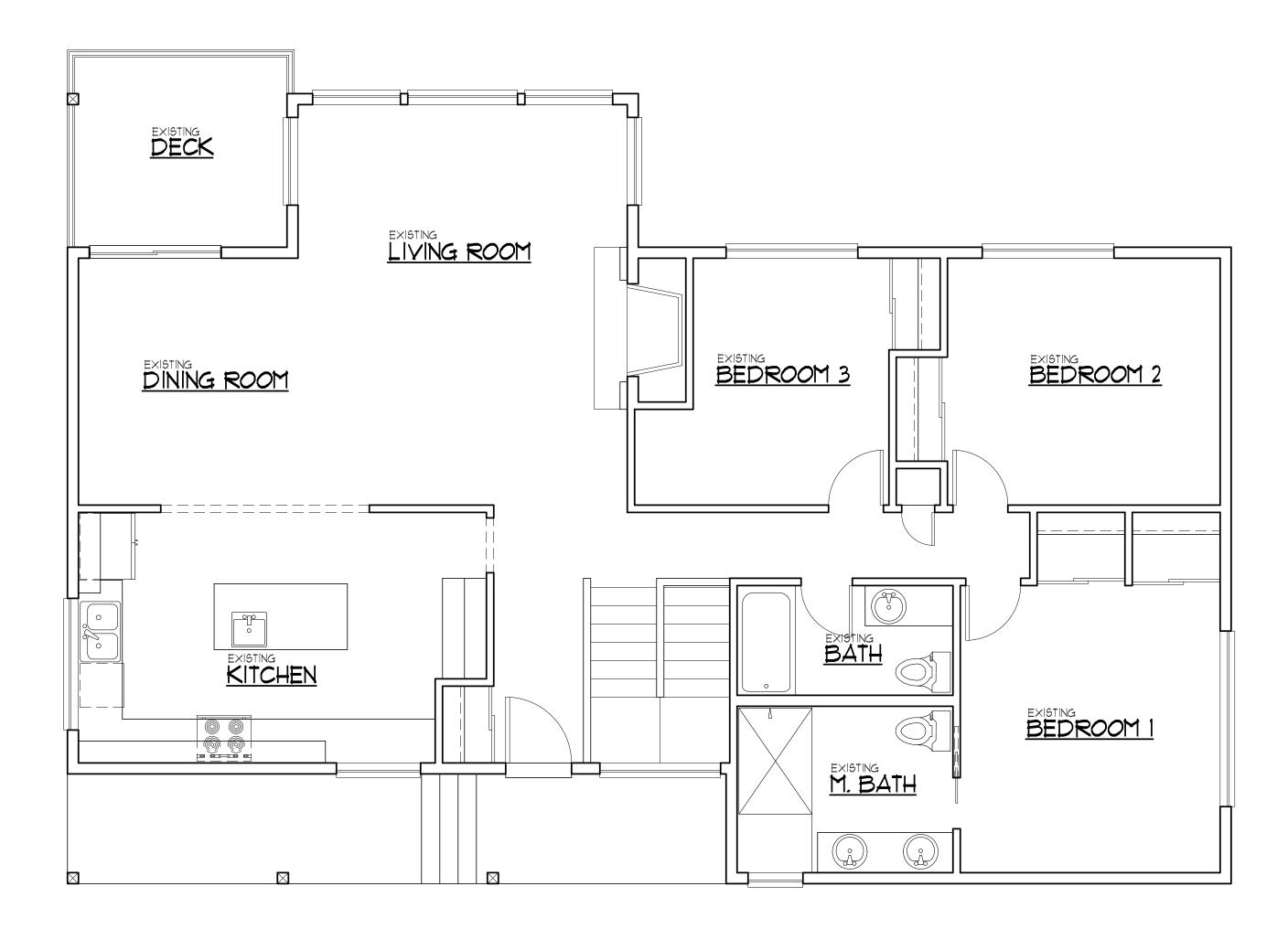
<u>WGRC RI505.4.1.1</u> A PERMANENT CERTIFICATE SHALL BE COMLETED BY THE MECHANICAL CONTRACTOR, TEST AND BALANCE CONTRACTOR OR OTHER APPROVED PARTY AND POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM, OR AN APPROVED LOCATION INSIDE THE BUILDING. WHEN LOCATED ON AN ELECTRICAL PANEL, THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL, OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST THE FLOW RATE DETERMINED FROM THE DELIVERED AIRFLOW OF THE WHOLEHOUSE MECHANICAL VENTILATION SYSTEM AS INSTALLED AND THE TYPE OF MECHANICAL WHOLE-HOUSE VENTILATION SYSTEM USED TO COMPLY WITH SECTION MI505.4.3.1.



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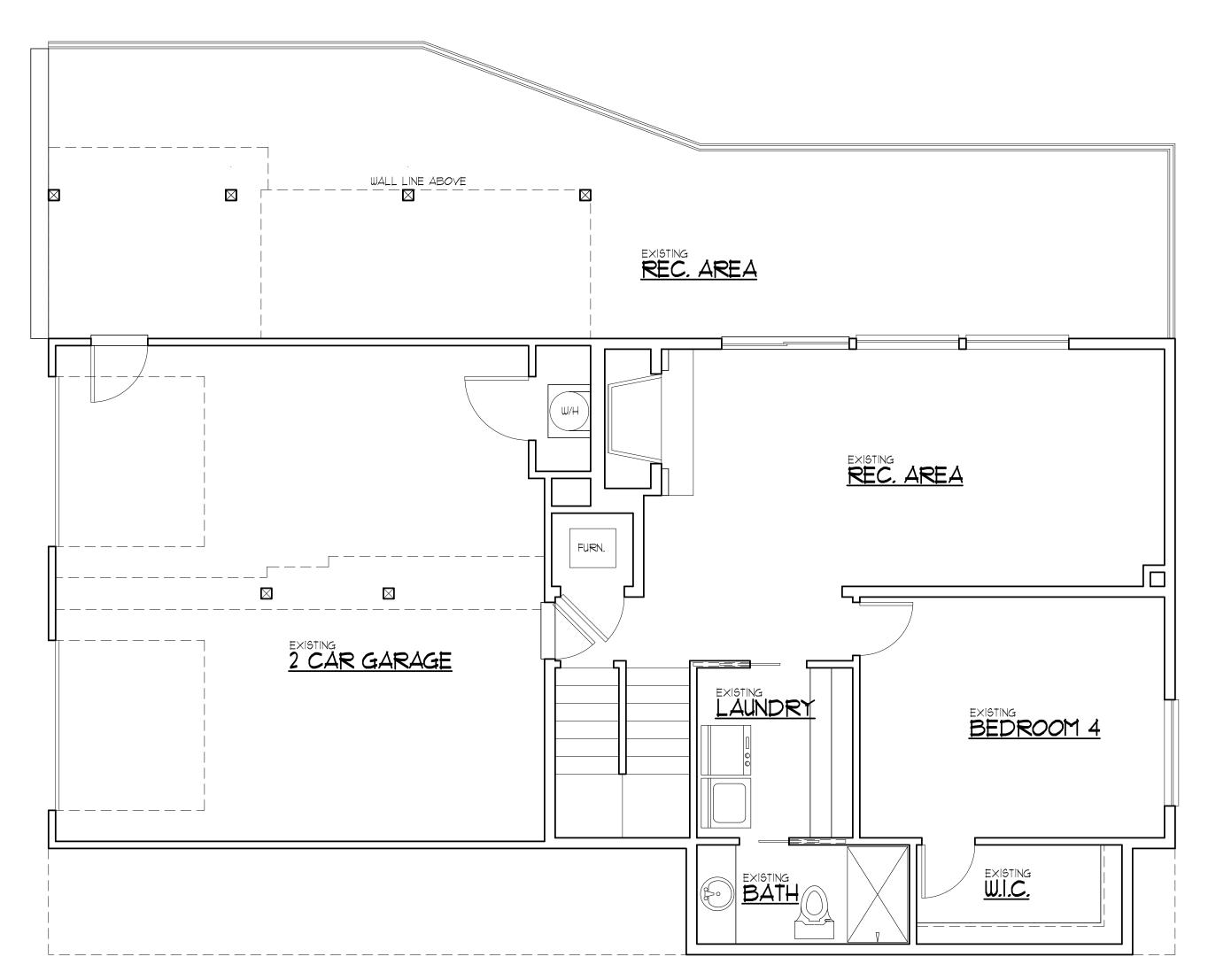
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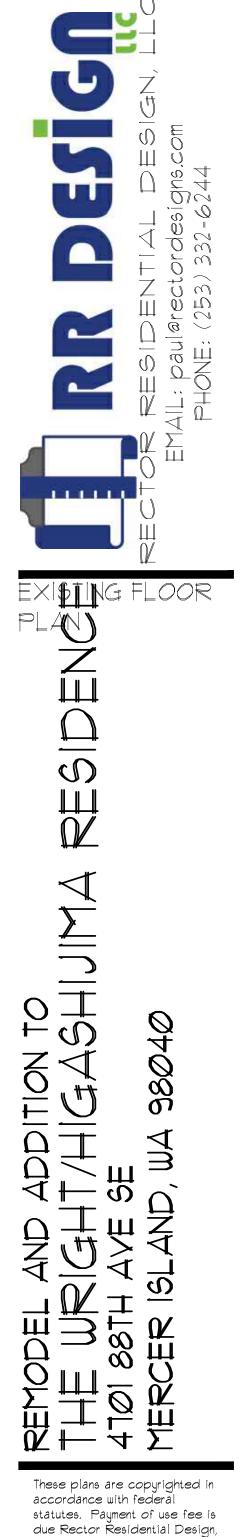


EXISTING SCALE : 1/4"= 1'-Ø"

LOWER FLOOR PLAN

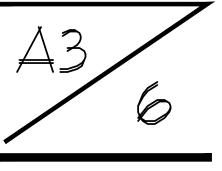
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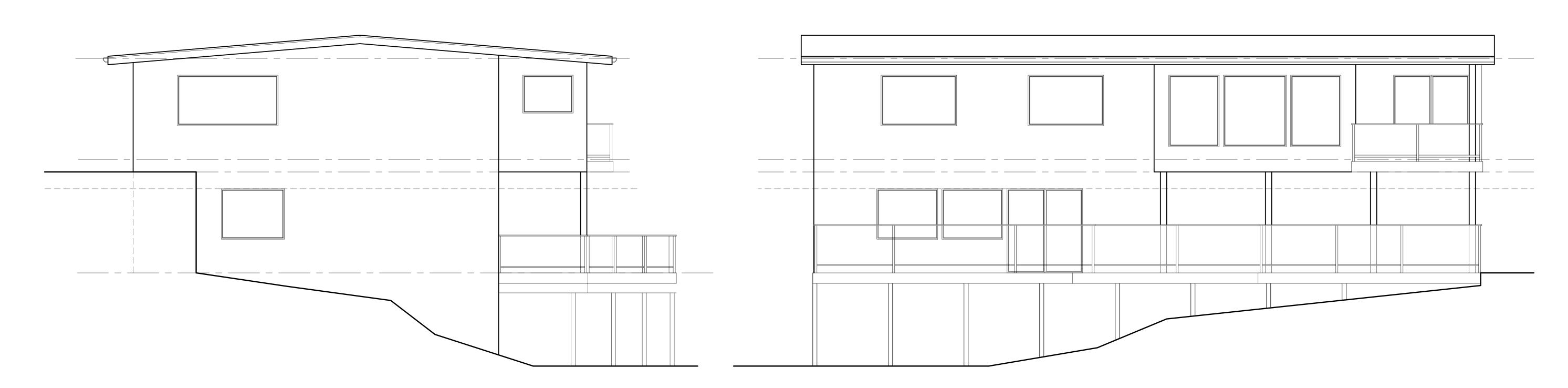
EXISTING SCALE : 1/4"= 1'-0"



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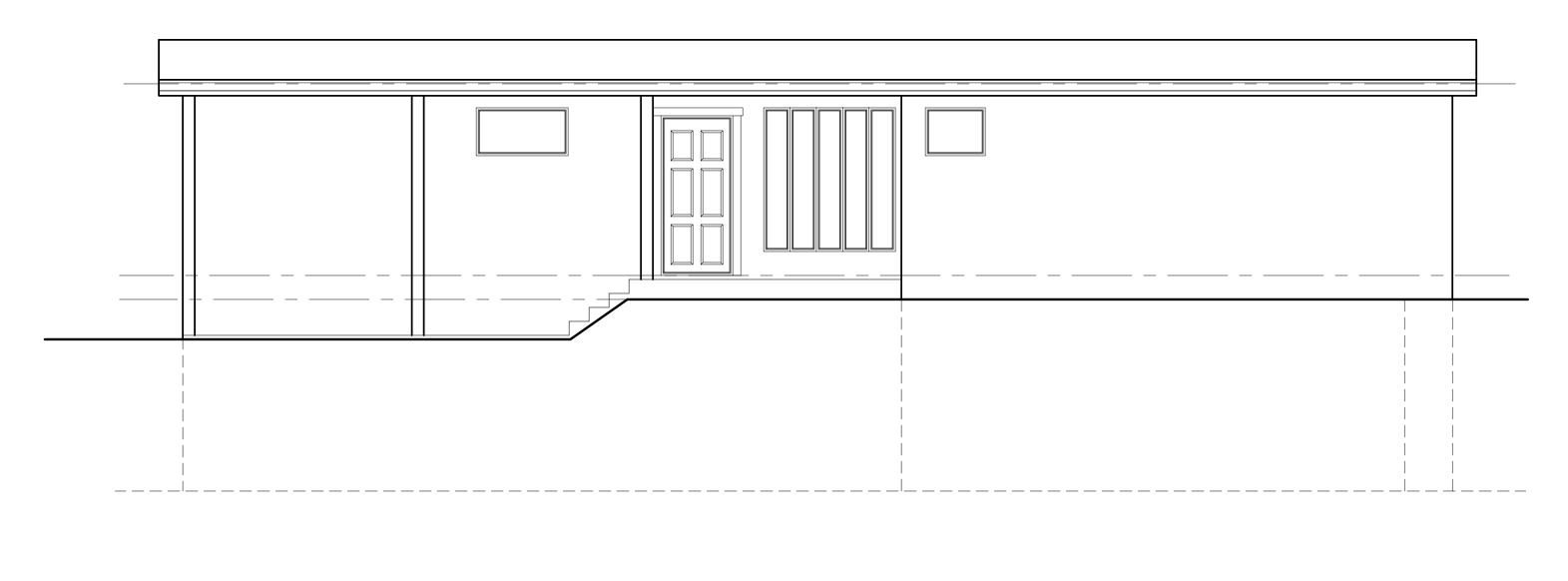
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<b>PROJECT NO:</b> 2210/24					











