#### **GENERAL**

- REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS. MORE STRINGENT REQUIREMENT CONTROLS WHERE INFORMATION SHOWN ON DRAWINGS AND IN SPECIFICATIONS ARE IN CONFLICT.
- CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, 2007
- 3. DETAILS OF THE CONSTRUCTION NOT FULLY SHOWN OR NOTED ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS SHALL BE OF THE SAME SIZE AND CHARACTER AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN AND NOTED.
- 4. THE WORD "TYPICAL" SHALL MEAN THAT THE INDICATED INFORMATION SHALL BE APPLIED TO ALL SIMILAR CONDITIONS WHETHER OR NOT THE INFORMATION IS SPECIFICALLY REFERENCED, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT JOB SITE. THE CONTRACTOR SHALL COMPARE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, CIVIL LANDSCAPE, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS BEFORE COMMENCING WITH THE WORK AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES REQUIRING CLARIFICATION OR REVISION. DO NOT SCALE DRAWINGS.
- 6. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITONS IS GIVEN AS THE BEST AVAILABLE KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. ACTUAL AS-BUILT CONDITIONS MAY BE DIFFERENT THAN RECORDED IN THE DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AT JOBSITE PRIOR TO PRODUCING SHOP DRAWINGS AND FABRICATING AND INSTALLING NEW WORK. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS THEY SHALL BE REPORTED TO THE ARCHITECT SO THAT THE PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN DIRECTION OF THE ARCHITECT.
- 7. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY AND PRESERVATION OF THE BUILDING AND CONTENTS DURING CONSTRUCTION, AND SHALL BE SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK. THE CONTRACTOR SHALL EXECUTE WORK TO ENSURE SAFETY OF PERSONS AND PROPERTY AGAINST DAMAGE BY FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH THIS WORK, AND SHALL PROVIDE ADEQUATE SHORING AND BRACING DURING ALL DEMOLITION AND CONSTRUCTION.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND CONSTRUCTION OF ANY NEW ELEMENTS.
- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR DEVELOPING AND COORDINATING A SEQUENCE OF TEMPORARY BRACING, SHORING, DEMOLITION, AND NEW CONSTRUCTION. SHORING TO SUPPORT EXISTING CONSTRUCTION TO REMAIN SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL SHORING AND TEMPORARY BRACING SHALL BE DESIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA HIRED AND PAID BY THE CONTRACTOR.
- 10. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL FABRICATED ELEMENTS AND SHALL BE APPROVED BY THE ARCHITECT PRIOR TO FABRICATION.

#### **DESIGN BASIS**

THE DESIGN IS IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, 2007 EDITION WITH DSA/OSHPD ANENDMENTS AND PROVIDES FOR THE FOLLOWING LOADS:

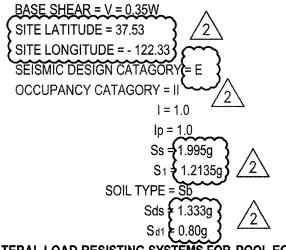
LIVE LOADS FOR POOL EQUIPMENT BUILDING

20 PSF

WIND LOADS FOR POOL EQUIPMENT BUILDING & SITE CONSTRUCTION

BASIC WIND SPEED = 85 MPH EXPOSURE C

SEISMIC LOADS FOR POOL EQUIPMENT BUILDING



LATERAL LOAD RESISTING SYSTEMS FOR POOL EQUIPMENT BUILDING

R = 5.0  $\Omega o = 2.5$ 

# SPECIAL INSPECTION

MASONRY BEARING SHEAR WALL

THE SPECIAL INSPECTION REQUIREMENTS OF CHAPTER 17 OF THE CALIFORNIA BUILDING CODE

- APPLY TO THE FOLLOWING: STEEL CONSTRUCTION
- CONCRETE CONSTRUCTION
- MASONRY CONSTRUCTION BOLTS INSTALLED IN CONCRETE AND MASONRY
- METAL DECK

SOIL

## STRUCTURAL OBSERVATION

STRUCTURAL OBSERVATION FOR SEISMIC RESISTANCE SHALL BE PROVIDED IN ACCORDANCE WITH CBC SECTIONS 1705A AND 1707A. AT THE CONCLUSION OF THE STRUCTURAL WORK. THE OBSERVER SHALL SUBMIT A WRITTEN STATEMENT TO THE BUILDING OFFICIAL THAT THE SITE VISITS HAVE BEEN MADE AND IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

