WOOD FRAMING

·MINIMUM DISTANCE FROM THE END OF A BOLTED TIMBER TO THE CENTER OF THE NEAREST BOLT HOLE SHALL BE SEVEN TIMES THE BOLT DIAMETER. MINIMUM DISTANCE FROM THE EDGE OF A BOLTED TIMBER TO THE CENTER OF THE NEAREST BOLT HOLE SHALL BE 1-1/2 TIMES THE BOLT DIAMETER FOR PARALLEL TO GRAIN LOADING AND FOUR TIMES THE BOLT DIAMETER FOR PERPENDICULAR TO GRAIN LOADING, AT THE LOADED EDGES ONLY.
·TIGHTEN NUTS ON ALL BOLTS PRIOR TO THE APPLICATION OF SHEATHING, PLASTER, ETC.
·ALL FRAMING LUMBER AND SHEATHING MUST BE GRADE MARKED.
·SOLID BLOCK OR MANUFACTURED BRIDGING REQUIRED AT ALL SPANS 8'-0" OR MORE IN LENGTH, AT JOISTS MORE THAN 4" IN DEPTH, AND AT RAFTERS SPANNING 10 FEET OR MORE IN LENGTH AND 8" OR MORE IN DEPTH.
·ALL GYPSUM BOARD NAILING SHALL BE WITH "COOLER-NAILS". SIZRE AND SPACING WILL BE AS IDENTIFIED BY NOTES AND DETAILS.
·GLUE LAMINATED BEAMS SHALL HAVE PROPERTIES AS SPECIFIED ON PLANS.BEAMS CANTILEVERED OVER SUPPORTS SHALL HAVE THE MINIMUM PROPERTIES TOP AND BOTTOM. ALL BEAMS FABRICATED USING WATER-PROOF GLUE.FABRICATION AND HANDLING SHALL BE PER THE LATEST A.I.T.C. AND W.C.L.A.STANDARDS. BEAMS TO BEAR GRADE STAMP AND A.I.T.C. STAMP AND CERTIFICATE. CAMBER SHALL BE AS SPECIFIED ON DRAWINGS OR INDUSTRY STANDARDS IF NOT NOTED.
·NOTE: A.I.T.C. CERTIFICATE OF COMPLIANCE FOR GLUED LAMINATED WOOD MEMBERS SHALL BE GIVEN TO THE BUILDING INSPECTOR PRIOR TO INSTALLATION.
·PROVIDE SOLID BLOCKING UNDER WALLS PERPENDICULAR TO JOISTS.
·MANUFACTURED WOOD PRODUCTS (TRUSSES, MICRO-LAMS, TRUSS JOISTS, ETC.) SHALL BE SIZED IN ACCORDANCE WITH THE MANUFACTURER'S LOAD TABLES AND/OR CERTIFIED ENGINEERED CALCULATIONS. SHOP DRAWINGS, CALCULATIONS,AND LAYOUTS FOR TRUSSES REQUIRES AN ENGINEER'S STAMP W/ SIGNATURE OF REGISTRANT FROM APPLICABLE STATE WHERE CONSTRUCTION OCCURS. FINAL AND TEMPORARY BRACING SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER.

WOOD TRUSSES SHALL BE DESIGNED TO SUPPORT SELF WEIGHT PLUS LIVE LOAD AND SUPERIMPOSED DEAD LOADS (SEE BUILDING CODE STRUCTURAL CRITERIA). ALL TRUSS CONNECTORS SHALL HAVE CURRENT I.C.B.O. APPROVALS. TRUSSES SHALL BE DESIGNED TO SUPPORT MECHANICAL EQUIPMENT WHEN APPLICABLE.

MULTIPLE TRUSS MEMBERS SHALL BE FASTENED TOGETHER TO ALLOW TRANSFER OF SHEAR AND TENSION FORCES (MINIMUM 200 P.L.F.) AT PLYWOOD SHEATHING JOINTS AND TO PREVENT CROSS GRAIN BENDING OF TOP CHORDS. ATTACHMENT SHALL BE A CONTINUOUS 20 GUAGE METAL PLATE OR OTHER APPROVED MEANS. METHOD OF ATTACHEMENT SHALL BE INDICATED ON SHOP DRAWINGS FOR REVIEW.

ALL TRUSS LUMBER SHALL BE DOUGLAS FIR. EACH TRUSS SHALL BE LEGALLY BRANDED, MARKED, OR OTHERWISE HAVE PERMANENTLY AFFIXED THERETO THE FOLLOWING INFORMATION LOCATED WITHIN TWO FEET OF THE CENTER OF SPAN ON THE FACE OF THE BOTTOM CHORD...

IDENTITY OF THE MANUFACTURING COMPANY (TRUSS FABRICATOR)
THE DESIGN LOAD (L.L. + D.L.)
THE ENGINEERED SPACING FOR THE TRUSSES

FRAMING ANCHORS, JOIST HANGERS, POST CAPS / BASES, TIE DOWNS, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS. MANUFACTURER SHALL BE "SIMPSON" OR ARCHITECT'S APPROVED EQUAL. THE FOLLOWING TABLE INDICATES MINIMUM CONNECTION REQUIREMENTS AND SHALL BE USED UNLESS NOTED OTHERWISE ON DETAILS AND NOTES.

