

THE FOLLOWING BUILDING CODES AND STANDARDS SHALL BE REFERENCED DURING CONSTRUCTION:

Table listing building codes and standards including IBC 2009, ASCE 7, ACI 301, AISC, ACI 318, ASTM, and NDS.

REFERENCE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. REFERENCE MECHANICAL, ELECTRICAL, AND ARCHITECTURAL PLANS FOR SIZES AND LOCATIONS OF WALL AND SLAB OPENINGS, DUCTS, PIPING, CURBS, AND EQUIPMENT PADS.

EXISTING DIMENSIONS AND CONDITIONS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ALL EXISTING CONSTRUCTION AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION OR FABRICATION.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF DEVIATIONS OR CHANGES ARE REQUIRED TO THE CONTRACT DOCUMENTS OR APPROVED SHOP DRAWINGS DUE TO INTERFERENCES, FABRICATION ERRORS, OR OTHER CAUSES.

THE STRUCTURE IS SELF-SUPPORTING AND STABLE AFTER THE ENTIRE BUILDING IS COMPLETELY CONSTRUCTED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCING DURING CONSTRUCTION AND ERECTION TO PROVIDE AND ENSURE LOCAL AND OVERALL STABILITY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION AND ERECTION.

GENERAL NOTES

SCALE: NTS

LIVE LOAD: LIBRARY STACK ROOMS = 150 PSF LOBBIES AND FIRST FLOOR CORRIDORS = 100 PSF CORRIDORS ABOVE FIRST FLOOR = 80 PSF

DESIGN CRITERIA

SCALE: NTS

ALL CONCRETE WORK, INCLUDING MATERIAL SELECTION, ADMIXTURES, MIXING, AND PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH APPLICABLE BUILDING CODES. IN ADDITION, REFERENCE THE FOLLOWING CONCRETE STANDARDS AND SPECIFICATIONS:

Table listing concrete standards and specifications including ACI 318, ACI 301, ACI 305, ACI 306, and ACI 308.

REQUIRED CONCRETE PARAMETERS ARE AS FOLLOWS:

Table with 4 columns: LOCATION, MAX W/C RATIO, f'c, and AIR-ENTRAINMENT. Rows include INT. CONC./WALLS/SLABS, FOUNDATIONS, FOOTINGS, & FOUNDATION WALLS, INT. SLAB-ON-GRADE, and EXT. SLAB-ON-GRADE.

WHERE: W/C = WATER TO CEMENT RATIO AND f'c = COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS

MAXIMUM AGGREGATE SIZE SHALL BE 3/4", IN CONFORMANCE WITH ASTM C33. USE PORTLAND CEMENT TYPE II, IN CONFORMANCE WITH ASTM 150. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C 260.

MAXIMUM SLUMP AFTER THE ADDITION OF A WATER-REDUCING ADMIXTURE IS 8 INCHES.

CONCRETE EXPOSED TO FREEZING AND THAWING, INCLUDING FOUNDATIONS, FOOTINGS, FOUNDATION WALLS, AND EXTERIOR WALKWAYS SHALL BE AIR ENTRAINED WITH AIR CONTENT BETWEEN 5% AND 6%.

CONTRACTOR SHALL SUBMIT PROPOSED CONCRETE MIX DESIGN AND LABORATORY TESTS OF FABRICATED CYLINDERS VERIFYING CONCRETE STRENGTH OR PERFORMANCE HISTORY OF MIX TO ENGINEER FOR ACCEPTANCE PRIOR TO PLACEMENT OF CONCRETE.

CONSTRUCTION JOINTS IN WALLS SHALL BE PERMITTED AS DETAILED ON THE STRUCTURAL DRAWINGS. SURFACES OF CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED.

WHERE ELECTRICAL CONDUIT/ RADIANT HEATING TUBES RUN IN THE SLAB, THEY SHALL BE LOCATED AT MID-DEPTH OF THE SLAB. ALUMINUM CONDUIT AND SLEEVES ARE NOT PERMITTED.

ANCHOR BOLTS SHALL CONFORM TO ASTM F1554. ANCHOR BOLTS SHALL HAVE HEAVY HEX NUTS AND LOCK WASHERS.

CONCRETE NOTES

SCALE: NTS

USE DEFORMED BILLET-STEEL REINFORCING BARS, GRADE 60, IN CONFORMANCE WITH ASTM A615. REINFORCEMENT SHALL BE ACCURATELY PLACED AND SUPPORTED PRIOR TO CONCRETE PLACEMENT, AND SHALL BE SECURED AGAINST DISPLACEMENT.

THE CONTRACTOR SHALL SUBMIT REINFORCING SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO COMMENCING FABRICATION.

Table titled 'MINIMUM CONCRETE COVER FOR REINFORCEMENT' with columns for concrete type and cover dimensions.

CONTINUOUS REINFORCEMENT SHALL BE TENSION LAP SPLICED PER LAP SPLICE LENGTH TABLE, U.N.O.

Table titled 'LAP SPLICE LENGTH TABLE' with columns for bar size and lap splice length in inches.

