BUILDING CODE INFORMATION:

THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC 2009).

AMERICAN SOCIETY OF CIVIL ENGINEERS: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ANSI/ASCE 7–05, 2005.

AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE – SHEET STEEL, 2nd ED., ANSI/AWS D1.3, 2008.

1.0 DESIGN ASSUMPTIONS

THE ARCHITECT AND/OR ENGINEER OF RECORD MUST REVIEW AND APPROVE THE FOLLOWING DESIGN ASSUMPTIONS BEFORE THE SHOP DRAWINGS MAY BE USED.

ALL CONNECTIONS SHALL BE COMPLETE AS PER THE PLANS AND SPECIFICATIONS AT THE TIME OF INSTALLATION.

STRUCTURAL DESIGN CRITERIA:

1. DESIGN LOADS:

i. DESIGN WIND: LOCATION: PORTLAND, MAINE
WIND LOAD (PER ASCE 2005 SECTION 6.0 COMPONENTS AND CLADDING):
OCCUPANCY CATEGORY II
BASIC WIND SPEED V = 100 MPH
WIND EXPOSURE FACTOR = B
IMPORTANCE FACTOR I = 1.0
DEFLECTION CRITERIA: L/360 OF THE WALL FRAMING LENGTH.

ii. ROOF LIVE LOAD:
SNOW LOAD: 42 PSF (GROUND SNOW LOAD 50 PSF) PLUS SNOW DRIFT LOADING WHERE APPLICABLE (PER ASCE 2005 SECTION 7.0)
SNOW EXPOSURE FACTOR (Ce) = 1.0
THERMAL FACTOR (Ct) = 1.1
IMPORTANCE FACTOR (I) = 1.0

WIND LOADS – COMPONENTS & CLADDING

WALLS (– ZONE 4)
P = +18.3 PSF / –20.0 PSF

WALLS (– ZONE 5)
P = +18.3 PSF / –24.5 PSF

WIND LOADS – MWFRS

ROOF (WIND NORMAL TO RIDGE)
P = +5.1 PSF / –10.7 PSF

ROOF (WIND PARALLEL TO RIDGE)
P = –14.7 PSF

WALL (WIND NORMAL TO RIDGE)
P = +10.6 PSF / –12.0 PSF

WALL (WIND PARALLEL TO RIDGE)
P = + 10.6 PSF / –12.0 PSF

iii. ROOF LOADS: GRAVITY LOADING

ROOF GRAVITY LOADING:

SHINGLED ROOF DEAD LOAD = 3.0 PSF ASPHALT SHINGLES
1.8 PSF ¾" CDX PLYWOOD SHEATHING
3.0 PSF WOOD 2X FRAMING AT 16" OC
1.3 PSF R–40 FIBERGLASS INSULATION
2.8 PSF ⅝" GWB CEILING
2.0 PSF MISCELLANEOUS
W_T = 15.0

FLOOR GRAVITY LOADING:

FLOOR DEAD LOAD = 1.5 PSF CARPET AND PAD
2.5 PSF ¾" ADVANTECH FLOOR SHEATHING
2.5 PSF 2x JOIST AT 16" OC
1.0 PSF R–30 FIBERGLASS INSULATION
1.5 PSF MISCELLANEOUS
W_T = 10.0

FLOOR LIVE LOAD = 40 PSF (ROOMS OTHER THAN SLEEPING AREA)

FLOOR LIVE LOAD = 30 PSF (SLEEPING AREAS)

DEFLECTION CRITERIA:

EXTERIOR WALLS = L/360

ROOF RAFTERS = L/240 LIVE LOAD

FLOOR JOISTS = L/480 LIVE LOAD

STRUCTURAL DESIGN CRITERIA:

1. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

2. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE STRUCTURE AND PERSONNEL DURING ERECTION. THIS INCLUDES THE ADDITION OF THE NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

3. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

WOOD FRAMING NOTES:

1. STRUCTURAL LUMBER: NLGS Grading Rules Agency / No. 2 SPRUCE PINE FIR OR BETTER.
Fb = 875 PSI Fv = 135 PSI
Fc = 1150 PSI E = 1400000 PSI

STRUCTURAL COMPOSITE LUMBER; LVL Fb = 3100 PSI

2. DESIGN CODE: THIS BUILDING IS DESIGNED TO COMPLY WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE, IBC 2009.

3. FASTENERS: COMPLY WITH RECOMMENDED FASTENING SCHEDULE OF THE INTERNATIONAL BUILDING CODE IBC 2009 UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

4. SHEATHING: APA RATED 'EXPOSURE 1' PLYWOOD OR COMPOSITE PANEL:

LOCATION	THICKNESS	SPAN RATING	EDGE NAILING	FIELD NAILING
ROOF SHEATHING:	⅝–INCH	40/20	8d AT 6" OC	8d AT 12" OC
WALL SHEATHING:	½–INCH	16/0	8d AT 6" OC	8d AT 12" OC
FLOOR SHEATHING:	¾–INCH	48/24	8d AT 6" OC	8d AT 12" OC