### GEOTECHNICAL INFORMATION

- 1. FOR SITE CONSTRUCTION, THE OWNER'S GEOTHECHNICAL ENGINEER (CORNERSTONE EARTH GROUP,) HAS PREPARED AN INVESTIGATION REPORT FOR USE ON THIS PROJECT, TITLED COLLEGE OF SAN MATEO SITE WORK PACKAGE", DATED MARCH 25, 2009
- FOR THE POOL EQUIPMENT BUILDING THE OWNER'S GEOTHECHNICAL ENGINEER, CORNERSTONE EARTH GROUP, HAS · "SUPPLEMENT GEOTECHNICAL RECOMMENDATIONS, COLLEGE OF SAN MATEO 👌 AQUATIC CENTER", DATED FEB. 2, 2009.
- THE CONTRACTOR SHALL REVIEW AND UNDERSTAND THE INFORMATION CONTAINED IN THE REPORT, BUT SHALL NOT ASSUME THAT SUCH INFORMATION IS SUFFICIENT FOR THE CONTRACTOR'S PURPOSES.
- 3. THE CONTRACTOR SHALL BE FAMILIAR WITH THE GEOTECHNICAL CONDITIONS AT THE PROJECT SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN GEOTECHNICAL STUDIES AND INFORMATION NECESSARY TO COMPLETE THE WORK.
- 5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF AN INDEPENDENT GEOTECHNICAL ENGINEER LICENSED IN THE STATE OF CALIFORNIA TO ANALYZE AVAILABLE INFORMATION AND TO MAKE ADDITIONAL INVESTIGATIONS AS NECESSARY TO COMPLETE THE WORK.

#### **FOUNDATIONS**

- 1. REFER TO GENERAL NOTES SECTION TITLED "GEOTECHNICAL INFORMATION".
- 2. SLABS ON GRADE AND FOUNDATIONS SHALL BEAR ON APPROVED NATIVE SUBGRADE OR COMPACTED SOIL.
- 3. FOOTINGS AND GRADE BEAMS SHALL BE CAST IN NEAT TRENCHED EXCAVATIONS (1" MINIMUM WIDER THAN SCHEDULED). IF FOOTINGS CANNOT BE CAST IN TRENCHES, FORM FOOTINGS TO SCHEDULED DIMENSIONS.
- 4. BOTTOM OF FOOTINGS SHALL BE CALCULATED USING INFORMATION SHOWN ON THE DRAWINGS AND MAY BE REVISED BY THE GEOTECHNICAL ENGINEER TO ENSURE PROPER BEARING OF FOOTINGS INTO FIRM, APPROVED SOIL MATERIAL (UNDISTURBED NATURAL SOILS OR COMPACTED ENGINEERED FILL). TOP OF FOOTING DIMENSION FROM DATUM SHALL BE AS SHOWN ON PLANS.
- 5. COMPACTED NATURAL SOIL, FILL, AND BACKFILL IS TO BE UNIFORMLY COMPACTED WITH APPROVED COMPACTION EQUIPMENT. FILL MATERIAL AND OPERATIONS SHALL BE INSPECTED BY THE OWNER'S GEOTECHNICAL ENGINEER.
- WATER SHALL NOT BE ALLOWED TO STAND IN TRENCHES OR FORMS BEFORE OR AFTER CONCRETE IS PLACED, AND SHALL BE PUMPED OUT. IF BOTTOMS OF TRENCHES BECOME SOFTENED DUE TO RAIN OR OTHER WATER BEFORE FOOTINGS ARE CAST, THE CONTRACTOR SHALL EXCAVATE THE SOFTENED MATERIAL AND REPLACE WITH CONCRETE

7. ALLOWABLE BEARING PRESSURES FOR SPREAD FOOTINGS:

POOL EQUIPMENT BUILDING: DEAD LOAD \$4500 PSF DEAD PLUS LIVE LOAD 6000 PSF TOTAL LOAD (INCLUDING SEISMIC)

SITE CONSTRUCTION: 2000 PSF DEAD LOAD 3000 PSF DEAD PLUS LIVE LOAD \$4000 PSF TOTAL LOAD (INCLUDING SEISMIC)

- CANTILEVER RETAINING WALL DESIGN PRESSURE: 35 PCF (LEVEL BACKFILL) 35 PCP (LEVEL BACKFILL)
- 9. SEISMIC INCREMENT SOIL PRESSURE: 13H (RECTANGULAR)
- 10. SPECIAL INSPECTION REQUIREMENTS APPLY TO FILL AND BACKFILL OPERATIONS FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING REINFORCEMENT STEEL.

