

GENERAL STRUCTURAL NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF ALL APPLICABLE STATE AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO:
 - IBC 2009 BUILDING CODE 2009 ED
 - ACI 308.1 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 - ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR REINFORCED CONCRETE"
 - AISC STEEL CONSTRUCTION MANUAL 9TH ED ASD
 - AISI COLD FORMED STEEL DESIGN MANUAL
 - ANSI/AIAA NDS-2005
- ROOF DESIGN LOADS:
 - Roof-Gross Ce=1.0 Ce=1.0
 - Ps=11 INDIANAPOLIS SURFACE SNOW LOAD
- DEAD LOAD
 - FLOOR= 15PSF
 - CEILING= 5PSF
 - WIND LOAD
- WIND LOADS:
 - BASED ON WIND SPEED OF 100 MPH, DIR. C, 1.0, 1.0, SURF-TED PROCEDURE.
- CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY CONDITIONS DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS AND ALSO ANY CONDITIONS THAT PREVENT THE PROGRESS OF THE WORK AS SHOWN ON THE CONSTRUCTION DRAWINGS
- ALL WORK SHALL BE PERFORMED BY PERSONS QUALIFIED IN THE STATE IN WHICH THE PROJECT IS LOCATED.
- THESE DRAWINGS SHALL BE USED IN CONJUNCTION WITH ANY ADDITIONAL SPECIFICATIONS AND ANY SHOP DRAWINGS PROVIDED BY SUBCONTRACTORS AND SUPPLIERS.
- ALL DIMENSIONS, RELATIONS, AND CONDITIONS SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR CLARIFICATION BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
- UNLESS OTHERWISE NOTED, DETAILS, SECTIONS, AND NOTES SHOWN ON ANY DRAWING SHALL BE CONSIDERED TYPICAL FOR ALL SIMILAR DETAILS.
- THESE DRAWINGS DO NOT SHOW SIZE, LOCATION OR TYPE OF CHANGING FOUNDATION SYSTEMS FOR MECHANICAL, PLUMBING OR MECHANICAL EQUIPMENT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING THESE ITEMS.
- ALL SHOP DRAWINGS PROVIDED BY OTHERS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION OF MATERIAL OR THE PROGRESS OF CONSTRUCTION. THE ENGINEER'S REVIEW IS THE CONTRACTOR'S RESPONSIBILITY.

WOOD FRAMING NOTES

- STRUCTURAL LUMBER: NO. 2 SPRUCE-PINE-FIR OR BETTER LAMINATED VENEER LUMBER (LVL) BY BOISE.
- DESIGN CODES:
 - A. NATIONAL DESIGN SPECIFICATIONS FOR WOOD ASSOCIATION.
 - FASTENERS: CONPLY WITH RECOMMENDED FASTENING SCHEDULE TABLE R602.3 (1) OF THE IRC 2009 BUILDING CODE. UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
 - FASTENER REQUIREMENTS FOR ROOF AND FLOOR SHEATHING: PROVIDE 8D RINGSHANK NAILS PER TABLE R602.3 (1).
 - ALL BOLTED WOOD CONNECTIONS TO BE MADE WITH 6800 HOT DIP GALVANIZED HEX HEAD THROUGH BOLTS. SIZE AS INDICATED ON THE DRAWINGS. DOME HEADED CARTRIDGE BOLTS ARE NOT TO BE USED.
 - ALL NAILS TO SIMPSON PRODUCTS AND FT LUMBER TO BE 6800 HOT DIP GALVANIZED 0.125" COMMON BOX NAILS, OR AS RECOMMENDED BY SIMPSON.
 - ALL SIMPSON PRODUCTS IN CONTACT WITH FT LUMBER TO BE 2"MAX. (6 88 GALVANIZED) IN CONTACT WITH (2) ROOMS.
 - TRIPLE LVL'S TO BE CONNECTED WITH (2) ROOMS.
 - TRIPLE LVL'S TO BE CONNECTED WITH (2) ROOMS.
 - DOUBLE LVL'S TO BE CONNECTED WITH (3) ROOMS (60 SINKERS AT 12" O.C.

