

STRUCTURAL DESIGN CRITERIA

- STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE MAINE UNIFORM BUILDING AND ENERGY CODE.
- DECK AND STAIR LOADS:
  - FLOOR FRAMING AND STAIRS 100 PSF
  - LATERAL LOAD ON RAILINGS - 200 POUNDS OR 50 POUNDS PER LINEAL FOOT ANY DIRECTION.
- SNOW LOAD IS BASED UPON A GROUND SNOW LOAD OF 60 PSF, ON AN UNHEATED STRUCTURE (THE DECK) OR IN A VENTILATED COLD ROOF STRUCTURE (THE MAIN ATTIC). NET FLAT ROOF SNOW LOAD IS 462 PSF.
- WIND LOAD: PER IBC SECTION 1609.01/ASCE 7-02 CHAPTER 6

BASIC WIND SPEED, 3 SECOND GUST	100 mph
IMPORTANCE FACTOR, $I_w$	1.0
EXPOSURE CATEGORY	C
BUILDING CLASSIFICATION	II
BASIC WIND PRESSURE	20 psf
COMPONENT AND CLADDING PRESSURE	+22.7, -35.9 psf

SEISMIC LOAD: IBC SECTION 1613.0, EARTHQUAKE DATA PER SECTIONS 1616.3:	
SEISMIC USE GROUP	II
OCCUPANCY IMPORTANCE FACTOR, $I_p$	1.0
SHORT PERIOD ACCELERATION $S_s$	0.314
10 SECOND ACCELERATION $S_1$	0.077g
SITE CLASSIFICATION SOIL TYPE	D
MAXIMUM CONSIDERED EQ. ACCEL. PARAMETER $F_a$	1.55
MAXIMUM CONSIDERED EQ. ACCEL. PARAMETER $F_v$	2.40
SHORT PERIOD ACCELERATION (ASCE 9.4.12.4-1, 5ms)	0.496g
10 SECOND ACCELERATION (ASCE 9.4.12.4-1, 5m)	0.184g
SHORT PERIOD DESIGN SPECTRAL RESPONSE ACC.	0.324g, 5DC B
10 SECOND DESIGN SPECTRAL RESPONSE ACC.	0.123g, 5DC B

FOUNDATION REQUIREMENTS and EXCAVATION STABILITY

- NO GEOTECHNICAL INVESTIGATION HAS BEEN PERFORMED AT THIS SITE. NOTIFY ENGINEER DURING EXCAVATION SO THAT ENGINEER MAY OBSERVE SOIL CONDITIONS ENCOUNTERED ONSITE. ENGINEER MAY ELECT TO REQUIRE SOIL INVESTIGATION BY A GEOTECHNICAL ENGINEER.
- PROOF ROLL EXISTING UNDISTURBED SOIL PRIOR TO PLACING FOUNDATION BACKFILL OR CONSTRUCTION FOOTINGS. PROOF ROLLING SHOULD CONSIST OF A MINIMUM OF THREE PASSES IN A NORTH-SOUTH DIRECTION AND THEN THREE PASSES IN AN EAST-WEST DIRECTION USING A VIBRATORY PLATE COMPACTOR.
- FOR FROST PROTECTION, BACKFILL FOOTINGS WITH FOUNDATION BACKFILL HAVING A MAXIMUM PARTICLE SIZE LIMITED TO 6 INCHES. THE PORTION PASSING THROUGH A 3/8 INCH SIEVE SHALL MEET THE GRADATION SPECIFICATIONS OF MDOT SPECIFICATION 703.06, TYPE F.
- FOUNDATION BACKFILL SHOULD BE PLACED IN 6 TO 12-INCH LIFTS AND SHOULD BE COMPACTED TO 95 PERCENT OF ITS MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D1557.