## CONCRETE

1. ALL CONCRETE SHALL DEVELOP THE FOLLOWING COMPRESSIVE STRENGTHS AT 28 DAYS

NORMAL WEIGHT CONCRETE	28 DAYS
FOOTINGS, GRADE BEAMS	4000 PSI
SLAB ON GRADE	4000 PSI
WALL	4000 PSI

- REFER TO SPECIFICATIONS FOR CONCRETE CLASS DESIGNATIONS.
- ALL EXPOSED CORNERS OR EDGES OF COLUMNS, PIERS, WALLS, BEAMS, ETC., SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE NOTED ON DRAWINGS.
- 4. CONSTRUCTION JOINTS SHALL BE LOCATED WHERE SHOWN AND, IF NOT SHOWN, WHERE DIRECTED BY THE ARCHITECT. THEY SHALL BE LOCATED SO AS TO LEAST IMPAIR THE STRENGTH OF THE STRUCTURE AND TO MINIMIZE SHRINKAGE. PROVIDE DOWELS AND KEYS AS DETAILED AND DIRECTED, AND THOROUGHLY CLEAN AND REMOVE LAITANCE FROM SURFACES BEFORE PROCEEDING WITH THE NEXT PLACEMENT.
- CONTRACTOR SHALL SUBMIT CONSTRUCTION JOINT LAYOUT FOR REVIEW.
- 6. FOR DRIP EDGES, REGLETS, REVEALS, AND OTHER FEATURES NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE ARCHITECTURAL DRAWINGS.

## **METAL DECK**

- SEE S7.1T FOR DECK PROFILES.
- 2. STEEL DECK SHALL BE WELDED TO ALL STRUCTURAL STEEL AND TO ADJACENT DECK SECTIONS IN ACCORDANCE WITH THE DECK WELDING SCHEDULE ON S7.1.
- 3. WELDING OF DECK SHALL BE IN ACCORDANCE WITH AWS STANDARDS AND PERFORMED BY WELDERS CERTIFIED FOR LIGHT-GAGE METALS.
- 4. PROVIDE VENTED DECK FOR ALL DECKS TO RECEIVE CONCRETE FILL UNLESS OTHERWISE NOTED. DECKS WITHOUT CONCRETE FILL SHALL NOT BE VENTED.

#### CONCRETE REINFORCEMENT

CAST-IN-PLACE CONCRETE

- 1. ALL CONCRETE SHALL BE REINFORCED. REINFORCEMENT SHALL BE NEW DEFORMED STEEL BARS, ASTM A615, GRADE 60.
- 2. ALL CONCRETE REINFORCEMENT DETAILS SHALL CONFORM TO ACI 315, "MANUAL OF
- STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES".
- 3. CONCRETE COVER SHALL BE TO FACE OF BAR, MECHANICAL COUPLER, OR WELDED HEADED BAR AS FOLLOWS, UNLESS OTHERWISE NOTED ON DRAWINGS: MINIMUM CONCRETE COVER

#### CAST AGAINST AND EXPOSED TO EARTH EXPOSED TO EARTH OR WEATHER #5 AND SMALLER 1 1/2" #6 AND LARGER NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH SLABS, JOISTS 1 1/2" COLUMNS, BEAMS

SLABS ON GRADE (8" THICK OR LESS)

4. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF REINFORCEMENT LAYOUTS AND DETAILS FOR REVIEW PRIOR TO FABRICATION. SHOW ALL PROPOSED SPLICE LOCATIONS, FABRICATE FROM APPROVED DRAWINGS ONLY.

