



FORM 1
CERTIFICATE OF SEISMIC PERFORMANCE LEVEL

- UC-Designed & Constructed Facility**
 Campus-Acquired or Leased Facility

BUILDING DATA

Building Name: 145 Irving St.
Address: 145 Irving St. San Francisco
Site location coordinates: Latitude 37.7642 Longitudinal -122.4596

UCOP SEISMIC PERFORMANCE LEVEL (OR "RATING"): III

ASCE 41-17 Model Building Type:

- a. Longitudinal Direction: W1a: Multistory Light Wood Frame
- b. Transverse Direction: W1a: Multistory Light Wood Frame

Gross Square Footage: 17,782
Number of stories *above* grade: 3
Number of basement stories *below* grade: 1

Year Original Building was Constructed: 2006
Original Building Design Code & Year: CBC- 2001
Retrofit Building Design Code & Code (if applicable): NA

SITE INFORMATION

Site Class: D Basis: (OLMM, 5/25/2004, S1.0)
Geologic Hazards:
Fault Rupture: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)
Liquefaction: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)
Landslide: No Basis: UCSF Presumptive Buildings – Geotechnical Assessment, Egan (2019)

ATTACHMENT

Original Structural Drawings: (Irving Street Housing Project, OLMM, 5/25/2004, S1.0) or
Seismic Evaluation: NA
Retrofit Structural Drawings: NA



CERTIFICATION & PRESUMPTIVE RATING VERIFICATION STATEMENT

I, [Maryann T. Phipps](#), a California-licensed structural engineer, am responsible for the completion of this certificate, and I have no ownership interest in the property identified above. My scope of review to support the completion of this certificate included both of the following ("No" responses must include an explanation):

- a) the review of structural drawings indicating that they are as-built or record drawings, or that they otherwise are the basis for the construction of the building: Yes No
- b) visiting the building to verify the observable existing conditions are reasonably consistent with those shown on the structural drawings: Yes No

Based on my review, I have verified that the UCOP Seismic Performance Level (SPL) is presumptively permitted by the following UC Seismic Program Guidebook provision (choose one of the following):

- 1) Contract documents indicate that the original design and construction of the aforementioned building is in accordance with the benchmark design code year (or later) building code seismic design provisions for UBC or IBC listed in Table 1 below.
- 2) The existing SPL rating is based on an acceptable basis of seismic evaluation completed in 2006 or later.
- 3) Contract documents indicate that a comprehensive¹ building seismic retrofit design was fully-constructed with an engineered design based on the 1997 UBC/1998 **or later** CBC, and (choose one of the following):
 - the retrofit project was completed by the UC campus. Further, the design was based on ground motion parameters, at a minimum, corresponding to BSE-1E (or BSE-R) and BSE-2E (or BSE-C) as defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1998 CBC **or later** for EXISTING buildings, and is presumptively assigned an SPL rating of IV.
 - the retrofit project was completed by the UC campus. Further, the design was based on ground motion parameters, at a minimum, corresponding to BSE-1 (or BSE-1N) and BSE-2 (or BSE-2N) as defined in ASCE 41, or the full design basis ground motion required in the 1997 UBC/1998 **or later** CBC for NEW buildings, and is presumptively assigned an SPL rating of III.
 - the retrofit project was not completed by the UC campus following UC policies, and is presumptively assigned an SPL rating of IV.

¹ A comprehensive retrofit addresses the entire building structural system as indicated by the associated seismic evaluation, as opposed to addressing selective portions of the structural system.

Campus: UCSF
Building Name: 145 Irving St.
CAAN ID: 3013
Auxiliary Building ID: NA



UNIVERSITY
OF
CALIFORNIA

Date: 8/16/2019

CERTIFICATION SIGNATURE

Maryann T. Phipps
Print Name

President
Title

S2995
CA Professional Registration No.

