SKYLINE COLLEGE

STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING

SAN MATEO COUNTY COMMUNITY COLLEGE DISTRICT - 3401 CSM DRIVE, SAN MATEO, CA.

FILE NO. 41-C1/APPL. NO. 01-106658

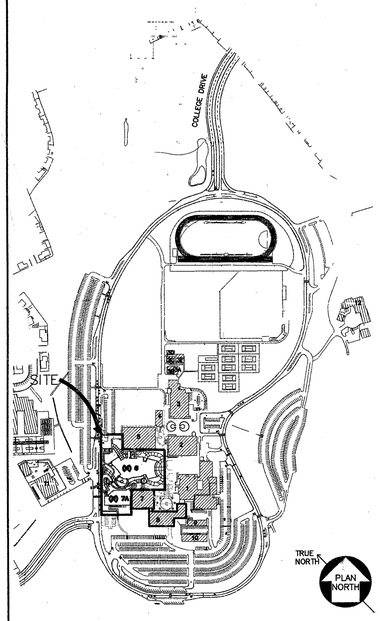
DSA INCREMENT ONE SUBMITTAL

OCTOBER 21, 2004 **PROJECT RECORD DOCUMENTS**

PROJECT DIRECTORY

DESIGN/ BUILDER	HENSEL PHELPS CONSTRUCTION 2107 NORTH FIRST STREET, SUITE 101 SAN JOSE, CA 95131	(408) 452-1800 (408) 452-1855	MIKE MEREDITH
EXECUTIVE ARCHITECT:	THE STEINBERG GROUP 60 PIERCE AVE. SAN JOSE, CA 95110	408) 295-5446 408) 295-5928 FAX	RON SAIKI, AIA MICHAEL CERVANTES OLIVIA TROUARD
ASSOCIATE ARCHITECT:	FENTRESS BRADBURN ARCHITECTS 421 BROADWAY DENVER, CO 80203	(303) 722-5000 (303) 722-5080 FAX	PATRICK STANLEY GREG GIDEZ
CIVIL ENGINEER:	BKF CIVIL ENGINEERS 981 RIDDER PARK DRIVE, SUITE 100 SAN JOSE, CA 95131	(408) 467-9126 (408) 467-9199 FAX	SCOTT SCHORK JEREMY MARELLO
STRUCTURAL ENGINEER:	CROSBY GROUP STRUCTURAL ENGINEERS 726 MAIN STREET REDWOOD CITY, CA 94063	(650) 367-5352 (650) 367-8189 FAX	COLIN BLANEY TEJAS GOSHALIA
LABORATORY PLANNERS:	AHSC-McLELLAN COPENHAGEN LAB PLANNING/DESIGN 160 PINE STREET, SUITE 305 SAN FRANCISCO, CA 94111	(206) 624-5300 (206) 624-5190	REZA AGAHIAN DAN MARKEY
MECHANICAL DESIGN/BUILD ENGINEERS	CRITCHFIELD MECHANICAL, INC. 4085 CAMPBELL AVENUE MENLO PARK, CA 94025	(650) 614-4406 (650) 321-1798 FAX	KEVIN FIELDING JENNIFER FRASER
ELECTRICAL DESIGN/BUILD CONTRACTOR	DECKER ELECTRICAL 147 BEACON STREET SOUTH SAN FRANCISCO, CA 94080	(650) 635-1392 (650) 635-1732 FAX	DAVE BRANDI
ELECTRICAL ENGINEERS	RANDALL LAMB 208 UTAH STREET, SUITE 201 SAN FRANCISCO, CA 94103	(415) 512-9771 (415) 512-8940	AARON STRAUCH
PLUMBING DESIGN/BUILD CONTRACTOR	LESCURE COMPANY 3867 MT. DIABLO ROAD LAFAYETTE, CA 94549	(925) 283-2528 (925) 283-1630 FAX	STEVE TAKAHASHI
TITLE 24 ENERGY CONSULTANT	BUILDER'S ENERGY SERVICES 670 GLENVEW COURT GILROY, CA 95020	(408) 842-8241	DARREL KELLY
LANDSCAPE ARCHITECT	BEALS ALLIANCE 2455 THE ALAMEDA, SUITE 200 SANTA CLARA, CA 95050	(408) 850-3416 (408) 985-7260 FAX	CORBIN SCHNEIDER DEBORAH LUCKING
CONSTRUCTION MANAGER:	SWINERTON MANAGEMENT & CONSULTING 3300 COLLEGE DRIVE, BLDG 12 SARATOGA, CA 95070	(650) 738-7047 (650) 738-7043 FAX	DOUG HENRY

CAMPUS PLAN



LEGEND:

BUILDING NUMBER	BUILDING NAME	DSA/ORS NUMBER
1	ADMINISTRATIVE/FINE ARTS	27746
2	CAMPUS CENTER	27746
3	GYMNASIUM	27746/01-106350
3A	RELOCATABLE CLASSROOM	01-104510
3B	RELOCATABLE CLASSROOM	01-100255
3C	RELOCATABLE CLASSROOM	01-100255
3D	RELOCATABLE CLASSROOM	01-104081
3E	RELOCATABLE CLASSROOM	01-104081
4	BOOKSTORE (RELOCATABLE)	32351
5	LIBRARY/LEARNING RESOURCE CENTER	60099
6	STUDENT SUPPORT & COMMUNITY SERVICES CENTER	01-106658
7	SCIENCE	27746/01-104511
7A	SCIENCE ANNEX	01-106658
8	TECHNICAL/VOCATIONAL	27746/01-106575
9	AUTOMOTIVE	40530
10	AUTOMOTIVE	53721
11	CHILD CARE CENTER (RELOCATABLE)	64904
12	FACILITIES MAINT. CTR. (RELOCATABLE)	01-104070

PROJECT DESCRIPTION

SKYLINE COLLEGE BUILDING 6 AND 7A
STUDENT SUPPORT AND COMMUNITY SERVICES CENTER AND SCIENCE ANNEX

THE WORK INCLUDES CONSTRUCTION OF A NEW STAND ALONE 2 STORY STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND A NEW 3 STORY SCIENCE ANNEX. BOTH BUILDINGS ARE IN THE CENTRAL CAMPUS AREA ADJACENT TO EXISTING STRUCTURES. THE NEW SCIENCE ANNEX IS DIRECTLY ADJACENT TO THE EXISTING SCIENCE BUILDING. BOTH NEW BUILDINGS WILL BE TYPE II, 1 HOUR RATED, STEEL FRAMED STRUCTURES WITH FIRE SPRINKLERS. BUILDING UTILITIES WILL BE CONNECTED TO EXISTING CAMPUS INFRASTRUCTURE.

ADJACENT SITE AND LANDSCAPE WORK ARE ALSO PART OF THE PROJECT SCOPE. ALL NEW CONSTRUCTION WILL BE DESIGNED TO BE ACCESSIBLE. ADJACENT ACCESSIBLE PARKING WILL BE PROVIDED.

THE WORK IS BEING DESIGNED AND CONSTRUCTED AS A DESIGN/BUILD PROJECT. DUE TO SKYLINE'S REQUIREMENTS TO MEET THEIR EDUCATIONAL MASTER PLAN, FACILITIES MASTER PLAN AND BOND FUND COMMITMENTS, THE PROJECT IS BEING DIVIDED INTO 2 SEPARATE INCREMENTS FOR DSA REVIEW:

1. THE FIRST INCREMENT WILL BE A SUBMITTAL FOR THE FOUNDATION, SLAB ON GRADE, STRUCTURAL STEEL FRAMING AND METAL DECKS, AND ROUGH GRADING, .

2. THE SECOND INCREMENTAL SUBMITTAL WILL INCLUDE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, CIVIL AND LANDSCAPE DOCUMENTS FOR EACH SEPARATE BUILDING TO COMPLETE THE PROJECT.

FOR INCREMENTAL SUBMITTAL ONE, ARCHITECTURAL DRAWINGS WILL BE INCLUDED FOR REFERENCE ONLY AND WILL BE NOTED AS SUCH. INCREMENT TWO WILL INCLUDE ALL DRAWINGS REQUIRED FOR STRUCTURAL DETAILS AND INFORMATION NOT INCLUDED IN INCREMENT ONE, AS WELL AS ALL OTHER DRAWING AND SPECIFICATION INFORMATION REQUIRED TO OBTAIN APPROVAL FOR FIRE, LIFE, SAFETY AND ACCESSIBILITY REVIEWS AND APPROVAL.

APPLICABLE CODES

2001 BUILDING STANDARD ADMINISTRATION CODE.
PART 1, TITLE 24 C.C.R.

2001 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. ;
(1997 UNIFORM BUILDING CODE VOLUMES 1-3 AND 2001 CALIFORNIA AMENDMENTS)

2001 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. ;
(1996 NATIONAL ELECTRICAL CODE AND 1996 CALIFORNIA AMENDMENTS)

2001 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. ;
(1997 UNIFORM MECHANICAL CODE AND 2001 CALIFORNIA AMENDMENTS)

2001 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. ;
(1997 UNIFORM PLUMBING CODE AND 2001 CALIFORNIA AMENDMENTS)

2001 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R. :
(1997 UNIFORM FIRE CODE AND 2001 CALIFORNIA AMENDMENTS)

2001 CALIFORNIA REFERENCED STANDARDS CODE
PART 12, TITLE 24 C.C.R.

1990 TITLE 19,CCR, PUBLIC SAFETY, STATE FIRE MARSHALL REGULATIONS
ANSI A156, 19-1984 AMERICAN NATIONAL STANDARD FOR POWER ASSIST AND LOW ENRGY POWER OPERATED DOORS

NATIONAL REFERENCE STANDARDS

NFPA 13 - AUTOMATIC FIRE SPRINKLER SYSTEMS - 1999 EDITION

NFPA 24 - PRIVATE FIRE MAINS, - 1995 EDITION

(CALIFORNIA AMENDED) NFPA 72 - NATIONAL FIRE ALRM CODES - 1999 EDITION

ADA - AMERICANS WITH DISABILITIES ACT, TITLE II: UNIFORM FEDERAL ACCESSIBILITY STANDARDS (UFAS)

OR AMERICANS WITH DISABLITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS & FACILITIES (ADA AG)

ADMINISTRATIVE REQUIREMENTS

CHAPTER 4 PART 1, TITLE 24, CCR, ADMINISTRATIVE REQUIREMENTS (PARTIAL LISTING ONLY)

1. A COPY OF PARTS 1 AND 2, TITLE 24, C.C.R. SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.

2. ALL CHANGE ORDERS AND ADDENDA TO BE SIGNED BY THE ARCHITECT AND THE OWNER AND APPROVED BY DSA. CHANGE ORDERS ARE NOT VALID UNTIL APPROVED BY DSA PER SECTION 4-335, PART 1, TITLE 24.

3. ALL TESTS TO CONFORM TO THE REQUIREMENTS OF SECTION 4-335, PART 1, TITLE 24, AND APPROVED 7 & I SHEET.

4. TESTS OF MATERIALS AND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH SECTION 4-335 OF PART I, TITLE 24 AND THE DISTRICT SHALL EMPLOY AND PAY THE LABORATORY. COSTS OF RE-TEST MAY BE BACK CHARGED TO THE CONTRACTOR.

5. DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE PER SECTION 4-331, PART 1, TITLE 24.

6. INSPECTOR SHALL BE APPROVED BY DSA. INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 4-333 (B). THE DUTY OF THE INSPECTOR SHALL BE IN ACCORDANCE WITH SECTION 4-342, PART I, TITLE 24.

7. SUPERVISION OF CONSTRUCTION BY DSA SHALL BE IN ACCORDANCE WITH SECTION 4-334, PART I, TITLE 24.

8. CONTRACTOR, INSPECTOR, ARCHITECT, AND ENGINEERS SHALL SUBMIT VERIFIED REPORTS (FORM SSS-6) IN ACCORDANCE WITH SECTION 4-336, AND 4-343, PART I, TITLE 24.

9. THE ARCHITECT AND THE STRUCTURAL ENGINEER SHALL PERFORM THEIR DUTIES IN ACCORDANCE WITH SECTION 4-333 (A) AND 4-341, PART I, TITLE 24.

10. THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH SECTION 4-343, PART I, TITLE 24.

SHEET INDEX

Drawing No.	SHEET INDEX	DSA INCREMENT 1 SUBMITTAL - 10/21/04	
	ARCHITECTURAL		
A0.00	COVER SHEET	X	FOR REFERENCE ONLY
A0.02	ABBREVIATIONS, SYMBOLS, AND GENERAL NOTES	X	FOR REFERENCE ONLY
A1.01	ARCHITECTURAL SITE PLAN	X	FOR REFERENCE ONLY
	CIVIL		
C1.01	ROUGH GRADING PLAN	X	
C2.01	UTILITY PLAN		FOR REFERENCE ONLY
	ARCHITECTURAL (CONT.)		
AA0.21	BUILDING A - BUILDING CODE ANALYSIS AND EXITING PLAN	X	FOR REFERENCE ONLY
AA2.01	BUILDING A - FIRST FLOOR PLAN	X	FOR REFERENCE ONLY
AA2.02	BUILDING A - SECOND FLOOR PLAN	X	FOR REFERENCE ONLY
AA2.03	BUILDING A - THIRD FLOOR PLAN	X	FOR REFERENCE ONLY
AA2.04	BUILDING A - ROOF PLAN	X	FOR REFERENCE ONLY
AA4.01	BUILDING A - BUILDING SECTIONS	X	FOR REFERENCE ONLY
AA4.02	BUILDING A - BUILDING SECTIONS	X	FOR REFERENCE ONLY
AA5.01	BUILDING A - EXTERIOR ELEVATIONS	X	FOR REFERENCE ONLY
AA5.02	BUILDING A - EXTERIOR ELEVATIONS	X	FOR REFERENCE ONLY
AB0.21	BUILDING B - BUILDING CODE ANALYSIS & EXITING PLAN	X	FOR REFERENCE ONLY
AB1.01	BUILDING B - GEOMETRY PLAN	X	FOR REFERENCE ONLY
AB2.01	BUILDING B - FIRST FLOOR PLAN	X	FOR REFERENCE ONLY
AB2.02	BUILDING B - SECOND FLOOR PLAN	X	FOR REFERENCE ONLY
AB2.03	BUILDING B - ROOF PLAN	X	FOR REFERENCE ONLY
AB4.01	BUILDING B - BUILDING SECTIONS	X	FOR REFERENCE ONLY
AB4.02	BUILDING B - BUILDING SECTIONS	X	FOR REFERENCE ONLY
AB4.03	BUILDING B - ENLARGED BUILDING SECTIONS	X	FOR REFERENCE ONLY
AB4.11	BUILDING B - EXTERIOR WALL SECTIONS	X	FOR REFERENCE ONLY
AB4.12	BUILDING B - EXTERIOR WALL SECTIONS	X	FOR REFERENCE ONLY
AB4.13	BUILDING B - EXTERIOR WALL SECTIONS	X	FOR REFERENCE ONLY
AB4.14	BUILDING B - EXTERIOR WALL SECTIONS	X	FOR REFERENCE ONLY
AB5.01	BUILDING B - EXTERIOR ELEVATIONS (NORTH AND SOUTH)	X	FOR REFERENCE ONLY
AB5.02	BUILDING B - EXTERIOR ELEVATIONS (EAST AND SOUTHWEST)	X	FOR REFERENCE ONLY
	STRUCTURAL		
S0.0	GENERAL NOTES	X	
S0.1	GENERAL NOTES	X	
S1.1	TYPICAL DETAILS	X	
S1.2	TYPICAL DETAILS	X	
S1.3	TYPICAL STEEL DECK DETAILS	X	
S1.4	TYPICAL DETAILS	X	
S1.5	TYPICAL STEEL DETAILS	X	
S1.6	TYPICAL STEEL DETAILS	X	
S1.7	MOMENT AND BRACE FRAME	X	
SA2.01	BUILDING A - FIRST FLOOR PLAN	X	
SA2.02	BUILDING A - SECOND FLOOR FRAMING PLAN	X	
SA2.03	BUILDING A - THIRD FLOOR FRAMING PLAN	X	
SA2.04	BUILDING A - ROOF FRAMING PLAN	X	
SB2.01	BUILDING B - FIRST FLOOR PLAN	X	
SB2.02	BUILDING B - SECOND FLOOR FRAMING PLAN	X	
SB2.03	BUILDING B - ROOF FRAMING PLAN	X	
S5.1	BRACE FRAME ELEVATIONS	X	
S6.1	BRACE FRAME SCHEDULE	X	
S8.1.1	SECTIONS AND DETAILS	X	
S8.1.2	SECTIONS AND DETAILS	X	
S8.1.3	SECTIONS AND DETAILS	X	
S8.2.1	SECTIONS AND DETAILS	X	
S9.0	BRACE FRAME DETAILS	X	
S9.01	BRACE FRAME DETAILS	X	
S9.1	BRACE FRAME CONNECTION DETAILS	X	
S9.2	BRACE FRAME CONNECTION DETAILS	X	
S9.3	BRACE FRAME CONNECTION DETAILS	X	
S9.4	BRACE FRAME CONNECTION DETAILS	X	
S9.5	BRACE FRAME CONNECTION DETAILS	X	
S10.11	BASE PLATE DETAILS	X	
S11.0	TYPICAL STAIR DETAILS	X	
S11.01	TYPICAL STAIR DETAILS	X	
S11.1	STAIR PLANS	X	
S11.2	STAIR PLANS	X	
	MECHANICAL		
M1.01	MECHANICAL SITE PLAN	X	
	PLUMBING		
PA2.01	BUILDING A - FIRST FLOOR PLUMBING PLAN	X	
PA2.02	BUILDING A - SECOND FLOOR UNDERGROUND PLUMBING PLAN	X	
PB2.01	BUILDING B - FIRST FLOOR UNDERGROUND PLUMBING PLAN	X	
	ELECTRICAL		
E0.01	SYMBOL LIST, GENERAL NOTES, INDEX	X	
E0.02	ELECTRICAL SITE PLAN	X	
E0.03	SINGLE LINE DIAGRAM ⚠		
EA0.01	BUILDING A - SINGLE LINE DIAGRAMS	X	
EA3.01	BUILDING A - FIRST FLOOR POWER AND SIGNAL PLAN	X	
EA3.02	BUILDING A - SECOND FLOOR POWER AND SIGNAL PLAN	X	
EB0.01	BUILDING B - SINGLE LINE DIAGRAMS	X	
EB3.01	BUILDING B - FIRST FLOOR POWER AND SIGNAL PLAN	X	
	LANDSCAPE		
FA.1	FIRE ACCESS PLAN	X	

DEFERRED APPROVAL

THE FOLLOWING ITEMS SHALL NOT BE INSTALLED UNTIL SIGNED:
ENGINEERING CALCULATIONS, DETAILED PLANS, SPECIFICATIONS AND EQUIPMENT SUBMITTALS HAVE BEEN SUBMITTED, REVIEWED, AND APPROVED BY THE ENGINEER, ARCHITECT AND THE DIVISION OF THE STATE ARCHITECT.

1. OVERHEAD FIRE SPRINKLER

2. CUTRAIN WALL

3. ELEVATOR TITLE 24 PART 1; 4-317

4. GFRC PANELS DEFERRED APPROVALS ONLYWHERE A PORTION OF THE CONSTRUCTION CANNOT BE ADEQUATELY DETAILED ON THE APPROVED PLANS BECAUSE OF VARIATIONS IN PRODUCT DESIGN AND/OR MANUFACTURER, THE APPROVAL OF PLANS FOR SUCH PORTION, WHEN SPECIFICALLY ACCEPTED BY DSA, MAY BE DEFERRED UNTIL THE MATERIAL SUPPLIERS ARE SELECTED PROVIDED THE FOLLOWING CONDITIONS ARE MET:

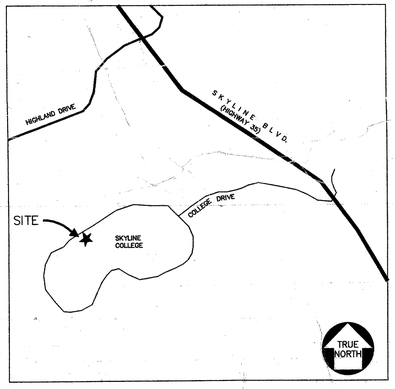
1. THE PROJECT PLANS CLEARLY INDICATE THAT A DEFERRED APPROVAL BY DSA IS REQUIRED FOR THE INDICATED PORTIONS OF THE WORK PRIOR TO FABRICATION AND INSTALLATION.

2. THE PROJECT PLANS AND SPECIFICATIONS ADEQUATELY DESCRIBE THE PERFORMANCE AND LOADING CRITERIA FOR SUCH WORK.

3. AN ARCHITECT OR REGISTERED ENGINEER STAMPS AND SIGNS THE PLANS AND SPECIFICATIONS FOR THE DEFERRED APPROVAL ITEM. THE ARCHITECT OR ENGINEER IN GENERAL RESPONSIBLE CHARGE OF THE DESIGN OF THE APPROVAL ITEM TO THE ENFORCEMENT AGENCY, WITH NOTATION INDICATING THAT THE DEFERRED APPROVAL DOCUMENTS HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING.

4. FABRICATION OF DEFERRED APPROVAL ITEMS SHALL NOT BEGIN WITHOUT FIRST OBTAINING THE APPROVAL OF PLANS AND SPECIFICATIONS BY DSA.

VICINITY MAP



THESE DRAWINGS AND/OR SPECIFICATIONS AND/OR CALCULATIONS FOR THE ITEMS LISTED BELOW HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT AND APPEAR TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME.

THE ITEMS LISTED BELOW HAVE BEEN COORDINATED WITH MY PLANS AND SPECIFICATIONS AND ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE.

- CIVIL SHEETS: C0 TO C6 SERIES
- MECHANICAL SHEETS: MA AND MB SERIES
- PLUMBING SHEETS: PA AND MB SERIES
- ELECTRICAL SHEETS: E0, EA AND EB SERIES
- LANDSCAPE SHEETS: L SERIES
- * STRUCTURAL SHEETS: S SERIES

Ernest Tamaro
Sr. Vice President
[illegible] Architects

4.14.05
Date

C13447
License Number

12/31/05
Expiration Date

LICENSED ARCHITECT
ERNEST T. TAMARO
LIC. NO. C 13447
REN. 12-31-05
STATE OF CALIFORNIA

File # 41-C1

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL # 01-106658
WAIVER
DATE 04/21/2005

SHEET NUMBER
A0.00

GENERAL NOTES

A. GENERAL

1. THE INTENT OF THESE DRAWINGS IS TO SHOW ALL ITEMS NECESSARY TO COMPLETE THE STRUCTURE. FOR ITEMS, METHODS AND/OR MATERIALS NOT SHOWN, THE MINIMUM REQUIREMENTS OF THE 2001 CBC "STATE CHAPTERS" SHALL GOVERN. ALL WORK AND CONSTRUCTION SHALL COMPLY WITH ALL OTHER APPLICABLE BUILDING CODES, SOIL REPORTS, REGULATIONS AND SAFETY REQUIREMENTS.
2. TYPICAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.
3. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING AND FORMWORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING THE CONSTRUCTION OF THIS BUILDING. SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL FLOORS, ROOF AND WALL SHEATHING HAVE BEEN ENTIRELY CONSTRUCTED. SHORING DRAWINGS AND CALCULATIONS SHALL BE SEALED BY REGISTERED ENGINEER AND SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW.
4. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS WITH THE ARCHITECTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWING BEFORE PREPARING SHOP DRAWINGS, FABRICATION OR CONSTRUCTION. SEE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATIONS OF PIPES, SLEEVES, PITS, VENTS, DUCTS, ETC. AND DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
5. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON FRAMED ROOF OR FLOOR. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING AND/ OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH.
6. ALL DRAWINGS ARE CONSIDERED TO BE A PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
7. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS GIVEN, CONSTRUCTION SHALL BE AS SHOWN FOR SIMILAR WORK.
8. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
9. OPENINGS, POCKETS, ETC., LARGER THAN 6" SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, WALLS, UNLESS SPECIALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., LARGER THAN 6" NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS. FOR ANY FURTHER RESTRICTIONS ON OPENINGS IN STRUCTURAL ELEMENTS, SEE APPLICABLE SECTIONS BELOW.
10. PIPES LARGER THAN 1 1/2" DIAMETER SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE EXCEPT WHEN WHERE SPECIFICALLY APPROVED. NO CONDUITS SHALL BE PLACED IN CONCRETE FILL OVER METAL DECKING.

B. DESIGN BASIS

REFERENCE CODE

2001 CALIFORNIA BUILDING CODE "STATE CHAPTERS"

LIVE LOADS

ROOF	-20 PSF (REDUCIBLE)
FLOOR: ALL TYPICAL FLOOR AREAS SUCH AS MEETING ROOMS, OFFICE SPACE, KITCHEN, ETC., UNLESS NOTED OTHERWISE	-80 PSF (REDUCIBLE)
STORAGE ROOMS	-125 PSF (NO REDUCTION)
PATIOS AND EXTERIOR AREAS ACCESSIBLE TO THE PUBLIC	-100 PSF (NO REDUCTION)
ASSEMBLY AREAS	-100 PSF (NO REDUCTION)
DINING AREAS (NOT USED FOR ASSEMBLY AREAS)	-100 PSF (REDUCIBLE)
EXITS/ CORRIDORS	-100 PSF (NO REDUCTION)

PARTITION LOADS
TYPICAL FLOOR ....20.0 PSF
EQUIPMENT.................SEE MECHANICAL SCHEDULES
TYPICAL FLOOR (SEISMIC ONLY)..............10.0 PSF

EARTHQUAKE LOADS.......................................2001 CBC SECTION 1630A.1

$E=PE_h \pm E_v \quad E_m=\Omega_o E_h$

WHERE: E_h DUE TO

$V=\frac{C_v I}{RT} W$

$V=\frac{2.5\ C_a\ I}{R} W$ (NOT TO EXCEED)

$V=0.11\ C_a\ I\ W$ (SHALL NOT BE LESS THAN)

$V=\frac{0.8\ Z N_v I}{R} W$ (NOT TO EXCEED FOR ZONE 4)

AND: SOIL TYPE= S_D
Z = ZONE 4
I = 1.15....FOR STUDENT CENTER BUILDING
I = 1.00....FOR SCIENCE ANNEX BUILDING
R = 5.5 ....FOR CONCRETE SHEAR WALLS
R = 6.4 ....STEEL SPECIAL CONCENTRIC BRACE FRAME
R = 8.5 ....STEEL SPECIAL MOMENT RESISTING FRAMES
Na= 1.5 ....FOR STUDENT CENTER BUILDING
Na= 1.5 ....FOR SCIENCE ANNEX BUILDING
Nv= 2.0
Ca= 0.66....FOR STUDENT CENTER BUILDING
Ca= 0.66....FOR SCIENCE ANNEX BUILDING
Cv= 1.28
W = TOTAL SEISMIC DEAD LOAD

WIND LOADS ....2001 CBC SECTION 1615A.
P=Ce Cq qs Iw..SECTION 1620A
WHERE:
Ce= SEE TABLE 16A-G FOR EXPOSURE "C"
Cq= SEE TABLE 16A-H
qs= 16.4 PSF FOR BASIC WIND SPEED =80MPH
Iw= 1.0

C. FOUNDATIONS

1. FOUNDATION DESIGN IS BASED ON A GEOTECHNICAL REPORT BY LOWNEY & ASSOCIATES. NO. 324-29 DATED JULY 17TH, 2003. AND SUPPLEMENTAL REPORT #324-29A DATED NOV 8, 2004 AND SUPPLEMENTAL REPORT #1620-30 DATED FEB 28,2005.
2. IT IS RECOMMENDED THAT SOIL ENGINEERS a) REVIEW THE FOUNDATION PLANS PRIOR TO CONSTRUCTION, AND b) OBSERVE THE INSTALLATION OF THE FOUNDATION.
3. ANY SLOPES SHALL BE CONSTRUCTED AT A MAXIMUM GRADIENT OF 1.25:1 (HORIZONTAL TO VERTICAL). FILL AND CUT SLOPES SHOULD BE VEGETATED AS SOON AS POSSIBLE TO MINIMIZE EROSION OF SOIL. SEE GEOTECHNICAL REPORT FOR ADDITIONAL INFORMATION. SEE CIVIL DWGS FOR BUILDING PAD SECTION.
4. ANY VERTICAL SOIL CUTS MUST BE PROVIDED WITH PROPER SHORING TO PROTECT THE WORKERS AND ADJACENT PROPERTY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND THE PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES. ALL WORK AND CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, CALIFORNIA OSHA REGULATIONS AND SAFETY REQUIREMENTS.
5. AN ADEQUATE DRAINAGE SYSTEM SHALL BE PROVIDED TO COLLECT AND TRANSPORT RUNOFF WATER TO THE DISCHARGE FACILITIES. ALL RETAINING WALLS SHALL HAVE AT THE BOTTOM, PERFORATED BACK-OF WALL DRAINS AND WEEP HOLES AT 6'-0" O.C. MAXIMUM.
6. ALL BUILDING PADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL REPORTS REFERRED TO IN NOTE # 1 ABOVE
7. COMPACTION OF OVER EXCAVATION & FILL MATERIAL SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT REFERRED TO IN NOTE #1 ABOVE.
8. SOIL PRESSURES USED FOR FOUNDATION DESIGN SHALL BE AS FOLLOWS:

   A) ALLOWABLE BEARING OF CONTINUOUS & SPREAD FOOTINGS

CONTINUOUS FOOTINGS:		
	DL	Q = 3000 PSF
	DL+LL	Q = 4500 PSF
	DL+LL+ST	Q = 6000 PSF

   B) LATERAL EARTH PRESSURES

   UN-RESTRAINED (DRAINED CONDITION)=45 PCF+1/3 SURCHARGE
   RESTRAINED (DRAINED CONDITION)=45PCF+8H+1/2 SURCHARGE

   C) FRICTIONAL RESISTANCE

   ALLOWABLE = 0.3

   D) PASSIVE PRESSURES

   ALLOWABLE = 300 PCF

   E) SEE GEOTECHNICAL REPORT FOR ADDITIONAL LATERAL EARTH PRESSURE REQUIREMENTS FOR RETAINING WALLS.
9. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE, IF REQUIRED.
10. FOOTING WILL BE INCREASED 2 IN. IN WIDTH FROM THAT SHOWN ON PLANS.

RFI 54 Conc Batch Plant inspection not Required

D. CONCRETE

1. THE MINIMUM 28 DAY STRENGTH AND TYPE OF CONCRETE SHALL BE AS FOLLOWS:

   SLABS ON GRADE* (INTERIOR)...........................150 PCF. f'c = 3000 PSI
   FOUNDATIONS ....150 PCF. f'c = 3000 PSI
   COLUMNS, BEAMS, SUSPENDED SLAB, WALLS.....150 PCF. f'c = 4000 PSI
   LIGHTWEIGHT CONCRETE TOPPING SLABS............110 PCF. f'c = 3000 PSI
   MECHANICAL CURBS AND PADS @ GRADE..........150 PCF. f'c = 3000 PSI
   MECHANICAL CURBS AND PADS @
   2ND FLR & ROOF..110PCF. F'c = 3000 PSI
   CONCRETE TOPPING AT STAIR TREADS
   AND PLATFORMS...110 PCF. f'c = 3000 PSI
   OTHER...150 PCF. f'c = 3000 PSI

   * W/C RATIO SHALL NOT EXCEED 0.45
   Interior Slab only RFI 0007
2. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF MAIN BARS, TIES, ETC. AND DENOTE CLEAR COVERAGE. CONCRETE COVERAGE SHALL BE AS FOLLOWS, U.O.N. ON DRAWINGS:

   A) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH
   ALL ELEMENTS ....3"

   B) CONCRETE EXPOSED TO EARTH OR WEATHER BUT PLACED IN FORMS.
   #6 THROUGH #18 BARS...2"
   #5 BARS, W31 OR D31 WIRE, AND SMALLER...........................1 1/2"

   C) CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND

   SLABS, WALLS OR JOISTS.
   #14 OR #18 BARS...1 1/2"
   #11 BARS AND SMALLER...3/4"

   BEAMS AND COLUMNS.
   PRIMARY REINFORCEMENT, STIRRUPS, HOOPS, TIES, SPIRALS..............1 1/2"

   SHELLS AND FOLDED PLATE MEMBERS
   #6 AND LARGER BARS.. 3/4"
   #5 BARS, W31 OR D31 WIRE, AND SMALLER.................................. 1/2"
3. NO PIPES OR DUCTS SHALL BE PLACED IN CONCRETE SLABS OR WALLS UNLESS SPECIFICALLY DETAILED.
4. REFER TO ARCHITECTURAL, STRUCTURAL,ELECTRICAL AND MECHANICAL DRAWINGS FOR ALL MOULDS, GROOVES, ORNAMENTS, CLIPS AND GROUNDS TO BE CAST IN CONCRETE.
5. FORMS SHALL BE PROPERLY CONSTRUCTED CONFORMING TO CONCRETE SURFACE AS SHOWN ON THE DRAWINGS, SUFFICIENTLY TIGHT TO PREVENT LEAKAGE, SUFFICIENTLY STRONG AND BRACED TO MAINTAIN THEIR SHAPE AND ALIGNMENT UNTIL NO LONGER NEEDED TO SUPPORT THE CONCRETE.
6. HORIZONTAL CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS, AND THE HARDENED CONCRETE SURFACE SHALL BE CLEANED BY SAND-BLASTING OR OTHER APPROVED MEANS TO EXPOSE FIRMLY EMBEDDED AGGREGATES PRIOR TO POURING ADDITIONAL CONCRETE IN CONTACT WITH THESE SURFACES. VERTICAL CONSTRUCTION JOINTS CONFORM TO ALL PLANS AND DETAILS.
7. FORMS AND SHORING SHALL NOT BE REMOVED UNTIL THE CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO WITHSTAND ALL LOADS TO BE IMPOSED WITHOUT EXCESSIVE STRESS, CREEP OR DEFLECTION.
8. ALL ITEMS TO BE CAST IN CONCRETE SUCH AS REINFORCING, DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC. SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING THE CONCRETE.
9. SEE ARCHITECTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPES, SLEEVES, PITS AND DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED WITH THE ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS.
10. MINIMUM EMBEDMENT FOR ANCHOR BOLTS IN CONCRETE SHALL BE 9", UNLESS SPECIFICALLY NOTED OTHERWISE.
11. THE CONTRACTOR SHALL INFORM THE ARCHITECT/ENGINEER AT LEAST 2 DAYS PRIOR TO POURING ANY STRUCTURAL CONCRETE SO THAT HE MAY HAVE THE OPPORTUNITY OF REVIEWING THE WORK PRIOR TO PLACEMENT.
12. BARS SHALL BE CLEAN OF RUST, GREASE, OR OTHER MATERIALS LIKELY TO IMPAIR BOND. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
13. REINFORCING BAR SPLICES SHALL BE MADE AS INDICATED ON THE DRAWINGS. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN MASONRY SHALL BE 48 BAR DIAMETERS, 24" MINIMUM. MINIMUM SPLICE LENGTH FOR REINFORCING STEEL BARS IN CONCRETE SHALL BE AS PER THE CODE SECTION 1912A. LAP ALL HORIZONTAL BARS AT CORNERS AND INTERSECTIONS. STAGGER ALL SPLICES UNLESS NOTED OTHERWISE ON PLANS.
14. ALL BARS SHALL BE MARKED SO THEIR IDENTIFICATION CAN BE MADE WHEN THE FINAL IN-PLACE INSPECTION IS MADE.
15. WHERE WELDING OF REINFORCING IS APPROVED BY THE STRUCTURAL ENGINEER, IT SHALL BE DONE BY AWS CERTIFIED WELDERS USING E90XX OR APPROVED ELECTRODES. WELDING PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF STRUCTURAL WELDING CODE-REINFORCING STEEL, AWS-D1.4, LATEST REVISION. REINFORCING BARS TO BE WELDED SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-706.
16. LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM-C330 DRYING SHRINKAGE OF TEST SPECIMENS SHALL NOT EXCEED 0.07%.

E. REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A-615 GRADE 40 FOR #3 BARS ASTM A-615 GRADE 60, FOR #4 AND LARGER UNLESS OTHERWISE NOTED. USE ASTM A-706 FOR ALL WELDED APPLICATIONS.
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. WELDED WIRE TO BE SUPPLIED IN FLAT SHEETS ONLY.
3. ALL BARS SHALL HAVE A MINIMUM "LAP SPLICE" OR "DEVELOPMENT LENGTH" PER APPROPRIATE TABLES ON THIS SHEET, UNLESS OTHERWISE NOTED.
4. REINFORCING SPACINGS GIVEN ARE MAXIMUM ON CENTER AND ALL REINFORCING IS CONTINUOUS UNLESS OTHERWISE NOTED.
5. ALL REINFORCING STEEL SHALL BE SECURELY WIRED AND PROPERLY SUPPORTED ABOVE GROUND AND AWAY FROM THE FORM.
6. REINFORCING BAR FABRICATION LAPS AND PLACING SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE OF THE WESTERN CONCRETE REINFORCING STEEL INSTITUTE, UNLESS OTHERWISE NOTED ON DRAWINGS.
7. DOWEL ALL VERTICAL REINFORCING IN WALLS AND COLUMNS FROM FOUNDATION WITH THE SAME SIZE REINFORCING. (U.O.N.)
8. SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5'-0" APART.
9. SPLICE CONTINUOUS BARS IN SPANDRELS, GRADE BEAMS, WALL BEAMS, ETC. AS FOLLOWS: TOP BARS AT MID-SPAN. BOTTOM BARS AT CENTERLINE SUPPORT (U.O.N.)

F. STRUCTURAL STEEL

1. ALL FABRICATION AND ERECTION SHALL CONFORM TO THE AISC SPECIFICATIONS AND AMERICAN IRON AND STEEL SPECIFICATION MANUAL (LATEST EDITION). THE DESIGN AND ERECTION OF LIGHT GAGE STEEL STRUCTURAL MEMBERS SHALL CONFORM TO AISI (LATEST EDITION), EXCEPT AS NOTED OR AS REQUIRED BY THE CALIFORNIA BUILDING CODE. WELDING SHALL CONFORM TO THE AWS SPECIFICATIONS.
2. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE BEST PRACTICE AND WITHIN THE TOLERANCES SPECIFIED IN THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL.
3. IT IS SPECIFICALLY NOTED THAT BURNED HOLES ARE NOT ACCEPTABLE UNLESS SPECIAL PERMISSION IS GIVEN BY ENGINEER.
4. ALL SHOP FABRICATED WORK SHALL BE DONE IN A SHOP APPROVED BY THE GOVERNING AGENCY. FABRICATOR SHALL SUBMIT PROGRAM OF WELDING INSPECTION TO ENGINEER FOR APPROVAL.
5. ALL STRUCTURAL STEEL SHALL BE AS FOLLOWS UNO:

   ALL WF, WT SHAPES....................................... ASTM A992 GRADE 50
   BASE PL, CONN. PL & MISC STEEL (UNO)... ASTM A36
   MOMENT FRAME COLUMNS..............................ASTM A992 GRADE 50
   GUSSET & COLLECTOR PLATES........................ASTM A572 GRADE 50
   PIPE COLUMNS (TYPE S, SEAMLESS)............. ASTM A53 GRADE B.
   STRUCTURAL TUBING......................................ASTM A500 GRADE B.
   ANGLE, CHANNELS..ASTM A36
6. ALL HIGH STRENGTH BOLTS SHALL BE ASTM A325-N TYPE UNLESS OTHERWISE NOTED. ALL ASTM A325-SC & A490-SC BOLTS SHALL BE FULLY TENSIONED.
7. ALL BOLTS USED FOR ERECTION SHALL BE ASTM A307 TYPE WITH THREADS EXCLUDED FROM SHEAR PLANES.
8. ALL PLAIN ANCHORS SHALL BE A36; ALL ANCHOR BOLTS SHALL COMPLY WITH ASTM A307. 3" MINIMUM CONCRETE COVER WILL BE PLACED AROUND ALL ANCHOR BOLTS EXPOSED TO THE WEATHER, U.N.O.
9. WELDING MATERIALS: AWS D1.1: TYPE REQUIRED FOR MATERIALS BEING WELDED.
10. PROVIDE CONTINUOUS INSPECTION FOR ALL FABRICATION AND WELDING OF STRUCTURAL STEEL IN ACCORDANCE WITH CODE REQUIREMENTS. ALL COMPLETE PENETRATION GROOVE WELDS IN JOINTS AND SPLICES SHALL BE TESTED 100 PERCENT IN ACCORDANCE WITH CBC SEC. 1701B5.1. USE ONE OF THE APPROVED METHODS OF TIGHTENING HIGH STRENGTH BOLTS.
11. A WELDING SEQUENCE SHALL BE PLANNED TO MINIMIZE RESIDUAL STRESSES AND DISTORTIONS OF INDIVIDUAL MEMBERS AND THE BUILDING FRAME. ALL DETAILING, FABRICATION, AND ERECTION SHALL COMPLY WITH AISC, LATEST EDITION.
12. UNLESS OTHERWISE NOTED, ALL STIFFENER PLATES ARE 3/8" THICK MINIMUM AND ALL BUTT WELDS ARE FULL PENETRATION WELDS. ERECTION CLIPS, TEMPORARY BRACING, ETC., REQUIRED BY THE CONTRACTOR ARE NOT SHOWN.

    RFI 127 1/4' Edge of deck bent plate acceptable to be 1/8" partial pene
13. SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL ASSEMBLIES OF STRUCTURAL STEEL WORK. INCLUDE PLANS AND ELEVATIONS AT NOT LESS THAN 1" TO 1'-0" SCALE, AND INCLUDE DETAILS OF SECTIONS AT NOT LESS THAN 3" TO 1'-0" SCALE.
14. NO WORK OR FABRICATION SHALL BE COMMENCED OR MATERIAL DELIVERED TO THE JOB UNTIL THE ENGINEER HAS REVIEWED AND APPROVED THE SHOP DRAWINGS.
15. ALL STRUCTURAL STEEL SHALL BE PAINTED WITH ONE SHOP COAT OF ZINC CHROMATE PRIMER OR EQUAL. AFTER ERECTION, FIELD CONNECTIONS SHALL BE TOUCHED UP. DO NOT PAINT PORTION OF STEEL TO BE EMBEDDED IN CONCRETE, HEADED ANCHOR STUDS, OR AREAS TO RECEIVE FIRE PROOFING.
16. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WHERE FILLET WELD SYMBOL IS GIVEN WITHOUT INDICATION OF SIZE. USE MINIMUM SIZE WELDS AS SPECIFIED IN AISC MANUAL OF STEEL CONSTRUCTION 9TH EDITION, SECTION 1.17.2
17. THE USE OF E70T-4 WELDING WIRE IS NOT ALLOWED FOR ANY APPLICATION.
18. WRITTEN WELDING PROCEDURE SPECIFICATIONS (WPS) PER THE RECOMMENDATIONS OF THE AMERICAN WELDING SOCIETY (AWS) SHALL BE DEVELOPED BY THE FABRICATOR/ERECTOR AND SUBMITTED FOR REVIEWED TO THE ENGINEER PRIOR TO ANY WELDING OF THE STRUCTURAL STEEL. THE WELDING PROCEDURES SHALL INCLUDE ALL THE WELDED JOINTS AND CONFIGURATIONS TO BE USED ON THIS PROJECT-ONLY WPS WHICH ARE RELEVANT TO THIS PROJECT SHALL BE SUMITTED. ALL WELDED JOINTS SHALL BE PRE-QUALIFIED PER AWS OR BE QUALIFIED BY TEST PER AWS. A PROCEDURE QUALIFICATION RECORD (PQR) SHALL BE INCLUDED WITH THE WPS IF THE WELDING PROCEDURE OR JOINT IS QUALIFIED BY TESTING. THE ELECTRODE MANUFACTURER AND PRODUCT/TRADE NAME SHALL BE IDENTIFIED IN THE WPS IN ADDITION TO THE AWS ELECTRODE CLASSIFICATION NAME. A COPY OF THE ELECTRODE MANUFACTURER'S TECHNICAL DATA SHEETS WITH THE RECOMMENDED WELDING PARAMETERS SHALL BE SUBMITTED WITH THE WPS.
19. ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE-RESISTING SYSTEMS SHALL BE MADE WITH A FILLER METAL THAT HAS A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT MINUS 20 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION. THIS INCLUDES ALL WELDS THAT CONNECT PLATES, SHEAR TABS STIFFENER PLATES, TUBE STEEL OR WX BRACES, GUSSET PLATES, AND CHORDS / COLLECTORS.

G. HEADED STUDS

1. ALL HEADED STUDS WELDED TO BEAMS OR CONCRETE CONNECTIONS SHALL BE "TRUE-WELD STUDS", DIVISION OF TRU-FIT SCREW CORPORATION, CLEVELAND, OHIO OR "NELSON STUD", TRW FASTENERS AND ASSEMBLIES GROUP, LORAIN, OHIO, OR APPROVED EQUAL.
2. ALL HEADED STUDS SHALL BE AUTOMATICALLY END WELDED IN SHOP OR FIELD WITH EQUIPMENT RECOMMENDED BY MANUFACTURER OF STUDS.
3. STEEL SHEAR STUDS MATERIAL WELDING AND INSPECTION, SHALL BE IN ACCORDANCE WITH AWS "STRUCTURAL WELDING CODE", AWS D1.1-88, SECTION 7. ALL STUDS SHALL BE 3/4" DIAMETER X 5" LONG, SPACED AT 12" o.c. MAXIMUM, UNLESS NOTED OTHERWISE.

H. METAL DECKING

1. UNLESS OTHERWISE NOTED ON THE DRAWINGS ROOF DECKING SHALL BE AS MANUFACTURED BY VERCO MANUFACTURING INC. (ICBO REPORT ER-2078P), OR EQUAL AS APPROVED BY THE ENGINEER OF RECORD. SEE SECTION 01330.
2. THE MINIMUM BASE THICKNESS OF METAL MATERIAL SHALL BE AS NOTED ON PLANS.
3. FURNISH DECKING IN MINIMUM LENGTHS OF THREE SPANS EXCEPT WHERE SINGLE OR DOUBLE SPANS ARE INDICATED ON THE DRAWINGS.
4. STRUCTURAL PROPERTIES SHALL BE EQUAL TO THOSE OF THE DECKING TYPES INDICATED ON THE DRAWINGS AS APPROVED BY ICBO.
5. FURNISH ALL ACCESSORIES REQUIRED TO PROVIDE A COMPLETE INSTALLATION INCLUDING FILLERS FOR END PANELS, FRICTION CAPS FOR CLOSING SHOP FABRICATED ACCESS HOLES FOR WELDING, FLASHING AT COLUMNS AND CLOSURES FOR CELL ENDS, ROOF AND FLOOR DRAIN RECESSES, AND OTHER ACCESSORIES AS REQUIRED. ACCESSORIES SHALL BE FORMED FROM GALVANIZED STANDARD COMMERCIAL GRADE STEEL OR BETTER.
6. WELDING ROD: ASW A5.1-LATEST EDITION, E90XX, LOW HYDROGEN.

   RFI 125 E60XX weld rod min.
7. SHEAR STUDS, INCLUDING INSTALLATION EQUIPMENT SHALL BE AS MANUFACTURED BY NELSON STUD WELDING DIVISION, GREGORY INDUSTRIES, LORAIN, OHIO, TYPES S3L OR H4L, OR EQUAL APPROVED IN ACCORDANCE WITH SECTION 01330, AND SHALL CONFORM TO AWS D1.1 (LATEST EDITION). FERRULES SHALL BE SUITABLE FOR USE WITH GALVANIZED METAL DECK WHERE INDICATED.
8. WHERE LARGE PREDETERMINED OPENINGS FOR DUCTS AND SIMILAR ELEMENTS PASSING THROUGH THE PANEL UNITS OCCUR, FURNISH PREFABRICATED UNITS TO FIT JOB CONDITIONS; WHERE OTHER HOLES OR OPENING ARE REQUIRED IN DECKING AFTER ERECTION, SUCH HOLES SHALL BE REINFORCED PER THE DRAWINGS.
9. PROVIDE ALL CLOSURES, END PLATES, PROFILE PLATES AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. WELD IN PLACE.
10. SUPPORT AT COLUMNS: WHERE, DUE TO CUTTING OF DECK UNITS AT COLUMNS, BEARING SUPPORT IS NOT PROVIDED FOR THE END OF A WEB, SUCH WEB SHALL BE WELDED TO THE COLUMN OR STRUCTURAL STEEL MATERIAL AT THE COLUMN OR EQUIVALENT SUPPORT SHALL BE PROVIDED. THE WELDING OR EQUIVALENT SUPPORT SHALL BE SUFFICIENT FOR THE SUPPORT OF THE DECK, CONSTRUCTION LOADS. PROVIDE L3x3x1/4 MINIMUM WITH A 3/16" CONTINUOUS FILLET WELD FOR SUPPORT AT SUCH LOCATIONS.
11. SUBMIT SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL ASSEMBLIES IN ACCORDANCE WITH THE SPECIFICATIONS.
12. NO WORK OF FABRICATION SHALL BE COMMENCED OR MATERIAL DELIVERED TO THE JOB UNTIL THE ENGINEER HAS REVIEWED AND APPROVED THE SHOP DRAWINGS.
13. ALL CONCRETE AT METAL DECK ASSEMBLIES SHALL BE REINFORCED WITH A MINIMUM OF WELDED WIRE FABRIC 4x4 W5x5.

I. MASONRY NOTES

1. SPECIAL MASONRY INSPECTION IS REQUIRED FOR ALL BLOCK INSTALLATION.
2. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO CBC SECTION 2102A.2.2 TYPE I OR TYPE II, AND SHALL BE ENTIRELY OF ONE MANUFACTURE.
3. WATER USED FOR MORTAR AND GROUT SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNTS OF ACIDS, SALTS, ALKALI, AND ORGANIC MATERIALS.
4. HYDRATED LIME SHALL CONFORM TO CBC SECTION 2102A.2.3.2, TYPE S.
5. AGGREGATES: SAND FOR MORTAR SHALL CONFORM TO ASTM C-144 EXCEPT THAT NOT LESS THAN 3% OF THE SAND SHALL PASS THE NUMBER 100 SIEVE. SAND AND PEA GRAVEL FOR GROUT SHALL CONFORM TO ASTM C-404-61, TABLE I, COARSE AGGREGATE, EXCEPT WHEN OTHER GRADINGS ARE SPECIFICALLY APPROVED BY THE ENGINEER.
6. CONCRETE MASONRY UNITS SHALL BE HOLLOW, SUITABLE FOR BEARING WALL CONSTRUCTION. ALL BLOCKS SHALL BE GRADE N-1 AND CONFORM TO CBC SECTION 2102A.2.5.2. IN ADDITION, UNITS SHALL HAVE A LINEAR SHRINKAGE OF 0.067% MAXIMUM FROM SATURATED TO THE OVEN DRY CONDITION. MASONRY UNITS SHALL HAVE CURED FOR NOT LESS THAN 28 DAYS WHEN PLACED IN THE STRUCTURE. BLOCKS COLOR SHALL BE APPROVED BY THE ARCHITECT. NET COMPRESSIVE STRESS OF MASONRY UNITS SHALL BE 1900 PSI (F'm OF GROUT, BLOCK, AND MORTAR ASSEMBLY= 1500 PSI.)
7. ADMIXTURES: THE USE OF ADMIXTURES SHALL NOT BE PERMITTED IN MORTAR OR GROUT UNLESS SUSTAINING DATA HAS BEEN SUBMITTED TO AND APPROVED BY THE ENGINEER. THE USE OF ADMIXTURES IN MORTAR SHALL BE ONLY AS APPROVED BY THE ENGINEER. THE USE OF UNCONTROLLED FIRE CLAY, DIRT, AND OTHER DELETERIOUS MATERIALS IS PROHIBITED.
8. MORTAR SHALL BE TYPE "S", 1900 psi MINIMUM
9. GROUT SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 2000 psi AT 28 DAYS. APPROVED ADMIXTURES MAY BE ADDED TO THE GROUT. COARSE GROUT SHALL BE USED IN ALL GROUT SPACES 2" OR MORE IN WIDTH AND ALL FILLED CELL CONSTRUCTION. RFI 239 5.5 sack not acceptable
10. GROUT FOR PUMPING SHALL BE FLUID CONSISTENCY AND SHALL NOT HAVE LESS THAN 7 SACKS OF CEMENT IN EACH CUBIC YARD OF GROUT. THE MIX SHALL BE AS APPROVED BY ENGINEER. FLUID CONSISTENCY SHALL MEAN A CONSISTENCY AS FLUID AS POSSIBLE FOR POURING, WITHOUT SEGREGATION OF THE CONSTITUENT PARTS.
11. ALL WALLS SHALL HAVE ALL CELLS FILLED SOLID WITH GROUT.
12. ALIGNMENT OF VERTICAL CELLS: ALL MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS TO BE FILLED. THE VERTICAL ALIGNMENT SHALL BE SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED VERTICAL FLUE MEASURING NOT LESS THAN 3" BY 3", EXCEPT WHERE OPEN END UNITS ARE USED.
13. LAYING: IN PLACING MORTAR IN HORIZONTAL JOINTS, COMPLETELY COVER THE FACE SHELLS OF THE UNITS WITH MORTAR, SOLIDLY FILL ALL HEAD JOINTS. LAY ALL MASONRY IN COMMON BOND. HOLD RACKING TO A MINIMUM. NO TOOTHING SHALL BE ALLOWED.
14. REINFORCEMENT SHALL BE FULLY EMBEDDED IN GROUT AND SHALL BE MECHANICALLY SECURED TO INSURE PROPER LOCATION (DURO WALL OR EQUAL). AT 192 BAR DIAMETERS REINFORCEMENT SHALL NOT BE BEDDED IN MORTAR OR MORTAR JOINTS. PLACE THE VERTICAL STEEL PRIOR TO LAYING THE WALL. SEE STRUCTURAL NOTES AND DETAILS FOR SIZE, GRADE, LAPS, ETC.
15. CONSTRUCTION JOINTS: WHEN GROUTING IS STOPPED FOR A PERIOD OF ONE HOUR OR LONGER, FORM HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT POUR 2" MINIMUM BELOW THE UPPERMOST UNIT.
16. DEFECTIVE UNITS: DO NOT USE CHIPPED OR CRACKED BLOCKS. IF ANY SUCH BLOCKS ARE DISCOVERED IN ANY FINISHED WALL, THEY SHALL BE PROMPTLY REMOVED AND REPLACED WITH NEW BLOCKS TO THE APPROVAL OF THE ENGINEER.
17. WALL CLEANING AND PROTECTION: REMOVE CONCRETE SCUM AND GROUT STAINS ON THE WALL IMMEDIATELY. AFTER THE WALL IS CONSTRUCTED, DO NOT SATURATE WITH WATER FOR CURING OR ANY OTHER PURPOSE. CHECK ALL JOINTS FOR TIGHTNESS AND WHERE CRACKS ARE VISIBLE, CHIP OUT THE MORTAR. TUCK POINT AND TOOL TO MATCH ADJACENT JOINTING.
18. NO ELECTRICAL CONDUIT SHALL BE LOCATED IN THE SAME CELL AS TYPICAL VERTICAL OR JAMB BAR REINFORCING.
19. MAX. MASONRY LIFT HEIGHT SHALL NOT EXCEED 4 FT. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

J. DRILLED IN EXPANSION BOLTS AND ADHESIVE ANCHORS IN CONCRETE

1. ALL DRILLED-IN EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT III OR POWER'S BOLT (ICBO 1385, ICBO 1532) OR AN EQUAL APPROVED BY THE ENGINEER OF RECORD. SEE SPEC. SECTION 01330.
2. DRILLED-IN EXPANSION ANCHORS SHALL BE TENSION TESTED IN ACCORDANCE WITH THE FOLLOWING:

   a) 10%: WHERE USED FOR CONNECTION OF SILL PLATES.

   b) 50% WHERE USED FOR NON-STRUCTURAL APPLICATIONS SUCH AS EQUIPMENT ANCHORAGE.

   d) 100% FOR THE ATTACHMENT OF ALL OTHER STRUCTURAL ATTACHMENTS.
3. THE TENSION TESTING OF THE EXPANSION ANCHORS SHALL BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY. IF ANY ANCHORS FAIL THE TENSION-TESTING REQUIREMENTS, ADDITIONAL TESTING REQUIREMENTS ACCEPTABLE TO THE ENFORCEMENT AGENCY SHALL BE MADE. SEE S0.1 FOR FOR PULL TEST REQUIREMENTS.

K. SPECIAL INSPECTION

1. SPECIAL INSPECTION IN CONFORMANCE WITH SECTION 1701A OF THE 2001 CBC IS REQUIRED AND SHALL BE PROVIDED FOR THE FOLLOWING WORK, UNDER SUPERVISION OF AN OUTSIDE SPECIAL INSPECTION TESTING AGENCY EMPLOYED BY THE OWNER. SEE PROJECT SPECIFICATIONS FOR INDIVIDUAL REQUIREMENTS IN ADDITION TO THOSE LISTED BELOW:

   a) STRUCTURAL CONCRETE WITH AN f'c GREATER THAN 2500psi
   b) ALL STRUCTURAL STEEL WELDING, EXCEPT WHERE DONE IN THE SHOP OF AN APPROVED FABRICATOR
   c) REINFORCING STEEL (WHERE F'c GREATER THEN 2500 PSI OR REINFORCEMENT IS WELDED)
   d) WELDED REINFORCING BARS: CBC SECTION 1928A.12
   e) USE OF STRUCTURAL EPOXIES
   f) USE OF A325 OR A325-S.C., A490-SC BOLTS
   g) BOLTS EMBEDDED IN CONCRETE OR MASONRY
   h) SOIL COMPACTION REQUIREMENTS
   i) TESTING, PREPARATION, AND PLACEMENT OF ALL CONCRETE MASONRY UNITS PER 2105A.7
   j) ADHESIVE ANCHORS PER CBC SECTION 1925A.3.5
   k) DRILLED-IN EXPANSION ANCHORS PER CBC SECTION 1925A.3.5
   l) DRILLING AND INSTALLATION OF CIP PILES
   m) CEMENTITIOUS MATERIAL TESTS: CBC SECTION 1928A.1
   n) REINFORCING BARS: CBC SECTION 1928A.2
   o) BATCH PLANT INSPECTION: CBC SECTION 1928A.4
   p) CONCRETE PLACING RECORDS: CBC SECTION 1928A.7

L. CONSTRUCTION JOINTS

1. ALL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CODE SECTION 1906A.4 AND THE TYPICAL CONSTRUCTION JOINT DETAILS SHOWN ON THE STRUCTURAL DRAWINGS.

   ALL SURFACES OF CONSTRUCTION JOINTS SHALL BE CLEANED TO REMOVE DUST, CHIPS, OR OTHER FOREIGN MATTER PRIOR TO PLACING THE ADJACENT CONCRETE.

   THE CONTRACTOR SHALL SUBMIT THE PROPOSED LOCATIONS OF CONSTRUCTION JOINTS TO THE ENGINEER FOR APPROVAL BY THE STRUCTURAL ENGINEER BEFORE STARTING CONSTRUCTION.

(SEE SHEET S0.1 FOR CONTINUATION)

REINFORCEMENT DEVELOPMENT LENGTH & SPLICE TABLES

(GR60 EXCEPT AS NOTED)

REINFORCEMENT DEVELOPMENT LENGTHS (LENGTH IN INCHES)

REINFORCED CONCRETE f'c = 2500 PSI AT 28 DAYS

REINF LOCATION	#3 GR40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	16	32	39	47	69	78	88	100	110
OTHER	12	24	30	36	53	60	68	77	85

REINFORCED CONCRETE f'c = 3000 PSI AT 28 DAYS

REINF LOCATION	#3 GR40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	16	29	36	43	63	72	81	102	125
OTHER	13	22	28	33	48	55	62	78	96

REINFORCED CONCRETE f'c = 4000 PSI AT 28 DAYS

REINF LOCATION	#3 GR40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	14	25	31	37	54	62	70	88	108
OTHER	12	19	24	29	42	48	54	68	83

NOTE:
1. MIN. CENTER-TO-CENTER BAR SPACING > 3db
2. MIN. CONCRETE COVER > db
3. db= BAR DIAMETER

REINFORCED MASONRY f'm = 1500 PSI (CONCRETE BLOCK)

	#3 GR40	#4	#5	#6	#7	#8	#9	#10	#11
	18	24	30	36	42	48	55	61	68

REINFORCEMENT LAP SPLICES (LENGTHS IN INCHES)

REINFORCED CONCRETE f'c = 2500 PSI AT 28 DAYS

REINF LOCATION	#3 GR40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	21	42	51	62	90	102	115	130	143
OTHER	16	32	39	47	69	78	89	101	111

REINFORCED CONCRETE f'c = 3000 PSI AT 28 DAYS

REINF LOCATION	#3 GR40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	21	38	47	56	82	94	106	132	162
OTHER	16	29	37	43	63	72	81	102	125

REINFORCED CONCRETE f'c = 4000 PSI AT 28 DAYS

REINF LOCATION	#3 GR40	#4	#5	#6	#7	#8	#9	#10	#11
TOP	18	33	41	49	71	81	91	114	140
OTHER	16	25	32	38	55	63	71	88	108

NOTE:
1. MIN. CENTER-TO-CENTER BAR SPACING > 3db
2. MIN. CONCRETE COVER > db
3. db= BAR DIAMETER

REINFORCED MASONRY f'm = 1500 PSI (CONCRETE BLOCK)

	#3 GR40	#4	#5	#6	#7	#8	#9	#10	#11
	18	24	30	36	42	*	*	*	*

* SPLICED BY WELDING OR MECHANICAL CONNECTORS.

WELDED WIRE FABRIC W5xW5@4x4 LAP SPLICE LENGTH IN TENSION = 12 IN.

TOP REINFORCING IS HORIZONTAL REINFORCEMENT THAT HAS MORE THAN TWELVE INCHES OF CONCRETE PLACED BELOW IT.

USE WELDED SPLICE OR MECHANICAL CONNECTOR IF THE LAP SPLICE REINFORCEMENT DOES NOT HAVE A MINIMUM SPACING 3db+1/8 INCHES AND A MINIMUM COVER OF db+1/8 INCHES

WELDED SPLICE (DIRECT BUTT SPLICES—FULL PENETRATION)
#5 AND SMALLER—SINGLE-BEVEL GROOVE WELD
#6 AND LARGER DOUBLE-BEVEL GROOVE WELD

WELDS SHALL HAVE THE ABILITY TO DEVELOP 125 PERCENT OF THE YIELD STRENGTH FOR THE SPLICED REINFORCEMENT (75 KSI)

MECHANICAL CONNECTORS

MECHANICAL CONNECTORS SHALL BE TENSION-COMPRESSION TYPE WITH THE ABILITY TO DEVELOP 125 PERCENT OF THE YIELD STRENGTH FOR THE SPLICED REINFORCEMENT (75KSI). ALSO, MECHANICAL CONNECTORS SHALL HAVE AND BE INSTALLED PER AN EVALUATION REPORT FROM ICBO EVALUATION SERVICE, INC.

MECHANICAL ANCHORAGE

GENERAL CONTRACTOR TO SUBMIT SHOP DRAWINGS AND ENGINEERING CALCULATIONS FOR THE ANCHORAGE, SUPPORT, AND SEISMIC BRACING OF MECHANICAL UNITS, DUCTS, EQUIPMENT, PIPING OR PLUMBING EQUIPMENT NOT ALREADY NOTED OR DETAILED ON EQUIPMENT SCHEDULES, OR ARCHITECTURAL ELECTRICAL, MECHANICAL OR STRUCTURAL DRAWINGS.

ALL SUBMITTALS SHALL BE SIGNED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND APPROVED TO THE START OF FABRICATION. SEISMIC DESIGN FORCES SHALL ACT AT THE CENTER OF GRAVITY AND ASSUMED TO COME IN ANY DIRECTION PER 2001 C.B.C. SECTION 1632A. ADDITIONAL BUILDING/ SUPPORT FRAMING SHALL BE ADDED WHERE REQUIRED.

REVIEW SET

ABBREVIATIONS

@	AT
ABV	ABOVE
AB	ANCHOR BOLTS
AC	ASPHALTIC CONCRETE
ADDNL	ADDITIONAL
AFF	ABOVE FINISH FLOOR
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BLW	BELOW
BEV	BEVELED
BLDG	BUILDING
BM	BEAM
BOC	BOTTOM OF CONCRETE
BOF	BOTTOM OF FOOTING
BOT	BOTTOM
BRCG	BRACING
BRG	BEARING
BRG PL	BEARING PLATE
BTW	BETWEEN
CC	CENTER TO CENTER
CIP	CAST IN PLACE
CJ	CONSTRUCTION JOINT
CTR	CENTER
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CP	COMPLETE PENETRATION
DBL	DOUBLE
DEPR	DEPRESSED
DF	DOUGLAS FIR
DIA, ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DWG	DRAWING
(E)	EXISTING
EA	EACH
EF	EACH FACE
EBF	ECCENTRICALLY BRACED FRAME
EW	EACH WAY
EW EF	EACH WAY EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
EOS	EDGE OF SLAB
E.S.	EACH SIDE
EQ	EQUAL
EXP B	EXPANSION BOLT
EXT	EXTERIOR
EN	EDGE NAIL
FAB	FABRICATE
FD	FLOOR DRAIN
FF	FINISH FLOOR
FG	FINISH GRADE
FLG	FLANGE
FND	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FT (')	FOOT/FEET
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
GT	GROUT
HAS	HEADED ANCHOR STUD
HDR	HEADER
HK	HOOK
HORIZ	HORIZONTAL
HSA	SEE HAS
HSB	HIGH STRENGTH BOLT
ID	INSIDE DIAMETER
IN (")	INCH
INT	INTERIOR
JT	JOINT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LS	LAG SCREW
LT WT	LIGHT WEIGHT
LG	LONG
MAX	MAXIMUM
MB	MACHINE BOLT
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MEZZ	MEZZANINE
MISC	MISCELLANEOUS
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPG	OPENING
OPH	OPPOSITE HAND
PCC	PRECAST CONCRETE
PC	PIECE
PERP	PERPENDICULAR
PL	PLATE
PP	PARTIAL PENETRATION
PPT	PRESSURE PRESERVATIVE TREATED
PPT	PRESSURE PRESERVATIVE TREATED
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
R	RADIUS
REINF	REINFORCING
REQD	REQUIRED
SAD	SEE ARCHITECTURAL DRAWINGS
SIM	SIMILAR
SJ	SHRINKAGE JOINT
SLH	SHORT LEG HORIZONTAL
SLV	SHORT LEG VERTICAL
SM	SHEET METAL
SOG	SLAB ON GRADE
SQ	SQUARE
SS	STAINLESS STEEL
STAG	STAGGER
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUC	STRUCTURAL
SYM	SYMMETRICAL
THK	THICK
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
T.O.SLAB	TOP OF SLAB
TOS	TOP OF STEEL
TOW	TOP OF WALL
TN	TOE NAIL
TS	TUBE STEEL
TYP	TYPICAL
T&B	TOP AND BOTTOM
UON	UNLESS OTHERWISE NOTED
UNO	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
W/	WITH
WSA	WELDED STUD ANCHOR
WWF	WELDED WIRE FABRIC

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ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

DRAWING TITLE
GENERAL NOTES

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S0.0

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CONTINUED FROM PAGE S0.0

M. METAL STUDS

1. ALL LIGHTGAGE METAL FRAMING SHALL BE AS NOTE BELOW:

EXTERIOR STUDS:	GALVANIZED
INTERIOR STUDS:	GALVANIZED

2. ALL LIGHTGAGE METAL FRAMING CONSTRUCTION SHALL BE A ACCORDANCE WITH AISI "SPECIFICATIONS FOR DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBER" LATEST EDITION.

3. ALL LIGHTGAGE METAL FRAMING SHALL CONFORM WITH THE FOLLOWING:

GALVANIZED STUDS: 12, 14 AND 16 GAUGE	ASTM A653, GRADE 50 (Fy = 50,000 psi)
GALVANIZED STUDS: 18 AND 20 GAUGE	ASTM A653 GRADE 33 (Fy = 33,000 psi)
GALVANIZED TOP TRACK: 16, 18, AND 20 GAUGE SLIPTRACK SYSTEMS OR EQUAL	ASTM A653 GRADE 33 (Fy = 33,000 psi) INTERIOR VERTICAL PARTITIONS
GALVANIZED TRACK END CLOSURES, BRIDGING AND ACCESSORIES	ASTM A653, GRADE 33, U.N.O.) (Fy = 33,000 psi)

4. DOUBLE VERTICAL STUDS SHALL BE STITCH WELDED TOGETHER ON BOTH FLANGES WITH 1/16" GROOVE WELDS X 1" LONG AT 12" ON CENTER, U.N.O.

5. BOTTOM STUD TRACKS FOR INTERIOR PARTITIONS SHALL MATCH THE SIZE AND GAGE OF THE WALL STUDS AND SHALL HAVE 1.5" FLANGES (U.N.O.) TOP TRACKS AT INTERIOR PARTITION SHALL HAVE 1 3/8" FLANGES MATCH THE SIZE AND GAGE OF TYPICAL STUDS BUT SHALL BE 16 GA. MIN, AND SHALL BE MANUFACTURED BY SLIP TRACK SYSTEMS OR EQUAL.

6. MINIMUM SECTION PROPERTIES FOR STEEL STUDS AT INTERIOR PARTITIONS AND THOSE STUDS REFERENCED ON ARCHITECTURAL DRAWING SHALL BE AS FOLLOWS:

	EFFECTIVE S_{xx} =.....IN^3	EFFECTIVE I_{xx} =.....IN^4	EFFECTIVE A =.....IN^2
3⅝" STUDS:			
3⅝" X 20 GA	0.292	0.551	0.262
3⅝" X 18 GA	0.389	0.710	0.340
3⅝" X 16 GA	0.468	0.873	0.422
3⅝" X 14 GA	0.584	1.069	0.524
3⅝" X 20 GA TRACK	0.174	0.384	0.212
3⅝" X 18 GA TRACK	0.245	0.531	0.276
3⅝" X 16 GA TRACK	0.332	0.705	0.346
3⅝" X 14 GA TRACK	0.453	0.921	0.436
4" STUDS:			
4" X 20 GA	0.290	0.603	0.249
4" X 18 GA	0.383	0.776	0.323
4" X 16 GA	0.457	0.953	0.401
4" X 20 GA TRACK	0.201	0.484	0.225
4" X 18 GA TRACK	0.282	0.666	0.293
4" X 16 GA TRACK	0.381	0.882	0.367
6" STUDS:			
6" X 20 GA	0.510	1.582	0.318
6" X 18 GA	0.670	2.042	0.413
6" X 16 GA	0.809	2.518	0.514
6" X 20 GA TRACK	0.331	1.291	0.294
6" X 18 GA TRACK	0.519	1.766	0.383
6" X 16 GA TRACK	0.655	2.229	0.480
6" X 16 GA DL TRACK	0.680	2.383	0.509
8" STUDS:			
8" X 16 GA STUDS	1.218	4.873	0.612
8" X 14 GA STUDS	1.512	6.049	0.766
8" X 16 GA TRACK	0.967	4.559	0.594
8" X 16 GA DL TRACK	0.969	4.847	0.622
10" STUDS:			
10" X 1 5/8" X 16 GA STUDS	1.716	9.958	0.783
10" X 16 GA TRACK	1.436	7.994	0.702
10" X 16 GA DL TRACK	1.756	8.878	0.731
12" STUDS:			
12" x 1 5/8" X 16 GA STUDS	2.028	14.982	0.896
12" X 3" X 14 GA STUDS	4.000	28.415	1.387
12" X 16 GA TRACK	1.655	12.862	0.816
12" X 16 GA DL TRACK	2.333	14.133	0.844
14" STUDS:			
14" X 1 5/8" X 14 GA STUDS	3.379	28.304	1.263
14" X 3" X 14 GA STUDS	4.632	40.613	1.530
14" X 14 GA TRACK	3.036	24.690	1.167
14" X 14 GA DL TRACK	3.741	26.454	1.203

THESE VALUES ARE TAKEN FROM THE SSMA CATALONG, ICBO#4943P & THE DIETRICH CATALOG ICBO #4784. ALL PROPERTIES FOR TRACKS REFLECT 1 3/8" OR 1 1/4" FLANGE, AND ALL PROPERTIES FOR DEEP LEG TRACKS REFLECT 1 1/2" FLANGE.

7. ALL SHEET METAL SCREWS SHALL PROTRUDE 1/4" THROUGH METAL FRAMING.

8. AS A MINIMUM ANCHOR TRACK TO CONCRETE WITH HILTI 0.145" DIAMETER X-DNI (ICBO #2388) LOW VELOCITY POWDER DRIVEN INSERTS @ 16" o.c. OR APPROVED EQUAL. THE INSERTS SHALL HAVE A MINIMUM 1 1/2" EMBEDMENT INTO THE CONCRETE AND SHALL BE LOCATED A MINIMUM 3" FROM ANY CONCRETE EDGE. THE INSERTS SHALL BE PLACED ADJACENT TO EACH WALL STUD AT A MAXIMUM DISTANCE OF 3".

9. POWDER DRIVEN ANCHORS SHALL NOT BE USED IN CONCRETE CURBS.

10. CONTRACTOR SHALL COMPLY WITH ALL OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS AND RECOMMENDATIONS. ALL METAL STUDS SHALL HAVE STIFFENED FLANGES. SEE DRAWINGS FOR SPECIFIC DETAILS ON CONNECTIONS, BRACING, BRIDGING, ETC. CONTRACTOR SHALL PROVIDE ALL ACCESSORIES INCLUDING. BUT NOT LIMITED TO, TRACKS, CLIPS, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATIONS, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED.

11. ALL METAL STUDS TO BE MANUFACTURED BY MEMBERS OF THE STEEL STUD MANUFACTURER'S ASSOCIATION, SSMA (ICBO #4943P), U.N.O.

12. SEE ARCH PLAN FOR SPECIAL METAL STUD FRAMING WHERE INDICATED.

13. FOR FASTENERS INSTALLED IN CONCRETE, MINIMUM SPACING BETWEEN FASTENERS IS 4" o.c. AND MINIMUM EDGE DISTANCE IS 3", TYP. U.N.O.

14. FOR FASTENERS INSTALLED IN STEEL (3/16" MIN. THICKNESS), MINIMUM SPACING BETWEEN FASTENERS IS 1 1/2" o.c. AND MINIMUM EDGE DISTANCE IS 1/2". FASTENERS SHALL BE DRIVEN TO A PENETRATION WHERE THE SHANK PIERCES THE STEEL BASE, UNLESS AS NOTED ON PLAN, TYP. U.N.O.

15. FOR SHEET METAL SCREWS INSTALLED IN LIGHT GAUGE METAL FRAMING, MINIMUM SPACING BETWEEN FASTENERS IS 1 1/2" o.c. AND MINIMUM EDGE DISTANCE IS 3/4" TYP. U.N.O.

16. AS MINIMUM PROVIDE (2) #10 SMS AT EACH LIGHT GAUGE METAL MEMBER CONNECTION, U.N.O.

N. STRUCTURAL OBSERVATION

1. STRUCTURAL OBSERVATION WILL BE PERFORMED BY THE STRUCTURAL ENGINEER OF RECORD OR DESIGNEE IN ACCORDANCE WITH SECTION 1702A OF THE CBC CODE.

2. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVAION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES AND THE COMPLETED STRUCTURAL FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR.

3. THE CONTRACTOR SHALL COORDINATE AND CALL FOR A PRE-CONSTRUCTION MEETING BETWEEN THE ENGINEER OR ARCHITECT RESPONSIBLE FOR THE STRUCTURAL DESIGN, STRUCTURAL OBSERVER, CONTRACTOR, AFFECTED SUBCONTRACTORS, BUILDING AND DEPUTY INSPECTORS. THE PURPOSE OF THE MEETING SHALL BE TO IDENTIFY THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS THAT AFFECT THE VERTICAL AND LATERAL LOAD SYSTEMS OF THE STRUCTURE AND TO REVIEW SCHEDULING OF THE REQUIRED OBSERVATIONS.

4. THE STRUCTURAL OBSERVER SHALL PERFORM SITE VISITS AT THOSE STEPS IN THE PROGRESS OF THE WORK THAT ALLOW FOR CORRECTION OF DEFICIENCIES WITHOUT SUBSTANTIAL EFFORT OR UNCOVERING OF THE WORK INVOLVED. AT A MINIMUM, THE FOLLOWING SIGNIFICANT CONSTRUCTION STAGES REQUIRE A SITE VISIT.

CONSTRUCTION STAGES	ELEMENTS/CONNECTIONS TO BE OBSERVED
A) FOUNDATIONS	REINF / DOWELS / ANCHORS
B) CONCRETE WALLS	REINF / DOWELS / SPLICES
C) STEEL ERECTION	COLUMNS / BEAMS /BRACES /CONNECTIONS
D) FLOOR DECKING	REINF / STUDS / WELDING

ANCHORAGE

1. FOR STRUCTURAL ANCHORAGE OF MECHANICAL EQUIPMENT SEE SHEETS MECHANICAL DRAWINGS.

2. FOR STRUCTURAL ANCHORAGE OF ELECTRICAL EQUIPMENT SEE SHEETS ELECTRICAL DRAWINGS.

3. FOR STRUCTURAL ANCHOR OF PLUMBING EQUIPMENT SEE PLUMBING DRAWINGS.

4. FOR STRUCTURAL ANCHORAGE OF LABORATORY/SCIENTIFIC SEE ARCHITECTURAL DRAWINGS.

5. NO EQUIPMENT SHALL BE INSTALLED WITHOUT APPROVED SUPPORT AND ANCHORAGE DETAILS EXCEPT ITEMS IN THE CATEGORIES LISTED BELOW (SEE CBC PART 1, SECTION 7–125(c):

   A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS THAT IS SUPPORTED ON A FLOOR OR ROOF.

   B. FURNITURE.

   C. TEMPORARY OR MOVEABLE EQUIPMENT.

   D. EQUIPMENT WEIGHING LESS THAN 20 POUNDS AND SUSPENDED ON OR HUNG FROM A WALL.

   E. EQUIPMENT WEIGHING LESS THAN 20 POUNDS AND SUSPENDED FROM A ROOF OR FLOOR.

   SOME ITEMS IN THE ABOVE CATEGORIES MUST BE ANCHORED. THEIR ANCHORAGE IS SUBJECT TO FIELD REVIEW EVEN IF THEIR ANCHORAGE DETAILS ARE NOT SHOWN IN THE APPROVED DOCUMENTS.

6. *ATTACHMENTS OF EQUIPMENT WEIGHING LESS THAN 400# AND SUPPORTED DIRECTLY ON THE FLOOR OR ROOF STRUCTURE. FURNITURE OR TEMPORARY OR MOVABLE EQUIPMENT WEIGHING LESS THAN 20# THAT IS SUPPORTED BY VIBRATION ISOLATION DEVICES SUSPENDED FROM THE ROOF, WALL, OR FLOOR NEED NOT BE DETAILED ON THE PLANS. (CBC TITLE 24 PART 2 SECTION 1630A.1) HOWEVER, SUCH EQUIPMENT MUST BE SUPPORTED AND ANCHORED TO RESIST THE FORCES PRESCRIBED BY SECTION 1630A.2 AND THE ANCHORAGE SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD AS PART OF FIELD REVIEW/INSPECTIONS. THE INSPECTOR OF RECORD SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

7. ALL PIPES, DUCTS, AND CONDUITS SHALL BE SUPPORTED AND BRACED FOR ALL FORCES IN ACCORDANCE WITH 2001 CBC CHAPTER 1632A. GENERAL CONTRACTOR SHALL SUBMIT FINAL SUPPORT AND BRACING CONSTRUCTION DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD FOR GENERAL CONFORMANCE WITH THE ORIGINAL DESIGN INTENT.

8. FOR ALL VIBRATION ISOLATORS AND THEIR ANCHORAGES, CONTRACTOR/ MANUFACTURER SHALL PROVIDE CALCULATIONS, DETAIL, AND/ OR TEST DATA TO SUBSTANTIATE THE ISOLATOR'S CAPACITY FOR VERTICAL AND LATERAL LOADS.

9. SPACING AND DETAILS OF THE SUPPORT AND BRACING OF FIRE SPRINKLER PIPING SHALL COMPLY WITH THE 1999 EDITION OF NFPA 13 AND CHAPTER 35 OF THE CALIFORNIA AMENDMENTS. PROVIDE STRUCTURAL ENGINEER WITH ANCHORAGE DETAILS AND CALCULATIONS FOR THE CONNECTION OF SWAY BRACING TO THE STRUCTURE. DESIGN LOADS FOR THE ANCHORAGE MAY BE COMPUTED PER TABLE 4–14,4,3,5,3 OF NFPA 13 OR BY A RATIONAL ANALYSIS OF THE PIPING SYSTEM, WHERE APPLICABLE, DETAILS FOR THE SUPPORT AND BRACING MAY BE REFERRED TO PRE-APPROVED ANCHORAGE SYSTEM. ALL SHOP DRAWINGS OF THE SPRINKLER SYSTEM SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. THE ALLOWABLE VALUES FOR ANCHORS IN TABLE 4–6.4.3.5.4 MAY NOT COMPLY WITH THE REQUIREMENTS OF THE CODE. REFER TO THE ADOPTED CBC FOR ALLOWABLE LOADS ON THE SPECIFIC FASTENER TYPE. CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THESE REQUIREMENTS. THE ALLOWABLE VALUES FOR EXPANSION ANCHORS SHALL BE DETERMINED IN ACCORDANCE WITH IR 19–1.

NOTES

1. ANCHOR DIAMETER REFERS TO THE THREAD SIZE OF THE WEDGE ANCHOR.

2. APPLY PROOF TEST LOADS TO WEDGE ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS OF THE ORIGINAL NUT USING A TORQUE WRENCH AND APPLY LOAD.

3. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURE(S).

4. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.

5. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:

   HYDRAULIC RAM METHOD: THE ANCHOR SHOULD HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE.

6. TESTING MUST OCCUR 24 HOURS MINIMUM AFTER INSTALLATION OF THE SUBJECT ANCHORS.

7. WHEN INSTALLING DRILLED-IN ANCHORS AND /OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS.

8. THESE TENSION VALUES ARE ONLY APPLICABLE WHEN THE ANCHORS ARE INSTALLED WITH SPECIAL INSPECTION AS SET FORTH IN SECTION 306 OF THE CODE.

9. THE TABULATED VALUES ARE FOR ANCHORS INSTALLED A MINIMUM OF 12 ANCHOR DIAMETERS ON CENTER AND A MINIMUM EDGE DISTANCE OF 10 ANCHOR DIAMETERS, (U.N.O).

10. THE TABULATED VALUES FOR LIGHT WEIGHT CONCRETE ARE THE ANCHORS INSTALLED IN LIGHTWEIGHT EXPANDED SHALE AGGREGATE CONCRETE HAVING THE COMPRESSIVE STRENGTH AT THE TIME OF INSTALLATION. CONCRETE AGGREGATE MUST COMPLY WITH U.B.C. STANDARD NO. 19–3

11. "*" ANCHORS INSTALLED AT THIS EMBEDMENT DEPTH SHALL NOT BE USED TO RESIST SHEAR DUE TO WIND OR SEISMIC FORCES PER ICBO REPORT #1385.

EXPANSION TYPE CONCRETE WEDGE ANCHOR DESIGN & TEST VALUES. HILTI–KWIK BOLT–III CARBON STEEL WEDGE ANCHORS (ICBO REPORT #1385)

TABLE 1A

3,000 PSI NORMAL WEIGHT CONCRETE

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
1/4	1 1/8*	359	270	540
	2	359	535	1070
	3	359	571	1,142
3/8	1 5/8	850	677	1,354
	2 1/2	1,004	1139	2,278
	3 1/2	1,004	1248	2,496
1/2	2 1/4	1,396	1,027	2,054
	3 1/2	1,493	1,638	3,276
	4 3/4	1,465	1,765	3,530
5/8	2 3/4	2,062	1,518	3,036
	4	2,659	2,244	4,488
	5 1/2	2,659	2,770	5,540
3/4	3 1/4	3,059	1,784	3,568
	4 3/4	3,761	3,165	6,330
	6 1/2	3,761	4,295	8,590
1	4 1/2	5,300	2,920	5,840
	6	6,900	4,248	8,496
	9	6,900	5,640	11,280

THESE VALUES REFLECT 80% OF ICBO REPORT VALUES FOR SHEAR. THESE VALUES ASSUME SPECIAL INSPECTION AND REFLECT 80% OF ICBO REPORT VALUES FOR TENSION.

TABLE 1B

4,000 PSI NORMAL WEIGHT CONCRETE

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
1/4	1 1/8*	359	319	638
	2	359	596	1,192
	3	359	613	1,226
3/8	1 5/8	850	810	1,620
	2 1/2	1,004	1335	2,670
	3 1/2	1,004	1335	2,670
1/2	2 1/4	1,396	1,215	2,430
	3 1/2	1,493	1,828	3,656
	4 3/4	1,465	1,931	3,862
5/8	2 3/4	2,062	1,623	3,246
	4	2,659	2,512	5,024
	5 1/2	2,659	3,076	6,152
3/4	3 1/4	3,059	2,008	4,016
	4 3/4	3,761	3,924	7,848
	6 1/2	3,761	5,252	10,504
1	4 1/2	5,300	3,500	7,000
	6	6,900	5,300	10,600
	9	6,900	6,444	12,888

THESE VALUES REFLECT 80% OF ICBO REPORT VALUES FOR SHEAR. THESE VALUES ASSUME SPECIAL INSPECTION AND REFLECT 80% OF ICBO REPORT VALUES FOR TENSION.

TABLE 1C

3 1/4" LIGHTWEIGHT CONCRETE OVER 1 1/2" METAL DECK (F'c=3000 PSI)

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH FROM BOTTOM OF FLUTE (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
1/4	2"	460	495	600
3/8	2 1/2"	650	826	1652
1/2	3 1/2"	1011	1280	2560

THE ABOVE VALUES WERE CACULATED USING IR 19–1. & ICBO ER–1385 EFFECTIVE EMBEDMENT IS CONSIDERED HEIGHT OF ANCHOR ABOVE METAL DECK + 1/3 DECK HEIGHT.
THESE VALUES REFLECT 80% OF ICBO REPORT VALUES FOR SHEAR. THESE VALUES ASSUME SPECIAL INSPECTION AND REFLECT 80% OF ICBO REPORT VALUES FOR TENSION.

EXPANSION TYPE CONCRETE WEDGE ANCHOR DESIGN & TEST VALUES. ITW RAMSET / RED HEAD TRUBOLT CARBON STEEL WEDGE ANCHORS (ICBO REPORT–1372)

NOT USED

TABLE 1D

2 1/2" LIGHTWEIGHT CONCRETE OVER 2" METAL DECK (F'c=3000 PSI)

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH FROM BOTTOM OF FLUTE (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
3/8	1 1/2"	632	424	848
	3"	800	588	1176
1/2	2 1/4"	1076	720	1440
	3"	1324	944	1888
	4"	1288	N/A	N/A
5/8	3"	1100	1200	2400
	5"	1828	1192	2384
3/4	3 1/4"	1776	1432	2864
	5 1/4"	N/A	1780	3560

THE ABOVE VALUES WERE CACULATED USING IR 19–1. & ICBO ER–1372 EFFECTIVE EMBEDMENT IS CONSIDERED HEIGHT OF ANCHOR ABOVE METAL DECK + 1/3 DECK HEIGHT.
THESE VALUES REFLECT 80% OF ICBO REPORT VALUES FOR SHEAR. THESE VALUES ASSUME SPECIAL INSPECTION AND REFLECT 80% OF ICBO REPORT VALUES FOR TENSION.

TABLE 1E

HILTI KWIK BOLT–III EXPANSION ANCHORS IN GROUTED MASONRY (ICBO REPORT #1385

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH (INCHES)	MIN. DISTANCE FROM EDGE OF WALL (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
1/4	1 1/8	4	304	121	242
		12	304	121	242
	2	4	342	432	864
		12	342	432	864
3/8	1 5/8	4	589	257	514
		12	751	273	546
	2 1/2	4	764	626	1252
		12	1054	626	1252
1/2	2 1/4	4	664	502	1004
		12	1171	533	1066
	3 1/2	4	840	724	1448
		12	1853	724	1448
5/8	2 3/4	4	710	651	1302
		12	1732	692	1384
	4	4	743	994	1988
		12	2123	1035	2070
3/4	3 1/4	4	627	829	1658
		12	2508	829	1658
	4 3/4	4	657	1316	2632
		12	2627	1368	2736

THESE VALUES REFLECT 80% OF ICBO REPORT VALUES FOR SHEAR. THESE VALUES ASSUME SPECIAL INSPECTION AND REFLECT 80% OF ICBO REPORT VALUES FOR TENSION.

TABLE 1F

POWER–BOLT CARBON STEEL EXPANSION SLEEVE ANCHORS (ICBO REPORT #1532)

3,000 PSI LIGHT WEIGHT CONCRETE

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH FROM BOTTOM OF FLUTE (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
1/4	1 1/4"	472	184	368
3/8	2"	548	318	736
1/2	2 1/2"	880	400	800
5/8	2 3/4"	888	400	800

THE ABOVE VALUES WERE CACULATED USING IR 19–1. & ICBO ER–1532 EFFECTIVE EMBEDMENT IS CONSIDERED HEIGHT OF ANCHOR ABOVE METAL DECK + 1/3 DECK HEIGHT.
THESE VALUES REFLECT 80% OF ICBO REPORT VALUES FOR SHEAR. THESE VALUES ASSUME SPECIAL INSPECTION AND REFLECT 80% OF ICBO REPORT VALUES FOR TENSION.

TABLE 1G

POWER–STUD CARBON STEEL EXPANSION WEDGE ANCHOR (ICBO REPORT # 1532)

3,000 PSI LIGHT WEIGHT CONCRETE

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH FROM BOTTOM OF FLUTE (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
1/4	1 1/8"	368	176	352
3/8	1 5/8"	560	304	608
	3"	768	896	1792
1/2	2 1/4"	956	640	1280
	3"	1192	912	1824
5/8	2 3/4"	956	640	1280
	3 1/2"	1432	1108	2216

THE ABOVE VALUES WERE CACULATED USING IR 19–1. & ICBO ER–1532 EFFECTIVE EMBEDMENT IS CONSIDERED HEIGHT OF ANCHOR ABOVE METAL DECK + 1/3 DECK HEIGHT.
THESE VALUES REFLECT 80% OF ICBO REPORT VALUES FOR SHEAR. THESE VALUES ASSUME SPECIAL INSPECTION AND REFLECT 80% OF ICBO REPORT VALUES FOR TENSION.

ADHESIVE TYPE ANCHORS: HAS THREADED RODS WITH HILTI HY150 ADHESIVE (ICBO REPORT #5193)

TABLE 2A

3,000 PSI NORMAL WEIGHT CONCRETE

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
3/8	1 3/4	494	744	1,488
	3 1/2	1,496	1,720	3,440
	5 1/4	3,052	2,037	4,075
1/2	2 1/8	720	1,048	2,096
	4 1/4	2,336	2,097	4,195
	6 3/8	4,477	3,600	7,200
5/8	2 1/2	984	1,353	2,707
	5	3,200	3,616	7,232
	7 1/2	6,373	5,344	10,688
3/4	3 3/8	1,700	2,358	4,716
	6 5/8	5,504	5,078	10,156
	10	10,980	8,120	16,240
7/8	3 3/4	2,241	2,980	5,960
	7 1/2	7,049	7,040	14,080
	11 1/4	14,205	11,240	22,480
1	4 1/8	2,696	3,116	6,232
	8 1/4	8,764	7,488	14,976
	12 3/8	17,112	13,150	26,300

TABLE 2B

4,000 PSI NORMAL WEIGHT CONCRETE

ANCHOR DIA (INCHES)	EMBEDMENT DEPTH (INCHES)	DESIGN VALUES (POUNDS) SHEAR	DESIGN VALUES (POUNDS) TENSION	TENSION TEST (POUNDS)
3/8	1 3/4	580	948	1,896
	3 1/2	1,752	2,032	4,064
	5 1/4	3,576	2,100	4,200
1/2	2 1/8	844	1,180	2,360
	4 1/4	2,736	2,952	5,904
	6 3/8	5,248	3,972	7,944
5/8	2 1/2	1,152	1,492	2,984
	5	3,748	3,936	7,872
	7 1/2	7,468	6,182	12,364
3/4	3 3/8	1,992	2,944	5,888
	6 5/8	6,448	6,664	13,328
	10	12,864	9,104	18,208
7/8	3 3/4	2,628	3,648	7,296
	7 1/2	8,260	8,200	16,400
	11 1/4	16,644	12,484	24,968
1	4 1/8	3,160	3,648	7,296
	8 1/4	10,268	8,728	17,456
	12 3/8	20,048	14,644	29,288

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EXP. 6/30/05

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STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL # 01-106658
AC FLS SSS
DATE 04/21/2005

DRAWING TITLE
GENERAL NOTES

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S0.1

drawn by: AY

REVIEW SET

20050420.16345059KK:\SkylineCommunityCollege\Dwgs\Inc#1Rev-1\SKY-S01.dwg

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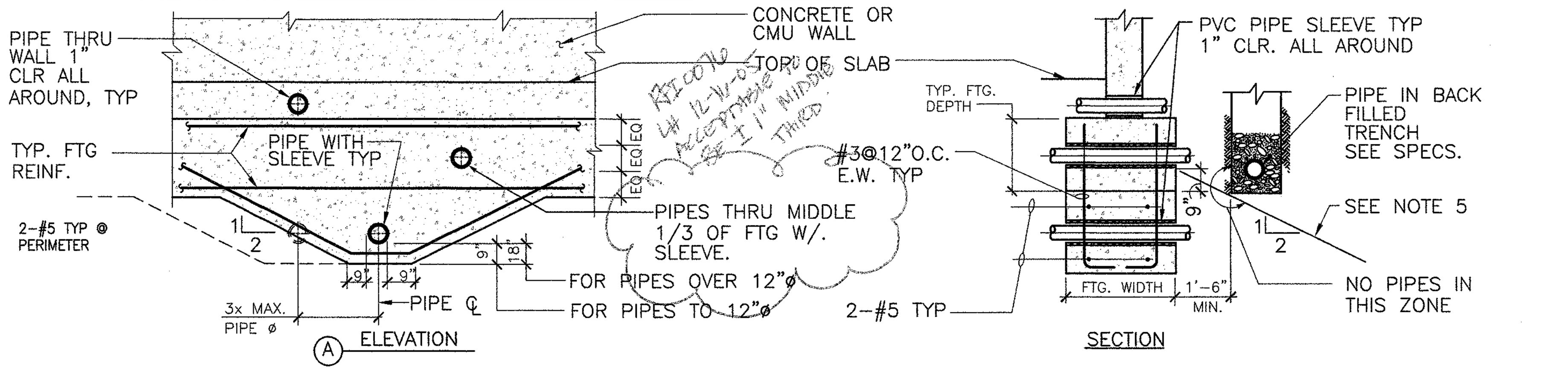
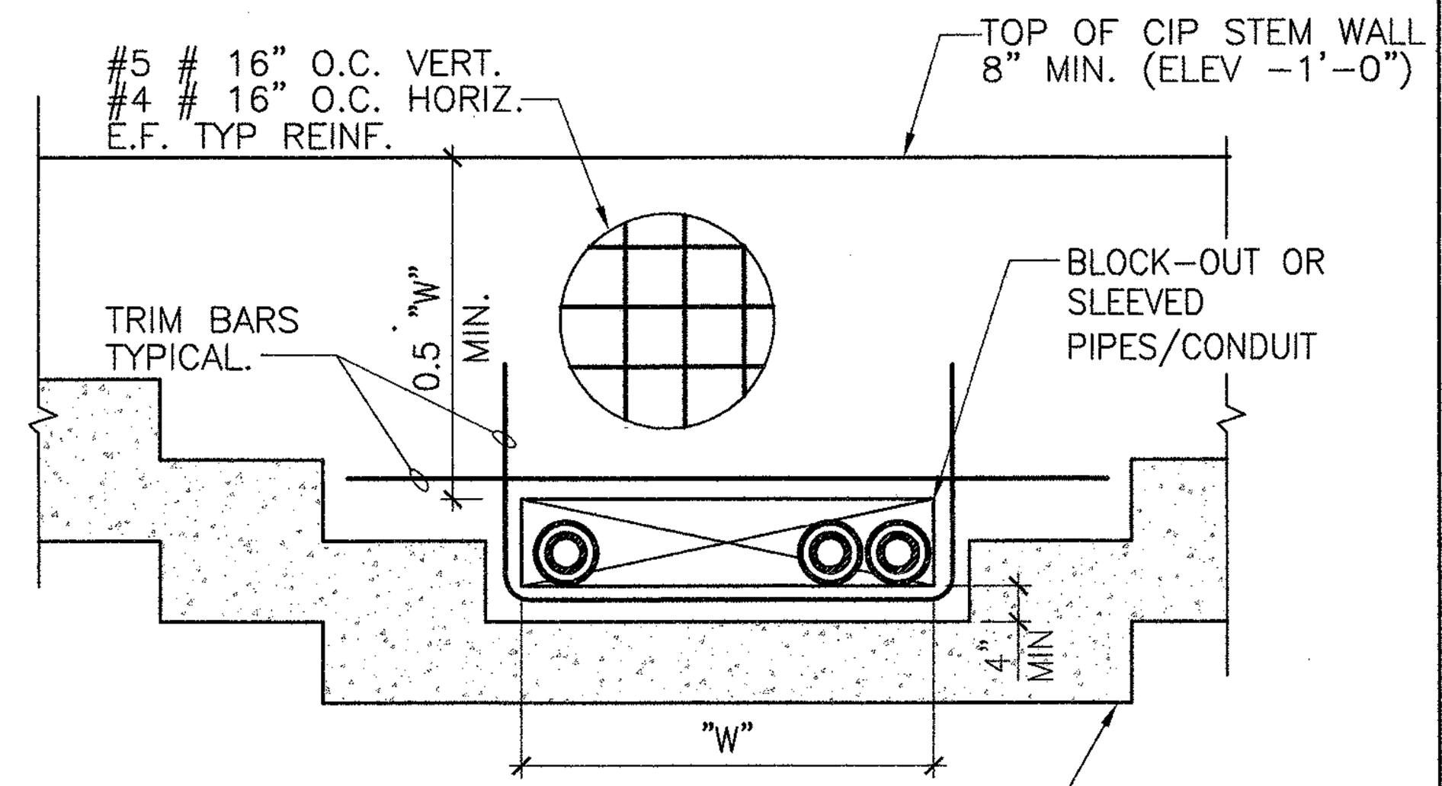


NOTES:
1. DEPTHS OF FOOTINGS MAY BE DETERMINED BY LOCATION OF CONDUIT AND METAL PIPING. ALL METAL PIPES SHALL RUN THROUGH METAL SLEEVES AND SHALL HAVE 1" CLR ALL AROUND. *Acceptable to use PVC sleeves RFI 0047*
2. WHERE C METAL PIPES CROSS UNDER FOOTINGS WITHIN 3 FT (ELECT. CONDUIT 2FT) OF THE BOTTOM, FOUNDATIONS SHALL BE EXTENDED DOWNWARDS AND CONCRETE PLACED ACCORDING TO ELEVATION A ABOVE. SEE NOTES 3 & 5 FOR ANY EXCEPTIONS.
3. WHERE C METAL PIPES CROSS UNDER FOOTINGS WITHIN 3 FT (ELECT. CONDUIT 2FT) OF THE BOTTOM, FOUNDATIONS SHALL BE STEPPED AND DETAIL 9/– FOLLOWED IF ANY OF THE FOLLOWING CONDITIONS ALSO EXIST. (UNLESS OTHERWISE AUTHORIZED BY ENGINEER OF RECORD):
   a) THERE ARE MULTIPLE PIPES WHERE THE C SPACING BETWEEN PIPES IS LESS THAN 3 TIMES THE DIAMETER OF THE LARGER PIPE SLEEVE.
   b) THERE ARE PIPE SLEEVES 12"ø OR LARGER.
4. PIPES OR CONDUIT RUNNING PARALLEL TO FOOTINGS SHALL NOT PASS BELOW OR WITHIN THE 1:2 INFLUENCE OF ANY CONTINUOUS OR ISOLATED FOOTINGS. FOUNDATIONS SHALL BE STEPPED AND LOWERED AND DETAIL 9/– FOLLOWED WHERE SUCH A CONDITION EXISTS.
5. WHERE GROUPS METAL PIPES OR ELECT CONDUIT WITH A COMBINED WIDTH GREATER THAN 5 FT CROSS UNDER FOOTINGS LESS THAN 5 FT BELOW THE BOTTOM, THE FOOTINGS SHALL BE STEPPED AND DETAIL 9/– FOLLOWED.
6. ALL ELECT CONDUIT PASSING THROUGH CONCRETE FOOTINGS SHALL BE WRAPPED IN 1/2" THICK FOAM.