CONCRETE NOTES

- CODES:
 - CONPLY WITH THE FOLLOWING LATEST EDITIONS AND CURRENT AMENDMENTS:
 - ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
 - ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE PERMISSIVE STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE
 - TESTING:
 - INTENTIONALLY LEFT BLANK
 - SUBMITTALS: INTENTIONALLY LEFT BLANK
 - MATERIALS:
 - 1. REINFORCING STEEL, GRADE 60, ASTM A118, NEW
 - 2. CONCRETE: ALL CONCRETE SHALL BE EQUAL TO PREPARED, 1.5 PARTS CEMENT, 1 PART SAND, 2.5 PARTS AGGREGATE, AND WATER AS NOTED ON PLAN
 - 3. MINIMUM WATER SHALL BE FORTALE, FREE OF ANY SUBSTANCES THAT MAY BE DETRIMENTAL TO THE CONCRETE OR REINFORCING STEEL.
 - CONCRETE MIX:
 - 5.1. EXTERIOR SLABS:
 - CEMENT SHALL BE ASTM 150, TYPE II PORTLAND CEMENT
 - MAX. AGG. SIZE: 3/4"
 - AIR CONTENT: 5% ± 1% BY VOLUME
 - MAX. WATER CEMENT RATIO: 0.45
 - AGGREGATE SHALL CONFORM TO ASTM C33
 - 5.2. INTERIOR SLABS:
 - CEMENT SHALL BE ASTM 150, TYPE II PORTLAND CEMENT
 - MAX. AGG. SIZE: 3/4"
 - AIR CONTENT: 0% ±
 - MAX. WATER CEMENT RATIO: 0.45
 - AGGREGATE SHALL CONFORM TO ASTM C33
 - 5.3. WALLS AND FOOTINGS:
 - CEMENT SHALL BE ASTM 150, TYPE II PORTLAND CEMENT
 - MAX. AGG. SIZE: 3/4"
 - AIR CONTENT: 5% ± 1% BY VOLUME
 - MAX. WATER CEMENT RATIO: 0.50
 - AGGREGATE SHALL CONFORM TO ASTM C33

CONCRETE NOTES (CONT.)

- ADMITTIVES:
 - PROVIDE ADMITTIVES WHICH ARE CHEMICALLY COMPATIBLE FOR THEIR INTENDED USE. CONPLY WITH MANUFACTURERS' RECOMMENDATIONS. CALCIUM CHLORIDE IS NOT ALLOWED.
 - HIGH RANGE WATER REDUCERS (SPUR) SHALL BE USED AT A MAXIMUM OF 1.0% BY WT. OF THE CONCRETE. GRADE 100, ASTM C-494
 - ACCELERATORS: EQUAL TO MARKET BY W.R. GRACE 100, ASTM C-494
 - ADDITIONAL AGGREGATE SHALL BE USED TO MAINTAIN A MINIMUM OF 20% FINER THAN 200 SIEVE.
- CONCRETE SURFACE FINISHES:
 - 5.4.1. CURING COMPOUND, "KURE-N-SEAL" BY SONNEMON, OR EQUIVALENT. EQUAL TO BRUSH ON AT THE TIME OF FINISHING.
 - 5.4.2. BRITANNIUM DAMPROOFING: EQUAL TO BRUSH ON AT THE TIME OF FINISHING.
- FORMS AND RELATED MATERIALS:
 - 5.5.1. FORMS FOR CONCRETE SURFACES THAT WILL BE EXPOSED IN THE FINISHED BUILDING SHALL BE AT LEAST 2" THICK. FORMS SHALL BE REINFORCED WITH BRASS OR ALUMINUM BRACES TO PREVENT DEFLECTION. FORMS SHALL BE BRUSHED AND OILED WITH FORMOLIN OR MATCHED LUMBER. FORMS SHALL BE REINFORCED WITH BRASS OR ALUMINUM BRACES TO PREVENT DEFLECTION.
 - 5.5.2. FORM OILING ON SURFACE OF FORMS SHALL BE A NON-STAINING TYPE.
 - 5.6. ALUMINUM PRODUCTS:
 - 5.6.1. NO ALUMINUM CONTACT. PRE. INSERTS, REGLES, ETC. SHALL BE PLACED IN ANY CONCRETE, UNLESS OTHERWISE NOTED.
 - 5.6.2. NO CONTACT WITH BRITANNIUM DAMPROOFING. BRITANNIUM DAMPROOFING SHALL BE PLACED ON FORMS BEFORE PLACEMENT OF CONCRETE.
- NON-SHRINK GROUT FOR USE UNDER COLUMN BASE:
 - 5.7.1. NON-SHRINK GROUT FOR USE UNDER COLUMN BASE SHALL BE TYPE I, F50, PERMANENTLY PLACED AND BE SECURELY HELD IN PLACE DURING CONCRETE PLACEMENT.
 - 5.7.2. NON-SHRINK GROUT FOR USE UNDER COLUMN BASE SHALL BE TYPE I, F50, PERMANENTLY PLACED AND BE SECURELY HELD IN PLACE DURING CONCRETE PLACEMENT.
- FORMWORK:
 - 5.8.1. FORM SPACERS, REINFORCING TIES AND CHAINS, AND OTHER DEVICES NEEDED FOR PROPER FORMWORK SHALL BE PROVIDED. CLAY BRICKS ARE NOT ALLOWED FOR USE AS SLAB SPACERS.
 - 5.9. EMBEDDED ITEMS:
 - 5.9.1. EMBEDDED ITEMS SHALL BE ANCHOR BOLTS, ETC. SHALL BE INSTALLED USING A TEMPLAT AND BE SECURELY HELD IN PLACE DURING CONCRETE PLACEMENT.
 - 5.10. SPACERS, SUPPORTS AND FASTENERS:
 - 5.10.1. FORM SPACERS, REINFORCING TIES AND CHAINS, AND OTHER DEVICES NEEDED FOR PROPER FORMWORK SHALL BE PROVIDED. CLAY BRICKS ARE NOT ALLOWED FOR USE AS SLAB SPACERS.
- VARIOUS BARRIERS:
 - 5.11.1. UNDERSLAB MOISTURE VAPOR BARRIER SHALL BE 6 MIL POLY W/ TYPED STAPES AND PENETRATOR PLACED VAPOR BARRIER DIRECTLY BELOW SLAB.