# <u>RIGHT ELEVATION</u>



# LEFT ELEVATION

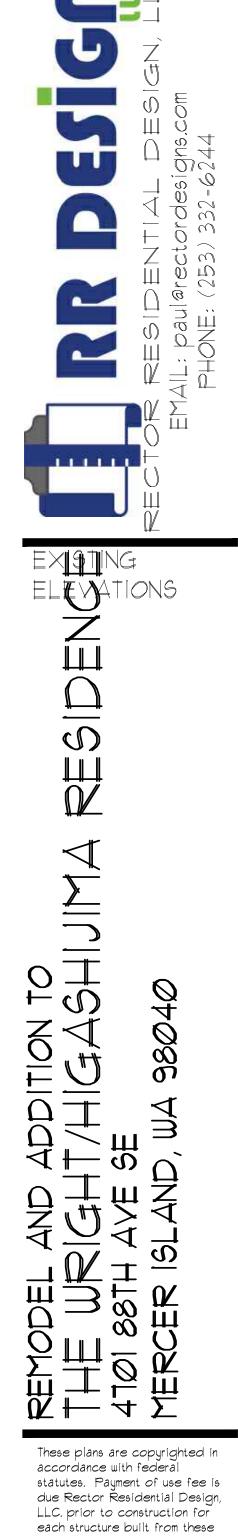






EXISTING SCALE : 1/4"= 1'-Ø"

EXISTING SCALE : 1/4"= 1'-Ø"



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<b>PROJECT NO:</b> 2210/24				

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EXIST, BM

2 x 6 STUDS @ 16"0.c.-W/ R-21 INSULATION

SIDING PER ELEVATIONS ON-TYVEK WRAP ON 7/16" PLY OR OSB SHEATHING.



EXIST. ROOF FRAMING PER MFR. INSULATION BAFFLE-VENTED BLOCKING AT ALTERNATE BAYS-

WINDOW HDR. PER PLAN 5/4 TRIM SURROUND -WINDOW W/ INS. GLASS 2×6 STUDS @ 16" O.C. \_\_\_\_ R-21 INSULATION -7/16" PLY OR OSB SHEATHING -SIDING PER ELEVATION TYVEK WRAP 2X P.T. WOOD SILL

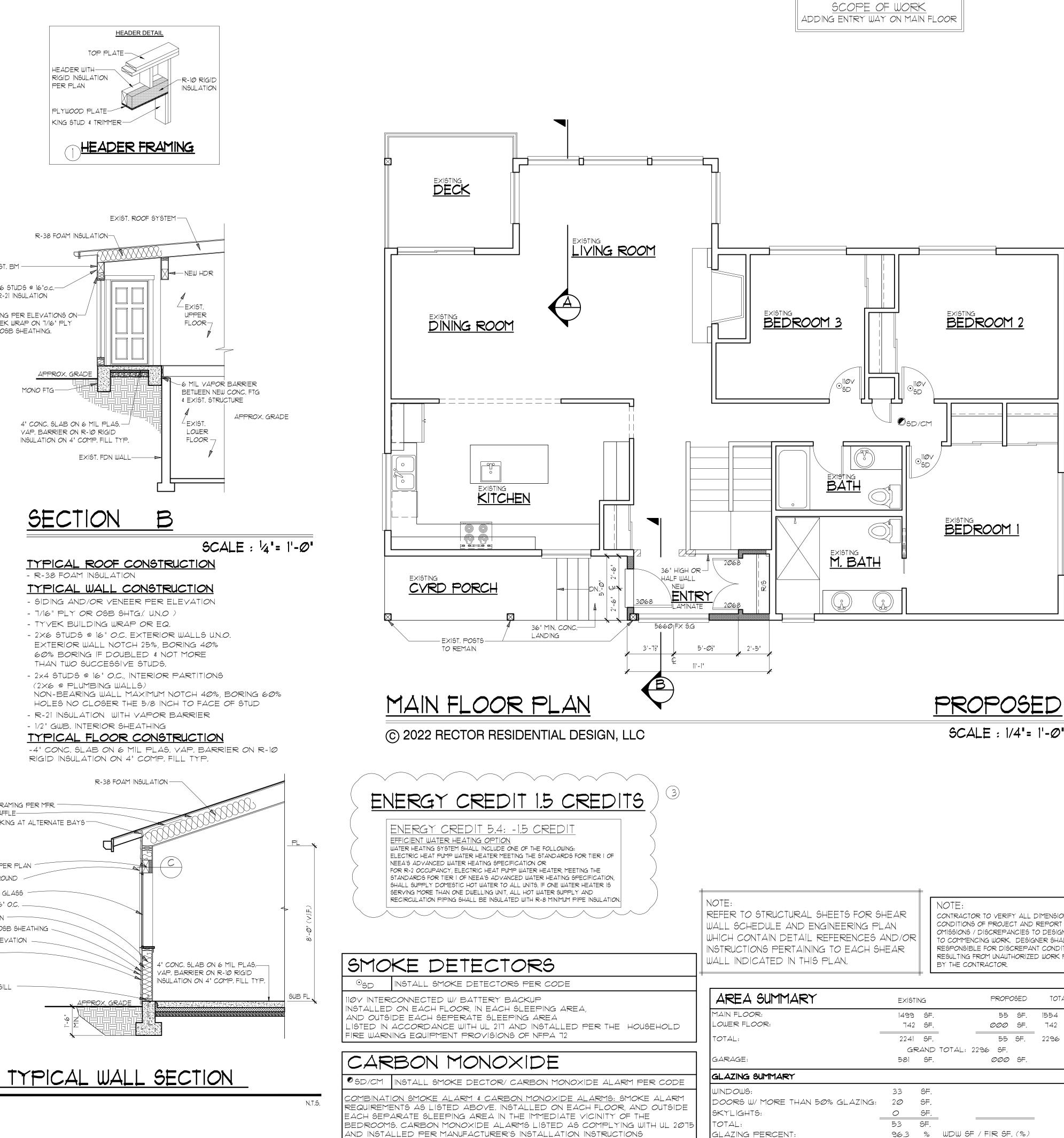
<u>PLAN KEY</u>					
WALLS:					
	NEW CONSTRUCTION				
	EXISTING WALLS TO REMAIN				
	EXISTING WALLS AND WINDOWS TO BE REMOVED AND OR MODIFIED				
3068	NEW D <i>oo</i> r				

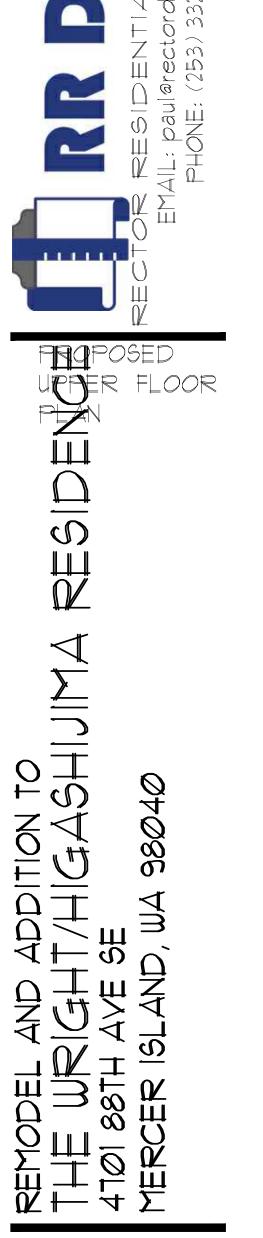
EXISTING DOOR

REMOVED AND OR MODIFIED

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EXISTING DOOR TO BE





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5/25.23 CREDITS

10/10/23

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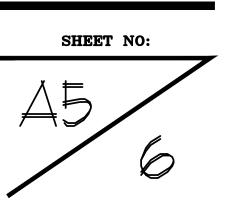
PR 5/25.23 COMMENTS

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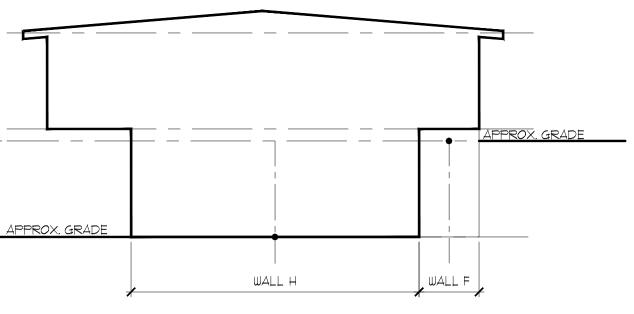
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CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS OF PROJECT AND REPORT ANY OMISSIONS / DISCREPANCIES TO DESIGNER PRIOR TO COMMENCING WORK. DESIGNER SHALL NOT BE RESPONSIBLE FOR DISCREPANT CONDITIONS RESULTING FROM UNAUTHORIZED WORK PERFORMED

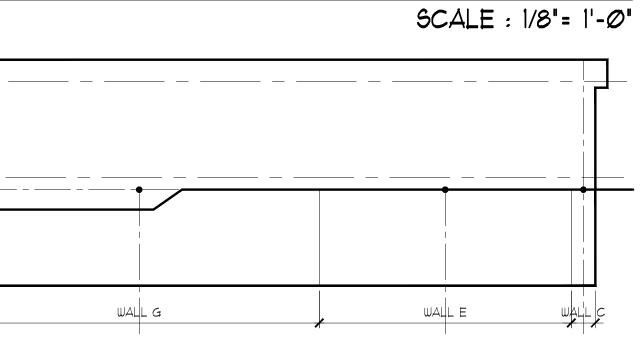
AREA SUMMARY	EXIST	ING		PROF	OSED	tot,	ЧL
MAIN FLOOR:	1499	SF,		55	SF,	1554	SF.
LOWER FLOOR:	742	SF,		000	SF,	742	SF,
TOTAL:	2241	SF.		55	SF.	2296	SF,
	GF		TOTAL: 22	96 SF.			
GARAGE:	581	SF.		000	SF.		
GLAZING SUMMARY							
WINDOWS:	33	SF.					
DOORS W/ MORE THAN 50% GLAZING:	2Ø	SF,					
SKYLIGHTS:	0	SF.	_				
TOTAL:	53	SF,					
GLAZING PERCENT:	96.3	%	WDW SF /	FIR SF	=_(%)		