METAL PIPES OR CONDUIT SHALL NOT PASS VERTICALLY THROUGH THE FOOTINGS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER OF RECORD.

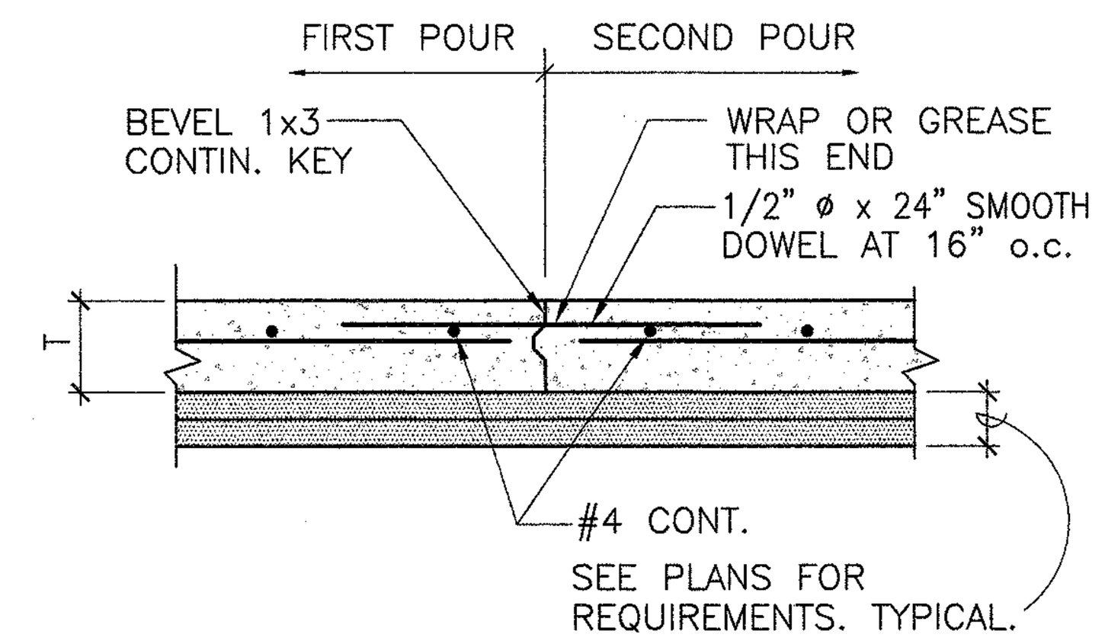
17 PIPE @ FOOTING DETAIL
N.T.S.



TRIM BAR SCHEDULE

WIDTH "W"	HORIZ.	VERT.
6 FT (MAX)	2–#4	2–#4
8 FT (MAX)	2–#5	2–#4
12 FT (MAX)	2–#6	2–#5

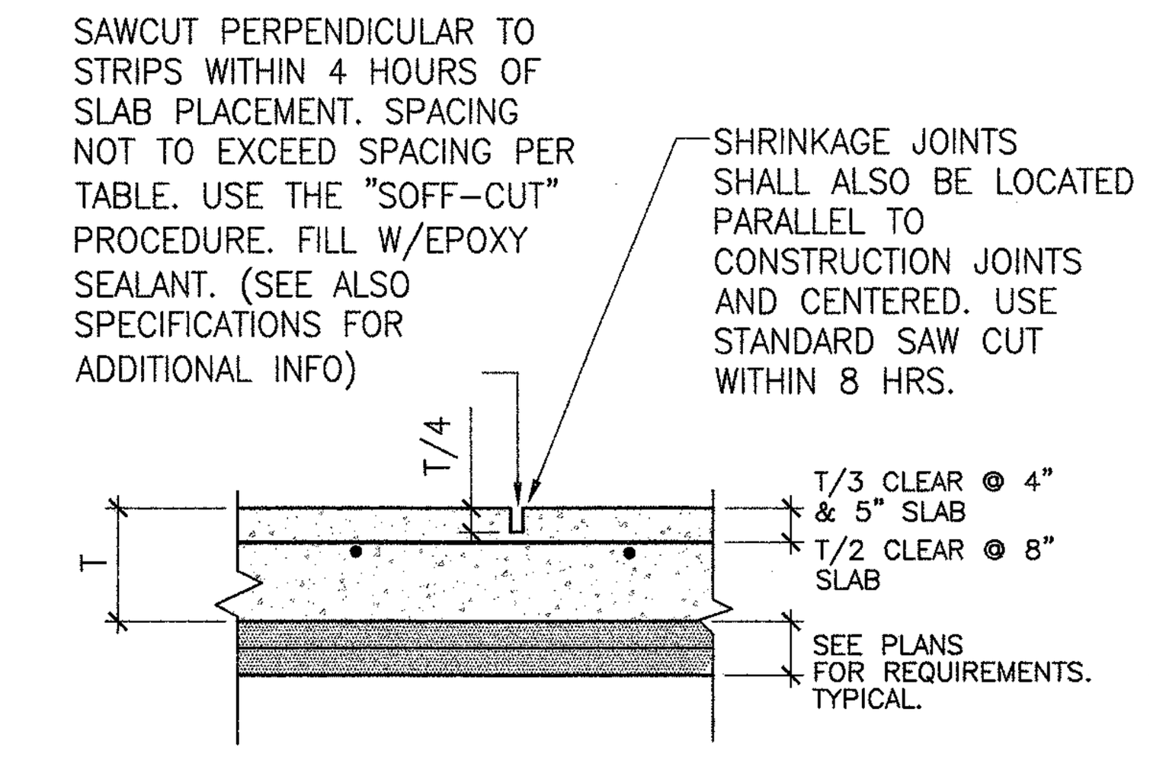
9 ELEVATION @ PIPING PENETRATIONS
N.T.S.



NOTE: REINFORCING NOT CONTINUOUS THRU JOINT.

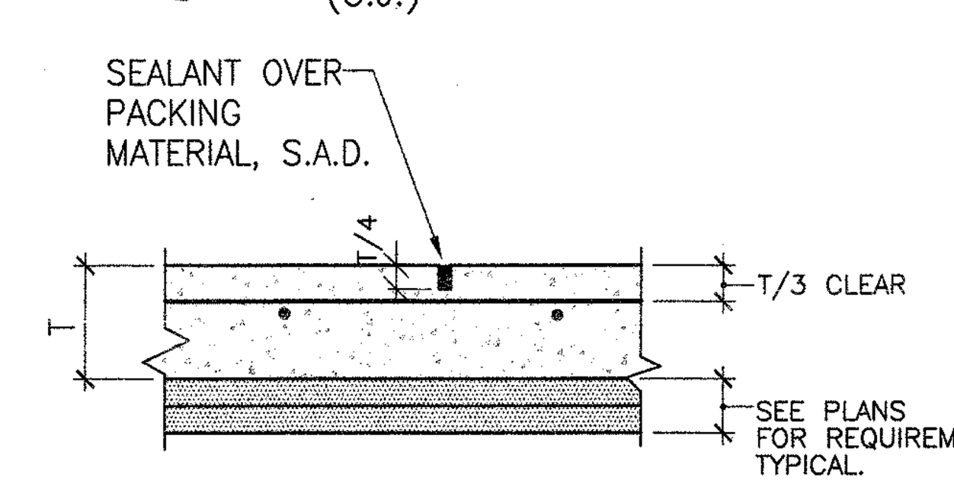
PLACE SLAB-ON-GRADE AND LOCATE CONSTRUCTION JOINTS UTILIZING POUR STRIP METHOD, WITH SPACING NOT TO EXCEED 50 FEET IN WIDTH U.N.O. AVOID REENTRANT CORNERS. MAX. ONE POUR LENGTH SHALL NOT EXCEED 200 FEET.

(A) CONSTRUCTION JOINT (C.J.)



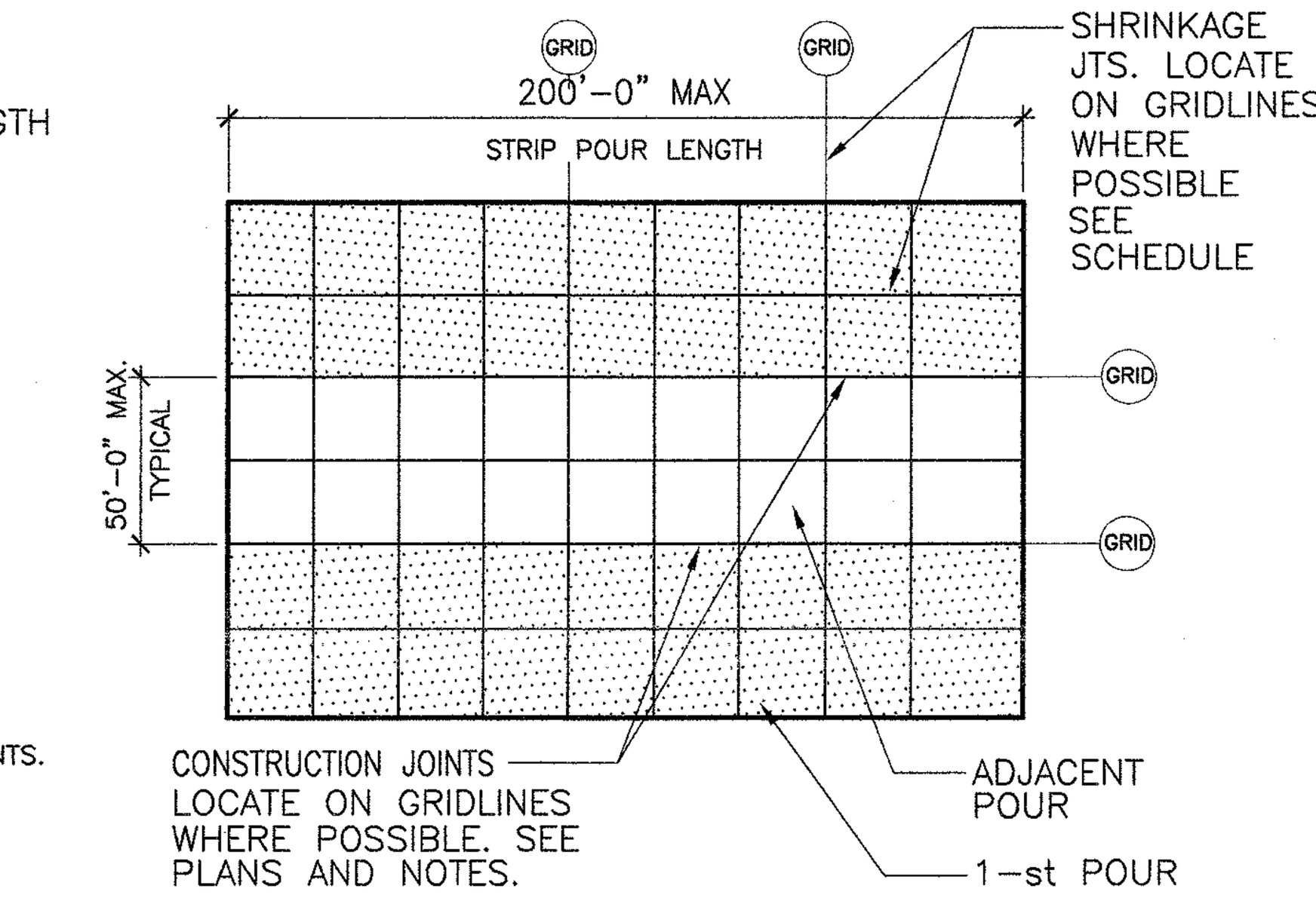
NOTE: REINFORCING CONTINUOUS THRU JOINT.

(B) SHRINKAGE JOINT (S.J.)



NOTE: REINFORCING CONTINUOUS THRU JOINT.

(C) EXPANSION JOINT @ EXTERIOR SLABS ONLY

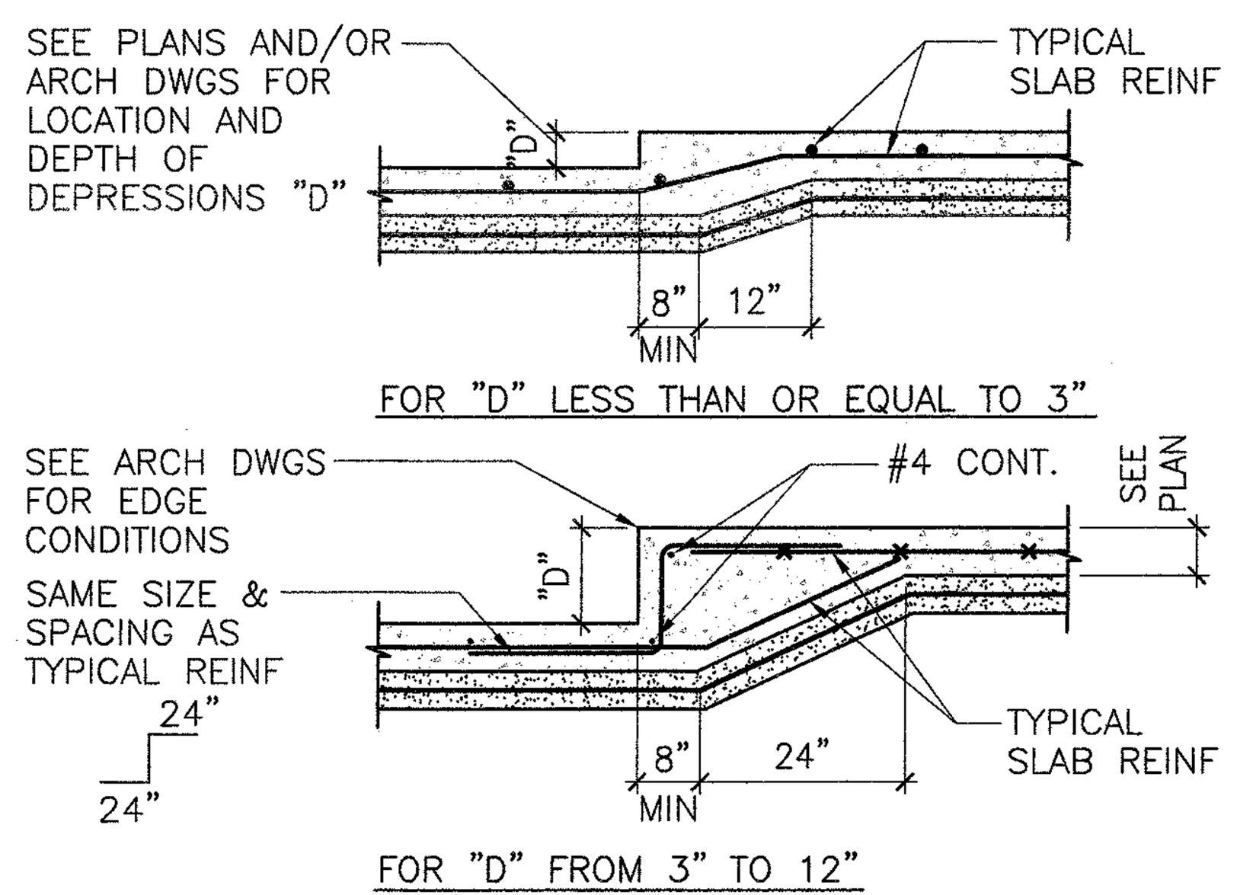


STRIP POUR PATTERN JOINT LAYOUT

SHRINKAGE JOINT SPACING

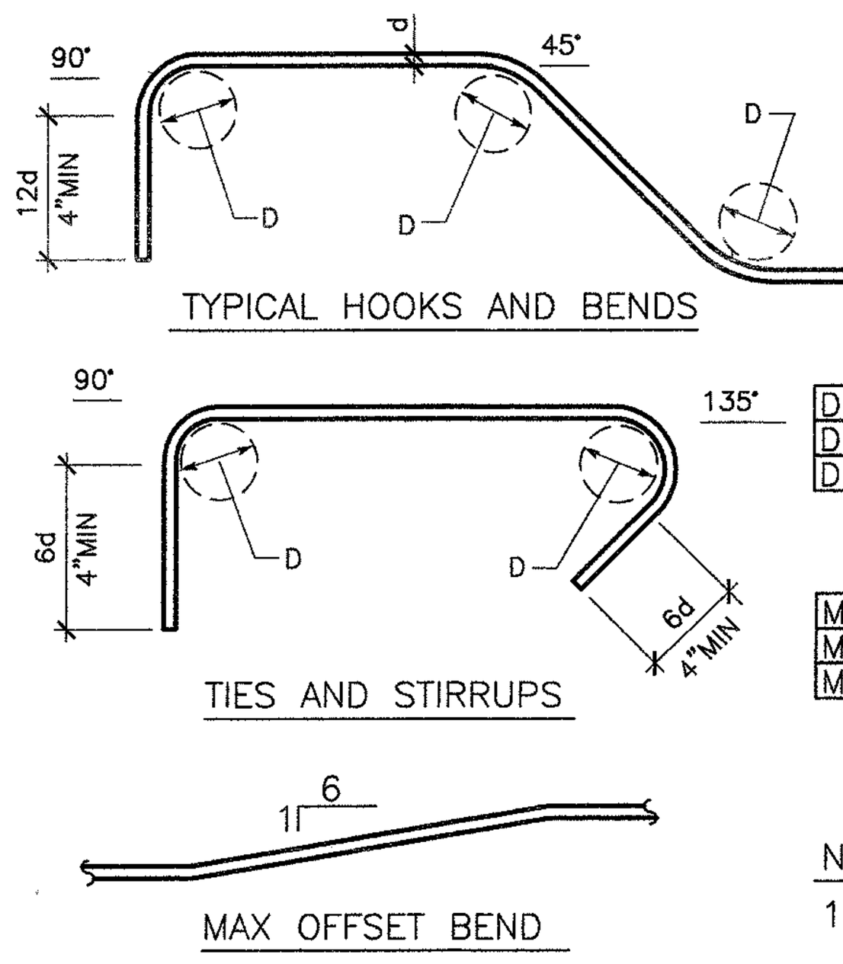
SLAB THICKNESS	MAXIMUM SPACING
4"	10'-0"
5"	12'-0"
6"	15'-0"

6 TYPICAL SLAB JOINTS
N.T.S.



NOTE:
SEE PLAN FOR SLAB SIZE AND UNDERLYING MATERIALS.

18 TYPICAL DEPRESSED SLAB
N.T.S.



D = 6d	FOR #3 TO #8
D = 8d	FOR #9 TO #11
D = 10d	FOR #14 TO #18

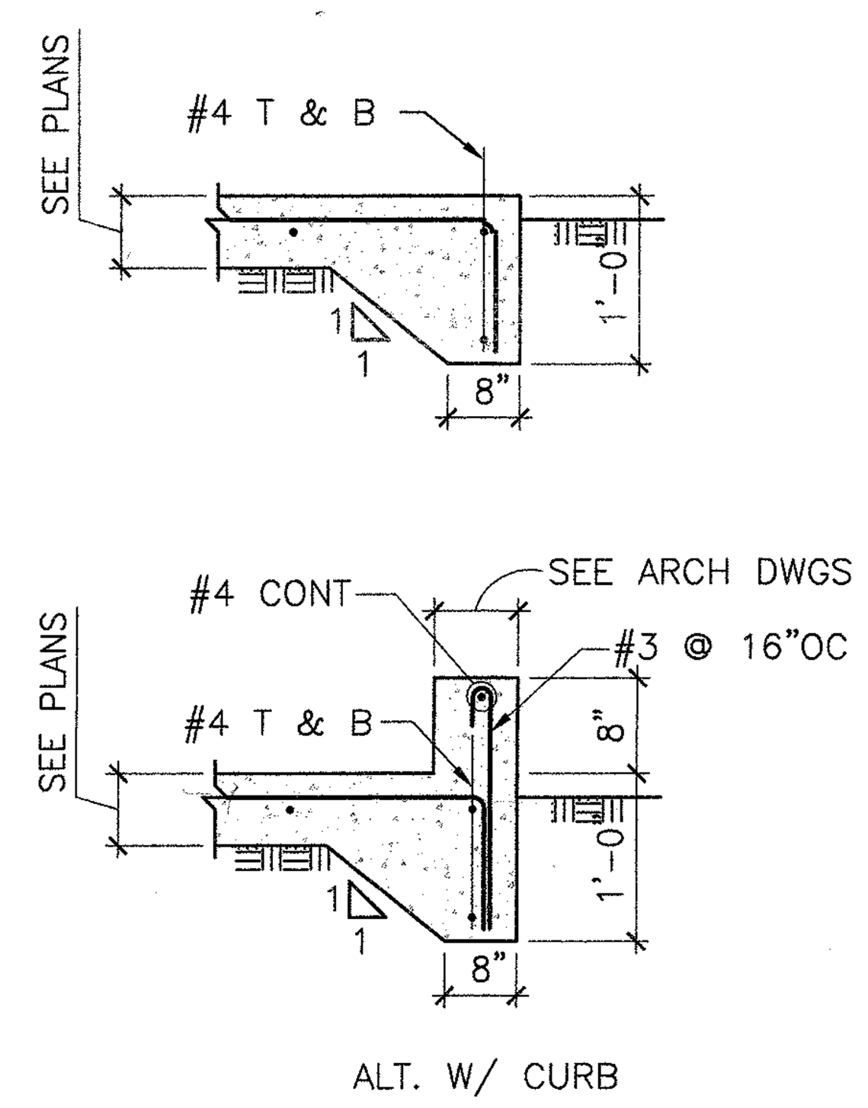
PRINCIPAL REINFORCING

MINIMUM D = 1 1/2"	FOR #3
MINIMUM D = 2"	FOR #4
MINIMUM D = 2 1/2"	FOR #5

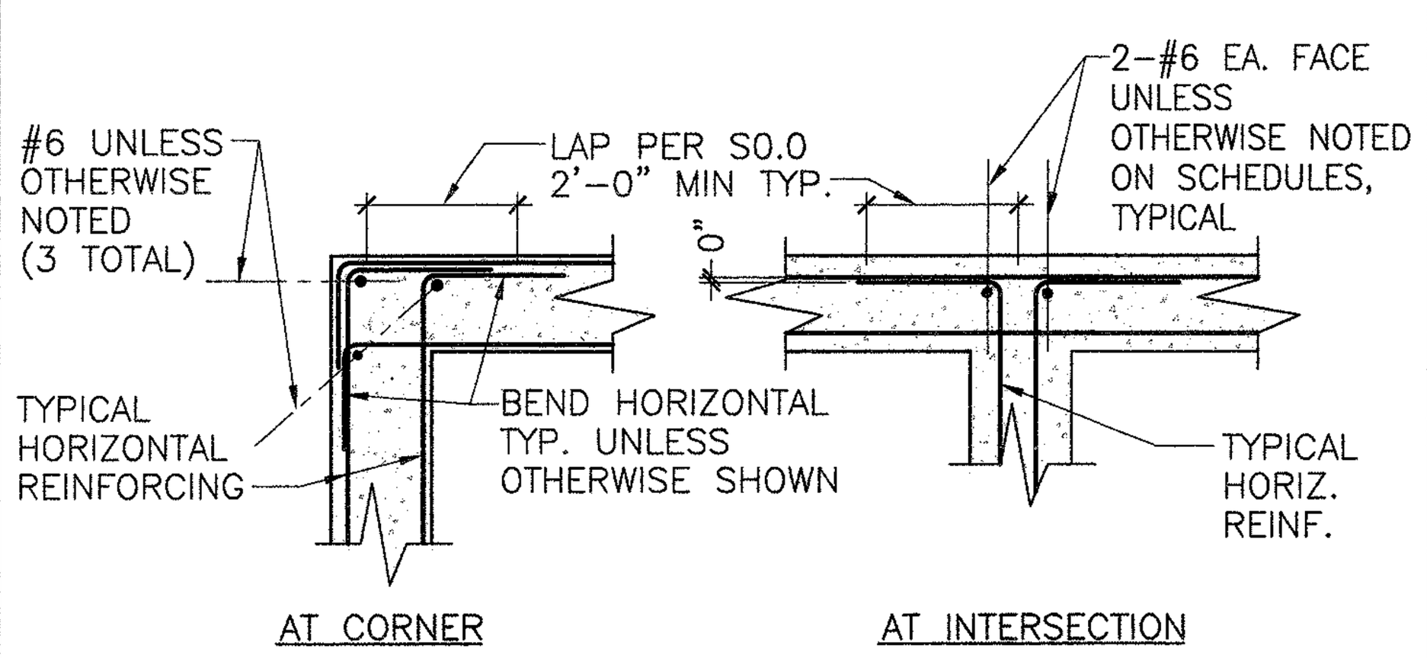
TIE OR STIRRUPS

NOTES:
1. ALL BENDS SHALL BE MADE COLD.

14 REBAR HOOKS AND BENDS
N.T.S.



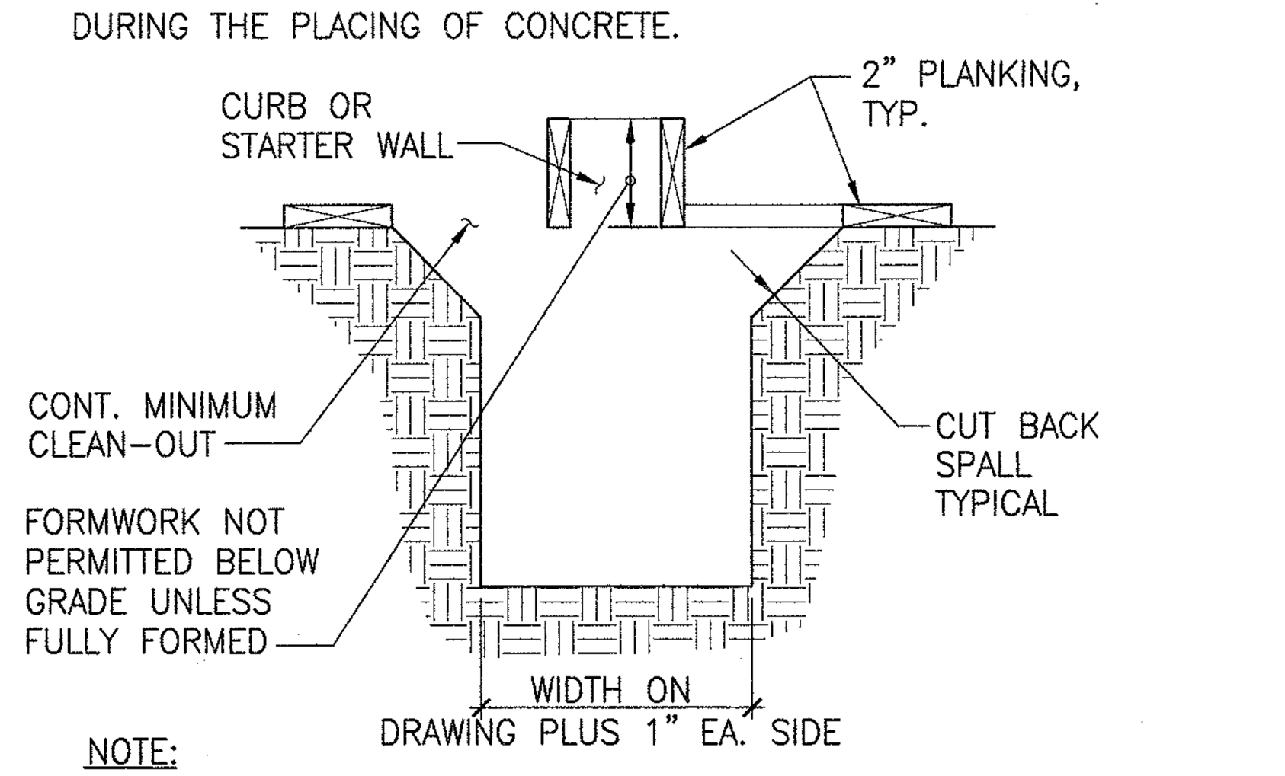
10 EDGE OF EXTERIOR SLAB
N.T.S.



NOTE:
1. BAR INTERSECTIONS SHOWN APPLY TO ALL SINGLE AND DOUBLE CURTAIN INTERSECTIONS AND TO ALL VARIATIONS OF VERTICAL AND HORIZONTAL REBAR POSITIONS.
2. ALL FOOTING REINFORCEMENT TO BE CONTINUOUS WITH REINFORCEMENT EXTENDING MIN. 2'-0" BEYOND BENDS.

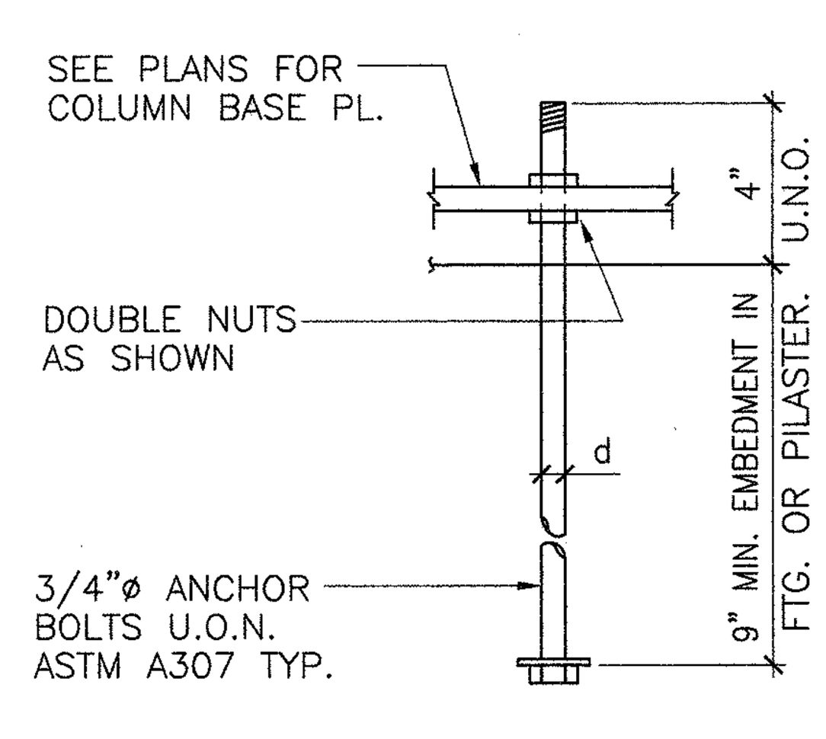
19 PLAN VIEWS OF CONC. FOOTINGS
N.T.S.

FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE STRUCTURAL ENGINEER OR GEOTECHNICAL ENGINEER, SUBJECT OF APPROVAL BY THE DIVISION OF THE STATE ARCHITECT. IN SUCH CASE THE MINIMUM FORMWORK SHOWN BELOW IS MANDATORY TO INSURE CLEAN EXCAVATIONS IMMEDIATELY PRIOR TO AND DURING THE PLACING OF CONCRETE.



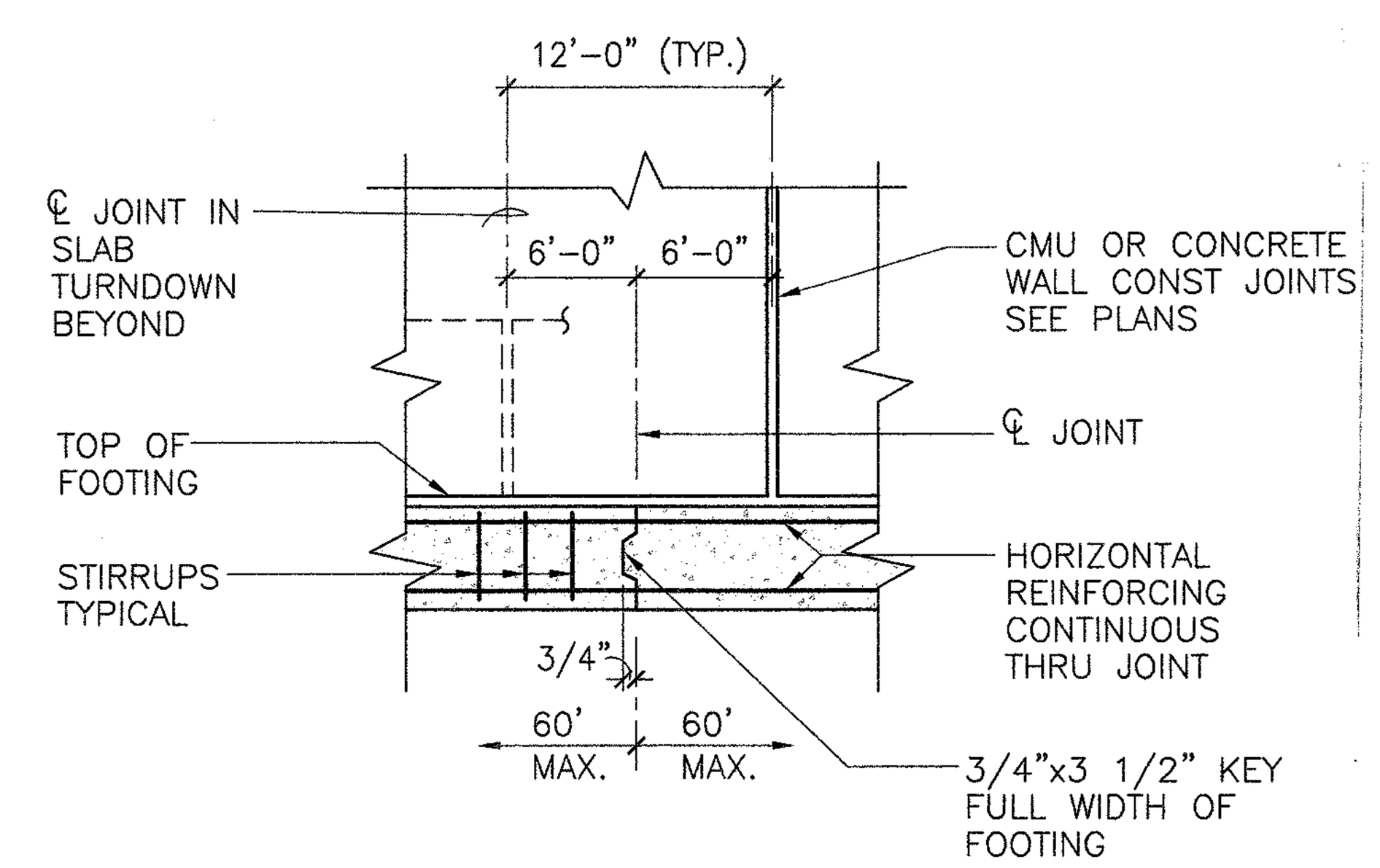
NOTE:
A. STAKES NOT PERMITTED WITHIN FOOTING SECTION.
B. STARTER WALL REQUIRED FOR FOOTINGS BELOW GRADE. SEE PLANS FOR STARTER WALL WIDTH & HEIGHT.
C. AFTER CONCRETE HAS SET, CLEAN AND REMOVE LAITANCE AND SCUM.

15 DETAIL
N.T.S.



℄ WASHER 3 x 3 x 1/4" @ d < 3/4"
4 x 4 x 3/8" @ d > 3/4"

11 ANCHOR BOLT IN CONCRETE
N.T.S.



RFI 0049

Subject
Construction Joint's

Location	**Discipline**	**CSI Division**		
	Structural	03000	Concrete	
Drawing/Spec	**Revision**	**Date**		**Detail/Section**

Question
General Contractor requires the following clarification for locating the footing construction joints, 7/S1.1

1. Is this detail a DSA or ACI requirement
2. Is there a standard area where the joint shall occur?
3. Can there be any relief on the 60' max parameter? On previous projects the Structural Engineer has provided relief.
4. Can CJ's occur where a grade beam has a braced beam embed?
5. Can CJ's occur where a pipe at footing occurs, 9 & 17/S1.1?
6. Can CJ's occur in a stepped footing?

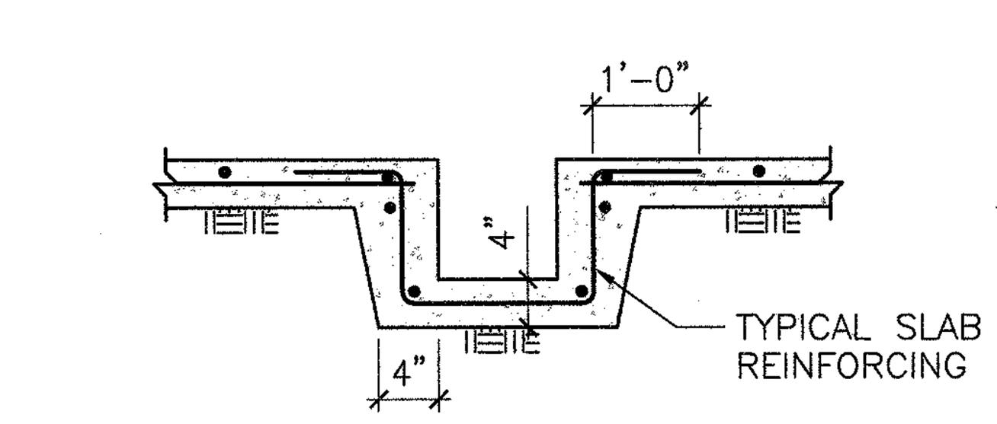
The aforementioned items are required to finalize the proposed footing CJ drawing. The second scheduled pour, the 1st requiring this information, will be on 6/29/05.

Consultant Comments
Response to clarification questions:
1. Both
2. Joint to occur between pours
3. Though the 60 ft spacing requirement is not a specific code requirement, it is a good design/construction practise to mitigate concrete cracking. This 60ft parameter could be relaxed.
4. No ... notify SE where this situation occurs.
5. No ... notify SE where this situation occurs.
6. No ... notify SE where this situation occurs.

...///...

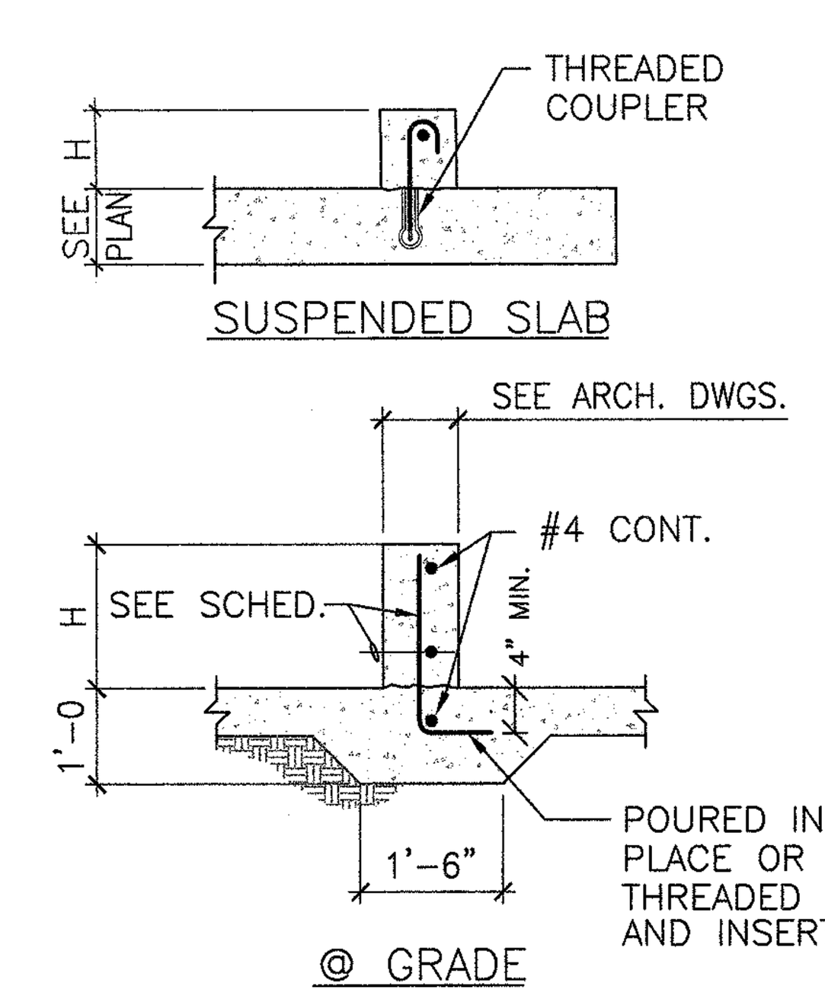
Tejas, Crosby Group.

7 FOOTING CONSTRUCTION JOINT
N.T.S.



NOTES:
SEE ARCH. AND MECH. DRAWINGS FOR DIMENSIONS, LOCATION, AND COVER DETAILS

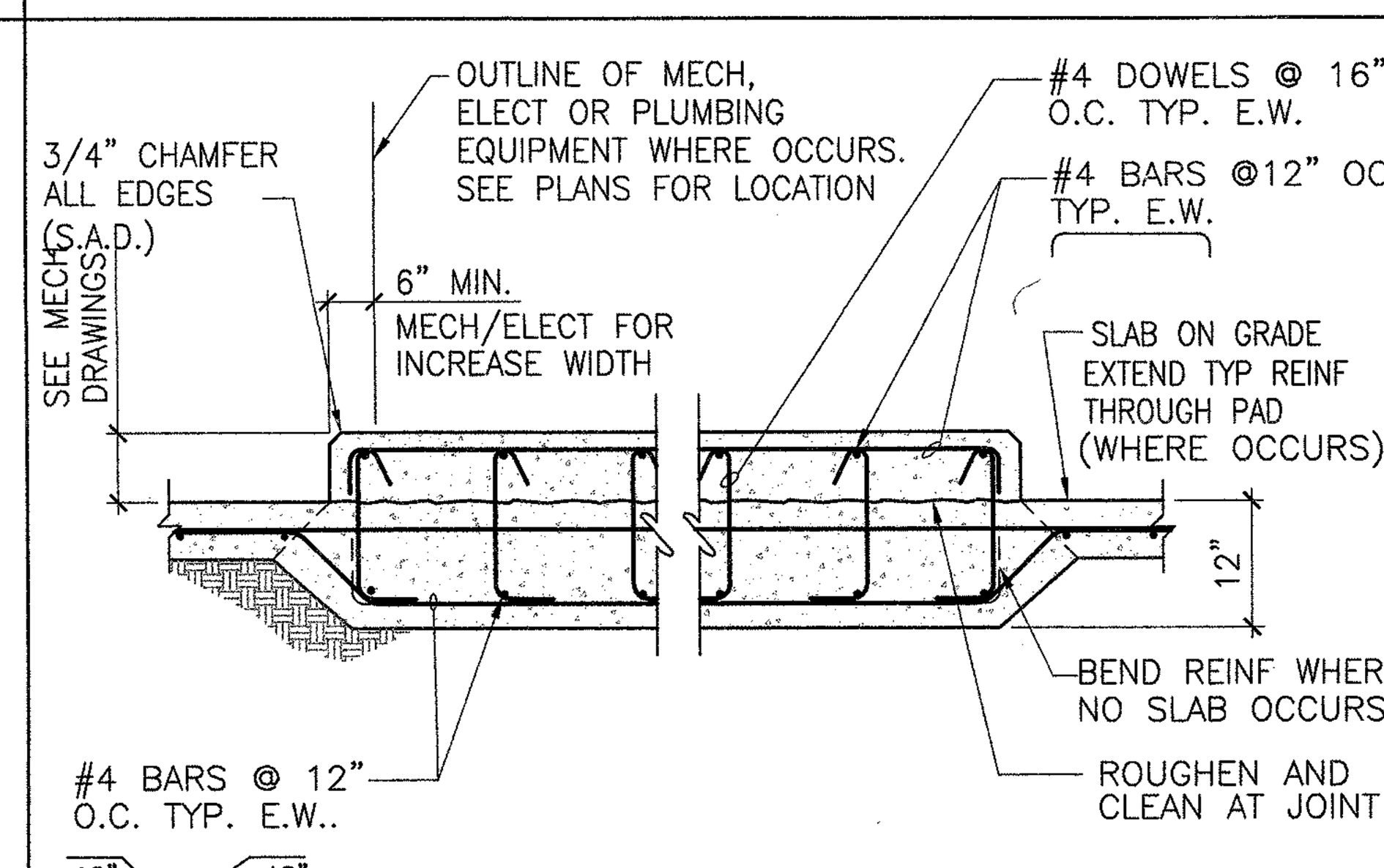
20 TYPICAL CONCRETE TRENCH
N.T.S.



	CURB	
MAX. "H"	VERTICAL	HORIZ.
8"	#3 @ 18"	1–#4
18"	#4 @ 18"	3–#4
4'-0"	#4 @ 12"	#4@12"

REINF. TO BE PLACED ON CURB WALL ℄

16 TYPICAL CONCRETE CURB
N.T.S.

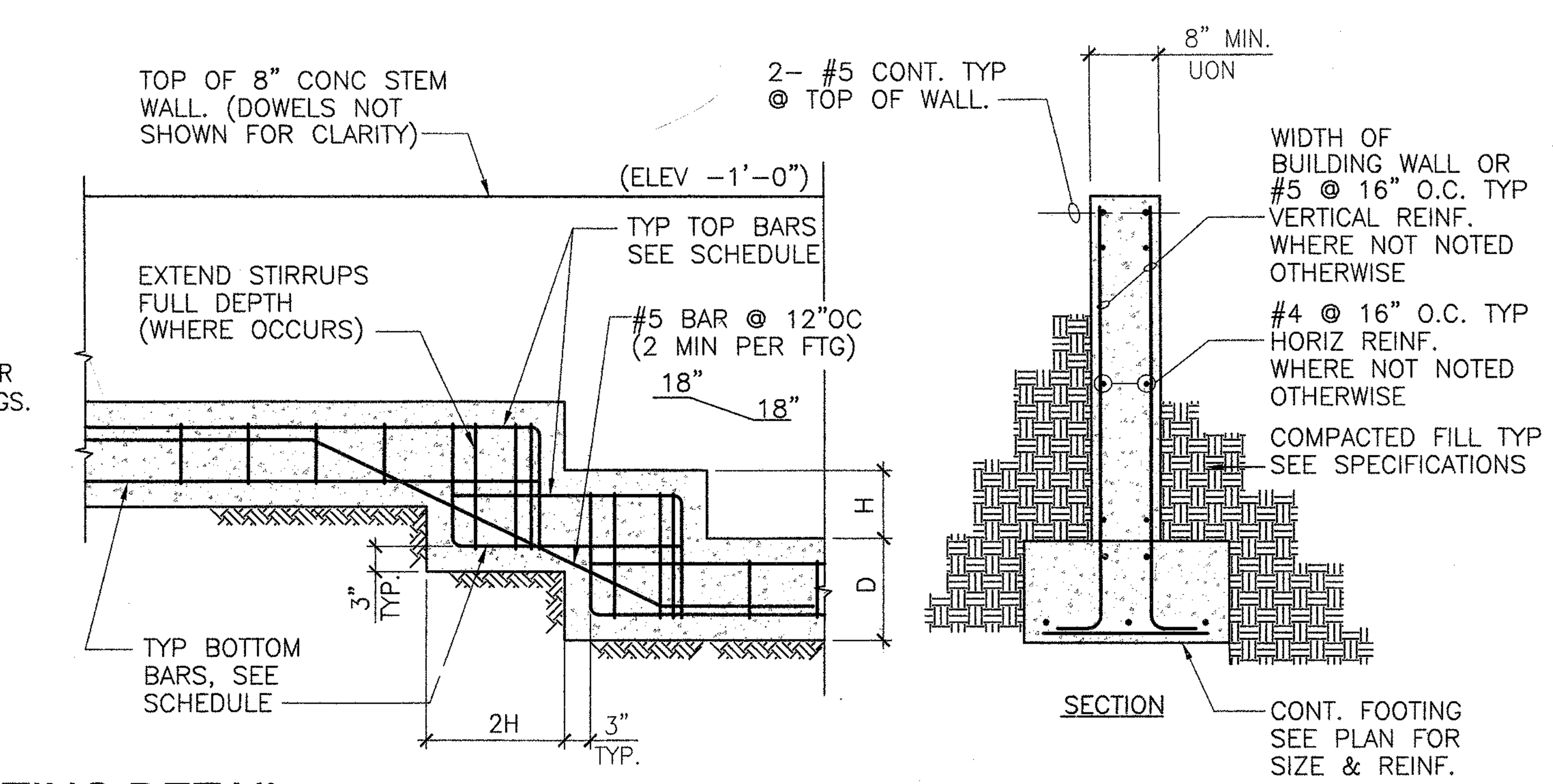


NOTE:
SEE ARCH AND MECH DRAWINGS FOR SIZE AND LOCATION OF PADS.

MECHANICAL EQUIPMENT MINIMUM ATTACHMENT 5/8"ø HILTI KWIK BOLT II @ 12"O.C. (4" MIN EMBEDMENT). SEE MECH DRAWINGS

12 RAISED CONC. SLAB-ON-GRADE
N.T.S.

NOTES:
1) H = FTG STEP (18" MAX)
2) D = FTG DEPTH (SEE SCHEDULE)
3) SEE PLANS & DETAIL 17/– FOR AREAS REQUIRING STEP FOOTINGS.



8 STEPPED FOOTING DETAIL
SCALE: 3/4"=1'-0"

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INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

IDENTIFICATION STAMP — DIV. OF THE STATE ARCHITECT — OFFICE OF REGULATION SERVICES

DRAWING TITLE
TYPICAL DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S1.1

REVIEW SET

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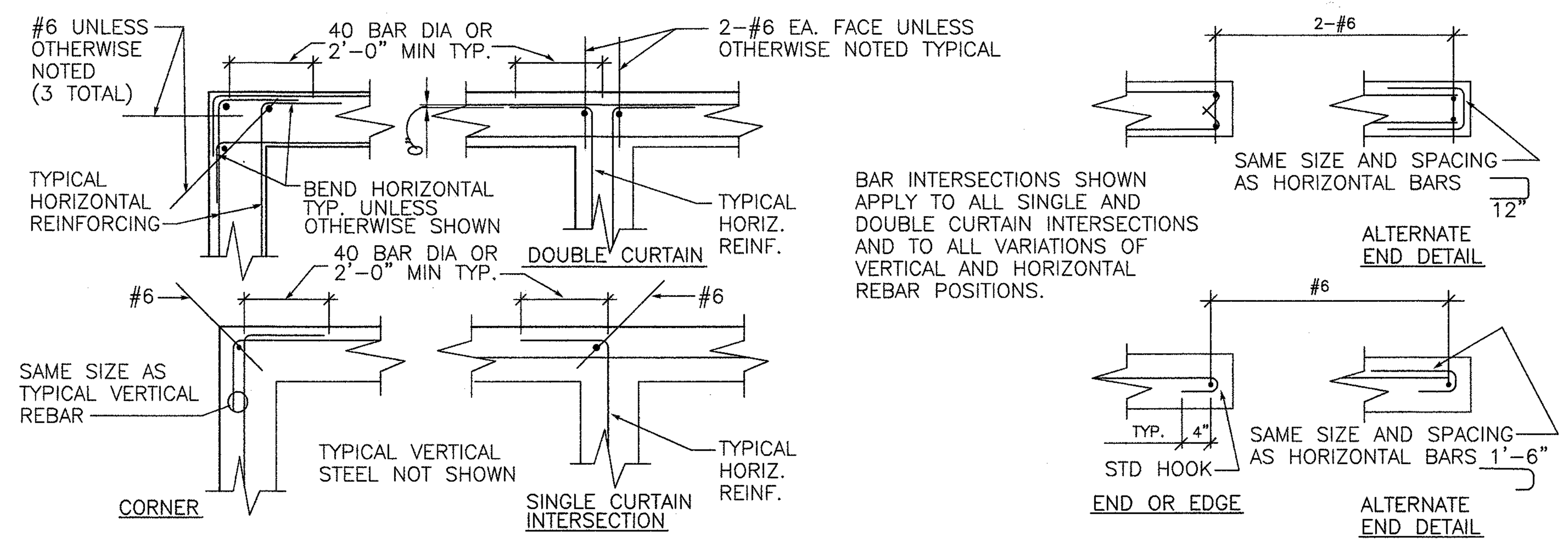
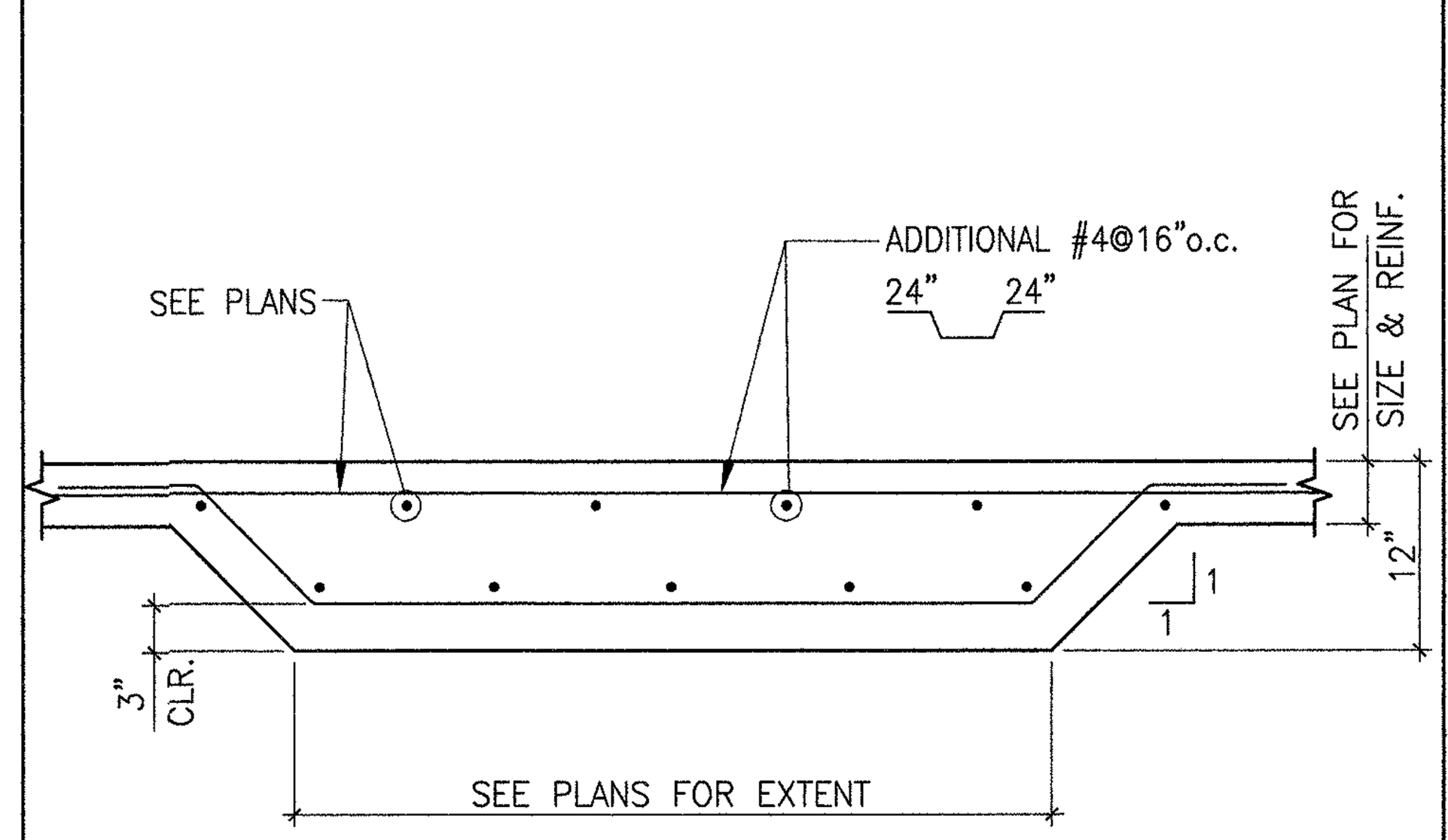
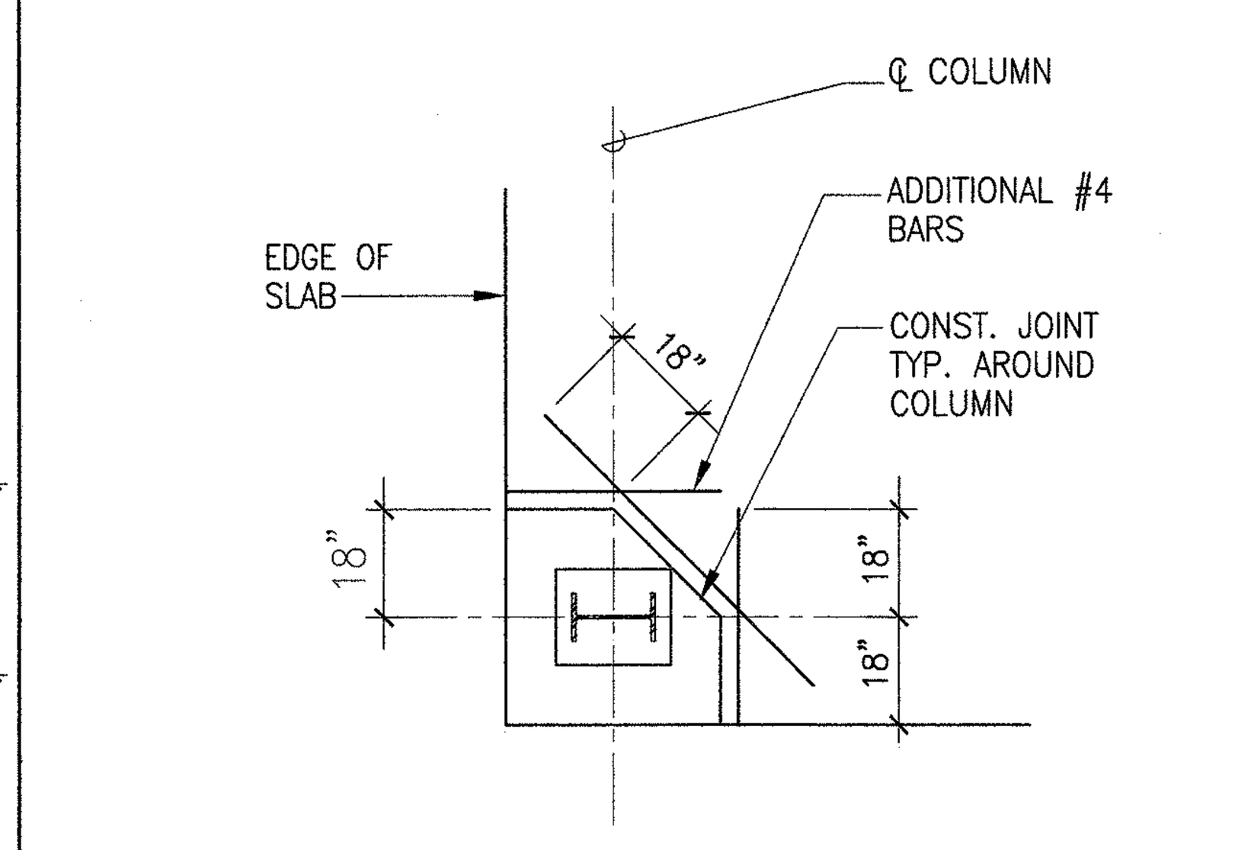
20050420.16584814 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S1.1.dwg



17 PLAN VIEW OF CONCRETE WALLS
N.T.S.

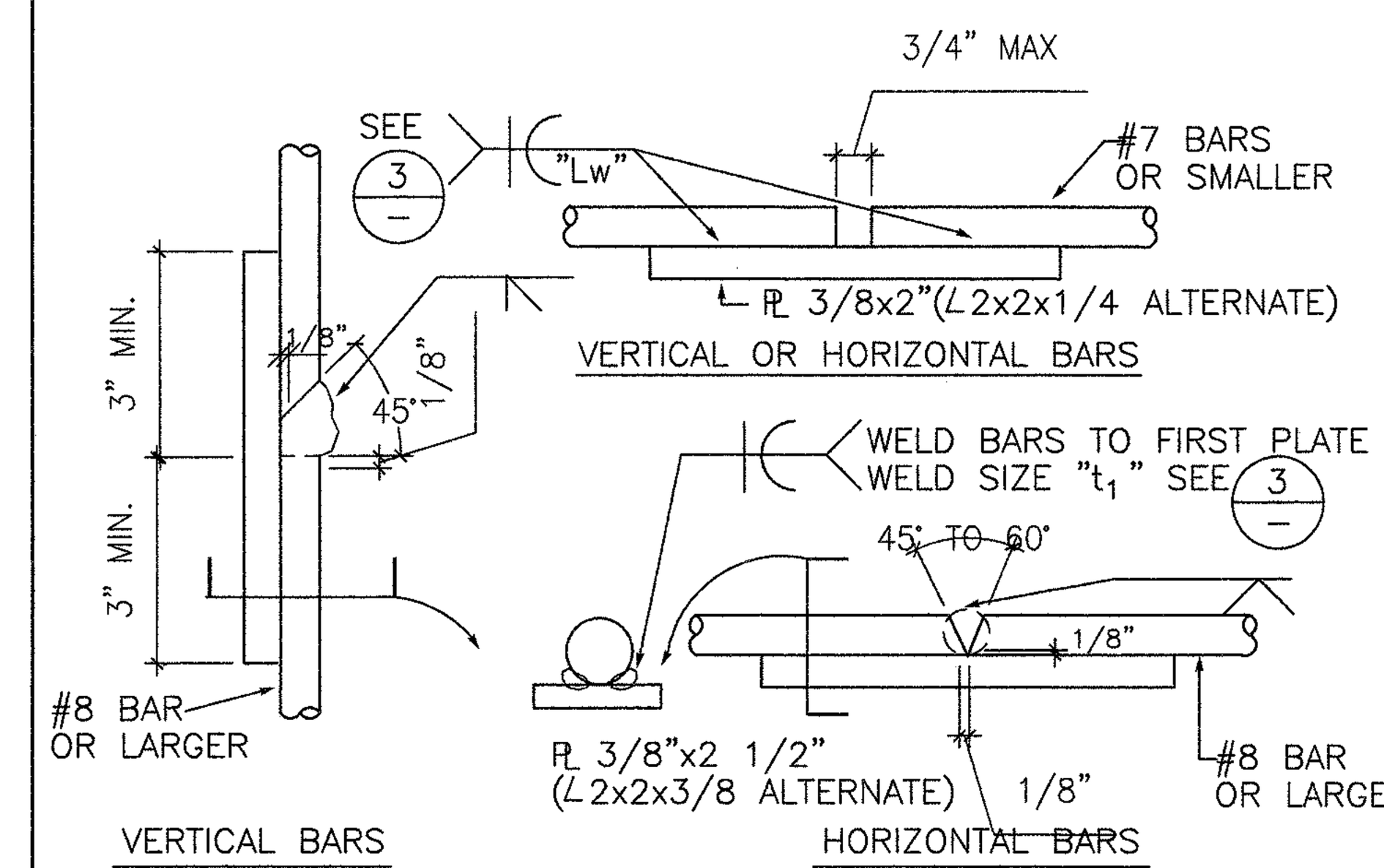


9 TYPICAL SECTION @ THICKENED SLAB
N.T.S.



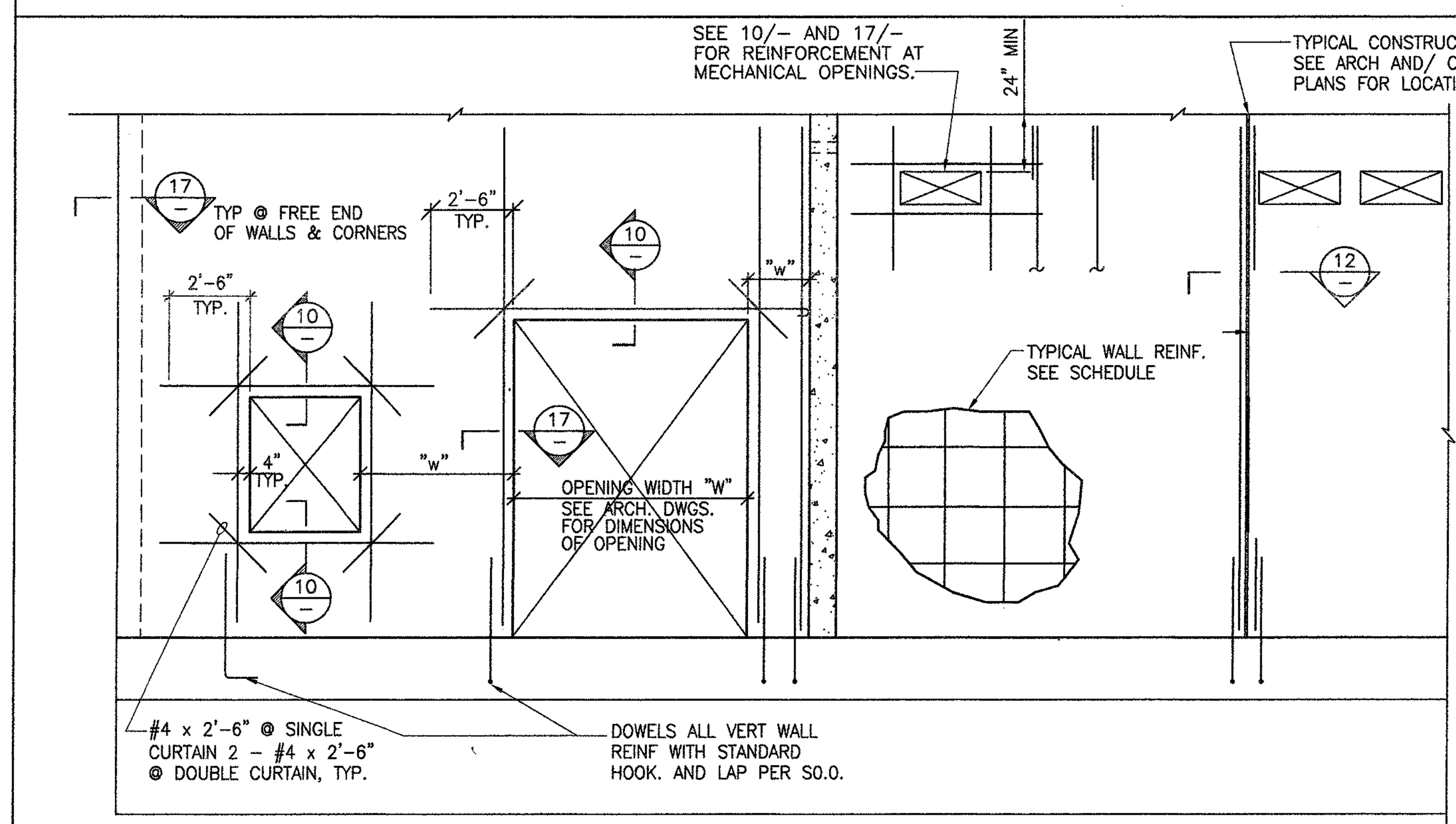
Acceptable to modify blockout details around braced frames.

5 COLUMN BLOCKOUT DETAIL



NOTES:
1. ALL BARS TO BE WELDED TO BE ASTM A706
2. ALL WELDING OR REINFORCING BARS TO COMPLY WITH AWS D1.4

1 WELDED SPLICE IN REBAR
NOT TO SCALE

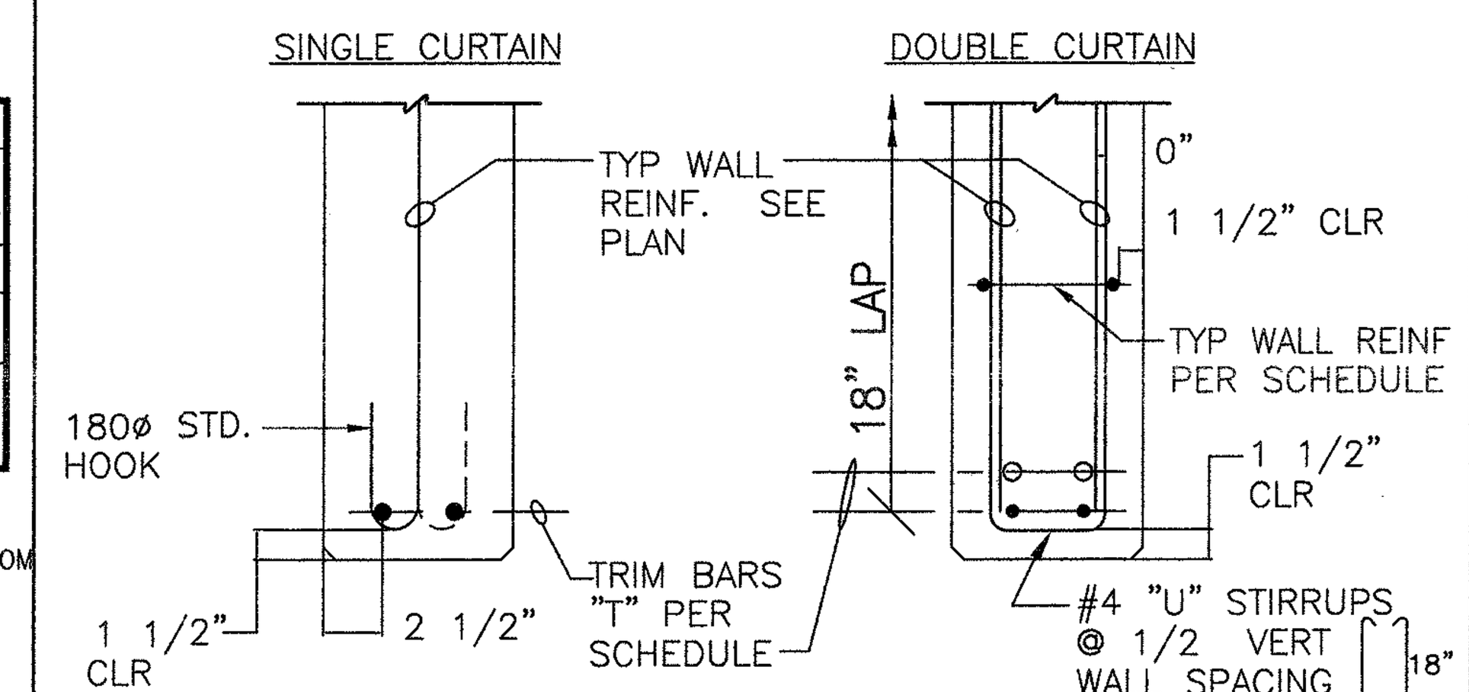


MAXIMUM REINFORCEMENT IN CIP CONC WALLS			
WALL SIZE	TYPICAL HORIZ. REINF.	TYPICAL VERT. REINF.	JAMB AND END OF WALL REINF.
8" CIP WALL	#5@14"	#5@14"	2–#5
10" CIP WALL	#6@12" EA. FACE	#6@16" EA. FACE	2–#6

NOTE:
USE THIS SCHEDULE WHERE REINFORCING ISNOT SHOWN OTHERWISE ON SECTIONS, DETAILS OR WALL ELEVATIONS.

NOTES:
1. VERTICAL REINF. FOR WALLS SHALL BE CONTINUOUS FROM FOOTING TO TOP OF WALL OR FLOOR TO FLOOR WITHOUT SPLICE, EXCEPT AS NOTED IN DETAIL
2. HOLD BARS ACCURATELY IN PLACE IN WALLS DURING CONCRETE PLACEMENT.
3. THE TERM "STANDARD HOOK" SHALL MEAN EITHER:
   - 180 HOOK PLUS AN EXTENSION OF 4 BAR DIAMETERS OR 2 1/2".
   - 90 HOOK PLUS AN EXTENSION OF 12 BAR DIAMETERS.
4. ALL ANGLES AND BENT STRAPS AT TOP ANCHORAGE ARE TO BE INSTALLED TIGHT AGAINST WALL.
5. LAP BARS PER SCHEDULE S0.0.
6. FOR WALL EMBEDS SEE S1.4.

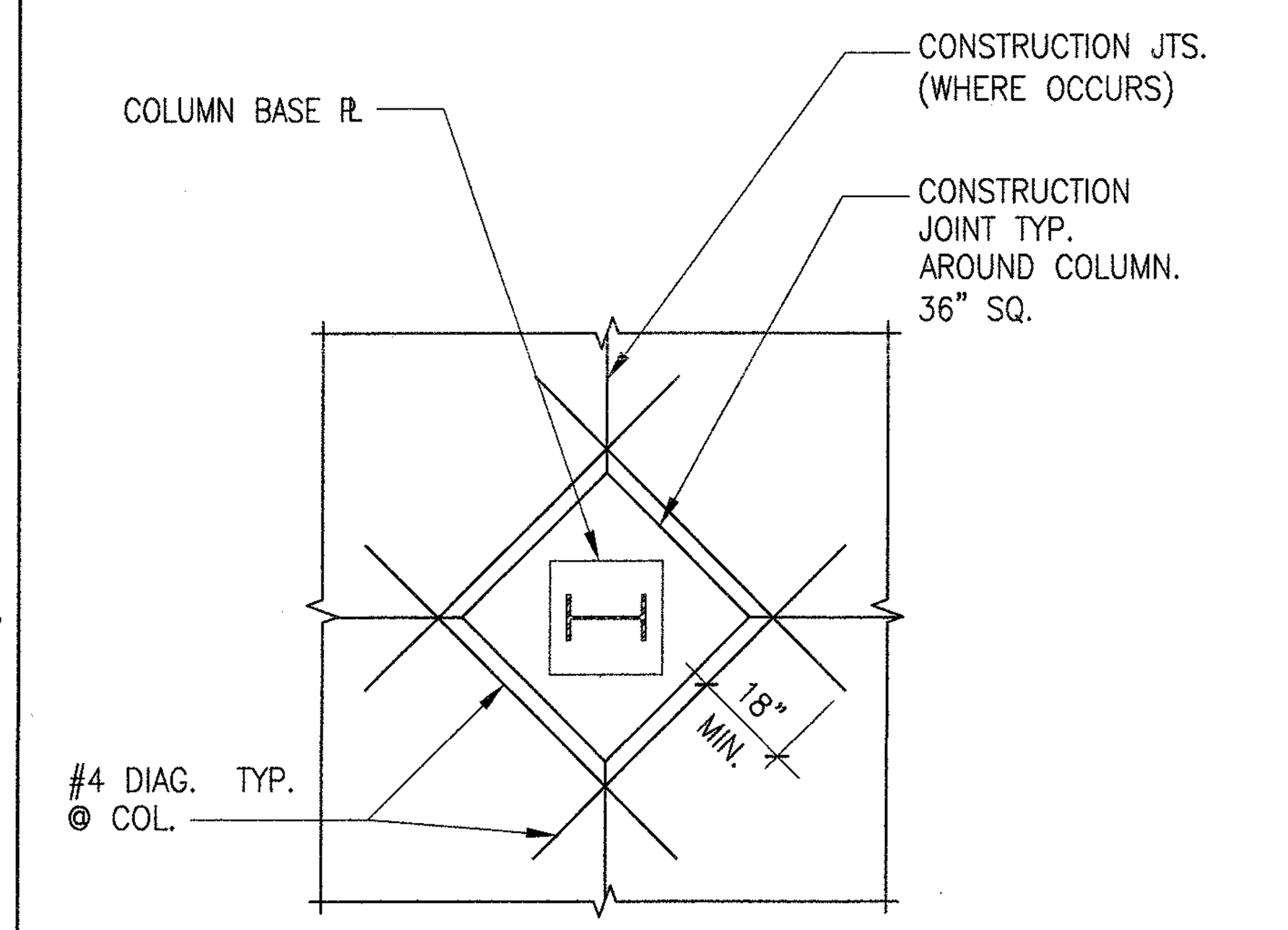
18 ELEVATION @ CIP CONC WALLS
N.T.S.



SINGLE CURTAIN	
MAX SPAN	TRIM BAR "T"
4'-0"	2 – #5
8'-0"	2 – #6

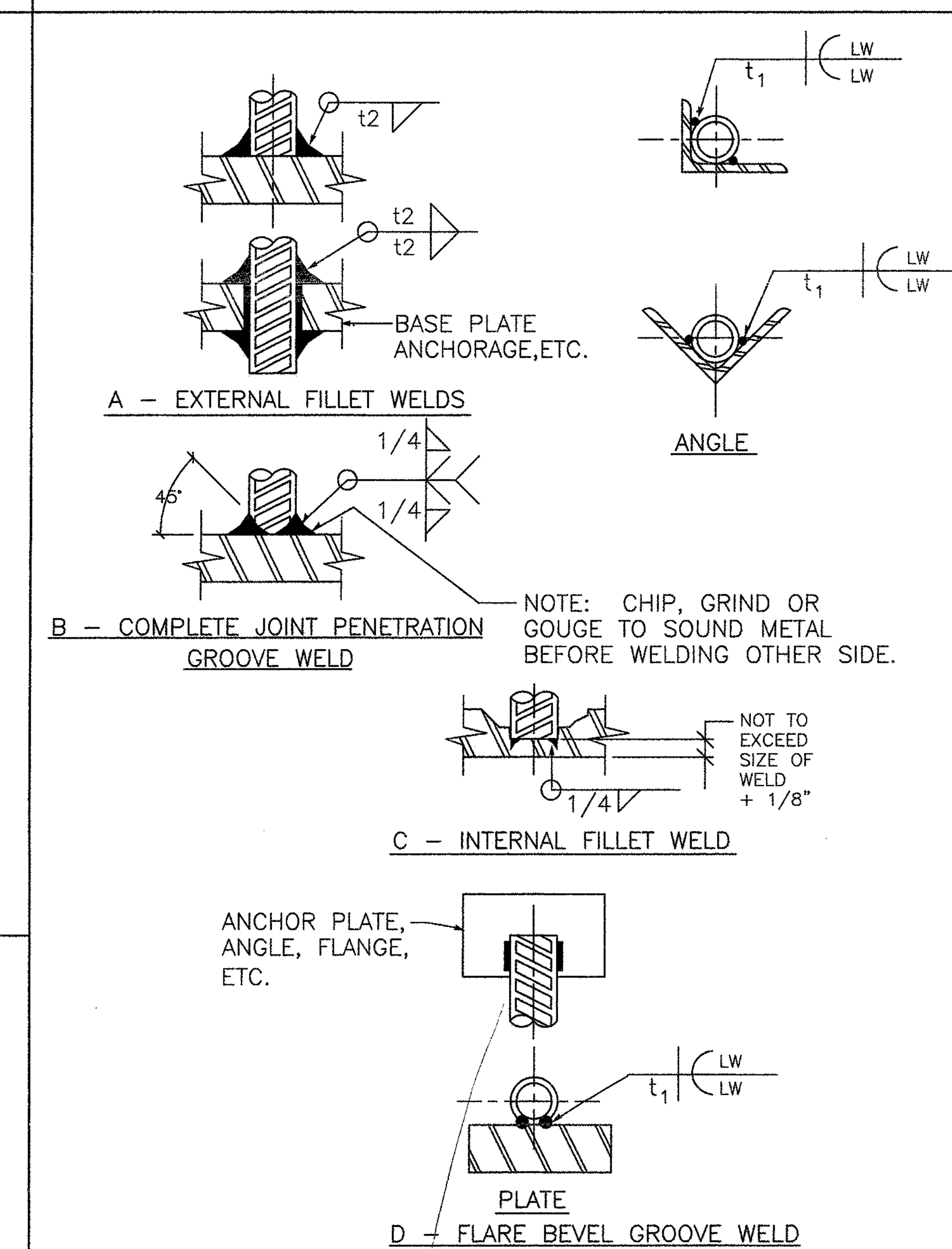
DOUBLE CURTAIN	
MAX SPAN	TRIM BAR "T"
6'-0"	2 – #5
10'-0"	2 – #6
14'-0"	4 – #6

10 REINF. @ LINTEL OPENINGS
N.T.S.



Acceptable to modify blockouts details around braced frames.

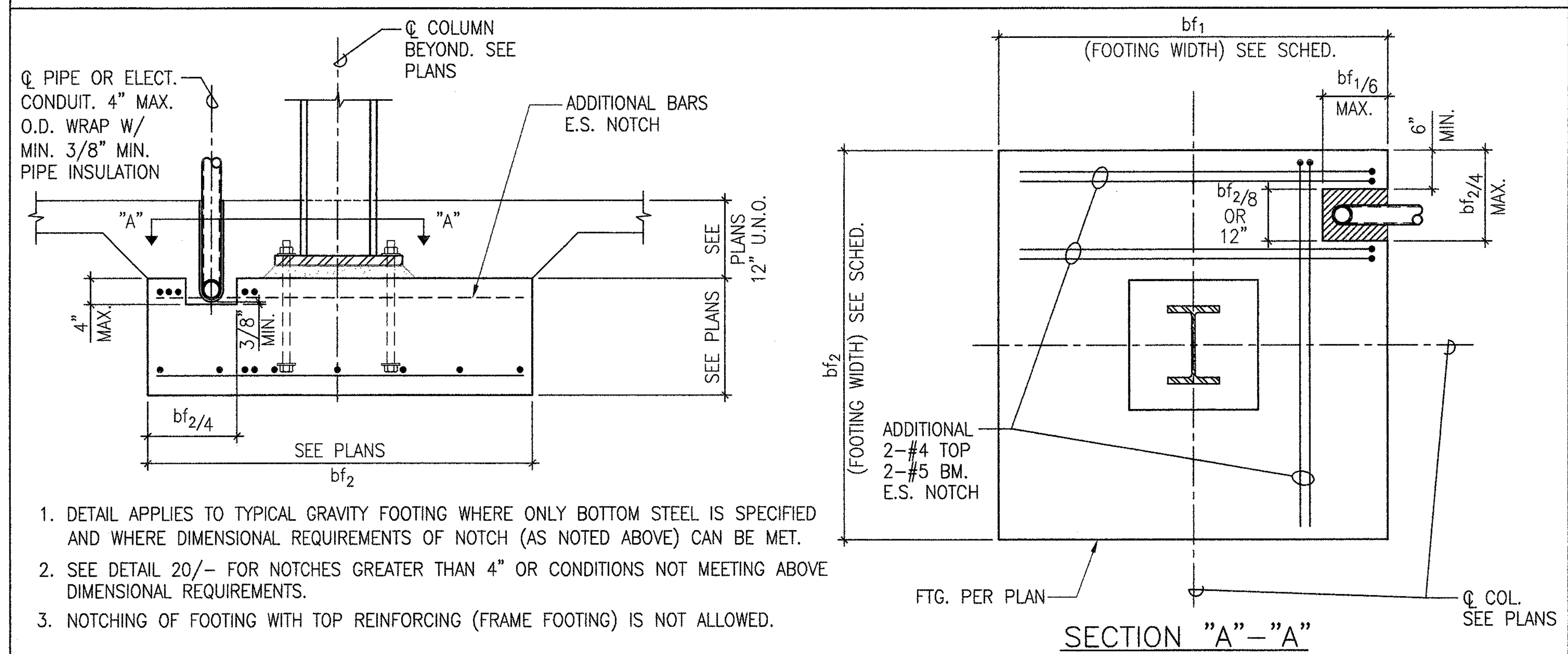
6 COLUMN BLOCKOUT DETAIL
N.T.S.



* TYP UON

A307 STUD SIZE	BAR SIZE	WELD SIZE "t1"	LENGTH "LW" *	WELD SIZE "t2"
1/2"	#4	3/16	3 1/2"	1/4
5/8"	#5	3/16	3 1/2"	5/16
3/4"	#6	1/4	3 1/2"	3/8
7/8"	#7	1/4	3 1/2"	3/8
1"	#8	1/4	4 1/2"	USE V-GROOVE
–	#9	5/16	4 1/2"	USE V-GROOVE

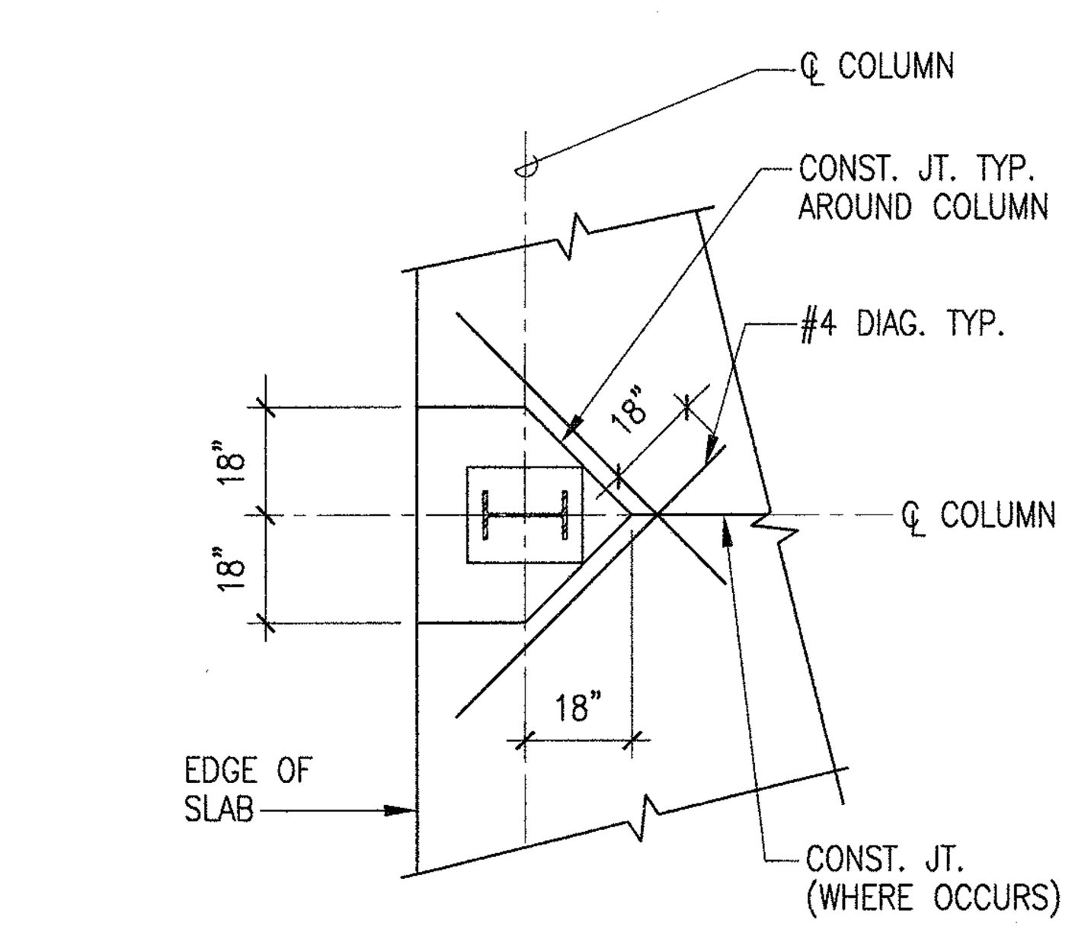
3 REINFORCING BARS & BOLTS WELDS TO PLATES OR STEEL SHAPES
NOT TO SCALE



1. DETAIL APPLIES TO TYPICAL GRAVITY FOOTING WHERE ONLY BOTTOM STEEL IS SPECIFIED AND WHERE DIMENSIONAL REQUIREMENTS OF NOTCH (AS NOTED ABOVE) CAN BE MET.
2. SEE DETAIL 20/– FOR NOTCHES GREATER THAN 4" OR CONDITIONS NOT MEETING ABOVE DIMENSIONAL REQUIREMENTS.
3. NOTCHING OF FOOTING WITH TOP REINFORCING (FRAME FOOTING) IS NOT ALLOWED.

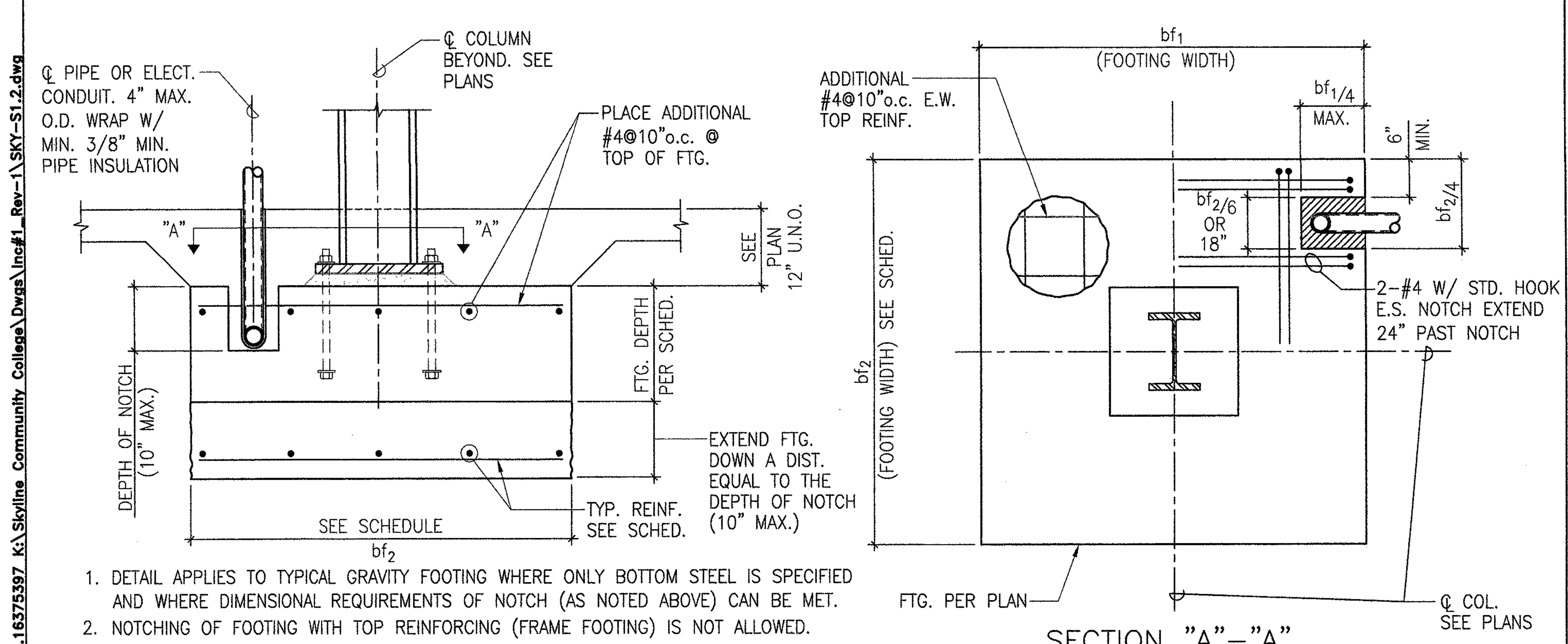
19 TYPICAL SECTION @ FTG. NOTCH
N.T.S.

NOT USED



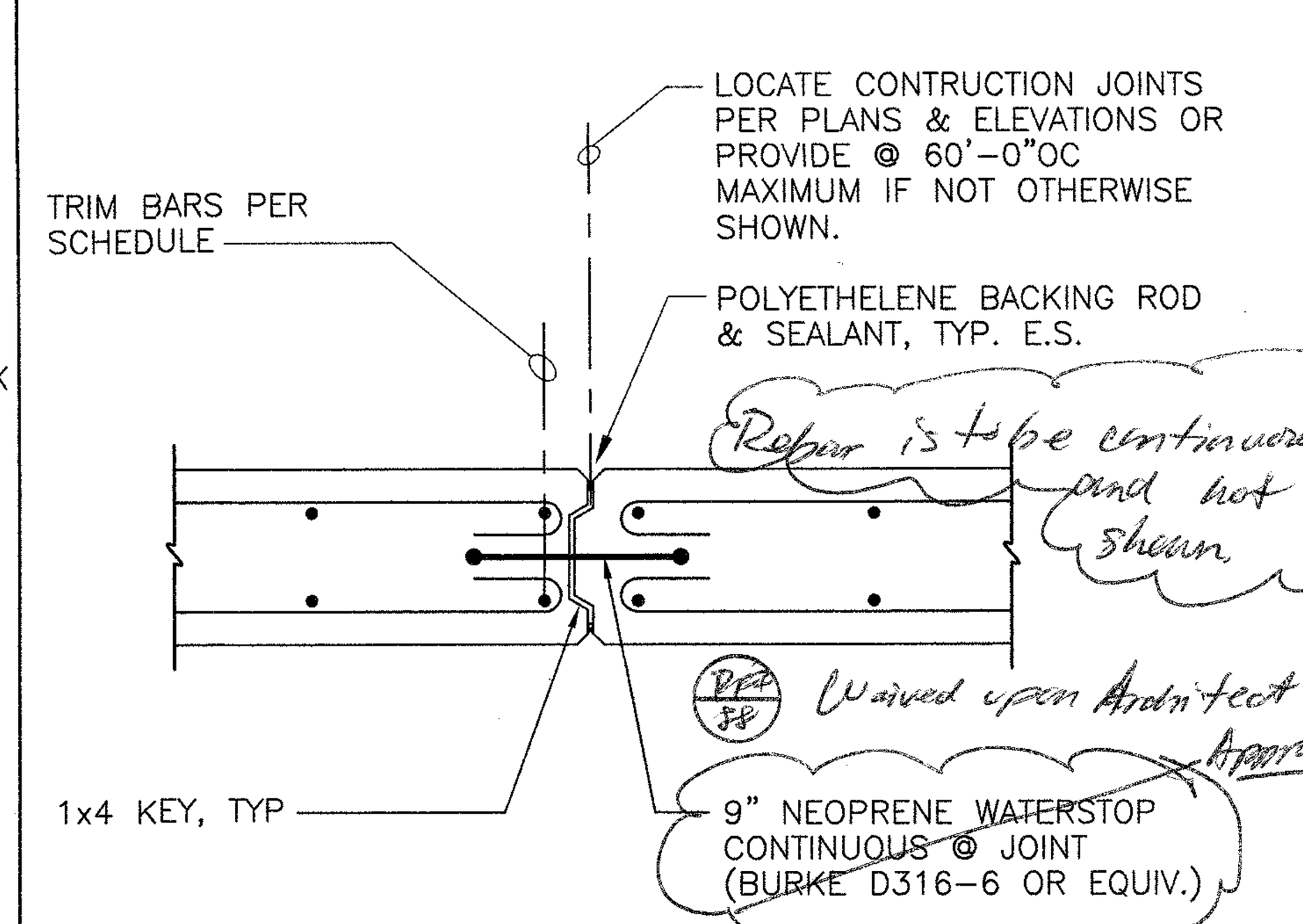
Acceptable to modify blockouts details around braced frames

7 COLUMN BLOCKOUT DETAIL
N.T.S.



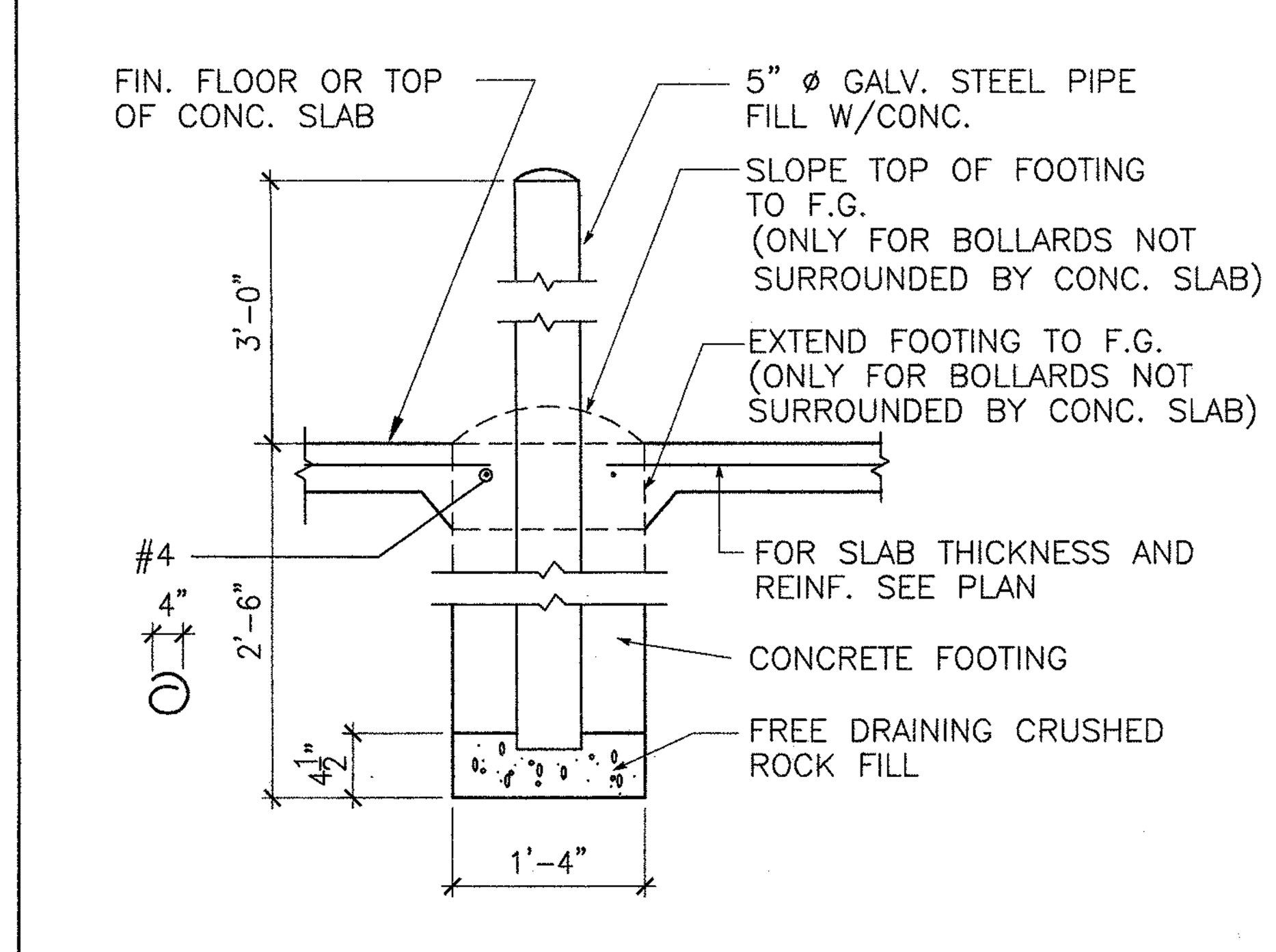
1. DETAIL APPLIES TO TYPICAL GRAVITY FOOTING WHERE ONLY BOTTOM STEEL IS SPECIFIED AND WHERE DIMENSIONAL REQUIREMENTS OF NOTCH (AS NOTED ABOVE) CAN BE MET.
2. NOTCHING OF FOOTING WITH TOP REINFORCING (FRAME FOOTING) IS NOT ALLOWED.

