

TOTAL IMPERV %	29.8%
LEGAL DESCRIPTION: GILBERT ADD PLat Block: Plat Lot: 6	
LOT SLOPE CALCU	ILATIONS

140 FT 35.7%

HIGHEST ELEVATION POINT OF LOT: 335 FT LOWEST ELEVATION POINT OF LOT: 285 FT

ELEVATION DIFFERENCE:

HORIZONTAL DISTANCE:

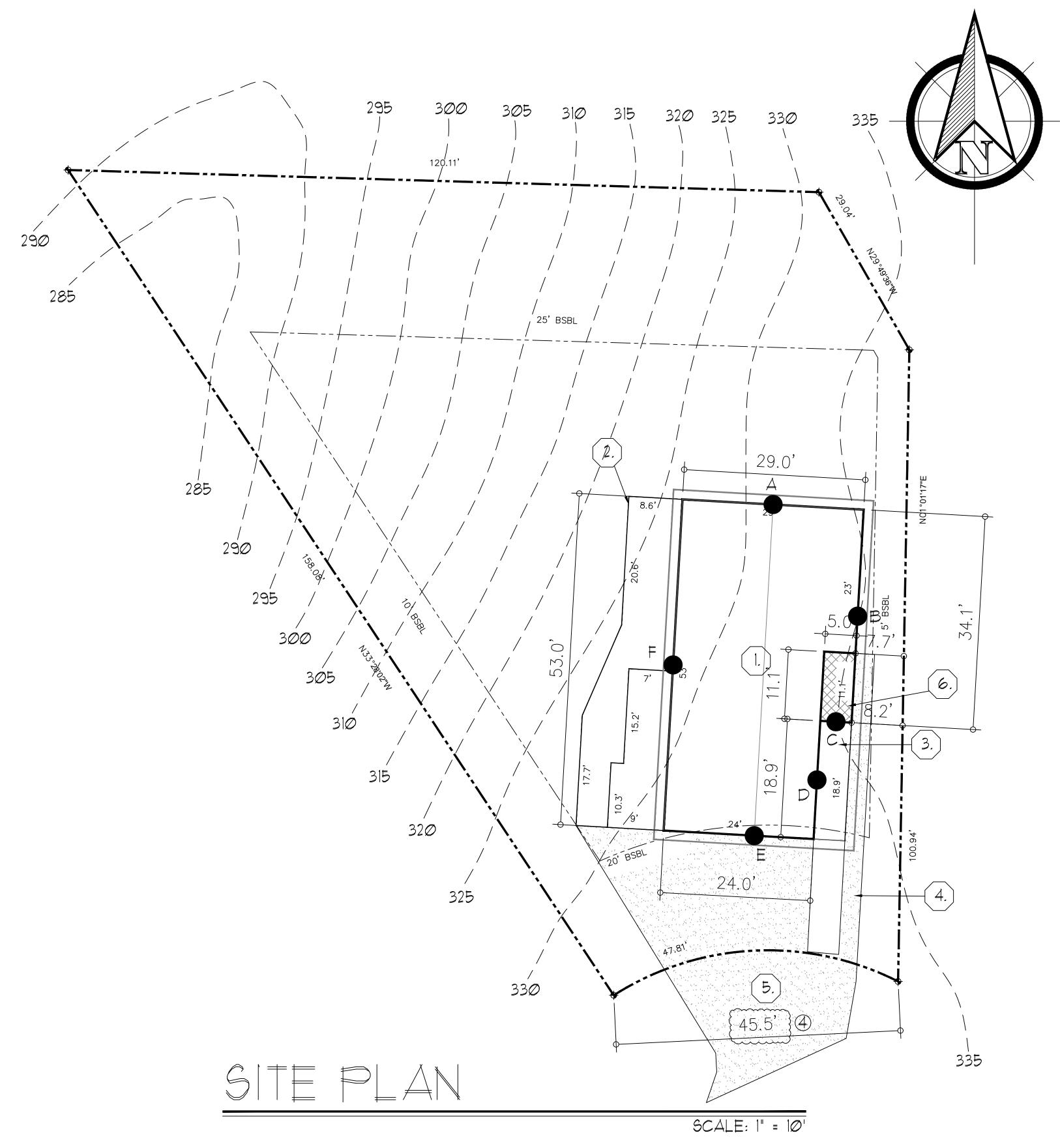
LOT SLOPE:

AVERAGE BI	JILDING E	<u>LEVATION</u>	
MIDPOINT ELEVAT	ON WALL SE	GMENT LENGTH	TOTAL
A= 331.2'	A= 29	) <sup>1</sup>	A= 96 <i>0</i> 4.8
B= 335	B= 34	<b>Ļ'</b>	B= 11390
C= 334.8	C= 5'		C= 1674
D= 334.4	D= 18	.9'	D= 632 <i>0.</i> 2
E= 322.6	E= 24		E= 7742.4
F= 328.6	F= 53	ı	F= 17415.8
Sui	3101AL = 163	3.9 SUBTOT	AL = 48847.2
54147.2/ 163.9 = 3	3 <i>0.</i> 4 ABE		

4701 88TH AVE SE MERCER ISLAND, WA 98040

Parcel# 275700-0060

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



UNLESS A SOILS INVESTIGATION BY A QUALIFIED SOILS ENGINEER IS PROVIDED, FOUNDATION DESIGN IS BASED ON AN ASSUMED AVERAGE SOIL BEARING <u>UISOO PSF.</u> EXTERIOR FOOTINGS SHALL BEAR IS" (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 AGAINST WOOD TO BE PROVIDED WITH 1/4"x3"x3" PLATE WASHERS, WOOD BEARING ON OR INSTALLED WITHIN 1" OF MASONRY OR CONCRETE TO BE PRESSURE TREATED WITH AN APPROVED PRESERVATIVE.

FOUNDATION SILL BOLTS TO BE 5/8" DIAMETER AT 6'-O" O.C. UN.O. WITH MIN. 7" EMBEDMENT METAL FRAMING CONNECTORS TO BE MANUFACTURED BY SIMPSON STRONG-TIE OR USP STRUCTURAL CONNECTORS

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

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 F1667.

### 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 (12.7) 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.

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 (Ø.131" DIA., 2-1/2" LENGTH), 8d BOX (Ø.113" DIA, 2-1/2" LONG), 1Ød 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)

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 SAWN 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
2X6 OR LARGER	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi
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=1300000psi
STUDS	
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=1300000psi
POSTS	
4×4	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=13000000psi
4X6 OR LARGER	HF #2 - Fb=975 psi, Fv=150 psi, Fc=1300 psi, E=1300000psi
6X6 OR LARGER	DF-L #1 - Fb=1200 psi, Fv=170 psi, Fc=1000 psi, E=1600000psi

### GLUED-LAMINATED BEAM (GLB)

SHALL BE 24F-V4 FOR SINGLE SPANS & 24F-V8 FOR CONTINUOUS OR CANTILEYER 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 = 750 PSI (PERPENDICULAR), E = 2,000,000 PSI. BEAMS DESIGNATED AS "LYL" SHALL HAVE THE MINIMUM PROPERTIES:

Fb = 2,600 PSI, Fv = 285 PSI, Fc = 150 PSI (PERPENDICULAR), E = 1,900,000 PSI.

BEAMS DESIGNATED AS "LSL" SHALL HAVE THE MINIMUM PROPERTIES: Fb = 1,700 PS1, Fv = 400 PS1, Fc = 680 PS1 (PERPENDICULAR), E = 1,300,000 PS1.

CALCULATIONS SHALL INCLUDE DEFLECTION AND CAMBER REQUIREMENTS.

DEFLECTION SHALL BE LIMITED 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

### INSULATION AND MOISTURE PROTECTION

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:

I. 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

### 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

AN APPROVED VAPOR BARRIER SHALL BE PROPERLY INSTALLED IN ROOF DECKS, IN ENCLOSED CEILING SPACES AND AT EXTERIOR WALLS.

A GROUND COVER OF 6 MIL (0.006") BLACK POLYETHYLENE OR EQUIVALENT SHALL BE LAID OVER THE GROUND 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 CORROSION-RESISTANT 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:

I. 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.

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

- 6. AT WALL AND ROOF INTERSECTIONS.
- 7. 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.

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:

- I.I. 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

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.
- ONE-EIGHTH-INCH CEMENT-BASED, FIBER-REINFORCED, WATERPROOF COATING
- SIXTY-MIL SOLVENT-FREE LIQUID-APPLIED SYNTHETIC RUBBER

### FOUNDATION WATERPROOFING

### 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. 2" 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

### DOORS, WINDOWS AND SKYLIGHTS

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 MASONRY 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

### 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.

MISØ5.4.4 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

### 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 BE EXHAUSTED	INTERMITTENT	CONTINUOUS	
KITCHEN6	100 CFM	30 CFM	
BATHROOMS - TOILET ROOMS	50 CFM	20 CFM	

FOR SI: INCH = 25.4 MM, I FOOT = 304.8 MM, I CUBIC FOOT PER MINUTÉ = 0.0004719 m /s. I 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 HYAC EQUIPMENT IS USED TO PROVIDE WHOLE HOUSEVENTILATION, THE AIR HANDLER SHALL BE POWERED BY AN ELECTRONICALLY COMMUTED MOTOR.

