GENERAL NOTES

- DO NOT SCALE DRAWINGS.
- 2. COORDINATE AND YERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO COMMENCING CONSTRUCTION.
- 3. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS, SLOPES, ROUGH OPENING DIMENSIONS FOR WINDOWS, DOORS, ETC.
- 4. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR OPENINGS IN FLOORS, ROOF, WALLS, ETC.
- 5. DO NOT CUT OR DRILL OPENINGS IN ANY STRUCTURAL MEMBERS WITHOUT WRITTEN APPROVAL FROM AN APPROVED ENGINEER,
- 6. THE STAMPING ENGINEER SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF REQUIRED SITE INSPECTIONS.
- 7. STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE, THEY DO NOT SHOW COMPONENTS WHICH MAY BE NECESSARY FOR SAFETY DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SITE SAFETY AND TO ENSURE THAT ALL SUBTRADES CONFORM TO THE LATEST REGULATIONS OF THE PROVINCIAL "BUILDING PROTECTION ACT", TO PROVIDE ALL NECESSARY SAFETY EQUIPMENT AS REQUIRED THEREIN AND TO NOTIFY LOCAL AUTHORITIES AS REQUIRED BY LAW.
- 8. THE CONTRACTOR SHALL CONFORM TO THE COLD WEATHER REQUIREMENTS OF THE LATEST EDITION OF CSA STANDARD A23.1/A23.2 AND THE NATIONAL BUILDING CODE.
- 9. IT IS THE GENERAL CONTRACTORS RESPONSIBILITY TO LOCATE ALL SITE SERVICES PRIOR TO CONSTRUCTION.
- 10. THE GENERAL CONTRACTOR SHALL DESIGN ALL SHORING, FORM WORK, AND BRACING TO ENSURE PROPER CONSTRUCTION AND
- 11. THE CONTRACTOR SHALL VISIT THE SITE, AND NOTE ALL CHARACTERISTICS AND IRREGULARITIES AFFECTING THE WORK OF THIS
- 12. SHOP DRAWINGS NOT STAMPED, SIGNED, AND DATED BY THE CONTRACTOR WILL BE RETURNED AND SHALL BE CONSIDERED REJECTED, SHOP DRAWINGS FOR WORK DESIGNED BY THE CONTRACTOR SHALL BEAR THE SEAL AND SIGNATURE OF A QUALIFIED PROFESSIONAL ENGINEER IN THE PROJECTS PROVINCE,
- 13. THE CONTRACTOR SHALL SUBMIT STAMPED SHOP DRAWINGS FOR ALL PRE-FABRICATED STRUCTURAL ASSEMBLIES, INCLUDING REINFORCING STEEL TO THE STAMPING ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. ALL SHOP DRAWINGS, EXCEPT REINFORCING STEEL, SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE PROJECTS PROVINCE.
- 14. ALL PLANS ARE THE PROPERTY OF GRUNTHAL LUMBER, AND MAY NOT BE DISTRIBUTED OR COPIED WITHOUT WRITTEN PERMISSION.
- 15. UNLESS OTHERWISE NOTED, ENERGY CODE CALCULATIONS ARE BASED ON COMMON ASSEMBLIES STATED IN MANITOBA BUILDING CODE SECTION A-9.36.2.2.(4.1).

SLAB ON GRADE

ALL SLAB-ON-GRADE FLOORS WILL EXPERIENCE MOYEMENT AND CRACKING DUE TO HEAVING AND SOIL EXPANSION RESULTING FROM THE NATURE OF THE CLAY SOIL, PREVIOUS AND PRESENT LEVEL OF VEGETATION AT THE SITE, SOIL MOISTURE LEVEL AND CONSTRUCTION PRACTICES, THE STAMPING ENGINEER ACCEPTS NO LIABILITY FOR THIS CRACKING AND /OR MOVEMENT.

CONCRETE

- I. CONCRETE SHALL BE MANUFACTURED AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF CSA STANDARDS A23,1 AND
- 2. PROVIDE A MINIMUM 150mm (6") VOID UNDER ALL BEAMS, WALLS AND STRUCTURAL SLABS, VOID TO BE SHEARMAT OR APPROVED CARDBOARD VOIDFORM.
- 3. VIBRATE ALL CONCRETE TO ENSURE COMPLETE CONSOLIDATION.
- 4. THE LOCATIONS OF CONSTRUCTION JOINTS IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE APPROVED BY AN APPROVED ENGINEER
- 5. WHEN THE OUTSIDE TEMPERATURE FALLS BELOW 5 DEGREES CENTIGRADE, THE CONTRACTOR SHALL CONFORM TO THE LATEST EDITION OF CSA STANDARD A23.1/A23.2 AND THE NATIONAL BUILDING CODE FOR COLD WEATHER CONCRETING PROCEDURES, AND SHALL RECIEVE WRITTEN APPROVAL FROMAN APPROVED ENGINEER PRIOR TO COMMENCING CONCRETE CONSTRUCTION.
- 6. PROVIDE $\frac{1}{8}$ x 1" SAW CUTS AT 20' O.C. BOTH WAYS IN FLOOR SLABS UNLESS OTHERWISE NOTED ON DRAWINGS.
- 7.1. FOOTINGS EXPOSURE CLASS F-2 (25MPA AT 28 DAYS) 7.2. PILECAPS
- EXPOSURE CLASS S-2 (25MPA AT 28 DAYS) 7.3. INTERIOR SLABS ON GRADE EXPOSURE CLASS N (25MPA AT 28 DAYS)
- EXTERIOR SLAB ON GRADE EXPOSURE CLASS C-2 (32MPA AT 28 DAYS)