20 TYPICAL SECTION @ FTG. NOTCH
N.T.S.



12 CONC. WALL CONST. JOINT
N.T.S.

NOT USED



4 BOLLARD DETAIL
SCALE: 1"=1'-0"

REVIEW SET

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60 Pierce Avenue San Jose CA 95110
408.295.5446 tel
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STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES

DRAWING TITLE
TYPICAL DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S1.2

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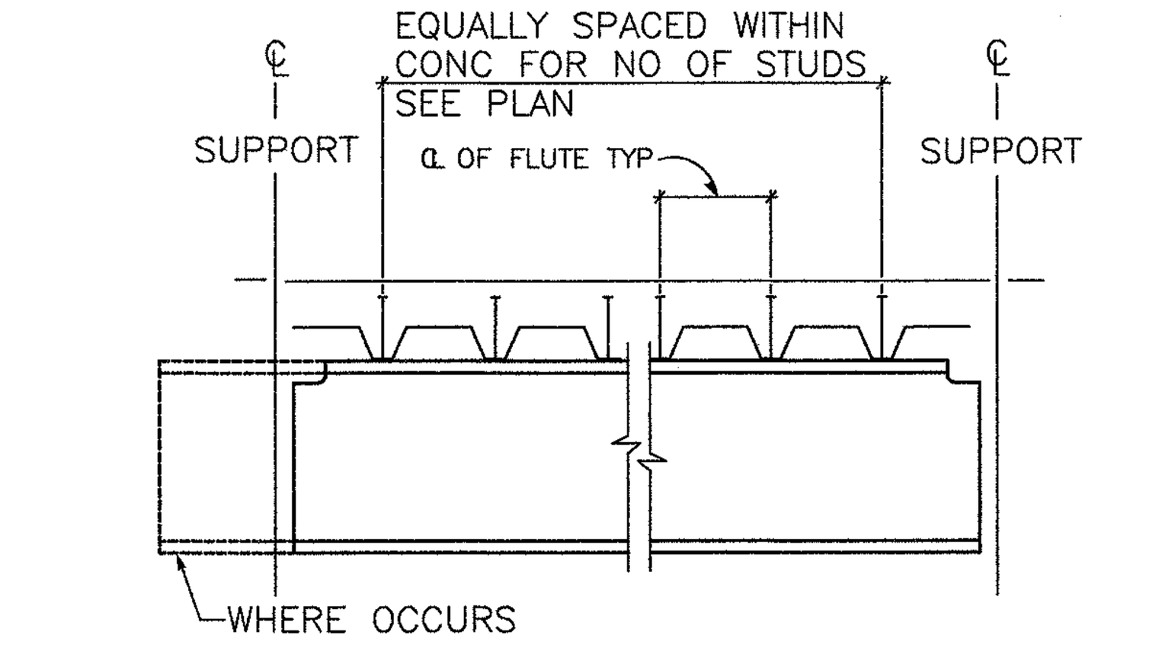
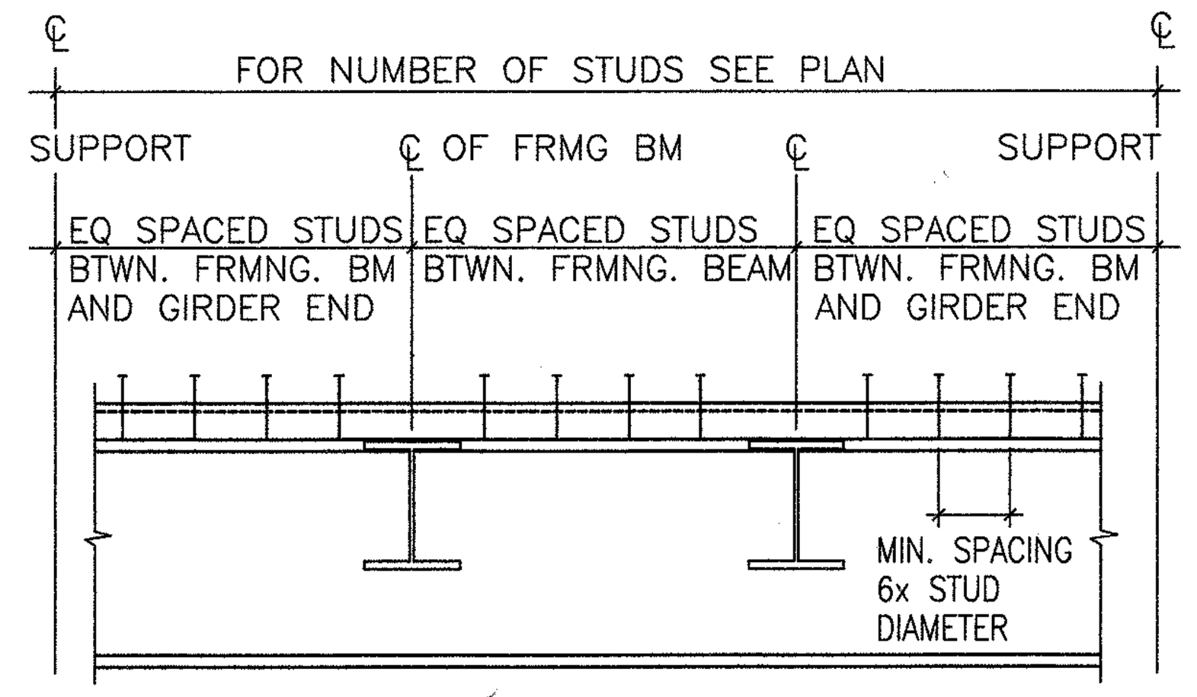


[25] NO OF STUDS AS SHOWN ON PLAN

BEAM ELEVATION

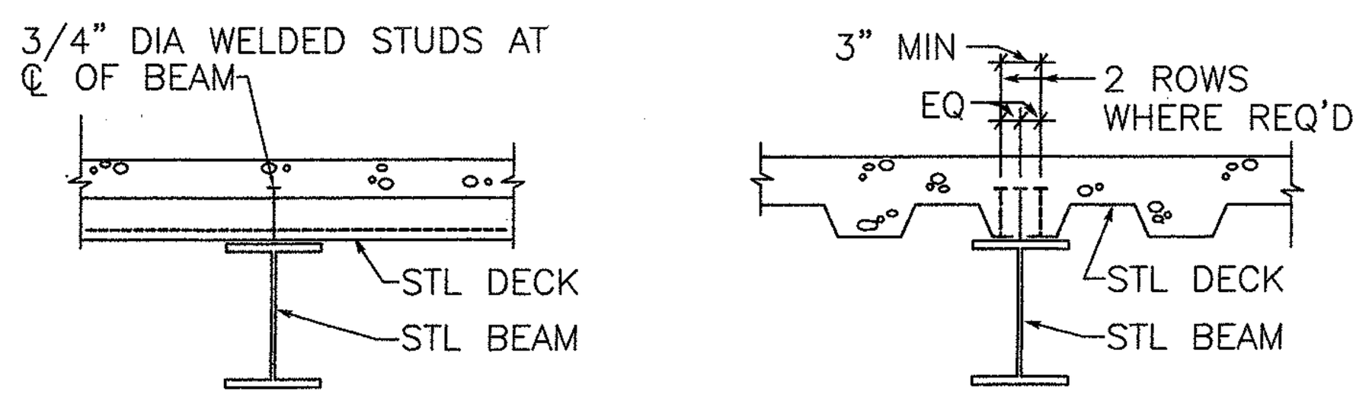


[25] [12] [25] NO OF STUDS AS SHOWN ON PLAN

INDICATES NO OF STUDS BTW FRAMING BEAM AND GIRDER END

INDICATES NO OF STUDS BTW FRAMING BEAM

GIRDER ELEVATION



SECTION

NOTES:

1. WELDED STUD SHALL BE HEADED STUDS OF A TYPE IN CONFORMANCE WITH THE DESIGN CODES AND THE SPECIFICATIONS.
2. ALL WELDED STUD SHALL BE 3/4" DIAMETER & SHALL EXTEND 1 1/2" MIN. ABOVE TOP OF DECK. SEE 10/–.

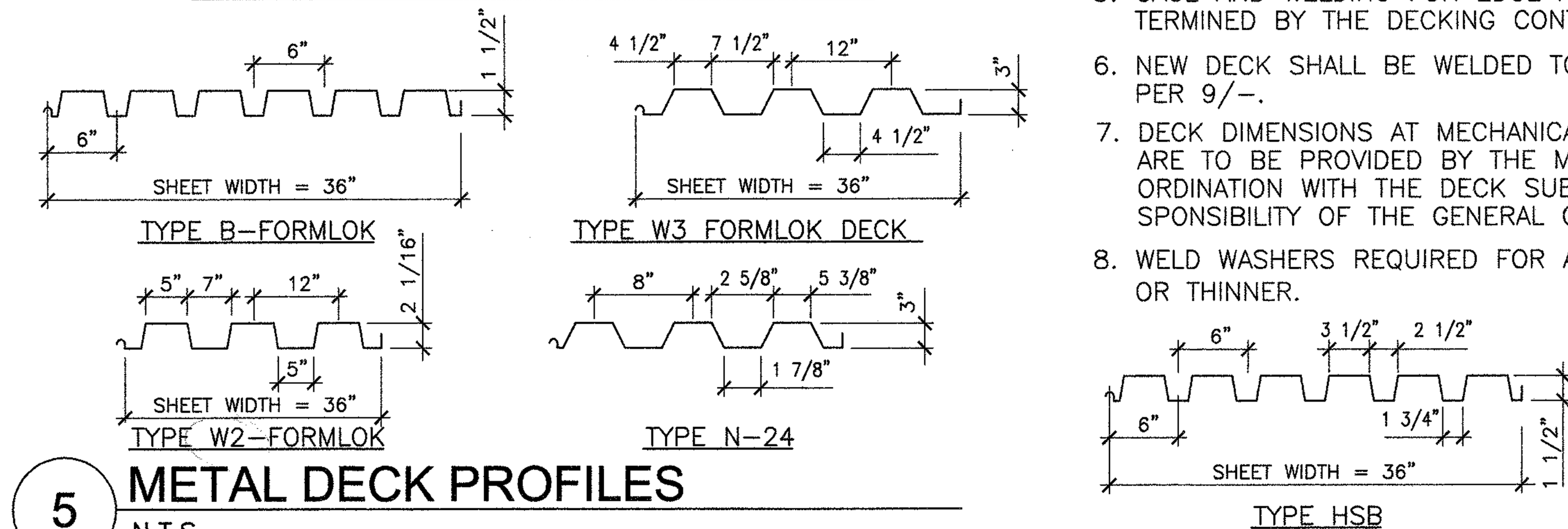
14 WELDED STUD DETAILS
NOT TO SCALE

DECK MARK (SEE PLAN)	DECK DEPTH AND SECTION TYPE SEE 5/–	DECK WELDS, SEE 2/– 12/–: WELD Ⓐ SIZE AND TYPE	WELD Ⓐ # PER SHEET	WELD Ⓑ SIZE AND TYPE	WELD Ⓑ SPACING	ATTACHMENT Ⓒ SIZE AND TYPE	ATTACHMENT Ⓒ SPACING	ALLOWABLE DESIGN VALUES (SEE NOTE 5): GA	8'-0" SPAN DIAPH. SHEAR q (plf)	8'-0" SPAN FLEX. FACTOR F	9'-0" SPAN DIAPH. SHEAR q (plf)	9'-0" SPAN FLEX. FACTOR F
1	HSB36	1/2"ø PUDDLE	7	1/2"ø PUDDLE	12"	TSW	12"	20GA	813	7.6 + 2R	766	8.1 + 2R
								18GA	1196	5.6 + 1R	1124	6.0 + 1R
2	HSB36	1/2"ø PUDDLE	7	1/2"ø PUDDLE	12"	TSW	6"	20GA	1125	4.2 + 2R	978	4.4 + 2R
								18GA	1611	3.2 + 1R	1502	3.3 + 1R
3	W2 FORMLOK + 2½" LT. WT. CONC.	1/2"ø PUDDLE	4	1/2"ø PUDDLE	12"	BP	12"	20GA	1280	F<1	1240	F<1
								18GA	1360	F<1	1304	F<1

1. SEE S1.5 FOR ADDITIONAL DETAILS AT SHEARTRANS II.
2. SEE PLANS FOR ADDITIONAL WELDING REQUIREMENTS.
3. SEE PLANS FOR INSOLATING CONCRETE.
4. ALL DECK WITH INSULATING OR LTWEIGHT CONCRETE SHALL BE GALVANIZED.
5. ALLOW. DESIGN VALUES ARE BASED ON ICBO REPORT #2078P MULTIPLIED BY 0.8 PER IR22-1 FOR SHOWN SPANS

9 STEEL DECK WELDING SCHEDULE
NO SCALE

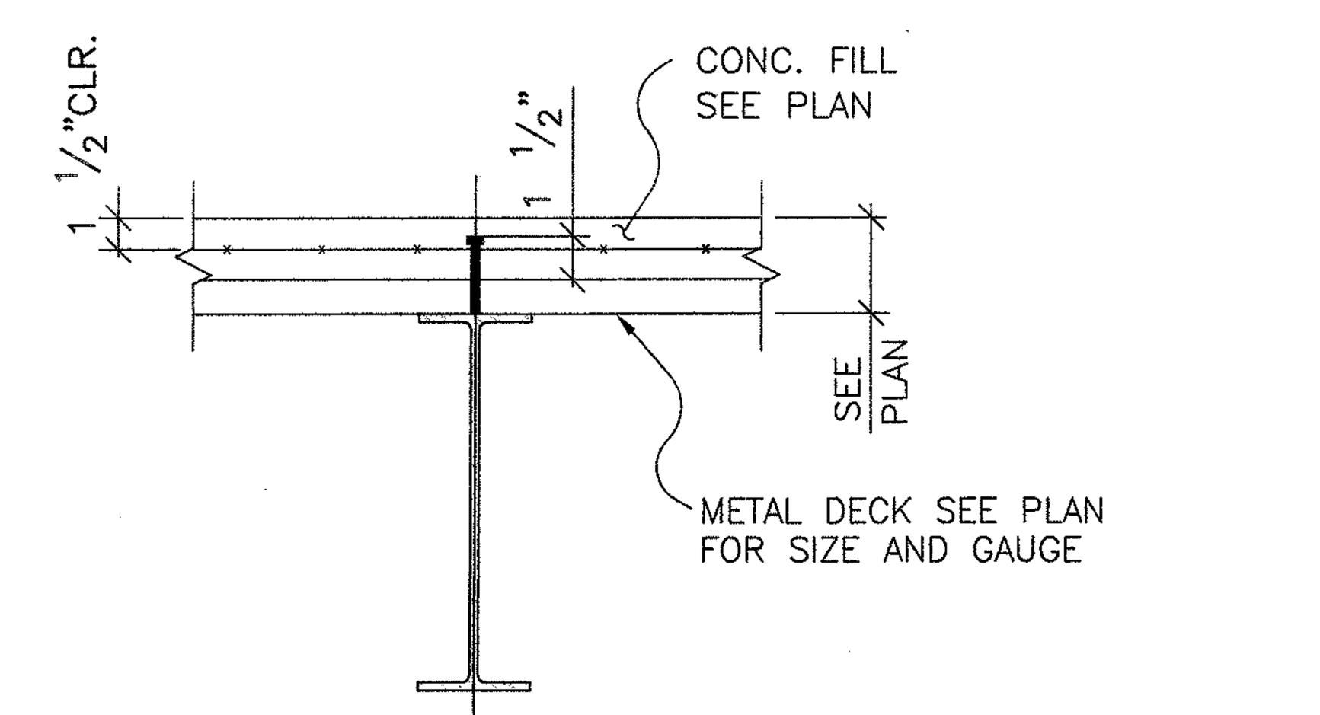
MINIMUM SECTION PROPERTIES					
SECTION TYPE	THICKNESS (GA.)	I (IN⁴/FT)	+S (IN³/FT)	-S (IN³/FT)	DECK EMBOSSED (COMPOSITE)
W3-FORMLOK	20 GA.	.896	.534	.564	YES
W2-FORMLOK	20 GA.	.423	.361	.370	YES
W2-FORMLOK	18 GA.	.555	.510	.511	YES
B-FORMLOK	20 GA.	.216	.235	.248	YES
B-FORMLOK	18 GA.	.302	.322	.335	YES
HSB-36	18 GA.	.302	.322	.335	NO
HSB-36	20 GA.	.216	.235	.248	NO
N-24	18 GA.	1.22	.731	.776	NO
N-24	16 GA.	1.65	.950	1.00	NO
B-FORMLOK	16 GA.	.377	.411	.417	YES



5 METAL DECK PROFILES
N.T.S.

STEEL DECK NOTES

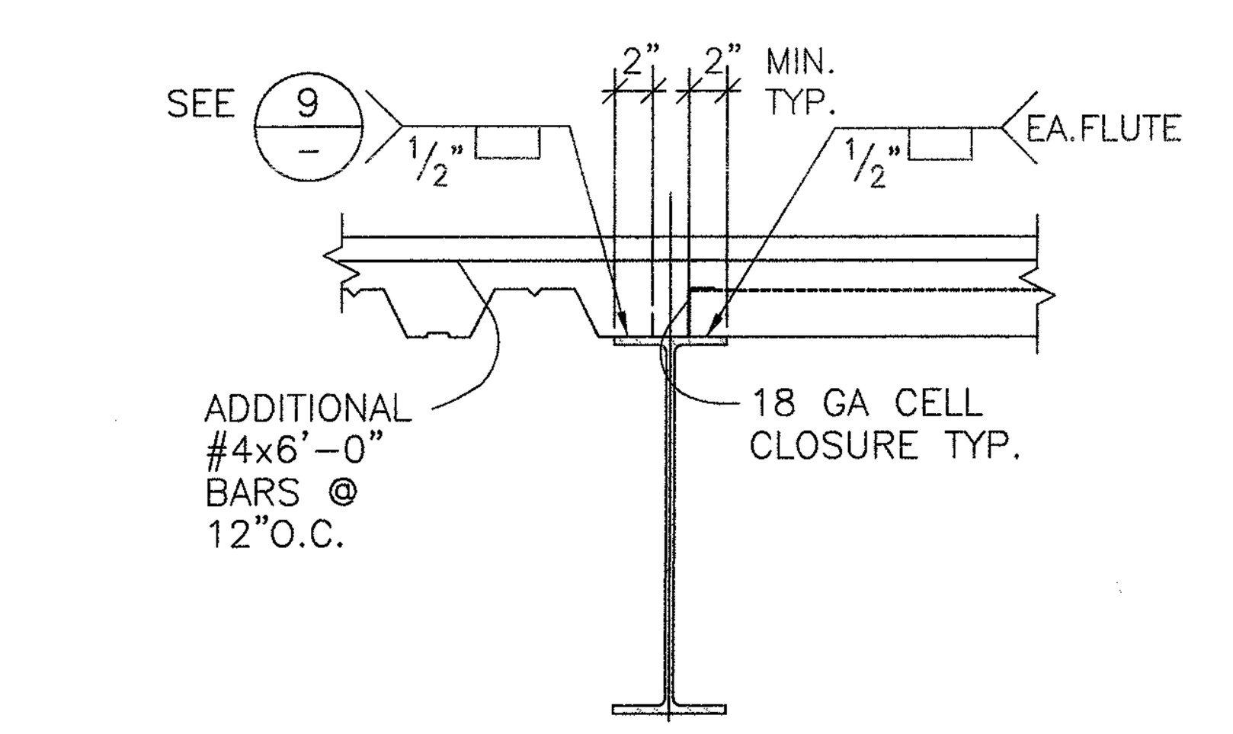
1. SEE FRAMING PLANS & DETAILS FOR EXTENT OF DECK TYPES.
2. DECK SIDE SEAMS SHALL BE CRIMPED TOGETHER AT WELD POINTS BEFORE MAKING TOP OR SIDE SEAM WELDS.
3. WELDS AT DECK LAPS SHALL BE MADE THROUGH BOTH SHEETS TO STRUCTURAL STEEL.
4. SEE TYPICAL DETAILS SHEETS FOR REINFORCEMENT REQUIRED FOR OPENINGS IN THE DECK SEE ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR MAJOR OPENING SIZES AND LOCATIONS. OTHER SMALLER OPENINGS ARE NOT SHOWN AND ARE SUBJECT TO REVIEW AND APPROVAL BY THE STATE REPRESENTATIVE.
5. GAGE AND WELDING FOR EDGE ANGLE CLOSURES ARE TO BE DETERMINED BY THE DECKING CONTRACTOR.
6. NEW DECK SHALL BE WELDED TO ALL ROOF BEAMS, ANGLES, ETC. PER 9/–.
7. DECK DIMENSIONS AT MECHANICAL EQUIP. AND SHAFT OPENINGS ARE TO BE PROVIDED BY THE MECHANICAL SUBCONTRACTOR. COORDINATION WITH THE DECK SUBCONTRACTOR SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. WELD WASHERS REQUIRED FOR ALL WELDS TO DECKS 22 GA OR THINNER.



NOTE:

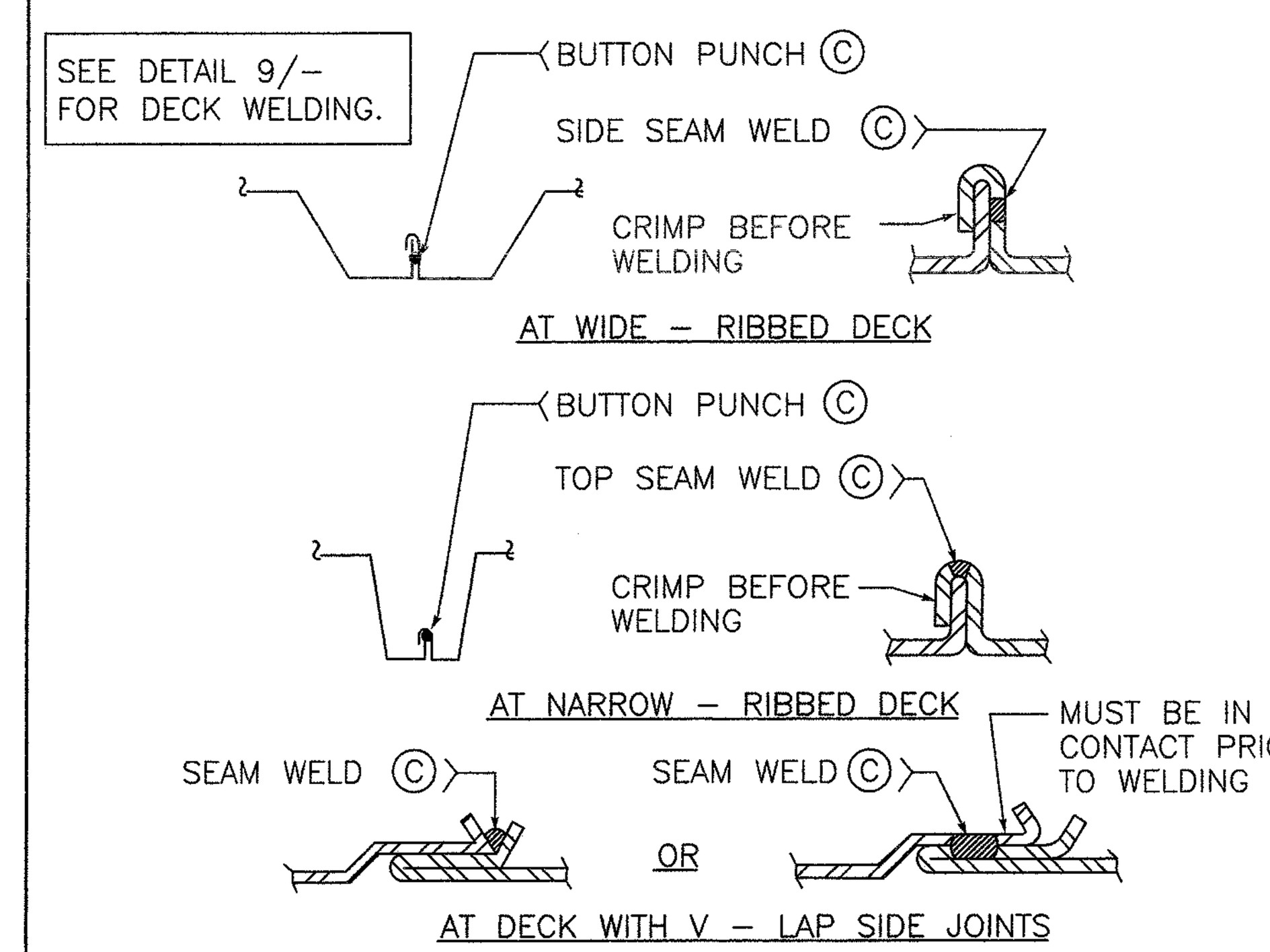
SEE PLANS & SECTIONS FOR TYPICAL DECK REINF. STUDS SHALL BE WELDED IN ACCORDANCE WITH AWS D1.1-94 SECTION 7.

10 TYPICAL SLAB CONSTRUCTION
NOT TO SCALE

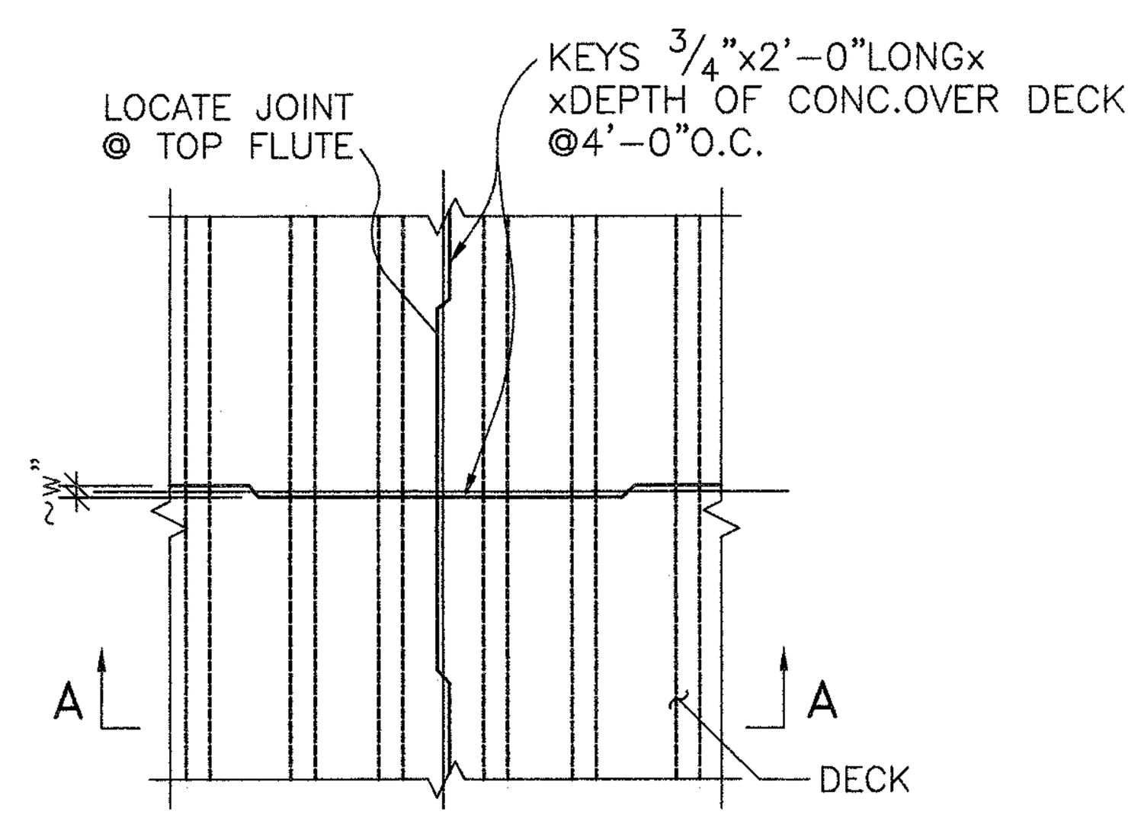


6 DETAIL @ DECK CHANGE.
NOT TO SCALE

SEE DETAIL 9/– FOR DECK WELDING.



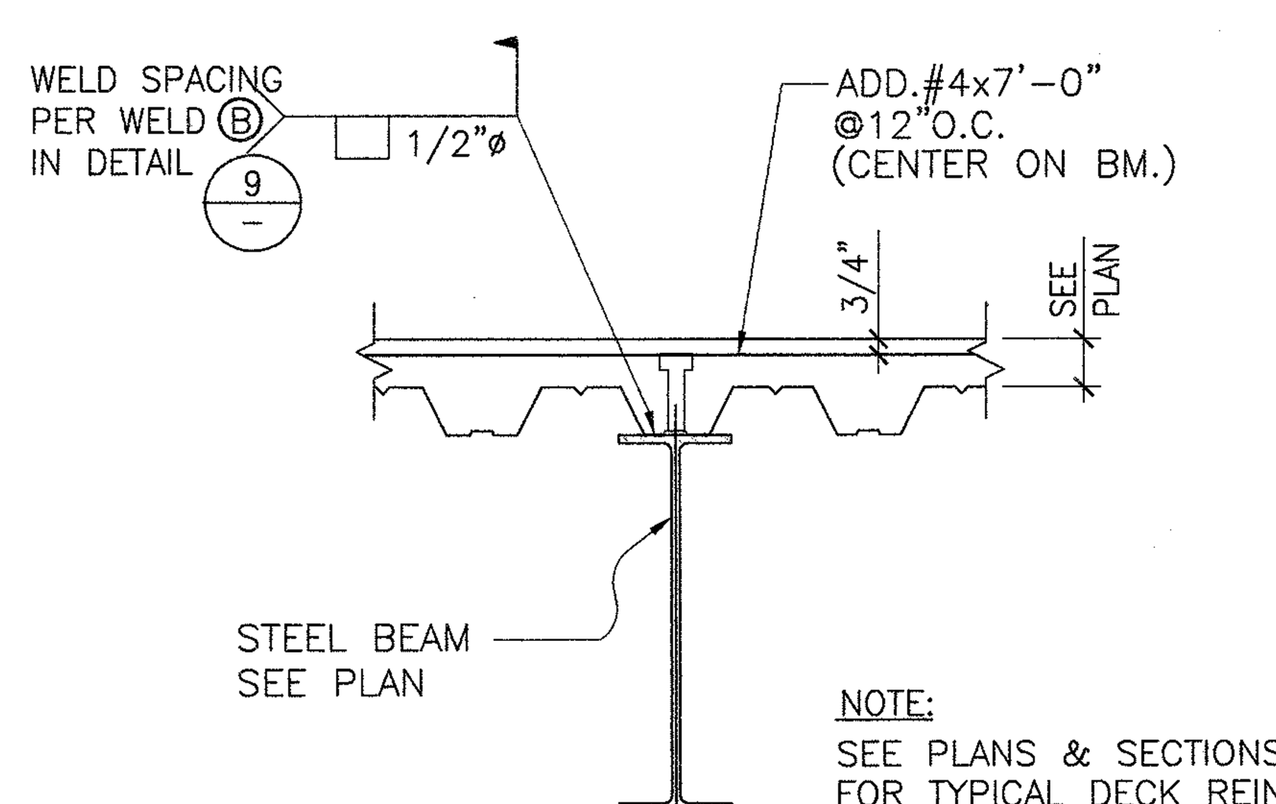
2 METAL DECK WELD DETAILS
N.T.S.



NOTES:

1. REINF. CONT. THRU JOINT, U.O.N. (2'-0" MIN.)
2. SEE PLAN OR SPECIFICATIONS FOR LOCATION OF C.J.'S.
3. FOR SECTION "A-A" SEE DET.16 BELOW

15 CONSTR. JOINT IN CONC/DECK
NOT TO SCALE

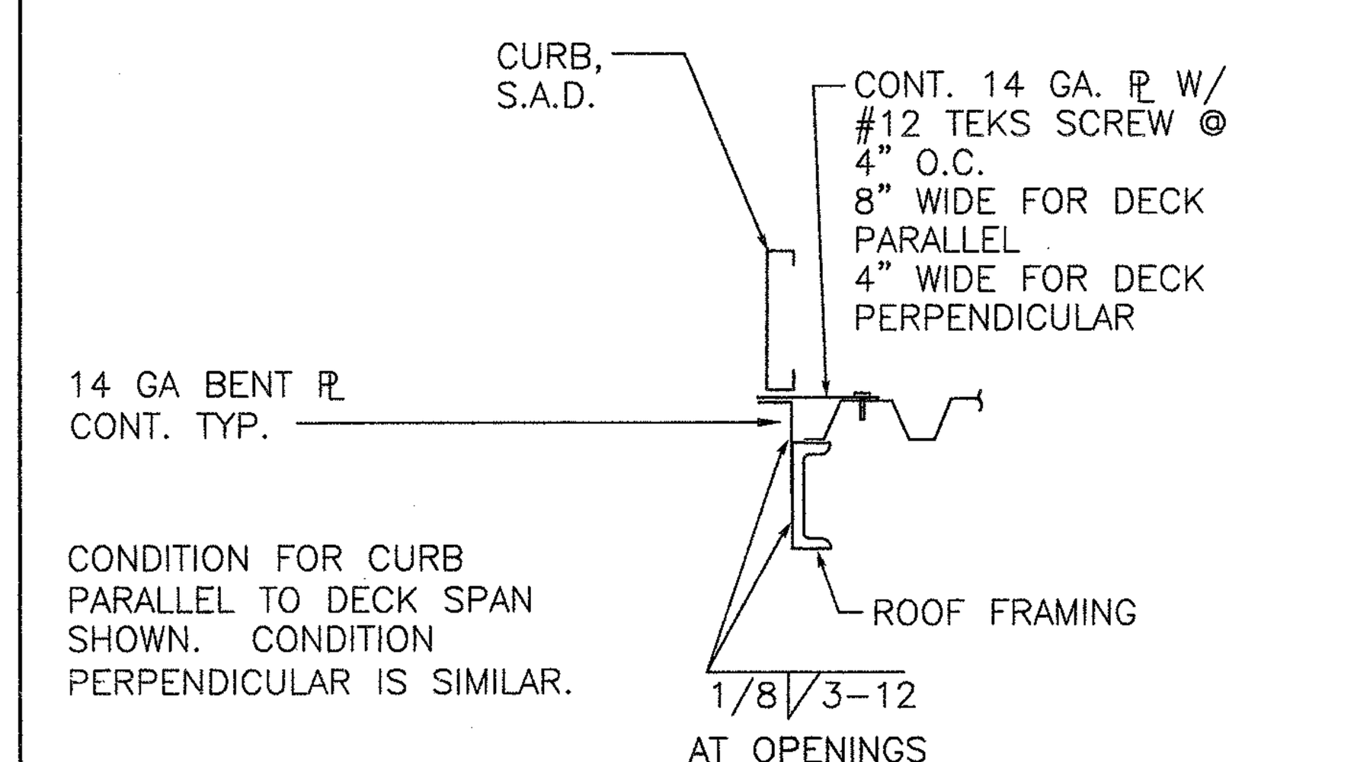


NOTE:

SEE PLANS & SECTIONS FOR TYPICAL DECK REINF

PUDDLE WELD MAY BE OMITTED WHERE NELSON STUDS OCCUR.

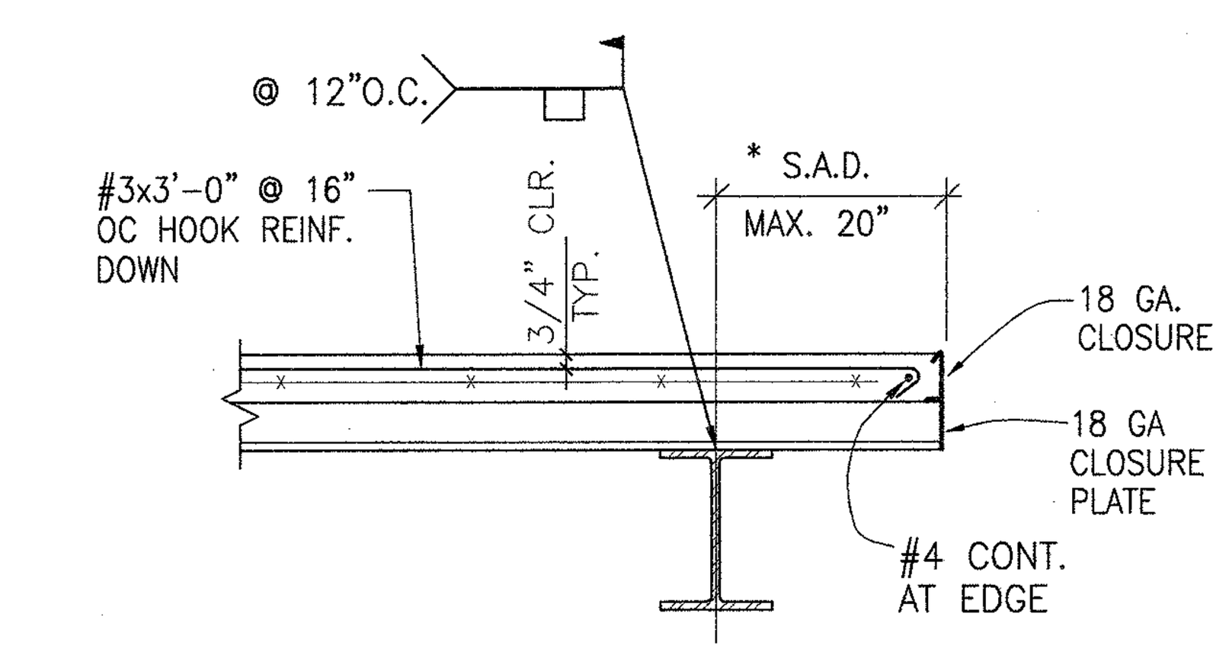
11 BEAM PARALLEL TO DECK
NOT TO SCALE



CONDITION FOR CURB PARALLEL TO DECK SPAN SHOWN. CONDITION PERPENDICULAR IS SIMILAR.

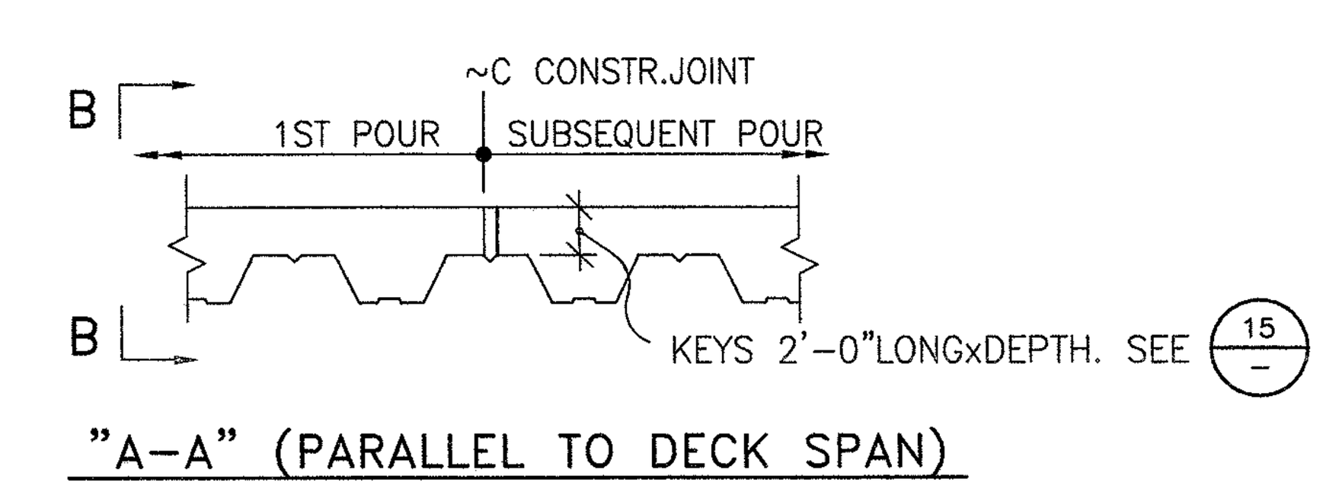
FOR FRAMING INFORMATION SEE 12/S1.04

7 CURB SUPPORT DETAILS
N.T.S.

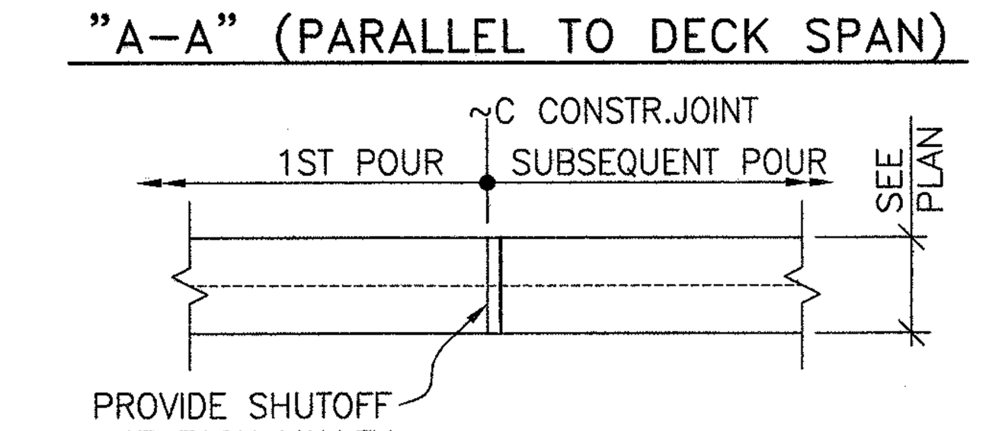


* SEE 13/S1.5 FOR DECK CANTILEVERS GREATER THAN 20"

A DECK PERPENDICULAR TO EDGE



"A-A" (PARALLEL TO DECK SPAN)

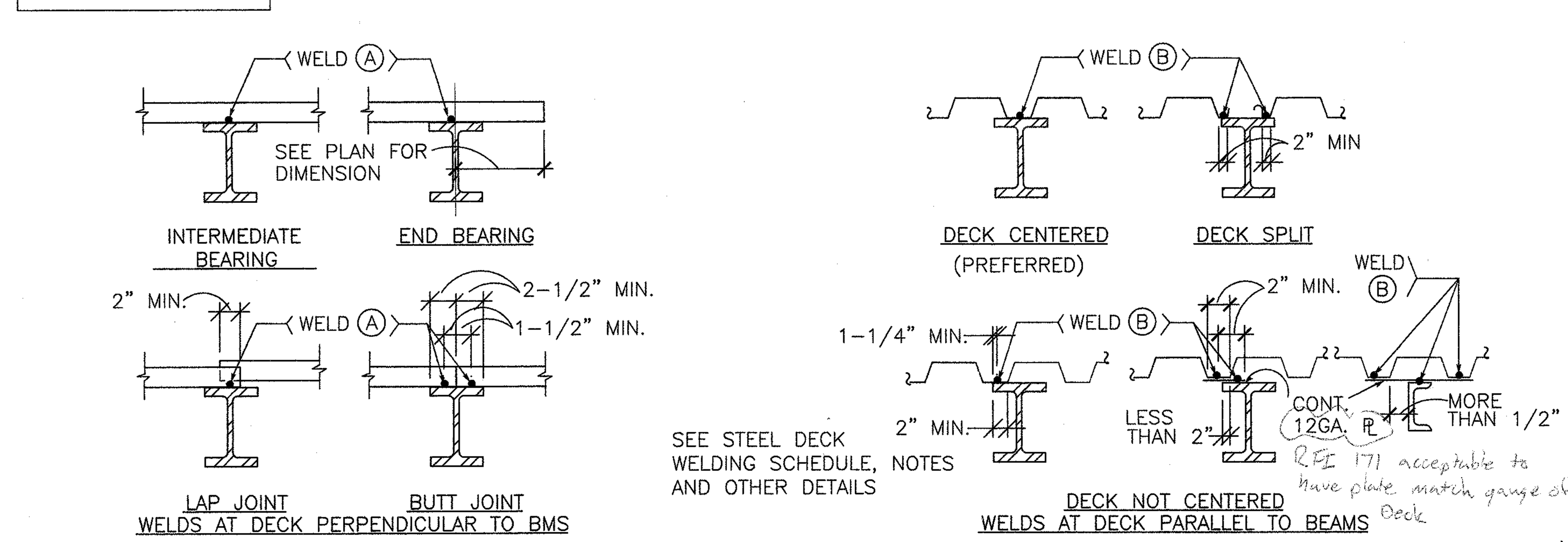


"B-B" (PERPENDICULAR TO DECK SPAN)

16 SLAB CONSTRUCTION JOINT IN CONC/DECK
NOT TO SCALE

RFI 1584/1585-1 acceptable to screw deck and plate together w/ 12" OC spacing no WT required

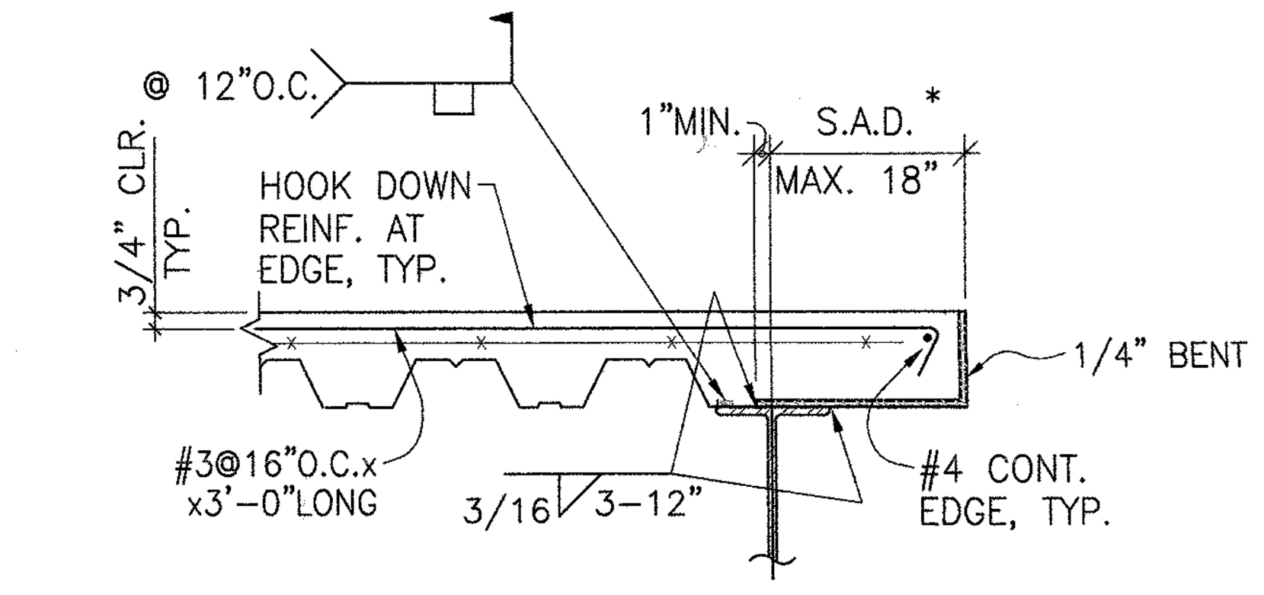
SEE DETAIL 9/– FOR DECK WELDING.



SEE STEEL DECK WELDING SCHEDULE, NOTES AND OTHER DETAILS

RFI 171 acceptable to have plate match gauge of Deck

12 STEEL DECK TO BEAM WELD DETAILS
N.T.S.



* SEE 13/S1.5 FOR DECK CANTILEVERS GREATER THAN 18"

B DECK PARALLEL TO EDGE

RFI 127 acceptable for EOD 1/4" bent plate to have 1/2" partial pen at butt joints

NOTES:
1. STUDS NOT SHOWN FOR CLARITY

4 TYP. INTERIOR & EXTERIOR EDGE DETAILS
NOT TO SCALE

REVIEW SET

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STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
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INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

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DRAWING TITLE
TYPICAL STEEL DECK DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S1.3

20050420_1828383 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S1.3.dwg

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Hensel Phelps Construction Co.

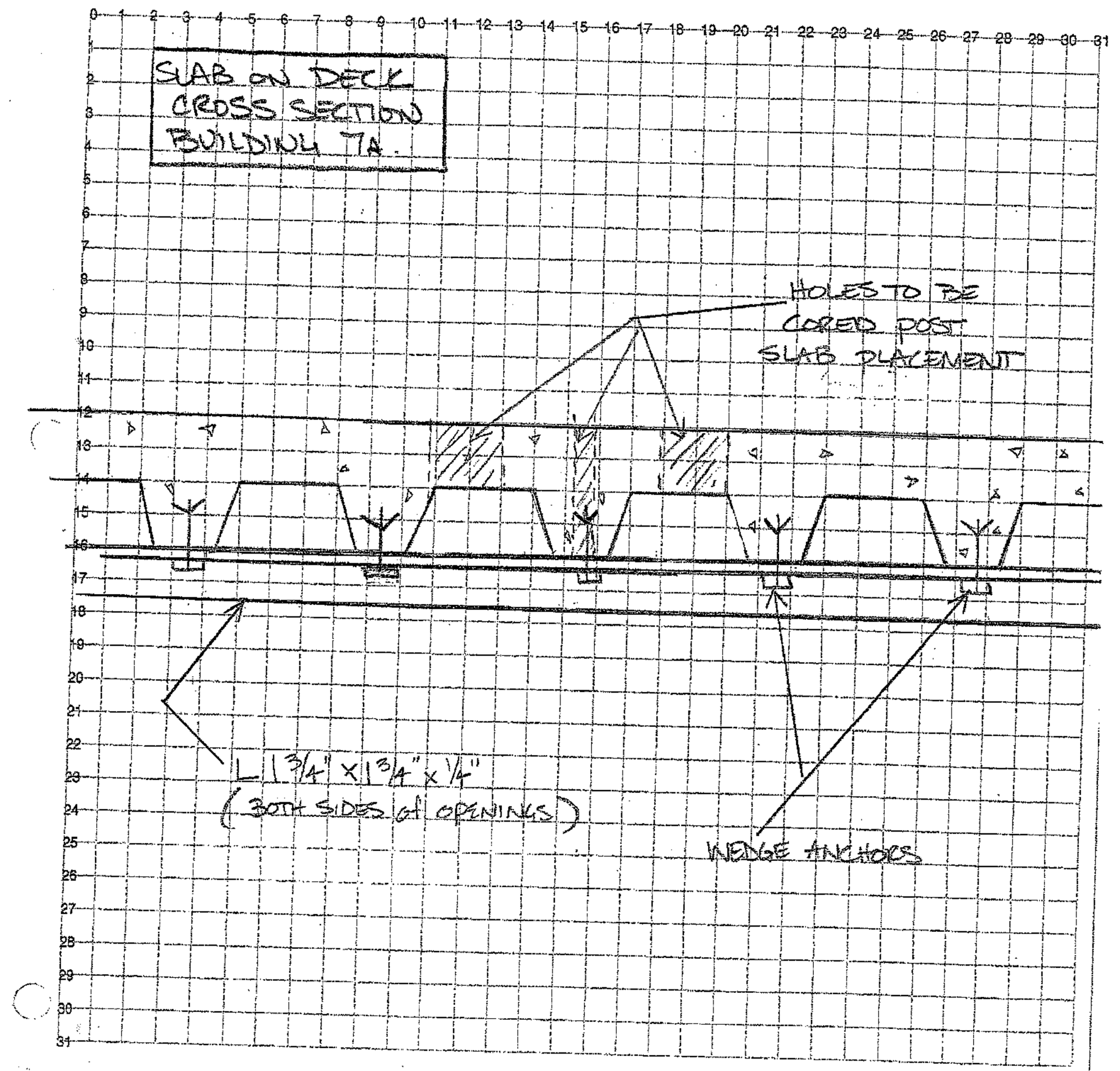
Memo

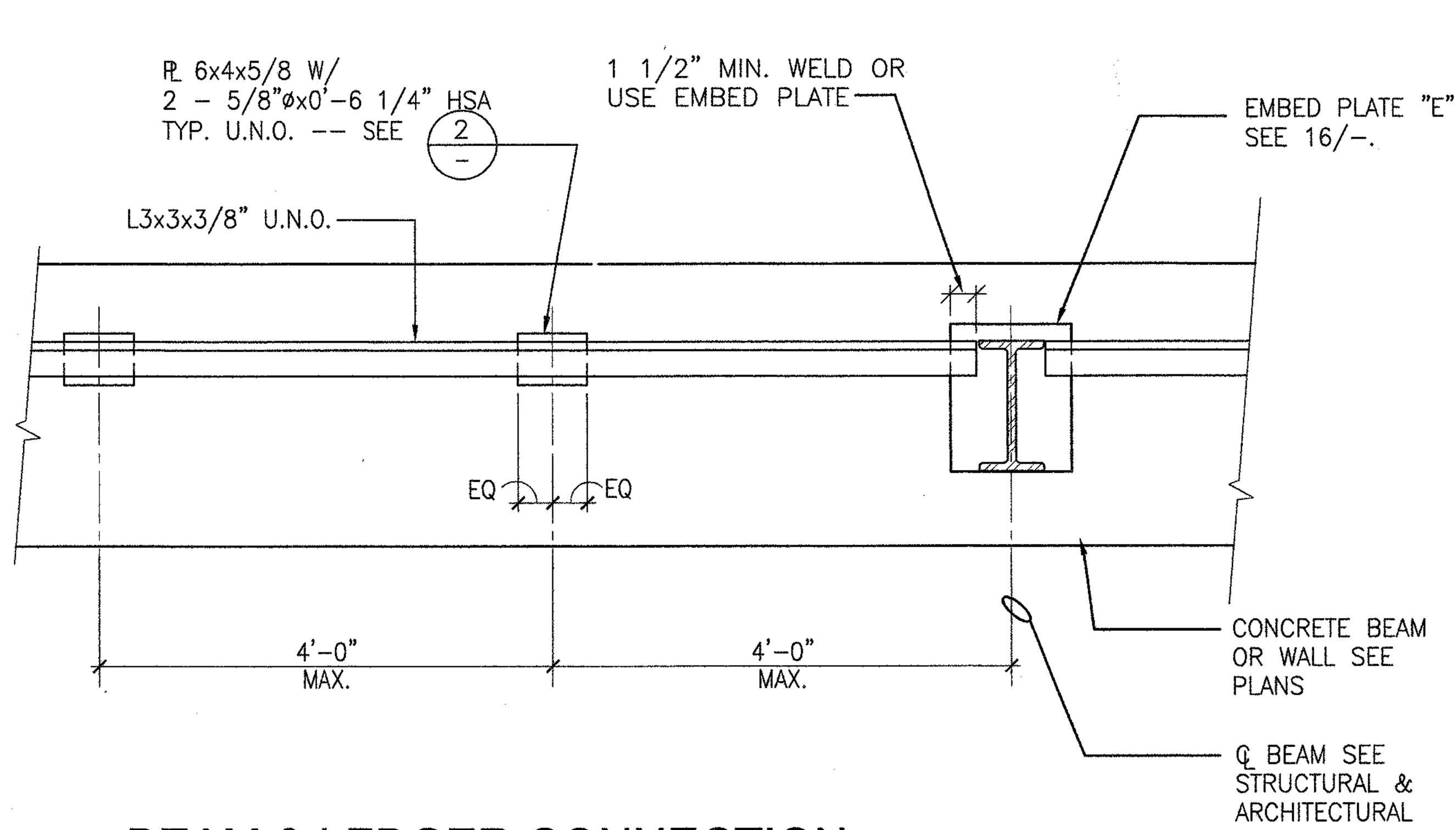
For action to: RFI # 208

Date: 1-19-06 Job No: SKYLINE COLLEGE 6+7A

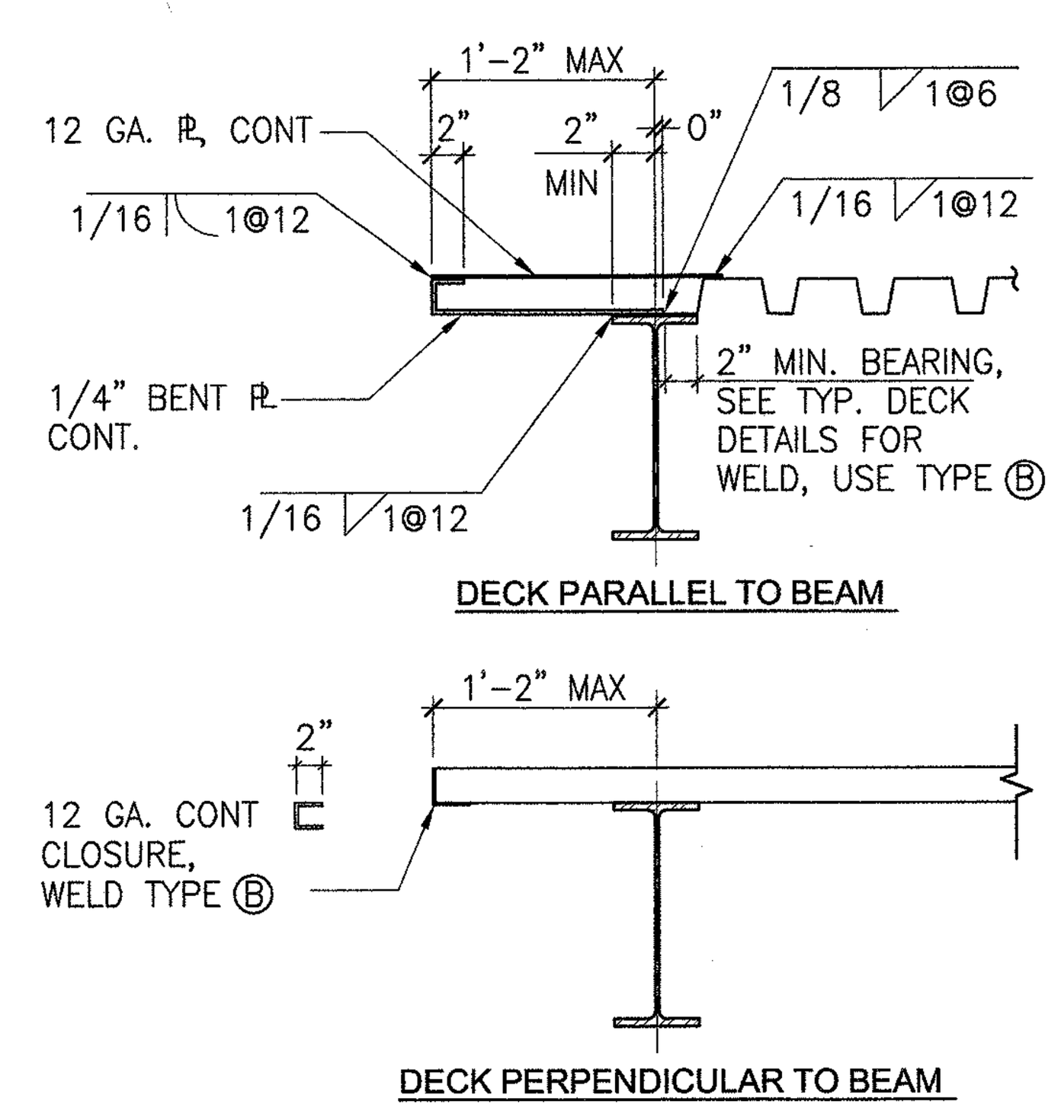
For info to:

Your action or reply is required on or before: DRAWN BY: LCH

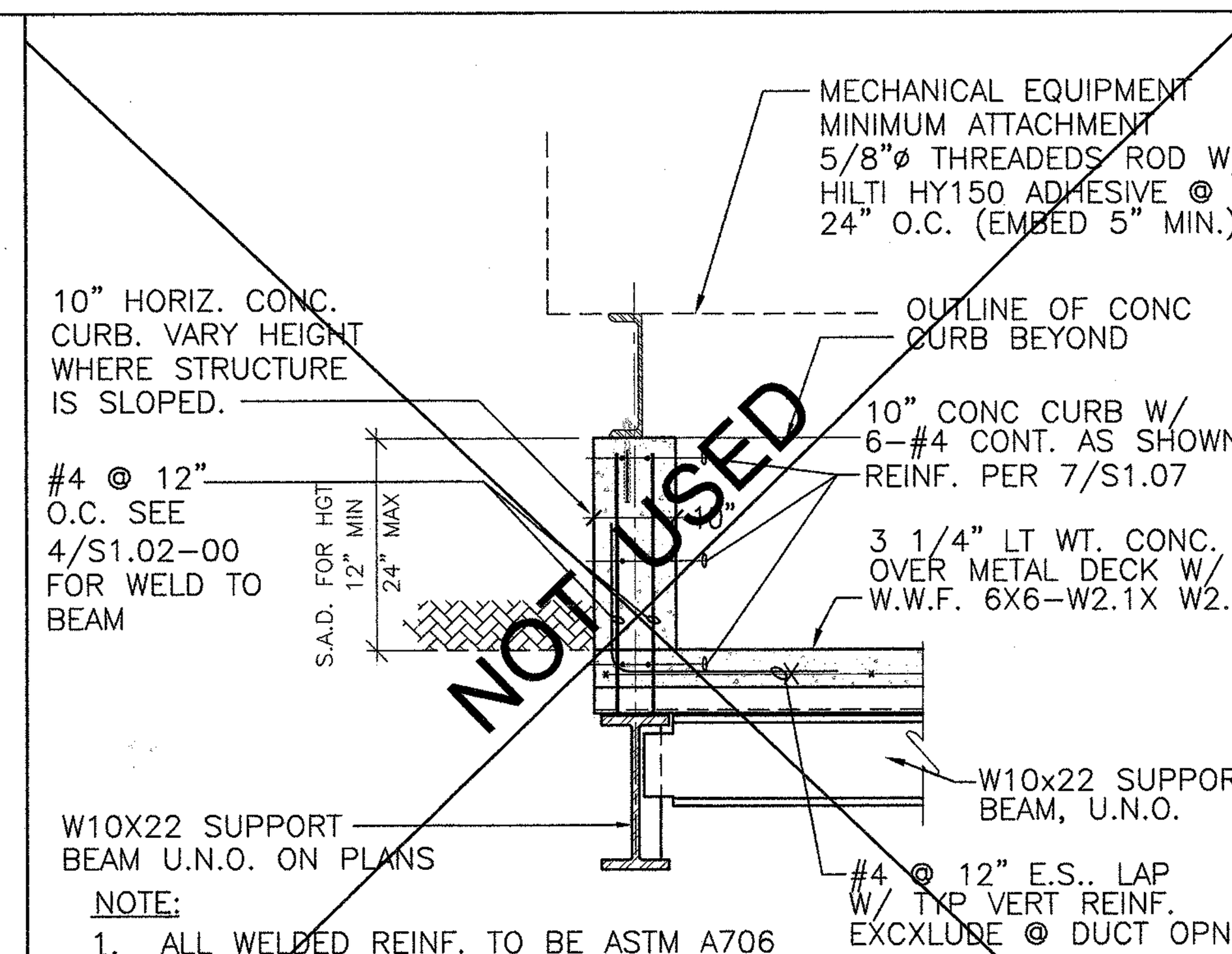




13 BEAM & LEDGER CONNECTION TO CONCRETE BEAM / WALL
N.T.S.



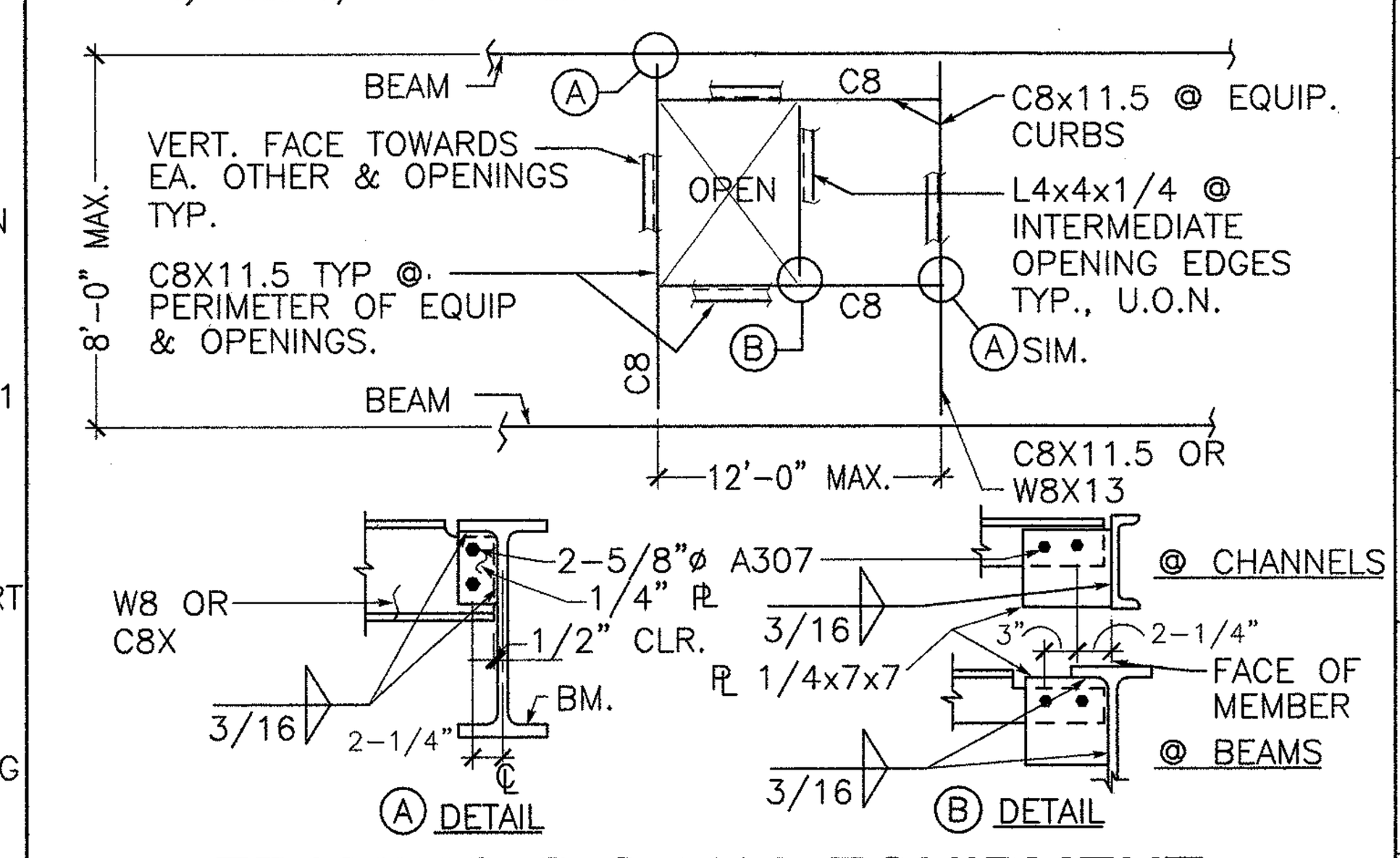
9 TYPICAL EDGE CONDITION METAL NON-COMPOSITE DECK
N.T.S. RFI 100 must use "J" metal to give 12 GA plate something to weld to



NOTE:
1. ALL WELDED REINF. TO BE ASTM A706
2. SEE 1,12/- FOR REINF AT PENETRATIONS
3. SEE PLAN FOR ANY INTERMEDIATE CURBS.

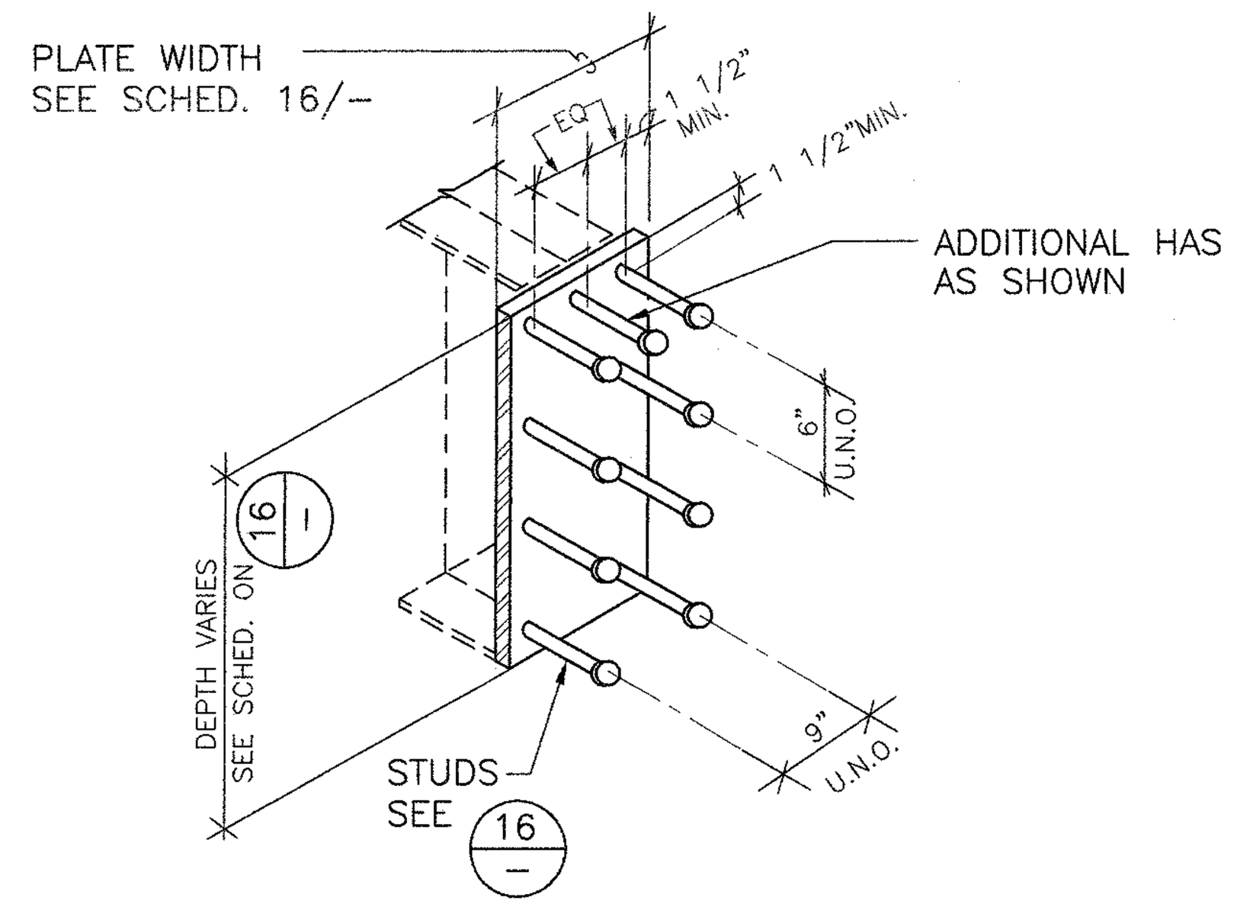
5 AHU UNIT SUPPORT @ DECK (ALTERNATE)
SCALE: 3/4"=1'-0"

NOTE:
1) ALL DIMENSIONS MUST BE PROVIDED BY EQUIPMENT MANUFACTURER BEFORE FABRICATION BEGINS.
2) UNO ON PLANS, ALL C8X OR W8X NOTED BELOW SHALL BE W8X13 OR C8X11.5 RESPECTIVELY.
3) METAL DECK & CONCRETE NOT SHOWN FOR CLARITY.
4) SEE 7/- FOR SMALL MECH UNIT CURB SUPPORT.

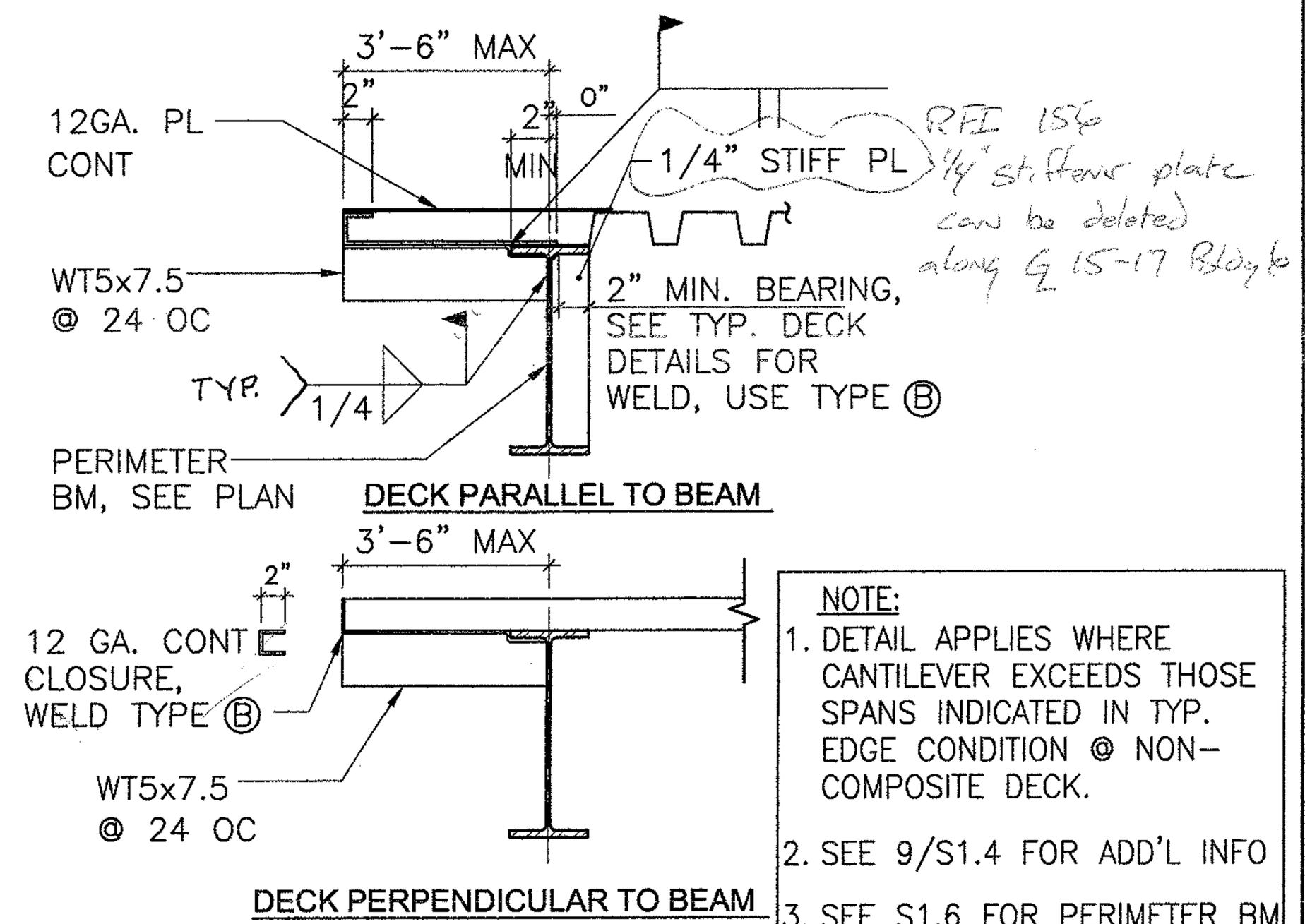


1 FRAMING @ SMALL EQUIPMENT AND LARGE OPENINGS
N.T.S.
MAX. EQUIP. WEIGHT = 1000#

NOT USED



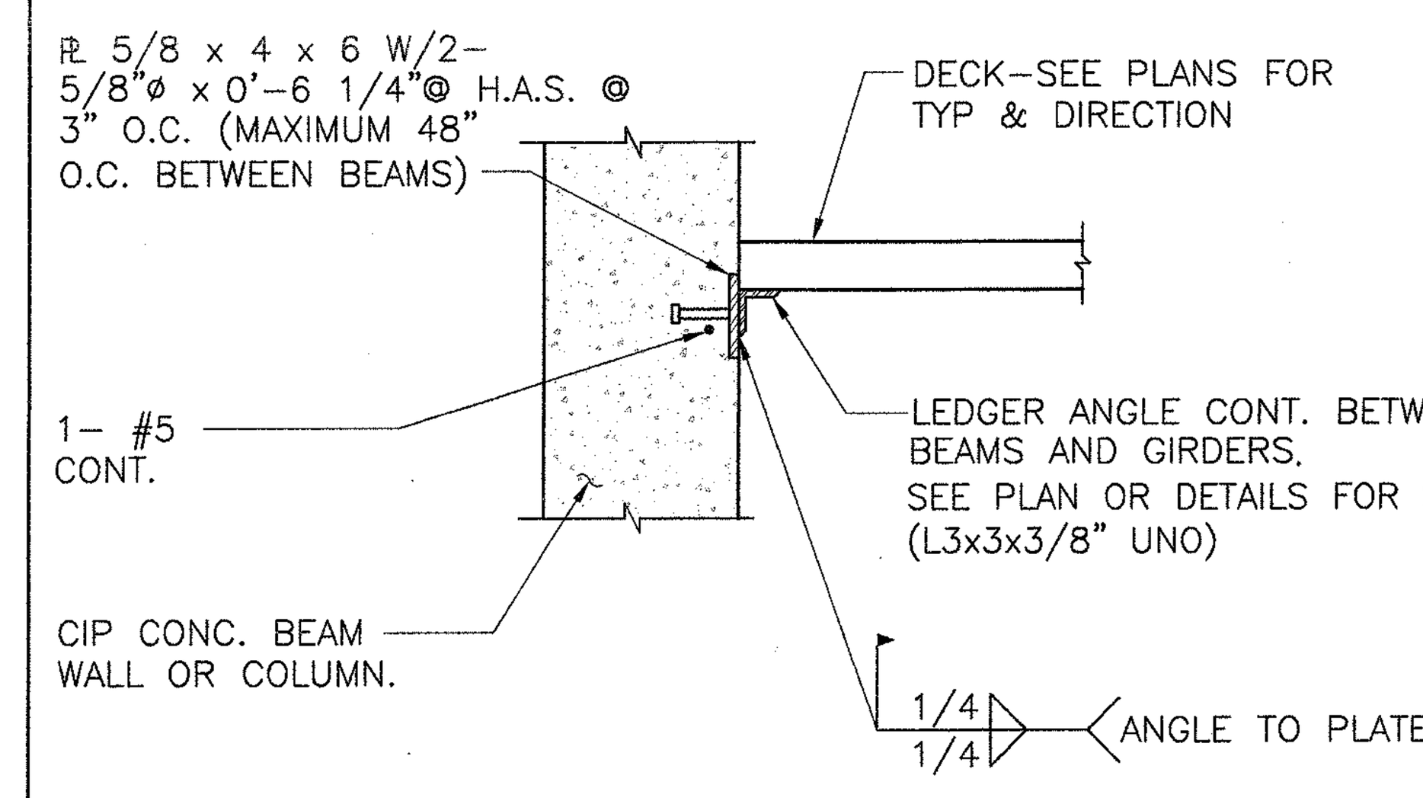
14 ISOMETRIC DETAIL PLATE "E"
N.T.S.



NOTE:
1. DETAIL APPLIES WHERE CANTILEVER EXCEEDS THOSE SPANS INDICATED IN TYP. EDGE CONDITION @ NON-COMPOSITE DECK.
2. SEE 9/S1.4 FOR ADD'L INFO
3. SEE S1.6 FOR PERIMETER BM FRAMING CONNECTIONS

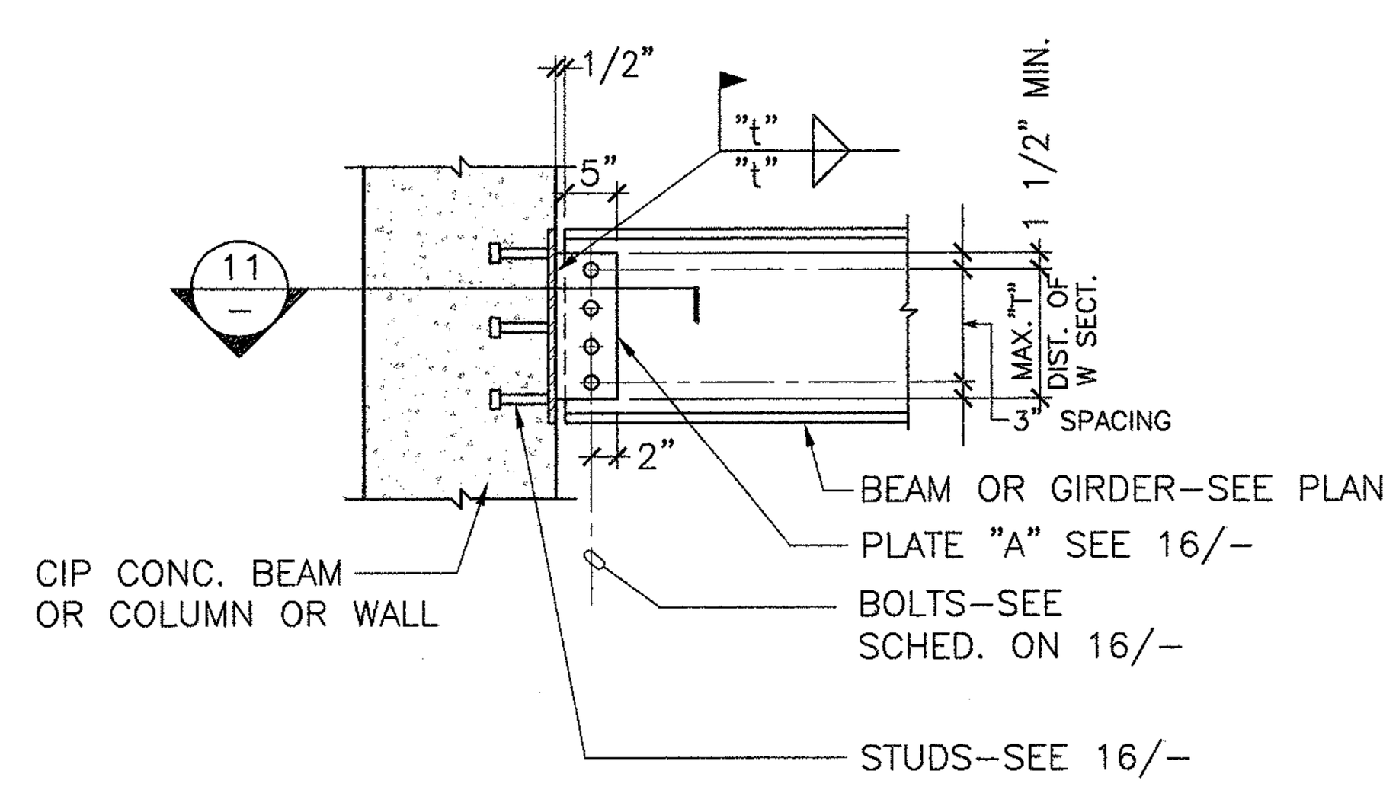
10 STIFFENED EDGE CONDITION AT NON-COMPOSITE DECK
N.T.S.

NOT USED

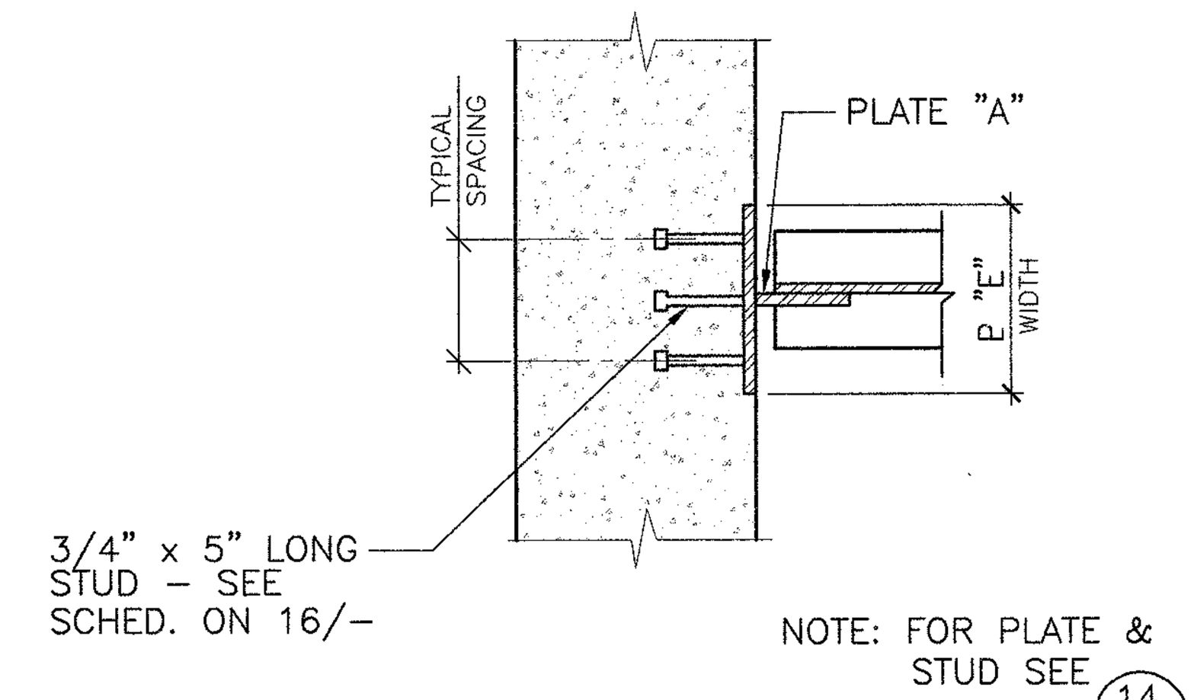


2 SECTION
SCALE: 3/4"=1'-0"

NOT USED

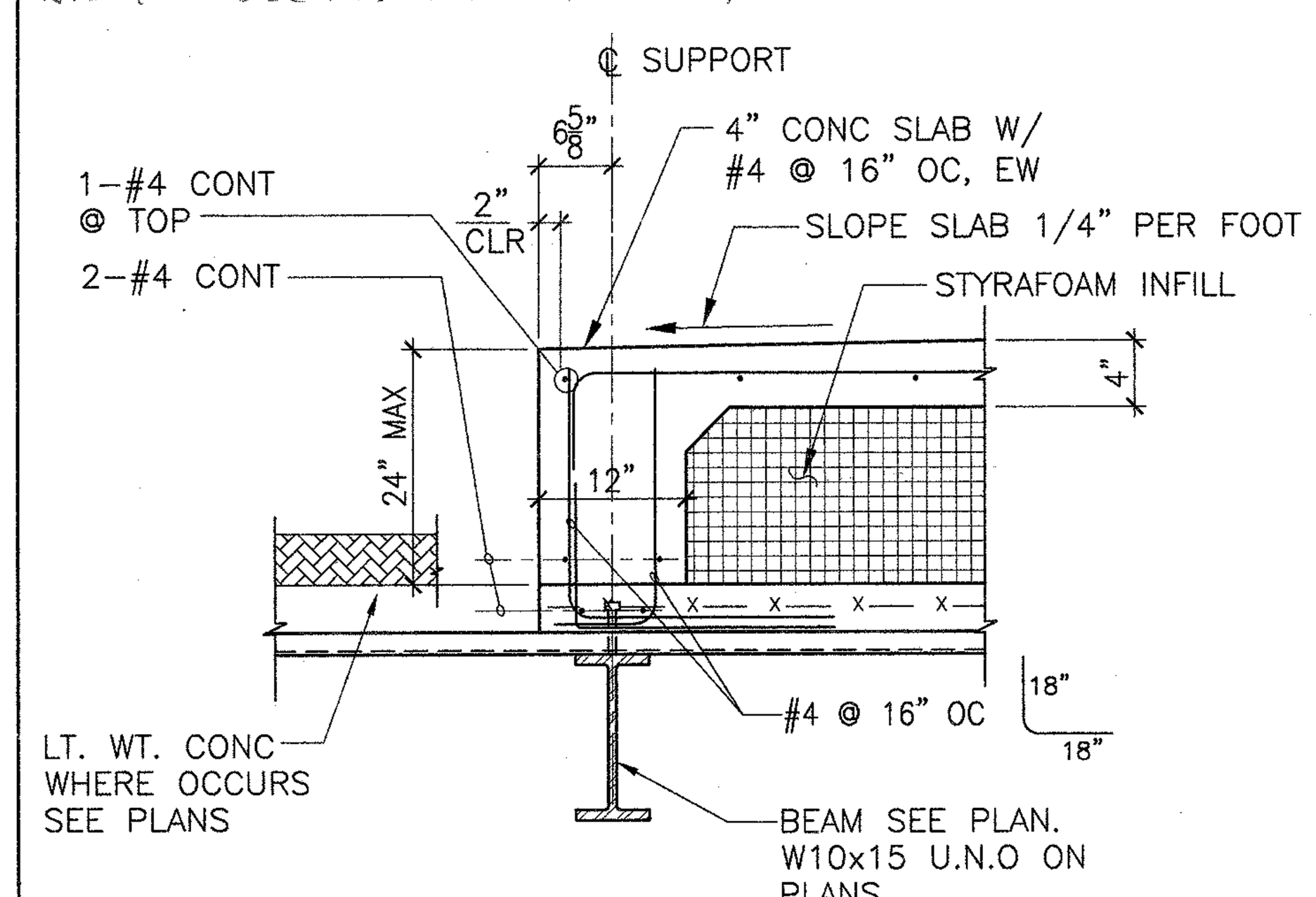


15 BEAM TO CONC WALL/ BEAM
N.T.S.



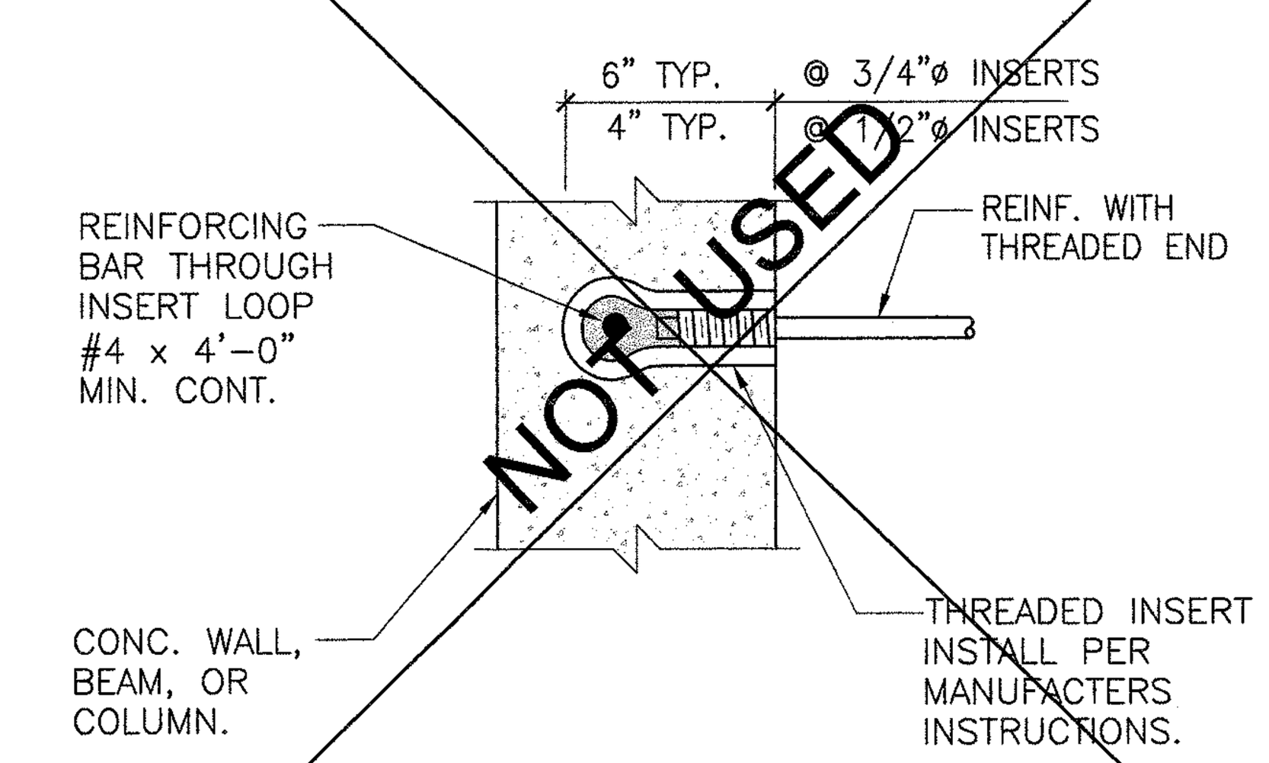
11 PLAN VIEW BEAM / GIRDER TO BEAM / WALL
N.T.S.

RFI 112 use this detail for all pads on metal deck



1. ALL WELDED REINF. TO BE ASTM A706
2. SEE 1,12/- FOR REINF AT PENETRATIONS

7 SECTION @ MECH. PAD SUPPORT
SCALE: 3/4"=1'-0"

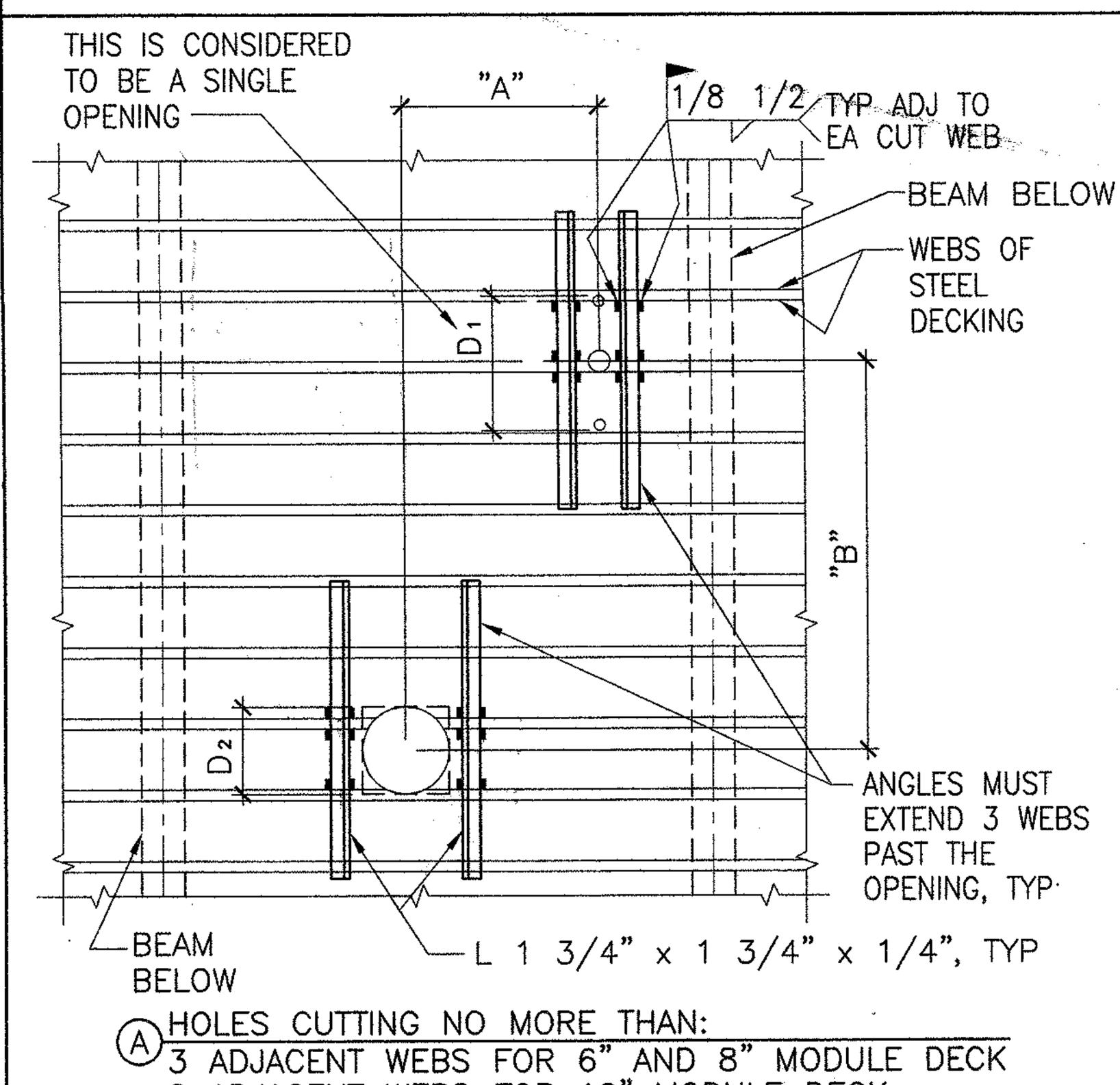


3 CONCRETE THREADED INSERT
N.T.S.

BEAM CONNECTION SCHEDULE										
BEAM/ GIRDER SIZE	PLATE "A" THICKNESS INCH	PLATE "E"			WELD	NO. OF H.S. ASTM A-325-N 3/4" DIA. BOLTS	STUD DIAMETER INCH	NO. OF 8" LONG STUDS WELDED TO PLATE "E"	HORIZ. STUD SPACING	VERTICAL STUD SPACING
		THICKNESS INCHES	WIDTH INCHES	DEPTH INCHES	t INCH					
W8	3/8	1/2	10	10	1/4"	2	3/4	4(2-ROWS)	6"	6"
W10	3/8	3/4	10	12	1/4"	3	3/4	4(2-ROWS)	6"	8"
W12	3/8	3/4	10	14	1/4"	3	3/4	6(2-ROWS)	6"	5 1/2"
W14	3/8	3/4	12	16	1/4"	3	3/4	6(2-ROWS)	9"	6 1/2"
W16	3/8	3/4	12	18	5/16"	4	3/4	6(2-ROWS)	9"	7 1/2"
W18	3/8	3/4	12	18	3/8"	5	3/4	6(2-ROWS)	9"	7 1/2"
W21	3/8	3/4	12	21	3/8"	6	3/4	8(2-ROWS)	9"	6"
W24	3/8	3/4	12	24	3/8"	7	3/4	8(2-ROWS)	9"	7"
TS7X	3/8	5/8	8	8	1/4	–	3/4	4(2-ROWS)	5"	5"

NOTES:
1. A325N BOLTS SHALL BE IN ACCORDANCE WITH APPROVED METHODS PER C.B.C. SECTION 2205A.11
2. PROVIDE LONGER DEPTH PLATE WHERE CONCRETE BEAM EXTENDS ABOVE TOP OF DECK. LOCATE PLATE 1" ABOVE TOP OF BEAM.
3. SEE 11/-, 14/-, 15/- FOR ADDITIONAL INFORMATION.