MID-DEPTH

- 5. THE LENGTHS AND SPLICES OF REINFORCEMENT SHOWN ON DRAWINGS REPRESENT A SUGGESTED CONSTRUCTION JOINT LAYOUT. BAR SPLICES MAY BE DELETED AND CONTINUOUS REINFORCEMENT USED AT THE CONTRACTOR'S OPTION. LONG BARS OR BENT BARS SHOWN MAY BE SPLICED IF NECESSARY FOR PLACEMENT OR EASE OF CONSTRUCTION PROVIDED MINIMUM SCHEDULED LAP LENGTHS ARE FOLLOWED WITH APPROVAL FROM THE ARCHITECT. MECHANICAL COUPLERS SHALL BE USED WHERE SHOWN ON THE DRAWINGS AND MAY BE USED IN LIEU OF LAP SPLICES WITH APPROVAL FROM THE ARCHITECT.
- 6. PROVIDE DOWELS OR CONTINUOUS REINFORCEMENT BETWEEN ALL CONCRETE ELEMENTS, UNLESS OTHERWISE NOTED. IN GENERAL, BAR SPLICES SHALL BE MADE AT POINTS OF MINIMUM STRESS. IN FRAMED BEAMS AND SLABS, SPLICE TOP BARS AT MID-SPAN, BOTTOM BARS OVER SUPPORTS, UNLESS OTHERWISE NOTED. IN GRADE BEAMS SUPPORTED ON SOIL, SPLICE TOP BARS AT COLUMNS, BOTTOM BARS AT MID-SPAN BETWEEN COLUMNS, UNLESS OTHERWISE NOTED ON DRAWINGS. VERTICAL REINFORCEMENT FROM COLUMNS, PILASTERS, AND WALLS SHALL BE DOWELED TO SUPPORTING FOOTINGS WITH BARS OF SAME SIZE AND SPACING AS VERTICAL REINFORCEMENT UNLESS OTHERWISE NOTED ON DRAWINGS.
- 7. ALL SPLICES OF #8 AND LARGER REINFORCEMENT SHALL BE MADE USING TYPE II MECHANICAL COUPLERS, UNLESS OTHERWISE SHOWN, LAP SPLICES FOR #8 AND LARGER BARS SHALL NOT BE PERMITTED.
- 8. TYPE II MECHANICAL COUPLERS SHALL CONFORM TO DIMENSIONAL REQUIREMENTS SHOWN ON THE DRAWINGS, SO AS NOT TO REQUIRE SPECIAL STIRRUPS OR HOOPS, OR VIOLATE THE REQUIRED CLEAR COVER OF CONCRETE. HRC TYPE 510 XTENDER OR EQUAL (NO KNOWN EQUAL). MECHANICAL COUPLERS SHALL BE STAGGERED A MINIMUM OF 3'-0" FROM MECHANICAL COUPLERS ON ADJACENT BARS, UNLESS OTHERWISE NOTED ON DRAWINGS.
- CONTRACTOR SHALL ORDER ADEQUATE ADDITIONAL UNITS OF REINFORCEMENT SPLICED WITH MECHANICAL COUPLERS AND ADEQUATE ADDITIONAL UNITS OF REINFORCEMENT TERMINATED WITH WELDED HEADED BARS TO FACILITATE THE MINIMUM TESTING REQUIREMENTS TO BE PERFORMED BY THE OWNER'S TESTING
- 10. THE OWNER'S TESTING AGENCY SHALL TENSION TEST ONE TYPE II MECHANICAL COUPLER FOR EACH ONE HUNDRED DEVICES UTILIZED ON PROJECT. ROUND UP TO NEXT HIGHEST 100 FOR INTERMEDIATE NUMBER OF DEVICES, AND TEST A MINIMUM OF TWO DEVICES. OWNER'S TESTING AGENCY SHALL TENSION TEST ONE WELDED HEADED BAR FOR EACH ONE HUNDRED DEVICES UTILIZED ON PROJECT. ROUND UP TO NEXT HIGHEST 100 FOR INTERMEDIATE NUMBERS AND TEST TWO DEVICES MINIMUM. FAILURE OF A DEVICE SHALL REQUIRE ADDITIONAL TESTS OF ONE IN TEN DEVICES OF THE SAME HEAT OF DEVICE. ADDITIONAL REINFORCEMENT REQUIRED DUE TO FAILED DEVICES SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
- 11. THE OWNER'S TESTING AGENCY SHALL TORQUE TEST TEN PERCENT OF ALL IN-PLACE TYPE II MECHANICAL COUPLERS TO THE VALUES TABULATED ON THE DRAWINGS. IF ANY ONE TORQUE TEST FAILS, ALL TYPE II MECHANICAL COUPLERS INSTALLED THAT DAY SHALL BE TORQUE TESTED BY THE OWNER'S TESTING AGENCY. THE CONTRACTOR SHALL CORRECT ALL TYPE II MECHANICAL COUPLERS IDENTIFIED AS HAVING FAILED TORQUE TESTS AT NO ADDITIONAL COST TO THE OWNER. THE OWNER'S TESTING AGENCY SHALL RETEST ALL FAILED COUPLERS.