6/30/2020
License Expiration Date

Maryann T. Phipps
Signature

8/16/2019
Date

AFFIX SEAL HERE



Estructure, (510) 235-3116, 1144 65th St Suite A, Oakland
Firm Name, Phone Number, and Address



Table 1: Benchmark Building Codes and Standards

Building Type ^{a,b}	Building Seismic Design Provisions	
	UBC	IBC
Wood frame, wood shear panels (Types W1 and W2)	1976	2000
Wood frame, wood shear panels (Type W1a)	1976	2000
Steel moment-resisting frame (Types S1 and S1a)	1997	2000
Steel concentrically braced frame (Types S2 and S2a)	1997	2000
Steel eccentrically braced frame (Types S2 and S2a)	1988 ^g	2000
Buckling-restrained braced frame (Types S2 and S2a)	f	2006
Metal building frames (Type S3)	f	2000
Steel frame with concrete shear walls (Type S4)	1994	2000
Steel frame with URM infill (Types S5 and S5a)	f	2000
Steel plate shear wall (Type S6)	f	2006
Cold-formed steel light-frame construction—shear wall system (Type CFS1)	1997 ^h	2000
Cold-formed steel light-frame construction—strap-braced wall system (Type CFS2)	f	2003
Reinforced concrete moment-resisting frame (Type C1) ⁱ	1994	2000
Reinforced concrete shear walls (Types C2 and C2a)	1994	2000
Concrete frame with URM infill (Types C3 and C3a)	f	f
Tilt-up concrete (Types PC1 and PC1a)	1997	2000
Precast concrete frame (Types PC2 and PC2a)	f	2000
Reinforced masonry (Type RM1)	1997	2000
Reinforced masonry (Type RM2)	1994	2000
Unreinforced masonry (Type URM)	f	f
Unreinforced masonry (Type URMa)	f	f
Seismic isolation or passive dissipation	1991	2000

Note: This table has been adapted from ASCE 41-17 Table 3-2. Benchmark Building Codes and Standards for Life Safety Structural Performed at BSE-1E.

Note: UBC = Uniform Building Code. IBC = International Building Code.

^a Building type refers to one of the common building types defined in Table 3-1 of ASCE 41-17.

^b Buildings on hillside sites shall not be considered Benchmark Buildings.

^c not used

^d not used

^e not used

^f No benchmark year; buildings shall be evaluated in accordance with Section III.J.

^g Steel eccentrically braced frames with links adjacent to columns shall comply with the 1994 UBC Emergency Provisions, published September/October 1994, or subsequent requirements.

^h Cold-formed steel shear walls with wood structural panels only.

ⁱ Flat slab concrete moment frames shall not be considered Benchmark Buildings.

(A) GENERAL NOTES

- 1. THE CONTRACTOR AND HIS SUBS SHALL FIELD MEASURE & VERIFY ALL DIMENSIONS AS WELL AS FEASIBILITY OF CONNECTIONS AND DETAILS SHOWN PRIOR TO STARTING ANY WORK...
2. ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS...
3. SHOP DRAWINGS ARE PRODUCED TO FACILITATE FABRICATION AND COORDINATION BY THE CONTRACTORS...
4. SPECIFIC NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS...
5. ALL WORK SHALL CONFORM TO 2001 CALIFORNIA BUILDING CODE...
6. REFER TO CIVIL DRAWINGS FOR INFORMATION REGARDING OUTDOOR SLAB AND SITE DRAINAGE...
7. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
a. SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS.
b. SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.
c. SIZE AND LOCATION OF FLOOR DRAINS, SLOPES, DEPRESSED AREAS, ETC.
d. SIZE AND LOCATION OF ALL FLOOR AND ROOF CURBS e. FLOOR AND ROOF FINISHES.
f. STAIR DETAILS.
8. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWINGS:
a. PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC.
b. ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.
c. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.
d. MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
e. UNDERGROUND CONCRETE DUCTS, TRENCHES, PITS OR MANHOLES.
9. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, WORKMEN OR SHALL INCLUDE BUT NOT BE LIMITED TO BRACING, OTHER PERSONS DURING CONSTRUCTION, SUCH MEASURES SHALL INCLUDE SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, SHORING FOR EARTH BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT AND BRACING FOR CRANES AND GIN POLES, ETC. CONTRACTOR AT HIS OWN EXPENSE SHALL ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN THE FIELD. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER OR HIS FIELD REPRESENTATIVE SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS. CONTRACTOR SHALL PROTECT THE ADJOINING PROPERTY DURING EXCAVATION. PROTECTION SHALL BE SUCH THAT ANY EARTH OR STRUCTURE OF THE ADJOINING PROPERTY WILL NOT CAVE, SETTLE OR CRACK. CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 18 OF THE BUILDING CODE.
10. OPENINGS, POCKETS, ETC. SHALL NOT BE PLACED IN SLABS, DECKS, BEAMS, JOISTS, COLUMNS, WALLS, ETC. UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN OTHER DRAWINGS SHOW OPENINGS, POCKETS, ETC. BUT NOT LIKEWISE SHOWN ON THE STRUCTURAL DRAWINGS.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, LOCATE AND RELOCATE, AS NECESSARY, UTILITIES, SPRINKLERS, DUCTS, ETC.
12. MATERIAL SUBSTITUTIONS ARE SUBJECT TO CHANGE ORDERS APPROVAL BY HUD. SEE SPECIFICATIONS FOR SUBSTITUTION PROCEDURES.
13. ALL INSPECTIONS AND TESTS CALLED FOR BY THE DRAWINGS AND SPECIFICATIONS SHALL BE PAID FOR BY THE OWNER.
14. CONTRACTOR SHALL INVESTIGATE SITE DURING FOUNDATION OPERATIONS FOR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
15. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON SUSPENDED FLOORS OR ROOF. LOAD SHALL NOT EXCEED DESIGN LIVE LOAD FOR EACH PARTICULAR LEVEL.
16. ALL FIELD WELDING SHALL BE PERFORMED BY RECENTLY CERTIFIED WELDERS IN ACCORDANCE WITH AWS D1-I.
17. ALL MECHANICAL AND ELECTRICAL EQUIPMENT ON GRADE TO BE PLACED ON THICKENED PAD. SEE DETAILS.

