# DESIGN LOADS PER MASSACHUSETTS STATE BUILDING CODE

LIVE LOADS

GROUND SNOW LOAD: EXTERIOR BALCONIES AND DECKS 30 PSF 60 PSF

WIND LOADS

MASSACHUSETTS STATE BUILDING CODE

139 MPH, EXPOSURE C

DEAD LOAD

WEIGHTS OF MATERIALS AND CONSTRUCTION

**FLOOD ZONE INFORMATION** 

ZONE/ELEVATION: AE 13

### **FOUNDATIONS**

- 1. EXCAVATE TO LINES AND GRADES REQUIRED TO PROPERLY INSTALL THE FOUNDATIONS ON INORGANIC, UNDISTURBED SOIL OR CONTROLLED STRUCTURAL BACKFILL AS REQUIRED BY THE ARCHITECT. ALL EXCAVATIONS SHALL BE DRY BEFORE PLACING ANY CONCRETE.
- 2. EXTERIOR FOOTINGS SHALL BE PLACED ON APPROVED SOIL AT A MINIMUM DEPTH OF 4'-0", OR AS MODIFIED BY THE STRUCTURAL ENGINEER, BELOW THE LOWEST ADJACENT GROUND EXPOSED TO FREEZING. ANY ADJUSTMENT OF FOOTING ELEVATIONS DUE TO FIELD CONDITIONS MUST HAVE THE APPROVAL OF THE ARCHITECT.
- 3. SOIL BEARING CAPACITY: FOOTINGS MUST BE PLACED ON SOIL WITH A MINIMUM BEARING CAPACITY OF 4000 POUNDS PER SQUARE FOOT.
- 4. BACKFILL BELOW FOOTINGS AND SLABS SHALL BE MADE WITH APPROVED GRANULAR MATERIALS PLACED IN 6" LAYERS. LAYERS SHALL BE COMPACTED TO 96% DENSITY AT OPTIMUM MOISTURE CONTENT, AS DEFINED BY ASTM D1557.
- 5. BACKFILLING AGAINST WALLS OR PIERS MAY ONLY BE DONE AFTER WALLS OR PIERS ARE BRACED TO PREVENT MOVEMENT. FOR WOOD FRAMED RESIDENTIAL CONSTRUCTION, NO BACKFILLING OF WALLS MAY TAKE PLACE UNTIL THE FIRST FLOOR DECK HAS BEEN FRAMED AND SHEATHED, UNLESS WRITTEN APPROVAL IS GIVEN BY THE ARCHITECT OR ENGINEER.
- 6. PROVIDE FOUNDATION DRAINAGE, WATERPROOFING/DAMP-PROOFING, AND FOUNDATION WALL INSULATION AS INDICATED ON THE ARCHITECTURAL DRAWINGS.
- 7. FOUNDATION DESIGN ASSUMES SOILS ON SITE ARE CLASS TYPES GM,GC,SM,SM—SC AND ML (PER THE UNIFIED SOIL CLASSIFICATION SYSTEM) WITH A DESIGN LATERAL SOIL PRESSURE OF 45 PSF PER FOOT OF DEPTH. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/OWNER TO CONFIRM THIS DESIGN ASSUMPTION WITH A GEOTECHNICAL ENGINEER, CIVIL ENGINEER, OR OTHER QUALIFIED DESIGN PROFESSIONAL.
- 8. FORCES DUE TO HYDROSTATIC PRESSURE HAVE NOT BEEN CONSIDERED IN THE DESIGN OF THE FOUNDATION FOR THIS STRUCTURE. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/OWNER TO CONFIRM WITH A GEOTECHNICAL ENGINEER, CIVIL ENGINEER, OR OTHER QUALIFIED DESIGN PROFESSIONAL TO ENSURE HYDROSTATIC FORCES DO NOT EXIST.
- 9. INFORMATION REGARDING THE SUBGRADE SITE PREPARTION INDICATED ON THESE PLANS IS RUDAMENTARY. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR/OWNER TO CONFIRM ALL SUBGRADE, SOIL, DRAINAGE AND ANY OTHER SITE RELATED INFORMATION WITH A GEOTECHNICAL, CIVIL ENGINEER, OR OTHER QUALIFIED DESIGN PROFESSIONAL.