CONCRETE NOTES (CONT.)

- CONCRETE MIXING:
 - 6.5.3. NO CONCRETE SHALL BE PLACED IN THE FORMS UNTIL THE FORMS HAVE BEEN CLEANED AND REPAIRED.
 - 6.5.4. AFTER THE MAXIMUM WATER CEMENT RATIO HAS BEEN ACHIEVED, RETEMPERING OF THE CONCRETE SHALL BE ALLOWED, UNLESS APPROVED BY THE ENGINEER.
- CONCRETE PLACEMENT:
 - 6.6.1. DEPOSIT CONCRETE CONTINUOUSLY IN LAYERS NOT DEEPER THAN 24" OVER REINFORCING LAYERS.
 - 6.6.2. MECHANICAL VIBRATING EQUIPMENT, SUPPLEMENTED BY HAND SHAKING, RODDING AND TAMPING SHALL BE USED TO CONSOLIDATE CONCRETE. MECHANICAL VIBRATING EQUIPMENT SHALL NOT BE USED TO VIBRATE CONCRETE. VIBRATORS TO TRANSPORT CONCRETE SHALL BE USED TO VIBRATE CONCRETE. VIBRATORS TO TRANSPORT CONCRETE SHALL NOT BE USED TO VIBRATE CONCRETE. VIBRATORS TO TRANSPORT CONCRETE SHALL NOT BE USED TO VIBRATE CONCRETE.
 - 6.6.3. HOT WEATHER PLACING: CONPLY WITH ACI 306, LATEST EDITION. MAINTAIN A FRESH SURFACE OF CONCRETE. MAINTAIN A FRESH SURFACE OF CONCRETE.
- CONCRETE CURING:
 - 6.7.1. SLABS: USE MOISTURE CURE OR CURING COMPOUND. APPLY CURING COMPOUND WITHIN 2 HOURS OF FINAL FINISHING BY SPRAY OR BRUSH. RECORD CURING PRODUCTS TO BE USED ON SLABS WHICH WILL RECEIVE LIQUID FLOOR HARDENER OR OTHER FINISHES.
 - 6.7.2. FORMS: CURING PRODUCTS WITH ALTERNATE METHODS ARE APPROVED BY THE ENGINEER. CONTACT STRUCTURAL ENGINEER @ 507-627-2200 FOR ALTERNATE CURING METHODS. DETERMINE CURING PRODUCTS TO BE USED BY TEMPERATURE AT LOCATION AS DIRECTED BY ENGINEER. MAINTAIN 50% WITH USE OF INDIRECT READ OR RELATIVE HUMIDITY.
- ANCHOR BOLTS:
 - 6.8. ANCHOR BOLTS: USE TYPE, SIZE, AND LENGTH AS INDICATED ON PLANS.

