





WALL SECTIONS & DETAILS

Project:

AIRPLANE HANGER

WESTBROOK STREET
PORTLAND, MAINE

Portions

Revisions:
Checked By:
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OWNER:
NEPTUNE PROPERTIES LLC

120 Exchnage, Portland, Maine 04101

### GENERAL NOTES:

- specifications. See specifications for requirements in addition to general nates.

  2. Structural drawings shall be used in conjunction with job specifications and architectural, methodical, electrical, journabling, and site drowings, consult these drawings for locations and dimensions of openings, chases, inserts, regiets, seeves, and other details not shown on structural drawings and other details not shown on structural drawings 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.

  4. Do not scale plans.

  5. Sections and details shown on any structural drawings shall be considered typical for similar conditions.

  6. All proprietary products shall be installed in accordance with the manufacturers writter, instructions.

  7. The structure is designed to be sell supporting and stable after the Building is complete. It is the contractor's sole responsibility to determine erection procedures and sequencing to shaure the safety of the building and its components during erection. This includes the addition of necessary showing, sreeting temporary bracing, apps or tie downs. Such material shall remporary bracing, apps or tied downs. Such material shall remporary for the contractor after completion of the project.

  8. All applicable federal, state, and municipal regulations shall be followed, including the federal department of lobor occupational safety and health act.

- 1. Building code: IBC International Building Code (2003).
- Design Live Loads: (Ground snow load = 60 PSF)
  Roof......42 PSF + Drift
  Office Mezzanine......50 psf & partitio Common areas......Stairs & exit ways....... Hangar Floor/Storage areas...... ..100 PSF ..100 PSF ....125 PSF
- Design wind loads are based on  $\exp \ e \ D \ g \ 10$  wind speed. 3

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Seismic design per IBC 2001 Code.

# Foundations have been designed with a presumptive bearing capacity of 2000 PSF to be verified in the field by the general contractor.

FOUNDATION NOTES:

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- Interior spread footings and exterior strip footings shall be founded on native soil or compacted structural fill.
   Exterior strip and spread footings shall be founded on a minimum of 4°-0" below finished grade.
   Slabs on grade shall been on a minimum of 12" of compacted structural fill. If loose or undesirable fills are encountered at the slab sub grade 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.
   Structural fill shall be used at all locations below footings and slabs and adjacent to the foundation walls. Prior to placement of structural fill shall be used at all locations below footings conditions all table consist of clean granular material. Compacted structural fill shall consist of clean granular material free of organics, loam, trash, snow, ice, frazen soil or any other objectionable material, it shall be well graded within the following units:

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SCREEN OR SIEVE SIZE

PERCENT FINER BY WEIGHT

4 inch 3 inch 1/4 inch NO. 40 NO. 200 100 90 to 25 to 0 to 0 to 100 90 30 5

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- 6. Structural fill beneath slabs shall be placed in layers not exceeding 6" to 12" in loose measure and compacted by self propelled compaction equipment at approximate optimum moisture content to a dry density of at least 95% of the maximum in place dry density as determined by the modified proctor test (ATSM D-1557).

  1. Under drains shall be placed as shown on the site drawings. Under drains shall be installed to positively drain to a suitable discharge point away from the structure. Refer to the site drawings for additional information. Structural fill meeting gradation and compaction requirements noted above. Reinforce slabs with 6x6 W2.1xW2.1 WWF.

  9. Backfill both sides of foundation walls simultaneously.

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- All concrete work shall conform to ACI 318—Latest Edition. Concrete strength at 28 days shall be:
  a. 3000 PSI for footing, walls, and piers, b. 4000 PSI for all slabs on grade.
- All concrete shall be air entrained 4-6% per the specifications.
- Concrete shall not be placed in water or on frozen ground. Provide PVC sleeves where pipes pass through concrete walls or

- Scales.

  Reinforcing bars shall conform to ASTM A615 Grade 60 deformed bars, and shall be detailed, fobricated and erected in accordance with ACI 315-Latest edition.

  Welded wire fabric shall be provided in flat sheets.

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  Complete shap 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 work. All accessories must be shown on the shap drawings. Submit (6) blue line prints and (1) reproducible (sepia) to the Architect.

  Splices of reinforcing bars shall be in accordance with ACI 318. Splices of WMF shall be 6" minimum.

  Concrete finishes: See Architectural drawings
  for additional information.
- Provide control/construction joints in foundation walls at a maximum spacing of 15 ft. from any corner or 30 ft. along length of wall. At control joints, discontinue every other horizontal bor. At construction joints all reinforcing shall be continuous through the joint.

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The general contractor shall be responsible for coordination of door bond out locations, slab depression and other required bond outs. Coordinate location of bond outs with Architectural, Mechanical & Plumbing, and Electrical drawings as necessary to properly install each specific item.

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Provide control joints in slab (1 1/4" deep x 1/2" wide) at 15' x 15' spacing (225 SF).

- Structural steel fabrication, erection, and connection design conform to AISC "Specification for the design, fabrication, erection of structural steel"—Latest edition.