### **GENERAL CONDITIONS**

- 1. G. C. MUST BUILD EXACTLY WHAT IS SHOWN ON STRUCTURAL DRAWINGS. ANY PROPOSED DEPARTURES FROM WHAT IS INDICATED MUST BE REVIEWED WITH THE ENGINEER PRIOR TO CONSTRUCTION. ALL UNAUTHORIZED CHANGES TO THE APPROVED DRAWINGS MUST BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 2. THE CONTRACTOR SHALL CAREFULLY VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON DRAWINGS PRIOR TO COMMENCEMENT OF THE WORK, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ENGINEERING AND ARCHITECTURAL DOCUMENTS.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR ALL MEANS AND METHODS OF TEMPORARY SHORING, BRACING, OR OTHERWISE PROTECTING ANY PORTION OF THE STRUCTURE, SITE AND UTILITIES FROM DAMAGE DURING CONSTRUCTION. THE ENGINEER IS SPECIFYING THE FINISHED CONDITION ONLY, WITHOUT ASSUMING KNOWLEDGE NOR RESPONSIBILITY FOR HOW THE CONTRACTOR WILL ACHIEVE THIS RESULT.
- 4. FOR RENOVATION WORK STRUCTURAL DRAWINGS PRODUCED WITH ASSUMPTIONS MADE REGARDING EXISTING CONDITIONS. IF CONTRACTOR FINDS EXISTING CONDITIONS NOT AS ASSUMED CONTACT ENGINEER IMMEDIATELY. REVISIONS TO THE STRUCTURAL FRAMING MAY BE REQUIRED.

#### ROUGH CARPENTRY

- ALL ROUGH CARPENTRY WORK SHALL BE EXECUTED IN CONFORMANCE WITH THE 9TH EDITION OF THE MASSACHUSETTS BUILDING CODE FOR ONE AND TWO FAMILY DWELLINGS (MBC 1&2) AND THE INTERNATIONAL RESIDENTIAL CODE FOR ONE AND TWO FAMILY DWELLINGS (IRC 1&2).
- REFER TO THE MBC 1&2 AND IRC 1&2 FOR FRAMING COMPONENTS NOT SPECIFIED IN PLANS AND SECTIONS. NOTIFY THE ENGINEER OF ANY COMPONENT NOT DEFINED IN EITHER THE MBC 1&2 AND IRC 1&2 OR IN THESE DRAWINGS.
- REFER TO THE IRC 1&2 FASTENER SCHEDULE FOR STRUCTURAL MEMBERS TABLE 602.3 FOR CONNECTION FASTENING NOT IDENTIFIED IN THESE PLANS OR DETAILS.
- 4. ENGINEER MAKES NO CLAIMS TOWARDS EXISTING CONDITIONS.
- WHEN NOT OTHERWISE IDENTIFIED, ALL WOOD BEAMS, JOISTS, RAFTERS, HEADERS, STRINGERS, PLATES, AND SILLS SHALL BE SPRUCE PINE FIR #2 OR BETTER, WITH A MINIMUM Fb = 875 PSI (SINGLE USE) AND Fb = 1000 PSI (REPETITIVE USE), AND E SHALL BE 1,4000,000 PSI OR BETTER.
- WOOD STUDS MAY BE EASTERN HEMLOCK, EASTERN SPRUCE, OR HEM-FIR, GRADED "STUD" GRADE, #2 OR BETTER.
- 7. PRESSURE TREATED LUMBER SHALL BE SOUTHERN PINE #1 OR BETTER.
- 8. ALL WOOD HAVING DIRECT CONTACT WITH CONCRETE OR MASONRY, AND WHEREVER WOOD IS WITHIN 8" OF FINISHED GRADE OR PART OF OPEN DECK CONSTRUCTION, SHALL BE PRESSURE TREATED.
- ALL METAL CONNECTORS INCLUDING JOIST AND BEAM HANGERS AND COLUMN CAP AND BASES SHALL BE BY SIMPSON STRONG-TIE CORP. THE CONTRACTOR SHALL STRICTLY ADHERE TO MANUFACTURER'S FASTENING REQUIREMENTS. CONTRACTOR TO VERIFY ALL CONNECTOR SIZES TO FRAMING ELEMENTS BEFORE ORDERING.
- 10. FOR WOOD JOIST SPANS UP TO 14 FEET, PROVIDE A SINGLE ROW OF FULL DEPTH BLOCKING BETWEEN JOISTS AT MIDSPAN. FOR SPANS EXCEEDING 14 FEET, PROVIDE TWO ROWS OF FULL DEPTH BLOCKING BETWEEN JOISTS AT THIRD POINTS OF THE SPAN.