(B) FOUNDATION

- 1. FOUNDATION DESIGN IS BASED ON GEOTECHNICAL INVESTIGATION BY RUTHERFORD & CHEKENE DATED APRIL 29, 2005.
2. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATION FROM EITHER SURFACE WATER, GROUND WATER, OR SEEPAGE.
3. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS AND/OR EXCAVATION.
4. EXCAVATIONS FOR FOOTINGS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. CONTRACTOR TO NOTIFY GEOTECHNICAL ENGINEER WHEN EXCAVATION AND/OR DRILLED PIER IS READY FOR INSPECTION. GEOTECHNICAL ENGINEER TO SUBMIT LETTER OF COMPLIANCE TO THE ARCHITECT.
5. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING EXCAVATION AND BACKFILLING.
6. ALL BACKFILLS SHALL BE PROPERLY COMPACTED BUT NOT BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH.
7. CONTRACTOR TO BRACE OR PROTECT FROM LATERAL LOADS AT PITS AND BASEMENT WALLS UNTIL ATTACHING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH.
8. BEARING PRESSURE:
a. DEAD + LIVE LOAD ----- 6500 PSF
b. DEAD + LIVE LOAD + SEISMIC ----- 8700 PSF
c. DENSIFY SOIL AT ALL SITE FOUNDATION WORK.
9. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
10. WATER IN FOOTING EXCAVATIONS SHALL BE REMOVED BEFORE PLACING CONCRETE.