### TABLE R403.6. MECHANICAL VENTILATION SYSTEM FAN EFFICACY

FAN LOCATION	AIR FLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY (CFM/WATT)	AIR FLOW RATE MAXIMUM (CFM)
HRY OR ERV	ANY	1.2 CFM/WATT	ANY
RANGE HOODS	ANY	2.8 CFM/WATT	ANY
IN-LINE-FAN	ANY	2.8 CFM/WATT	ANY
BATHROOM, UTILITY ROOM	10	1.4 CFM/WATT	(90)
BATHROOM, UTILITY ROOM	90	2.8 CFM/WATT	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 M1505.4.1 THROUGH M1505.4.4

### 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

THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR AT A CONTINUOUS RATE AS DETERMINED IN ACCORDANCE WITH TABLE MISØ5,4,3(1) OR EQUATION IS-1 VENTILATION RATE IN CUBIC FEET PER MINUTE = (0.01 x TOTAL SQUARE FOOT AREA OF HOUSE) + 1.5 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) + 1.5 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 MIS05.4.3(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	7Ø	
2,501-3,000	45	55	60	7Ø	75	
3,001-3,500	50	60	65	75	80	
3,5 <b>0</b> 1-4, <b>000</b>	55	65	70	80	85	
4,001-4,500	60	7Ø	75	85	90	
4,501-5,000	65	75	80	90	95	

### TABLE MI5Ø5.4.3(2) SYSTEM COEFFICIENT

SYSTEM TYPE	DISTRIBUTED	NOT DISTRIBUTED
BALANCED	1.00	1.25
NOT BALANCED	1.25	1.5

### TABLE MI505.4.3(3)

INTERMITTENT WHOLE-HOUSE MECHANICAL VENTIL ATION RATE FACTORS app

TERTITIENT WHOLE-HO	USE HEU	HANICAL	AFIAIIF	HON RAIL	Ī
ABLE MI505.4.3(3)					
RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	50%	66%	75%	100%	
EVCTOR	2	15	12	(10)	

- 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 EXCEEDING 5 AIR CHANGES PER HOUR. TESTING SHALL BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF 0.2 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/SETUP

### 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 WOOD	FRAMED	WALL	SLAB ON	
VERTICAL	SKYLIGHT	W/ ATTIC	FRAMED WALL	FLOOR	BELOW GRADE	GRADE
Ø.3Ø	0.50	R-49	R-21	R-38	R-10/15/21 INT + 5TB	R-10 2'

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

### WSRC 403.6.1 WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM

Whole House	EACH DWELLING UNIT SHALL BE EQUIPPED WITH A VENTILATION SYSTEM. THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS MISØ5.4.1 THROUGH MISØ5.4.4
Fan	

### 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

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.

COMPLY WITH SECTION MI505.4.2

## NOT EXCEEDING 25 PERCENT OF ITS WIDTH. STUDS IN NONBEARING PARTITIONS SHALL BE PERMITTED TO BE

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 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.

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

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 GALYANIZED METAL TIE OF NOT LESS THAN 0.054 INCH THICK (1.37mm)(16 qa) 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 1

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

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 5/8" 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

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

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.

## 2018 WASHINGTON STATE ENERGY CODE - TABLE 402.1

FENESTRATION	U-FACTOR	CEILING I	WOOD FRAMED	FRAMED	WALL	SLAB ON
VERTICAL	SKYLIGHT	W/ ATTIC	WALL	FLOOR	BELOW GRADE	GRADE
0.30	0.50	R-49	R-21	R-38	R-10/15/21 INT + 5TB	R-10 2'

VENTILA	ATION SCHEDULE	
VENTILATION R	EQUIREMENTS OF IRC TABLE WSRC MI505.4.4	4
SYMBOL		
- <del>-</del>	KITCHENS	100 CFM INTERMITTENT OR 30 CFM CONTINUOUS
- <del></del>	BATHROOMS-TOILET ROOMS	MECHANICAL EXHAUST CAPACITY OF 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS

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

EXCEPTION: INTERIOR JOINING SPACES PROVIDED WITH A 30 CFM (0.0141 M 3/5) WHOLE-HOUSE TRANSFER FAN OR A PERMANENT OPENING WITH AN AREA OF NOT LEGS THAN 8 PERCENT OF THE FLOOR AREA OF THE INTERIOR ADJOINING SPACE BUT NOT LESS 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 MIDOS.4.1.1 AND SHALL HAVE WHOLE-HOUSE VENTILATION CONTROLS THAT

### DRILLING AND NOTCHING STUDS.

## I. NOTCHING. ANY STUD IN AN EXTERIOR WALL OR BEARING PARTITION MAY BE CUT OR NOTHCED TO A DEPTH

NOTCHED TO A DEPTH NOT TO EXCEED 40 PERCENT OF A SINGLE STUD WIDTH. MORE THATN 5/8 INCH TO THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A

R602.6.1 DRILLING AND NOTCHING OF TOP PLATE.

INCHES AT EACH SIDE OR EQUIVALENT. THE METAL TIE MUST EXTEND NOT LESS 6 INCHES PAST THE OPENING.

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

## FIXTURES SHALL BE HIGH EFFICACY LAMPS.

<u>WGRC RI505.4.1.7</u> A PERMANENT CERTIFICATE SHALL BE COMLETED BY THE MECHANICAL

## REVISIONS

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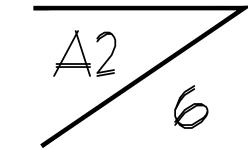
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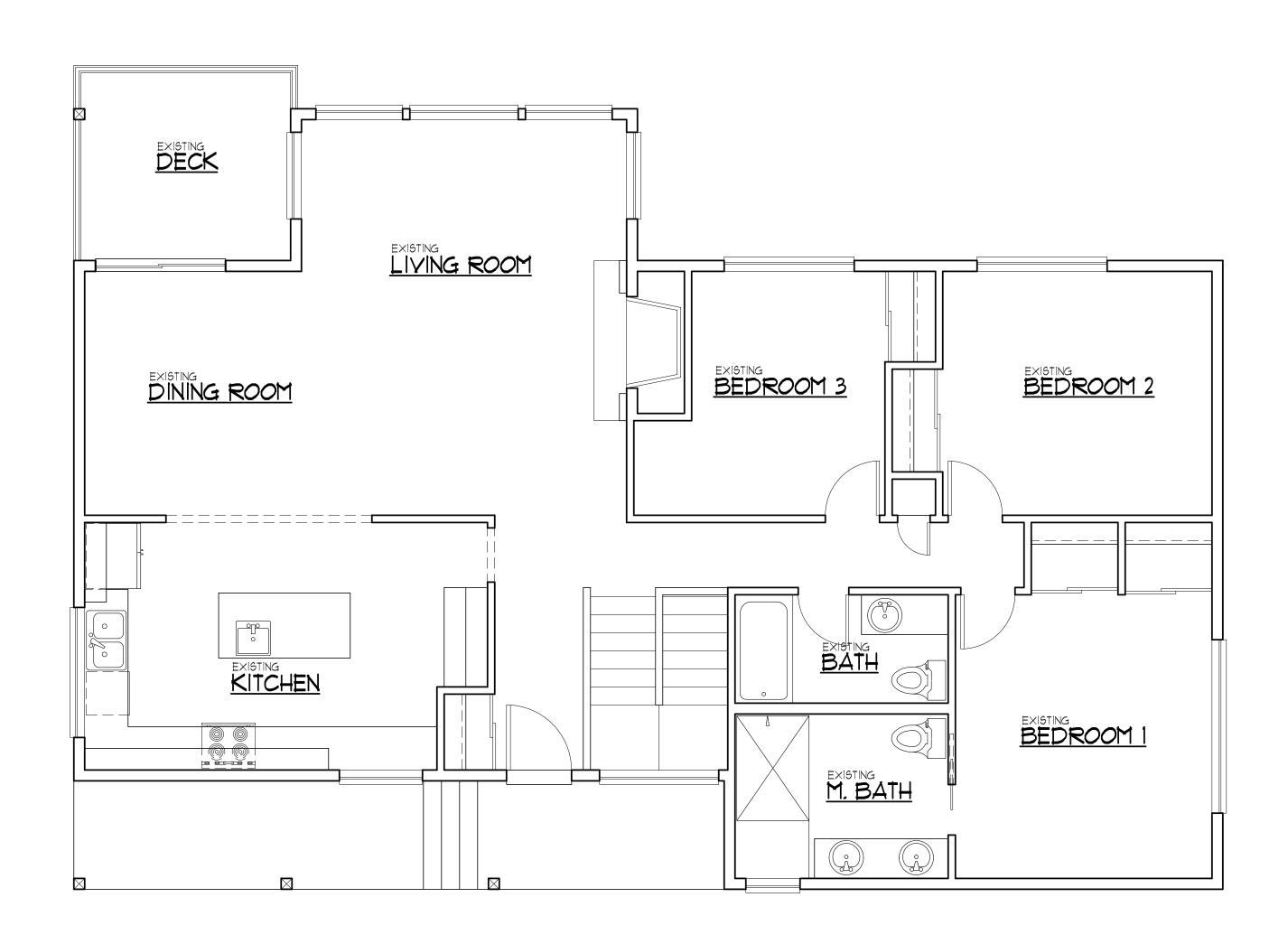
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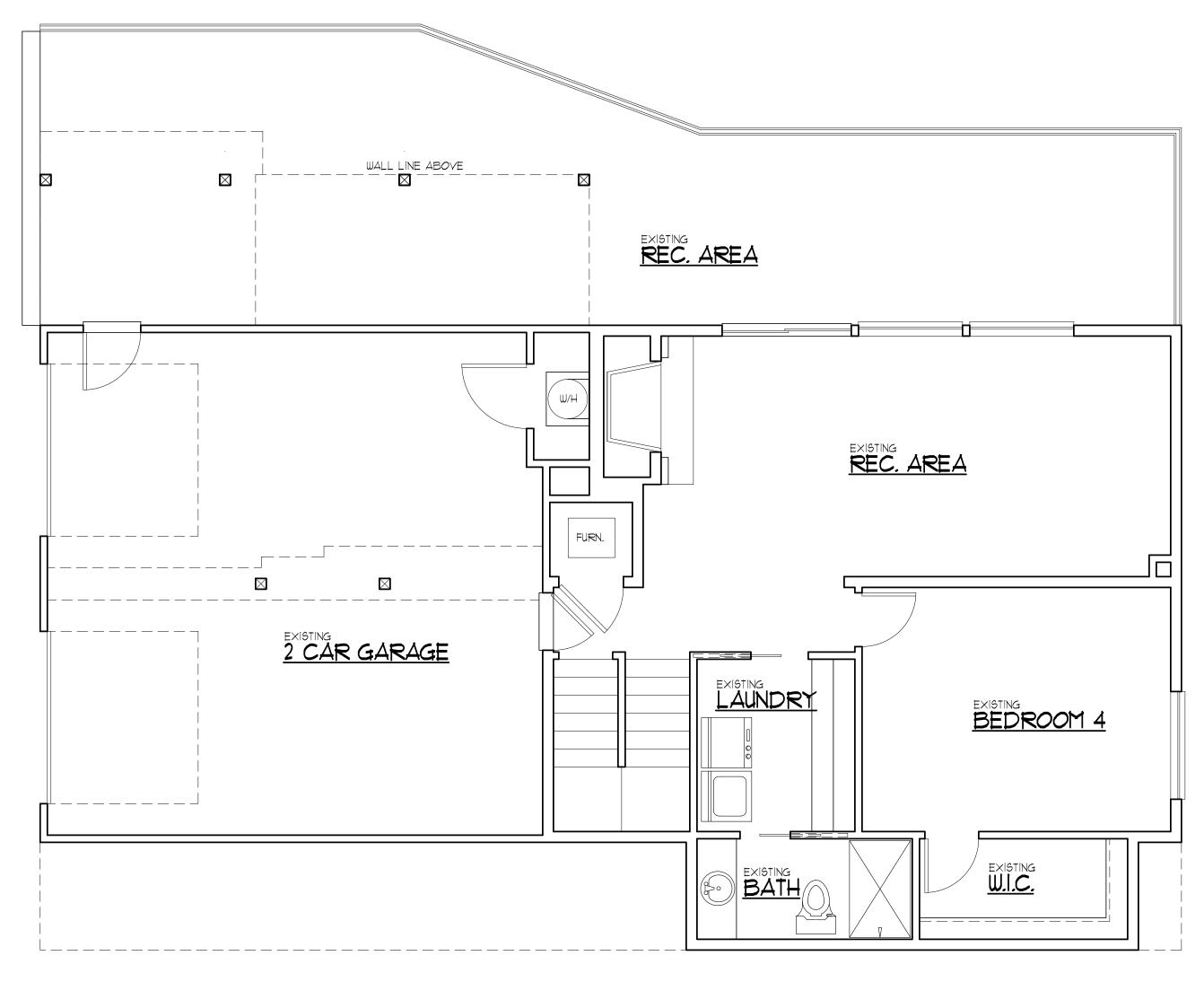
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MAIN FLOOR PLAN