# CONCRETE

- ALL CONCRETE WORK SHALL BE PERFORMED IN CONFORMANCE WITH THE LATEST EDITION OF ACI-318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- 2. CONCRETE SHALL ACHIEVE A MINIMUM 28 DAY DESIGN STRENGTH AS FOLLOWS:FOOTINGS, WALLS, INTERIOR SLABS-ON-GRADE, AND OTHER CONCRETE NOT OTHERWISE SPECIFIED 3000 PSI. EXTERIOR SLABS EXPOSED TO WEATHER 4000 PSI AIR ENTRAINED.
- ALL CONCRETE SHALL CONTAIN AN APPROVED WATER-REDUCING ADMIXTURE.
- SLUMP AT THE POINT OF DISCHARGE FROM THE READY-MIX TRUCK SHALL BE 3-5".
- . REINFORCING STEEL: TYPICAL ASTM A615, GRADE 60. FIELD BENT ASTM A615, GRADE 40 WELDED WIRE FABRIC ASTM A185.
- 7. PROVIDE #4 x 48" LONG BARS IN SLAB AT ALL INTERIOR CORNERS.





**Bivens Residence** 638 W. Rodney French blvd New Bedford, MA

REVISIONS:

No. Description Date

TITLE:

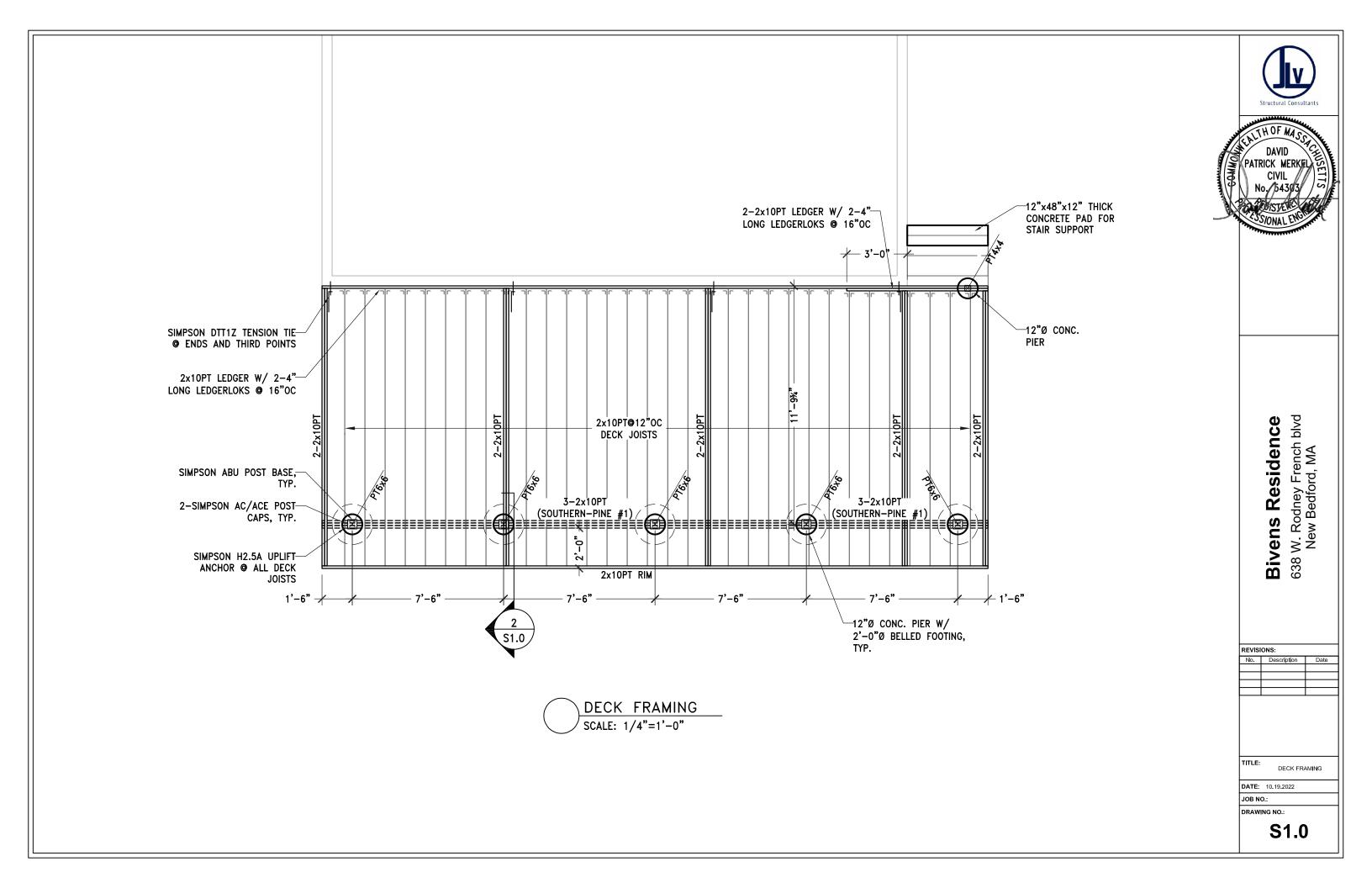