(C) CONCRETE

- 1. CONCRETE MIXES TO BE DESIGNED OR APPROVED BY A RECOGNIZED TESTING LABORATORY AND COPIES OF DESIGN SENT TO THE ARCHITECT. COMPRESSIVE STRENGTH TEST REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPT. AND ARCHITECT.
2. MAXIMUM CEMENT WATER/ CEMENT RATIO : 0.45 = SLAB ON GRADE & REINF. CONCRETE
3. THE MAXIMUM SIZE AGGREGATE IN FOUNDATION AND MASS CONCRETE WORK SHALL BE 1 1/2".
4. THE MAXIMUM SIZE AGGREGATE IN SLABS ON GRADE, SHALL BE 3/4".
5. THE MAXIMUM SIZE AGGREGATE IN COLUMNS, BEAMS AND WALLS AND SLABS SHALL BE 3/4".
6. PROVIDE SIEVE ANALYSIS SHOWING UNIFORM GRADATION OF AGGREGATES.
7. ALL SAW CUTS IN SLABS ON GRADE TO BE MADE NOT LATER THAN 24 HOURS AFTER PLACING CONCRETE.
8. REFER TO ARCHITECTURAL DRAWINGS FOR CLIPS, GROOVES, ROUNDS, ETC. TO BE CAST IN CONCRETE AND CONCRETE FINISHES.
9. CALCIUM CHLORIDE ADMIXTURE IS NOT PERMITTED.
10. PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE 2.
11. AGGREGATE (STONE CONCRETE) SHALL CONFORM TO ASTM C-33 & SHALL MEET CALIFORNIA STATE CLEANLINESS CRITERIA.
12. SHRINKAGE IN CONCRETE SHALL NOT EXCEED 0.055% PER ASTM C-157 (28 DAYS DRYING AFTER 7 DAYS MOIST CURE).
13. CONCRETE SHALL BE POURED WITHIN 60 MINUTES AFTER ADDITION OF WATER WHEN AIR TEMPERATURE EXCEEDS 75F.
14. NON-SHRINK GROUT AND DRYPACK SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI IN 7 DAYS. USE "MASTERFLOW 713 GROUT" WITH FLUID CONSISTENCY. FOLLOW MANUFACTURER'S RECOMMENDATIONS.
15. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.
16. CONCRETE STRENGTHS FOR FORM STRIPPING SHALL BE DETERMINED FROM CONCRETE SAMPLES THAT ARE CURED UNDER JOB SITE CONDITIONS.
17. IF COLUMNS AND WALLS ARE PLACED WITH FLOORS TWO HOURS MUST ELAPSE BETWEEN END OF COLUMN OR WALL POUR AND BEGINNING OF FLOOR POUR.
18. SLEEVE PLUMBING OPENING AND PVC CONDUITS THROUGH CONCRETE WALLS AND SLABS BEFORE PLACING CONCRETE AND ARRANGE REINFORCING AROUND SLEEVES. CORING NOT PERMITTED IN FLOOR, ROOF SLABS, COLUMNS, AND WALLS, UNLESS PERMITTED BY STRUCTURAL ENGINEER.
19. CONCRETE MIXING OPERATIONS, ETC. SHALL CONFORM TO ASTM C-94.
20. THE MAXIMUM SLUMP SHALL NOT EXCEED 3" FOR FOOTINGS, SLABS ON EARTH AND MASS CONCRETE, AND 4" FOR OTHER CONCRETE.
21. ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:
FOUNDATION, BASEMENT WALLS, PIT WALLS, FLAT SLAB, COLUMNS ----- 3000 PSI
SLAB ON GRADE ----- 3000 PSI
22. PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC. SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE INDICATED ON ARCHITECTURAL DRAWINGS.

(D) REINFORCING STEEL

- 1. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A-615, GRADE 60 EXCEPT AS NOTED BELOW: ACTUAL YIELD STRESS SHALL NOT EXCEED 78,000 PSI AND ULTIMATE TENSILE STRESS SHALL EXCEED 1.25 TIMES ACTUAL YIELD STRESS.
2. CLEAR COVERAGE OF CONCRETE OVER OUTER REINFORCING BARS SHALL BE AS FOLLOWS:
a. CONCRETE POURED DIRECTLY AGAINST EARTH, 3" CLEAR.
b. STRUCTURAL SLABS, 3/4" CLEAR (TOP AND BOTTOM).
c. CONCRETE FORMED AGAINST EARTH, 2" CLEAR. WALLS: INTERIOR FACE, 3/4" CLEAR, WEATHER FACE, 1-1/2".
e. BEAMS AND COLUMNS 1-1/2" CLEAR TO FACE OF THE OF SPIRAL UNLESS OTHERWISE NOTED.
3. ALL REINFORCING BAR BENDS TO BE MADE COLD. OFFSET SLOPE SHALL BE 1:8 MAXIMUM IN COLUMN VERTICAL REINFORCING.
4. MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6" OR ONE FULL MESH PLUS 2" PROVIDE W.W.F. 6X6-W1.4X1.4.
5. TOLERANCE IN PLACING REINFORCING SHALL BE (A) 1/4" FROM LOCATION SHOWN IN CROSS SECTION (B) 2" FROM LOCATION FOR END OF BARS.
6. PLACEMENT OF REINFORCING TO BE SUCH THAT ADEQUATE SPACE IS PROVIDED BETWEEN BARS TO ALLOW PASSAGE OF CONCRETE VIBRATOR, ETC. PROVIDE ADDITIONAL STIRRUPS OR TRANSVERSE REBARS TO MAINTAIN TOP REINFORCING BARS AT CORRECT LOCATION IN BEAMS AND SLABS.
7. CONTRACTOR SHALL NOT FABRICATE REINFORCING UNTIL REVIEWED SHOP DRAWINGS ARE RECEIVED ON THE JOB.
8. FOR BEAMS AND SLABS THE MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL BE THE DIAMETER OF THE BAR, 1 1/3 TIMES THE AGGREGATE SIZE, BUT IN NO CASE LESS THAN 1". FOR COLUMNS THE MINIMUM CLEAR DISTANCE BETWEEN BARS SHALL BE 1 1/2" BAR DIAMETERS BUT IN NO CASE LESS THAN 1 1/2". HOOK ENDS OF TOP REBARS IN SLABS AND BEAMS.
9. IN SLABS, SPLICES OF REINFORCING SHALL NOT BE MADE AT POINTS OF MAXIMUM STRESS WITHOUT THE APPROVAL OF THE ENGINEER. SPLICES WHERE PERMITTED SHALL PROVIDE SUFFICIENT LAP TO TRANSFER THE STRESS BETWEEN BARS BY BOND AND SHEAR (SEE LAP SPlice TABLE FOR LENGTHS). STAGGER SPLICES IN ADJACENT HORIZONTAL BARS BY 4'-0".
10. TACK WELDING OF REBARS IS NOT PERMITTED.
11. WELDING OF REBARS SHALL CONFORM AWS D1.4-92.