EXISTING

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

LOWER FLOOR PLAN

EXISTING

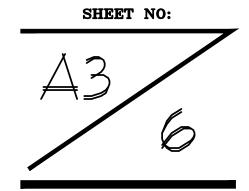
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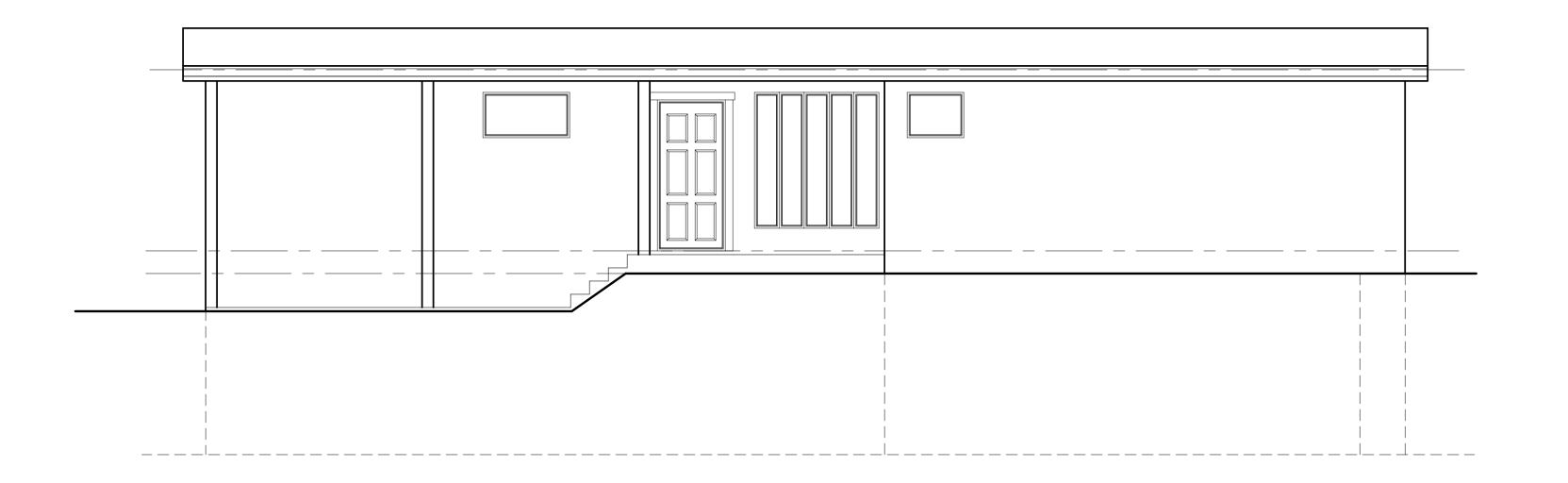
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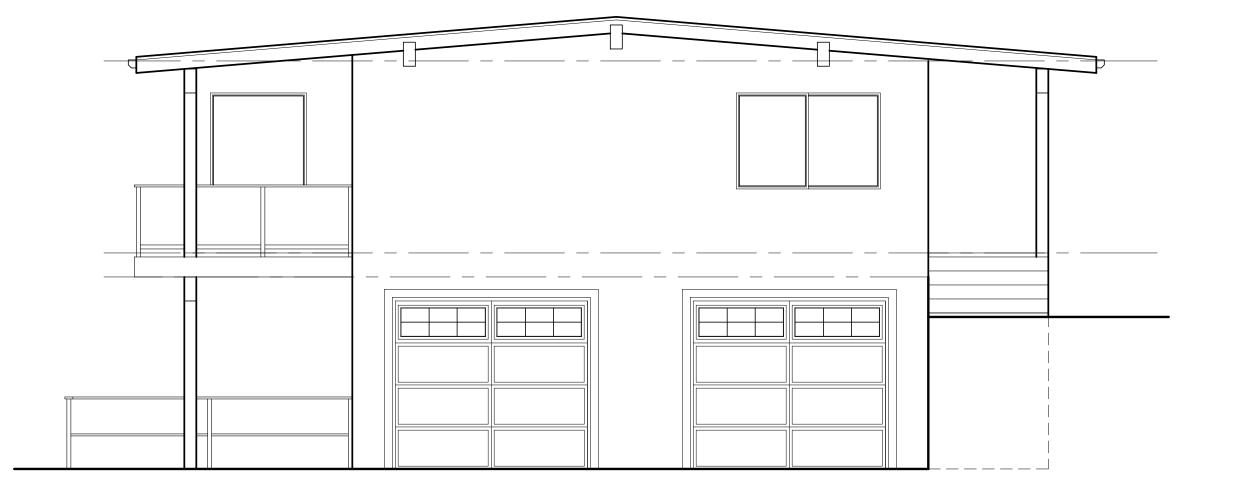
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RIGHT ELEVATION EXISTING SCALE : 1/4"= 1'-0"



FRONT ELEVATION

EXISTING

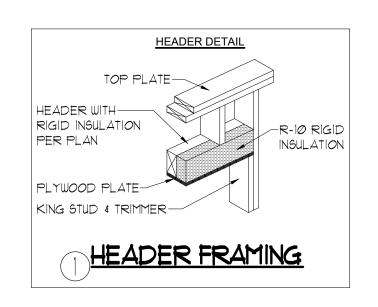
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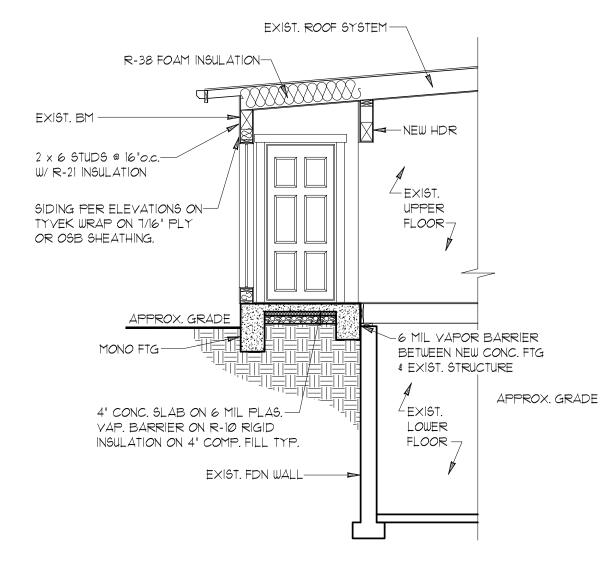
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## SECTION