REINFORCING STEEL

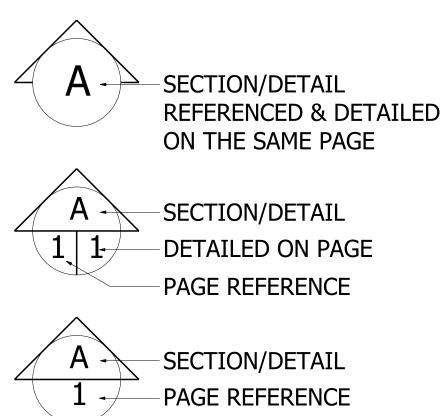
- I. REINFORCING STEEL SHALL BE NEW BILLET DEFORMED BARS MANUFACTURED IN ACCORDANCE WITH CSA G30,18 AND DETAILED IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI MANUAL, WITH MINIMUM YEILD STRENGTH AS FOLLOWS: 10M BARS-300MPA 15M BARS & LARGER - 400MPA.
- 2. REINFORCING STEEL SHALL BE FREE FROM LOOSE RUST, MUD, OIL OR OTHER COATINGS WHICH MAY REDUCE THE BOND OR HARM THE CONCRETE,
- 3. REINFORCING STEEL SHALL BE HELD IN PLACE AND TIED WITH PROPER ACCESSORIES SUCH AS HI-CHAIRS, SPACERS, TIES, ETC. SUPPLIED BY THE REINFORCING STEEL PROVIDER, APPROPRIATE SUPPORT SHALL BE PROVIDED UNDER ALL SUPPORT ACCESSORIES TO ENSURE THAT THE REINFORCING STEEL IS ACCURATELY POSITIONED.
- 4. LAP TOP BARS AT MID-SPAN AND BOTTOM BARS OVER SUPPORTS.
- 5. BEND ALL HORIZONTAL STEEL 18" AROUND CORNERS, OR USE EXTRA 36"x36" CORNER BARS TO MATCH HORIZONTALS.
- 6. PROVIDE 2-15M AROUND ALL SLAB, WALL, & BEAM OPENINGS, UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS. 7. CONCRETE COYER TO REINFORCING STEEL SHALL BE AS FOLLOWS:
- 7.1. CONCRETE CAST IN DIRECT CONTACT WITH SOIL
- 75mm (3") 7.2. FORMED CONCRETE IN CONTACT WITH SOIL 15M OR SMALLER
- 7.3. FORMED CONCRETE IN CONTACT WITH SOIL 20M OR LARGER 40mm (1 ½")
- 7.4. FORMED CONCRETE NOT IN CONTACT WITH SOIL (BEAMS AND COLUMNS) -40mm (1 ½")
- FORMED CONCRETE NOT IN CONTACT WITH SOIL (SLABS AND WALLS)
- 8. MISCELLANEOUS CONCRETE HOUSEKEEPING PADS AND CURBS SHALL BE REINFORCED WITH A MINIMUM IOM AT 18" O.C. EACH WAY UNLESS NOTED, SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.

WOOD NOTES:

- ALL LUMBER COMPONENTS SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE LATEST EDITION OF CAN/CSA-086.14.
- 2. ALL LUMBER SHALL CONFORM TO "NLGA STANDARD GRADING RULES FOR CANADIAN LUMBER", AND THE GRADE SHALL BE CLEARLY IDENTIFIED ON ALL PRODUCTS.
- 3. ALL DIMENSIONAL LUMBER SHALL BE NO.2 GRADE, OR BETTER, UNLESS NOTED OTHERWISE ON DRAWINGS.
- FRAMED WALLS AND ROOF SYSTEMS SHALL BE ADEQUATELY BRACED UNTIL CONSTRUCTION IS COMPLETED, THE CONTRACTOR SHALL SUPPLY AND ERECT ALL BRACING NECESSARY TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE, INCLUDING DURING THE CONSTRUCTION PHASE
- 5. LOAD BEARING STUD WALLS SHALL HAVE SOLID BLOCKING AT 4'-O" CENTERS UNLESS OTHERWISE NOTED.
- SHEATHING AND STRUCTURAL ACCESSORIES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS, SHEATHING SHALL BE CANPLY EXTERIOR GRADE PLYWOOD UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY AN APPROVED ENGINEER.
- 7. LUMBER IN CONTACT WITH SOIL SHALL BE PRESERVATIVE-TREATED IN ACCORDANCE WITH THE LATEST EDITION OF CAN/CSA-0322 AND CAN/CSA-080, ALL TREATED WOOD PRODUCTS SHALL BEAR A CAN/CSA-0322 CERTIFICATION STAMP, THE CUT ENDS AND DRILLED HOLES OF TREATED LUMBER SHALL BE TREATED WITH 3 COATS OF PRESERVATIVE AND CONFORM TO CAN/CSA-0132-1
- 8. FASTENERS USED FOR FRAMING SHALL BE: HOT-DIPPED AND GALVANIZED FOR LUMBER ABOVE GRADE, AND, STAINLESS STEEL (TYPES 304 AND 316) FOR PRESERVATIVE-TREATED LUMBER.
- 9. JOINTS AND HOLES BELOW GRADE SHALL BE SEALED WITH BUTLY CAULKING COMPOUND OR EQUAL CONFORMING TO CGSB 19-GP-13 OR CGSB 19-GP-14, INSTALLED TO PROVIDE A WATER-TIGHT SEAL
- 10. PROVIDE STAMPED AND SEALED SHOP DRAWINGS FOR ALL ROOF TRUSSES SUPPLIED BY THE TRUSS MANUFACTURER. SUBMIT SHOP DRAWINGS TO THE STAMPING ENGINEER FOR APPROVAL
- 11. ALL STRUCTURAL ENGINEERED WOOD (TIMBERSTRAND,MICROLLAM,PARALLAM,GLUE-LAMINTATED,ETC) PRODUCTS SHALL BE SUPPLIED BY MANUFACTURERS APPROVED BY AN APPROVED ENGINEER, PRODUCTS SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF CAN/CSA-086-14 TO SATISFY LOADING CONDITIONS NOTED ON THE DRAWINGS AND LOCAL BUILDING CODE REQUIREMENTS, THE MANUFACTURER SHALL PROVIDE SHOP DRAWINGS TO THE STAMPING ENGINEER, SEALED BY AND ENGINEER, REGISTERED IN THE PROVINCE OF MANITOBA, FOR ALL COMPONENTS PRIOR TO FABRICATION,
- 12. FASTEN EXTERIOR SHEATHING AT 6" O.C. AT EDGES, AND 12" O.C. AT INTERMEDIATE MEMBERS.

CONCRETE FOOTINGS

- 1. CONCRETE FOOTINGS SHALL BEAR ON UNDISTURBED NATIVE MATERIAL OR COMPACTED GRANULAR FILL WITH AN ALLOWABLE BEARING CAPACITY OF 1500PSF, CONFIRM SOIL CONDITIONS TO THE ENGINEER DURING EXCAVATION/CONSTRUCTION.
- 2. ALL TOPSOIL AND ORGANIC MATTER TO BE REMOVED, RECOMPACT NATIVE MATERIAL AND REPLACE ANY SOFT AREAS WITH COMPACTED GRANULAR FILL COMPACTED TO 98% MDD.
- 3. THE CONTRACTOR SHALL LOCATE ALL SITE SERVICES PRIOR TO EXCAVATION.
- BEARING SURFACE SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY THE ALLOWABLE BEARING CAPACITY AND TO ENSURE ALL LOOSE AND DISTURBED MATERIAL HAS BEEN REMOVED AND REPLACED WITH COMPACTED GRANULAR
- 5. POUR JOINTS IN THE FOUNDATION SHALL BE APPROVED BY THE ENGINEER.



19-111 ST UILAIRE DIANE ROSEAU RIVER DEC. 18, 2019 STRUCTURAL REVIEW & APPROVAL ONLY

PHONE: 1-204-434-6340 gerald@grunthallumber.con

PROJECT TITLE: REVISION: 7 19-111 ST HILAIRE DIANE

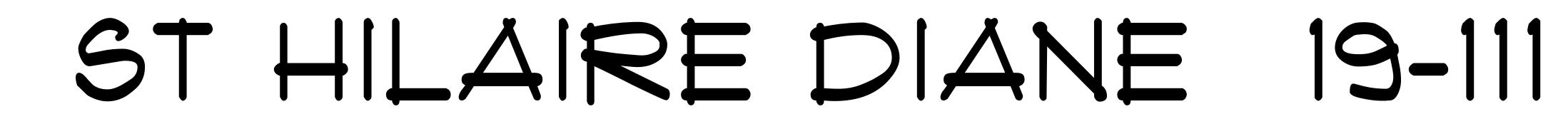
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WORKING DRAWINGS