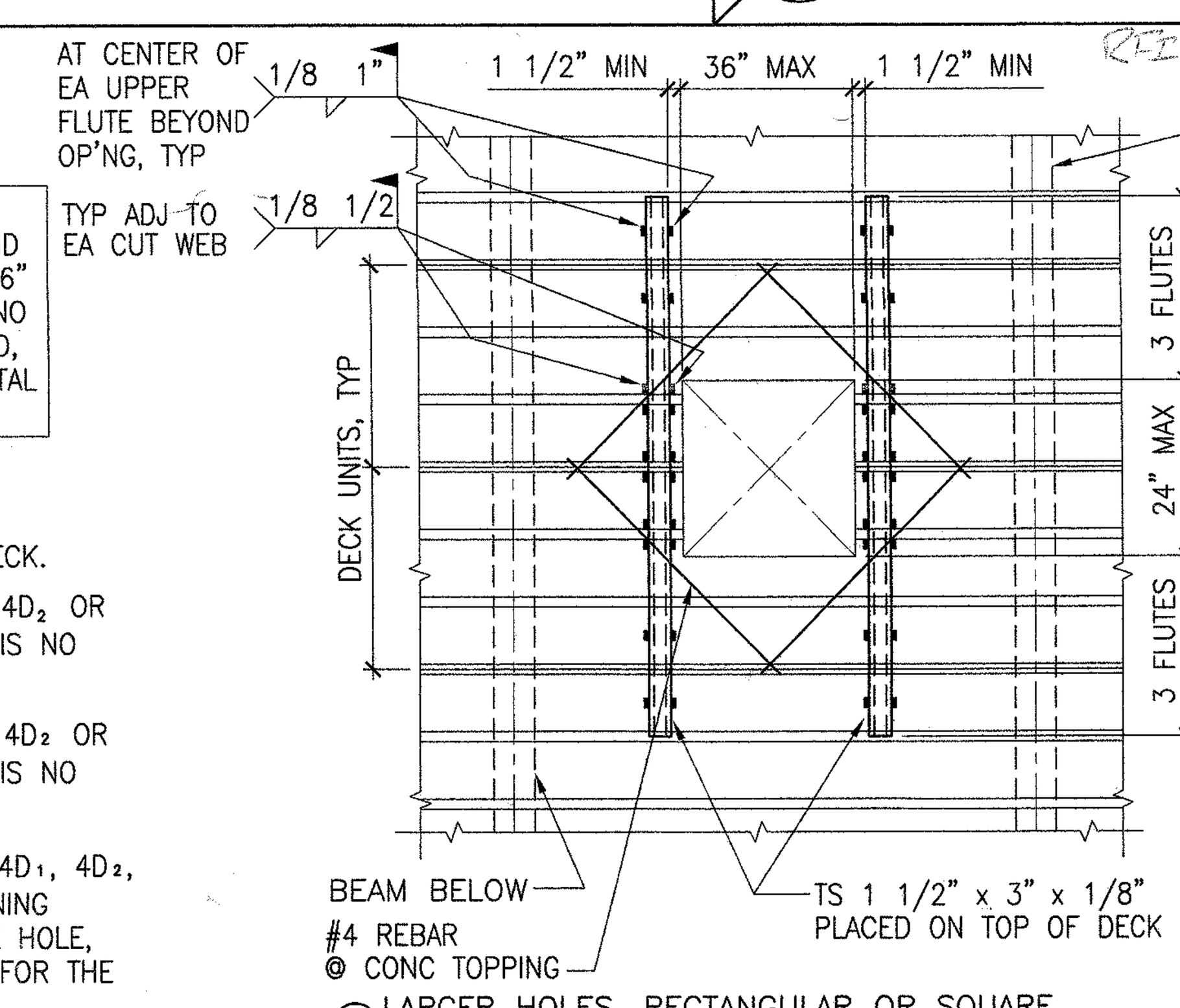
16 BEAM CONNECTION SCHEDULE
N.T.S.



(A) HOLES CUTTING NO MORE THAN:
3 ADJACENT WEBS FOR 6" AND 8" MODULE DECK
2 ADJACENT WEBS FOR 12" MODULE DECK

PRIOR TO CONCRETE POUR (WHERE REQUIRED), SMALL OPENINGS SHOULD BE BLOCKED OUT AND METAL DECK LEFT INTACT. HOLES LESS THAN 6" ø AND CUTTING NO MORE THAN 1 WEB NEED NO REINFORCING. AFTER THE CONCRETE HAS CURED, THE BLOCKOUT CAN BE REMOVED AND THE METAL DECK IN THE AREA OF THE HOLE REMOVED.

NOTES:
1. ANGLES SHALL BE PLACED ON TOP OF DECK.
2. IF DIMENSION "A" IS GREATER THAN 4D1, 4D2 OR 32", WHICHEVER IS LARGER, THEN THERE IS NO RESTRICTION ON DIMENSION "B".
3. IF DIMENSION "B" IS GREATER THAN 4D1, 4D2 OR 32", WHICHEVER IS LARGER, THEN THERE IS NO RESTRICTION ON DIMENSION "A".
4. IF DIMENSION "A" & "B" ARE LESS THAN 4D1, 4D2, OR 32", WHICHEVER IS LARGER, THE OPENING GROUP WILL BE CONSIDERED AS A SINGLE HOLE, AND MUST BE REINFORCED AS REQUIRED FOR THE LARGER OPENING.



(B) LARGER HOLES, RECTANGULAR OR SQUARE

RFI 204 acceptable to install reinforcing ∠ and TS to under side of deck but adding 1/8 x 1/2 weld at ends

NOTES:
1. IF THE OPENING OR GROUP OF OPENINGS OCCURS IN ONE DECKING UNIT, THE OPENING OR OPENING GROUP MAY BE CUT PRIOR TO POURING OF CONCRETE.
2. IF, AS SHOWN IN THE DETAIL ABOVE, THE OPENING OR OPENING GROUP CUTS THROUGH TWO DECKING UNITS, THE DECKING SHALL NOT BE CUT UNTIL CONCRETE HAS BEEN PLACED AND CURED. AT TIME OF POURING, SUITABLE SLEEVES OR BULKHEADS SHALL BE PLACED AROUND THE OPENING.
3. ADD REBAR AT CORNERS OF OPENING.
4. WHEN MAXIMUM DIMENSION OF AN OPENING OR OPENING GROUP EXCEEDS 24"(PERP TO DECK) OR 36"(PARALLEL TO DECK), PLACE HEADER BEAM AROUND OPENING, SEE 1/-.

12 SMALL MECH UNIT OR DECK OPENING WITH OR WITHOUT CONC TOPPING (MAX WT = 200 LBS)

REVIEW SET

The Steinberg Group
Architecture Planning Interiors
60 Pierce Avenue San Jose CA 95110
408.295.5446 tel 408.295.5928 fax

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Architecture • Interiors • Planning

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Structural Engineering

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REGISTERED PROFESSIONAL ENGINEER — STRUCTURAL — STATE OF CALIFORNIA — NO. S4377 EXP. 6/30/05

SKYLINE COLLEGE
STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

Dim 6" or less cutting 1 web no reinforcing. Larger cuttings 2 or more webs weld angle per 12/S1.4 to underside of deck. SEE BACK of SHEET

RFI 308 core holes after deck placement not to exceed 8"

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

DRAWING TITLE
TYPICAL DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S1.4

20050420.16420153 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S1.4.dwg

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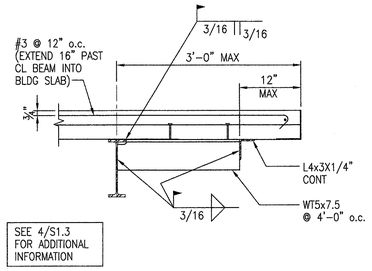
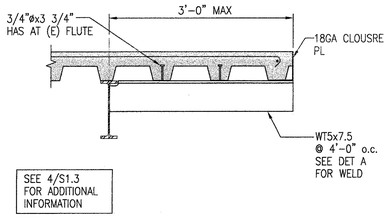
NOT USED

NOT USED

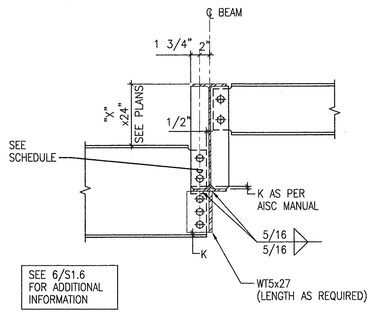


DETAIL – A

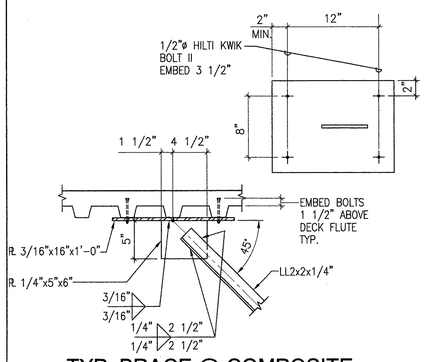


DETAIL – B

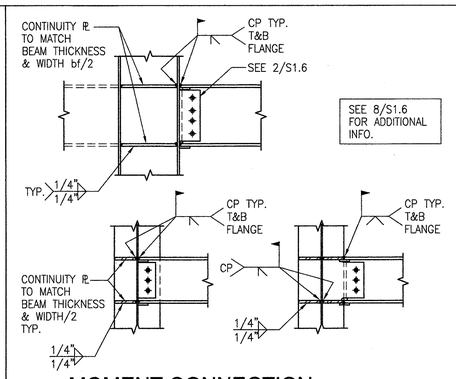
14 DECK SUPPORT @ LONG CANTILEVER
SCALE: 1" = 1'-0"



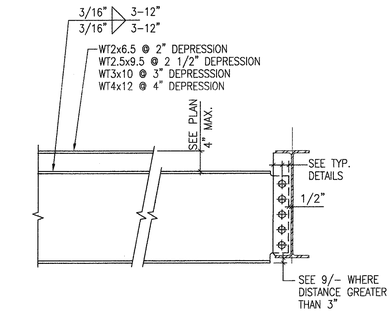
9 BEAM CONNECTION @ OFFSET
SCALE: 1" = 1'-0"



5 TYP. BRACE @ COMPOSITE DECK
SCALE: 1" = 1'-0"

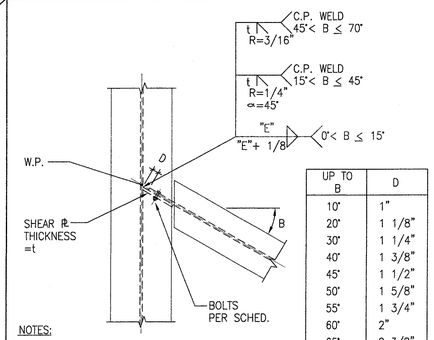


1 MOMENT CONNECTION @ GRAVITY COLUMNS
N.T.S.



10 BEAM TO GIRDER CONNECTION @ DEPRESSION
SCALE: 1" = 1'-0"

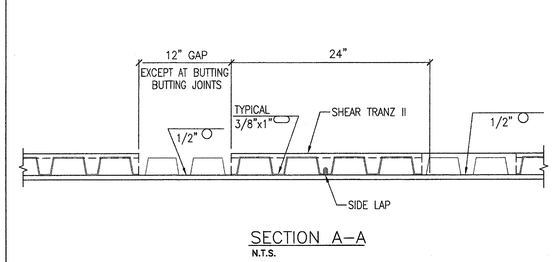
NOT USED



UP TO B	D
10°	1"
20°	1 1/8"
30°	1 1/4"
40°	1 3/8"
45°	1 1/2"
50°	1 5/8"
55°	1 3/4"
60°	2"
65°	2 3/8"
70°	3"

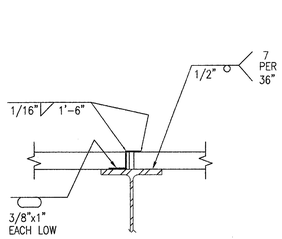
NOTES:
1. SEE NON–MOMENT BEAM CONNECTION SCHEDULE AND DETAILS FOR INFO. NOT SHOWN.

2 SKEWED BEAM CONNECTION
N.T.S.



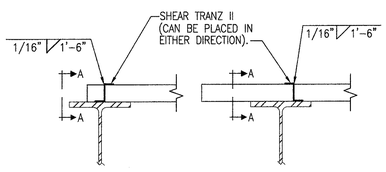
SECTION A–A
N.T.S.

NOTE: SHEAR TRANS REQURED AT PERIMETER BEAMS AND INTERIOR COLLECTOR WHICH ARE PERPENDICULAR TO THE DIRECTION OF DECK. SHEAR TRANS II IS NOT REQUIRED AT COLLECTOR BEAMS AND PERIMETER MEMBER WHICH RUN PARALLEL TO THE DECK DIRECTION.

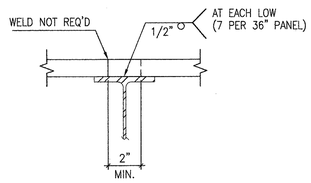


TYPICAL BUTT JOINT

(NOTE: USE ONLY WHERE DECK CANNOT LAP). SHEAR TRANZ II TO BE CONTINUOUS AT BUTT JOINTS BY INSTALLING A 12" UNIT BETWEEN THE 24" UNITS.



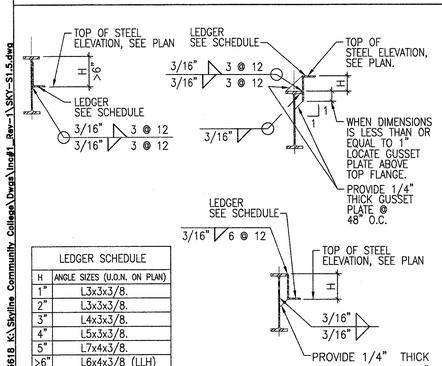
METAL DECK STIFFENER



TYPICAL INTERIOR END LAP

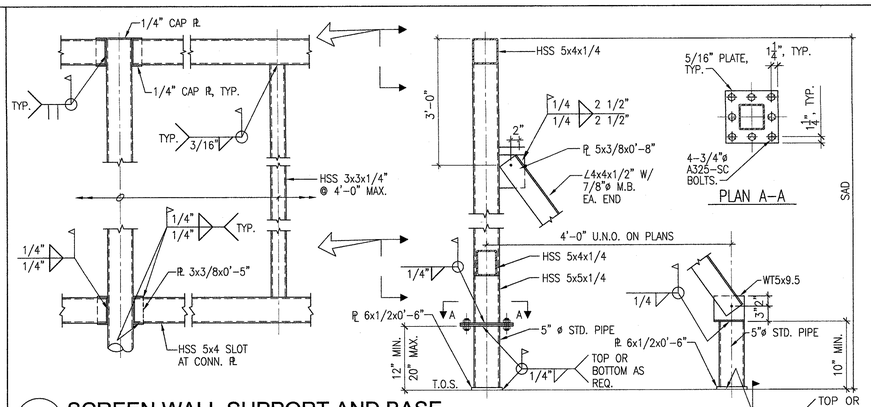
REI 157
Shear Trans not required on this project

19 TYPICAL DETAILS @ SHEAR TRANS II
N.T.S.

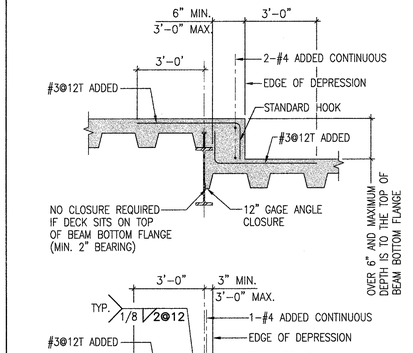


LEDGER SCHEDULE	
H	ANGLE SIZES (U.O.N. ON PLAN)
1"	L3x3x3/8.
2"	L3x3x3/8.
3"	L4x3x3/8.
4"	L5x3x3/8.
5"	L7x4x3/8.
>6"	L6x4x3/8 (LLH)

20 LEDGER DETAIL
N.T.S.

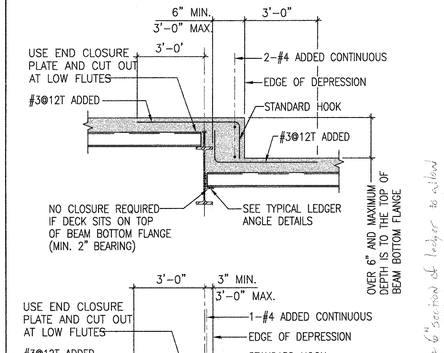


16 SCREEN WALL SUPPORT AND BASE
N.T.S.



NOTES:
LOCATE ALL ADDED REINF. AT 3/4" CLEAR FROM TOP OF CONCRETE. ADDED REINF. AT METAL DECK EDGE TAKES PRECEDENCE OVER ANY OTHER REINF. AND IS LOCATED AT THE OUTERMOST LAYER.

8 TYPICAL METAL DECK DETAIL AT SLAB DEPRESSION
N.T.S.



REI 183
acceptable to remove 6" section of ledger to allow plumbing to run thru. (Bldg 6 sh 12 thru K–L.3)

NOTES:
LOCATE ALL ADDED REINF. AT 3/4" CLEAR FROM TOP OF CONCRETE. ADDED REINF. AT METAL DECK EDGE TAKES PRECEDENCE OVER ANY OTHER REINF. AND IS LOCATED AT THE OUTERMOST LAYER. SEE SPECIFIC DETAILS FOR ANY ADDITIONAL REQUIREMENTS.

4 TYPICAL METAL DECK DETAILS AT SLAB DEPRESSIONS
N.T.S.

REVIEW SET

The Steinberg Group
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Hensel Phelps Construction Co.

SKYLINE COLLEGE
STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

DRAWING TITLE
TYPICAL STEEL DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S1.5

20050420.16423618 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKT-S1.5.dwg

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Hensel Phelps Construction Co. Andrew Brown Prolog WebSite RFI 42

Question	Date Required: 6/24/2005

Please verify that detail 10 on sheet S1.6 of Increment One drawings is to occur on only one side of the beam. If not please provide locations.

Suggestion

Here is more clarification on Detail 10/S1.6:

...///...

1. At one side of all building perimeter beams

...///...

2. At one side of all openings of stairs & elevators

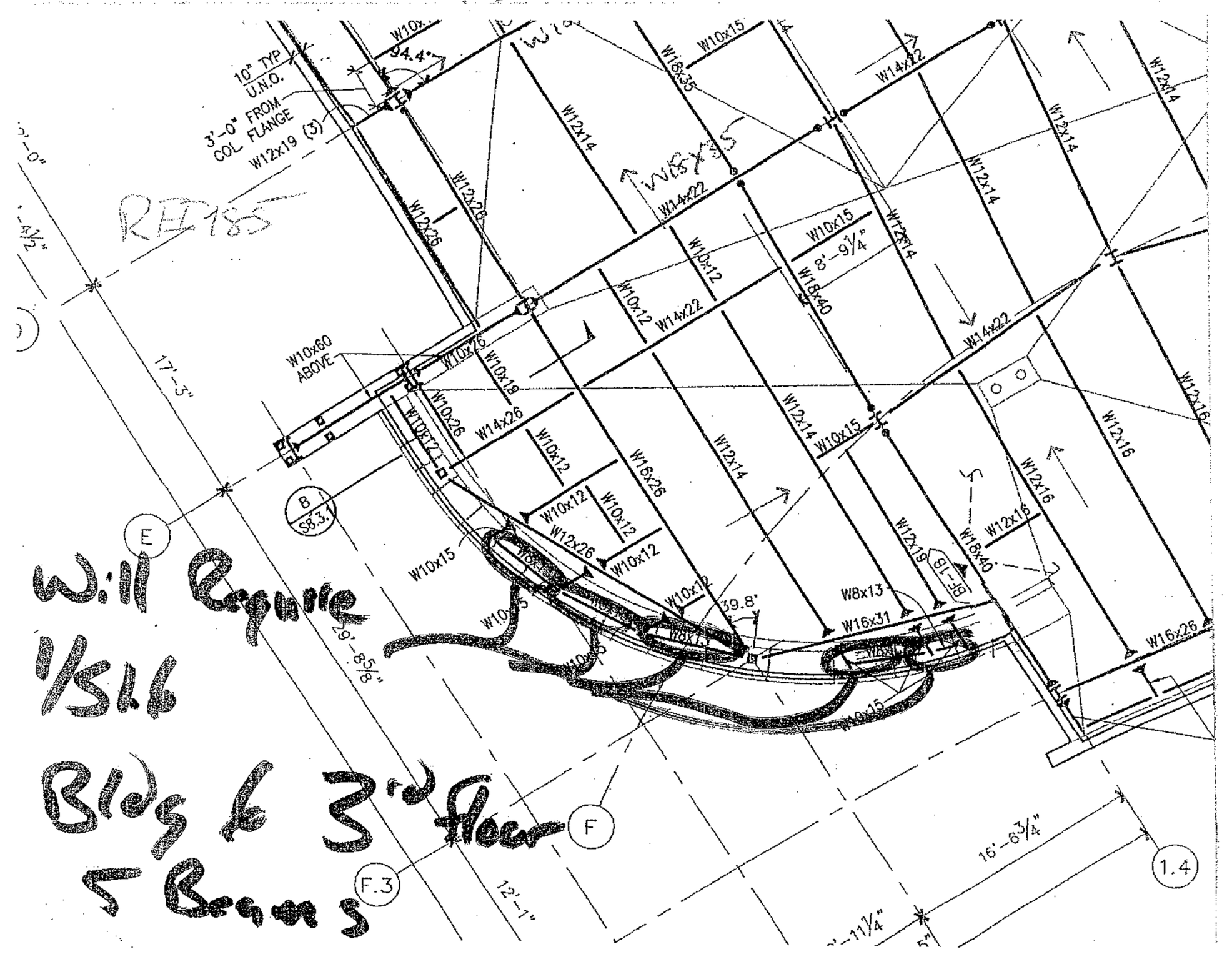
...///...

3. At interior locations on any one side of frame beams with not more than 10'-0" o.c. to laterally brace the top and bottom flange of frame beams. As shown on plan drawings, one lateral bracing beam will be always provided at center of brace-frame beam where braces intersect. As shown on plan drawing SB2.03 gridline 6, one lateral bracing beam will be always provided on any one side, at center of special moment frame beam and at 3'-0" away from special moment frame column-flanges.

...///...

Tejas, Crosby Group

Answer	Date Answered:



Dam Decker CMI Lescure Dodge

Hensel Phelps Construction Co. Posted 2-4-06

Skyline College Building 6 & 7A

Request For Information

Detailed, Each RFI

Project # 5004030
3500 College Drive
San Bruno, CA 94066

Jobsite Info.
Tel: 650-355-5578
Fax: 650-355-7428

Hensel Phelps Construction Co.

RFI#: 0140 Date Created: 11/3/2005 Date Required: 11/10/2005

Answered By	Authored By
Ron Saiki, The Steinberg Group 60 Pierce Avenue San Jose, CA 95110	Laine Heikel, Hensel Phelps Construction Co. 3500 College Drive San Bruno, CA 94066
Co-Respondent	**Subcontractor RFI Number**
	HPCC 0093

Subject

Bolts at Moment Connection of Gravity Columns

Location	Discipline	CSI Division	
	Structural	Metals	
Drawing/Spec	**Revision**	**Date**	**Detail/Section**

Question

Reference Increment No. 1, sheet S1.5; detail 1; sheet S1.6 detail 2; and sheet S1.7 detail 1

Detail 1 of sheet S1.5 of Moment Connection at Gravity Columns refers to detail 2 of sheet S1.6 for the type of bolts to be used in this situation, calling out A325-N bolts. However, sheet S1.7 detail 1 specifies a different type of bolt, A490-SC, to be used at Moment Connections.

Please confirm moment connections at gravity columns require the A325-N bolts called out on sheet S1.6 detail 2, and not thos called out on sheet S1.7 detail 1.

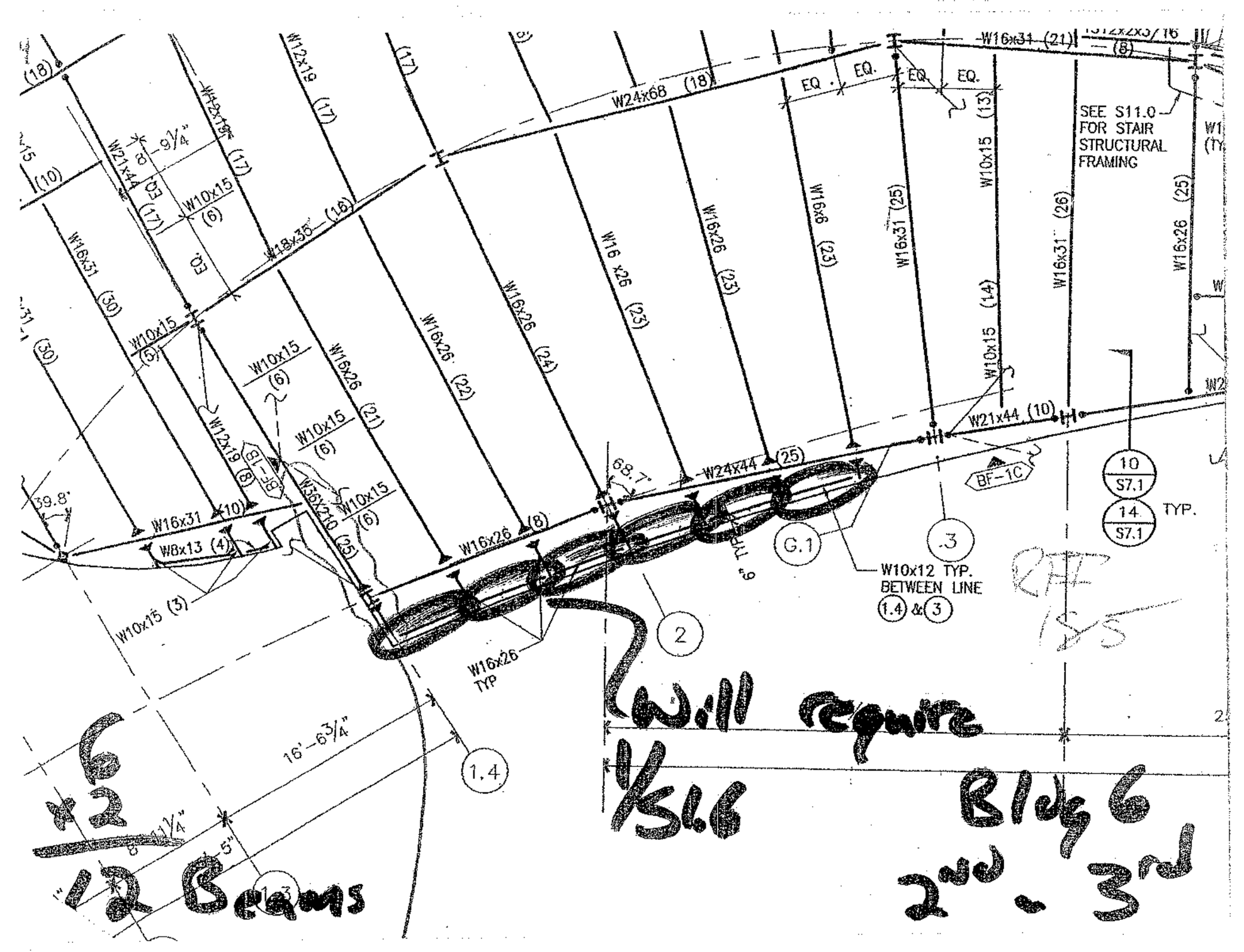
Consultant Comments

A325-SC bolts per det. 2/S1.6 are required at moment connections per det.1/S1.5 ... except that if the moment connecti column happens to be a collector location then det. 2/S1.7 applies. Collector locations are marked with a dark dot on beams shown on framing plans ...///... Tejas, Crosby Group.

Answer Date Answered: 11/3/2005

See comments by Tejas, Crosby Group.
R. Saiki

Cc: Company Name	Contact Name	Copies	Notes
CIS inc.	Kurt Dodge	Prolog WebSite	
The Crosby Group	Tejas Goshalia	Prolog WebSite	
Hensel Phelps Construction Co.	Andrew Brown	Prolog WebSite	



BAM Decker CMI Lescure Dodge

Hensel Phelps Construction Co. Posted 2-4-06

Skyline College Building 6 & 7A

Request For Information

Detailed, Each RFI

Project # 5004030
3500 College Drive
San Bruno, CA 94066

Jobsite Info.
Tel: 650-355-5578
Fax: 650-355-7428

Hensel Phelps Construction Co.

RFI#: 0140.1 Date Created: 11/7/2005 Date Required: 11/14/2005

Answered By	Authored By
Ron Saiki, The Steinberg Group 60 Pierce Avenue San Jose, CA 95110	Laine Heikel, Hensel Phelps Construction Co. 3500 College Drive San Bruno, CA 94066
Co-Respondent	**Subcontractor RFI Number**
	HPCC 0093

Subject

Bolts at Moment Connection of Gravity Columns

Location	Discipline	CSI Division	
	Structural	Metals	
Drawing/Spec	**Revision**	**Date**	**Detail/Section**

Question

Reference Increment No. 1, sheet S1.5, detail 1; sheet S1.6 detail 2; sheet S1.7 detail 1; and RFI 140

For further clarification the cantilevered beams on building 6 long the perimeter at the mentioned areas are to have a moment connection per detail 1 on S1.5 and using A325 bolts.

Cantilevered beams along gridline "G" between 1.4 and 3
Cantilevered beams along gridline 6 between "A" and "D"
Beams in the "Feature Wall" along gridline "E" between 9'-11" off-set of 1 and 1 on 2nd and roof level.

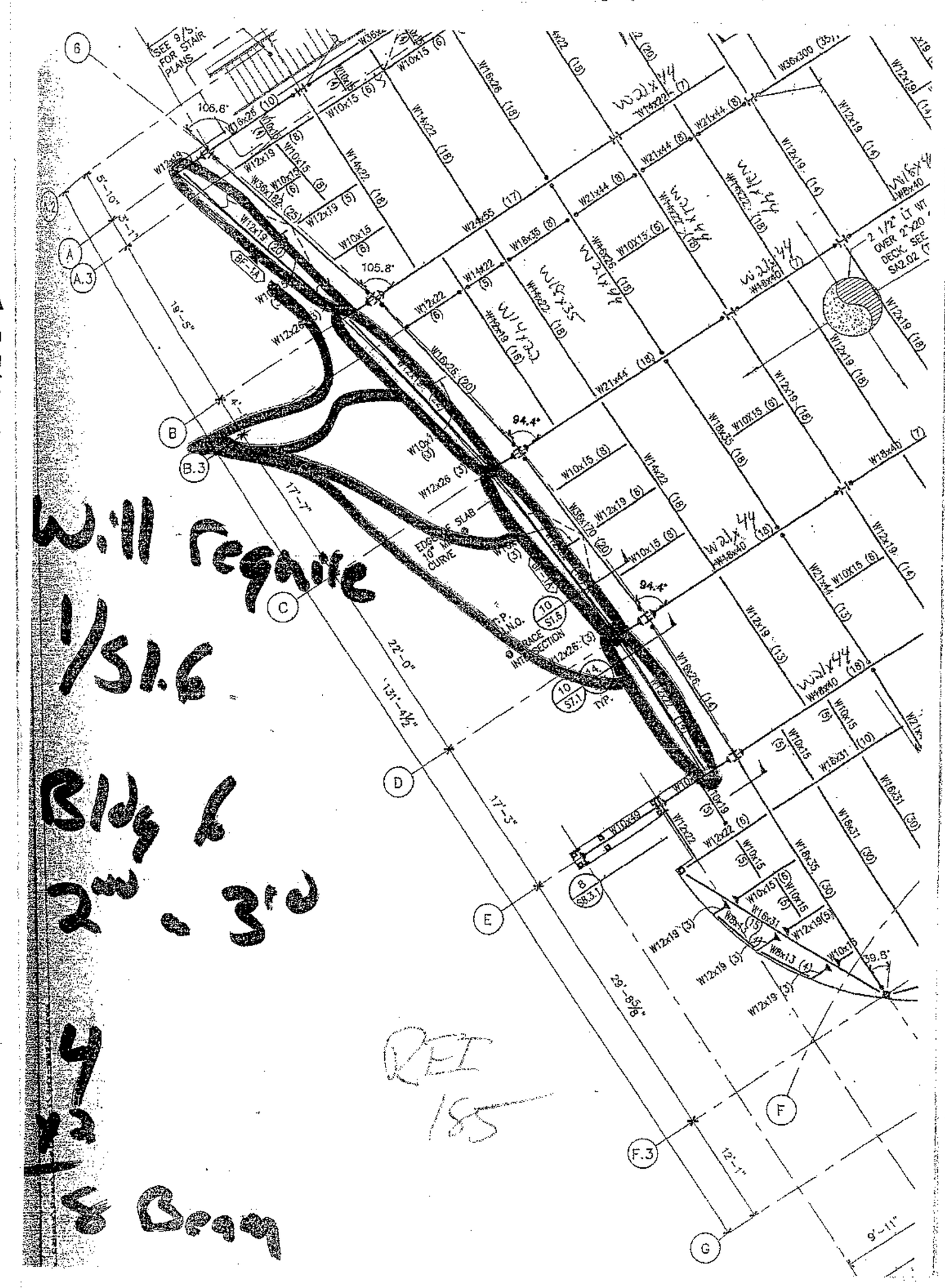
Consultant Comments

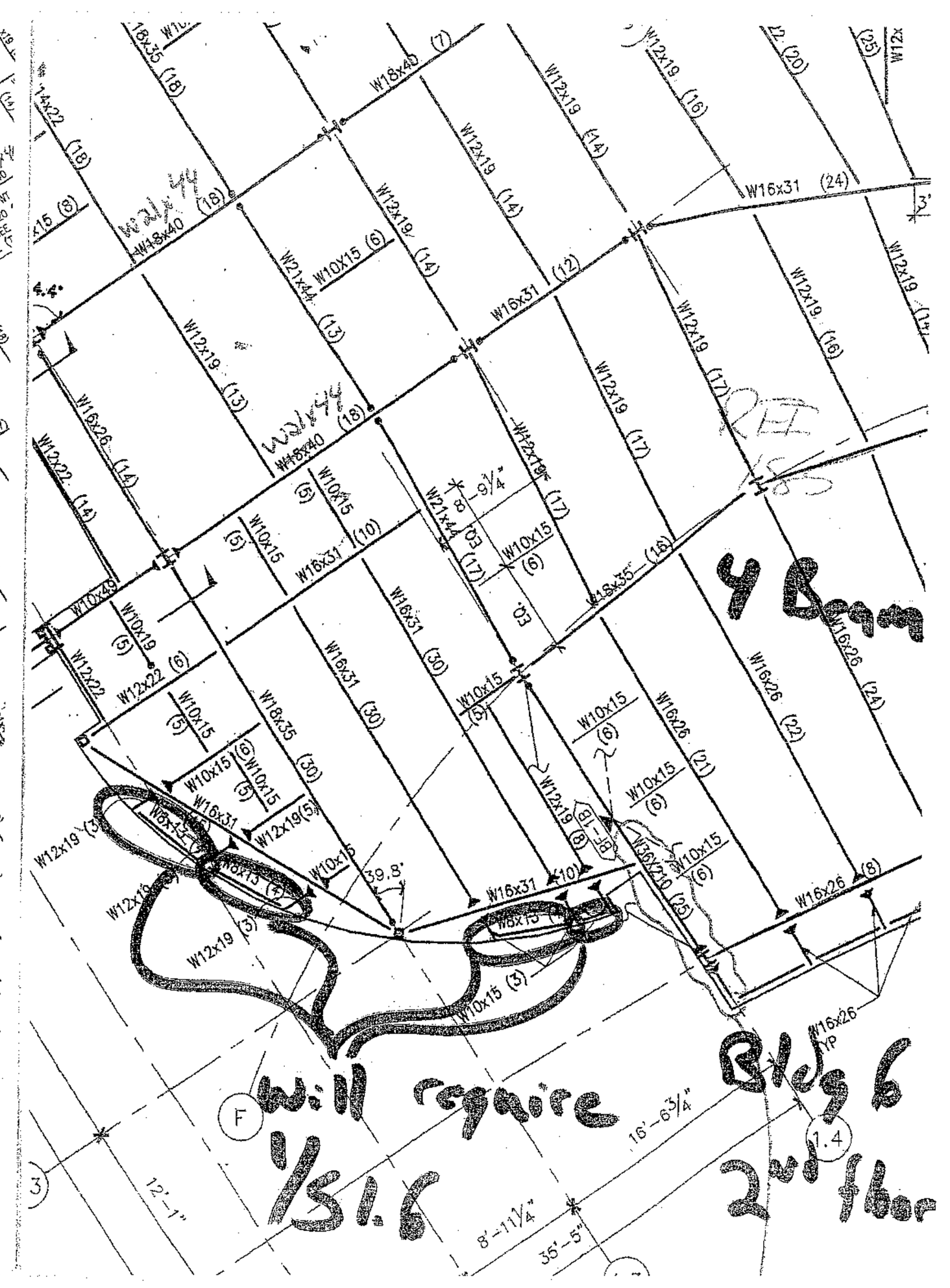
Confirmed ... Tejas, Crosby Group.

Answer Date Answered: 12/2/2005

See comments from Tejas, Crosby Group.
R. Saiki

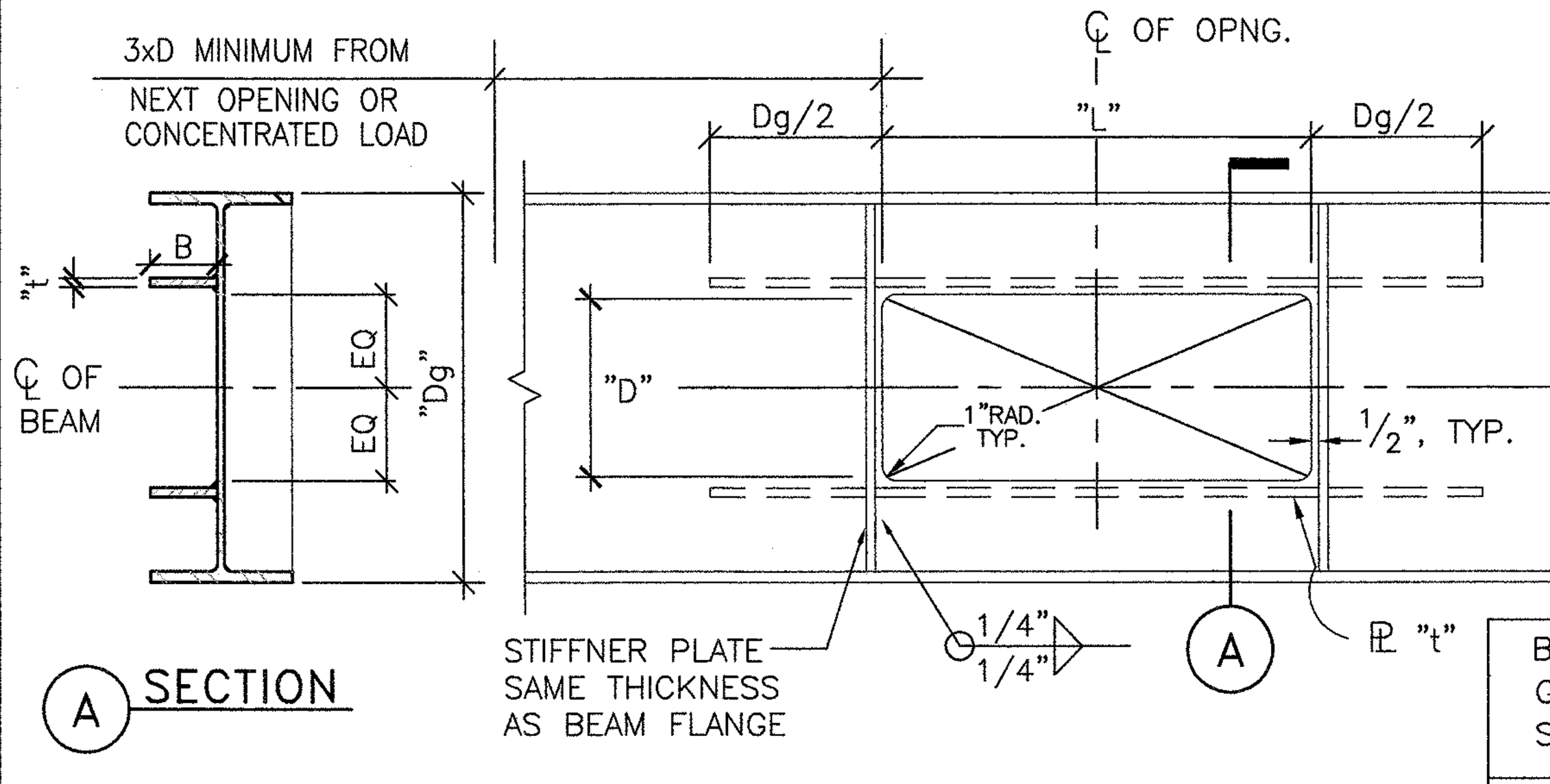
Cc: Company Name	Contact Name	Copies	Notes
The Crosby Group	Tejas Goshalia	Prolog WebSite	
Hensel Phelps Construction Co.	Andrew Brown	Prolog WebSite	





RFI 158.1

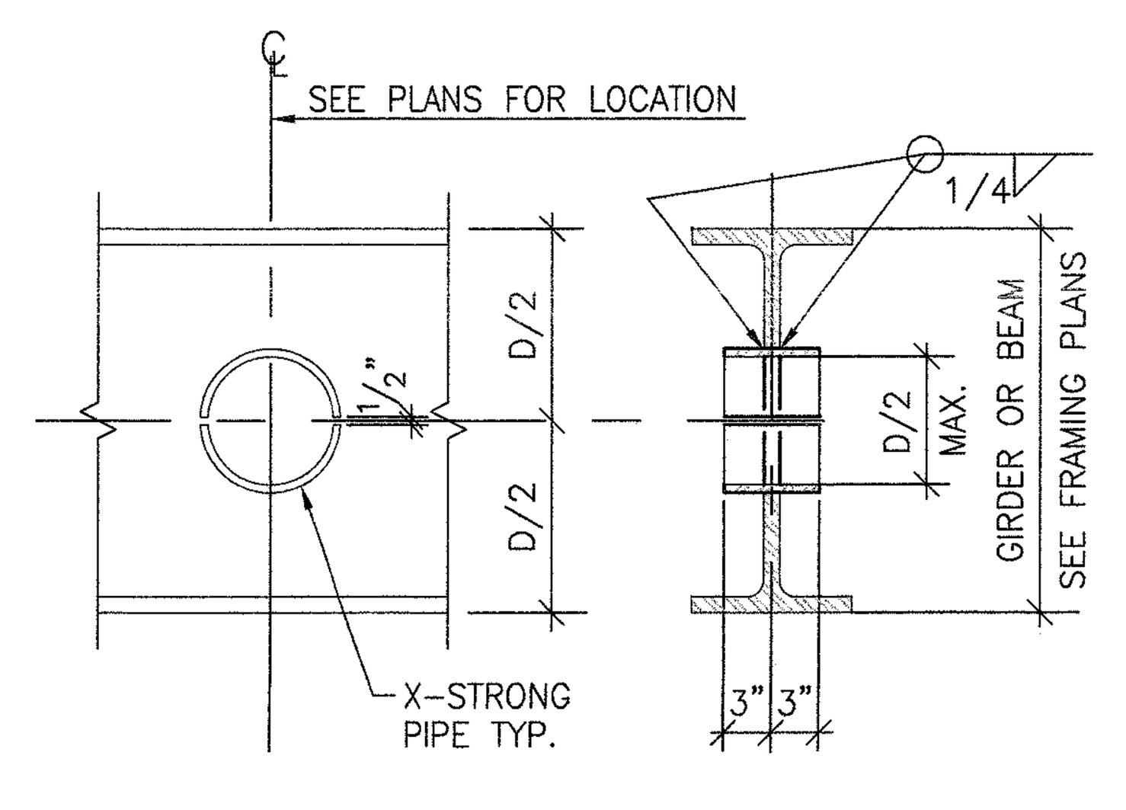
17 BEAM REINF @ PIPE PENETRATION
N.T.S.



NOTE:
1. SEE PLAN FOR LOCATION.
2. NO PENETRATIONS ALLOWED TO BEAMS @ BRACED FRAMES & MOMENT FRAMES

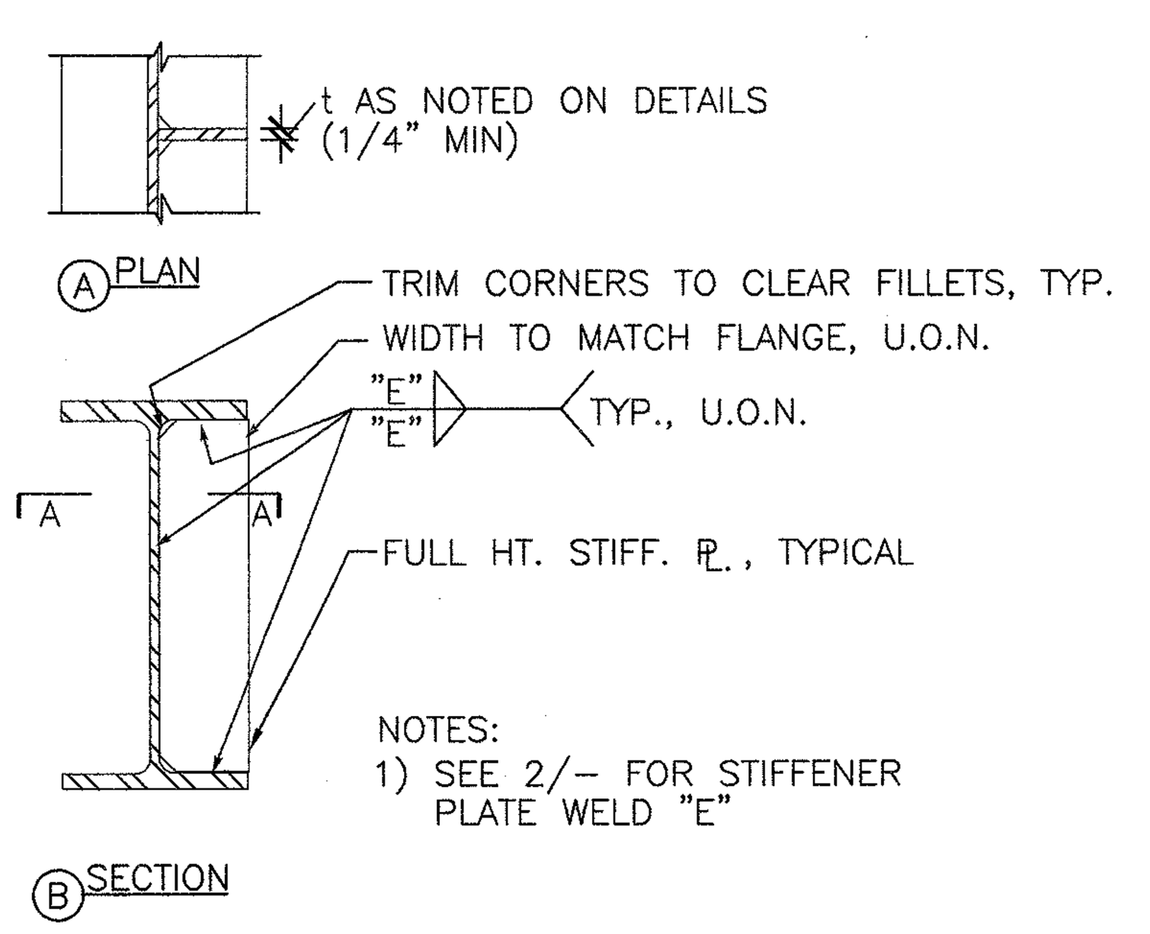
BEAM/ GIRDER SIZE	MAXIMUM SIZE OF OPENING (IN)		REINFORCING PLATES (IN)	
	D	L	t	B
W16	5 1/2	16	THICKNESS OF PLATES TO EQUAL THICKNESS OF BEAM FLANGES.	2 1/2
W18	6	18		2 1/2
W21	7	21		3
W24	8	24		3 1/2
W27	9	27		3 1/2
W30	10	30		4
W36	12	32		6

18 BEAM REINF @ PIPE PENETRATION
N.T.S.

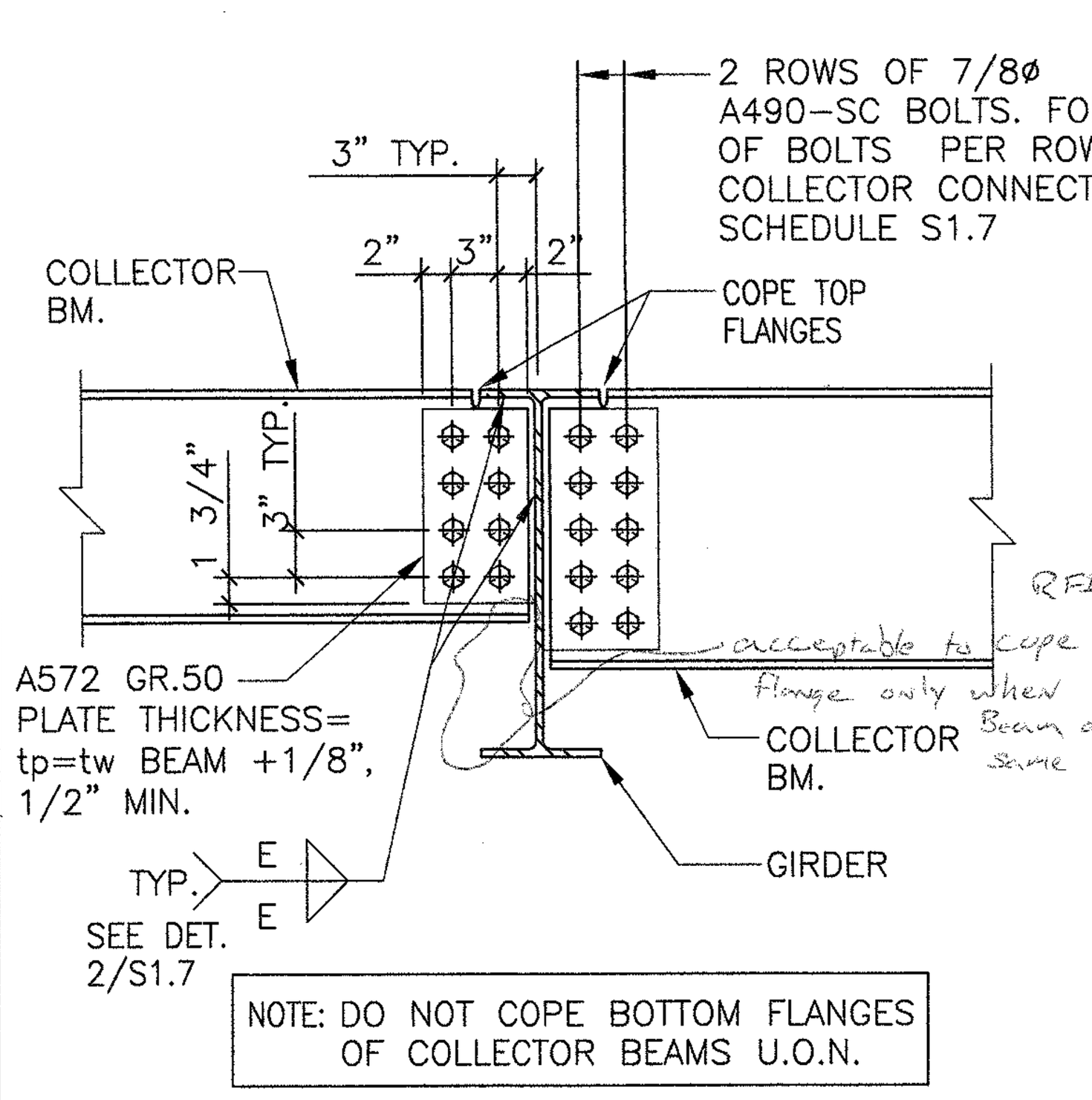


NOTE:
1. "D"= DEPTH OF BEAM/GIRDER
2. SEE 17/– FOR ADDNL. INFO.
3. NO PENETRATIONS ALLOWED TO BEAMS @ BRACED FRAMES & MOMENT FRAMES

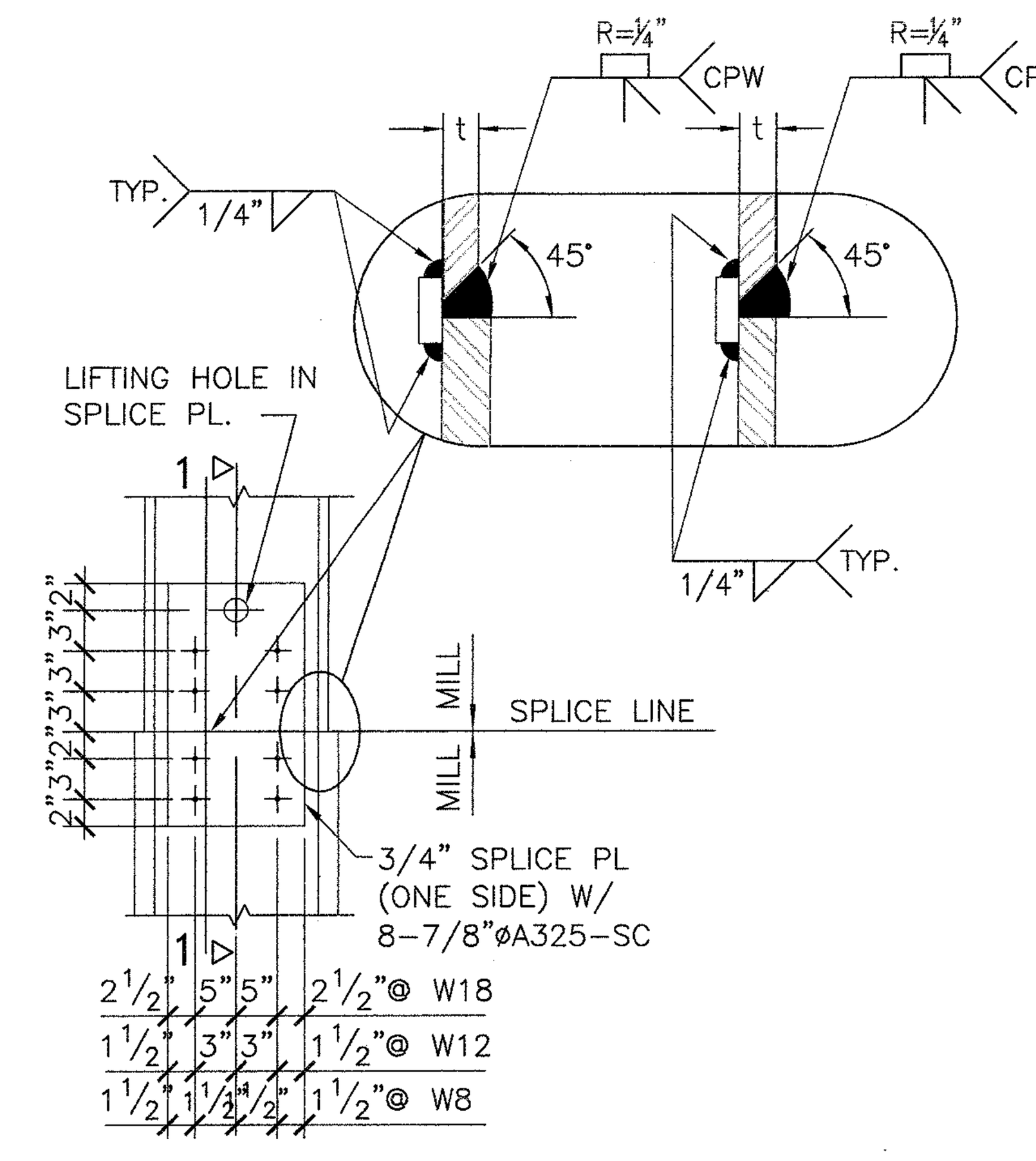
19 BEAM WEB STIFFENER DETAILS
N.T.S.

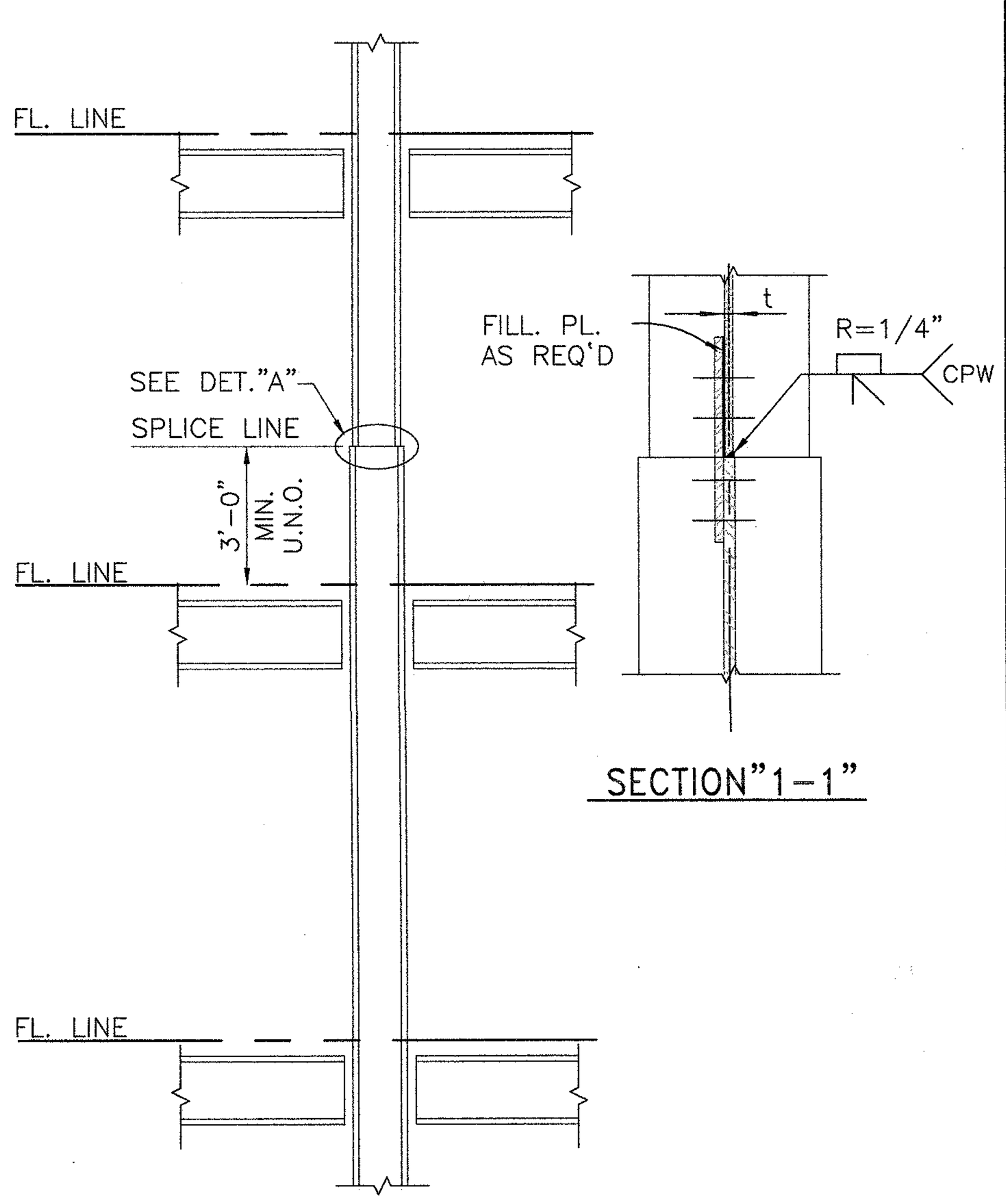


20 COLLECTOR CONNECTION BEAM TO BEAM
N.T.S.



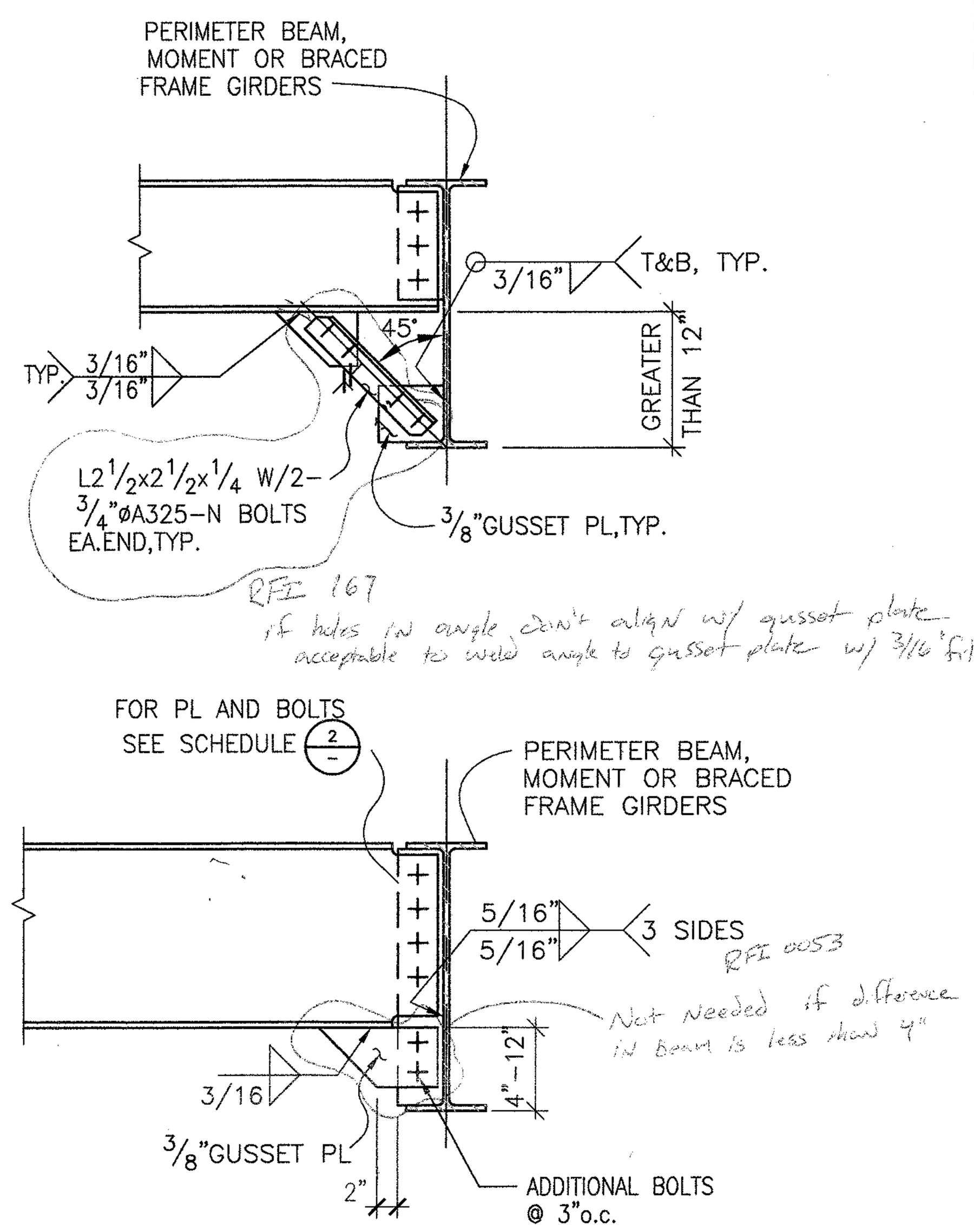
16 TYPICAL COLUMN SPLICE DETAIL
N.T.S.





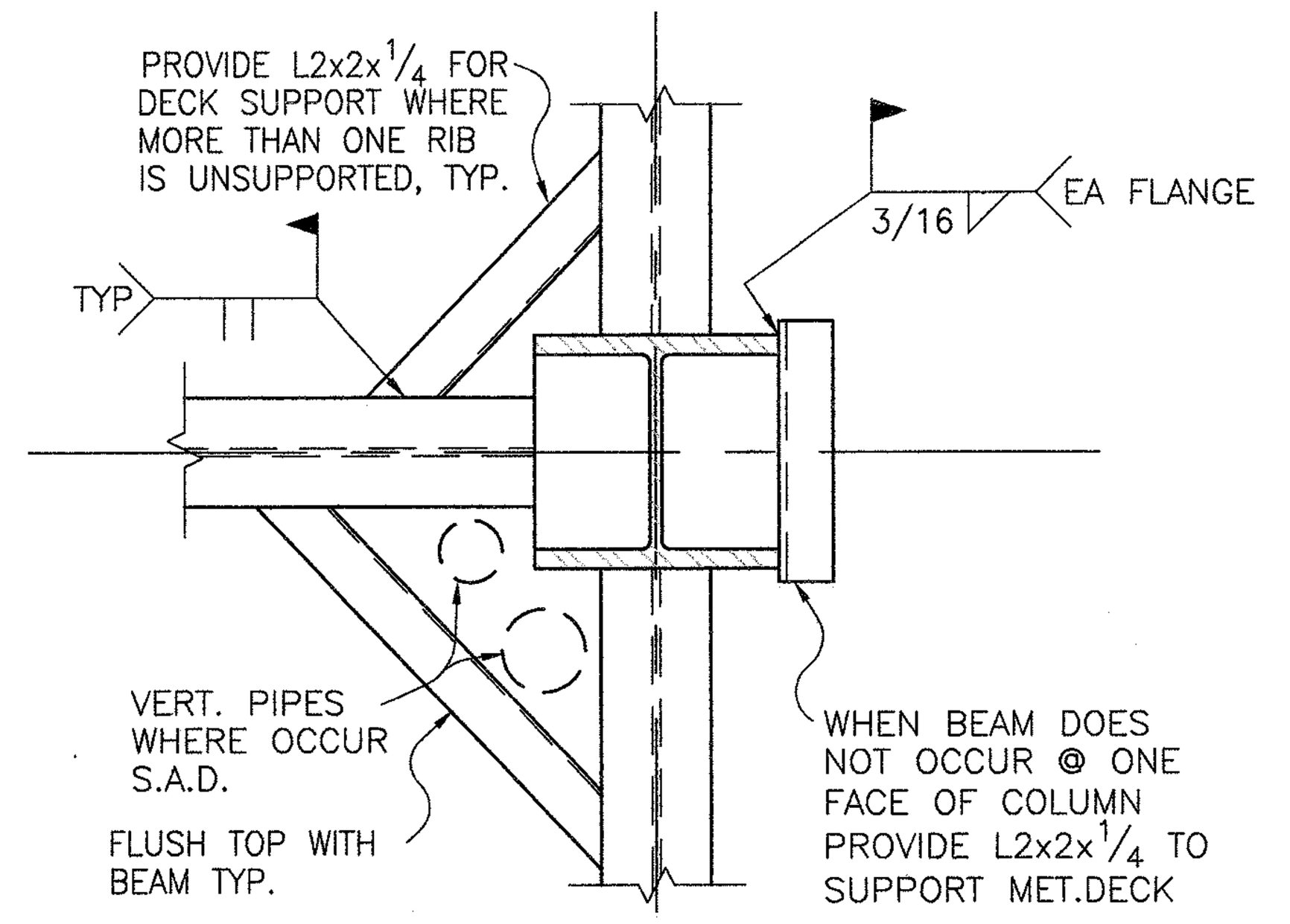
NOTE:
NO SPLICES ALLOWED TO SMRF COLUMNS

10 BEAM CONN @ PERIMETER BEAMS, MOMENT & BRACED FRAMES & COLLECTOR BEAMS
N.T.S.

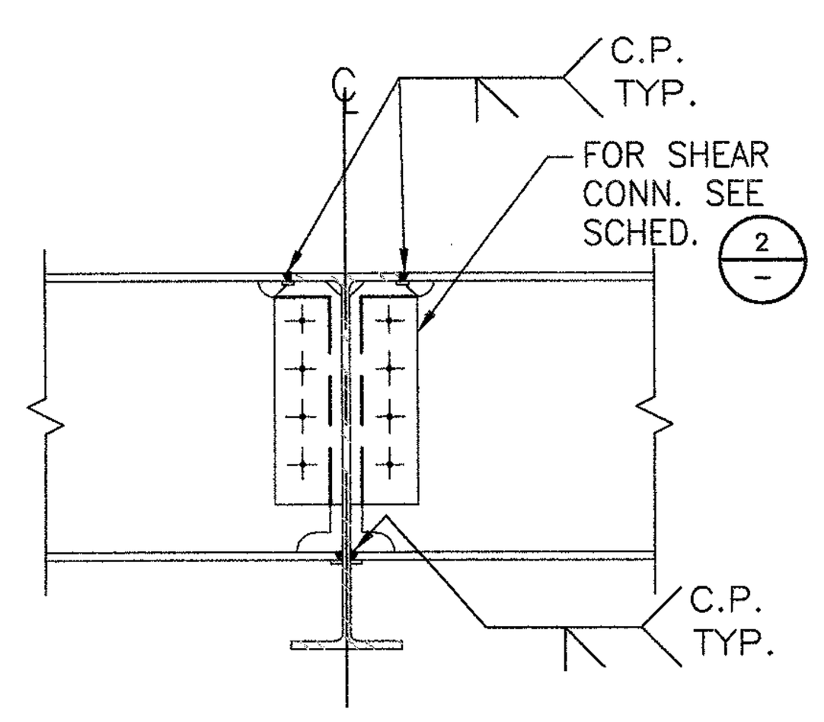


DETAIL OCCURS AT THE PERIMETER OF ALL BUILDING (INCLUDING THOSE SEPARATED BY SEISMIC JOINTS), AT THE PERIMETER OF ALL OPENINGS OF STAIRS & ELEVATORS, AND ON AT LEAST ONE SIDE OF ALL MOMENT FRAMES, BRACED FRAMES, AND COLLECTOR BEAMS.

11 METAL DECK SUPPORT @ COLUMN
N.T.S.

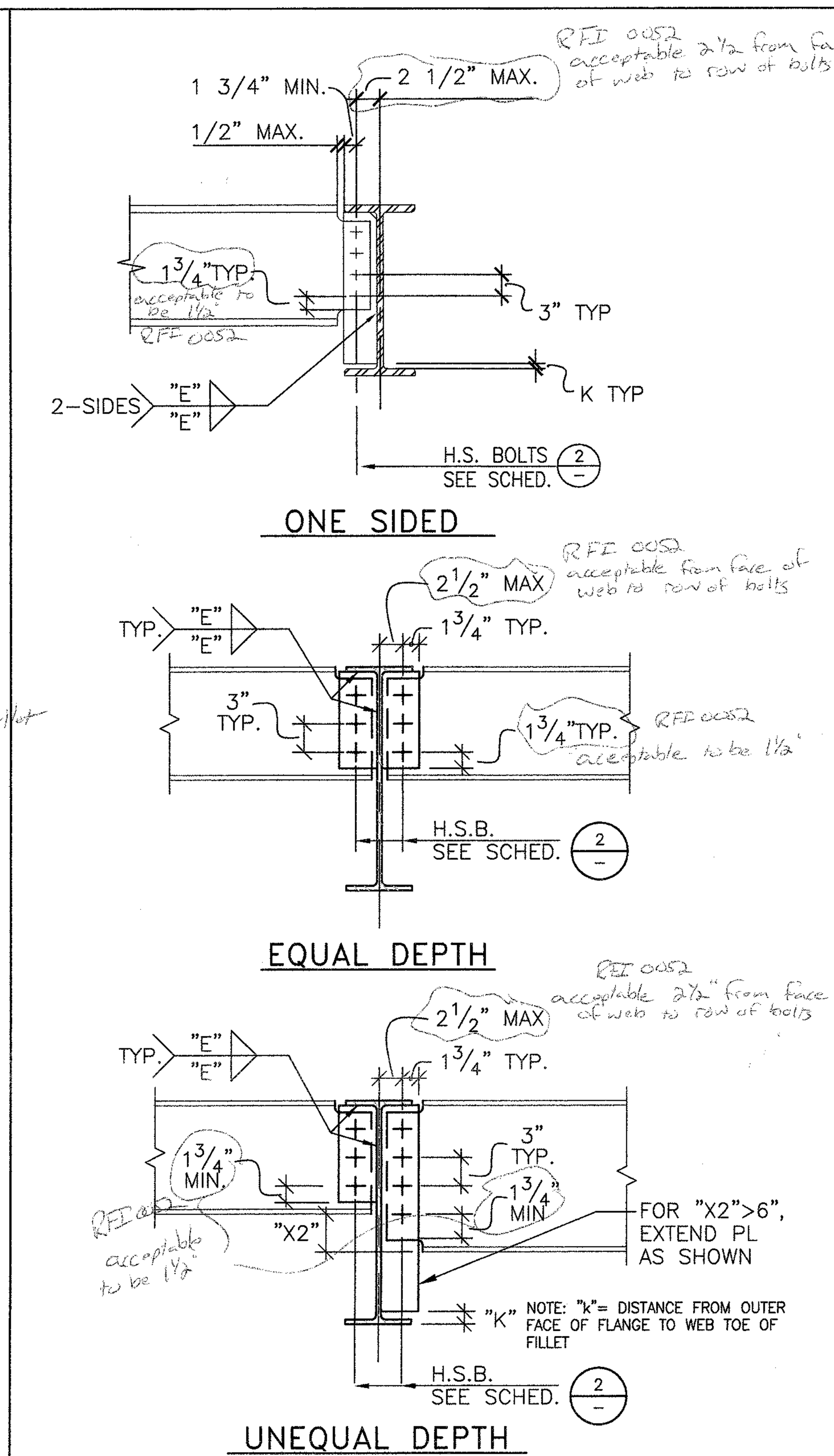


12 MOMENT BEAM TO GIRDER CONN.
N.T.S.

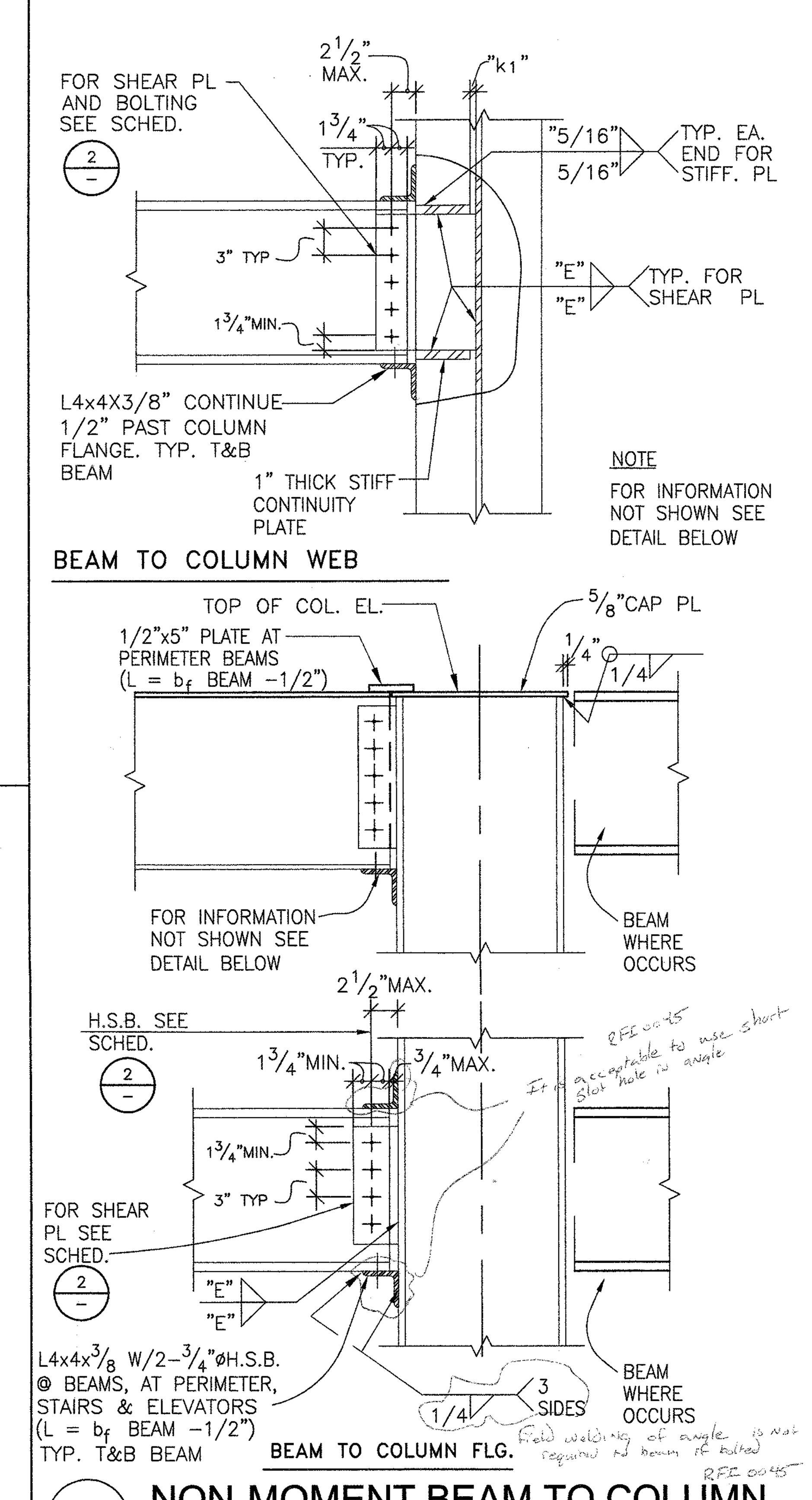


SEE 1/S1.5 FOR BEAM TO COLUMN MOMENT CONNECTION AT GRAVITY COLUMNS.

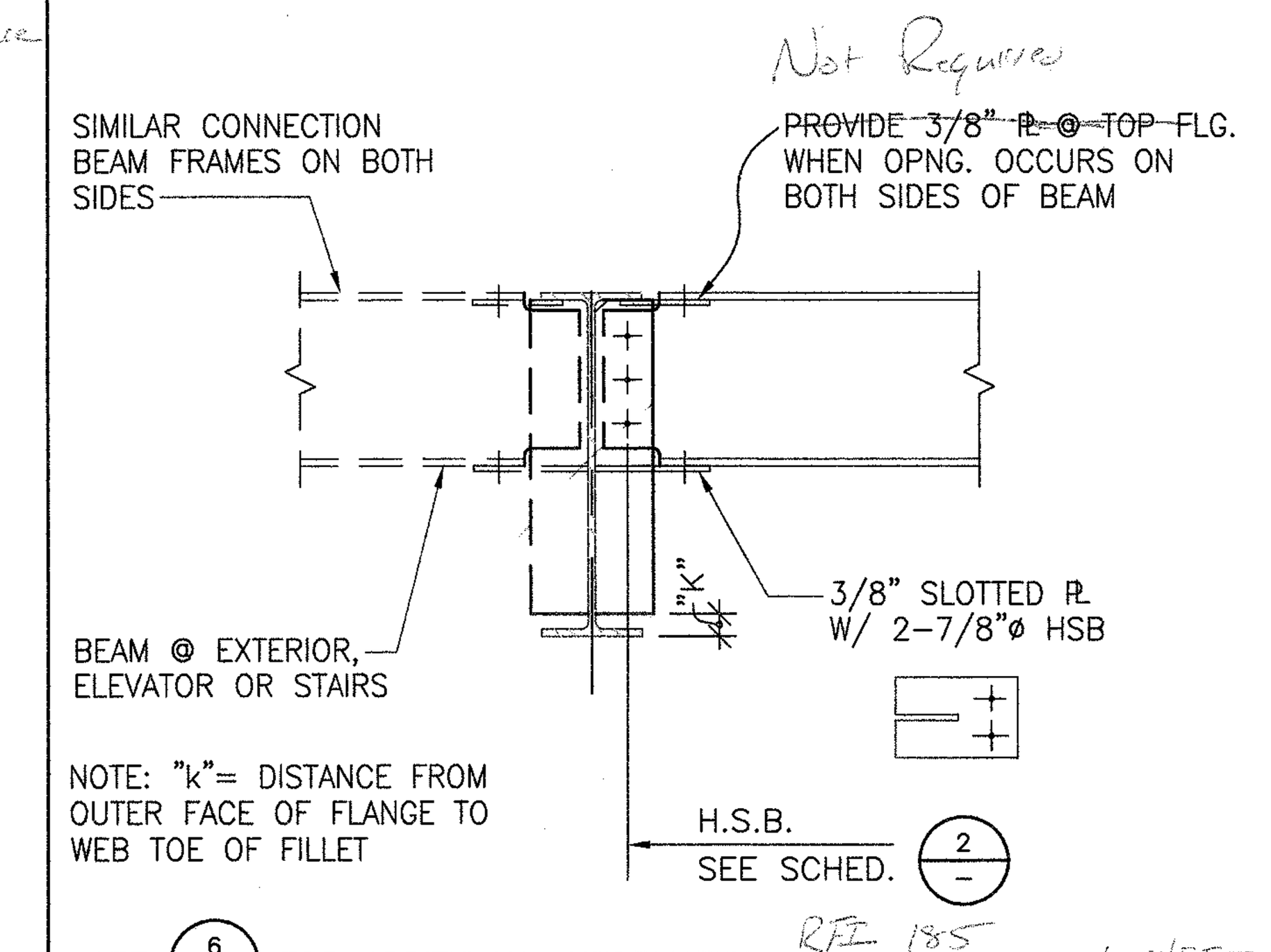
6 NON-MOMENT STEEL CONNECTIONS BEAM TO BEAM OR BEAM TO GIRDER
N.T.S.



8 NON-MOMENT BEAM TO COLUMN
N.T.S.



1 BEAM CONNECTION @ STAIRS, ELEV.& PERIMETER BEAMS WITHOUT COLUMNS
N.T.S.



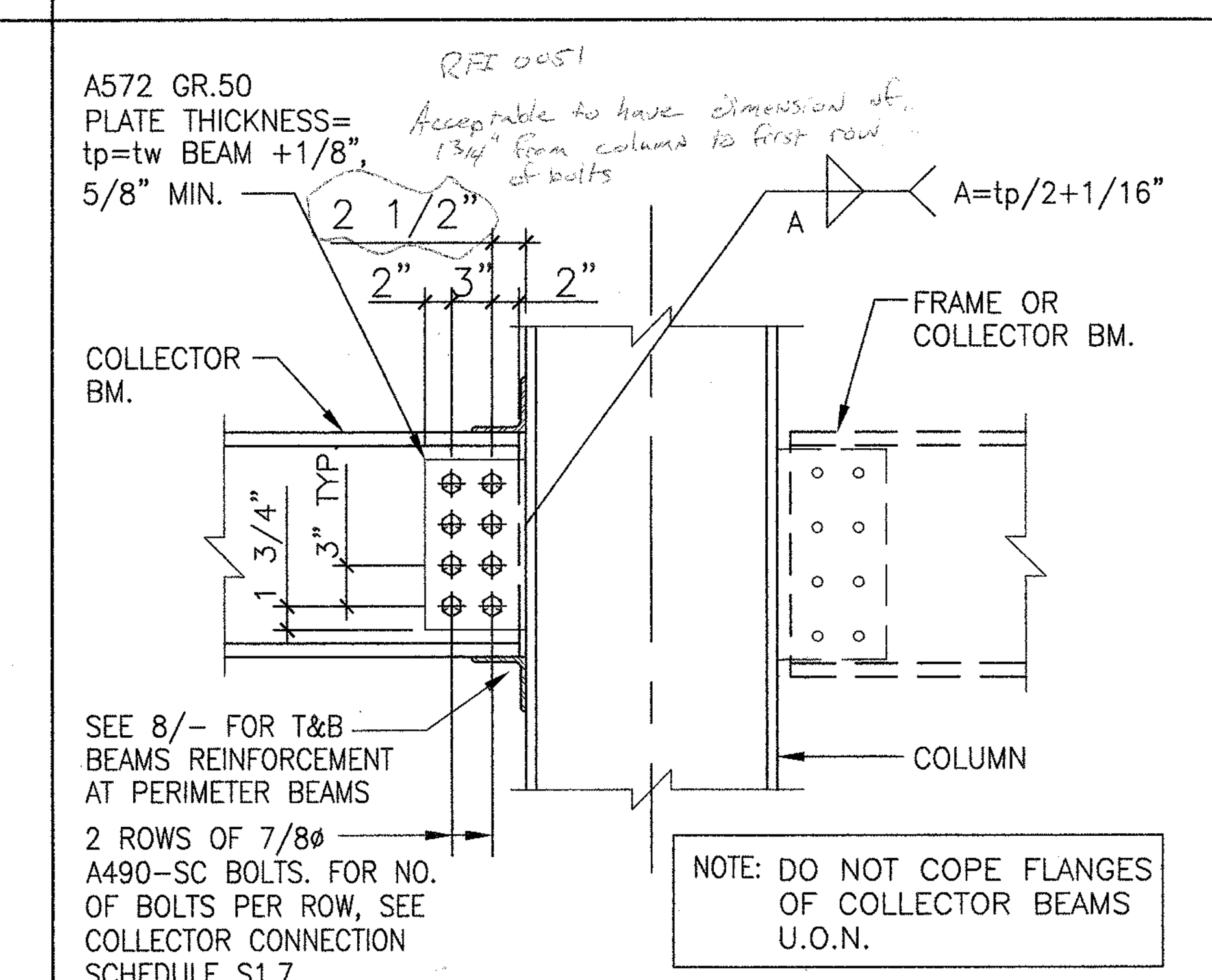
SEE 6 FOR ADDITIONAL INFORMATION

2 BEAM CONNECTION SCHEDULE
NO SCALE

BEAM TO BEAM CONNECTION SCHEDULE					
BEAM SIZE	CONNECTION PLATE "t"	BOLTS	WELD "E"	LOADS (kips)	REMARKS
W6	1/4"	2–3/4"ø	3/16"	8	
W8–W10	3/8"	2–7/8"ø	5/16"	11.1	
W12	3/8"	3–7/8"ø	5/16"	22.1	
W14	3/8"	3–7/8"ø	5/16"	22.1	
W16	7/16"	4–7/8"ø	5/16"	35.4	
W18	7/16"	5–7/8"ø	5/16"	49.1	
W21	1/2"	6–7/8"ø	3/8"	62.7	
W24	1/2"	7–7/8"ø	3/8"	76.4	
W27	1/2"	7–7/8"ø	3/8"	76.4	
W30	1/2"	8–7/8"ø	3/8"	89.8	
W33	1/2"	9–7/8"ø	3/8"	N/A	
W36	1/2"	10–7/8"ø	3/8"	N/A	

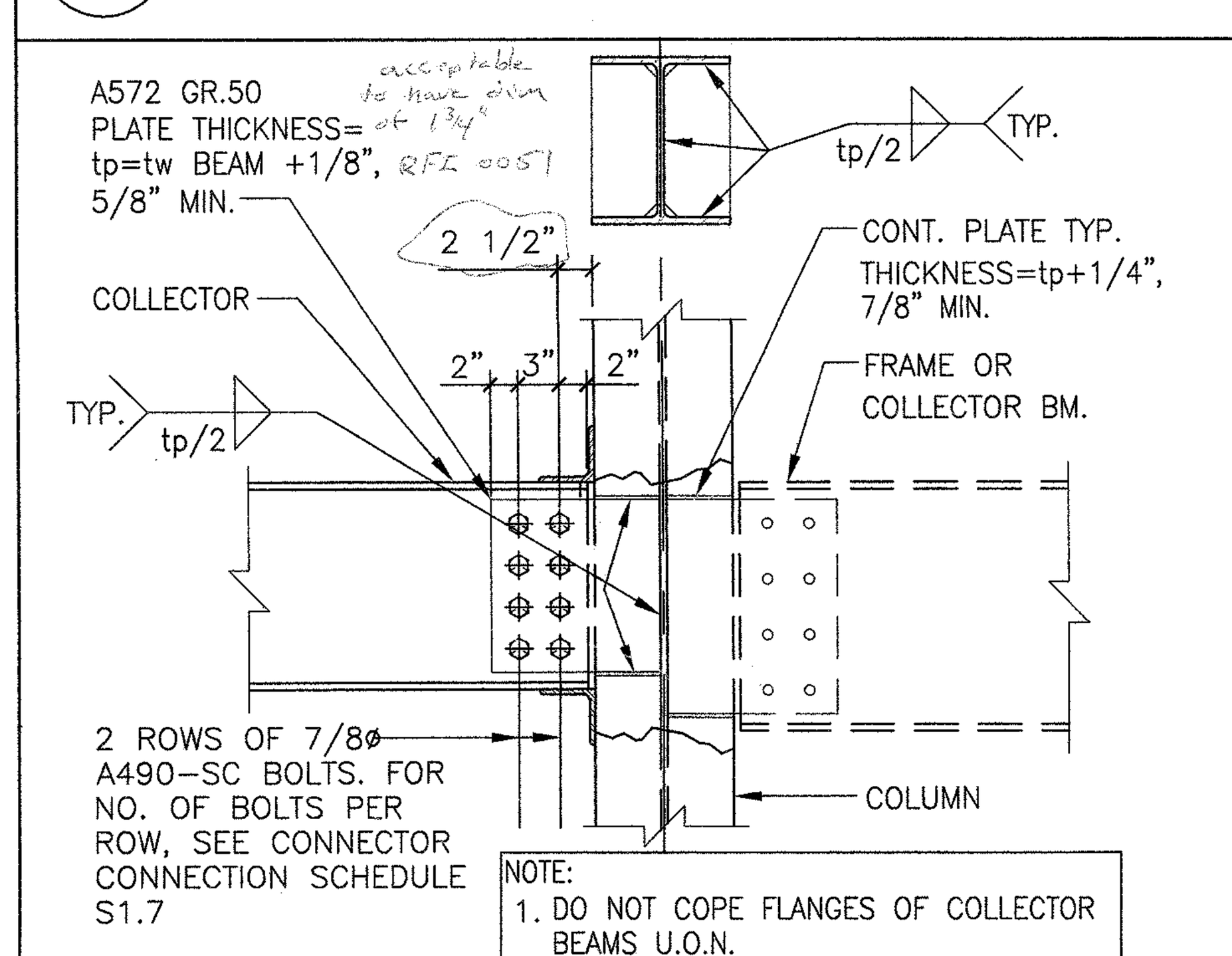
1. USE A325-N BOLTS.
2. USE PLATE--Fy=36 ksi Fu=58 ksi
3. USE SHORT-SLOTTED HORIZONTAL HOLES AT ALL BEAM TO EXTERIOR WALL CONNECTIONS.
4. USE A325-SC BOLTS (PRE-TENSIONED) WHERE INDICATED ON PLANS. SEE 1, 6, 8 FOR ITEM NOT NOTED HERE.

3 COLLECTOR CONNECTION BEAM TO COLUMN FLANGE
N.T.S.



NOTE: DO NOT COPE FLANGES OF COLLECTOR BEAMS U.O.N.

4 COLLECTOR CONNECTION BEAM TO COLUMN WEB
N.T.S.



NOTE:
1. DO NOT COPE FLANGES OF COLLECTOR BEAMS U.O.N.
2. SEE 8/– FOR T&B REINFORCEMENT AT PERIMETER BEAMS

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ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

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DRAWING TITLE
TYPICAL STEEL DETAILS
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S1.6

20050420_1643294 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S1.6.dwg

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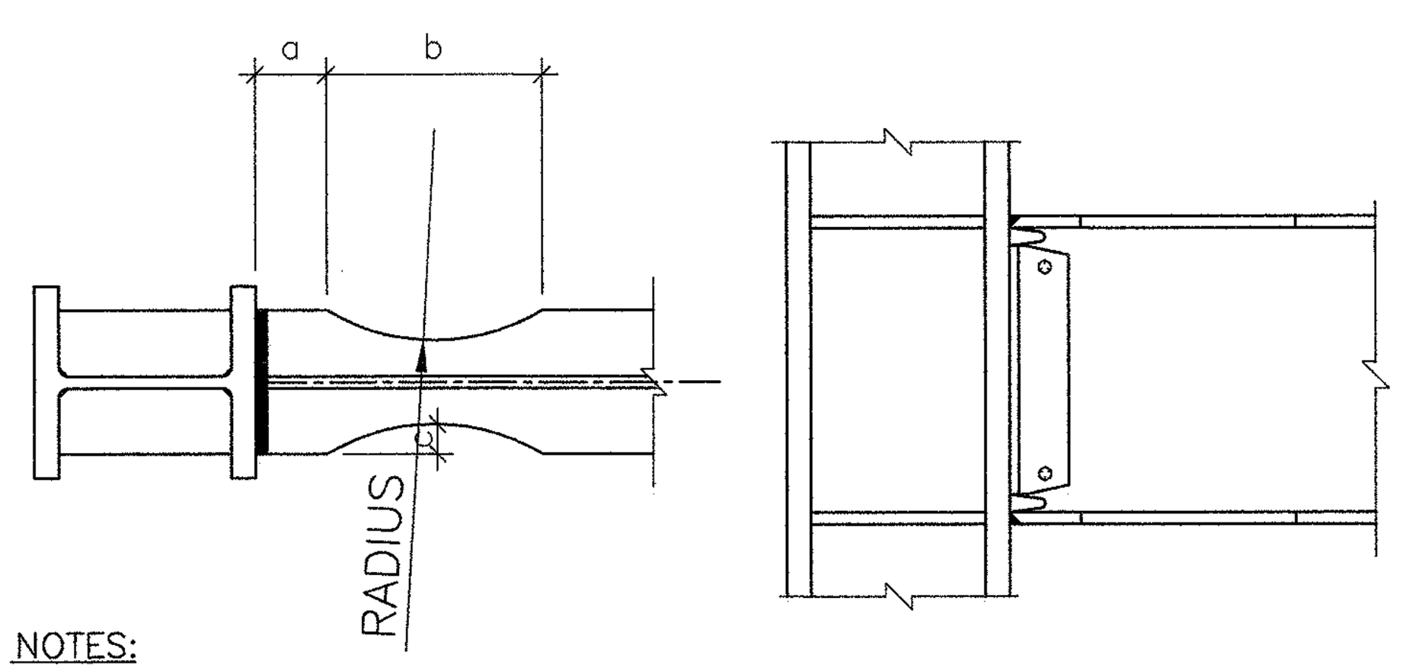


NOTES:

1. NO HOLES MAY BE DRILLED OR PUNCHED IN EITHER FLANGE OF THE BEAM WITHIN THE LENGTH THAT HAS RECEIVED THE RADIUS CUT, OR BETWEEN THE RBS CUT AND THE COLUMN. SHEAR STUDS AND MECHANICAL DECK FASTENER TO THE BEAM FLANGE WITHIN THE LENGTH OF THE RADIUS CUT ARE PROHIBITED. SPOT WELDS FOR THE ATTACHMENT OF METAL DECKING ARE PERMITTED.
2. THE TOLERANCE ON THE DEPTH OF EACH RBS CUT IS PLUS OR MINUS 1/4 INCH. THE LENGTH OF THE CUT SHALL BE WITHIN PLUS OR MINUS 15% OF THE SPECIFIED LENGTH. THE DEPTH OF CUT ON EACH SIDE SHALL BE BALANCED, WITH NO MORE THAN 3/8 INCH TOTAL VARIATION IN THE DEPTH OF CUT FROM ONE SIDE TO THE OTHER. THE ATTACHMENT OF METAL DECKING ARE PERMITTED. (EXAMPLE; PLUS 1/8 INCH ON ONE SIDE, MINUS 1/4 INCH ON THE OTHER SIDE). THE BALANCE OF REMAINING FLANGE WIDTH ABOUT THE WEB OF THE BEAM IS NOT A CONSIDERATION.
3. AFTER THERMAL CUTTING, THE RBS SURFACE SHALL HAVE A SURFACE ROUGHNESS OF NO MORE THAN 500 MICRO INCHES (AWS SAMPLE 3). GRINDING OF THERMALLY CUT EDGES SHALL BE PROVIDED ONLY AS NECESSARY TO MEET THIS CRITERIA. CORNERS BETWEEN THE CUT RBS SURFACE AND THE TOP AND BOTTOM OF THE FLANGES SHALL BE GROUND TO REMOVE SHARP EDGES, BUT A MINIMUM RADIUS OR CHAMPER IS NOT REQUIRED.
4. GOUGES AND NOTCHES THAT OCCUR IN THERMAL CUT RBS SURFACE MAY BE REPAIRED BY GRINDING IF NOT MORE THAN 1/4 INCH DEEP. THE GOUGED OR NOTCHED AREA SHALL BE FAIRED BY GRINDING SO THAT A SMOOTH TRANSITION EXIST, AND THE TOTAL LENGTH OF THE AREA GROUND FOR THE TRANSITION SHALL BE NO LESS THAN 10 TIMES THE DEPTH OF THE REMOVED GOUGE. IF A SHARP NOTCH EXIST, THE AREA SHALL BE INSPECTED BY MT AFTER GRINDING TO ENSURE THAT ENTIRE DEPTH OF GOUGE OR NOTCH HAS BEEN REMOVED. GRINDING MAY NOT INCREASE THE DEPTH OF THE RBS CUT SECTION MORE THAN 1/4 INCH BEYOND THE SPECIFIED DEPTH OF CUT.
5. GOUGES AND NOTCHES THAT EXCEED 1/4 INCH IN DEPTH, BUT NOT TO EXCEED 1/2 INCH IN DEPTH, AND THOSE NOTCHES AND GOUGES WHERE REPAIR BY GRINDING WOULD INCREASE THE EFFECTIVE DEPTH OF THE RBS CUT BEYOND TOLERANCE, MAY BE REPAIRED BY WELDING. NOTCHES AND GOUGES EXCEEDING 1/2 INCH IN DEPTH MAY BE REPAIRED ONLY WITH THE APPROVAL OF ENGINEER. THE NOTCH OR GOUGE SHALL BE REMOVED AND GROUND TO PROVIDE A SMOOTH RADIUS OF NOT LESS THAN 3/8 INCH FOR WELDING. THE REPAIR AREA SHALL BE PREHEATED TO A TEMPERATURE BETWEEN 400°F AND 500°F, MEASURED AT THE LOCATION OF THE WELD REPAIR APPROXIMATELY ONE MINUTE AFTER REMOVAL OF THE HEATING SOURCE. REPAIR WELDING SHALL BE DONE WITH NOTCH-TOUCH ELECTRODES MEETING THE REQUIREMENTS IN FEMA 353 (DATED JULY 2000) PART I, SECTION 2.4. A REPAIR WPS IS REQUIRED. FOLLOWING WELDING, THE REPAIR WELD SHALL BE GROUND TO A SMOOTH CONTOUR MEETING THE RBS REQUIREMENTS, WITH A SURFACE ROUGHNESS NOT TO EXCEED 500 MICROINCHES. THE WELDED REPAIR AREA SHALL BE INSPECTED USING MAGNETIC PARTICLE TESTING.
6. WELDED DECK STUDS, BEAM PIPE HANGERS, EXTERIOR SUPPORT, ETC. SHALL NOT OCCUR IN THE AREA OF THE BEAM FLANGE BETWEEN THE COLUMN FACE AND 6" BEYOND THE EXTREME END OF THE RBS.