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

### - R-38 FOAM INSULATION

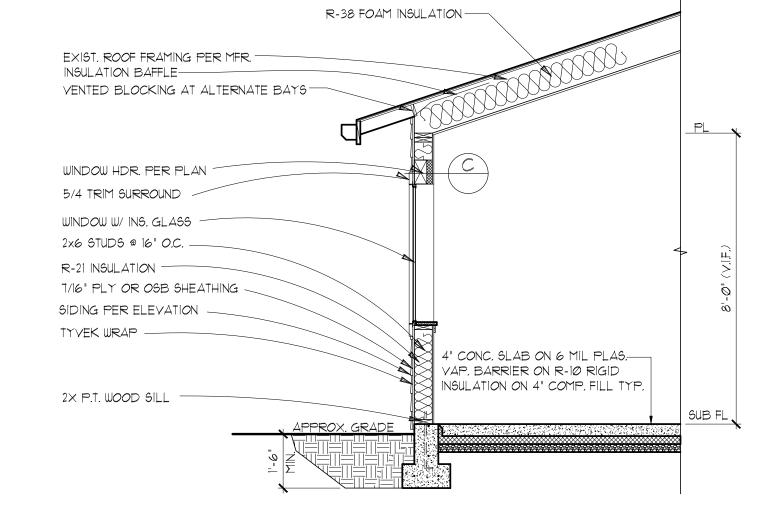
TYPICAL ROOF CONSTRUCTION

### TYPICAL WALL CONSTRUCTION

- SIDING AND/OR VENEER PER ELEVATION - 7/16" PLY OR OSB SHTG.( U.N.O )
- TYVEK BUILDING WRAP OR EQ.
- 2×6 STUDS @ 16" O.C. EXTERIOR WALLS U.N.O. EXTERIOR WALL NOTCH 25%, BORING 40% 60% BORING IF DOUBLED & NOT MORE THAN TWO SUCCESSIVE STUDS.
- 2x4 STUDS @ 16" O.C., INTERIOR PARTITIONS
- (2×6 @ PLUMBING WALLS) NON-BEARING WALL MAXIMUM NOTCH 40%, BORING 60%
- HOLES NO CLOSER THE 5/8 INCH TO FACE OF STUD
- R-21 INSULATION WITH VAPOR BARRIER

### - 1/2" GWB. INTERIOR SHEATHING TYPICAL FLOOR CONSTRUCTION

-4" CONC. SLAB ON 6 MIL PLAS. VAP. BARRIER ON R-10 RIGID INSULATION ON 4" COMP. FILL TYP.



## TYPICAL WALL SECTION

**DECK** LIVING ROOM BEDROOM 3 BEDROOM 2 DINING ROOM BATH KITCHEN BEDROOM M. BATH 36" HIGH OR-EXISTING
CVRD PORCH HALF WALL ENTRY 5660|FX S.G 36" MIN. CONC.—— LANDING - EXIST. POSTS TO REMAIN 5'-Ø2" 11'-1" MAIN FLOOR PLAN PROPOSED SCALE : 1/4"= 1'-0" © 2022 RECTOR RESIDENTIAL DESIGN, LLC

ENERGY CREDIT 1.5 CREDITS ENERGY CREDIT 5.4: -1.5 CREDIT EFFICIENT WATER HEATING OPTION

WATER HEATING SYSTEM SHALL INCLUDE ONE OF THE FOLLOWING: ELECTRIC HEAT PUMP WATER HEATER MEETING THE STANDARDS FOR TIER I OF

NEEA'S ADVANCED WATER HEATING SPECIFICATION OR FOR R-2 OCCUPANCY, ELECTRIC HEAT PUMP WATER HEATER, MEETING THE STANDARDS FOR TIER I OF NEEA'S ADVANCED WATER HEATING SPECIFICATION, SHALL SUPPLY DOMESTIC HOT WATER TO ALL UNITS. IF ONE WATER HEATER IS SERVING MORE THAN ONE DWELLING UNIT, ALL HOT WATER SUPPLY AND RECIRCULATION PIPING SHALL BE INSULATED WITH R-8 MINIMUM PIPE INSULATION.

## SMOKE DETECTORS

INSTALL SMOKE DETECTORS PER CODE 110V INTERCONNECTED W/ BATTERY BACKUP INSTALLED ON EACH FLOOR, IN EACH SLEEPING AREA, AND OUTSIDE EACH SEPERATE SLEEPING AREA LISTED IN ACCORDANCE WITH UL 217 AND INSTALLED PER THE HOUSEHOLD

## CARBON MONOXIDE

FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72

SD/CM INSTALL SMOKE DECTOR/ CARBON MONOXIDE ALARM PER CODE COMBINATION SMOKE ALARM & CARBON MONOXIDE ALARMS: SMOKE ALARM REQUIREMENTS AS LISTED ABOVE. INSTALLED ON EACH FLOOR, AND OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS. CARBON MONOXIDE ALARMS LISTED AS COMPLYING WITH UL 2015 AND INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS

REFER TO STRUCTURAL SHEETS FOR SHEAR WALL SCHEDULE AND ENGINEERING PLAN WHICH CONTAIN DETAIL REFERENCES AND/OR INSTRUCTIONS PERTAINING TO EACH SHEAR WALL INDICATED IN THIS PLAN.

GLAZING PERCENT:

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 BY THE CONTRACTOR.

AREA SUMMARY	EXIST	ING	PROP	0SED	TOTA	ДL
MAIN FLOOR:	1499	SF.	55	SF.	1554	SF.
LOWER FLOOR:	742	SF.	000	SF.	742	SF.
TOTAL:	2241	SF.	<u> </u>	SF.	= 2296	SF.
	GF	RAND	TOTAL: 2296 SF.			
GARAGE:	581	SF.	000	SF.		
GLAZING SUMMARY						
WINDOWS:	33	SF.				
DOORS W/ MORE THAN 50% GLAZING:	20	SF.				
SKYLIGHTS:	0	SF.			_	
TOTAL:	53	SF.	-		_	

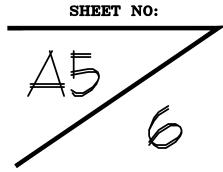
96.3 % WDW SF / FIR SF. (%)

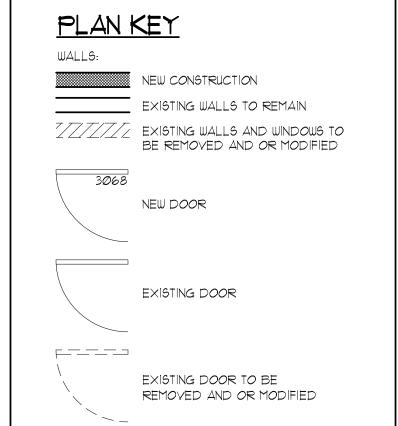
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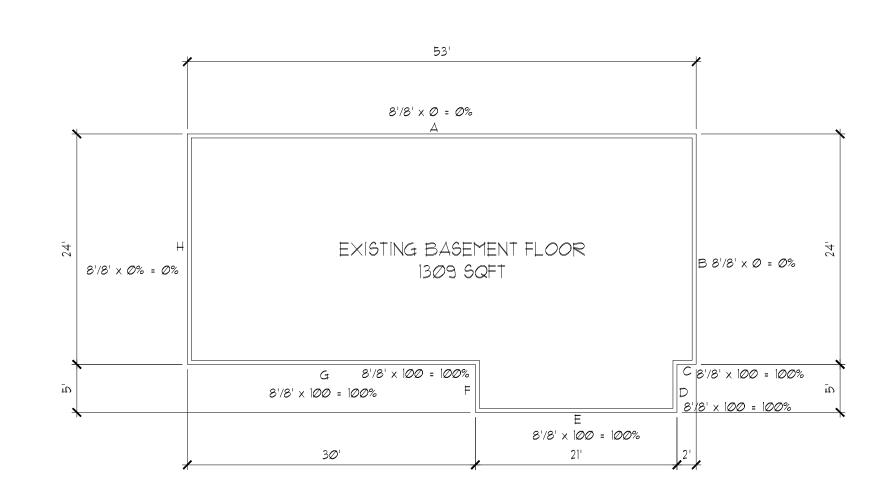
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Rector Residential Design, LLC

**DRAFTER:**  $\emptyset$ DATE: 10/10/23 **PROJECT NO:** 221004 SHEET NO:







SCALE : 1/8"= 1'-0"

WALL SEGMENT	LENGTH X	COVERAGE=	RESULT
А	53'	<i>©</i> %	<i>©</i> %
В	24'	Ø%	<i>0</i> %
С	2'	100%	2%
D	5'	100%	50%
E	21'	100%	21%
F	5'	100%	50%
G	3Ø'	100%	3 <i>0</i> %
Н	24'	Ø%	<i>0</i> %
TOTALS	164'	N/A	153%

1309 SQFT imes 153% /164 = 1221.2 EXCLUDED FROM THE GROSS FLOOR AREA

BASEMENT FLOOR PLAN

EXISTING BASEMENT FLOOR GFA:  $1309^{\circ}$  SQFT - 1221.2 SQFT = 87.8 GFA EXISTING MAIN FLOOR GFA: 1411 GFA PROPOSED MAIN FLOOR GFA: 48 GFA SUBTOTAL GFA: 1546.8 - 11224 SQFT LOT SIZE X 40% = 4,489.6 MAX, GFA