CONNECTION DESCRIPTION	SIMPSON NUMBER	REMARKS
R.R OR TRUSS TO WALL PLATE	H2.5	EVERY OTHER CONN.
R.R OR TRUSS TO WALL PLATE WHERE SHTG. IS ONE SIDE ONLY	H2.5	EA. CONN.
R.R OR TRUSS TO WALL PLATE WHEN SPAN EXCEEDS 20 FEET	H2.5	EA. CONN.
STUD TO SOLE AND TOP PLATE WHERE SHTG. IS ONE SIDE ONLY	H2.5	EA. CONN.
STUD TO SOLE AND TOP PLATES SHTG. OCCURS ON BOTH SIDES	H2.5	EVERY OTHER CONN.
R.R TO RIDGE (SLOPING ROOFS)	ST6224 STRAP	CENTER @ APEX
FLUSH JOIST OR R.R. TO BEAM	JOIST HANGERS	SIZE PER PLAN
POST TO BEAM CONNECTION	ST STRAP & PB	SIZE PER PLAN

· IN ADDITION TO CONNECTORS ABOVE, COMPLY WITH THE NAILING SCHEDULE
· CONNECTORS FOR STUDS DESCRIBED ABOVE, MAY BE OMITTED WHERE PLYWOOD SHEATHING IS NAILED DIRECTLY TO THE TOP AND BOTTOM PLATES. PROVIDE 2 X SOLID BLOCKING AT MID-HEIGHT OF BEARING STUD WALLS.
· ALL FRAMING MEMBERS SHALL BE PLACED AND INSTALLED IN SUCH A MANNER AS TO BE ANCHORED, TIED, AND BRACED SO AS TO DEVELOP THE STRENGTH AND RIGIDITY NECESSARY FOR THE PURPOSE FOR WHICH IT IS INTENDED.
· ALL FRAMING MEMBERS SHALL BE PLACED AND INSTALLED IN SUCH A MANNER AS TO BE ANCHORED, TIED, AND BRACED SO AS TO DEVELOP THE STRENGTH AND RIGIDITY NECESSARY FOR THE PURPOSE FOR WHICH IT IS INTENDED.
· SILL PLATES IN CONTACT WITH CONCRETE OR MASONRY OR ANY WOOD TOUCHING CONCRETE OR MASONRY, SHALL BE PRESSURE TREATED OR REDWOOD.
· ORIENTED STRAND BOARD (O.S.B.), STRUCTURAL PARTICLE BOARD, COMPOSITE BOARD, WAFER BOARD, AND PLYWOOD SHALL CONFORM TO U.B.C. (N.E.R. - 108).
· ADHESIVE USED TO ATTACH FLOOR SHEATHING TO JOISTS SHALL CONFORM WITH AMERICAN PLYWOOD ASSOCIATION SPECIFICATION AFG-01
· ALL LEDGERS SHALL BE SPLICES WITH SIMPSON ST22 STRAP UNLESS NOTED.
· IN WOOD FRAMED WALLS, STUDS SHALL BE CONTINUOUS BETWEEN SUPPORTS. (SUPPORTS ARE CEILINGS, FLOORS, ROOFS, ETC.) SPACING OF STUDS SHALL NOT EXCEED 16 INCHES. GENERALLY, STUDS EXCEEDING 10 FEET IN LENGTH SHALL BE DOUBLED UP TO 14 FEET AND SHALL BE 4 X MATERIAL WHEN MORE THAN 14 FEET LONG OR AS NOTED ON PLANS AND DETAILS.
· LUMBER GRADES SHALL CONFORM TO PS 20-70, A.S.L. AND GRADE MARKED BY W.W.P.A. OR W.C.L.B. W/ EACH PIECE OF WOOD BEARING THE OFFICIAL GRADE MARK STAMP AND TRADE MARK. THE FOLLOWING TABLE APPLIES UNLESS NOTED OTHERWISE ON PLANS AND DETAILS........................

2X 4 STUDS	D.F.L STUD GRADE MARK
2X 6 STUDS	D.F.L #2 (MIN)
4X POSTS	D.F.L 1 GRADE MARK
6X POSTS	D.F.L 1 GRADE MARK
4X BEAMS	D.F.L. 1 GRADE MARK
6X BEAMS	D.F.L. 1 GRADE MARK
G.L.B	24FV 8 COMBO GD
	V4 FOR CANTILEVERS

VIGA COLUMNS: CERTIFICATION OF STRESS VALUES REQUIRED

· ALL PLYWOOD SHALL BEAR THE STAMP OF AN APPROVED TESTING AGENCY. LAY UP PLYWOOD W/ FACE GRAIN PERPENDICULAR TO SUPPORTS. ON ROOFS WHERE PLYWOOD IS LAYED UP W/ FACE GRAIN PARALLEL TO SUPPORTS, USE A MINIMUM 5-PLY PLYWOOD. STAGGER JOINTS. ALL NAILING, COMMON NAILS UNLESS NOTED OTHERWISE. WHERE SCREWS ARE USED, USE WOOD SCREWS ONLY. CONFORM TO THE FOLLOWING TABLE UNLESS OTHERWISE NOTED ON THE DRAWINGS.....

USE	THICKNESS	SPAN/INDEX RATIO	EDGE ATTACHMENT
	1/2 INCH	32/16	10d@ 6" O.C.
ROOF	3/8 INCH	24/0	8d @ 6" O.C.

SHEAR WALL IN ACCORDANCE WITH SHEAR WALL SCHEDULE

· AMERICAN PLYWOOD ASSOCIATION PERFORMANCE RATED SHEATHING MAY BE USED AS AN ALTERNATE TO PLYWOOD W/ PRIOR APPROVAL OF OWNER, ARCHITECT AND ROOFING CONTRACTOR. WHERE ROOF IS TO BE GUARANTEED, IT MAY NOT BE USED W/ OUT PRIOR APPROVAL FROM BUILT-UP ROOFING SYSTEM MANUFACTURER. RATED SHEATHING SHALL COMPLY W/ I.C.B.O. REPORT NUMBER N.E.R. - 108, EXPOSURE 1, AND SHALL HAVE A SPAN RATING EQUIVALENT TO OR BETTER THAN THE PLYWOOD IT REPLACES. ATTACHMENT AND THICKNESS (W/IN 1/32") SHALL BE THE SAME AS PLYWOOD IT REPLACES. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
INTERIOR PLYWOOD TO BE GRADE C-D. EXTERIOR PLYWOOD TO BE C-C.
·ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED, EXCEPT FOR FRAMING 48" MINIMUM ABOVE FINISH GRADE.
·WHERE PARALLEL JOISTS OCCUR, THE FOLLOWING APPLIES.......

AT BEARING WALL CONNECTION, PROVIDE SOLID BLOCKING AT 24" O.C.AT ONE SIDE OR AS DETAILED ON DRAWINGS.
PROVIDE DOUBLE JOISTS UNDER PARALLEL PARTITIONS (WHERE OCCURS).
PROVIDE DOUBLE JOISTS UNDER PERMANENT LOADS (EQUIPMENT, WATER HEATER, WASHER/DRYER, ETC.)
·CEILING JOISTS (UNLESS SPECIFICALLY IDENTIFIED ON DRAWINGS) SHALL BE IN COMPLIANCE WITH THE FOLLOWING MINIMUM SPAN TABLE REQUIREMENTS.

SIZE	SPACING	MAXIMUM SPAN
2X4	12"	9'-10"
	16"	8'-10"
	24"	7'-7"
2X6	12"	16'-0"
	16"	14'-5"
	24"	12'-6"
2X8	12"	20'-5"
	16"	18'-4"
	24"	15'-9"

A DEAD LOAD = 6.0 P.S.F
B LIVE LOAD = 10.0 P.S.F
C TOTAL DEFLECTION = L /240
D CEILING DRYWALL ASSUMED
E USE DOUGLAS FIR LARCH #2

· DO NOT NOTCH OR DRILL JOISTS, BEAMS, OR LOAD BEARING STUDS WITHOUT PRIOR APPROVAL OF THE ARCHITECT.
· STUD WALLS PERPENDICULAR TO CONCRETE OR MASONRY WALLS SHALL BE BOLTED TO CONCRETE OR MASONRY WITH 1/2" DIAMETER X 8" LONG A307 ANCHORS AT TOP, MID-HEIGHT, AND AT BOTTOM.
· STUD TOP PLATES SHALL CONSIST OF DOUBLE 2X's THE SAME WIDTH AS THE STUDS. PLATES SHALL LAP A MINIMUM OF 48 INCHES AND BE SPLICES WITH NOT LESS THAN (6) 16d NAILS SPACED NOT MORE THAN 12" O.C.
· ALL SPECIFIED SHEAR PANEL ASSEMBLIES MUST BE CONTINUOUS SHEATHING MATERIAL FROM ONE END TO THE OTHER AND FROM PLATE TO PLATE (AS SPECIFIED ON THE DRAWINGS). CONTRACTOR SHALL COORDINATE FRAMING FOR CONTINUITY OF SHEAR PANELS.
· SHEAR TRANSFER NAILING AND CONNECTIONS MUST OCCUR IN ACCORDANCE WITH DETAILS AND SCHEDULES. CONTRACTOR SHALL PROVIDE PROPER NOTIFICATION FOR INSPECTION FOR CONNECTION COMPLIANCE BY THE ARCHITECT.
· IF A DOUBLE SILL PLATE IS INSTALLED BECAUSE OF A POURED CONCRETE FLOOR OR DUE TO SHEAR WALL SPECIFICATIONS ASSEMBLY REQUIREMENTS, THEN THE CONTRACTOR SHALL APPLY SILL PLATE NAILING TO BOTH SILL PLATES, AT 16" O.C. OR AS INDICATED.
· PROVIDE POSTS AT LOWER FLOOR(S) DIRECTLY UNDER POSTS OR MULTIPLE STUDS THAT OCCUR AT UPPER FLOOR. PROVIDE FULL WIDTH COMPRESSION BLOCK BETWEEN FLOORS AT SUCH LOCATIONS.
· FIREBLOCKING IS REQUIRED IN THE FOLLOWING LOCATIONS...................................

CONCEALED SPACES OF STUD WALLS AT CEILING AND FLOOR LEVELS
FURRED SPACES AND SOFFITS AT 10 FEET LEVELS BOTH VERTICAL AND HORIZONTAL
ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT DROP CEILINGS, SOFFITS, AND COVE CEILINGS.
BETWEEN STAIR STRINGERS IN TOP AND BOTTOM OF RUN AND BETWEEN STUDS ALONG AND IN LINE WITH THE STRINGERS.
OPENINGS AROUND PIPES, DUCTS, VENTS AND CHIMNEYS W/ NONCOMBUSTIBLE MATERIALS (SUCH AS UNFACED INSULATION).
AT OPENINGS BETWEEN ATTIC SPACES AND CHIMNEY CHASES FOR FACTORY BUILT CHIMNEYS. (UBC 2516)

STRUCTURAL STEEL

· COMPLY W/ THE FOLLOWING GRADE TABLE........

STEEL DESCRIPTION	ASTM	Fy VALUE	REMARKS
STRUCTURAL STEEL	A-36	36 K.S.I	
PIPE COLUMNS	A-501	36 K.S.I	TYPE OR S
PIPE COLUMNS	A-53	46 K.S.I.	GRADE B
TUBE STEEL	A-500	46 K.S.I.	35 K.S.I.
W SHAPES	A-992		
BOLTS	A-307	33 K.S.I.	U.N.O.
RE-BAR / CONC.	A-615	60 K.S.I.	2" MIN. COVER
RE-BAR / MAS.	A-615	40 K.S.I	2" MIN. COVER
STIRRUPS	GD.40		
W.W.F	A-185		

· ALL CONSTRUCTION SHALL BE PER LATEST A.I.S.C. HANDBOOK.
· ALL EXPANSION AND EPOXY BOLTS TO HAVE I.C.B.O. RATING FOR MATERIAL INTO WHICH INSTALLATION TAKES PLACE.
· ALL REFERENCE TO HEADED STUDS SHALL BE HIGH STRENGTH HEADED STUDS.ATTACHMENT OF HEADED STUDS SHALL CONFORM TO ALL REQUIREMENTS OF THE LATEST EDITION OF THE " RECOMMENDED PRACTICES FOR STUD WELDING" AND THE "STRUCTURAL WELDING CODE" PUBLISHED BY A.W.S.
· ALL BOLTS, ANCHOR BOLTS, EXPANSION BOLTS, ETC. SHALL BE INSTALLED W/STEEL WASHERS AT FACE OF WOOD OR AT SLOTTED HOLES IN STEEL SECTIONS.
· ALL HIGH STRENGTH BOLTING SHALL BE INSPECTED BY AN INDEPENDENT TESTING LABORATORY.
· ALL WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS AND NOTES. CERTIFICATES SHALL BE THOSE ISSUED BY AN ACCEPTED TESTING AGENCY.
· ALL WELDING SHALL BE PER LATEST "AMERICAN WELDING SOCIETY STANDARDS', EXCEPT STEEL JOISTS AND JOIST GIRDERS (SHALL COMPLY W/ S.J.I. STANDARDS). THESE DRAWINGS DO NOT DISTINGUISH BETWEEN SHOP AND FIELD WELDS; THE CONTRACTOR MAY SHOP WELD OR FIELD WELD AT HIS DISCRETION. SHOP WELDS AND FIELD WELDS SHALL BE SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW. FULL COMPLETE PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.
· ALL WELDING DONE BY E70 SERIES LOW HYDROGEN RODS U.N.O. (SUBMERGED ARC PROCESS USING E70XX-LOW HYDROGEN ELECTRODES).
· FIELD WELDING REQUIRES CONTINUOUS INSPECTION. (CERTIFIED WELDER, ASNT CERTIFIED TECHNICIAN, AND SPECIAL INSPECTOR).
· FILLER (WELD) METAL SHALL HAVE A MINIMUM CVN OF 20 FT-LBS @ 20°F
· COMPLETE JOINT PENETRATION GROOVE WELDS BETWEEN THE BEAM FLANGE AND COLUMN FLANGE SHALL BE MADE PER THE AWS D1.1-96 TABLE 3.7. ALL SHIELDED MEAL ARE WELDING (SMAW) ELECTRODES SHALL BE OF THE LOW HYDROGEN TYPE AND SHALL BE SUBJECT TO THE REQUIREMENTS OF AWS DA.1-96 SECTION 5.3.2 FOR SMAW AND FLUX CORED ARC WELDING (FACW), THE MAXIMUM PERMITTED ELECTRODE DIAMETER SHALL BE PER TABLE 3.7
· FOR THE WELDING OF THE BOTTOM FLANGE TO THE COLUMN FLANGE, FOLLOW THE FOLLOWING STEPS...
THE ROOT PASS SHOULD NOT EXCEED A 1/4" IN LAYER THICKNESS

THE FIRST HALF LENGTH ROOT SHOULD BE MADE WITH ONE OF THE FOLLOWING TECHNIQUES (CONTRACTOR'S OPTION).

THE ROOT PASS MAY BE INITIATED NEAR THE CENTER OF THE JOINT. IF THIS APPROACH IS USED, THE WELDER SHOULD EXTEND THE ELECTRODE THROUGH THE WELD ACCESS HOLE, APPROXIMATELY 1" BEYOND THE OPPOSITE SIDE OF THE GIRDER WEB. THIS IS TO ALLOW ADEQUATE ACCESS FOR CLEARING AND INSPECTION OF THE INITIATION POINT OF THE WELD BEFORE THE SECOND HALF-LENGTH OF THE ROOT PASS IS APPLIED.

IT IS NOT DESIRABLE TO INITIATE THE ARC IN THE EXACT CENTER OF THE GIRDER WIDTH SINCE THIS WILL LIMIT ACCESS TO THE START OF THE WELD DURING POST-WELD OPERATIONS. AFTER THE ARC IS INITIATED, TRAVEL SHOULD PROGRESS TOWARD THE END OF THE JOINT (OUTBOARD BEAM FLANGE EDGE), AND THE WELD SHOULD BE TERMINATED ON A WELD TAB / RUN OFF TAB. TABS SHALL EXTEND THE JOINT, NO END DAMS.

THE WELD MAY BE INITIATED ON THE WELD RUN-OFF TAB, WITH TRAVEL PROGRESSING TOWARD THE CENTER OF THE GIRDER FLANGE WIDTH. WHEN THIS APPROACH IS USED, THE WELDER SHOULD STOP WELD APPROXIMATELY 1 INCH BEFORE THE BOTTOM WEB. IT IS NOT ADVISABLE TO LEAVE THE WELD CRATER DIRECTLY IN THE CENTER OF THE BEAM FLANGE WIDTH SINCE THIS WILL HINDER POST-WELD OPERATIONS.

THE HALF-LENGTH ROOT PASS SHALL BE THOROUGHLY SLAGGED AND CLEANED.

THE END OF THE HALF-LENGTH ROOT PASS THAT IS NEAR THE CENTER OF THE BEAM FLANGE SHOULD BE VISUALLY INSPECTED TO ENSURE FUSION, SOUNDNESS, FREEDOM FROM SLAG INCLUSIONS AND EXCESSIVE POROSITY. THE RESULTING BEAD PROFILE SHOULD BE SUITABLE FOR OBTAINING FUSION BY THE SUBSEQUENT PASS TO BE INITIATED ON THE OPPOSITE SIDE OF THE GIRDER WEB. IF THE PROFILE IS NOT CONDUCTED TO GOOD FUSION, THE START OF THE FIRST ROOT PASS SHOULD BE GROUND, GOUGED, CHIPPED OR OTHERWISE PREPARED TO ENSURE ADEQUATE FUSION.

EACH WELD LAYER SHOULD BE COMPLETED ON BOTH SIDES OF THE JOINT BEFORE A NEW LAYER IS DEPOSITED.

WELD RUN-OFF TABS SHOULD BE REMOVED AND GROUND FLUSH TO THE BEAM FLANGE.

DEVIATION FROM THE PRECEDING PROCEDURES MAY BE MADE, PROVIDED THE CONTRACTORSUBMITS TN WRITING AN ALTERNATE SEQUENCE THAT IS APPROVED BY THE BUILDING OFFICIAL AND ARCHITECT PRIOR TO FABRICATION.

· EXPANSION BOLTS (COMPLY WITH I.C.B.O. REPORT NUMBER 1372)

BOLT DIAM.	CONCRETE SHEAR	TENSION	
1/2"	1205#	665#	VALUES ARE FOR ITW RAMSET
5/8"	1880#	880#	RED HEAD TRUEBOLT
3/4"	2235#	1375#	WEDGW ANCHOR

UTILIZE PROPER SIZE AND DRILL TYPE, CLEAN HOLE DRIVE AND TIGHTEN BOLT

·DESIGN OF MINOR CONNECTIONS AND FASTENINGS NOT SPECIFICALLY INDICATED ON THE DRAWINGS SHALL BE COMPLETED BY THE FABRICATOR TO MEET REQUIRED CONDITIONS AND INDICATED ON THE SUBMITTED SHOP DRAWINGS.
·REINFORCING STEEL IN CONCRETE SHALL BE FREE OF MUD AND DIRT, OIL, OR OTHER NON-METALIC COATINGS AND SHALL BE "COLD-BENT".
·THE VERTICAL STEEL IN WALLS W/ SINGLE WIRE LOOP TIES AS MANUFACTURED BY "A.A." WIRE PRODUCTS OR ARCHITECT'S APPROVED EQUAL.
·USE STANDARD #9 GUAGE WIRE "DUR-O-WALL" OR "DUR-O-WIRE" OR EQUAL LADDER TYPE JOINT REINFORCEMENT AT 16" O.C. IN MASONRY WALLS.
·LAPPED RE-BAR SPLICES SHALL IN NO CASE BE LESS THAN THE FOLLOWING.

40 TIMES BAR DIAMETER FOR MASONRY.
36 TIMES BAR DIAMETER FOR CONCRETE
MIN. LAP (ALL CASES) SHALL BE 2 FEET.

·FOR BEAMS AND SLABS, THE MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS SHALL BE EQUAL TO THE BAR DIAMETER, 1.33 TIMES THE MAX. AGGREGATE SIZE, BUT IN NO CASE SHALL IT BE LESS THAN ONE INCH.
·EXPANSION BOLTS (I.C.B.O. 1372) ARE STUD TYPE ANCHORS W/ A SINGLE PIECE WEDGE AND HAVE THE FOLLOWING MINIMUM WORKING LOADS......

BOLT DIA.	SHEAR	TENSION
1/2"	1205 LBS.	665 LBS.
5/8"	1880 LBS.	880 LBS.
3/4"	2235 LBS.	1375 LBS.

·FOR MINIMUM BOLT EMBEDMENT LENGTH, SEE TYPICAL DETAIL. CONTRACTOR SHALL SUBMIT MANUFACTURER'S SIZE AND STRENGTH DATA TO ENGINEER THROUGH ARCHITECT PRIOR TO CONSTRUCTION. INSTALL ALL BOLTS AS OUTLINED IN MANUFACTURER'S SPECIFICATIONS, UTILIZING PROPER SIZE AND TYPE OF DRILL, CLEANING HOLE, DRIVING AND TIGHTENING BOLT. VALUES LISTED ABOVE ARE FOR ITW RAMSET/RED HEAD TRUBOLT WEDGE ANCHOR.
·FOR GRADE 60 REINFORCING BARS, USE E90 SERIES.
·ALL STEEL EXPOSED TO THE WEATHER SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION.
·SHOP PAINT STRUCTURAL STEEL EXCEPT PORTIONS EMBEDDED IN CONCRETE OR MASONRY AND ANY EDGES WHICH ARE TO BE FIELD WELDED. APPLY ONE COAT OF METAL PRIMER PAINT AND TWO COATS TO SURFACES WHICH ARE NOT ACCESSIBLE AFTER ERECTION. PRIMER TO BE TNEMEC 10-1009 OR APPROVED EQUAL.

CONCRETE

·STRENGTHS OF CONCRETE SHALL COMPLY AS FOLLOWS U.N.O.

FOUNDATIONS	2,500 P.S.I. @ 28 DAYS
~~SLABS ON GRADE~~	3,000 P.S.I. @ 28 DAYS
COLUMNS	4,000 P.S.I. @ 28 DAYS
FLAT SLABS, BEAMS, WALLS	3,000 P.S.I. @ 28 DAYS

·MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND UNDER-FLOOR DUCTS, ETC.
·MAXIMUM SLUMP TO BE 4 1/2" W/OUT PLASTICIZER. IF PLASTERIZER IS USED, A HIGHER FINAL SLUMP MAY BE ALLOWED UPON STRUCTURAL ENGINEER'S APPROVAL..
·CAST CLOSURE POUR AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED.
·UNLESS APPROVED OTHERWISE IN WRITING BY THE ARCHITECT, ALL CONCRETE SLABS ON GRADE SHALL BE BOUND BY CONTROL JOINTS (KEYED OR SAW CUT), AS SHOWN ON THE FOUNDATION PLAN, SUCH AS THE ENCLOSED AREA DOES NOT EXCEED 225 SQUARE FEET. KEYED CONTROL JOINTS NEED ONLY OCCUR AT EXPOSED EDGES DURING POURING, ALL OTHER JOINTS MAY BE SAW CUT.
·NO FLY ASH ADDITIVES SHALL BE USED IN FLATWORK OR ARCHITECTURAL EXPOSED CONCRETE. FLY ASH, IF PERMITTED BY ARCHITECTURAL SPECIFIUCATIONS SHALL BE LIMITED TO 18% OF CEMENTITIOUS MATERIALS AND SHALL HAVE A REPLACEMENT FACTOR OF 1.2 RELATIVE TO CEMENT REPLACED.
·CONCRETE SLABS TYPICALLY SHALL BE NOMINAL 4 INCH THICK UNLESS NOTED OTHERWISE. USE 1; 2 1/2; 3 1/4; 7 1/2 GAL OF WATER AND MEMBRANE CURING COMPOUND (A.S.T.M. C-309).
·STEEL TROWEL CONCRETE SLABS AFTER SUFFICIENTLY HARDENED TO PREVENT DRAWING MOISTURE AND FINES TO THE SURFACE. FINISH TROWEL IN TWO OPERATIONS. PERFORM FIRST W/ POWER TROWEL UNTIL MATRIX NO LONGER ACCUMILATES. CONCRETE SHALL BE HOT WEATHER PLACEMENT DESCRIBED IN A.C.I. 305R SHOULD BE FOLLOWED TO MINIMIZE TEMPERATURE SHRINKAGE CRACKS.
·POUR ALL CONCRETE STEM WALLS MONOLITHICALLY W/ FOUNDATION FOOTINGS UNLESS VERTICAL STEEL IS USED.
·THE MINIMUM TIME ALLOWABLE BEFORE STRIPPING FORMS POURED CONCRETE IS 24 HOURS.
·STONE CONCRETE AGGREGATE SHALL BE A.S.T.M. C-33 (DRYWEIGHT OF 145 POUNDS PER CUBIC FEET MAXIMUM. THE MAXIMUM AGGREGATE SIZE TO BE.....

FOUNDATION AND MASS CONCRETE	1- 1/2"
COLUMNS/BMS/WALKS/SLABS	3/4"

·PORTLAND CEMENT USED IN CONCRETE MIX SHALL BE A.S.T.M. C-150, TYPE II (TYPE V USED WHEN IN CONTACT W/ EART OR BELOW GRADE)
·AGGREGATE FOR LIGHT WEIGHT CONCRETE SHALL BE A.S.T.M. C-330. EACH PARTICLE SHALL HAVE A CONTINUOUS SEALED OUTER SHELL, RESISTANT TO MOISTURE PENETRATION AND CEMENT LOSS.
·AGGREGATE THAT WILL DISRUPT THE BOND OF RESILIENT FLOOR TILE SHALL NOT BE USED.

· WATER SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS, OR ORGANIC MATERIALS.
· MIXING OPERATIONS SHALL COMPLY W/ A.S.T.M. C-94
· REINFORCING STEEL SHALL MEET THE FOLLOWING REQUIREMENTS...

#6 AND LARGER	ASTM A615	Fy= 60 KSI
#5 AND SMALLER	ASTM A615	Fy= 40 KSI
WELDED WIRE FABRIC	ASTM A185 (WIRE PER ASTM A82)	
BAR WELDING	ASTM A706	GRADE 60

·NO TACK WELDING OF REINFORCING BARS ALLOWED WITHOUT PRIOR REVIEW OF PROCEDURE WITH THE ARCHITECT (LATEST ACI CODE APPLIES).
·MINIMUM COVERAGES FOR REINFORCING STEEL SHALL BE.......

CONCRETE IN CONTACT W/ EARTH UNFORMED	3"
CONCRETE IN CONTACT W/ EARTH FORMED	2"
WALLS, EXTERIOR FACE	1 - 1/2"
WALLS, INTERIOR FACE	1"
STRUCTURAL SLABS / JOIST	3/4"
BEAM / GIRDERS / COLUMS	1 - 1/2"

·ALL REINFORCING BARS AND ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO CONCRETE PLACEMENT.
·LAP SPLICES IN CONCRETE TO COMPLY AS FOLLOWS...

CLASS "B" TENSION LAP SPLICES PER LATEST EDITION OF ACI 318
COLUMNS SHALL BE STANDARD COMPRESSION LAP SPLICES (STAGGER SPLICES A MINIMUM OF ONE LAP LENGTH)
WELDED WIRE FABRIC LAP SO OVERLAP (MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET) IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2 INCHES
ALL WELDED WIRE FABRIC SHALL BE CHAIRED TO ENSURE PROPER CLEARANCE
SPLICE LOCATIONS ARE SUBJECT TO APPROVAL BY ARCHITECT. PROVIDE BENT
CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT ALL CORNERS AND INTERSECTIONS PER TYPICAL DETAILS.
·DOWEL ALL VERTICAL REINFORCING TO FOUNDATION WITH STANDARD 90 DEGREE HOOKS UNLESS NOTED OTHERWISE. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. ACI 318 TO BE USED AS MINIMAL STANDARDS IF NOT INDICATED ON DTLS.
·DRYPACK SHALL BE 5,000 PSI NON-SHRINK GROUT, FIVE STAR OR EQUAL. INSTALL UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, DRYPACK AFTER PLUMB BUT BEFORE FLOOR/ROOF CONSTRUCTION.

POST TENSIONING
POST TENSIONING REINFORCING SHALL CONFORM TO THE FOLLOWING...

~~TENDON MATERIAL~~	~~STRESS RELIEVED~~	LOW RELAXATION
ASTM DESIGNATION	A416	A416
ULTIMATE STRENGTH	270 KSI	270 KSI
TEMPORARY STRESS	216 KSI	216 KSI
ANCHOR STRESS	189 KSI	189 KSI
EFFECTIVE STRESS	159 KSI	174 KSI
ELONGATION	0.0825 IN/FT	0.0825 IN/FT
CONCRETE COVER	3/4" TO STRAND	3/4" TO STRAND
CONCRETE COVER	2-1/4" TO WEDGES	2-1/4" TO WEDGES

WHEN POST-TENSIONING DESIGN IS PERFORMED USING LOW RELAXING STRAND, SUPPLIER MAY SUBSTITUTE WITH STRESS RELIEVED STRAND PROVIDED THEY PERFORM AND SUBMIT THE NECESSARY CALCULATIONS.

SUPPLIER SHALL SUBMIT CALCULATIONS FOR ALL LOSES FOR SPECIFIED STRESSING LENGTHS TO ENSURE MINIMUM FINAL EFFECTIVE FORCE IS MAINTAINED.

BASE ALL ELONGATION CALCULATIONS UPON THE MODULUS OF ELASTICITY SHOWN ON THE MILL CERTIFICATES FOR THE TENDONS BEING FURNISHED TO THE SITE. ALL TENDONS SHALL HAVE THEIR HEAT NUMBER MARKED ON THE TAG ATTACHED TO TENDON.

ONE SAMPLE OF EACH REEL SHALL BE TESTED BY AN APPROVED LABORATORY. TEST RESULTS SHALL BE SUBMITTED TO THE ARCHITECT AND BUILDING DEPARTMENT BEFORE STRESSING. (SHOP DRAWINGS ARE ALSO REQUIRED BY SUPPLIER FOR REVIEW).

· POST TENSION ANCHORAGE HARDWARE SHALL COMPLY WITH I.C.B.O. REPORT 4164, TYPE U-5, AS SUPPLIED BY SOUTHWEST MARKETING COMPANY OR OTHER MANUFACTURER WITH CURRENT AND EQUIVALENT I.C.B.O. APPROVAL.
· DRAPES SHALL CONFORM TO CONTROLLING POINTS SHOWN ON DRAWINGS AND SHALL BE IN AN APPROXIMATE PARABOLIC SHAPE BETWEEN SUPPORTS. DIMENSIONS LOCATE THE CENTER OF GRAVITY OF THE TENDON OR GROUP OF TENDONS (LOW POINTS ARE MID SPAN U.N.O.)
· SECURE TENDONS TO A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION DURING CONCRETE PLACEMENT. SPACING TO BE NOT LESS THAN 48 INCHES O.C. ALL CHAIRS TO BE STAPLED UNLESS NOTED OTHERWISE.
· ALL #4 SUPPORT BARS TO BE LAPPED 18". PLACE (2) #4 CONT. BARS EDGE OF SLAB ANCHOR.
· ALL POCKETS REQUIRED FOR ANCHORAGE SHALL BE REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCTURE. ALL POCKETS SHALL BE WATERPROOFED SO AS TO ELIMINATE WATER LEAKAGE THRU THE POCKET. ALL DAMAGE TO MASTIC SHEATHING AROUND TENDONS SHALL BE PREPARED.
· SLEEVES AND INSERTS SHALL BE CAST-IN-PLACE WHENEVER POSSIBLE. DRILLED OR POWER DRIVEN FASTENERS ARE PERMITTED IF IT CAN BE SHOWN THAT INSERTS WILL NOT SPALL THE CONCRETE AND LOCATED SO AS TO AVOID THE TENDONS AND ANCHORAGES.
· SLAB OR BEAMS MAY BE DE-SHORED WHEN ALL TENDONS HAVE BEEN STRESSED EXCEPT WHEN SHORING IS REQUIRED TO CARRY FLOORS ABOVE. CONTINUOUS SHORING SHALL BE PROVIDED IN BAYS WITH CLOSURE STRIPS. RESHORING SHALL BE SPACED 7'-0" O.C. MAXIMUM AND SHALL EXTEND TO FOUNDATION SLAB UNLESS APPROVED BY THE ARCHITECT.

MASONRY

·HOLLOW CONCRETE MASONRY UNITS SHALL CONFORM TO A.S.T.M. C-90, GRADE N, TYPE 1, F'm = 1,500 P.S.I.
GRADE S (USED FOR GENERAL USE WHERE MODERATE STRENGTH AND RESISTANCE TO FROST ACTION AND MOISTURE PENETRATION IS REQUIRED.
RUNNING BOND SHALL BE TYPICAL U.N.O.
~~MORTAR TYPE SHALL BE TYPE~~ "S", 1,800 P.S.I. (ASTM C270)
GROUT SHALL BE 2,000 P.S.I. STRENGTH (TYPICAL) (ASTM C476)
· MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING AND AGAIN ABOUT FIVE MINUTES LATER. PROVIDE CLEAN-OUTS IF GROUT LIFT EXCEEDS 48 INCHES IN BLOCK WALLS. MAXIMUM GROUT LIFT SHALL BE 8'-0".
· UNLESS NOTED OTHERWISE, PLACE CONTROL JOINTS IN MASONRY WALLS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24 FEET. CONTROL JOINTS SHALL NOT OCCUR AT WALL CORNERS, INTERSECTIONS, ENDS, W/IN 24" OF CONCENTRATED POINTS OF BEARING OR JAMBS, OR OVER OPENINGS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS. ALL MASONRY BELOW FINSIHED FLOOR OR GRADE SHALL BE GROUTED SOLID.
· GROUT ALL CELLS SOLID BELOW GRADE OR WHERE FILLS OCCUR.
· ALLOW MASONRY WALLS TO CURE A MINIMUM OF THREE DAYS BEFORE GROUTING.
· WATER USED IN GROUT, MORTAR, AND MASONRY WORK SHALL BE CLEAN AND FREE FROM OIL, ACID, ALKALI, ORGANIC MATTER, OR OTHER INJURIOUS MATERIAL.
· THE MINIMUM COVERAGE OF REINFORCING STEEL IN MASONRY SHALL BE 5/8".
· IF COMPRESSIVE STRENGTH IS SPECIFIED GREATER THAN 1500 psi, THE STRENGTH MUST BE VERIFIED BY PRISM TESTS. (SPECIAL INSPECTION)

SHOP DRAWINGS

·SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS FABRICATED COMPONENTS AND MANUFACTURED ITEMS) IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS.

· THE CONTRACTOR SHALL REVIEW SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ARCHITECT. ITEMS WHICH ARE NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON REVIEW.
· VERIFY ALL DIMENSIONS WITH ARCHITECT.
· ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE CLOUDED BY MANUFACTURER OR FABRICATOR. ANY OF THE AFORMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED APPROVED AFTER ARCHITECT'S REVIEW UNLESS NOTED ACCORDINGLY.
· THE ARCHITECT RESERVES THE RIGHT TO APPROVE OR DISAPPROVE ANY CHANGES TO CONTRACT DOCUMENTS AT ANYTIME BEFORE OR AFTER SHOP DRAWING REVIEW.
· SHOP DRAWINGS DO NOT REPLACE CONTRACT DOCUMENTS. ITEMS OMITTED OR SHOWN INCORRECTLY, NOT IN COMPLIANCE, AND ARE NOT FLAGGED BY THE ARCHITECT ARE NOT TO BE CONSIDERED CHANGES TO THE CONTRACT DOCUMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE SURE ITEMS ARE CONSTRUCTED TO CONTRACT DOCUMENTS.
· THE ADEQUACY OF ENGINEERING DESIGNS AND LAYOUT PERFORMED BY OTHERS RESTS WITH THE DESIGNING OR SUBMITTING AUTHORITY.
· REVIEWING IS INTENDED ONLY AS AN AID TO THE CONTRACTOR IN OBTAINING CORRECT SHOP DRAWINGS. RESPONSIBILITY FOR CORRECTIONS SHALL REST WITH THE CONTRACTOR.
· FOR THE PURPOSES OF CODE COMPLIANCE, DEFERRED SUBMITTALS ARE DEFINED AS THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF THE APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE BUILDING OFFICIAL W/IN A SPECIFIED DEFINED TIME.
· DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE PRIOR APPROVAL OF THE BUILDING OFFICIAL. THE ARCHITECT OF RECORD SHALL LIST THE DEFERRED SUBMITTALS ON THE PLANS AND SHALL SUBMIT THE DEFERRED SUBMITTAL DOCUMENTS FOR REVIEW BY THE BUILDING OFFICIAL. DEFFERED SUBMITTALS PER 1994 UBC 106.3.4.2.
· SUBMITTAL DOCUMENTS FOR DEFFERED SUBMITAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OF RECORD WHO SHALL REVIEW THEM AND FORWARD TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THEY HAVE BEEN FOUND TO BE IN GENERAL COMPLIANCE WITH THE BUILDING DESIGN INTENT. THE DEFFERED ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTALS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

SPECIAL INSPECTIONS
·PER C.B.C. CHAPTER 17, SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING.

CONCRETE	TEST SPECIMENS/REINF. CONC.
BOLTS IN CONC.	DURING PLACEMENT
REINFORCING STEEL	FOR CONC. REQ. ABOVE
WELDING	FIELD WELDS/ PENETRATION WELDS
EXPANSION/ EPOXY BOLTS	DURING PLACEMENT
STRUCTURAL MASONRY	PRISM PREPARATION/ CLEANOUTS

·THE SPECIAL INSPECTOR SHALL FURNISH REPORTS TO THE BUILDING OFFICIAL WITH DUPLICATE COPY TO THE ARCHITECT OF RECORD. ALL DISCREPENCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.

2013 CBC DESIGN CRITERIA

SEISMIC DESIGN CATEGORY	SDC = D	CBC 2013/ASCE 7-10 SECTION 11.4
SITE CLASS	D	CBC 2013/ASCE 7-10 SECTION 11.4.2
SHORT RESPONSE SPECTRAL RESPONSE PARAMETER	Ss = 0.923	CBC 2013/ASCE 7-10 SECTION 11.4.1
1 SEC PERIOD SPECTRAL RESPONSE PARAMETER	S1 = 0.359	CBC 2013/ASCE 7-10 SECTION 11.4.1
SHORT PERIOD SITE COEFFICIENT	Fa = 1.131	CBC 2013/ASCE 7-10 SECTION 11.4.3
LONG PERIOD SITE COEFFICIENT	Fv = 1.681	CBC 2013/ASCE 7-10 SECTION 11.4.5
RESPONSE MODIFICATION FACTOR	R = 5.0 (CMU)	CBC 2013/ASCE 7-10 SECTION 12-2.1
SYSTEM OVERSTRENGTH FACTOR	Omega = 2.5	CBC 2013/ASCE 7-10 SECTION 12-2.1
DEFLECTION AMPLIFICATION FACTOR	Cd = 3.5	CBC 2013/ASCE 7-10 SECTION 12-2.1
IMPORTANCE FACTOR	I = 1.0	CBC 2013/ASCE 7-10 SECTION 11.5-1
WIND SPEED	110 MPH EXP B	CBC 2013/ASCE 7-10 SECTION 26.5.1
RISK CATEGORY	II	CBC 2013 SECTION 1604.5

DESIGN LOADS:

WIND SPEED, EXPOSURE D:	**110 MPH; 16 PSF MIN**
FLOOR DEAD LOAD:	**20 PSF**
FLOOR LIVE LOAD:	**100 PSF**
BALCONY/DECK LIVE LOAD:	**100 PSF**
ROOF DEAD LOAD:	**20 PSF**
ROOF LIVE LOAD:	**20 PSF**
DECK LIVE LOAD:	**60 PSF**
SOIL BEARING PRESSURE:	**2000 PSF**

IF THE BUILDING INSPECTOR SUSPECTS FILL, EXPANSIVE SOIL OR ANY GEOLOGIC INSTABILITY BASED UPON OBSERVATION OF THE FOUNDATION EXCAVATION, A SOILS OR GEOLOGICAL REPORT, AND RESUBMITTAL OF PLANS TO PLAN CHECK TO VERIFY THAT THE REPORT RECOMMENDATIONS HAVE BEEN INCORPORATED MAY BE REQUIRED.

JUNE 5, 2015
JULY 21, 2015

HORIUCHI GUEST QTRS/GYM

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