EARTHWORK NOTES

- SITE WORK AND CONCRETE CONTRACTORS ARE REQUIRED TO REPAIR THE EXISTING SUBGRADE SOIL CONDITIONS WITH THE CONTRACTOR WILL NOTIFY 56R AFTER EXCAVATION HAS STARTED AND PRIOR TO THE PLACEMENT OF ANY STRUCTURAL FOUNDATION.
 - 2. REMOVE ALL TOPSOIL AND UNCONTROLLED FILL FOR THE AREAS INDICATED ON PLANS.
 - 3. BACKFILL TO THE NECESSARY SUBGRADES REQUIRED ON THE STRUCTURAL FILL MATERIAL LIFTING THE FOLLOWING GRADATIONS:

PERCENT PASSING	SCREEN OR SIEVE SIZE
5	100
NO. 4	90-100
NO. 10	35-70
NO. 20	0-5
 - PLACE CONTROLLED STRUCTURAL FILL IN LIFTWISE LIFTS AND IN ACCORDANCE WITH ASTM D1557, MODIFIED PROCTOR DENSITY.
 - PROVIDE SURE GRADING AROUND THE PERIMETER OF THE BUILDING TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE FOUNDATION DURING AND AFTER CONSTRUCTION.
 - MAINTAIN THE INTEGRITY OF NATURAL SOILS AND CONTROLLED STRUCTURAL FILL DURING CONSTRUCTION. PROJECT STRUCTURAL FILL TO BE PLACED IN LIFTWISE LIFTS AND EXCESSIVE WETTING, REMOVE AND RETILL FROZEN SUBGRADES, MOISTURE CONDITION, OR REPLACE EXCESSIVELY WET SUBGRADE MATERIALS.
 - NOTIFY ENGINEER TO OBSERVE SUBGRADERS PRIOR TO PLACING FOOTINGS. FOOTINGS ARE DESIGNED FOR A MIN. SOIL BEARING CAPACITY OF 2000PSF, OR FOR BEARING ON SOUND LEDGE.
 - CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER IF LEDGE IS ENCOUNTERED TO DETERMINE FINISHING REQUIREMENTS.
 - ALL FOOTINGS SHALL EXTEND A MINIMUM OF 4'-6" BELOW EXTERIOR FINISHED GRADE, OR BE DEVELOPED TO LEDGE.
 - ROOF ROLL SUBGRADE FROM TO SLAB CONSTRUCTION. PROVIDE 18" MINIMUM SUBGRADE FOR FOOTINGS AND WALLS. PROVIDE 18" MINIMUM PERCENT PASSING 200 SIEVE = 5%.
 - COMPACT CONTROLLED STRUCTURAL FILL IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND ASTM D1557. USE ONLY HAND-OPERATED EQUIPMENT EQUAL ELEVATIONS BEFORE COMPACTING:

DEPTH OF COMPACTION: COMPACT TO THE FOLLOWING MINIMUM DENSITIES:	DENSITY
FILL AND BACKFILL LOCATION	95% OF MAX.
UNDER STRUCTURE FOUNDATIONS	92%
BELOW TOP 2 FEET UNDER FOUNDATIONS	92%
TRINCHED THROUGH UNPAVED AREAS	90%
EMPAVEMENTS	90%
BEFORE STRUCTURE FOUNDATION WALLS	92%
UNDER PILES THROUGH STRUCTURAL FILL	90%
UNDER DRIVEWAY TIE-IN SAND	92%
UNDER DRIVEWAY TIE-INS, ASTM D1557, MODIFIED	92%
FIELD DRIVEWAY TIE-INS, ASTM D1557, SAND CORN. ASTM D6167 RUBBER BALLOON, OR ASTM D2922 (NUCLEAR METHODS).	92%
 - CONTRACTOR IS REQUIRED TO CONFORM TO OSHA 1910.1332 (55) AND 1910.1332 (55) FOR CONSTRUCTION STANDARD FOR EXCAVATIONS.

A1

CONSTRUCTION NOTES

SCALE: NTS



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PROJECT: **PENNINGTON RESIDENCE**
GREAT DIAMOND ISLAND, ME.
FOR:
SHEET TITLE: **CONSTRUCTION NOTES**
ISSUED FOR PERMITTING

NO.	BY	DATE	DESCRIPTION
1	ASW	5-18-17	ISSUED FOR PERMITTING
2	ASW		
3	ASW		
4	ASW		
5	ASW		

DATE: 5-18-17
SCALE: AS NOTED
DESIGN BY: ASW
DRAWN BY: RSC
FILE #: 17102-S1.dwg
PROJECT NUMBER: **17102**
SHEET NO.: **55**