STRUCTURAL NOTES

A. BASIS OF DESIGN:

1. THE STRUCTURAL DESIGN HAS BEEN PERFORMED IN ACCORDANCE WITH THE 2007 CALIFORNIA BUILDING CODE (CBC).

2. LIVE LOADS (MAY BE REDUCED IN ACCORDANCE WITH THE BUILDING CODE)

ROOF MECHANICAL AREA	150 psf
ROOF	20 psf
FLOOR (LAB & LAB SUPPORT)	125 psf
FLOOR (OFFICE)	100 psf
PARTITION LOADING	0 psf
EXITS AND STAIRS	100 psf
MECHANICAL/ELECTRICAL ROOMS	150 psf
INTERSTITIAL	40 psf
PARKING	40 psf

3. SEISMIC DESIGN DATA

OCCUPANCY CATEGORY	II
SEISMIC IMPORTANCE FACTOR	$I_E = 1.0$
MAPPED SPECTRAL ACCELERATION	$S_S = 1.591$
MAPPED SPECTRAL ACCELERATION	$S_1 = 0.611$
SITE CLASS	C
SITE COEFFICIENT	$F_a = 1.0$
SITE COEFFICIENT	$F_v = 1.3$
DESIGN SPECTRAL ACCELERATION	$S_{DS} = 1.061$
DESIGN SPECTRAL ACCELERATION	$S_{D1} = 0.530$
SEISMIC DESIGN CATEGORY	D
PARTITION LOADING AT FLOORS	10 psf
PARTITION LOADING AT ROOFS	5 psf
ANALYSIS PROCEDURE USED	MODAL RESPONSE SPECTRUM (SEE NOTE 4)
FOR LONGITUDINAL DIRECTION:	
SEISMIC FORCE RESISTING SYSTEM	SPECIAL REINFORCED CONCRETE SHEAR WALL
RESPONSE MODIFICATION	$R = 6$
SYSTEM OVERSTRENGTH FACTOR	$\Omega = 2.5$
DEFLECTION AMPLIFICATION FACTOR	$C_d = 5$
SEISMIC RESPONSE COEFFICIENT	$C_s = 0.177$
DESIGN BASE SHEAR	V = 4213 k
FOR TRANSVERSE DIRECTION:	
SEISMIC FORCE RESISTING SYSTEM	SPECIAL REINFORCED CONCRETE SHEAR WALL
RESPONSE MODIFICATION	$R = 6$
SYSTEM OVERSTRENGTH FACTOR	$\Omega = 2.5$
DEFLECTION AMPLIFICATION FACTOR	$C_d = 5$
SEISMIC RESPONSE COEFFICIENT	$C_s = 0.139$
DESIGN BASE SHEAR	V = 3320 k

4. THE MODAL RESPONSE SPECTRUM ANALYSIS IS BASED ON THE DESIGN RESPONSE SPECTRUM IN ASCE 7, FIGURE 11.4-1.

5. WIND DESIGN DATA

BASIC WIND SPEED	V = 85 mph
WIND IMPORTANCE FACTOR	$I_W = 1.0$
EXPOSURE CATEGORY	
NORTH QUADRANT	C
EAST QUADRANT	C
SOUTH QUADRANT	C
WEST QUADRANT	C
ENCLOSURE CATEGORY	ENCLOSED
GUST &INTERNAL PRESSURE COEFF	$GC_{PI} = 0.18$
DIRECTIONALITY FACTOR	$K_d = 0.85$
TOPOGRAPHIC FACTOR	$K_{zt} = 1.0$

B. DEFERRED APPROVALS:

1. THE FOLLOWING COMPONENTS REQUIRE DEFERRED APPROVAL BY THE BUILDING OFFICIAL. STRUCTURAL CALCULATIONS AND DRAWINGS SIGNED AND SEALED BY A CALIFORNIA REGISTERED CIVIL ENGINEER SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR REVIEW AND TO THE BUILDING OFFICIAL FOR PERMIT.
   A. PREMANUFACTURED STEEL STAIRS.
   B. EXTERIOR COLD-FORMED STEEL FRAMING.
   C. CURTAIN WALL SYSTEM
   D. DESIGNATED SEISMIC EQUIPMENT SYSTEMS

2. IN ADDITION TO THE SEAL OF THE RESPONSIBLE ENGINEER, DEFERRED SUBMITTAL PACKAGES SHALL BEAR THE SHOP DRAWING APPROVAL STAMPS OF THE ARCHITECT, ENGINEER AND THE GENERAL CONTRACTOR PRIOR TO BUILDING DEPARTMENT SUBMITTAL.

3. PLANS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED IN A TIMELY MANNER THAT ALLOWS A MINIMUM OF 30 WORKING DAYS FOR INITIAL PLAN REVIEW BY THE BUILDING OFFICIAL. ALL COMMENTS RELATED TO THE DEFERRED SUBMITTAL MUST BE ADDRESSED TO THE SATISFACTION OF THE PLAN CHECK DIVISION PRIOR TO PERMIT APPROVAL OF THE SUBMITTAL ITEMS.

4. DEFERRED SUBMITTAL ITEMS SHALL NOT BE FABRICATED PRIOR TO APPROVAL BY THE BUILDING OFFICIAL OF THE CALCULATIONS AND DRAWINGS.

C. PRE-ENGINEERED ELEMENTS TO BE ANCHORED TO THE BUILDING:

1. PRE-ENGINEERED STRUCTURAL AND NONSTRUCTURAL ELEMENTS AND THEIR ATTACHMENTS SUPPORTED BY THE BUILDING WHICH ARE NOT DETAILED ON THESE DRAWINGS SHALL BE DESIGNED BY OTHER RESPONSIBLE PARTIES.

2. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

3. DESIGN CALCULATIONS AND DRAWINGS, SIGNED AND SEALED BY A CALIFORNIA REGISTERED CIVIL ENGINEER, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND TO THE BUILDING OFFICIAL FOR PERMIT, PRIOR TO FABRICATION AND INSTALLATION. CALCULATIONS SHALL CLEARLY IDENTIFY LOADS IMPOSED ON THE BUILDING STRUCTURE.

4. SUCH ELEMENTS AND THEIR ATTACHMENTS SHALL BE DESIGNED IN ACCORDANCE WITH ASCE 7, CHAPTER 13, SECTIONS OF THE AISI SPECIFICATIONS AND THE MSMA RECOMMENDED DESIGN PRACTICE MANUAL, AS ARE APPLICABLE.

5. EQUIPMENT WEIGHING IN EXCESS OF 400 POUNDS SHALL NOT EXCEED THE WEIGHT NOR DEVIATE FROM THE LOCATION AS IDENTIFIED ON THE STRUCTURAL DRAWINGS.

6. NONSTRUCTURAL ELEMENTS THAT CONTAIN OR TRANSMIT HAZARDOUS MATERIALS OR THAT ARE REQUIRED TO FUNCTION FOR LIFE-SAFETY PURPOSES FOLLOWING AN EARTHQUAKE ARE DEFINED AS "DESIGNATED SEISMIC EQUIPMENT SYSTEMS." THE FOLLOWING SHALL BE CONSIDERED AS COMPONENTS OF DESIGNATED SEISMIC EQUIPMENT SYSTEMS:
   A. EMERGENCY GENERATORS
   B. FUEL SUPPLY SYSTEMS
   C. FIRE SPRINKLER SYSTEMS

7. EACH MANUFACTURER OF A COMPONENT OF A DESIGNATED SEISMIC EQUIPMENT SYSTEM SHALL QUALIFY THE COMPONENT AND ITS MOUNTING SYSTEM OR ANCHORAGE BY TESTING OR ANALYSIS IN ACCORDANCE WITH ASCE 7 SECTION 13.2. A CERTIFICATE OF COMPLIANCE SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND TO THE BUILDING OFFICIAL FOR PERMIT. (WHERE CERTIFICATES ARE BASED ON ANALYSIS, THE ANALYSIS SHALL BE SIGNED BY A CALIFORNIA-REGISTERED CIVIL ENGINEER.)

8. AT CONNECTIONS TO STRUCTURE, PROVIDE STABILIZING ELEMENTS SUCH AS BRACES, STIFFENER PLATES, ETC., SO AS TO NOT IMPOSE ECCENTRIC LOADING, TWISTING, OR WARPING TO STRUCTURAL MEMBERS. PROVIDE MATERIAL AND INSTALL STABILIZING ELEMENTS.