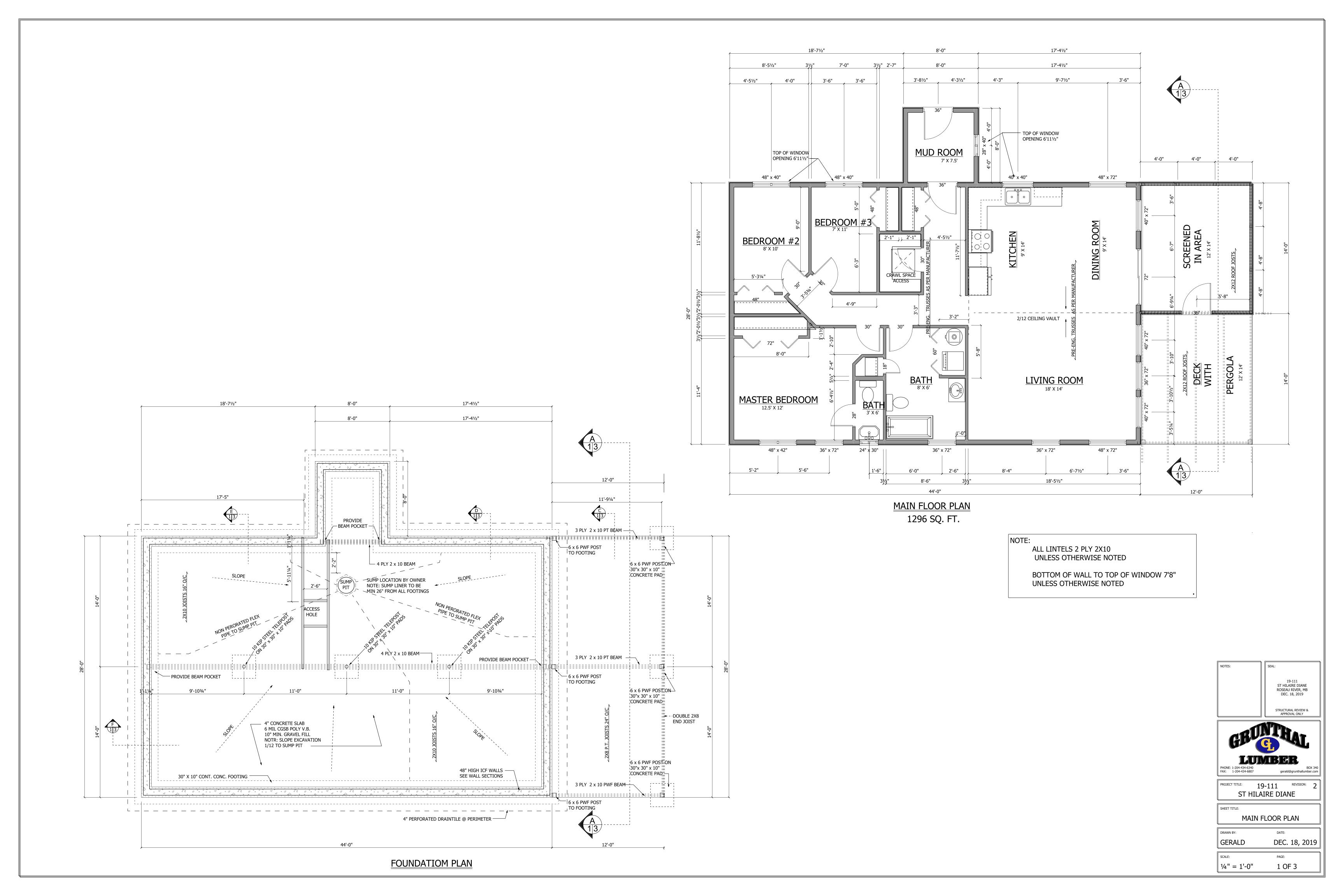
DRAWN BY: DATE DEC. 18, 2019 **GERALD**

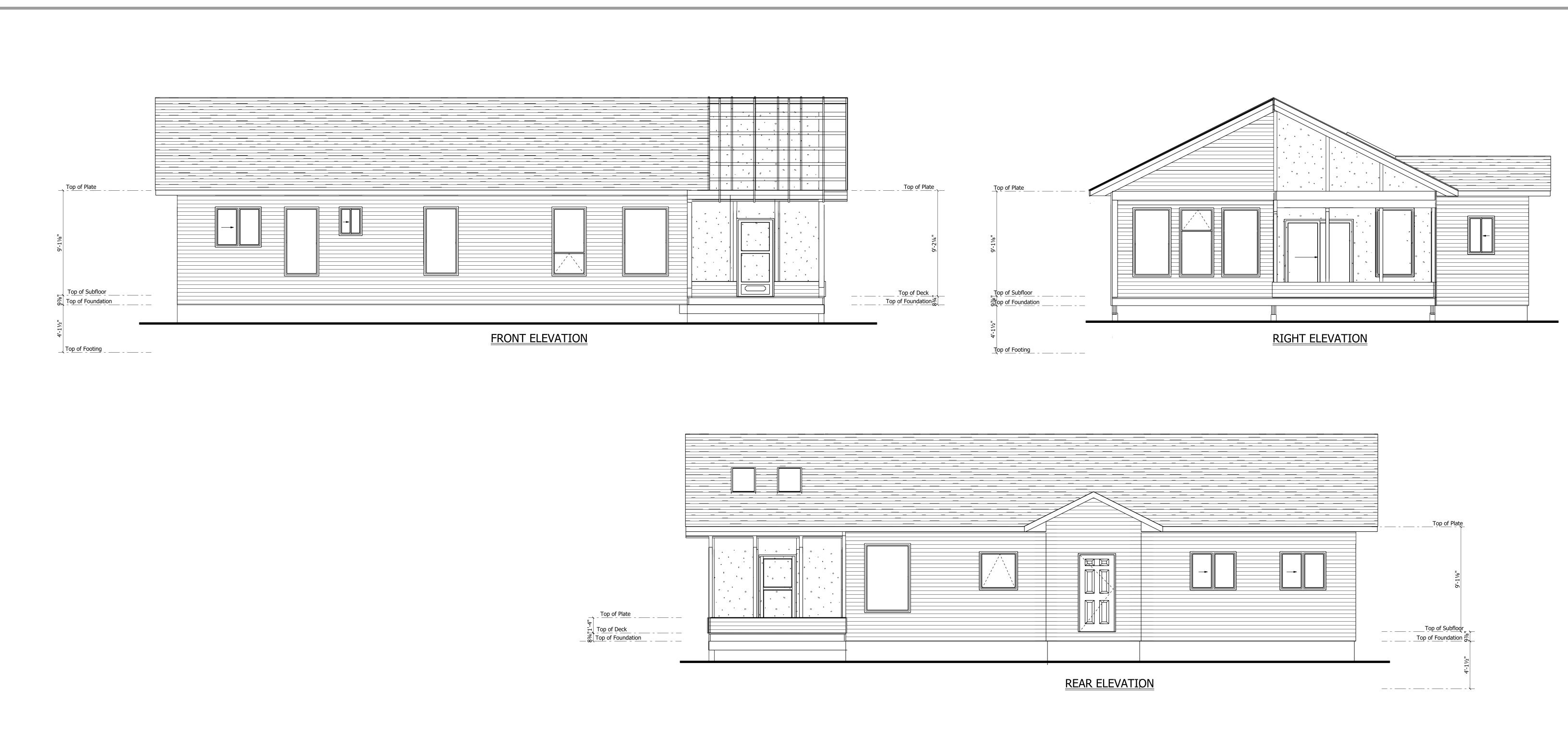