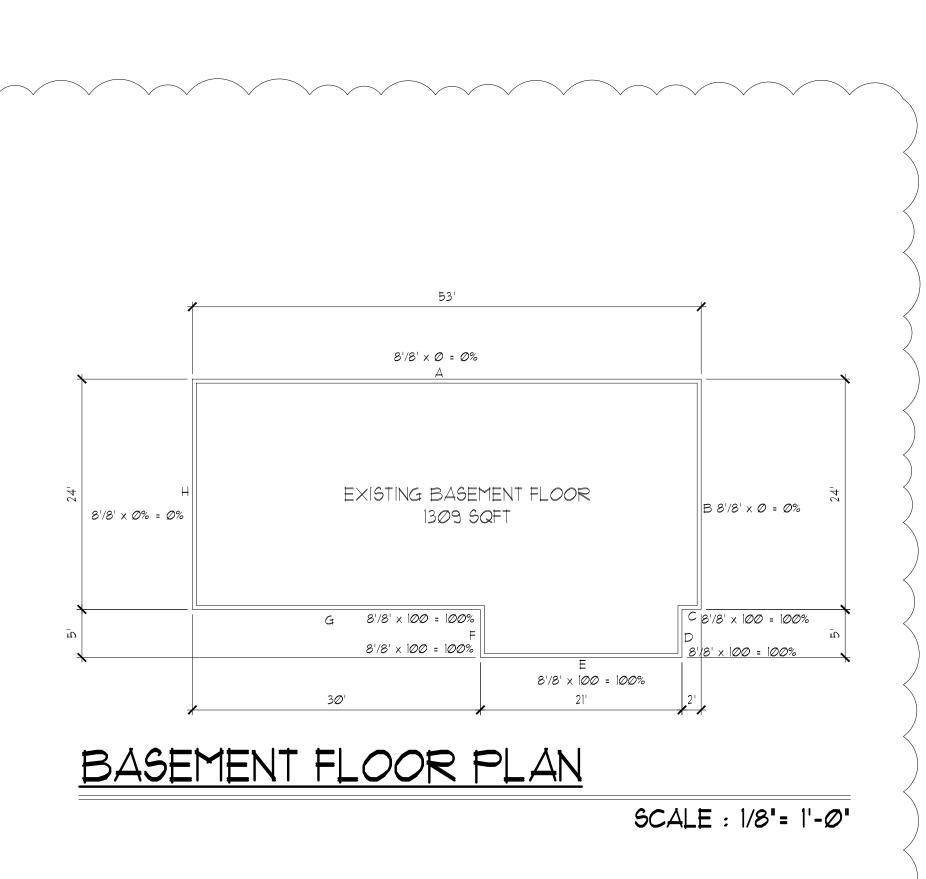




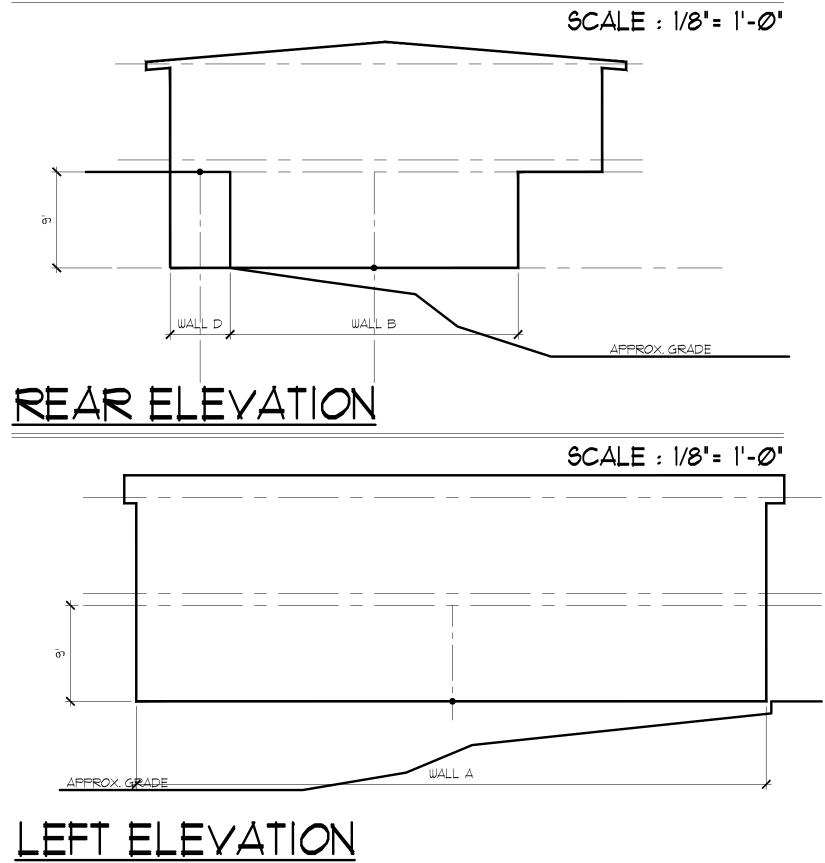


# FRONT ELEVATION





# <u>RIGHT ELEVATION</u>



WALL SEGMENT TOTALS  $\underline{1323}$  SQFT  $\times$  84% /164 ==611.63 EXCLUDED FROM THE GROSS FLOOR AREA

SCALE : 1/8"= 1'-Ø"

LENGTH $ imes$	COVERAGE =	RESULT
53'	Ø%	Ø%
24'	Ø%	Ø%
2'	100%	2%
5'	100%	5%
21'	100%	21%
5'	100%	5%
3Ø'	100%	3Ø%
24'	Ø%	Ø%
164'	N/A	84%

EXISTING BASEMENT FLOOR GFA: 1323' SQFT - 678 SQFT = <u>645 GFA</u> EXISTING MAIN FLOOR GFA: <u>1411 GFA</u> PROPOSED MAIN FLOOR GFA: <u>48 GFA</u> SUBTOTAL GFA: <u>2104</u> /11224 = 18.8% 11224 SQFT LOT SIZE X 40% = 4,489,6 MAX, GFA

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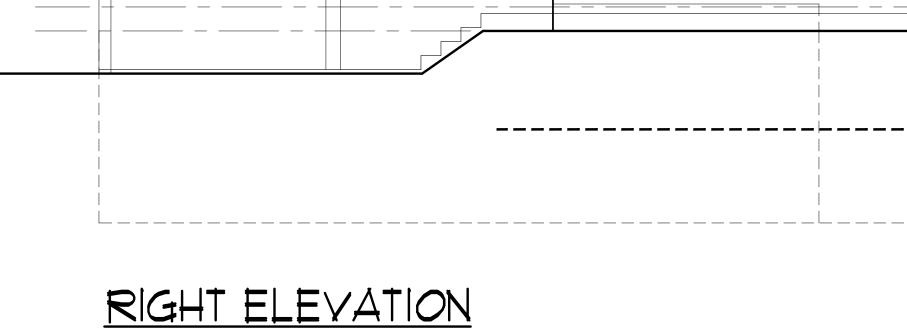
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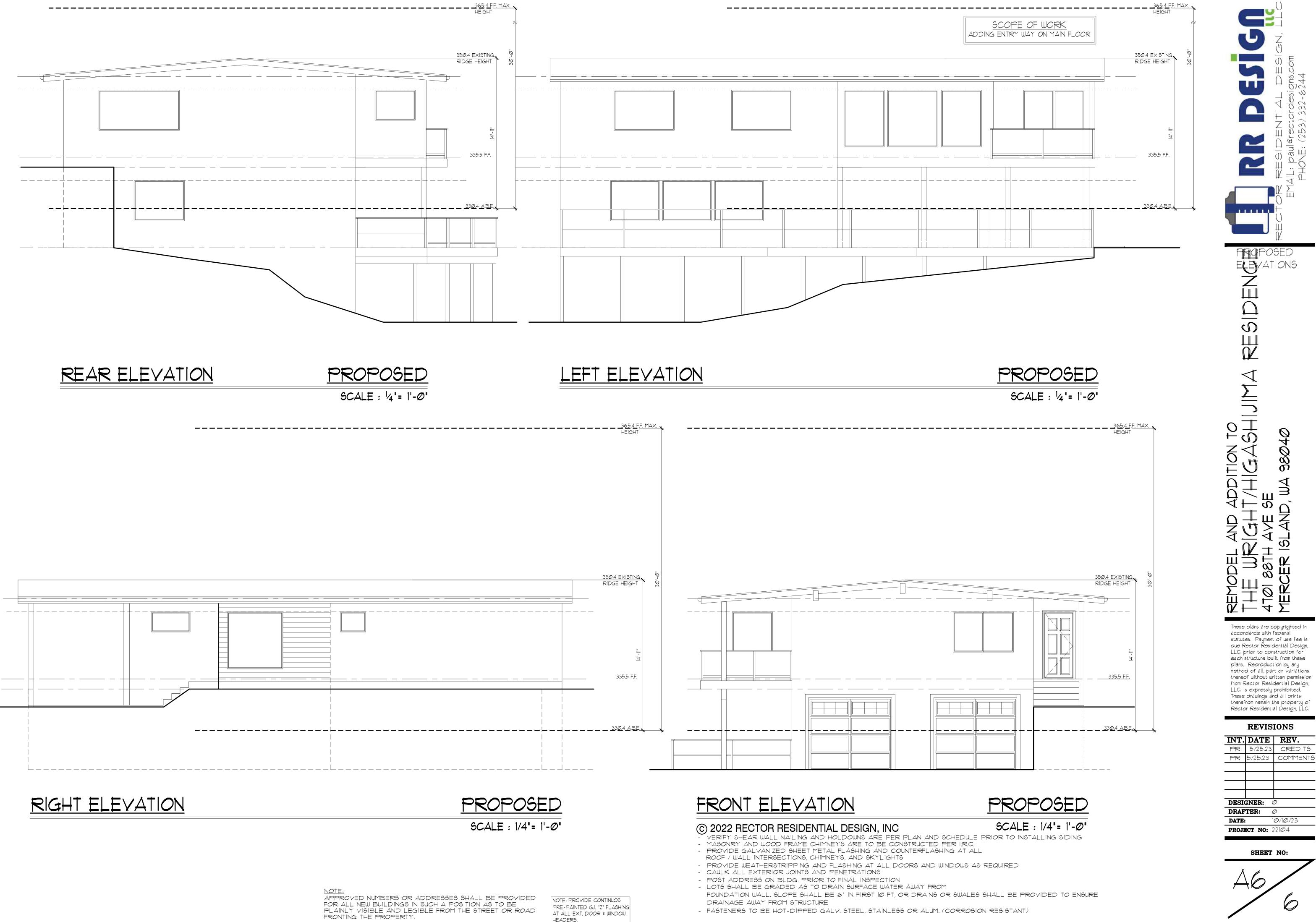
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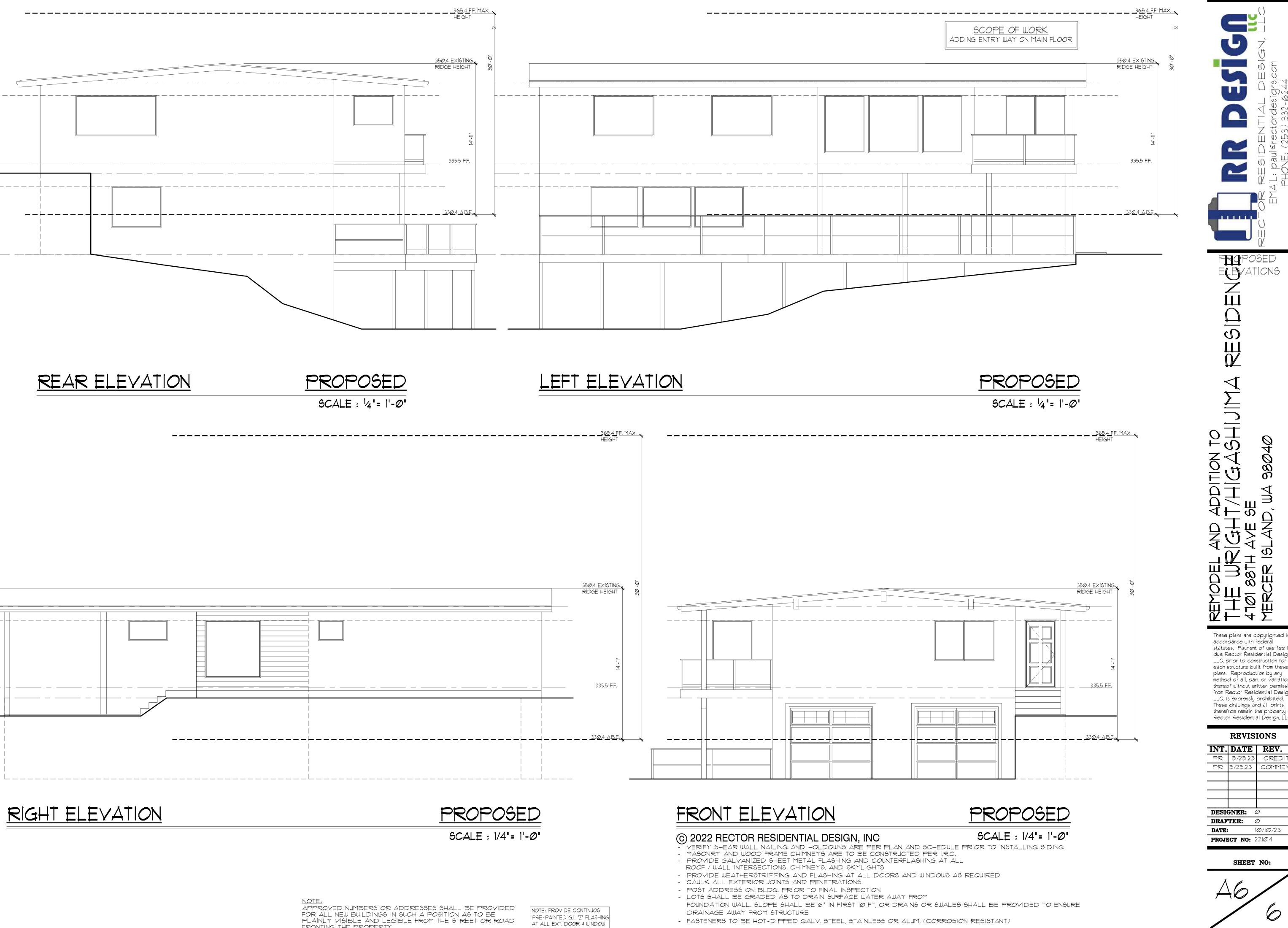