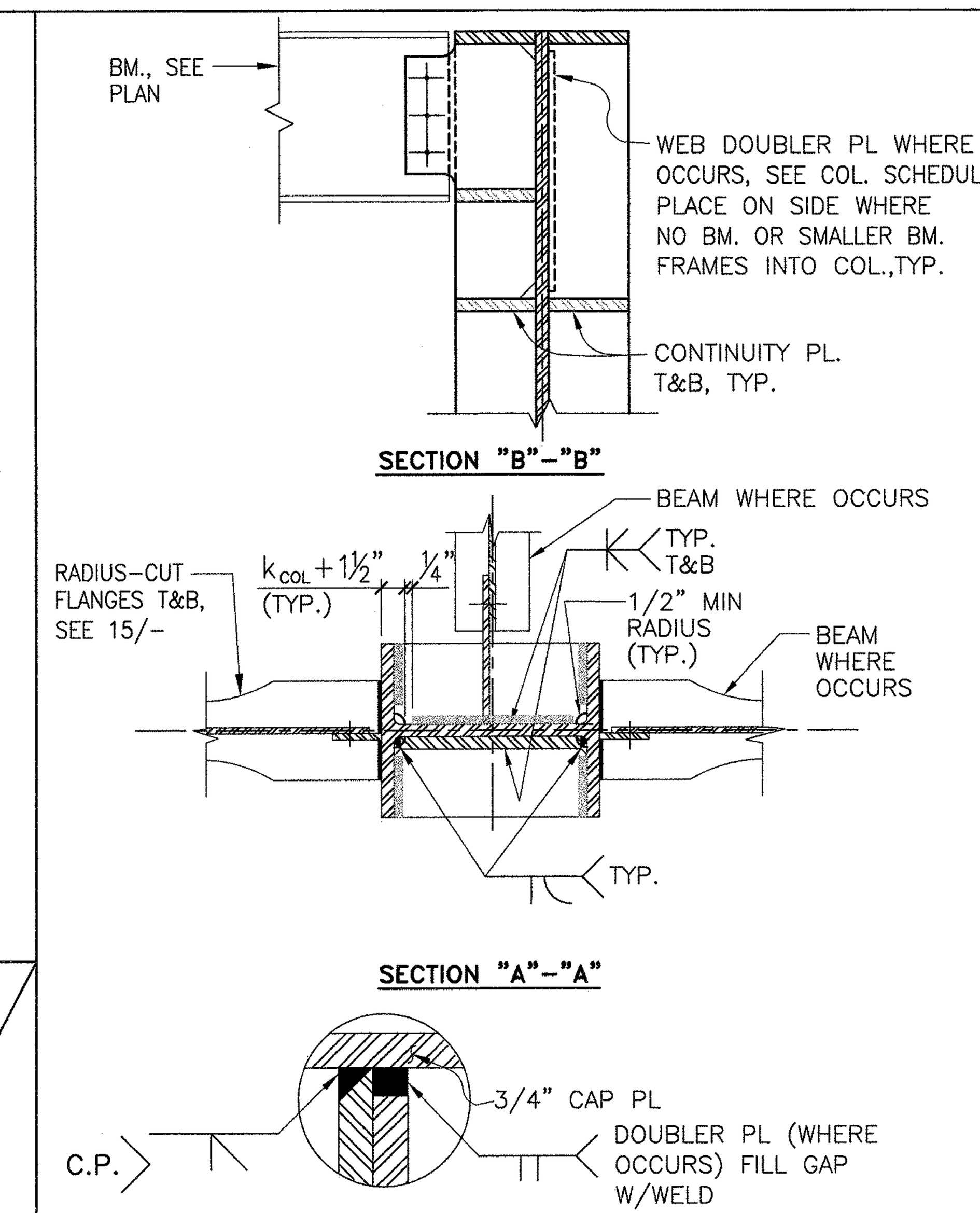
15 REDUCED BEAM SECTION
NTS

REDUCED BEAM SECTION DIMENSION SCHEDULE					
BEAM DESIGNATION	"a" (IN)	"b" (IN)	"c" (IN)	RADIUS (IN)	REMARKS
W24x84	5.64	16.87	1.80	20.6	

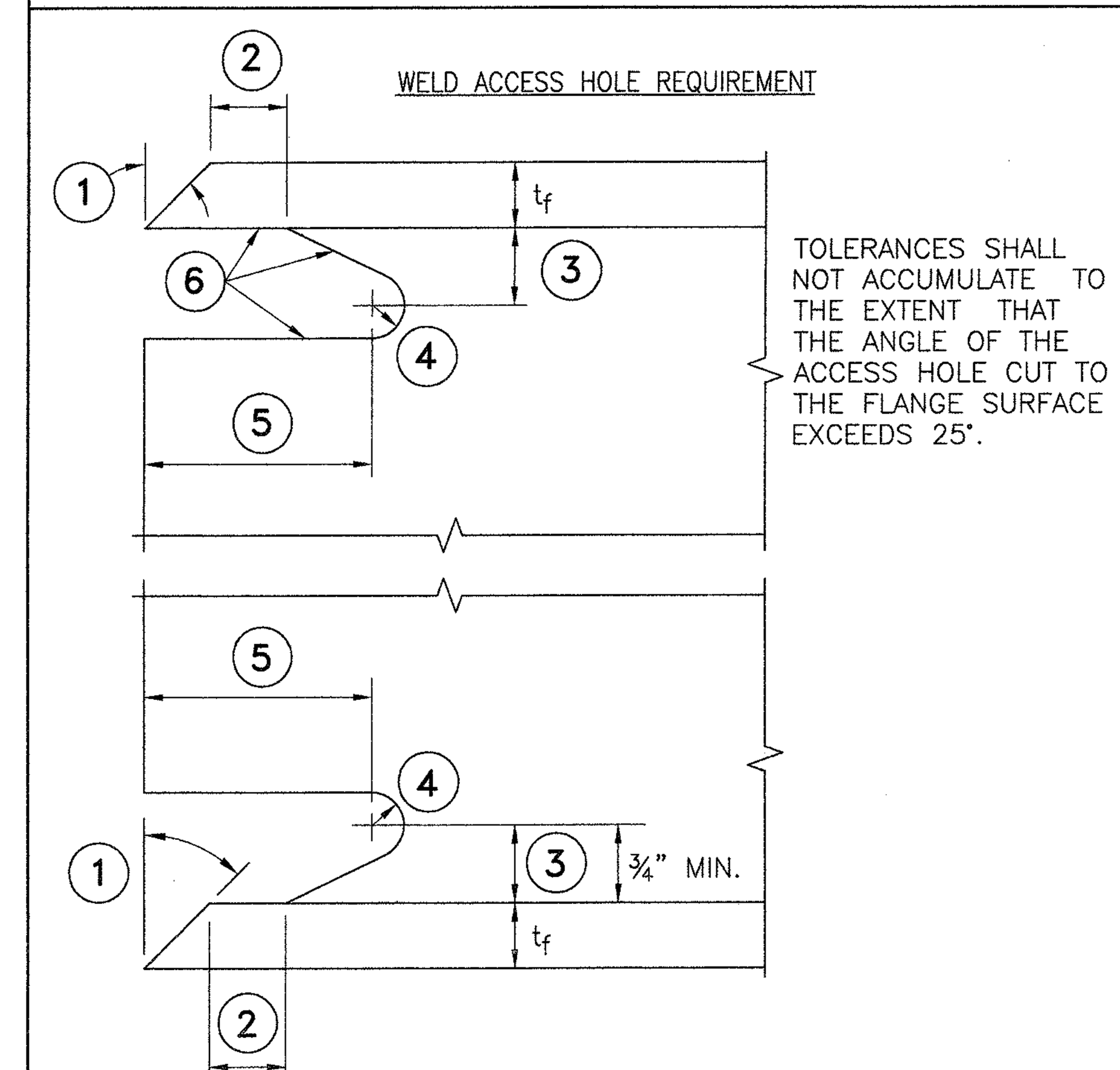
NOTE: SEE DETAIL 15/- FOR CONNECTION DETAILS

9 REDUCED BEAM SECTION SCHEDULE
NTS

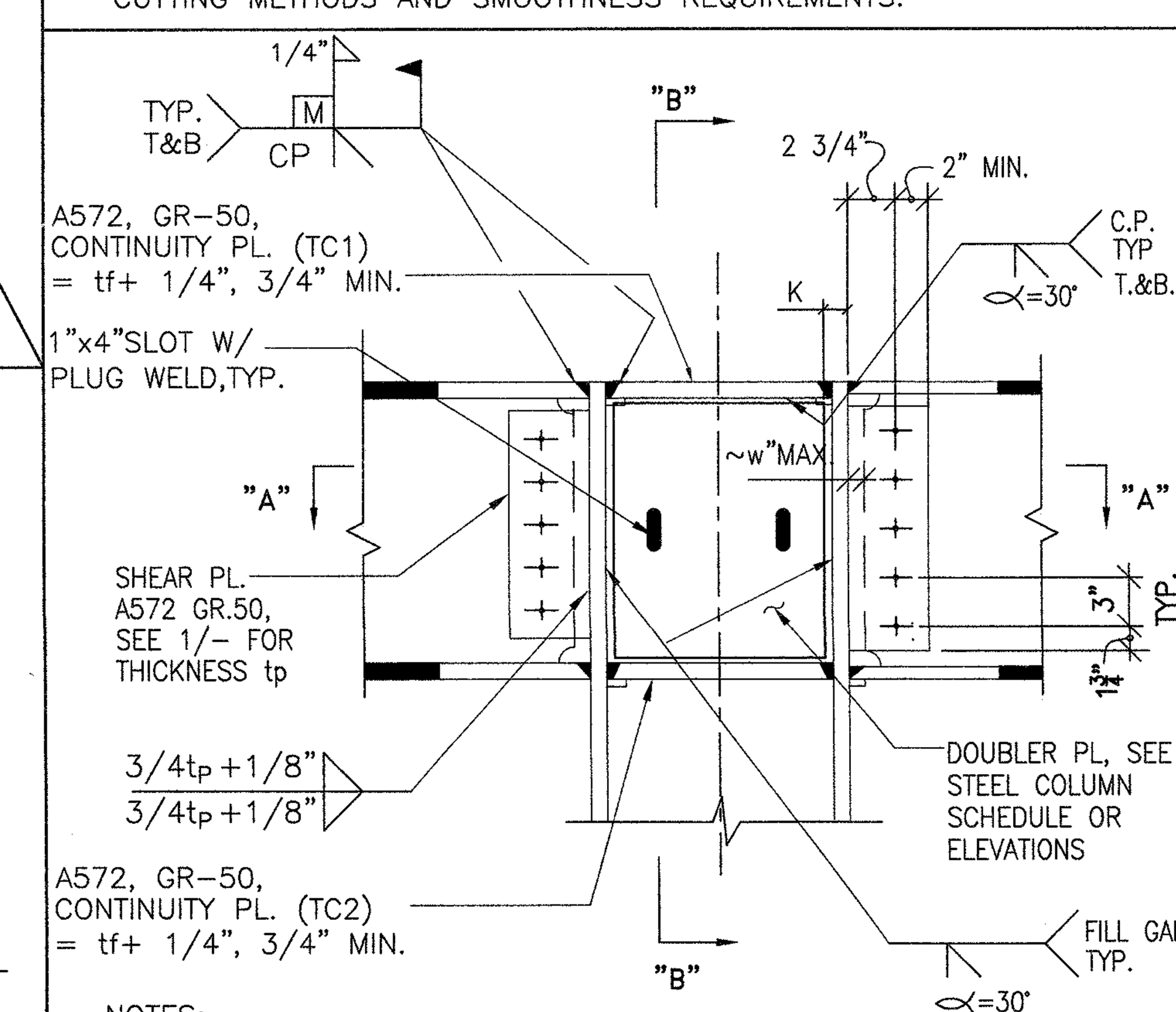
NOT USED



WELD ACCESS HOLE REQUIREMENT



NOTE:
1. BEVEL AS REQUIRED BY AWS D1.1 FOR SELECTED GROOVE WELD PROCEDURE.
2. LARGER OF tf OR 1/2 INCH. (PLUS 1/2 tf, or minus 1/4 tf).
3. 3/4 tf to tbf, 3/4" MIN. (±1/4 INCH)
4. 3/8" MINIMUM RADIUS (PLUS NOT LIMITED, OR MINUS 0).
5. 3 tf (±1/2 INCH).
6. SEE FEMA-353, RECOMMENDED SPECIFICATIONS AND QUALITY ASSURANCE GUIDELINES FOR STEEL MOMENT-FRAME CONSTRUCTION FOR SEISMIC APPLICATIONS, FOR FABRICATION DETAILS INCLUDING CUTTING METHODS AND SMOOTHNESS REQUIREMENTS.



NOTES:
1) tf= THICKNESS OF BEAM FLANGE (THICKER FLANGE).
3) TC1= THICKNESS OF TOP CONTINUITY PLATE.
4) TC2= THICKNESS OF BOTTOM CONTINUITY PLATE.
5) LOCATE DOUBLER PLATE ON SIDE OF COLUMN WITH NON-FRAME BEAM WHERE POSSIBLE.
6) ANY BEAMS FRAMING INTO COLUMN WEB NOT SHOWN FOR CLARITY.

8 MOMENT-FRAME BEAM TO COLUMN COLUMN FLANGE
N.T.S.

GIRDER TO COLUMN MOMENT CONNECTION SCHEDULE		
BEAM DESIGNATION	A490-SC CLASS A BOLTS	REMARKS
W16	4-7/8"ø	
W18	5-7/8"ø	
W21	6-7/8"ø	
W24	6-7/8"ø	
W27	7-7/8"ø	
W30	8-7/8"ø	

NOTES:
1. SHEAR PLATE Tp=BEAM Tw+1/8", 1/2" MIN.
2. WELD A= 3/4"Tp+1/8", 3/8" MIN.
3. LENGTH OF WELD A= DIST. BETWEEN WELD ACCESS HOLE +1/4"

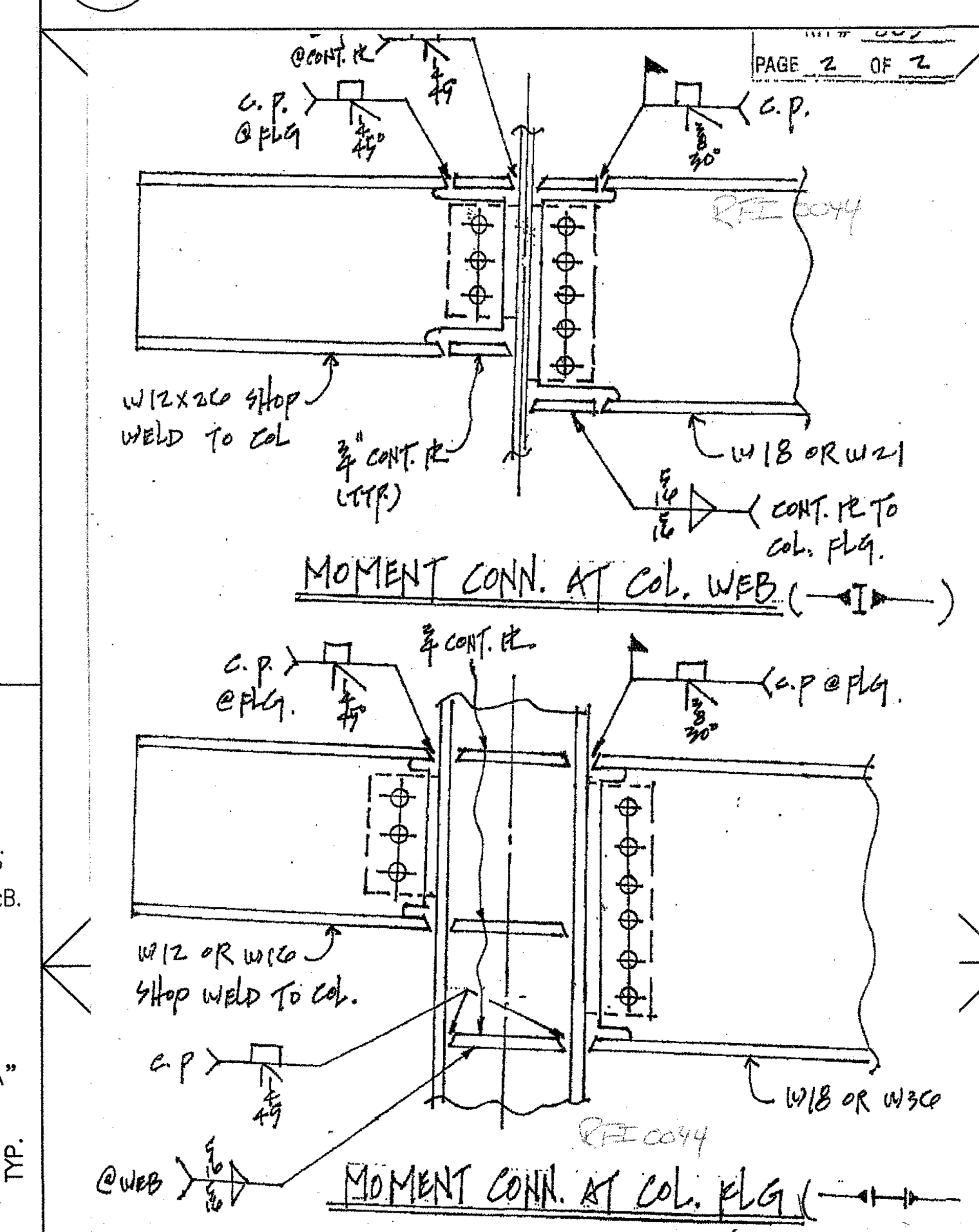
1 BEAM TO COLUMN CONNECTION SCHEDULE AT MOMENT RESISTING FRAMES
N.T.S.

BEAM SIZE	NO. OF A490-SC BOLTS	WELD "E"	ALLOWABLE SERVICE LOAD (KIPS)	
			FLANGE COPED	FLANGE NOT COPED
W8	2x2 - 3/4"ø = 4 BOLTS	5/16"	18.7 k	19.4 kips
W10	2x2 - 7/8"ø = 4 BOLTS	5/16"	19.4 kips	19.4 kips
W12	2x3 - 7/8"ø = 6 BOLTS	5/16"	30 kips	35.5 kips
W14	2x3 - 7/8"ø = 6 BOLTS	5/16"	34.5 kips	35.5 kips
W16	2x4 - 7/8"ø = 8 BOLTS	5/16"	47.6 kips	57.2 kips
W18	2x5 - 7/8"ø =10 BOLTS	5/16"	69.2 kips	81.2 kips
W21	2x6 - 7/8"ø =12 BOLTS	3/8"	94.8 kips	107.1 kips
W24	2x7 - 7/8"ø =14 BOLTS	3/8"	122.9 kips	133.8 kips
W27	2x8 - 7/8"ø =14 BOLTS	3/8"	143.5 kips	143.5 kips
W30	2x8 - 7/8"ø =16 BOLTS	3/8"	143.5 kips	143.5 kips
W33	2x9 - 7/8"ø =18 BOLTS	3/8"	N/A	161 kips
W36	2x10 - 7/8"ø =20 BOLTS	3/8"	N/A	179 kips

(1) REF: AISC ASD 9TH ED., CONNECTIONS TABLE 1-D
(2) SEE DET. 3/S1.6, 4/S1.6 & 20/S1.6 FOR SCHEMATIC.

2 COLLECTOR CONNECTION SCHED.
N.T.S.

PAGE 2 OF 2



Question
Please verify the attached drawing is the an acceptable connection detail. RFI 0044

Consultant Comments
For Moment connection at column flange, in a Special Moment Resisting Frame (SMRF), see details on sheet S1.7

...///...

For Moment connection at column flange, not at Moment Resisting Frame, the provided Bambacigno detail is acceptable when continuity plate thickness matches beam flange thickness and weld access hole matches detail 8/S1.7

...///...

For Moment connection at column web use detail 1/S1.5 (typ. u.o.n.) ... Where beams are of unequal size, the provided Bambacigno detail is acceptable when continuity plate thickness matches beam flange thickness, continuity plate is also provided on other side of column web at lowest beam flange connection and weld access hole matches detail 8/S1.7

...///...

Tejas, Crosby Group.

Answer Date Answered: 6/23/2005
See comments from Tejas, Crosby Group.
R. Saiki

Cc: Company Name | Contact Name | Copies | Notes

NOTES FOR MOMENT FRAMES AND BRACED FRAME CONNECTIONS:

1) NO WELD DAMS ARE ALLOWED.
2) MOMENT FRAME BEAM FLANGE TO COLUMN WELDS SHALL BE MADE BEFORE BOLTS ARE TENSIONED.
3) ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE-RESISTING SYSTEMS SHALL BE MADE WITH A FILLER METAL THAT HAS A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS AT MINUS 20 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION. THIS INCLUDE ALL WELDS THAT CONNECT PLATES, SHEAR TABS STIFFENER PLATES, TUBE STEEL BRACES, GUSSET PLATES, CHORDS/ COLLECTORS & SMRF CONNECTIONS.
4) WELDING PROCESSES SHALL BE LIMITED TO SHIELDED METAL ARC WELDING (SMAW) AND FLUX CORE ARC WELDING (FCAW) WITH SELF SHIELDING ELECTRODES OR GAS SHIELDING, EXCEPT THAT SUBMERGED ARC WELDING CAN BE USED FOR SHOP WELDING.
5) FCAW FILLER METAL WIRE SHALL BE LIMITED TO 7/64" DIAMETER MAXIMUM. SMAW WELDING ELECTRODES SHALL BE BE LIMITED TO 5/32" DIAMETER. STRINGER BEADS SHALL NOT EXCEED 1/2" MAXIMUM. WEAVE BEADS ARE PROHIBITED.
6) FOR COMPLETE PENETRATION (C.P.) WELDS AT MOMENT FRAMES:
   A. RUN-OFF TABS PER AWS D1.1 ARE REQUIRED FOR ALL COMPLETE PENETRATION GROOVE WELDS (C.P.) ALL WELDS ARE TO BE STARTED AND COMPLETED ON THE RUN-OFF TABS AS MUCH AS POSSIBLE.
   B. THE MAXIMUM PREHEAT AND INTERPASS TEMPERATURE REQUIREMENTS OF AWS D1.1, TABLE 3.2 MUST BE FOLLOWED. SEE ALSO AWS D1.1 APPENDIX XI "ALTERNATE METHODS OF DETERMINING PREHEAT."
   C. RUN-OFF TABS AT THE TOP AND BOTTOM FLANGES AND BACKER BARS AT THE BOTTOM FLANGES SHALL BE REMOVED AFTER COMPLETION OF THE WELD. THE WELD SHALL BE GROUND SMOOTH AND THE WELD ROOT INSPECTED AND TESTED FOR IMPERFECTIONS IN ACCORDANCE WITH AWS D1.1, SECTION 9.25.
7) COOLING RATES ON FINISHED WELDS SHALL NOT EXCEED 250 DEGREES PER HOUR. COMPLETED CONNECTIONS MAY BE WRAPPED WITH THERMAL INSULATION TO MAINTAIN PROPER COOLING RATES.
8) PEEN EACH STRINGER PASS, 3 PASSES MINIMUM, WITH A SLAG GUN AT RIGHT ANGLES TO THE WELD. USE A DULL CHISEL TOOL SO THAT NO NICKS, CUTS, OR NOTCHES RESULT.
9) GENERAL CONTRACTOR TO SUBMIT WELDING PROCEDURE SPECIFICATION (WPS) FOR ENGINEERS APPROVAL PRIOR TO THE COMMENCEMENT OF ANY WELDING.

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MOMENT & BRACE FRAME
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S1.7

REVIEW SET

drawn by: AY

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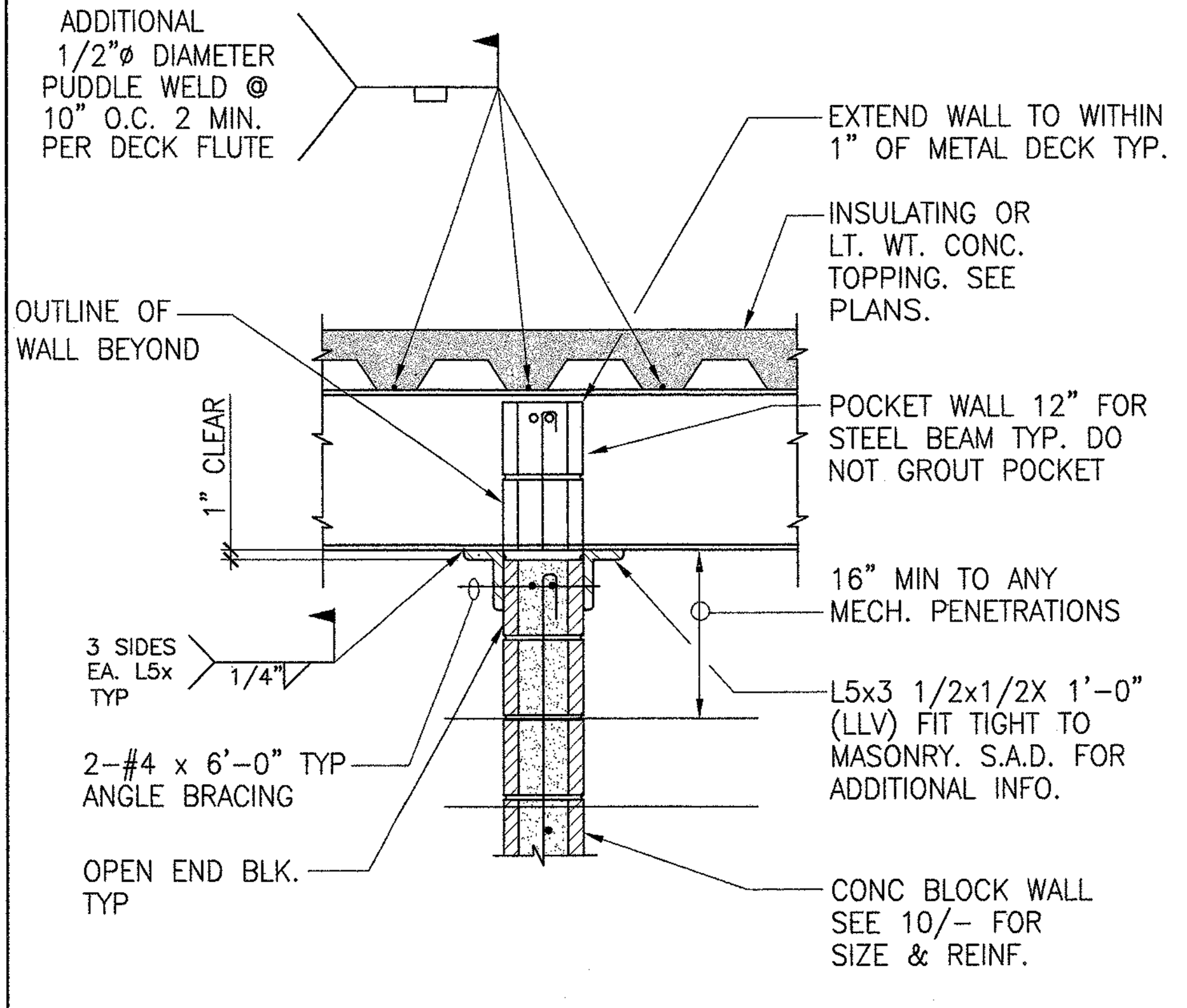
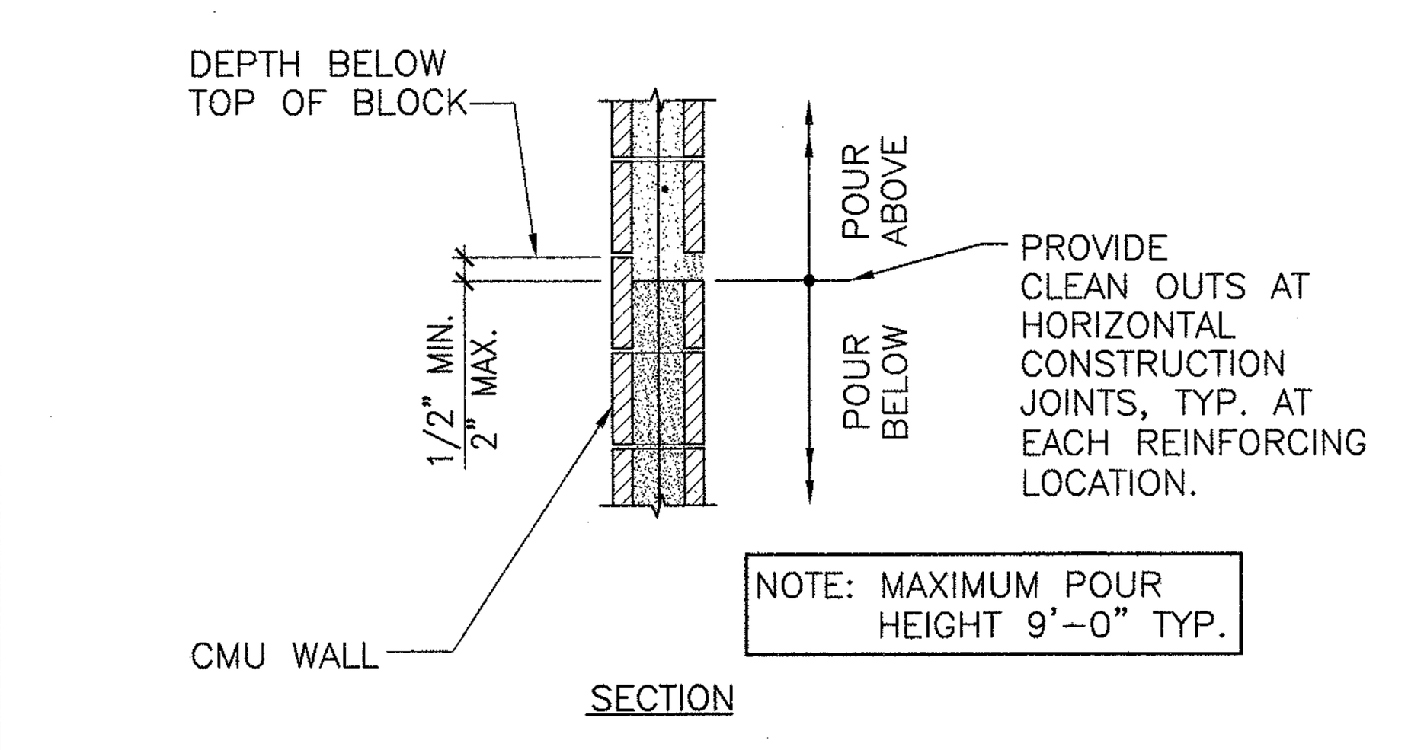


17 **BRACING @ INTERIOR WALL**
N.T.S. (DECK PARALLEL TO WALL)



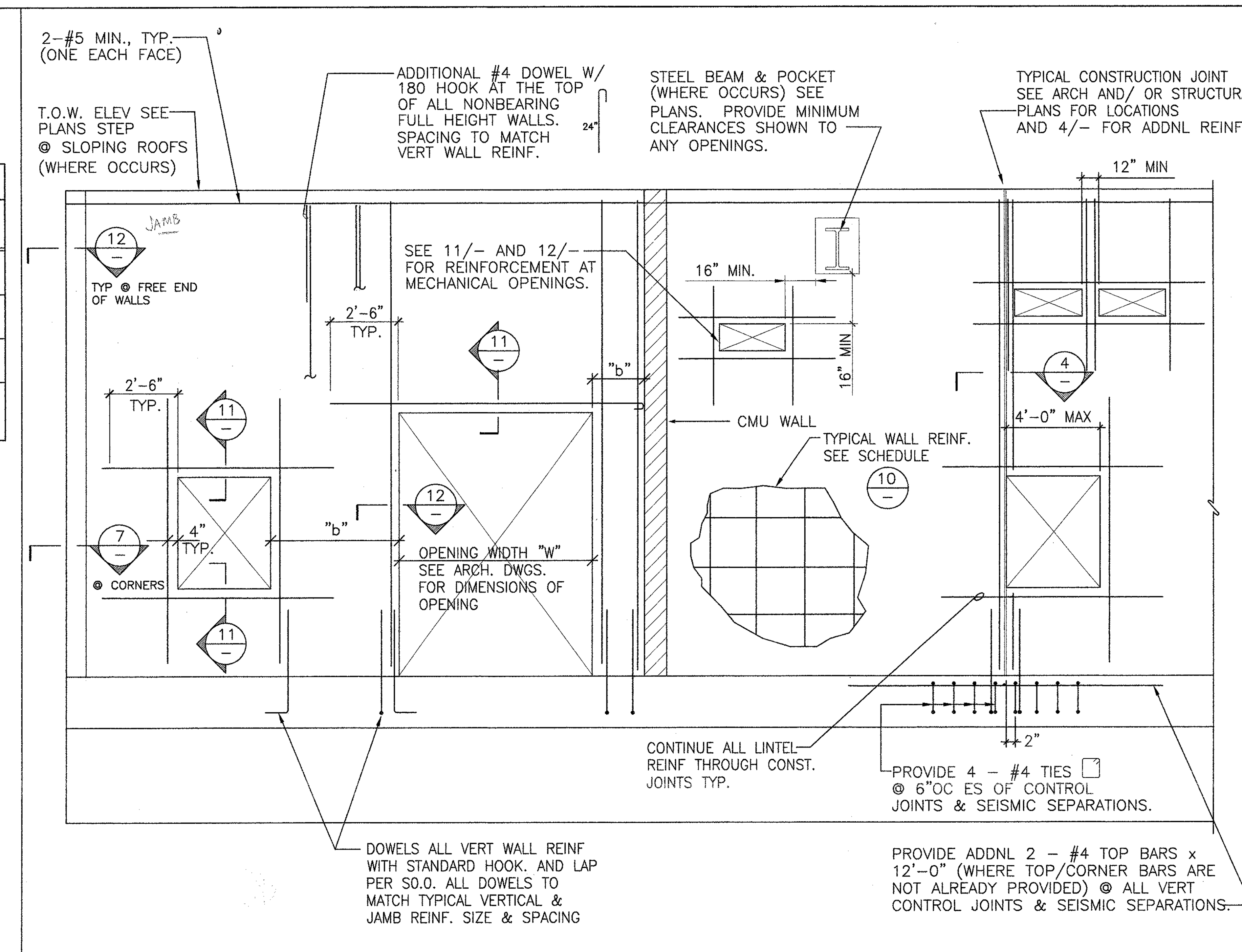
13 **CMU WALL HORIZONTAL C.J.**
N.T.S.

MINIMUM REINFORCEMENT IN CMU WALLS			
NOMINAL WALL THICKNESS "t"	BOND BEAM HORIZ. REINF.	VERT. REINF. (SEE NOTE 11)	JAMB AND END OF WALL REINF.
6" BLOCK (F'm=1500 psi)	#4 @ 24"	#4 @ 16"	2-#4 U.O.N.
8" BLOCK (F'm=1500 psi)	#4 @ 24"	#5 @ 16"	2-#5 U.O.N.

NOTE:
USE THIS SCHEDULE WHERE REINFORCING IS NOT SHOWN OTHERWISE ON PLANS, DETAILS OR WALL ELEVATIONS.

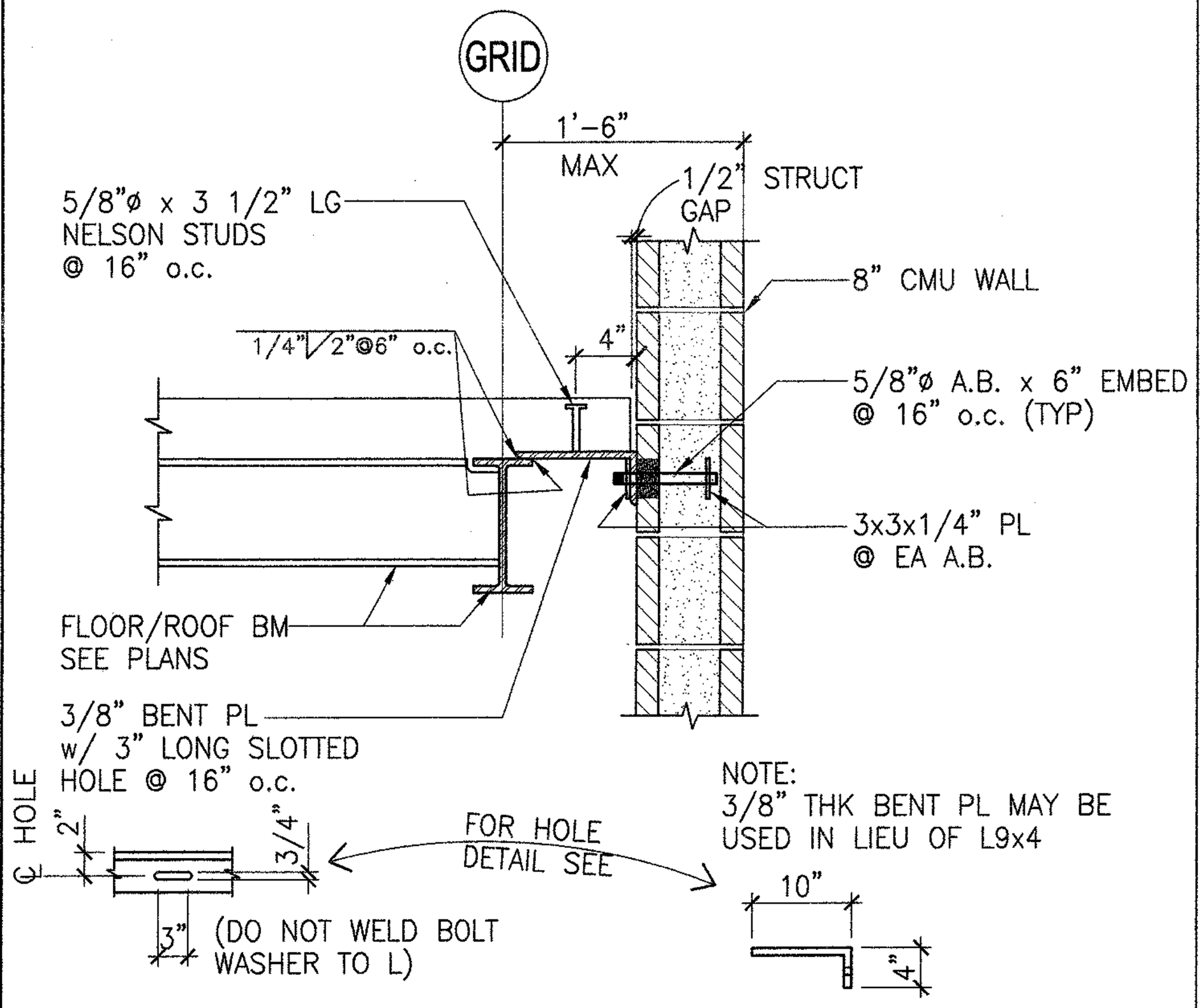
NOTES:
1. VERTICAL REINF. FOR WALLS SHALL BE CONTINUOUS FROM FOOTING TO TOP OF WALL OR FLOOR TO FLOOR WITHOUT SPLICE. EXCEPT AS NOTED IN DETAIL 6/–
2. ALL CELLS SHALL BE SOLID GROUTED.
3. USE OPEN END BLOCK AT VERTICAL REINFORCING BARS.
4. HOLD BARS ACCURATELY IN PLACE AT THE CENTER LINE OF THE WALL UNTIL GROUT SETS.
5. USE SPECIAL BOND BEAM OR LINTEL BLOCK AT ALL HORIZONTAL BARS.
6. THE TERM "STANDARD HOOK" SHALL MEAN EITHER:
   – 180 HOOK PLUS AN EXTENSION OF 4 BAR DIAMETERS OR 2 1/2".
   – 90 HOOK PLUS AN EXTENSION OF 12 BAR DIAMETERS.
7. ALL ANGLES AND BENT STRAPS AT TOP ANCHORAGE ARE TO BE INSTALLED TIGHT AGAINST WALL BEFORE GROUT PLACEMENT
8. LAP BARS PER SCHEDULE S0.0 U.O.N.
9. FOR 3t ≤ b ≤ 5t AS SHOWN ON DETAIL 6/– PROVIDE TYP VERT REINFORCING EF & HAIRPINS SAME SIZE & SPACING AS TYP. HORIZ REINFORCING. USE #4 HORIZONTAL BARS MAX.
10. FOR b < 3t AS SHOWN ON DETAIL 6/– PROVIDE 4 – #5 VERT & #3 TIES @ 8"OC VERT.
11. USE 9 GA WIRE POSITIONERS FOR ALL VERTICAL WALL REINFORCING. (AA WIRE PRODUCTS COMPANY # AA225 OR EQUAL) SPACE VERT TIES MAX 192d ON CENTER OR 10'-0"

10 **CMU REINFORCING SCHEDULE**
N.T.S.

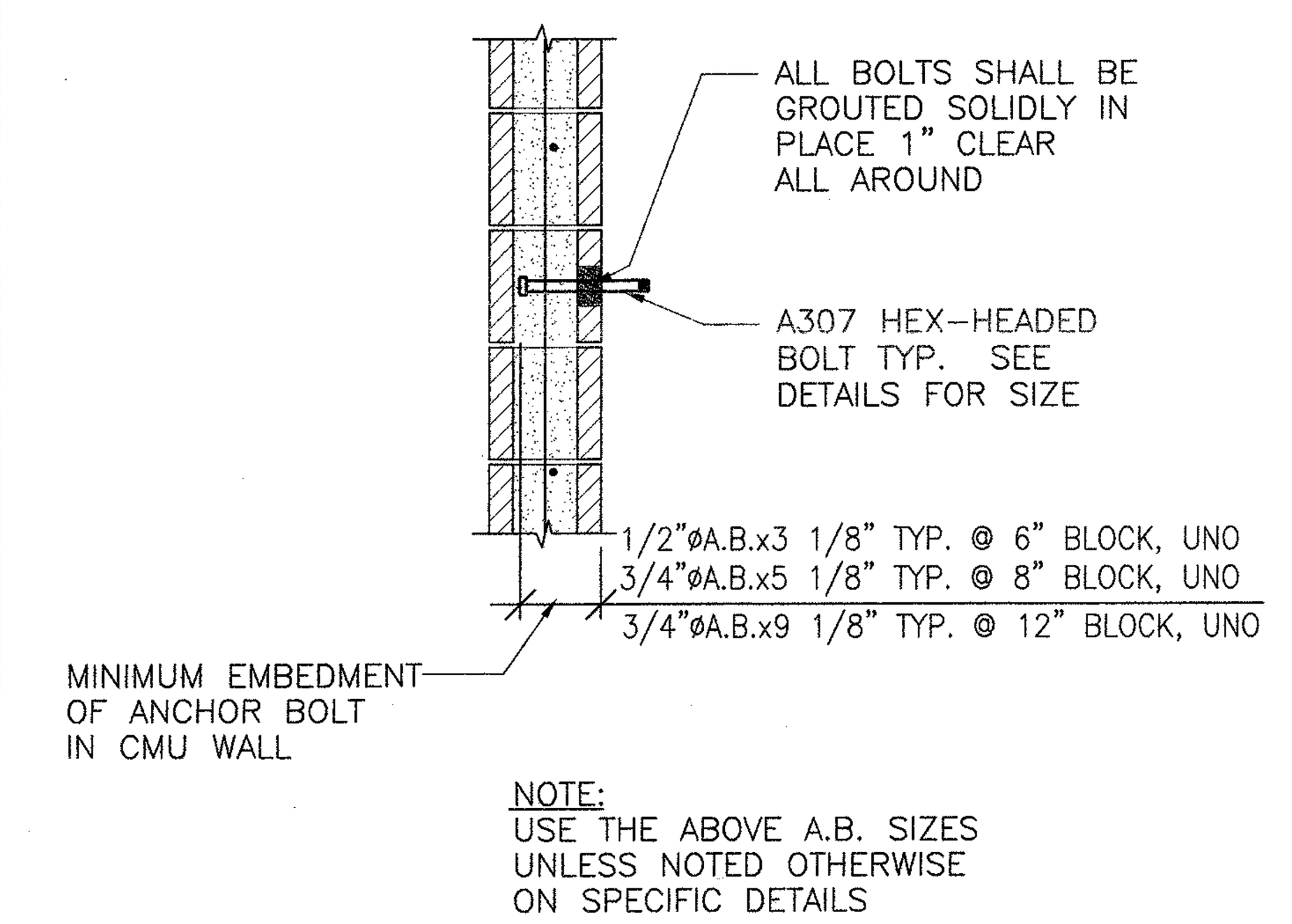


NOTE:
1. DO NOT PLACE ELECTRICAL CONDUIT IN THE SAME CELL AS ANY TYPICAL VERTICAL REINFORCING OR JAMB BARS.
2. MASONRY WALL PIERS SHALL NOT BE LESS THAN 16" WIDE.

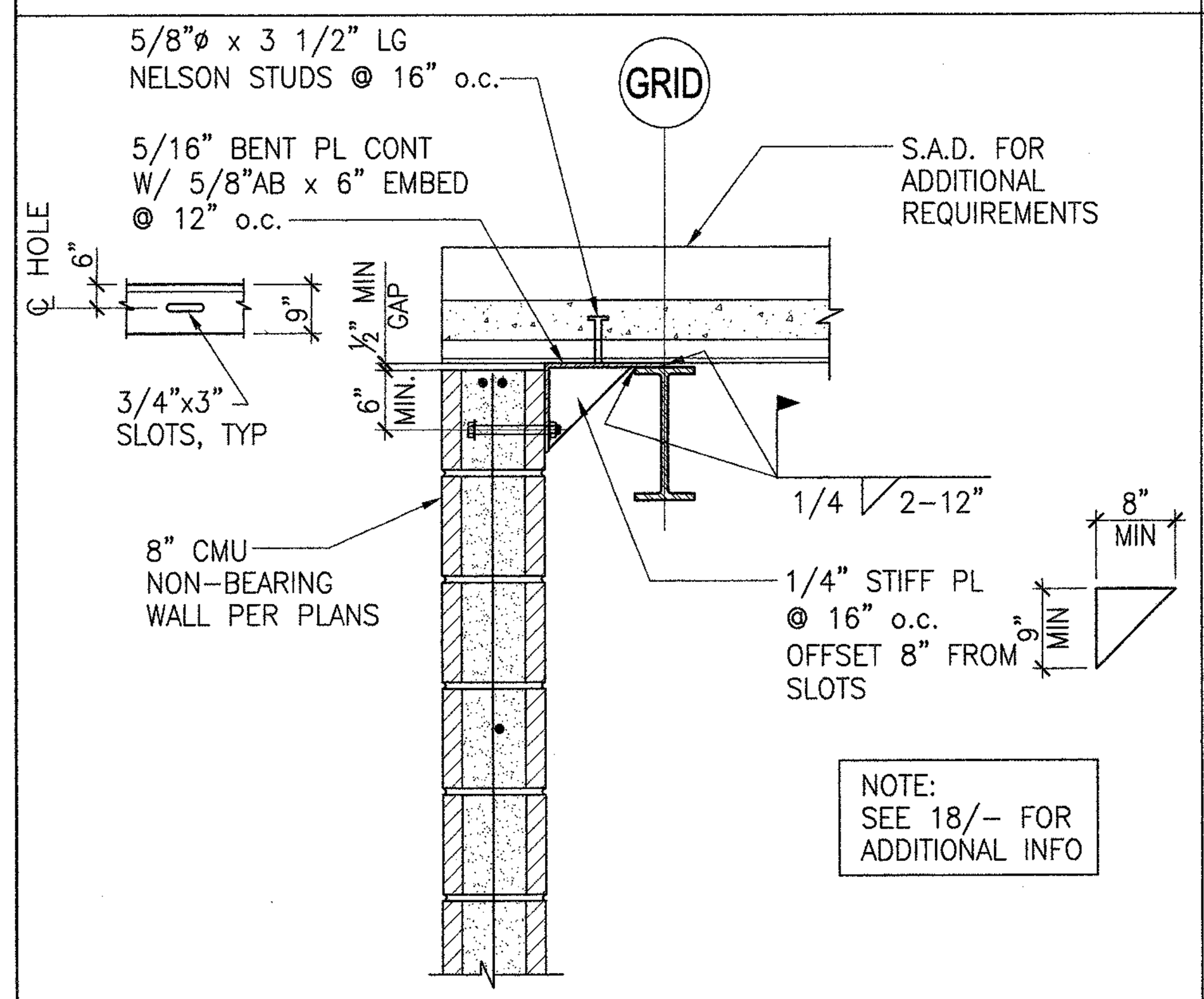
6 **ELEVATION @ 6", 8", 10" & 12" CMU WALLS**
N.T.S.



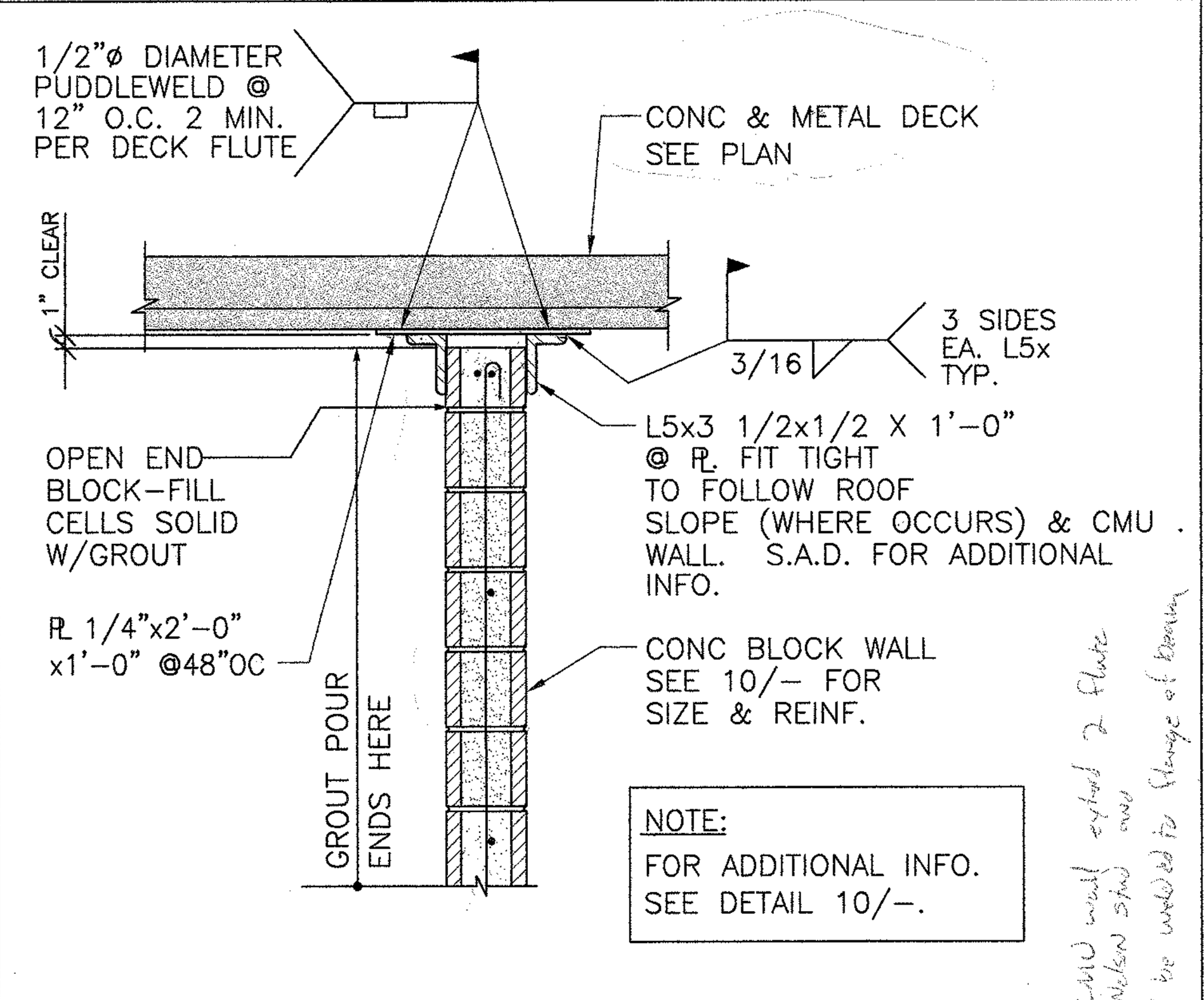
18 **SECTION DETAIL**
N.T.S.



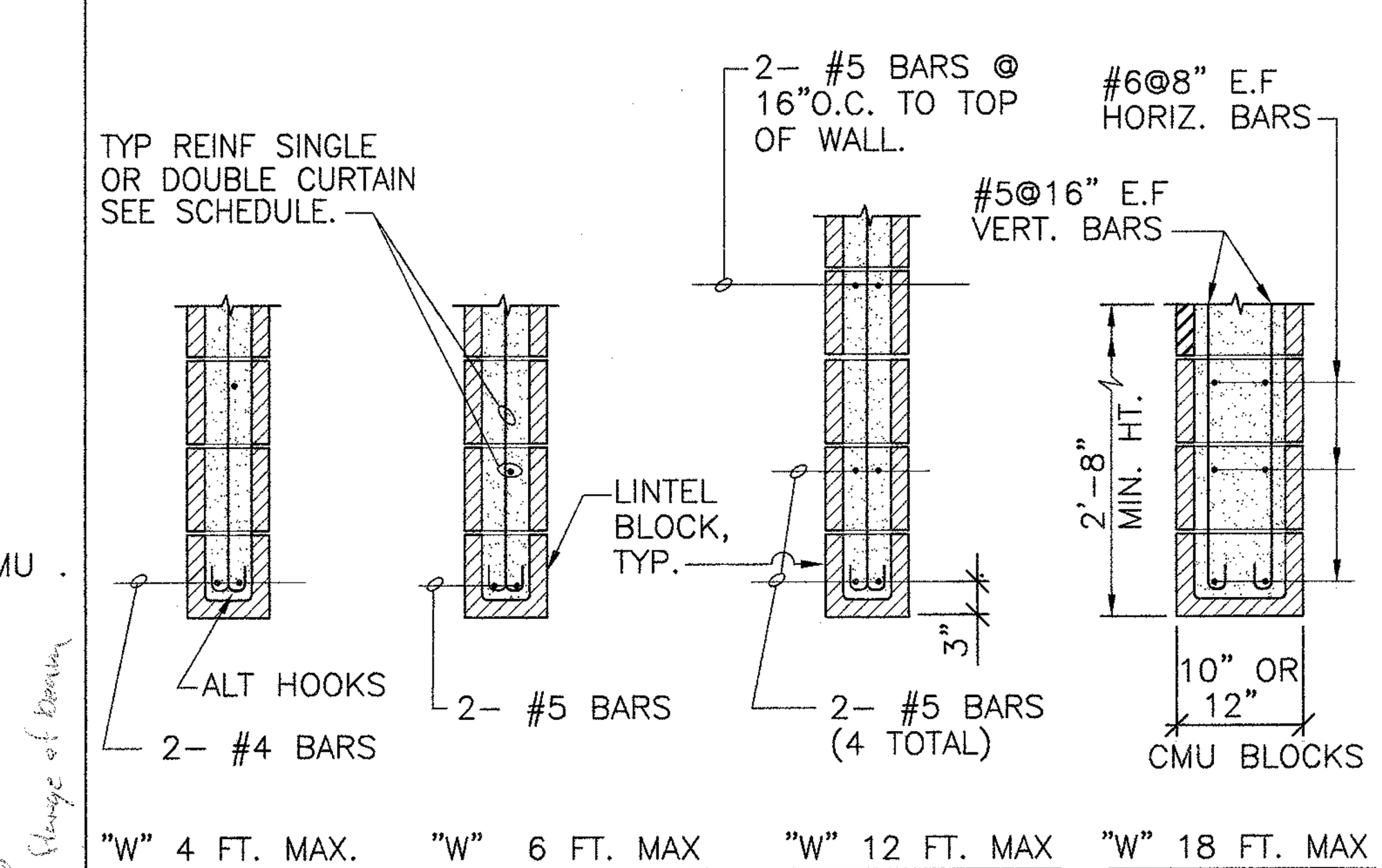
14 **ANCHOR BOLT TO CMU**
N.T.S.



19 **SECTION DETAIL**
N.T.S.

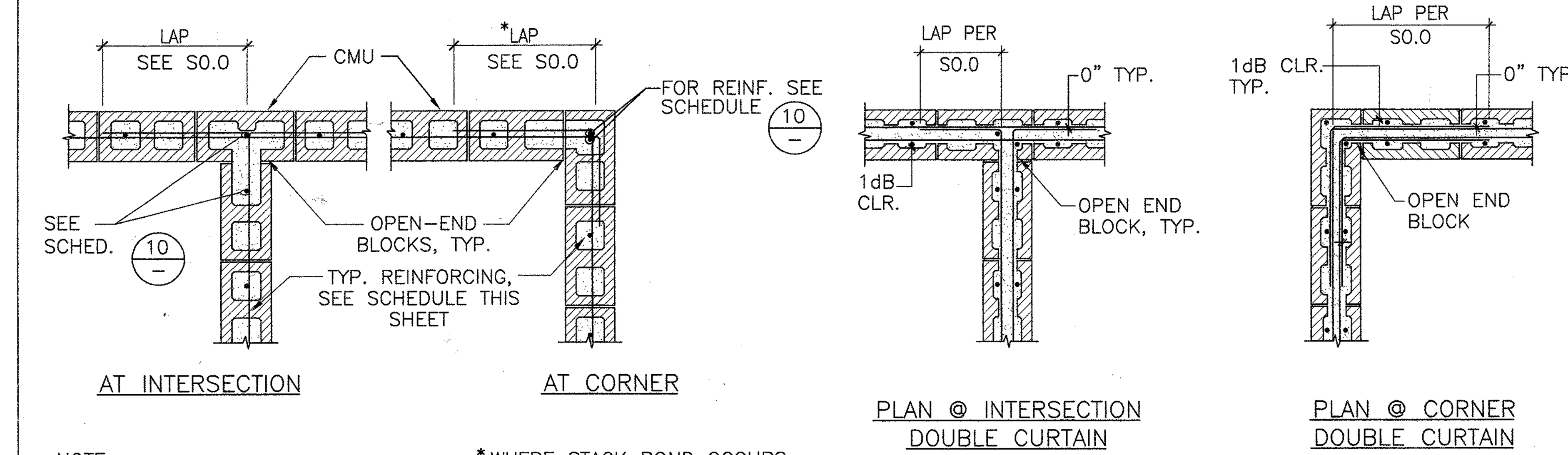


15 **BRACING @ INTERIOR WALL**
N.T.S. (DECK PERPENDICULAR TO WALL)



NOTE:
ALL LINTELS WILL BE SHORED FOR MIN 28 DAYS AFTER GROUT PLACEMENT. PROVIDE HOOKS ON BOTH TOP & BOTTOM OF LINTELS

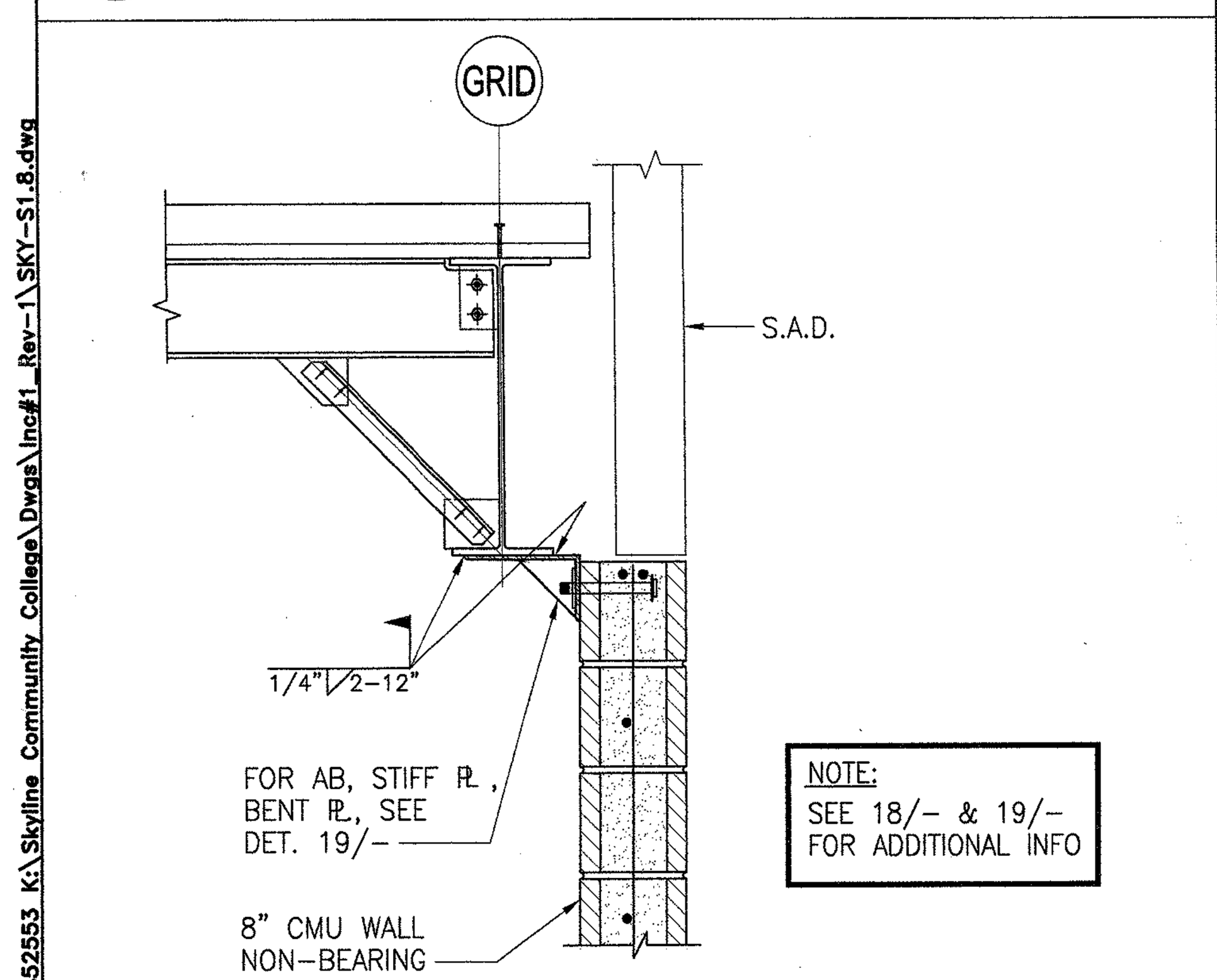
11 **REINFORCING @ OPENINGS**
N.T.S.



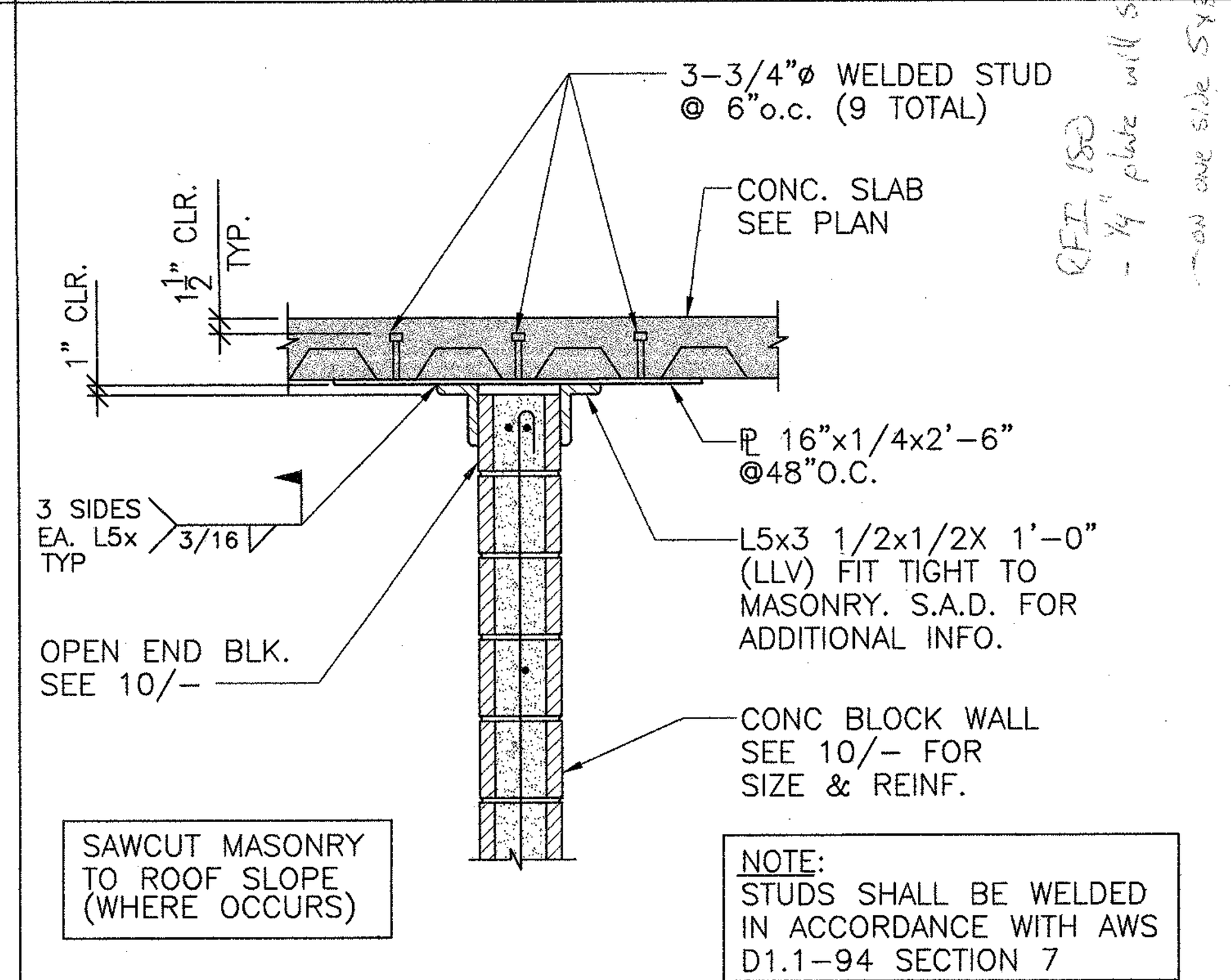
NOTE:
BLOCKS IN DETAIL ABOVE ARE SHOWN FOR GRAPHIC PURPOSE ONLY REFER TO DETAIL 10, GENERAL NOTES & SPECIFICATIONS FOR SPECIFIC REQUIREMENTS

*WHERE STACK BOND OCCURS LAP ALL HORIZONTAL BARS A MIN. OF 2'-0" PAST EDGE OF VERT JOINT.

7 **CMU WALL INTERSECTIONS**
N.T.S.

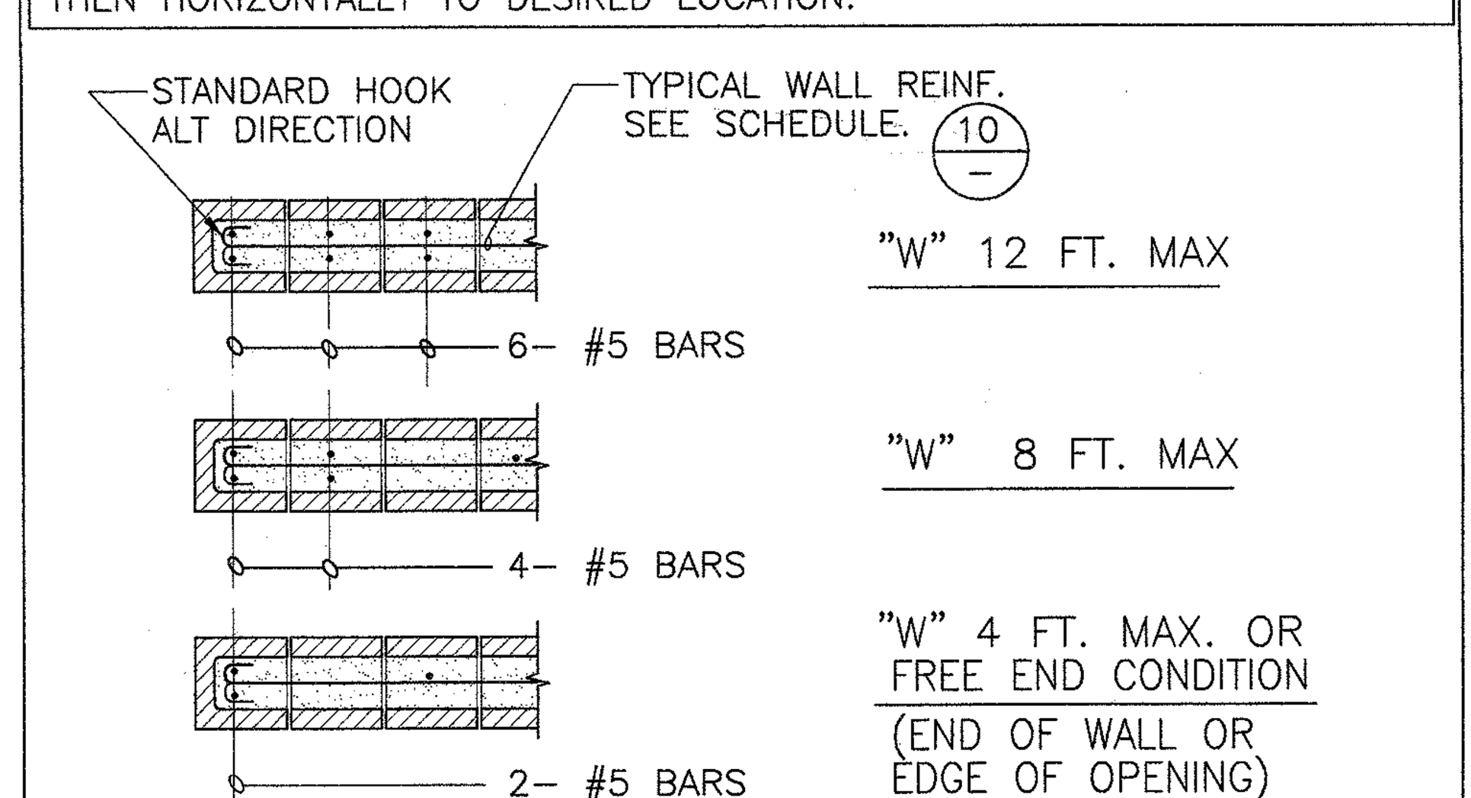


20 **SECTION DETAIL**
N.T.S.



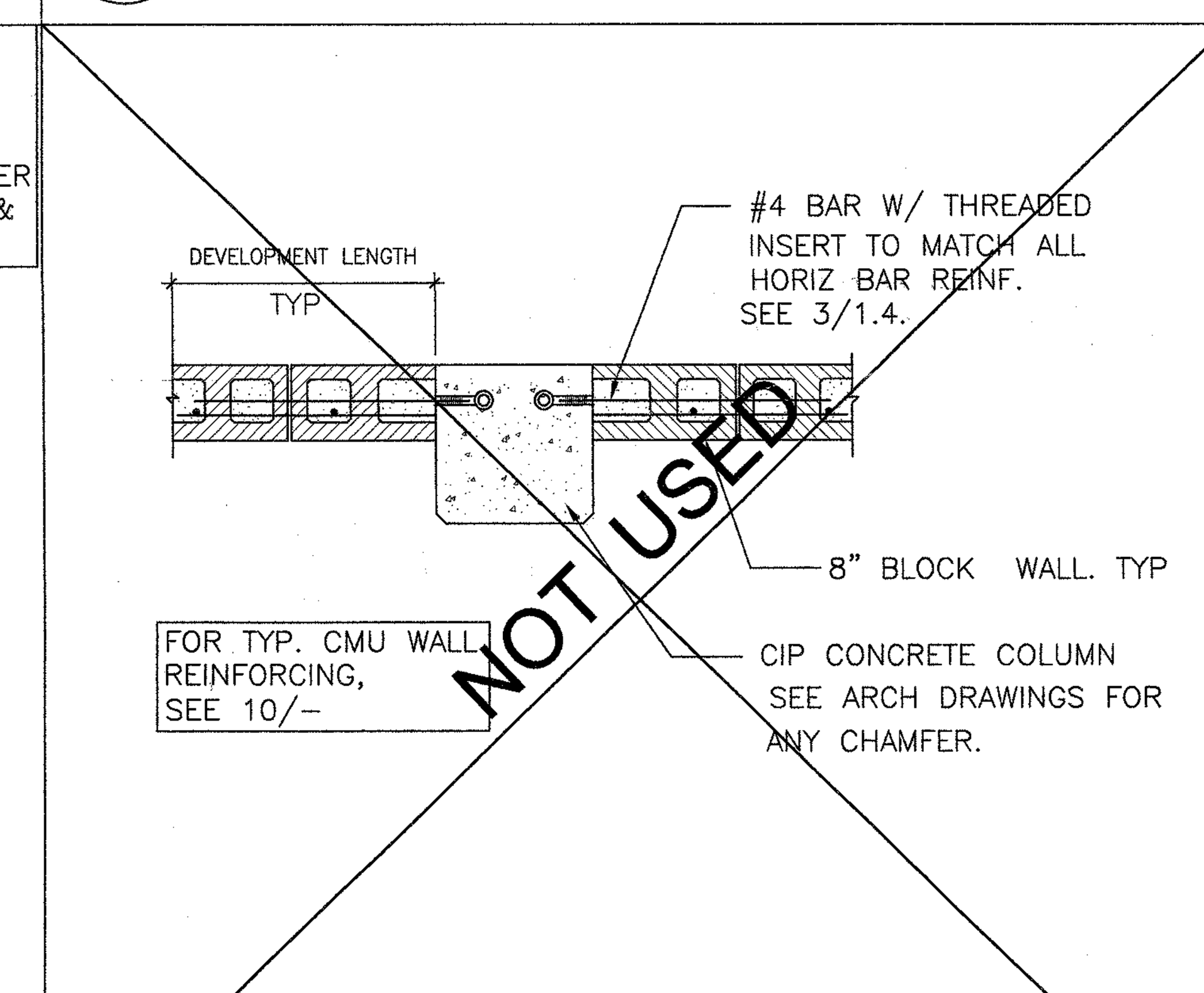
16 **BRACING @ INTERIOR WALL**
N.T.S. (DECK PARALLEL TO WALL)

NOTE:
CONTINUE ALL JAMB BARS FULL HEIGHT OF WALL AT DOOR & WINDOW OPENINGS GREATER THAN 6'-0".
ELECTRICAL CONDUIT REQUIRED NEAR THE EDGE OF ANY OPENING GREATER THAN 4 FT SHALL BE ROUTED VERTICALLY IN FIRST OPEN ADJACENT CELL & THEN HORIZONTALLY TO DESIRED LOCATION.

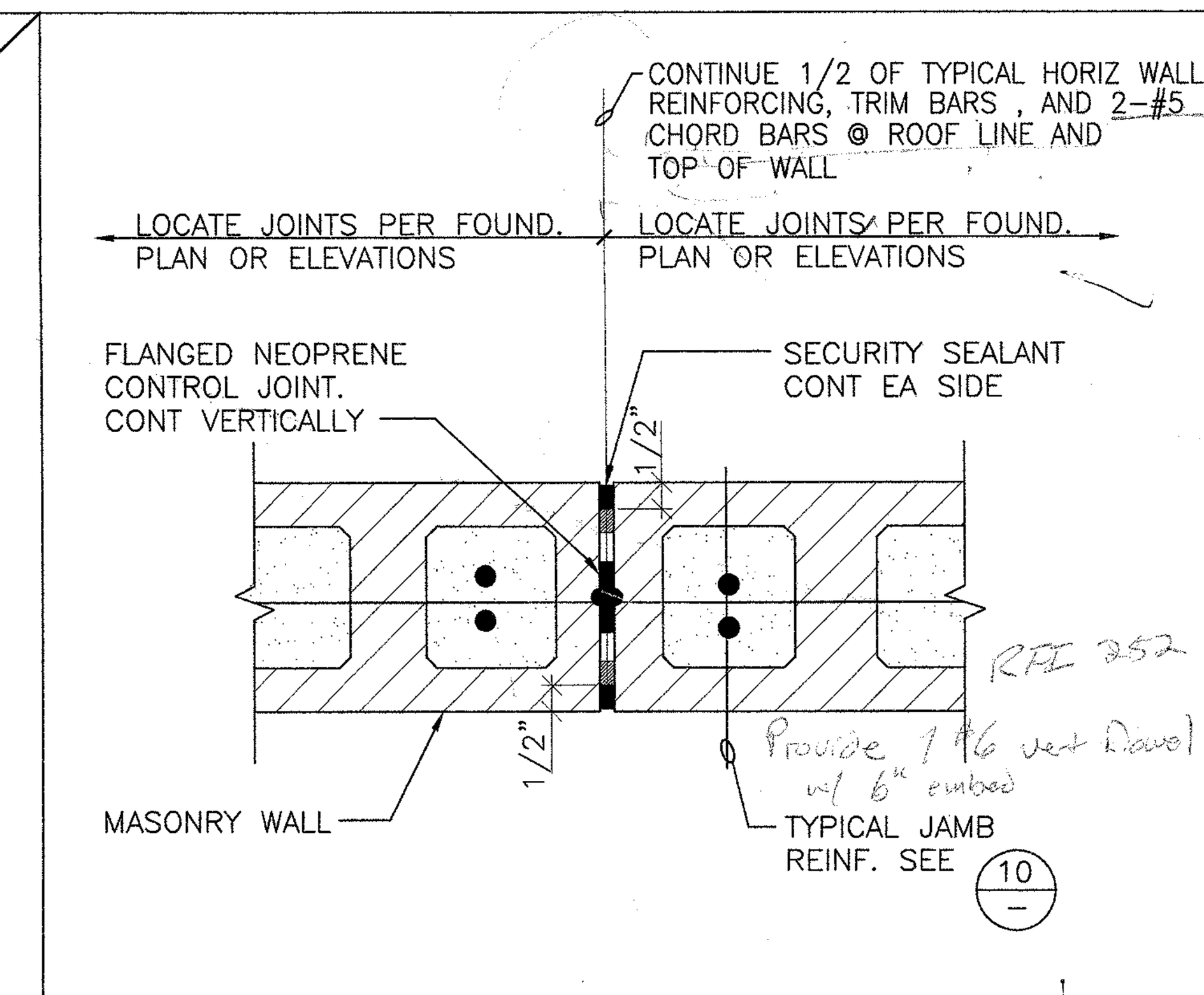


NOTE: SEE 6/– FOR HORIZONTAL WALL REINF @ PIER WITH b ≤ 5t NOT NOTED HERE

12 **JAMB & FREE END OF WALLS**
N.T.S.



8 **CMU WALL @ CIP COLUMN**
N.T.S.



4 **CMU CONSTRUCTION JOINTS**
N.T.S.

REVIEW SET

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Fentress Bradburn ARCHITECTS LTD.
Architecture • Interiors • Planning

Crosby group
Structural Engineering

Hensel Phelps Construction Co.

REGISTERED PROFESSIONAL ENGINEER JOLIN BLANEY No. S4377 EXP. 6/30/06 STRUCTURAL STATE OF CALIFORNIA

SKYLINE COLLEGE
STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

DRAWING TITLE
CMU WALL DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S1.8

20050420_16452553 K:\Skyline Community College\Dwgs\Inc#1 Rev-1\SKY-S1.8.dwg

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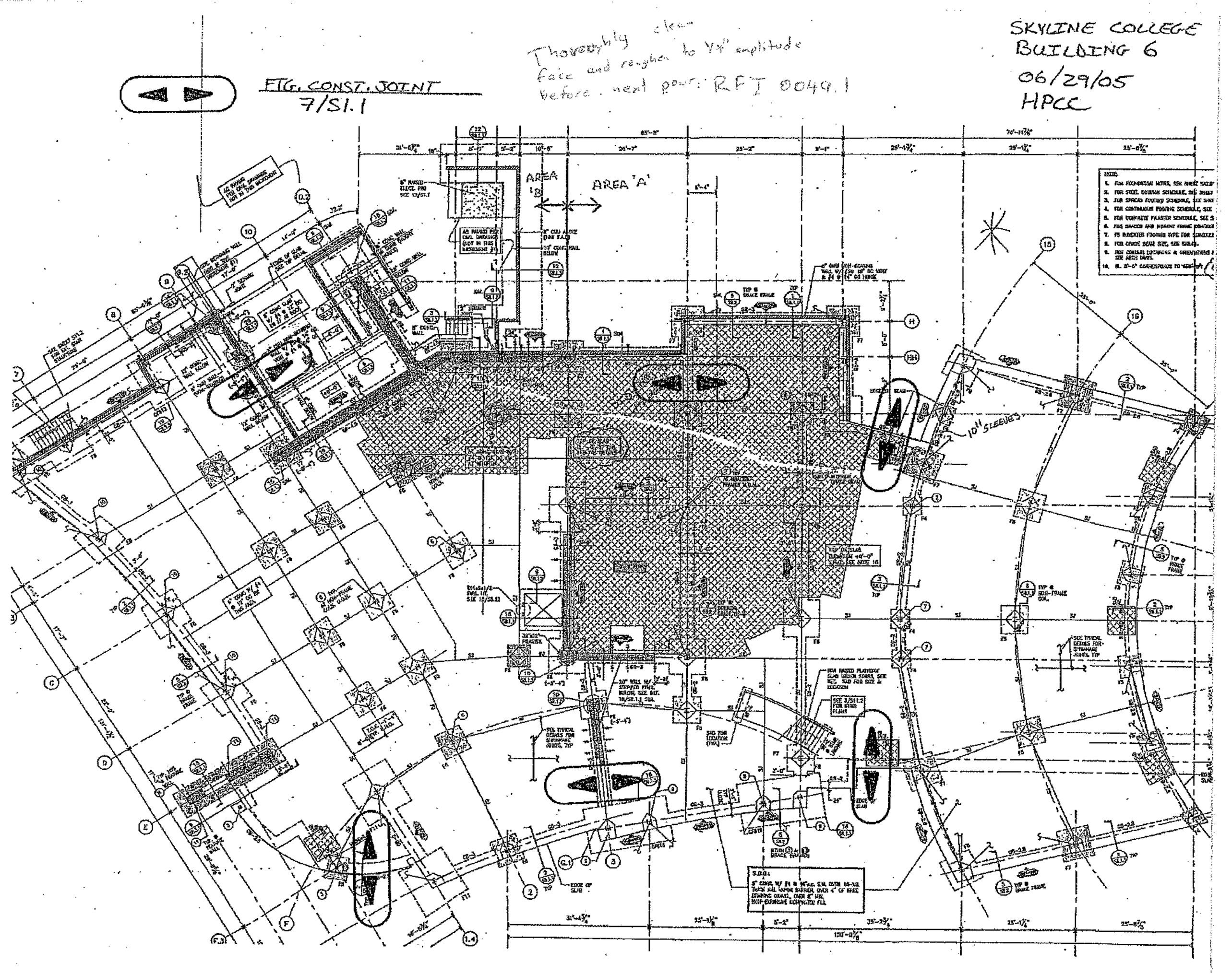
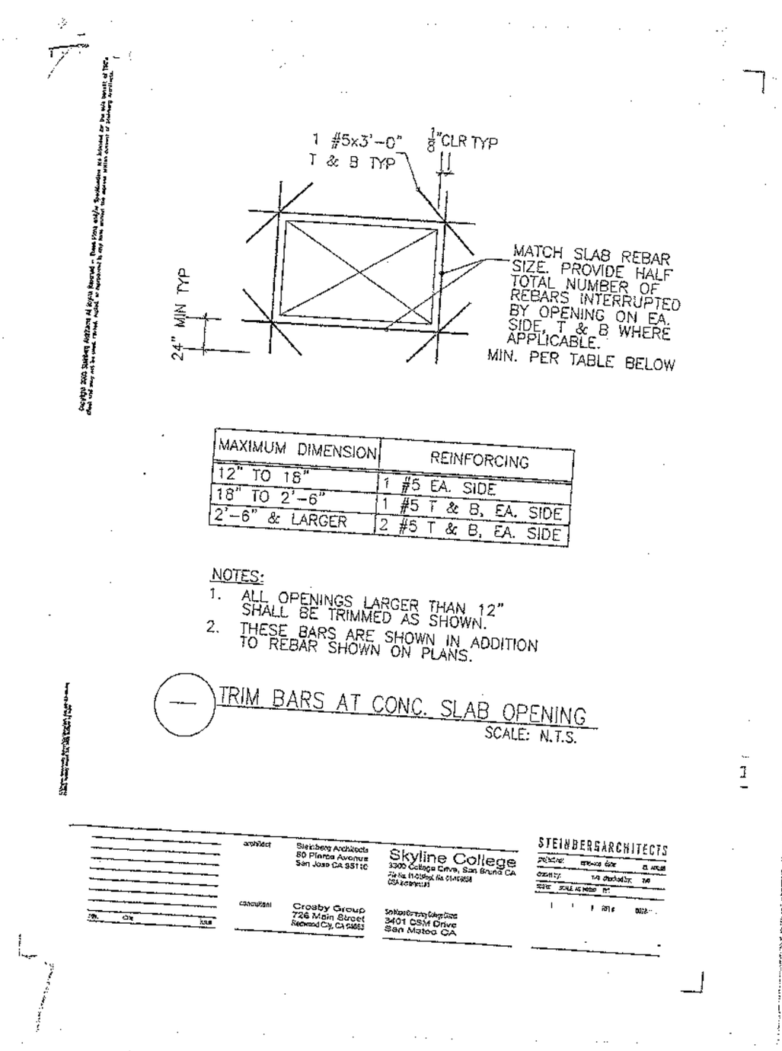
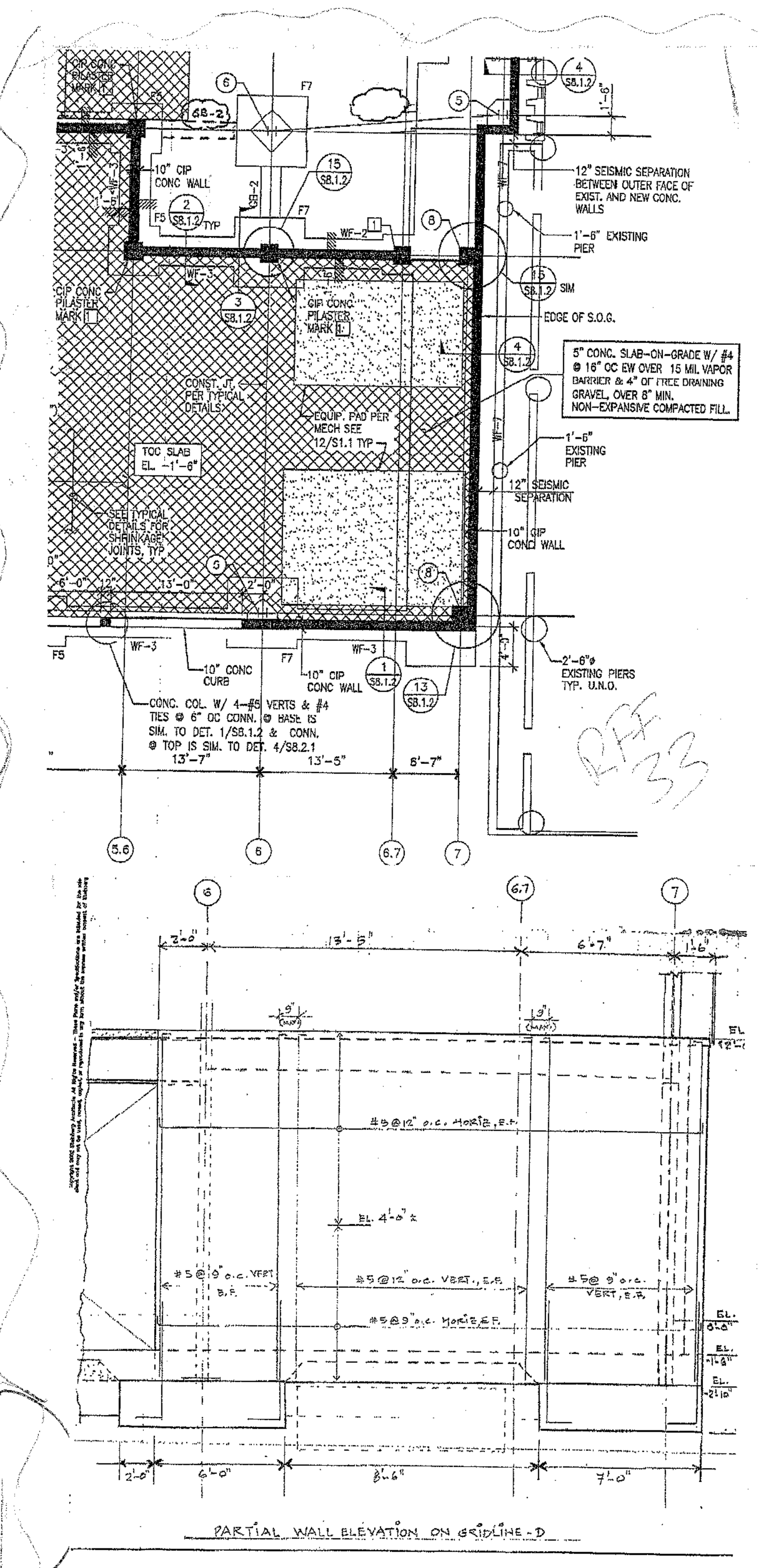
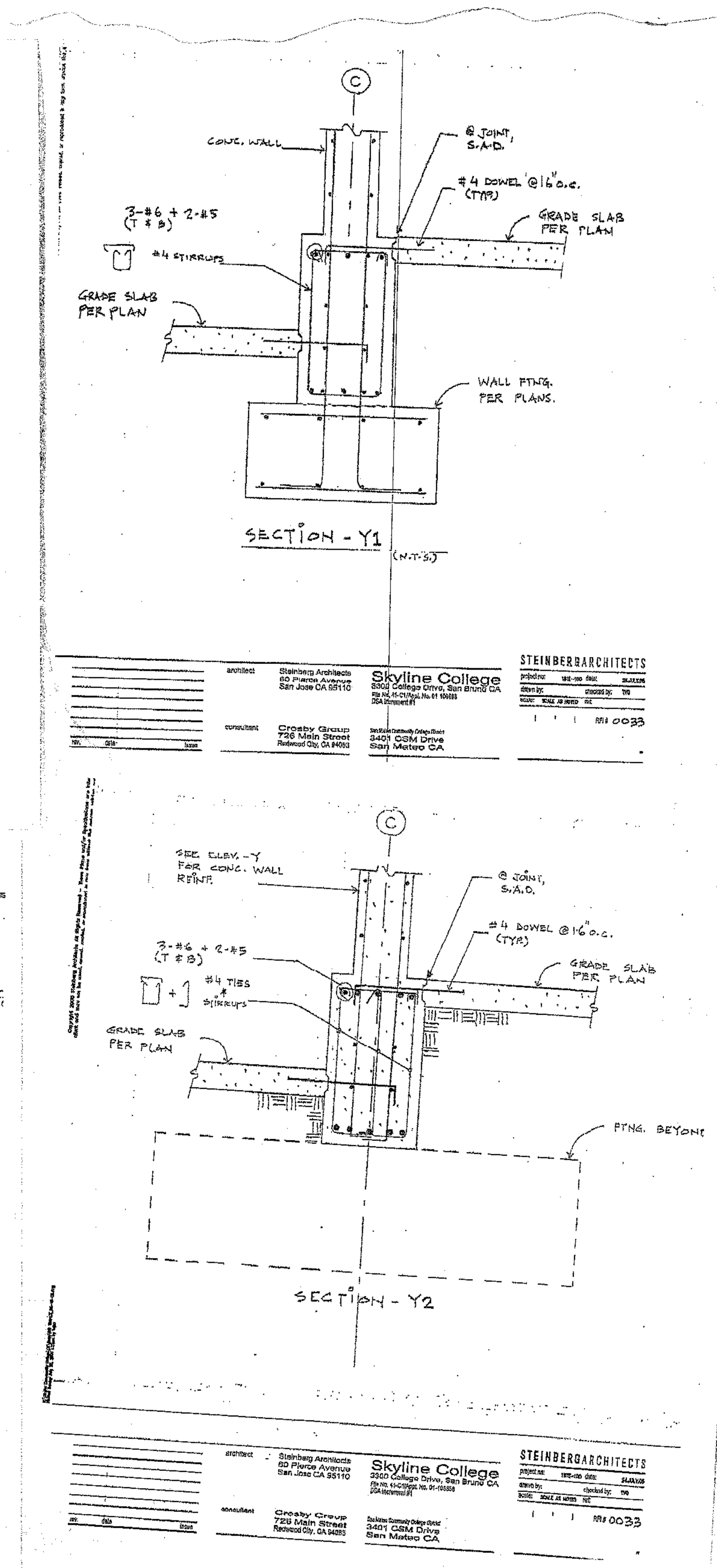
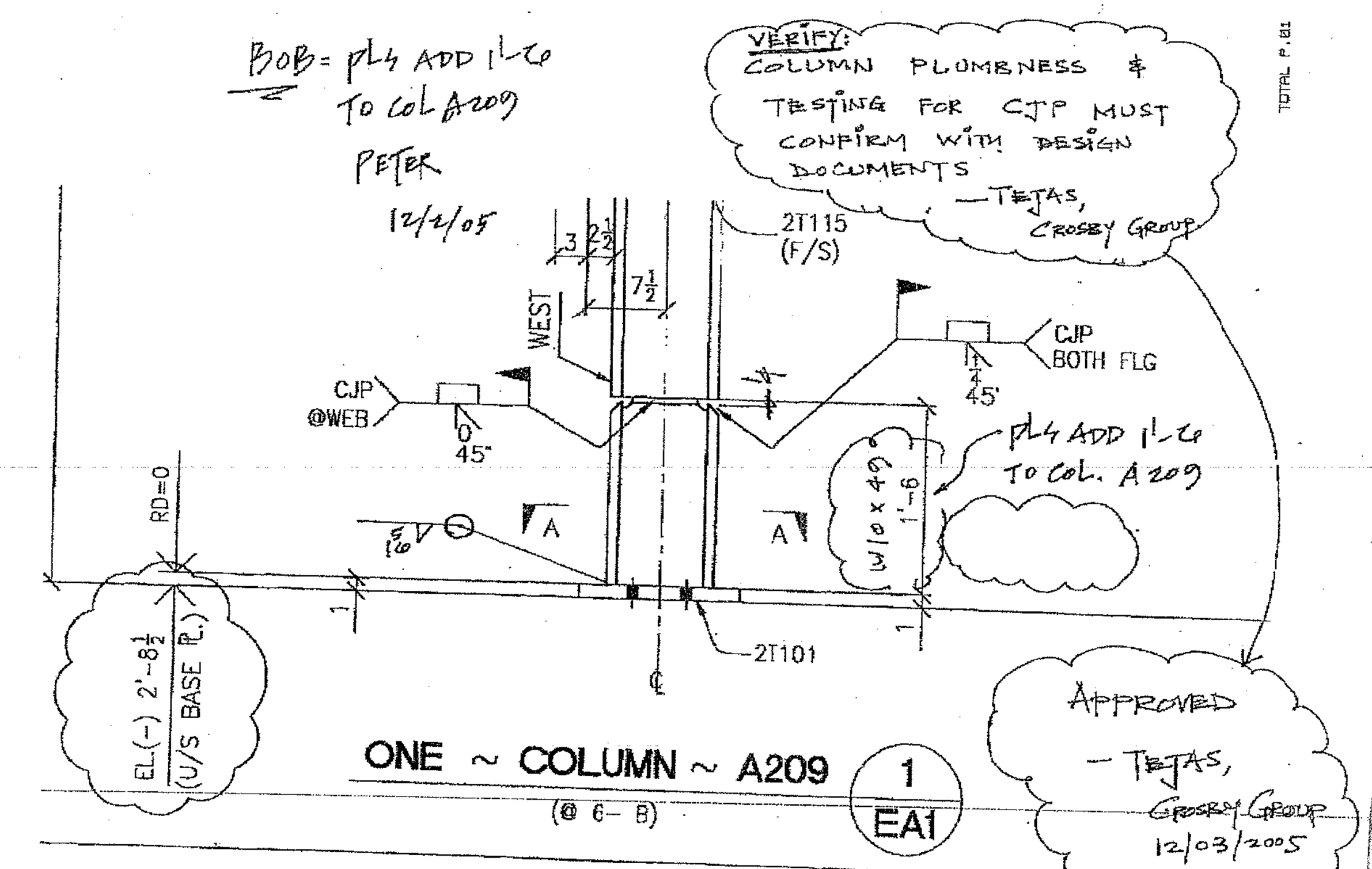


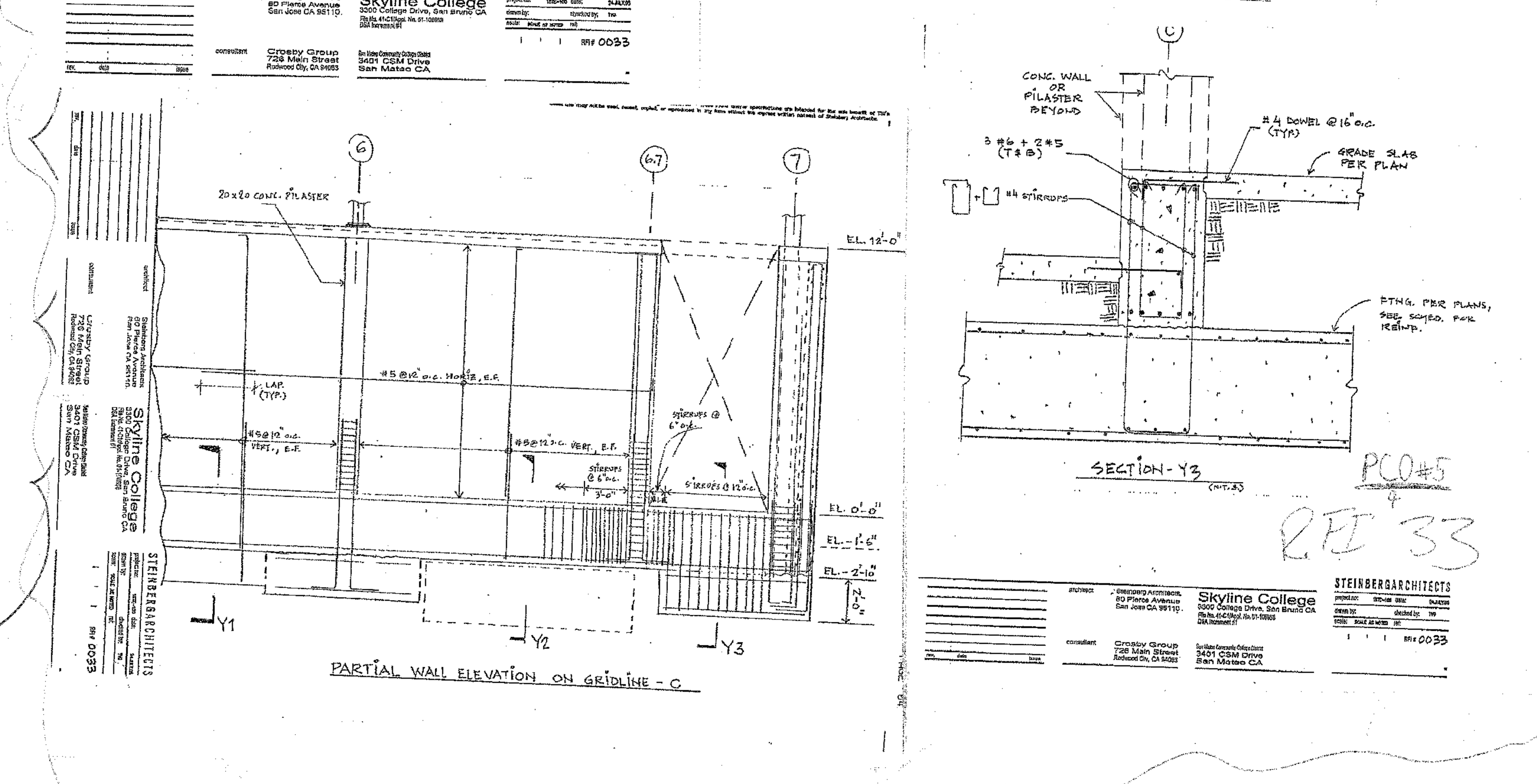
RFI 0078
LH 12-16-05











RFI 0077
LH 12-16-05

Question

In building 7A along gridline 7.2 there are three (3) steps in the WF-7 footing between gridline A the elevator pit. In this location there is a existing live sanitary sewer line for building 7 that conflicts with the steps.
Since we are not allowed any variance from detail 17 on sheet S1.1 Hensel Phelps Construction is proposing the following solution.
See Attached Sketches.
Please Cofirm These Details.
Hensel Phelps Construction is proceeding with these details per conversations between Hensel Phelps and Crosby Group.