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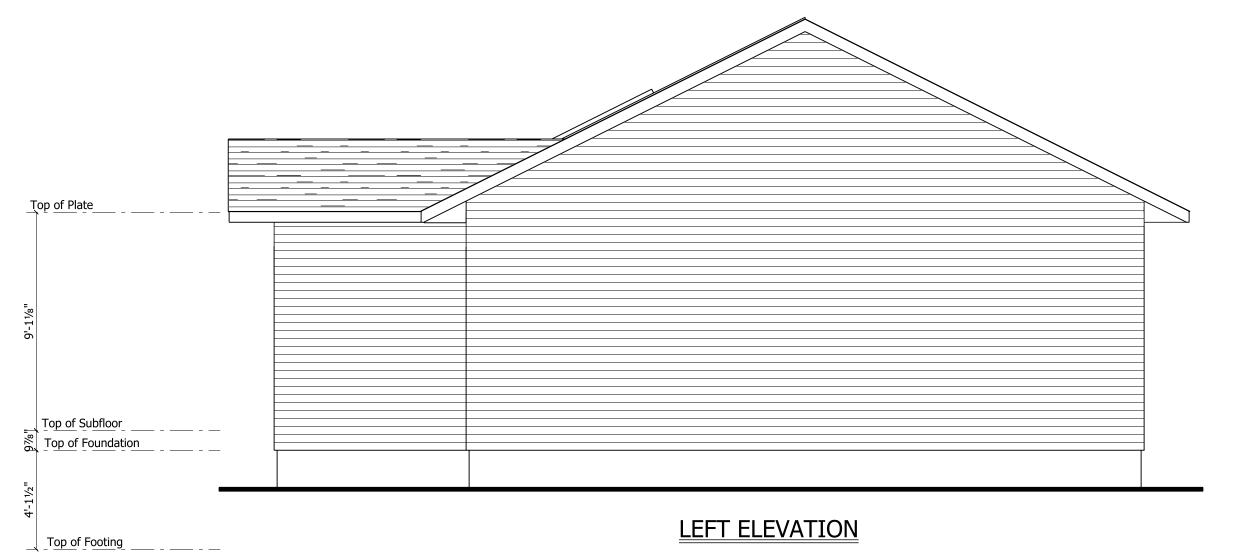
COVER