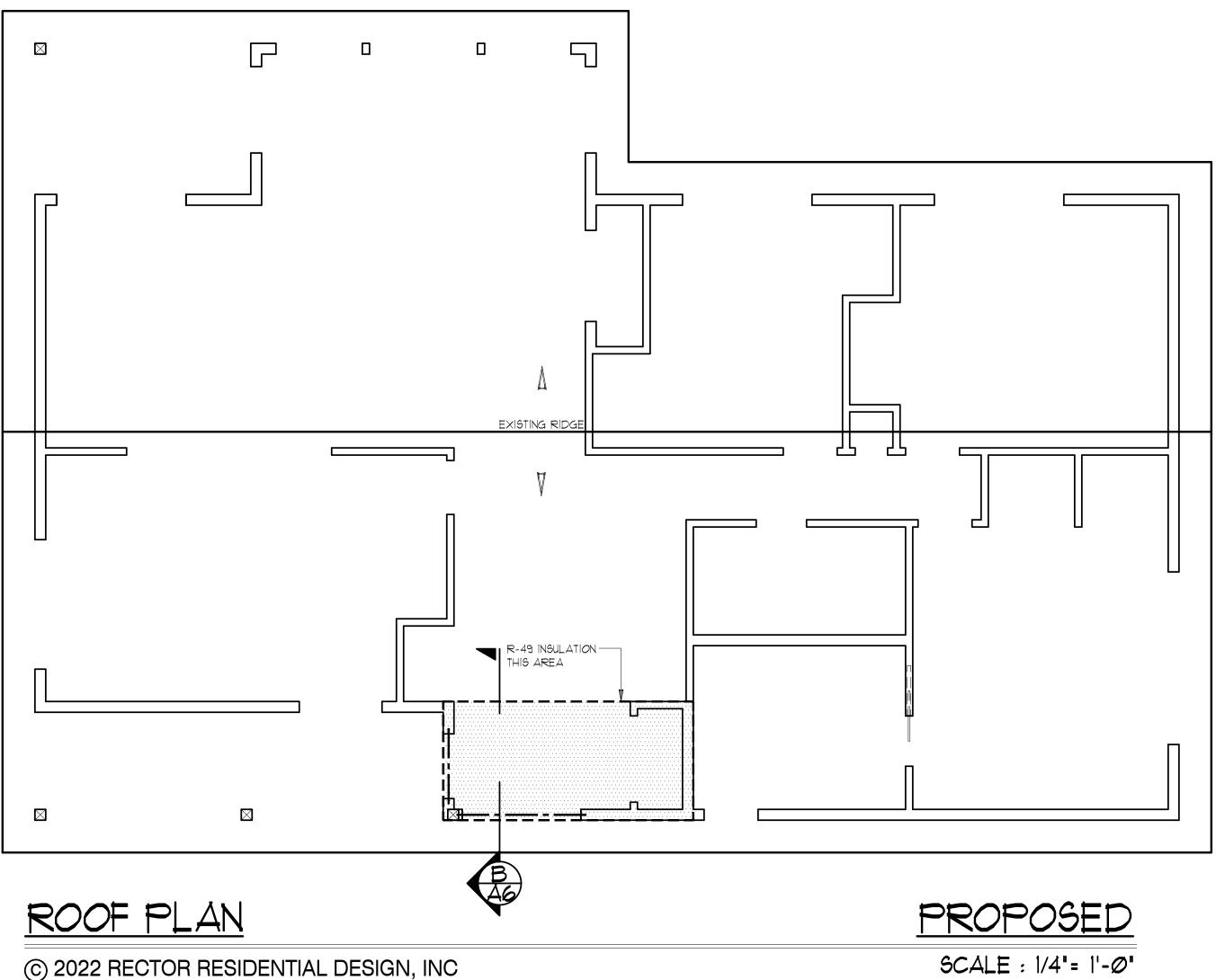




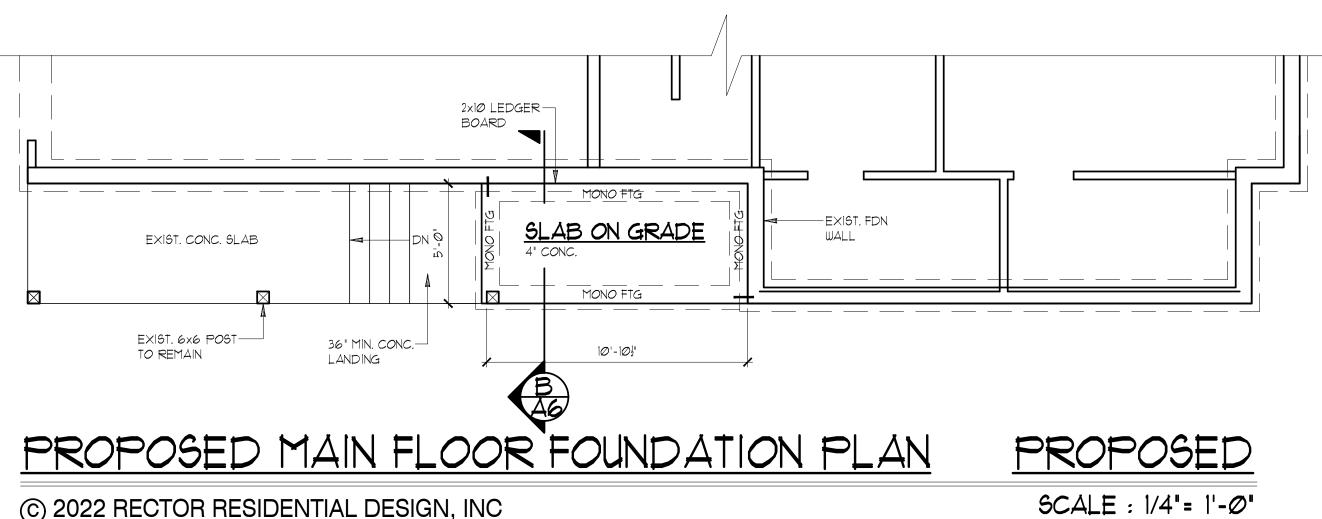




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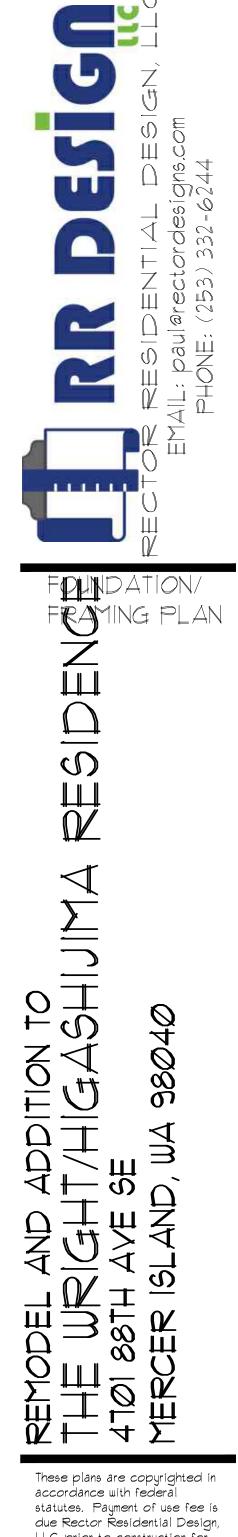


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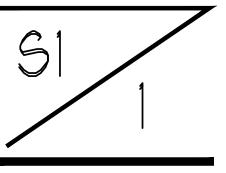


FOOTING SCHEDULE	USE MIN. 6" WIDE POST BELOW BEAM SPLICES USE P.T. $4 \times 4$ POSTS BELOW $4 \times$ BEAMS U.N.O. USE P.T. $6 \times 6$ POST BELOW $6 \times$ BEAMS U.N.O.
Is P.T. POST ON 18" DIA. X 8" THICK	CONC. FOOTING
$\square$ 24 P.T. POST ON 24" DIA. X 12" THICK	CONC. FOOTING
■ 30 P.T. POST ON 30" × 30" × 12" THIC	CK CONC. FOOTING W/ 3- # 5 BARS EACH WAY
B.T. POST ON 36" × 36" × 12" THIC	CK CONC. FOOTING W/ 3- $*$ 5 BARS EACH WAY
42 P.T. POST ON 42" × 42" × 12" THIC	K CONC. FOOTING W/ 4- # 5 BARS EACH WAY
FOOTING SIZES BASED ON 1500	pof SOIL BEARING CAPACITY



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#### **GENERAL STRUCTURAL NOTES:**

- THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS OF ALL OTHER DISCIPLINES AND THE SPECIFICATIONS. THE CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF OTHER TRADES AS TO SLEEVES, CHASES, HANGERS, INSERTS, ANCHORS, HOLES AND OTHER ITEMS TO BE PLACED OR SET IN THE STRUCTURAL WORK.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR ISSUE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS
- THE STRUCTURAL DRAWINGS HEREIN REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY GUYING AND BRACING REQUIRED TO ERECT AND HOLD THE STRUCTURE IN PROPER ALIGNMENT UNTIL ALL STRUCTURAL WORK AND CONNECTIONS HAVE BEEN COMPLETED. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 4. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS. TECHNIQUES D SEQUENCES OF PROCEDURES TO PERFORM THE WORK, THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION WHERE CONDITIONS ARE NOT SPECIFICALLY SHOWN, SIMILAR DETAILS OF
- CONSTRUCTION SHALL BE USED, SUBJECT TO APPROVAL BY THE ENGINEER 6. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANU-FACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH THE SUPPLIER'S INSTRUCTIONS AND REQUIREMENTS.
- 7. LOADING APPLIED TO THE STRUCTURE DURING THE PROCESS OF CONSPLICT. ION SHALL NOT EXCEED THE SAFE LOAD-CARRYING CAPACITY OF THE STRUCTURAL MEMBERS. THE LIVE LOADINGS UESD IN THE DESIGN OF THIS STRUCTURE ARE INDICATED IN THE "DESIGN CRITERIA NOTES". DO NOT APPLY ANY CONSTRUCTION LOADS UNTIL STRUCTURAL FRAMING IS PROPERLY CONNECTED TOGETHER AND UNTIL ALL TEMPORARY BRACING IS IN PLACE.
- 8. ALL ASTM AND OTHER REFERENCES ARE PER THE LATEST EDITIONS OF THESE STANDARDS, UNLESS OTHERWISE NOTE
- 9. SHOP DRAWINGS AND OTHER ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION, ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR BEFORE SUBMITTAL. THE ENGINEER'S REVIEW IS TO BE FOR CONFORMANCE WITH THE DESIGN CONCEPT AND GENERAL COMPLIANCE WITH THE RELEVANT CONTRACT DOCUMENTS. THE ENGINEER'S REVIEW DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW, CHECK AND COORDINATE THE SHOP DRAWINGS PRIOR TO SUBMISSION. THE CONTRACTOR REMAINS SOLEY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, DIMENSIONS, ETC.
- 10. SUBMIT SHOP DRAWINGS IN THE FORM OF TWO BLUELINE PRINTS AND ONE SEPIA. IN NO CASE SHALL REPRODUCTION OF THE CONTRACT DRAWINGS BE USED AS SHOP DRAWINGS, AS A MINIMUM, SUBMIT THE FOLLOWING ITEMS FOR REVIEW:
- A. CONCRETE MIX DESIGN (S). B. REINFORCING STEEL SHOP DRAWINGS.
- C. STRUCTURAL STEEL SHOP DRAWINGS.
- D. STEEL JOIST /GIRDER SHOP DRAWINGS E. METAL DECKING SHOP DRAWINGS.
- F. PRE-MANUFACTURED WOOD SYSTEM/TRUSS SHOP DRAWINGS (SEE NOTES). G. PRE-ENGINEERED METAL BUILDING SYSTEM (SEE NOTES
- OTHER SUBMITTALS MAY BE REQUIRED PER THE "SCHEDULE OF SPECIAL INSPECTIONS" OR THE SEPARATE NOTES CONTAINED HEREIN.
- 11. IN ACCORDANCE WITH SECTION 1705 OF IBC 2018. SPECIAL INSPECTIONS WILL NOT BE REQUIRED FOR THIS PROJECT. SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE "SCHEDULE OF SPECIAL INSPECTIONS". ALL FABRICATORS SHALL SATISFY THE "EXCEPTION" NOTED IN SECTION 1705.2, WHICH REQUIRES THE FABRICATOR TO MAINTAIN AN AGREEMENT WITH AN APPROVED INDEPENDENT INSPECTION OR QUALITY CONTROL AGREEMENT WITH CONTRACTOR SHALL NOTIFY THE SPECIAL INSPECTOR AT LEAST 48 HOURS IN ADVANCE FOR WORK THAT WILL REQUIRE INSPECTION OR TESTING.
- 12. UNLESS OTHERWISE INDICATED, ALL ITEMS NOTED TO BE DEMOLISHED SHALL BECOME THE CONTRACTOR'S PROPERTY AND BE REMOVED FROM THE SITE.
- 13. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN ITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.

#### **DESIGN CRITERIA NOTES: SEE SHEET S00.1**

1.	THE INTENDED DESIGN STANDARDS AN	D/OR CRITERIA ARE AS FOLLOWS:
	GENERAL	INTERNATIONAL BUILDING CODE (IBC 2018, AS AMENDED)
	CONCRETE	ACI 318-14
	MASONRY	ACI 530/530.1-13
	STRUCTURAL STEEL	ANSI/AISC 360-16 & ANSI/AISC 341-16
	STEEL JOISTS/GIRDERS	SJI 100-15 (& 50-YEAR JOIST DIGEST)
	METAL DECK	SDI NC -17
	COLD-FORMED METAL	AISI S100-16
	WOOD	ANSI/AWC NDS-18
	WOOD TRUSSES	TPI 1-2014
	FOUNDATIONS	SOILS INVESTIGATION AND REPORT PERFORMED BY XXX
2.	DESIGN GRAVITY DEAD LOADS USED IN	THE DESIGN OF THIS STRUCTURE

- 3. DESIGN GRAVITY LIVE LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS: SEE S00
- 4. DESIGN LATERAL LIVE LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS: SEE S00

6. THE LATERAL LOAD RESISTING SYSTEM OF THIS BUILDING CONSISTS OF: SEE S00

5. DESIGN SNOW LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS; SEE S00

### **EXISTING CONSTRUCTION NOTES:**

- BEFORE PROCEEDING WITH ANY WORK WITHIN THE EXISTING FACILITY. THE CONTRACTOR SHALL FAMILIARIZE HINSELF WITH EXISTING FACILIT, THE CONTRACTOR SHALL FAMILIARIZE HINSELF WITH EXISTING STRUCTURAL AND OTHER CONDITIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY BRACING, SHORING AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF THE EXISTING WORK IN A SAFE CONDITION DURING THE ROCESS OF DEMOLITION AND CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING WORK WHICH ARE TO REMAIN
- 2. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS, ELEVATIONS, ETC NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTIONS OF THE WORK TO THE EXISTING WORK. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS NECESSARY FOR FABRICATION AND ERECTION OF STRUCTURAL MEMBERS. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 3. WELDING TO AND WITHIN AN EXISTING FACILITY PRESENTS POTENTIAL HAZARDS,
- A. FIRE HAZARD- DUE TO THE EXISTING CONSTRUCTION AND BUILDING CONTENTS. STRUCTURAL LIQUEFACTION-DUE TO WELDING ACROSS THE FULL SECTION OF STRUCTURAL STEEL MEMBERS.
- RECOMMENDATIONS TO PREVENT THESE HAZARDS INCLUDE: A. FIRE HAZARD-PROTECT EXISTING COMBUSTIBLES PRIOR TO WELDING. KEEP
- A SEPARATE WATCHMAN AND SEVERAL FIRE EXTINGUISHERS ON HAND STRUCTURAL LIQUEFACTION-WELD IN SMALL INCREMENTS. ALLOW WELDS TO В.
- HARDEN BEFORE CONINTUING TO THE NEXT INCREMEN C. DO NOT LEAVE THE SITE UNTIL SATISFIED THAT NO FIRE HAZARD EXISTS.
- 4. INFORMATION USED IN PREPARING THESE DRAWINGS WAS TAKEN FROM DRAWINGS PREPARED BY THE FIRM OF [ ], DATED [ ].
- 5 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND ERECTION OF ALL SHORING NECESSARY TO SAFEGUARD THE EXISTING STRUCTURE. THE SHORING SHOWN IS A PARTIAL AND SCHEMATIC REPRESENTATION OF THAT REQUIRED. THE CONTRACTOR SHALL SUBMI A DETAILED PLAN FOR SHORING, BRACING AND PROTECTION OF THE EXISTING CONSTRUCTION. THE PLAN SHALL INCLUDE A CONSTRUCTION SEQUENCE, BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF VIRGINIA AND BE SUBMITTED TO THE ENGINEER FOR **REVIEW PRIOR TO BEGINNING THE WORK**