- Structural steel:

  a. Structural steel shall conform to ASTM A-36.
  b. Structural tubing shall conform to ASTM A-500 GR.B.
  c. Structural pipe shall conform to ASTM A-5.3, TYPE E or S.
  c. Structural pipe shall conform to ASTM A-5.3, TYPE E or S.
  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.
- Field connections shall be bolted using 3/4% A325 high strength bolts except where field welding is indicated on the drawings
- All welding shall conform to AWS D1.1—Latest edition. Welding electrodes shall be  ${\rm E70XX}.$

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## TIMEEN FA MING:

- 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 acca 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 drowings.

  5. Provide Simpson H1 hurricane anchors where timber framing and/or trusses bear on structural steel beams or bearing walls.

  6. Nalling not specified shall contarm with BOCA 1999.

  7. Roof sheathing shall be 5/8" APA rated plywood w/ H-clips. Attach plywood to all supports using 10d nails spaced at 4" o.c. at panel edges and 12" o.c. at intermediate supports. All panel edges shall be 1/2" APA rated plywood. Attach plywood to all supports using 10d nails spaced at 4" o.c. at panel edges and 12" o.c. at intermediate supports. All panel edges shall be 1/2" APA rated plywood. Attach plywood to all supports using 10d nails spaced at 6" o.c. at panel edges and 12" o.c. at intermediate supports. All panel edges and 12" o.c. at intermediate supports. All panel nailed and glued to the timber floor framing.
- Ceiling sheathing shall be 1/2" APA rated plywood. Attach plywood to all supports using 10d nails spaced at 6" o.c. at panel edges and 12" O.C. at intermediate supports.

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- 1. Materials: Stress graded lumber, metal plate connectors. Minimum grade No. 2 M.S.R. Southern Pine, kin dried, 15% maximum M.C., or approved alternate.

  2. Applicable specifications:

  a. National Design Specification for stress graded lumber and its fastening (NDS).

  b. Design specifications for light metal plate connected wood trusses (TPI—Latest edition)

  3. Bracing: The truss manufacturer shall specify all bracing required both for temporary construction loading and for permanent lateral support of compression members.

  a. Submittels:

  a. Submittels:

  b. Submittels:

  c. Submit design calculations, shop drawings and erection procedures all affixed with the seal of a professional structural engineer registered in the State of Maine.

  b. Shap drawings shall show stress grade and size of members, size and location of plate connectors, size and location of plate connectors, size and location of bracing and shall be approved by the truss designer.

  5. All fabricated trusses shall be inspected at the fabrication plant and approved trusses shall be inspected at the fabrication license agreement.

  6. Connector plates shall be galvanized.

  7. Timber trusses shall be galvanized.

  8. Provide temporary and permanent bottom chard and web bracing in accordance with the (TPI—latest edition).

  9. Trusses shall be designed for all potential load combinations of live loads (snow) and wind loads in accordance with BOCA 1999.

- web bracing in accordance with the

## PRECAST CONCRETE

- Structural precast concrete shall conform to the Concrete Institute's manual for quality control, p ne Pre-stressed publication MNL 116.
- Extent of structural precast concrete work is shown on drawings and in schedules.
- Reinforcing Bars: ASTM A 615, Grade 60. Structural precast concrete includes all 8" hollow core panels.
- complying with ASTM
- Tendons shall be 7 wire stress relieved strand A 416. Use 270 ksi 7 wire strand.
- Steel Wire shall meet ASTM A 82, plain, cold-drawn, steel. Install tendons to produce units having a UL fire rating of 1 hour.
- Welded Wire Fabric: ASTM A 185.
- Deformed Welded Wire Fabric: ASTM A 497.

  Portland Cement: ASTM C 150, Type I or Type
- Aggregates: ASTM C 33, Provide aggregates for exposed concrete. from a single
- Water shall be potable and free from foreign materials in amounts harmful to concrete and embedded steel.
- 13. Air-Entraining Admixture: ASTM C 260.
- 14. Water-Reducing Admixture: ASTM C 494, Type A. Types B, C, D or E may be used, subject to the Architect's approval.

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- 16. Compressive strength: 5000 psi minimum at Accessories: Provide clips, hongers, and other accessories required for installation of project units and for supports of subsequent construction or lindsres.
- t 28 days. 3500 psi.
- Use air—entraining admixture in concrete, unless otherwise indicated.
- Release strength for pre-stressed units(f'ci):
- 19. Bearing Pads (1/8"x3"): Provide bearing pads slab units: KOROLATH or approved alternate. for precast hollow
- Install flexible bearing pads where indicated, as precast units are being erected. Set pads on level, uniform bearing surfaces and maintain in correct position until precast units are placed.
- Powder-Actuated Fasteners are not permitted for surface attachment of accessory items in precast, pre-stressed unit, unless otherwise accepted by precast manufacturer, architect and engineer of record.
- 23. Provide precast lintel were shown on the architectural drawings in brick veneer system. Lintels shall have 2#4 bars T&B typ. Grouting Connections and Joints: After precast concrete units
  have been placed and secured, grout open spaces at connection and
  joints where shown on the plans.

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PRECAST PLANK &

MASONRY NOTES

esigned by: JHL rawn by: LEM necked by: JHI cole: 3/16" = 1'~0 late: OCT. 04, 2005 olot date: OCT. 04, 2005

GENERAL REVISIONS
MULTIPLE CHANGES TO DWGS

H. LEASURE 6242

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