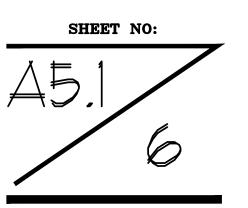


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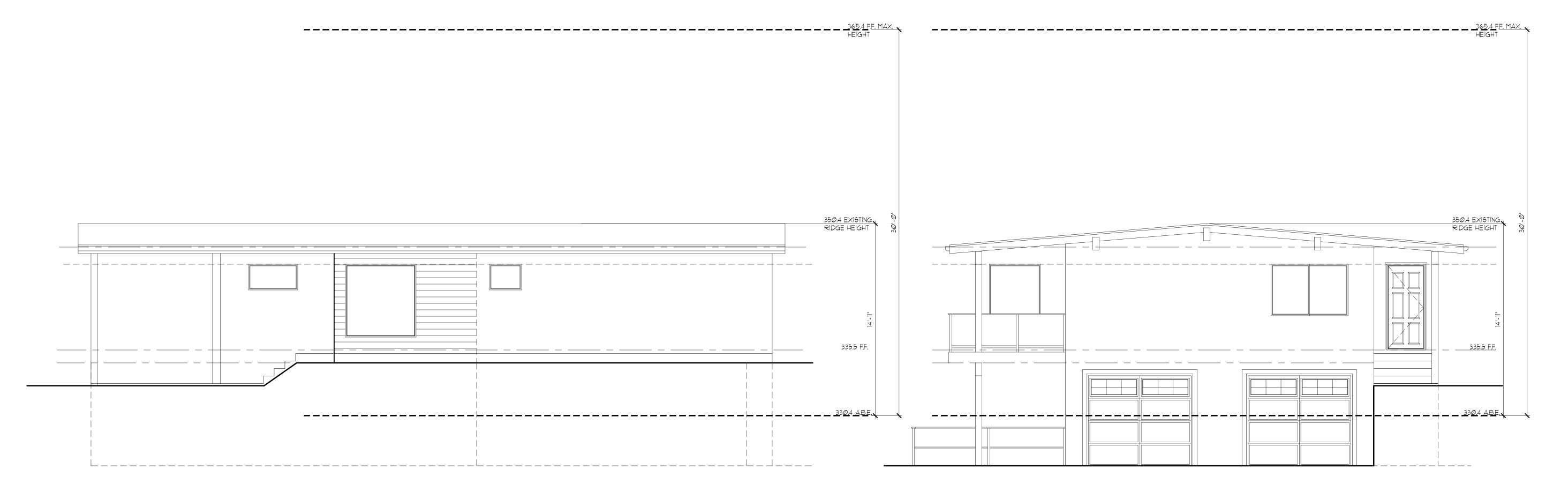
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**PROJECT NO:** 221004



REAR ELEVATION

PROPOSED SCALE : 1/4"= 1'-0" LEFT ELEVATION



RIGHT ELEVATION

## PROPOSED

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

## FRONT ELEVATION

## PROPOSED

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- VERIFY SHEAR WALL NAILING AND HOLDOWNS ARE PER PLAN AND SCHEDULE PRIOR TO INSTALLING SIDING

- MASONRY AND WOOD FRAME CHIMNEYS ARE TO BE CONSTRUCTED PER I.R.C.

- PROVIDE GALVANIZED SHEET METAL FLASHING AND COUNTERFLASHING AT ALL
ROOF / WALL INTERSECTIONS, CHIMNEYS, AND SKYLIGHTS

- PROVIDE WEATHERSTRIPPING AND FLASHING AT ALL DOORS AND WINDOWS AS REQUIRED
- CAULK ALL EXTERIOR JOINTS AND PENETRATIONS
- POST ADDRESS ON BLDG. PRIOR TO FINAL INSPECTION
- LOTS SHALL BE GRADED AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALL. SLOPE SHALL BE 6" IN FIRST 10 FT, OR DRAINS OR SWALES SHALL BE PROVIDED TO ENSURE DRAINAGE AWAY FROM STRUCTURE
- FASTENERS TO BE HOT-DIPPED GALV. STEEL, STAINLESS OR ALUM. (CORROSION RESISTANT)

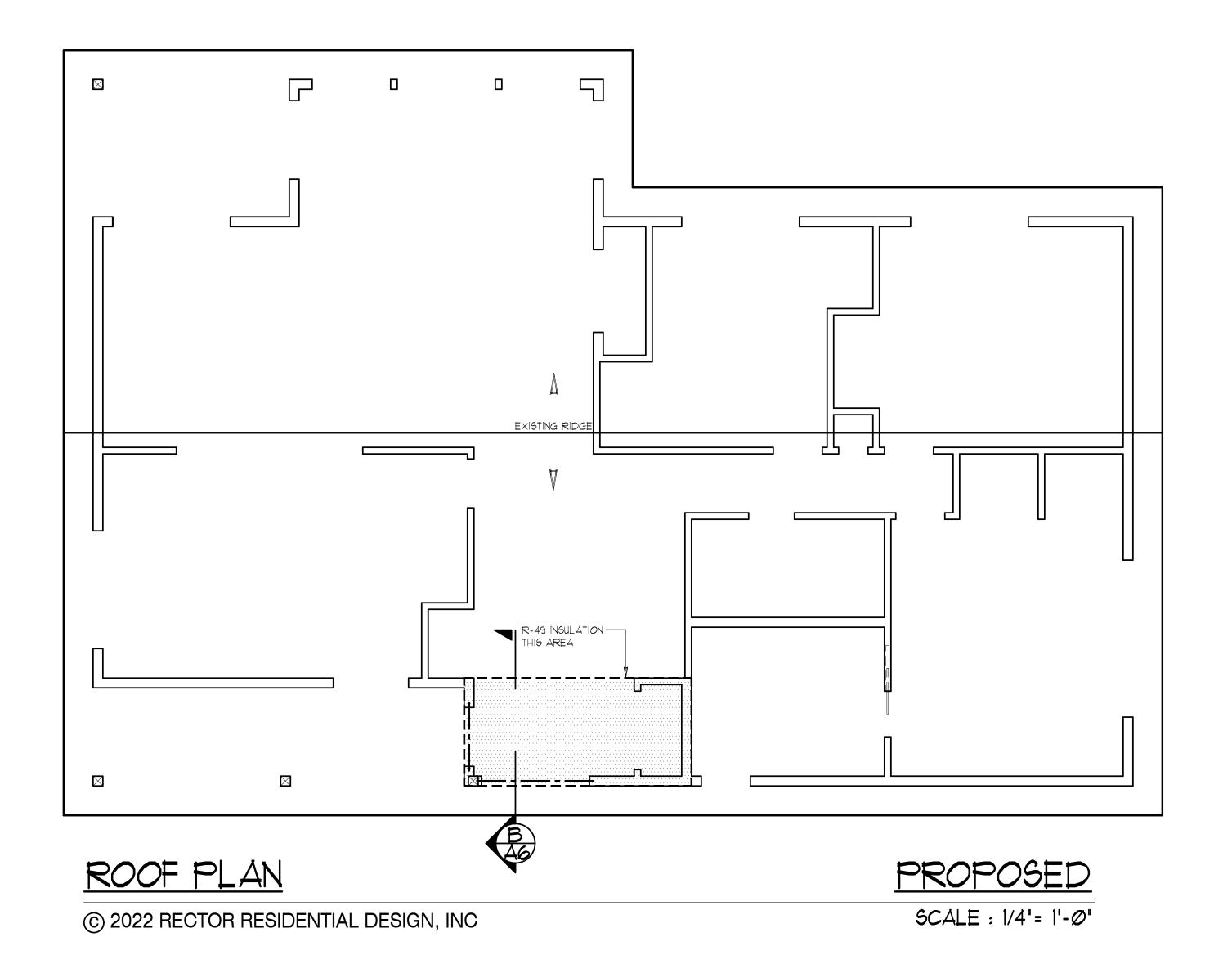
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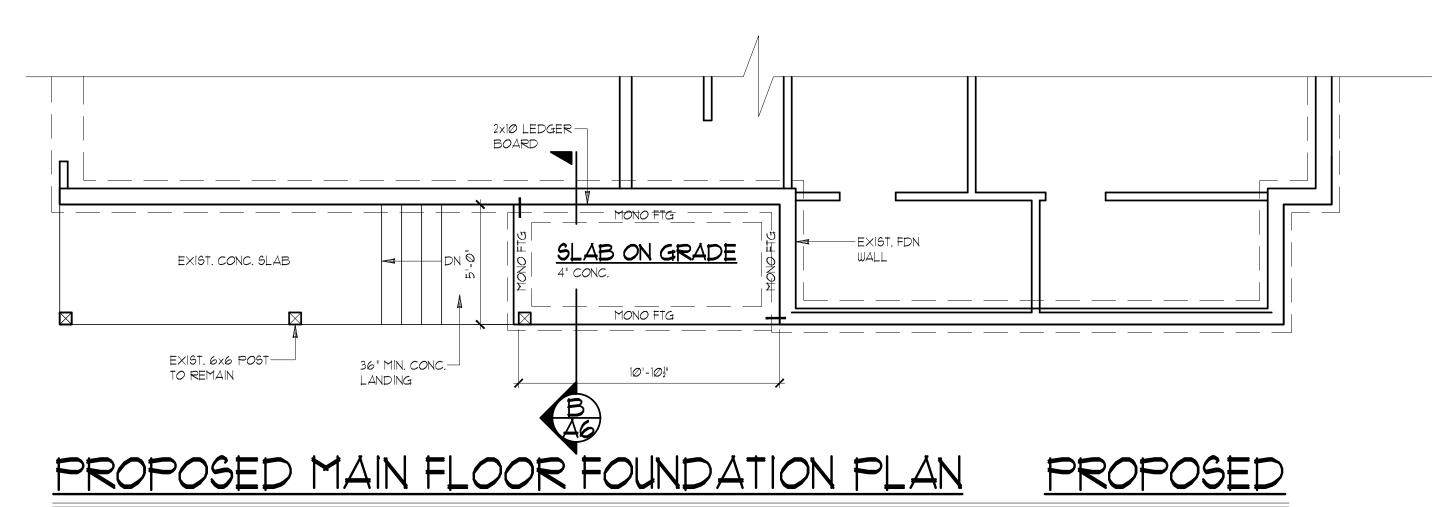
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APPROVED NUMBERS OR ADDRESSES SHALL BE PROVIDED FOR ALL NEW BUILDINGS IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY.