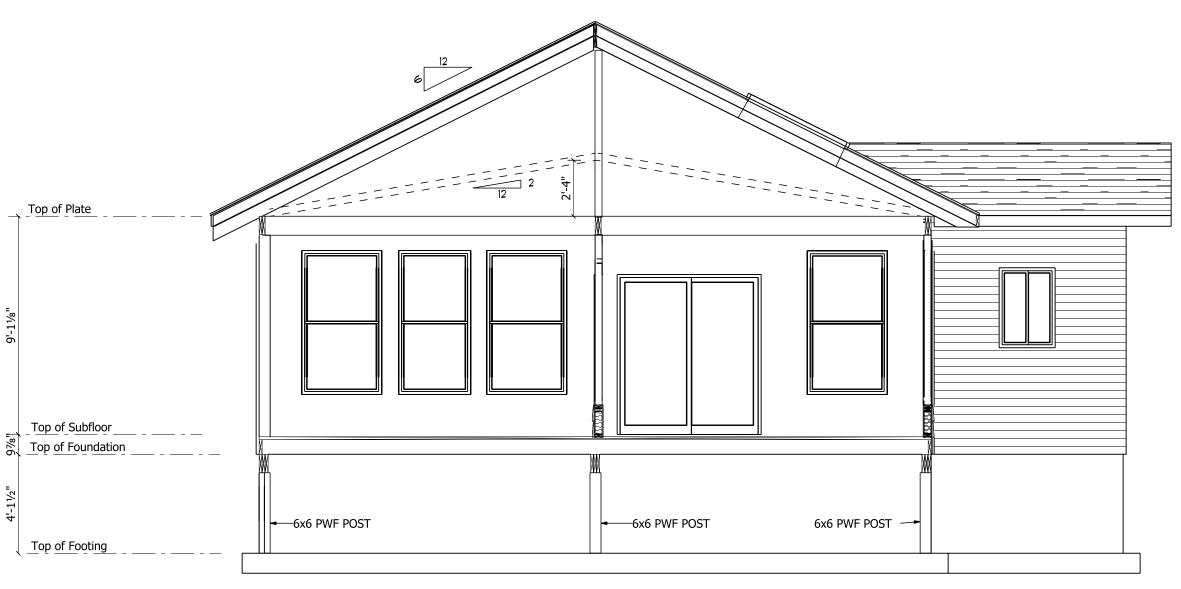




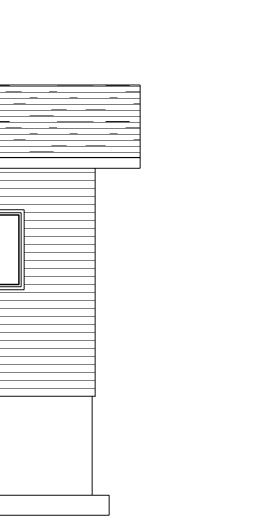
RSIcontinuous - Fndtn Wall	mm	RSI/mm	RSI
Extruded Insulation (25/8")	66.675	0.0336	2.24028
Concrete	152.4	0.0004	0.06096
Extruded Insulation (25/8")	66.675	0.0336	2.24028
½" Gypsum Board	12.7	0.0061	0.07747
Inside Air Film			0.12
Total RSIcontinuous			<u>4.73899</u>
RSIeffective			<u>4.73899</u>
R-Value (R15.9 Required)			26.90799

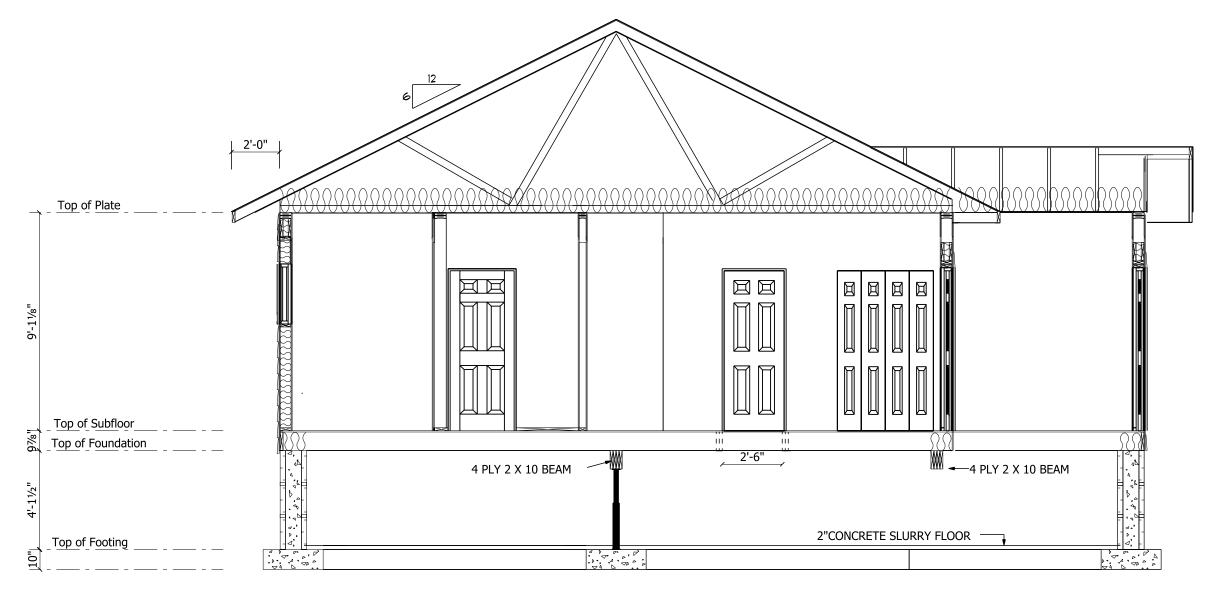
RSIcontinuous - Wall	mm	RSI/mm	RSI
Exterior Air Film			0.03
Vinyl Siding			0.11
OSB	11	0.0098	0.108
½" Gypsum Board	12.7	0.0061	0.07747
Inside Air Film			0.12
Total RSIcontinuous			0.44547
Framing Percentages	19	81	
RSIf	88.9	0.0085	0.75565
RSIc			3.34
RSIparallel			2.486456
RSIeffective			2.835426
R-Value (R15.9 Required))		16.09955