(E) WOOD

- 1. ALL LUMBER SHALL HAVE MAXIMUM 19% MOISTURE CONTENT. IT SHALL BE DOUGLAS FIR #1, EXCEPT:
a. STUDS: 2x4, 2x6, 3x4, 3x6 TO BE STUD GRADE OR BETTER. USE DOUGLAS FIR #1 FOR HOLDDOWN STUDS.
b. MUDSILLS: TREATED STANDARD GRADE OR BETTER.
c. SOLE PLATE AND DOUBLE TOP PLATES SAME LUMBER AS WALL STUDS.
d. FLOOR JOISTS: DOUG FIR/LARCH #1 & BETTER.
e. ROOF RAFTERS: DOUG FIR/LARCH #1 & BETTER OR 2x PREFABRICATED WOOD TRUSS.
f. PROVIDE DOUBLE JOISTS UNDER PARTITIONS PARALLEL TO JOISTS AND SOLID BLOCKINGS UNDER PARTITIONS PERPENDICULAR TO JOISTS.
g. EXPOSED STRUCTURAL LUMBER TO BE WESTERN RED CEDAR TYP. @ DECKS, ETC. ALASKAN YELLOW CEDAR @ CANTILEVERED SENIOR DECK ONLY.
h. ALL WOOD IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
2. ALL PLYWOOD SHALL BE D.F. APA, PERFORMANCE RATED. CDX, EXPOSURE 1, MINIMUM 5 PLY FOR HORIZONTAL SHEATHING & STRUCTURAL I FOR WALL SHEATHING, U.O.N. IN ARCHITECTURAL DRAWINGS. THE PLYWOOD SHALL BE BLOCKED AT ALL EDGES U.O.N. PLYWOOD OVER FLOOR AND ROOF SHALL BE LAID WITH LONG GRAIN PERPENDICULAR TO SUPPORTS WITH JOINTS STAGGERED 4'-0" IN ADJACENT SHEETS. ATTACH PLYWOOD TO SUPPORTS WITH GLUE AND NAILS TO PREVENT POPPING. NAIL AT INTERMEDIATE SUPPORT AT 8" AT FLOOR AND AT 12" AT ROOF. SEE DRAWINGS FOR OTHER NAILING.
3. FLOOR- 3/4" PLYWOOD IDENTIFICATION INDEX = 32/16. ROOF- 5/8" PLYWOOD IDENTIFICATION INDEX = 32/16.
4. ALL EXTERIOR STUD WALLS SHALL BE SHEATHED W/ 1/2" STRUCTURAL I PRESSURE TREATED PLYWOOD - NAILING TO BE 8d @ 6" O.C. U.O.N., SEE SHEAR WALL SCHEDULE.
5. PROVIDE MALLEABLE WASHERS OR SQUARE STEEL PLATE WASHERS WHERE BOLTS BEAR ON WOOD. SQUARE PLATE WASHERS SHALL BE PER SCHEDULE FOR BOLTS.

Table with 2 columns: BOLT DIA. and SQ. CUT WASHER PLATE. Rows include 1/2", 5/8", 3/4", 7/8", and 1" sizes with corresponding washer dimensions.

