GENERAL NOTES:

1. The notes on the drawings are not intended to replace specifications. See specifications for requirements in addition to general notes.
2. Structural drawings shall be used in conjunction with job specifications and architectural, mechanical, electrical, plumbing, and site drawings. Consult, these drawings for locations and dimensions of openings, chases, inserts, reglets, sleeves, depressions, and other details not shown on structural drawings.
3. 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. Do not scale plans.
4. The structure is designed to be self supporting and stable after the erection is complete. It is the contractor's sole responsibility to determine erection procedures and sequencing to ensure the safety of the building and its components during construction. This includes the addition of necessary shoring, sheeting temporary bracing, guys or tiedowns. Such material shall remain the property of the contractor after completion of the project.
5. Sections and details shown on any structural drawings shall be considered typical for similar conditions.
6. All applicable federal, state, and municipal regulations shall be followed, including the federal department of labor occupational safety and health act.

DESIGN LOADS & DESIGN CRITERIA:

1. Building code: INTERNATIONAL BUILDING CODE (IBC 2003)
2. Design Live Loads:
   - Roof ..... 42 PSF plus drift
   - Dwelling Units ..... 40 PSF
   - Corridors ..... 100 PSF
   - Stairs & Exist Ways ..... 100 PSF
   - Mechanical/Electrical Rm .... 60 PSF
3. Design wind loads are based on exposure B Using 100 mph basic wind speed.
4. Earthquake Design Utilizes the following design criteria:
   - a) Building framing system: Load bearing brick walls, space frames & light framed shearwalls.
   - b) Analysis Procedure: Static Force Proceedure.
   - c) Seismic Use Group: "II"
   - d) Seismic Importance Factor : $I_E = 1.0$
   - e) Wind Importance Factor : $I_W = 1.0$
   - f) Snow Importance Factor : $I_S = 1.0$
   - g) Site Class: "D"
   - h) Spectral Response Coefficients: $S_{DS} = 0.35$ / $S_{D1} = 0.16$
   - i) Site Coefficient: Fa=1.5, Fv=2.4
   - j) Spectural Acceleration for Short Periods: $S_s = 0.35$
   - k) Spectrual Acceleration for 1 second period: $S_1 = 0.10$
   - l) Seismic Design Category: "C"
   - m) Response modification factor (R): "2"
   - n) Deflection amplification factor (Cd): "2"

FOUNDATION NOTES:

1. Foundations have been designed to conform with recommendations provided in the geotechnical report provided by S.W. Cole Engineering, Inc. dated April 8, 2005.
2. Foundation preparation and excavation shall conform with the recommendations provided in the geotecnical report.
3. Bottoms of exterior strip and spread footings shall be founded a minimum of 4'-6" below finished grade.
4. Interior spread footings shall be founded on 12" of crushed stone wrapped in a non-woven geotextile fabric "Mirafi 180N".
5. Slabs on grade shall bear on a minimum of 12" of crushed stone or compacted structural fill. If loose or undesirable fills are encountered at the slab subgrade level, they shall be over excavated to the surface of the natural soil and replaced with structural fill. Refer to drawings and specifications for vapor barrier requirements.
6. Crushed stone shall be used as fill at all locations below footings, slabs, and adjacent to the foundation walls. Prior to placement of fill, remove all topsoil and other unsuitable material. Compacted structural fill shall consist of clean granular material free of organics, loam, trash, snow, ice, frozen soil or any other objectionable material. It shall be well graded within the following limits:

SCREEN OR SIEVE SIZE	PERCENT FINER BY WEIGHT
1 inch	100
3/4"	90-100
3/8"	0-75
No. 4	0-25
No. 10	0-5

7. Structural foundation fill shall be placed and compacted in accordance with the Geotechnical report.
8. Open excavations shall be adequately braced or properly benched.

CONCRETE NOTES:

1. All concrete work shall conform to ACI 318-Latest Edition
2. Concrete strength at 28 days shall be:
   a) 4,000 Psi for footings, walls & piers.
   b) 3,000 Psi for slabs-on-grade.
3. All concrete shall be air entrained per the specifications.
4. Concrete shall not be placed in water or on frozen ground.
5. Provide PVC sleeves where pipes pass through concrete walls or slabs.
6. Reinforcing bars shall conform to ASTM A615 Grade 60 deformed bars, and shall be detailed, fabricated and erected in accordance with ACI 315-Latest edition.
7. Welded wire fabric shall be provided in flat sheets.
8. Fiber reinforced concrete shall conform to ASTM C-1116.
9. Complete shop drawings and schedules of all reinforcing steel shall be prepared by the contractor and submitted to the engineer for review prior to commencement of that portion of the work. All accessories must be shown on the shop drawings. Submit (2) blue line prints and (1) reproducible (sepia) to the Architect.
10. Splices of reinforcing bars shall be in accordance with ACI 318-89 or as shown on the drawings. Splices of WWF shall be 6" minimum.
11. Concrete finishes: See specifications and Architectural drawings for additional information.
12. Anchor bolts shall conform to ASTM A307 unless noted otherwise on plan.
13. Provide control/construction joints in foundation walls at a maximum spacing of 15 ft. from any corner or 20 ft. along length of wall. At control joints, discontinue every other horizontal bar. At construction joints all reinforcing shall be continuous through the joint.
14. The general contractor shall be responsible for coordination of Door bondout locations, slab depressions & bondout locations with Architectural, Mechanical Electrical & Plumbing drawings as necessary to properly install each specific item.