#### FOUNDATION NOTES:

- ALL FOOTINGS SHALL BEAR ON UNDISTURBED, FIRM NATURAL SOIL OR COMPACTED FILL CAPABLE OF SUPPORTING A DESIGN BEARING PRESSURE OF 1,500 PSF. ALL FOUNDATION EXCAVATIONS SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY PRIOR TO POURING FOUNDATION CONCRETE ALL FOOTINGS HAVE BEEN DESIGNED BASED UPON AN ASSUMED SOIL BEARING PRESSURE OF 1,500 PSF. ALL FOOTINGS SHALL BEAR ON UNDISTURBED, FIRM NATURAL SOIL OR COMPACTED FILL. ALL FOUNDATION EXCAVATIONS SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY PRIOR TO URING FOUNDATION CONCRETE.
- 3. TOP OF FOOTING ELEVATION SHALL BE AS SHOWN ON THE FOUNDATION PLAN. THESE ELEVATIONS ARE A MAXIMUM AND SHALL BE LOWERED AS REQUIRED TO OBTAIN THE REQUIRED DESIGN BEARING PRESSURE
- 4. ALL FOUNDATION CONCRETE SHALL OBTAIN A 28 DAY COMPRESSIVE STRENGTH OF 2,500 PSI. ALL CONCRETE TO BE PERMANENTLY EXPOSED TO WEATHER SHALL BE AIR ENTRAINED TO 5% (±1%) WITH AN ADMIXTURE AT CONFORMS TO ASTM C-260 5. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI
- 301, "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS". HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 305. COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306. 6. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60.
- 7. UNLESS OTHERWISE NOTED, THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT A) CONCRETE CAST AGAINST & PERMANENTLY EXPOSED TO EARTH -3" B) CONCRETE EXPOSED TO EARTH OR WEATHER:
- #6 THROUGH #18 BARS #5 BAR, W31 OR D31 WIRE & SMALLER -1 1/2"
- 8. ALL REINFORCING MARKED CONTINUOUS (CONT.) ON THE PLANS AND DETAILS SHALL BE LAPPED 58X BAR DIAMETERS AT SPLICES UNLESS OTHERWISE NOTED. 9. NO UNBALANCED BACKFILLING SHALL BE DONE AGAINST FOUNDATIO
- WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING EITHER BY TEMPORARY BRACING OR BY PERMANENT CONSTRUCTION
- 10. PRIOR TO COMMENCING ANY FOUNDATION WORK, COORDINATE WORK WITH ANY EXISTING UTILITIES. FOUNDATIONS SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES.
- 11. UNLESS OTHERWISE NOTED, THE CENTERLINES OF COLUMN FOUNDATIONS [PILE CAPS] SHALL BE LOCATED ON COLUMN CENTERLINES 12. ALL RETAINING WALLS SHALL HAVE AT LEAST 12" OF FREE-DRAINING
- GRANULAR BACKFILL, FULL HEIGHT OF WALL, PROVIDE CONTROL JOINTS IN RETAINING WALLS AT APPROXIMATELY EQUAL INTERVALS NOT TO EXCEED 25 FEET NOR 3 TIMES THE WALL HEIGHT. PROVIDE EXPANSION JOINTS AT EVERY FOURTH CONTROL JOINT, UNLESS OTHERWISE INDICATED.

## CAST-IN-PLACE CONCRETE NOTES:

# CONCRETE MIXES SHALL BE DESIGNED PER ACI 301, USING PORTLAND CEMENT CONFORMING TO ASTM C-150 OR C-595, AGGRE-GATE CONFORMING TO ASTM C-33, AND ADMIXTURES CONFORMING TO ASTM C-494, C-1017, C-618, C-989 AND C-260, CONCRETE SHALL DE DE DE ADMINED IN ACCORDANCE WITH ASTM C 344

BE READY-MIXED IN ACCORDANCE WITH ASTM C-94.

2. CONCRETE SHALL CONFORM TO THE FOLLOWING COMPRESSIVE STRENGTH, SLUMP AND WATER/CEMENT RATIO REQUIREMENTS:						
	CONCRETE	MIN. F'C (28 DAYS)	<u>SLUMP</u> *	W/C PATIO		
	COLUMNS	4000 PSI	2" TO 4"	.46		
	ELEVATED SLABS	3000 PSI	2" TO 4"	.46		
	CONCRETE NOT NOTED	2500 PSI	2" TO 4"	.50		
	FOUNDATION	"SEE FDN NOTES"	2" TO 4"	.50		
	SLABS-ON-GRADE	SEE "SLAB-ON-GRADE NOTES"		.50		
	NOT EXCEED 10 INCHES. THE CO	CONCRETE. MAXIMUM SLUMP SHAL DNTRACTOR SHALL SUBMIT TEST DNCRETE MIXES ALONG WITH THE	L			
3.	ALL CONCRETE WORK SHALL CONFORM T 301, "SPECIFICATION FOR STRUCTURAL CO HOT WEATHER CONCRETING SHALL BE IN COLD WEATHER CONCRETING SHALL BE IN	ONCRETE BUILDINGS". ACCORDANCE WITH ACI 305.				
4.	ALL REINFORCING STEEL SHALL CONFORM ALL WELDING OF REINFORCING STEEL SH AWS D1.4. EPOXY COATED REINFORCING S A-775.	ALL BE IN ACCORDANCE WITH				
5.	ALL WELDED WIRE FABRIC (WWF) SHALL (	CONFORM TO ASTM A-185.				
6.	ALL REINFORCING STEEL SHALL BE SET AT TO POURING OF CONCRETE, EXCEPT THAT MASONRY WALL REINFORCING MAY BE "FI FIELD BEND BARS PARTIALLY EMBEDDED I UNLESS SPECIFICALLY INDICATED OR APP	I VERTICAL DOWELS FOR LOATED" IN PLACE. DO NOT N HARDENED CONCRETE				
7.	REINFORCING STEEL, INCLUDING HOOKS / DETAILED IN ACCORDANCE WITH ACI 315. / INDICATED AS BEING CONTINUOUS (CONT A TYPE 2 LAP SPLICE UNLESS OTHERWISE	ALL REINFORCING STEEL				
8.	UNLESS OTHERWISE NOTED, THE FOLLOW SHALL BE PROVIDED FOR REINFORCEMEN					
	A) CONCRETE EXPOSED TO EARTH C	R WEATHER:				
	#6 THROUGH #18 BARS #5 BAR, W31 OR D31 WIF	-2" E & SMALLER -1 1/2"				
	B) CONCRETE NOT EXPOSED TO EAR					

- B) CONCRETE NOT EXPOSED TO EARTH OR WEATHER: WALLS, ELEVATED SLABS [& JOISTS] -3/4" BEAMS AND COLUMNS -1 1/2" B) FOUNDATION CONCRETE (SEE "FOUNDATION NOTES") BAR SUPPORTS AND HOLDING BARS SHALL BE PROVIDED FOR ALL
- REINFORCING STEEL TO INSURE MINIMUM CONCRETE COVER BAR SUPPORTS SHALL BE PLASTIC TIPPED OR STAINLESS STEEL.
- 10. THE CONTRACTOR SHALL ALLOW IN THE BID AN ADDITIONAL ONE (1) TON OF REINFORCING STEEL TO BE PLACED IN THE FIELD AT THE DIRECTION OF THE ENGINEER. ANY UNUSED PORTION OF THIS ALLOWANCE SHALL BE CREDITED TO THE OWNER.

#### CAST-IN-PLACE CONCRETE NOTES (CONTINUED):

#### 11. UNLESS OTHERWISE NOTED, ALL CONCRETE WALLS (OTHER THAN RETAINING WALLS) SHALL BE REINFORCED AS FOLLOWS:

	RETAINING WALLS) SHALL DI	vo.		
	WALL THICKNESS	HORIZONTAL	VERTICAL	LOCATION
	4" TO 6"	#4 @ 16" O.C.	#4 @ 18" O.C.	CENTERED
	8"	#4 @ 12" O.C.	#4 @ 16" O.C.	CENTERED
	10"	#4 @ 18" O.C.	#4 @ 18" O.C.	EACH FACE
	12"	#4 @ 16" O.C.	#4 @ 18" O.C.	EACH FACE
2.	ALL EDGES OF PERMANENTL		URFACES SHALL BE	

- CHAMFERED 3/4" UNLESS OTHERWISE NOTED. 13. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH DOCUMENTA-TION THAT ALL MATERIALS CONFORM TO THE QUALITY STANDARDS
- SPECIFIED IN IBC 2018.
- 14 IN ACCORDANCE WITH IBC 2018. SPECIAL INSPECTIONS ARE REQUIRED FOR THE CONCRETE WORK. THE OWNER WILL HIRE THE SPECIAL INSPECTOR TO PERFORM ALL REQUIRED SPECIAL INSPECTIONS.
- 15. IN ORDER TO AVOID CONCRETE SHRINKAGE CRACKING, PLACE CONCRETE LABS IN AN ALTERNATING LANE PATTERN. THE MAXIMUM LENGTH
- SLAB CAST IN ANY ONE CONTINUOUS POUR SHALL BE LIMITED TO 80 FEET. 16. FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF ITS 28 DAY COMPRESSIVE STRENGTH. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND RESHORING.

# STRUCUTRAL GENERAL NOTES U.N.O.

### SLAB ON GRADE NOTES

PROVIDE CONCRETE SLABS OVER A 6 MIL POLYETHYLENE VAPOR BARRIER AND 4" OF POROUS FILL AS FOLLOWS:

ALL OTHER AREAS-4" SLAB REINFORCED WITH WWF 6X6 - 10/10 U.N.O WELDED WIRE FABRIC OR #3 @ 12" O/C E.W. AND WITH 2,500 PSI MIX CONCRETE. MAXIMUM SLUMP FOR ALL CONCRETE SLABS SHALL BE 5 INCHES,

2. ALL WELDED WIRE FABRIC SHALL BE IN ACCORDANCE WITH ASTM A-185. AP ADJOINING PIECES AT LEAST ONE FULL MESH.

3. ALL POROUS FILL MATERIAL SHALL BE A CLEAN GRANULAR MATERIAL ALL POROUS PASSING A 1 1/2" SIEVE AND NO MORE THAN 5% PASSING A NO.4 SIEVE. POROUS FILL SHALL BE COMPACTED TO 95% MAX. DRY DENSITY PER ASTM D-698. SLAB JOINTS SHALL BE FILLED WITH APPROVED MATERIAL. THIS SHOULD TAKE PLACE AS LATE AS POSSIBLE, PREFERABLY 4 TO 6 WEEKS AFTER THE SLAB HAS BEEN CAST. PRIOR TO FILLING, REMOVE

I DEBRIS FROM THE SLAB JOINTS. THEN FILL IN ACCORDANCE WITH

THE MANUFACTURER'S RECOMMENDATIONS AS FOLLOWS: 6" SLABS - FILL WITH EPOXY RESIN THER SLABS-FILL WITH FIELD MOLDED OR ELASTOMERIC SEALANT 5. UNLESS OTHERWISE APPROVED, ALL WELDED WIRE FABRIC SHALL BE

BLOCKED INTO THE POSITION INDICATED WITH PRECAST CONCRETE BLOCKS HAVING A COMPRESSIVE STRENGTH EQUAL TO THAT OF THE SLAB. 6. WALKWAYS AND OTHER EXTERIOR SLABS ARE NOT INDICATED ON THE DRAWINGS FOR LOCATIONS, DIMENSIONS, ELEVATIONS, JOINTING DETAILS AND FINISH DETAILS. PROVIDE 4" WALKS REINFORCED VITH 6X6-W1.4X W1.4 WWF UNLESS OTHERWISE NOTED

. SLABS TO BE PERMANENTLY EXPOSED TO WEATHER SHALL BE AIR ENTRAINED TO 5% (±1%) WITH AN ADMIXTURE THAT CONFORMS TO ASTM C-260. 8. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 01. "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 305. COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306.

9. IN ORDER TO AVOID CONCRETE SHRINKAGE CRACKING, PLACE CONCRETE SLABS IN AN ALTERNATING LANE (OR CHECKERBOARD) PATTERN. THE AXIMUM LENGTH OF SLAB CAST IN ANY ONE CONTINUOUS POUR IS RECOMMENDED O BE LESS THAN 100 FEET. THE MAXIMUM SPACING OF JOINTS SHALL BE 25'.

10. THE ALTERNATE WIRES OF THE WELDED WIRE FABRIC MUST BE PRECUT AT THE SLAB CONTRACTION JOINT LOCATIONS TO CREATE A "WEAKENED" PLANE". WITHOUT CUTTING THE ALTERNATE WIRES, THE STRENGTH OF THE WIRE WILL PREVENT THE SLAB FORM CRACKING (SEPARATING) AT THE JOINT AND THE SLAB MAY BEGIN TO CRACK ELSEWHERE.