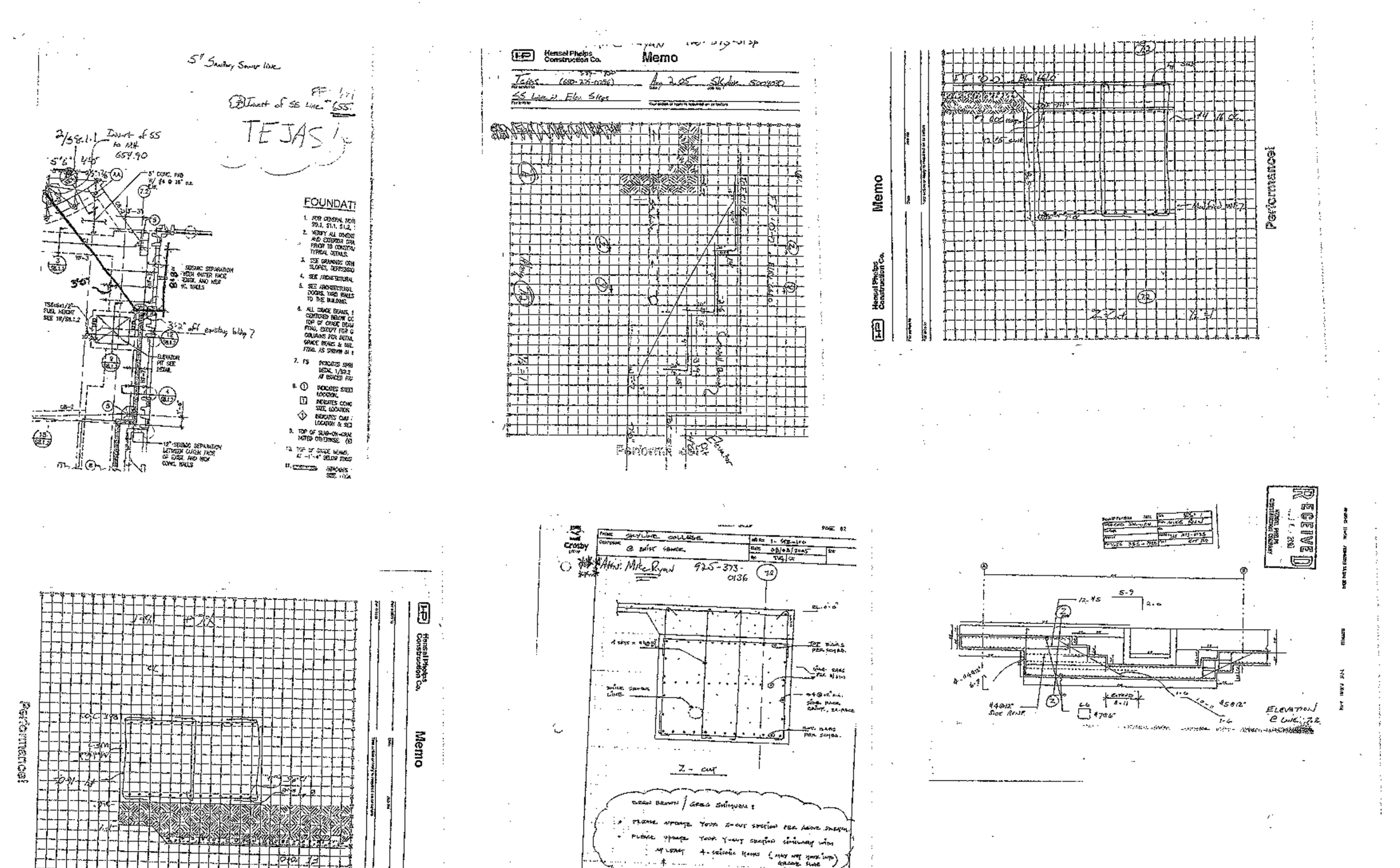
Consultant Comments

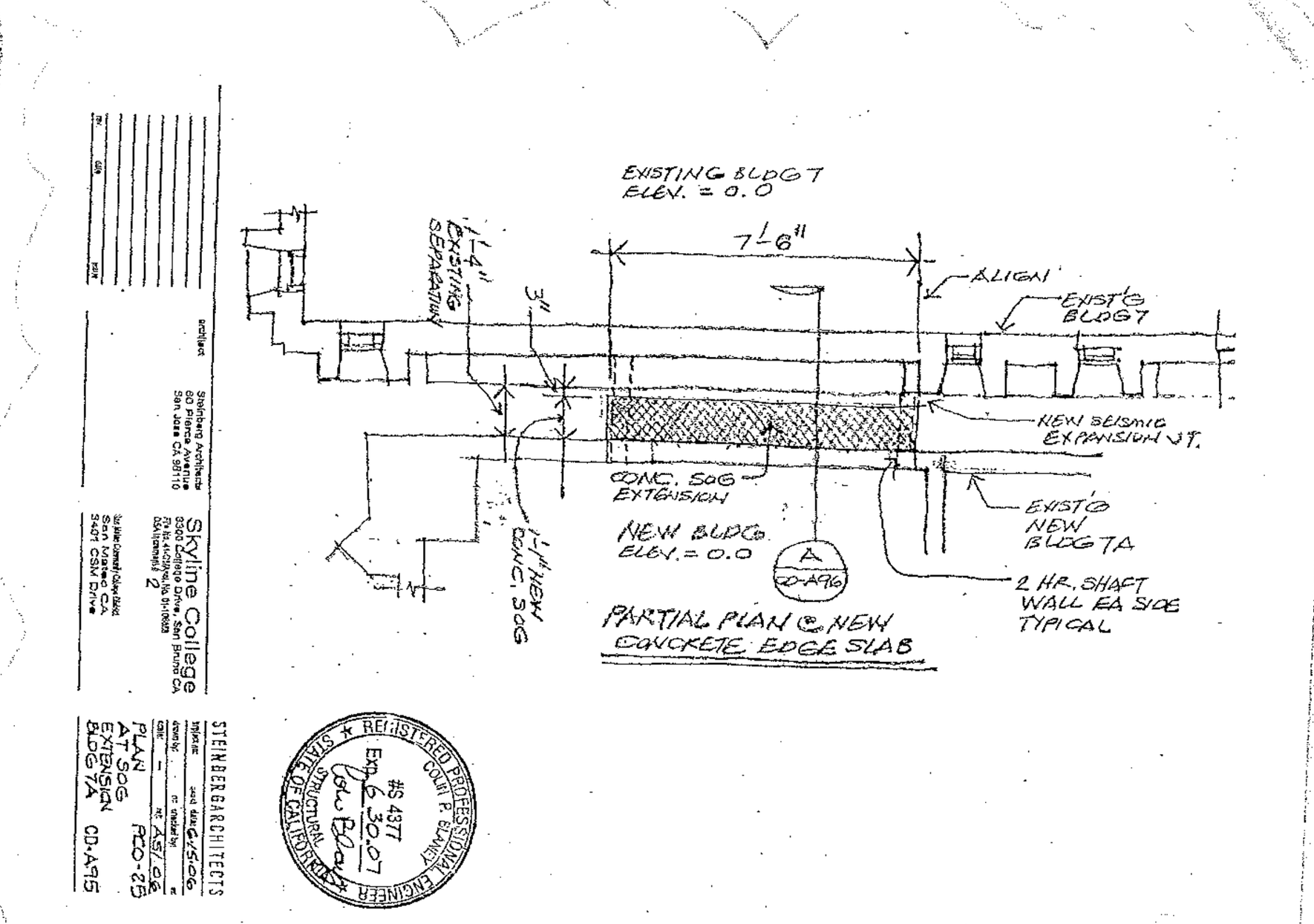
Confirmed ... Tejas, Crosby Group.

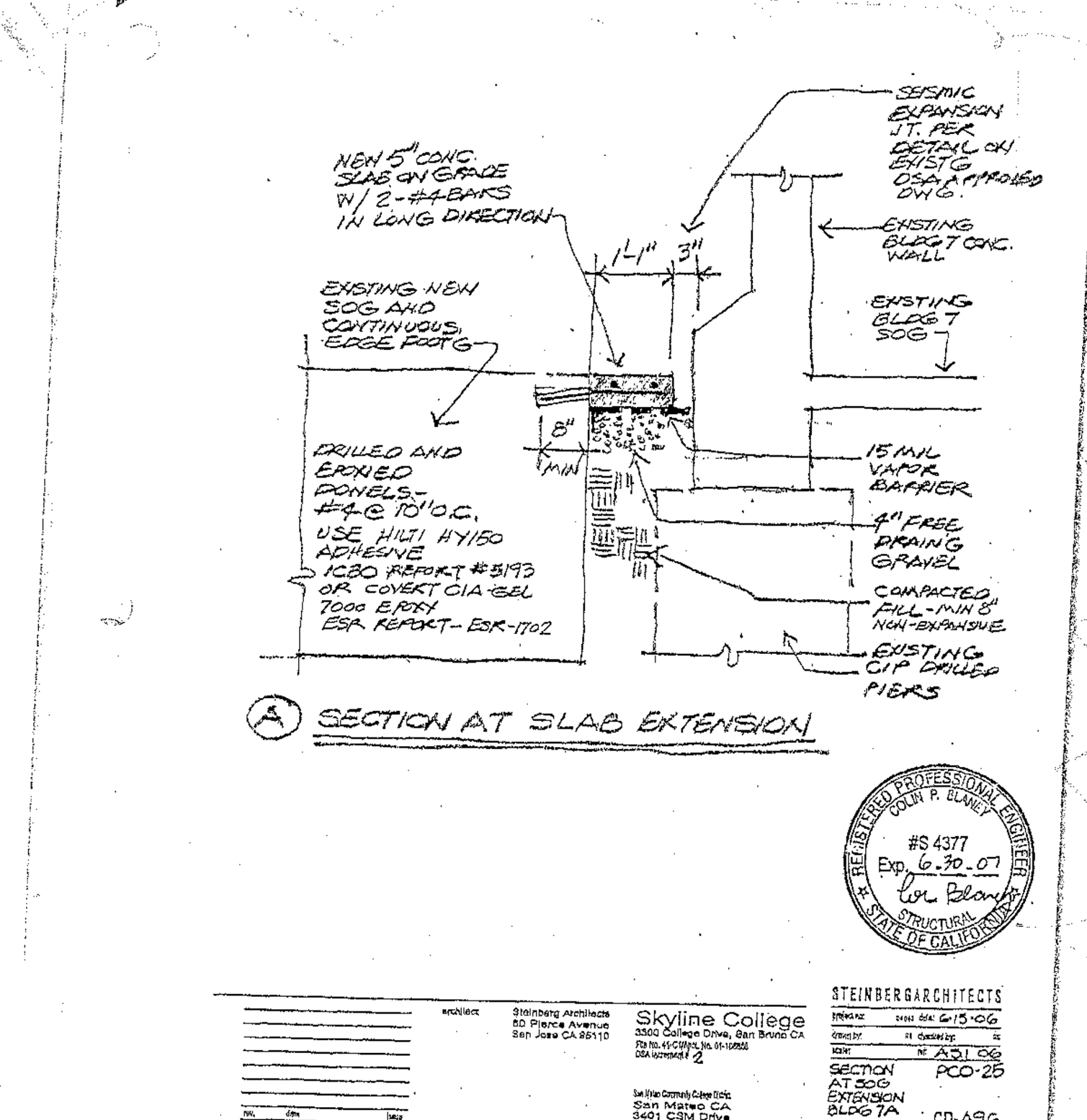
Answer Date Answered: 8/10/2005

See response from Tejas, Crosby Group.

R. Saiki







RFD 25 CONCRETE S.O.G. EXTENSION DETAILS

LH 12-17-05

RFI 0093

Question

Please Reference Increment 1 Drawing SA2.01

On sheet SA2.01 there is a 10" CIP concrete wall along grid line 'C' that runs from grid line 5.6 to 6.7. Hensel Phelps Construction Co. would like to temporary leave the section open from the pilaster on 6 to the pilaster on 6.7. HPCC would install the female dowel splicer similar to the attached file for the first pour. At a later date the male/threaded bar would be installed and wall finished.

Please confirm that thread dowels can be used.

Consultant Comments

Shown splice coupler is acceptable ... however, verify constructibility. Alternate bars at each end may need to be extended one lap length beyond face for splicing. Splice coupler flange should not encroach clear cover requirements ... /// ... Tejas, Crosby Group.

Answer Date Answered: 9/23/2005

See comments from Tejas, Crosby Group.
R. Saiki

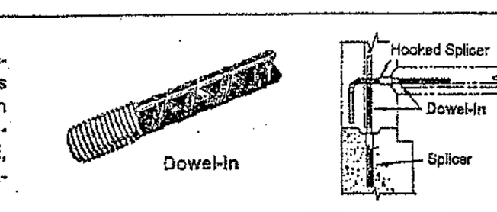
Cc: Company Name	Contact Name	Copies	Notes
Hensel Phelps Construction Co.	Andrew Brown	Prolog WebSite	

DAYTON/RICHMOND CONCRETE ACCESSORIES

FORMING HARDWARE

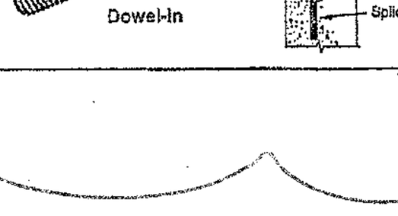
DB-SAE SPLICER (a.k.a. Richmond DB-SAE Dowel Bar Splicer)

Dayton Richmond DB-SAE Splicer is a one-piece forged unit made from grade 60 rebar and is supplied with NC or UNC threads depending on size. Available in bar sizes #4 through #11 in straight, hooked, double-ended and bolt-headed configurations.

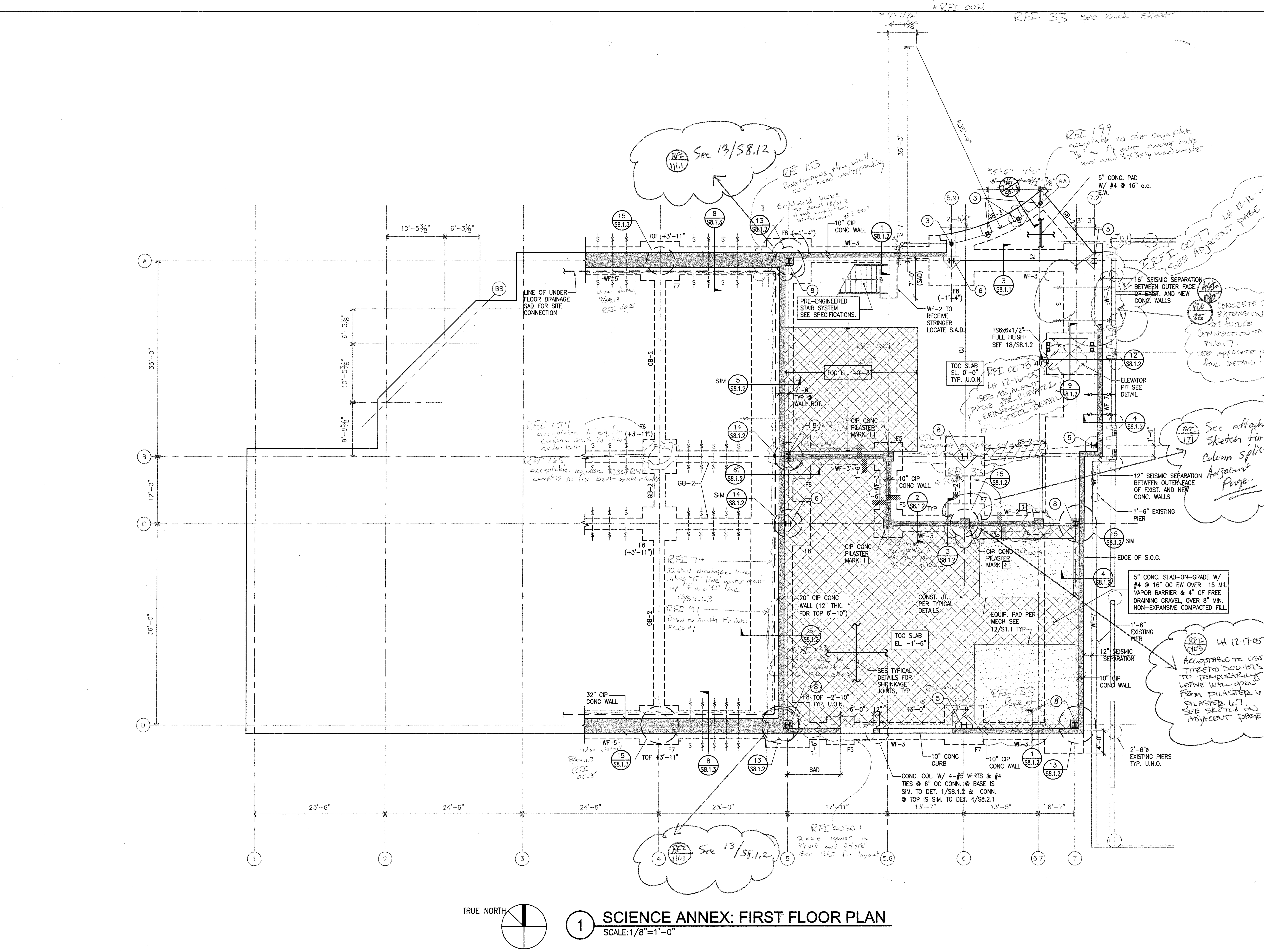


DOWEL-IN (a.k.a. Richmond Dowel-In)

Dayton Richmond Dowel-In is manufactured from grade 60 rebar material and is available in sizes #4 through #11 for use with the DB-SAE Splicer shown above. Dowel-Ins are available in straight, 90° hooked, 180° hooked and double-ended configurations.



DOWEL BASKETS



1 SCIENCE ANNEX: FIRST FLOOR PLAN

SCALE: 1/8"=1'-0"

FOUNDATION NOTES

1. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S0.0, S0.1, S1.1, S1.2, S1.3, S1.4, S1.5, S1.6, S1.7
2. VERIFY ALL DIMENSIONS, ELEVATIONS, COLUMN GRIDS AND INTERIOR AND EXTERIOR GRADES WITH ARCHITECTURAL AND SITE DRAWINGS PRIOR TO CONSTRUCTION. COORDINATE ALL STRUCTURAL PLANS WITH TYPICAL DETAILS.
3. SEE DRAWINGS OTHER THAN STRUCTURAL FOR FLOOR FINISHES, SLOPES, DEPRESSIONS, PENETRATIONS, CURBS AND OTHER FEATURES.
4. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL WALLS.
5. SEE ARCHITECTURAL AND SITE DRAWINGS FOR EXTERIOR PADS AT DOORS. YARD WALLS, FENCES, AND OTHER CONSTRUCTION ADJACENT TO THE BUILDING.
6. ALL GRADE BEAMS, SPREAD & CONTINUOUS FOOTINGS TO BE CENTERED BELOW COLUMNS & CMU WALLS UNLESS OTHERWISE NOTED. TOP OF GRADE BEAMS & WALL FOOTINGS TO MATCH TOP OF COLUMN FTNG, EXCEPT FOR GRADE BEAMS & WALL FOOTINGS BETWEEN FRAME COLUMNS PER DETAIL 3/S9.2 & 5/S9.2 WHERE TOP OF THESE GRADE BEAMS & WALL FOOTINGS BE 2 1/2' ABOVE TOP OF COLUMN FTNG. AS SHOWN IN DETAILS 11/S10.11 & 12/S10.11.
7. F5 INDICATES SPREAD FOOTING MARK, SEE SCHEDULE. SEE DETAIL 1/S9.2 FOR ADDITIONAL REINFORCING REQUIREMENTS AT BRACED FRAMES & MOMENT FRAME FOOTINGS.
8. (1) INDICATES STEEL COLUMN. SEE PLAN & SCHEDULE FOR SIZE, LOCATION.
   [1] INDICATES CONCRETE PILASTER. SEE PLAN & SCHEDULE FOR SIZE, LOCATION & REINF.
   ◇1 INDICATES CMU PILASTER. SEE PLAN & SCHEDULE FOR SIZE, LOCATION & REINF.
9. TOP OF SLAB-ON-GRADE DESIGNATE ELEVATION +0'-0", TYP. UNLESS NOTED OTHERWISE. (ELEV. 661'-0")
10. TOP OF GRADE BEAMS, CONTINUOUS & SPREAD FOOTING AT -1'-4" BELOW FINISH FLOOR SLAB, U.N.O.
11. INDICATES CIP CONC WALL. SEE PLANS & DETAILS FOR SIZE, LOCATION & REINFORCING.
12. INDICATES VERTICAL SEISMIC SEPARATION JOINT THROUGH ROOFS, AND SECOND FLOOR SLABS WHERE OCCURS. SEE ARCHITECTURAL DRAWINGS FOR WIDTH AND EXTENT.
13. S——S INDICATES STEP OR BEGINNING OF STEP IN CONTINUOUS AND/OR SPREAD FOOTING SEE 8/S1.1. ADDITIONAL FOOTING STEPS MAY BE REQUIRED FOR PLUMBING & ELECTRICAL LINES WHICH MAY OR MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS. SEE 17/S1.1 FOR FOOTING REQUIREMENTS WHERE CONDUITS OR PIPING RUNS PERPENDICULAR OR PARALLEL ALONG THE INFLUENCE OF FOOTINGS.
14. BF-1A INDICATES BRACE FRAME TYPE. SEE SHEET S5.1.
15. INDICATES RECESSED SLAB. SEE DETAIL 18/S1.1. S.A.D. FOR CURBS & DRAIN WHERE THEY OCCUR. RECESS TO BE 2" U.O.N.
    INDICATES SLOPED AND RECESSED SLAB WITH DRAIN. SEE DETAIL 18/S1.1. S.A.D. FOR CURBS, SLOPE, AND DRAIN. RECESS TO BE 3" MINIMUM AT PERIMETER, U.O.N.
    INDICATES SLAB SLOPED TO DRAIN. S.A.D. FOR CURBS, SLOPE, & DRAIN.
16. FOR BOLLARD DETAIL SEE 4/S1.2. S.A.D. FOR LOCATIONS.
17. INDICATES DIAGONAL BRACE UP FROM FOUNDATION.
18. CJ INDICATES SLAB CONSTRUCTION JOINTS. SEE 6/S1.1.
19. SLAB SHRINKAGE JOINTS (S.J.) ARE NOT SHOWN ON PLANS BUT SHALL CONFORM TO 6/S1.1.
20. GENERAL CONTRACTOR TO SUBMIT PLAN TO ENGINEER WHICH OUTLINES PROPOSED LAYOUT OF ALL CONSTRUCTION & SHRINKAGE JOINTS FOR APPROVAL PRIOR TO SLAB-ON-GRADE PLACEMENT. PLAN SHALL BE DRAWN TO SCALE.
21. ◇ INDICATES COLUMN BLOCKOUTS. SEE TYP. DETAILS FOR GENERAL CONFIGURATION. GENERAL CONTRACTOR TO COORDINATE LOCATION & SIZE ALL BLOCKOUTS AS REQUIRED.
22. INDICATES EQUIPMENT PAD. SEE 12/S1.1.
23. ▼ INDICATES CMU CONTROL JOINT .

CONCRETE PILASTER SCHEDULE

MARK	SIZE	DETAIL	VERT REINF	TIES
[1]	20"x20"	6/S8.1.2 SIM.	8-#7	#4 @ 4"

STEEL COLUMN SCHEDULE

MARK	SIZE	BASE PL DETAIL	ANCHOR BOLTS	REMARKS
(1)	HSS 4x4x1/2"	8/S8.1.1	PER BASE PL DET.	–
(2)	HSS 5x5x1/2"	8/S8.1.1	PER BASE PL DET.	–
(3)	HSS 6x6x1/2	8/S8.1.1	PER BASE PL DET.	–
(4)	HSS 5 1/2x5 1/2x1/4	8/S8.3.2	PER BASE PL DET.	–
(5)	W10x33	7/S8.1.1	PER BASE PL DET.	–
(6)	W10x49	7/S8.1.1	PER BASE PL DET.	SEE S10.11 AT BRACE FRAMES
(7)	W12x50	4/S10.11	PER BASE PL DET.	SEE S10.11 AT BRACE FRAMES
(8)	W12x96	4/S10.11	PER BASE PL DET.	SEE S10.11 AT BRACE FRAMES
(9)	W14x68	8/S10.11	PER BASE PL DET.	SEE S10.11 AT BRACE FRAMES
(10)	W14x159	8/S10.11	PER BASE PL DET.	SEE S10.11 AT MOMENT FRAMES, DOUBLER PLATE NOT REQ'D.
(11)	W18x50	7/S8.1.1	PER BASE PL DET.	–

NOTES:
1. ADD DOUBLER PLATES AS NOTED ONLY IF COLUMN IS PART OF A MOMENT FRAME (SEE SHEET S1.7)
2. BASE PLATE REFERENCED APPLIES UNLESS AN ALTERNATE DETAIL IS SPECIFICALLY NOTED ON PLANS
3. WHERE COLUMN IS PART OF A BRACED FRAME OR MOMENT FRAME, USE BASE PLATE FOR BRACED FRAME. SEE S10.11, U.N.O.

RFI 40
All Gravity columns to have embedment of 1'-2" anchor bolts

SPREAD FOOTING SCHEDULE

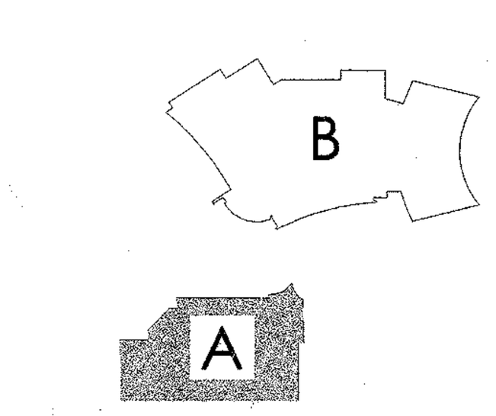
MARK	SIZE	DEPTH	BOTTOM REINF	TOP REINF	REMARKS
F3	3'-0"x3'-0"	1'-6"	6-#4 E.W.	4-#4 E.W.	HOOK ENDS
F4	4'-0"x4'-0"	1'-6"	8-#4 E.W.	4-#4 E.W.	HOOK ENDS
F5	5'-0"x5'-0"	1'-6"	10-#4 E.W.	5-#4 E.W.	HOOK ENDS
F6	6'-0"x6'-0"	2'-0"	12-#5 E.W.	6-#4 E.W.	AT NON-FRAME COLS
	6'-0"x6'-0"	2'-0"	12-#5 E.W.	12-#5 E.W.	AT FRAME COLS
F7	7'-0"x7'-0"	2'-0"	14-#5 E.W.	14-#5 E.W.	AT FRAME COLS
	7'-0"x7'-0"	2'-0"	14-#5 E.W.	7-#4 E.W.	AT NON-FRAME COLS
F8	8'-0"x8'-0"	2'-6"	16-#5 E.W.	16-#5 E.W.	–
F9	9'-0"x9'-0"	2'-6"	18-#6 E.W.	18-#6 E.W.	–
F10	10'-0"x10'-0"	3'-0"	20-#6 E.W.	20-#6 E.W.	–
F11	11'-0"x11'-0"	~~2'-6"~~ 3'-6" RFI 0040	22-#6 E.W.	22-#6 E.W.	–
–	–	–	–	–	NOT USED
CF-47	4'-6"X7'-0"	2'-0"	#5@8"OC EW	#4@16"OC E.W.	–
CF-510	5'-0"x10'-0"	3'-0"	#5@6"OC EW	#5@6"OC EW	–
CF818	8'-0"x18'-6"	2'-6"	#5@6"OC EW	#5@6"OC EW	SEE 18/S8.1.3
CF812	8'-0"x~~13'-0"~~ 12'-0"	2'-6"	#5@6"OC EW	#5@6"OC EW	SEE 19/S8.1.3

RFI 0029

CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	DEPTH	BOTTOM REINF	TOP REINF	TRANS. REINF.
WF-1.5	1'-6"	1'-6"	2-#5	1-#5	--
WF-2	2'-0"	1'-6"	3-#5	1-#5	--
WF-2.5	2'-6"	1'-6"	3-#5	3-#5	--
WF-3	3'-0"	1'-6"	4-#6	4-#6	#4@6"OC T&B
WF-3.5	3-6"	1'-6"	5-#5	2-#5	--
WF-4	4'-0"	1'-6"	6-#5	3-#5	--
WF-4.5	4'-6"	1'-6"	7-#5	4-#5	--
WF-5	5'-0"	1'-6"	9-#5	5-#5	#4@6"OC T&B
WF-6	6'-0"	2'-6"	10-#5	5-#5	--
WF-7	7'-0"	2'-0"	12-#5	12-#5	#7@6"OC T&B
WF-8	8'-0"	2'-0"	14-#5	6-#5	--
GB-2	2'-0"	1'-6"	3-#5	3-#5	TIES #3@8" OC
GB-2.5	2'-6"	2'-0"	5-#5	5-#5	TIES #4@8" OC
GB-2.8	2'-8"	2'-0"	5-#5	5-#5	TIES #4@8" OC
GB-3	3'-0"	2'-0"	5-#5	5-#5	TIES #4@8" OC
GB-3.5	3'-6"	2'-0"	7-#6	7-#6	TIES #4@8" OC
GB-4	4'-0"	2'-0"	8-#6	8-#6	TIES #4@8" OC
GB-6	6'-0"	2'-0"	12-#6	12-#6	TIES #4@8" OC

1. SPLICE GRADE BEAM REINF WITHIN MIDDLE 1/3 OF SPAN BETWEEN EDGES OF ADJACENT SPREAD FOOTINGS.



KEY PLAN

REVIEW SET

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CA 94063
tel. (650) 367-8100
fax. (650) 367-8189

Hensel Phelps Construction Co.

SKYLINE COLLEGE
STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL # 01-106658
DATE 04/21/2005

DRAWING TITLE
BUILDING A
FIRST FLOOR PLAN
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
SA2.01
drawn by: AY

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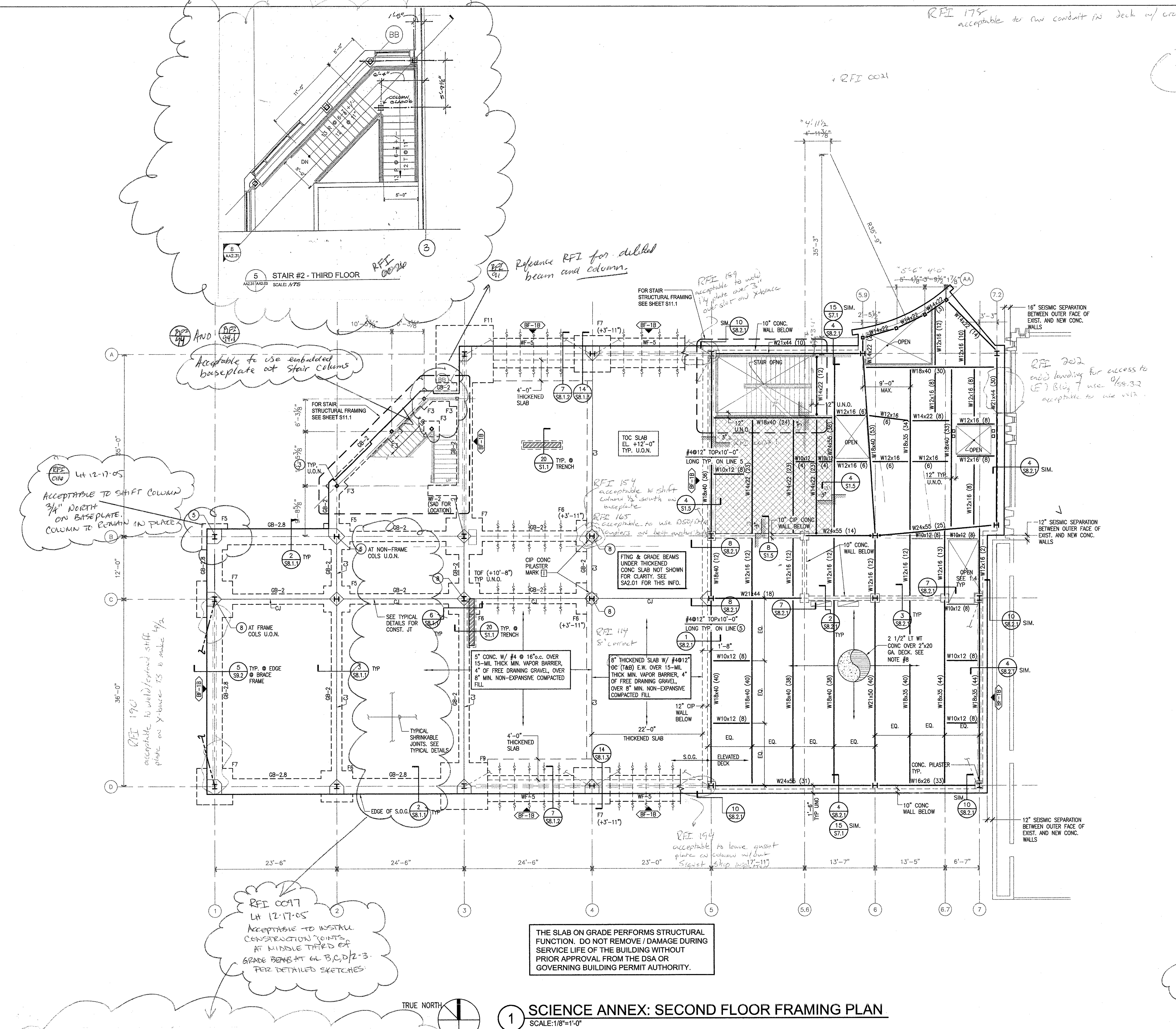
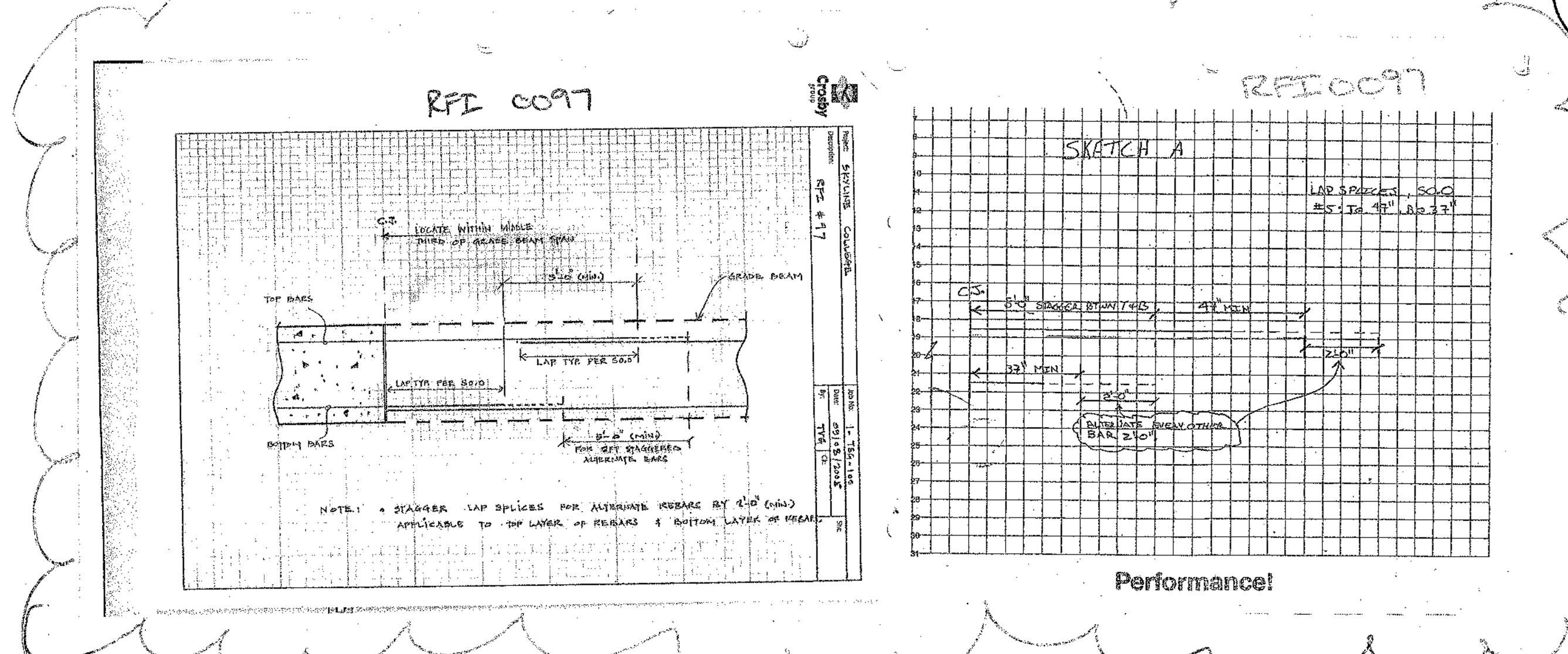


THE SLAB ON GRADE PERFORMS STRUCTURAL FUNCTION. DO NOT REMOVE / DAMAGE DURING SERVICE LIFE OF THE BUILDING WITHOUT PRIOR APPROVAL FROM THE DSA OR GOVERNING BUILDING PERMIT AUTHORITY.

TRUE NORTH

1 SCIENCE ANNEX: SECOND FLOOR FRAMING PLAN

SCALE: 1/8"=1'-0"



SECOND FLOOR FRAMING NOTES

1. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S0.0, S0.1 S1.1, S1.2, S1.3, S1.4, S1.5, S1.6, S1.7.
2. "C" INDICATES BEAM CAMBER.
3. FOR METAL DECK PROPERTIES, ATTACHMENTS AND DETAILS SEE SHEET S1.3.
4. VERIFY ALL DIMENSIONS, ELEVATIONS, COLUMN GRIDS AND INTERIOR AND EXTERIOR GRADES WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION
5. SEE DRAWINGS OTHER THAN STRUCTURAL FOR FLOOR AND WALL FINISHES, SLOPES, DEPRESSIONS, PENETRATIONS, CURBS AND EXACT NUMBERS AND LOCATIONS OF EQUIPMENT SUPPORTED ON THE FLOOR AND/OR SUSPENDED BELOW THE FLOOR. SEE MECHANICAL DRAWINGS FOR FLOOR MOUNTED EQUIPMENT SUPPORTS.
6. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL WALLS.
7. S.A.D. FOR LOCATION AND EXTENT OF TAPERED INSULATION.
8. DENOTES MIN. 2 1/2" LT. WT. TOPPING OVER GALVANIZED METAL DECK (3 SPAN MIN. EXCEPT WHERE NOTED). SEE SHEET S1.3 FOR ADDITIONAL DETAILS (SEE PLAN FOR SLAB ELEVATION). PROVIDE MINIMUM WELDED WIRE REINFORCEMENT 4x4 – W5 x W5 THROUGHOUT. SEE SHEET S0.0 FOR WWF LAP SPLICE LENGTH.

   DENOTES GALVANIZED METAL DECK. SEE PLAN FOR GAGE AND DIRECTION REFER TO SHEET S1.3 FOR ADDITIONAL INFORMATION
9. T.O.W. DENOTES TOP OF WALL ELEVATION.

   T.O. SLAB DENOTES TOP OF CONCRETE TOPPING SLAB.

   T.O. STEEL DENOTES TOP OF STEEL ELEVATION.
10. INDICATES VERTICAL SEISMIC SEPARATION JOINT THROUGH ROOFS, AND SECOND FLOOR SLABS WHERE OCCURS. SEE DRAWINGS FOR WIDTH AND EXTENT.
11. UNLESS OTHERWISE SHOWN, USE C8X11.5 TO SUPPORT ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL EQUIPMENT GREATER THAN 200#, OR DECK OPENING GREATER THAN 24" PERPENDICULAR TO METAL DECK DIRECTION. SEE DETAIL 1/S1.4.
12. SEE DETAIL 12/S1.4 FOR SUPPORT AT SMALL FLOOR & ROOF OPENINGS.
13. INDICATES TYPICAL MECHANICAL/PLUMBING FLOOR PENETRATION. SEE 1 & 12/S1.4 FOR SUPPORT.
14. ALL STEEL BEAMS SHOWN BEAR ON THE CENTER OF STEEL OR CONCRETE COLUMNS OR WALLS (WHERE APPLICABLE) OR SHALL BE EQUALLY SPACED BETWEEN DECK BEARING POINTS, U.N.O.
15. ALL MECHANICAL UNITS AND FLOOR PENETRATIONS SHOWN ARE APPROXIMATE. GENERAL CONTRACTOR TO COORDINATE WITH UNIT MANUFACTURER, ARCHITECTURAL, AND MECHANICAL DRAWINGS FOR ACTUAL SIZE AND LOCATION.
16. [28] INDICATES THE NUMBER OF 3/4" H.A.S. SEE 14/S1.3.
17. INDICATES RECESSED SLAB. RECESS TO BE 3" U.O.N. S.A.D. FOR CURBS AND DRAIN WHERE THEY OCCUR.

    INDICATES SLAB SLOPED TO DRAIN 1 1/4" MAX. S.A.D. FOR CURBS, SLOPE, & DRAIN.
18. INDICATES DIAGONAL BRACE UP FROM 2ND FLOOR.
19. INDICATES STEEL WELDED MOMENT CONNECTION WITH REDUCED BEAM SECTION PER SHEET S1.7. SEE ALSO S1.5 AND S1.6 FOR CANTILEVER BEAM AND COLUMN CONNECTION TO PERPENDICULAR BEAMS AND COLUMNS AT NON-MOMENT FRAME COLUMN BAYS.
20. STEEL BEAMS WHICH HAVE SPECIFIED OR INCIDENTAL SHOP CAMBER SHALL BE PLACED WITH CAMBER UP IN ALL LOCATIONS U.O.N.
21. INDICATES VERCO SHEAR TRANS II (OR EQUAL) REQUIRED AT ALL DECK SUPPORTS. SEE PLAN.
22. INDICATES BEAM TO COLUMN OR BEAM TO BEAM COLLECTOR CONNECTION. SEE DET. SHEET S1.6.
23. INDICATES SLIP CRITICAL CONNECTION. TIGHTEN PER TABLE J3.7 AISC MANUAL OF STEEL CONSTRUCTION (LATEST EDITION)
24. INDICATES TYPICAL ROOF DRAIN. SEE ARCH/MECH/PLUMBING DRAWINGS AND 12/S1.4 FOR DECK SUPPORT.
25. SEE SA2.01 FOR TYP. FOUNDATION NOTES & SCHEDULE.
26. TOP OF FOOTING ELEVATION IS 1'-4" BELOW TOP OF SLAB UNLESS NOTED OTHERWISE.

RFI 178 Okay to run conduit in metal decks

B

A

KEY PLAN

REVIEW SET

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SKYLINE COLLEGE
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3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

DRAWING TITLE
BUILDING A – SECOND FLOOR FRAMING PLAN
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
SA2.02

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20050420.18275327 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-SA2.02.dwg

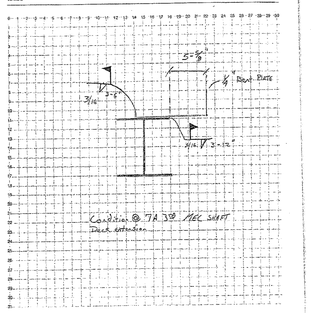
RFI 322

Newport Photon Construction Co.

Memo

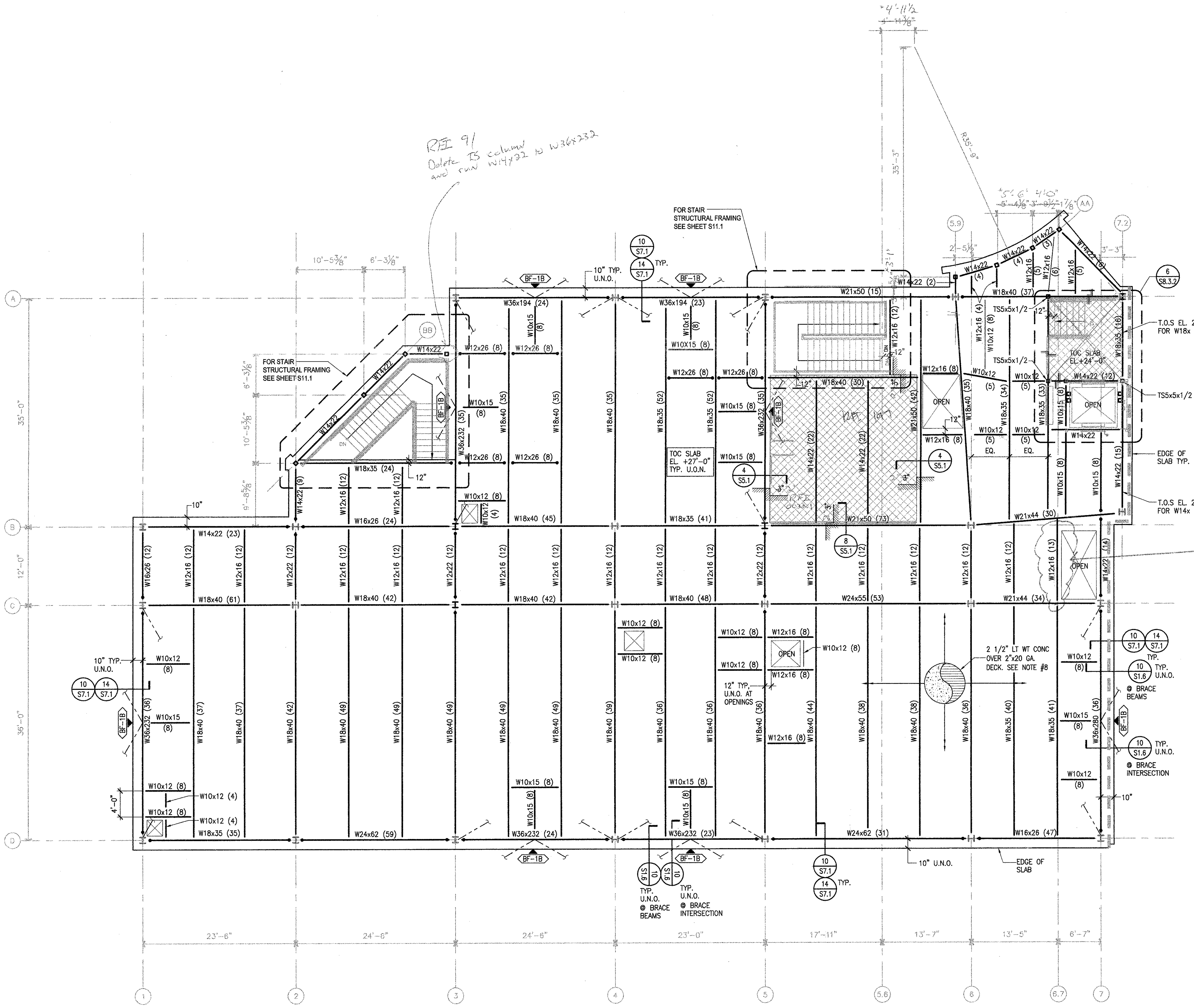
Skyline College — 7/17/05

RFI 0322 — SKETCH A



Condition @ TA 38 MEL SHAFT
Deck extension

Performance!



TRUE NORTH

1 SCIENCE ANNEX: THIRD FLOOR FRAMING PLAN

SCALE:1/8"=1'-0"

THIRD FLOOR FRAMING NOTES

1. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S0.0, S0.1 S1.1, S1.2, S1.3, S1.4, S1.5, S1.6, S1.7.
2. "C" INDICATES BEAM CAMBER.
3. FOR METAL DECK PROPERTIES, ATTACHMENTS AND DETAILS SEE SHEET S1.3.
4. VERIFY ALL DIMENSIONS, ELEVATIONS, COLUMN GRIDS AND INTERIOR AND EXTERIOR GRADES WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION
5. SEE DRAWINGS OTHER THAN STRUCTURAL FOR FLOOR AND WALL FINISHES, SLOPES, DEPRESSIONS, PENETRATIONS, CURBS AND EXACT NUMBERS AND LOCATIONS OF EQUIPMENT SUPPORTED ON THE FLOOR AND/OR SUSPENDED BELOW THE FLOOR. SEE MECHANICAL DRAWINGS FOR FLOOR MOUNTED EQUIPMENT SUPPORTS.
6. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL WALLS.
7. S.A.D. FOR LOCATION AND EXTENT OF TAPERED INSULATION.
8. DENOTES MIN. 2 1/2" LT. WT. TOPPING OVER GALVANIZED METAL DECK (3 SPAN MIN. EXCEPT WHERE NOTED). SEE SHEET S1.3 FOR ADDITIONAL DETAILS (SEE PLAN FOR SLAB ELEVATION). PROVIDE MINIMUM WELDED WIRE REINFORCEMENT 4x4 – W5 x W5 THROUGHOUT. SEE SHEET S0.0 FOR WWF LAP SPLICE LENGTH.

   DENOTES GALVANIZED METAL DECK. SEE PLAN FOR GAGE AND DIRECTION REFER TO SHEET S1.3 FOR ADDITIONAL INFORMATION
9. T.O.W. DENOTES TOP OF WALL ELEVATION.

   T.O. SLAB DENOTES TOP OF CONCRETE TOPPING SLAB.

   T.O. STEEL DENOTES TOP OF STEEL ELEVATION.
10. INDICATES VERTICAL SEISMIC SEPARATION JOINT THROUGH ROOFS, AND SECOND FLOOR SLABS WHERE OCCURS. SEE DRAWINGS FOR WIDTH AND EXTENT.
11. UNLESS OTHERWISE SHOWN, USE C8X11.5 TO SUPPORT ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL EQUIPMENT GREATER THAN 200#, OR DECK OPENING GREATER THAN 24" PERPENDICULAR TO METAL DECK DIRECTION. SEE DETAIL 1/S1.4.
12. SEE DETAIL 12/S1.4 FOR SUPPORT AT SMALL FLOOR & ROOF OPENINGS.
13. INDICATES TYPICAL MECHANICAL/PLUMBING FLOOR PENETRATION. SEE 1 & 12/S1.4 FOR SUPPORT.
14. ALL STEEL BEAMS SHOWN BEAR ON THE CENTER OF STEEL OR CONCRETE COLUMNS OR WALLS (WHERE APPLICABLE) OR SHALL BE EQUALLY SPACED BETWEEN DECK BEARING POINTS, U.N.O.
15. ALL MECHANICAL UNITS AND FLOOR PENETRATIONS SHOWN ARE APPROXIMATE. GENERAL CONTRACTOR TO COORDINATE WITH UNIT MANUFACTURER, ARCHITECTURAL, AND MECHANICAL DRAWINGS FOR ACTUAL SIZE AND LOCATION.
16. [28] INDICATES THE NUMBER OF 3/4" H.A.S. SEE 14/S1.3.
17. INDICATES RECESSED SLAB. RECESS TO BE 3" U.O.N. S.A.D. FOR CURBS AND DRAIN WHERE THEY OCCUR.

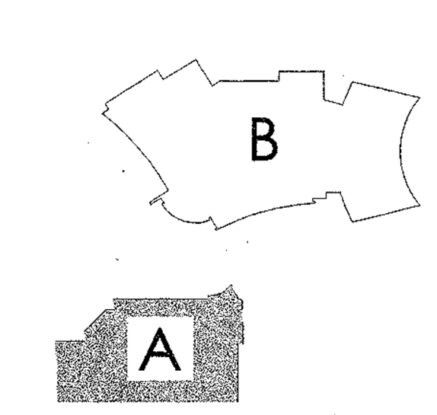
    INDICATES SLAB SLOPED TO DRAIN 1 1/4" MAX. S.A.D. FOR CURBS, SLOPE, & DRAIN.
18. INDICATES DIAGONAL BRACE UP FROM 2ND OR 3RD FLOOR.

    INDICATES DIAGONAL BRACE DOWN FROM ROOF, OR 3RD, OR SECOND LEVEL.
19. INDICATES STEEL WELDED MOMENT CONNECTION WITH REDUCED BEAM SECTION PER SHEET S1.7. SEE ALSO S1.5 AND S1.6 FOR CANTILEVER BEAM AND COLUMN CONNECTION TO PERPENDICULAR BEAMS AND COLUMNS AT NON-MOMENT FRAME COLUMN BAYS.
20. STEEL BEAMS WHICH HAVE SPECIFIED OR INCIDENTAL SHOP CAMBER SHALL BE PLACED WITH CAMBER UP IN ALL LOCATIONS U.O.N.
21. INDICATES VERCO SHEAR TRANS II (OR EQUAL) REQUIRED AT ALL DECK SUPPORTS. SEE PLAN.
22. INDICATES BEAM TO COLUMN OR BEAM TO BEAM COLLECTOR CONNECTION. SEE DET. SHEET S1.6.
23. INDICATES SLIP CRITICAL CONNECTION. TIGHTEN PER TABLE J3.7 AISC MANUAL OF STEEL CONSTRUCTION (LATEST EDITION)
24. INDICATES TYPICAL ROOF DRAIN. SEE ARCH/MECH/PLUMBING DRAWINGS AND 12/S1.4 FOR DECK SUPPORT.
25. SEE SA2.01 FOR TYP. FOUNDATION NOTES & SCHEDULE.

RFI 178 Okay to run conduit in metal decks

RFI 322 SEE DARK PAGE FOR DETAIL

PCO #11: RFIs 29, 32, 40, 71, 94.1, 124, 126, 128, 129, 132, 151, 154, 156, 162.1, 165, 167, 169, 170, 176, 177.1, 179, 180, 190 and 191. STRUCTURAL STEEL MODIFICATIONS DUE TO UNFORESEEN IN FABRICATION OR INSTALLATION.



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Hensel Phelps Construction Co.

REGISTERED PROFESSIONAL ENGINEER COLIN BLANEY NO. S4377 EXP. 6/30/05 STRUCTURAL STATE OF CALIFORNIA

SKYLINE COLLEGE

STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING

3300 COLLEGE DRIVE, SAN BRUNO, CA 94066

INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

DRAWING TITLE

BUILDING A – THIRD FLOOR FRAMING PLAN

DATE: 10.21.04

PROJECT # 04043

SHEET NUMBER

SA2.03

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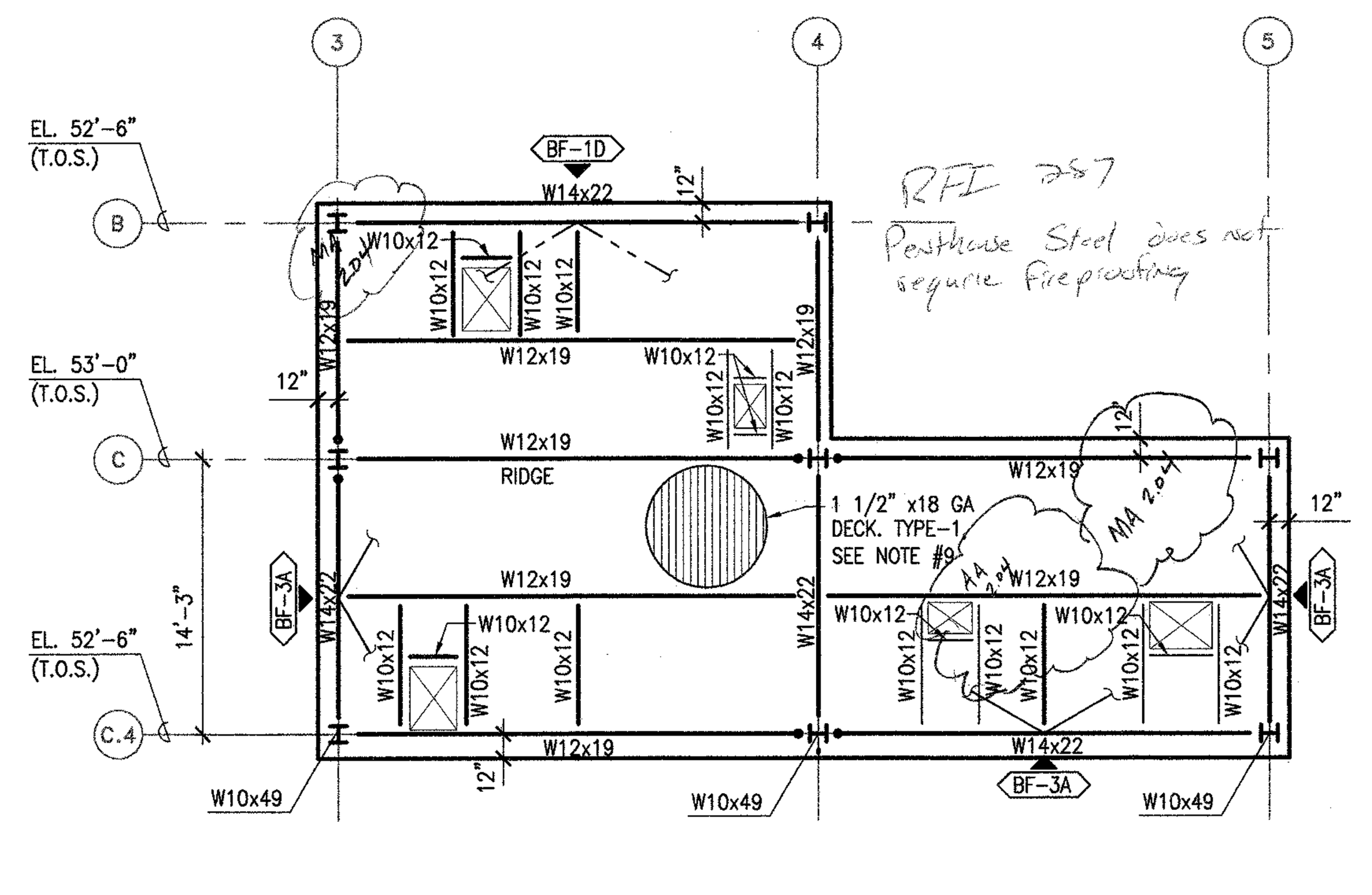
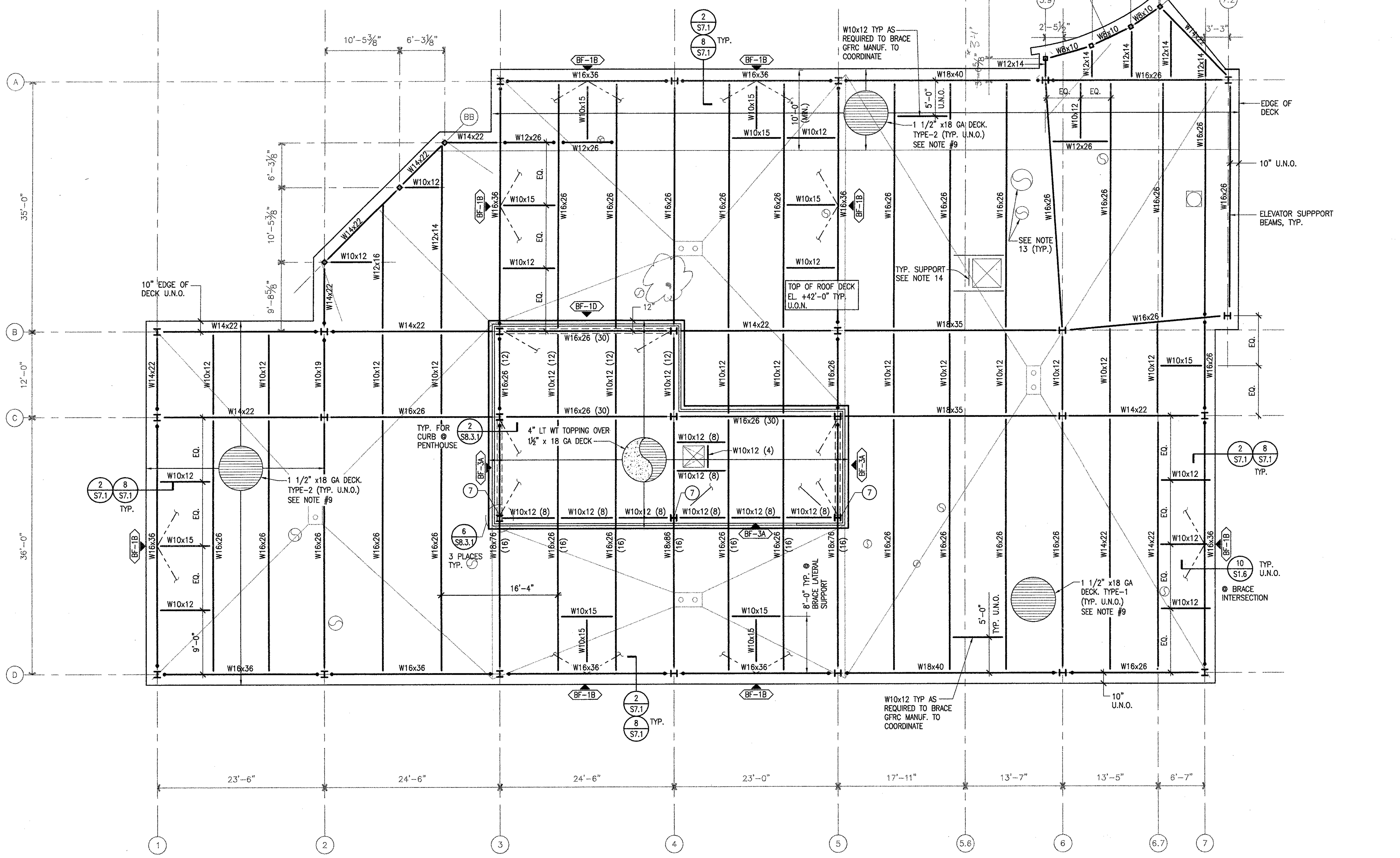


2 PENTHOUSE ROOF FRAMING PLAN
SCALE: 1/8"=1'-0"



1 SCIENCE ANNEX: ROOF FRAMING PLAN
SCALE: 1/8"=1'-0"

PCO#11: RFIs 29, 32, 48, 91, 94.1, 124, 126, 128, 129, 132, 151, 154, 156, 162.1, 165, 167, 169, 170, 176, 177.1, 179, 186, 190 and 191.
STRUCTURAL STEEL MODIFICATIONS DUE TO MINOR ERRORS IN FABRICATION OR INSTALLATION.

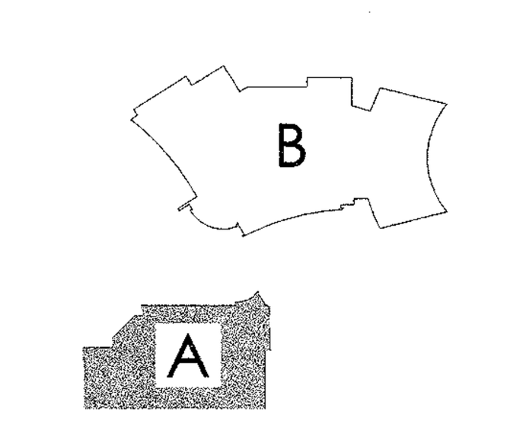
ROOF FRAMING NOTES

1. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S0.0, S0.1, S1.1, S1.2, S1.3, S1.4, S1.5, S1.6, S1.7
2. "C" INDICATES BEAM CAMBER.
3. FOR METAL DECK PROPERTIES, ATTACHMENTS AND DETAILS SEE SHEET S1.3.
4. VERIFY ALL DIMENSIONS, ELEVATIONS, COLUMN GRIDS AND INTERIOR AND EXTERIOR GRADES WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION
5. SEE DRAWINGS OTHER THAN STRUCTURAL FOR FLOOR AND WALL FINISHES, SLOPES, DEPRESSIONS, PENETRATIONS, CURBS AND EXACT NUMBERS AND LOCATIONS OF EQUIPMENT SUPPORTED ON THE ROOF AND/OR SUSPENDED BELOW THE ROOF. SEE MECHANICAL DRAWINGS FOR ROOF MOUNTED EQUIPMENT SUPPORTS.
6. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL WALLS.
7. S.A.D. FOR LOCATION AND EXTENT OF TAPERED INSULATION.
8. SEE 5/S1.4 & 7/S1.4 FOR SUPPORT OF ALL AIR HANDLING UNITS.
9. DENOTES LT WT. TOPPING OVER GALVANIZED METAL DECK (3 SPAN MIN. EXCEPT WHERE NOTED). PROVIDE MINIMUM WELDED WIRE REINFORCEMENT 4X4–W5 X W5 THROUGHOUT. SEE PLAN FOR THICKNESS. SEE S0.0 FOR WWF LAP SPLICE LENGTHS.

   DENOTES GALVANIZED METAL DECK. SEE PLAN FOR GAGE AND DIRECTION REFER TO SHEET S1.3 FOR ADDITIONAL INFORMATION
10. T.O. SLAB — DENOTES TOP OF CONCRETE TOPPING SLAB.

    T.O. STEEL — DENOTES TOP OF STEEL ELEVATION.
11. INDICATES VERTICAL SEISMIC SEPARATION JOINT THROUGH ROOFS, AND SECOND FLOOR SLABS WHERE OCCURS. SEE ARCHITECTURAL DRAWINGS FOR WIDTH AND EXTENT.
12. UNLESS OTHERWISE SHOWN, USE C8X11.5 TO SUPPORT ALL FLOOR MOUNTED OR SUSPENDED MECHANICAL EQUIPMENT GREATER THAN 200#, OR DECK OPENING GREATER THAN 24" PERPENDICULAR TO METAL DECK DIRECTION. SEE DETAIL 1/S1.4
13. SEE DETAIL 12/S1.4 FOR SUPPORT AT SMALL FLOOR & ROOF OPENINGS.
14. INDICATES TYPICAL MECHANICAL/PLUMBING ROOF PENETRATION. SEE 1 & 12/S1.4 FOR SUPPORT.
15. ALL STEEL BEAMS SHOWN BEAR ON THE CENTER OF STEEL OR CONCRETE OR CMU COLUMNS (WHERE APPLICABLE) AND SHALL BE EQUALLY SPACED BETWEEN BEARING POINTS & GRIDLINES AS SHOWN U.N.O.
16. ALL MECHANICAL UNITS AND AND PENETRATIONS SHOWN ARE APPROXIMATE. GENERAL CONTRACTOR TO COORDINATE WITH UNIT MANUFACTURER, ARCHITECTURAL, AND MECHANICAL DRAWINGS FOR ACTUAL SIZE AND LOCATION.
17. – INDICATES AREA OPEN TO BELOW.
18. [28] – INDICATES THE NUMBER OF 3/4" H.A.S., SEE 14/S1.3. (SPACE EQUALLY IN PORTION OF BEAM W/ CONC. DECK).
19. INDICATES CMU BEARING OR NON-BEARING WALL BELOW.
20. INDICATES BRACE FRAME HORIZONTAL MEMBER. SEE FOUNDATION PLANS FOR BRACED FRAME TYPE.
21. INDICATES DIAGONAL BRACE UP FROM FOUNDATION OR 2ND FLOOR.
22. INDICATES DIAGONAL BRACE DOWN FROM ROOF.
23. INDICATES STEEL WELDED MOMENT CONNECTION WITH REDUCED BEAM SECTION PER SHEET S1.7. SEE ALSO S1.5 AND S1.6 FOR CANTILEVER BEAM AND COLUMN CONNECTION TO PERPENDICULAR BEAMS AND COLUMNS AT NON-MOMENT FRAME COLUMN BAYS.
24. STEEL BEAMS WHICH HAVE SPECIFIED OR INCIDENTAL SHOP CAMBER SHALL BE PLACED WITH CAMBER UP IN ALL LOCATIONS U.O.N.
25. INDICATES BEAM TO COLUMN OR BEAM TO BEAM COLLECTOR CONNECTION. SEE SHEET S1.6.
26. INDICATES SLIP CRITICAL CONNECTION. TIGHTEN PER TABLE J3.7 AISC MANUAL OF STEEL CONSTRUCTION (LATEST EDITION)
27. INDICATES TYPICAL ROOF DRAIN. SEE ARCH/MECH/PLUMBING DRAWINGS AND 12/S1.4 FOR DECK SUPPORT.

RFI 178 okay to run conduit in metal deck



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ISSUED FOR:	DATE:
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DRAWING TITLE
BUILDING A – ROOF FRAMING PLAN
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
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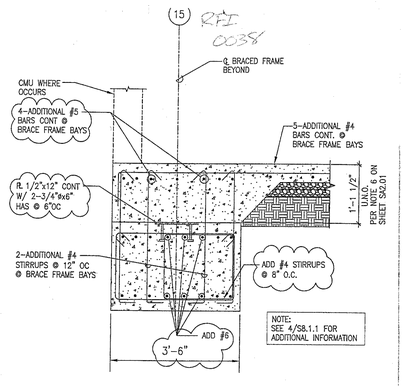
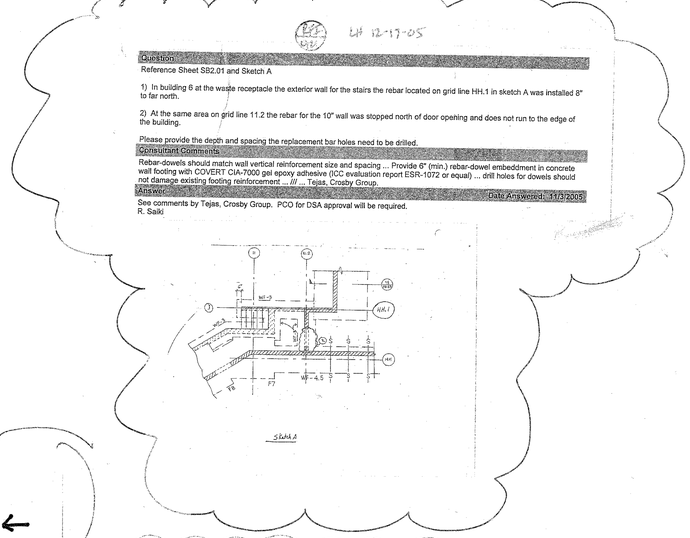
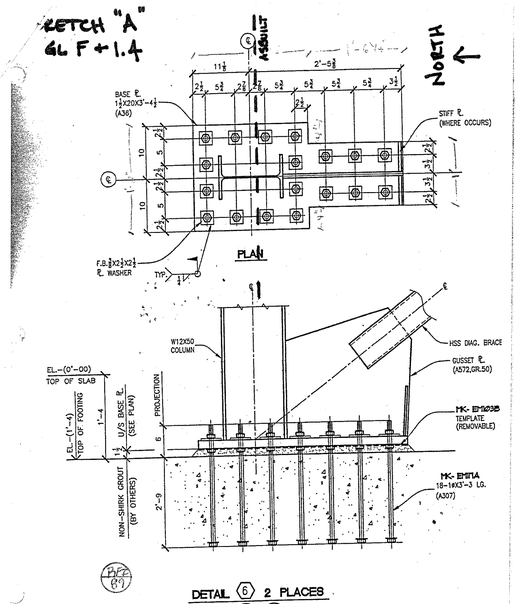
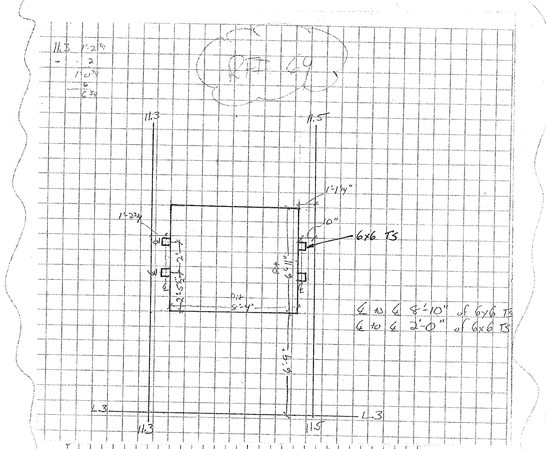
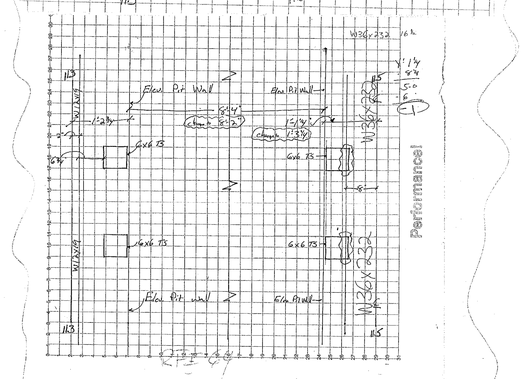


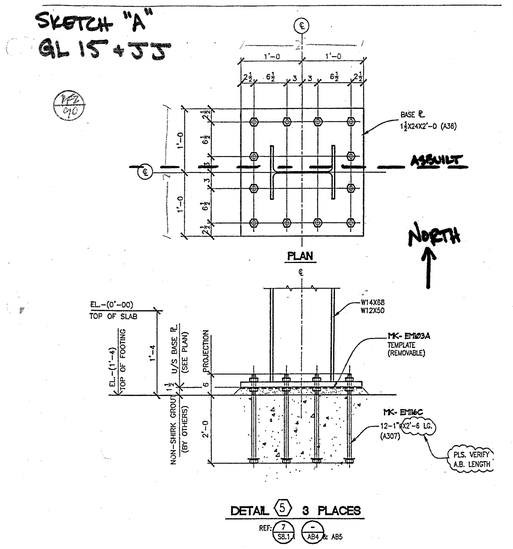
1 SECTION @ GRADE BEAM BETWEEN LINES J & L
SCALE: N.T.S.











9-2-05 LH

NOTE:

1. FOR FOUNDATION NOTES, SEE SHEET SA2.01.
2. FOR STEEL COLUMN SCHEDULE, SEE SHEET SA2.01.
3. FOR SPREAD FOOTING SCHEDULE, SEE SHEET SA2.01.
4. FOR CONTINUOUS FOOTING SCHEDULE, SEE SHEET SA2.01
5. FOR CONCRETE PILASTER SCHEDULE, SEE SHEET SA2.01.
6. FOR BRACED AND MOMENT FRAME CONFIGURATIONS, SEE S5.1.
7. F5 INDICATES FOOTING TYPE FOR SCHEDULE ABOVE
8. FOR GRADE BEAM SIZE, SEE SA2.01.
9. FOR COLUMN LOCATIONS & ORIENTATIONS NOT SHOWN HERE, SEE ARCH DWGS.
10. EL. 0'-0" CORRESPONDS TO ~~659'-0"~~. 659.40' RFI 0006

S.O.G.:

5" CONC. W/ #4 @ 16"o.c. E.W. OVER 15-MIL THICK MIN. VAPOR BARRIER, OVER 4" OF FREE DRAINING GRAVEL, OVER 8" MIN. NON-EXPANSIVE COMPACTED FILL

THE SLAB ON GRADE PERFORMS STRUCTURAL FUNCTION. DO NOT REMOVE / DAMAGE DURING SERVICE LIFE OF THE BUILDING WITHOUT PRIOR APPROVAL FROM THE DSA OR GOVERNING BUILDING PERMIT AUTHORITY.

1 STUDENT CENTER: FIRST FLOOR PLAN

SCALE 1/8" = 1'-0"

REVIEW SET

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Hensel Phelps Construction Co.

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COLIN BLANEY
NO. S4377
EXP. 6/30/05
STRUCTURAL
STATE OF CALIFORNIA

SKYLINE COLLEGE

STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL # 01-106658
AC — FLS — SSS DR
DATE 04/21/2005

DRAWING TITLE
BUILDING B - FIRST FLOOR PLAN
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
SB2.01
drawn by: AY

20050420.17142514 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-SB2.01.dwg

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Question

Reference Increment One drawings, sheet SB2.02 as well as Bambacigno Shop drawings. See also attached sketch.

Along gridline 6 of building 6 there are several cantilevers that extend to the west to support the outermost beams. On the south edge of these cantilevers at gridlines 6/B and 6/D, the web from the incoming beam has been bent slightly in order to bolt up flush with the shear tab. These beams bolting into the cantilevers are beams A2355 and A2234.

The inspector is concerned with this bending of the web and its affect on the beam and its connection to the cantilever at these locations.

Please clarfiy if this issue is a problem; if so, please offer any steps that may be needed in order to make corrections.

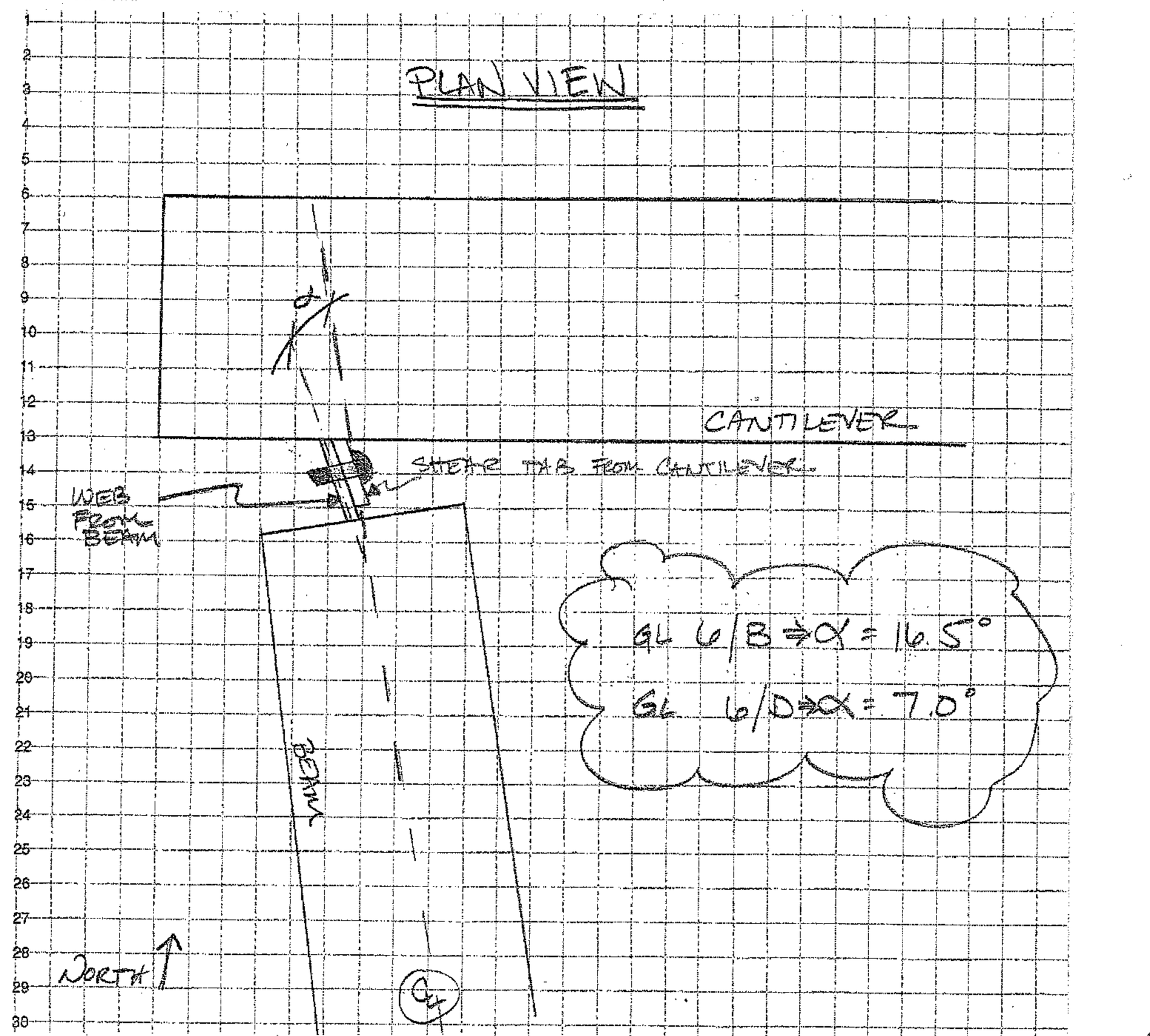
Consultant Comments

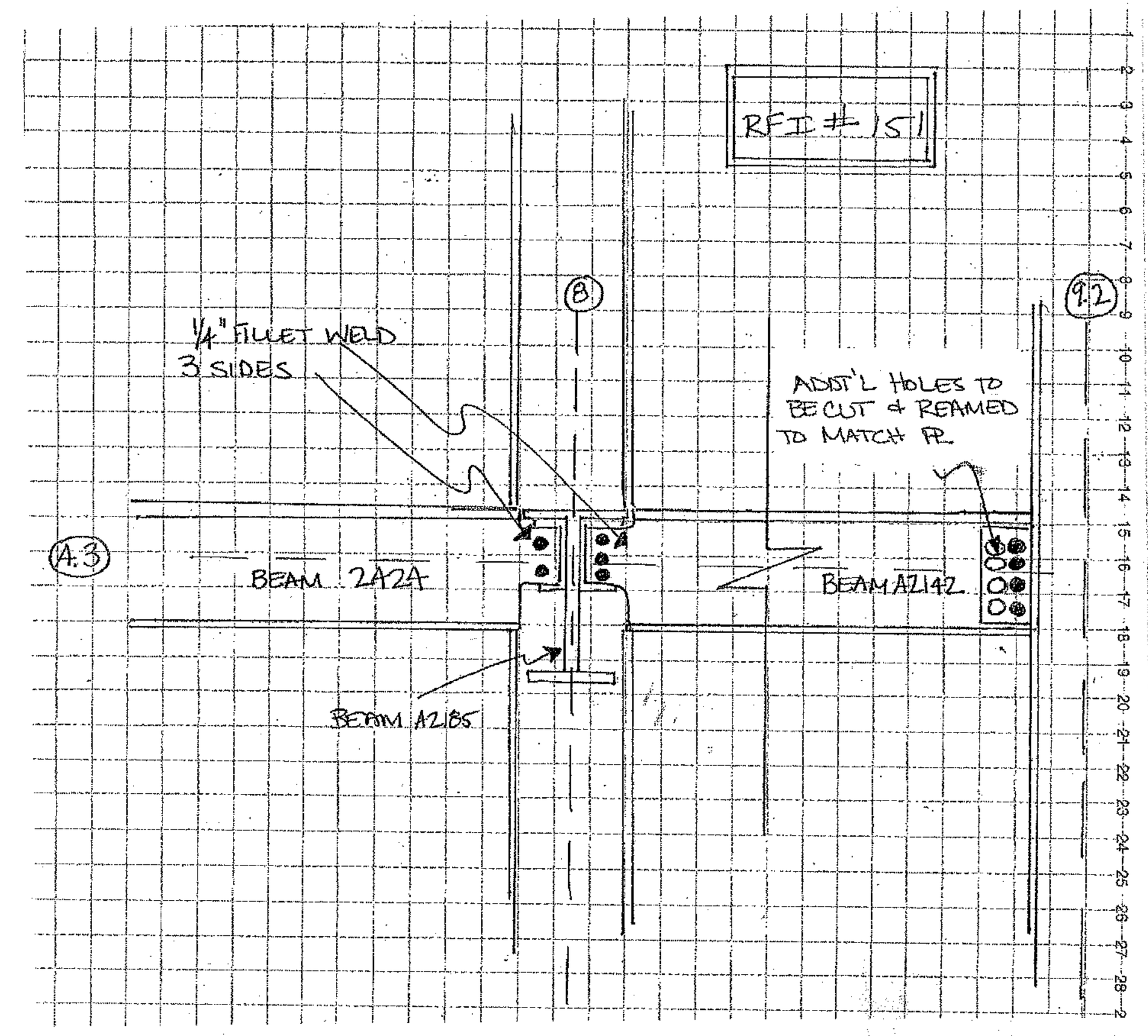
It is NOT acceptable to have bent steel plates. This may have yielded the beam web and potentially damaged shear tab too. Please do following: A. cut and replace existing shear tab plate attached to cantilever beams, B. cut bent web-extension plate from W12x long beam west of line 6, C. attach a new 3/8" thk x 12" long x 10.5" deep web-extension plate to web of this beam with a 5/16" fillet weld on three sides, 6" at top horiz., 10.5" vert., and 6" at bot horiz. D. The new web-extension plate should have required holes to match shear-tab plate holes per design drawings ... ///... Tejas, CrosbyGroup.