MASONRY NOTES:

1. All hollow load bearing concrete masonry units shall be ASTM C90 grade N, type I standard weight standard blocks including stretchers & corner blocks unless noted otherwise.
2. All load bearing concrete masonry units shall conform to ASTM C90 grade N, type I standard weight standard blocks including stretchers & corner blocks.
3. Masonry prism strength (f'm) shall be 1,500 psi.
4. Mortar shall conform to ASTM Specification C270, type M or S.
5. Concrete masonry units shall be laid in running bond.
6. Wall penetrations shall be coordinated with the Architect and Owners vendors/designers and shall be field located.
7. Provide joint reinforcing per drawings & specifications in all concrete masonry unit construction.
8. All masonry reinforcement shall be spliced 48 bar diameters.
9. Reinforcing bars shall conform to ASTM A615 grade 60 deformed bars and shall be detailed, fabricated and placed in accordance with ACI 315-Latest Edition.
10. Masonry walls which support structural members shall have cells grouted solid full height under bearing with 2-#6 minimum vertical reinforcing bar in each cell UNO on plan..
11. Bond beams shall be filled with grout capable of achieving 3000 psi compressive strength at 28 days. Reinforcing shall be supported prior to placing concrete to provide a minimum 1/2" clearance around all bars.
12. Cells of masonry units containing vertical reinforcing shall be filled with grout Unless otherwise noted. Maximum grout lift without cleanouts and inspection shall be 4'-0". Support all vertical bars in units as shown on the drawings.
13. Provide steel lintels for all masonry openings unless cmu lintel is indicated. Refer to lintel schedule for lintel sizes. All lintels used in exterior masonry walls shall be hot dipped galvanized.

STRUCTURAL STEEL NOTES:

1. Structural steel fabrication, erection, and connection design shall conform to AISC "Specification for the design, fabrication, and erection of structural steel"-Ninth edition.
2. Structural steel:
   A. Structural steel shall conform to ASTM A-36.
   B. Structural tubing shall conform to ASTM A-500 GR.B.
3. Design connections for the reactions shown on the drawings or the maximum end reaction that can be produced by a laterally supported uniformly loaded beam for each given beam size and span.
4. Field connections shall be bolted using 3/4" diameter ASTM A325 high strength bolts except where field welding is indicated on the drawings.
5. All welding shall conform to AWS D1.1-Latest edition. Welding electrodes shall be E70XX.

TIMBER FRAMING:

1. All timber framing shall be in accordance with the AITC timber construction manual or the national design specifications (NDS) -latest edition.
2. Individual timber framing members shall be visually graded, minimum grade #2 Spruce-Pine-Fir (SPF), kiln dried to 19% maximum moisture content.
3. Pressure treated lumber shall be used where wood is in contact with ground, concrete or masonry. Timber shall be southern yellow pine treated with cca to 0.4 #/CF in accordance with AWPA C-18.
4. Metal connectors shall be used at all timber to timber connections or as noted on the design drawings.
5. Provide Simpson H2.5A hurricane anchors where timber framing and/or trusses bearing on structural steel beams or bearing walls.
6. Nailing not specified shall conform with IBC 2003
7. Roof sheathing shall be 5/8" APA rated plywood w/ H-clips. Attach plywood to all supports using 8d nails spaced at 4" o.c. at panel edges and 8" o.c. at intermediate supports.
8. Wall sheathing shall be 1/2" APA rated plywood. Attach plywood to all supports using 8d nails spaced at 6" o.c. at panel edges and 12" o.c. at intermediate supports. All panel edges shall be blocked w/ 2x6 solid blocking.
9. Floor sheathing shall be 3/4" T&G APA rated "ADVANTEC". Attach plywood to all supports using 8d nails spaced at 6" o.c. at panel edges and 12" o.c. at intermediate supports. All panel nailed and glued to the timber floor framing.

REQUIRED SUBMITTALS & TESTING

For each submittal, submit (5) copies and (1) reproducible sepia to the Architect

1. Concrete reinforcing, concrete mix design & testing, (03300):
   Submit complete shop drawings and schedules of all reinforcing steel. Drawings shall be prepared by the contractor and submitted to the engineer for review prior to commencement of that portion of the work. All accessories, schedules, bend types etc. shall be shown on the shop drawings.
   Compressive Strength Tests: ASTM C39; prepare one set for each 100 cubic yards or fraction tereof, of each concrete class placed in any one day or for each 5,000 square feet of surface area placed; test 1 specimen at 7 days, 2 specimens at 28 days, and reserve 1 specimen for later testing if required.
2. Structural Steel:
   Submit detailed drawings, including complete details and schedules for fabrication and assembly of structural steel members, procedures and diagrams. Including details of cuts, copes, connections, camber, holes and other pertinent data.
   Indicate welds by standard AWS symbols, and show size, length, and type of each weld.
   Provide setting drawings, templates and directions for installation of anchor bolts and other anchorages to be installed by others.

Engineers Stamp: Provide a final set of shop drawings which have been signed and stamped by a structural engineer licensed to practice in the State of Maine if the submittal is for Arch/Eor review only.

STATE OF MAINE · MARK F. LEASURE · 5956 · REGISTERED PROFESSIONAL ENGINEER

490 Congress Street
Portland, Maine

Kimball Building, LLC
Portland, Maine

James Sterling
AIA
Architect
142 High Street
Portland, Maine

FOR PERMIT ONLY
NOT FOR CONSTRUCTION

GENERAL NOTES

SCALE: NO SCALE

DATE:
MAY 26, 2005

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