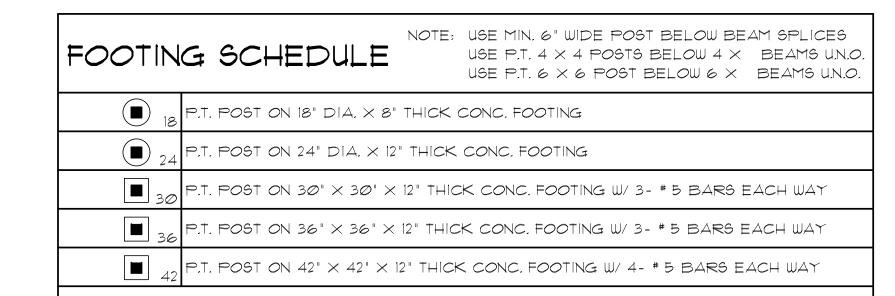
NOTE: PROVIDE CONTINUOS PRE-PAINTED G.I. "Z" FLASHING AT ALL EXT. DOOR & WINDOW HEADERS.





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



FOOTING SIZES BASED ON 1500 psf 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 RECAUTIONS 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 OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 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 CONSRUCT. 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
- SHOP DRAWINGS AND OTHER ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR 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
- 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 AGENCY. THE 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

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

### 1. THE INTENDED DESIGN STANDARDS AND/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

ANSI/AWC NDS-18 WOOD TRUSSES TPI 1-2014

- SOILS INVESTIGATION AND REPORT PERFORMED BY XXX
- 2. DESIGN GRAVITY <u>DEAD LOADS</u> USED IN THE DESIGN OF THIS STRUCTURE DESIGN GRAVITY <u>LIVE LOADS</u> USED IN THE DESIGN OF THIS STRUCTURE ARE AS FOLLOWS: SEE S00
- DESIGN LATERAL LIVE LOADS USED IN THE DESIGN OF THIS STRUCTURE
- 5. DESIGN SNOW 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

### **EXISTING CONSTRUCTION NOTES:**

- BEFORE PROCEEDING WITH ANY WORK WITHIN THE EXISTING FACILITY. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF 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 PROCESS 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.
- 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
- STRUCTURAL LIQUEFACTION-WELD IN SMALL INCREMENTS. ALLOW WELDS TO
- C. DO NOT LEAVE THE SITE UNTIL SATISFIED THAT NO FIRE HAZARD EXISTS.
- 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
- 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% ( $\pm 1\%$ ) WITH AN ADMIXTURE
- 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.
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60.
- 7. UNLESS OTHERWISE NOTED, THE FOLLOWING MINIMUM CONCRETE COVER 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
- ETAILS SHALL BE LAPPED 58X BAR DIAMETERS AT SPLICES UNLESS OTHERWISE NOTED.
- WALLS UNLESS WALLS ARE SECURELY BRACED AGAINST OVERTURNING EITHER BY TEMPORARY BRACING OR BY PERMANENT CONSTRUCTION 10 PRIOR TO COMMENCING ANY FOLINDATION 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 BACKELL 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 BE READY-MIXED IN ACCORDANCE WITH ASTM C-94.
- STRENGTH, SLUMP AND WATER/CEMENT RATIO REQUIREMENTS

CONCRETE	MIN. F'C (28 DAYS)	<u>SLUMP</u> *	W/C PA
COLUMNS	4000 PSI	2" TO 4"	.4
ELEVATED SLABS	3000 PSI	2" TO 4"	.4
CONCRETE NOT NOTED	2500 PSI	2" TO 4"	.5
FOUNDATION	"SEE FDN NOTES"	2" TO 4"	.5
SLABS-ON-GRADE	SEE "SLAB-ON-GRADE NOTES"		.5
* AT CONTRACTOR'S OPTION, AN AP USED TO PRODUCE FLOWABLE CONTRACTED TO INCHES. THE CONTRACTED TO THE C	NCRETE. MAXIMUM SLUMP SHALL	-	

POURING CONCRETE. 3. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 1. "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS". HOT WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACL 305 COLD WEATHER CONCRETING SHALL BE IN ACCORDANCE WITH ACI 306. 4. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60.

RESULTS OF THE PROPOSED CONCRETE MIXES ALONG WITH THE MANUFACTURER'S TECHNICAL DATA FOR APPROVAL PRIOR TO

- ALL WELDING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH AWS D1.4. EPOXY COATED REINFORCING SHALL CONFORM TO ASTM 5. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A-185.
- MASONRY WALL REINFORCING MAY BE "FLOATED" IN PLACE. DO NO FIELD BEND BARS PARTIALLY EMBEDDED IN HARDENED CONCRETI

6 ALL REINFORCING STEEL SHALL BE SET AND TIED IN PLACE PRIOR

7 REINFORCING STEEL INCLUDING HOOKS AND BENDS, SHALL BE

- A TYPE 2 LAP SPLICE UNLESS OTHERWISE NOTED.
- 8. UNLESS OTHERWISE NOTED, THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT A) CONCRETE EXPOSED TO EARTH OR WEATHER:
  - #6 THROUGH #18 BARS #5 BAR, W31 OR D31 WIRE & SMALLER -1 1/2" 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 ALI REINFORCING STEEL TO INSURE MINIMUM CONCRETE COVER. BAR SUPPORTS SHALL BE PLASTIC TIPPED OR STAINLESS STEEL
- 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 LLOWANCE SHALL BE CREDITED TO THE OWNER.

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

LOCATION

1.	UNLESS OTHERWISE NOTED, RETAINING WALLS) SHALL BE		
	WALL THICKNESS	HORIZONTAL	VERTICAL
	4" TO 6"	#4 @ 16" O.C.	#4 @ 18" O.C.

- CENTERED #4 @ 12" O.C. #4 @ 16" O.C. CENTERED #4 @ 18" O.C. #4 @ 18" O.C. EACH FACE #4 @ 16" O.C. #4 @ 18" O.C. EACH FACE 12. ALL EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES 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

- WITH 100% PASSING A 1 1/2" SIEVE AND NO MORE THAN 5% PASSING A NO.4 SIEVE. POROUS FILL SHALL BE COMPACTED TO 95%
  - 4. 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 LL DEBRIS FROM THE SLAB JOINTS. THEN FILL IN ACCORDANCE WITH
    - 6" SLABS FILL WITH EPOXY RESIN OTHER SLABS-FILL WITH FIELD MOLDED OR ELASTOMERIC SEALANT
  - 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

5. UNLESS OTHERWISE APPROVED, ALL WELDED WIRE FABRIC SHALL BE

- STRUCTURAL DRAWINGS. SEE THE SITE PLAN AND ARCHITECTURAL DRAWINGS FOR LOCATIONS, DIMENSIONS, ELEVATIONS, JOINTING DETAILS AND FINISH DETAILS. PROVIDE 4" WALKS REINFORCED VITH 6X6-W1.4X W1.4 WWF UNLESS OTHERWISE NOTED
- TO 5% (±1%) WITH AN ADMIXTURE THAT CONFORMS TO ASTM C-260. 8. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 1. "SPECIFICATION FOR STRUCTURAL CONCRETE BUILDINGS NOT 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 MAXIMUM LENGTH OF SLAB CAST IN ANY ONE CONTINÚOUS 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
- 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 NT 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: 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 MASONRY 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 SHALL BE LIMITED TO 1/2 OF THE NARROW FACE DIMENSION. ALL NAILING NOT OTHERWISE INDICATED SHALL BE IN ACCORDANCE
- /ITH THE "NAILING SCHEDULE" ON SHEET S00 . NAILING SHALL PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS WHICH RUN PARALLE 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 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
- 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 REQUIREMENT ALL STEEL SHALL HAVE A MINIMUM THICKNESS OF 0.04 INCHES (PER ASTM A446, GRADE A) AND BE GALVANIZED (COATING G60). 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

ROUGH FRAMING NAILING SCHEDULE (IN LIEU OF IBC TABLE 2304.10.1)

1. JOIST TO SILL OR GIRDER
2. BRIDGING TO JOIST, RAFTER OR TRUSS
3. 1X6 OR LESS SUBFLR. TO JST. 4. WIDER THAN 1X6 SUBFLR. TO JST . 2" SUBFLOOR TO JST./GIRDER 6. SOLE PLATE TO JST. OR BLKG.
SOLE PLATE AT BRACED WALL PANEL . TOP PLATE TO STU 8. STUD TO SOLE PLATE 9. DOUBLE STUDS 10. DOUBLE TOP PLATES DOUBLE TOP PLATE LAP SPLICE

11. JOIST/RAFTER BLKG. TO PLATE

12. RIM JOIST TO TOP PLATE

13. TOP PLATE LAP INTERSECTIONS

14. DOUBLE 2X JOIST/HEADER 15. CEILING JOISTS TO PLATE 16. CONTINUOUS HEADER TO STUD

7. CEILING JST, LAP AT PARTITION:

1. 1X8 OR LESS SHTG. TO EA. BRO

22. WIDER THAN 1X8 SHTG. TO BRG. 23. BUILT-UP CORNER STUDS 24. BUILT-UP GIRDERS AND BEAMS

18. CEILING JST. TO PARALLEL RAFTER
19. RAFTER TO PLATE
20. 1X BRACE TO EA. STUD & PLATE

(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 (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 0.131"X3" AT 12" FACE NAIL EA. EDGE (5) 0.131"X3" TOENAIL (4) 0.131"X3" TOENAILS 4) 0.131"X3" FACE NAII (4) 0.131"X3" FACE NAIL (3) 0.131"X3" TOENAIL (2) 0.131"X3" FACE NAIL 0.131"X3" FACE NAIL 0.131"X3" AT 12" FACE NAIL EA. SIDES