11. THE USE OF POLYPROPYLENE FIBERS (IN LIEU OF WELDED WIRE FABRIC) IS PROHIBITED WITHOUT THE WRITTEN AUTHORIZATION OF THE ENGINEER

12. SEE THE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF DEPRESSED SLAB AREAS AND DRAINS. SLOPE SLAB TO DRAINS WHERE SHOWN.

### WOOD FRAMING NOTES:

ALL WOOD FRAMING MATERIAL SHALL BE SURFACED DRY AND USED AT 19% MAXIMUM MOISTURE CONTENT. ALLOWABLE STRESS REQUIREMENTS OF ALL MATERIAL SHALL BE IN ACCORDANCE ANSI/AWC NDS-18. ALL STUD AND WALL FRAMING SHALL BE OF THE FOLLOWINGS: UMBER GRADE/USE SCHEDUI

STUD" GRADE MATERIAL IS STRICTLY PROHIBITED FROM USE.

ALL JOIST, RAFTER & MISC. FRAMING SHALL BE PER THE LUMBER GRADE/USE SCHEDULE . PROVIDE FULL-DEPTH (OR METAL) BRIDGING AT MIDSPAN AND AT A MAXIMUM SPACING OF 8'-0" O/C IN BETWEEN.

ALL FRAMING EXPOSED TO THE WEATHER OR IN CONTACT WITH MASORRY OR CONCRETE SHALL BE PRESSURE-TREATED (P.T.) IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION SPECIFICATIONS. WHERE POSSIBLE. ALL CUTS AND HOLES SHOULD BE COMPLETED BEFORE TREATMENT. CUTS AND HOLES DUE TO ON-SITE FABRICATION SHALL BE BRUSHED WITH 2 COATS OF COPPER NAPHTHENATE SOLUTION CONTAINING A MINIMUM OF 2% METALLIC COPPER IN SOLUTION (PER AWPA STD. U1 & M4). THE CONTRACTOR SHALL CAREFULLY SELECT LUMBER TO BE USED IN LOADBEARING APPLICATIONS. THE LENGTH OF SPLIT ON THE WIDE FACE OF 2" NOMINAL LOADBEARING FRAMING SHALL BE LIMITED TO ESS THAN 1/2 OF THE WIDE FACE DIMENSION. THE LENGTH OF SPLIT ON THE WIDE FACE OF 3" (NOMINAL) AND THICKER LUMBER

SHALL BE LIMITED TO 1/2 OF THE NARROW FACE DIMENSION. ALL NAILING NOT OTHERWISE INDICATED SHALL BE IN ACCORDANCE VITH THE "NAILING SCHEDULE" ON SHEET S00 . NAILING SHALL NOT BE OVERDRIVEN.

PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS WHICH RUN PARALLEL WITH JOISTS AND UNDER ALL CONCENTRATED LOADS FROM FRAMING ABOVE. PROVIDE HEADER BEAMS OF THE SAME SIZE AS JOISTS OR RAFTERS

TO FRAME AROUND OPENINGS IN THE PLYWOOD DECK UNLESS OTHERWISE INDICATED STRUCTURAL STEEL PLATE CONNECTORS SHALL CONFORM TO ASTM A-36 SPECIFICATIONS AND BE 1/4" THICK UNLESS OTHERWISE INDICATED.

BOLTS CONNECTING WOOD MEMBERS SHALL BE PER ASTM A-307 AND BE 3/4" DIAMETER UNLESS OTHERWISE INDICATED. PROVIDE WASHERS FOR ALL BOLT HEADS AND NUTS IN CONTACT WITH WOOD SURFACES.

10. BOLT HOLES SHALL BE CAREFULLY CENTERED AND DRILLED NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER. BOLTED CONNECTIONS SHALL BE SNUGGED TIGHT BUT NOT TO THE EXTENT OF CRUSHING WOOD UNDER WASHERS. 11. PREFABRICATED METAL JOIST HANGERS, HURRICANE CLIPS, HOLD-DOWN ANCHORS AND OTHER ACCESSORIES SHALL BE AS MANUFACTURED BY "SIMPSON

STRONG-TIE COMPANY" WWW.STRONGTIE.COM. OR APPROVED EQUAL. NSTALL ALL ACCESSORIES PER THE MANUFACTURER'S REQUIREMENTS ALL STEEL SHALL HAVE A MINIMUM THICKNESS OF 0.04 INCHES (PER ASTM A446, GRADE A) AND BE GALVANIZED (COATING G60). 12. HOLES AND NOTCHES DRILLED OR CUT INTO WOOD FRAMING SHAL

NOT EXCEED THE REQUIREMENTS OF IBC 2018, SECTION 2308.4.2.4, 2308.5.9, 2308.5.10 & 2308.7.4.

ALL PLATES, ANCHORS, NAILS, BOLTS, NUTS, WASHERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE HOT DIP GALVANIZED. 14. ALL COLUMNS SHALL EXTEND DOWN THRU THE STRUCTURE TO THE FOUNDATION. ALL COLUMNS SHALL BE BRACED AT ALL FLOOR LEVELS. COLUMNS SHALL BE THE SAME WIDTH AS THE MEMBERS THAT THEY ARE SUPPORTING.

ROUGH FRAMING NAILING SCHEDULE



(3) 0.131"X3" TOENAILS (3) 0.131"X3" TOENAILS EA. END (2) 0.131"X2.5" FACE NAIL 3) 0.131"X2.5" FACE NAIL (2) 0.161"X3.5" BLIND & FACE NAIL 0.131"X3" AT 8" O.C. TYP. FACE NAIL (4) 0.131"X3" AT 16" O.C. FACE NAIL 3) 0.131"X3" END NAIL (4) 0.131"X3" TOENAIL (3) 0.131"X3" END NAIL 0.131"X3" AT 8" O.C. FACE NAIL 0.131"X3" AT 8" O.C. TYP. FACE NAIL (20) 0.131"X3" FACE NAILS (3) 0.131"X3" TOENAILS 0.131"X3" AT 6" O.C. TOENAIL 3) 0.131"X3" FACE NAIL (5) 0.131"X3" AT 12" FACE NAIL EA. EDGE (5) 0.131"X3" TOENAIL (4) 0.131"X3" TOENAILS 4) 0.131"X3" FACE NAIL 4) 0.131"X3" FACE NAII (3) 0.131"X3" FACE NAIL (2) 0.131"X3" FACE NAIL (2) 0.131"X3" FACE NAIL 2) 0.131"X3" FACE NAIL 3) 0.131"X3" FACE NAIL 3) 0.131"X3" AT 16" O.C. FACE NAIL 0.131"X3" AT 12" FACE NAIL EA. SIDES

### WOOD MATETRALS:

LL WOOD MEMBERS USED FOR LOAD-BEARING PURPOSES, INCLUDING END-JOINTED AND EDGE-GLUED LUMBEF SHALL BE IDENTIFIED BY THE GRADEMARK OF A LUMBER GRADING OR INSPECTION AGENCY WHICH PARTICIPATES IN AN ACCREDITATION PROGRAM, SUCH AS THE AMERICAN LUMBER STANDARDS COMMITTEE OR EQUIVALENT. THE GRADEMARK SHALL INCLUDE AN EASILY DISTINGUISHABLE MARK OR INSIGNIA OF THE GRADING AGENCY WHICH COMPLIES WITH THE REQUIREMENTS OF U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD 20 PS20) AMERICAN SOFTWOOD LUMBER STANDARD. GLULAM GLUE LAMINATED TIMBERS SHALL MEET THE PROVISIONS OF ANSI/AITC A190.1 STRUCTURAL GLUED LAMINATED 3. PREFABRICATED WOOD I-JOISTS ASSEMBLIES USING PREFABRICATED WOOD I-JOISTS SHALL MEET THE PROVISIONS OF ASTM D5055 STANDARD SPECIFICATION FOR ESTABLISHING AND MONITORING STRUCTURAL CAPACITIES OF PREFABRICATED WOOD I-JOISTS, THIS MANUAL, THE GOVERNING BUILDING CODE, AND ANY ADDITIONAL REQUIREMENTS AS SET FORTH IN THE MANUFACTURER'S CODE EVALUATION REPORT. STRUCTURAL COMPOSITE LUMBER SINGLE MEMBERS OR ASSEMBLIES USING STRUCTURAL COMPOSITE LUMBER SHALL MEET THE PROVISIONS OF ASTM D5456 STANDARD SPECIFICATION FOR EVALUATIONS OF STRUCTURAL COMPOSITE LUMBER PRODUCTS, THIS MANUAL, THE GOVERNING BUILDING CODE, AND ANY ADDITIONAL REQUIREMENTS AS SET FORTH IN THE MANUFACTURER'S CODE EVALUATION REPORT PREFABRICATED WOOD TRUSSES ASSEMBLIES USING PREFABRICATED WOOD TRUSSES SHALL MEET THE PROVISIONS OF THIS MANUAL, THE GOVERNING BUILDING CODE, AND ANY ADDITIONAL REQUIREMENTS AS SET FORTH IN ANSI/TPI 1 NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONNECTION, THE TRUSS DESIGN DRAWINGS, OR THE ANUFACTURER'S CODE EVALUATION REPORT. GYPSUM GYPSUM MATERIAL USED IN A STRUCTURAL APPLICATION SHALL MEET THE PROVISIONS OF ASTM C 1396/C 1396M, STANDARD SPECIFICATION FOR GYPSUM BOARD HARDBOARD HARDBOARD USED IN A STRUCTURAL APPLICATION SHALL MEET THE PROVISIONS OF ANSI/CPA A135.6 HARDBOARD STRUCTURAL PANELS 8.1 ORIENTED-STRAND BOARD (OSB), WAFERBOARD ORIENTED-STRAND BOARD OR WAFERBOARD USE DIN STRUCTURAL APPLICATIONS SHALL MEET THE PROVISIONS OF PS2 OR APPLICABLE CODE EVALUATION REPORTS. 8.2 PARTICLEBOARD PARTICLEBOARD USED IN STRUCTURAL APPLICATIONS SHALL CONFORM TO ANSI A208.1 PARTICEBOARD STANDARD AND ANY ADDITIONAL REQUIREMENTS AS SET FORTH IN THE MANUFACTURER'S CODE EVALUATION REPORT. 8.3 FIBERBOARD FIBERBOARD USED IN STRUCTURAL APPLICATIONS SHALL MEET THE PROVISIONS OF ASTM C208 STANDARD SPECIFICATION FOR CELLULOSIC FIBER INSULATION BOARD. 8.4 STRUCTURAL PANEL SIDING STRUCTURAL PANEL SDING USED IN STRUCTURAL APPLICATIONS SHALL MEET THE REQUIREMENTS OF PS1, THE GOVERNING BUILDING CODE, AND ANY ADDITIONAL REQUIREMENTS AS SET FORTH IN APPLICABLE CODE EVALUATION

PLYWOOD SHEATHING SHALL BE AS FOLLOWS: U.N.O.	
ROOF SHEATHING SHALL BE 1/2" CDX INT-APA RATED 32/16, EXP. 1.	
B.N.:10d common nails at 6" o.c.	
E.N.:10d common nails at 6" o.c.	
F.N.:10d common nails at 12" o.c.	
FLOOR SHEATHING SHALL BE 3/4" T & G INT-APA RATED OSB.	
B.N.:10d common nails at 6" o.c.	

E.N.:10d common nails at 6" o.c. F.N.:10d common nails at 12" o.c.

### FASTENERS AND CONNECTORS:

1. LAG SCREWS LAG SCREWS OR LAG BOLTS SHALL COMPLY WITH ANSI/ASME B18.2.1 SQUARE AND HEX BOLTS AND SCREWS (INC 2. TRUSS METAL CONNECTOR PLATES

TRUSS METAL CONNECTOR PLATES SHALL MEET THE REQUIREMENTS OF ANSI/TPI 1, THE GOVERNING BUILDING CODE, AND ANY ADDITIONAL REQUIREMENTS AS SET FORTH IN THE MANUFACTURER'S CODE EVALUATION REPORTS. 3. METAL CONNECTORS WHERE METAL PLATE OR STRAPPING SIZE AND GAGE ARE SPECIFIED, MINIMUM ASTM A653 STANDARD SPECIFICATION FOR STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANNEALED) BY THE HOT-DIP PROCESS, STRUCTURAL STEEL, GRADE 33 STEEL SHALL BE USED. OTHER METAL CONNECTORS SHALL MEET THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND ANY ADDITIONAL REQUIREMENTS AS SET FORTH IN THE MANUFACTURER'S CODE EVALUATION REPORTS. 4. NAILS NAILS SHALL COMPLY WITH ASTM F1667 STANDARD SPECIFICATION FOR DRIVEN FASTENERS: NAILS, SPIKES, AND

5. PNEUMATIC NAILS AND STAPLES PNEUMATIC INCLO AND STAFLES PNEUMATIC NAILS AND STAPLES SHALL MEET THE REQUIREMENTS OF THE GOVERNING BUILDING CDE AND ANY ADDITIONAL REQUIREMENTS OF THE GOVERNING BUILDING CODE AND ANY ADDITIONAL REQUIREMENTS AS SET FORTH IN THE MANUFACTURER'S CODE EVALUATION REPORTS.