- USE DOUBLE NUTS AT HOLD-DOWNS. BOLT HOLES SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER. TIGHTEN NUTS ON ALL BOLTS BEFORE CLOSING IN.
6. STRUCTURAL WOOD MEMBERS REQUIRING HOLES OR NOTCHES SHALL CONFORM TO TYPICAL DETAIL SHOWN ON THESE DRAWINGS. JOISTS AND RAFTERS MAY BE SPLICED ONLY AT SUPPORTS. BLOCK JOISTS & RAFTERS WITH SOLID BLOCKING AT SUPPORTS.
7. ALL NAILS SHALL BE COMMON NAILS EXCEPT AS NOTED IN #11. PREBORE HOLES 70% OF SHANK DIAMETER WHERE NAILING TENDS TO SPLIT WOOD.
8. ALL METAL CONNECTORS SHALL BE BY SIMPSON COMPANY, USP, SEISMIC SOLUTIONS, ZONE FOUR, OR EQUIVALENT. ALL POSTS NOT WITHIN WALL FRAME SHALL HAVE "PC" CAP AND "PB" POST BASE, U.O.N.
9. ALL EXPOSED STEEL HARDWARE AND FASTENERS SHALL BE GALVANIZED OR STAINLESS STEEL. SEE ARCHITECTURAL DRAWINGS FOR OTHER REQUIREMENTS. (COMPATIBLE WITH PRESSURE TREATMENT WHERE OCCURS)
10. ALL HOLD-DOWNS SHALL BE CONCENTRIC IN ACTION TO THE POSTS. CONTRACTOR TO SUBMIT PRODUCT DATA & ICBO, SHOP DRAWINGS SHOWING LOCATIONS OF HOLD-DOWNS, AND INFORMATION TO ENGINEER FOR REVIEW PRIOR TO FABRICATION.

(F) CONCRETE MASONRY WALL

- 1. HOLLOW MASONRY UNITS SHALL BE TYPE 1, GRADE N UNITS CONFORMING TO ASTM C90 HAVING A MIN. SPECIFIED COMPRESSIVE STRENGTH (f'm) OF 2,500 PSI AT 28 DAYS.
2. MORTAR SHALL BE TYPE M; GROUT SHALL BE 3,000 PSI AT 28 DAYS.
3. CONCRETE BLOCK UNITS SHALL BE LAID IN COMMON BOND PATTERN, UNLESS OTHERWISE SHOWN AT GARAGE WALLS AND FLEX SPACES EXTERIOR RETAINING WALLS, S.A.D.
4. ALL CELLS SHALL BE SOLIDLY FILLED WITH GROUT.
5. PROVIDE 2-#6 AROUND ALL OPENINGS. MINIMUM REINFORCING #5 AT 16" E.W. IN ONE CURTAIN FOR 8".
6. REINFORCING BARS SHALL BE LAPPED A MIN. OF 48 BAR DIAMETERS WHERE SPLICED.
7. SEE SPECIFICATION FOR BLOCK UNITS.