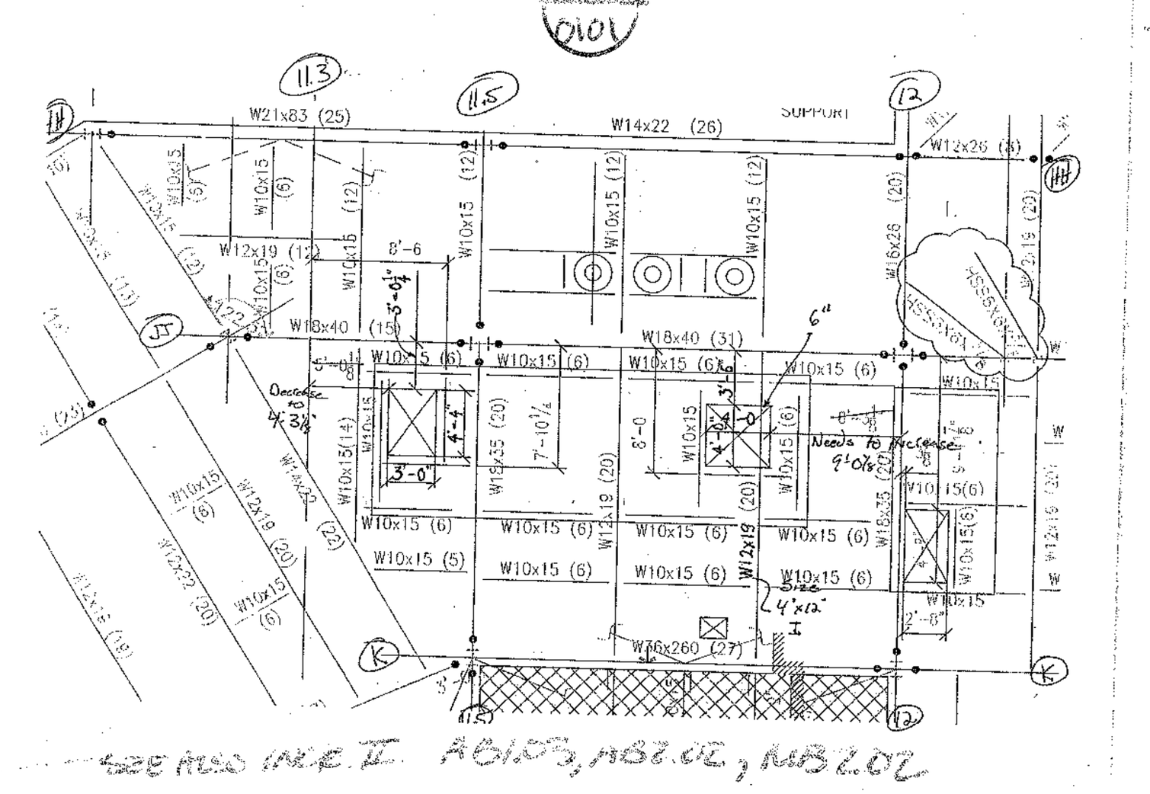
Answer

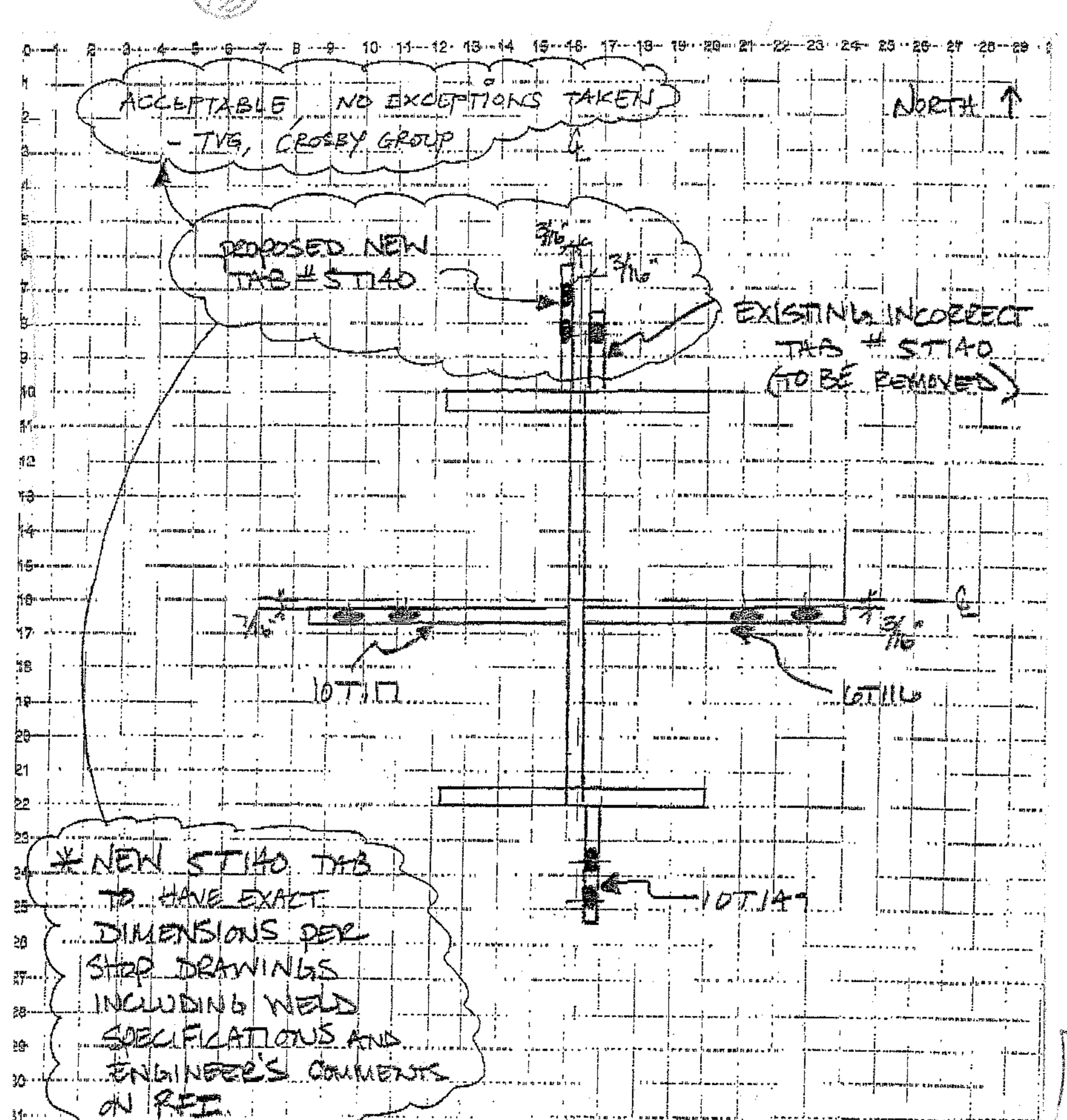
Date Answered: 12/12/2005

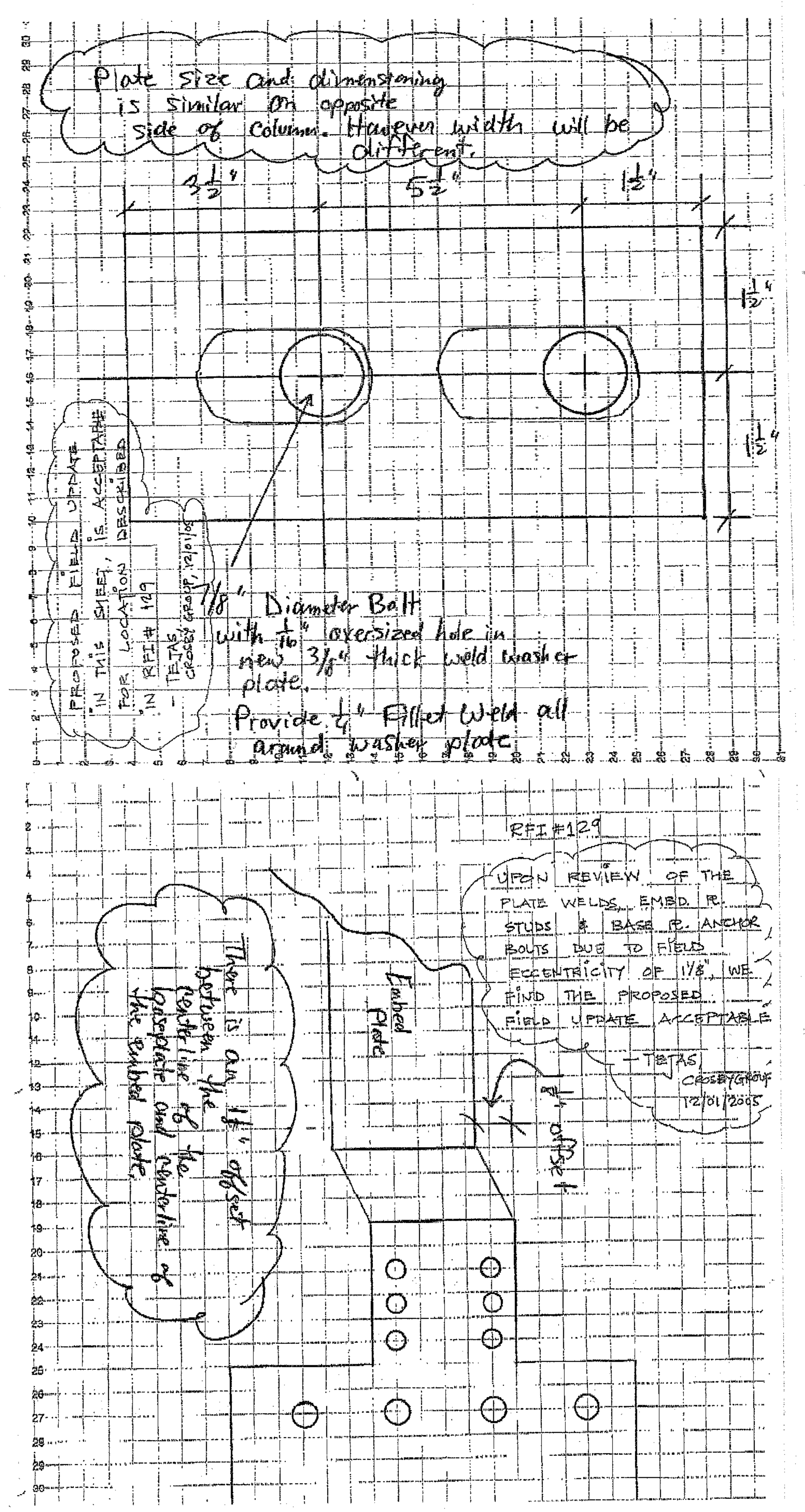
See comments from Tejas, Crosby Group. A PCO for DSA approval will be required. Follow up with documentation for repair for review and approval by Crosby Group and submittal to DSA.
R. Saiki

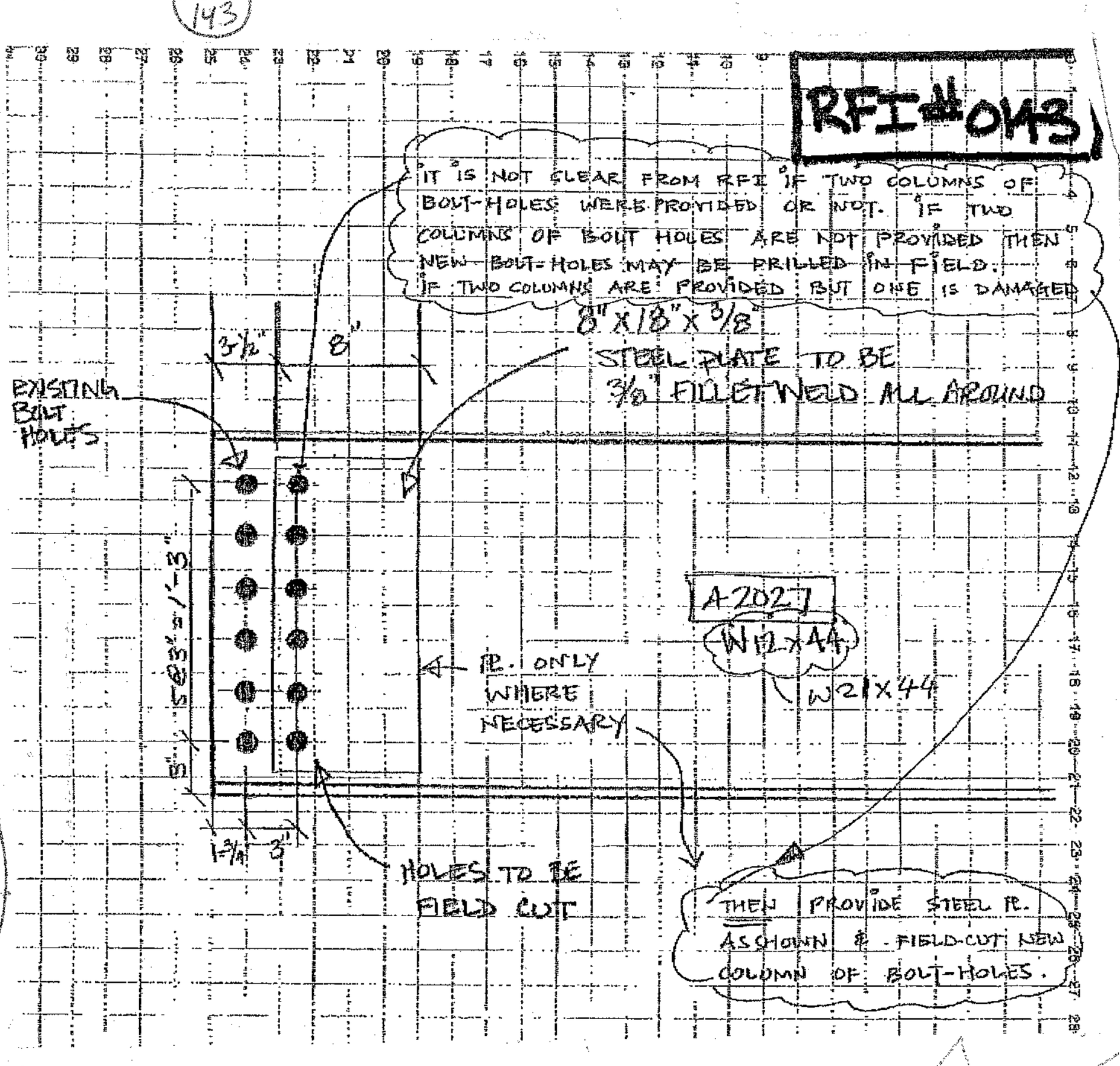


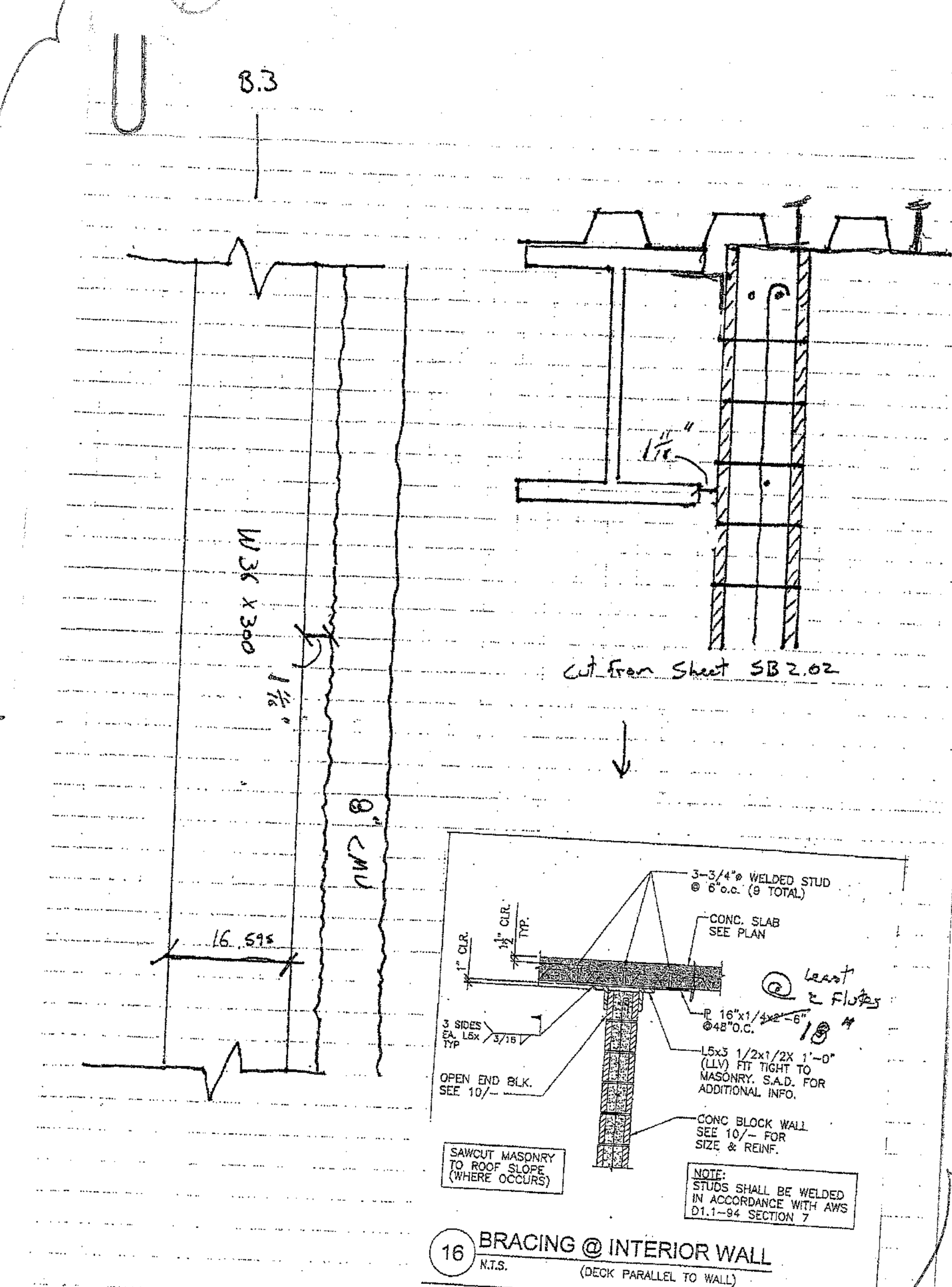


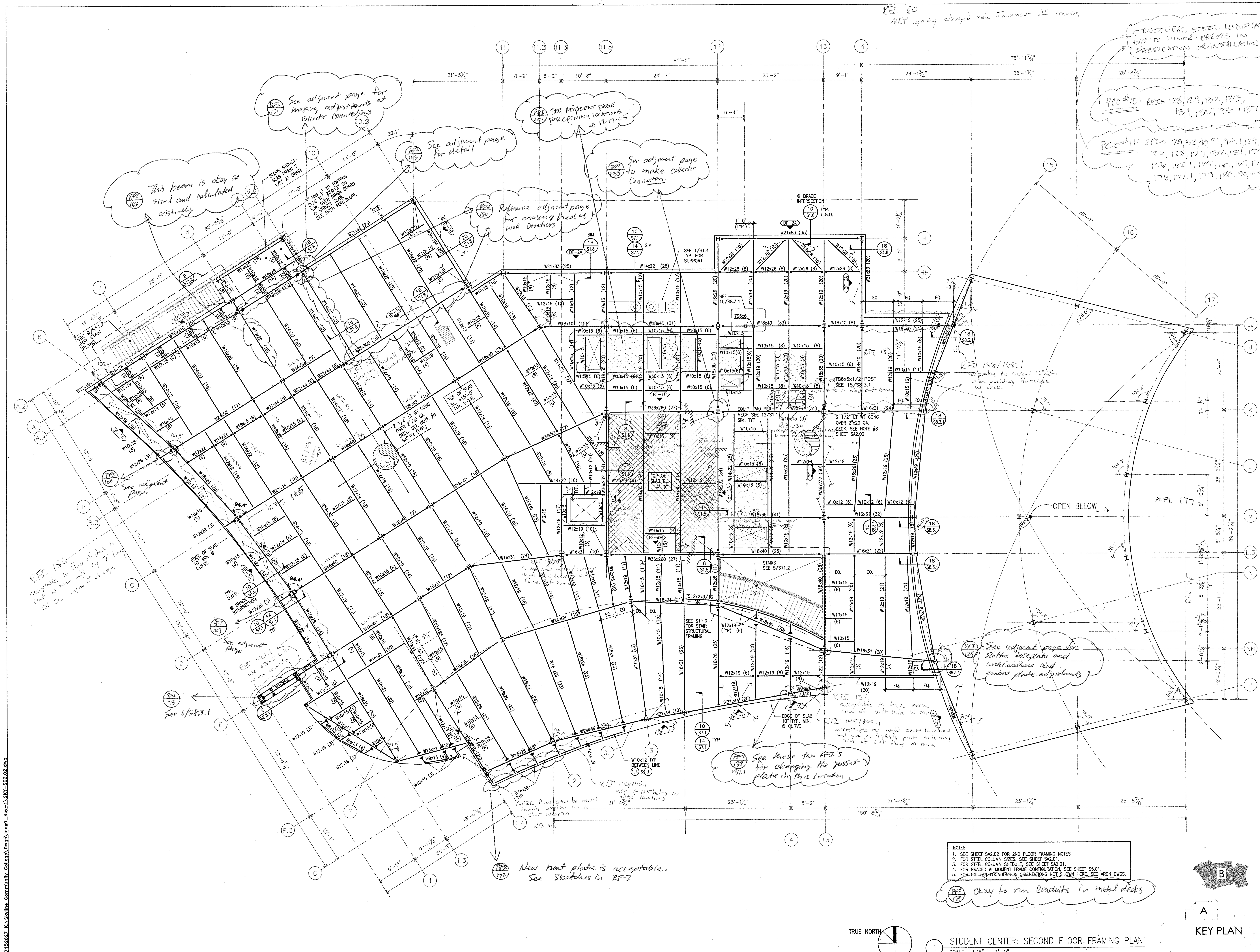











RFI 60 MEP opening changed see Increment II framing
STRUCTURAL STEEL MODIFICATIONS DUE TO MINOR ERRORS IN FABRICATION OR INSTALLATION.
PCO #10: RFIs 128, 129, 132, 133, 134, 135, 136 + 137
PCO #11: RFIs 29, 32, 40, 91, 94.1, 124, 126, 128, 129, 132, 151, 154, 156, 162.1, 165, 167, 169, 170, 176, 177.1, 179, 186, 190, 191
See adjacent page for making adjustments at collector connections
SEE ADJACENT PAGE FOR OPENING LOCATIONS.
See adjacent page for detail
See adjacent page to make collector connection.
This beam is okay as sized and calculated originally
Reference adjacent page for missing bead at wall condition
SLOPE STRUCT. SLAB DRAIN 2 1/2" AT DRAIN
5" MIN LT WT TOPPING SLAB W/ #3@12" OC E.W. OVER DRAIN BOARD & STRUCT SLAB. SEE ARCH FOR SLOPE
BRACE INTERSECTION
SEE 1/S1.4 TYP. FOR SUPPORT
SEE 9/S11.2 FOR STAIR PLAN
TOP OF SLAB EL +15'-0" TYP. U.O.N.
2 1/2" LT WT CONC OVER 2"x20 GA. DECK. SEE NOTE #8 SHEET SA2.02 (TYP.)
EQUIP. PAD PER MECH SEE 12/S1.1 SIM. TYP.
TS6x6x1/2 POST SEE 15/S8.3.1
TOP OF SLAB EL +14'-9"
OPEN BELOW
STAIRS SEE 5/S11.2
SEE S11.0 FOR STAIR STRUCTURAL FRAMING
EDGE OF SLAB 10" MIN. CURVE
EDGE OF SLAB 10" TYP. MIN. @ CURVE
W10x12 TYP. BETWEEN LINE 1.4 & 3
See adjacent page
See 8/S8.3.1
See adjacent page for slotted baseplate and weld washers and embed plate adjustments
RFI 131 acceptable to leave extra row of bolt holes in beam
RFI 145/145.1 acceptable to weld beam to column
See these two RFI's for changing the gusset plate in this location
RFI 188/188.1 acceptable to screw 12" O.C. with welding flat stock to deck.
New bent plate is acceptable. See sketches in RFI
Okay to run conduits in metal decks
TRUE NORTH
KEY PLAN

1 STUDENT CENTER: SECOND FLOOR FRAMING PLAN
SCALE 1/8" = 1'-0"

NOTES:
1. SEE SHEET SA2.02 FOR 2ND FLOOR FRAMING NOTES
2. FOR STEEL COLUMN SIZES, SEE SHEET SA2.01.
3. FOR STEEL COLUMN SHEDULE, SEE SHEET SA2.01.
4. FOR BRACED & MOMENT FRAME CONFIGURATION, SEE SHEET S5.01.
5. ~~FOR COLUMN LOCATIONS & ORIENTATIONS NOT SHOWN HERE, SEE ARCH DWGS.~~

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SKYLINE COLLEGE
STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

DRAWING TITLE
BUILDING B - SECOND FLOOR FRAMING PLAN
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
SB2.02

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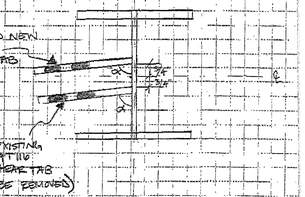
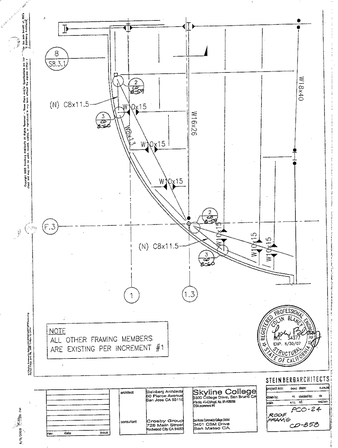
NEW TAB @ ATTIC TO HAVE EXACT DIMENSIONS FOR SHOP DRAWINGS. INCLUDING CONNECTION ANGLE INTO COLUMN. SEE ENGINEER'S RESPONSE FOR WELDS SPECIFICATIONS.

NORTH

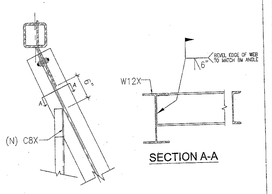


ACCEPTABLE, NO EXCEPTIONS TAKEN
-T.V.G. CROSBY GROUP

*NOTE: ADDITIONAL SHEAR TABS ON COLUMN NOT SHOWN.



NOTE
ALL OTHER FRAMING MEMBERS ARE EXISTING PER INCREMENT #1



2 DETAIL
N.T.S.

architect	Steinberg Architects 251 Pancho Avenue San Jose CA 95110	Skyline College 3300 College Drive, San Bruno CA Public Access to Arabia Conference Ctr	STEINBERGARCHITECTS
consultant	Crosby Group 1228 Main Street Rockwell City CA 94965	Skyline Campus Map Grid 3300 College Drive San Mateo CA	DETAIL PCO-24 CO-659

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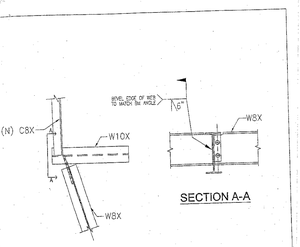
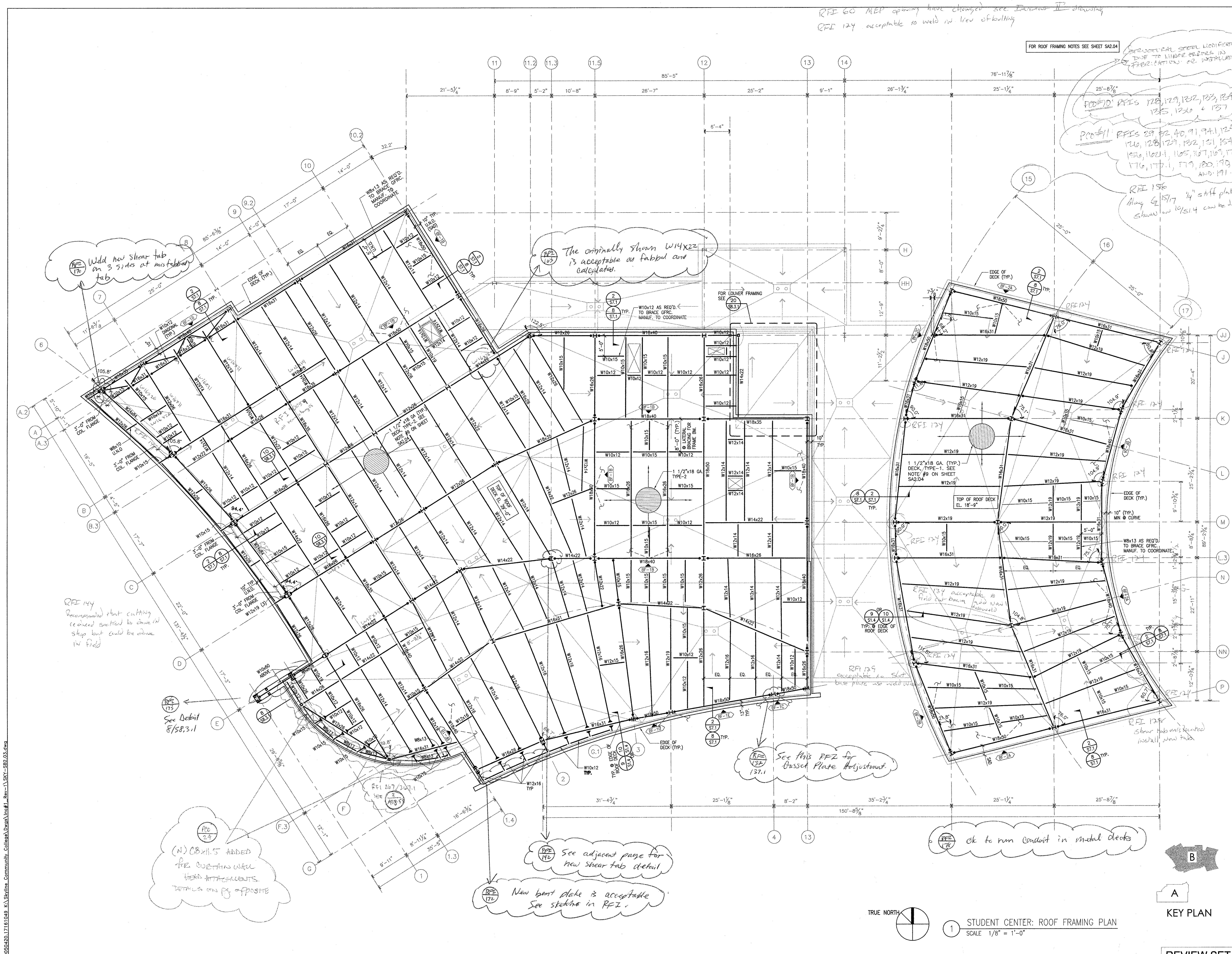


3 DETAIL
N.T.S.

architect	Steinberg Architects 251 Pancho Avenue San Jose CA 95110	Skyline College 3300 College Drive, San Bruno CA Public Access to Arabia Conference Ctr	STEINBERGARCHITECTS
consultant	Crosby Group 1228 Main Street Rockwell City CA 94965	Skyline Campus Map Grid 3300 College Drive San Mateo CA	DETAIL PCO-24 CO-660

2.5 ADDED C8X11.5 for CURTAIN WALL HEAD ATTACHMENT.



1 STUDENT CENTER: ROOF FRAMING PLAN
SCALE 1/8" = 1'-0"

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3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

DRAWING TITLE
BUILDING B – ROOF FRAMING PLAN
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
SB2.03

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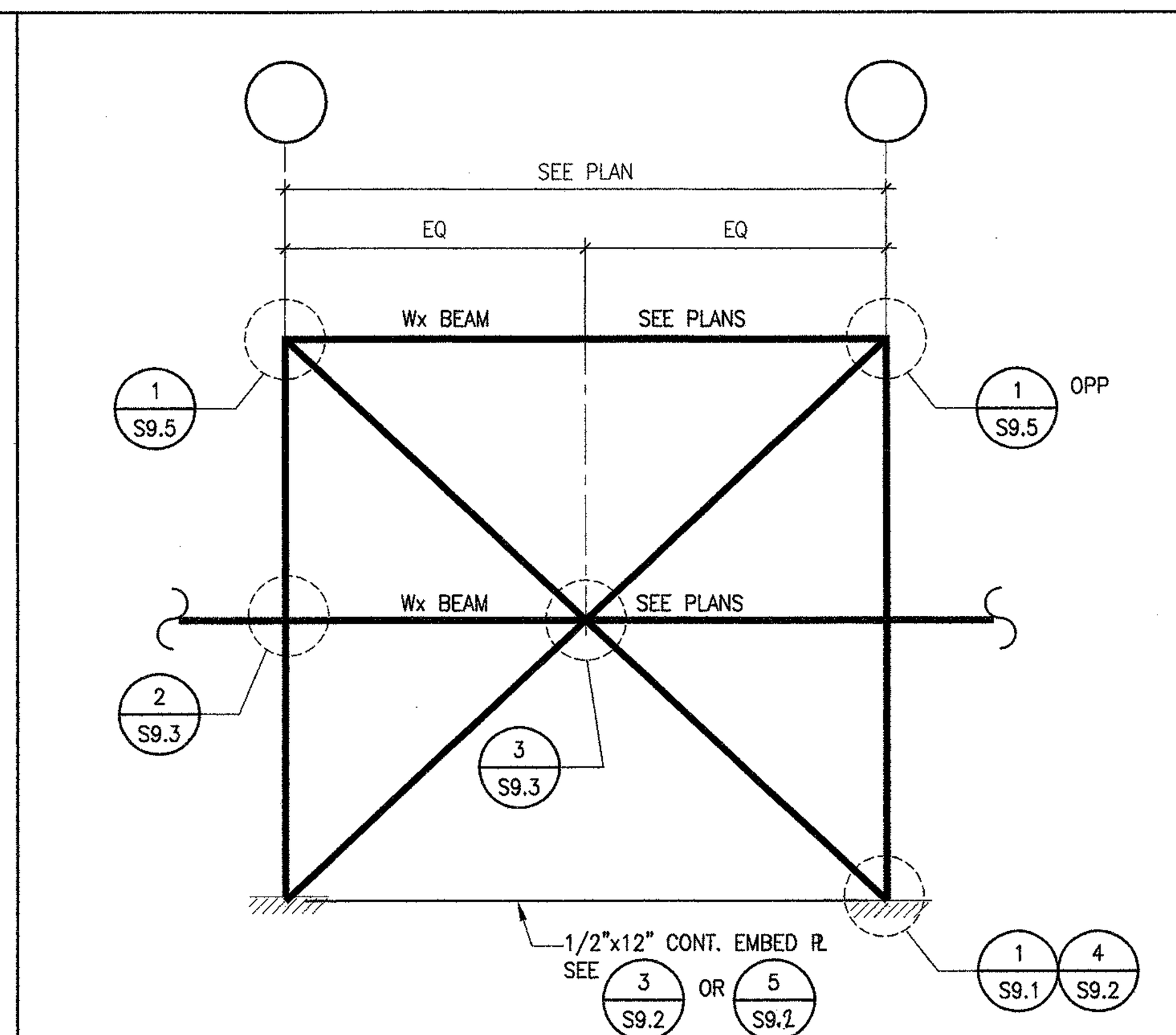

9 BRACE FRAME TYPE 1E
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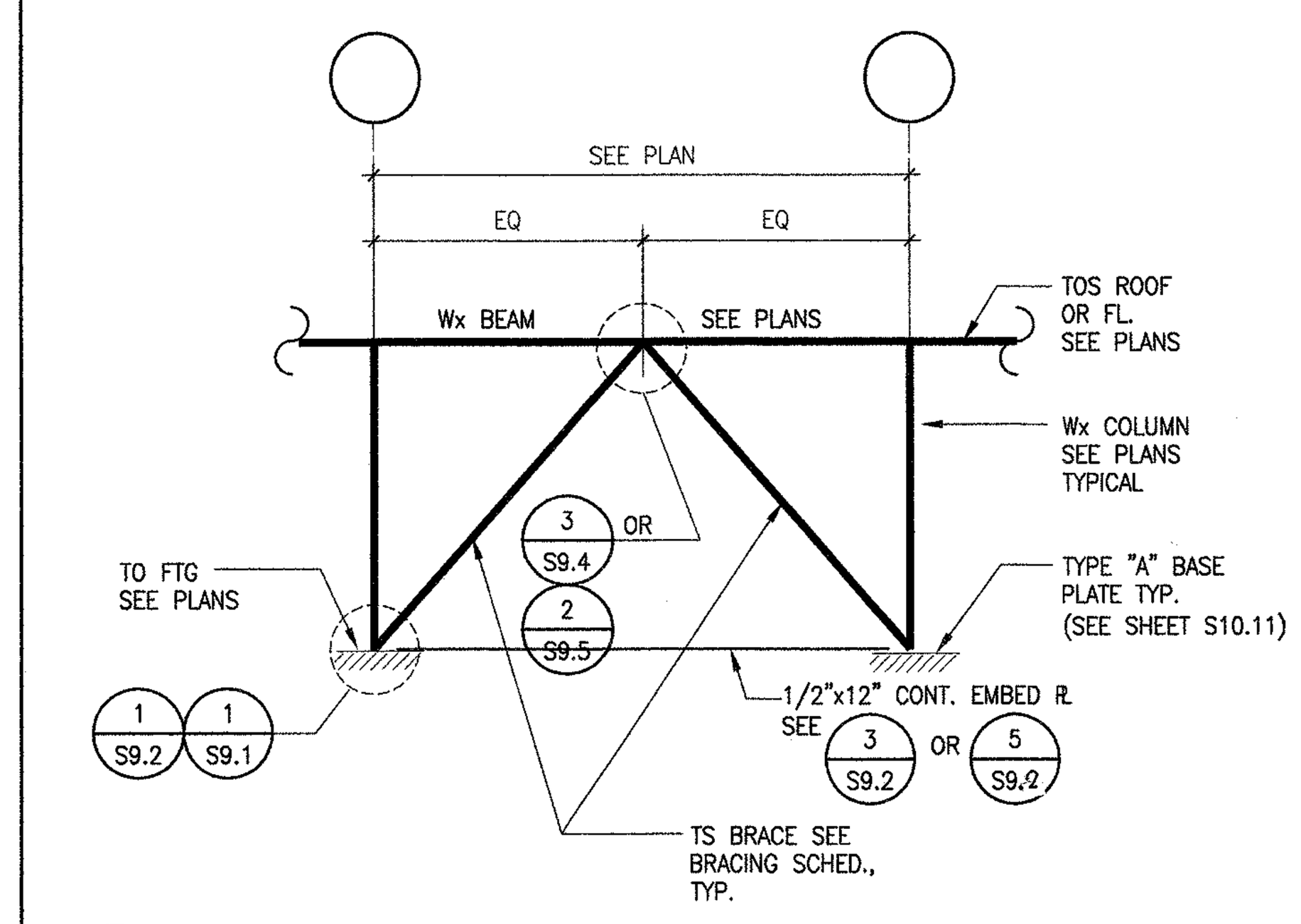

5 BRACE FRAME TYPE 2A
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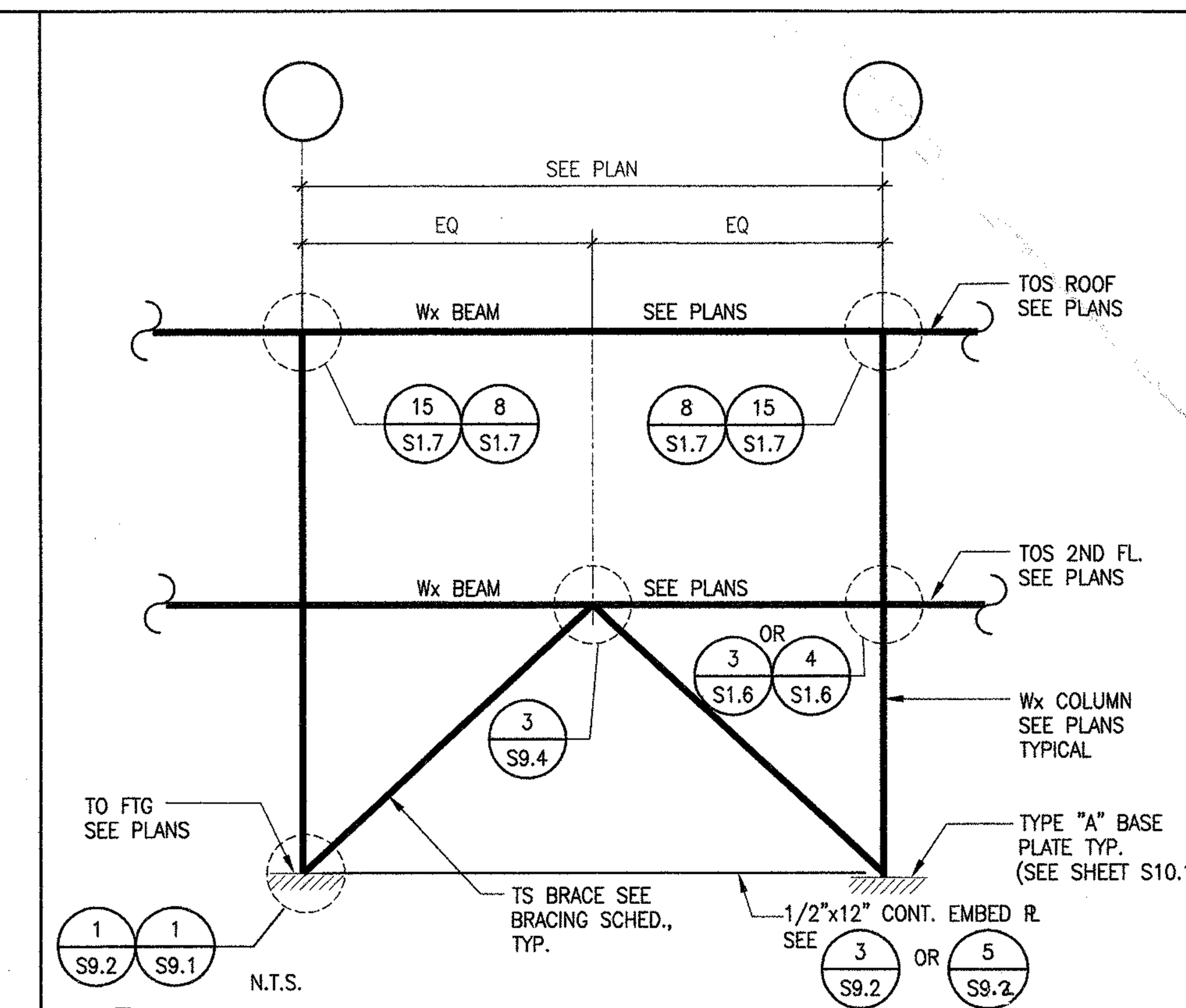

1 MOMENT/BRACE FRAMING TYPE 1A
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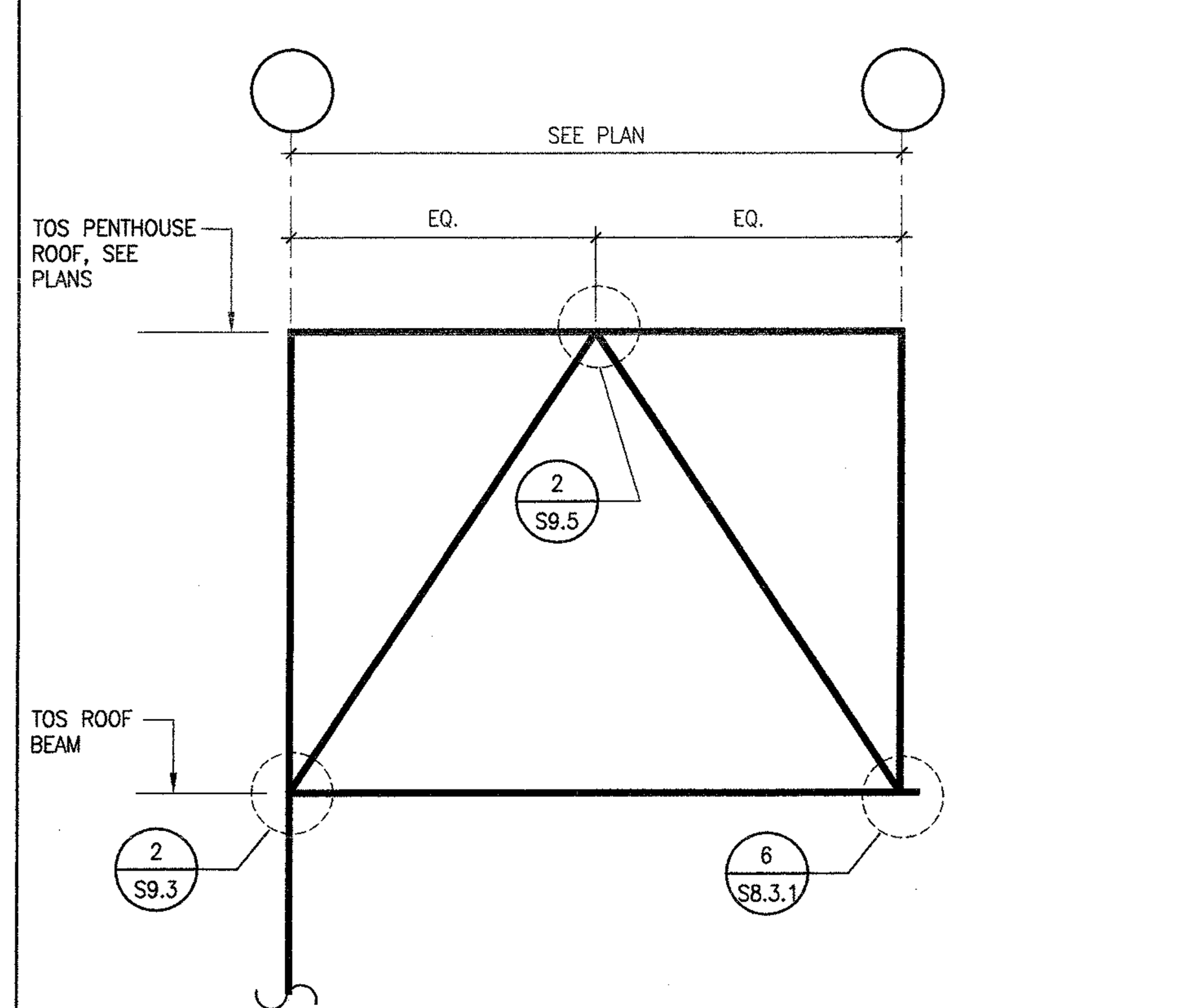

10 BRACE FRAME TYPE 3A
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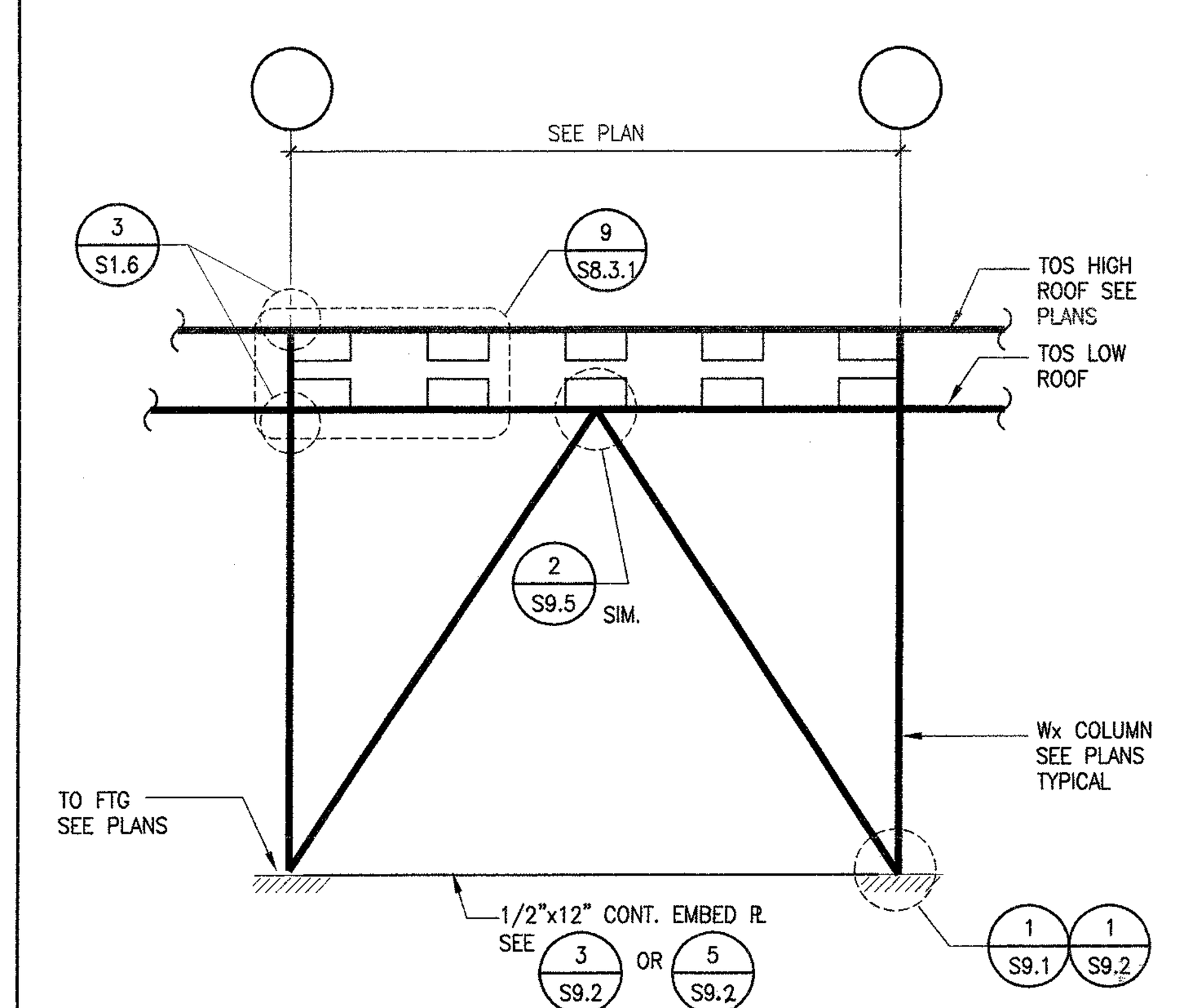

6 BRACE FRAME TYPE 2B
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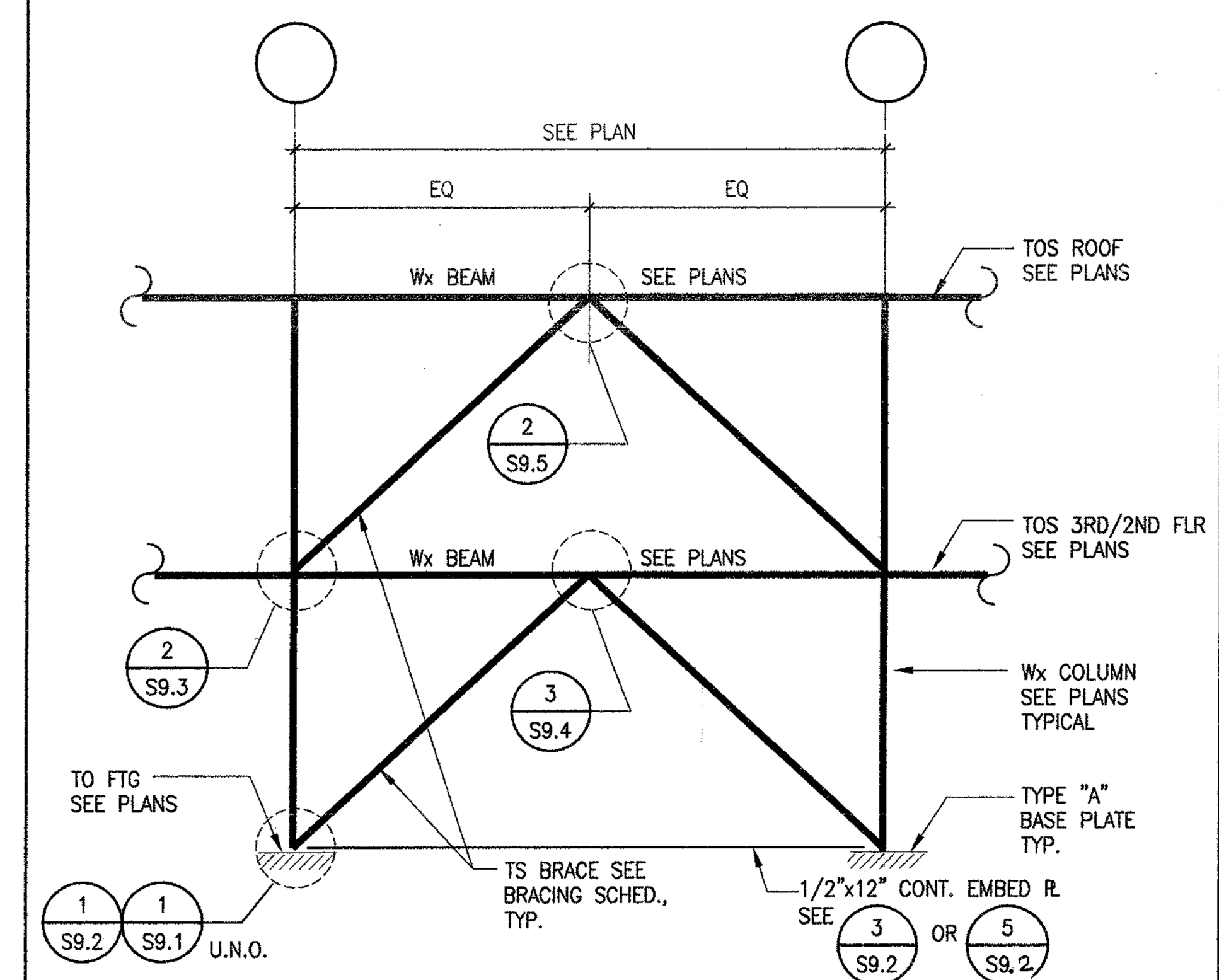

2 BRACE FRAME TYPE 1B
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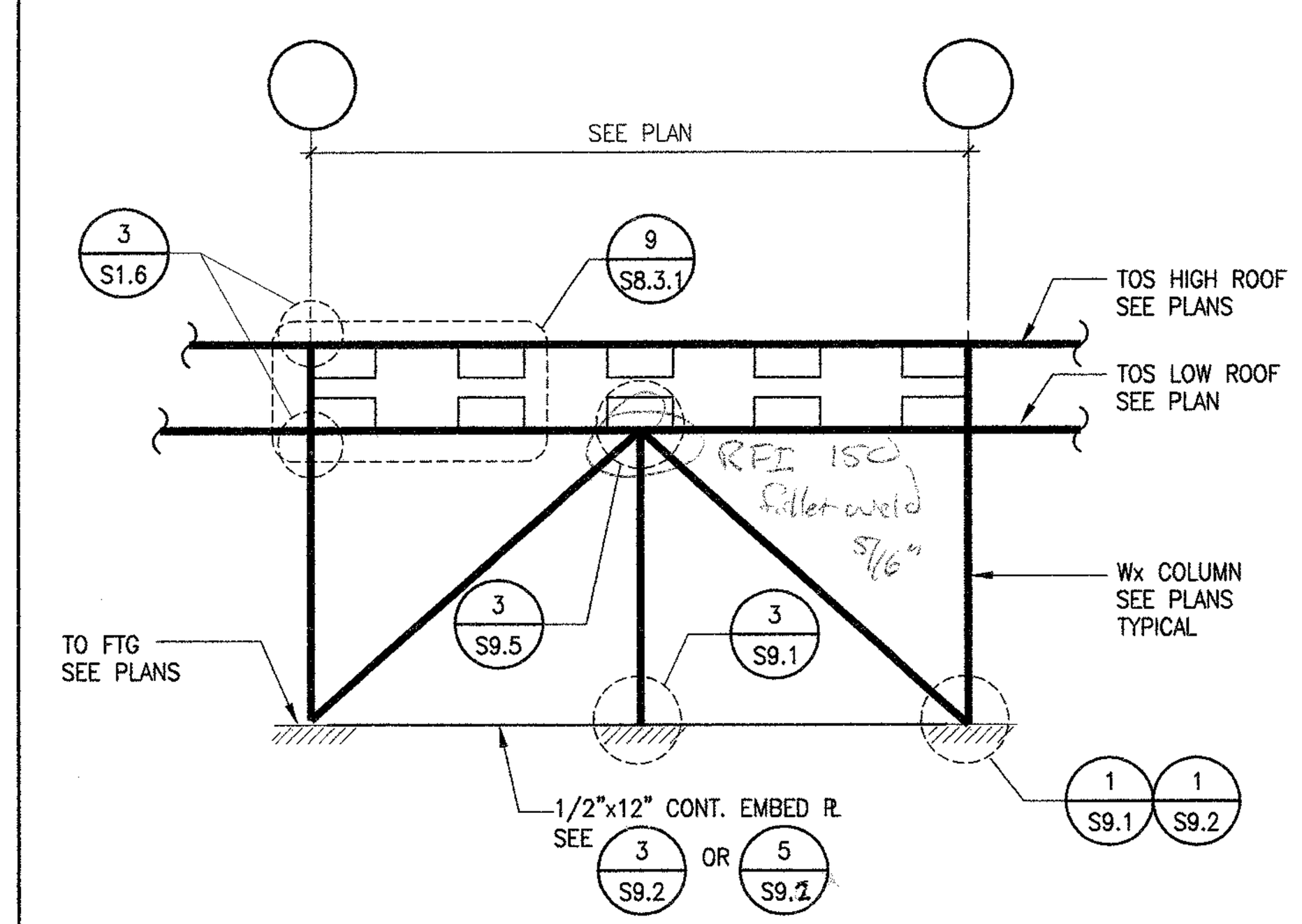

7 BRACE FRAME TYPE 2C
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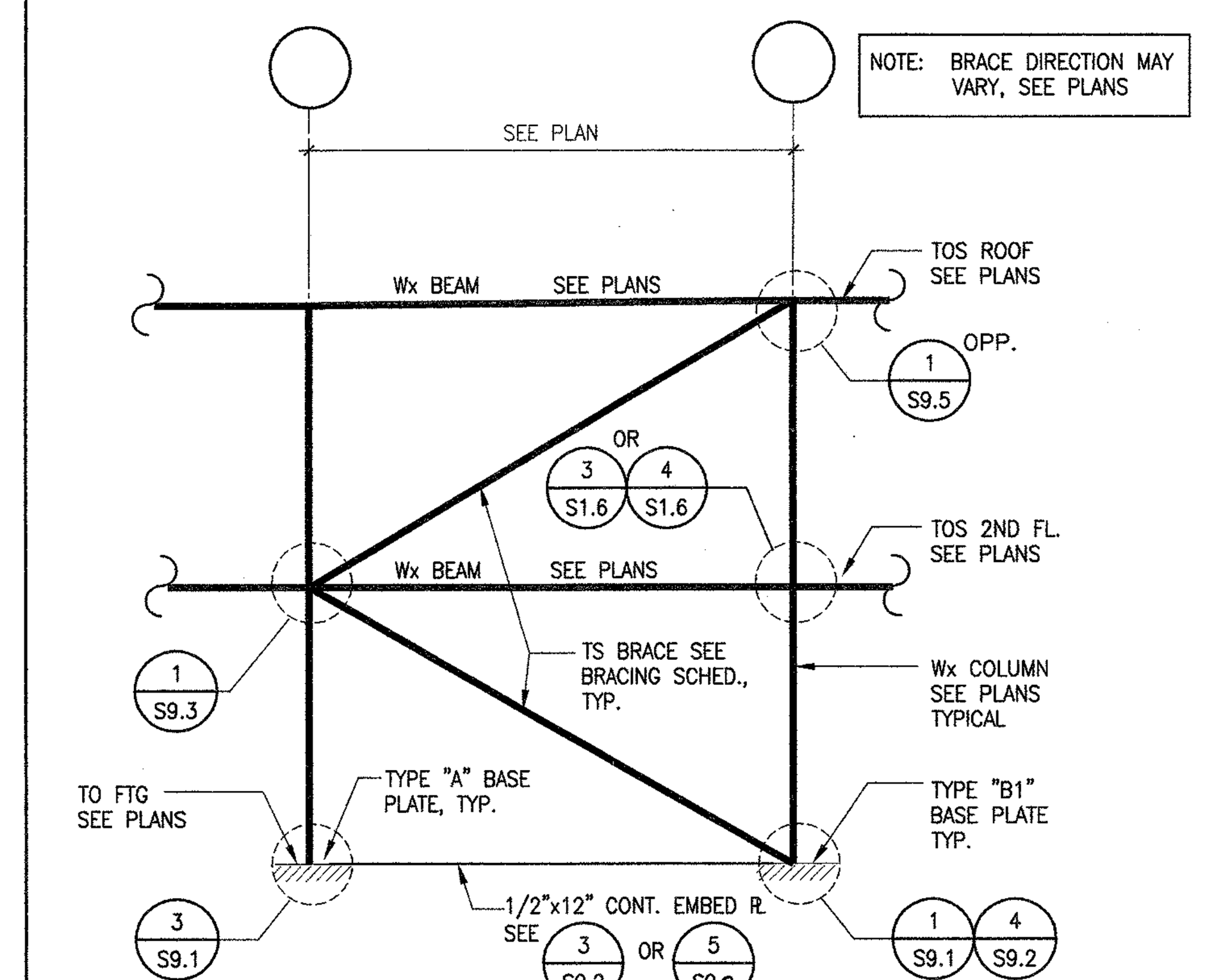

3 BRACE FRAME TYPE 1C
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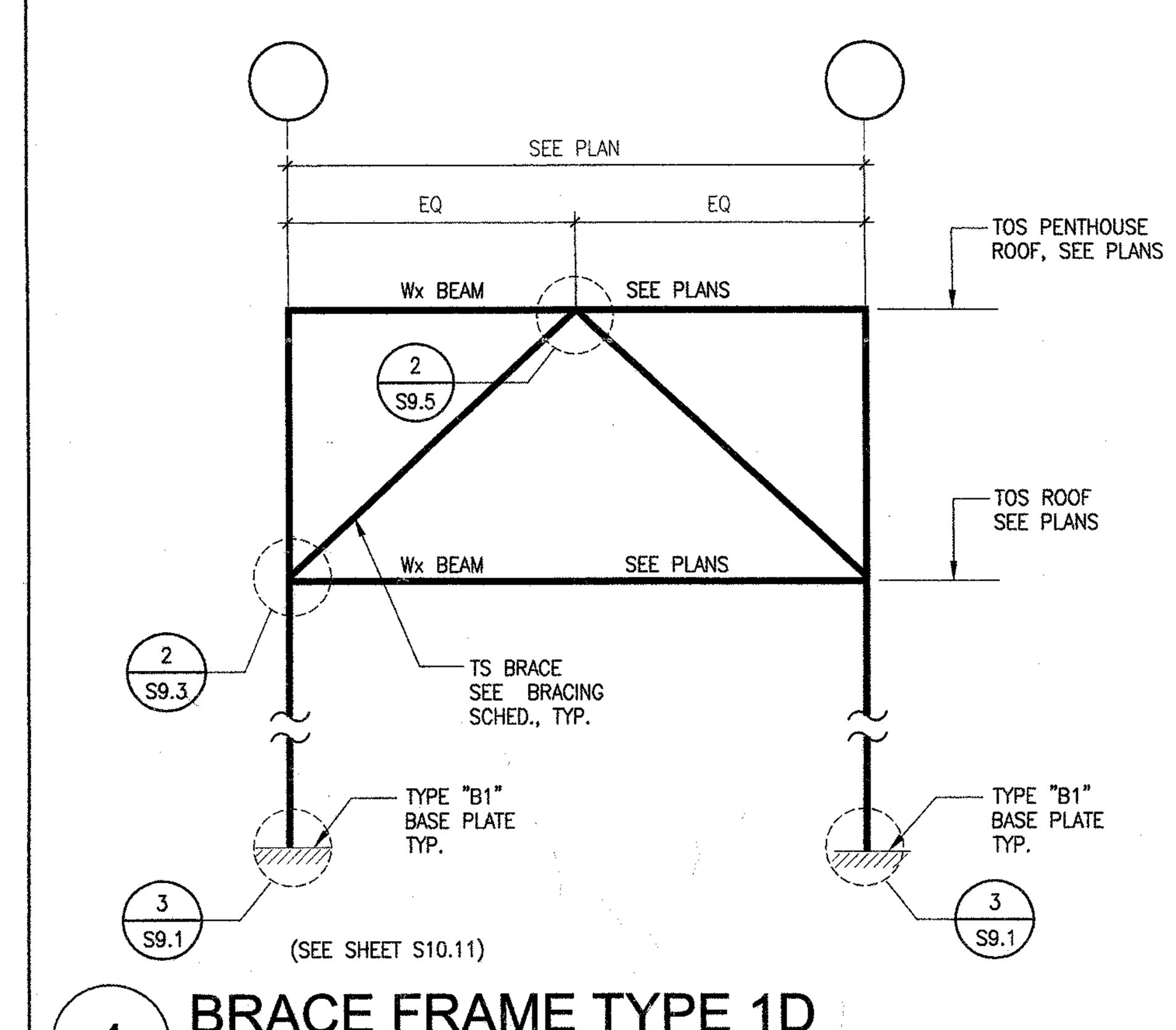

4 BRACE FRAME TYPE 1D
N.T.S.

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3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

DRAWING TITLE
BRACE FRAME ELEVATIONS
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S5.1

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BRACED FRAME CONNECTION SCHEDULE

BLDG.	BRACE BAY TYPE	LOCATION		BRACING MEMBER						CONNECTIONS																								REMARKS
				1ST FLOOR			2ND FLOOR			CONNECTION AT FIRST FLOOR						CONNECTION BELOW 2ND FLOOR						CONNECTION AT SECOND FLOOR						CONNECTION BELOW ROOF						
		GRID	BETWEEN	SIZE	WELD "A"		SIZE	WELD "A"		PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	
					SIZE	LENGTH		SIZE	LENGTH		SIZE	LENGTH	SIZE	LENGTH			SIZE	LENGTH	SIZE	LENGTH			SIZE	LENGTH	SIZE	LENGTH			SIZE	LENGTH	SIZE	LENGTH		
STUDENT UNION	BF-2A	14	H & JJ	HSS5x5x1/2	1/2	12	–	–	–	5/8	5/16	17	1/2	28	–	3/4	3/4	42	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-2A	H	12 &14	HSS6x6x1/2	1/2	12	–	–	–	3/4	3/8	18	5/8	22	–	1	5/8	64	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-2A	HH	11 & 11.5	HSS6x6x1/2	1/2	12	–	–	–	3/4	5/16	18	1/2	30	–	3/4	3/4	52	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	10.2	A.3 & B.3	↓	1/2	12	HSS5x5x3/8	3/8	12	3/4	5/16	18	1/2	30	–	3/4	3/4	56	–	–	–	1/2	1/4	18	1/2	18	–	3/4	1/2	48	–	–	–	
	BF-1B	A	7 & 8	↓	1/2	12	HSS5x5x3/8	3/8	12	3/4	5/16	18	1/2	30	–	3/4	3/4	62	–	–	–	1/2	3/8	25	5/16	12	–	3/4	1/2	48	–	–	–	
	BF-1A	6	A & B	↓	1/2	12	–	–	–	3/4	5/16	18	1/2	30	–	3/4	3/4	56	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	SMRF ABOVE 2ND FLOOR
	BF-1A	6	C & D	↓	1/2	12	–	–	–	3/4	5/16	18	1/2	30	–	3/4	3/4	56	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	SMRF ABOVE 2ND FLOOR
	BF-1B	B.3	9 & 10.2	HSS6x6x5/8	1/2	15	HSS5x5x1/2	1/2	12	3/4	1/2	21	5/8	24	–	1	5/8	88	–	–	–	1/2	1/2	24	5/16	10	–	3/4	5/8	58	–	–	–	
	BF-1B	1.7	F & G	HSS6x6x5/8	1/2	15	HSS6x6x3/8	1/2	12	3/4	5/16	21	5/8	32	–	3/4	3/4	62	–	–	–	1/2	5/8	17	5/16	17	–	3/4	5/8	48	–	–	–	
	BF-1B	K	11.5 & 12	HSS6x6x1/2	1/2	12	HSS5x5x5/16	3/8	12	3/4	5/16	18	1/2	30	–	1	5/8	62	–	–	–	1/2	3/8	25	5/16	12	–	3/4	1/2	48	–	–	–	
	BF-1B	L.3	11.5 & 12	HSS6x6x5/8	1/2	15	HSS5x5x1/2	1/2	12	3/4	5/16	21	5/8	32	–	1	5/8	70	–	–	–	1/2	1/2	24	5/16	10	–	3/4	5/8	56	–	–	–	
	BF-1B	11.5	K & L.3	HSS6x6x3/8	1/2	12	HSS5x5x5/16	3/8	12	5/8	5/16	18	1/2	21	–	3/4	1/2	74	–	–	–	1/2	3/8	25	5/16	12	–	3/4	3/8	67	–	–	–	
	BF-2A	12	K & L.3	↓	1/2	12	–	–	–	5/8	5/16	18	1/2	21	–	3/4	1/2	74	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	13	K & M	↓	1/2	12	HSS5x5x5/16	3/8	12	5/8	5/16	17	1/2	28	–	3/4	5/8	60	–	–	–	1/2	3/8	25	5/16	12	–	3/4	5/8	–	–	–	–	
	BF-1C	G1	3 & 3.2	HSS5x5x1/2	1/2	12	HSS4x4x1/4	3/8	12	3/4	5/16	20	3/8	35	–	3/4	–	–	1/4	37	–	1/2	1/4	18	1/2	18	–	5/8	–	–	–	–	–	
	BF-1E	G1	3.2 & 4	HSS6x6x5/8	1/2	15	HSS5x5x3/8	3/8	12	3/4	5/16	21	5/8	32	–	3/4	3/4	62	–	–	–	1/2	3/8	62	–	–	–	3/4	5/8	48	–	–	–	
	BF-1C	G1	4 & 13	HSS5x5x1/2	1/2	12	HSS4x4x1/4	3/8	12	3/4	5/16	20	3/8	35	–	3/4	–	–	1/4	37	–	1/2	1/4	18	1/2	18	–	5/8	–	–	–	–	–	
SU/DINING AREA	BF-2C	15	J & L	HSS6x6x3/8	1/2	12	–	–	–	3/4	5/16	20	3/8	35	–	–	–	–	–	–	–	–	–	–	–	–	–	3/4	5/16	20	3/8	32	–	
	BF-2B	15	N & P	HSS6x6x3/8	1/2	12	–	–	–	3/4	5/16	20	3/8	35	–	–	–	–	–	–	–	–	–	–	–	–	–	3/4	3/4	38	–	–	–	
	BF-2A	17	L.3 & NN	HSS6x6x3/8	1/2	12	–	–	–	3/4	5/16	22	5/16	44	–	–	–	–	–	–	–	–	–	–	–	–	–	3/4	1/2	42	–	–	–	
	BF-2A	17	K & M	HSS6x6x3/8	1/2	12	–	–	–	3/4	5/16	22	5/16	44	–	–	–	–	–	–	–	–	–	–	–	–	–	3/4	1/2	42	–	–	–	
	BF-2A	J	15 & 16	HSS6x6x1/2	1/2	12	–	–	–	3/4	5/16	20	1/2	32	–	–	–	–	–	–	–	–	–	–	–	–	–	3/4	1/2	48	–	–	–	
	BF-2A	P	15 & 16	HSS6x6x1/2	1/2	12	–	–	–	3/4	5/16	20	1/2	32	–	–	–	–	–	–	–	–	–	–	–	–	–	3/4	1/2	48	–	–	–	

BRACED FRAME CONNECTION SCHEDULE

BLDG.	BRACE BAY TYPE	LOCATION		BRACING MEMBER									CONNECTIONS																																				REMARKS
				2ND FLOOR			3RD FLOOR			PENTHOUSE			CONNECTION AT SECOND FLOOR						CONNECTION BELOW 3RD FLOOR						CONNECTION AT THIRD FLOOR						CONNECTION BELOW ROOF						CONNECTION AT ROOF						CONNECTION BELOW PENTHOUSE						
		GRID	BETWEEN	SIZE	WELD "A"		SIZE	WELD "A"		SIZE	WELD "A"		PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	PLATE "P1"	WELD "B"		WELD "C"		REFERENCE DETAIL	PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	PLATE "P"	WELD "B"		WELD "C"		REFERENCE DETAIL	
					SIZE	LENGTH		SIZE	LENGTH		SIZE	LENGTH		SIZE	LENGTH	SIZE	LENGTH			SIZE	LENGTH	SIZE	LENGTH			SIZE	LENGTH	SIZE	LENGTH			SIZE	LENGTH	SIZE	LENGTH			SIZE	LENGTH	SIZE	LENGTH			SIZE	LENGTH	SIZE	LENGTH		
SCIENCE ANNEX	BF-1B	D	3 &4	HSS6x6x5/8	1/2	15	HSS5x5x5/16	3/8	12	–	–	–	3/4	1/2	21	5/8	24	–	3/4	5/8	70	–	–	–	1/2	3/8	25	5/16	12	–	1/2	3/8	50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	D	4 & 5	HSS6x6x5/8	1/2	15	HSS5x5x5/16	3/8	12	–	–	–	3/4	1/2	21	5/8	24	–	3/4	5/8	70	–	–	–	1/2	3/8	25	5/16	12	–	1/2	3/8	50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	A	3 & 4	HSS6x6x1/2	1/2	12	HSS5x5x5/16	3/8	12	–	–	–	3/4	3/8	18	5/8	22	–	3/4	5/8	70	–	–	–	1/2	3/8	25	5/16	12	–	1/2	3/8	50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	A	4 & 5	HSS6x6x1/2	1/2	12	HSS5x5x5/16	3/8	12	–	–	–	3/4	3/8	18	5/8	22	–	3/4	5/8	70	–	–	–	1/2	3/8	25	5/16	12	–	1/2	3/8	50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	1	C & D	HSS6x6x1/2	1/2	12	HSS5x5x5/16	3/8	12	–	–	–	3/4	5/16	18	1/2	30	–	3/4	5/8	88	–	–	–	1/2	1/4	18	1/2	18	–	1/2	3/8	64	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	3	A & B	HSS6x6x1/2	1/2	12	HSS5x5x5/16	3/8	12	–	–	–	3/4	5/16	18	1/2	30	–	3/4	5/8	88	–	–	–	1/2	1/4	18	1/2	18	–	1/2	3/8	64	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	5	A & B	HSS6x6x5/8	1/2	15	HSS5x5x5/16	3/8	12	–	–	–	3/4	5/16	21	5/8	32	–	3/4	5/8	88	–	–	–	1/2	1/4	18	1/2	18	–	1/2	3/8	64	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-1B	7	C & D	HSS6x6x5/8	1/2	15	HSS5x5x5/16	3/8	12	–	–	–	3/4	5/16	21	5/8	32	–	3/4	5/8	88	–	–	–	1/2	1/4	18	1/2	18	–	1/2	3/8	64	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
	BF-3A	3	C & D	–	–	–	–	–	–	HSS4x4x1/4	3/8	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/2	1/4	18	3/8	27	–	1/2	3/8	37	–	–	–	
	BF-3A	5	C & D	–	–	–	–	–	–	HSS4x4x1/4	3/8	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/2	1/4	18	3/8	27	–	1/2	3/8	37	–	–	–	
	BF-3A	BTWN C & D	4 & 5	–	–	–	–	–	–	HSS4x4x1/4	3/8	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/2	3/8	25	5/16	12	–	1/2	3/8	48	–	–	–	
	BF-1D	B	3 & 4	–	–	–	–	–	–	HSS4x4x1/4	3/8	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1/2	3/8	25	5/16	12	–	1/2	3/8	50	–	–	–	

NOTE:
1. LENGTH OF WELD LEG, WELD "B" AND WELD "C", ARE THE MINIMUM REQUIRED LENGTHS SET PER UNIFORM FORCE METHOD.
2. FOR BRACE FRAME TYPE CONFIGURATION SEE SHEET S5.1.
3. WELD SIZE, LENGTH & PLATE THICKNESS ARE IN INCHES.
4. PROVIDE BRACE OVERSLOT REINFORCMENT PLATE AS SHOWN IN DET. 9/S10.11 (TYP.).

① BRACE FRAME CONNECTION SCHEDULE

NO SCALE

REVIEW SET

20050420.16485422 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S6.1.dwg

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Hensel Phelps Construction Co.

REGISTERED PROFESSIONAL ENGINEER
COLIN BLANEY
NO. S4377
EXP. 6/30/05
STRUCTURAL
STATE OF CALIFORNIA

Colin Blaney

SKYLINE COLLEGE
STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
APPL # 01-106658
AC
FLS
SSS
DATE 04/21/2005

DRAWING TITLE
BRACE FRAME SCHEDULE
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S6.1
drawn by: AY

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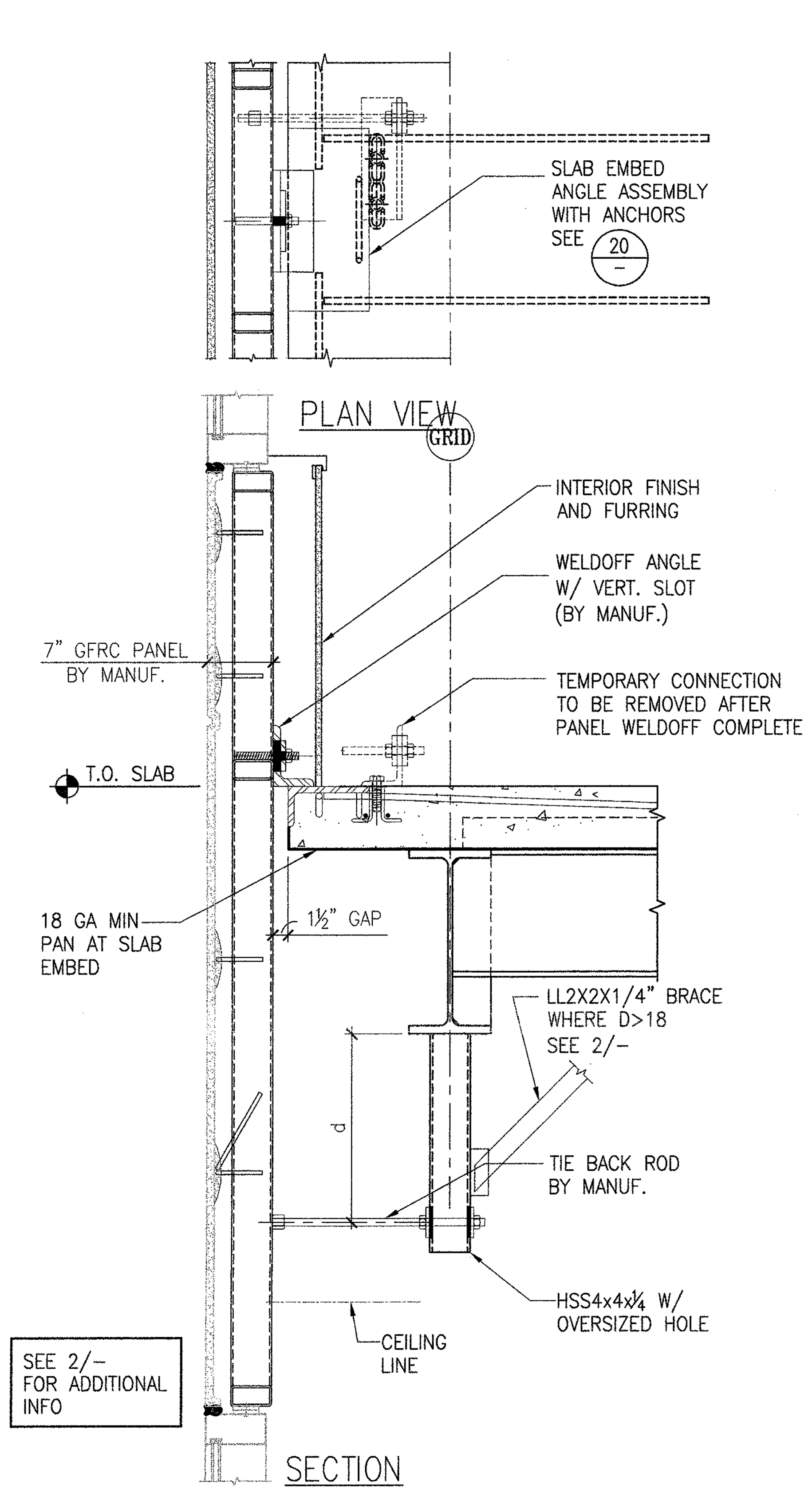
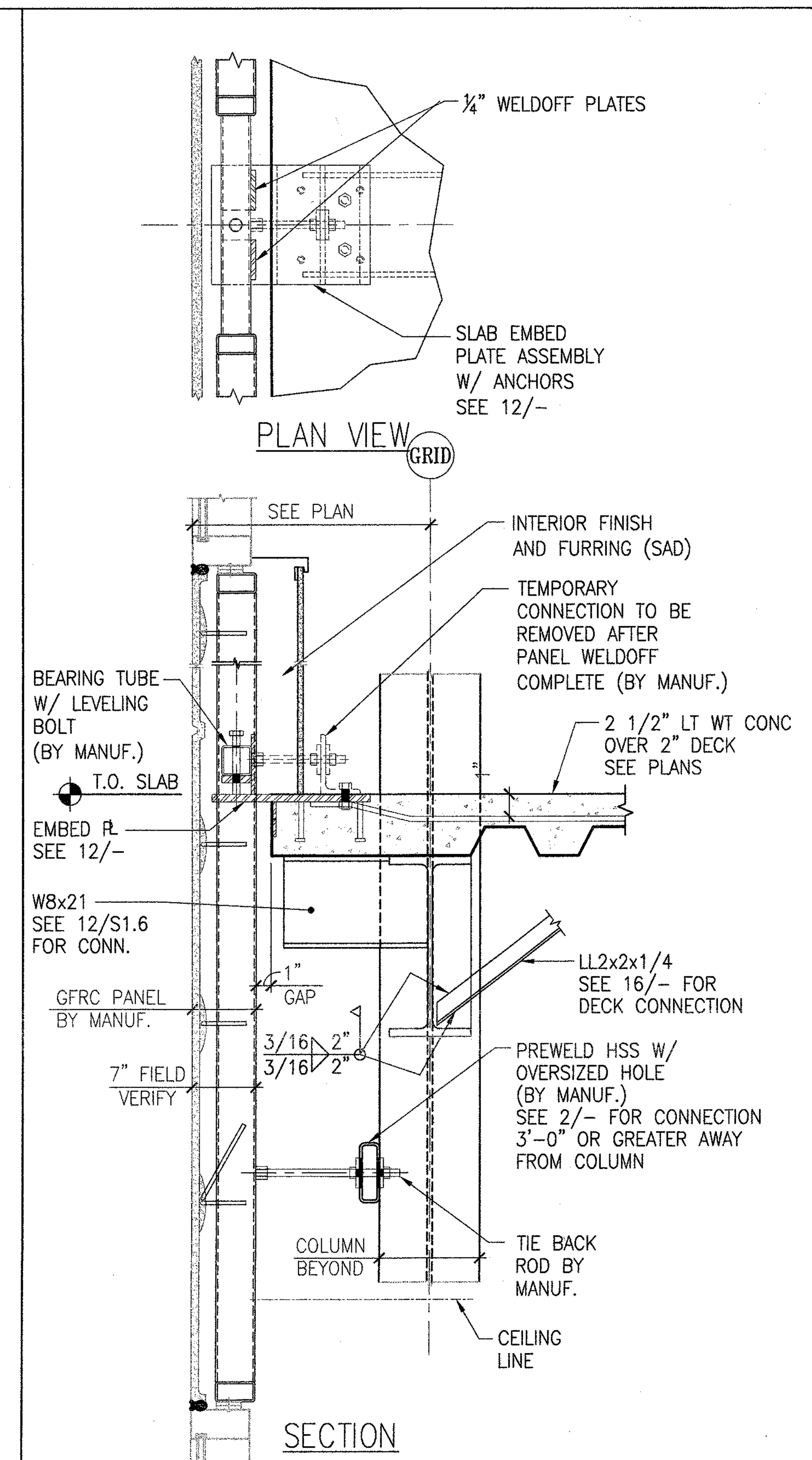
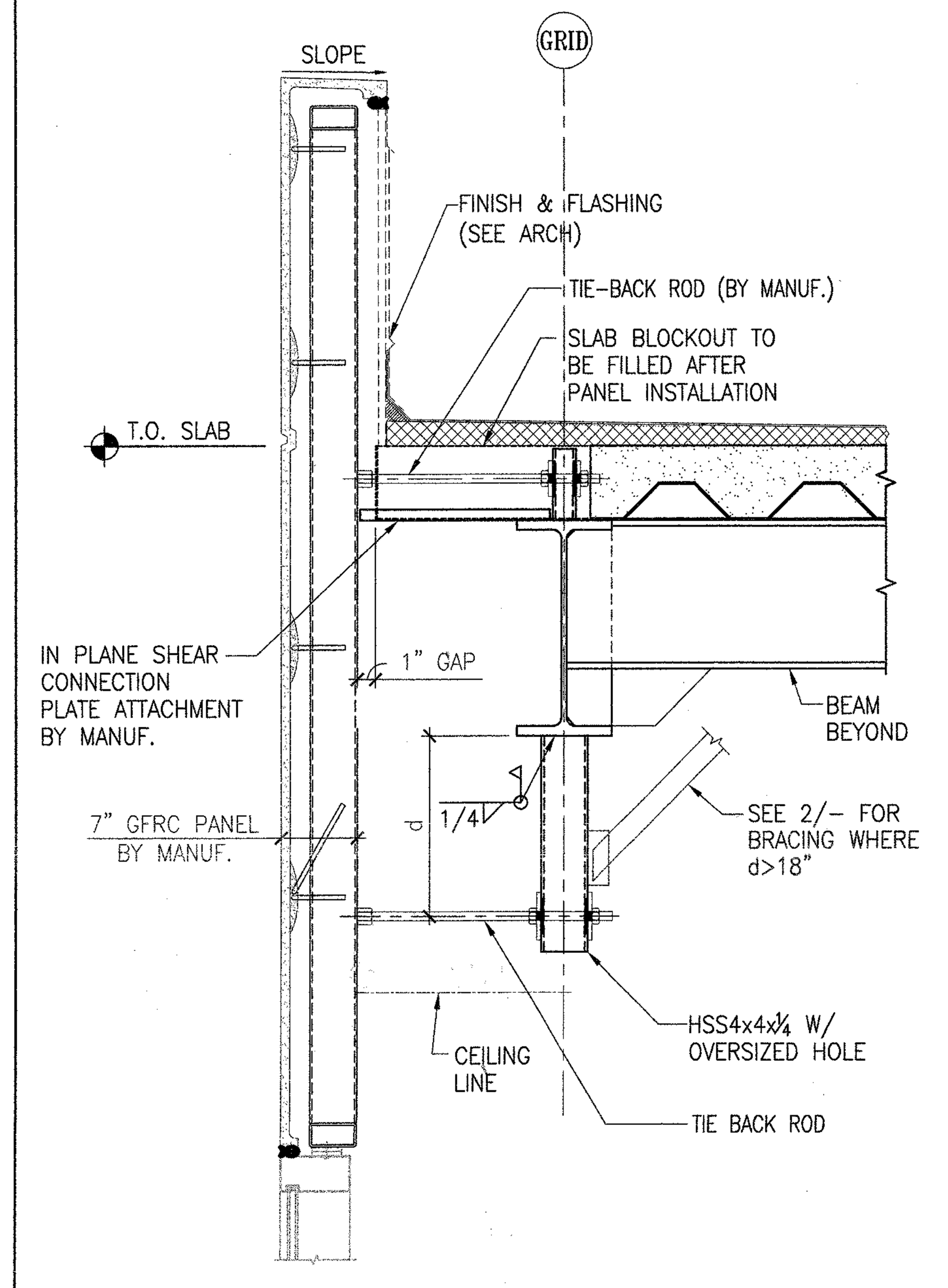


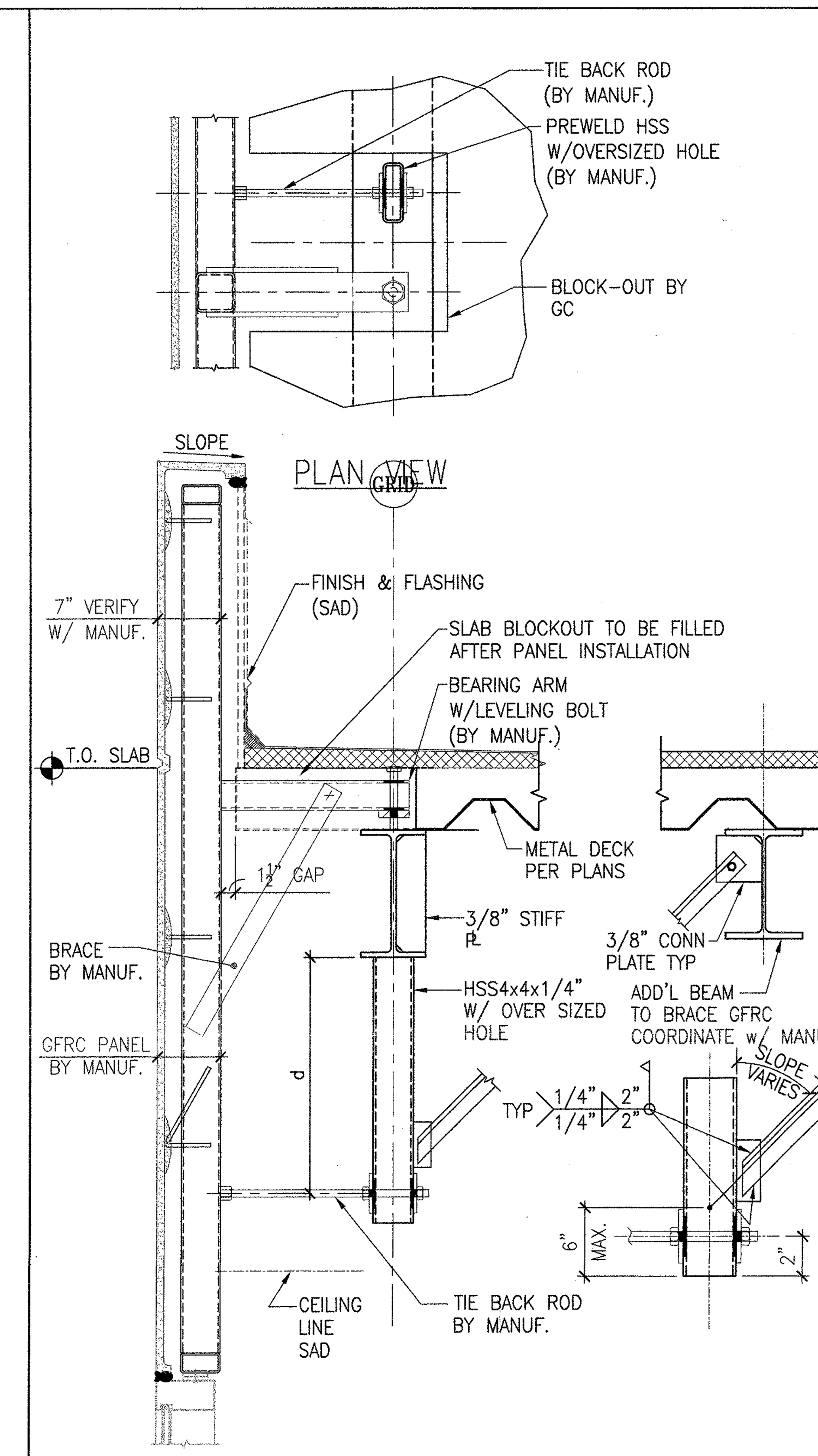
14 EXTERIOR SECTION @ 2ND FLOOR
N.T.S.



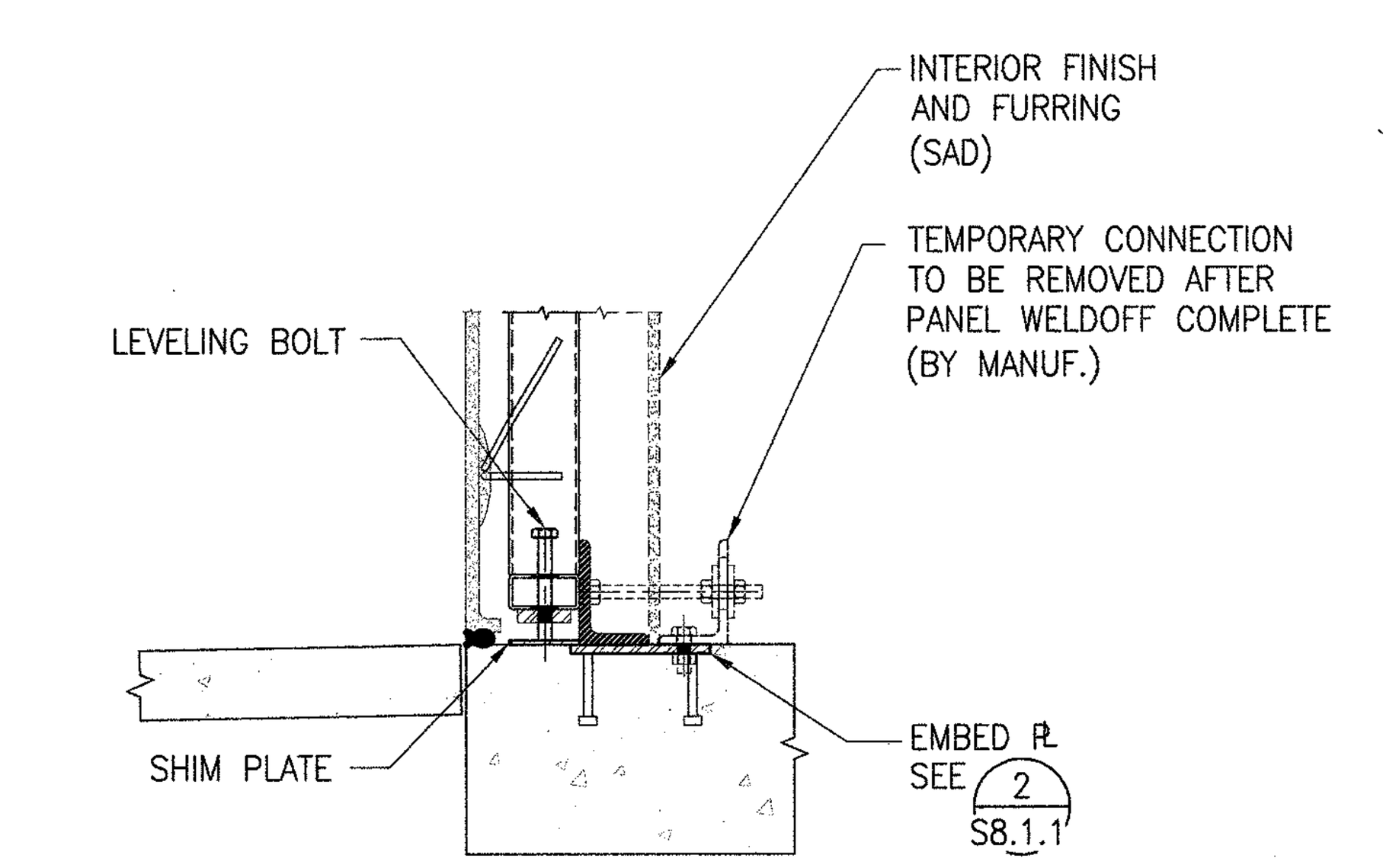
10 EXTERIOR SECTION @ 2ND FLOOR
N.T.S.



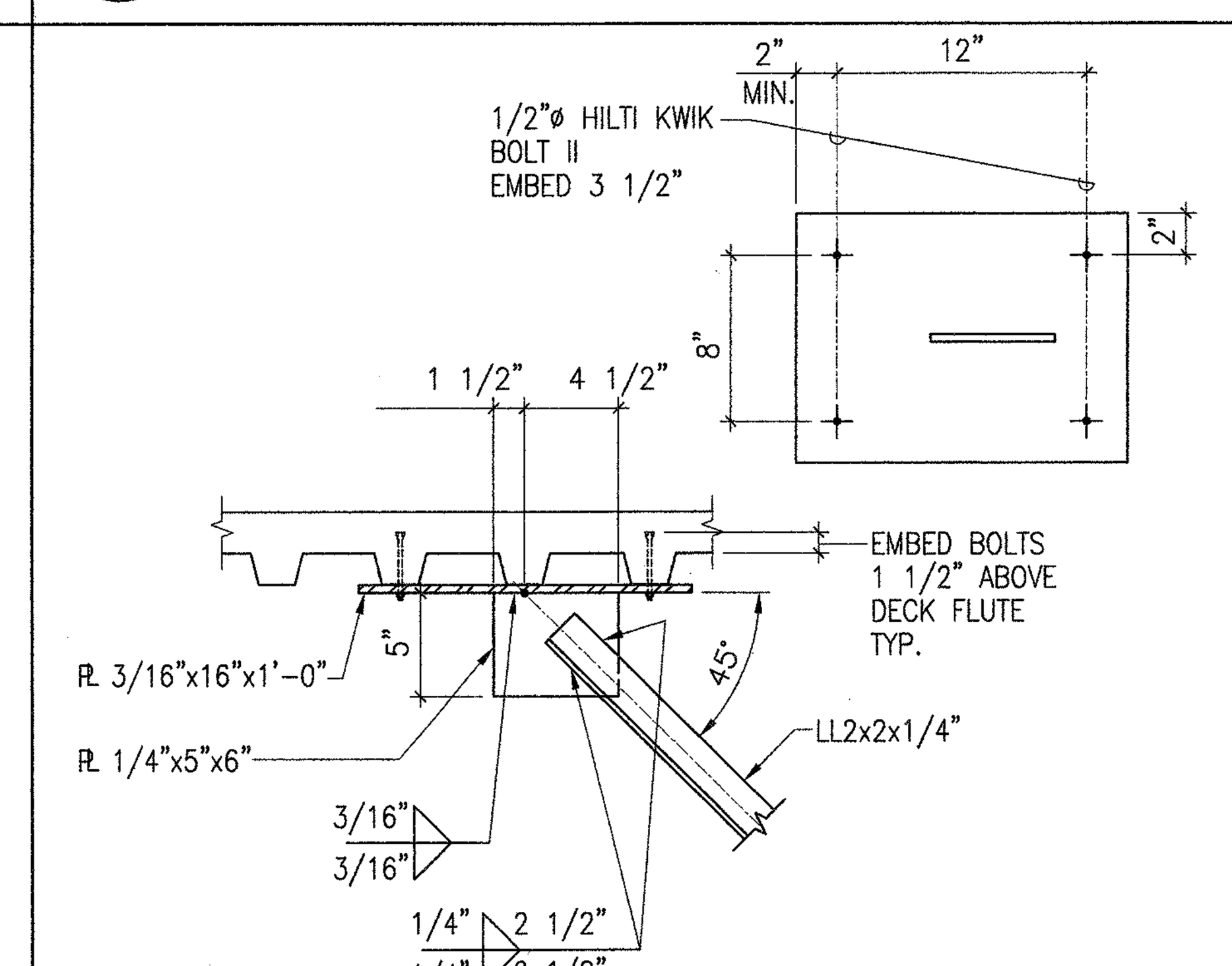
6 EXTERIOR SECTION @ ROOF
N.T.S.



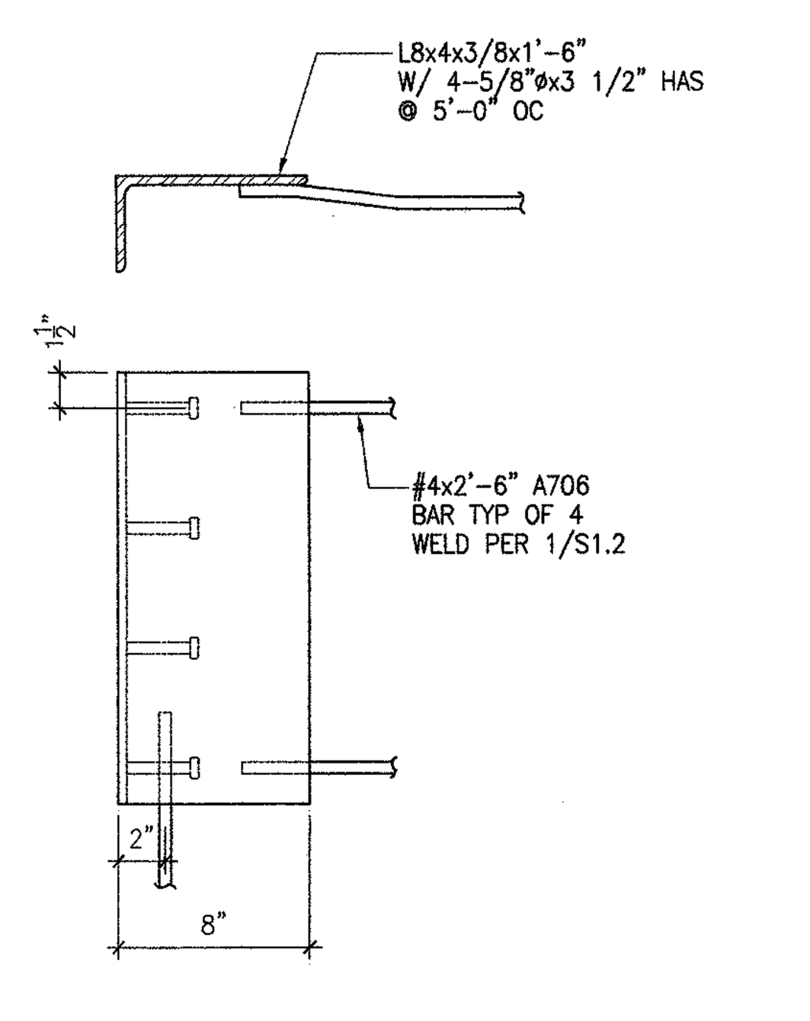
2 EXTERIOR SECTION @ ROOF
N.T.S.



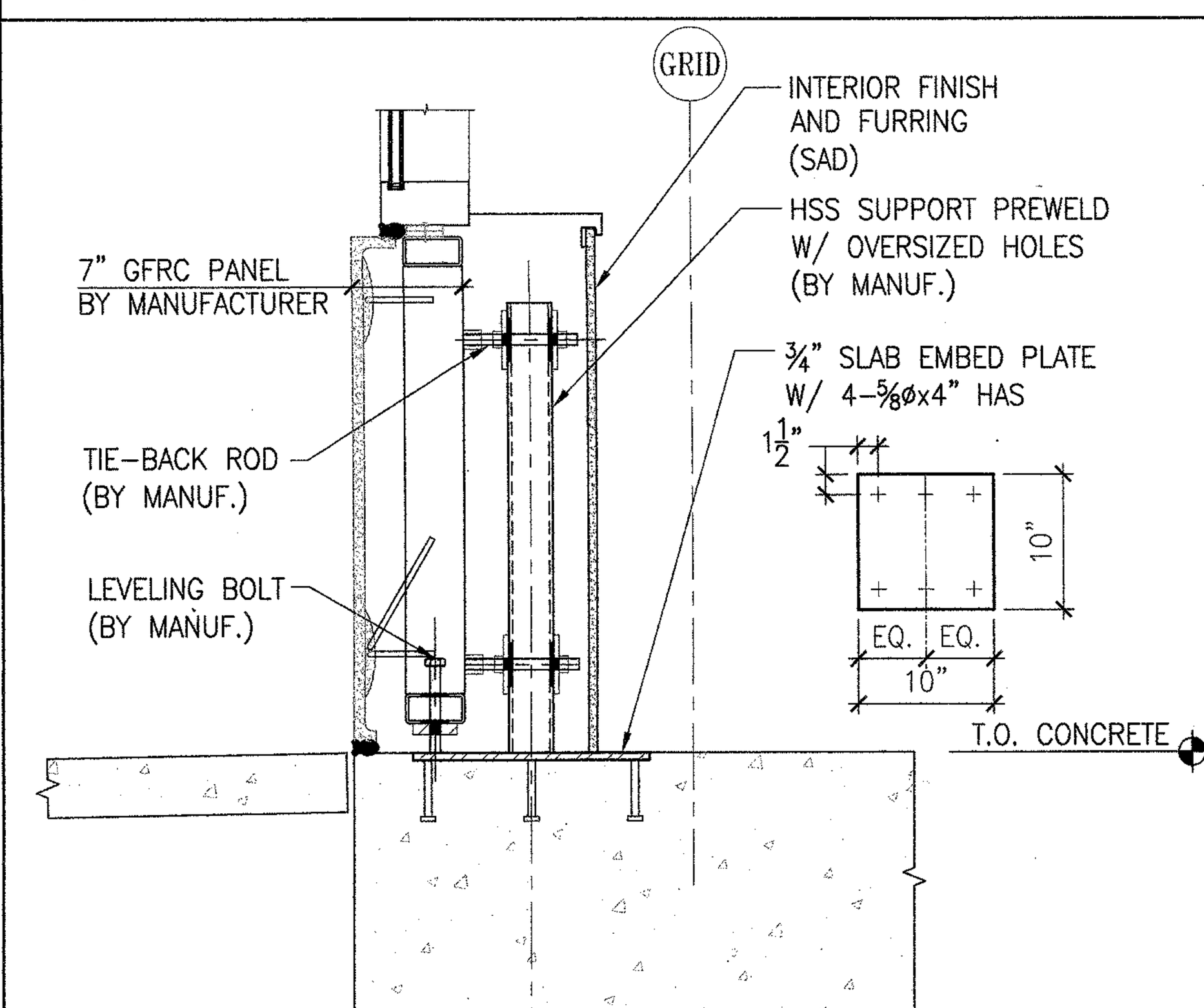
15 SECTION
N.T.S.



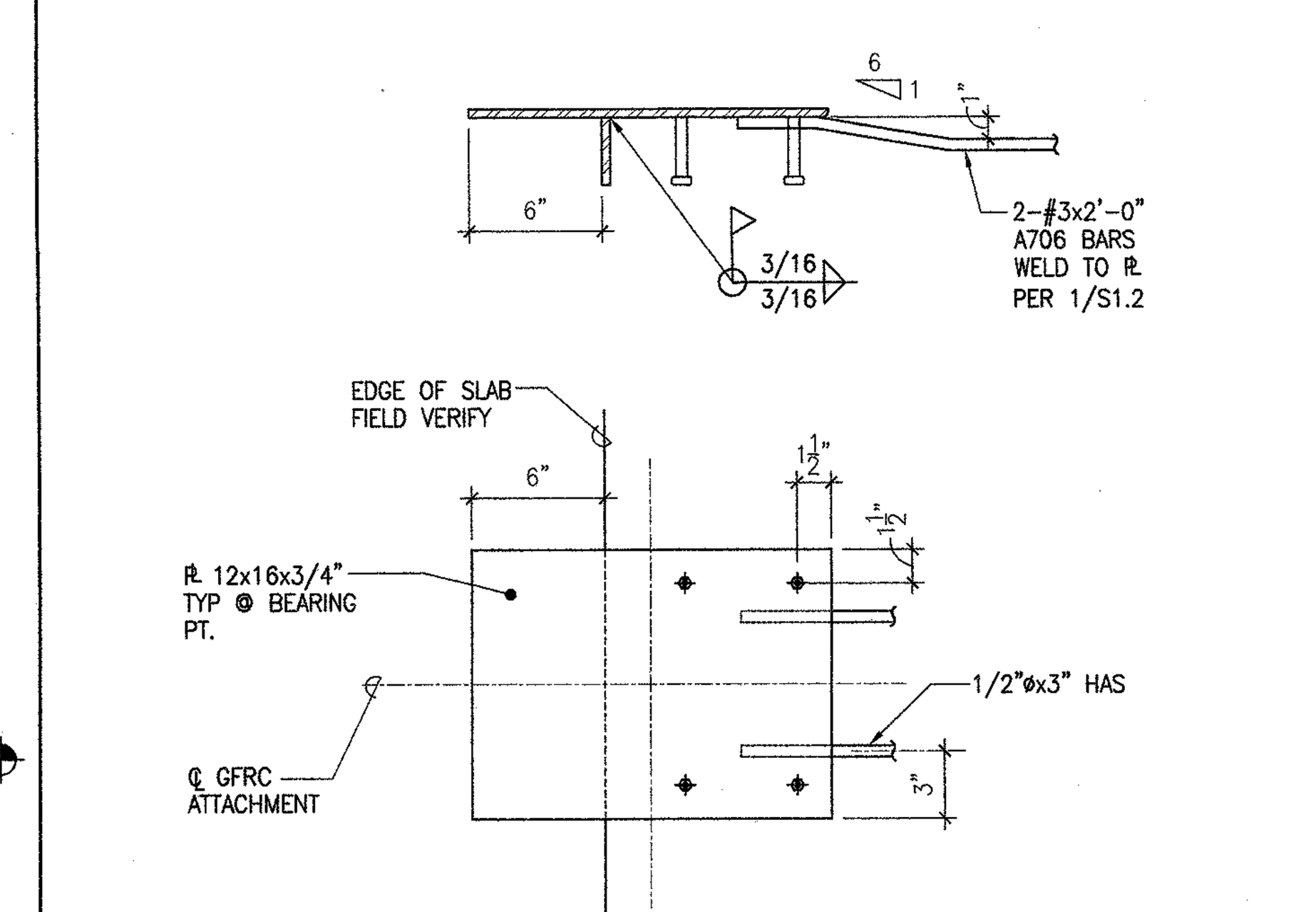
11 TYPICAL BRACE @ COMPOSITE DECK
N.T.S.



