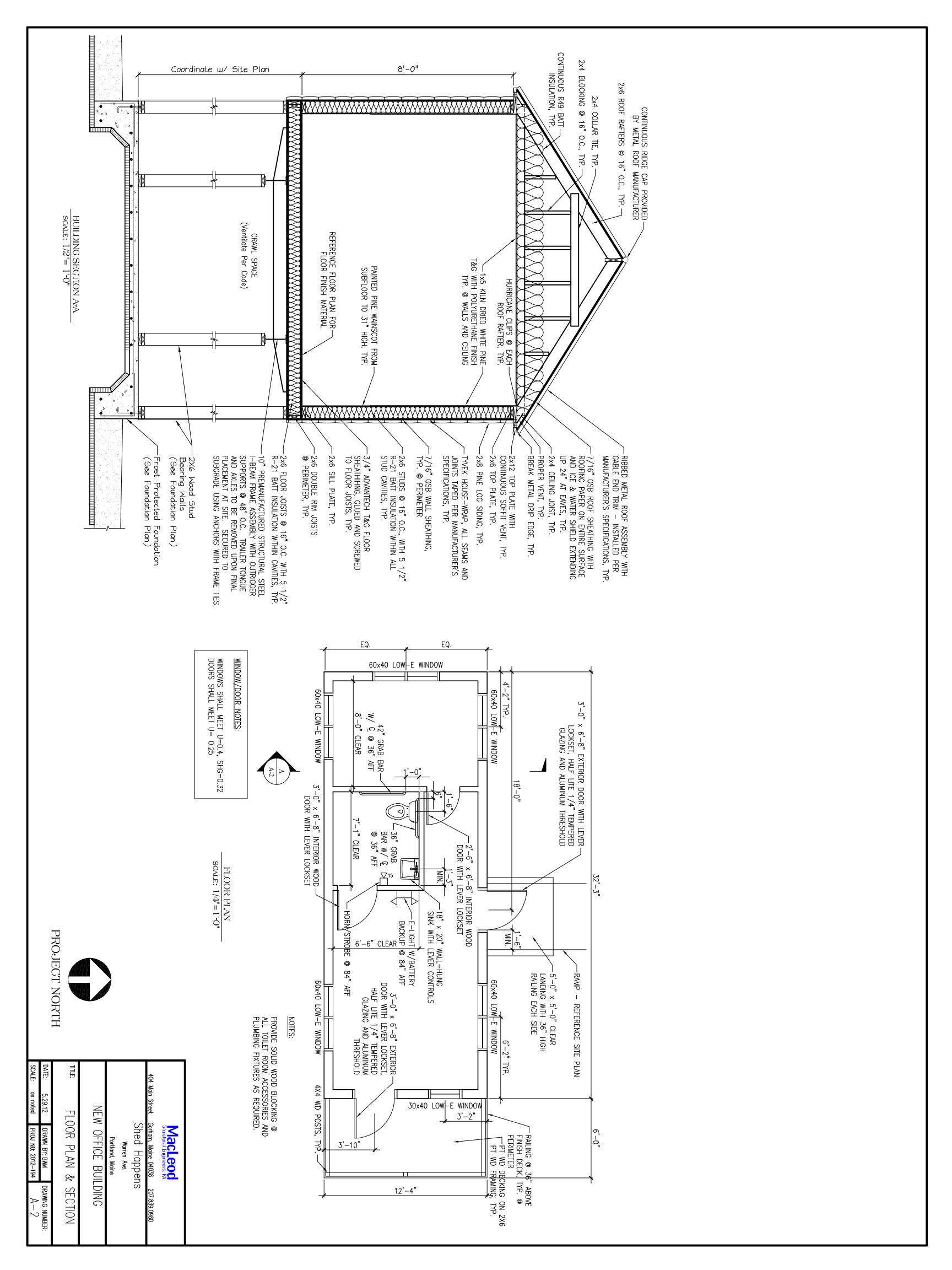
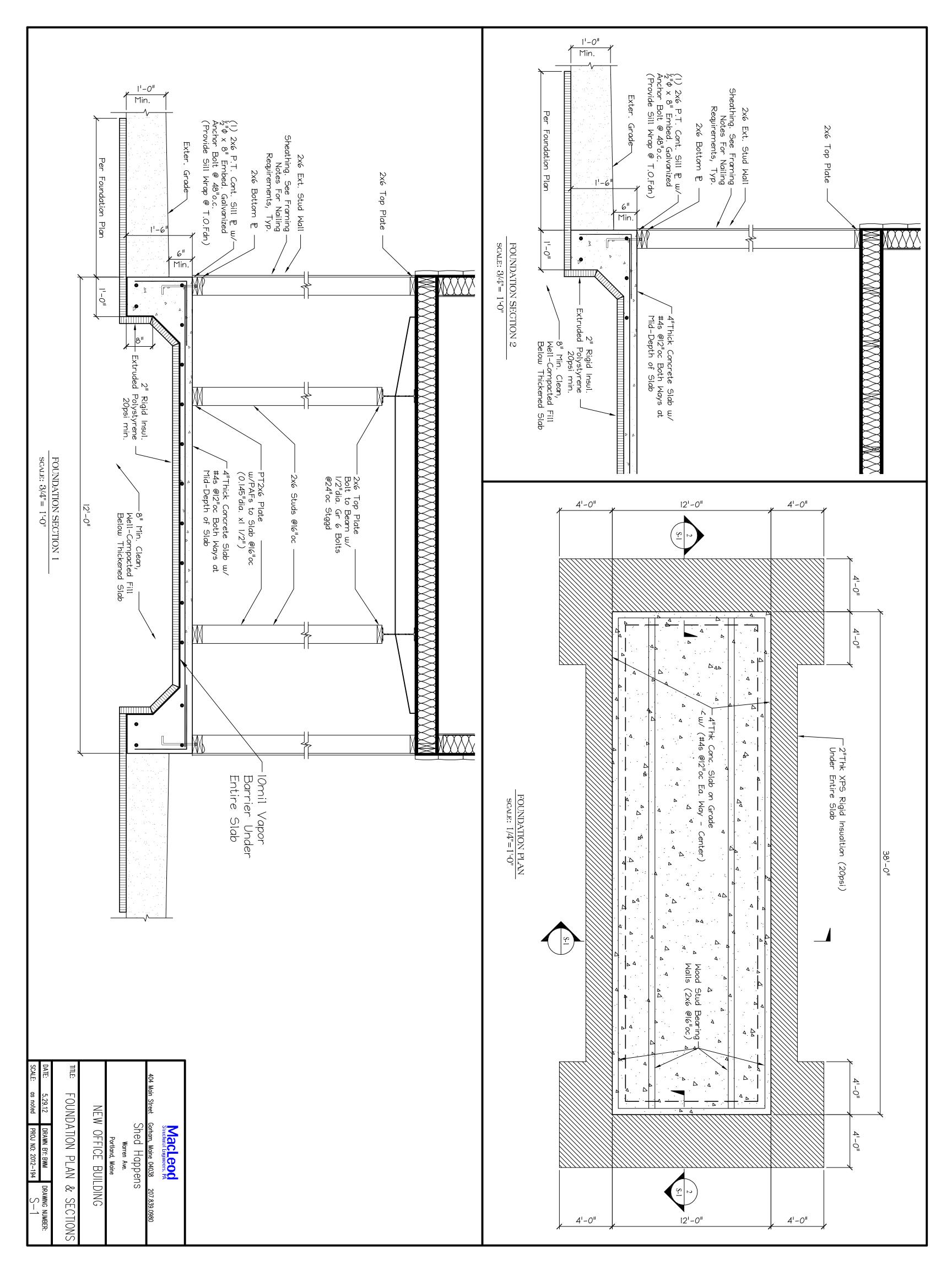


PORTLAND, MAINE





GENERAL NOTES:

- STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THES DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETS, SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS. THESE
- \dot{N} ALL DI 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.
- $\dot{\omega}$ 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.
- APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS ALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF SOR OCCUPATIONAL SAFETY AND HEALTH ACT.
- \mathcal{G} IT IS THE OWNER'S SOLE RESPONSIBILITY TO EMPLOY ONE OR MORE SPECIAL INSPECTORS (IF REQUIRED) TO PROVIDE INSPECTIONS IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF IBC 2006.

DESIGN NOTES:

- THIS BUILDING IS DESIGNED TO COMPLY INTERNATIONAL BUILDING CODE. WITH THE 2009 EDITION OF
- \dot{N} SNOW LOAD
- FLAT ROOF SNOW LOAD = 60 PSF FLAT ROOF SNOW LOAD = 42 PSF SNOW LOAD IMPORTANCE FACTOR I = 1.0 SNOW EXPOSURE FACTOR Ce = 1.0 SNOW THERMAL FACTOR Ct= 1.0 BALANCE AND UNBALANCED SNOW LOADS 0.
- Z ACCORDANCE WITH ASCE 7/05

MIND LOADS:

- BASIC WIND SPEED V = 100 MPH
 WIND LOAD IMPORTANCE FACTOR I = 1.0
 WIND INTERNAL PRESSURE COEFFICIENT (
- $\overline{\sigma}$ $\overline{\upsilon}$ $\overline{\omega}$ $\overline{\sigma}$ GCPi
- Mind Exposure \Box П
- ROOF

4.

- <u>2</u> 5
- С. OF DEAD LOAD a. TOP CHORD = 10.0 PSF b. BOTTOM CHORD = 15.0 PSF INIT(S) = TO BE DETERMINED
- 'n
- F LIVE LOAD
 TOP CHORD CHORD
- . Б TOP CHORD = 20.0 PSF BOTTOM CHORD - ATTIC LOAD Per Code

6

- EARTHQUAKE LOAD:
- a. DESIGN OF EARTHQUAKE LOAD IN ACCORDANCE WITH ASCE 7/05
 b. SEISMIC IMPORTANCE FACTOR I = 1.0
 c. 0.2s MAPPED SPECTRAL RESPONSE ACCELERATION Ss = per code
 d. 1.0s MAPPED SPECTRAL RESPONSE ACCELERATION SI = per code
 e. SITE CLASS = CLASS D.
 f. SPECTRAL RESPONSE COEFFICIENT SDS = per code
 g. SPECTRAL RESPONSE COEFFICIENT SDI = per code
 h. SEISMIC DESIGN CATEGORY = CATEGORY B
 i. BASIC SEISMIC FORCE RESISTING SYSTEM: BEARING WALL SYSTEM =
 LIGHT FRAMED WALL SYSTEMS SHEATHED WITH WOOD STRUCTURAL
 PANELS RATED FOR SHEAR RESISTANCE
 j. RESPONSE MODIFICATION FACTOR R = 6
 k. DEFLECTION AMPLIFICATION FACTOR CD = 4
 l. ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE ... \(\dot{a} \) \(\dot{a} \

7.

DEFLECTION CRITERIA
a. ROOF (LIVE) = L/
b. ROOF (TOTAL) = L/240

FOUNDATION NOTES:

- FOUNDATION DESIGNED BASED ON AN ASSUMED MAXIMUM ALLOWABLE BEARING PRESSURE OF 2500 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. MAXIMUM IT IS TH
- 2 DESIGN OF EXTERIOR FOUNDATION IS BASED ON A FROST DEPTH OF 4'-6 : 4'-6" BFI (' PROTECTED FOUNDATION FINISHED GRADE.
- 'n NO HORIZONTAL JOINT WILL BE PERMITTED IN UNLESS NOTED OTHERWISE. THE WALLS
- PROVIDE CONTROL JOINTS IN SLABS I2 FT O.C. MAX.
- $\dot{\Omega}$ EXCAVATING AND BACK FILLING AT NEW FOUNDATION WALLS SHALL BE DONE SUCH THAT SYMMETRICAL LOADING SHALL BE MAINTAINED ON BOTH SIDES. WHERE DESIGN CONDITIONS REQUIRE DIFFERENT BACK FILL HEIGHTS, WALLS SHALL BE FIRMLY SHORED IN POSITION, AND SHORES SHALL REMAIN UNTIL FLOORS ARE PLACED AND PROPERLY SET, TO PROVIDE FULL SUPPORT. ВE
- 6 CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, II AND FINAL CLEARANCE OF ANY NEEDLING, SHORING, BRACING OF EXISTING STRUCTURES. INSTALLATION,
- 7 VAPOR BARRIER BENEATH SLAB SHALL BE 10 MII OR APPROVED EQUAL.
 POLYETHYLENE <u>IS NOT</u> AN ALTERNATE PRODUCT. MII "STEGO WRAP"

CONCRETE NOTES:

- ALL CONCRETE WORK SHALL CONFORM TO ACI-318.
- ALL ALL CONCRETE EXCEPT INTERIOR AND EXTERIOR SLABS ON GROUND SHALL BE 3000 PSI AT 28 DAYS AND A MAXIMUM SLUMP OF 4".
 ALL INTERIOR AND EXTERIOR SLABS ON GROUND SHALL BE 4000 PSI AT 28 DAYS AND A MAXIMUM SLUMP OF 4". MAXIMUM SIZE AGGREGATE SHALL BE 34 " (WALL/FOOTINGS) AND 34 " (SLABS ON GROUND).
- . U CONCRETE TO REMAIN NO AIR ENTRAINMENT EXPOSED TO WEATHER SHALL IN INTERIOR CONCRETE SLABS BE AIR ENTRAINED.
- 4. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
- <u>,</u> 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.
- SPLICES OF ACI-318. REINFORCING BARS SHALL BE IN ACCORDANCE WITH
- ANCHOR CONFORM TO ASTM FI554-36.
- œ HOOKS NOT DIMENSIONED SHALL BE ACI ST, ANDARD HOOKS.
- ٩. CONCRETE COVER OVER REINFORCEMENT SHALL BE AS FOLLOWS:

 CONCRETE CAST AGAINST EARTH

 CONCRETE EXPOSED TO EARTH OR WEATHER

 CONCRETE NOT EXPOSED TO EARTH OR WEATHER

 =
- <u></u> PROVIDE CONTROL JOINTS IN STRUCTURAL SLAB AT 12-0" ON CENTER MAX.

=

PROPORTION DESIGN MIXES TO PROVIDE CONCRETE FOR INTERIOR AND EXTERIOR SLABS-ON-GRADE WITH THE FOLLOWING PROPERTIES: 5 5 5 5 STRENGTH; 4000psi @ 28 DAYS, W/C RATIO: 0.46
ENTRAINED AIR: 6% ±1%
SLUMP: 3"± 1" 3/4" AGGREGATE

MOOD FRAMING NOTES:

STRUCTURAL LUMBER:

SPRUCE PINE FIR NOI/NO2 OR BETTER

Fb = 875 PSI
Fc = 1150 PSI
E = 1400000 PSI

MANUFACTURED LUMBER:
BOISE CASCADE VERSA-LAM 2.0 3100
Fb = 3100 PSI
Fc = 3000 PSI
E = 20000000 PSI

- DESIGN CODE:
 IBC 2009 / NATIONAL DESIGN SPECIFICATIONS FOR WOOD
 CONSTRUCTION BY THE NATIONAL FOREST PRODUCTS
 ASSOCIATION.
- NAILING REQUIREMENTS FOR PLYWOOD SHEATHING: SEE DETAILS ON S6 FOR NAILING AND SPACING REQUIREMENTS.
- SPIKE TOGETHER ALL FRAMING MEMBERS WHICH ARE BUILT-UP USING MULTIPLE 2x LUMBER.
- PROVIDE GALVANIZED METAL TIES EQUAL TO SIMPSON H2.5 HURRICANE TIES BETWEEN ROOF RAFTERS OR TRUSSES AND SUPPORTING WALL MEMBERS, UNLESS SHOWN OTHERWISE. PROVIDE GALVANIZED METAL CONNECTORS EQUAL TO SIMPSON TC26 TRUSS CONNECTOR BETWEEN ALL ROOF SCISSOR TRUSSES AND SUPPORTING WALL MEMBERS, UNLESS SHOWN OTHERWISE.
- .6 PROVIDE PRESSURE TREATED LUMBER FOR ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE.
- 7. ROOF SHEATHING: 5/8" APA RATED SHEATHING, EXTERIOR OR STRUCTURAL I OR II RATED SHEATHING, SPAN RATING 32/16 (TRUSSES), 24/12 (JOISTS). INSTALL SHEETS WITH FACE GRAIN DIRECTION PERPENDICULAR TO SUPPORTING MEMBERS.
- PROVIDE $\frac{1}{2}$ " THRU BOLTS STAGGERED @ 24" O.C. FOR ATTACHEMENT OF 2x NAILER AT TOP OR BOTTOM OF WF BEAM (COORDINATE $\omega/$ PL
- 9. ALL NAILS, SPIKES, BOLTS ETC. FASTENING MEMBERS TO PRESSURE TREATED LUMBER SHALL BE EITHER STAINLESS STEEL OR HEAVY GALVANIZED.

MacLeod Structural Engineers, PA

Shed Happens Warren Ave

NEW OFFICE BUILDING

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NOTES

DRAWING I