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

### 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 GRADEMAR HALL INCLUDE AN EASILY DISTINGUISHABLE MARK OR INSIGNIA OF THE GRADING AGENCY WHICH COMPLIES WITH THE EQUIREMENTS OF U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD 20 PS20) AMERICAN SOFTWOOD
- GLUE LAMINATED TIMBERS SHALL MEET THE PROVISIONS OF ANSI/AITC A190.1 STRUCTURAL GLUED LAMINATED 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
- 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
- EVALIDATION TO THE STATE OF THE STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONNECTION, THE TRUSS DESIGN DRAWINGS, OR THE
- IANUFACTURER'S CODE EVALUATION REPORT. 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
- 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.
- 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.C. 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.
- 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:**

- 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 2. 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. 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.
- NAILS SHALL COMPLY WITH ASTM F1667 STANDARD SPECIFICATION FOR DRIVEN FASTENERS: NAILS, SPIKES, AND 5. PNEUMATIC NAILS AND STAPLES 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							
USE/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
LEDGER BOARDS	DOUGLAS FOR-LARCH (DF.) 2X, 3X	NO.2	900	180	625	1350	1.6E6
LEDGER 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

NAIL SIZE SCHEDUAL						
NAILS SIZE	DIAMETER	LENGTH		ı		
8d COMMON NAIL	0.131"	2-1/2"		E		
10d COMMON NAIL	0.148"	3.0"		E		
12d COMMON NAIL	0.148"	3-1/4"		E		
16d COMMON NAIL	0.162"	3-1/2"				

	BEA	RING WALL STUD S	SCHEDUAL	
MARK	WALL TYPE	LOCATION	PLATE SIZE	STUD SIZE & SPACING
BW1	EXTERIOR	TYPICAL U.N.O. PER PLAN	2X6	2X6 @ 16" O/C
BW2	CRAWL SPACE	TYPICAL	2X4	2X4 @ 16" O/C
BW2	INTERIOR	TYPICAL U.N.O. PER PLAN	2X4	2X4 @ 16" O/C

GLULAM BE	AMS SIZE SCHEDUA	L
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

### PRE-ENGINEERED WOOD TRUSS NOTES:

- WOOD TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER TO SUPPORT THE
- 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
- 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

- 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
- 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 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,

CONNECTOR PLATES SHALL BE NOT LESS THAN 0.036 INCHES (20

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. OAD DURATION FACTORS SHALL BE PER THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION".

JIGGING AND PRESSING EQUIPMENT UNDER THE REQUIREMENTS IN

MANUFACTURER'S REQUIREMENTS. THIS WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED CONTRACTOR. TRUSS ERECTION BY AN INEXPERIENCED OR NONQUALIFIED CONTRACTOR CAN RESULT IN CONSTRUCTION COLLAPSE AND/OR SERIOUS INJURY AND DAMAGE THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY AND PERMANENT BRACING THE GUIDELINES SET FORTH BY THE TRUSS PLATE INSTITUTE

PUBLICATION "H1B-91, COMMENTARY AND RECOMMENDATIONS FOR HANDLING STALLING AND BRACING METAL PLATE CONNECTED WOOD TRUSSES"

WOOD TRUSSES SHALL BE ERECTED IN ACCORDANCE WITH THE TRUSS

- SHALL BE A MINIMUM REQUIREMEN TRUSS MEMBERS AND COMPONENTS SHALL NOT BE CUT. NOTCHED. DRILLED NOR OTHERWISE ALTERED IN ANY WAY WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.
- 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

11. SEE THE "SCISSOR TRUSS NOTES" FOR ADDITIONAL REQUIREMENTS.

### PLYWOOD/GYPBOARD SHEATHING NOTES:

- ALL PLYWOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ENGINEERED WOOD ASSOCIATION (APA) SPECIFICATIONS
- ALL ROOF PANEL SHEATHING SHALL BE 5/8" (NOM.) TYPE CDX, EXP. 1 APA RATED SHEATHING. SUITABLE EDGE SUPPORT SHALL BE PROVIDED BY USE OF PANEL CLIPS OR BLOCKING BETWEEN FRAMING. UNLESS OTHERWISE NOTED CONNECT ROOF SHEATHING WITH 8d COMMON NAILS AT 6" O/C AT SUPPORTED PANEL EDGES (E.N.) AND 12" O/C AT INTERMEDIAT
- ALL FLOOR SHEATHING SHALL BE 3/4" (NOM.) APA RATED STURD-1-FLOOR, EXP. 1, WITH TONGUE AND GROOVE EDGE. UNLESS OTHERWISE NOTED CONNECT FLOOR SHEATHING WITH 10d COMMON NAILS SPACED 6" O/C AT SUPPORTED EDGES AND 12" O/C AT INTERMEDIATE SUPPORTS. FIELD: ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS
- ALL WALL PANEL SHEATHING SHALL BE 1/2" (NOM.) TYPE CDX. EXP. 1 APA RATED SHEATHING. UNLESS OTHERWISE INDICATED, CONNEC WALL SHEATHING WITH 10d COMMON NAILS SPACED 6" O/C AT SUP PORTED PANEL EDGES AND 12" O/C AT INTERMEDIATE SUPPORTS.
- INSTALL ALL PLYWOOD SHEATHING WITH THE LONG DIMENSION OF THE PANEL ACROSS SUPPORTS AND WITH PANEL CONTINUOUS OVER TWO OR MORE SPANS. STAGGER PANEL END JOINTS. ALLOW 1/8" SPACING AT PANEL ENDS AND EDGES UNLESS OTHERWISE RECOMMENDED BY THE
- ALL NAILING SHALL BE CAREFULLY DRIVEN AND NOT OVERDRIVEN. THE USE OF STAPLES AND PNUEMATIC NAIL GUNS ARE PROHIBITED FROM USE.
- ALL EXT. WALLS SHALL BE SHEATHED ON BOTH FACES WITH GYP-BOARD SHEATHING (SEE ARCH. DWGS. FOR THICKNESSES) AND CONNECTED WITH 5d COOLER NAILS SPACED 7" O/C AT SUPPORTED PANEL EDGES

AND INTERMEDIATE SUPPORTS.

### PROVIDE 2X BLOCKING AT UNSUPPORTED PANEL EDGES AS FOLLOWS: ROOFS AND FLOORS-ONLY WHERE INDICATED ON PLAN WALLS-PER THE SHEARWALL SCHEDULE ON SHEET SD2.

**CODE SUMMARY** International Building Code 2018 Live Loads: 0 to 200 sf: 20 psf 200 to 600 sf: 24 - 0.02Area, but not less than 12 psf over 600 sf: 12 psf Typical Floor 40 psf Partitions 15 psf Balconies (1.5 times live load) Habitable attics & sleeping areas 30 psf Attics without storage 10 psf Attics with storage 20 psf

**Dead Loads:** 15.0 psf 15.0 psf Wind Design Data: Ultimate Design Wind Speed 110 mph 85.21 mph Nominal Design Wind Speed Risk Category Mean Roof Ht (h) 20.0 ft **Exposure Category** Enclosure Classif. Enclosed Building Internal pressure Coef. +/-0.18 Directionality (Kd) 0.85 Roof Snow Loads: = 30.3 psf Design Uniform Roof Snow load Flat Roof Snow Load Pf = 30.3 psfPs = 30.3 psfBalanced Snow Load Pg = 30.1 psf Ground Snow Load Importance Factor 1.00 Ce = Snow Exposure Factor 1.20 1.20

Thermal Factor Ct = Sloped-roof Factor Cs = Drift Surcharge load Width of Snow Drift w = Earthquake Design Data: Risk Category | = Importance Factor Mapped spectral response accelerat S1 = Site Class Spectral Response Coef

= :ode default Sds = 1.000Sd1 = 0.599 Seismic Design Category Basic Structural System Bearing Wall Systems Seismic Resisting System = Light frame (wood) walls with structural wood shear panels Design Base Shear V = 0.154WSeismic Response Coef. Cs = 0.154Response Modification Factor R = 6.5= Equivalent Lateral-Force Analysis Analysis Procedure

1.00

1.00

49.90

**CODE SUMMARY- continued** Component and cladding ultimate wind pressures -51.8 -59.9 16.0 -45.8 -65.3 -66.5 -71.8 Negative Zone 2n, 2r &36 -52.4 16.0 Negative Zone 3 Positive All Zone -39.9

Overhang Zone 1 & 26

Overhang Zone 3e

Overhang Zone 3

Overhang Zone 2n & 2

CASE B: Interior zone

# Zone 2n. 2r & 3e

-97.4

-94.5

Wall	Surfa	ce Pressure	(psf)	
Area	10 sf	100 sf	200 sf	500 sf
Negative Zone 4	-27.8	-24.0	-22.9	-21.4
Negative Zone 5	-34.2	-26.6	-24 4	-21 4

Positive Zone 4 & 5 25.6 21.9 20.7 19.2

LIST OF ABBREVIATIONS;