(G) PREFABRICATED WOOD TRUSSES

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND DETAILS OF THE ROOF TRUSSES. THE DESIGN AND DETAILS OF THE TRUSSES TO BE STAMPED BY THE PROFESSIONAL ENGINEER AND SUBMITTED FOR APPROVAL.
2. TOP CHORD OF ROOF WOOD TRUSSES MAY BE IN ACCORDANCE WITH ANSI/AITC A190.1-83. WOOD CHORD MEMBERS SHALL BE MACHINE STRESS RATED LUMBER OF APPROVED GRADE AND KILN DRIED TO A MAXIMUM MOISTURE CONTENT OF 19%.
3. TRUSS CONNECTOR PLATES SHALL BE FORMED BY DIE STAMPING A-446 GRADE GALVANIZED STEEL CONFORMING WITH UBC STANDARD NO.27-1 AND TRUSS PLATE INSTITUTE STANDARDS PCI-80, TPI-85, PCT-80, QST-88 AND QSP-88.
4. DESIGN SHALL BE BY FABRICATORS AND SHALL MEET THE NATIONAL SPECIFICATIONS FOR STRESS GRADE LUMBER AND ITS FASTENING BY NATIONAL FOREST PRODUCT ASSOCIATION AND TRUSS PLATE INSTITUTE STANDARDS TPI-85, PCT-80, QST-88 AND QSP-88.
5. THE DESIGN OF THE ROOF TRUSSES AND CONNECTIONS SHALL INCLUDE:
a. TOP CHORD DEAD LOAD = 11 PSF
BOTTOM CHORD DEAD LOAD = 10 PSF
TOP CHORD LIVE LOAD = 20 PSF
BOTTOM CHORD LIVE LOAD = 10 PSF
(NOTE: TRUSS SELF WEIGHT AND AREAS REQUIRING BUILT UP ROOFING ARE NOT INCLUDED)
b. NET UPLIFT FORCE OF 5 PSF AT THE ROOF.
c. WIND IN ACCORDANCE WITH 2001 CALIFORNIA BUILDING CODE CBC & APPROPRIATE REFS.
6. PIPES, DUCTS AND SPRINKLER PIPES VERIFY WITH SUPPLIERS.
7. VERIFY IN WRITING NAIL SPACING FOR SEISMIC TIES AND PLYWOOD IN ORDER TO AVOID SPLITTING OF TRUSS CHORDS.
8. TRUSS FOR FIRE PARTITIONS SCREENS.
9. SUBMIT THE FOLLOWING:
a. PLACEMENT PLANS SEALED BY PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA SHOWING QUANTITY AND TYPE, DEPTH, SPANS, CONNECTION DETAILS, SPECIAL LOADING CONDITIONS, BEARING POINTS, PERMANENT BRACING OF BRIDGING (COMPLY WITH BWT-76), AND HANDLING AND ERECTION.
b. CERTIFICATION, SIGNED BY OFFICERS OF INSPECTION AGENCY AND THE MANUFACTURER INDICATING THAT TRUSSES SUPPLIED FOR PROJECT COMPLY WITH INDICATED REQUIREMENTS.
c. SUBMIT SHOP DRAWINGS AND CALCULATIONS TO PROJECT ENGINEER AND BUILDING DEPARTMENT FOR APPROVAL PRIOR TO FABRICATION.
10. ERECTION AND BRACING OF TRUSSES SHALL COMPLY WITH RECOMMENDATIONS OF THE MANUFACTURER AND TRUSS PLATE INSTITUTE (HET-80).

(H) GLUE LAMINATED BEAMS

- 1. ALL GLB'S SHALL BEAR AITC QUALITY MARK. CERTIFICATE OF CONFORMANCE SHALL BE SUBMITTED TO BUILDING DEPARTMENT, ARCHITECT AND ENGINEER.
2. SUBMIT SHOP DRAWINGS BEFORE FABRICATION.
3. COMBINATION 24F V4 TYP., EXCEPT USE 24F V8 FOR CANTILEVER BEAM EXTERIOR GLUE: SIDES AND ENDS SEALED (WHERE ENDS ARE FIELD TRIMMED, APPLY SAME SEALER TO CUT PORTIONS), INDIVIDUALLY WRAPPED TO PROTECT GLB'S THROUGHOUT CONSTRUCTION.
4. FOR DECK GLB @ B12, USE ALASKA CEDAR 20F-V13.

(I) PARALLAM BEAMS

- 1. ALL PARALLAM BEAMS SHALL BEAR TRUSJOIST QUALITY MARK. CERTIFICATE OF CONFORMANCE SHALL BE SUBMITTED TO BUILDING DEPARTMENT, ARCHITECT, AND ENGINEER.
2. SUBMIT SHOP DRAWINGS BEFORE FABRICATION/INSTALLATION.

(J) SPECIAL INSPECTION

- 1. IN ADDITION TO THE INSPECTIONS REQUIRED BY THE LOCAL BUILDING DEPARTMENT SPECIAL INSPECTION BY A QUALIFIED INSPECTOR IS REQUIRED FOR THE FOLLOWING, THE INSPECTOR SHALL HAVE A MINIMUM OF 5 YEARS OF INSPECTION IN THE TYPE OF CONSTRUCTION TO BE INSPECTED. ALL SPECIAL INSPECTIONS SHALL BE PERFORMED ACCORDING TO SEC. 1701 OF THE BUILDING CODE AND SHALL BE PAID FOR BY THE OWNER.
a. ALL CONCRETE WORK OF 28 DAY STRENGTH GREATER THAN 2500 PSI
b. ALL REINFORCING PLACEMENT
c. INSTALLATION OF ANCHOR BOLTS & EPOXY ANCHORS IN AND CONCRETE
d. PLYWOOD NAILING AT FLOOR & ROOF
e. INSTALLATION OF HOLD-DOWNS OR TIE-DOWNS
f. BLOCK MASONRY WORK
g. INSTALLATION OF STRAPS, DIAPHRAGM AND SHEAR WALL
h. EXCAVATION BY GEOTECHNICAL ENGINEER