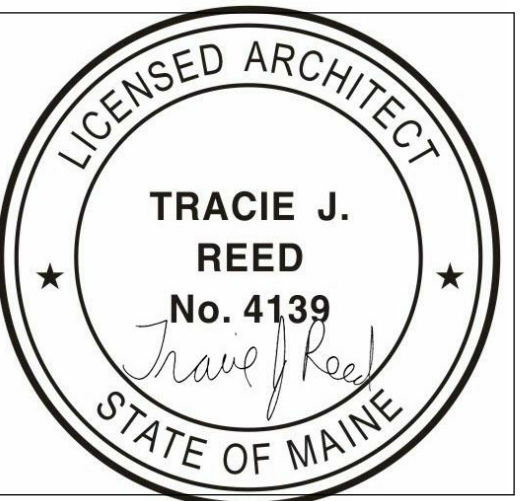
ROUGH CARPENTRY MATERIALS

- DIFFERING LUMBER AND COMPOSITE LUMBER MATERIALS ARE SPECIFIED AT VARIOUS LOCATIONS. MATERIAL GRADES SHALL CONFORM TO THE FOLLOWING SPECIES AND GRADES:
  - PERIMETER GILLS (WALL GILLS): PRESSURE-TREATED SOUTHERN YELLOW PINE, SUITABLE FOR GROUND CONTACT PLACED ON TOP OF CONCRETE.
  - EXPOSED FINISH TIMBERS: PRESSURE-TREATED SOUTHERN YELLOW PINE.
  - EXPOSED EXTERIOR POSTS:
  - PRESSURE-TREATED LUMBER: SOUTHERN YELLOW PINE NO. 1 GRADING
  - COMPOSITE LUMBER: VERSA-LAM BY BOISE-CASCADE, Fb=3,100 psi, E=2000ksi (INTERIOR FRAMING AS NOTED), ANTHONY POWER-PRESERVED BEAMS FOR EXTERIOR USE.
  - CONVENTIONAL LUMBER: S-P-F-# NO. 2 OR BETTER
- ALL LEDGER BOLTS EXTENDING THROUGH PRESSURE-TREATED LUMBER SHALL BE STAINLESS STEEL.
- ALL LUMBER AND TIMBER FRAMING MATERIAL SHALL BE STORED IN A PROTECTED, DRY AREA OFF OF THE GROUND AND GROUND FLOOR SURFACES. STORE MATERIAL OUT OF DIRECT SUNLIGHT TO PREVENT DIFFERENTIAL DRYING AND WARPING.
- JOIST HANGERS SHALL BE MANUFACTURED BY SIMPSON STRONG-TIE, INC. WHERE NOTED, HANGERS SHALL BE STAINLESS STEEL, ATTACHED WITH STAINLESS STEEL 10d x 1 1/2" HANGER NAILS INSTALLED IN PREDRILLED HOLES AS REQUIRED OR DIRECTED BY ENGINEER. REFER TO PLAN SHEETS AND SCHEDULE FOR HANGERS AND LOCATIONS.
- REFER TO STRUCTURAL DRAWINGS FOR APPROPRIATE SELF-DRIVING FASTENERS, EITHER MANUFACTURED BY FASTENMASTER, INC. OR BY GRK, INC. INSTALL FASTENERS AS INDICATED ON DRAWINGS.
- DO NOT NOTCH JOISTS IN THE MIDDLE-THIRD OF THEIR SPANS, AND PROVIDE TAPERED CUTS AT ENDS OF JOISTS WHERE NOTED, TO PREVENT SPLITTING OF LUMBER AT STRESS CONCENTRATION POINTS.
- FLOOR SHEATHING SHALL BE ADVANTEK SHEATHING, IN THICKNESS INDICATED ON DRAWINGS. GLUE AND NAIL FLOOR DECKING TO SHEATHING AS NOTED. PROVIDE 1/8" SPACING BETWEEN SHORT ENDS OF PANELS AS REQUIRED BY MANUFACTURER.

CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK AND REINFORCING BAR DETAILS SHALL CONFORM TO THE LATEST ACI STANDARDS, ACI 301 AND 318.
- FOUNDATION CONCRETE SHALL BE AIR-ENTRAINED, (5 TO 7%), AND HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 psi. PROVIDE BATCH TICKETS TO ENGINEER FOR REVIEW.
- SLAB CONCRETE SHALL BE AIR-ENTRAINED, (5 TO 7%), AND HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 psi. REINFORCE SLAB CONCRETE WITH WIRE REINFORCING IN ACCORDANCE WITH ASTM A183. PROVIDE A 15-MIL STEGOWRAP VAPOR BARRIER DIRECTLY BELOW ALL SLABS ON GRADE. OVERLAP SEAMS AND TAPE ADJACENT PIECES TO PREVENT MOVEMENT.
- PLACE NO CONCRETE WITHOUT REVIEW AND APPROVAL OF THE REINFORCING AND EMBEDDED ITEMS BY THE CITY AND BY THE ENGINEER.
- ALL CONCRETE MATERIALS, REINFORCEMENT, AND FORMS SHALL BE FREE OF FROST OR DEBRIS.
- CONSOLIDATE ALL CONCRETE WITH A VIBRATOR OR OTHER MEANS RECOMMENDED BY ACI 301.
- PROVIDE DIAGONAL REINFORCING BARS AROUND INSIDE CORNERS OF ALL OPENINGS IN CONCRETE.
- MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
 

CONCRETE CAST AGAINST EARTH	3 INCHES
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	1 1/2 INCHES -#6 BARS 2 INCHES -#6 OR GREATER
- CALCIUM CHLORIDE IS PROHIBITED FROM ALL CONCRETE MIXES.
- PLACE WALL CONTROL JOINTS AS SHOWN ON DRAWINGS OR AT A MAXIMUM OF 40 FEET ON CENTER.
- BACKFILL BOTH SIDES OF FOUNDATION WALLS SIMULTANEOUSLY TO PREVENT UNEVEN LATERAL LOADINGS.



61 FALMOUTH STREET

RENOVATION OF EXISTING TWO UNIT BUILDING W/NOV-CONFORMING THIRD UNIT

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No.	Description	Date

STRUCT. NOTES

Project No.	17-14_61 Falmouth ST
Date	10.07.17
Drawn by	Author
Checked by	Checker

S-1.1

Scale