5. SPIKE TOGETHER ALL FRAMING MEMBERS WHICH ARE BUILT–UP USING MULTIPLE 2x LUMBER.

6. PROVIDE PRESSURE TREATED LUMBER FOR ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE OR EXPOSED TO WEATHER.

7. ROOF SHEATHING: 5/8" APA RATED SHEATHING, EXTERIOR OR STRUCTURAL I OR II RATED SHEATHING, SPAN RATING 40/20. INSTALL SHEETS WITH FACE GRAIN DIRECTION PERPENDICULAR TO SUPPORTING MEMBERS.

8. WALL SHEATHING: 1/2" APA RATED SHEATHING, EXTERIOR OR STRUCTURAL I OR II RATED SHEATHING, SPAN RATING 32/16. INSTALL SHEETS WITH FACE GRAIN DIRECTION PERPENDICULAR TO SUPPORTING MEMBERS.

NOTES
NTS
TYPICAL NOTES

FOUNDATION NOTES:

1. FOUNDATION DESIGNED BASED ON AN ASSUMED MAXIMUM ALLOWABLE BEARING PRESSURE OF **2000 PSF**. IT IS THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO VERIFY THE SOIL BEARING CAPACITY. NOTIFY THE ENGINEER AND STOP WORK IF CLAY, WET SOILS, FILL, OR OTHER DELETERIOUS MATERIALS ARE ENCOUNTERED.

2. SUITABLE MATERIAL FOR BACK FILLING AGAINST THE FOUNDATION PIERS AND BENEATH THE CABINS INCLUDE; SELECT FILL, STRUCTURAL FILL AND GRANULAR BACKFILL: THESE MATERIALS SHALL BE SANDY GRAVEL TO GRAVELY SAND, FREE OF ORGANIC MATERIAL, LOAM, TRASH, OR FROZEN SOIL AND CONFORM TO THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT FINER BY WEIGHT
6"	100
No. 4	30–90
No. 40	10–50
No. 200	0–8

3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND THE ARCHITECTURAL AND SITE SHOP DRAWINGS.

4. ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS MUST BE VERIFIED IN THE FIELD BY THE GENERAL CONTRACTOR. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK. THE CONTRACTOR SHALL DETERMINE ALL NECESSARY DIMENSIONS, ELEVATIONS AND CONDITIONS REQUIRED FOR THE FABRICATION AND ERECTION OF THE BUILDING COMPONENTS PRIOR TO SUBMISSION OF SHOP DRAWINGS.

5. SECTIONS AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL AND USED FOR SIMILAR CONDITIONS.

6. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL FOLLOW ALL APPLICABLE FEDERAL, STATE AND MUNICIPAL REGULATIONS INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

7. PROVIDE CONTROL JOINTS IN STRUCTURAL SLAB AT 12'–0" ON CENTER MAX.

8. PROPORTION DESIGN MIXES TO PROVIDE CONCRETE FOR INTERIOR SLABS–ON–GRADE WITH THE FOLLOWING PROPERTIES:
   a. STRENGTH; 4000psi @ 28 DAYS, 3/4" AGGREGATE
   b. W/C RATIO: 0.46
   c. SLUMP: 3"± 1"

9. PROPORTION DESIGN MIXES TO PROVIDE CONCRETE FOR EXTERIOR FROST WALLS, FOOTINGS AND ALL OTHER EXPOSED SITE CONCRETE WITH THE FOLLOWING PROPERTIES:
   a. STRENGTH; 3500psi @ 28 DAYS, 3/4" AGGREGATE
   b. W/C RATIO: 0.52
   c. ENTRAINED AIR: 6% ±1%
   d. SLUMP: 3"± 1"

PORTLAND CEMENT: ASTM C150, TYPE I OR TYPE II.

STRUCTURAL DESIGN CRITERIA:

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS, SHORING AND TEMPORARY BRACING DURING THE PROGRESS OF THE PROJECT.

ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE RECOMMENDATIONS AND REQUIREMENTS CONTAINED IN THE "MANUAL OF STEEL CONSTRUCTION", AISC THIRTEENTH EDITION (INCLUDING AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES), AND "STRUCTURAL STEEL WELDING CODE – STEEL", (AWS D1.1, LATEST EDITION).

STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING:
a) ASTM A992, GRADE 50: ALL WIDE FLANGE SECTIONS, FY=50
b) ASTM A36: OTHER ROLLED SHAPES, PLATES AND BARS, FY=36
ASTM A36: THREADED AND OTHER STEEL RODS

GENERAL NOTES:

1. **COPYRIGHT:**
THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS INCLUDING VERIFYING EXISTING FINISH GRADE CONDITIONS. DO NOT SCALE THE DRAWING–ANY ERROR OR OMISSIONS SHALL BE REPORTED TO DOWNEAST STRUCTURAL CONSULTANTS WITHOUT DELAY. THE COPYRIGHTS TO ALL DESIGNS AND DRAWINGS ARE THE PROPERTY OF DOWNEAST STRUCTURAL CONSULTANTS, PLLC. REPRODUCTION OR USE FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY DOWNEAST STRUCTURAL CONSULTANTS, PLLC IS PROHIBITED.

2. LIABILITY / DISCLAIMER:
WHILE GREAT EFFORT HAS BEEN EXERTED TO INSURE THAT THESE CONSTRUCTION DRAWINGS ARE COMPLETE AND ACCURATE, DOWNEAST STRUCTURAL CONSULTANTS, PLLC, ASSUMES NO LIABILITY FOR ANY BUILDING CONSTRUCTED FROM THIS PLAN. ALL CONSTRUCTION DOCUMENTS PROVIDED BY DOWNEAST STRUCTURAL CONSULTANTS, PLLC ARE PROVIDED AS–IS. IT IS THE RESPONSIBILITY OF THE OWNER/BUILDER TO PERFORM BUILDING REVIEWS BEFORE BEGINNING CONSTRUCTION. THESE INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWNG:
   A. VERIFY ALL DIMENSIONS
   B. REVIEW DEMOLITION PROCEDURES (WHERE REQUIRED) WITH A DESIGN PROFESSIONAL TO DETERMINE POSSIBLE STRUCTURAL INSTABILITIES AND DEVELOP A DEMOLITION PLAN.
   C. VERIFY ACTUAL SITE CONDITIONS. ANY DISCREPANCIES ON THE PLANS MUST BE RESOLVED BY THE BUILDER PRIOR TO CONSTRUCTION. CONSTRUCTION OF ANY HOME SHOULD NOT BE UNDERTAKEN WITHOUT THE ASSISTANCE OF A QUALIFIED BUILDING PROFESSIONAL.

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO ACI–318.
2. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 3500 PSI AT FOUNDATION WALLS AND FOOTINGS, 4000 PSI AT SLABS, MAXIMUM SIZE AGGREGATE SHALL BE 3/4".
3. ALL CONCRETE WITH THE EXCEPTION OF INTERIOR FLOOR SLABS SHALL BE AIR ENTRAINED.
4. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
5. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60. DEFORMED BARS SHALL BE DETAILED AND FABRICATED IN ACCORDANCE TO ACI–315 LATEST EDITION, AND PLACED IN ACCORDANCE WITH ACI–318.
6. SPLICES OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI–318. SPLICES OF WWF SHALL BE 6" MINIMUM.
7. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 UNLESS OTHERWISE NOTED.
8. HOOKS NOT DIMENSIONED SHALL BE ACI STANDARD HOOKS.
9. CONCRETE COVER OVER REINFORCEMENT SHALL BE AS FOLLOWS:
   CONCRETE CAST AGAINST EARTH = 3"
   CONCRETE EXPOSED TO EARTH OR WEATHER = 2" FOR #6 AND LARGER
   = 1–3/4" FOR #5 AND SMALLER
1. CONCRETE NOT EXPOSED TO EARTH OR WEATHER = 3/4"
10. SUBMIT COMPLETE REBAR SHOP DRAWINGS AND SCHEDULES SHOWING ALL DETAILS AND ELEVATIONS PRIOR TO ANY FABRICATION.
2 11. VAPOR RETARDER SHALL BE PREMOLDED 10–MIL STEGO WRAP W/ 2" RIGID INSULATION.

NOTES
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TYPICAL NOTES–CONT

Proposed Single Family Residence
5 Monument Street
Portland, Maine

Downeast Structural Consultants LLC
5 Oak Street, Cumberland, Maine 04021
Office 207.829.8015 Mobile 207.650.3093
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Reviewed for Code Compliance
Inspection Division
Date: 11/28/17

OWNER:
LIV CHASE
PORTLAND, ME

ARCHITECT/DESIGNER:
ROCKWOOD DESIGN STUDIO
MOUNT DESERT, ME

PREPARED FOR:
LIV CHASE
PORTLAND, ME

Project:

Proposed Single Family Residence
5 MONUMENT STREET
PORTLAND, MAINE

REVISIONS:

No.	Description	Date

Seal:

STATE OF MAINE
CHRISTOPHER F RAY
No. 10547
LICENSED
PROFESSIONAL ENGINEER

CURRENT ISSUE STATUS:

■ *SUBMITTED FOR APPROVAL*
Date: 11/28/2017

Drawing Title:

COVER SHEET AND GENERAL NOTES

Project No:	17170
Date	11/17/2017
Drawn by	CFR
Checked by	CFR

Drawing Number:

S.001

Scale: As Noted