**BOTTOM FACE** 

BENCHMARK

ASD ALLOWABLE STRESS DESIGN

**BOUNDARY NAILING** 

CENTER TO CENTER

CONSTRUCTION JOINT

CMP CORRUGATED METAL PIPE

CT.J. CONTRACTION JOINT

DIAMETER

DIAGONAL

EACH FACE

ELEVATION

FAR FACE

FIELD NAILING

FIGURE

FEET

FINISH

GAGE

GALLON

GRADE

HOUR

HORIZ. HORIZONTAL

HEIGHT

INVERT

INCH

JOIST

JOINT

POUND

LOW POINT

MAXIMUM

MINIMUM

MANHOLE

MFR. MANUFACTURER

N.I.A. NOT IN CONTRACT

ON CENTERS

OVER HANG

OUTSIDE FACE

**OUTLET WORKS** 

N.T.S. NOT TO SCALE

N.F. NEAR FACE

P.D. PLAIN DOWEL

RADIUS

REQD. REQUIRED

REV. REVISION

SCH. SCHEDULE

SECT. SECTION

SIM. SIMILAR

SQ. SQUARE

STA. STATION

STD. STANDARD

THK. THICKNESS

TYP. TYPICAL

VERT. VERTICAL

WEST

WITH

W.S. WATERSTOP

W/O WITHOUT

TRANS. TRANSVERSE

TOPO. TOPOGRAPHY

T.O.W. TOP OF WALL

T.O.F. TOP OF FOOTING

U.N.O. UNLESS NOTED OTHERWISE

WSP WOOD STRUCTURAL PANEL

SOUTH

SHEET

S.O.G. SLAB ON GRADE

SPEC. SPECIFICATIONS

T&B TOP AND BOTTOM

TOP FACE

SYMMETRICAL

STAINLESS STEEL

SIMPS. SIMPSON STRONG TIES

REINF. REINFORCEMENT

NORTH, NORTHING

OUTSIDE DIAMETER

POINT OF CURVATURE

PRESSURE TREATED

POLYVINYL-CHLORIDE

POINT OF INTERSECTION

POUNDS PER SQUARE INCH

POUNDS PER SQUARE FOOT

RCC ROLLER COMPACTED CONCRETE

RCP REINFORCED CONCRETE PIPE

PLATE PREEAB. PREFABRICATED

GALVANIZED

GRADE LEVEL

INSIDE DIAMETER

INSIDE FACE

KILOPOUNDS

**GALLONS PER MINUTE** 

HIGH POINT, HORSE POWER

LONG LONG. LONGITUDINAL

NGVD NATIONAL GEODETIC VERTICAL DATUM

FTG FOOTING

**EDGE NAILING** 

**EXPANSION JOINT** 

EXIST. EXISTING F FAHRENHEIT

DOWEL

EACH

CUBIC FEET PER MINUTE

B.O.B. BOTTOM OF BOREHOLE

B.O.T.P. BOTTOM OF TEST PIT

CENTIGRADE

CAST IRON

CLEAR

CONT. CONTINUOUS

CONC. CONCRETE

DEG. DEGREE

E EAST, EASTING

E.W. EACH WAY

ADD'L ADDITIONAL APPROX. APPROXIMATE ARCH. ARCHITECTURAL

BOTT. BOTTOM

B.M.

B.N.

CFM

C.I.

C.J.

DIA.

DIAG.

DWL

EA.

E.F.

E.N.

F.F.

FIG.

F.N.

FT.

FIN.

GA.

GAL

GR.

G.L.

GPM

H.P.

HR

HT.

ΙD

INV.

IN.

JST

JT.

LB.

L.P.

LG.

MAX.

MIN.

M.H.

O/C

O.D.

O.F.

O.H.

P.T.

PVC

S.S.

SYM.

T.F.

W

W/

-35.6

-57.6

-53.2

-54.6

-50.0 -39.9

-54.6

-60.8 -58.7

-61.7

O.W.

KIPS

GALV.

E.J.

CLR.

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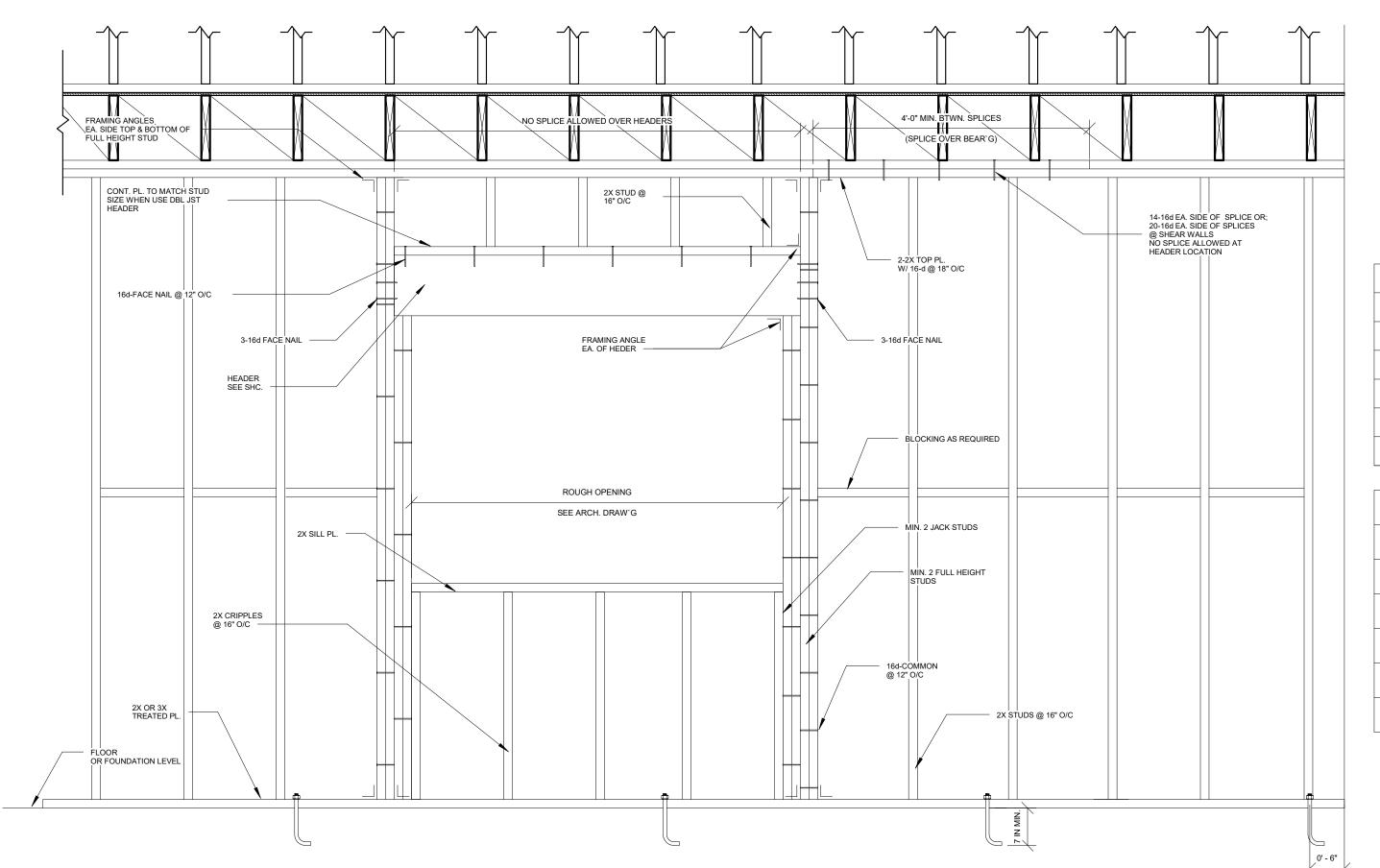
Revisions Description

## **GENERAL** STRUCTURAL NOTES

Project number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

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As indicated

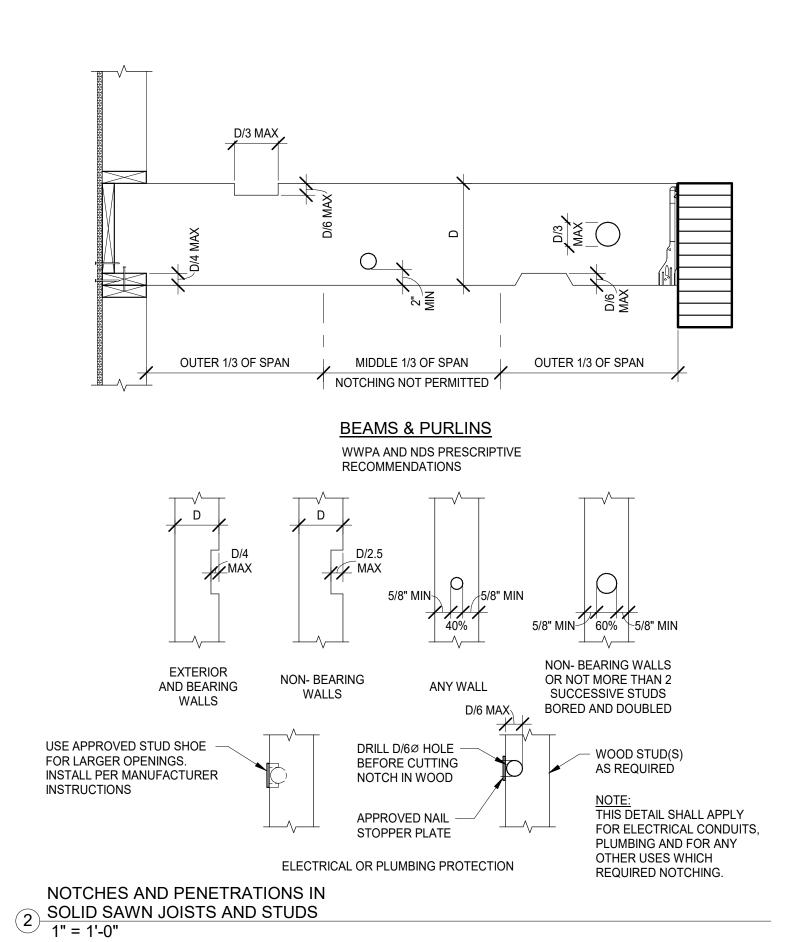


COOF OPENING U.N.O.
HEADER, U.N.O.
6x6 OR 4x8
6x8 OR 4x10
6x10 OR 4x12
6x12 OR 4x14
SEE PLANS

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







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WORK.

**SHIJIM** 

HT/HIGA

WRIG

Revisions			
Rev#	Description	Date	

# STRUCTURAL TYPICAL DETAILS

Project number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

SD3.1

As indicated