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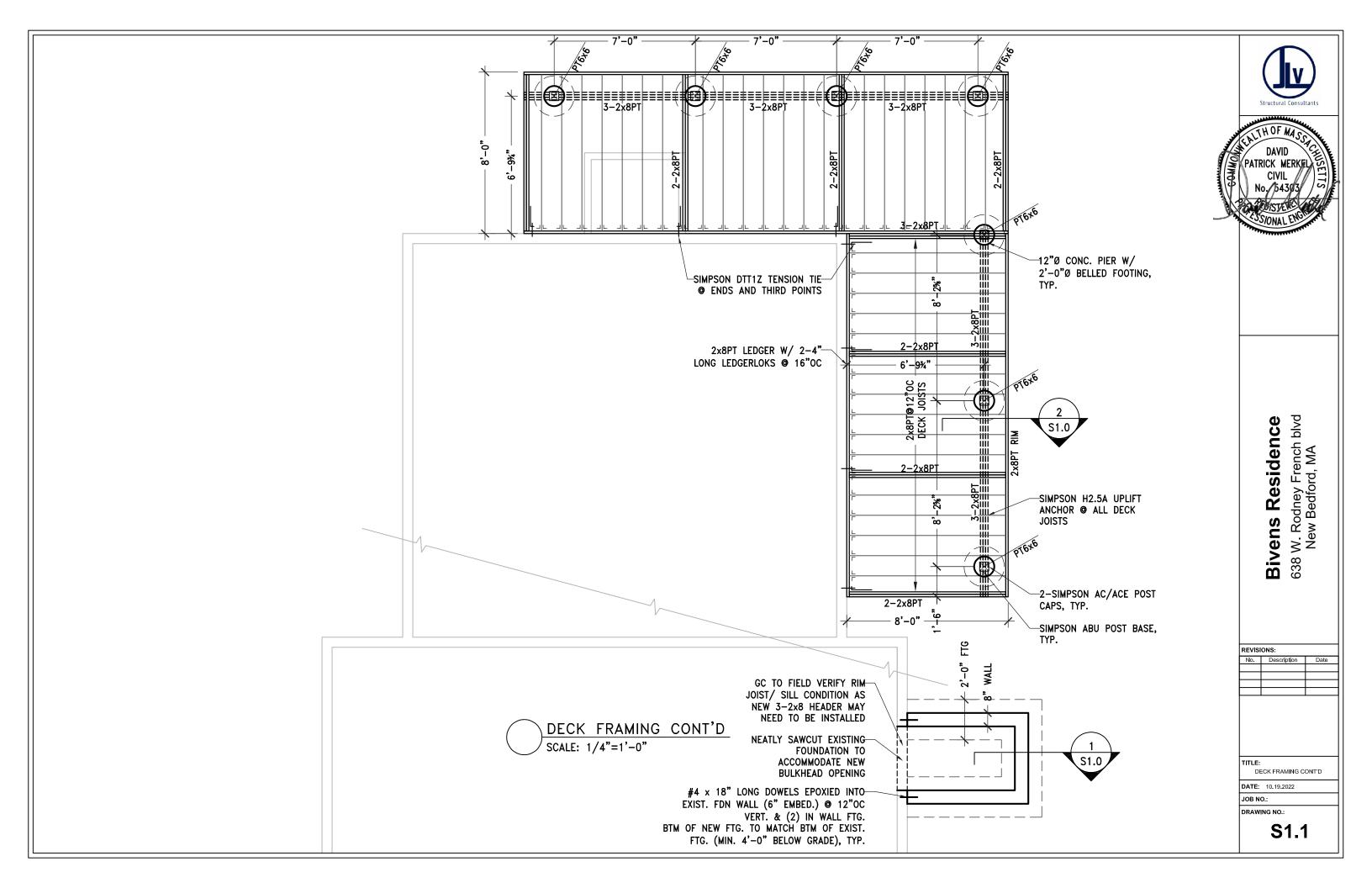
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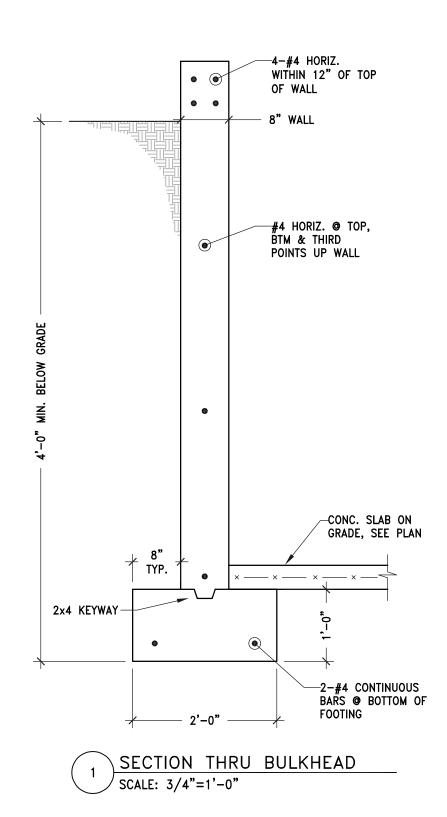
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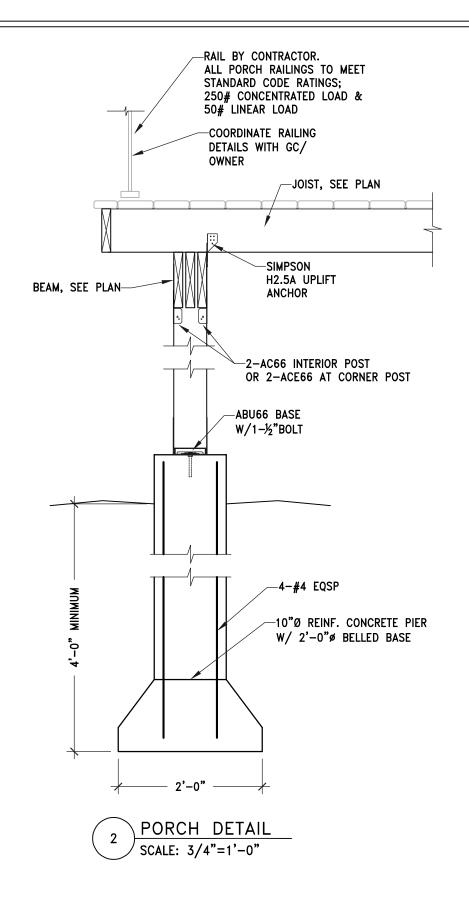
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REVISIONS:
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DETAILS

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