REINFORCEMENT HOOKS SHALL CONFORM TO STANDARD HOOKS ACCORDING TO ACI 318. WELDING OF REINFORCEMENT IS NOT PERMITTED, U.N.O.

CONCRETE REINFORCING NOTES

SCALE: NTS

ALL LUMBER SHALL BE VISUALLY GRADED AND STAMPED WITH GRADE DESIGNATION, SPECIES, AND ADDITIONAL INSPECTION INFORMATION, U.N.O.

CARE SHALL BE TAKEN TO PROTECT TIMBER FROM WEATHER AND DAMPNESS. DO NOT STACK IN SUCH A WAY AS TO CAUSE WARPING OR PREVENT ADEQUATE AIR CIRCULATION.

WOOD GRADES AND SPECIES:

- 1. SPRUCE-PINE-FIR, No.1/No.2 OR BETTER FOR TYPICAL LUMBER (JOISTS, WALLS, ETC) U.N.O.
2. USE SOUTHERN YELLOW PINE FOR EXTERIOR EXPOSURE APPLICATIONS AND WHERE SHOWN ON DRAWINGS AS PRESERVATIVE TREATED LUMBER (PT OR PPT)
3. WHERE NOTED LVL ON DRAWINGS, PROVIDE VERSA LAM 3100 BY BOISE CASCADE, OR EQUIVALENT, WHICH HAS THE FOLLOWING MINIMUM ALLOWABLE STRESSES:

Table with 2 columns: A. LVL PROPERTIES and values for Fb, Fv, Ft, Fc, and E.

STRUCTURAL LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19%.

PROVIDE PRESSURE TREATED OR WOLVANIZED LUMBER FOR ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE. ALL CONNECTORS THAT ARE IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT-DIP GALVANIZED, U.N.O.

NOMINAL SIZES ARE TYPICALLY REFERENCED ON THE DRAWINGS. PROVIDE ACTUAL SIZES AS SET FORTH IN U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD PS20-99.

ALL PLYWOOD SHALL BE APA RATED CDX SHEATHING:

- 1. USE 3/4" PLYWOOD WALL SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO WALL STUDS. STAGGER PANEL ENDS AND BLOCK ALL PANEL EDGES.
2. USE 3/4" PLYWOOD ROOF SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO FRAMING. STAGGER PANEL ENDS. USE SHEATHING CLIPS BETWEEN SHEETS WHERE BLOCKING IS NOT REQUIRED.
3. USE 3/4" PLYWOOD FLOOR SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO FRAMING. STAGGER PANEL ENDS.

PROVIDE FULL DEPTH BLOCKING AT ENDS AND INTERIOR SUPPORTS OF ALL JOISTS AND RAFTERS WHERE JOISTS AND RAFTERS FRAME OVER SUPPORTS. PROVIDE 1x3 DIAGONAL BRIDGING OR FULL DEPTH SOLID BLOCKING FOR EACH 8'-0" OF SPAN FOR ALL JOISTS AND RAFTERS.

WHERE BEAMS ARE LABELED ON PLAN, DO NOT SPLICE BEAM NOR ANY PLY OF BEAM BETWEEN SUPPORTS.

FASTENERS SHALL COMPLY WITH RECOMMENDED FASTENING SCHEDULE OF REFERENCED BUILDING CODE, U.N.O. ON DRAWINGS, SPIKE TOGETHER ALL FRAMING MEMBERS WHICH ARE BUILT-UP USING A MINIMUM OF 2-ROWS OF 16d NAILS AT 12" O.C. STAGGERED, UNLESS OTHERWISE NOTED IN BOCA OR ON THE DRAWINGS.

ALIGN COLUMNS SUCH THAT COLUMNS BEAR CONTINUOUSLY TO FOUNDATION SUPPORT.

PROVIDE HORIZONTAL BLOCKING FOR ALL LOAD BEARING WALLS AT 4'-0" O.C. VERTICAL, MAXIMUM.

SUBMIT SHOP DRAWINGS FOR ALL PREFABRICATED WOOD JOISTS AND WALL PANELS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

WOOD NOTES

SCALE: NTS

ALL STRUCTURAL STEEL WORK SHALL CONFORM TO:

- AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, NINTH EDITION
AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES

STRUCTURAL STEEL MEMBERS SHALL BE IN CONFORMANCE WITH THE FOLLOWING:

Table listing steel shapes and standards including WIDE FLANGE SHAPES AND TEES, ANGLES, PLATES, CHANNELS, SQUARE AND RECTANGULAR HSS, and STEEL PIPE.

SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO COMMENCING FABRICATION.

SHOP DRAWINGS SUBMITTALS SHALL INCLUDE:

- 1. CERTIFIED MILL TEST REPORTS OF STRUCTURAL STEEL (INCLUDING NAMES AND LOCATIONS OF MILLS AND SHOPS).
2. CERTIFIED MILL TEST REPORTS OF BOLTS, NUTS AND WASHERS (INCLUDING NAMES AND LOCATIONS OF MILLS AND SHOPS).
3. STRUCTURAL STEEL FABRICATION AND ERECTION DRAWINGS WHICH INCLUDE BOLTED CONNECTIONS (SHOP AND FIELD) AND WELDED CONNECTIONS (SHOP AND FIELD) DEPICTING AWS WELDING SYMBOLS.
4. METAL DECK SHOP DRAWINGS DEPICTING SHEAR STUD LAYOUT ON BEAMS AND GIRDERS.