9. ELEMENTS THAT ARE ATTACHED TO THE BUILDING SHALL BE DESIGNED TO ACCOMMODATE MOVEMENTS OF THE STRUCTURE BASED ON THE AMPLIFIED RESPONSE DISPLACEMENT, δ_x PER ASCE 7 SECTION 12.9.2. THE VALUES OF. δ_x ARE AS FOLLOWS:

	MAIN BUILDING (GRIDS 4.8 - 16) LONGIT.	MAIN BUILDING (GRIDS 4.8 - 16) TRANSV.	STEEL BUILDING (GRIDS 1 - 4.8) LONGIT.	STEEL BUILDING (GRIDS 1 - 4.8) TRANSV.
ROOF	1.08 IN.	2.27 IN.	--	--
LEVEL 4	1.18 IN.	2.12 IN.	--	--
LEVEL 3	0.87 IN.	1.91 IN.	1.42 IN.	0.97 IN.
LEVEL 2	0.23 IN.	0.21 IN.	0.58 IN.	0.43 IN.

D. SUBMITTALS:

1. THE CONTRACTOR SHALL MAKE SUBMITTALS PRIOR TO FABRICATION AS REQUIRED BY THE WRITTEN SPECIFICATIONS AND SHALL INCLUDE AS A MINIMUM THE FOLLOWING SUBMITTALS:
   A. CONCRETE MIX DESIGNS.
   B. REINFORCING STEEL DRAWINGS.
   C. CONTROL JOINT/CONSTRUCTION JOINT LOCATIONS.
   D. SHORING REMOVAL AND RE-SHORING PROCEDURE (SIGNED BY A CALIFORNIA-REGISTERED CIVIL ENGINEER).
   E. STRUCTURAL STEEL DRAWINGS
   F. STEEL STAIRS DRAWINGS.
   G. DESIGN-BUILD STEEL STAIRS DRAWINGS AND CALCULATIONS (SIGNED BY A CALIFORNIA-REGISTERED CIVIL ENGINEER).
   H. METAL DECK DRAWINGS.
   I. DESIGN-BUILD COLD-FORMED STEEL FRAMING DRAWINGS AND CALCULATIONS (SIGNED BY A CALIFORNIA-REGISTERED CIVIL ENGINEER).
   J. WELDING PROCEDURES (SHOP AND FIELD WELDING).
   K. CURTAIN WALL DRAWINGS AND CALCULATIONS (SIGNED BY A CALIFORNIA-REGISTERED CIVIL ENGINEER).
   L. MANUFACTURER'S CERTIFICATES OF COMPLIANCE FOR DESIGNATED SEISMIC EQUIPMENT SYSTEMS IN ACCORDANCE WITH SECTION 1708.5 OF THE BUILDING CODE, PRIOR TO INSTALLATION.

2. THE FOLLOWING SHOP DRAWINGS ARE NOT REQUIRED FOR SUBMISSION FOR STRUCTURAL REVIEW:
   A. SHORING AND BRACING.
   B. PICK-UP INSERTS.
   C. WINDOW MULLIONS
   D. UNSPLICED REBAR AT SLAB-ON-GRADE AND FOOTINGS
   E. FORMWORK.
   F. STRUCTURAL STEEL MILL REPORTS.
   G. WELDER CERTIFICATIONS
   H. WWF FOR CONCRETE OVER STEEL DECK.

3. STEEL REINFORCING LISTS AND QUANTITIES AND LENGTHS OF ALL MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ASSURE COMPLIANCE WITH THE PLANS. ENGINEER WILL NOT REVIEW.

4. SHOP DRAWINGS SUBMITTED TO THE ENGINEER FOR REVIEW SHALL BE STAMPED AND SIGNED BY THE CONTRACTOR INDICATING THE CONTRACTORS PRIOR REVIEW AND THAT THE SUBMITTAL IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

5. AS AN ALTERNATE TO MULTIPLE PAPER COPIES, SHOP DRAWINGS MAY BE SUBMITTED IN ELECTRONIC (PDF) FORMAT. WHERE SUBMITTED ELECTRONICALLY, SHOP DRAWINGS WILL BE PROCESSED AND RETURNED ELECTRONICALLY.

E. GENERAL:

1. SPECIFIC NOTES AND DETAILS ON THE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

2. WHERE NO DETAILS ARE SHOWN OR NOTED IN ANY PART OF THE WORK THE DETAILS FOR OTHER SIMILAR WORK SHALL APPLY

3. DETAILS IDENTIFIED AS TYPICAL, SHALL APPLY IN ESTIMATING AND CONSTRUCTION TO EVERY LIKE CONDITION WHETHER OR NOT THE REFERENCE IS REPEATED.

4. THE STRUCTURAL DRAWINGS SHALL NOT BE SCALED. COORDINATE DIMENSIONS WITH ARCHITECTURAL DRAWINGS.

5. COORDINATE ELEVATIONS, SLOPES AND DRAINAGE REQUIREMENTS WITH THE ARCHITECTURAL DRAWINGS.

6. STANDARDS REFERENCED ON THE STRUCTURAL DRAWINGS REFER TO THE EDITION APPLICABLE UNDER THE CURRENT BUILDING CODE.

7. THE RESPONSIBILITY FOR THE REVIEW AND COORDINATION OF DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF RELATED CONSTRUCTION SHALL BEAR ON THE CONTRACTOR. DISCREPANCIES THAT EXIST SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN A TIMELY MANNER, PRIOR TO START OF RELATED CONSTRUCTION.

8. WORK PERFORMED IN CONFLICT WITH THE STRUCTURAL DRAWINGS OR APPLICABLE BUILDING CODE REQUIREMENTS SHALL BE CORRECTED AT THE EXPENSE OF THE CONTRACTOR.

9. DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS SHALL BE VERIFIED BEFORE STARTING RELATED WORK AND THE ENGINEER NOTIFIED OF DISCREPANCIES IN A TIMELY MANNER.

10. SITE CONDITIONS THAT ARE NOT REFLECTED ON THE STRUCTURAL DRAWINGS OR THAT DEVIATE FROM THE MAXIMUM OR MINIMUM DIMENSIONS INDICATED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN A TIMELY MANNER. SUCH CONDITIONS MAY INCLUDE CONFLICT IN GRADES, ADVERSE SOIL CONDITIONS, GROUND WATER PRESENT, DEEPENED FOOTINGS, UNCOVERED AND UNEXPECTED UTILITY LINES, ETC.

11. MATERIALS AND WORKMANSHIP SHALL CONFORM TO REQUIREMENTS OF APPLICABLE REGULATIONS AND THE BUILDING CODE AS AMENDED AND ADOPTED BY THE BUILDING OFFICIAL.

12. LOADS TO THE BUILDING EXCEEDING THE LOADS INDICATED ON THE PLANS, OR ANY LOADS EXCEEDING 400 POUNDS THAT ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE REPORTED TO THE ENGINEER.

F. TEMPORARY WORK AND SITE SAFETY:

1. THE STRUCTURAL DRAWINGS SHOW THE REQUIREMENTS FOR THE COMPLETED STRUCTURE ONLY. TEMPORARY WORKS REQUIRED TO COMPLETE THE CONSTRUCTION PROCESS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE DESIGN OR FIELD VERIFICATION OF TEMPORARY AND ANCILLARY WORK.

2. THE RESPONSIBILITY FOR SAFETY IN AND AROUND THE JOBSITE SHALL BEAR ON THE CONTRACTOR. PROPER AND SAFE METHODS OF CONSTRUCTION SHALL BE EMPLOYED AT ALL TIMES INCLUDING THE STABILIZING OF INCOMPLETE STRUCTURES, FORMWORK, SHORING, RESHORING, FALSEWORK, PLATFORMS, SCAFFOLDING, BARRIERS, WALKWAYS, ETC. AND INCLUDING CONTROL OF THE INTENSITY, DURATION AND LOCATION OF CONSTRUCTION LOADS.

3. THE RESPONSIBILITY FOR THE DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING, UNDERPINNING, AND SHORING REQUIRED TO SAFELY RETAIN ALL GRADES AND STRUCTURES SHALL BEAR ON THE CONTRACTOR.

4. CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON A STRUCTURE. LOADS SHALL NOT EXCEED THE DESIGN LIVE LOAD INDICATED. WHERE THE STRUCTURE HAS NOT ATTAINED FINAL DESIGN STRENGTH, ADEQUATE SHORING AND OR BRACING SHALL BE INSTALLED.

G. FOUNDATION:

1. THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL INVESTIGATION REPORT SHALL BE FOLLOWED:

   BY: GEOTECHNICS, INC.
   DATED: NOVEMBER 8, 2007
   PROJECT NO: 0287-008-00

2. DEVIATIONS IN GEOTECHNICAL CONDITIONS FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE STRUCTURAL AND GEOTECHNICAL ENGINEERS IN A TIMELY MANNER.

3. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

4. THE MAXIMUM ALLOWABLE SOIL BEARING PRESSURE SHALL BE 5,000 psf. ALLOWABLE BEARING MAY BE INCREASED BY 250 psf AND 500 psf FOR EACH ADDITIONAL FOOT OF FOUNDATION WIDTH AND DEPTH, RESPECTIVELY, TO A MAXIMUM OF 7,500 psf. THE RESULTING ALLOWABLE BEARING VALUE MAY BE INCREASED BY 1/3 FOR WIND AND SEISMIC LOAD CASES.

5. THE EXPANSION INDEX HAS BEEN DETERMINED TO BE 50 OR LESS AND NO SPECIAL DESIGN RECOMMENDATIONS ARE REQUIRED.

6. FOOTING AND UTILITY TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED IN LAYERS SUBJECT TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER. FLOODING WILL NOT BE PERMITTED.

7. LOOSE SOIL AND FILL MATERIAL SHALL BE COMPACTED ACCORDING TO THE REQUIREMENTS OF THE SOILS REPORT.

8. COMPACTION TEST REPORTS FOR FILL BY A QUALIFIED TESTING LAB SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER, GEOTECHNICAL ENGINEER AND BUILDING OFFICIAL PRIOR TO REQUESTING FOUNDATION INSPECTION.

9. FOOTING DEPTHS INDICATED ON THE STRUCTURAL DRAWINGS ARE FOR BIDDING PURPOSES ONLY AND ARE ASSUMED TO BE IN SUITABLE BEARING MATERIALS. THE GEOTECHNICAL ENGINEER MAY REQUIRE FOUNDATION DEPTHS TO BE INCREASED. THE RESPONSIBILITY FOR CONFORMING TO THE GEOTECHNICAL REPORT RECOMMENDATIONS REGARDING DEPTH OF FOOTINGS SHALL BEAR ON THE CONTRACTOR.

10. FOOTING ELEVATIONS SHALL BE LOCATED SUCH THAT THEIR BEARING IS A MINIMUM HORIZONTAL DISTANCE OF EIGHT FEET FROM THE DAYLIGHT OF AN ADJACENT SLOPE OR AS RECOMMENDED WITHIN THE GEOTECHNICAL REPORT.

11. ANCHOR BOLTS, DOWELS AND HOLD-DOWN ANCHORS SHALL BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.

12. WALLS RETAINING EARTH SHALL BE DRAINED AND BACKFILLED ACCORDING TO THE RECOMMENDATIONS WITHIN THE GEOTECHNICAL REPORT.

13. BACKFILLING BEHIND RETAINING WALLS SHALL NOT BEGIN UNTIL WALLS HAVE BEEN CURED FOR A MINIMUM OF 14 DAYS.

14. SHORING SHALL BE INSTALLED AT THE TOP OF RESTRAINED RETAINING WALLS PRIOR TO BACKFILLING. SHORING SHALL REMAIN IN PLACE UNTIL THE PERMANENT STRUCTURAL SUPPORTING MEMBERS ARE IN PLACE. FOR CONCRETE SUPPORTING MEMBERS, SHORING TO REMAIN IN PLACE FOR A MINIMUM OF 7 DAYS AFTER CONCRETE PLACEMENT.

15. SLABS ON GRADE THAT RESTRAIN THE BOTTOM OF RETAINING WALLS SHALL BE IN PLACE PRIOR TO BACKFILLING OF THE WALLS.

H. REINFORCING STEEL:

1. DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS SHALL FOLLOW ACI 315, "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT."

2. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

3. REINFORCING BARS SHALL CONFORM TO ASTM A 615, GRADE 60, U.O.N.

4. LONGITUDINAL REINFORCING BARS FOR COLUMNS AND IN SEISMIC ELEMENTS INCLUDING SHEAR WALL BOUNDARY ZONES SHALL CONFORM TO ASTM A 706, GRADE 60. BARS CONFORMING TO ASTM A 615, GRADE 60 MAY BE SUBSTITUTED AT THESE LOCATIONS PROVIDED THE FOLLOWING CONDITIONS (BASED ON MILL TESTS) ARE MET:
   A. THE ACTUAL YIELD STRENGTH DOES NOT EXCEED THE SPECIFIED YIELD STRENGTH BY MORE THAN 18,000 psi.
   B. THE RATIO OF THE ACTUAL TENSILE STRENGTH TO ACTUAL YIELD STRENGTH IS NOT LESS THAN 1.25.

5. WELDED REINFORCING BARS SHALL CONFORM TO ASTM A 706, GRADE 60. BARS TO BE WELDED CONFORMING TO ASTM A 615, GRADE 60 MAY BE SUBSTITUTED PROVIDED THAT THE WELDING OF BARS COMPLIES WITH AWS D1.4 AND THE MINIMUM SPECIFICATIONS FOR WELDING OF REINFORCING STEEL INCLUDED HEREIN.

6. WELDED REINFORCEMENT GRIDS SHALL BE BAUGRID (ICC #ER-5192 OR #ESR-2352). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

7. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185. MINIMUM LAP OF WWF SHALL BE ONE FULL MESH + 2".

8. REINFORCING BAR LAP SPLICES SHALL BE:
   CLASS B. (18" MIN.) FOR CONCRETE, U.O.N.
   65 BAR DIA. (24" MIN.) FOR MASONRY, U.O.N. .

9. DETAILS OF REINFORCEMENT SHALL COMPLY WITH ACI 318, CHAPTER 7.

10. REINFORCING BAR LAP SPLICES SHALL NOT BE PERMITTED IN SHEAR WALLS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER IN WRITING.

11. REINFORCING BARS FOR CONCRETE SHALL BE PROVIDED WITH THE FOLLOWING MINIMUM COVER:

CONC. CAST AGAINST EARTH	3"
FORMED CONC. EXPOSED TO EARTH / WEATHER	
#5 OR SMALLER	1-1/2"
#6 OR LARGER	2"
SLABS (#11 AND SMALLER)	1"
BEAMS & GIRDERS	1-1/2"
C.I.P. WALLS	1-1/2"
COLUMN TIES	1-1/2"

12. VERTICAL WALL BARS SHALL BE ACCURATELY POSITIONED AT THE CENTER OF THE WALL, U.O.N., AND SHALL BE TIED IN PLACE AT THE TOP AND BOTTOM.

13. #3 SPACER TIES SHALL BE INSTALLED AT 30" ON CENTER IN ALL BEAMS AND FOOTINGS TO SECURE REINFORCING BARS IN PLACE, U.O.N.

14. TYPE 1 AND TYPE 2 INTERNALLY-THREADED REINFORCING COUPLERS SHALL BE LENTON COUPLERS (ICC #ER-3967). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

15. INTERNALLY-THREADED BAR TERMINATORS SHALL BE LENTON TERMINATORS (ICC #ER-3967). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

16. AN ALLOWANCE OF 5,000 POUNDS OF REINFORCEMENT SHALL BE PROVIDED FOR PLACEMENT IN STRUCTURAL SLABS AS DIRECTED BY THE ENGINEER DURING FIELD OBSERVATION.

I. MINIMUM SPECIFICATIONS FOR WELDING OF REINFORCING STEEL:

1. PRIOR TO WELDING, THE CHEMICAL ANALYSIS AND THE CARBON EQUIVALENT OF STEEL (C.E.) SHALL BE DETERMINED. THE CARBON EQUIVALENT OF REINFORCING STEEL OR SPLICE MATERIAL SHALL BE CALCULATED FROM ITS CHEMICAL COMPOSITION AND SHALL BE LESS THAN 0.55.

2. MILL REPORTS STATING THE CHEMICAL COMPOSITION AND THE CARBON EQUIVALENT DETERMINED BY HEAT ANALYSIS BY THE MANUFACTURER SHALL BE FURNISHED FOR REVIEW BY THE REGISTERED SPECIAL INSPECTOR. STEEL DELIVERED TO THE JOB SITE SHALL BE CLEARLY IDENTIFIED SO AGREEMENT WITH THE HEAT NUMBER(S) OF THE MILL REPORT(S) CAN BE VERIFIED.

3. JOINT WELDING PROCEDURES FOR REINFORCING BAR SPLICES, BAR CONNECTIONS, AND INSERT CONNECTIONS THAT ARE TO BE EMPLOYED SHALL BE ESTABLISHED IN A PROCEDURE SPECIFICATION AND SHALL BE QUALIFIED PRIOR TO USE BY TESTS AS PRESCRIBED IN AWS D1.4:
   A. WELDING PROCEDURES FOR FILLET WELDS WHICH CONFORM TO THE APPLICABLE PROVISIONS OF AWS D1.4 SHALL BE DEEMED AS PREQUALIFIED.
   B. THE BUILDING OFFICIAL MAY ACCEPT EVIDENCE OF PREVIOUS QUALIFICATION OF THE JOINT WELDING PROCEDURE.

4. PROCEDURE QUALIFICATION TESTS SHALL BE WITNESSED AND TESTED BY AN APPROVED TESTING AGENCY.

5. THE RESULTS OF THE PROCEDURE QUALIFICATION TESTS AND/OR THE PROCEDURE SPECIFICATION SHALL BE SUBMITTED TO AND APPROVED BY THE DESIGN ENGINEER AND THE BUILDING INSPECTION DEPARTMENT. APPROVED PROCEDURE SPECIFICATIONS SHALL BE AVAILABLE FOR REVIEW BY THE REGISTERED SPECIAL INSPECTOR AT THE SITE WHERE WELDING IS PERFORMED.

J. SHEAR REINFORCEMENT SYSTEMS:

1. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

2. STUD STRIP REINFORCEMENT SHALL BE DECON STUDRAILS (ICC #ESR-2494). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

3. STUD STRIP REINFORCEMENT SHALL BE SECURED IN PLACE BY NAILING TO THE FORMWORK THROUGH PREFORMED HOLES IN THE STRIP.

4. CONCRETE COVER AND CLEARANCES SHALL BE MAINTAINED FOR SHEAR REINFORCEMENT SYSTEMS AS REQUIRED FOR CONVENTIONAL BAR REINFORCEMENT.

K. REINFORCED CONCRETE (GENERAL):

1. CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19 OF THE BUILDING CODE AND TO THE PROVISIONS OF ACI 318, LATEST EDITION.

2. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

3. READY MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C 94.

4. CEMENT SHALL CONFORM TO ASTM C 150 TYPE I OR II, LOW ALKALI. COORDINATE WITH ARCHITECT FOR ADDITIONAL REQUIREMENTS FOR EXPOSED ARCHITECTURAL CONCRETE.

5. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C 33.

6. AGGREGATE FOR LIGHTWEIGHT CONCRETE SHALL BE EXPANDED SHALE TYPE AND CONFORM TO ASTM C 330.

7. LIGHT-WEIGHT CONCRETE SHALL HAVE A MAXIMUM DRY DENSITY OF 115 pcf. NORMAL WEIGHT CONCRETE SHALL BE 150 pcf.

8. CONCRETE MIXES SHALL BE DESIGNED BY A QUALIFIED TESTING LABORATORY AND APPROVED BY THE ENGINEER. MIX DESIGN METHODS (TEST HISTORY OR TRIAL BATCH METHOD) IN ACCORDANCE WITH ACI 318, SECTION 5.3 SHALL BE USED TO PROPORTION CONCRETE.

9. MINIMUM CONCRETE COMPRESSIVE STRENGTHS AT 28 DAYS, MAXIMUM SLUMPS, AND MAXIMUM WATER/CEMENT RATIOS SHALL BE AS FOLLOWS:

DESCRIPTION	MIN 28 DAY F'c	SLUMP	MAX.W/C RATIO
FOOTINGS	4.0 KSI	4" +/- 1"	0.50
GRADE BEAMS	4.0 KSI	4" +/- 1"	0.50
SLAB ON GRADE	3.5 KSI	4" +/- 1"	0.45
CONC. COLUMNS	5.0 KSI	4" +/- 1"	0.45
ELEVATED SLABS AND BEAMS	5.0 KSI	4" +/- 1"	0.40
SHEAR WALLS	5.0 KSI	4" +/- 1"	0.45
BASEMENT WALLS	5.0 KSI	4" +/- 1"	0.45
LIGHT WEIGHT FILL ON METAL DECK	3.5 KSI	4" +/- 1"	0.48
NORMAL WEIGHT FILL ON METAL DECK	3.5 KSI	4" +/- 1"	0.48
OTHER CONCRETE	3.5 KSI	4" +/- 1"	0.50

10. ADMIXTURES SHALL BE APPROVED IN ADVANCE.

11. CONCRETE IN AREAS OF SHEARWALLS, COLUMNS, BEAMS OR SLABS WHERE REBAR IS CONGESTED OR DUCTS CREATE PLACING DIFFICULTIES, SHALL BE SELF CONSOLIDATING CONCRETE (SCC) OR SHALL INCLUDE A PLASTICIZER ADMIXTURE AND/OR SMALLER MAXIMUM AGGREGATE SIZE, WITH APPROPRIATE AIR AND CEMENT CONTENT ADJUSTMENTS.

12. SLUMPS INDICATED ARE PRIOR TO PLASTICIZER ADDITIVES.

13. DRYING SHRINKAGE OF CONCRETE IN WALLS, ELEVATED SLABS, BEAMS AND GIRDERS SHALL BE LIMITED TO 0.05 PERCENT AS VERIFIED BY ASTM C157.

14. CONCRETE ADMIXTURES CONTAINING CHLORIDE OR CHLORIDE SALTS SHALL NOT BE USED EXCEPT WHERE APPROVED IN WRITING BY THE ENGINEER.

15. FLYASH SHALL BE LIMITED TO NO MORE THAN THE FOLLOWING PERCENTAGES OF THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS IN THE CONCRETE, U.O.N.

SUSPENDED SLABS, BEAMS AND GIRDERS	15%
COLUMNS AND WALLS	20%
FOUNDATIONS	20%
SLABS ON GRADE	20%

16. WATER MAY BE ADDED ON SITE TO OBTAIN SPECIFIED SLUMPS PROVIDED THAT IT IS ADDED WITHIN ONE HOUR OF BATCHING AND SITE-ADDED WATER IS SPECIFIED ON THE BATCH REPORT. SITE-ADDED WATER SHALL NOT COMPROMISE THE STRENGTH OR SLUMP OF THE CONCRETE.

17. CONCRETE SHALL NOT BE PLACED BEYOND 1-1/2 HOURS FOLLOWING BATCHING.

18. PROJECTING CORNERS OF SLABS, BEAMS, WALLS, COLUMNS, ETC., SHALL BE FORMED WITH A 1/2" CHAMFER U.O.N.

19. CONSTRUCTION OR CONTROL JOINTS IN SLABS ON GRADE SHALL BE PROVIDED AS INDICATED. THE LOCATIONS OF JOINTS NOT SPECIFICALLY INDICATED SHALL BE REVIEWED BY THE ENGINEER AND APPROVED BY THE ARCHITECT. JOINTS SHALL ALIGN WITH RE-ENTRANT CORNERS OF THE SLAB OR TOPPING.

20. CONSTRUCTION JOINTS IN STRUCTURAL MEMBERS THAT ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. LONGITUDINAL REINFORCEMENT SHALL CONTINUE UNINTERRUPTED THROUGH CONSTRUCTION JOINTS. KEYWAYS SHALL BE PROVIDED PERPENDICULAR TO THE DIRECTION OF LOAD IN CONSTRUCTION JOINTS.

21. WHERE CONCRETE IS PLACED AGAINST EXISTING CONCRETE SURFACES, THE SLAB TO WALL EXISTING CONCRETE SURFACES SHALL BE THOROUGHLY CLEANED AND ROUGHENED TO A MINIMUM AMPLITUDE OF ¼-INCH.

22. CONDUIT, PIPES OR DUCTS SHALL NOT BE PLACED IN CONCRETE COLUMNS, WALLS, SLABS OR CONCRETE TOPPING FILLS UNLESS SPECIFICALLY INDICATED ON THE STRUCTURAL DRAWINGS OR APPROVED IN WRITING BY THE ENGINEER. SLEEVES FOR OPENINGS IN CONCRETE SHALL BE INSTALLED BEFORE PLACING. REINFORCING WHICH MAY CONFLICT SHALL NOT BE CUT UNLESS APPROVED IN WRITING BY THE ENGINEER.

23. WHERE PERMITTED, CONDUITS AND SLEEVES WITHIN SLABS AND WALLS SHALL BE PLACED WITHIN THE MIDDLE THIRD OF THE THICKNESS OF THE SLAB OR WALL. THE MAXIMUM SIZE OF A CONDUIT IS 1/4 OF THE SLAB OR WALL THICKNESS. CONDUITS OR SLEEVES SHALL BE SPACED AT LEAST 3 TIMES THEIR DIAMETER CLEAR BETWEEN.

24. STAY-IN-PLACE FORMS SHALL HAVE MATERIAL STRENGTH AND STIFFNESS PROPERTIES SUFFICIENT FOR THE SUPPORT OF WET CONCRETE DURING CURING.

25. FORMWORK FOR COLUMNS SHALL NOT BE REMOVED UNTIL THE COLUMN CONCRETE HAS REACHED A MINIMUM STRENGTH OF 1500 PSI.

26. FORMWORK FOR SLABS SHALL NOT BE REMOVED UNTIL SLAB CONCRETE HAS REACHED A MINIMUM STRENGTH OF 3750 PSI. IMMEDIATELY RESHORE ALL SLABS UNTIL CONCRETE HAS REACHED DESIGN STRENGTH. RESHORING SHALL BE DESIGNED AND FIELD REVIEWED BY A CALIFORNIA REGISTERED CIVIL ENGINEER.

27. THE CONCRETE SLAB-ON-GRADE AND TOPPING FILL THICKNESS SHOWN IS THE MINIMUM REQUIRED THICKNESS. SLAB-ON-GREADE FLOORS SHALL BE MONITORED BY TRANSIT LEVEL OR LASER DURING PLACEMENT TO MAINTAIN LEVEL FLOOR.

28. CONCRETE COLUMNS SHALL ACHIEVE A MINIMUM OF 75 PERCENT OF THE DESIGN STRENGTH INDICATED PRIOR TO POURING ELEVATED CONCRETE SLABS.

29. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF 7 DAYS AFTER ITS PLACEMENT. APPROVED CURING COMPOUNDS MAY BE USED IN LIEU OF MOIST CURING.

30. FINISH SURFACES TO THE FOLLOWING TOLERANCES, MEASURED WITHIN 24 HOURS ACCORDING TO ASTM E 1155/E 155M FOR A RANDOMLY TRAFFICKED FLOOR SURFACE. SPECIFIED OVERALL VALUES OF FLATNESS, F (F) 35; AND LEVELNESS, F (L) 25; WITH MINIMUM LOCAL VALUES OF FLATNESS, F (F) 24; AND LEVELNESS, F (L) 17; FOR SLAB-ON-GRADE.

L. REINFORCED CONCRETE - ELEVATED SLABS AND BEAMS:

1. REINFORCED CONCRETE SLABS AND BEAMS SHALL BE CAMBERED AS INDICATED ON THE DRAWINGS OR 1/8" FOR EVERY 10 FEET OF SPAN UP TO 18 FEET, AND 1/4" FOR EVERY 10 FEET OF SPAN OVER 18 FEET. CANTILEVERS SHALL BE CAMBERED DOUBLE THESE AMOUNTS. THE SLAB OR BEAM THICKNESS SHALL BE MAINTAINED THROUGH OUT THE CAMBERED AREA. SUBMIT DETAILS OF CONCRETE PROFILE FOR REVIEW WHERE THERE A VARIATION IN CONCRETE OUTLINE FROM THAT SHOWN ON THE DRAWINGS RESULTS FROM CAMBERING.

2. FINISH SURFACES TO THE FOLLOWING TOLERANCES, MEASURED WITHIN 24 HOURS ACCORDING TO ASTM E 1155/E 1155M FOR A RANDOMLY TRAFFICKED FLOOR SURFACE. SPECIFIED OVERALL VALUES OF FLATNESS, F (F) 30; AND LEVELNESS, F (L) 20; WITH MINIMUM LOCAL VALUES OF FLATNESS, F (F) 24; AND LEVELNESS, F (L) 15; FOR SUSPENDED SLABS.

3. OPENINGS WITHIN 4'-0" OF A COLUMN NOT INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

4. TEMPERATURE REINFORCEMENT SHALL BE INSTALLED AS BOTTOM STEEL IN EACH DIRECTION IN TWO-WAY SLABS. INSTALL THE FOLLOWING MINIMUM TEMPERATURE REINFORCEMENT U.O.N.:

SLAB THICKNESS	TEMPERATURE REINFORCEMENT
6" OR LESS	#4 @ 18"
TO 7"	#4 @ 16"
TO 8"	#4 @ 14"

5. CHAIRS FOR REINFORCEMENT IN EXPOSED SOFFITS OR OTHER AREAS EXPOSED TO WEATHER AND VIEW SHALL BE MANUFACTURED OF NONCORROSIVE MATERIAL.

6. WHERE SLAB OPENINGS OCCUR AND ARE NOT OTHERWISE DETAILED ON THE STRUCTURAL DRAWINGS, REINFORCEMENT SHALL BE SPREAD ON EACH SIDE OF THE OPENING WITH THE SAME TOTAL NUMBER OF BARS PLUS ONE PASSING THE OPENING ADDITIONALLY. TOP AND BOTTOM EDGE BARS SHALL BE INSTALLED AS INDICATED. OPENINGS IN EXCESS OF 18" IN DIMENSION THAT ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO INSTALLATION.

7. ADDITIONAL REBAR MATS SHALL BE INSTALLED OVER AREAS OF CONGESTED CONDUIT AS INDICATED IN THE STRUCTURAL DRAWINGS OR AS DIRECTED BY THE ENGINEER.

8. WHERE COLUMN CONCRETE STRENGTH EXCEEDS THAT OF THE SLAB BY MORE THAN 40%, CONCRETE OF SAME STRENGTH AS COLUMNS SHALL BE PLACED IN THE SLAB IN THE REGION OF THE COLUMN, PROJECTING 2'-0" MINIMUM OUTSIDE OF THE COLUMN. SURROUNDING SLAB CONCRETE SHALL BE PLACED WHILE THE HIGHER STRENGTH CONCRETE IS STILL PLASTIC AND THE TWO CONCRETES SHALL BE INTEGRATED BY VIBRATION AT THEIR INTERFACE. .

9. CONCRETE FINISH REQUIREMENTS AND TREATMENTS SHALL BE APPLIED AS INDICATED ON THE ARCHITECTURAL DRAWINGS

10. WHERE APPEARANCE IS OF CONCERN, STAPLES AT THE SLAB SOFFIT SHALL BE GROUND OFF AND IMMEDIATELY PAINTED WITH A PERMANENT SEALER AS APPROVED BY THE ARCHITECT.

M. STRUCTURAL STEEL:

1. STRUCTURAL STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 22 OF THE BUILDING CODE, AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" AND AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".

2. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

3. STRUCTURAL STEEL STRENGTHS AND GRADES SHALL BE AS FOLLOWS, U.O.N.

DESCRIPTION	YIELD Fy,ksi	ASTM GRADE
WF AND WT SHAPES, U.O.N.	50 ksi	A992, GR 50
ANGLES, CHANNELS & OTHER SHAPES	36 ksi	A36
HSS SECTIONS	46 ksi	A500, GR B
STRUCTURAL PIPE SECTIONS	35 ksi	A53, GR B
BASE PLATES, CONNECTION PLATES & MISC., U.O.N.	36 ksi	A36
CONNECTION PLATES WHERE NOTED AS GR.50	50 ksi	A572, GR 50

4. HOLLOW STRUCTURAL STEEL (HSS) MEMBERS SHALL BE SEAL WELDED IN DRY CONDITION IN THE SHOP. PROVIDE WEEP HOLES AT THE LOW END OF ALL HOLLOW MEMBERS IN EXTERIOR CONDITIONS, AND SEAL WELD AROUND ALL MATING SURFACES IN EXTERIOR CONDITIONS WHETHER COVERED OR OPEN. CONCEAL WELD SEAM FROM VIEW WHERE PRACTICAL.

5. ANCHOR RODS SHALL CONFORM TO ASTM F 1554, GRADE 36, UNLESS OTHERWISE NOTED. NUTS FOR ANCHOR RODS SHALL CONFORM TO ASTM A 563, GRADE A HEX (HEAVY HEX WHERE ANCHOR ROD DIAMETER IS GREATER THAN 1 1/2").

6. MAIN MEMBERS SHALL HAVE HIGH STRENGTH BOLTS CONFORMING TO AISC SPECS FOR ASTM A 325N BOLTS, U.O.N. OTHER BOLTS SHALL CONFORM TO ASTM A 307. NUTS FOR HIGH STRENGTH BOLTS SHALL BE HEAVY HEX GRADE C CONFORMING TO ASTM A 563.

7. EXTERIOR STRUCTURAL STEEL PERMANENTLY EXPOSED TO THE WEATHER SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION. ZINC COATING SHALL CONFORM TO ASTM A 123 (G60, U.O.N.).

8. TIGHTEN ASTM A 325N BOLTS TO "SNUG-TIGHT" CONDITION PER AISC SPECIFICATION FOR STRUCTURAL JOINTS. TEST ASTM A 325SC BOLTS WITH A CALIBRATED WRENCH UNLESS LOAD INDICATOR BOLTS ARE USED.

9. WELDING DONE AFTER GALVANIZING SHALL BE PROTECTED WITH TWO COATS OF "GALVANIZED", "GALVALOY", OR EQUAL.

10. APPLY SPRAYED FIREPROOFING OVER STRUCTURAL STEEL WITH MONOKOTE MK6/CBF OF MK6/ED AS MANUFACTURED BY W.R. GRACE AND COMPANY, PER ICC #ER-4607. HOURLY FIRE RESISTANCE SHALL BE DETERMINED USING TABLE 6-A OF THE CBC AND BUILDING TYPES OF CONSTRUCTION AS INDICATED ON THE ARCHITECTURAL DRAWINGS.

N. STEEL STAIRS:

1. MEMBER SIZES SHOWN ARE MINIMUM SIZES TO BE USED FOR CONSTRUCTION. MEMBER SIZES SHALL BE IN THE SAME NOMINAL SHAPE AND DIMENSION INDICATED HEREIN.

2. CONTRACTOR SHALL VERIFY VERTICAL AND HORIZONTAL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS. CONTRACTOR TO NOTIFY ARCHITECT OF ANY FIELD CONDITIONS NOT COVERED BY EITHER ARCHITECTURAL OR STRUCTURAL PLANS PRIOR TO STAIR FABRICATION.

3. CONTRACTOR SHALL PROVIDE CONNECTIONS, STIFFENERS, INTERMEDIATE BEAMS, HANGERS, ETC., NECESSARY FOR SUPPORT OF THE STAIRS. PROVIDE STABILIZING ELEMENTS SUCH AS BRACES, STIFFENER PLATES, ETC., SO AS TO NOT IMPOSE ECCENTRIC LOADING, TWISTING, OR WARPING TO STRUCTURAL MEMBERS. PROVIDE MATERIAL AND INSTALL STABILIZING ELEMENTS AT NO ADDITIONAL COST TO OWNER.

O. STEEL STAIRS, DESIGN-BUILD:

1. STEEL STAIRS ARE DESIGN-BUILD UNLESS SPECIFICALLY DESIGNED AND DETAILED ON DRAWINGS. NOTES BELOW APPLY TO DESIGN-BUILD STEEL STAIRS ONLY.

2. DESIGN STAIRS INCLUDING FRAMING MEMBERS, CONNECTIONS (INCLUDING THOSE TO BUILDING STRUCTURE), CHECKERED PLATES, STEPS, HANDRAILS, ETC., AND PROVIDE FOR LATERAL RESTRAINT COMPLYING WITH CONTRACT DOCUMENTS AND THE BUILDING CODE.

3. CALCULATIONS SHALL CLEARLY IDENTIFY LOADS IMPOSED ON THE BUILDING STRUCTURE.

4. CONTRACTOR SHALL VERIFY VERTICAL AND HORIZONTAL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS. CONTRACTOR TO NOTIFY ARCHITECT OF ANY FIELD CONDITIONS NOT COVERED BY EITHER ARCHITECTURAL OR STRUCTURAL PLANS PRIOR TO STAIR FABRICATION.

5. AT CONNECTIONS TO STRUCTURE, PROVIDE STABILIZING ELEMENTS SUCH AS BRACES, STIFFENER PLATES, ETC., SO AS TO NOT IMPOSE ECCENTRIC LOADING, TWISTING, OR WARPING TO STRUCTURAL MEMBERS. PROVIDE MATERIAL AND INSTALL STABILIZING ELEMENTS.

P. WELDING:

1. WELDING SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE AMERICAN WELDING SOCIETY (AWS) D1.1.

2. WELDING OF METAL DECK AND LIGHT GAUGE METAL FRAMING SHALL BE DONE BY CERTIFIED LIGHT GAUGE WELDERS IN ACCORDANCE WITH AWS SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES, AWS D1.3.

3. WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS.

4. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

5. WELDING ELECTRODE FOR THE SHIELDED METAL-ARC WELDING (S.M.A.W.) PROCESS AND WELDING ELECTRODE SHALL CONFORM TO AWS A5.1 "SPECIFICATION FOR CARBON STEEL ELECTRODES FOR SHIELDED METAL ARC WELDING."

6. ELECTRODES FILLER MATERIAL SHALL BE A MINIMUM OF E70XX U.O.N., EXCEPT E60XX MAY BE USED FOR WELDING OF METAL DECK AND LIGHT GAUGE FRAMING.

7. WELDS SHALL HAVE A WELD CONTROLLED SEQUENCE AND TECHNIQUE IN ORDER TO MINIMIZE SHRINKAGE STRESSES AND DISTORTION.

Q. DRYPACK / NON-SHRINK GROUT:

1. NON-SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 6,000 psi IN ACCORDANCE WITH ASTM C 109.

2. NON-SHRINK GROUT SHALL BE INSTALLED UNDER A COLUMN BASE PLATE AFTER THE COLUMN HAS BEEN PLUMBED AND PRIOR TO PLACING CONCRETE FILL ON THE STRUCTURE.

R. METAL DECK:

1. METAL DECK SHALL BE OF THE TYPE AND GAUGE AS INDICATED ON THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND PUBLISHED ICC REPORT.

2. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

3. METAL FLOOR AND ROOF DECK SHALL BE FACTORY VENTED WHERE STRUCTURAL CONCRETE FILL OCCURS, U.O.N.

4. METAL DECK AND ACCESSORIES SHALL BE FORMED FROM STEEL SHEETS CONFORMING TO ASTM A 653, WITH COATING DESIGNATION G60.

5. DECK SHALL BE CONTINUOUS OVER THREE SPANS WHEREVER POSSIBLE. SHORE DECK IF RECOMMENDED BY THE MANUFACTURER. MINIMUM BEARING AT ENDS IS 2".

6. WHERE 3/4" DIAMETER SHEAR STUDS ARE TO BE WELDED TO SUPPORTS, 18 GAUGE (OR THICKER) DECKING SHALL NOT BE LAPPED.

7. CONTRACTOR SHALL CUT DECK PER STRUCTURAL DETAILS AT ALL OPENINGS, COLUMNS, AND REQUIRED PENETRATIONS AND SHALL SUPPLY NECESSARY ACCESSORY ITEMS SUCH AS CLOSURES, CLIPS, ETC.

8. HANGERS SUPPORTED BY METAL DECKING ONLY OR METAL DECKING WITH INSULATING FILL SHALL BE ATTACHED TO STEEL BARS, 3/8" ROUND X 12" OR 1/8" X 12" FLAT, PLACED PERPENDICULAR TO FLUTES. ONLY LIGHT DUCTWORK (12" X 16" MAX.), PIPING (1-1/2" ROUND MAX.), OR CEILING MAY BE HUNG FROM SUCH INSTALLATIONS. MAXIMUM WEIGHT PER HANGER SHALL NOT EXCEED 75 LBS. HANGERS MUST BE AT LEAST TWO FLUTES APART ON THE SAME SPAN.

9. HANGERS SUPPORTED BY METAL DECK WITH STRUCTURAL CONCRETE FILL SHALL BE INSTALLED USING ICC APPROVED ANCHORAGE SYSTEMS. SUCH HANGERS SHALL BE USED TO SUPPORT DUCTWORK (15" X 16" MAX.), PIPING (4" ROUND MAX.), OR CEILINGS. MAXIMUM WEIGHT PER HANGER SHALL NOT EXCEED 250 LBS. HANGERS MUST BE AT LEAST TWO FLUTES APART ON THE SAME DECK SPAN. LARGER DUCTWORK AND PIPING SHALL BE SUPPORTED BY STRUCTURAL BEAMS OR COLUMNS.

S. SHEAR CONNECTORS (WELDED STUDS):

1. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

2. SHEAR CONNECTORS SHALL COMPLY WITH ICC #ER-2614, NELSON SHEAR CONNECTOR STUDS, OR EQUAL. SHEAR CONNECTORS SHALL BE MADE FROM COLD ROLLED STEEL CONFORMING TO ASTM A 108, GRADES 1015-1020 WITH A MINIMUM TENSILE STRENGTH 60,000 psi. STUD WELDING INSPECTING AND TESTING SHALL CONFORM TO AWS D1.1.

3. SHEAR STUDS SHALL HAVE NOT LESS THAN 3/4 INCH OF CONCRETE COVER.

4. STUDS SHALL BE AUTOMATICALLY END WELDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS IN SUCH A MANNER AS TO PROVIDE COMPLETE FUSION BETWEEN THE END OF THE STUD AND THE PLATE. THERE SHOULD BE NO POROSITY OR EVIDENCE OF LACK OF FUSION BETWEEN THE WELDED END OF THE STUD AND THE PLATE. THE STUD SHALL DECREASE IN LENGTH DURING WELDING APPROXIMATELY 1/8" FOR 5/8" DIAMETER AND UNDER, AND 3/16" FOR OVER 5/8" DIAMETER. WELDING SHALL BE DONE ONLY BY QUALIFIED WELDERS APPROVED BY THE WELDING INSPECTOR.

5. NUMBER OF 3/4" DIA. HEADED STUD SHEAR CONNECTORS ARE SHOWN ON FRAMING PLANS. SPACE SHEAR CONNECTORS EQUALLY ALONG LENGTH OF BEAM. IF DECK FLUTES PREVENT EQUAL SPACING, STUDS SHALL BE SPACED CLOSER NEAR ENDS OF BEAMS OR STUDS MAY BE SPACED TWO PER FLUTE NEAR ENDS IF TOTAL NUMBER EXCEEDS NUMBER OF FLUTES. A SINGLE NUMBER INDICATES UNIFORM SPACING FROM END TO END, MULTIPLE NUMBERS INDICATE NUMBER OF STUDS TO BE SPACED UNIFORMLY BETWEEN BEAM REACTION POINTS AND/OR ENDS OF BEAM. MINIMUM SPACING IN A SINGLE ROW SHALL BE 6x STUD DIAMETER.

6. INSTALL STUDS IN SINGLE ROW DIRECTLY OVER BEAM WEBS. WHERE OBSTRUCTIONS PREVENT PLACEMENT DIRECTLY OVER WEB PLACE STUDS CLOSE TO WEB AS POSSIBLE.

7. WHERE SHEAR STUDS AND DECK WELDING LOCATION COINCIDE, EACH SHEAR STUD WELDED THROUGH THE DECK MAY REPLACE A DECK WELD.

8. WHEN WELDING THROUGH TWO THICKNESSES OF METAL DECK OR WHERE A LAP JOINT IS REQUIRED, BURN A 3/4" DIAMETER HOLE THROUGH THE DECK TO ALLOW PROPER SEATING OF STUD ON BEAM.

9. WHEN DECK IS PARALLEL TO DIRECTION OF BEAM SPAN, DECK POSITION SHALL BE SUCH THAT A VALLEY OCCURS OVER BEAM CENTERLINE OR DECK MUST BE SEPARATED AT BEAM CENTERLINE TO PERMIT SHEAR STUD ATTACHMENT DIRECTLY TO BEAM FLANGE.

T. COLD-FORMED STEEL FRAMING:

1. COLD-FORMED STEEL FRAMING SHALL BE FROM A STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) APPROVED SUPPLIER, AND CONFORM TO ICC #ER-4943P.

2. COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISI SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.

3. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

4. COLD-FORMED STEEL FRAMING SHALL BE GALVANIZED (G60), AND CONFORM TO ASTM A 653 AS FOLLOWS:

STUDS - 43 MILS (18GA) & LIGHTER	GRADE 33
STUDS - 54 MILS (16GA) & HEAVIER	GRADE 50
TRACK - ALL GAUGES	GRADE 33
CLIP ANGLES - ALL GAUGES	GRADE 33

5. PROVIDE ACCESSORIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, RESILIENT CLIPS AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED. STUD MEMBERS SHALL HAVE PUNCHED WEBS.

6. TOP AND BOTTOM TRACKS SHALL BE 54 MILS (16 GAUGE) WITH 1-1/4 INCH FLANGES, U.O.N.

7. STUDS SHALL BE INSTALLED WITH THEIR BEARING ENDS POSITIONED FLUSH AGAINST THE INSIDE TRACK WEB, U.O.N.

8. FULL HEIGHT DOUBLE STUDS SHALL BE PROVIDED AT THE ENDS OF PARTITIONS, AT ALL WALL OPENINGS, AND AT OTHER LOCATIONS SHOWN ON THE PLANS.

9. SHOTPINS SHOWN FOR CONNECTIONS TO CONCRETE, CMU OR CONCRETE TOPPING SHALL BE HILTI X-U 32 P8, ICC #ESR-2269, OR EQUAL.
   MINIMUM SPACING 4 INCHES
   MINIMUM EDGE DISTANCE 3 INCHES

10. SHOTPINS SHOWN FOR CONNECTIONS TO UNDER SIDE OF METAL DECK WITH CONCRETE TOPPINGS ABOVE SHALL BE HILTI HILTI X-U 32 P8, ICC #ESR-2269, OR EQUAL.
   MINIMUM SPACING 1-1/2 INCHES OC
   MINIMUM EDGE DIST. (W-DECK) 1-1/8 INCH
   MINIMUM EDGE DIST. (B-DECK) 7/8 INCH

11. SHOTPINS SHOWN FOR CONNECTIONS TO STRUCTURAL STEEL FRAMING OR DECK CLOSURE PLATE SHALL BE HILTI X-U 16 P8, ICC #ESR-2269, OR EQUAL. FASTENER LENGTH SHALL PENETRATE THROUGH THE STRUCTURAL STEEL THICKNESS.
   MINIMUM SPACING 1-1/2 INCHES OC
   MINIMUM EDGE DISTANCE 1/2 INCH

12. FLOOR AND/OR CEILING JOISTS SHALL HAVE THE SAME ON-CENTER SPACING AS THE WALL STUDS, AND JOISTS SHALL BE ALIGNED DIRECTLY OVER STUDS SO AS TO AVOID BENDING IN THE WALL TOP TRACK.

13. FASTENINGS OF COMPONENTS SHALL BE WITH #10 SELF-DRILLING SCREWS, U.O.N. PER ICC #ER-4943P, OR EQUAL.
   MINIMUM SPACING 1-1/2 INCHES OC
   MINIMUM EDGE DISTANCE 1/2 INCH

14. SHEATHING SHALL BE ATTACHED TO BOTH FACES OF METAL WALL STUDS THROUGHOUT THEIR LENGTH, U.O.N. PROVIDE LATERAL BRACING WHERE SHEATHING DOES NOT OCCUR.

U. COLD-FORMED STEEL FRAMING, DESIGN-BUILD:

1. COLD-FORMED STEEL FRAMING IS DESIGN-BUILD UNLESS SPECIFICALLY DESIGNED AND DETAILED ON DRAWINGS. NOTES BELOW APPLY TO DESIGN-BUILD FRAMING ONLY.

2. DESIGN COLD-FORMED STEEL FRAMING INCLUDING FRAMING MEMBERS AND CONNECTIONS (INCLUDING THOSE TO BUILDING STRUCTURE) AND PROVIDE FOR LATERAL RESTRAINT COMPLYING WITH CONTRACT DOCUMENTS AND THE BUILDING CODE.

3. CALCULATIONS SHALL CLEARLY IDENTIFY LOADS IMPOSED ON THE BUILDING STRUCTURE.

4. CONTRACTOR SHALL VERIFY VERTICAL AND HORIZONTAL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY FIELD CONDITIONS NOT COVERED BY EITHER ARCHITECTURAL OR STRUCTURAL PLANS PRIOR TO CONSTRUCTION OF FRAMING.

5. AT CONNECTIONS TO STRUCTURE, PROVIDE STABILIZING ELEMENTS SUCH AS BRACES, STIFFENER PLATES, ETC., SO AS TO NOT IMPOSE ECCENTRIC LOADING, TWISTING, OR WARPING TO STRUCTURAL MEMBERS. PROVIDE MATERIAL AND INSTALL STABILIZING ELEMENTS.

6. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

V. POST-INSTALLED MECHANICAL ANCHORS:

1. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

2. MECHANICAL ANCHORS FOR INSTALLATION IN SOLID CONCRETE SHALL BE HILTI KB-TZ (ICC #ESR-1917) OR SIMPSON STRONG-BOLT (ICC #ESR-1771). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL THAT IS BASED ON TESTING IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC193 AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

3. MECHANICAL ANCHORS FOR INSTALLATION IN CONCRETE FILL OVER METAL DECK SHALL BE HILTI KB-TZ (ICC #ESR-1917). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL THAT IS BASED ON TESTING IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC193 AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

4. MECHANICAL ANCHORS FOR OVERHEAD INSTALLATION THRU METAL DECK, INTO CONCRETE FILL SHALL BE HILTI KB-TZ (ICC #ESR-1917) OR SIMPSON STRONG-BOLT (ICC #ESR-1771). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL THAT IS BASED ON TESTING IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC193 AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

5. MECHANICAL ANCHORS FOR INSTALLATION IN CONCRETE MASONRY SHALL BE HILTI KB3 (ICC #ESR-1385) OR SIMPSON WEDGE-ALL (ICC #ESR-1396). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL THAT IS BASED ON TESTING IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC01 AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

6. ANCHORS SHALL BE OF THE TYPE, DIAMETER, AND MINIMUM DIMENSIONAL REQUIREMENTS (EMBEDMENT, SPACING AND EDGE DISTANCE) AS INDICATED ON THE DRAWINGS.

7. ANCHORS SHALL BE INSTALLED IN HOLES DRILLED WITH DRILLING EQUIPMENT OF THE TYPE REQUIRED IN THE MANUFACTURER'S PUBLISHED ICC REPORT. HOLES SHALL BE CLEANED IN CONFORMANCE WITH THE ANCHOR MANUFACTURER'S INSTRUCTIONS.

8. WHEN INSTALLING ANCHORS IN EXISTING REINFORCED CONCRETE OR MASONRY, AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.

W. POST-INSTALLED ADHESIVE ANCHORS:

1. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

2. ADHESIVE ANCHOR INSTALLERS SHALL BE TRAINED BY A QUALIFIED REPRESENTATIVE OF THE ADHESIVE MANUFACTURER ON THE PROPER PROCEDURES AND TECHNIQUES FOR INSTALLATION.

3. ADHESIVE SHALL BE STORED ON THE JOBSITE IN A COOL, DRY LOCATION IN CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS.

4. ADHESIVE ANCHORS FOR INSTALLATION IN SOLID CONCRETE SHALL BE HILTI HIT RE500-SD (ICC #ESR-2322). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL THAT IS BASED ON TESTING IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC308 AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

5. ADHESIVE ANCHORS FOR INSTALLATION IN CONCRETE FILL OVER METAL DECK SHALL BE HILTI HIT RE500-SD (ICC #ESR-2322). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL THAT IS BASED ON TESTING IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC308 AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

6. ADHESIVE ANCHORS FOR OVERHEAD INSTALLATION THRU METAL DECK, INTO CONCRETE FILL SHALL BE HILTI HIT RE500-SD (ICC #ESR-2322). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL THAT IS BASED ON TESTING IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC308 AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

7. ADHESIVE ANCHORS FOR INSTALLATION IN CONCRETE MASONRY SHALL BE HILTI HIT HY150 MAX (ICC #ESR-1967) OR SIMPSON SET (ICC #ESR-1772). ALTERNATE PRODUCTS SHALL CARRY AN ICC APPROVAL THAT IS BASED ON TESTING IN ACCORDANCE WITH ICC ACCEPTANCE CRITERIA AC58 AND SHALL BE APPROVED BY THE ENGINEER IN WRITING PRIOR TO DELIVERY TO THE JOBSITE.

8. ANCHORS SHALL BE OF THE TYPE, DIAMETER, AND MINIMUM DIMENSIONAL REQUIREMENTS (EMBEDMENT, SPACING AND EDGE DISTANCE) AS INDICATED ON THE DRAWINGS.

9. ANCHORS SHALL BE INSTALLED IN HOLES DRILLED WITH DRILLING EQUIPMENT OF THE TYPE REQUIRED IN THE MANUFACTURER'S PUBLISHED ICC REPORT. HOLES SHALL BE CLEANED IN CONFORMANCE WITH THE ANCHOR MANUFACTURER'S INSTRUCTIONS.

10. WHEN INSTALLING ANCHORS IN EXISTING REINFORCED CONCRETE OR MASONRY, AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.

X. POWDER DRIVEN FASTENERS IN REINFORCED CONCRETE:

1. THE USE OF POWDER DRIVEN FASTENERS FOR TENSION LOADS IS LIMITED TO SUPPORT OF MINOR LOADS LIKE ACOUSTICAL CEILINGS, DUCT WORK, CONDUITS, ETC.

2. ALLOWABLE TENSION LOADS SHALL BE LIMITED TO LESS THAN 100 POUNDS.

3. THE USE OF POWDER DRIVEN FASTENERS FROM UNDERSIDE OF STEEL DECK WITH STRUCTURAL CONCRETE FILL REQUIRES PULL OUT TESTING AS SCHEDULED ON THE DRAWINGS. POWDER DRIVEN FASTENERS ARE NOT ALLOWED AT STEEL DECKS WITH INSULATING FILL.

4. FASTENERS SHALL HAVE ICC APPROVAL FOR THE TYPE OF CONCRETE USED ON THE JOB.

5. WHEN INSTALLING POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGE TO THE EXISTING REINFORCING BARS. MAINTAIN A MINIMUM CLEARANCE OR ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED IN ANCHOR AND/OR PIN.

Y. ROUGH CARPENTRY:

1. SHEATHING SHALL BE APA-RATED STRUCTURAL USE PANELS CONFORMING TO PRODUCT STANDARD PS 1 FOR PLYWOOD.

2. FLOOR SHEATHING SHALL BE TONGUE AND GROOVE, INTERIOR TYPE WITH EXTERIOR GLUE, SPAN INDEX (32/16).

Z. CURTAIN WALLS, DESIGN-BUILD:

1. CURTAIN WALLS ARE DESIGN-BUILD UNLESS SPECIFICALLY DESIGNED AND DETAILED ON DRAWINGS. NOTES BELOW APPLY TO THE DESIGN-BUILD SYSTEM ONLY.

2. CURTAIN WALL AND CLADDING DESIGNER/MANUFACTURER SHALL PROVIDE SUPPORTS AND CALCULATIONS FOR ALL VERTICAL AND HORIZONTAL LOADS INCLUDING WIND, SEISMIC, AND DEAD LOADS.

3. CALCULATIONS SHALL CLEARLY IDENTIFY LOADS IMPOSED ON THE BUILDING STRUCTURE.

4. CURTAIN WALL AND CLADDING SYSTEM DESIGN SHALL ALLOW FOR 1/2 INCH LIVE LOAD DEFLECTION OF FLOOR OR ROOF BEAMS WITHOUT ADVERSELY IMPACTING CURTAIN WALL, CLADDING ELEMENTS OR CONNECTIONS.

5. CURTAIN WALL WEIGHT SHALL NOT EXCEED 20 PSF.

6. CONTRACTOR SHALL VERIFY VERTICAL AND HORIZONTAL DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS AND EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY FIELD CONDITIONS NOT COVERED BY EITHER ARCHITECTURAL OR STRUCTURAL PLANS PRIOR TO CONSTRUCTION OF FRAMING.

7. AT CONNECTIONS TO STRUCTURE, PROVIDE STABILIZING ELEMENTS SUCH AS BRACES, STIFFENER PLATES, ETC., SO AS TO NOT IMPOSE ECCENTRIC LOADING, TWISTING, OR WARPING TO STRUCTURAL MEMBERS. PROVIDE MATERIAL AND INSTALL STABILIZING ELEMENTS.

8. SPECIAL INSPECTION AND TESTING IS REQUIRED IN ACCORDANCE WITH SECTIONS 1704, 1707 AND 1708 OF THE BUILDING CODE AND THE "STATEMENT OF SPECIAL INSPECTIONS" ON THESE CONSTRUCTION DOCUMENTS.

ISSUED FOR	DATE
BID PK #1 100 DD	10.06.08
50% PROGRESS	10.24.08
CD-2 CODE REVIEW	11.17.08
BD PK #1 80 CD	12.01.08
BD PK #1 100 CD	02.16.09
BD PK #2 100 CD	03.26.09
100% CD	05.08.09

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STATE OF CALIFORNIA

SHEET NAME
STRUCTURAL NOTES

DRAWN BY:

PROJECT #: 208005.000

SHEET NUMBER

S1101