LUMBER GRADE/USE SCHEDULE									
JSE/LOCATION	SPECIES & SIZE	GRADE	Fb (PSI)	Fv (PSI)	Fcp (PSI)	Fc (PSI)	E (PSI)		
WALL STUDS/BLOCKS	HEM-FIR (HF.) 2X, 3X, 4" WIDE, 6" & WIDER	NO.2	850	150	405	1300	1.3E6		
WALL PLATES	HEM-FIR (HF.) 2X4, 3X4, 2X6, 3X6	NO.2	850	150	405	1300	1.3E6		
JOISTS	HEM-FIR (HF.) 2X, 3X	NO.2	850	150	405	1300	1.3E6		
EDGER BOARDS	DOUGLAS FOR-LARCH (DF.) 2X, 3X	NO.2	900	180	625	1350	1.6E6		
EDGER BOARDS	DOUGLAS FOR-LARCH (DF.) 4X	NO.1	1000	180	625	1500	1.7E6		
BEAMS & POSTS	DOUGLAS FOR-LARCH (DF.) 4X	NO.2	900	180	625	1350	1.6E6		
BEAMS & POSTS	DOUGLAS FOR-LARCH (DF.) 6X	NO.1	1200	170	625	1000	1.6E6		

			1					
NAIL	SIZE SCHEDUAL	T		BEARING WALL STUD SCHEDUAL				
NAILS SIZE	DIAMETER	LENGTH	-	MARK	WALL TYPE	LOCATION	PLATE SIZE	STUD SIZE & SPACING
8d COMMON NAIL	0.131"	2-1/2"	-	BW1	EXTERIOR	TYPICAL U.N.O. PER PLAN	2X6	2X6 @ 16" O/C
10d COMMON NAIL	0.148"	3.0"		BW2	CRAWL SPACE	TYPICAL	2X4	2X4 @ 16" O/C
12d COMMON NAIL	0.148"	3-1/4"		BW2	INTERIOR	TYPICAL U.N.O. PER PLAN	2X4	2X4 @ 16" O/C
16d COMMON NAIL	0.162"	3-1/2"	'		1	1		

GLULAM BEAMS SIZE SCHEDUAL			
USE	COMBINATION SYMBOL/SPECIES	CAMBER	
SIMPLE SPAN BEAM	24F-V4 DF/DF	STANDARD	
CONTINUOUS BEAM	24F-V8 DF/DF	ZERO	
CANTILEVER BEAM	24F-V8 DF/DF	ZERO	

OTES:

WOOD TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE FOLLOWING LOADS A. GRAVITY LOADING CASE

- TOP CHORD LOADING LIVE LOAD-15 PSF (ON THE HORIZONTAL PROJECTION) DEAD LOAD-10 PSF (ON THE SURFACE AREA) -ADDITIONAL 5 PSF AT BUILT-UP FRAMING AREAS
- BOTTOM CHORD LOADING
- ATTIC LIVE LOAD-20 PSF (PER IBC 2018, SECTION 1607/ TABLE 1607.1) DEAD LOAD-10 PSF
- B. WIND LOADING CASE (PER IBC 2018, SECTION 1609) SEE 'DESIGN CRITERIA NOTES' FOR WIND COMPONENT CRITERIA IN S00.1
- WOOD TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN AC-CORDANCE WITH THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL DESIGN SPECIFICATION OF THE NATIONAL FOREST PRODUCTS ASSOCIATION, THE DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES OF THE TRUSS PLATE INSTITUTE AND IBC 2018.
- WOOD MATERIALS SHALL BE HEM-FIR, DOUGLAS FIR OR LARCH AND SHALL BE KILN DRIED AND USED AT 19% MAXIMUM MOISTURE ONTENT. PROVIDE GRADE NO.2 OR AS REQUIRED TO SATISFY STRESS REQUIREMENTS
- CONNECTOR PLATES SHALL BE NOT LESS THAN 0.036 INCHES (20 GAUGE) IN COATED THICKNESS, SHALL MEET OR EXCEED ASTM GRADE A OR HIGHER AND SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A-525 (COATING G60). MINIMUM STEEL YIELD STRESS SHALL BE 33.000 PSI.
- TRUSSES SHALL BE FABRICATED IN A PROPERLY EQUIPPED MANUFACT-URING FACILITY OF A PERMANENT NATURE. TRUSSED SHALL BE MANUFACTURED BY EXPERIENCED WORKMEN, USING PRECISION CUTTING, JIGGING AND PRESSING EQUIPMENT UNDER THE REQUIREMENTS IN QUALITY CONTROL STANDARD QST-88 OF THE TRUSS PLATE INSTITUTE.
- SECONDARY BENDING STRESSES IN TRUSS TOP AND BOTTOM CHORDS DUE O DEAD, LIVE AND WIND LOADS SHALL BE CONSIDERED IN THE DESIGN. LOAD DURATION FACTORS SHALL BE PER THE "NATIONAL DESIGN SPECIFI CATION FOR WOOD CONSTRUCTION".
- WOOD TRUSSES SHALL BE ERECTED IN ACCORDANCE WITH THE TRUSS A QUALIFIED AND EXPERIENCED CONTRACTOR. TRUSS ERECTION BY AN INEXPERIENCED ON NONQUALIFIED CONTRACTOR CAN RESULT IN CONSTRUCTION COLLAPSE AND/OR SERIOUS INJURY AND DAMAGE
- THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY AND PERMANENT BRACING AS REQUIRED FOR SAFE ERECTION AND PERFORMANCE OF THE TRUSSES. THE GUIDELINES SET FORTH BY THE TRUSS PLATE INSTITUTE PUBLICATION "H1B-91, COMMENTARY AND RECOMMENDATIONS FOR HANDLING ISTALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES"
- TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT. NOTCHED. DRILLED NOR OTHERWISE ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

SHALL BE A MINIMUM REQUIREMEN

- SUBMIT COMPLETE SHOP DRAWINGS FOR ALL WOOD TRUSSES SHOWING MEMBER SIZES, SPECIES, GRADE, MOISTURE CONTENT, SPAN, CAMBER, DIMENSIONS, CHORD PITCH, BRACING REQUIREMENTS AND LOADINGS. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN WASHIN
- 11. SEE THE "SCISSOR TRUSS NOTES" FOR ADDITIONAL REQUIREMENTS.

#### PLYWOOD/GYPBOARD SHE

- ENGINEERED WOOD ASSOCIATION (APA) SPECIFI ALL ROOF PANEL SHEATHING SHALL BE 5/8" (NOM APA RATED SHEATHING. SUITABLE EDGE SUPPOR BY USE OF PANEL CLIPS OR BLOCKING BETWEEN OTHERWISE NOTED CONNECT ROOF SHEATHING AT 6" O/C AT SUPPORTED PANEL EDGES (E.N.) ANI SUPPORTS (F.N.). ALL FLOOR SHEATHING SHALL BE 3/4" (NOM.) APA F EXP. 1, WITH TONGUE AND GROOVE EDGE. UNLESS CONNECT FLOOR SHEATHING WITH 10d COMMON N
- SUPPORTED EDGES AND 12" O/C AT INTERMEDIA UE USING ADHESIVES MEETING APA SPECIFIC N ACCORDANCE WITH THE MANUFACTURER'S RE ALL WALL PANEL SHEATHING SHALL BE 1/2" (NON APA RATED SHEATHING, UNLESS OTHERWISE IND WALL SHEATHING WITH 10d COMMON NAILS SPAC PORTED PANEL EDGES AND 12" O/C AT INTERMED
- INSTALL ALL PLYWOOD SHEATHING WITH THE LC 5. PANEL ACCOSS SUPPORTS AND WITH PANEL CON MORE SPANS. STAGGER PANEL END JOINTS. ALLO AT PANEL ENDS AND EDGES UNLESS OTHERWISE SHEATHING MANUFACTURER.
- ALL NAILING SHALL BE CAREFULLY DRIVEN AND N USE OF STAPLES AND PNUEMATIC NAIL GUNS ARE 6.
- ALL EXT. WALLS SHALL BE SHEATHED ON BOTH FA SHEATHING (SEE ARCH. DWGS. FOR THICKNESSE WITH 5d COOLER NAILS SPACED 7" O/C AT SUPPO AND INTERMEDIATE SUPPORTS.

8. PROVIDE 2X BLOCKING AT UNSUPPORTED PANE

#### ROOFS AND FLOORS-ONLY WHERE INDICATE WALLS-PER THE SHEARWALL SCHEDULE ON S CODE SUN

### CODE SUMN

Roof	Surfa	С
Area	2 sf	
Negative Zone 1 & 2e	-51.8	
Negative Zone 2n, 2r &3e	-75.5	
Negative Zone 3r	-89.8	
Positive All Zones	20.9	
Overhang Zone 1 & 2e	-59.4	
Overhang Zone 2n & 2r	-83.1	
Overhang Zone 3e	-97.4	
Overhang Zone 3r	-111.6	
Overhang so	ffit pressure ec	ր

Negative Zone 2	2n, 2r &3e	-75.5	-75.5	-65.3	-51.8	-45.8	-41.5	-31.3	-28.0
Negativ	e Zone 3r	-89.8	-89.8	-76.9	-59.9	-52.4	-47.0	-47.0	-47.0
Positive	All Zones	20.9	17.0	16.0	16.0	16.0	16.0	16.0	16.0
Overhang Zo	ne 1 & 2e	-59.4	-59.4	-59.4	-45.8	-39.9	-35.6	-35.6	-35.6
Overhang Zon	ne 2n & 2r	-83.1	-83.1	-75.4	-65.3	-60.8	-57.6	-50.0	-47.5
Overhang	g Zone 3e	-97.4	-97.4	-84.1	-66.5	-58.7	-53.2	-39.9	-35.6
Overhan	g Zone 3r	-111.6	-111.6	-94.5	-71.8	-61.7	-54.6	-54.6	-54.6
0	verhang soff	fit pressure ec	quais adj wali	pressure (will	ich includes ir	nemai pressu	ie of 4.5 psi)		
	verhang soff	nt pressure ec		rapet Pressu			re of 4.5 psr)		
	-	10 sf		• `		250 sf	500 sf		
Р	arapet		Solid Pa	rapet Pressu	ıre (psf)				
Р	arapet Area Zone 2e :	10 sf	Solid Pa	rapet Pressu 50 sf	ıre (psf) 100 sf	250 sf	500 sf		
P CASE A: 2 Zone 2n,	arapet Area Zone 2e :	10 sf 0.0	Solid Pa 20 sf 0.0	rapet Pressu 50 sf 0.0	ure (psf) 100 sf 0.0	250 sf 0.0	500 sf 0.0		
P CASE A: 2 Zone 2n,	Area Area Zone 2e : 2r & 3e :	10 sf 0.0 0.0	Solid Pa 20 sf 0.0 0.0	rapet Pressu 50 sf 0.0 0.0	ure (psf) 100 sf 0.0 0.0	250 sf 0.0 0.0	500 sf 0.0 0.0		
P CASE A: 2 Zone 2n,	Area Area Zone 2e : 2r & 3e : Zone 3r :	10 sf 0.0 0.0	Solid Pa 20 sf 0.0 0.0	rapet Pressu 50 sf 0.0 0.0	ure (psf) 100 sf 0.0 0.0	250 sf 0.0 0.0	500 sf 0.0 0.0		

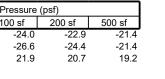
Wall	Surfa	ce l
Area	10 sf	1
Negative Zone 4	-27.8	
Negative Zone 5	-34.2	
Positive Zone 4 & 5	25.6	

2	INTEF	RIOR	TYPICAL PER PLAI		2X4	2X4 @ 16" O/	с
GLI	ULAM BE	AMS SIZE	E SCHEDUA	L			
	COMBINATION SYMBOL/SPECIES CA			CAM	BER		
٩N	N BEAM 24F-V4 DF/DF STANDARD						
JS BEAM 24F-V8 DF/DF			ZE	RO			
RB	R BEAM 24F-V8 DF/DF			ZE	RO		

	STIVIDUL/SPECIES	
SIMPLE SPAN BEAM	24F-V4 DF/DF	STAN
CONTINUOUS BEAM	24F-V8 DF/DF	ZE
CANTILEVER BEAM	24F-V8 DF/DF	ZE

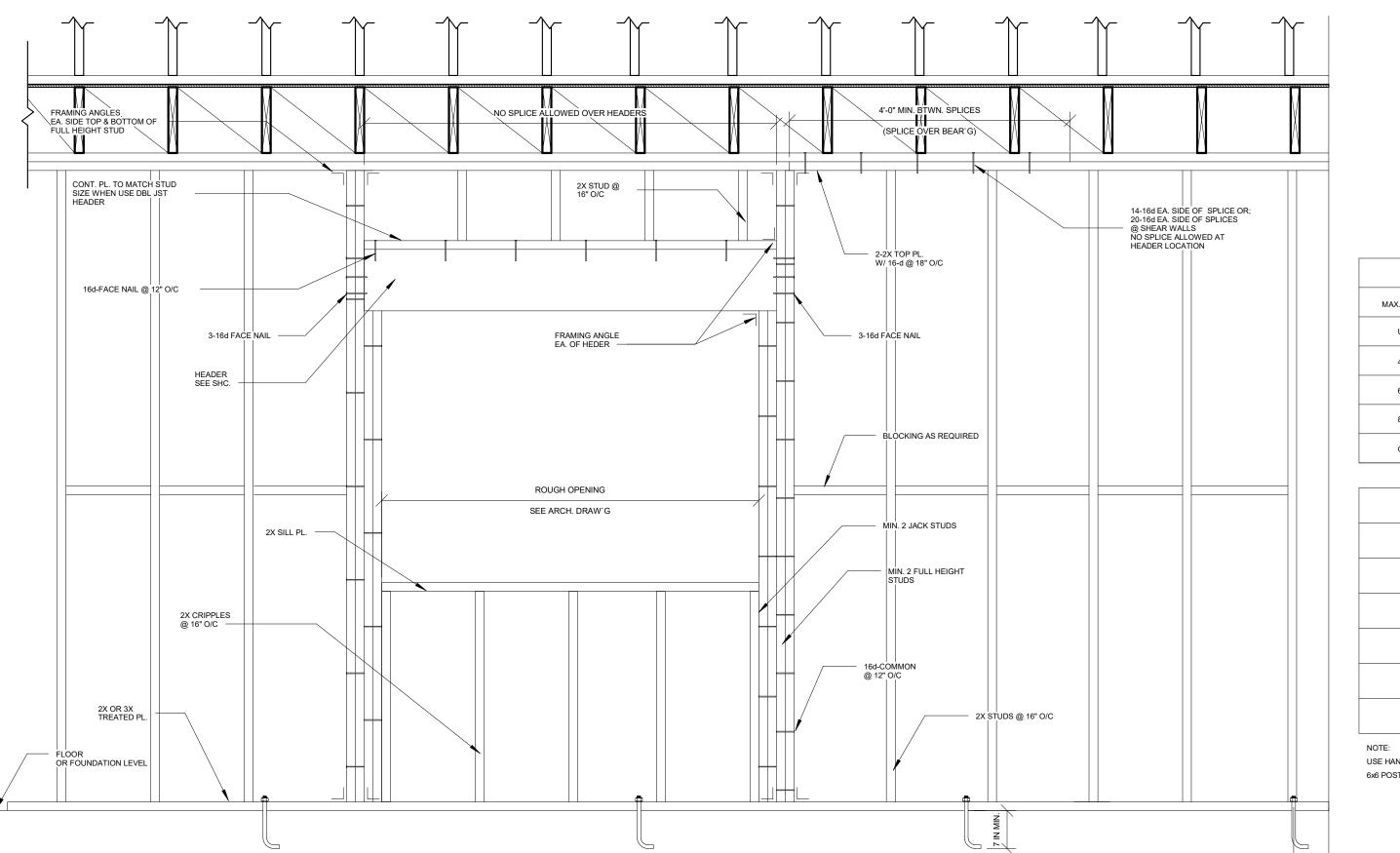
	CANTILEVER BEAM	24F-V8 DF/DF	ZERO	
<u>PRE-EI</u>	<u>NGINEERED</u>	WOOD TF	RUSS	NC