OWNER SHALL RETAIN A QUALIFIED TESTING AGENCY TO PERFORM AND VERIFY THE FOLLOWING:

- 1. VISUAL INSPECTION OF ALL WELDS.
2. ULTRASONIC TESTING, IN ACCORDANCE WITH ASTM E-164, ON 100% OF ALL FIELD FULL PENETRATION WELDS.
3. PROVIDE RANDOM VERIFICATION VIA ULTRASONIC TESTING OF SHOP FULL PENETRATION WELDS.
4. FIELD BOLTED CONNECTIONS, INCLUDING VERIFICATION OF BOLT GRADES.
5. SHEAR STUD QUANTITY, PROPER INSTALLATION, SIZE, AND SPACING. SHEAR STUDS SHALL CONFORM TO AWS D1.1.

BOLTED CONNECTIONS:

- 1. FIELD CONNECTIONS SHALL UTILIZE MINIMUM 3/4" DIAMETER A325 HIGH STRENGTH BOLTS, U.N.O.
2. HIGH STRENGTH BOLTS SHALL BE INSTALLED AND TIGHTENED PER AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS.
3. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36, STANDARD HEX HEAD FURNISHED WITH HEAVY HEX NUTS AND LOCK WASHERS.
4. CONTRACTOR SHALL DESIGN CONNECTIONS NOT ALREADY DETAILED ON STRUCTURAL DRAWINGS. DESIGN SHALL BE STAMPED BY A LICENSED STRUCTURAL ENGINEER AND SUBMITTED PRIOR TO COMMENCING FABRICATION.

WELDED CONNECTIONS:

- 1. WELDING SHALL CONFORM TO AWS D1.1. USE LOW-HYDROGEN SMAW ELECTRODES WITH MINIMUM TENSILE STRENGTH OF 70 KSI.

STRUCTURAL STEEL SHALL RECEIVE THE FOLLOWING PROTECTIVE COATINGS:

- 1. DO NOT PAINT SURFACES TO RECEIVE METAL DECK AND/ OR SHEAR CONNECTORS FASTENED BY WELDING, CONTACT SURFACES OF HIGH STRENGTH BOLTED CONNECTIONS, FINISHED BEARING SURFACES, AND SURFACES TO BE WELDED IN THE FIELD. IF REQUIRED, PROTECT THESE SURFACES BY RUST-INHIBITING COATING THAT CAN BE REMOVED EASILY PRIOR TO ERECTION.
2. UNEXPOSED STRUCTURAL STEEL SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP3 AND PAINTED WITH PRIMER PAINT, TNEPEC 10-99, OR EQUIVALENT, U.N.O.
3. EXPOSED STRUCTURAL STEEL TO RECEIVE ZINC-RICH EPOXY PAINT SHALL BE FIRST CLEANED IN ACCORDANCE WITH SSPC-SP6, COMMERCIAL BLAST CLEANING. USE TNEPEC ZIN-RICH EPOXY PAINT, OR EQUIVALENT. APPLY FINISH COAT PER ARCHITECT.
4. EXPOSED STRUCTURAL STEEL TO BE HOT-DIPPED GALVANIZED SHALL BE IN ACCORDANCE WITH ASTM A123.

SHEAR CONNECTOR STUDS:

- 1. SHEAR CONNECTOR STUDS SHALL BE NELSON, OR EQUIVALENT, 3/4" DIAMETER, U.N.O.. WELD STUDS PER STUD MANUFACTURER'S RECOMMENDATIONS THROUGH METAL DECKING. STUD LENGTH SHALL BE 1" BELOW TOP OF CONCRETE SLAB-ON-DECK.
2. SHEAR STUDS, WHERE REQUIRED, ARE INDICATED ON THE DRAWINGS AS [XX] WHERE XX IS THE NUMBER OF STUDS EQUALLY SPACED BETWEEN SUPPORTS ON A BEAM OR GIRDER.

STRUCTURAL STEEL NOTES

SCALE: NTS

Large table of abbreviations and symbols including AB, ADDL, ARCH, ANCHOR BOLT, ANGLE, DOUBLE ANGLE, POUND, LINEAR FOOT, LONG LEG HORIZONTAL, LONG LEG VERTICAL, MAX, MECH, MFR, MIN, MISC, etc.

ABBREVIATIONS

SCALE: NTS

Table showing symbols for SLOPE DESIGNATION, ELEVATION MARK, ROOF PITCH, SPAN DIRECTION, SECTION MARK, UNDISTURBED EARTH, LEDGE, COMPACTED STRUCTURAL FILL, CONCRETE, GROUT, BRICK, and CMU.

LEGEND

SCALE: NTS

Vertical sidebar containing project name, drawing name, field book used, references, and contact information for Portland Public Library - Burbank Branch.