#### **GENERAL**

- REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS. MORE STRINGENT REQUIREMENT CONTROLS WHERE INFORMATION SHOWN ON DRAWINGS AND IN SPECIFICATIONS ARE IN CONFLICT.
- 2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, 2007 EDITION WITH DSA AMENDMENTS.
- 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 NOTED OTHERWISE 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. 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.

#### **DESIGN BASIS**

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

#### LIVE LOADS

10010	20	1 01
<u>FLOORS</u>		
CORRIDORS, STAIRS	100	PSF
OFFICE	100	PSF (80 PSF + 20 PSF PARTITION)
CLASSROOMS	100	PSF (80 PSF + 20 PSF PARTITION)

0 PSF

#### GROUND SNOW LOAD (Pg)

**SNOW LOADS** 

WIND LOADS

BASIC WIND SPEED = 85mph EXPOSURE CATAGORY = C lw = 1.15

# SEISMIC LOADS

V (NORTH-SOUTH) =	0.277 W
V (EAST-WEST) =	0.277 W
SITE LATITUDE =	37.53
SITE LONGITUDE =	-122.33
SEISMIC DESIGN CATAGORY =	Е
OCCUPANCY CATAGORY =	III
=	1.25
lp =	1.15
Ss = 1.995 g	
S1 = 1.2135 g	
SOIL TYPE = Sb	
Sds = 1.333 g	
Ss1 = 0.809 g	

# SEISMIC LOAD RESISTING SYSTEMS

NORTH -SOUTH DIRECTION:			
STEEL SPECIAL CONCENTRIC BRACED FRAMES	R =6.0	$\Omega$ o = 2.0	
SPECIAL REINFORCED CONCRETE SHEAR WALL	R =6.0	$\Omega$ o = 2.5	
EAST-WEST DIRECTION:			
STEEL SPECIAL CONCENTRIC BRACED FRAMES	R =6.0	$\Omega$ o = 2.0	
SPECIAL REINFORCED CONCRETE SHEAR WALL	R =6.0	$\Omega$ o = 2.5	

THE SEISMIC LOAD RESISTING SYSTEMS (SLRS) CONSIST OF THE STEEL BRACES, BEAMS AND COLUMNS, COLLECTORS, METAL DECK ROOFS AND FLOORS AND OTHER DRAWING SHEETS AND DETAILS NOTED AS SLRS. COLLECTORS ARE THOSE BEAMS NOTED ON THE PLANS TO HAVE COLLECTOR CONNECTIONS AT ONE OR BOTH ENDS. BELOW THE SECOND FLOOR, THE SLRS CONSISTS OF SPECIAL REINFORCED CONCRETE SHEAR WALLS.

#### GEOTECHNICAL INFORMATION

- 1. THE OWNER'S GEOTECHNICAL ENGINEER, CORNERSTONE EARTH GROUP, HAS PREPARED AN INVESTIGATION REPORT FOR USE ON THIS PROJECT, TITLED: "GEOTECHNICAL INVESTIGATION AND GEOLOGIC HAZARD EVALUATION, COLLEGE OF SAN MATEO BUILDING 5N MODERNIZATION", DATED FEB. 1, 2008.
- 2. 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.
- THE CONTRACTOR SHALL BE FAMILIAR WITH THE GEOTECHNICAL CONDITIONS AT THE PROJECT SITE.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN GEOTECHNICAL STUDIES AND INFORMATION NECESSARY TO COMPLETE THE WORK.
- 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**

- REFER TO GENERAL NOTES SECTION TITLED "GEOTECHNICAL INFORMATION".
- 2. FOUNDATIONS SHALL BEAR ON APPROVED NATIVE SUBGRADE OR COMPACTED SOIL.
- SLAB ON GRADE SHALL BEAR ON NON-EXPANSIVE FILL PLACED ABOVE NATIVE SUBGRADE OR COMPACTED FILL. REFER TO GEOTECHNICAL REPORT FOR COMPLETE REQUIREMENTS
- 4. 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.
- 5. BOTTOM OF FOOTINGS SHALL BE CALCULATED USING INFORMATION SHOWN ON THE DRAWINGS AND MAY BE REVISED BY THE GEOTECHNICAL ENGINEER TO ENSURE MINIMUM FOOTING EMBEDMENTS OF TWO FEET INTO FIRM, APPROVED SOIL MATERIAL (UNDISTURBED NATURAL SOILS OR COMPACTED ENGINEERED FILL). TOP OF FOOTING DIMENSION FROM DATUM SHALL BE AS SHOWN ON PLANS.
- 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.
- 7. 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
- 8. ALLOWABLE BEARING PRESSURES FOR SPREAD FOOTINGS:

DEAD LOAD	8000 PSF
DEAD PLUS LIVE LOAD	10000 PSF
TOTAL LOAD (INCLUDING SEISMIC)	13500 PSF

- CANTILEVER RETAINING WALL DESIGN PRESSURE: 35 PCF (LEVEL BACKFILL)
- 10. BASEMENT WALLS (RESTRAINED AT THE TOP) DESIGN PRESSURE: 35 PCF + 8H (LEVEL BACKFILL) WHERE H = DISTANCE BETWEEN TOP OF FOOTING AND TOP OF RETAINING SOIL
- CANTILEVER WALLS DESIGN PRESSURE: 35PCF
- 11. DO NOT BACKFILL BASEMENT WALLS UNTIL CONSTRUCTION IS COMPLETE AND CONCRETE SLAB AND FILL ON METAL DECK OF SUPPORTING LEVELS HAS ATTAINED ITS 28-DAY
- 12. SEISMIC INCREMENT SOIL PRESSURE: 13H (RECTANGULAR).
- 13. 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.

# GROUND (FOUNDATION) ANCHORS

- 1. REFER TO GEOTECHNICAL REPORT, AS LISTED IN THE FOUNDATIONS SECTION OF THE GENERAL NOTES, FOR GROUND ANCHOR DESIGN CRITERIA AND RECOMMENDATIONS.
- 2. ALLOWABLE UPLIFT CAPACITIES FOR GROUND ANCHORS:

PRIOR TO CONCRETE PLACEMENT.

CONDITION	ALLOWABLE LOAD
UPLIFT DUE TO DEAD - SEIMIC LOAD	100 KIPS

- 3. GROUND ANCHORS SHALL BE TESTED IN ACCORDANCE WITH SHEET S5.03 AND THE SPECIFICATIONS.
- 4. GROUND ANCHORS SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER

#### STRUCTURAL STEEL

1. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING:

W-SHAPES, WT-SHAPES	ASTM A 992
CHANNEL AND ANGLE SHAPES	ASTM A 36
RECTANGULAR AND ROUND HSS	ASTM A 500, GRADE B
PIPE	ASTM A 53, GRADE B
PLATES	ASTM A 36 OR ASTM A 572, GRADE 50 AS
	INDICATED
BASE PLATES	ASTM A 36 OR ASTM A 572, GRADE 50 AS
	INDICATED
ANCHOR RODS	ASTM F 1554 GRADE 105
MACHINE BOLTS	ASTM A 307
HIGH STRENGTH BOLTS	ASTM A 325-N OR F1852 TYP. U.O.N., SC OR X
	INDICATED
WELDED HEADED STUDS	ASTM A 108

- ALL STRUCTURAL STEEL SHALL CONFORM TO AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. FABRICATE FROM APPROVED DRAWINGS ONLY.
- 4. ALL HIGH STRENGTH BOLTS SHALL BE FULLY PRETENSIONED UNLESS OTHERWISE NOTED ON THE DRAWINGS. 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.
- 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 PROCESSESWHICH ARE EXPOSED TO VIEW 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.
- 9. 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).
- 11. COMPOSITE BEAMS AND GIRDERS REQUIRING SHORING ARE INDICATED ON FRAMING PLANS ("S" INDICATES A SHORED COMPOSITE BEAM).
- 12.CUTTING AND BORING OF EXISTING STEEL SHALL NOT BE DONE EXCEPT WHERE SPECIFICALLY CALLED FOR ON THE DRAWINGS. HOLES THROUGH EXISTING STEEL MAY BE DRILLED, FLAME CUT, OR MADE USING AIR-ARC, AND SHALL NOT BE MORE THAN ½ INCH DIAMETER LARGER THAN REQUIRED TO PASS REINFORCEMENT, ANCHORS, ETC., SHOWN ON DRAWINGS, UNLESS OTHERWISE NOTED.

### WELDED HEADED STUDS

- 1. ALL STEEL BEAMS SUPPORTING CONCRETE SLABS OR CONCRETE FILL ON METAL DECK SHALL HAVE WELDED STUDS IN ACCORDANCE WITH THE SCHEDULE THE DRAWINGS. MINIMUM SIZE AND SPACING SHALL BE 3/4" DIAMETER AT 12" O.C. UNLESS OTHERWISE NOTED.
- 2. EACH WELDED STUD MAY REPLACE ONE DECK WELD.

# **METAL DECK**

- 1. SEE SHEET S7.02 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 SHEET S7.02. [MINIMUM DECK WELDS TO STRUCTURAL STEEL SHALL BE 3/4-INCH DIAMETER FUSION WELDS AT 24 INCHES O.C. OR ALTERNATE CELLS.]
- 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

1. ALL CONCRETE SHALL DEVELOP THE FOLLOWING COMPRESSIVE STRENGTHS AT 28 DAYS (AND 56 DAYS WHERE APPLICABLE):

NORMAL WEIGHT CONCRETE	28 DAYS
ROCK ANCHORS	4000 PSI
FOOTINGS, GRADE BEAMS	4000 PSI
WALLS, PILASTERS	4000 PSI
SLABS-ON-GRADE, CURBS	3000 PSI
FILL ON METAL DECK	4000 PSI
LIGHTWEIGHT CONCRETE	
FILL ON METAL DECK	3000 PSI

- REFER TO SPECIFICATIONS FOR CONCRETE CLASS DESIGNATIONS
- 3. 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.
- 5. 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.

#### CONCRETE REINFORCEMENT

ALL CONCRETE SHALL BE REINFORCED. REINFORCEMENT SHALL BE NEW DEFORMED STEEL BARS, ASTM A706 OR EQUIVALENT ASTM A615 GR. 60.

- 1. ALL CONCRETE REINFORCEMENT DETAILS SHALL CONFORM TO ACI 315, "MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES".
- $\Omega$ . CONCRETE COVER SHALL BE TO FACE OF BAR, MECHANICAL COUPLER, OR WELDED

HEADED BAR AS FOLLOWS, UNLESS OTHERWISE NOTED ON DRAWINGS:

CAST-IN-PLACE CONCRETE CAST AGAINST AND EXPOSED TO EARTH	MINIMUM CONCRETE COVER 3"
EXPOSED TO EARTH OR WEATHER #5 AND SMALLER	1 ½"
#6 AND LARGER	2"
NOT EXPOSED TO WEATHER	
OR IN CONTACT WITH EARTH	
SLABS, JOISTS	1"
WALLS	1 ½"
COLUMNS, BEAMS	1 ½"
SLABS ON GRADE	MID-DEPTH

- 3. 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.
- 4. 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.
- 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. IN GRADE BEAMS SUPPORTED ON PIERS OR PILES, SPLICE TOP BARS AT MID-SPAN BETWEEN SUPPORTS, BOTTOM BARS AT SUPPORTS, UNLESS OTHERWISE NOTED ON DRAWINGS. STRUCTURAL OBSERVATION FOR SEISMIC RESISTANCE SHALL BE PROVIDED IN ACCORDANCE 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.
- 6. ALL SPLICES OF #10 AND LARGER REINFORCEMENT SHALL BE MADE USING TYPE II MECHANICAL COUPLERS, UNLESS OTHERWISE SHOWN. LAP SPLICES FOR #10 AND LARGER BARS SHALL NOT BE PERMITTED.
- 7. 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 AGENCY. TESTING OF DEVICES SHALL BE COORDINATED WITH DSA FIELD ENGINEER PRIOR TO THE START OF TESTING.
- 9. THE OWNER'S TESTING AGENCY SHALL TENSION TEST ONE TYPE II MECHANICAL COUPLER FOR EACH FIFTY DEVICES UTILIZED ON PROJECT. ROUND UP TO NEXT HIGHEST FOR INTERMEDIATE NUMBER OF DEVICES, AND TEST A MINIMUM OF FOUR DEVICES. OWNER'S TESTING AGENCY SHALL TENSION TEST ONE WELDED HEADED BAR FOR EACH FIFTY DEVICES UTILIZED ON PROJECT. ROUND UP TO NEXT HIGHEST FOR INTERMEDIATE NUMBERS AND TEST FOUR 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.
- 10. 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.

#### **EXTERIOR CLADDING**

- THESE NOTES APPLY TO ARCHITECTURAL CURTAIN WALL AND CLADDING, DENOTED HEREIN AS "EXTERIOR WALL"
- 2. ALL PRIMARY STRUCTURAL STEEL FRAMING SHALL BE CONSIDERED AS HAVING NO (ZERO) TORSIONAL CAPACITY AND NO (ZERO) CAPACITY FOR LATERAL LOADS APPLIED TRANSVERSELY TO UNBRACED FLANGES OF BEAMS. ANY BEAM FLANGE THAT IS NOT SECURED TO THE FLOOR SLAB BY WELDED STUDS SHALL BE CONSIDERED UNBRACED. WHERE CONNECTIONS IMPOSE TORSIONAL LOADS OR LOADS TO UNBRACED FLANGES OF BEAMS, COMPLETE SECONDARY STEEL BRACING OF THE SUPPORTING STRUCTURE SHALL BE DESIGNED AND PROVIDED BY THE TRADE CONTRACTOR
- 3. REFER TO PARAGRAPH ABOVE FOR LIMITATIONS ON LOADS AND STRESSES IMPOSED ON THE PRIMARY STRUCTURE AND PROVIDE ALL SECONDARY FRAMING INCLUDING BUT NOT LIMITED TO KICKERS, GIRTS OR POSTS, AND BRACING REQUIRED BY THESE SPECIFICATIONS. LATERAL AND /OR TORSIONAL LOADS MAY BE IMPOSED ON BUILDING FLOOR AND ROOF PERIMETER SPANDREL BEAMS WITHOUT SECONDARY BRACING AT THE FOLLOWING LOCATIONS:
  - a. WITHIN SIX INCHES OF EITHER SIDE OF THE CENTERLINE OF BEAMS SUPPORTED BY THE SPANDREL GIRDER, ONLY WHERE SAID BEAMS ARE INDICATED ON THE FRAMING PLANS WITH THE FOLLOWING SYMBOL AT THE BEAM END FRAMING INTO THE PERIMETER SPANDREL:
  - b. WITHIN 30 INCHES OF EITHER SIDE OF COLUMN CENTERLINE
- 4. WHERE LATERAL LOADS ARE APPLIED BY EXTERIOR WALL TO BEAM BOTTOM FLANGES AT ANY LOCATION OTHER THAN THOSE IDENTIFIED ABOVE, EXTERIOR WALL TRADE CONTRACTOR SHALL PROVIDE SECONDARY BRACING OF THE BEAM BOTTOM FLANGE IN ACCORDANCE WITH THE SPECIFICATIONS.
- PRIMARY STRUCTURAL BEAMS AND COLUMNS ARE DETAILED AND ERECTED USING TOLERANCES IN ACCORDANCE WITH THE LATEST EDITION OF AISC SPECIFICATIONS AND EXTERIOR CLADDING SHALL BE DETAILED TO PERMIT INSTALLATION WITHIN THESE TOLERANCES.

#### SPECIAL INSPECTION

THE SPECIAL INSPECTION REQUIREMENTS OF CHAPTER 17A OF THE CALIFORNIA BUILDING CODE APPLY TO THE FOLLOWING:

- STEEL CONSTRUCTION CONCRETE CONSTRUCTION ANCHORS AND DOWELS IN CEMENTITIOUS GROUT ANCHORS AND DOWELS IN RESIN
- EXPANSION ANCHORS
- UNDERCUT ANCHORS SOILS
- GROUND (FOUNDATION) ANCHORS
- THE SUPPLEMENTAL SPECIAL INSPECTION REQUIREMENTS FOR SEISMIC RESISTANCE OF CBC SECTION 1707A APPLY TO THE FOLLOWING ELEMENTS OF THE SEISMIC LOAD RESISTING SYSTEM AND ARCHITECTURAL COMPONENTS:
- STRUCTURAL STEEL

EXTERIOR NON-BEARING COLD-FORMED STEEL WALLS

- COLD-FORMED STEEL FRAMING GROUND (FOUNDATION) ANCHORS
- ARCHITECTURAL COMPONENTS:
- THE SUPPLEMENTAL STRUCTURAL TESTING REQUIREMENTS FOR SEISMIC RESISTANCE OF CBC

SECTION 1708A APPLY TO THE FOLLOWING ELEMENTS OF THE SEISMIC LOAD RESISTING SYSTEM:

STRUCTURAL STEEL

# STRUCTURAL OBSERVATION

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.



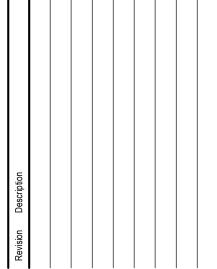
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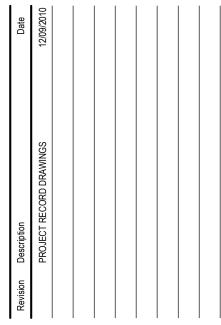
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#### DRILLED HOLES FOR ANCHORS AND DOWELS **IN CONCRETE**

- 1. DRILLED HOLE DEPTH TO ACHIEVE MINIMUM ANCHOR OR DOWEL EMBEDMENT MAY BE GREATER THAN REQUIRED EMBEDMENT SHOWN IN ANCHOR OR DOWEL TABLES. VERIFY HOLE DEPTH REQUIREMENTS WITH MANUFACTURER. HOLE DEPTH SHALL NOT BE LESS THAN TABULATED DEPTH.
- 2. VERIFY DRILL BIT TYPE AND DIAMETERS WITH MANUFACTURER.
- 3. USE CARE AND CAUTION AT ALL TIMES TO AVOID CUTTING OR DAMAGING REINFORCEMENT STEEL. DRILL HOLE SIZE AS RECOMMENDED BY MANUFACTURER, UNLESS OTHERWISE NOTED ON THE DRAWINGS. ALL LOCATIONS TO BE DRILLED SHALL BE CAREFULLY PRESCANNED USING EFFECTIVE MEANS PRIOR TO DRILLING. THE USE OF PACHOMETERS MAY NOT BE EFFECTIVE. USE OF X-RAYS WILL NOT BE PERMITTED. DRILL PILOT HOLES WITH SMALLER DIAMETERS THAN FINAL HOLES (3/8" MAXIMUM PILOT HOLE DIAMETER) TO DETECT REINFORCEMENT WHERE OTHER MEANS ARE NOT EFFECTIVE.
- 4. WHEN INSTALLING ANCHORS OR DOWELS IN EXISTING PRESTRESSED CONCRETE, LOCATE THE PRESTRESSED TENDONS USING NON-DESTRUCTIVE METHODS PRIOR TO DRILLING. EXERCISE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED ANCHOR OR DOWEL. CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED TENDONS AT NO COST TO OWNER USING MEANS APPROVED BY THE ARCHITECT PRIOR TO COMMENCEMENT OF REPAIR.
- 5. WHERE REINFORCEMENT IS ENCOUNTERED, SHIFT THE ANCHOR OR DOWEL LOCATION SO AS TO AVOID THE REINFORCEMENT BAR.
- 6. ALL ABANDONED HOLES SHALL BE REPAIRED USING APPROVED MATERIALS AND METHODS. SEE SPECIFICATIONS.
- 7. WHERE ENCASED STRUCTURAL STEEL IS ENCOUNTERED WHILE DRILLING, THE CONTRACTOR SHALL DRILL THROUGH THE STEEL AS REQUIRED TO ACHIEVE MINIMUM EMBEDMENT. CORE DRILLING MAY BE REQUIRED. CORED HOLES SHALL BE ROUGHENED. WHEN STRUCTURAL STEEL FLANGES ARE ENCOUNTERED, NOTIFY THE ARCHITECT.
- 8. WHERE STRUCTURAL STEEL IS TO BE ATTACHED USING DRILLED 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.

#### **EXPANSION ANCHORS IN CONCRETE**

ANCHOR FAILS A TEST.

- 1. EXPANSION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 2. EXPANSION ANCHORS SHALL NOT BE USED TO RESIST VIBRATORY OR SHOCK LOADS.
- 3. MINIMUM EXPANSION ANCHOR EMBEDMENT SHALL BE AS INDICATED IN THE APPROPRIATE TABLES BELOW, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- 4. THE OWNER'S TESTING AGENCY SHALL PERFORM TENSION LOAD TESTS ON 10% OF EXPANSION ANCHORS TO THE TENSION LOAD VALUES INDICATED IN THE TABLES BELOW.
- 5. SEE SPECIFICATIONS FOR REQUIREMENTS WHEN AN EXPANSION ANCHOR FAILS A TENSION LOAD TEST. NOTIFY THE ARCHITECT IMMEDIATELY WHEN AN EXPANSION
- 6. EXPANSION ANCHORS SPECIFICALLY NOTED ON THE DRAWINGS AS "NO TEST REQUIRED" DO NOT REQUIRE TENSION LOAD TESTS.
- 7. TESTING AGENCY SHALL DEVELOP AND UTILIZE AN EFFECTIVE METHOD OF FIELD MARKING EXPANSION ANCHOR TEST LOCATIONS AND RESULTS.
- 8. THE TENSION LOAD TEST VALUES FOR EXPANSION ANCHORS ARE BASED ON 200% OF THE MINIMUM ALLOWABLE TENSION LOAD REPORTED IN THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICES (ICC-ES) TEST REPORTS FOR THE MANUFACTURERS

LISTED IN THE SPECIFICATIONS FOR 2,000 PSI CONCRETE.

EXPANSION ANCHORS INSTALLED IN EXISTING NORMAL WEIGHT CONCRETE		
ANCHOR DIAMETER	MINIMUM EMBEDMENT	TENSION TEST LOAD (Pounds)
3/8"	2 1/2"	2250
1/2"	3 1/2"	3500
5/8"	4"	4360
3/4"	4 3/4"	5500

DRILLED EXPANSION ANCHORS INSTALLED IN EXISTING LIGHTWEIGHT, EXPANDED-SHALE AGGREGATE CONCRETE		
ANCHOR DIAMETER	MINIMUM EMBEDMENT	TENSION TEST LOAD (Pounds)
3/8"	2 1/2"	1260
1/2"	3 1/2"	2000
5/8"	4"	3300

# RESIN ANCHORS AND DOWELS IN CONCRETE

- 1. DRILLED RESIN ANCHORS AND DOWELS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- DRILLED RESIN ANCHORS AND DOWELS SHALL NOT BE USED TO RESIST VIBRATORY OR SHOCK (IMPACT) LOADS.
- MINIMUM ANCHOR OR DOWEL EMBEDMENT SHALL BE AS INDICATED IN THE
- 4. ANCHORS SHALL BE ASTM A 36 ALL-THREAD ROD, EXCEPT AS NOTED OTHERWISE ON THE DRAWINGS OR IN THE SPECIFICATIONS. DOWELS SHALL BE ASTM A 615 GRADE 60, BOTT. EXCEPT AS NOTED OTHERWISE ON DRAWINGS OR IN THE SPECIFICATIONS.

APPROPRIATE TABLES BELOW, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

- THE TESTING AGENCY SHALL PERFORM TENSION LOAD TESTS ON THE FOLLOWING PERCENTAGES OF ANCHORS AND DOWELS TO THE TEST VALUES INDICATED IN THE TABLES BELOW:
- WHEN AN ANCHOR OR DOWEL FAILS A TENSION LOAD TEST, NOTIFY THE ARCHITECT IMMEDIATELY. REFER TO SPECIFICATIONS FOR REPLACEMENT AND RETESTING REQUIREMENTS. ABANDONED HOLES SHALL BE PATCHED.
- 7. ANCHORS AND DOWELS SPECIFICALLY NOTED ON THE DRAWINGS AS "NO TEST REQUIRED," DO NOT REQUIRE TENSION LOAD TESTS.
- 8. THE OWNER'S TESTING AGENCY SHALL DEVELOP AND UTILIZE AN EFFECTIVE METHOD FOR FIELD MARKING LOCATIONS OF ANCHOR AND DOWEL TESTS.
- THE TENSION LOAD TEST VALUES FOR ANCHORS ARE BASED ON 200% OF THE MINIMUM ALLOWABLE TENSION LOAD REPORTED IN THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICES (ICC-ES) TEST REPORTS FOR THE MANUFACTURERS LISTED IN THE SPECIFICATIONS FOR 2,000 PSI CONCRETE. THE TENSION LOAD TEST VALUES FOR DOWELS IN CONCRETE ARE BASED ON 90% OF THE SPECIFIED YIELD STRENGTH OF THE DOWEL.

ANCHOR DIAMETER	MINIMUM EMBEDMENT	TENSION TEST LOAD (Pounds)
3/8"	3 3/8"	2920
1/2"	4 1/2"	5110
5/8"	5 5/8"	8200
3/4"	6 3/4"	8730
7/8"	7 7/8"	14710
1"	9"	15620
1 1/4"	12"	22980

RESIN DOWELS INSTALLED IN EXISTING NORMAL WEIGHT CONCRETE		
ANCHOR DIAMETER	MINIMUM EMBEDMENT	TENSION TEST LOAD (Pounds)
#3	4"	5960
#4	6"	10800
#5	7 1/2"	16740
#6	9"	23760
#7	10"	32400
#8	12"	42660
#9	13"	54000

### **ABBREVIATIONS**

**ANCHOR BOLT** 

ABOVE

HSB

HIGH STRENGTH BOLT

HOLLOW STRUCTURAL

LONG LEG HORIZONTAL

LONG LEG VERTICAL

INSIDE FACE

LAG SCREW

MACHINE BOLT

NOT APPLICABLE

NOT IN CONTRACT

MAXIMUM

MINIMUM

**NEAR SIDE** 

ON CENTER

OPENING

**FASTENER** 

PLATE

PLYWOOD

RESIN DOWEL

REINFORCEMENT REQUIRED

ROUGH OPENING

SEE ARCHITECTURAL

SEE CIVIL DRAWINGS

SEE ELECTRICAL

REDWOOD

DRAWINGS SOLID BLOCKING

SECTION

DRAWINGS SHEET(S)

SIMILAR

SEISMIC JOINT

SEE MECHANICAL

SPECIFICATIONS

SEISMIC RESISTING

SQUARE

STAGGERED

STANDARD

STIFFENER

TIE BEAM

SYMMETRICAL

TOP AND BOTTOM

TOP OF CONCRETE

UNDERCUT ANCHOR UNLESS OTHERWISE

WELDED THREADED STUD

WELDED WIRE FABRIC

VERIFY IN FIELD

TOP OF STEEL

TYPICAL

NOTED

VERTICAL

WITHOUT **WORK POINT** WOOD SCREW

WITH

W.S. W.T.S.

W.W.F.