## **CONCRETE MASONRY UNITS**

1. MINIMUM MASONRY COMPRESSIVE STRENGTH AT 28 DAYS, fm = 1,500 psi.

2. MASONRY MATERIALS SHALL CONFORM TO THE FOLLOWING U.O.N.: CONCRETE MASONRY UNITS: ASTM C90, GRADE N, LIGHTWEIGHT, HOLLOW LOAD BEARING UNITS (MINIMUM COMPRESSIVE STRENGTH = \((1,900 \text{ psi})\)\) **GROUT:** ASTM C476 (FILL ALL CELLS) (MINIMUM COMPRESSIVE STRENGTH = \((2,000 psi)\)\

ASTM C270, TYPE S

(MINIMUM COMPRESSIVE STRENGTH = (1,800 psi) (

3. REINFORCING STEEL:

MORTAR:

REINFORCING TO BE WELDED: ASTM A706 ALL OTHER REINFORCING ASTM A615, GRADE 60 JOINT REINFORCING: **UBC STANDARD 21-10** 

4. REINFORCING BAR LAP SPLICES: 65 BAR DIAMETERS, UNLESS OTHERWISE NOTED. WHERE MULTIPLE BARS ARE LAPPED IN THE SAME CELL OR COURSE, STAGGER LAP SPLICES A MINIMUM OF 3 FEET.

- 5. FILL ALL CELLS WITH GROUT.
- 6. S.L.D. FOR COURSING LAYOUT AND LOCATIONS OF CONSTRUCTION JOINTS IN CMU WALLS.
- FOR HIGH LIFT GROUTING MAX WALL HEIGHT IS 12 ' AND MAX GROUT LIFT IS 4'-0". IF BLOW-OUT SITUATION OCCURS, CONTRACTOR SHALL STOP THE WORK AND REPORT TO THE STRUCTURAL ENGINEER AND DSA FOR REMEDIAL CORRECTIVE ACTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

#### STRUCTURAL STEEL

FABRICATE FROM APPROVED DRAWINGS ONLY.

1. STEEL MATERIALS SHALL CONFORM	TO THE FOLLOWING:			
W-SHAPES, WT-SHAPES	ASTM A 992, GRADE 50			
CHANNEL AND ANGLE SHAPES	ASTM A 36			
RECTANGULAR HSS	ASTM A 500, GRADE B			
PLATES	ASTM A 36			
BASE PLATES	ASTM A 36			
ANCHOR RODS	ASTM F 1554 GRADE 55 W/ S1			
MACHINE BOLTS	ASTM A 307			
HIGH STRENGTH BOLTS	ASTM A 325-N TYP. U.O.N., SC OR X AS INDICATED			
2. ALL STRUCTURAL STEEL SHALL CONFORM TO AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.				
3. CONTRACTOR SHALL SUBMIT SHOP	DRAWINGS FOR REVIEW PRIOR TO FABRICATION.			

4. ALL HIGH STRENGTH BOLTS SHALL BE SNUG TIGHT ONLY UNLESS OTHERWISE NOTED ON THE DRAWINGS AS SLIP CRITICAL (SC). ALL BOLTED CONNECTIONS NOTED AS SLIP CRITICAL SHALL BE FULLY TENSIONED IN ACCORDANCE WITH THE SPECIFICATIONS. 5. WELDING SHALL ONLY BE PERFORMED BY CERTIFIED WELDERS. ALL WELDING SHALL

CONFORM TO AWS SPECIFICATIONS. PROVIDE TEMPORARY BACK-UP PLATES OR WELDS

AT ALL COMPLETE JOINT PENETRATION (CJP) WELD LOCATIONS AS REQUIRED; REMOVE

PLATES AFTER CJP WELDING AND GRIND AREA SMOOTH WHERE EXPOSED. 6. WHERE FIELD WELDING IS SPECIFICALLY NOTED, THE DESIGNATION IS GIVEN AS A SUGGESTED CONSTRUCTION PROCEDURE ONLY. CONTRACTOR SHALL DETERMINE

SUITABILITY OF SHOP OR FIELD WELDING FOR ALL CONDITIONS.

LEGEND

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- 7. DO NOT CUT THROUGH ERECTED STEEL PLATES, BOLTS, ANGLES OR SHAPES WITHOUT PERMISSION OF THE ARCHITECT. WHERE STEEL WILL BE EXPOSED TO VIEW, ALL SLAG AND ROUGH EDGES SHALL BE MECHANICALLY REMOVED TO PROVIDE A SMOOTH EDGE AFTER CUTTING OR BORING. ALL SURFACES CUT BY THERMAL PROCESSES SHALL BE GROUND (1/32 INCH MIN.) TO BRIGHT METAL.
- 8. ALL SHOP AND FIELD WELDING SHALL BE INSPECTED BY THE OWNER'S TESTING AGENCY.
- WHERE STRUCTURAL STEEL IS TO BE ATTACHED USING POST-INSTALLED ANCHORS ANCHOR HOLES SHALL BE DRILLED PRIOR TO PREPARATION OF STEEL SHOP DRAWINGS AND FABRICATION. DRILLED HOLE LOCATIONS SHALL BE RECORDED AND TRANSFERRED USING TEMPLATES FOR THE PURPOSE OF ACCURATELY LOCATING HOLES IN STRUCTURAL STEEL.
- 10. SEE ARCHITECTURAL DRAWINGS FOR FINISHES AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS).

**EARTH** 

**GROUT** 

C.M.U.

INDICATES CONCRETE

SLAB ON GRADE

GRADE BEAM

TOP OF FOOTING, GRADE BEAM, OR MAT SLAB

ELEVATION WITH RESPECT TO TOP OF FINISHED

INDICATES SLOPE. ARROWHEAD

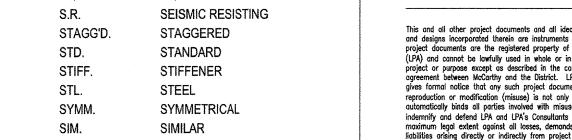
POINTS TO LOWER ELEVATION.

DEPRESSED SLAB TYPE, SEE

TOP OF SLAB, WALL, ETC. ELEVATION

## **ABBREVIATIONS**

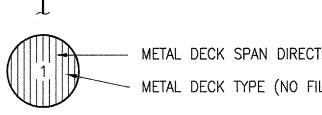
&	AND	HSB	HIGH STRENGTH BOLT	
@	AT		HOLLOW STRUCTURAL	
A.B.	ANCHOR BOLT	HSS	SHAPE	
ABV.	ABOVE	I.F.	INSIDE FACE	
ALT.	ALTERNATE	JT.	JOINT	
A.R.	ANCHOR ROD	LLH	LONG LEG HORIZONTAL	
BLW.	BELOW	LLV	LONG LEG VERTICAL	
BM.	BEAM	L.S.	LAG SCREW	
B.N.	BOUNDARY NAILING	MAX.	MAXIMUM	
B.O.	BOTTOM OF	MB	MACHINE BOLT	
B.O.S.	BOTTOM OF STEEL	MIN.	MINIMUM MINIMUM	
BOTT.	BOTTOM	(N)	NEW	
BRG.	BEARING	N/A	NOT APPLICABLE	
B.S.	BACK SIDE	N.I.C.	NOT IN CONTRACT	
BTW/	BETWEEN	N.S.	NEAR SIDE	
C.B.F.	CONCENTRIC BRACED	N.T.S.	NOT TO SCALE	
C.J.P.	FRAME CAST-IN-PLACE	O.C.	ON CENTER	
C.J.	CONSTRUCTION JOINT	O.F.	OUTSIDE FACE	
	COMPLETE PENETRATION	O.H.	OPPOSITE HAND	
CJP	JOINT	OP'G OR OPG.	OPENING	
C.L.	CENTERLINE	O.S.B.	ORIENTED STRAND BOARD	
CLR.	CLEAR	PDF	POWDER DRIVEN	
C.M.U.	CONCRETE MASONRY UNIT	PUF	FASTENER	
CONC.	CONCRETE	PJP	PARTIAL JOINT	
CONN.	CONNECTION	Di	PENETRATION	
CONT.	CONTINUOUS	PL. PLY. or P.W.	PLATE PLYWOOD	
CTR'D.	CENTERED		POST-TENSION OR	
D.B.A.	DEFORMED BAR ANCHOR	P.T.	PRESSURE TREATED	
DBL.	DOUBLE	R.D.	RESIN DOWEL	
DET.	DETAIL	REINF.	REINFORCEMENT	
DIA. OR Ø	DIAMETER	REQ.	REQUIRED	
		R.O.	ROUGH OPENING	
DIAG.	DIAGONAL		SEE ARCHITECTURAL	
DN.	DOWN	S.A.D.	DRAWINGS	
DWG.	DRAWING(S)	S.B.	SOLID BLOCKING	
DWL.	DOWEL	S.C.D.	SEE CIVIL DRAWINGS	
EA.	EACH	SECT.	SECTION	
E.F.	EACH FACE	S.E.D.	SEE ELECTRICAL	
EL. or ELEV.	ELEVATION	CUT	DRAWINGS	
EQ.	EQUAL	SHT. SIM.	SHEET(S)	, "M
E.S.	EACH SIDE	S.J.	SIMILAR SEISMIC JOINT	
E.W.	EACH WAY	J.J.	SEE LANDSCAPE	
FDN.	FOUNDATION	S.L.D.	ARCHITECTURAL	
F.F. FIN.	FINISH FLOOR		DRAWINGS	
FLG.	FINISH FLANGE	S.M.D.	SEE MECHANICAL	
FLG. FLR.	FLOOR	S.P.D.	SEE PLUMBING DRAWINGS	
F.O.C.	FACE OF CONCRETE	SPECS.	SPECIFICATIONS	
F.O.W.	FACE OF WALL	SQ.	SQUARE	
FRMG.	FRAMING	S.R.	SEISMIC RESISTING	
F,S.	FAR SIDE	STAGG'D.	STAGGERED	
FTG.	FOOTING	STD.	STANDARD	
GALV.	GALVANIZED	STIFF.	STIFFENER	
G.B.	GRADE BEAM	STL.	STEEL	
GR.	GRADE	SYMM. SIM.	SYMMETRICAL SIMILAR	
H. or HORIZ.	HORIZONTAL	T&B	TOP AND BOTTOM	
H.S.	HEADED STUD	T.O.F.F.	TOP OF FINISHED FLOOR	
1 11 407 5		T.O.F.	TOP OF FOOTING	
		T.O.C.	TOP OF CONCRETE	
		T.O.S.	TOP OF STEEL	
		T.O.W.	TOP OF WALL	
		TYP.	TYPICAL	
			UNLESS OTHERWISE	
		U.O.N.	NOTED	
		V.I.F.	VERIFY IN FIELD	



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TOP OF BEAM ELEVATION WITH RESPECT TO TYPICAL TOP OF STEEL ELEVATION (C=1 ½") —— POSITIVE OR UPWARD CAMBER AT MID-SPAN

FULL-DEPTH STIFFENER



W/O **WORK POINT** SIMPLE BEAM TO BEAM AND BEAM TO COLUMN CONNECTION

VERIFY IN FIELD

VERTICAL

WITHOUT

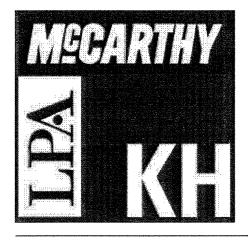
WITH

DOUBLE ROW BOLTING CONNECTION HEADED STUD LAYOUT

V.I.F.

(V) or VERT.

METAL DECK SPAN DIRECTION METAL DECK TYPE (NO FILL)



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FILE NUMBER:

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09 APRIL 2009

**SENERAL NOTES** AND LEGEND