(K) STAIR STRINGERS, HANDRAILS AND CONNECTIONS

FOR EXTERIOR STEEL STAIRS & EGRESS STAIRS @ BLDGS. B11/B12. SUBMIT FOR REVIEW CALCULATIONS AND SHOP DRAWINGS STAMPED BY A CALIFORNIA REGISTERED CIVIL OR STRUCTURAL ENGINEER. CALCULATIONS AND SHOP DRAWINGS TO BE SUBMITTED TO THE UNIVERSITY FOR REVIEW.

(L) DESIGN BASIS

ROOF LIVE LOAD: 20 PSF
FLOOR LIVE LOAD: 40 PSF TYP. EXCEPT 100 PSF AT CORRIDOR
WIND DESIGN: BASIC WIND SPEED = 70 MPH EXPOSURE B
SEISMIC DESIGN: V = (2.5 x Ca x I / R) x W
WHERE,
Ca = 0.44 No ZONE FACTOR = 4
Cv = 0.84 Nv
I = 1.0 SOIL PROFILE = TYPE Sd
R = 4.5 Ns = 1.08
Ns = 1.36

(M) SYMBOLS AND ABBREVIATIONS

Table with 4 columns: Symbol, Description, Symbol, Description. Includes entries for ANCHOR BOLT, ALTERNATE, BOTTOM, BLOCKING LINE, BLOCK, BEAM, BOTTOM OF FOOTING, BEARING, CONSTRUCTION JOINT, CENTER LINE, CLEAR, COMPRESSIBLE CONNECTION, CONTINUOUS, CONTROL JOINT, COMPLETE PENETRATION, DOUBLE, DEPRESS, DIAMETER, DRAWING, EACH FACE, ELEVATION, ENGINEERED, EACH SIDE, EXPANSION JOINT, EXTERIOR, FAR FACE, FLOOR, FACE OF CONCRETE, FACE OF STUD, GLUED LAMINATED BEAM, GRADE, HEADER, HOOK, HORIZONTAL, HIGH STRENGTH BOLT, HYDROSTATIC, JOIST HANGER, JOIST, LIGHT WEIGHT, MAXIMUM, MACHINE BOLT, MINIMUM, MISCELLANEOUS, MILD STEEL, NEAR FACE, NOT IN CONTRACT, NOT TO SCALE, ON CENTER, OPPOSITE HAND, PRECAST, PERPENDICULAR, POUR IN PLACE, PROPERTY LINE, PLATE, PLYWOOD, POUND PER SQUARE FOOT, POST TENSIONED, PRESSURE TREATED, PAVEMENT, REINFORCEMENT, REDWOOD, SEE ARCHITECTURAL DRAWING, SOLID BLOCKING, SEE ELECTRICAL DRAWING, SIMILAR, SLOPE, SLOPE, SEE LANDSCAPING DRAWING, SEE MECHANICAL DRAWING, SLAB ON GRADE, SPLICE, STANDARD, STEEL, STEEL SUPPORT, TOP AND BOTTOM, THREADED, T.O.F., TOP OF FOOTING, TOP OF SLAB, TOP OF WALL, TYPICAL, UNLESS OTHERWISE NOTED, VERTICAL, WELDED WIRE FABRIC, LETTER OR DETAIL NUMBER, SHEET WHERE DETAIL IS DRAWN.

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CDF OFFICE OF STATE FIRE MARSHAL APPROVED 6/21/05
Approved of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.
Reviewed by: [Signature]
145 IRVING STREET HOUSING PROJECT
UCSF Capital Projects No. M2406 File No. 10753
Client: University of California San Francisco
Revisions:
DESIGN DEVELOPMENT 11-23-04
REVISED DATE
90% CON. DOC. SET 02-21-05
BID SET 06-01-05
Stamp: [Professional Engineer Seal]
Job Number: 0420
Drawn by: RCarrion
Checked by: MChoo
Date: 25 MAY, 2004
Scale: 1/8"=1'-0"
Title: GENERAL NOTES
Sheet: S1.0
Preliminary- Not For Construction