MASONRY

1. CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO ASTM C-90, GRADE N. MEDIUM WEIGHT UNITS.
2. CEMENT SHALL BE AS SPECIFIED FOR CONCRETE.
3. REINFORCING BARS – SEE NOTES UNDER "REINFORCING STEEL" FOR REQUIREMENTS.
4. MORTAR SHALL BE TYPE S PER ASTM C270 WITH PROPORTIONS OF 4 -1/2 PARTS SAND, 1/2 PART HYDRATED LIME, 1 PART PORTLAND CEMENT AND SHALL COMPLY WITH SECTION 2103A.8 OF THE CODE. MORTAR SHALL HAVE A 28 DAY STRENGTH OF 1800 PSI MINIMUM. MORTAR COMPONENT TESTS ARE NOT REQUIRED.
5. GROUT SHALL CONSIST OF 3 PARTS SAND, 2 PARTS PEA GRAVEL, AND 1 PART PORTLAND CEMENT, AND SHALL COMPLY WITH SECTION 2103A.12 OF THE CODE AND ASTM C476. GROUT SHALL HAVE A 28 DAY STRENGTH OF 2000 PSI MINIMUM. GROUT COMPONENT TESTS ARE NOT REQUIRED.
6. PROVIDE A MINIMUM OF 1/2" CLEAR BETWEEN MAIN REINFORCING AND MASONRY UNITS.
7. ALL CELLS SHALL BE GROUTED SOLID.
8. DESIGN f'm = 1500 PSI FOR CMU CONSTRUCTION. PRISM TESTING SHALL BE PERFORMED AS PER THE REQUIREMENTS OF THE CODE, SECTION 2105A.2.2.2.
9. USE RUNNING BOND PATTERN UNLESS NOTED OTHERWISE.
10. LOW LIFT AND HIGH LIFT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND SECTION 2104A.6 OF THE CODE.
11. TYPICAL PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE 11.
12. COMPRESSIVE STRENGTH OF THE CONCRETE MASONRY UNITS SHALL BE 1900 PSI PER TABLE 2105A.2.2.1.2 OF THE CODE.

SEISMIC LOAD RESISTING SYSTEM

ALL MEMBERS AND ASSOCIATED CONNECTIONS DESIGNATED AS PART OF THE SEISMIC LOAD RESISTING SYSTEM (SLRS) ON THE DRAWINGS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

1. SLRS WELDED JOINTS (SECTION 7.3, AISC 341):

   ALL WELDING AT SLRS CONNECTIONS SHALL CONFORM TO APPENDIX W OF AISC 341-05 AND SHALL BE MADE WITH A FILLER METAL THAT CAN PRODUCE WELDS THAT HAVE A CHARPY V-NOTCH TOUGHNESS OF 20 FT-LB AT 0° F.

   WELDS DESIGNATED AS DEMAND CRITICAL (DC) ON THE DRAWINGS SHALL BE MADE WITH A FILLER METAL CAPABLE OF PROVIDING A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LB AT -20° F AND 40 FT-LB AT 70° F.

2. SLRS QUALITY ASSURANCE PLAN (SECTION 18/APPENDIX Q, AISC 341):

   a. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING DOCUMENTS FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO FABRICATION/ERECTION:

   -SHOP DRAWINGS
   -ERECTION DRAWINGS
   -WELDING PROCEDURE SPECIFICATIONS
   -COPIES OF THE MANUF CERT. OF COMPLIANCE FOR ELECTRODES, FLUXES, AND SHIELDING GASES.
   -MANUF CERTIFICATIONS FOR CHARPY V-NOTCH TESTING AT DC WELDS
   -ELECTRODE MANUF PRODUCT DATA, INCLUDING STORAGE AND EXPOSURE REQUIREMENTS

   b. THE FOLLOWING DOCUMENTS SHALL BE AVAILABLE FOR REVIEW BY THE ENGINEER OF RECORD PRIOR TO FABRICATION/ERECTION UNLESS SPECIFIED TO BE SUBMITTED:

   -MATERIAL TEST REPORTS FOR STRUCTURAL STEEL, BOLTS, SHEAR CONNECTORS, AND WELDING MATERIALS
   -INSPECTION PROCEDURES
   -NONCONFORMANCE PROCEDURE
   -MATERIAL CONTROL PROCEDURE
   -BOLT INSTALLATION PROCEDURE
   -WELDER PERFORMANCE QUALIFICATION RECORDS
   -INSPECTOR QUALIFICATIONS

   c. THE PROJECT INSPECTOR SHALL SUBMIT THE FOLLOWING DOCUMENTS TO DSA, THE ENGINEER OF RECORD, AND THE OWNER:

   -WRITTEN PRACTICES FOR MONITORING/CONTROL OF INSPECTION AGENCY'S OPERATIONS (SEE SECTION Q4.1 OF APP. Q, AISC 341 FOR DETAILED REQUIREMENTS)
   -QUALIFICATIONS OF MANAGEMENT AND PERSONNEL
   -QUALIFICATION RECORDS FOR INSPECTORS AND NDT TECHNICIANS
   -NDT PROCEDURES AND EQUIPEMENT CALIBRATION RECORDS
   -DAILY OR WEEKLY INSPECTION REPORTS
   -NONCONFORMANCE REPORTS

   d. WELDED CONNECTIONS:

   i. VISUAL INSPECTION OF WELDING SHALL BE THE PRIMARY METHOD USED TO CONFIRM PROCEDURES, MATERIALS, AND WORKMANSHIP FOR THE PROJECT. VISUAL INSPECTIONS SHALL CONFORM TO SECTION Q5 AND Q5.1 OF APPENDIX Q, AISC 341, AND TO SECTION W3 OF APPENDIX W, AISC 341.
   ii. NONDESTRUCTIVE TESTING (NDT) OF SLRS WELDS SHALL CONFORM TO THE REQUIREMENTS OF SECTION Q5.2 OF APPENDIX Q, AISC 341 AS WELL AS SECTIONS W3.3 AND W4 OF APPENDIX W, AISC 341.
   iii. WELDING PRACTICES SHALL CONFORM TO ALL REQUIREMENTS OF APPENDIX W, AISC 341.

   e. BOLTED CONNECTIONS:

   i. INSPECTION OF BOLTED SLRS CONNECTIONS SHALL CONFORM TO SECTIONS Q5 AND Q5.3 OF APPENDIX Q, AISC 341.

   f. MISCELLANEOUS INSPECTIONS:

   i. INSPECTION OF REDUCED BEAM SECTIONS (RBS) AT MOMENT FRAME BEAMS SHALL CONFORM TO SECTION Q5.4 OF APPENDIX Q, AISC 341.
   ii. INSPECTION OF PROTECTED ZONES SHALL CONFORM TO SECTION Q5.4 OF APPENDIX Q, AISC 341.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS (LATEST EDITION), AND WITH CHAPTER 22A OF THE CODE.
2. ALL STRUCTURAL STEEL SHALL CONFORM TO THE ASTM DESIGNATION AS INDICATED BELOW (UNO):

ALL W SHAPES	A572/A992, GRADE 50
BRACED FRAME GUSSET PLATES	A572, GRADE 50
PLATES, CONNECTION PLATES, AND MISC.	A-36
PIPE COLUMNS	A-53, GRADE B
TUBE SECTIONS	A-500, GRADE B
HIGH STRENGTH BOLTS (TYP FOR CONNECTIONS, UNO)	A-325, A490
BOLTS IN CONCRETE/MASONRY	A-36/A-307 U.N.O.
BRACED FRAME/MOMENT FRAME ANCHOR BOLTS	A-354 GRBD
ANGLES, CHANNELS, WT SHAPES	A-36

3. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP DRAWINGS TO THE ARCHITECT OF ALL STEEL FOR ARCHITECTS AND STRUCTURAL ENGINEERS REVIEW BEFORE FABRICATION.
4. BOLT HOLES USED IN STEEL SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLT USED, EXCEPT AS NOTED.
5. ALL STRUCTURAL STEEL SURFACES THAT ARE ENCASED IN CONCRETE, OR MASONRY, OR SPRAY ON FIREPROOFING SHALL BE LEFT UNPAINTED.
6. ALL WELDING IS TO BE DONE BY AWS CERTIFIED WELDERS USING E70XX ELECTRODES (UNO). ALL WELDS SHALL BE IN CONFORMITY WITH THE PROJECT SPECIFICATIONS AND THE CODE FOR WELDING IN BUILDING CONSTRUCTION (AWS D1.1 LATEST REVISION) OF THE AMERICAN WELDING SOCIETY. SEE SPECIAL INSPECTIONS SECTION FOR WELDING INSPECTION REQUIREMENTS.
7. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE, USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION 9TH EDITION, SECTION J2.2.b.
8. ALL STRUCTURAL STEEL AND MISCELLANEOUS METAL EXPOSED TO THE WEATHER SHALL BE HOT DIP GALVANIZED AFTER FABRICATION, UNLESS CALLED OUT TO BE PAINTED ON THE CONSTRUCTION DOCUMENTS. PROTECT FIELD WELDS EXPOSED TO THE WEATHER VIA PRIME AND PAINT OR BRUSH/COLD GALVANIZING.
9. THE USE OF E70T-4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION. ALL WELD FILLER METAL SHALL BE OF THE LOW HYDROGEN TYPE AND SHALL HAVE A MINIMUM CHARPY V-NOTCH (CVN) VALUE OF 20 FT-LBS AT A TEMPERATURE OF (-)20°F.
10. FOR ALL STRUCTURAL STEEL THAT IS TO REMAIN EXPOSED AND VISIBLE PER THE ARCHITECTURAL DRAWINGS, CONTRACTOR SHALL GRIND SMOOTH ALL EXPOSED WELDS AND SHALL COMPLY WITH THE SPECIFICATIONS FOR (AESS) ARCHITECTURALLY EXPOSED STRUCTURAL STEEL FOUND ON THE AISC CODE OF STANDARD PRACTICE.
11. WRITTEN WELDING PROCEDURE SPECIFICATIONS (WPS) PER THE RECOMMENDATIONS OF THE AMERICAN WELDING SOCIETY (AWS) SHALL BE DEVELOPED BY THE FABRICATOR/ERECTOR AND SUBMITTED FOR REVIEWED TO THE ENGINEER PRIOIR TO ANY WELDING OF THE STRUCTURAL STEEL. THE WELDING PROCEDURES SHALL INCLUDE ALL THE WELDED JOINTS AND CONFIGURATIONS TO BE USED ON THIS PROJECT-ONLY WPS WHICH ARE RELEVANT TO THIS PROJECT SHALL BE SUBMITTED. ALL WELDED JOINTS SHALL BE PRE-QUALIFIED PER AWS OR BE QUALIFIED BY TEST PER AWS. A PROCEDURE QUALIFICATION RECORD (PQR) SHALL BE INCLUDED WITH THE WPS IF THE WELDING PROCEDURE OR JOINT IS QUALIFIED BY TESTING. THE ELECTRODE MANUFACTURER AND PRODUCT/TRADE NAME SHALL BE IDENTIFIED IN THE WPS IN ADDITION TO THE AWS ELECTRODE CLASSIFICATION NAME. A COPY OF THE ELECTRODE MANUFACTURER'S TECHNICAL DATA SHEETS WITH THE RECOMMENDED WELDING PARAMETERS SHALL BE SUBMITTED WITH THE WPS.

EXPANSION TYPE CONCRETE WEDGE ANCHORS

1. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.
2. HOLES ARE DRILLED INTO CONCRETE USING CARBIDE-TIPPED MASONRY DRILL BITS COMPLYING WITH ANSI B212. 15-1994. THE DRILL BIT DIAMETER MUST BE THE SAME AS THAT OFTHE ANCHORS. THE DRILLED HOLES MUST EXCEED THE DEPTH OF ANCHOR EMBEDMENT BY AT LEAST TWO ANCHOR DIAMETERS. TO PERMIT OVERDRIVING OF ANCHORS AND TO PROVIDE A DUST FREE AREA. THE ANCHOR MUST BE HAMMERED INTO THE PREDRILLED HOLE UNTIL AT LEAST SIX THREADS ARE BELOW THE SURFACE. THE NUT MUST BE TIGHTENED AGAINST THE WASHER UNTIL THE TORQUE VALUES SPECIFIED IN ICC REPORT ARE ATTAINED.
3. THE SPECIAL INSPECTOR MUST BE ON THE JOBSITE CONTINUOUSLY DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, PREDRILLED HOLE DIMENSIONS, ANCHOR SPACING, EDGE DISTANCES, SLAB THICKNESS, ANCHOR EMBEDMENT AND TIGHTENING TORQUE.

POWDER ACTIVATED FASTENERS

1. WHEN INSTALLING POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.
2. THE SPECIAL INSPECTOR MUST BE ON THE JOBSITE CONTINUOUSLY DURING ANCHOR INSTALLATION TO VERIFY ANCHOR TYPE, ANCHOR DIMENSIONS, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, PREDRILLED HOLE DIMENSIONS, ANCHOR SPACING, EDGE DISTANCES, SLAB THICKNESS, ANCHOR EMBEDMENT AND TIGHTENING TORQUE.
3. POWDER ACTUATED FASTENERS ARE NOT PERMITTED FOR USE ON CONCRETE CURBS.

METAL STUDS

1. ALL LIGHTGAGE METAL FRAMING SHALL BE AS NOTED BELOW:
   EXTERIOR STUDS: GALVANIZED
   INTERIOR STUDS: GALVANIZED
2. ALL LIGHTGAGE METAL FRAMING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS", NAS-01 W/ 2004 SUPPLEMENT. CONSTRUCTION SHALL ALSO CONFORM TO GENERAL-04, HEADER-04, AND WSD-04.
3. ALL LIGHTGAGE METAL FRAMING SHALL CONFORM WITH THE FOLLOWING:

GALVANIZED STUDS/TRACKS: 12, 14 AND 16 GAGE	ASTM A653, GRADE 50 (Fy = 50,000 psi)
GALVANIZED STUDS/TRACKS: 18 AND 20 GAGE	ASTM A653, GRADE 33 (Fy = 33,000 psi)
END CLOSURES, BRIDGING AND ACCESSORIES	ASTM A653, GRADE 33 (Fy = 33,000 psi)

4. AS A MINIMUM, DOUBLE VERTICAL STUDS SHALL BE STITCH WELDED TOGETHER ON BOTH FLANGES WITH 1/16" GROOVE WELDS X 1" LONG AT 12" ON CENTER, U.N.O.
5. MINIMUM STUD PROPERTIES SHALL BE AS INDICATED ON PLANS.
6. ALL SHEET METAL SCREWS SHALL CONSIST OF 'DARTS' BRAND SELF-DRILLING / SELF-TAPPING STEEL SCREWS (ICC ER-5202). INSTALLATION OF SCREWS SHALL BE IN CONFORMANCE WITH ICC REPORT # ER-5202 AND SHALL PROTRUDE THROUGH THE ATTACHED MEMBERS THREE FULL THREADS BEYOND THE ATTACHED MEMBERS.
7. AS A MINIMUM, ANCHOR STUD TRACKS WITH HILTI 0.157" DIAMETER X-U (ICC #2269) LOW VELOCITY POWDER DRIVEN INSERTS @ 16" OC OR APPROVED EQUAL. THE INSERTS SHALL HAVE A MINIMUM 1/4" EMBEDMENT INTO THE CONCRETE AND SHALL BE LOCATED A MINIMUM 3" FROM ANY CONCRETE EDGE. THE INSERTS SHALL BE PLACED ADJACENT TO EACH WALL STUD AT A MAXIMUM DISTANCE OF 2".
8. CONTRACTOR SHALL COMPLY WITH ALL OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS AND RECOMMENDATIONS. ALL METAL STUDS SHALL HAVE STIFFENED FLANGES. SEE DRAWINGS FOR SPECIFIC DETAILS ON CONNECTIONS, BRACING, BRIDGING, ETC. CONTRACTOR SHALL PROVIDE ALL ACCESSORIES INCLUDING. BUT NOT LIMITED TO, TRACKS, CLIPS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED.
9. ALL METAL STUDS TO BE MANUFACTURED BY MEMBERS OF THE STEEL STUD MANUFACTURER'S ASSOCIATION, SSMA (ICC #4943P), U.N.O.

10. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT. CORING IN CONCRETE IS NOT PERMITTED. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE DRAWINGS. SEE THESE DRAWINGS FOR ADDITIONAL RESTRICTIONS ON THE PLACEMENT OF OPENINGS IN SLABS AND WALLS.
11. PIPES LARGER THAN 1-1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED BY STRUCTURAL ENGINEER. PIPES SHALL NOT DISPLACE OR INTERRUPT REINFORCING BARS, SPACE EMBEDDED PIPES AND SLEEVES AT A MINIMUM OF 3 DIAMETERS.

HEADED STUDS

1. ALL HEADED STUDS WELDED TO BEAMS OR CONCRETE CONNECTIONS SHALL BE 'NELSON SHEAR CONNECTOR STUDS' (ICC ER 2614) OR 'NELSON DEFORMED BAR ANCHOR STUDS' (ICC ER 5217), TRW FASTENERS AND ASSEMBLIES GROUP, LORAIN, OHIO, OR APPROVED EQUAL.

   NELSON SHEAR CONNECTOR STUDS SHALL BE MANUFACTURED FROM ASTM A 108, GRADES C-1010 THROUGH C-1020 COLD-DRAWN STEEL. NELSON DEFORMED BAR ANCHOR STUDS ARE PRODUCED FROM DEFORMED WIRE COMPLYING WITH ASTM A 496.
2. ALL HEADED STUDS SHALL BE AUTOMATICALLY END WELDED IN SHOP OR FIELD WITH EQUIPMENT RECOMMENDED BY MANUFACTURER OF STUDS 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. WELDING SHALL BE DONE ONLY BY QUALIFIED WELDERS APPROVED BY AN AWS-CWI INSPECTOR APPROVED BY DSA.
3. INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 1704 A.3.1.1 OF THE CODE. ALL THE SHOP AND FIELD WELDING OPERATIONS FOR THE AUTOMATIC END-WELDED STUDS SHALL BE MADE BY AN AWS-CWI INSPECTOR APPROVED BY DSA. THE TYPE AND CAPACITY OF THE WELDING EQUIPMENT SHALL BE IN ACCRODANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE CHECKED AND APPROVED BY A WELDING INSPECTOR.

   AT THE BEGINNING OF EACH DAY'S WORK, A MINIMUM OF TWO TEST STUD WELDS SHALL BE MADE WITH THE EQUIPMENT TO BE USED TO METAL WHICH IS THE SAME AS THE ACTUAL WORK PIECE. THE TEST STUDS SHALL BE SUBJECTED TO A 30% BEND TEST BY STRIKING THEM WITH A HEAVY HAMMER. AFTER THE ABOVE TEST, THE WELD SECTION SHALL NOT EXHIBIT ANY TEARING OUT OR CRACKING.

   TESTING OF END-WELDED STUDS SHALL BE IN ACCORDANCE WITH SECTION 2212 A.3 OF THE CODE.
4. STEEL SHEAR STUDS MATERIAL, WELDING, SHALL BE IN ACCORDANCE WITH AWS "STRUCTURAL WELDING CODE", AWS D1.1 LATEST EDITION, SECTION 7. ALL STUDS SHALL BE 3/4" DIAMETER X 5" LONG, SPACED AT 12" O.C. MAXIMUM, UNLESS NOTED OTHERWISE.

REINFORCING STEEL (FOR CONCRETE AND MASONRY)

1. REINFORCING BARS SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 19A OF THE CODE, ASTM A615, GRADE 60 UNO. DEFORMATIONS SHALL BE IN ACCORDANCE WITH ASTM A-305. REINFORCEMENT TO BE WELDED SHALL CONFORM TO ASTM A706 GR60.
2. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. PROVIDE LAPS AS PER THE CODE SECTION 12.8 OF ACI 318-05, 9" MINIMUM. WWF SHALL BE SUPPORTED ON APPROVED CHAIRS.
4. REINFORCING BAR SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN MASONRY SHALL BE 72 BAR DIAMETERS, 24" MINIMUM. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE AS REQUIRED FOR CLASS B SPLICES PER CODE SECTION 12.15 OF ACI 318-05 & 11/S-5.00 UNO. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS.
5. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
6. WHERE WELDING OF REINFORCING IS APPROVED BY THE STRUCTURAL ENGINEER, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING APPROVED ELECTRODES. WELDER SHALL BE APPROVED BY DSA. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF STRUCTURAL WELDING CODE- REINFORCING STEEL", AWS-D1.4, LATEST REVISION. REINFORCING BARS TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-706.
7. BARS IN SLABS SHALL BE SECURELY SUPPORTED ON WELL-CURED CONCRETE BLOCKS OR APPROVED METAL CHAIRS, PRIOR TO PLACING CONCRETE.
8. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", LATEST EDITION.
9. COMPLETE AND DETAILED REINFORCING PLACEMENT DRAWINGS SHALL BE PREPARED AND SUBMITTED TO THE ARCHITECT FOR REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO FABRICATION IN ACCORDANCE WITH THE SPECIFICATIONS AND APPLICABLE CODES. THESE DRAWINGS SHALL BE AVAILABLE ON THE JOB SITE PRIOR TO PLACING OF CONCRETE.
10. MILL TEST REPORTS FOR GRADE 60 BARS SHALL BE SUBMITTED PRIOR TO PLACEMENT OF CONCRETE.
11. CONTINUOUS INSPECTION OF CONCRETE SHALL INCLUDE INSPECTION DURING INSTALLATION OF REINFORCING STEEL. INSPECTION SHALL BE SCHEDULED SO THAT PLACEMENT OF REINFORCING STEEL, CONDUIT, SLEEVES, AND EMBEDDED ITEMS MAY BE CORRECTED PRIOR TO PLACEMENT OF OVERLYING GRIDS OR REINFORCING STEEL.
12. CONCRETE PROTECTION FOR REINFORCEMENT
    (I) CAST-IN-PLACE CONCRETE (NON-PRESTRESSED). THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

	MINIMUM COVER, IN.
A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3
B. CONCRETE EXPOSED TO EARTH OR WEATHER:	
NO. 6 THROUGH NO. 18 BAR	2
NO 5 BAR, W31 OR D31 WIRE & SMALLER	1 1/2
C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
SLABS, WALLS, JOISTS:	
NO. 14 AND NO. 18 BAR	1 1/2
NO. 11 BAR & SMALLER	3/4
BEAMS, COLUMNS:	
PRIMARY REINFORCEMENT TIES, STIRRUPS, SPIRALS	1 1/2

STEEL DECK

1. ROOF AND FLOOR DECK SHALL BE AS NOTED ON THE DRAWINGS. MINIMUM PROPERTIES ARE AS FOLLOWS:

DECK SIZE AND GAUGE	I (in4)	+S (in3)	-S (in3)
3" x 18 GA DECK	1.203	0.767	0.767
3" x 20 GA DECK	0.896	0.534	0.564
1 1/2" x 18 GA DECK	0.302	0.322	0.335

2. DECK SHOP DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND SHALL INDICATE STUD LAYOUT.
3. THE AMERICAN IRON AND STEEL INSTITUTE "SPECIFICATIONS FOR THE DESIGN OF LIGHT GAUGE STEEL STRUCTURAL MEMBERS" SHALL GOVERN THE DESIGN OF ALL DECK UNITS, STEEL DECK AND ALL OF ITS CLOSURES. FLASHINGS SHALL CONFORM TO ASTM A653 SS, GR33.
4. ACCEPTABLE STEEL DECK MANUFACTURES ARE AS FOLLOWS:
   VERCO MANUFACTURING INC. (ICC ER 2078P)
5. UNITS SHALL BE CONTINUOUS OVER THREE OR MORE SPANS, EXCEPT WHERE THE FRAMING DOES NOT PERMIT. SHORING MAY BE REQUIRED AT NON-CONTINUOUS SPANS. DECK SHOP DRAWINGS SHALL INDICATE WHERE SHORING WILL BE REQUIRED. DECK SHALL BEAR 2" MINIMUM AT ALL SUPPORTS. ALL DECKS FOR INTERIOR FLOORS SHALL HAVE VENT TABS FOR CONCRETE VENTILATION.
6. ALL WELDING OF STEEL DECK SHALL BE DONE BY CERTIFIED LIGHT GAGE WELDERS IN ACCORDANCE WITH AWS "SPECIFICATIONS FOR WELDING SHEET STEEL IN STRUCTURES", AWS D1.3, LATEST EDITION. WELDER SHALL BE APPROVED BY DSA.
7. UNITS SHALL BE FASTENED TO THE STEEL SUPPORTS AT THE END OF THE UNITS AND AT INTERMEDIATE SUPPORTS AND TO THE STEEL SUPPORTS AT THE SIDE BOUNDARIES BY 3/4" DIAMETER PUDDLE WELDS AT 1'-0" O.C.
8. THE SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BETWEEN SUPPORTS BY BUTTON PUNCHING.
9. PROVIDE FLASHING AND CLOSURE PLATES AT ENDS OF ALL UNITS, AROUND COLUMNS, AND AT ALL PERIMETER LOCATIONS REQUIRING CONCRETE.
10. ALLOWABLE LOADS FOR DECK PER VERCO CATALOG (ICC ER 2078P).

7. FOUNDATIONS SHALL BE PLACED AND ESTIMATED ACCORDING TO DEPTHS SHOWN ON DRAWINGS. SHOULD SOIL ENCOUNTERED AT THESE DEPTHS NOT BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER, FOUNDATION ELEVATIONS/ DIMENSIONS MAY NEED TO BE MODIFIED BY THE ENGINEER.
8. FOOTING BACKFILL AND UTILITY TRENCH BACKFILL WITHIN BUILDING AREA SHALL BE MECHANICALLY COMPACTED IN LAYERS IN ACCORDANCE WITH THE SOILS REPORT AND APPROVED BY THE SOILS ENGINEER. FLOODING WILL NOT BE PERMITTED. ALL FILLS USED TO SUPPORT FOUNDATIONS SHALL BE INSPECTED BY THE SOILS ENGINEER REPRESENTATIVE PER CODE SECTION 1704A, 7 AND TABLE 1704A, 7.
9. ALL ABANDONED FOOTINGS, UTILITIES, ETC. SHALL BE REMOVED UNLESS NOTED OTHERWISE. NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS OR FOUNDED ON STRUCTURALLY CERTIFIED FILL PER THE SOILS REPORT.

CONSTRUCTION JOINTS

1. ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CODE SECTION 1906A.4 AND THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.
2. ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS, OR OTHER FOREIGN MATTER PRIOR TO PLACING THE ADJACENT CONCRETE.
3. THE CONTRACTOR SHALL SUBMIT THE PROPOSED LOCATIONS OF CONSTRUCTION JOINTS TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE STARTING CONSTRUCTIOM.

SPECIAL INSPECTIONS

THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL HAVE PERIODIC OR CONTINUOUS INSPECTION PER CHAP 17A BY A PROJECT INSPECTOR APPROVED BY DSA.

1. CONCRETE.
2. BOLTS INSTALLED IN CONCRETE.
3. PLACING OF REINFORCING STEEL.
4. ALL STRUCTURAL WELDING, INCLUDING REINFORCING STEEL.
5. EXPANSION ANCHORS.
6. POWDER ACTUATED FASTENERS/SHOT PINS.
7. HIGH STRENGTH BOLTS.
8. SEE GEOTECHNICAL ENGINEER'S REPORT FOR SPECIFIC INSPECTION REQUIREMENTS FOR ENGINEERED FILL BY SOILS ENGINEER'S REPRESENTATIVE.
9. INSTALLATION OF METAL DECK AND HEADED STUDS.
10. EXTERIOR METAL STUDS/ANCHORAGE.
11. MASONRY.
12. SEAM WELDS OF ALL HSS MATERIAL (TUBES/PIPES).
13. SPRAYED-ON FIREPROOFING

ALL SPECIAL INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 1701A OF THE CODE AND ANY ADDITIONAL REQUIREMENTS STATED IN THESE DRAWINGS AND/OR THE PROJECT SPECIFICATIONS.
REFER TO THE STRUCTURAL TESTS AND INSPECTIONS FORM FOR ADDITIONAL INFORMATION.

STRUCTURAL OBSERVATION:

1. STRUCTURAL OBSERVATION SHALL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD OR DESIGNEE IN ACCORDANCE WITH SECTION 1709A OF THE CODE.
2. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATION. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE DSA INSPECTOR.
3. THE CONTRACTOR SHALL COORDINATE AND CALL FOR A PRE-CONSTRUCTION MEETING BETWEEN THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, STRUCTURAL OBSERVER, CONTRACTOR, AFFECTED SUBCONTRACTORS, DSA INSPECTORS. THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS THAT AFFECT THE VERTICAL AND LATERAL LOAD SYSTEMS OF THE STRUCTURE AND TO REVIEW SCHEDULING OF THE REQUIRED OBSERVATIONS. A RECORD OF THE MEETING SHALL BE INCLUDED IN THE FIRST OBSERVATION REPORT SUBMITTED TO THE DSA INSPECTOR.
4. THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE WORK THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT AND AN OBSERVATION REPORT FROM THE STRUCTURAL OBSERVER.

	CONSTRUCTION STAGES	ELEMENTS/CONNECTIONS TO BE OBSERVED
a)	FOUNDATIONS	REINF / CONC / AB
b)	STEEL ERECTION	FRAMING / CONNECTIONS
c)	METAL DECKING	PLACEMENT / WELDS / REINF
d)	EXTERIOR METAL STUDS	PLACEMENT / CONNECTIONS

5. THE STRUCTURAL OBSERVER SHALL PREPARE A REPORT FOR EACH SIGNIFICANT STATE OF CONSTRUCTION OBSERVED AND AT COMPLETION OF STRUCTURAL SYSTEM. A COPY OF THE OBSERVATION REPORT SHALL BE SENT TO DSA, OWNER, CONTRACTOR, AND PROJECT INSPECTOR.

PRE-APPROVED AND CONTRACTOR DESIGN-BUILD ITEMS

THE FOLLOWING LIST OF DESIGN ELEMENTS SHALL BE INSTALLED AND DESIGNED IN ACCORDANCE WITH ALL REGULATIONS OF THE BUILDING CODE AND THE BUILDING OFFICIAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF PRE-APPROVED SUPPORT DETAILS BY THE BUILDING OFFICIAL AND/OR THE APPROVAL OF ALTERNATE INSTALLATION DETAILS FROM THE BUILDING OFFICIAL. THE CONTRACTOR AS REQUIRED SHALL SUBMIT THE NECESSARY DESIGN DRAWINGS, SHOP DRAWINGS, AND/OR STRUCTURAL CALCULATIONS STAMPED AND SIGNED BY A CALIFORNIA REGISTERED STRUCTURAL ENGINEER TO THE BUILDING OFFICIAL FOR REVIEW AND APPROVAL. THE DESIGN SHALL COMPLY WITH ALL PROJECT SPECIFICATIONS AND CRITERIA AS WELL AS THE MINIMUM BUILDING CODE REQUIREMENTS. PRIOR TO ANY SUBMITTAL TO THE BUILDING OFFICIAL, THE DRAWING AND/OR CALCULATIONS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW OF GENERAL CONFORMANCE WITH THE DESIGN INTENT OF THE PROJECT. THE TIME TO COMPLETE THIS PROCESS SHALL BE INCORPORATED INTO THE CONTRACTORS SCHEDULE.

1. TEMPORARY SHORING FOR EXCAVATION.
2. GFRC PANELS
3. SEISMIC BRACING OF DUCTS/PIPES/CONDUITS

CAST-IN-PLACE CONCRETE

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM WITH CHAPTER 19A OF THE CODE. AND WITH THE PROVISIONS OF ACI 318, 2005 EDITION.
2. REINFORCED CONCRETE WAS DESIGNED BY THE "ULTIMATE STRENGTH DESIGN METHOD".
3. CONCRETE MIXES SHALL BE DESIGNED BY AN APPROVED TESTING LABORATORY AND REVIEWED BY THE STRUCTURAL ENGINEER. THE COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE PROPORTIONED BASED ON SECTION 1905A OF THE CODE.

   CONTRACTOR SHALL FORMULATE APPROPRIATE MIX DESIGNS, PLACEMENT PROCEDURES, AND CONCRETE CURING PROCEDURES TO REDUCE THE OCCURRENCE AND MAGNITUDE OF CONCRETE SHRINKAGE CRACKING.
4. SCHEDULE OF STRUCTURAL CONCRETE 28-DAY STRENGTH AND TYPES (UNO):

LOCATION IN STRUCTURE	MINIMUM STRENGTH (PSI)	DENSITY (PCF)	SLUMP (INS)	MAX WATER/CEMENT RATIO
ALL CONCRETE FOUNDATIONS GRADE BEAMS, TIE BEAMS,	4000	150	4	0.60
CONCRETE SLAB ON GRADE/PAD ON GRADE	4000	150	4	0.50
CONCRETE FILL ON METAL DECK	3000	110	4	0.50
CURBS AND OTHER NON-STRUCTURAL CONCRETE (NO SPECIAL INSPECTION)	2500	150	4	0.55

5. TYPICAL PORTLAND CEMENT SHALL CONFORM TO ASTM C-150, TYPE II. PORTLAND CEMENT IN CONCRETE IN CONTACT W/ EARTH SHALL CONFORM TO ASTM C-150, TYPE II.
6. AGGREGATE FOR HARDROCK CONCRETE SHALL CONFORM TO ALL REQUIREMENTS AND TESTS OF ASTM C-33 AND PROJECT SPECIFICATIONS. EXCEPTIONS MAY BE USED ONLY WITH PERMISSION OF THE STRUCTURAL ENGINEER.
7. CONCRETE MIXING OPERATION, ETC. SHALL CONFORM TO ASTM C-94.
8. PLACEMENT OF CONCRETE SHALL CONFORM TO CODE SECTION 1905A AND PROJECT SPECIFICATIONS. CLEAN AND ROUGHEN TO 1/4" AMPLITUDE ALL CONCRETE SURFACES AGAINST WHICH NEW CONCRETE IS TO BE PLACED.
9. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.

STRUCTURAL NOTES

GENERAL

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
2. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
3. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
4. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING :

   2007 CALIFORNIA BUILDING CODE REFERRED TO HERE AS "THE CODE", AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OVER WHICH ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES & STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
5. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

   SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED.

   SIZE AND LOCATION OF ALL INTERIOR AND EXTERIOR NON-BEARING PARTITIONS.

   SIZE AND LOCATION OF ALL CONCRETE CURBS, EQUIPMENT PADS, PITS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHANGE IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.

   SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN.

   FLOOR AND ROOF FINISHES.

   DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
6. SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:

   PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC., EXCEPT AS SHOWN OR NOTED.

   ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS.

   CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES.

   SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
7. 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 DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
8. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS. FOR ANY FURTHER RESTRICTIONS ON OPENINGS IN STRUCTURAL ELEMENTS, SEE APPLICABLE SECTIONS BELOW.
9. PIPES SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHERE SPECIFICALLY APPROVED. CONTRACTOR TO PROVIDE SHOP DRAWING INDICATING PIPE LOCATION, SIZE, AND DEPTH OF EMBEDMENT IN CONCRETE POUR.
10. ASTM SPECIFICATIONS ON THE DRAWINGS SHALL BE OF THE LATEST REVISION.
11. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES, SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
12. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
13. LIVE LOADS:

TYPICAL ROOF	20 PSF NON-REDUCIBLE
OBSERVATION DECK	100 PSF REDUCIBLE
CLASSROOMS	50 PSF REDUCIBLE
LECTURE HALL	60 PSF REDUCIBLE
LABORATORIES	60 PSF REDUCIBLE
GROUND LEVEL CORRIDORS	100 PSF REDUCIBLE
UPPER LEVEL CORRIDORS	80 PSF REDUCIBLE
PEDESTRIAN BRIDGE (NO VEHICLE ACCESS)	100 PSF REDUCIBLE
STAIRS AND EXITS	100 PSF REDUCIBLE
STORAGE	125 PSF NON-REDUCIBLE
CANOPIES	20 PSF NON-REDUCIBLE

14. WIND ANALYSIS PER ASCE 7-05 AS MODIFIED BY DSA 1R 16-7. SEE S-7.00A FOR COMPONENTS AND CLADDING PRESSURES FOR WALL ELEMENTS.

BASIC WIND SPEED	85 MPH
IMPORTANCE FACTOR	1.15
OCCUPANCY CATEGORY	III
WIND EXPOSURE	C

15. SEISMIC ANALYSIS PER SECTIONS 1613A AND 1614A OF THE CODE, UTILIZING THE MODAL RESPONSE SPECTRUM ANALYSIS PROCEDURE VIA A SITE SPECIFIC RESPONSE SPECTRUM ANALYSIS FOR THE ADMIN BLDG, AND THE EQUIVALENT LATERAL FORCE PROCEDURE FOR THE MAIN BLDG.

    OCC CAT III

I =	1.25	
S_S =	1.5g	R = 6 STEEL SCBF (MAIN BLDG)
S_1 =	0.66g	R = 8 STEEL SMF (ADMIN BLDG)
SITE CLASS D		C_S = 0.21 (MAIN BLDG)
S_{DS} =	1.0g	C_S = 0.16 (ADMIN BLDG)
S_{D1} =	0.66g	V = 2,200 K (MAIN BLDG)
SEIS DES CAT D		V = 220 K (ADMIN BLDG)

16. LOWEST ANTICIPATED SERVICE TEMPERATURE IS 50° F. TEMPERATURE DIFFERENTIAL IN THE CONDITIONED SPACE SHALL NOT EXCEED 30° F OVER THE LIFE OF THE BUILDING, INCLUDING WEEKENDS AND HOLIDAYS.

FOUNDATION

1. FOUNDATION DESIGN BASED ON SOILS REPORT BY EARTH SYSTEMS REPORT NO. PL-07131-01 DATED FEBRUARY 28, 2008.
2. FOUNDATIONS ARE DESIGNED BASED ON THE FOLLOWING INFORMATION:
   ALLOWABLE NET BEARING * = 2,000 PSF (CONTINUOUS)
   = 2,500 PSF (ISOLATED PAD)
   PASSIVE EARTH PRESSURE = 320 PCF (USE 1.5 FACTOR FOR SAFETY)
   COEFFICENT OF FRICTION * = 0.35
   * MAY BE INCREASED BY 1/3 FOR WIND AND SEISMIC LOAD CASES

   FOOTINGS SHALL BEAR ON COMPACTED SOILS PER SECTION A OF SOILS REPORT. MINIMUM DEPTH OF FOOTINGS BELOW LOWEST ADJACENT GRADE SHALL BE 1'-6", MINIMUM WIDTH OF FOOTING SHALL BE 1'-0" FOR CONTINUOUS FOOTING, 2'-0" FOR ISOLATED PAD FOOTINGS. SEE 3/S-5.01 FOR EXTENT OF OVEREXCAVATION/RECOMPACTION OF PROJECT SITE.

   THE ALLOWABLE NET BEARING VALUES NOTED MAY BE INCREASED FOR WIDTHS AND/OR DEPTHS EXCEEDING THE MINIMUMS NOTED, UP TO 3,000 PSF FOR CONTINUOUS FOUNDATIONS AND 3,500 PSF FOR ISOLATED PAD FOUNDATIONS.
3. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE, IF REQUIRED.
4. CONTRACTOR SHALL PROVIDE FOR DESIGN AND INSTALLATION OF ALL CRIBBING, SHEATHING AND SHORING REQUIRED AND SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
5. EXCAVATION FOR FOOTINGS SHALL BE APPROVED BY THE INSPECTOR OR SOILS ENGINEER PRIOR TO PLACING THE CONCRETE AND REINFORCING. CONTRACTOR TO NOTIFY THE INSPECTOR WHEN INSPECTION OF EXCAVATION IS READY. INSPECTOR TO SUBMIT LETTER OF COMPLIANCE.
6. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE OR GROUT HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTORS SHALL BRACE OR PROTECT ALL BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHING FLOORS ARE COMPLETELY IN PLACE AND HAVE ATTAINED FULL STRENGTH. CONTRACTOR SHALL PROVIDE FOR DESIGN, PERMITS AND INSTALLATION OF SUCH BRACING.

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