RSIcontinuous - Roof	mm	RSI/mm	RSI
Exterior Air Film			0.03
Blown Insualtion (11.5")	292.1	0.025	7.3025
5⁄8" Gypsum Board	15.9	0.0061	0.09699
Inside Air Film			0.11
Total RSIcontinuous			7.53949
Framing Percentages	11	89	
RSIf	89	0.0085	0.7565
RSIc	89	0.025	2.225
RSIparallel			1.833495
RSIeffective			9.372985
R-Value (R48.3 Required)	53.21981		

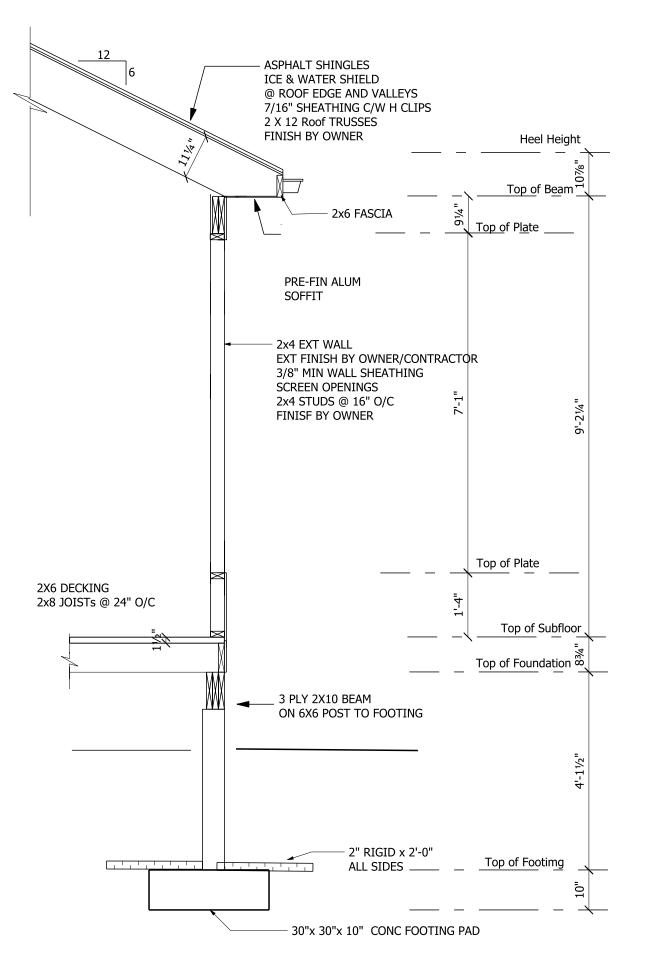


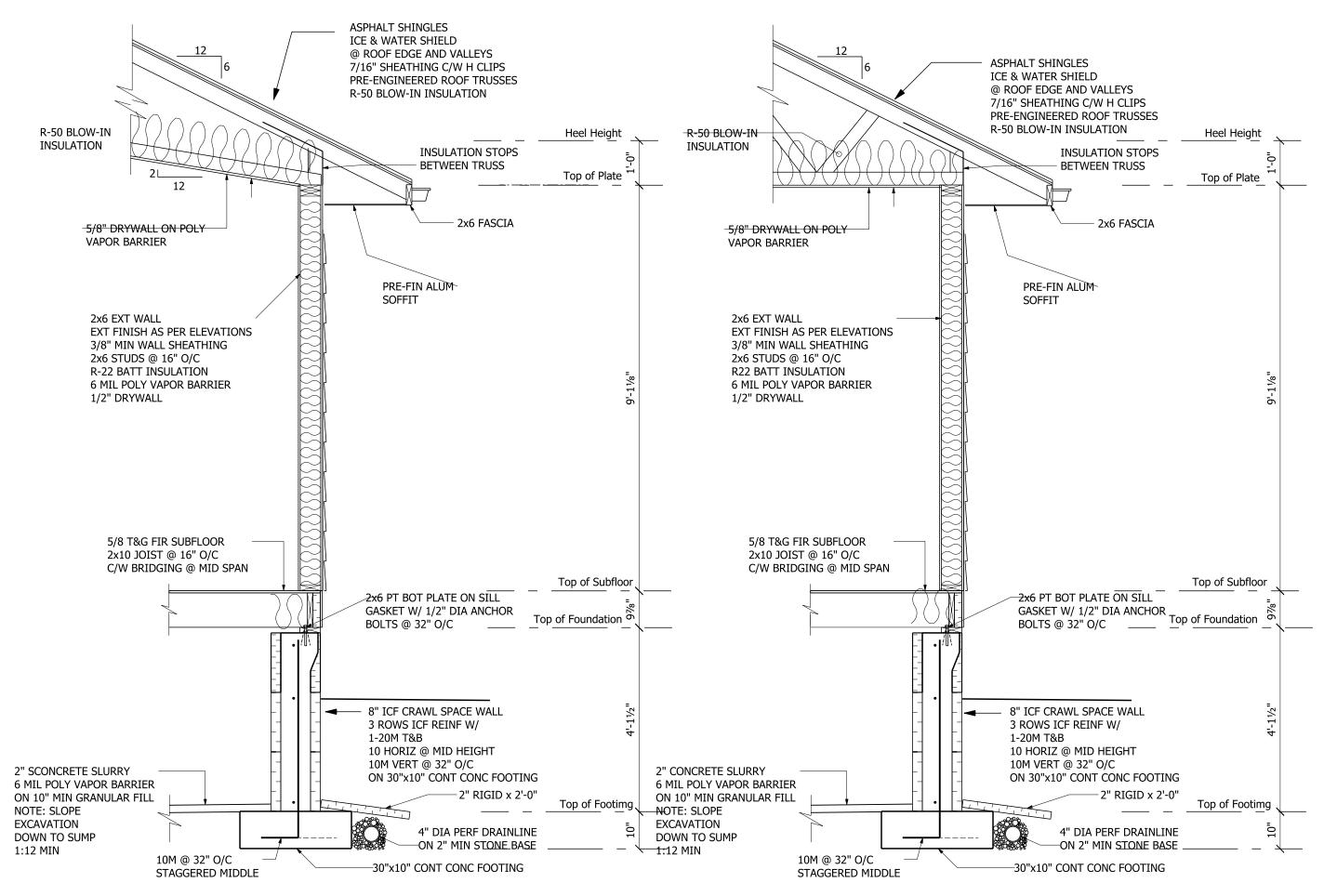
CROSS SECTION A

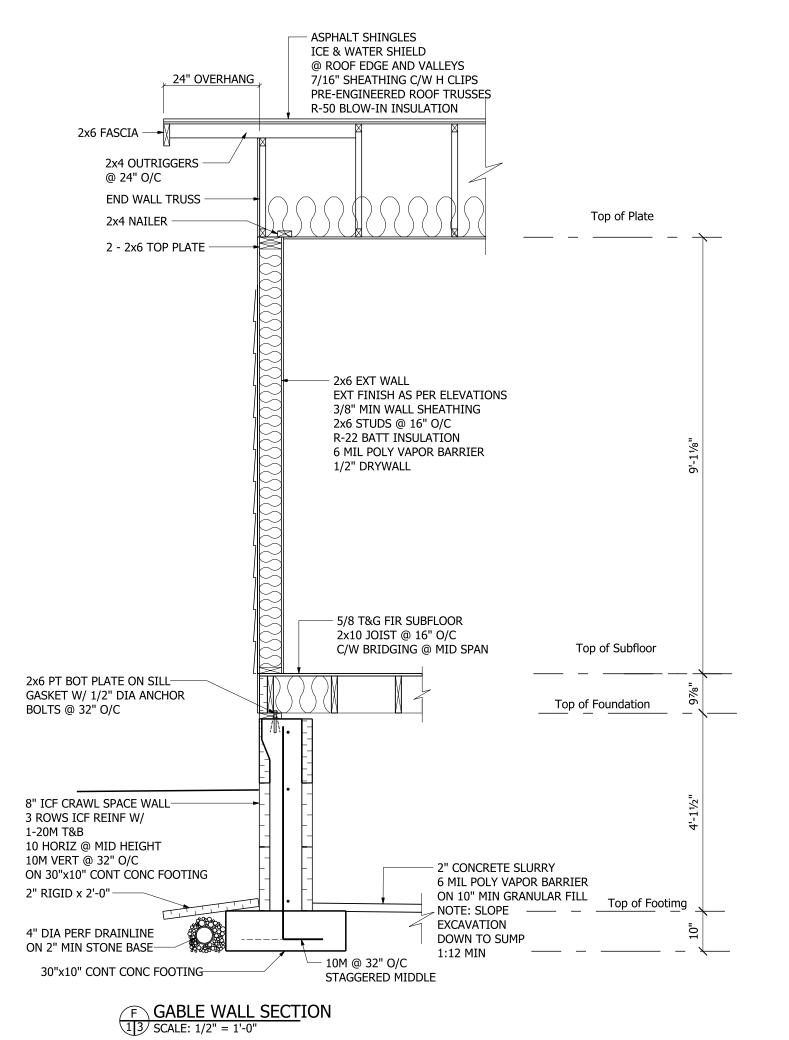


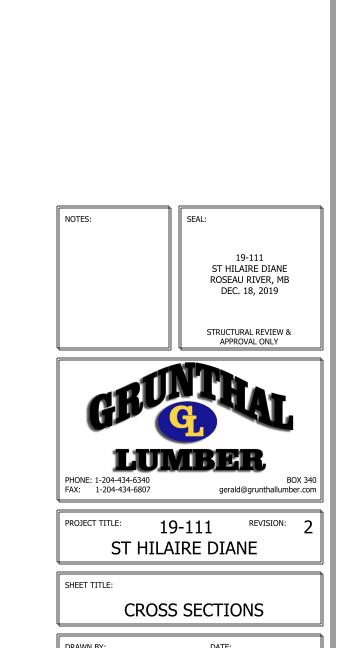


CROSS SECTION B









DEC. 18, 2019

PAGE: 3 OF 3

GERALD

SCALE: