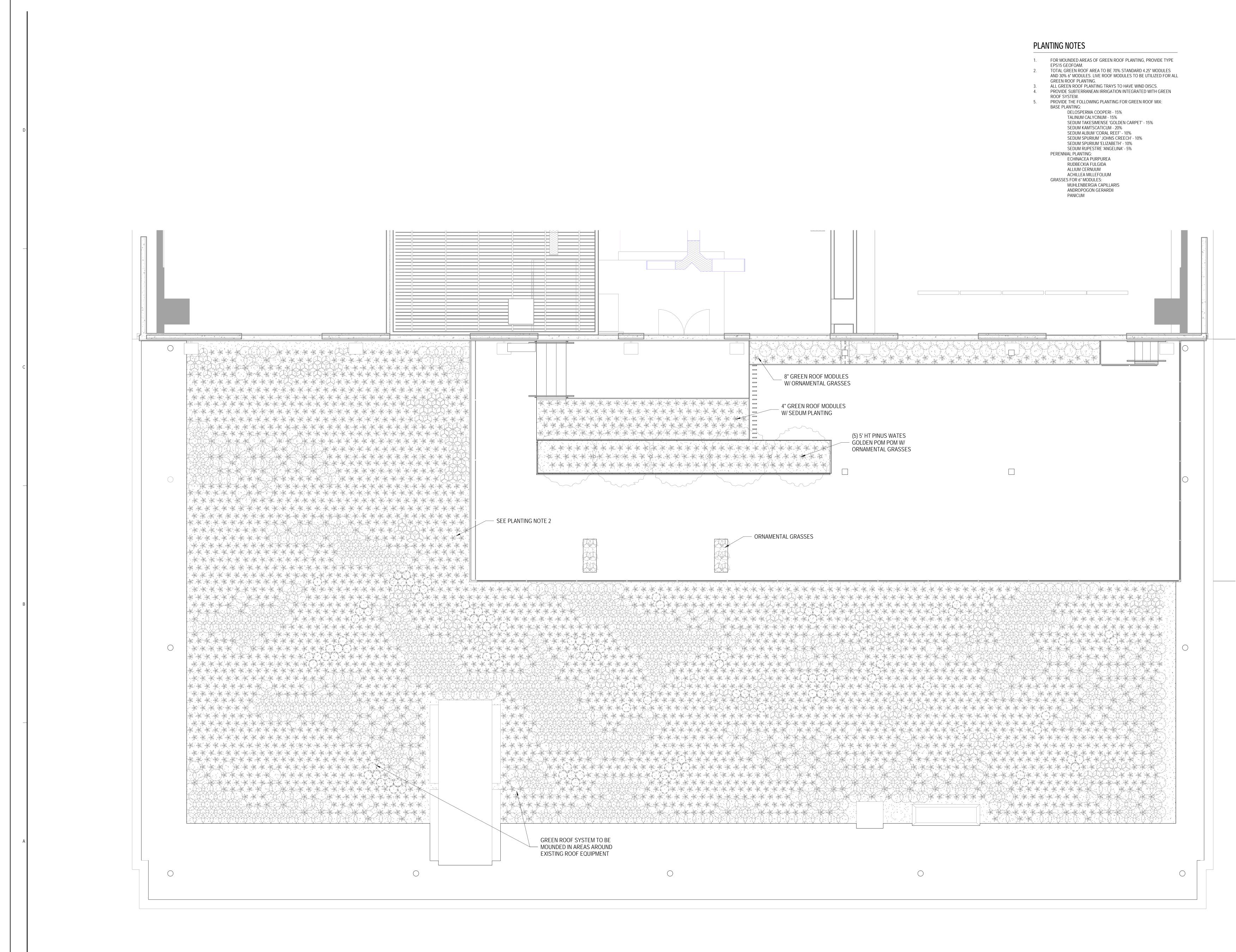




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<u>Building Loads</u>

<u>Roof Deck</u> Dead Load

Live Load

lOO psf loo psf

Design Criteria-Ćodes: 2012 IBC

<u>Concrete</u>

1.) Concrete shall be regular weight, conform to ASTM C33, and have the following minimum compressive strengths: Slabs-on-grade: 4000psi

All other foundations: 3000psi

2.) Detail, fabricate, and erect all concrete in accordance with American Concrete Institute specifications, latest edition. 3.) Concrete construction shall conform to "Specification for Structural

Concrete for Buildings" (ACI301).

4.) Air entrained concrete (5% + 1% air) shall be used for all concrete exposed in the finished work when freezing temperatures might apply. 5.) Admixtures containing chloride salts shall not be used.

6.) Maximum water/cement ratio shall be 0.50.

7.) Concrete sahll be conveyed and deposited in accordance with the recommendations of ACI 614.

8.) At time of placement, concrete shall have a slump of 4" maximum (per ASTM CI43).

9.) All concrete shall be thoroughly consolidated during placement, using a mechanical vibrator

10.) Concrete when placed, shall have a temperature between 50 degrees F. and 70 degrees F. The temperature of concrete during mixing and transportation shall never be lower than 40 degrees F. nor higher than 90 degrees F.

II.) During cold weather (ambient temperature below 40 degrees F.) the concrete contractor shall maintain the concrete at a minimum temperature of 50 degrees F. for 3 days and above 32 degrees F. for 14 days following its placement.

12. During hot weather (ambient temperature above 80 degrees F.) the concrete contractor shall follow the recommendations for hot weather concrete placement as described in ACI 305 as required to minimize temperature and shrinkage cracking of the concrete.

13.) See architectural drawings for blockouts, grooves and other surface treatments. See architectural, mechanical, electrical, and plumbing drawings for floor depressions, pads, sleeves, curbs, embedments and inserts. 15.) At construction joints of slabs and beams, provide straight, vertical

joints. Limit joint surface roughness to a half an inch amplitude. Remove any spoilage of the first concrete replacement. 16.) Place concrete in foundation only after obtaining written verification

from the geotechnical engineer of record that the bearing stratum meets project requirements ..

17.) Submit detailed shop drawings indicating locations of joints, form ties, curbs, grooves, blockouts, and any other treatment. Include a schedule of concrete casting sequences.

18.) See specifications and architectural drawings for concrete finishes. See specifications and architectural drawings for surface hardeners and sealers.

Cast-In-Place Concrete

1.) Provide 3/4" chamfer at edges of column encasements, beams, and walls, unless noted otherwise.

2.) See architectural drawings for blockouts, grooves and other surface treatments. See architectural, mechanical, electrical, and plumbing drawings for floor depressions, pads, sleeves, curbs, embedments, and inserts. 3.) At construction joints of slabs and beams, provide straight, vertical joints. Limit joint surface roughness to a half an inch amplitude. Remove any spoilage of the first concrete replacement.

4.) Where concrete is placed against an existing, hardened concrete surface at a construction joint, steel brush and clean the existing concrete surface of any debris and dust. Wet the existing concrete to a surface-dry saturated state prior to concrete placement.

5.) Place concrete in foundations only after obtaining written verification from the geotechnical engineer of record that the bearing stratum meets project requirements.

to a rim joist. 2" blocking or plate. anchored sill plate.

C. Apply gypsum board so that end joints of adjacent courses do not occur over the same stud. II. Sawn lumber material shall be as follows: A. Sawn lumber calculations are based on Spruce Pine Fir No. 2 or better, unless shown otherwise on the drawings, graded in accordance with Standard Grading Rules of WWPA or Rule #16 of WCLB.

<u>Structural Steel</u> I. Wide Flange structural steel shapes shall conform to ASTM A992 or ASTM A572 Gr50, all other structural steel shapes shall conform to ASTM A36 with special requirements per AISC Technical Bulletin #3, New Shape Material, date March 3, 1997; and structural steel tubes ASTM A500 Grade B unless noted otherwise. 2. Detail, fabricate, and erect all steel in accordance with "AISC Specification", latest edition. 3. Connection bolts shall be 3/4" diameter high strength bolts conforming to ASTM A325 unless otherwise designed by the fabricator. 4. Anchor bolts shall conform to ASTM A36. 5. All welding electrodes to be ETOXX. 6. All shop and field welding shall be in accordance with A.W.S. "Code For Welding In Building Construction", latest edition, and shall be made by certified welders. 7. Provide one shop coat of paint on all steel elements and fabrications. 8. Fabricator shall select AISC simple shear connectors for steel beams capable of carrying 50% of the total uniform load for the given size, span and grade of beam, as tabulated in the AISC tables for allowable loads. 9. Contractor shall submit shop drawings for all prefabricated steel products to the structural engineer for review prior to start of erection. 10. Unless noted otherwise all fillet welds are 1/4". II. Furnish and install all miscellaneous steel (curbs, hangers, expansion joint angles, struts, etc.) as called for or as necessary per Architectural and Mechanical/Electrical drawings. 12. Grout under bearing plates and column base plates shall attain a minimum bearing stress of 5000 psi.

erection.

Rough Carpentry I. All plywood shall be DFPA grade marked to comply with PSI-66 and shall be Standard C-D, Flat. Floor plywood shall be 3/4" T & G APA 48/24. Nail subfloor at edges with 12d nails at 6" o.c. min. and 12" o.c. in field.

2. All stud walls shown on the structural drawings shall have 2x4 or 2x6 studs spaced 16" o.c. as shown.

3. Top plates shall be doubled on all stud walls.

4. Cripples under headers shall be continuous to the sole plate.

5. Block all stud walls as required for sheathing. 6. Blocking 2" wide of equal depth of the members shall be provided

between all joists and rafters at their supports, unless members are nailed

7. Install all horizontal members with crown up.

4

8. All members in bearing shall be accurately cut and aligned so that full bearing is provided without the use of shims.

9. All joists shall have a minimum of 2" bearing at supports. Lapping joists shall have 6" laps centered over interior supports.

IO. All wall sheathing shall be applied as follows: A. Center vertical joints over studs and center horizontal joints over

B. Nail top of panels to double top plate and nail bottom of panels to

B. All 2" lumber shall be seasoned to 19% maximum moisture content. C. All wood in contact with concrete, masonry or soil shall be pressure treated or protected from condensate

12. Cuts, notches and holes bored in trusses, laminated veneer lumber, glue-laminated members or I-Joists are not permitted unless the effects of

such are specifically addressed. (Section: R502.8.2) 13. Exterior or load bearing walls with plates cut, drilled or notched more than 50% of the width of the stud shall have a galvanized metal tie 16

gage and 1 1/2 inches $(1 \frac{1}{2})$ wide fastened to each plate. (Section: R602.6.1)

13. The contractor shall submit shop drawings and connection calculations signed and sealed by a Licensed Structural Engineer in the State of Illinois to the Engineer of Record for review prior to the start of fabrication or

<u>General</u>

I. Verify all conditions and dimensions in the field and report any discrepancies immediately. 2. Contractor and sub-contractors as required will obtain all necessary

permits. 3. Contractor to be solely responsible for all construction means, methods, techniques, procedures and for coordinating all portions of the work. 4. All work to be done in accordance with all applicable codes and

ordinances related to the Local Municipality. 5. The contractor and his/her subcontractors shall hold harmless the architect/engineer, his agents, and the Owners against loss, damages, liability, or any expense arising in any manner from the wrongful and negligent acts of the contractor, the subcontractors or their respective

employees and agents. 6. All contractors, subcontractors and their employees shall be familiar and comply with all laws, ordinances, rules and regulations of all the governmental authorities having jurisdiction with regard to this work.

7. The scope of the work is shown on the drawings. The drawings show the general extent of the work and do not necessarily show everything to be removed to prepare for construction. They also do not show all of the conditions which may be encountered in order to properly execute the work.

8. The architect is responsible for reviewing all dimensions on structural drawings. In cases of dimensional discrepancies, contractor shall notify the architect.

DRAWING INDEX	
SHEET NUMBER	DESCRIPTION
50.0	GENERAL NOTES
SI.0	ROOF DECK/ PERGOLA FRAMING PLAN
52.0	FRAMING DETAILS

2