TONGUE AND GROOVE

TOP OF FINISHED FLOOR

SHEET METAL SCREW

SEE PLUMBING DRAWINGS

PARTIAL JOINT

PENETRATION

POST-TENSION OR

PRESSURE TREATED

NOT TO SCALE

OUTSIDE FACE

OPPOSITE HAND

POWDER DRIVEN

ORIENTED STRAND BOARD

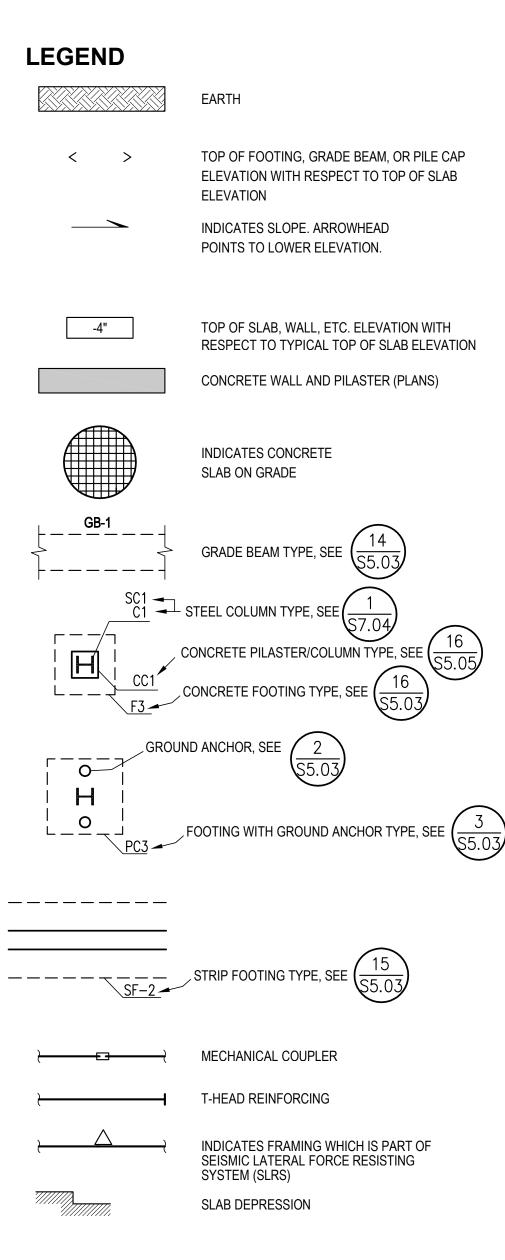
OPEN WEB STEEL JOIST

NEW

JOIST

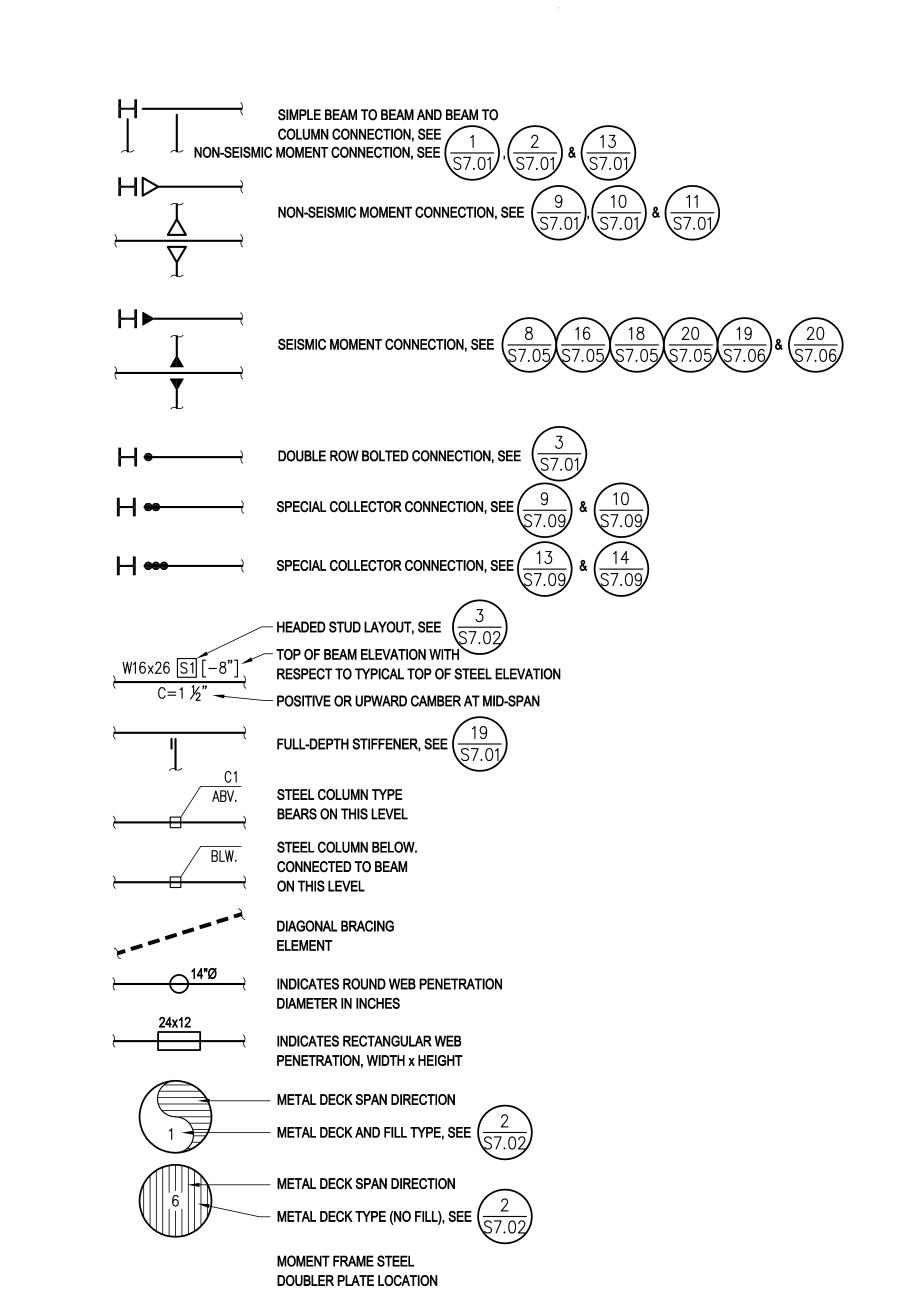
JOINT

ABV.	ABOVE	ICT
ALT.	ALTERNATE	JST.
A.R.	ANCHOR ROD	JT.
BLW.	BELOW	LLH
BM.	BEAM	1117
		LLV
B.N.	BOUNDARY NAILING	L.S.
B.O.	BOTTOM OF	MAX.
BOTT.	BOTTOM	
	BUCKLING-RESISTING	MB
BRBF.	BRACED FRAME	MIN.
BRG.	BEARING	(N)
		N/A
B.S.	BACK SIDE	N.I.C.
BTW/	BETWEEN	
C.I.P.	CAST-IN-PLACE	N.S.
C.J.	CONSTRUCTION JOINT	N.T.S.
0.0.	COMPLETE PENETRATION	O.C.
CJP	JOINT	O.F.
0.1		
C.L.	CENTERLINE	O.H.
CLR.	CLEAR	OP'G OR OPG.
C.M.U.	CONCRETE MASONRY UNIT	O.S.B.
COL.	COLUMN	O.W.S.J.
		O.VV.O.U.
CONC.	CONCRETE	PDF
COND.	CONDITION	
CONN.	CONNECTION	PJP
CONT.	CONTINUOUS	
CTR'D.	CENTERED	PL.
_		PLY. or P.W.
C.S.	CONCRETE SCREW	
d	PENNY (nail size, as in 10d)	P.T.
D D A	DEFORMED DAD AMOUOD	R.D.
D.B.A.	DEFORMED BAR ANCHOR	
DBL.	DOUBLE	REINF.
DET.	DETAIL	REQ.
D.F.	DOUGLAS FIR	R.O.
		_
DIA. OR Ø	DIAMETER	RWD.
DIAG.	DIAGONAL	S.A.D.
DN.	DOWN	S.A.D.
DWG.	DRAWING(S)	S.B.
	, ,	S.C.D.
DWL.	DOWEL	
(E)	EXISTING	SECT.
EA.	EACH	S.E.D.
	ECCENTRIC BRACED	0.2.0.
EBF.	FRAME	SHT.
E.F.	EACH FACE	SIM.
		S.J.
	EXPANSION JOINT	
EL. or ELEV.	ELEVATION	S.M.D.
E.N.	END NAILING	S.M.S.
E.P.S.	EXPANDED POLYSTYRENE	O.IVI.O.
EQ.		S.P.D.
	EQUAL	SPECS.
E.S.	EACH SIDE	SQ.
E.W.	EACH WAY	
EXA	EXPANSION ANCHOR	S.R.
	FOUNDATION	STAGG'D.
		STD.
FIN.	FINISH	STIFF.
FLG.	FLANGE	STL.
FLR.	FLOOR	
F.N.	FIELD NAILING	SYMM.
		T&B
	FACE OF CONCRETE	T&G
F.O.S.	FACE OF STUD	T.B.
F.O.W.	FACE OF WALL	
	FRAMING	T.F.F.
		T.O.C.
F.S.	FAR SIDE	T.O.S.
FTG.	FOOTING	TYP.
GALV.	GALVANIZED	
G.B.	GRADE BEAM	U.A.
		U.O.N.
G.L.	GLU-LAM	J.J.14.
GR.	GRADE	V.I.F.
		(V) or VERT.
H. or HORIZ.	HORIZONTAL	W/
HDR.	HEADER	
H.S.	HEADED STUD	W/O
		W.P.
		W.O.



**ELEVATION** 

SECTION CUT DETAIL





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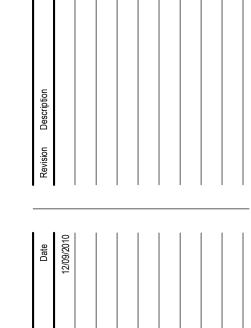
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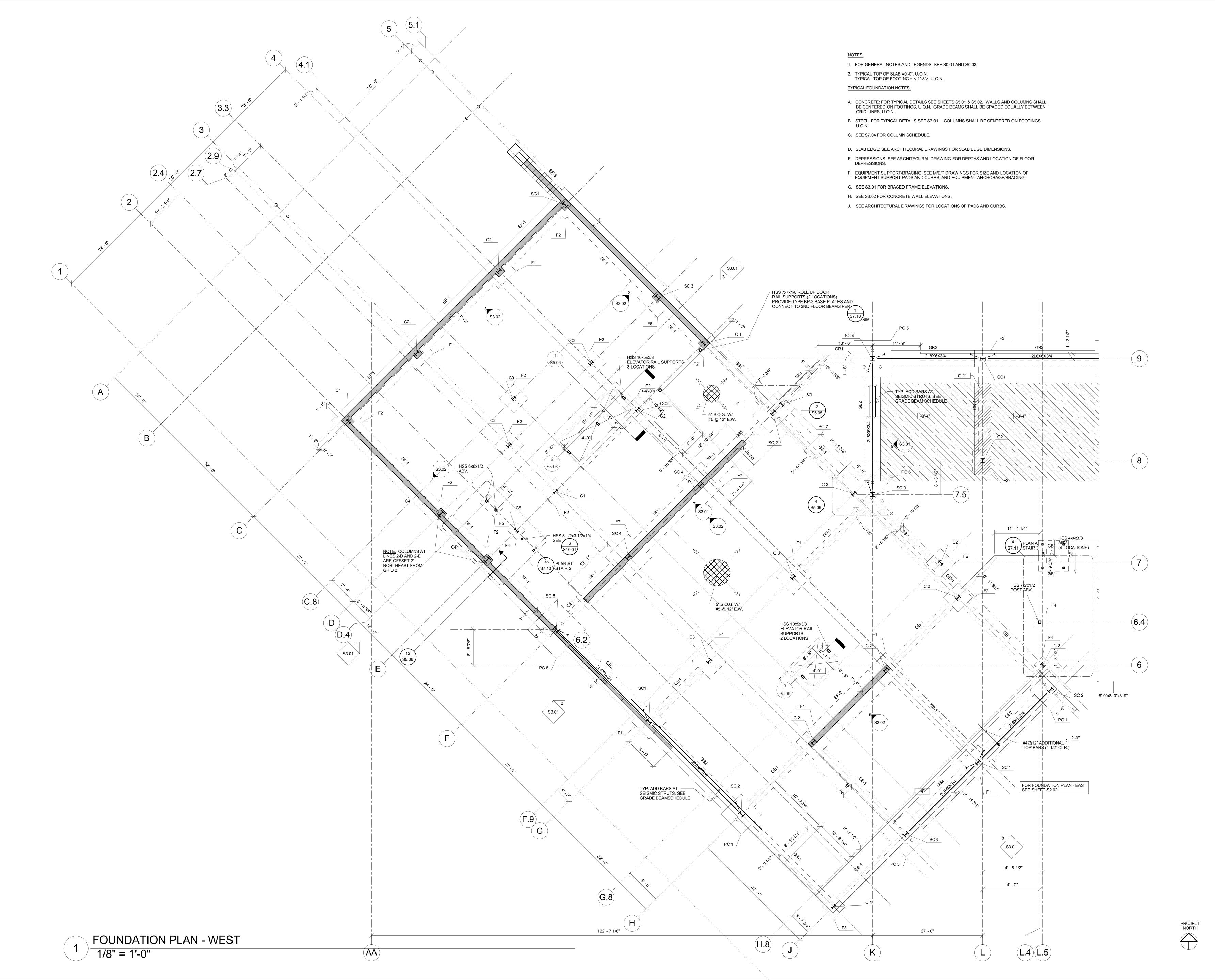
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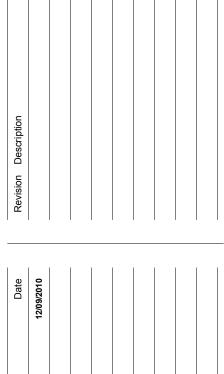
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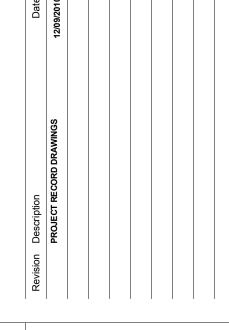
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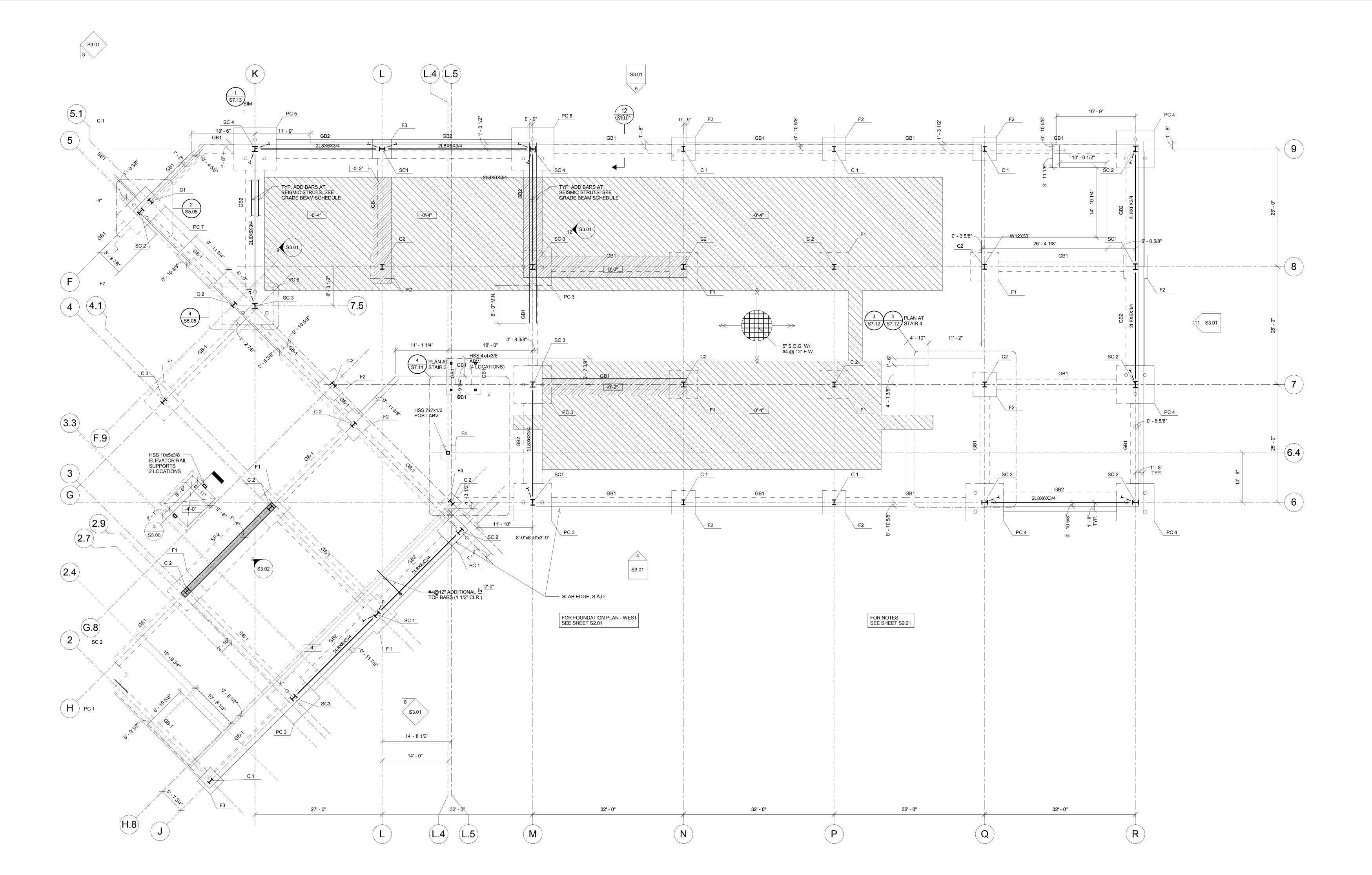


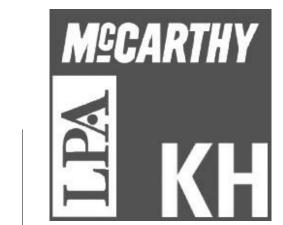
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Date 10.09.2008

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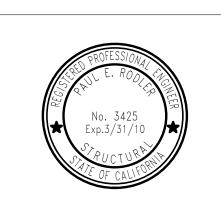
Foundation Plan
- West





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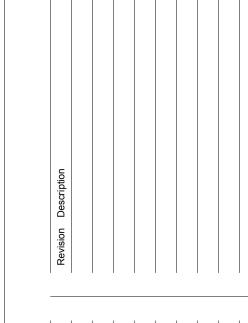
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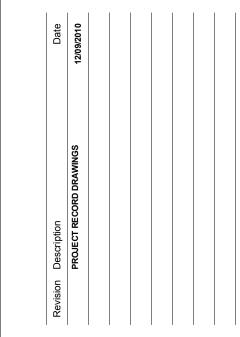
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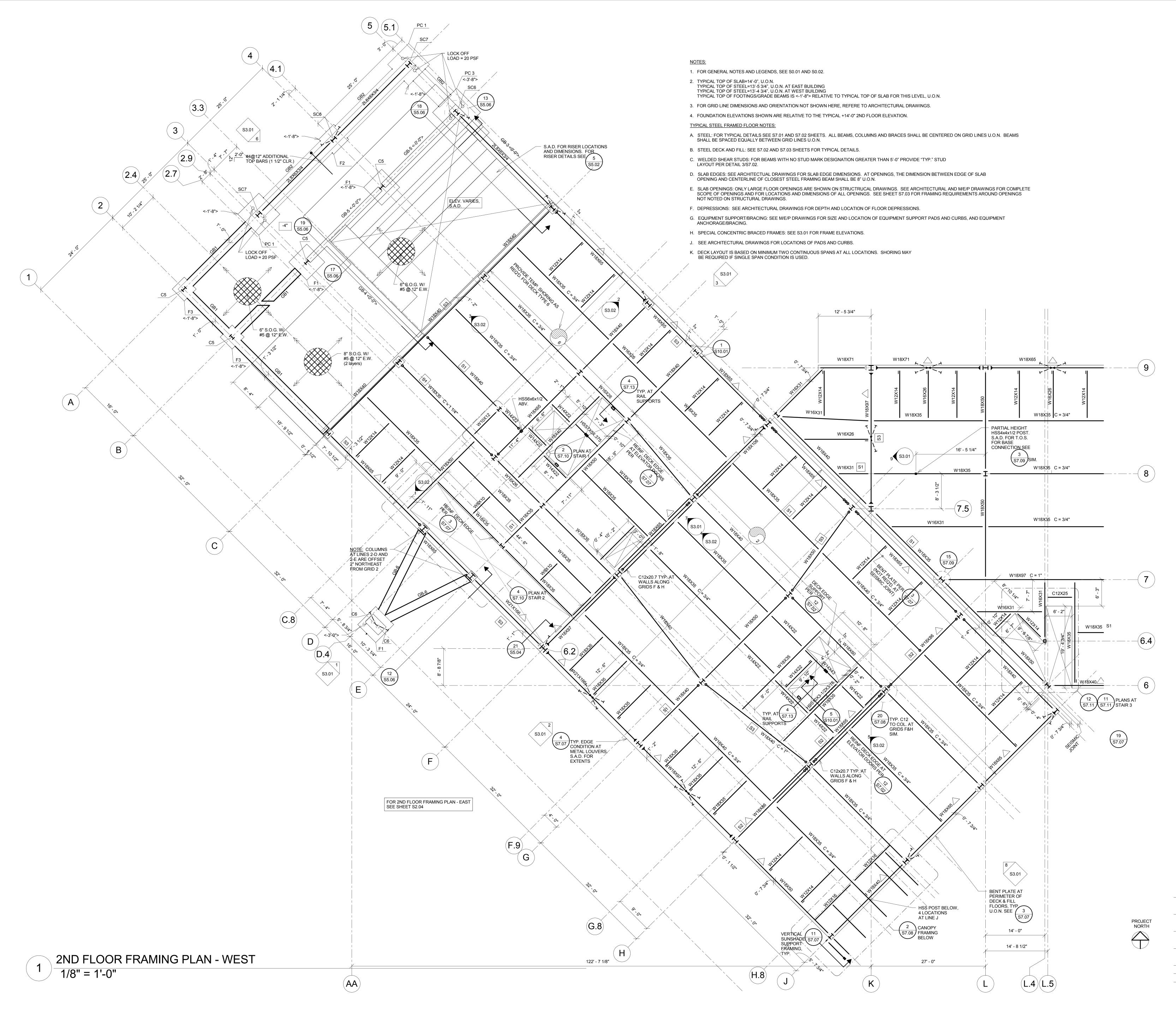


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Foundation Plan
- East



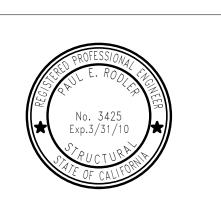


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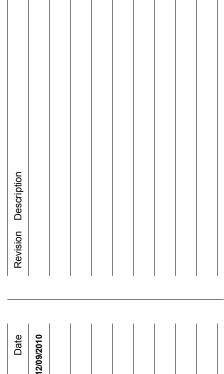
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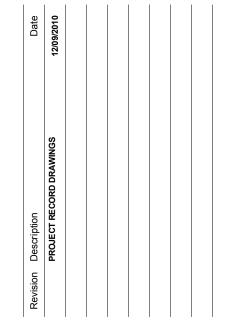
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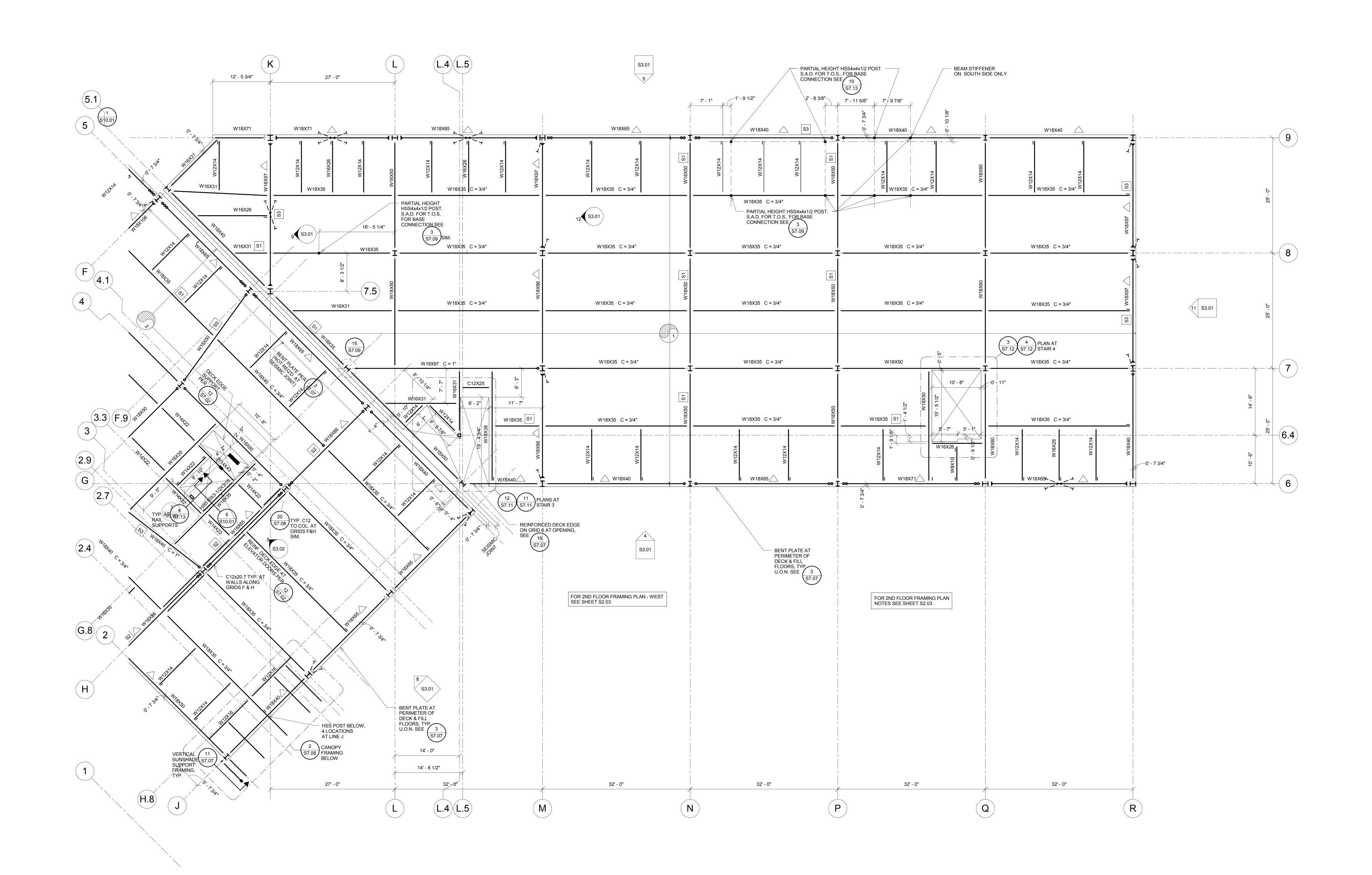
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Date 10.09.2008

Scale

2nd Floor

2nd Floor Framing Plan -West

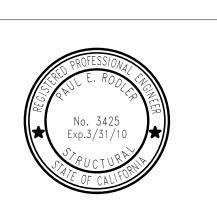


MECARTHY

KH

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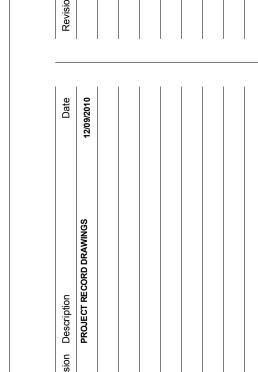
Building 5N

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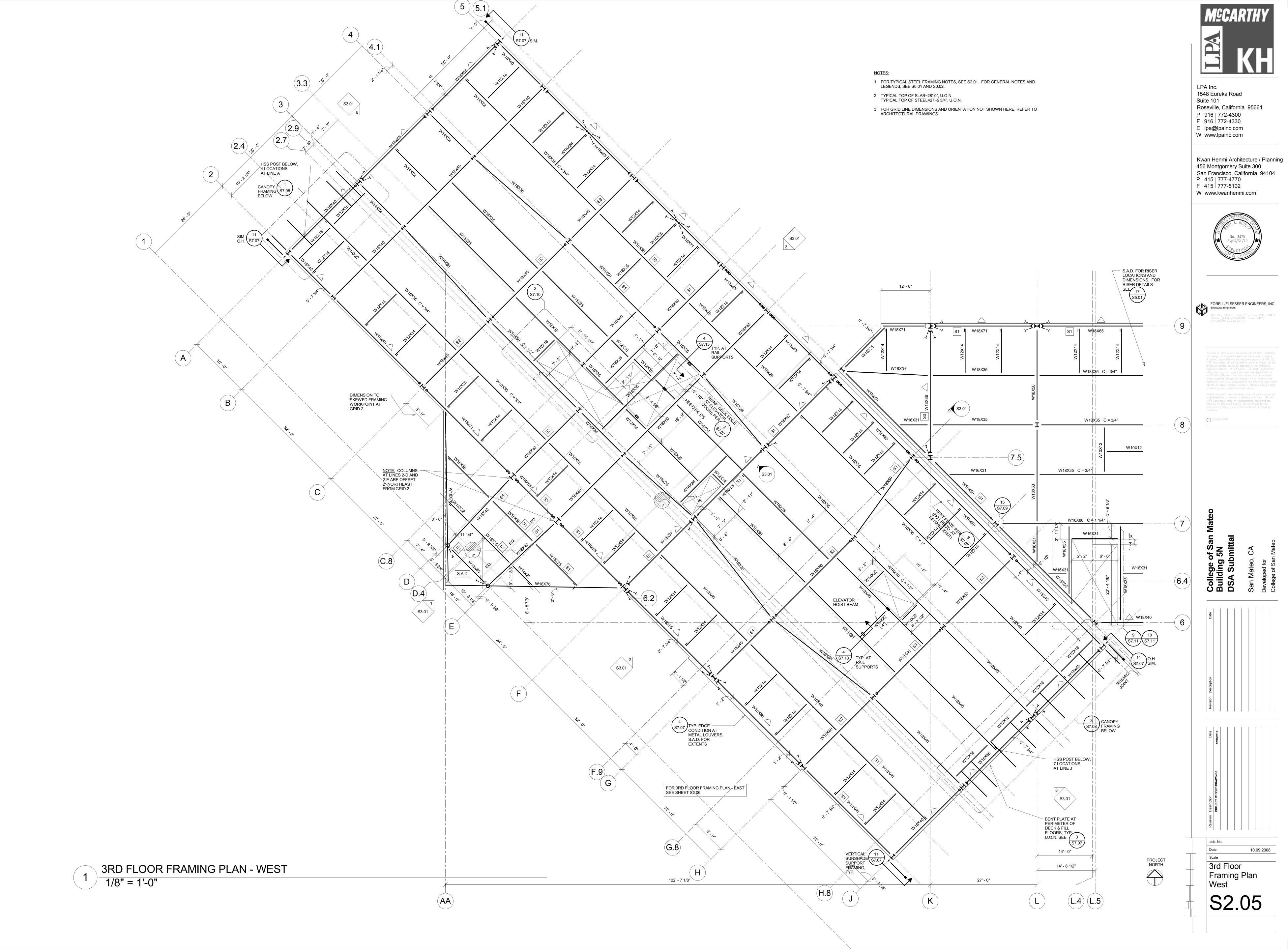


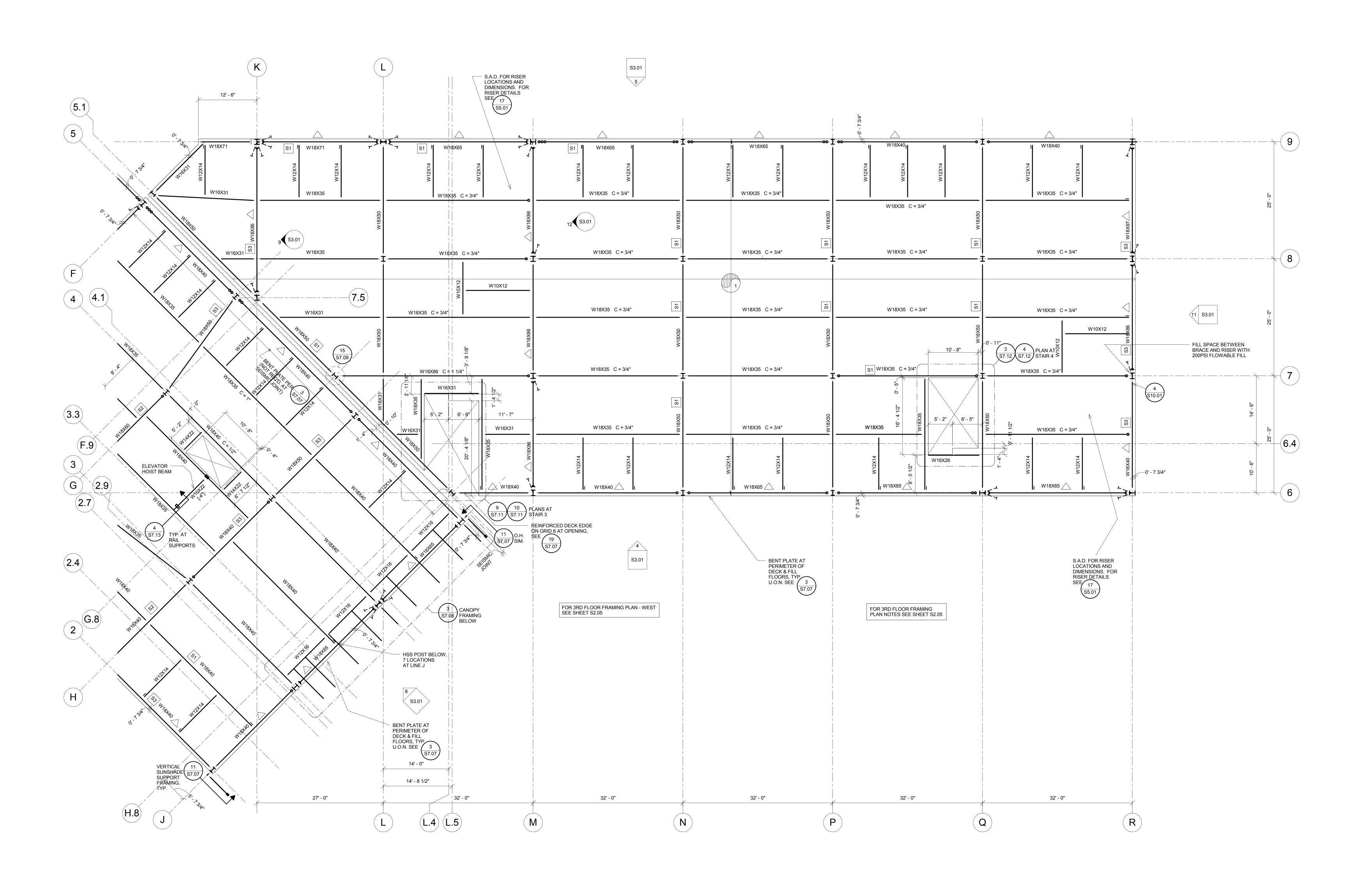
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Date 10.09.2008

Scale

2nd Floor
Framing Plan
Fact



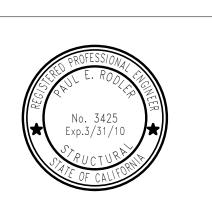


 $\frac{3RD FLOOR FRAMING PLAN - EAST}{1/8" = 1'-0"}$ 



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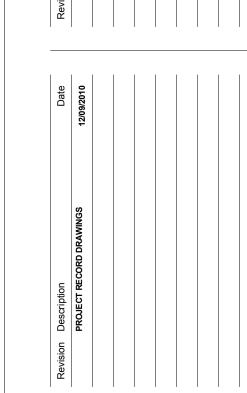
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3rd Floor
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PROJECT NORTH





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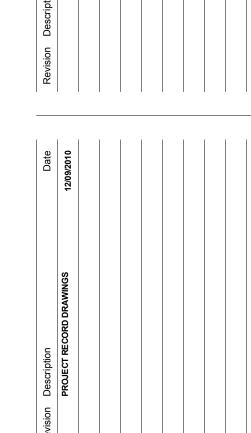
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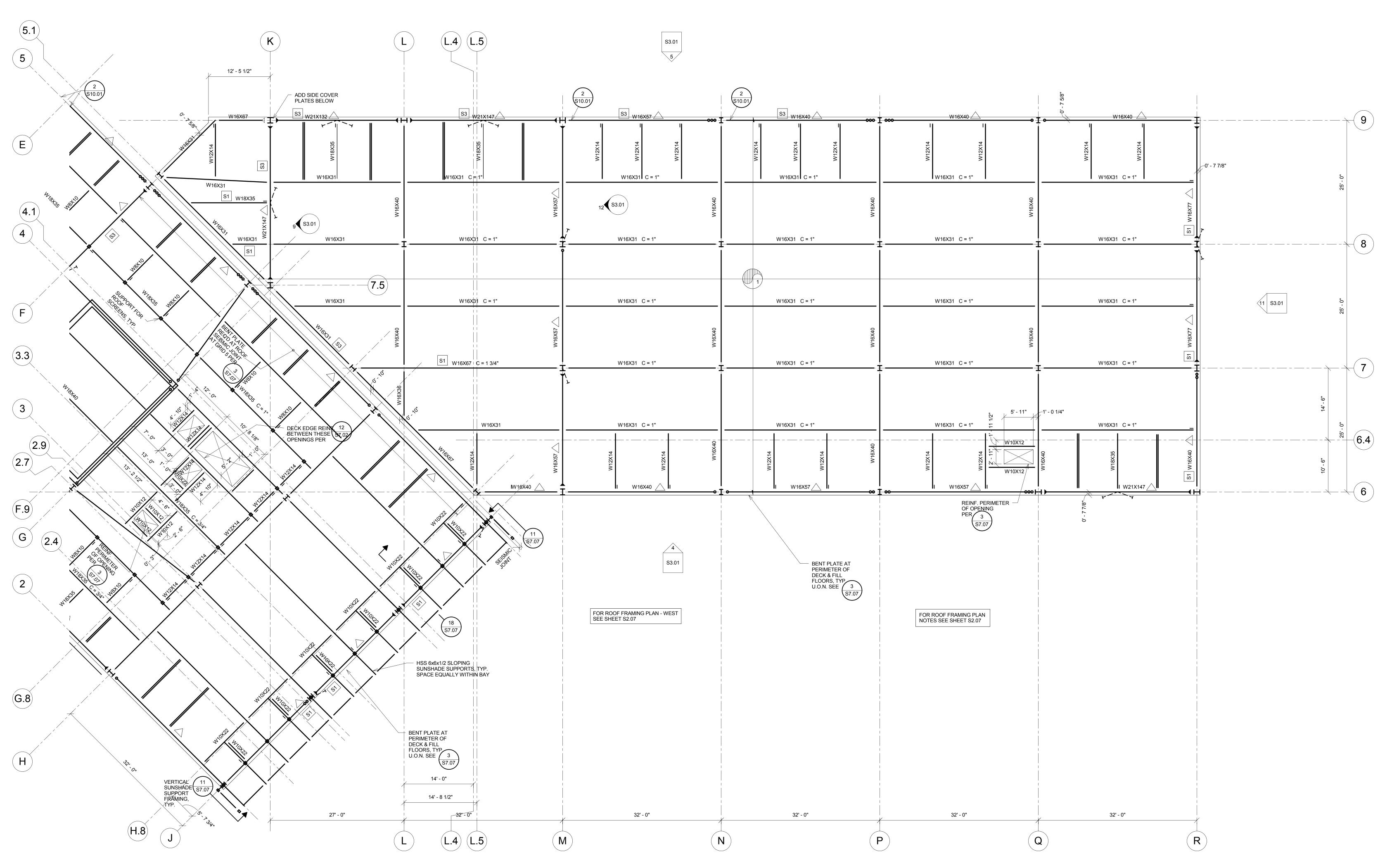


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Date 10.09.2008

Scale

Roof Framing
Plan - West

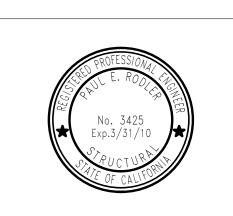


 $\frac{1}{1/8" = 1'-0"}$ 



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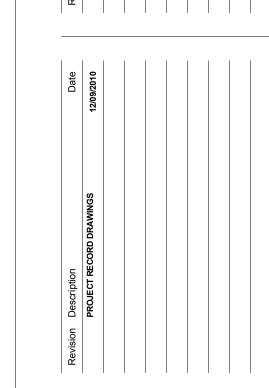


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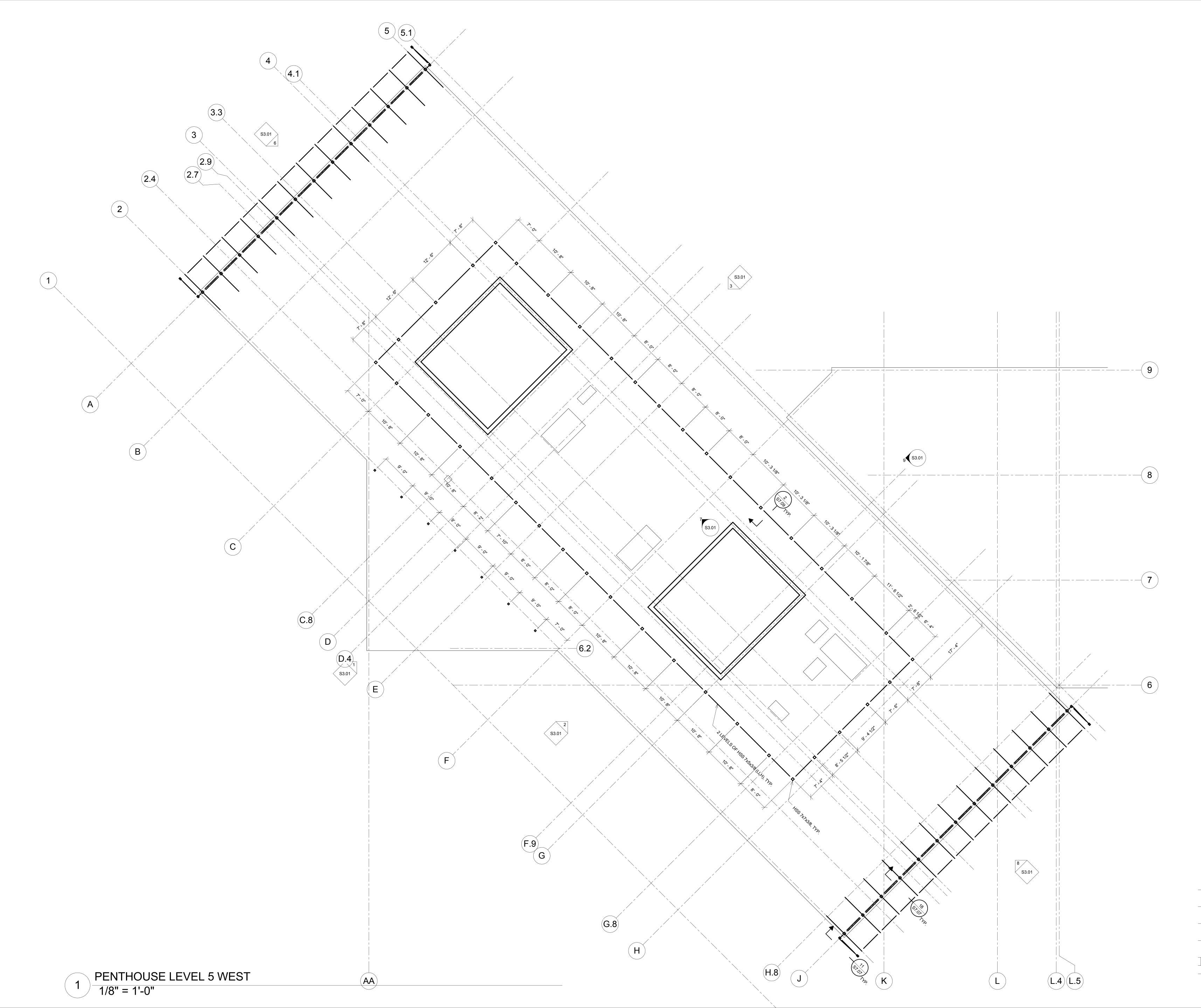


Job. No.

Date 10.09.2008

Scale

Roof Framing
Plan - East





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FORELL/ELSESSER ENGINEERS, INC. Structural Engineers

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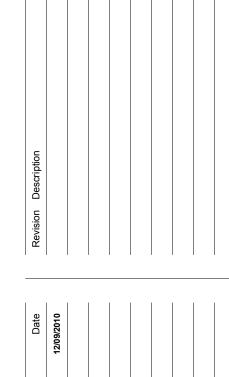
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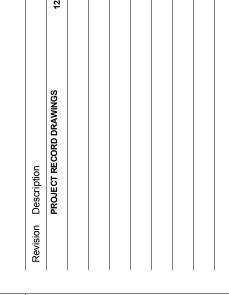
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Building 5N

DSA Submittal

San Mateo, CA



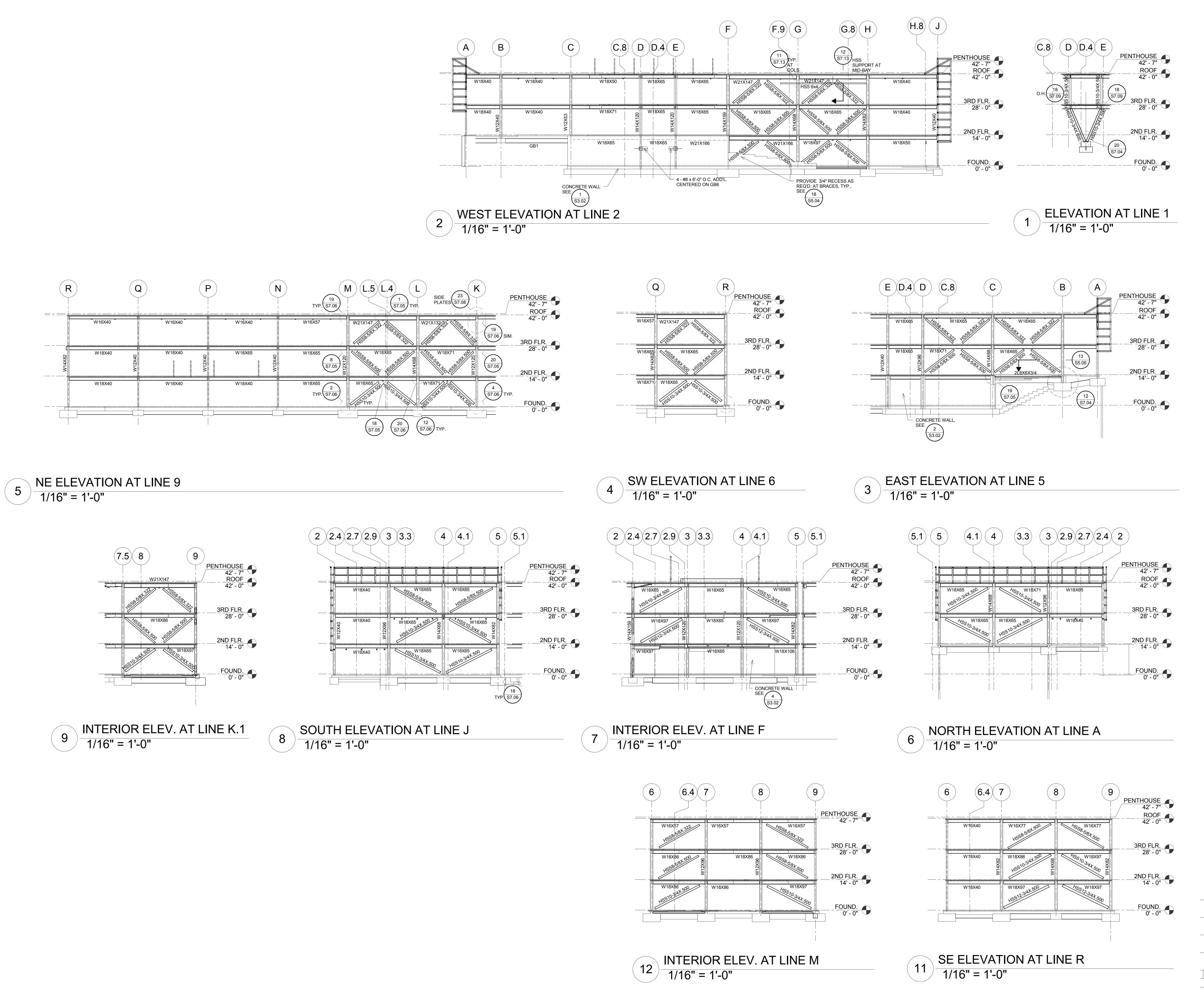


Job. No.

Date 10.09.2008

Scale

Penthouse
Framing Plan West



MECARTHY

KH

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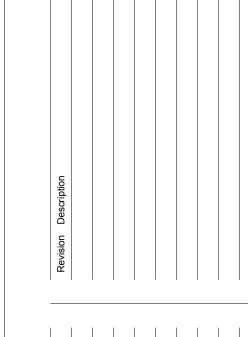
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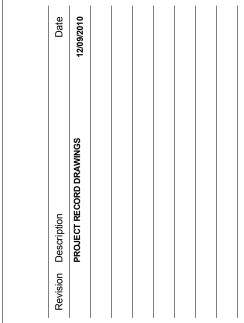
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Building 5N
DSA Submittal
San Mateo, CA
College of San Mateo





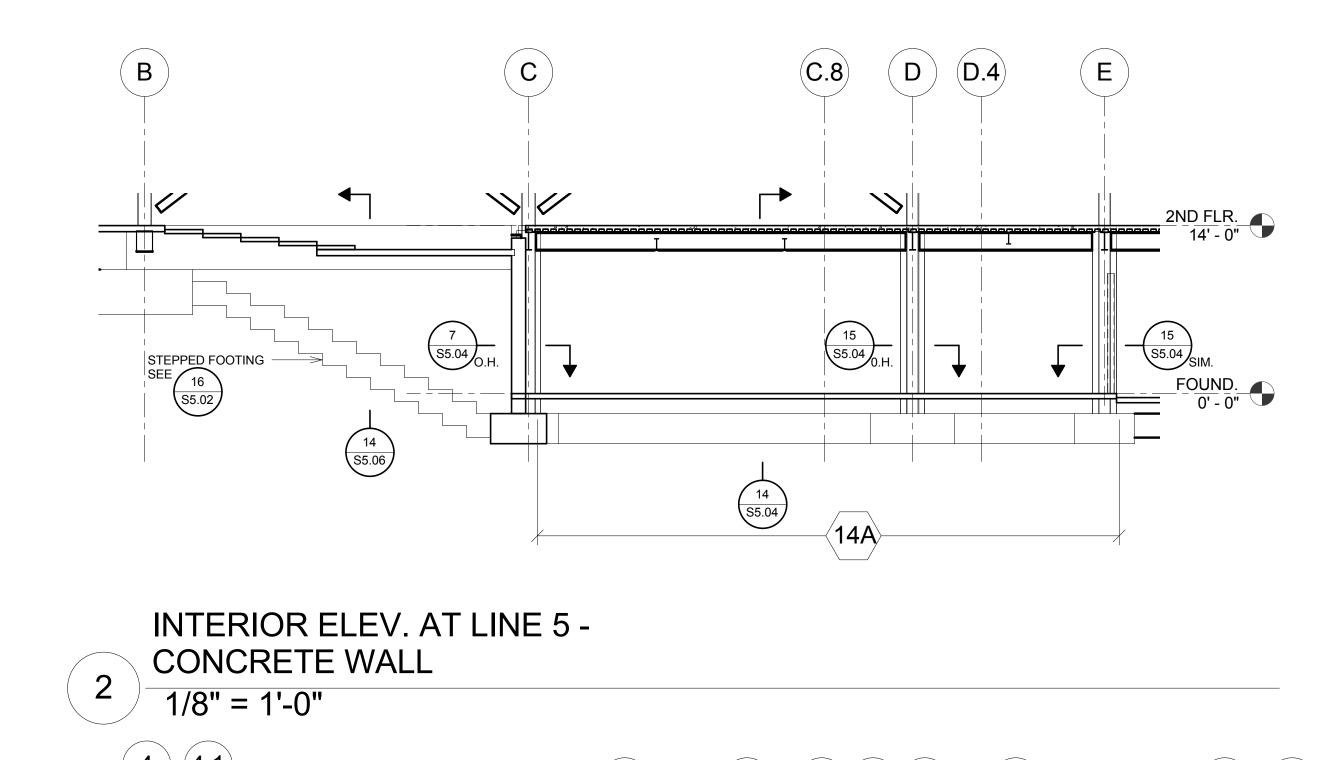
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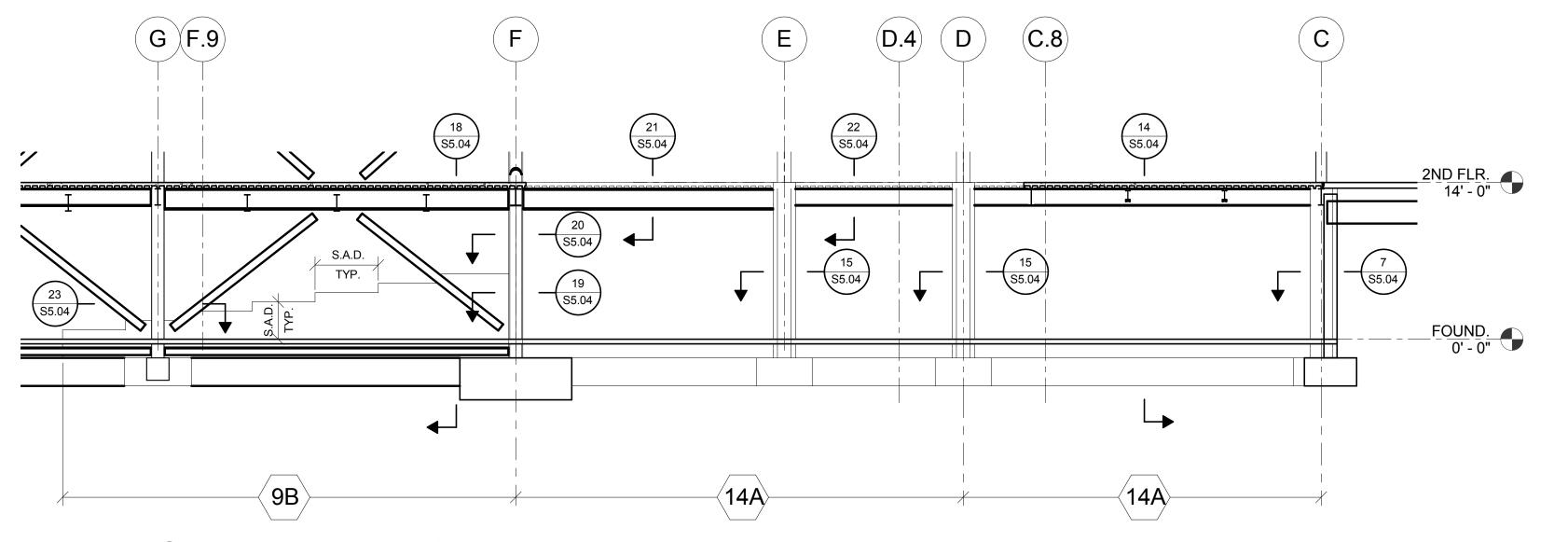
Date 10.09.2008

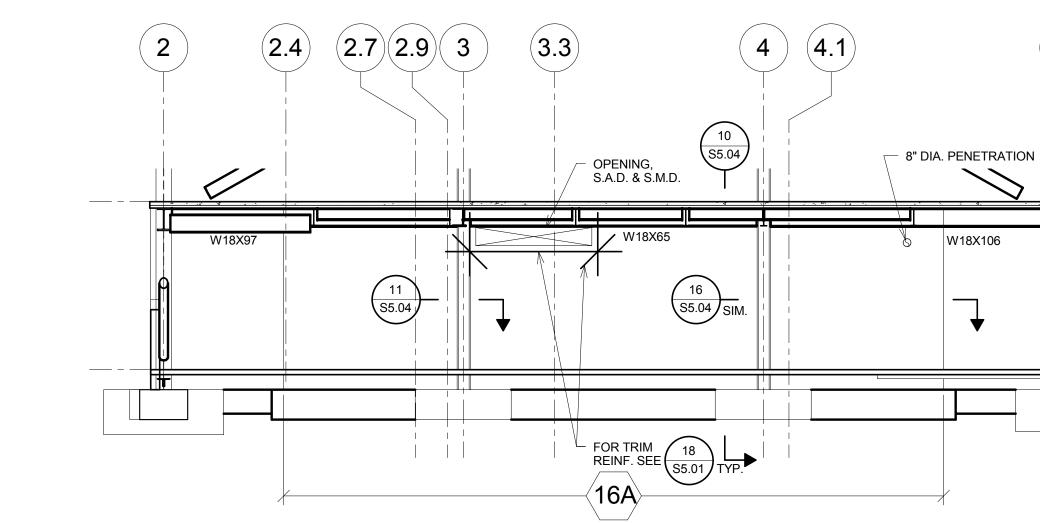
Scale

Braced Frame
Elevations

S3.01

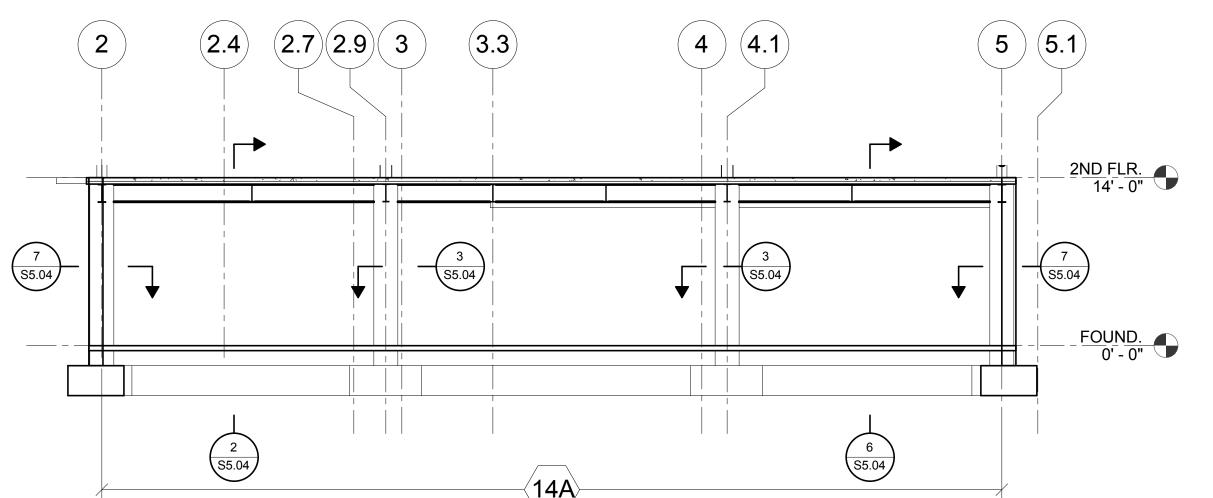






INTERIOR ELEV. AT LINE 2 - CONCRETE WALL 1/8" = 1'-0" 5/5.1

FOUND. 0' - 0"



INTERIOR ELEV. AT LINE H -

FOR TRIM REINF. SEE S5.01

OPENING, S.A.D. & S.M.D.

2ND FLR. 14' - 0"

CONCRETE WALL

1/8" = 1'-0"

INTERIOR ELEV. AT LINE F - CONCRETE WALL

4 1/8" = 1'-0"

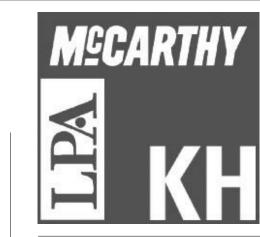
INTERIOR ELEV. AT LINE C -

CONCRETE WALL

1/8" = 1'-0"

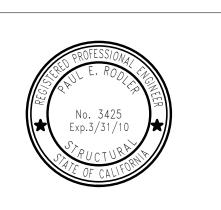
LEGEND	NOTES		=	VALL FORCIN	G
12A WALL REINFORCING MARK	OPENINGS AND SLEEVES NOT SHOWN ON WALL     ELEVATIONS ARE NOT PERMITTED WITHOUT PRIOR	TYPE	NO. OF CURTAINS	HORIZ. REINF.	VERT. REINF.
REINFORCING TYPE	APPROVAL FROM THE STRUCTURAL ENGINEER.	А	2	#7@12"	#8@12"
WALL THICKNESS		В	2	#5@12"	SEE DETAILS

6 CONCRETE WALL SCHEDULE AND LEGEND



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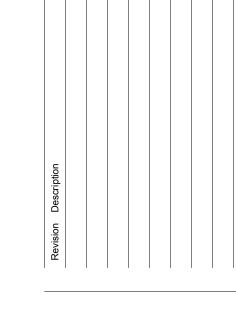
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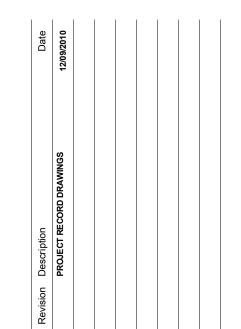
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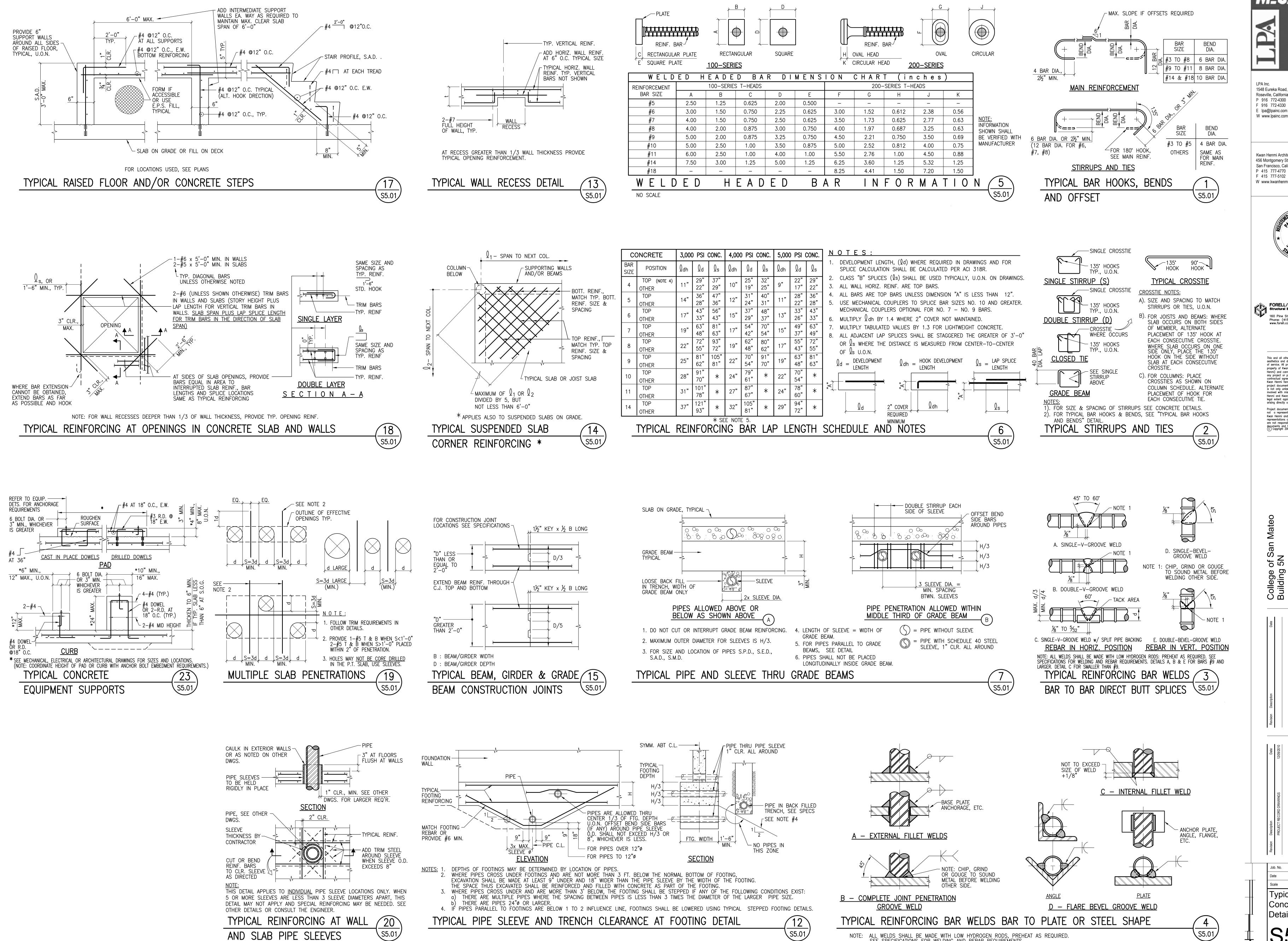


Date 10.09.2008

Scale

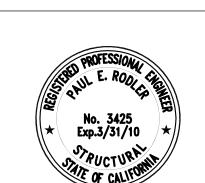
Concrete Wall
Elevations

S3.02



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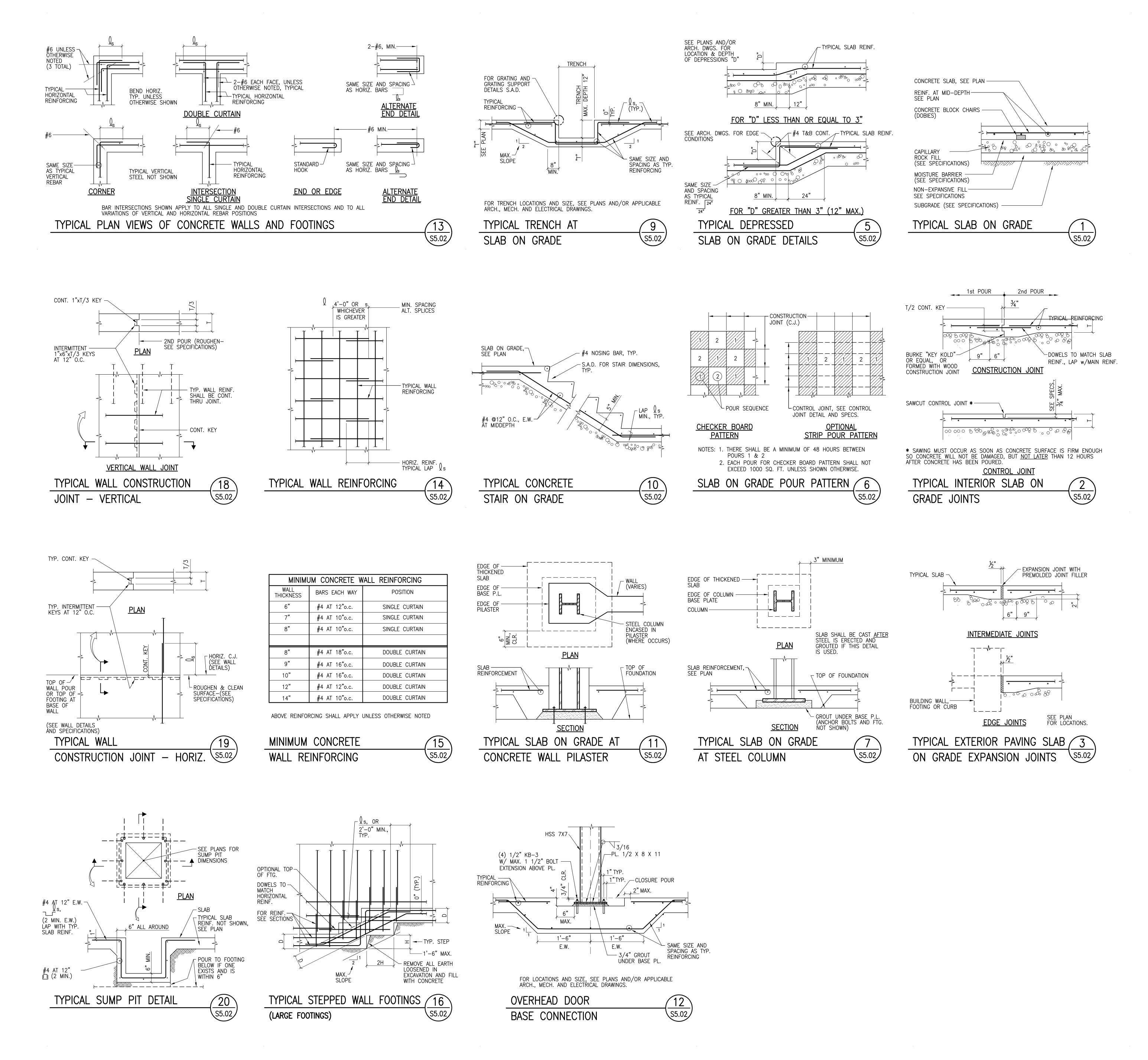
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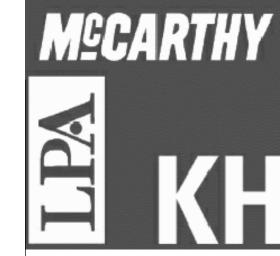
Typical Concrete

04.03.2009

Details

NOTE: ALL WELDS SHALL BE MADE WITH LOW HYDROGEN RODS, PREHEAT AS REQUIRED. SEE SPECIFICATIONS FOR WELDING AND REBAR REQUIREMENTS.





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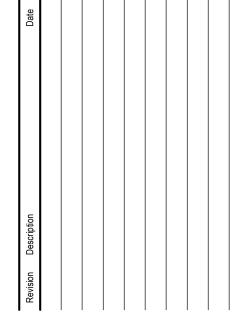
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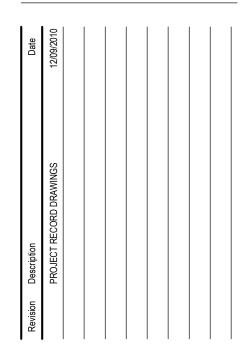
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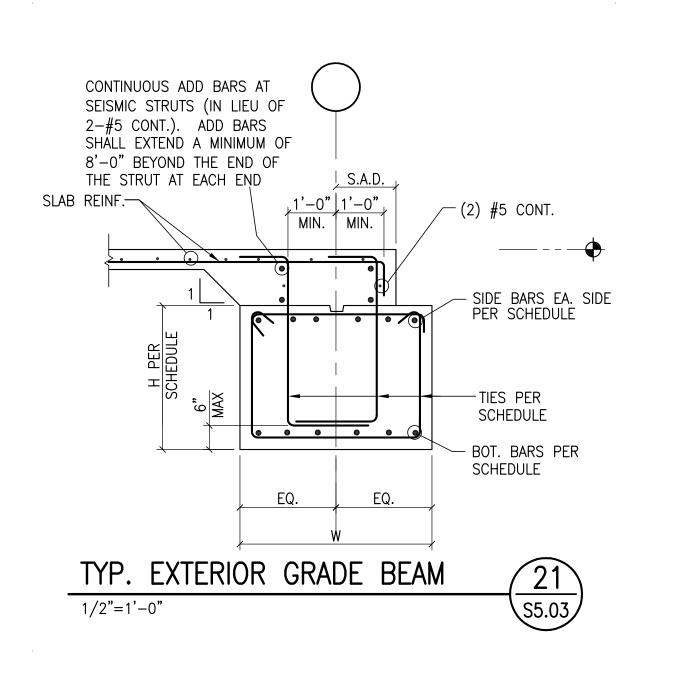


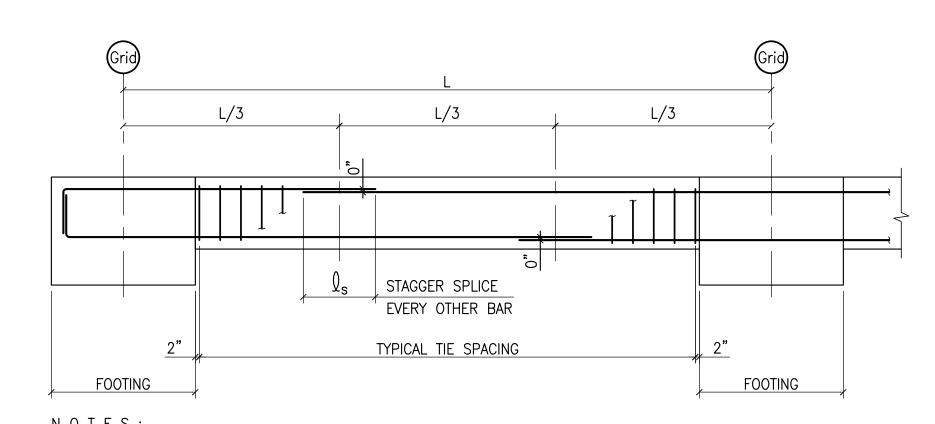
Job. No. 0715.00

Date 04.03.2009

Scale

Typical
Concrete
Details





1. MAKE LONGITUDINAL BARS AS LONG AS PRACTICAL, STAGGER LAP SPLICES. 2. LOCATE GRADE BEAM REINFORCING TO CLEAR PIER REINFORCING, ANCHOR BOLTS AND PIPE SLEEVES. SEE STRUCTURAL DETAILS AND PLUMBING DRAWINGS, TYPICAL.

TYPICAL GRADE BEAM REINFORCING LAYOUT

# SLAB REINF. -(2) #5 CONT. TOP BARS PER SCHEDULE - SIDE BARS EA. SIDE PER SCHEDULE TIES PER SCHEDULE — BOT. BARS PER SCHEDULE EQ. TYP. INTERIOR GRADE BEAM

1/2"=1'-0"

NO GRADE BEAM —

© SPLICE—

1'-6" MIN. IF THIS LENGTH EXCEEDS

THE SCHEDULED DEVELOPMENT,

INTERIOR LOCATE SPLICES

CONDITION AT CONTRACTOR'S —
OPTION — STAGGER

SPLICES IN

AS NOTED

PIER CAP OR

FOOTING, TYP.

SPREAD

ALIGN TOP OF-FOUNDATION &

GRADE BEAM, TYI

ADJACENT BARS

PLAN: TYPICAL CONDITION

ADDT'L TIES—

AT CHANGES IN TOP OF

FOUNDATION ELEVATION

LENGTH "Ld" THEN HOOKS

MAY BE OMITTED-

**CONDITION** 

			G R /	A D E	BEA	M S (	CHED	ULE		
MARK	W	I	LONGITUD	INAL BARS	TRANSVERSE BARS		TIES	SIDE BARS	REMARKS	SECTION DETAIL
			BOTT.	TOP	BOTT.	TOP				DETAIL
GB-1	2'-0"	2'-0"	3#8	3#8	•		#4@12"			21/-, 22/-
GB-2	4'-0"	2'-6"	4#9	4#9	•	•	<b>#</b> 5@12"	1#6	4-#9 ADD BARS AT SEISMIC STRUTS	12/-
GB-3	2'-2"	3'-8"	4#9	4#9	•	•	<b>#</b> 5@12"	#8@12"		17/S5.06
GB-4	1'-6"	VARIES	2#8	2#8	•	•	<b>#</b> 5@12"	1#8	BOTTOM BARS ARE BENT	19/S5.06
GB-5	1'-4"	1'-8"	2#8	2#8	•	•	#4@12"			18/S5.06
GB-6	2'-0"	1'-6"	3#9	3#9	•	•	#4@12"	1#9		11/S5.06

<u>NOTES</u>

C.J. SEE 19 \$5.02

- SEE FOUNDATION PLANS FOR GRADE BEAM MARK LOCATIONS.
- ALL GRADE BEAM ARE CENTERED ON GRID LINES
   UNLESS DIMENSIONED OTHERWISE ON PLAN DETAILS.
   SEE DETAILS 13/- & 24/- FOR TYPICAL GRADE BEAM DETAILS

GRADE BEAM SCHEDULE

TOP BARS -

CONT.

SIDE BARS

-STD. HOOKS, TYP.

- TRANSVERSE REINF., TYP.

+STEEL COLUMN, TYP.

-LONGITUDINAL REINF., TYP.

IF DIMENSION "A" IS LESS

SPLICES PAST ENDS OF

FOUNDATION.

LONGITUDINAL REINF., TYP.

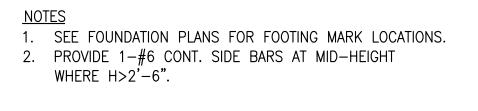
\S5.03

-GRADE BEAM, TYP.

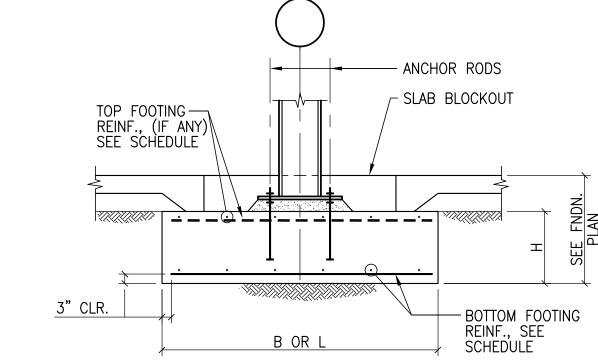
THAN THE LAP SPLICE LENGTH, EXTEND LAP

NO SCALE

	STRIP FOOTING SCHEDULE										
FTG. MARK	W	W H TOP BOTTOM BARS BARS				TIES					
SF-1	4'-5"	2'-6"	#8@12	#8@12	#8@12	#4@18					
SF-2	6'-0"	2'-6"	#8@12	#8@12	#8@12	#4@18					
SF-3	SF-3 3'-0" 1'-6"		_	4 - #5	SEE DETAIL	_					

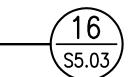


.	++		TIES——V	BOTTOM BARS SHORT BARS TYP. T&B	
٦	TYPICAL	STRIP	FOOTING	SCHEDULE	15
1	/2"=1'-0"				S5.03



	SQU	JARE C	R RE	CTANGULAR	FOOTING SC	HEDULE
FTG. MARK	В	L	Н	BOTTOM REINFORCING	TOP REINFORCING	REMARKS
F1	6'-0"	6'-0"	2'-6"	9-#6	_	
F2	5'-0"	5'-0"	2'-6"	8-#6	-	
F3	4'-0"	4-0"	2'-0"	5-#6	-	
F4	3'-0"	3'-0"	2'-0"	4-#6	_	
F5	3'-0"	5'-0"	2'-0"	4-#6/5-#6	-	
F6	7'-0"	7-0"	2'-6"	8-#7	-	
F7	8'-0"	8'-0"	2'-6"	9-#7	_	

- 1. SEE FOUNDATION PLANS FOR FOOTING MARK LOCATIONS.
- 2. SEE BASE PLATE DETAILS FOR ANCHOR ROD DETAILS. 3. SEE SHEET S5.01 FOR TYPICAL CONCRETE DETAILS AND ADDITIONAL
- FOUNDATION DETAILS. 4. ALL FOOTINGS AND GRADE BEAMS ARE CENTERED ON GRID LINES UNLESS DIMENSIONED OTHERWISE ON PLAN DETAILS.
- TYP. GRADE BEAM DETAILS TYPICAL COLUMN SQUARE FOOTING



#### GROUND ANCHOR NOTES

- 1. GROUND ANCHOR DESIGN LOAD "P" = 100 kips. ALL ANCHORS SHALL BE PROOF TESTED OR SHALL BE PERFORMANCE TESTED. REFER TO SPECS FOR TESTING REQUIREMENTS AND
- 2. ALL ANCHORS SHALL BE APPROVED POST-TENSIONED THREAD BARS WITH DOUBLE CORROSION PROTECTION.

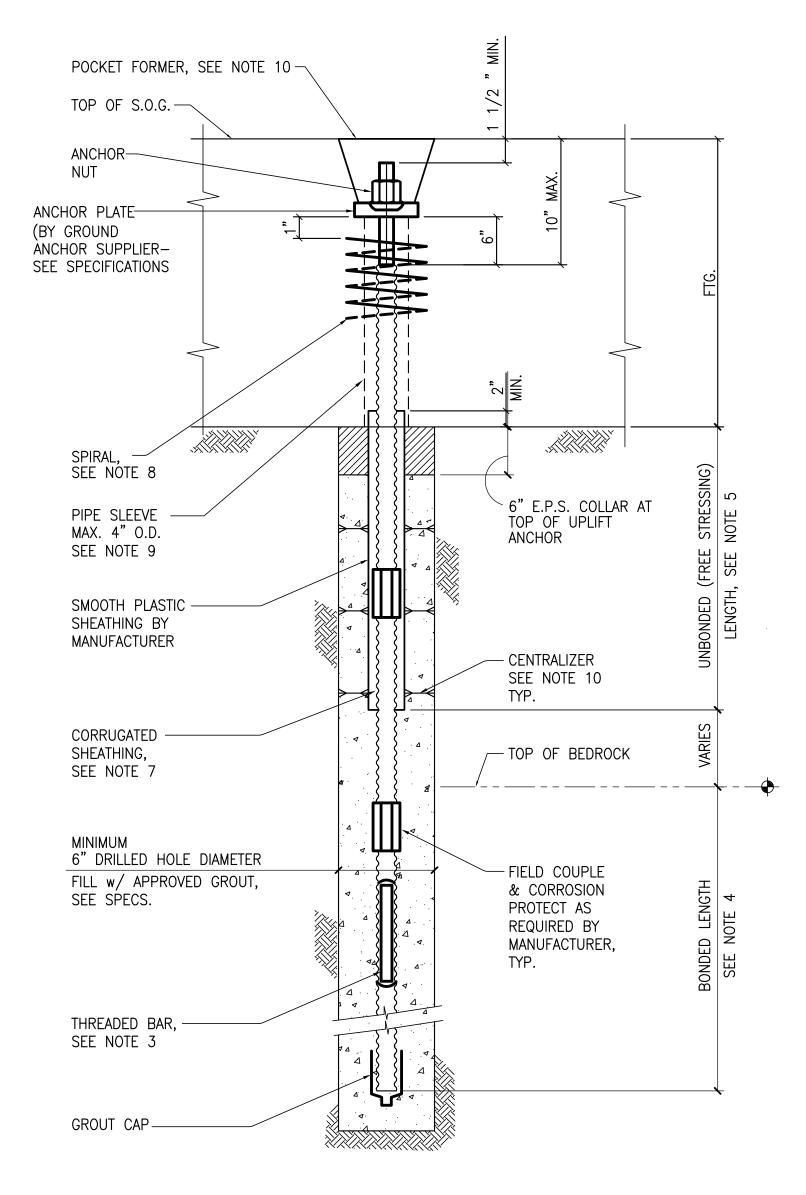
TENSION AT TRANSFER (LOCK-OFF) SHALL BE 0.55x"P".

- 3. 1 3/8" DIA. POST-TENSIONED THREAD BARS SHALL BE ASTM A 722 TYPE II GRADE 150 STEEL RODS. TENSION RODS TO A TENSILE STRESS OF NOT MORE THAN 0.80\*Fpu.
- 4. BONDED LENGTH LENGTH SHALL BE 25' MINIMUM INTO COMPETENT BEDROCK BASED ON DIAMETER SHOWN ON ELEVATION.
- 5. UNBONDED LENGTH SHALL BE 10' MIN.
- 6. CORRUGATED SHEATHS SHALL BE FULLY PRE-GROUTED IN FACTORY USING APPROVED CEMENTITIOUS GROUT.
- 7. PROVIDE 1/4" DIA. (W20, ASTM A82) SMOOTH SPIRAL 10" O.D. WITH 4 TURNS AT 2" PITCH AT EA. POST-TENSIONED ANCHOR.
- 8. FILL ANNULUS WITH EPOXY RESIN OR APPROVED NON-SHRINK GROUT.
- 9. PROVIDE STANDARD POCKET FORMER SUPPLIED BY GROUND ANCHOR MANUFACTURER. FILL BLOCKOUT WITH NON-SHRINK GROUT TO TOP OF FOOTING AFTER FINAL INSPECTION AND APPROVAL OF TIEDOWN INSTALLATION. GROUT SHALL BE BURKE DAMP PACK GROUT OR
- 10. PROVIDE NON-METALLIC CENTRALIZERS PER MANUFACTURER'S RECOMMENDATION TO MAINTAIN ANCHOR AT CENTER OF DRILLED HOLE (5'-0" O.C. MAX. SPACING).
- 11. CONTRACTOR MAY PROPOSE ALTERNATIVE DIA./DEPTH COMBINATION, PROVIDED THAT THE OWNER'S GEOTECHNICAL ENGINEER'S REQUIREMENTS & TESTING REQUIREMENTS ARE MET. MINIMUM DIAMETER SHALL BE 6". SUBMIT PROPOSED ALTERNATIVES TO ARCHITECT FOR REVIEW. ADDITIONAL COSTS INCURRED DUE TO PROPOSALS THAT DO NOT MEET TESTING REQUIREMENTS SHALL BE PAID BY CONTRACTOR.
- 12. REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS.
- 13. ANCHOR TESTING

S5.03

S5.03

- A. PERFORMANCE TEST THE FIRST 2 ANCHORS AND AT LEAST 5 PERCENT OF ALL REMAINING ANCHORS. ALL OTHER ANCHORS SHALL BE PROOF TESTED.
- B. ANCHOR TESTING ACCEPTANCE CRITERIA. AN ANCHOR SHALL BE ACCEPTABLE IF:
- a. THE TOTAL ELASTIC MOVEMENT OBTAINED FROM A PROOF OR PERFORMANCE TEST SHALL NOT BE LESS THAN 80% OF THE THEORETICAL ELASTIC BARE-STEEL LONGATION OF THE UNBONDED LENGTH AND SHALL NOT EXCEED THE THEORETICAL ELASTIC BARE-STEEL ELONGATION OF THE UNBONDED LENGTH PLUS 50% OF THE BONDED LENGTH. THE THEORETICAL ELASTIC BARE-STEEL ELONGATION SHALL BE CALCULATED AS PxL/(AxE).
- b. THE CREEP RATE DOES NOT EXCEED 0.080 INCHES/LOG CYCLE OF THE PERFORMANCE TEST OR PROOF TEST REGARDLESS OF TENDON LENGTH AND LOAD.



**ELEVATION** 

PLAN DETAIL AT FOOTING

1/2"=1'-0"

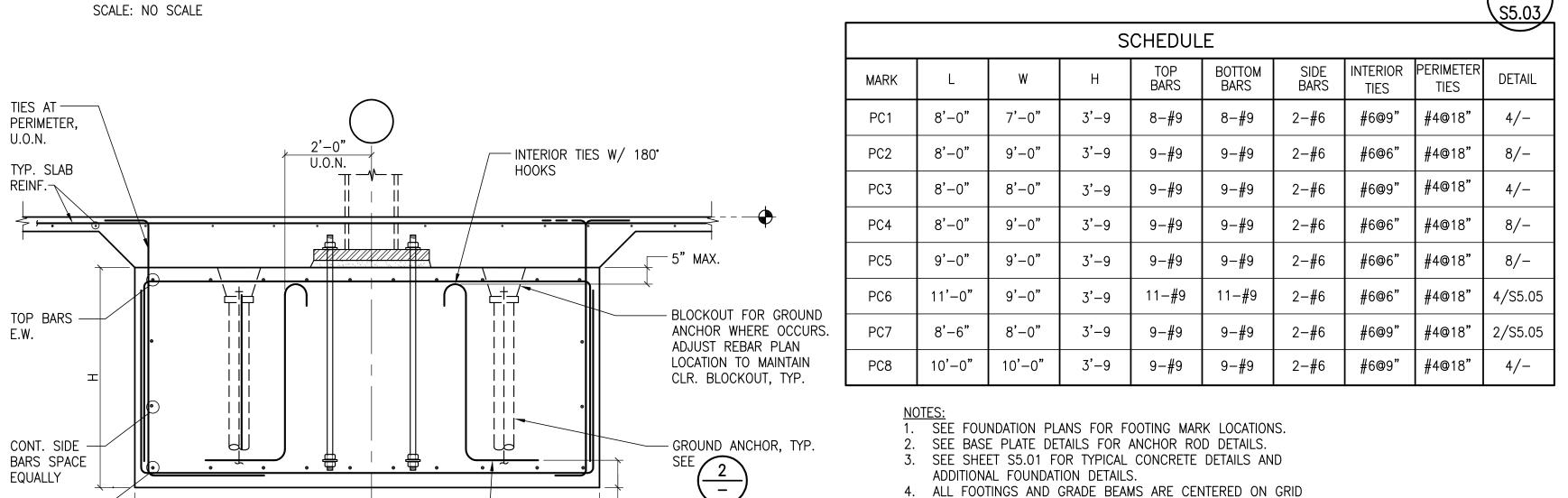
S5.03

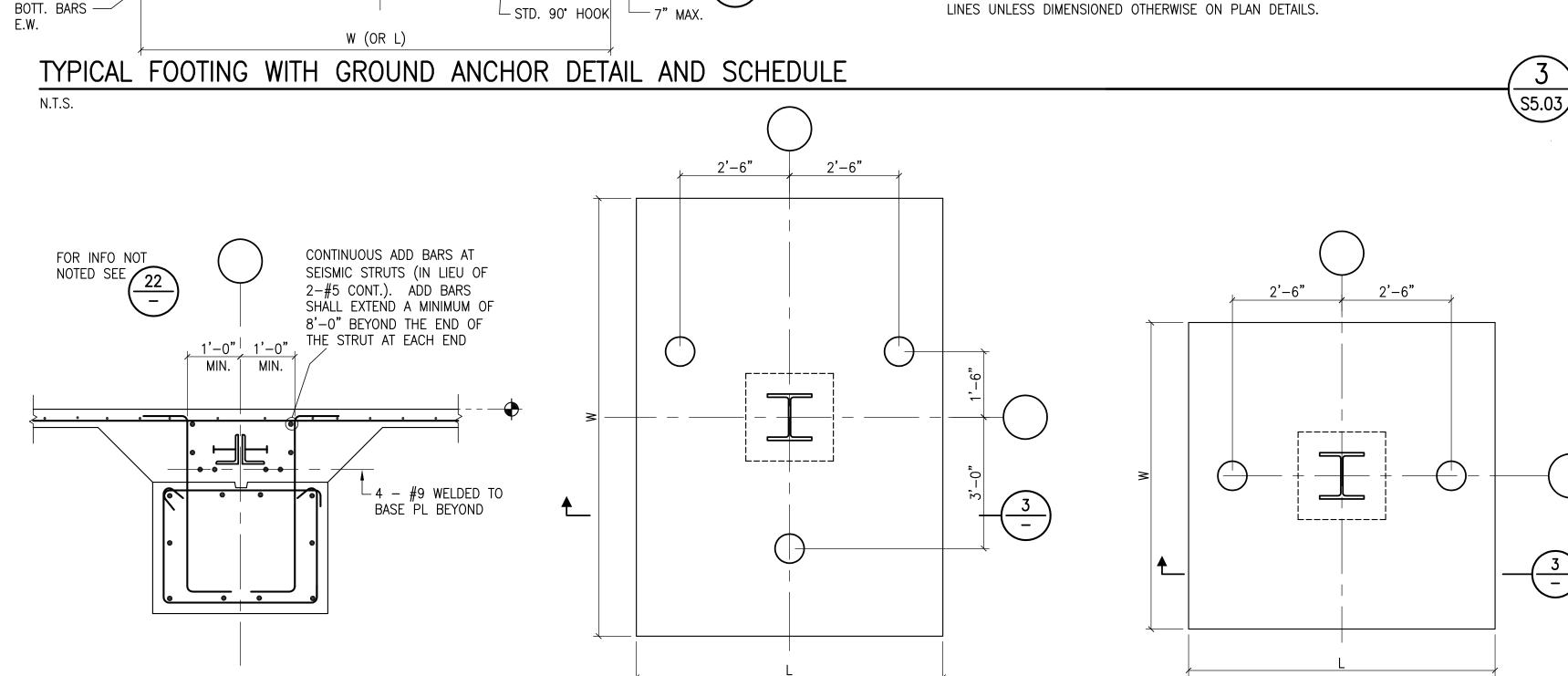


SEISMIC STRUT GRADE BEAM

1/2"=1'-0"

S5.03





PLAN DETAIL AT FOOTING

1/2"=1'-0"

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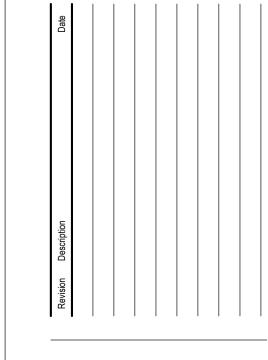


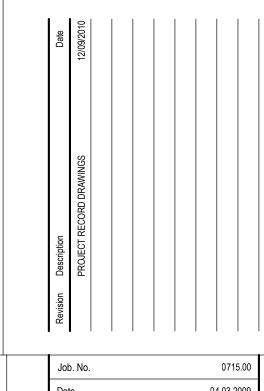


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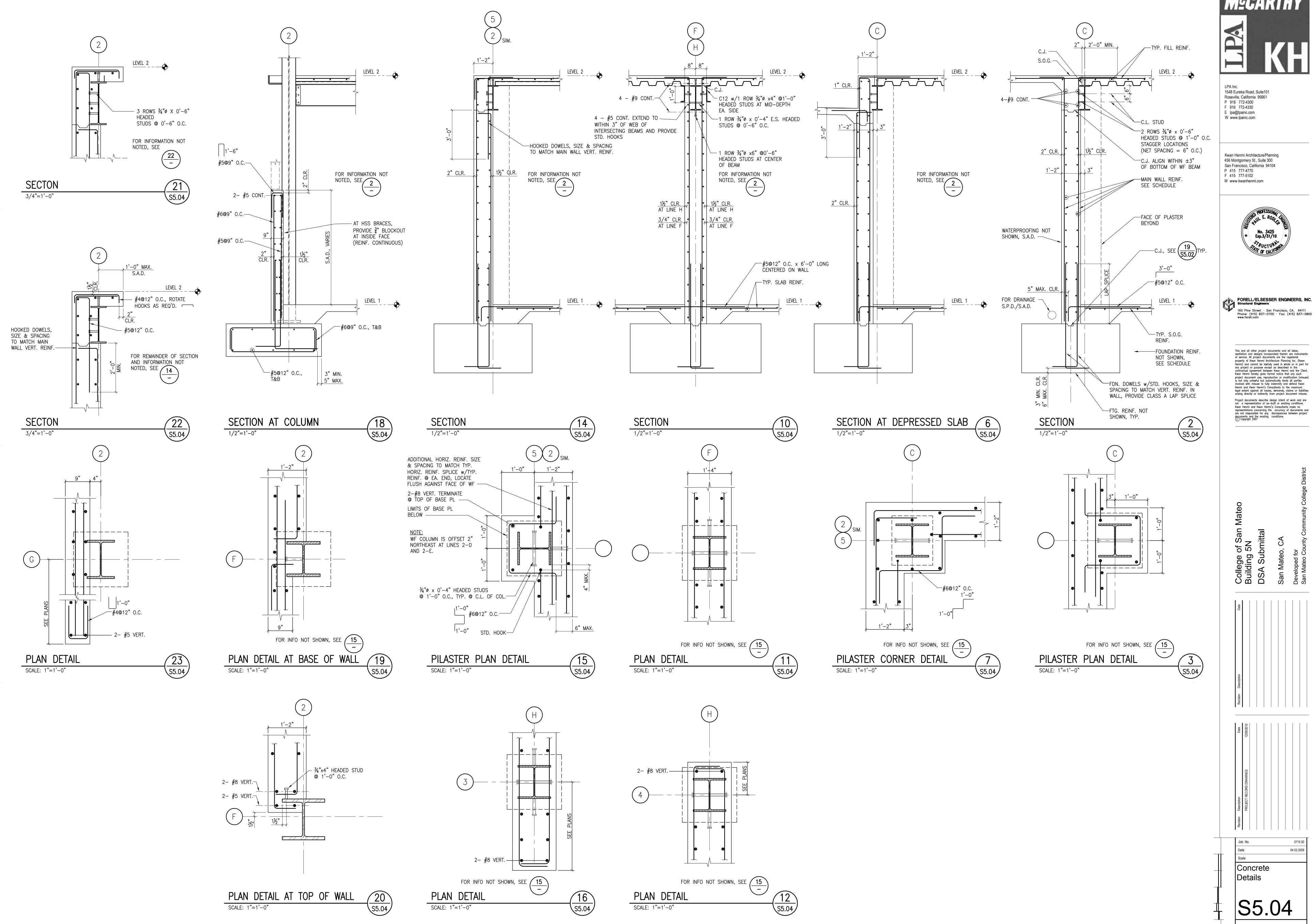




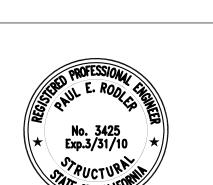
Foundation Details

S5.03

S5.03

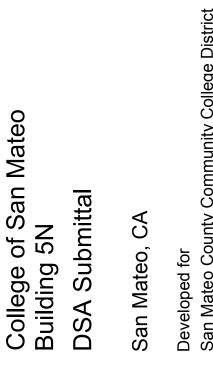


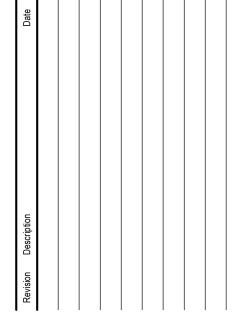


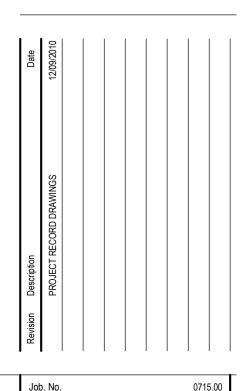




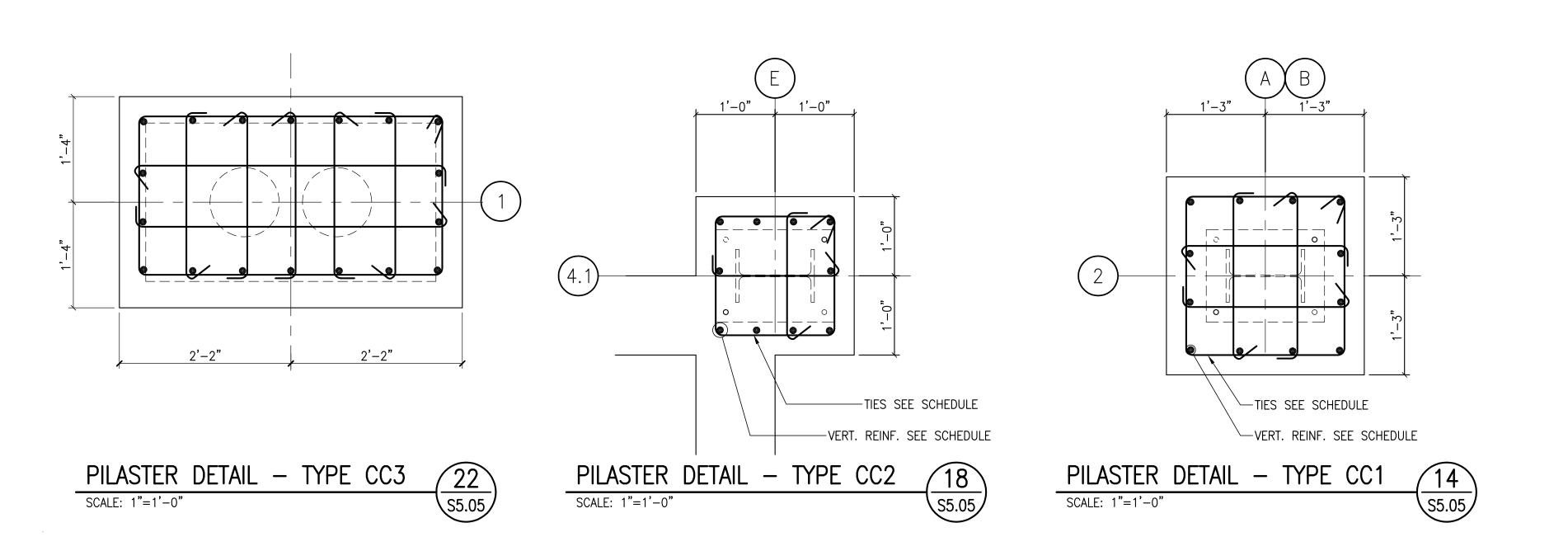
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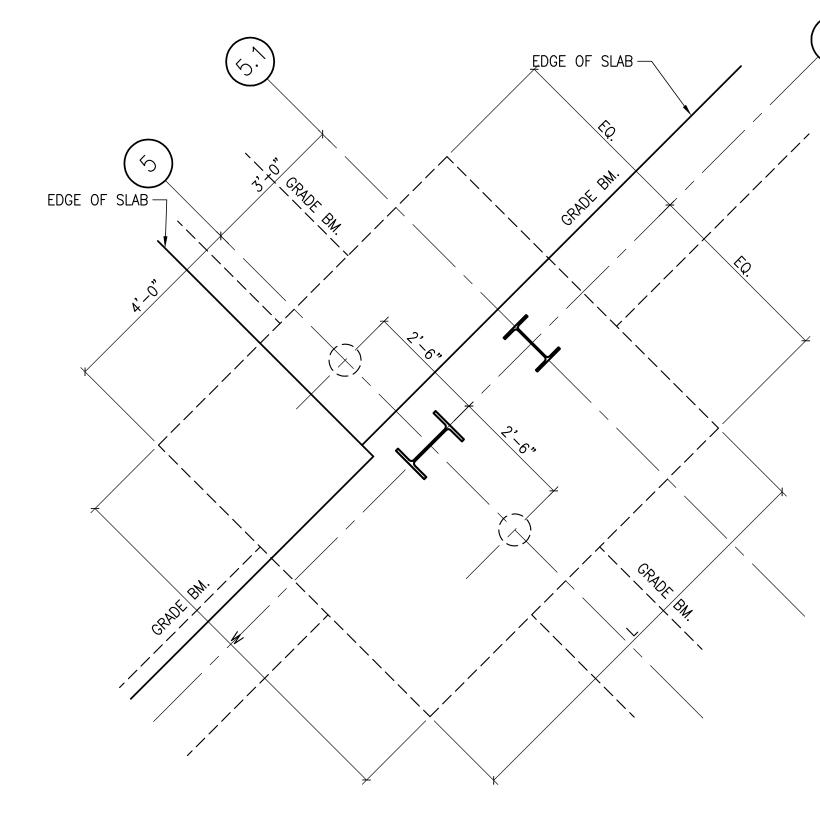












HSS STRUT ───

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 $\left(\frac{Z}{S5.05}\right)$ 

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Kwan Henmi Architecture/Planning 456 Montgomery St., Suite 300 San Francisco, California 94104

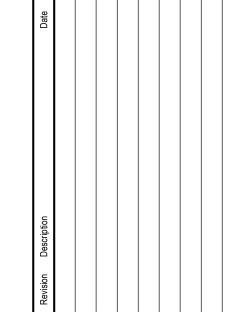
FORELL/ELSESSER ENGINEERS, INC. Structural Engineers

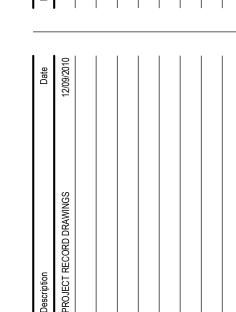
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Phone: (415) 837-0700 · Fax: (415) 837-0800
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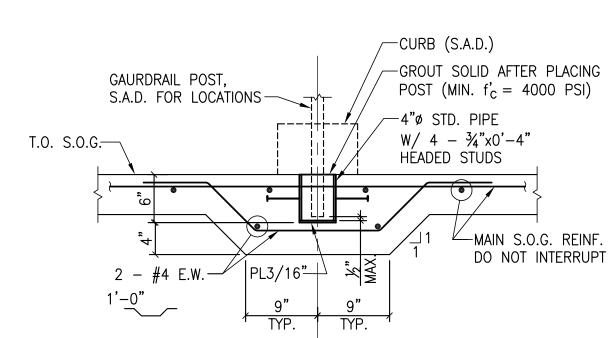
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0715.00 04.03.2009 CONCRETE DETAILS

CURB (S.A.D.) GAURDRAIL POST, S.A.D. FOR LOCATIONS ∕-4"ø STD. PIPE W/ 4  $- \frac{3}{4}$ "x0'-4" HEADED STUDS T.O. S.O.G.— 2 - #4 E.W. PL3/16" \$\frac{\times}{9}" 9"





TIE SIZE & SPC.

#4 @ 8"

#4 @ 12"

NOTES:

1. PROVIDE HOOKED FOUNDATION DOWELS TO MATCH VERTICAL REINFORCING.
PROVIDE CLASS B LAP SPLICES.

VERTICAL REINFORCING

12 - #9

10 - #9

18 – #8

CC2

CC3

REFERENCE

DETAIL

14/-

18/-

12/-

CONCRETE PILASTER SCHEDULE SCALE: 1"=1'-0"

∕—LENTON TERMINATOR

 $\sim$ FDN. DOWELS

16 S5.05

TYPICAL GUARDRAIL POST BASE

SCALE: 1"=1'-0"

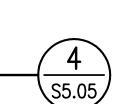
S5.05

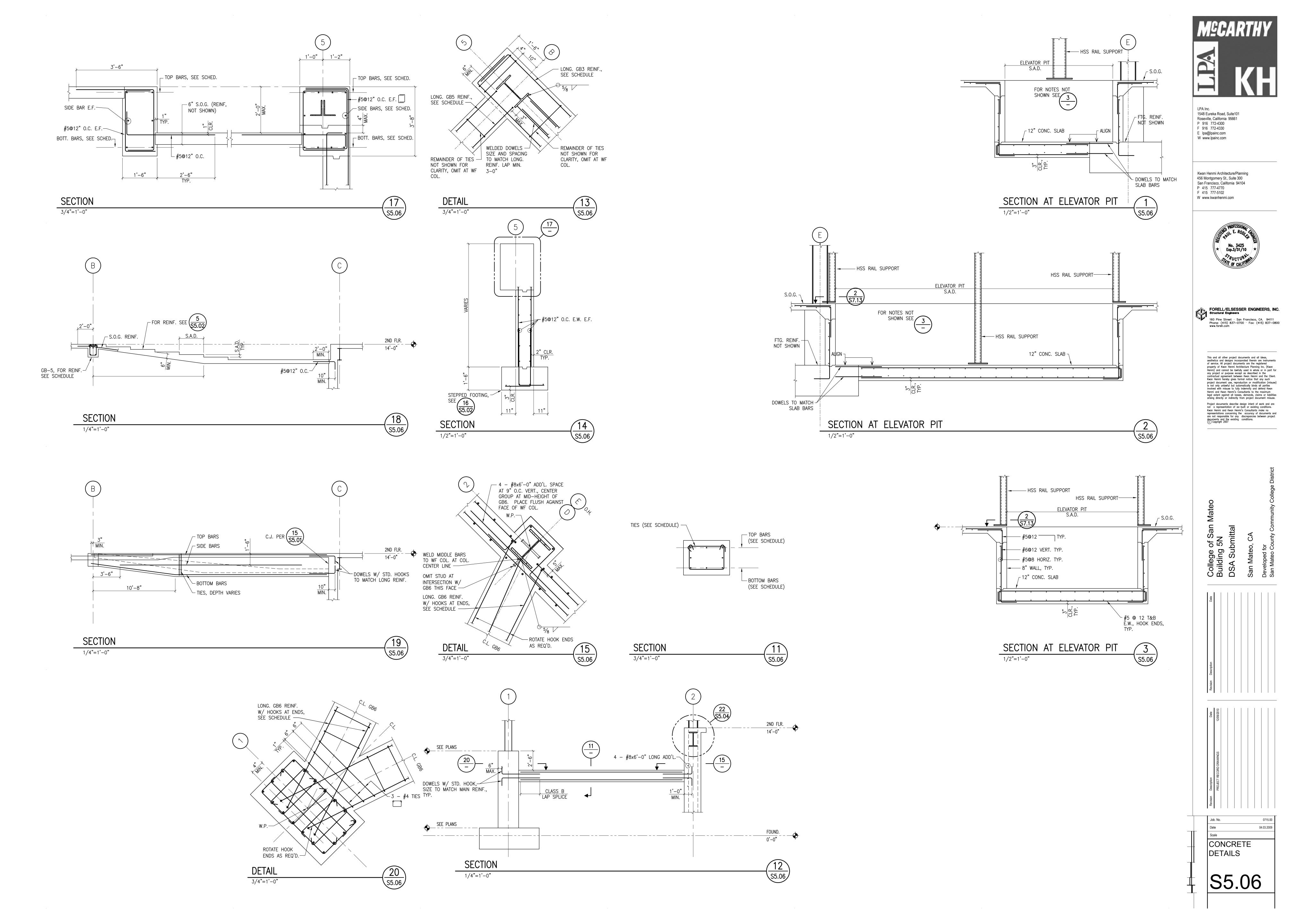
PARTIAL PLAN AT FOOTING PC6 1/2"=1'-0"

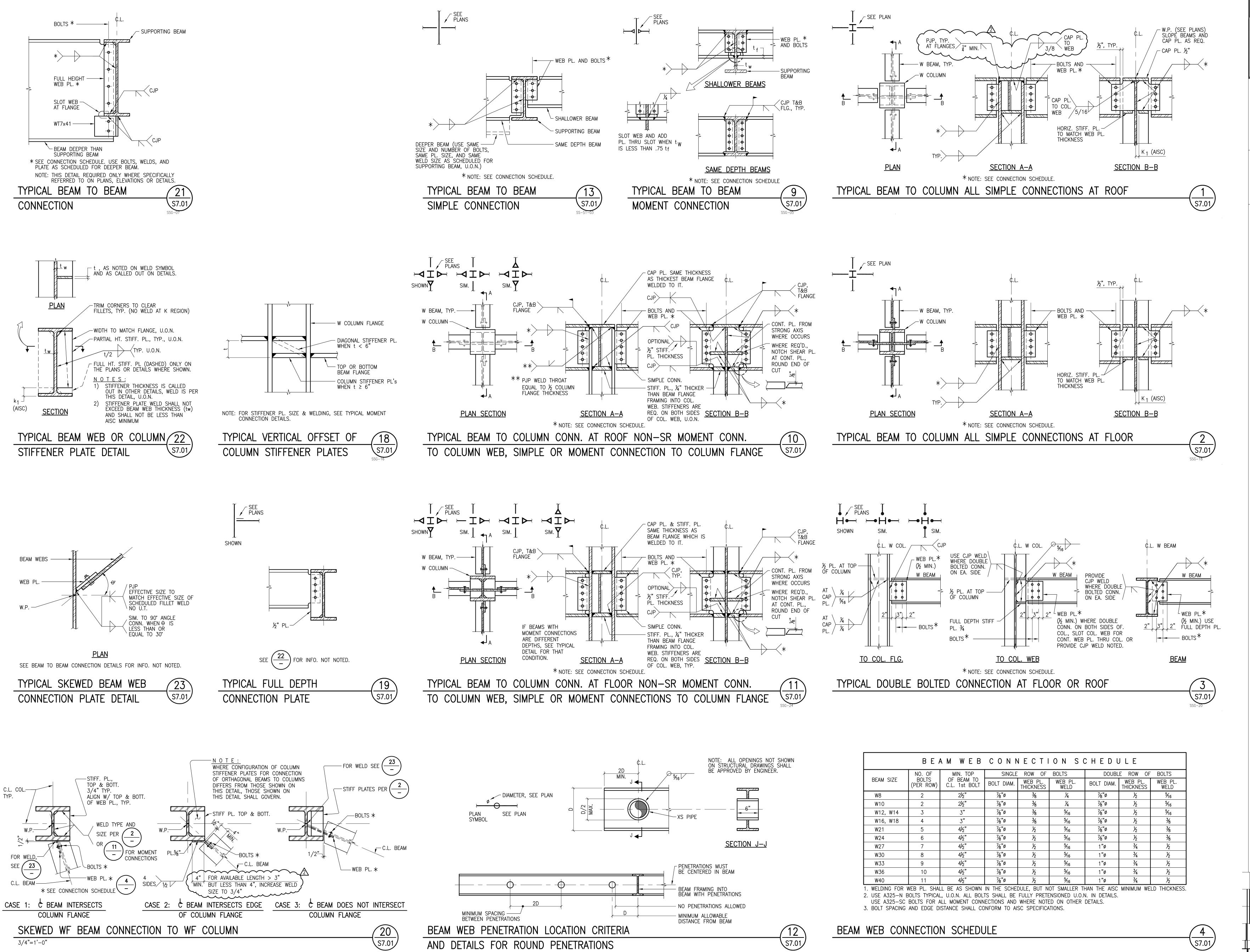
PARTIAL PLAN AT FOOTING PC7

1/2"=1'-0"

<u>4</u> <u>\$5.05</u>







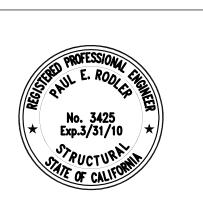
MECARTHY

MECARTHY

MINING

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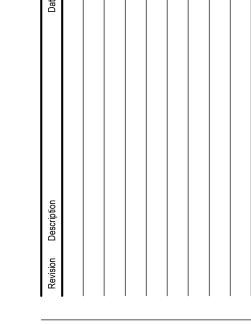
FORELL/ELSESSER ENGINEERS, INC.
Structural Engineers

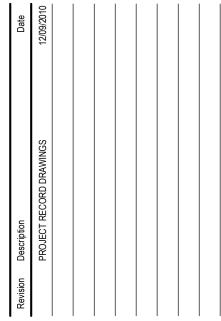
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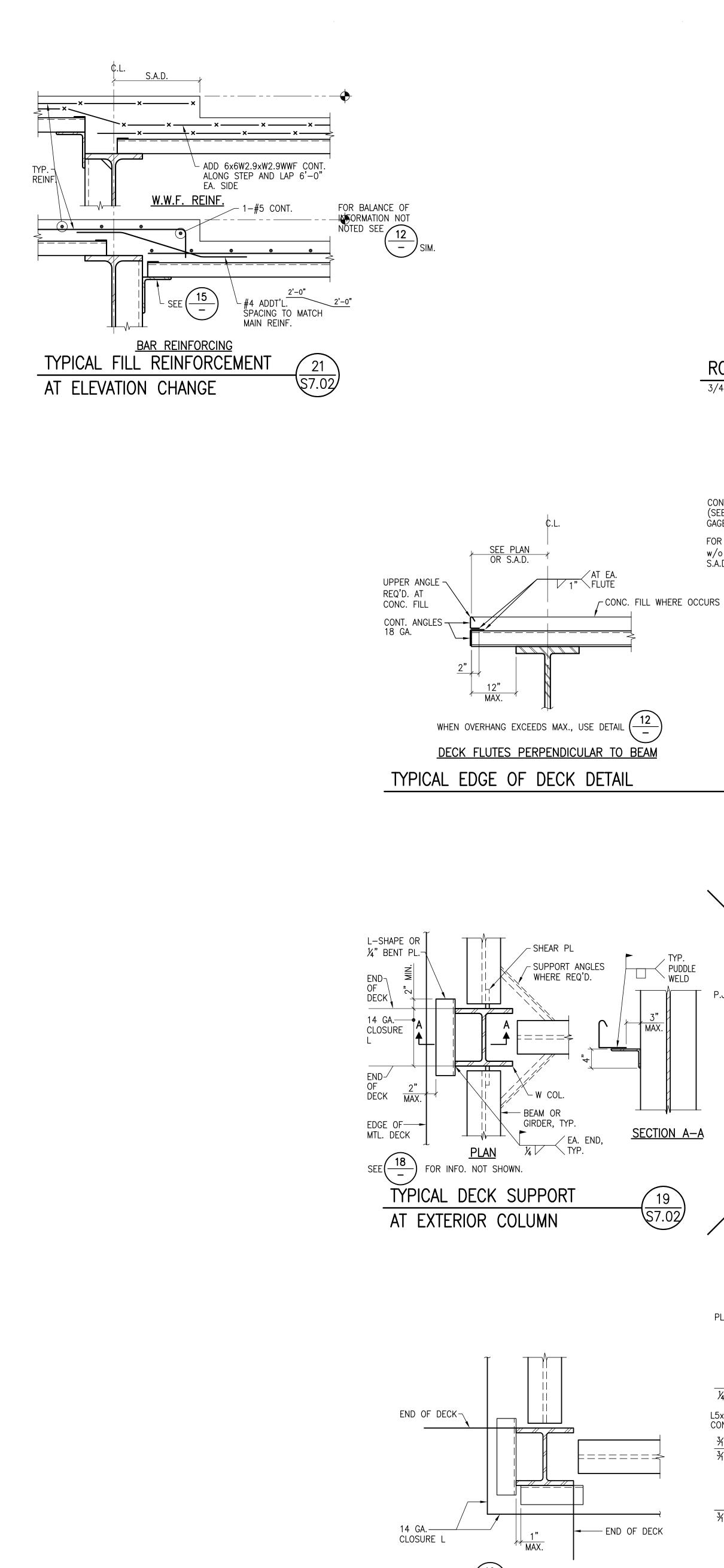
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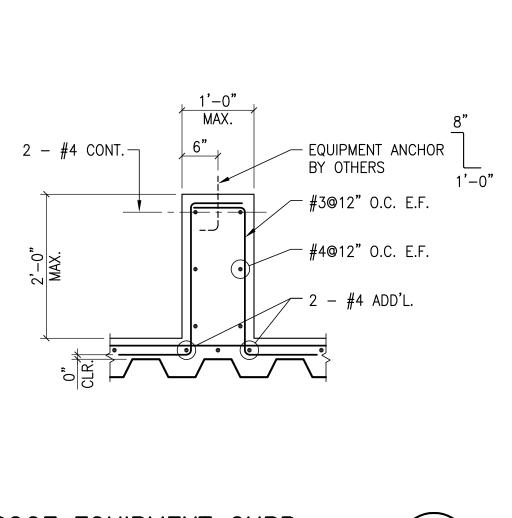
College of San Mateo
Building 5N
DSA Submittal
San Mateo, CA





Job. No. 0715.00
Date 04.03.2009
Scale
Typical
Steel
Details







WHEN OVERHANG EXCEEDS MAX., USE DETAIL

EDGE ANGLE THICKNESS (GAGE)

DECK FLUTES PARALLEL TO BEAM

(USE FOR FLUTES SKEWED RELATIVE TO BEAM)

VIEW FROM ABOVE

OVERHANG

2" 3" 4" 5" 6" 7" 8"

VIEW FROM BELOW

\$7.02

WHERE OCCURS

\$7.02

16 16 14 12 12 12

CONT. EDGE ANGLE (SEE TABLE FOR

GAGE)

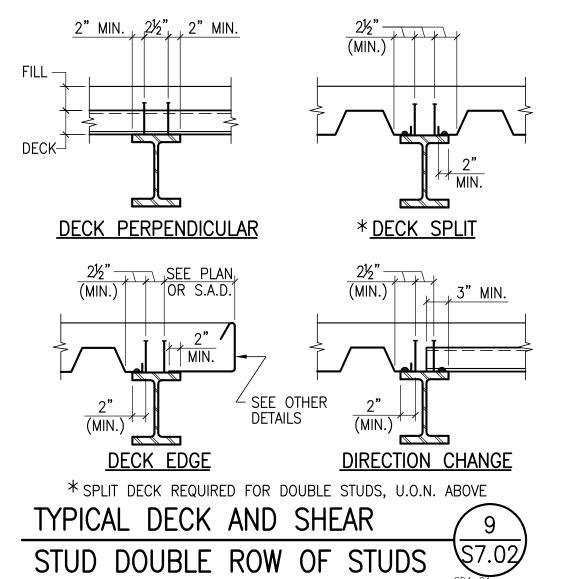
PUDDLE

19

**FLUTES** 

FOR DECK

w/o FILL S.A.D. FOR t



SHEET WIDTH = 36"

VERCO W3 FORMLOK OR APPROVED EQUAL

TYPE A DECK

SHEET WIDTH = 24"

VERCO N-24 OR APPROVED EQUAL

TYPE B DECK

VERCO B FORMLOK OR APPROVED EQUAL

TYPE C DECK

SHEET WIDTH = 36"

VERCO HSB-36 OR APPROVED EQUAL

TYPE D DECK

VERCO W2 FORMLOK OR APPROVED EQUAL

TYPE E DECK

METAL DECK PROFILES

AT LARGE OVERHANGS

AND MINIMUM PROPERTIES

16GA 0.377 18GA 0.302 20GA 0.216 22GA 0.175

MIN. I (in<sup>4</sup>)

16GA 0.694 18GA 0.555 20GA 0.423 22GA 0.340

\$7.02

# STEEL DECK NOTES

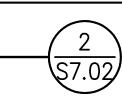
- 1. SEE ROOF AND FLOOR FRAMING PLANS FOR EXTENT OF DECK TYPES.
- NOT ALL DECK TYPES ARE SHOWN. 2. DECK SIDE LAPS SHALL BE CRIMPED TOGETHER AT WELD POINTS
- BEFORE MAKING TOP SEAM WELDS. SEE TYPICAL DETAILS ON THIS SHEET FOR REINFORCEMENT REQUIRED
- FOR OPENINGS IN THE DECK. SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MAJOR OPENING SIZES AND LOCATIONS. OTHER OPENINGS ARE NOT SHOWN AND ARE SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.
- 4. SEE ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS FOR EDGE OF DECK DIMENSIONS.
- 5. ALL BEAMS COVERED BY STEEL DECK ARE TO HAVE DECK WELDED
- STEEL DECK AND STEEL MEMBER SURFACES COVERED BY STEEL DECK SHALL NOT BE PAINTED AND SHALL BE FREE OF MOISTURE, RUST, SCALE, DIRT, SAND AND OTHER MATERIALS THAT WILL INTERFERE WITH THE WELDING OPERATIONS. SEE SPECS.
- STEEL DECK CONTRACTOR SHALL PROVIDE AND INSTALL CLOSURE ANGLES, AND OTHER GAGE METAL SHAPES TO CLOSE ALL MISC. OPENINGS IN DECK AS NEEDED AROUND COLUMNS, VERTICAL
- DISCONTINUITIES, ETC. ALL PUDDLE WELDS ARE 3/4" OR EQUAL, REFER TO MANUFACTURER'S
- RECOMMENDATION. STEEL DECK W/O CONCRETE MAY REQUIRE LIGHT GAGE EDGE ANGLES OR CLOSURE ANGLE, ETC. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT.
- SHEAR STUDS MAY BE USED TO REPLACE PUDDLE WELD ON A ONE-TO-ONE BASIS.
- LAYOUT OF DECK SHALL PROVIDE SHEETS OF SUFFICIENT LENGTH TO SPAN AT LEAST THREE SPANS. ENDS SHALL TERMINATE OVER A SUPPORT PERPENDICULAR TO THE DECK SPAN, EXCEPT AT OPENINGS OR BUILDING EDGES WHERE DECKS MAY BE CANTILEVERED AS SHOWN. SEE SPECIFICATIONS FOR COMPLETE REQUIREMENTS.
  - 12. DO NOT PLACE CONDUITS OR PIPES IN CONCRETE FILL OVER METAL DECK.

# STEEL DECK NOTES

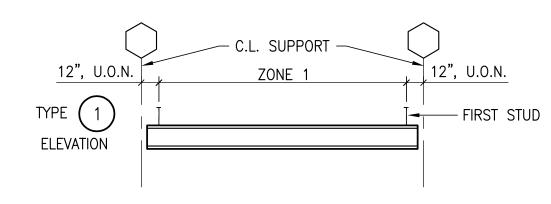


<u>МІМ. І (in<sup>4</sup>)</u> 16GA 1.509	DECK AND FILL MARK (SEE PLAN)	DECK GAGE AND PROFILE TYPE SEE	DE W E L		S, SEE DET		13 W E L D ©		FILL THICKNESS ABOVE DECK –	FILL REINFORCEMENT SEE	REMARKS
18GA 1.203 20GA 0.896 22GA 0.718		11 -	SIZE AND TYPE	# PER SHEET	SIZE AND TYPE	SPACING	SIZE AND TYPE	SPACING	FILL TYPE	\$7.03	
	1	A, 18 GA	3/4" P.W.	FLUIE		12"	1½" T.S.W.	12"	3-1/4" LWC	#4@12" E.W. AT MID DEPTH OF CONC. FILL	EAST ROOF, FLOORS (VENTED AT ROOF)
	2	A, 18 GA	3/4" P.W.	TLOTE			1½" T.S.W.	12"	4-1/4" LWC	#5@12" E.W. AT MID DEPTH OF CONC. FILL	WEST 2ND FLOOR
MIN. I (in <sup>4</sup> ) 16GA 1.647	3	A, 18 GA	3/4" P.W.	EA. LOW FLUTE	3/4" P.W.	12"	1½" T.S.W.	12"	3-1/2" NWC	#4@12" E.W. AT MID DEPTH OF CONC. FILL	WEST ROOF (VENTED)
18GA 1.223 20GA 0.837 22GA 0.655	4	C, 18 GA	3/4" P.W.	EA. LOW FLUTE	3/4" P.W.	12"	1½" T.S.W.	12"	2-1/2" NWC	6x6-W2.9xW2.9 WWF AT MID DEPTH	STAIR LANDINGS
	5	E, 18 GA	3/4" P.W.	EA. LOW FLUTE	3/4" P.W.	12"	1½" T.S.W.	12"	4-1/4" LWC	#4@12" E.W. AT MID DEPTH OF CONC. FILL	FULL DEPTH VARIES, 2¼" MIN., S.A.D.
	6	E, 18 GA	3/4" P.W.	EA. LOW FLUTE	3/4" P.W.	12"	1½" T.S.W.	12"	5-1/4" LWC	#5@12" E.W. AT MID DEPTH OF CONC. FILL	WEST 2ND FLOOR
MIN. I (in <sup>4</sup> )	P.W. = PUDDL	E WELD, TSW	= TOP SE			_					

STEEL DECK AND FILL SCHEDULE



MARK	SIZE	NUMBER OF ROWS AT STUD SPACING (IN.)	ELEVATION	SHORING REQUIRED	
SEE PLAN	SEE NOTE 1	ZONE 1	ELEVATION TYPE	SEE GENERAL NOTES	
TYP.	3/4"ø x H	1 <b>@</b> 12" O.C.	1	NO	
S1	3/4"ø x H	1 @ 9" O.C.	1	NO	
S2	3/4"ø x H	2 @ 9" O.C.	1	NO	
S3	3/4"ø x H	2 <b>@</b> 12" O.C.	1	NO	



NOTES:

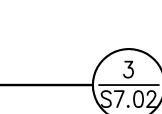
FOR DOUBLE ROW OF STUDS, SEE

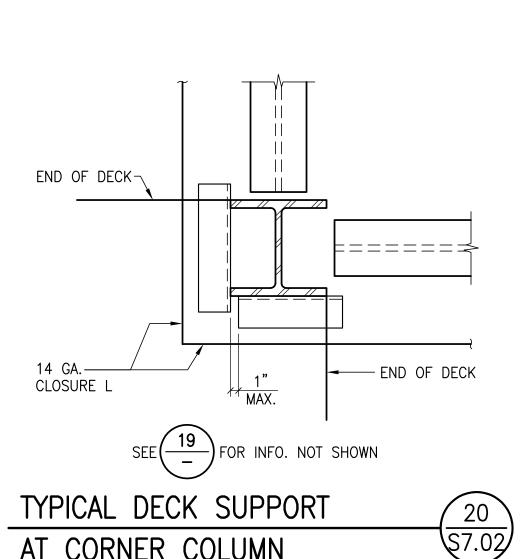
1" MIN., 1 1/2" MAX.

4. STUDS SHOULD BEGIN 6 INCHES FROM GUSSET PLATES AT BEAM ENDS WHERE APPLICABLE. OMIT STUDS WHERE NO CONCRETE FILL IS PRESENT FOR DECKS WITH LESS THAN 2 1/2 IN. OF FILL, PROVIDE 3/4 IN. CLEAR TO TOP OF STUD.

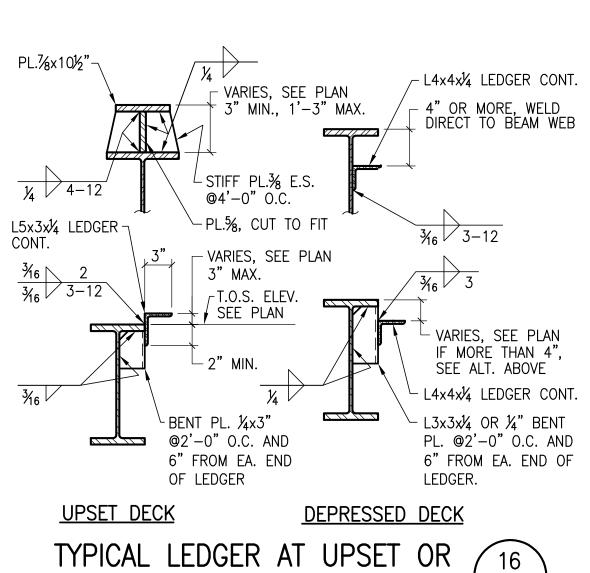
TYPICAL SHEAR STUD AND LAYOUT SCHEDULE

FOR ALL BEAMS WITH NO STUDMARK, USE "TYP" STUD INFORMATION SHOWN ABOVE.





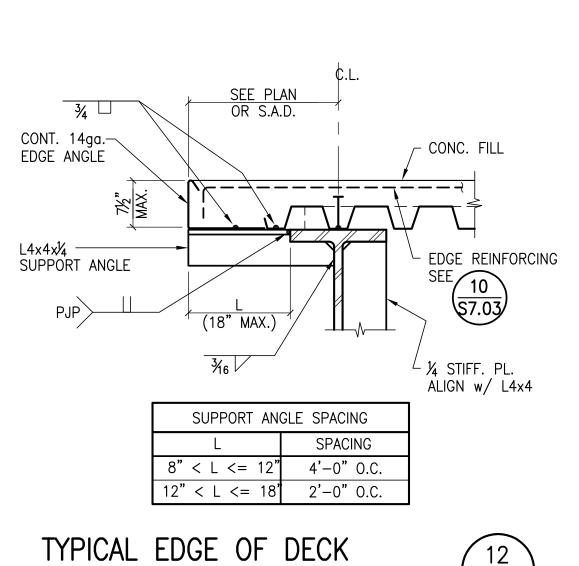
AT CORNER COLUMN

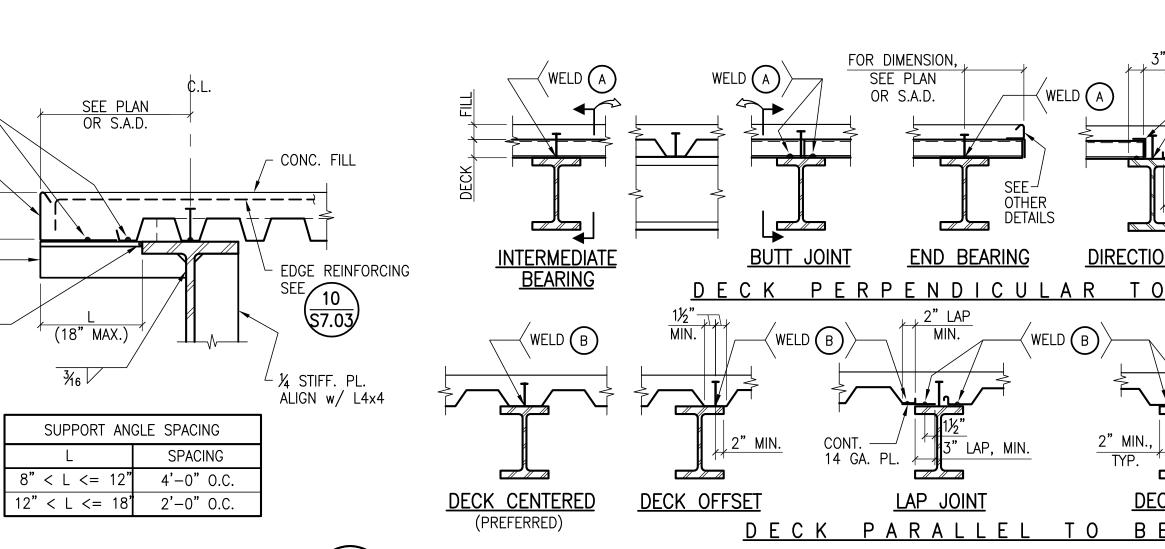


DEPRESSED DECK

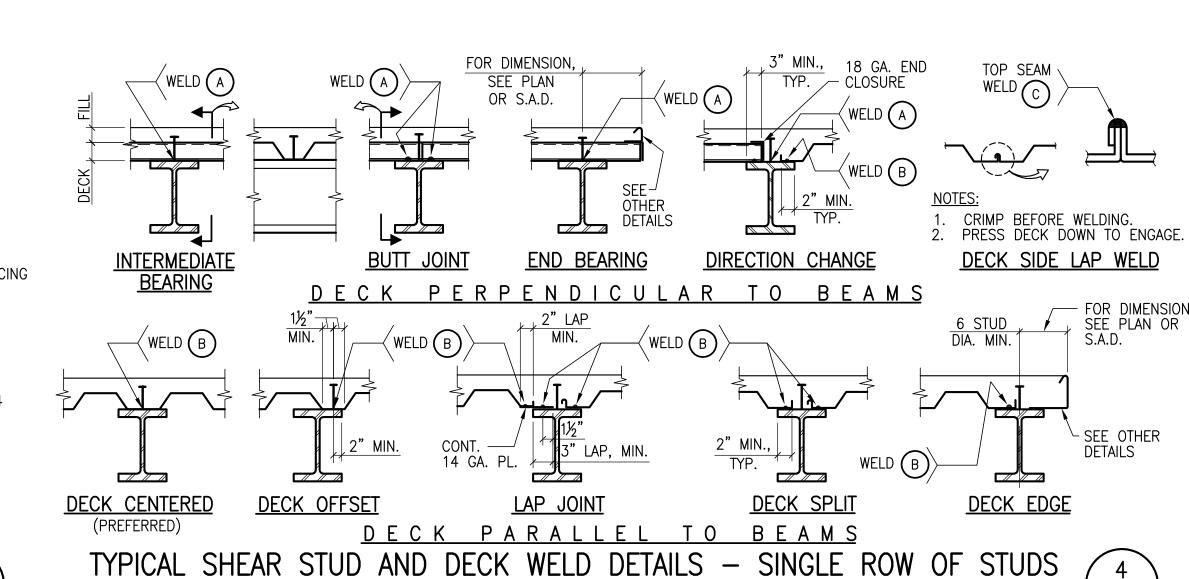
DYPICAL DECK SUPPORT DETAIL

INTERIOR W COLUMNS





WITH CONCRETE FILL



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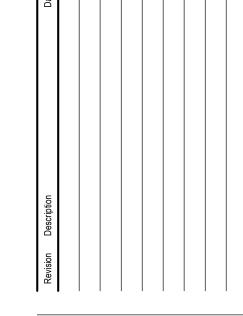


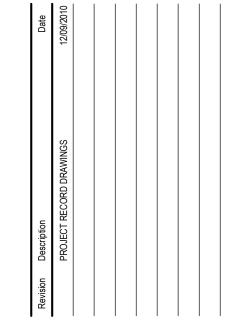
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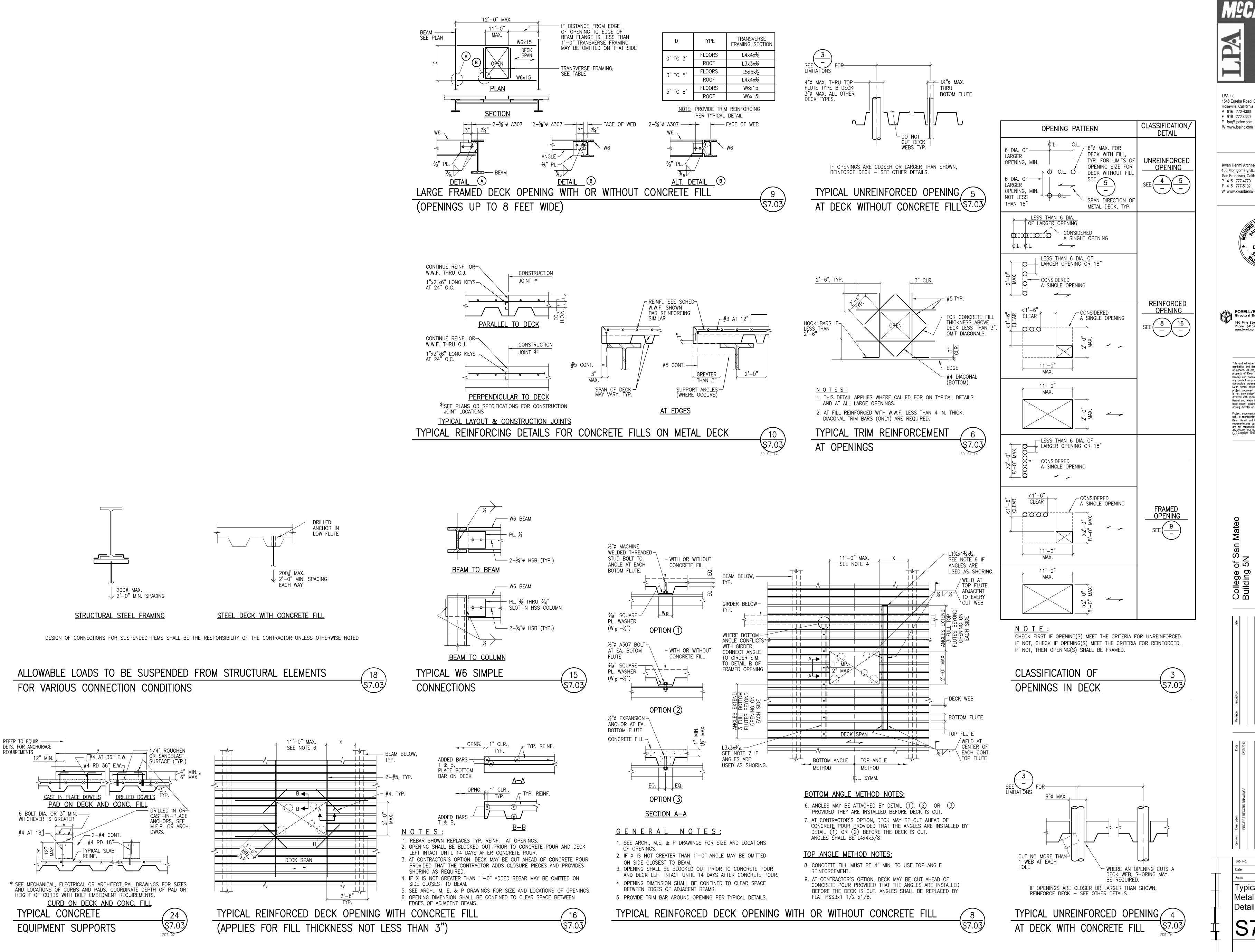
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Typical Metal Deck Details



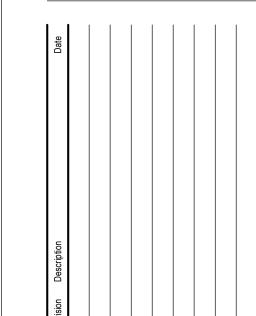
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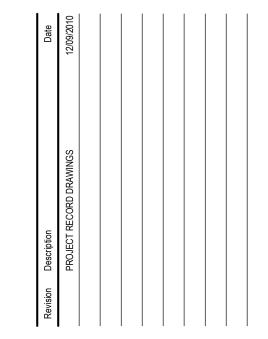
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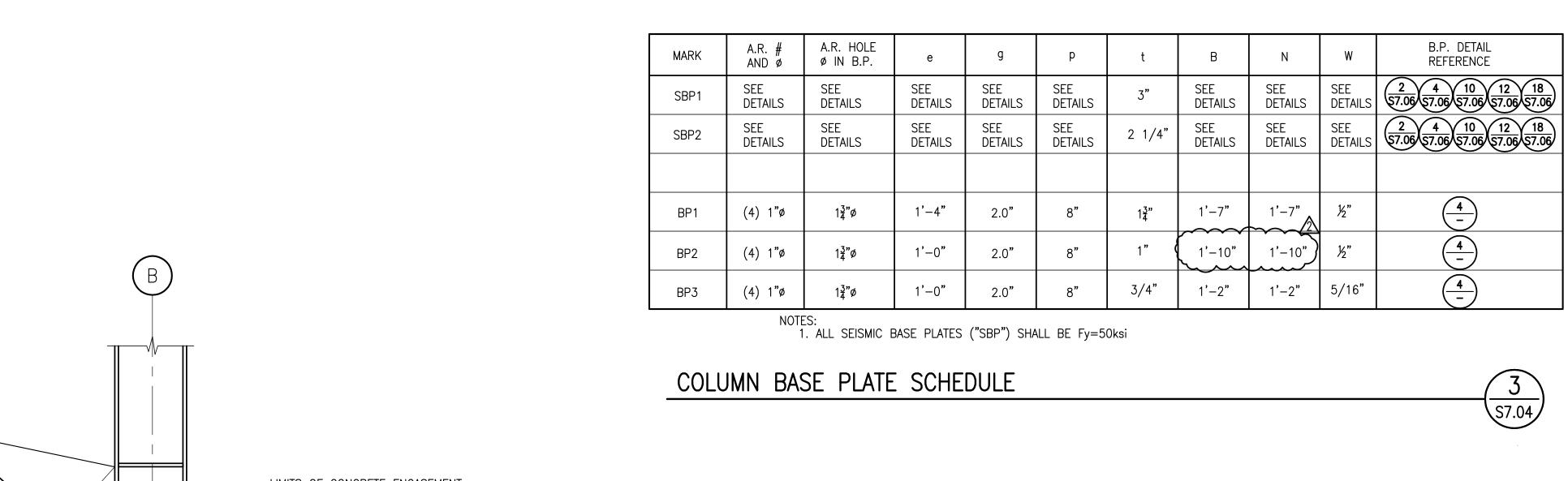
04.03.2009

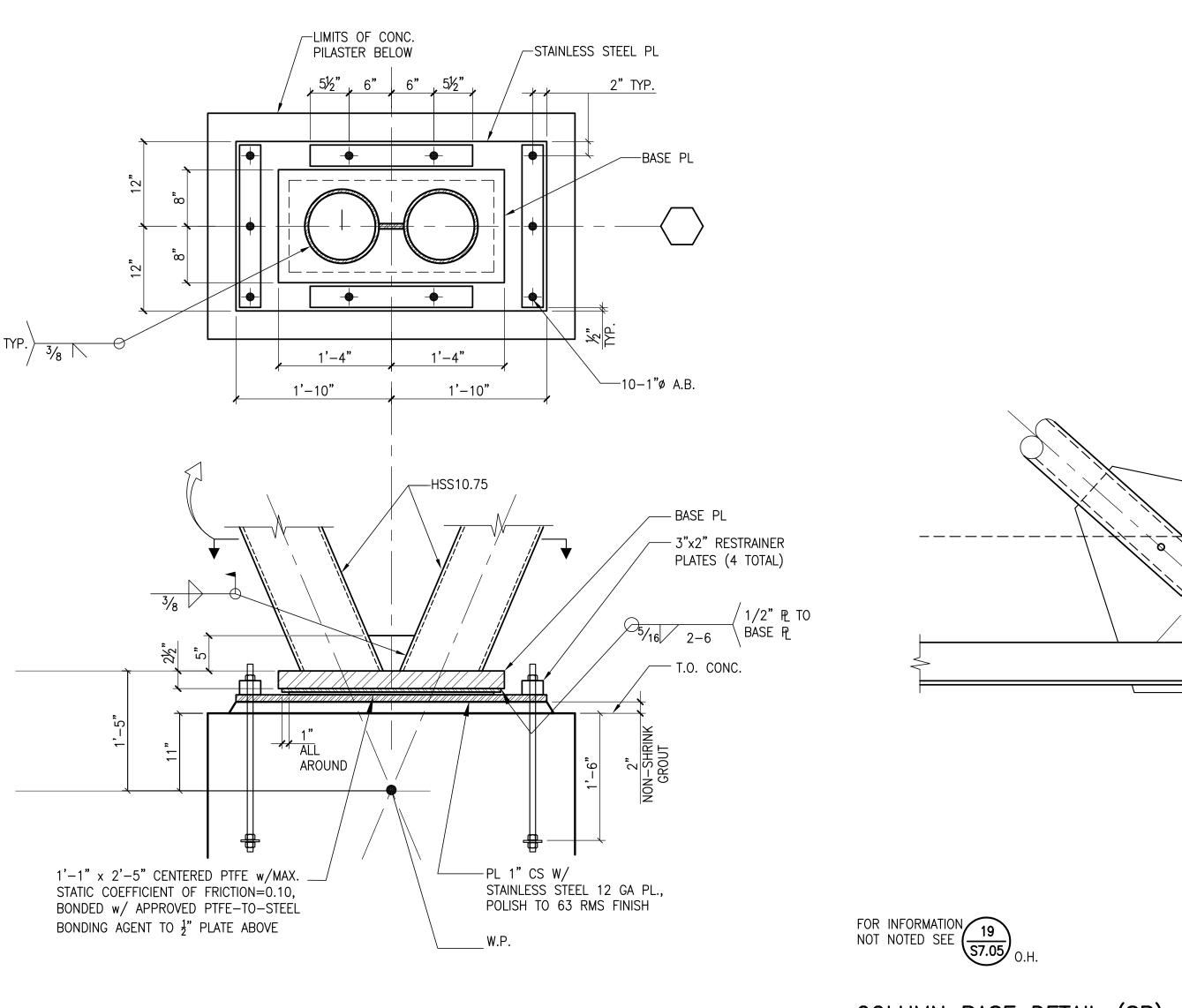
Typical Metal Deck Details

					STE	E L C	OLUM	N S	CHEDL	JLE						
COLUMN MARK	SC1	SC2	SC3	SC4	SC5	SC6	SC7	C1	C2	C3	C4	C5	C6	C7	C8	C9
ROOF T.O.S.		_														
3rd FLOOR T.O.S.												W12X40	HSS10.75x0.5 HSS10.75x0.5			1
2nd FLOOR T.O.S.	W14X68	W14X82	W12X96	W12X120	W14X159	W14X68	W12X96	W12X40	W12X53	W12X65	W14X120		HSS10.75x0.5 HSS10.75x0.5			W12X40
1st FLOOR T.O.S.							_						<u>L</u>		W12X40	
T.O. FOOTING			<u> </u>	<b>_</b>	<b>_</b>				<b>_</b>	<u> </u>	<b>_</b>				<b>_</b>	
BASE PLATE TYPE	SBP-2	SBP-1	SBP-1	SBP-1	SBP-2 *	SBP-2 *	SBP-2	BP-1	BP-1	BP-1	BP-2	BP-1	(20)		BP-1	BP-1

\*C.J.P. SPLICE APPLIED TO COLUMNS LOCATED AT GRID LINES 2F, 4A AND 5B.

# STEEL COLUMN SCHEDULE

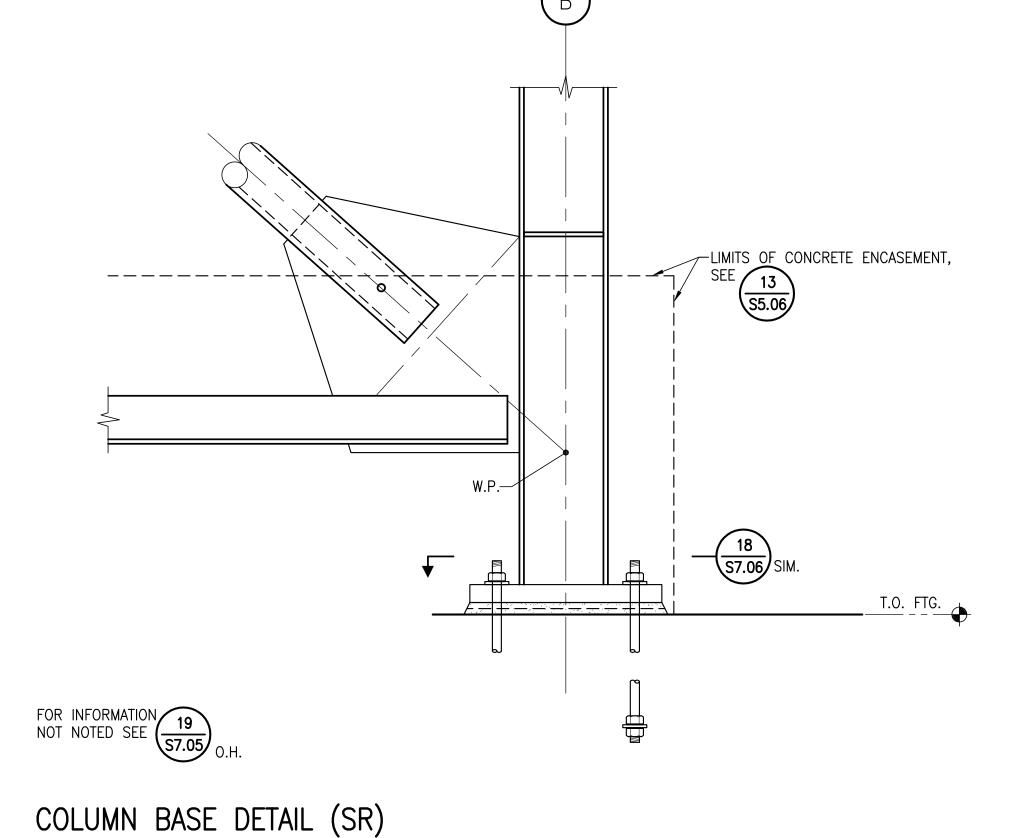


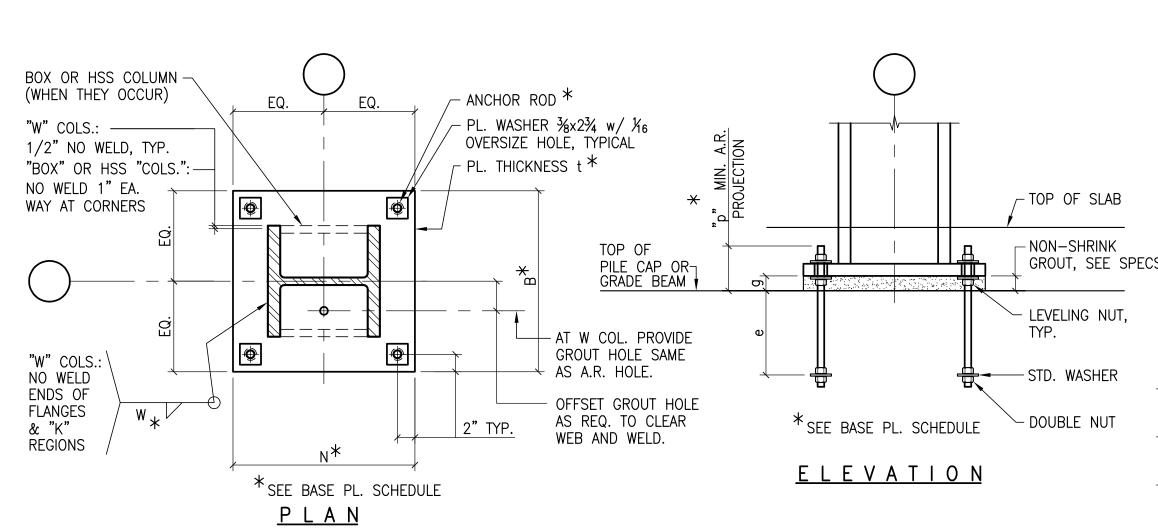


BASE DETAIL

SCALE: 1"=1'-0"

<u>20</u> \$7.04





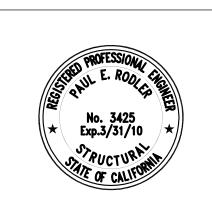
TYPICAL BASE PLATE GRAVITY COLUMNS

12 \$7.04 MECARTHY

KH

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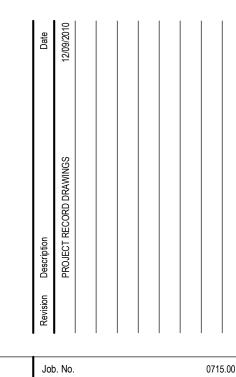
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DSA Submittal
San Mateo, CA
Developed for

Revision Description Date



Job. No. 0715.00

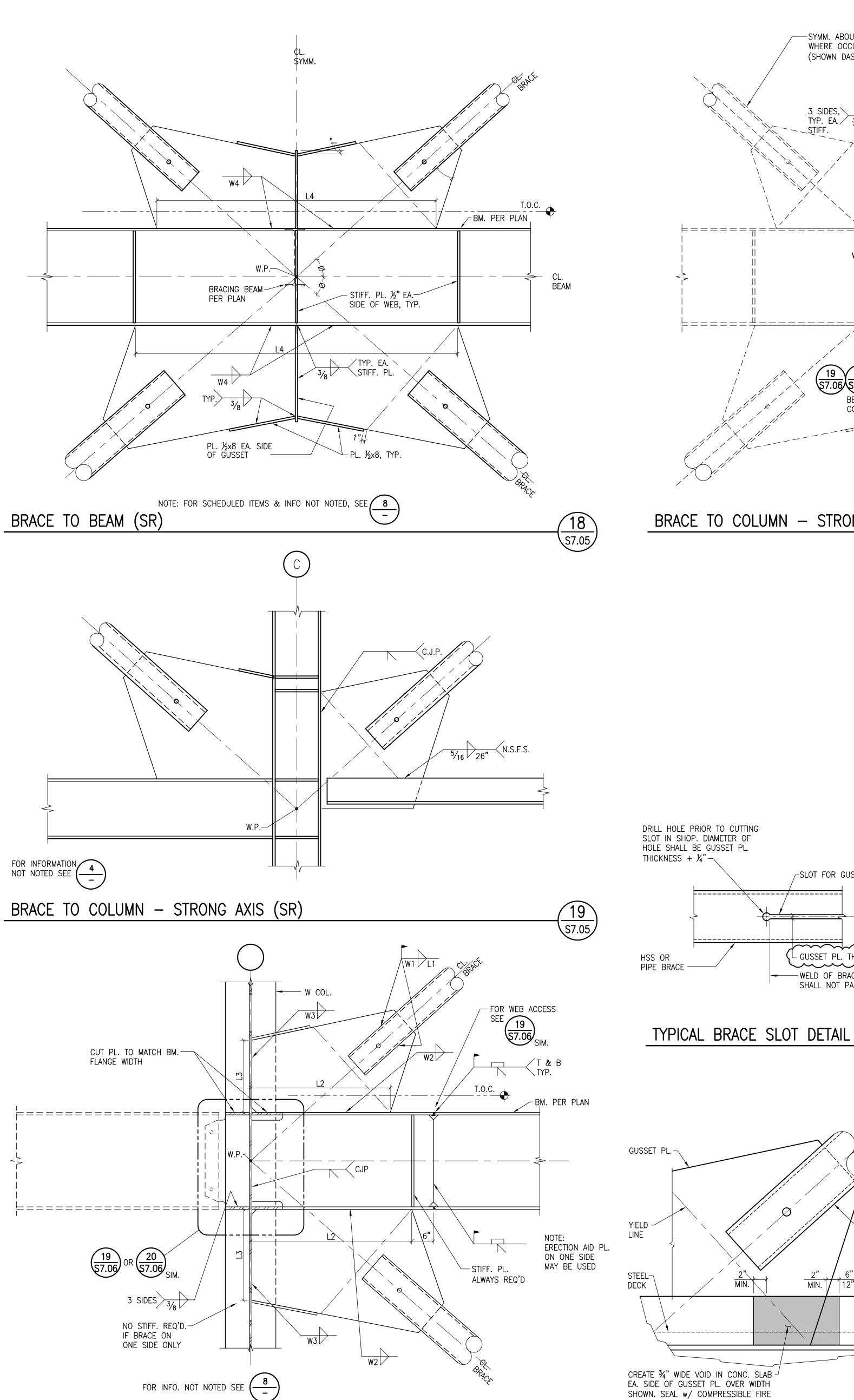
Date 04.03.2009

Scale

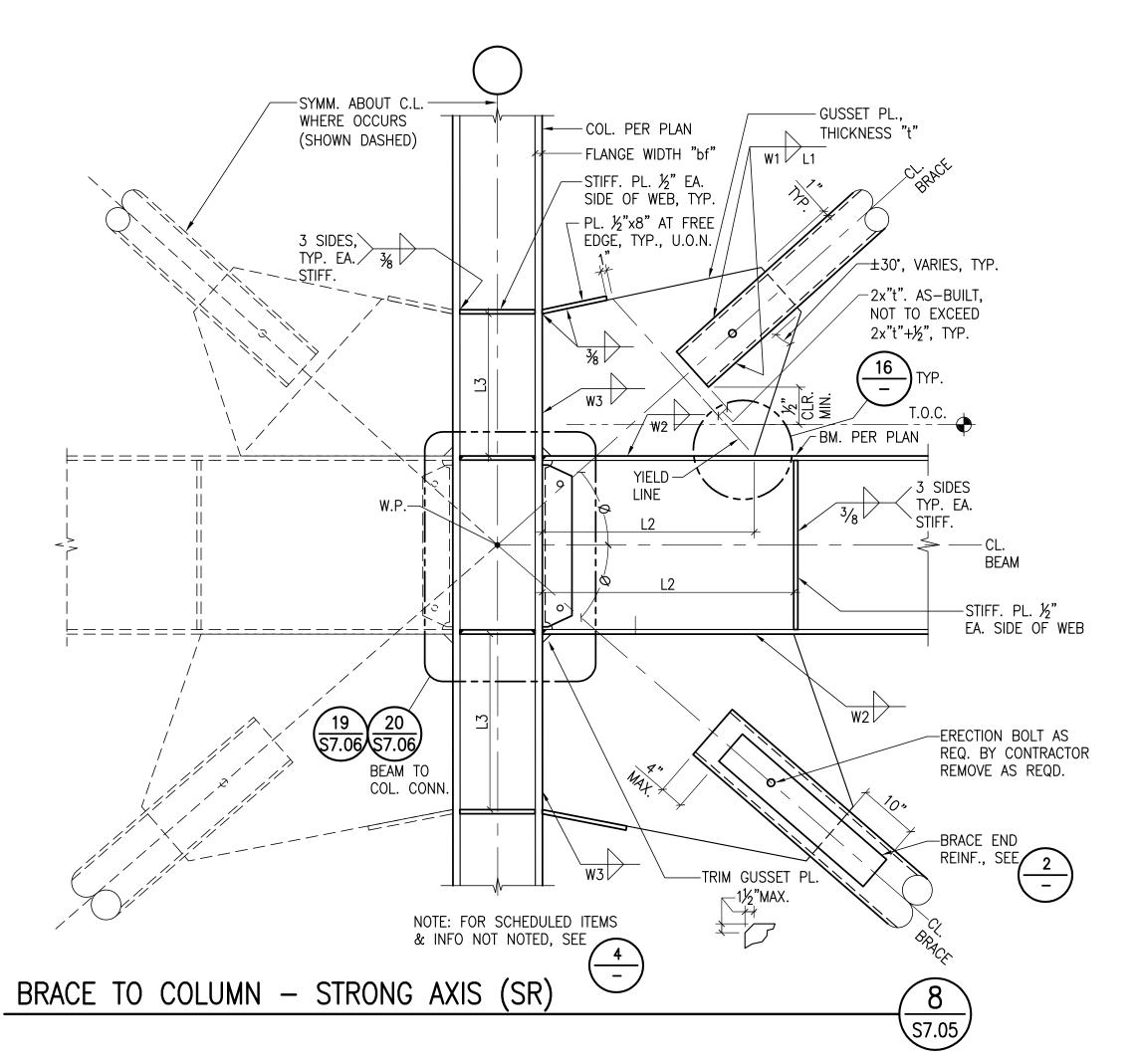
Column
Schedule and
Details

Details S7 04

<del>(4)</del> <del>(57.04)</del>



BRACE TO COLUMN - WEAK AXIS (SR)



\_SLOT FOR GUSSET PL.

GUSSET PL. THICKNESS + 1/4" MAX

─ BRACE

HEADED

STUDS

S7.05

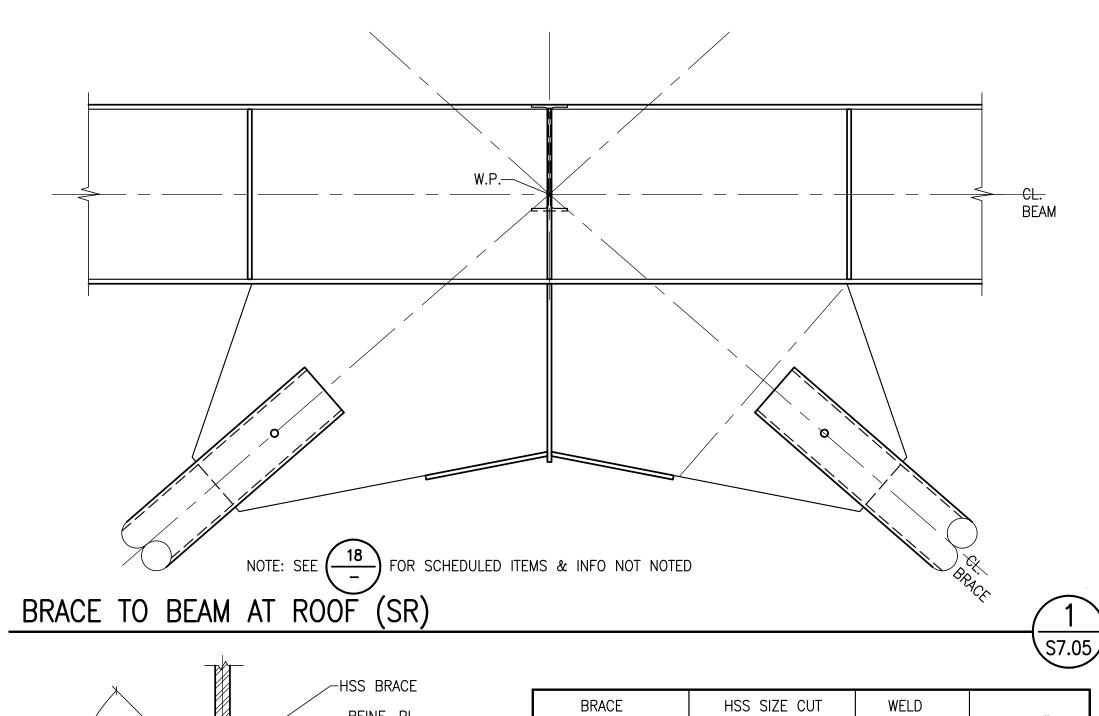
2" 6" MIN. 12" MAX.

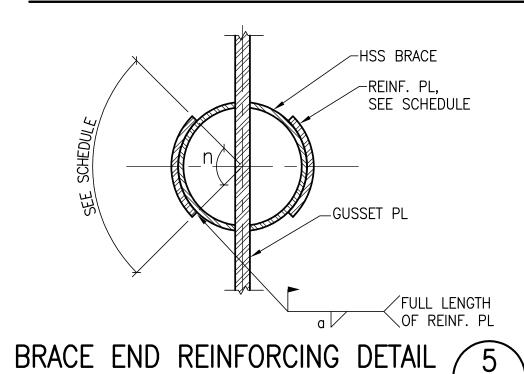
TYP. SLAB BLOCK-OUT AT GUSSETS 16

SAFING.

 $1 \ 1/2" = 1'-0"$ 

20 \$7.05





ANGLE "n" SIZE "a" FOR REINFORCING PL SIZE HSS8.625x0.322 60° HSS9.625x0.5 HSS8.625x0.5 HSS9.625x0.5 1/4 1/4 HSS10.75x0.5 HSS11.75x0.5 A106 GR. B PIPE HSS12.75x0.5 14"øx0.75

 FOR ALL INFORMATION NOT NOTED SEE DETAIL 5/-.
 HSS SIZES USED FOR REINFORCING MAY BE REPLACED BY PLATE (A572 Gr. 50) WITH MATHCHING THICKNESS AND RADIUS.
. REINFORCING PLATE MAY BE SHOP WELDED AT CONTRACTORS OPTION, BUT NO ERECTION BOLT HOLES ARE PERMITTED IN THE PLATE. BRACE END REINFORCING SCHEDULE

	37.00											\S7		
		BRAC	ED	FRAM	E C	0 N N	ECTI	0 N	SCHE	DULE	<u> </u>			
CONDITION	BRACE SIZE	BRACE ANGLE (Ø)	GUSSET THICKNESS (IN.)	L1 (IN.)	W1 (IN.)	L2 (IN.)	W2 (IN.)	L3 (IN.)	W3 (IN.)	L4 (IN.)	W4 (IN.)	REMARKS		
		28°-30°				48		32		_				
	HSS8.625x0.322	39°-42°	1"	20	5/16"	33	5/16"	26	1/4"	_	_			
		45°-46°				28		25		_				
BRACE TO COLUMN — STRONG AXIS		28°-30°				55		37		_				
8	HSS8.625x0.5	39°-42°	1 1/4"	24	3/8"	37	7/16	30	7/16"	_	_			
		45°-46°				31		29		_				
	HSS10.75x0.5	28°-30°	1 1/4"	26	7/16"	58	3/8"	41	7/16"		-			
	HSS12.75x0.5	28°-30°	1 3/8	26	1/2"	61	5/16"	43	7/16"		_			
	HSS8.625x0.322	28°-30°	1"	20	5/16"	54	5/16"	32	1/4"	_	_			
BRACE TO COLUMN —	11000.020.022	45*-46*	'	20	,,,,,	34	7, 12	23	,	_				
WEAK AXIS	HSS8.625x0.5	28°-30°	1 1/4"	24	3/8"	59	3/8"	37	7/16"	_	_			
$\frac{20}{-}$	1100010207010	45°-46°	,		,	38	,,,,	27	.,	_				
	HSS10.75x0.5	28°-30°	1 1/4"	26	7/16"	58	3/8"	41	7/16"		_			
	HSS12.75x0.5	28°-30°	1 3/8"	26	1/2"	59	5/16"	41	7/16"		_			
	HSS8.625x0.322	39°-42°	1"	20	5/16"	_	1/4"	25	1/4"	83	1/2"			
BRACE TO BEAM AT		45°-46°				_		23		66	,			
MIDSPAN 18	HSS8.625x0.5	39°-42°	1 1/4"	24	3/8"	_	3/8"	29		89	89 —————————9/16"			
		45*-46*			,	_	·	27		75				
	HSS10.75x0.5	39*-42*	1 1/4"	26	7/16"	_	3/8"	33	7/16"	95	- - 5/8"			
		45°-46°				-	·	30	<u> </u>	83				
BRACE TO	HSS8.625x0.5	39°-42°	1 1/4"	24	3/8"	31	3/8"	31	7/16"	_	_			
FOUNDATION— STRONG AXIS COLUMN		28°-30°				49		41		_	_	GUSSET PLATES LOCATED AT BASE OF GRID		
	HSS10.75x0.5	39°-42°	1 1/4"	26	7/16"	35	3/8"	35	7/16"	_	_	LOCATION J/4 AND A/4 ARE 2" THICK WITH NO FREE EDGE STIFF. PL. REQUIRED		
<u>2</u> <u>\$7.06</u>		45°-46°				32		36		_				
	HSS12.75x0.5	28°-30°	1 3/8"	26	1/2"	51	5/16"	43	7/16"	_	_			
BRACE TO FOUNDATION— WEAK AXIS	HSS10.75x0.5	28°-30°	1 1/4"	26	7/16"	55	3/8"	41	1/2"	_	_			
WEAK AXIS S7.06		45*-46*				36		32		_				

NOTES:

1. WELD SIZES FOR BRACE CONNECTIONS SHALL BE AS SHOWN IN THIS SCHEDULE.

2. SEE BRACED FRAME ELEVATIONS FOR BRACE SIZES.

3. WELD LENGTHS SHOWN ARE MINIMUM. WELD ENTIRE CONTACT SURFACE BETWEEN MEMBERS.

SEE DETAIL 15/- FOR TYPICAL BRACE SLOT DETAIL.
 BRACE AND GUSSET ARE CENTERED ON COLUMN AND BEAM.
 GUSSET PL. SHALL BE A572 GRADE 50 STEEL.

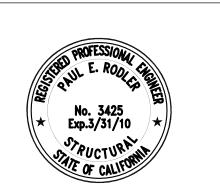
7. WELDS W2, W3, & W4 AT GUSSET PLATES MAY BE REPLACED WITH CJP WELDS AT CONTRACTOR'S OPTION.

BRACED FRAME SCHEDULE



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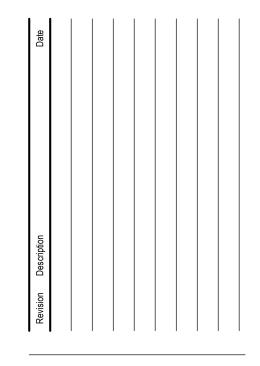


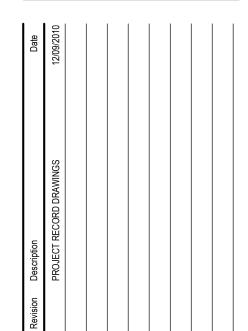
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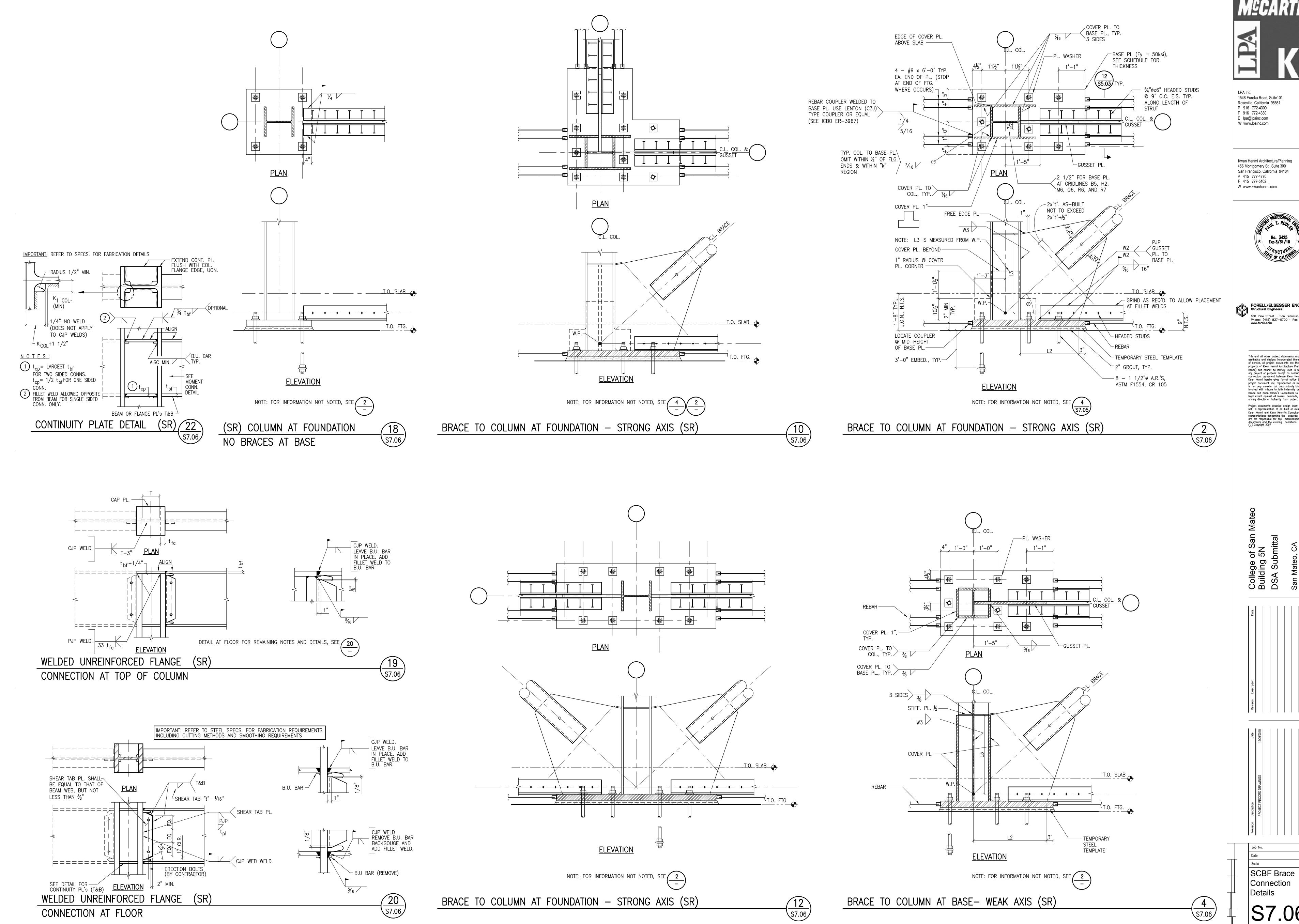
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SCBF Brace Connection Details

\$7.05

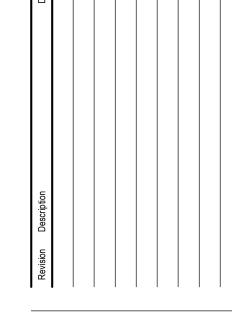


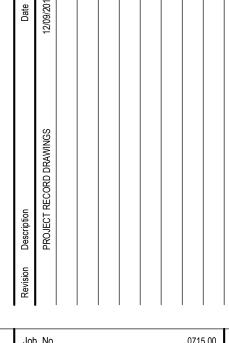


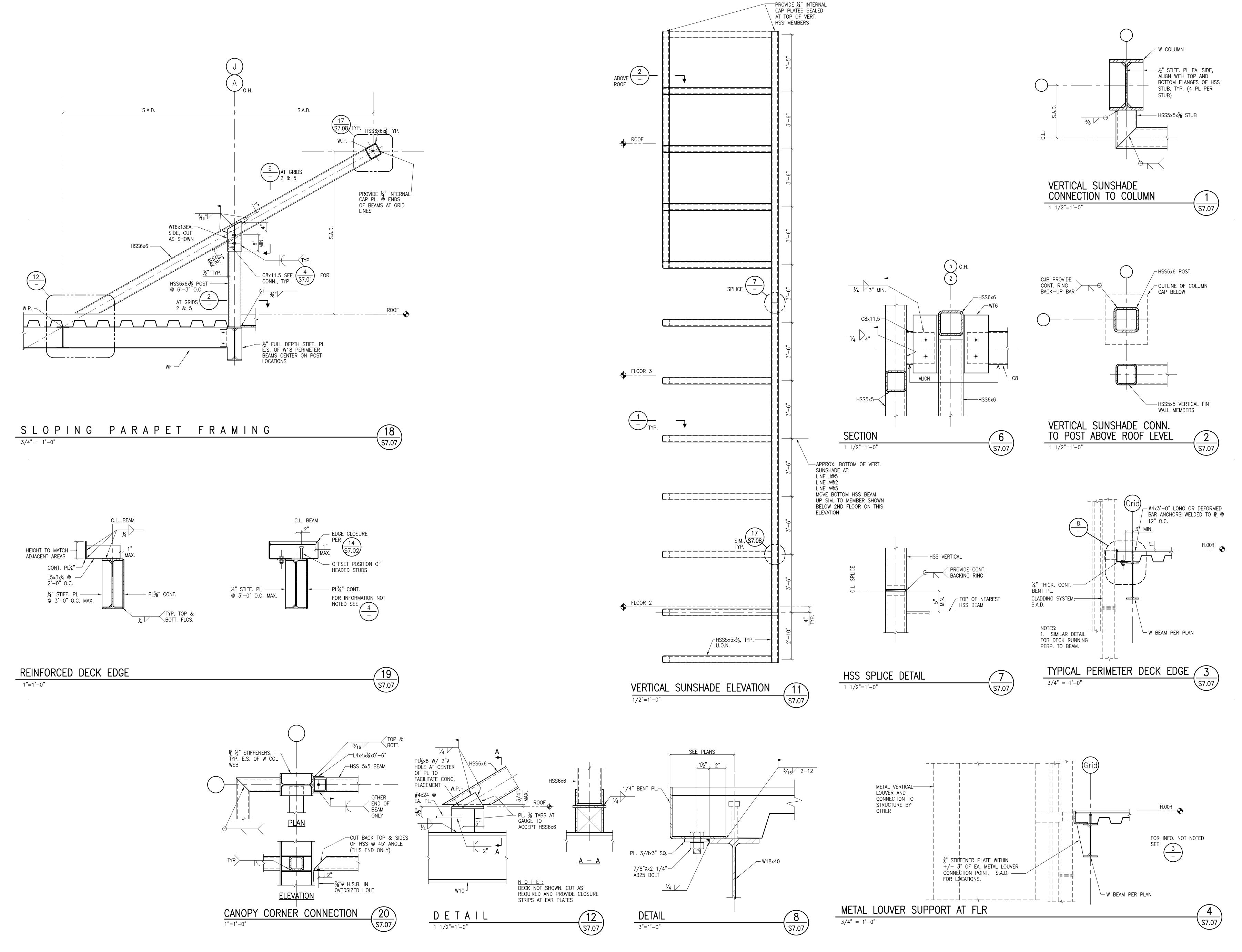
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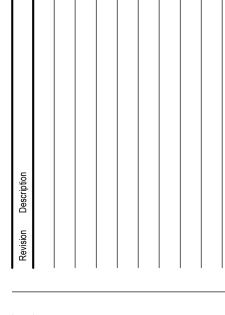
Building 5N

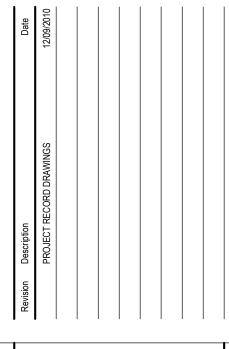
Building 5N

DSA Submittal

San Mateo, CA

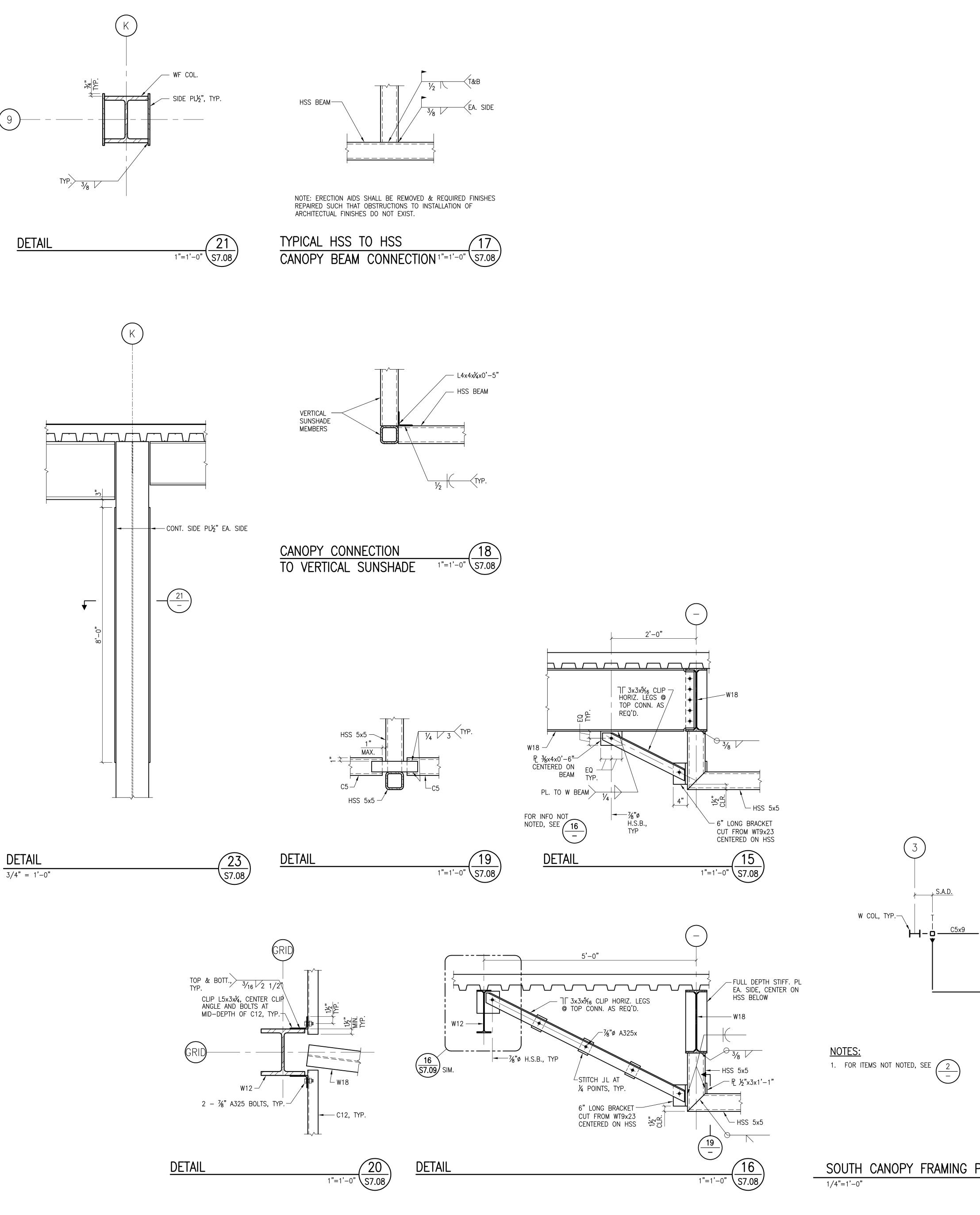
Developed for

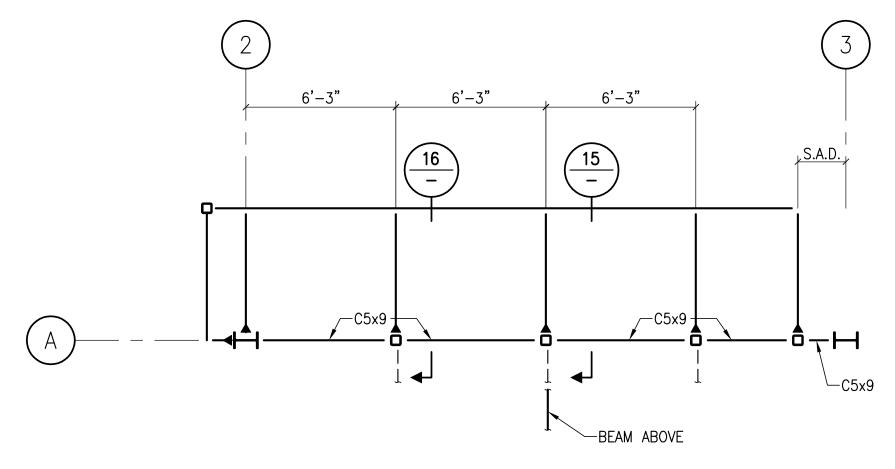




Job. No. 0715.00
Date 04.03.2009
Scale

Steel Details

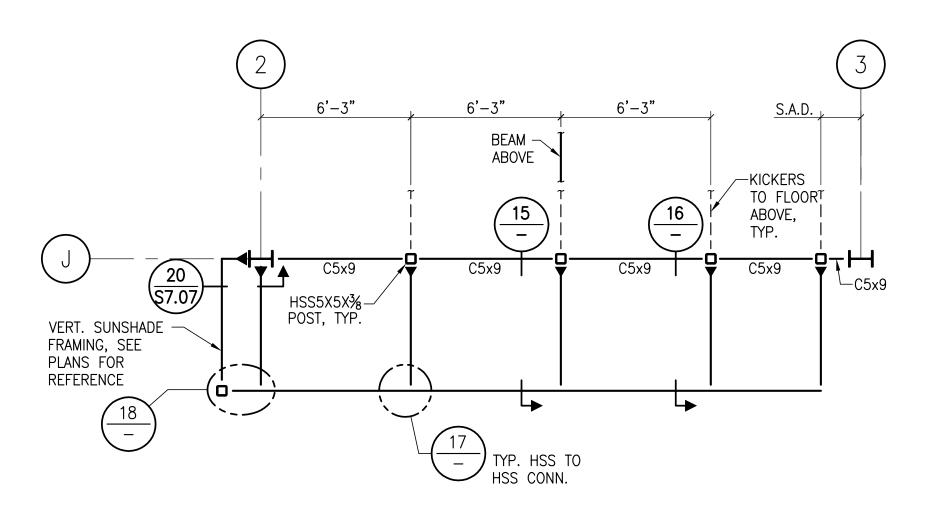




NOTES:

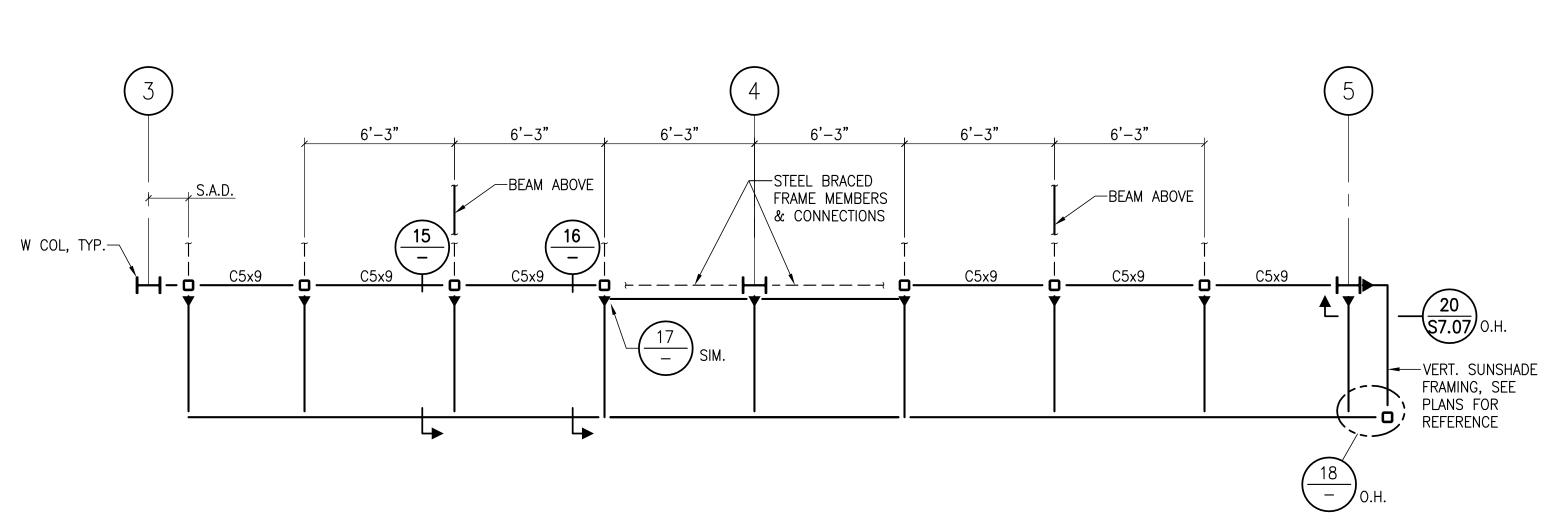
1. FOR ITEMS NOT NOTED, SEE  $\begin{pmatrix} 17 \\ - \end{pmatrix}$ 

NORTH CANOPY FRAMING PLAN (3RD FLOOR) 1/4"=1'-0"



1. FRAMING MEMBERS SHALL BE HSS5X5X¾ U.O.N. 2. LOCATE BOTTOM OF STEEL AT PROPER ELEVATION FOR SUPPORT OF GLASS PANELS, S.A.D.

SOUTH CANOPY FRAMING PLAN (2ND FLOOR) 1/4"=1'-0"



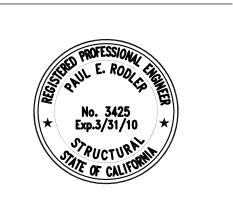
SOUTH CANOPY FRAMING PLAN (3RD FLOOR)

1/4"=1'-0"



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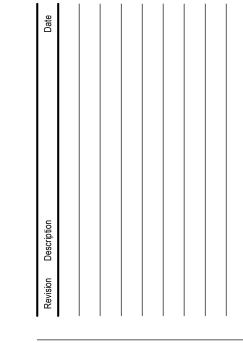
S7.08

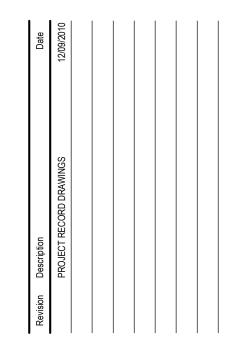
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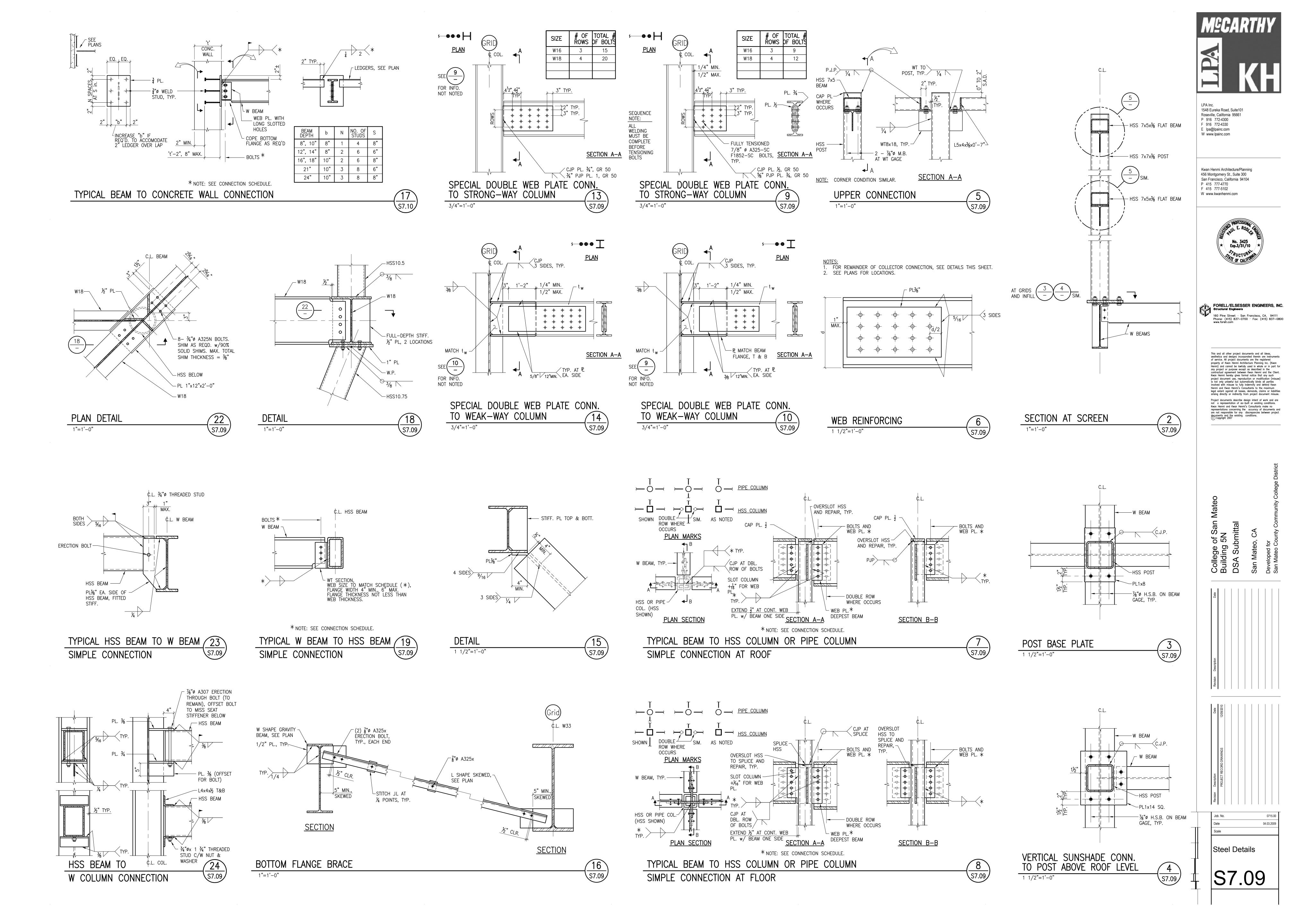
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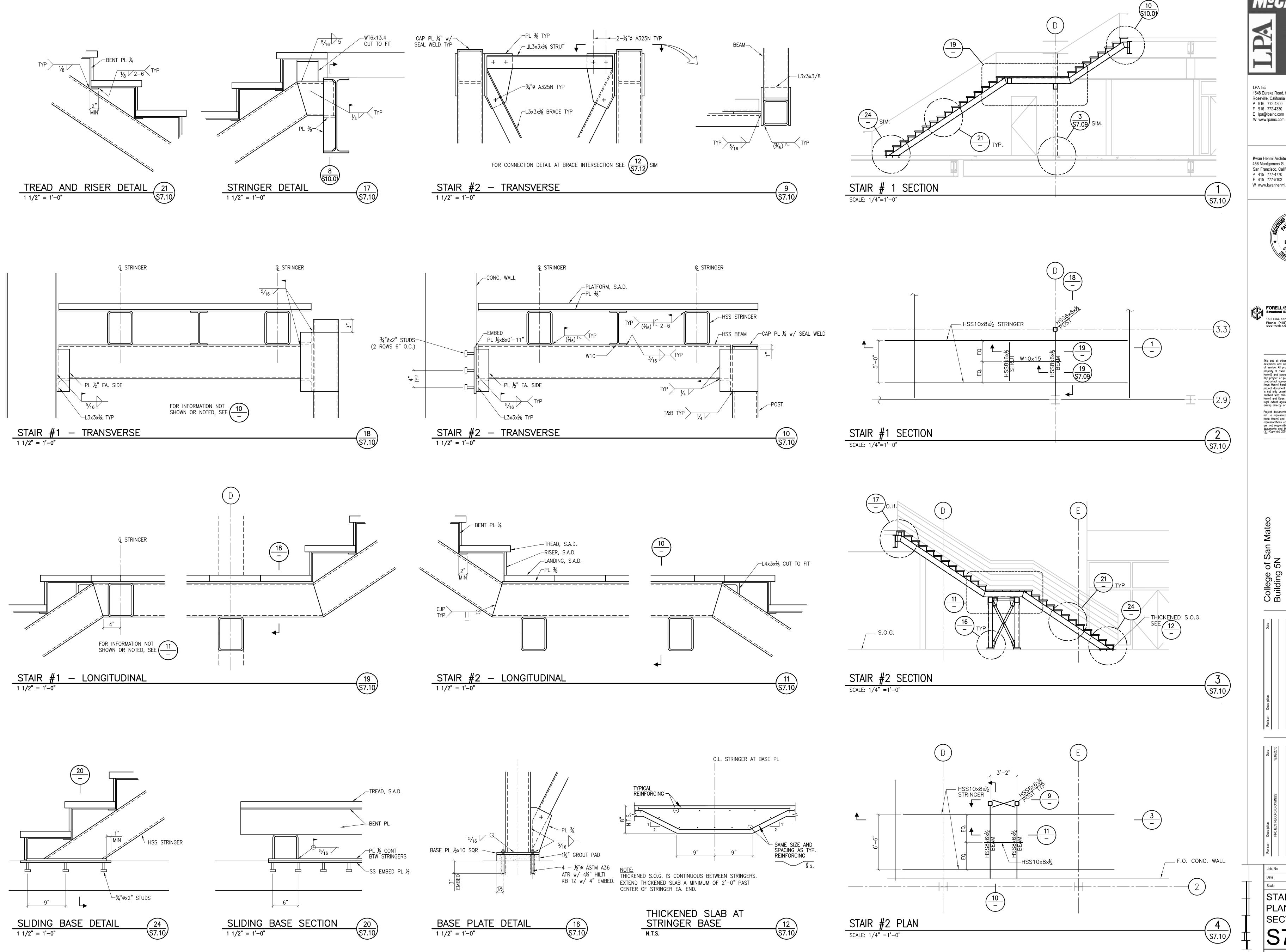


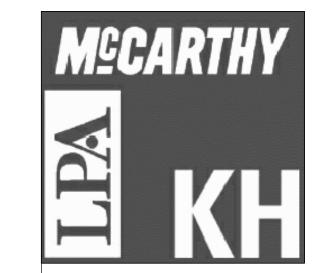


Steel Details

<u>S7.08</u>







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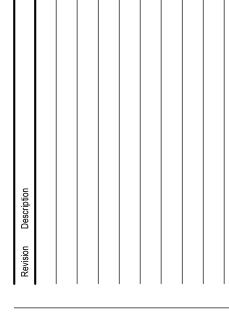
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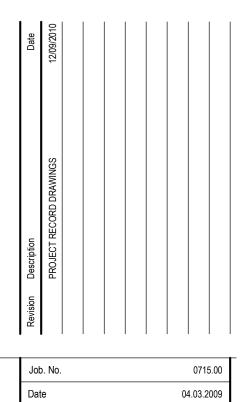


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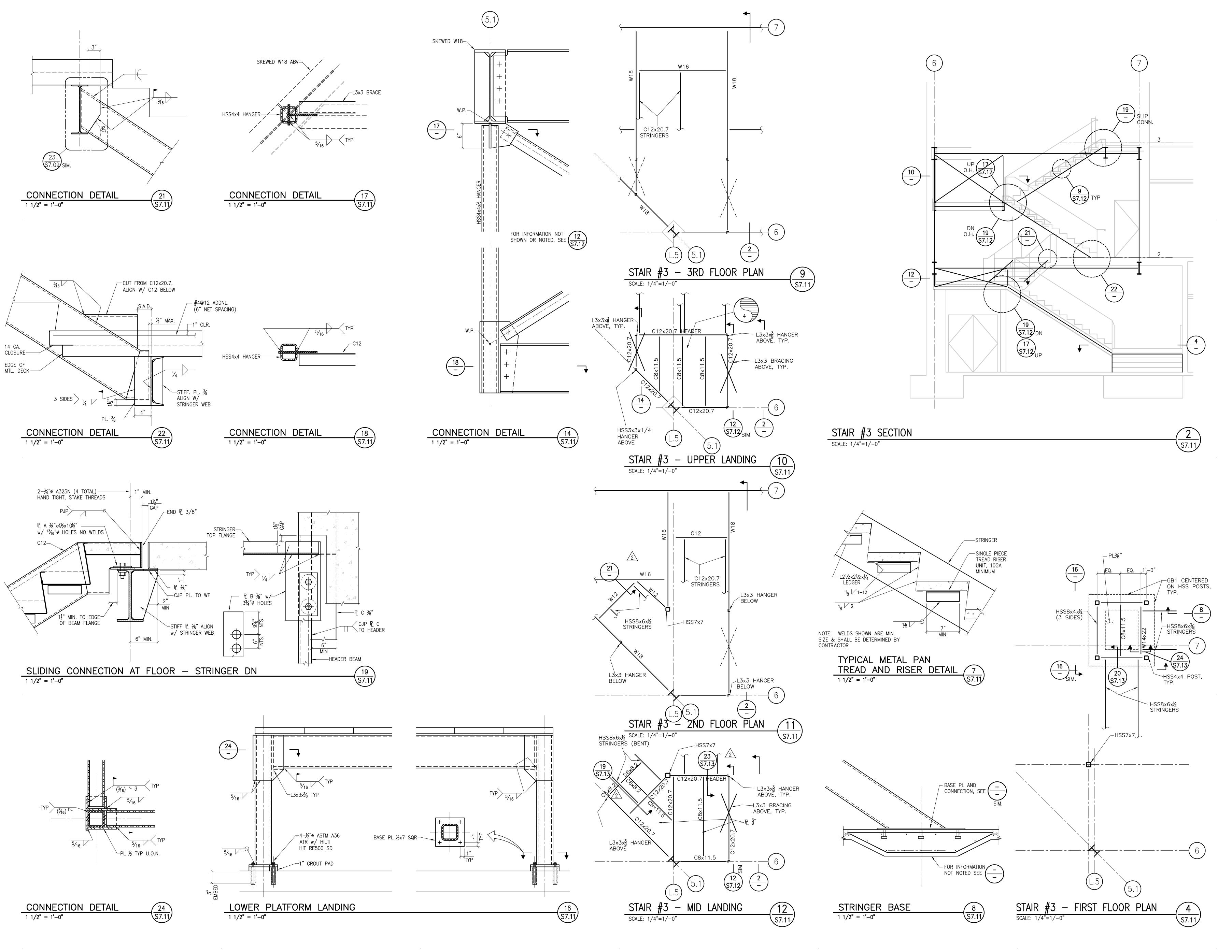
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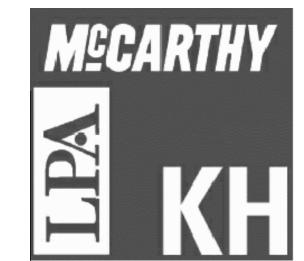
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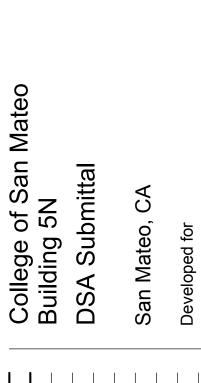


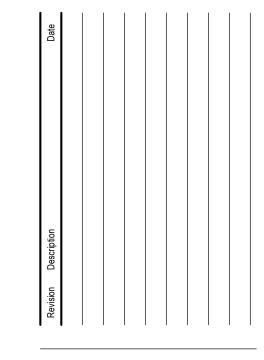
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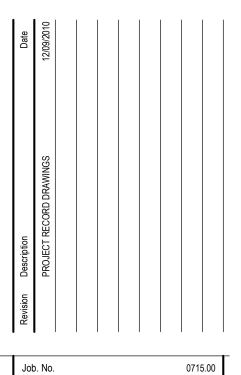
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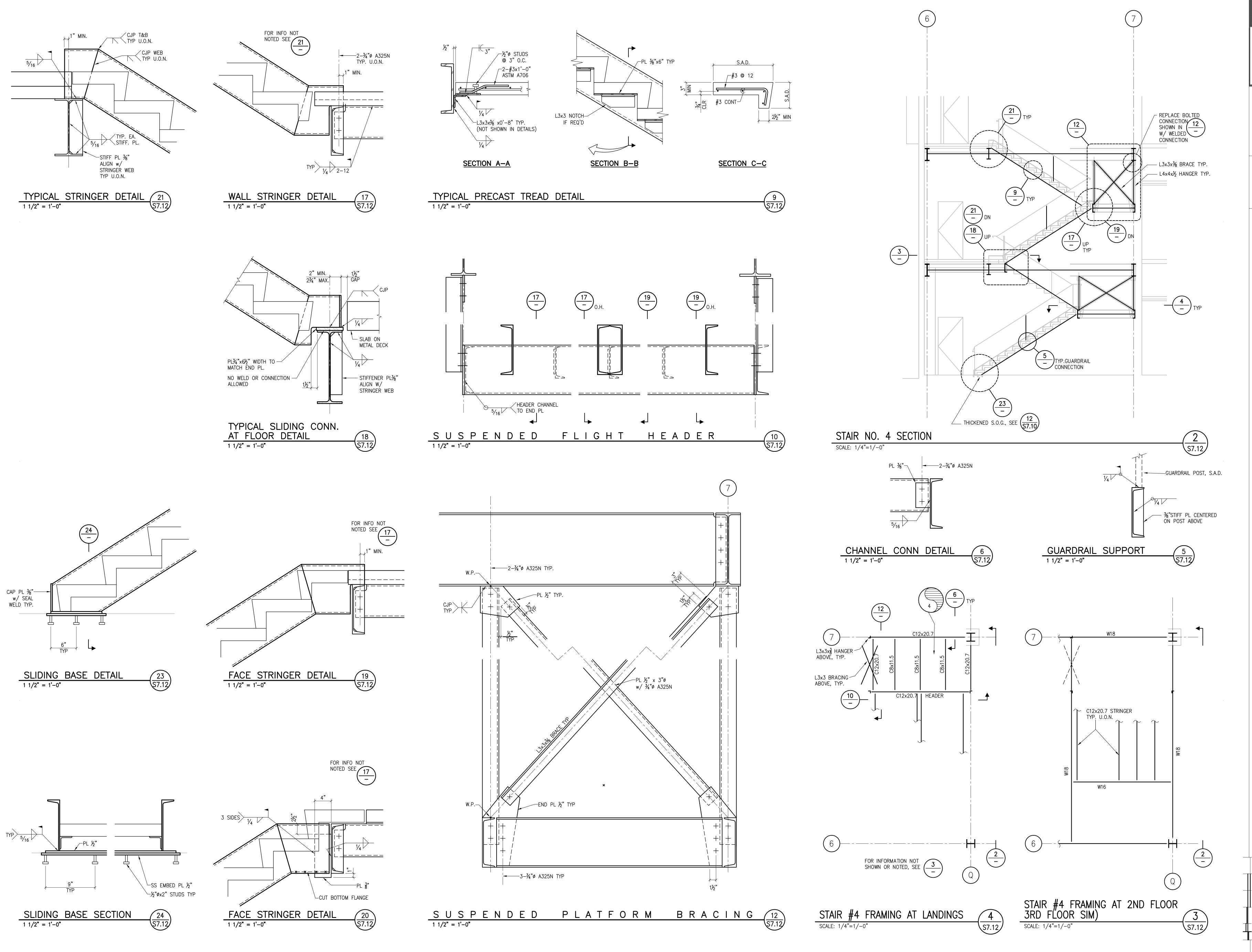




Stair FRMG.
PLANS AND
SECTIONS

57.11

04.03.2009





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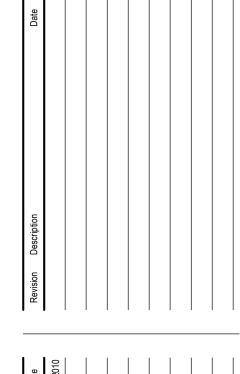
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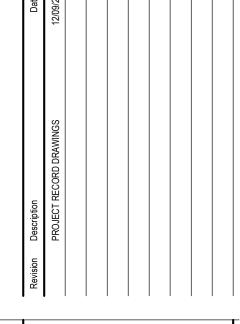
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College of San Mateo
Building 5N
DSA Submittal
San Mateo, CA

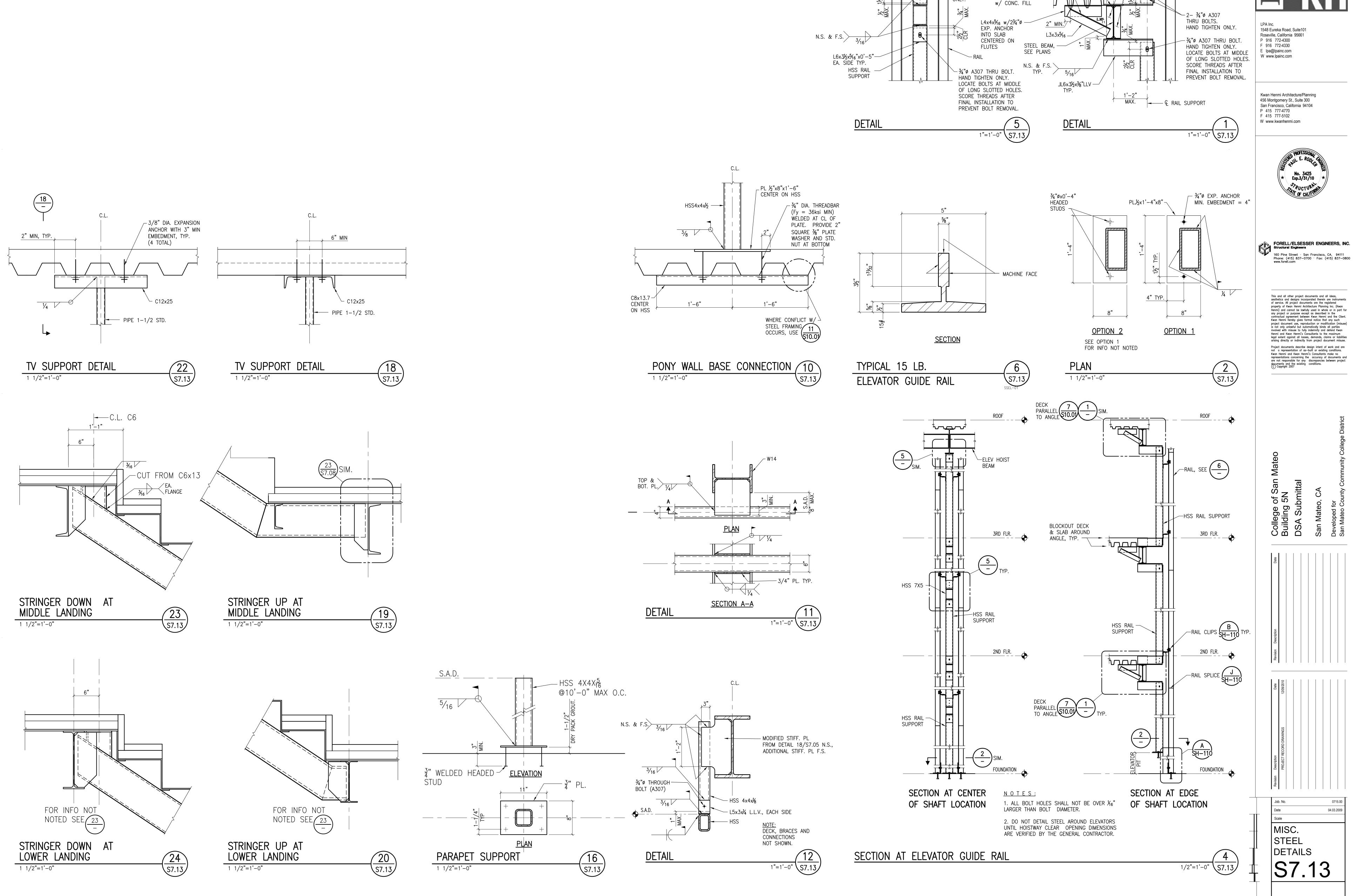


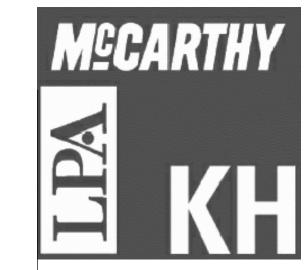


Stair Framing
PLANS, SECTIONS

AND DETAILS

S7.12





BLOCKOUT DECK

& SLAB AROUND -

ANGLE, TYP.

N.S. & F.S. \ TYP. /

NS & FS, TYP., EA. END

THRU BOLTS.
HAND TIGHTEN
ONLY.

\_STIFF. PL¾ EA. SIDE ALIGN

ABOVE & BELOW

W/ VERT. LEGS OF ANGLES

RAIL

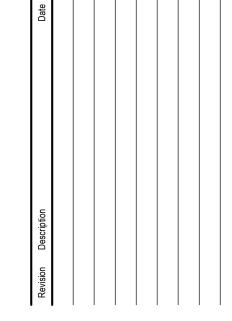


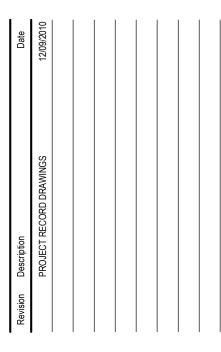
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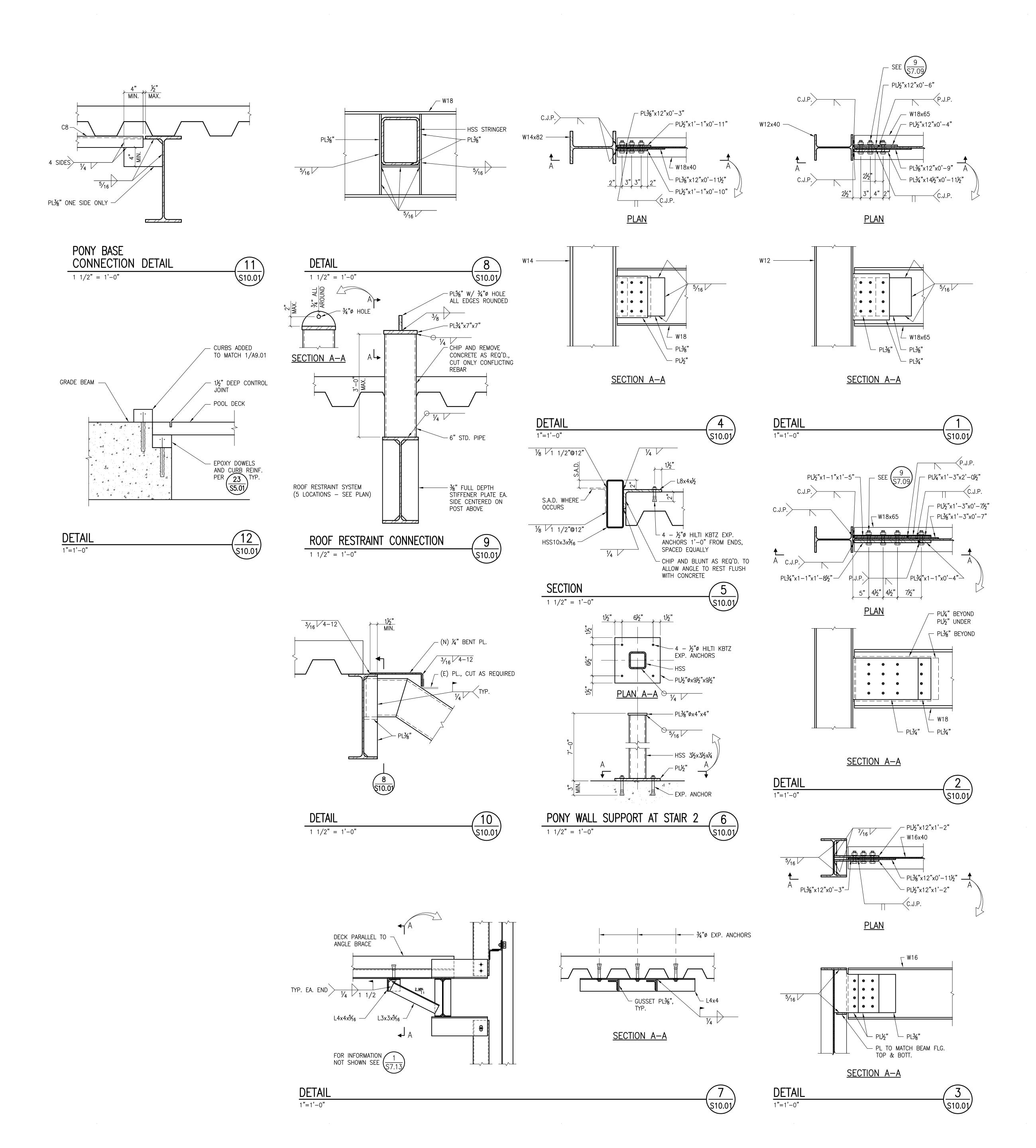
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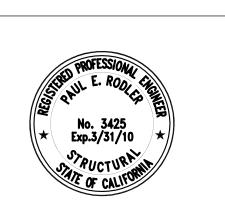
04.03.2009





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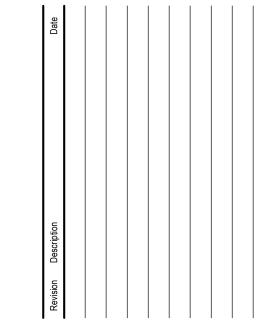
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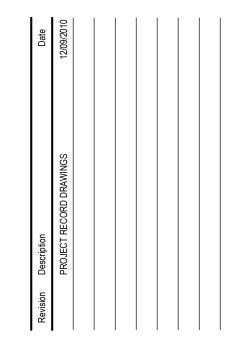
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Suilding 5N

San Mateo, CA

Developed for





Job. No. 0715.00
Date 04.03.2009
Scale

Sections and Details

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