

FOUNDATION NOTES:

- FOUNDATION NOTES HAVE BEEN DESIGNED WITH A PRESUMPTIVE SOIL BEARING CAPACITY OF 2000 PSF TO BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
- INTERIOR SPREAD FOOTINGS AND EXTERIOR STRIP FOOTINGS SHALL BE FOUNDED ON NATIVE SOIL, COMPACTED STRUCTURAL FILL OR BEDROCK.
- EXTERIOR STRIP AND SPREAD FOOTINGS SHALL BE FOUNDED ON A MIN. 4'-0" BELOW FINISH GRADE.
- SLABS ON GRADE SHALL BEAR A MINIMUM OF 12" OF COMPACTED STRUCTURAL FILL OR 3/4" CRUSHED STONE. 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, 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 UNITS:

SCREEN OR SIEVE	PERCENT FINER BY WEIGHT
4 INCH	100
3 INCH	90 TO 100
1/2 INCH	25 TO 90
NO. 40	0 TO 30
NO. 200	0 TO 5
- STRUCTURAL FILL BENEATH SLABS SHALL BE PLACED IN LAYERS NOT EXCEEDING 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 (ASTM D-1557).
- 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.
- EXTERIOR CONCRETE SLABS ON GRADE, SHALL BE UNDERLAIN BY AT LEAST 4 FEET OF STRUCTURAL FILL MEETING GRADATION AND COMPACTION REQUIREMENTS NOTED ABOVE. REINFORCE SLABS WITH 6x6 W2.1xW2.1 WWF.
- BACKFILL BOTH SIDES OF FOUNDATION WALLS SIMULTANEOUSLY.

CONCRETE NOTES:

- ALL CONCRETE WORK SHALL CONFORM TO ACI 318-LATEST EDITION.
- CONCRETE STRENGTH AT 28 DAYS SHALL BE:
 - 3000 PSI FOR FOOTINGS, FROST WALLS, AND PIERS.
 - 4000 PSI FOR ALL RETAINING WALLS AND SLAB-ON-GRADE.
- ALL CONCRETE SHALL BE AIR ENTRAINED PER THE SPECIFICATIONS.
- CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
- PROVIDE PVC SLEEVES WHERE PIPES PASS THROUGH CONCRETE WALLS OR SLABS.
- 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.
- WELDED WIRE FABRIC SHALL BE PROVIDED IN FLAT SHEETS.
- FIBER REINFORCING CONCRETE SHALL CONFORM TO ASTM C-116.
- 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 WORK. ALL ACCESSORIES MUST BE SHOWN ON THE SHOP 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 WWF SHALL BE 6" MINIMUM.
- CONCRETE FINISH: TROWEL FINISH ALL CONCRETE SLABS AND GROUT CLEAN ALL CONCRETE WALLS.
- ANCHOR BOLTS SHALL CONFORM TO ASTM A307 UNLESS NOTED OTHERWISE ON PLAN. ANCHOR BOLTS AT ALL BRACING LOCATIONS SHALL CONFORM TO ASTM A36.
- PROVIDE CONTROL CONSTRUCTION JOINTS IN FOUNDATION WALLS AT A MAXIMUM SPACING OF 15 FT. FROM ANY CORNER OR 30 FT. FROM ANY CORNER OR 30 FT. ALONG LENGTH OF WALL. AT CONTROL JOINTS, DISCONTINUE EVERY OTHER HORIZONTAL BAR. AT CONSTRUCTION JOINTS ALL REINFORCING SHALL BE CONTINUOUS THROUGH THE JOINT.
- 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 CIVIL/SITE, ARCHITECTURAL, MECHANICAL & PLUMBING, AND ELECTRICAL DRAWINGS AS NECESSARY TO PROPERLY INSTALL EACH SPECIFIC ITEM.

TIMBER TRUSS FRAMING:

- MATERIALS: STRESS GRADED LUMBER, METAL PLATE CONNECTORS, MINIMUM GRADE NO. 2 M.S.R. SOUTHERN PINE, KILN DRIED, 15 % MAXIMUM M.C., OR APPROVED ALTERNATE.
- APPLICABLE SPECIFICATIONS:
 - NATIONAL DESIGN SPECIFICATION FOR STRESS GRADED LUMBER AND ITS FASTENING (NDS).
 - DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES (TPI-LATEST EDITION).
- BRACING: THE TRUSS MANUFACTURER SHALL SPECIFY ALL BRACING REQUIRED BOTH FOR TEMPORARY CONSTRUCTION LOADING AND FOR PERMANENT LATERAL SUPPORT OF COMPRESSION MEMBERS.
- SUBMITTALS:
 - SUBMIT DESIGN CALCULATIONS, SHOP DRAWINGS AND ERECTION PROCEDURES ALL AFFIXED WITH THE SEAL OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF MAINE.
 - SHOP DRAWINGS SHALL SHOW STRESS GRADE AND SIZE OF MEMBERS, SIZE AND LOCATION OF PLATE CONNECTORS, SIZE AND LOCATION OF BRACING AND SHALL BE APPROVED BY THE TRUSS DESIGNER.
- ALL FABRICATED TRUSSES SHALL BE INSPECTED AT THE FABRICATION PLANT AND APPROVED TRUSSES SHALL RECEIVE THE TPI MARK OF APPROVAL IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE IN-PLANT INSPECTION LICENSE AGREEMENT.
- CONNECTOR PLATES SHALL BE GALVANIZED.
- TIMBER TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH IBC 2003 AND ASCE 7-LATEST EDITION.
- PROVIDE PERMANENT BOTTOM CHORD BRACING IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE (TPI)-LATEST EDITION.
- TRUSSES SHALL BE DESIGNED FOR ALL POTENTIAL LOAD COMBINATIONS OF LIVE LOADS (SNOW) AND WIND LOADS INCLUDING UNBALANCED SNOW LOADS, DRIFT LOADS AND WIND LOADS IN ACCORDANCE WITH INC 2003.

TIMBER FRAMING:

- ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH THE AITC TIMBER CONSTRUCTION MANUAL OR THE NATIONAL DESIGN SPECIFICATIONS (NDS) - LATEST EDITION.
- INDIVIDUAL TIMBER FRAMING MEMBERS SHALL BE VISUALLY GRADED, MINIMUM GRADE #2 SPRUCE-PINE-FIR (SPF), KILN DRIED TO 19 % MAXIMUM MOISTURE CONTENT.
- 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 AWWA C-18.
- METAL CONNECTORS SHALL BE USED AT ALL TIMBER TO TIMBER CONNECTIONS OR AS NOTED ON THE DESIGN DRAWINGS.
- PROVIDE SIMPSON H2.5A HURRICANE ANCHORS WHERE TIMBER FRAMING AND/OR TRUSSES BEAR ON STRUCTURAL STEEL BEAMS OR BEARING WALLS.
- NAILING NOT SPECIFIED SHALL CONFORM WITH BOCA 1999.
- ROOF SHEATHING SHALL BE 3/4" APA RATED SHEATHING W/ H-CLIPS. ATTACH SHEATHING TO ALL SUPPORTS USING 8d NAILS SPACED AT 4" O.C. AT PANEL EDGES AND 8" O.C. AT INTERMEDIATE SUPPORTS.
- WALL SHEATHING SHALL BE 1/2" APA RATED SHEATHING. ATTACH SHEATHING 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.
- FLOOR SHEATHING SHALL BE 3/4" T&G APA RATED SHEATHING. ATTACH SHEATHING TO ALL SUPPORTS USING 8d NAILS SPACED AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS. ALL PANELS SHALL BE NAILED AND GLUED TO THE TIMBER FLOOR FRAMING.

REQUIRED SUBMITTALS & TESTING

- FOR EACH SUBMITTAL SUBMIT (2) COPIES AND/OR ELECTRONIC MEDIA TO THE ARCHITECT.
- CONCRETE REINFORCING, CONCRETE MIX DESIGN & TESTING, (03300): SUBMIT COMPLETE SHOP DRAWINGS AND SCHEDULE 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 THEREOF, 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.
 - OPEN WEB ROOF TRUSSES:

SUBMIT SHOP DRAWINGS, PREPARED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF MAINE, SHOWING TIMBER SPECIES, SIZES AND STRESS GRADE OF LUMBER TO BE USED; PITCH, SPAN, CAMBER, CONFIGURATION, AND SPACING FOR EACH TYPE OF TRUSS REQUIRED; TYPE SIZE, MATERIAL, FINISH, DESIGN VALUE AND LOCATION OF METAL CONNECTOR PLATES; INCLUDING BEARING AND ANCHORAGE DETAILS.

ENGINEER 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.



LOT 16 CARRAIGE LANE
 PORTLAND, MAINE
 50 x 40 UNIT

DRAWINGS THIS SHEET
 STRUCTURAL NOTES

DATE
 02/24/08

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