	VOOD/GYPBOARD SHEAT	
E	NGINEERED WOOD ASSOCIATION (APA) SPECIFICAT	TIONS.
A B O A	PA RATED SHEATHING. SUITABLE EDGE SUPPORT S Y USE OF PANEL CLIPS OR BLOCKING BETWEEN FR THERWISE NOTED CONNECT ROOF SHEATHING WIT TO" O/C AT SUPPORTED PANEL EDGES (E.N.) AND 12 UPPORTS (F.N.).	SHALL BE PROVIDED RAMING. UNLESS TH 8d COMMON NAILS
E C S G	LL FLOOR SHEATHING SHALL BE 3/4" (NOM.) APA RA XP. 1, WITH TONGUE AND GROOVE EDGE. UNLESS C ONNECT FLOOR SHEATHING WITH 10d COMMON NA UPPORTED EDGES AND 12" O/C AT INTERMEDIATE S LUE USING ADHESIVES MEETING APA SPECIFICATIC I ACCORDANCE WITH THE MANUFACTURER'S RECO	OTHERWISE NOTED AILS SPACED 6" O/C AT SUPPORTS. FIELD- ON AFG-01, APPLIED
A W	LL WALL PANEL SHEATHING SHALL BE 1/2" (NOM.) T PA RATED SHEATHING. UNLESS OTHERWISE INDICA (ALL SHEATHING WITH 10d COMMON NAILS SPACED ORTED PANEL EDGES AND 12" O/C AT INTERMEDIAT	ATED, CONNECT D 6" O/C AT SUP-
P. M A	ISTALL ALL PLYWOOD SHEATHING WITH THE LONG ANEL ACROSS SUPPORTS AND WITH PANEL CONTIN ORE SPANS. STAGGER PANEL END JOINTS. ALLOW T PANEL ENDS AND EDGES UNLESS OTHERWISE RE HEATHING MANUFACTURER.	NUOUS OVER TWO OR / 1/8" SPACING
	LL NAILING SHALL BE CAREFULLY DRIVEN AND NOT SE OF STAPLES AND PNUEMATIC NAIL GUNS ARE PF	
S W	LL EXT. WALLS SHALL BE SHEATHED ON BOTH FACE HEATHING (SEE ARCH. DWGS. FOR THICKNESSES) A ITH 5d COOLER NAILS SPACED 7" O/C AT SUPPORTE ND INTERMEDIATE SUPPORTS.	AND CONNECTED
P	ROVIDE 2X BLOCKING AT UNSUPPORTED PANEL EDO ROOFS AND FLOORS-ONLY WHERE INDICATED ON	N PLAN
	CODE SUMM	www.struware.co
	Code:	International Building Code 2018
	Live Loads:	
	Roof 0 to 200 sf:	24 - 0.02Area, but not less than 12 psf
	Typical Floor	40 psf
	Partitions Balconies (1.5 times live load)	15 psf 60 psf
	Habitable attics & sleeping areas Attics without storage	30 psf 10 psf
	Attics with storage	20 psf
	<u>Dead Loads:</u> Floor	15.0 psf
	Roof	15.0 psf
	<u>Wind Design Data:</u> Ultimate Design Wind Speed Nominal Design Wind Speed Risk Category	110 mph 85.21 mph II
	Mean Roof Ht (h) Exposure Category	20.0 ft C
	Enclosure Classif. Internal pressure Coef. Directionality (Kd)	Enclosed Building +/-0.18 0.85
	Roof Snow Loads: Design Uniform Roof Snow load	= 30.3 psf
	Flat Roof Snow Load Balanced Snow Load	Pf = 30.3 psf Ps = 30.3 psf
	Ground Snow Load Importance Factor	Pg = 30.1  psf I = 1.00
	Snow Exposure Factor Thermal Factor	Ce = 1.20 Ct = 1.20
	Sloped-roof Factor Drift Surcharge load	Cs = 1.00 Pd =
	Width of Snow Drift	w =
	Earthquake Design Data:	
	Risk Category Importance Factor Mapped spectral response accelerat	$ \begin{array}{rcl} = & II \\ I = & 1.00 \\ t & Ss = & 143.60 \\ S1 = & 49.90 \\ \end{array} $
	Site Class Spectral Response Coef.	= :ode default Sds = 1.000 Sd1 = 0.599
	Seismic Design Category Basic Structural System	= D = Bearing Wall Systems
	Seismic Resisting System Design Base Shear	<ul> <li>Light frame (wood) walls with structural wood shear panels</li> <li>V = 0.154W</li> </ul>
	Seismic Response Coef. Response Modification Factor	Cs = 0.154 R = 6.5
	Analysis Procedure	= Equivalent Lateral-Force Analysis
	CODE SUMMA	www.struware.com
	Component and cladding	ng ultimate wind pressures
	Roof Surface Pres	essure (psf)
	Area 2 sf 10	
	Negative Zone 2n, 2r &3e -75.5 - Negative Zone 3r -89.8 -	-75.5         -65.3         -51.8         -45.8         -41.5         -31.3         -28.0           -89.8         -76.9         -59.9         -52.4         -47.0         -47.0         -47.0
	Overhang Zone 1 & 2e -59.4 -	17.0         16.0         16.0         16.0         16.0         16.0           -59.4         -59.4         -45.8         -39.9         -35.6         -35.6         -35.6           -83.1         -75.4         -65.3         -60.8         -57.6         -50.0         -47.5



LIST OF	ABBREVIATIONS;
ARCH.	X. APPROXIMATE ARCHITECTURAL
ASD B.F.	ALLOWABLE STRESS DESIGN BOTTOM FACE
B.M. B.N	BOTTOM FACE BENCHMARK BOUNDARY NAILING
B.O.B.	BOTTOM OF BOREHOLE
BOTT	BOTTOM OF TEST PIT BOTTOM
C C.C.	CENTIGRADE CENTER TO CENTER CUBIC FEET PER MINUTE CAST IRON
CFM	CUBIC FEET PER MINUTE
C.J.	CONSTRUCTION JOINT
CLR. CMP	CLEAR CORRUGATED METAL PIPE
	CONCRETE CONTINUOUS
CT.J. DEG.	CONTRACTION JOINT DEGREE
DIA.	DEGREE DIAMETER DIAGONAL
DWL	DOWEL
EA.	, EASTING EACH
E.F. E.N.	EACH FACE EDGE NAILING EXPANSION JOINT
E.J. EL.	EXPANSION JOINT ELEVATION
F.F.	EXISTING F FAHRENHEIT FAR FACE FIGURE
F.N.	FIELD NAILING
FT. FTG	FEET FOOTING FINISH
	FINISH GAGE
GAL	GALLON GALVANIZED
GR.	GRADE
G.L. GPM	GRADE LEVEL GALLONS PER MINUTE
H.P. HR	HIGH POINT, HORSE POWER HOUR
	HORIZONTAL
I.D.	HEIGHT INSIDE DIAMETER INSIDE FACE
	INSIDE FACE INVERT
	INCH JOIST
IT	JOINT KILOPOUNDS
LB.	POUND
L.P. LG.	LOW POINT LONG LONG. LONGITUDINAL
MAX. MIN.	LONG LONG. LONGITUDINAL MAXIMUM MINIMUM
M.H.	MANHOLE MANUFACTURER
NGVD	NATIONAL GEODETIC VERTICAL DATUM
N.I.A.	NORTH, NORTHING NOT IN CONTRACT
	NOT TO SCALE NEAR FACE
0/C	ON CENTERS OUTSIDE DIAMETER
O.F.	OUTSIDE FACE OVER HANG
O.W.	OUTLET WORKS
РТ	POINT OF CURVATURE PRESSURE TREATED
P.D.	PLAIN DOWEL POINT OF INTERSECTION
PL.	PLATE PREEAB. PREFABRICATED POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
R	POLYVINYL-CHLORIDE RADIUS
	ROLLER COMPACTED CONCRETE REINFORCED CONCRETE PIPE
	REINFORCEMENT REQUIRED
	REVISION
SCH.	SOUTH SCHEDULE
	SHEET STAINLESS STEEL
SECT.	SECTION SIMILAR
SIMPS.	SIMPSON STRONG TIES SLAB ON GRADE
SQ.	SQUARE
STA.	SPECIFICATIONS STATION
	SYMMETRICAL STANDARD
T&B T.F.	TOP AND BOTTOM TOP FACE
THK.	THICKNESS TRANSVERSE
TOPO.	TOPOGRAPHY
	TYPICAL TOP OF WALL TOP OF FOOTING
T.O.F. U.N.O	TOP OF FOOTING UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
W.S.	WITHOUT WATERSTOP
WSP	WOOD STRUCTURAL PANEL





 $1 \frac{\text{TYP. STUD WALL CONSTRUCTION}}{3/4" = 1'-0"}$ 

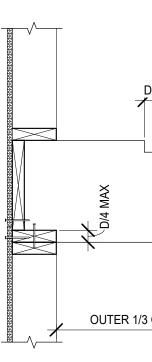
STUD WALL HEADER AT ROOF OPENING U.N.O.			
MAX. ROUGH OPENING	HEADER, U.N.O.		
UP TO 4'-0"	6x6 OR 4x8		
4'-1" TO 6'-0"	6x8 OR 4x10		
6'-1" TO 8'-0"	6x10 OR 4x12		
8'-1" TO 10'-0"	6x12 OR 4x14		
OVER 10'-0"	SEE PLANS		
STUD WALL HEADER AT FLOOR OPENING U.N.O.			
MAX. ROUGH OPENING	HEADER, U.N.O.		
UP TO 4'-0"	6x6 OR 4x10		
4'-1" TO 6'-0"	6x10 OR 4x14		

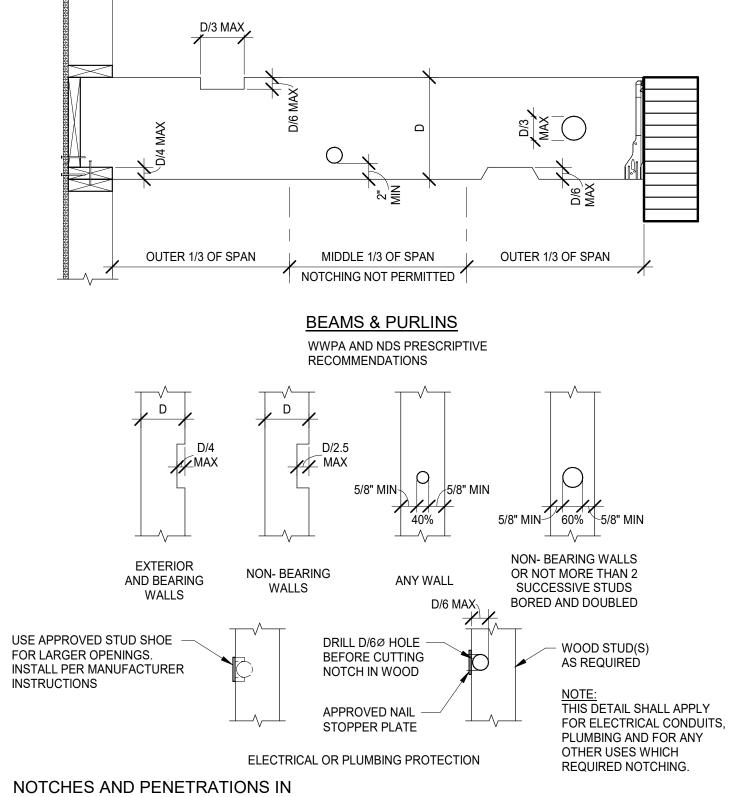
6'-1" TO 8'-0" 3 1/8"x12"GLB OR 6x12 8'-1" TO 10'-0" 3 1/8"x15"GLB OR 5 1/8"x10 1/2"GLB OVER 10'-0" SEE PLANS

USE HANGERS WITH CONCEALED FLANGES FOR HEADER AND MIN 6x6 POSTS AT SPANS GREATER THAN 10'-0" OR AT GLULAM BEAMS

0' - 6"

FROM END





USE APPROVED STUD SHOE — FOR LARGER OPENINGS. INSTALL PER MANUFACTURER INSTRUCTIONS

2 SOLID SAWN JOISTS AND STUDS 1" = 1'-0"