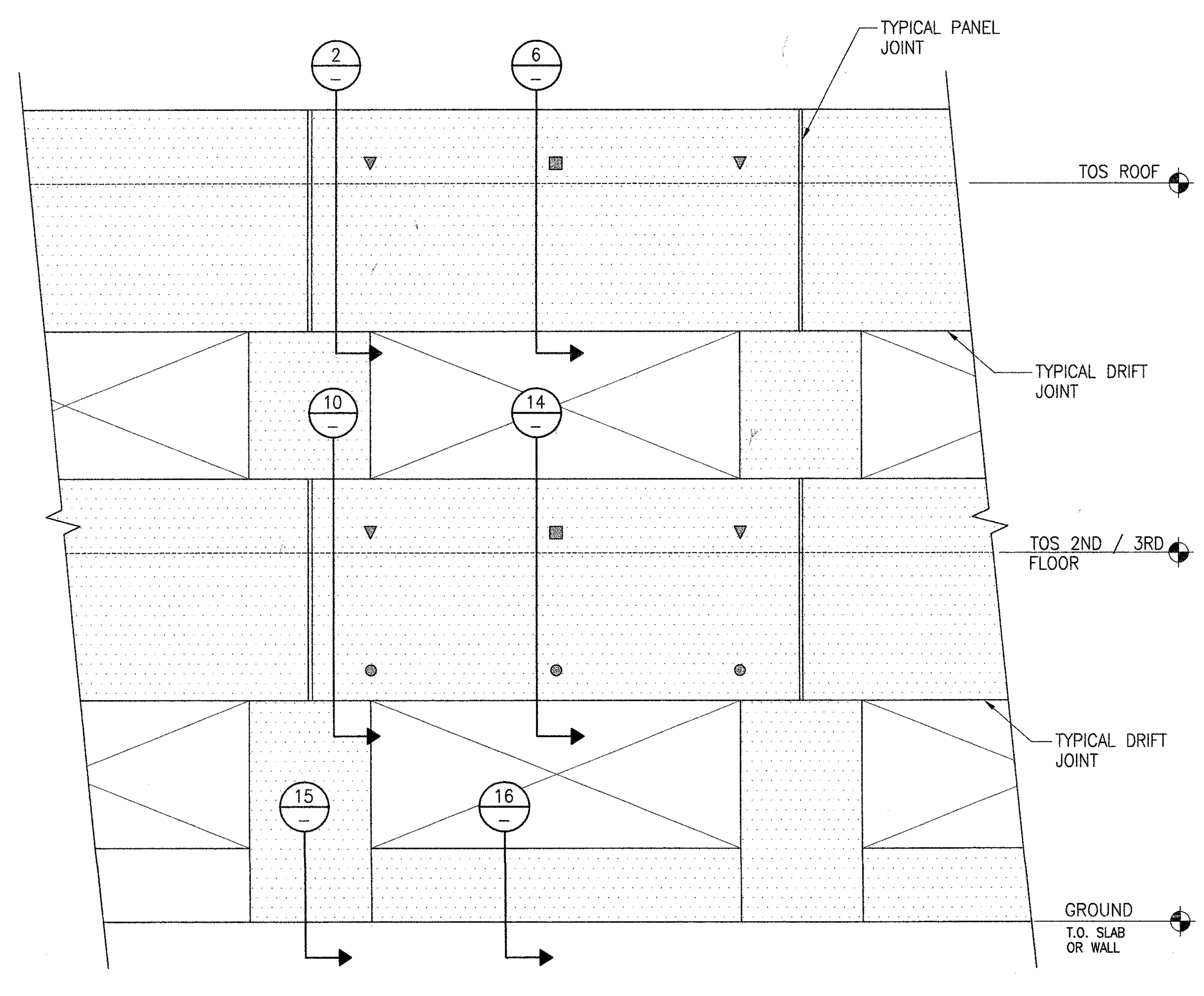
20 EMBED PLATE DETAIL
N.T.S.



16 SECTION
N.T.S.



12 TYPICAL BEARING PLATE
N.T.S.



GENERAL NOTES:

1. ▼ – DENOTES TYPICAL BEARING CONNECTION.
   ● – DENOTES TYPICAL PUSH/PULL OUT-OF-PLANE CONNECTION.
   ▩ – DENOTES PUSH/PULL & SHEAR CONNECTION.
2. GENERAL CONTRACTOR TO SUBMIT DRAWING AND CALCULATIONS FOR DESIGN OF THE EXTERIOR GFRC SYSTEM (DEFERRED APPROVAL) SEE INCREMENT #2 DRAWING.

THIS SHEET IS FOR REFERENCE ONLY

FOR INFORMATION ON AHCORAGE OF GFRC PANELS TO BUILDING STRUCTURE, SEE GFRC DESIGN DRAWINGS AND DOCUMENTS PREPARED AND SUBMITED BY WILLIS CONSTRUCTION OF SAN-JUAN BAUTISTA, CA, AND APPROVED FOR CONSTRUCTION BY DSA.

8 TYPICAL PANEL ELEVATION GFRC
N.T.S.

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No. S4377
EXP. 6/30/05
STRUCTURAL
STATE OF CALIFORNIA

SKYLINE COLLEGE

STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

DRAWING TITLE
EXTERIOR GFRC DETAILS (SCHEMATIC)

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S7.1

20050420,16501877 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S7.1.dwg

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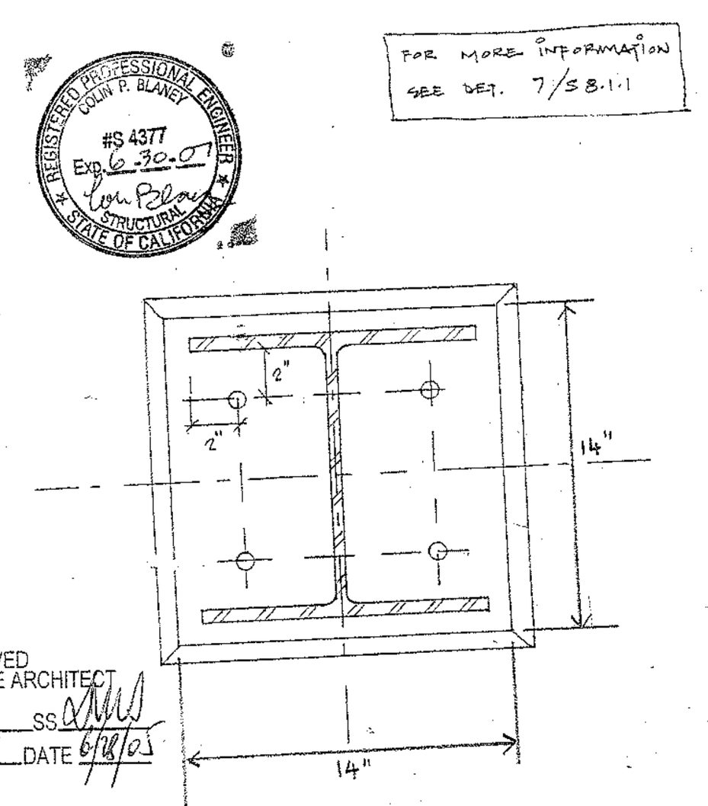
PCO#2

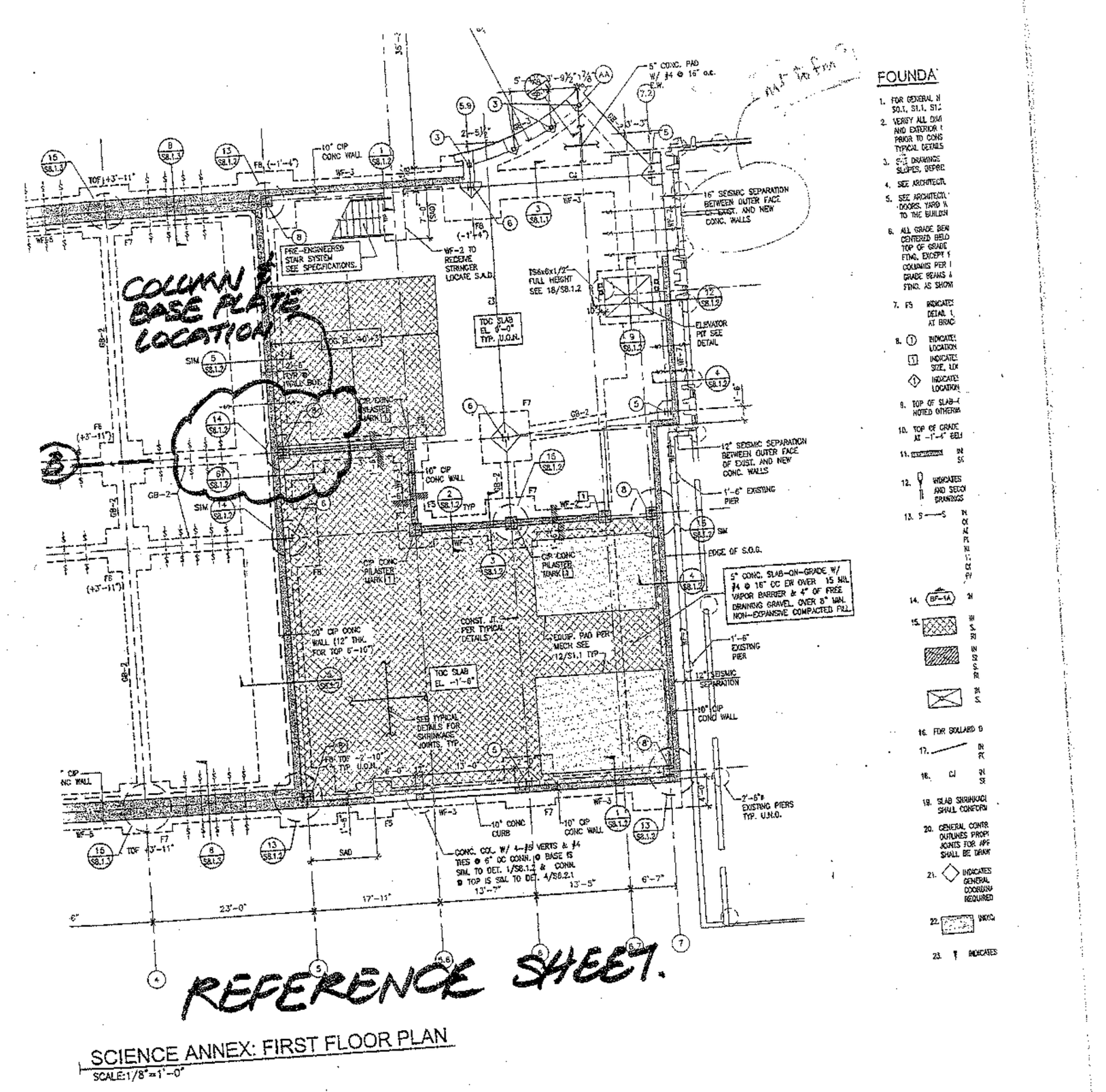


APPROVED
DIV OF THE STATE ARCHITECT
AC ___ F/LS ___ SS ___
APPL NO. 106658 DATE 6/28/05

RESPONSE TO RFI # 0003:
USE ABOVE BASE PL SIZE & ANCHOR BOLT SPACING CONFIGURATION FOR CIP CONCRETE 20" SQ COLUMNS ENCASING W12x96 COLUMNS IN BUILDING-7A.

architect	Steinberg Architects, 60 Pierce Avenue, San Jose CA 95110
consultant	Crosby Group, 726 Main Street, Redwood City, CA 94063
	Skyline College, 3300 College Drive, San Bruno CA
	San Mateo Community College District, 3401 CSM Drive, San Mateo CA

STEINBERGARCHITECTS
project no: 04043 date: 6-24-05
drawn by: AY checked by: TW
scale: NO SCALE ref: RFI 003
BASE PLATE DETAIL PCO2
CD-A7



SCIENCE ANNEX: FIRST FLOOR PLAN

PCO #3

Preliminary Change Order No. 03 (PCO – 03)

Skyline College
Student Support and Community Services Center
and Science Annex Building
3300 College Drive
San Bruno, CA 94066

DSA File No.: 41-C1
DSA Application No.: 01-106658
Increment I

June 27, 2005

The item listed below is submitted for preliminary Change Order Review and approval. Please see attached information.

Item No. 1: **Revise Grade Beam Detail to accommodate embeds**

Reason: Concrete grade beam in location noted was not wide enough for embed. Grade Beam was increased and rebar added to allow embed installation at this location

Attached is drawing CD-B8 for approval. Other drawings are for reference.

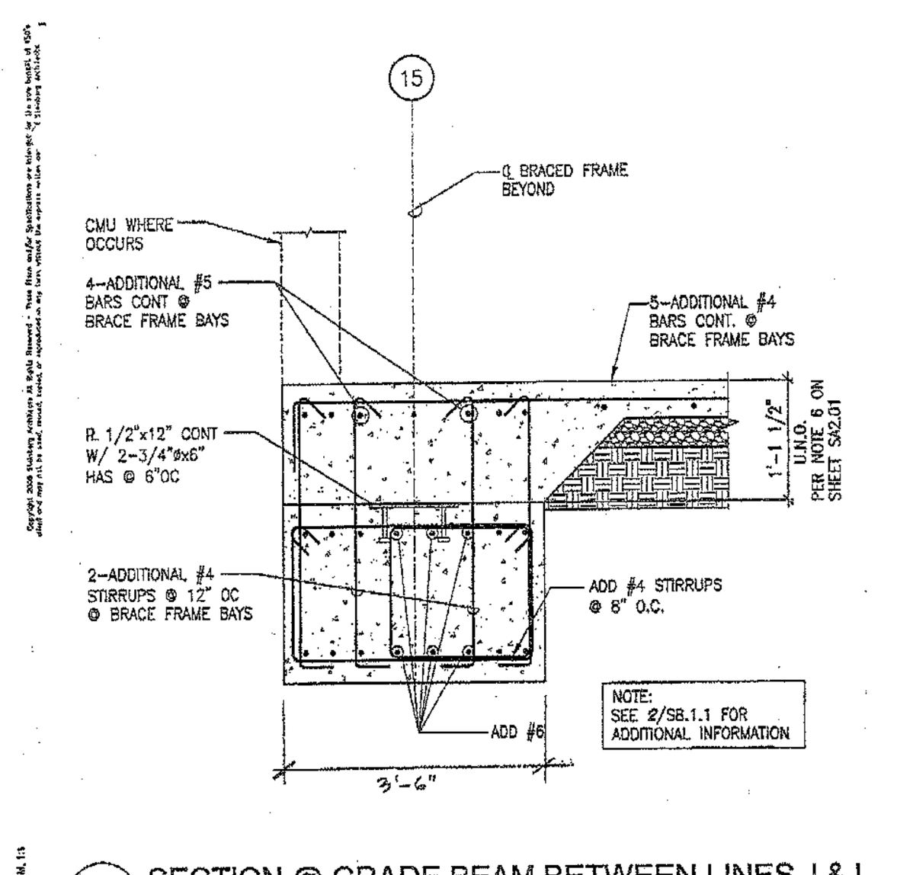
Steinberg Architects

Ron Saiki, AIA
Sr. Project Manager
(408) 817-2966

encl

cc: HPCC
File

JUN-28-2005 16:18 DSA P.0



SECTION @ GRADE BEAM BETWEEN LINES J & L
SCALE: N.T.S.

APPROVED
DIV OF THE STATE ARCHITECT
AC ___ F/LS ___ SS ___
APPL NO. 106658 DATE 6/28/05

REGISTERED PROFESSIONAL ENGINEER, COLIN P. BLANEY, #S 4377, Exp. 6-30-07, STRUCTURAL, STATE OF CALIFORNIA

architect	Steinberg Architects, 60 Pierce Avenue, San Jose CA 95110
consultant	Crosby Group, 726 Main Street, Redwood City, CA 94063
	Skyline College, 3300 College Drive, San Bruno CA
	San Mateo Community College District, 3401 CSM Drive, San Mateo CA

STEINBERGARCHITECTS
project no: 04043 date: 6-27-05
drawn by: AY checked by: TW
scale: NO SCALE ref: -
BLDG 6 REVISED GRADE BEAM PCO3
CD-B8

RFI Page 1 of 2

RFI

All Closed

Entry: 6 Of 39 List View << < > >>

Add Comments

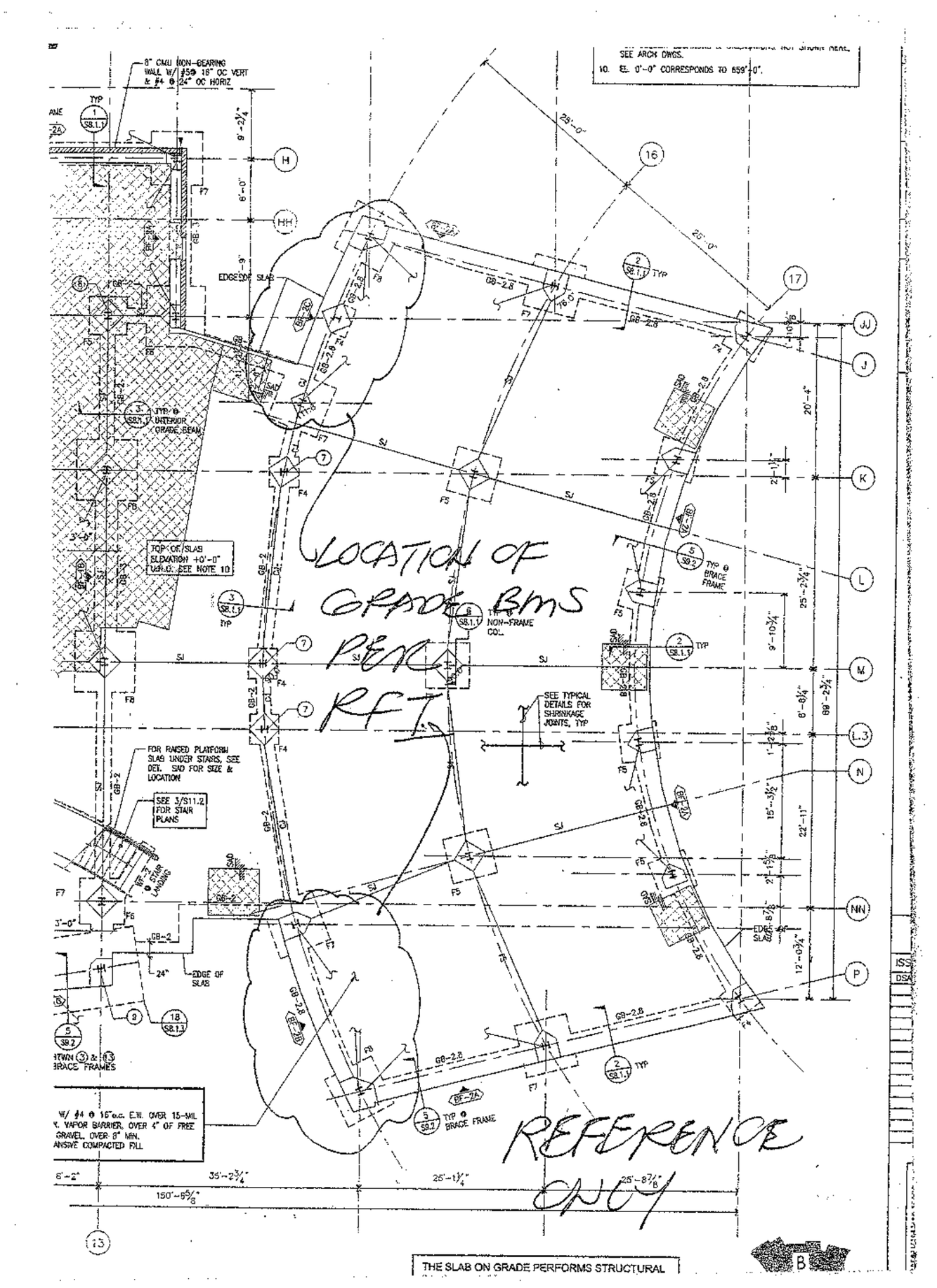
View Item History View Linked Files

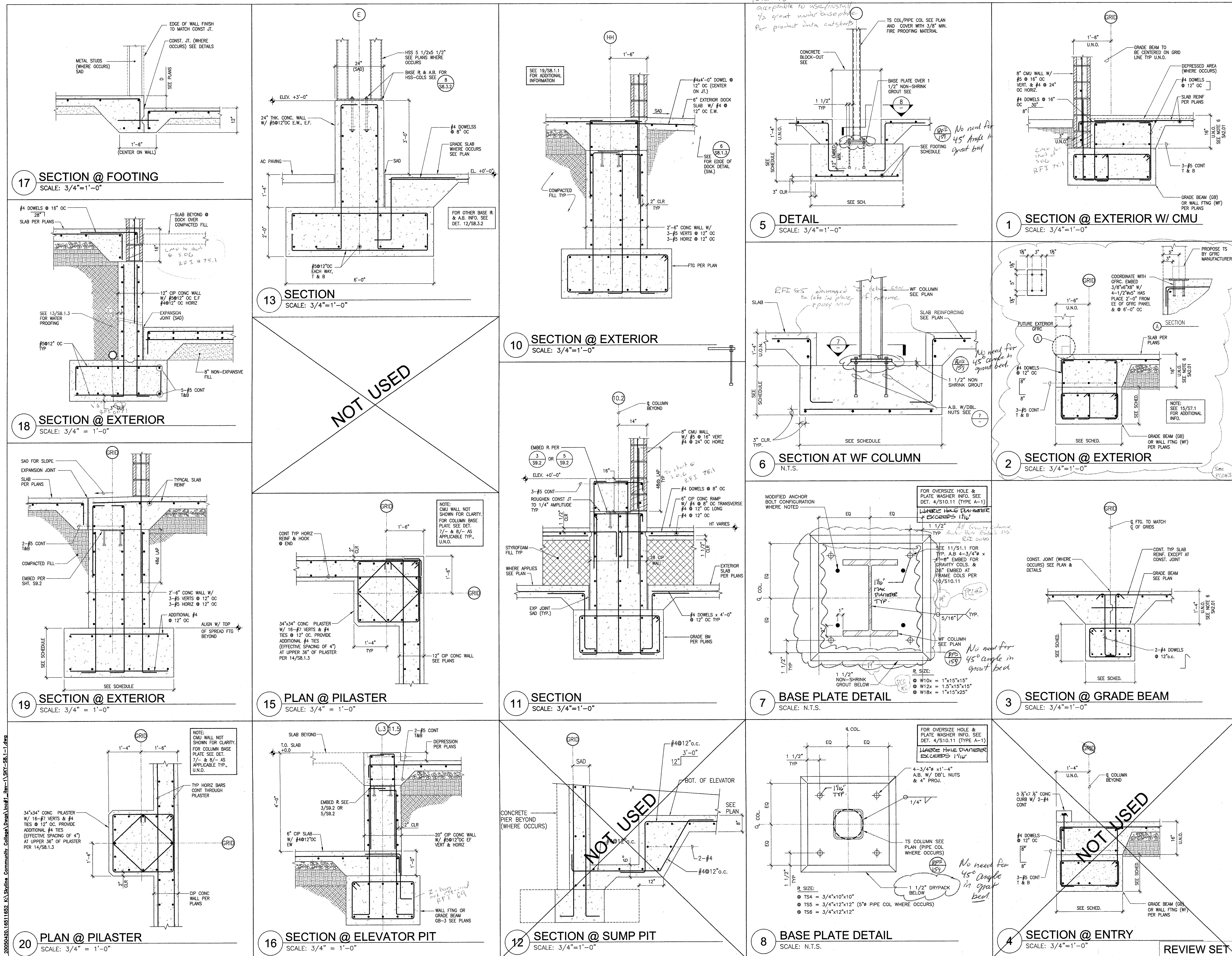
Number	0038
Is Official	Yes
Date Created	6/10/2005
Date Required	6/17/2005
RFI Location	
Is Closed	Yes
Subject	Building 6 Line 15 Embed Conflict
Discipline	Structural
CSI Division	Concrete
Question	Reference Drawing SB2.01 DSA Increment One Submittal, October 21, 2004 and Attached Sketches A and B The embed in the 2.8 type grade beam that is used to connect the beam brace frame on 15 line between J and L and again between N and P falls outside of the width of the footing due to the radius curve of the building. Please advise.
Author Company	Hensel Phelps Construction Co. (HPCC)
Author Contact	Rocky Ernest - HPCC
Author's Ref Number	HPCC 0029
Consultant Comments	Make grade beam 3'-6" wide. Add 3-#6 longitudinal rebars at top and botom. Respace the top and bottom rebars equally about the grade-beam centerline. Add #4 stirrups @ 8" oc. tying inside 4 longitudinal rebars as shown in attached sketch. See response from Tejas, Crosby Group and attached sketches. R. Saiki
Answer	
Co Respondent	
Dwgs and Specs AffectedDwgs and Specs Affected	
Answer Company	The Steinberg Group (SG)
Answer Contact	Ron Saiki - SG
Date Answered	6/17/2005
Is Cost Impact	Unknown
Is Drawing Update Required	Unknown
Drawing Notes	
Is Drawing Updated	No
Last Modified By	rernest
Last Modified	6/22/2005 6:53 AM

REFERENCE RFI

Custom Options

Transmittal - PROCEED IMMEDIATELY (Additional Cost IS Anticipated)	No





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3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

DRAWING TITLE
SECTIONS AND DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S8.1.1

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Crosby group

Project: SKYLINE COLLEGE	Job No: 1-6TB-100	
Description: EPI # 111	Date: 12/01/2005	Sht: 1/2
	By: TVG Ck:	

CORNER OF GRIDLINE 5/A & 5/D:

THIS CALCULATION IS TO CHECK SHEAR TRANSFER FROM STEEL FRAME COLUMNS & THEIR CONCRETE PILASTERS TO THE CONCRETE SHEAR WALLS ALONG LINE 5 & A OR LINE 5 & D (AS APPLICABLE) THAT HAVE CAPACITY TO ACCOMMODATE THE DESIGN LOADS.

DESIGN LOADS: (REF INC #1 STRUCT. CALC. SHEET # ACF3 #ACF5)

COLUMN ON LINE A/5 : NODE # 129

$P_{DEAD} = 127.8^K$

$P_{EH} = 118.4^K$

(REGISTERED PROFESSIONAL ENGINEER COLIN P. BLANEY #S 4377 Exp. 6-30-07 STRUCTURAL STATE OF CALIFORNIA)

[COLUMN] ON LINE D/5 : NODE # 139

$P_{DEAD} = 110.2^K$ } INCLUDES 30% ORTHAGONAL LOADS

$P_{EH} = 113.2^K$

* NOTE: IT IS CHECKED THAT NET UPLIFT IS OK PER CALC. SHEET ACF3 & ACF5.

* GRAVITY LOADS FOR SELF-WT & LIVE LOADS CAN BE CARRIED BY STEEL COL. TO FOUNDATIONS ∴ OK.

* FRAME LATERAL LOADS ARE CARRIED BY CONC. WALLS VIA SHEAR TRANSFER R. ∴ COL. OK.

* WE ONLY NEED TO CHECK TRANSFER OF STEEL COL. UPLIFT LOADS TO CONC. WALLS.

Crosby group

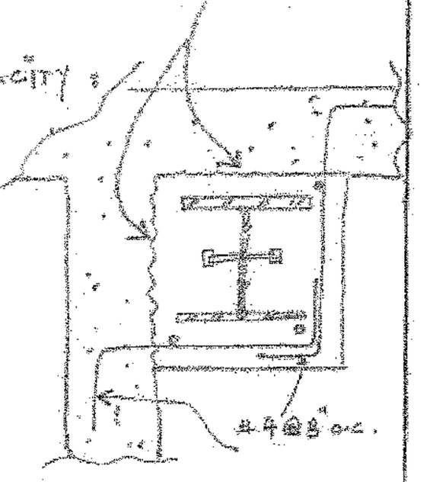
Project: SKYLINE COLLEGE	Job No: 1-6TB-100	
Description:	Date: 12/01/2005	Sht: 2/2
	By: TVG Ck:	

MAX. DEMAND FOR SHEAR FRICTION DUE TO UPLIFT

(REGISTERED PROFESSIONAL ENGINEER COLIN P. BLANEY #S 4377 Exp. 6-30-07 STRUCTURAL STATE OF CALIFORNIA)

$= 0.9 P_D - \Omega_0 E_h$

$= 0.9 \times 110.2 - 2.2 \times 113.2 \cong 150^K$



AVAILABLE SHEAR FRICTION CAPACITY:
(REF: CBC 1911A.5.6.2)

$\phi V_n = 0.85 \times A_{vf} \times f_y \times \mu$

$= 0.85 \times 2 \times 0.2 \times 60 \times 1.0 \times \left[12 \times \frac{12}{8}\right]$

$= 367.2^K > 150^K$ ∴ OK

1. WE ACKNOWLEDGE #4 REBARS WERE BENT 2 TIMES AS APPROVED BY DSA.

2. FIELD CONDITION SHOWS MORE THAN 1/4" AMPLITUDE FOR ROUGHENED SURFACE.

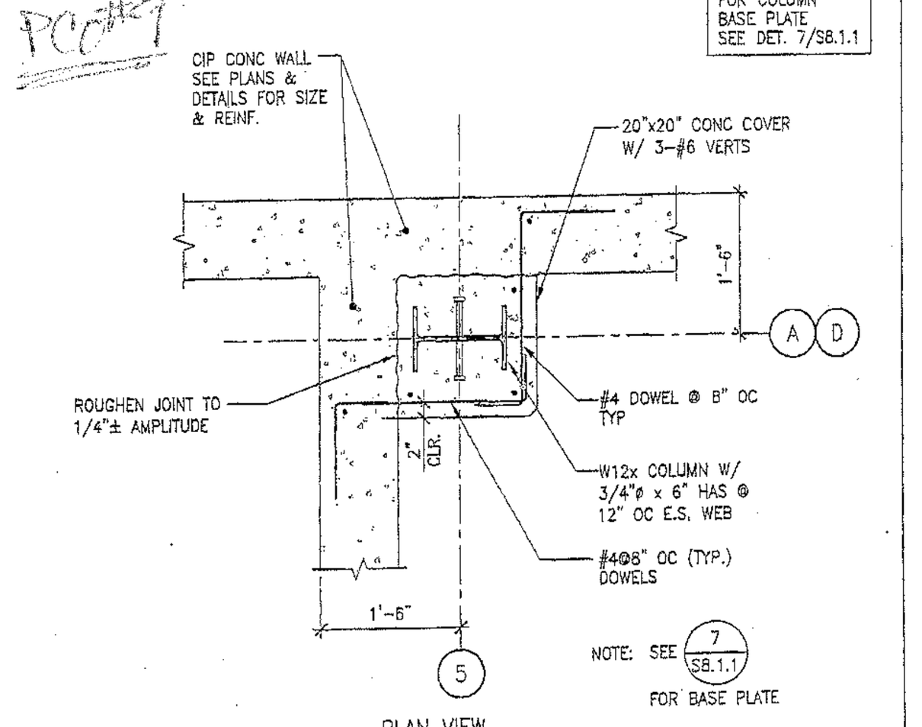
3. THERE IS UNACCOUNTED AVAILABLE RESERVE CAPACITY IN PILASTER CONC. FROM PARTICIPATION BY STEEL COL. STUDS & VERT. #6 ANCHORED & DEVELOPED IN CONC. FOOTINGS

4. CALCULATED CAPACITY > 2x DEMAND .... ($367^K > 2 \times 150$)

BASED ON ABOVE ITEMS 1, 2, 3, 4 ... WE ALLOW CORNER #4 REBAR DOWEL, SHOWN IN DET. 13/S8.1-2 BE OMITTED FROM CONSTRUCTION.

PCO #9

FOR COLUMN BASE PLATE SEE DET. 7/S8.1.1



NOTE: SEE 7/S8.1.1 FOR BASE PLATE

PLAN VIEW

13 SECTION @ COLUMN

SCALE: 3/4" = 1'-0"

REPLACES DETAIL 13/S8.1.2

APPROVED DIV. OF THE STATE ARCHITECT
AC ___ F/LS ___ SS ___
APPL. NO. 106658 DATE 2/6/06

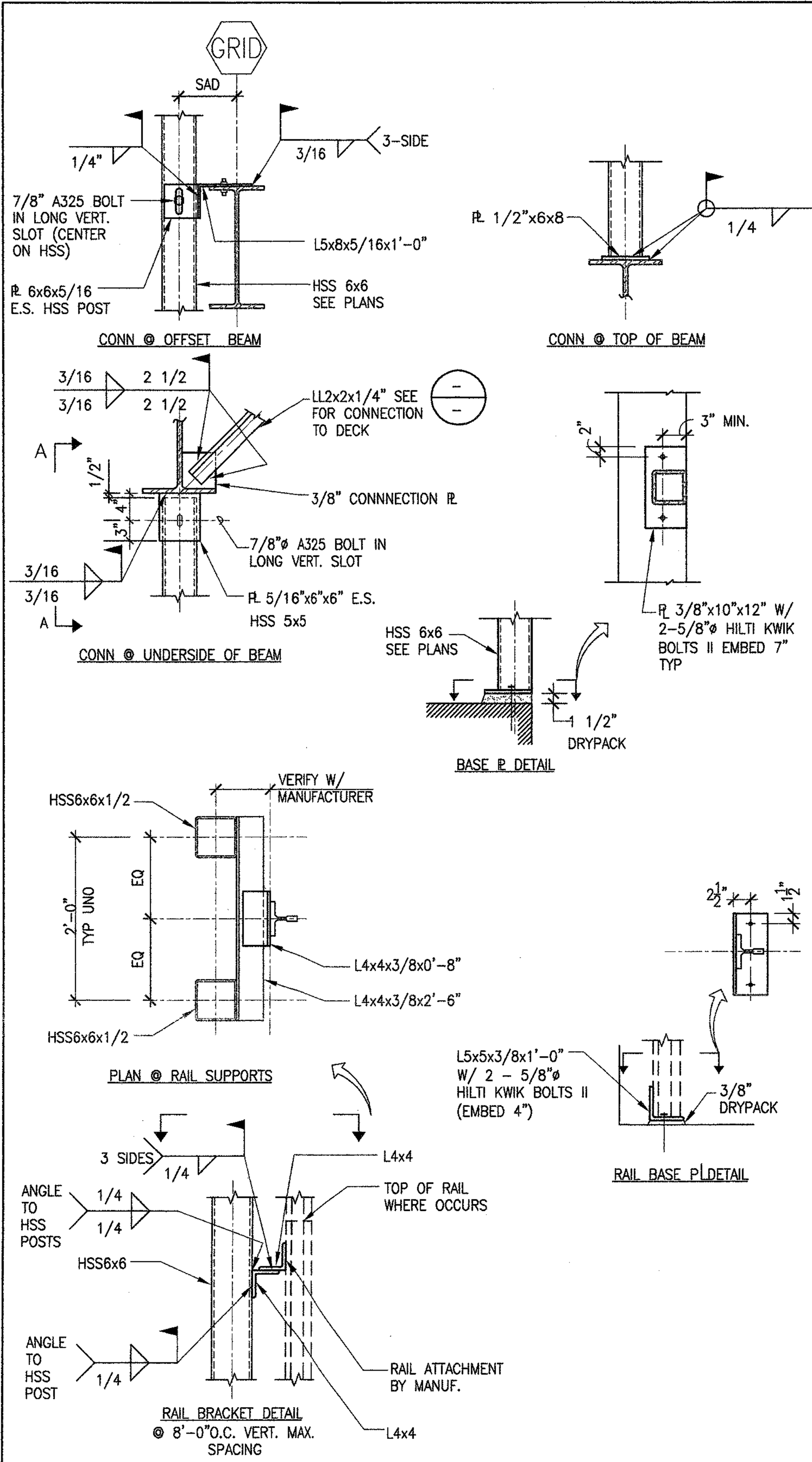
(REGISTERED PROFESSIONAL ENGINEER COLIN BLANEY NO. S4377 EXP. 6/30/07 STRUCTURAL STATE OF CALIFORNIA)

architect	Steinberg Architects 60 Pierce Avenue San Jose CA 95110	Skyline College 3300 College Drive, San Bruno CA File No. 41-C1/Appl. No. 01-106658 DSA Increment #1
consultant	Crosby Group 726 Main Street Redwood City CA 94063	San Mateo Community College District 3401 CSM Drive San Mateo CA

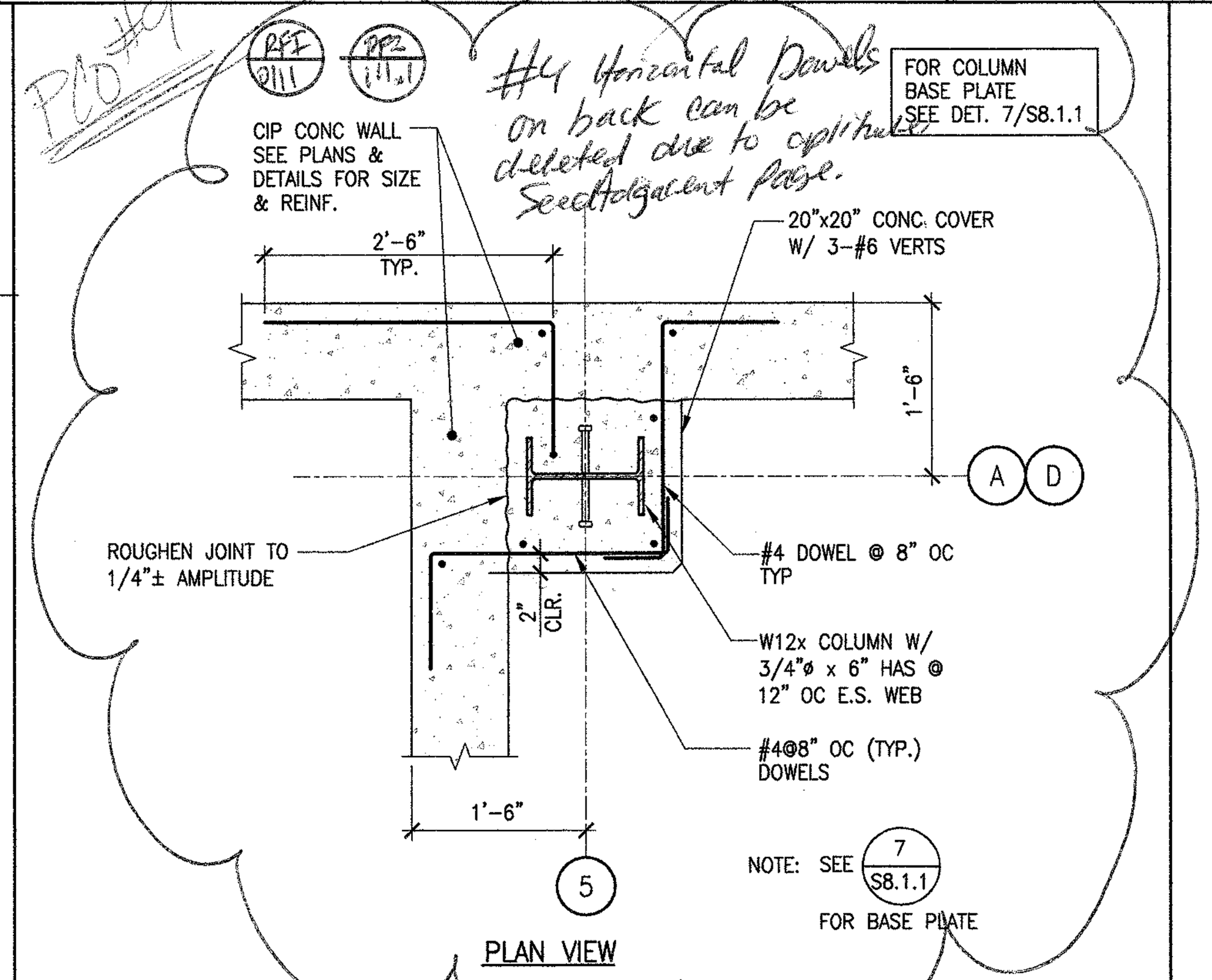
STEINBERGARCHITECTS

REBAR TIE @ COLUMN — PCO-9 — CO-A54

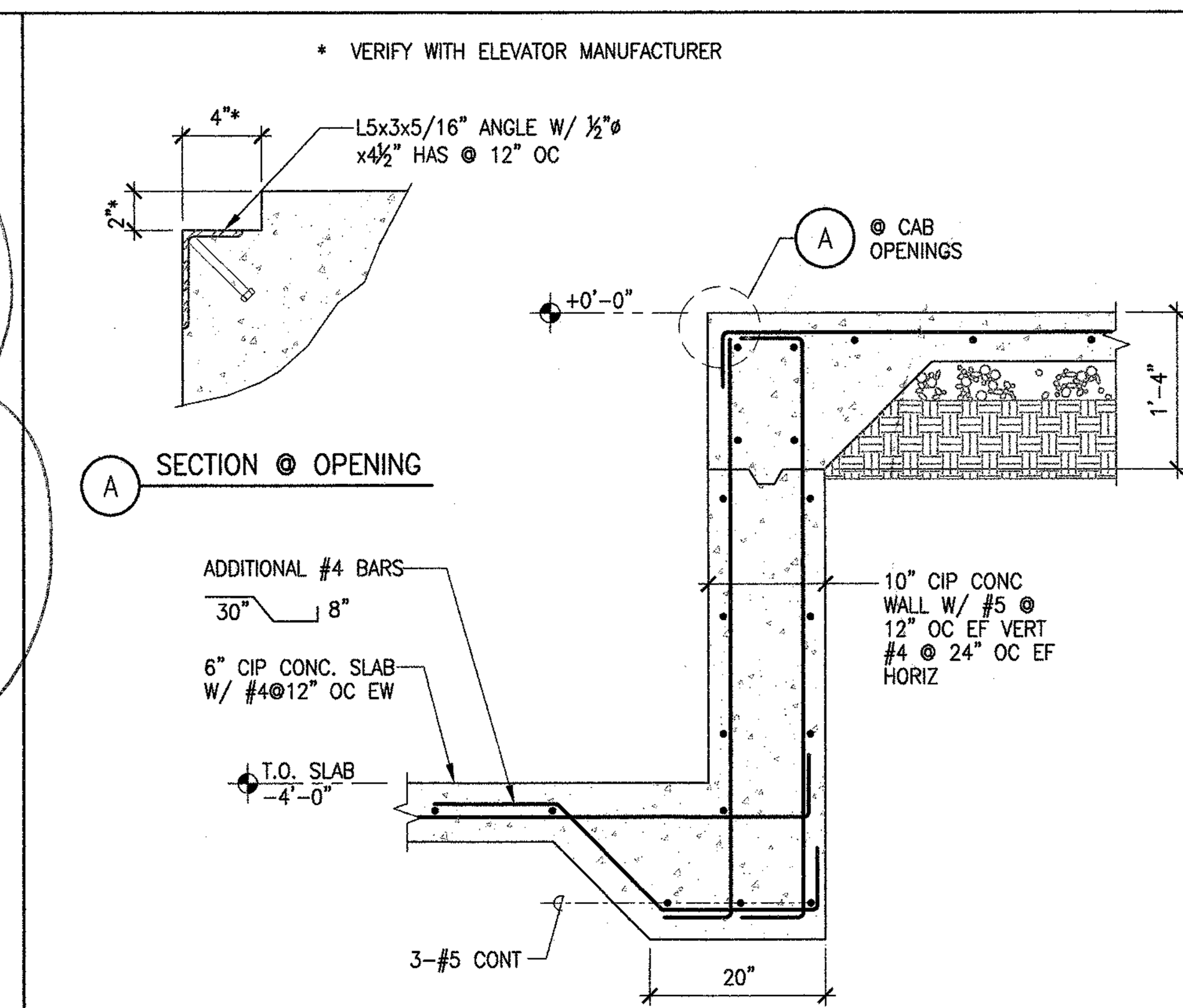
rev. date issue



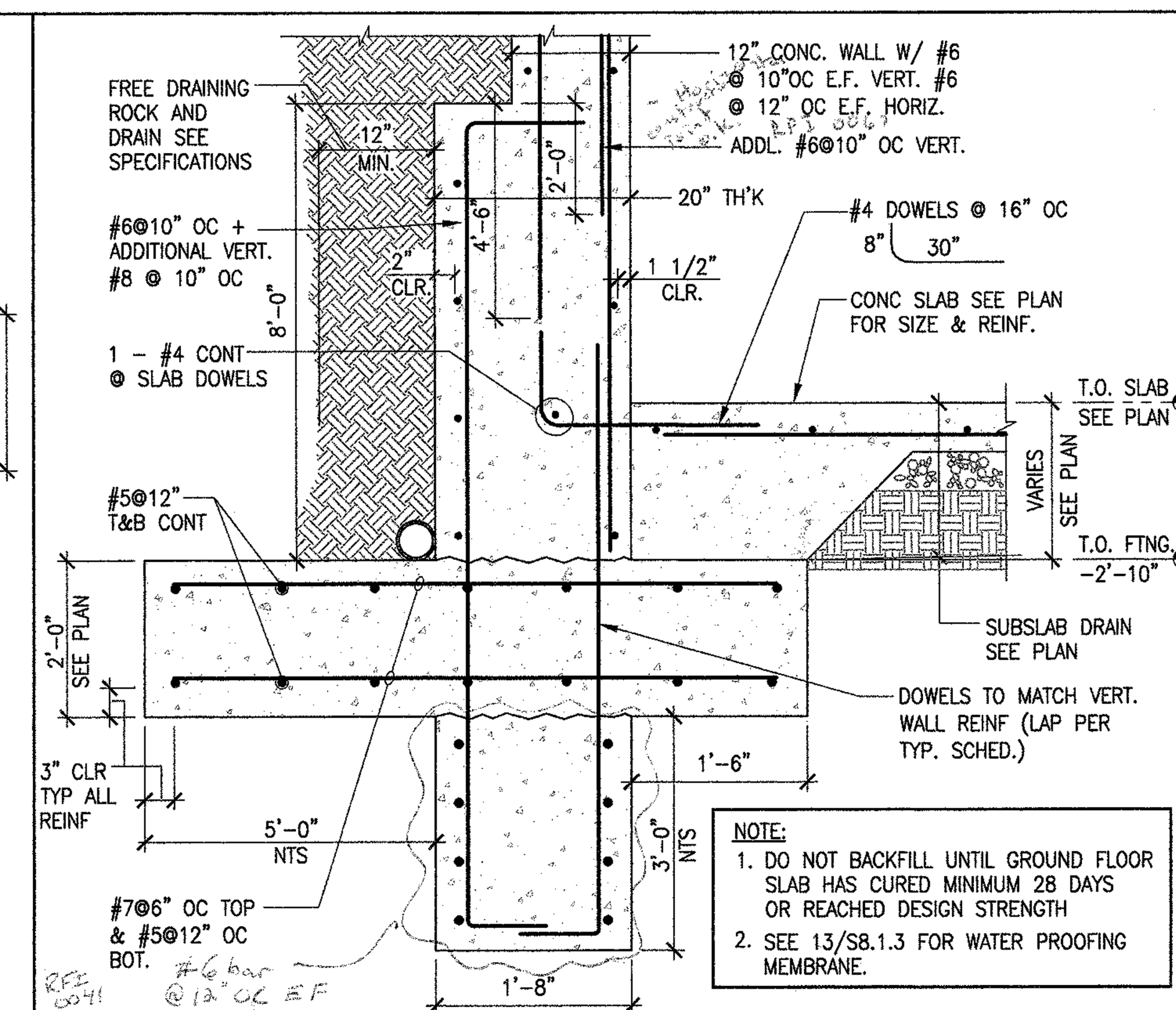
18 ELEVATOR RAIL SUPPORTS
SCALE: 3/4" = 1'-0"



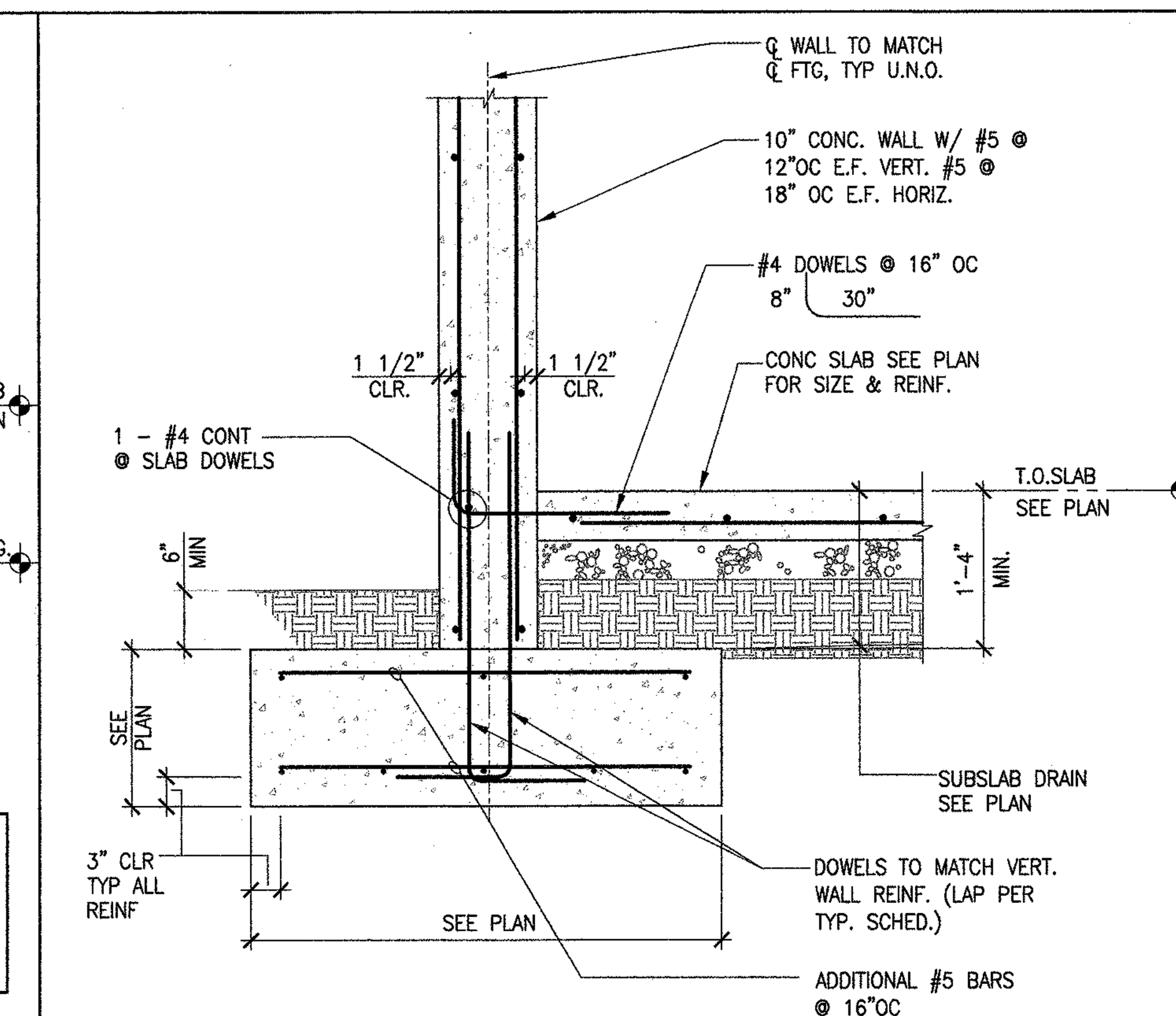
13 SECTION @ COLUMN
SCALE: 3/4" = 1'-0"



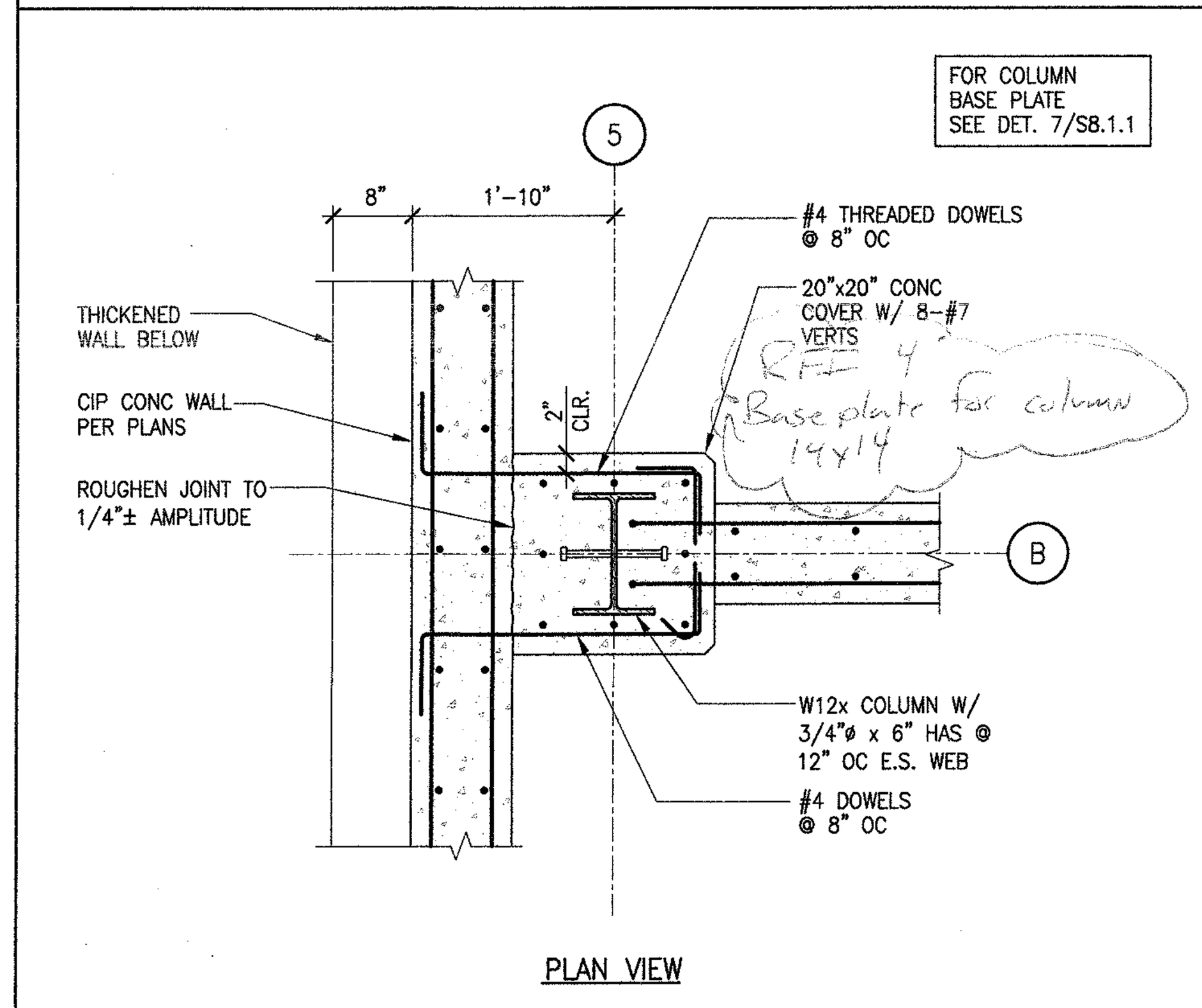
9 SECTION @ ELEVATOR PIT
SCALE: 3/4" = 1'-0"



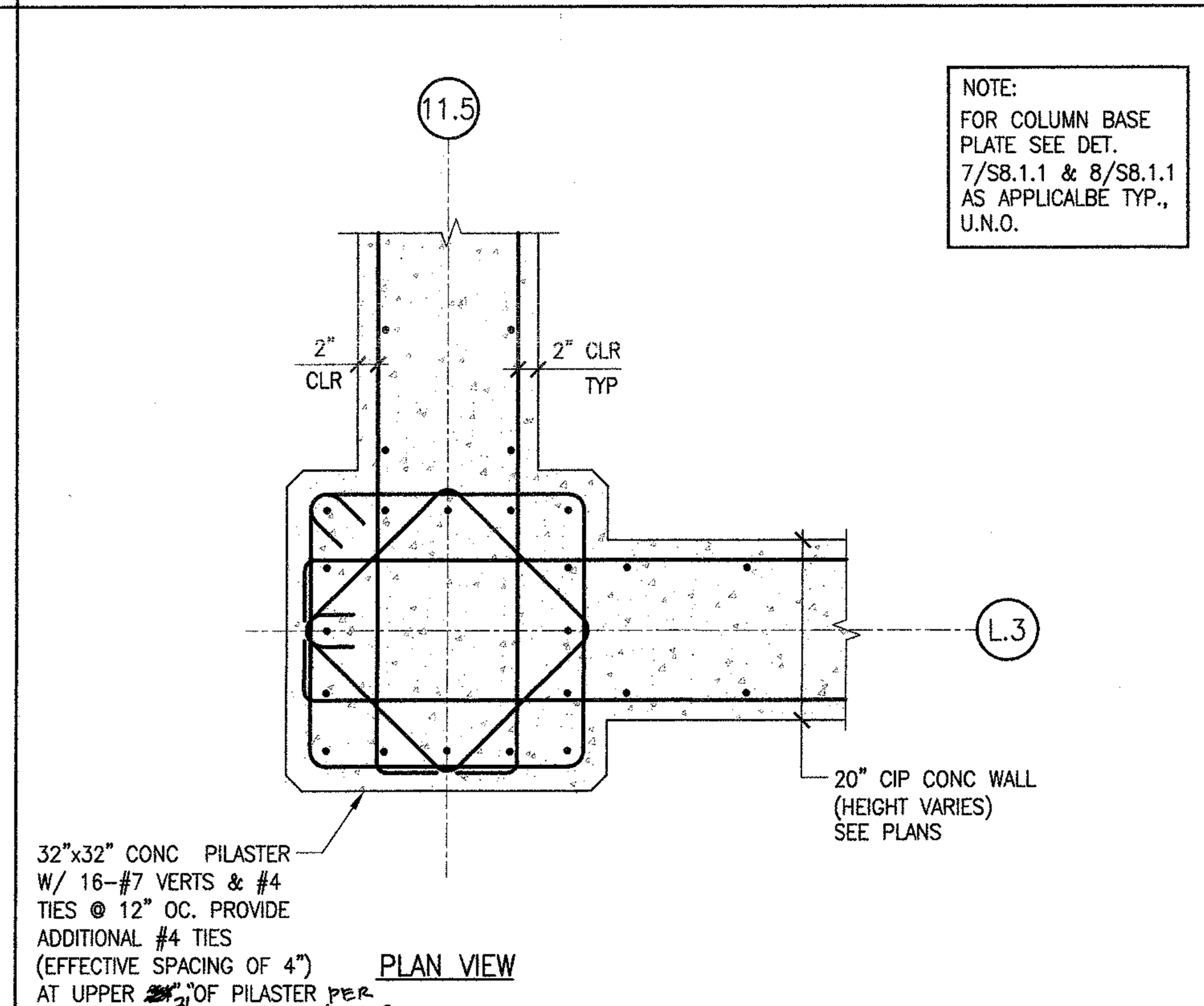
5 SECTION @ RETAINING WALL
N.T.S.



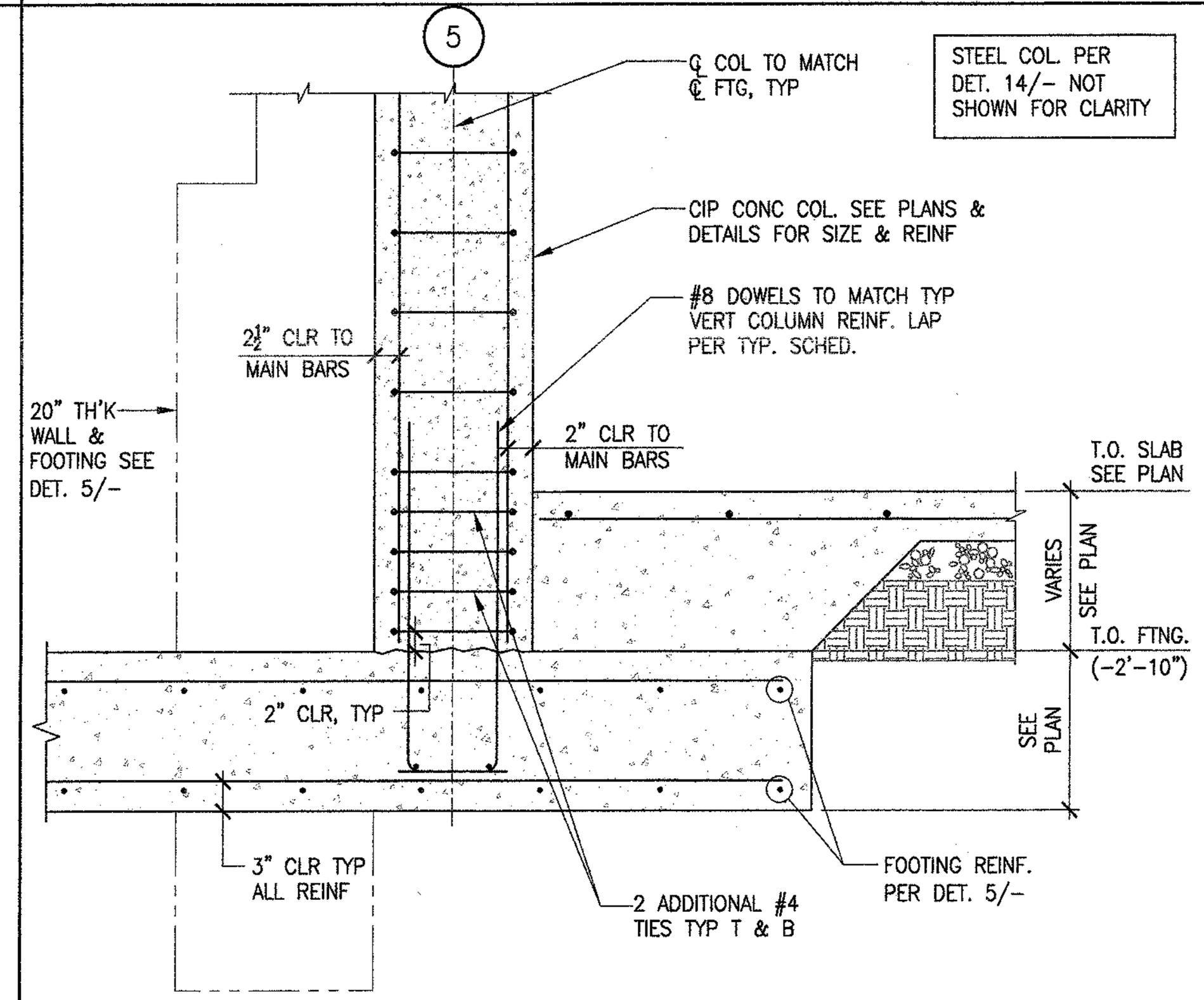
1 SECTION @ EXTERIOR
SCALE: 3/4" = 1'-0"



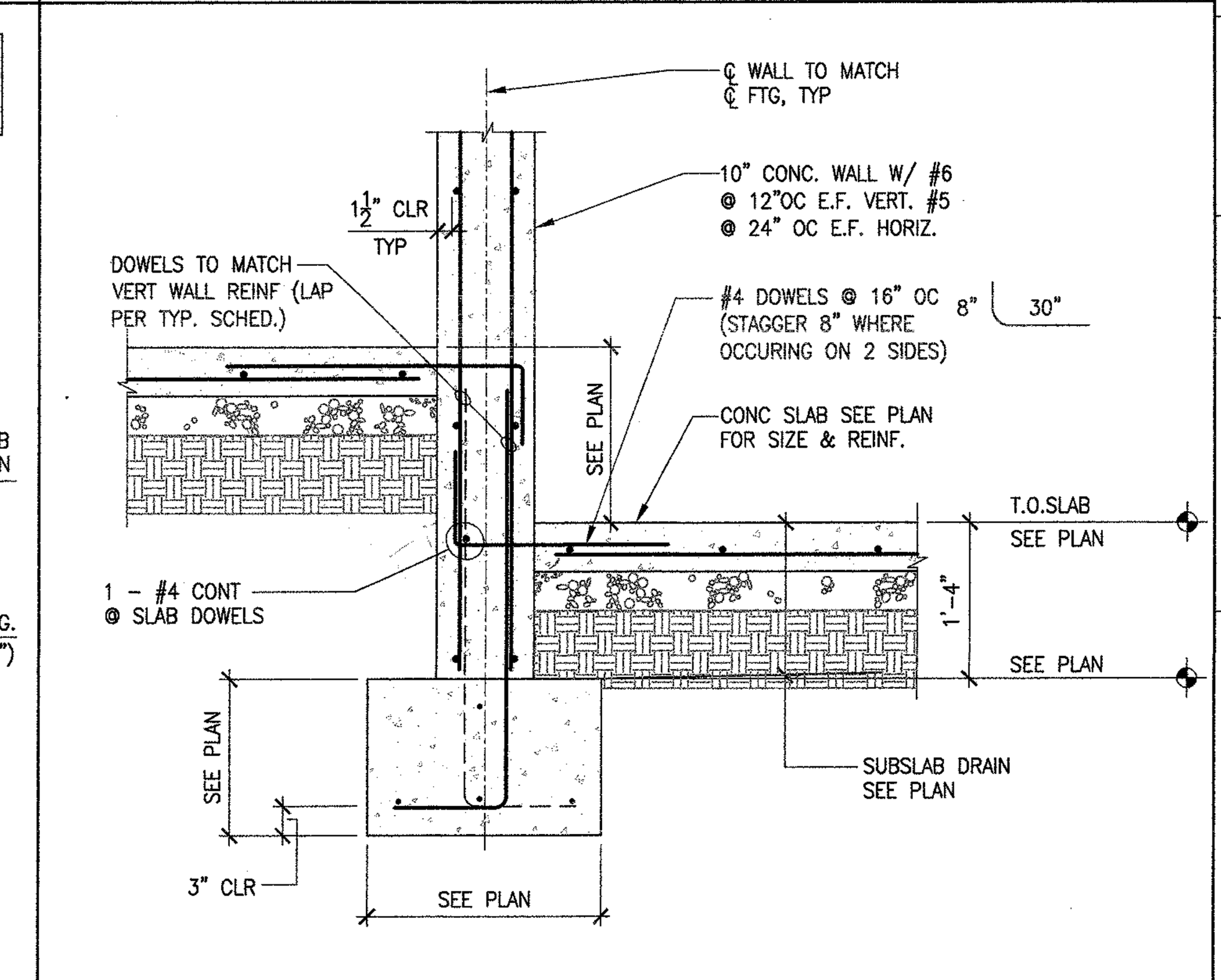
14 SECTION @ ENCASED COLUMN
SCALE: 3/4" = 1'-0"



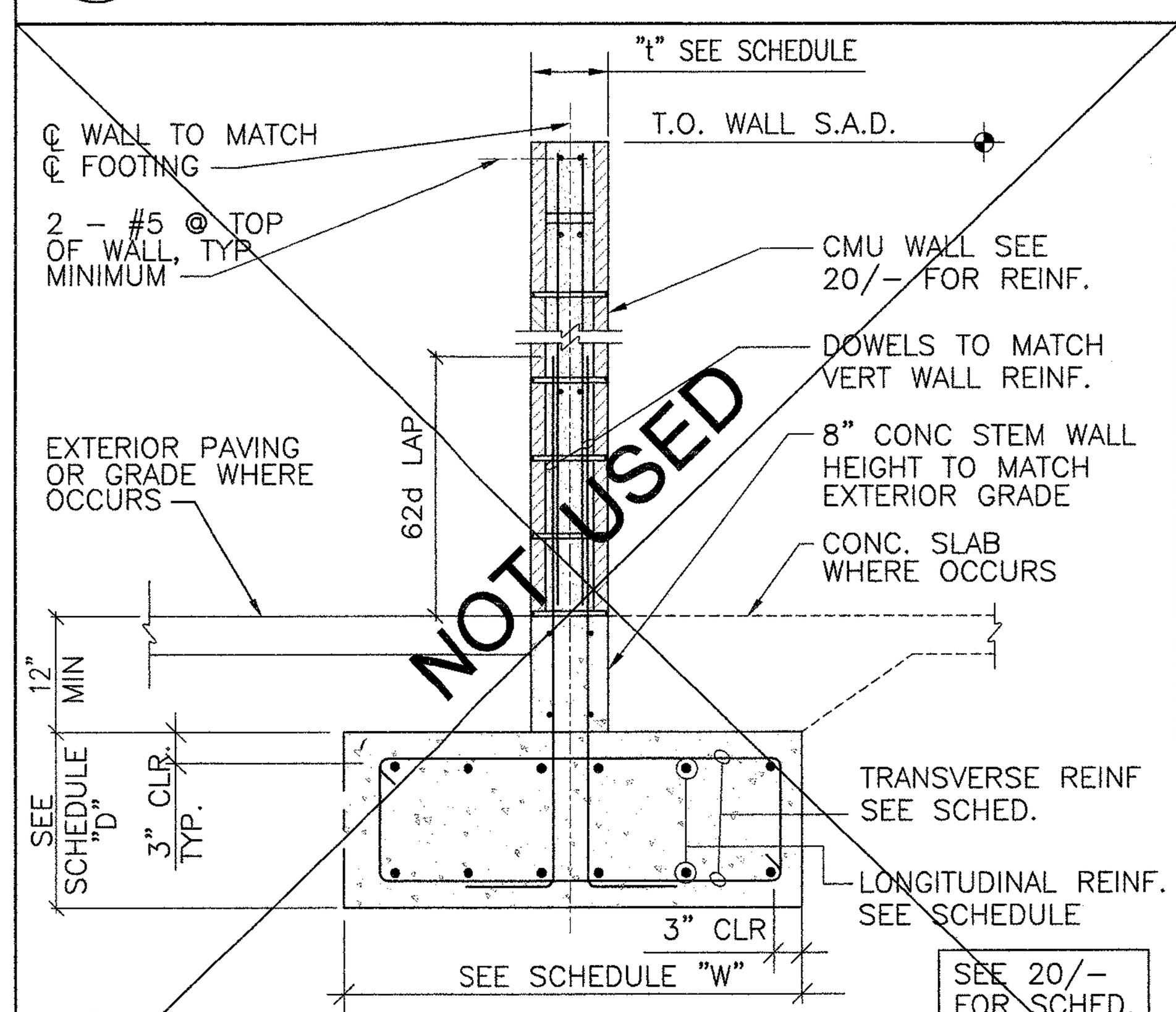
10 SECTION @ PILASTER
SCALE: 3/4" = 1'-0"



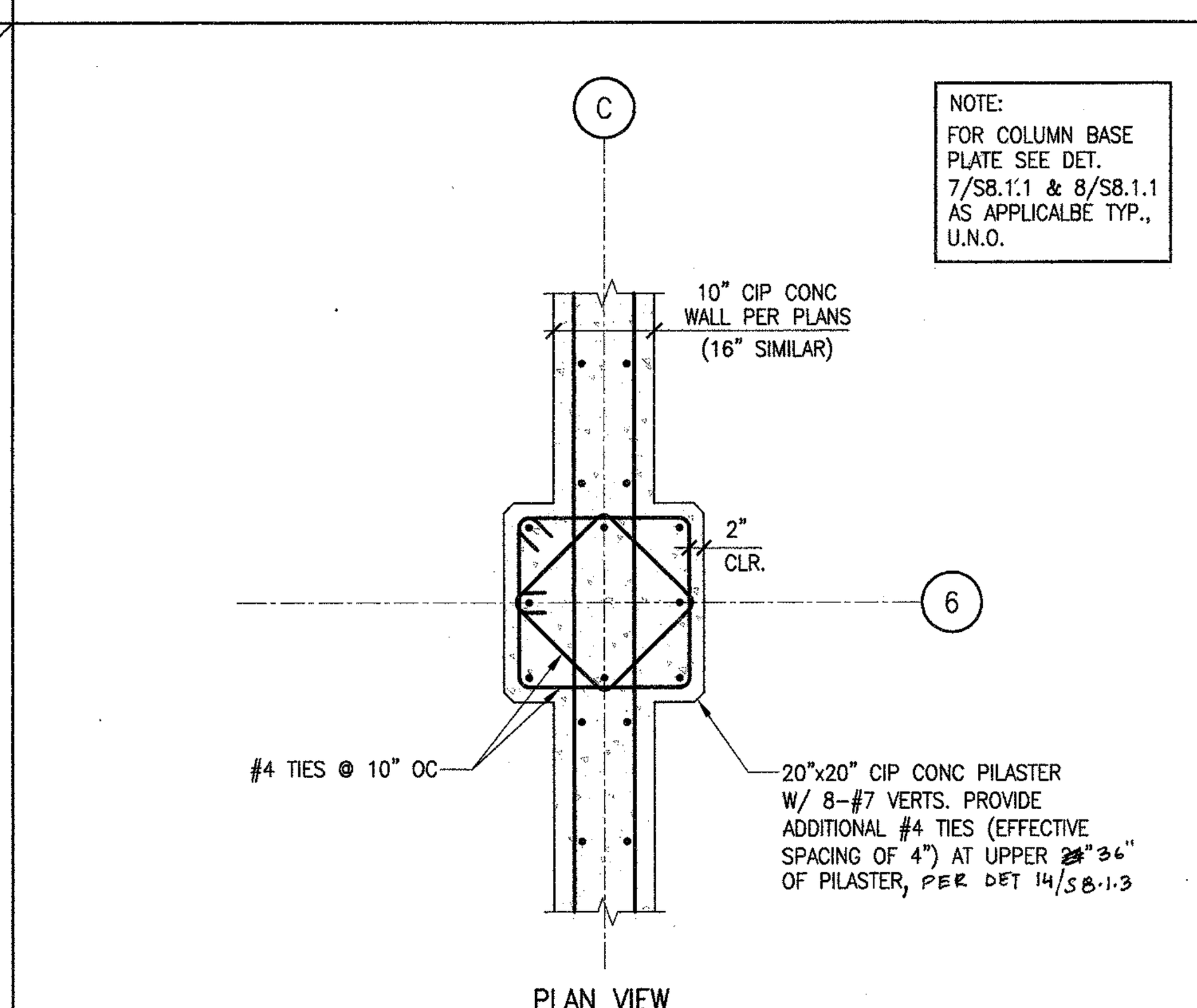
6 SECTION @ CONCRETE PILASTER
SCALE: 3/4" = 1'-0"



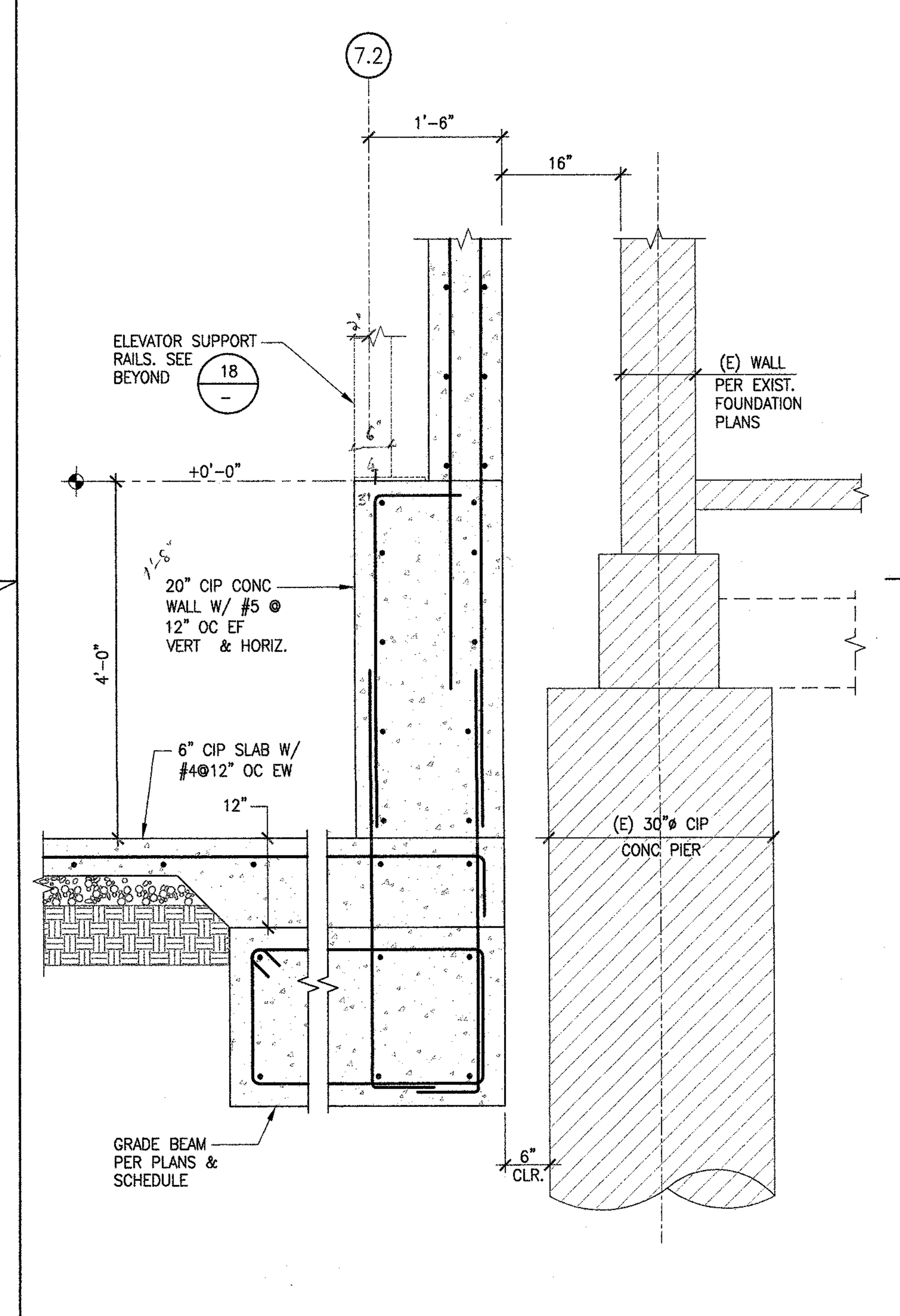
2 SECTION @ INTERIOR WALL
SCALE: 3/4" = 1'-0"



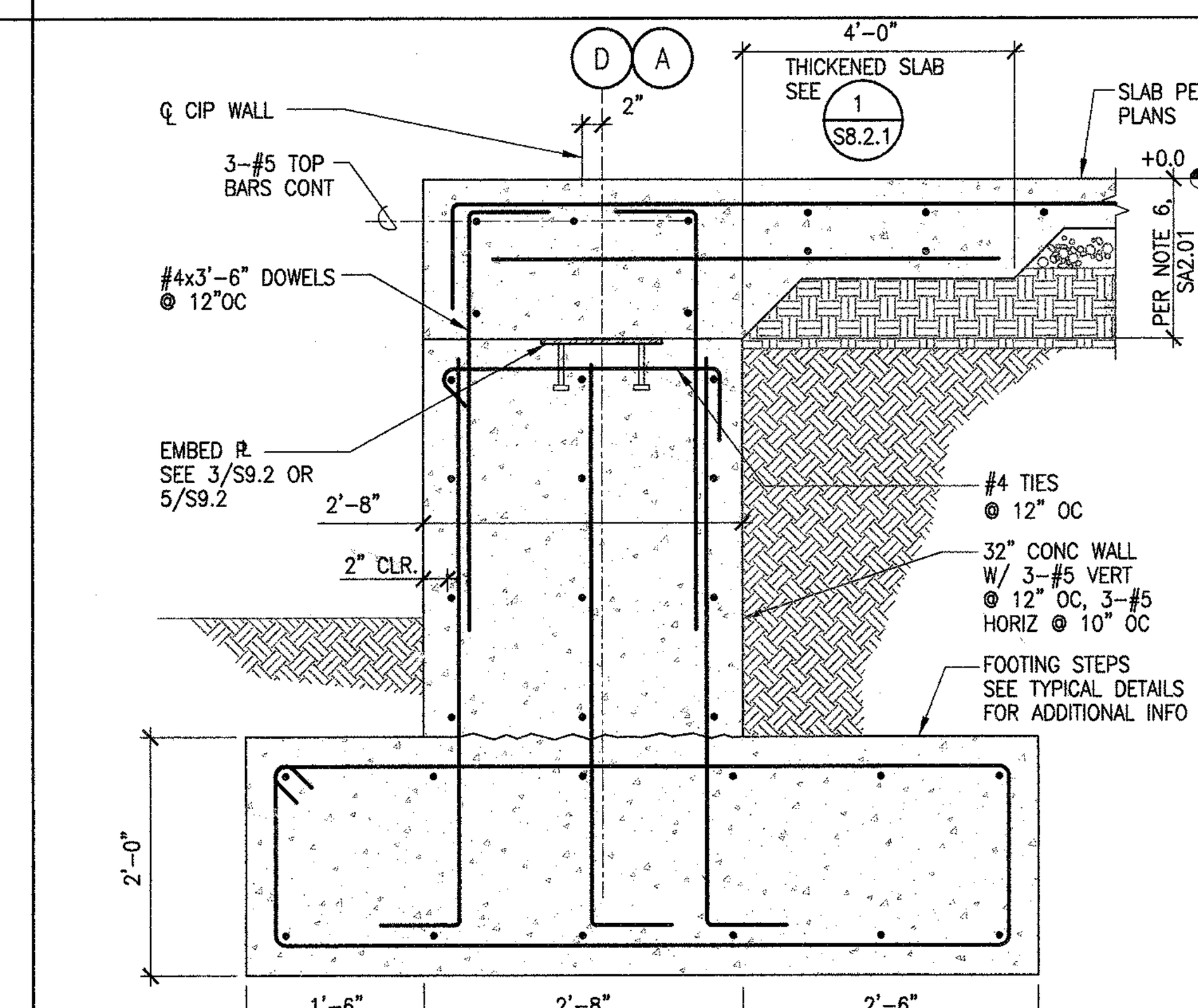
19 SECTION @ EXTERIOR WALL
SCALE: 3/4" = 1'-0"



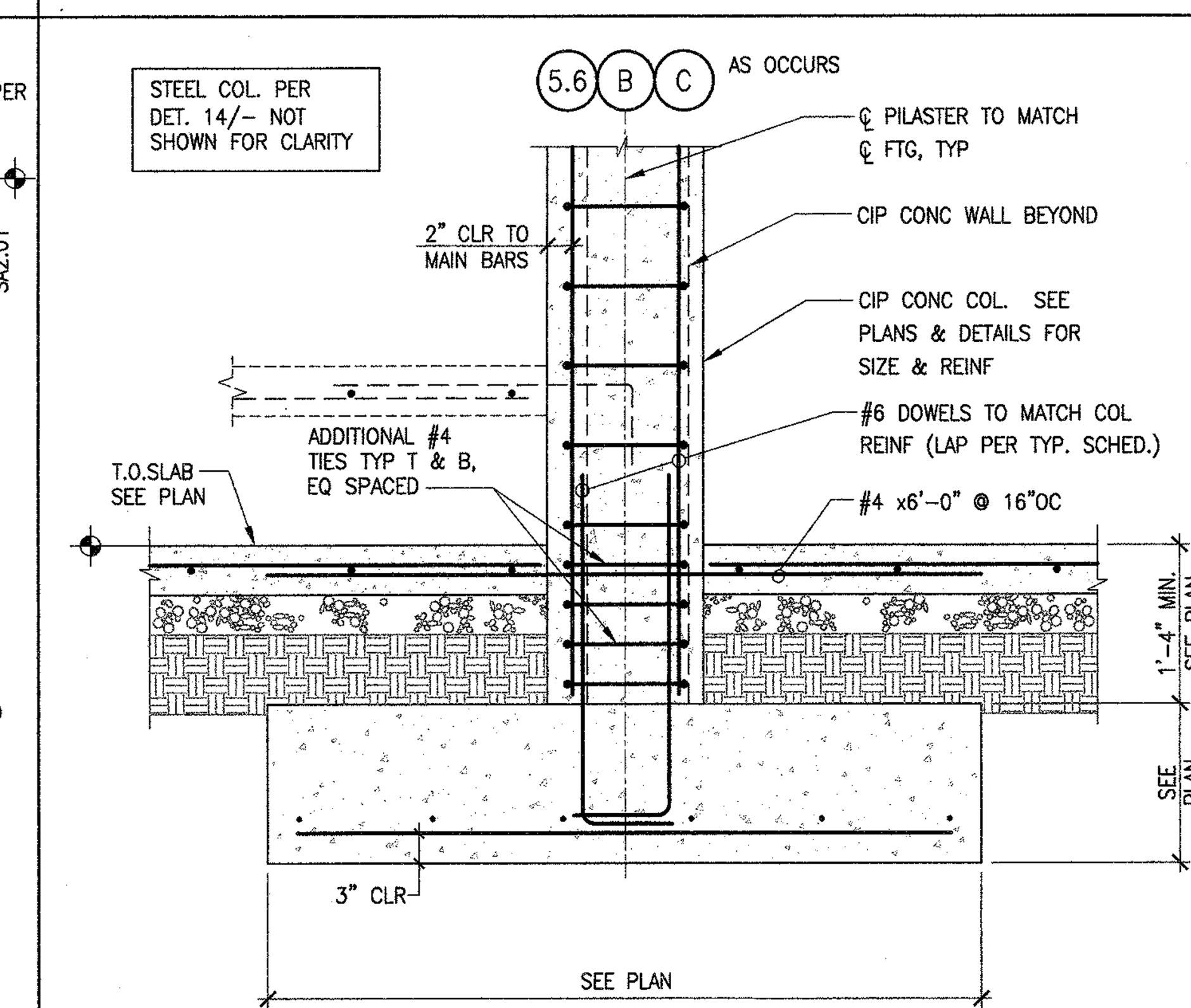
15 SECTION
SCALE: 3/4" = 1'-0"



12 SECTION @ ELEVATOR
SCALE: 3/4" = 1'-0"



7 SECTION
N.T.S.



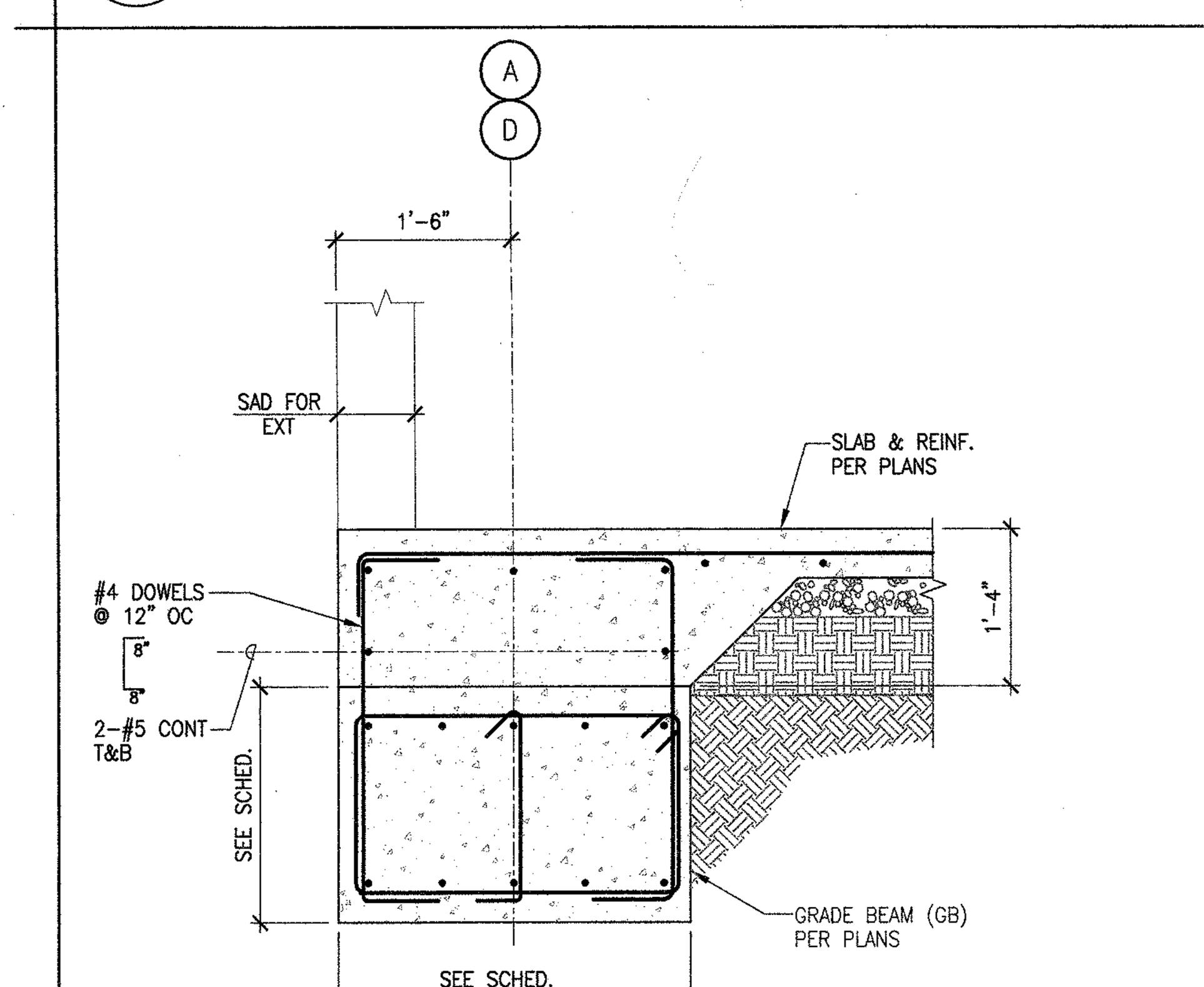
3 SECTION @ CONCRETE PILASTER
SCALE: 3/4" = 1'-0"

WALL HEIGHT	WALL		FOOTING				
	THICKNESS t (IN.)	VERT. REINF.	HOR. REINF.	W (IN.)	D (IN.)	TRANS. REINF.	LONG. REINF.
≤ 6'-0"	8"	#5 @ 16" O.C.	#4 @ 24" O.C.	36"	18"	#4 @ 16" O.C.	#4 @ 16" O.C.
6'-1" TO 8'-0"	8"	#5 @ 16" O.C.	#4 @ 24" O.C.	48"	18"	#4 @ 16" O.C.	#4 @ 16" O.C.
8'-1" TO 10'-0"	10"	#5 @ 16" O.C. E.F. (STAGGERED)	#5 @ 24" O.C.	56"	18"	#4 @ 16" O.C.	#4 @ 16" O.C.
10'-1" TO 12'-0"	12"	#5 @ 16" O.C. EACH FACE	#4 @ 24" O.C. EACH FACE	60"	20"	#5 @ 12" O.C.	#5 @ 12" O.C.
12'-1" TO 16'-0"	12"	#5 @ 8" O.C. EACH FACE	#4 @ 24" O.C. EACH FACE	78"	24"	#5 @ 12" O.C.	#5 @ 12" O.C.
16'-1" TO 18'-0"	16"	#5 @ 8" O.C. EACH FACE	#5 @ 24" O.C. EACH FACE	90"	24"	#5 @ 12" O.C.	#5 @ 12" O.C.

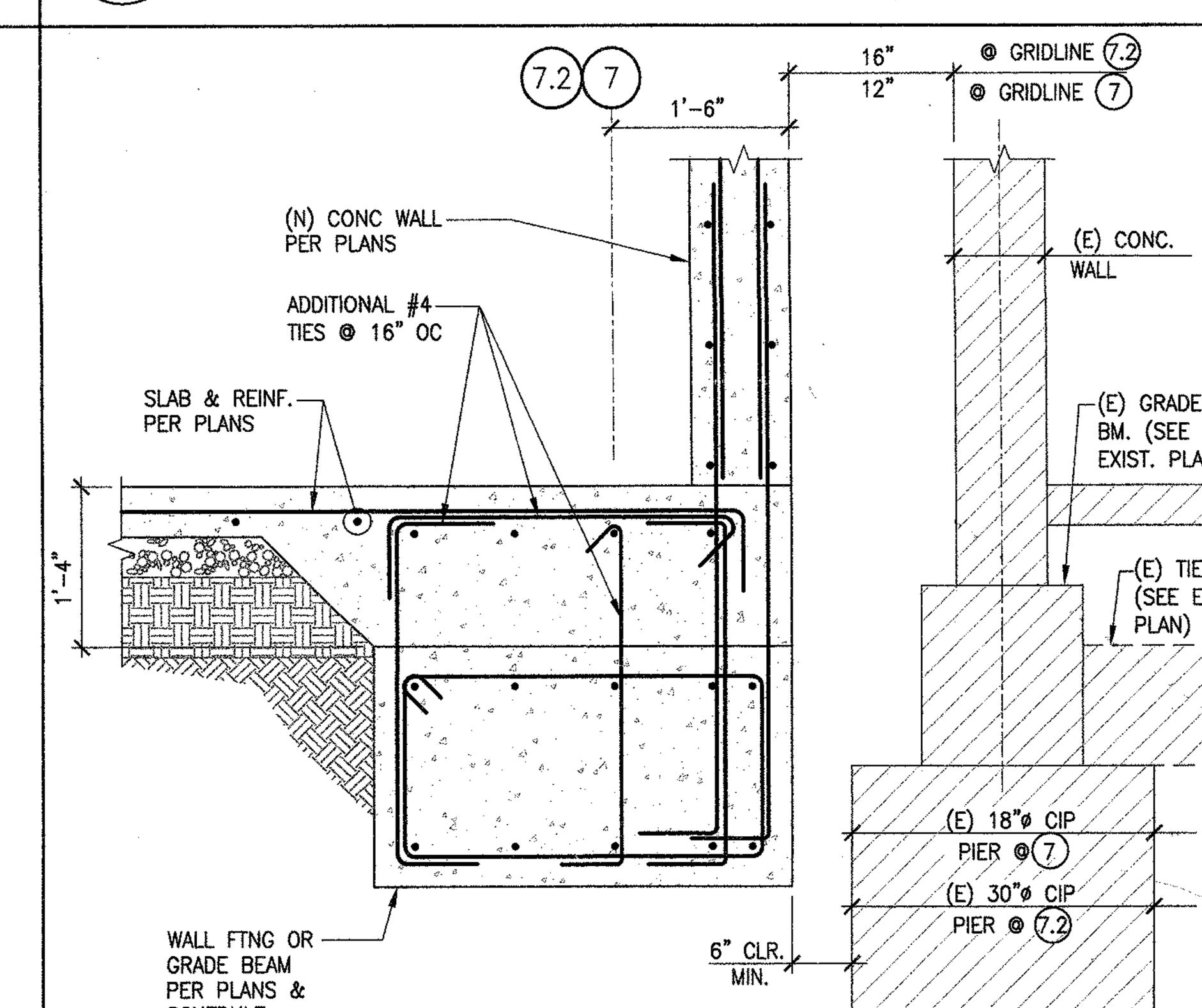
NOT USED

NOTE: SEE 19/- FOR ADDITIONAL INFO.

20 FREE STANDING CMU WALL CONSTRUCTION
SCALE: 3/4" = 1'-0"



8 SECTION @ EXTERIOR
SCALE: 3/4" = 1'-0"



4 SECTION @ (E) BLDG.
SCALE: 3/4" = 1'-0"

REVIEW SET

The Steinberg Group
Architecture Planning Interiors
60 Pierce Avenue San Jose CA 95110

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Crosby group Structural Engineering

Hensel Phelps Construction Co.

SKYLINE COLLEGE
STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

DRAWING TITLE
SECTIONS AND DETAILS
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S8.1.2

20050420_16525988 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S8.1-2.dwg

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PLAN LAYOUT
18 DETAIL
SCALE: 1/4"=1'-0"" = 1'-0"
PLAN LAYOUT
19 DETAIL
SCALE: 1/4"=1'-0"" = 1'-0"
PLAN LAYOUT
FINISH GRADE
TERMINATION BAR
TAPE
PREFABRICATED DRAINAGE COMPOSITE
TAPE TYP.
4" PREFABRICATED SUBDRAINAGE PIPING. SEE CIVIL FOR CONNECTION TO DRAINS
CONC. FOOTING
MASTIC OR LIQUID MEMBRANE
CONC. WALL
WATERPROOF MEMBRANE
CONC. SLAB ON GRADE
SEE 5/S8.1.2 FOR ADDITIONAL INFORMATION
13 SECTION @ SUBDRAINAGE PIPING
SCALE: 3/4" = 1'-0"
2-#4 CONT @ TOP
PIPE SLEEVE SAD
#4@8" OC
HT. VARIES
#4 CONT @ DOWELS
#5 @ 12" OC VERT
#4 @ 12" OC HORIZ
EXP. JOINT (SAD)
STYRAFOAM FILL
6" DRAIN ROCK BEHIND WALL
4"Ø WEEP HOLES @ 4'-0" OC
WHERE APPLIES, SEE PLAN FOR REINF.
#4@8" OC E.W. T&B
9 SECTION @ RAMP
SCALE: 3/4" = 1'-0"
HANDRAIL S.A.D. TYP.
EL. VARIES S.A.D.
#4 CONT. @ HOOKS (TYP.)
CONC. PAVEMENT
2-#4 CONT. @ TOP
SLEEVE S.A.D.
NOT USED
1 SECTION AT STAIRS
SCALE: 3/4" = 1'-0"
NOTE: SEE 7/S8.1.2 FIR ADDITIONAL INFORMATION
SLAB PER PLANS
CONT. CIP WALL SEE PLAN
5" W/ 2 SETS OF #4 TIES
8-#4 TIES @ 4" OC TYP. @ ANCHOR BOLTS
SEE PLANS
WHERE FOOTING STEPS SEE TYPICAL DETAILS FOR ADDITIONAL INFO
SEE PLAN
14 SECTION @ WALL WITH FRAME COLUMN - PILASTER
N.T.S.
#4@12"O.C. EACH WAY
SLOPE S.A.D.
CONT. L4x4x1/4 W/3/4Ø x 5" STUDS @ 12" O.C.
#5 CONT. @ HOOK
COMPACTED FILL
EXP. JOINT (SAD)
SEE PLAN
4-#4 CONT
6 SECTION @ LOADING DOCK
SCALE: 3/4" = 1'-0"
CONC. PILASTER W/ 16-#6 BARS AS SHOWN
CIP WALL PER PLANS
OUTLINE OF BASE PL ABOVE
#4 TIES @ 8" OC TYP. PROVIDE 7-#4 @ 4" OC AT TOP OF PILASTER
TYP. WALL REINF. SEE PLANS & DETAILS
15 PLAN @ PILASTER
SCALE: 3/4" = 1'-0"
TOW SAD
8" CMU WALL W/ #5 @ 16" OC E.F. & #4 @ 24" OC HORIZ (ALTERNATE VERTS EACH CELL)
10" CIP CONC WALL W/ #5 @ 6" OC E.F. #4 @ 12" OC HORIZ., E.F.
FUTURE AC PAVING
#5 CONTS @ 12" OC
#5 BARS @ 12" OC
2-#4 CONT T&B
3" CLR. TYP.
12 SECTION
N.T.S.
℄ OF CIP WALL
SEE 7/S8.1.2 FOR SLAB INFO. NOT SHOWN HERE
SEE 7/S8.1.2 FOR ADDITIONAL INFORMATION
32" CONC WALL W/ #5@12" OC EA. FACE, BOTH WAY
ADDITIONAL #5 @ 12" OC VERT
FOR RETAINING WALL SUB-DRAINAGE SEE 13/S8.1.3
#5@12" OC T&B BOTH WAY
8 SECTION
N.T.S.
NOTE: FOR TREAD AND RISER DIMENSION S.A.D.
#4 NOSING (TYP.)
RETAINING WALL (WHERE OCCURS) SEE 9
DOWEL INTO ADJACENT WALL OR WALL BELOW AT CAST IN PLACE WALLS.
COMPACTED (TYP.)
3 SECTION AT STAIRS
SCALE: 3/4" = 1'-0"
The Steinberg Group
Architecture Planning Interiors
60 Pierce Avenue San Jose CA 95110
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DSA - INC #1 10.21.04
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DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S8.1.3
REVIEW SET

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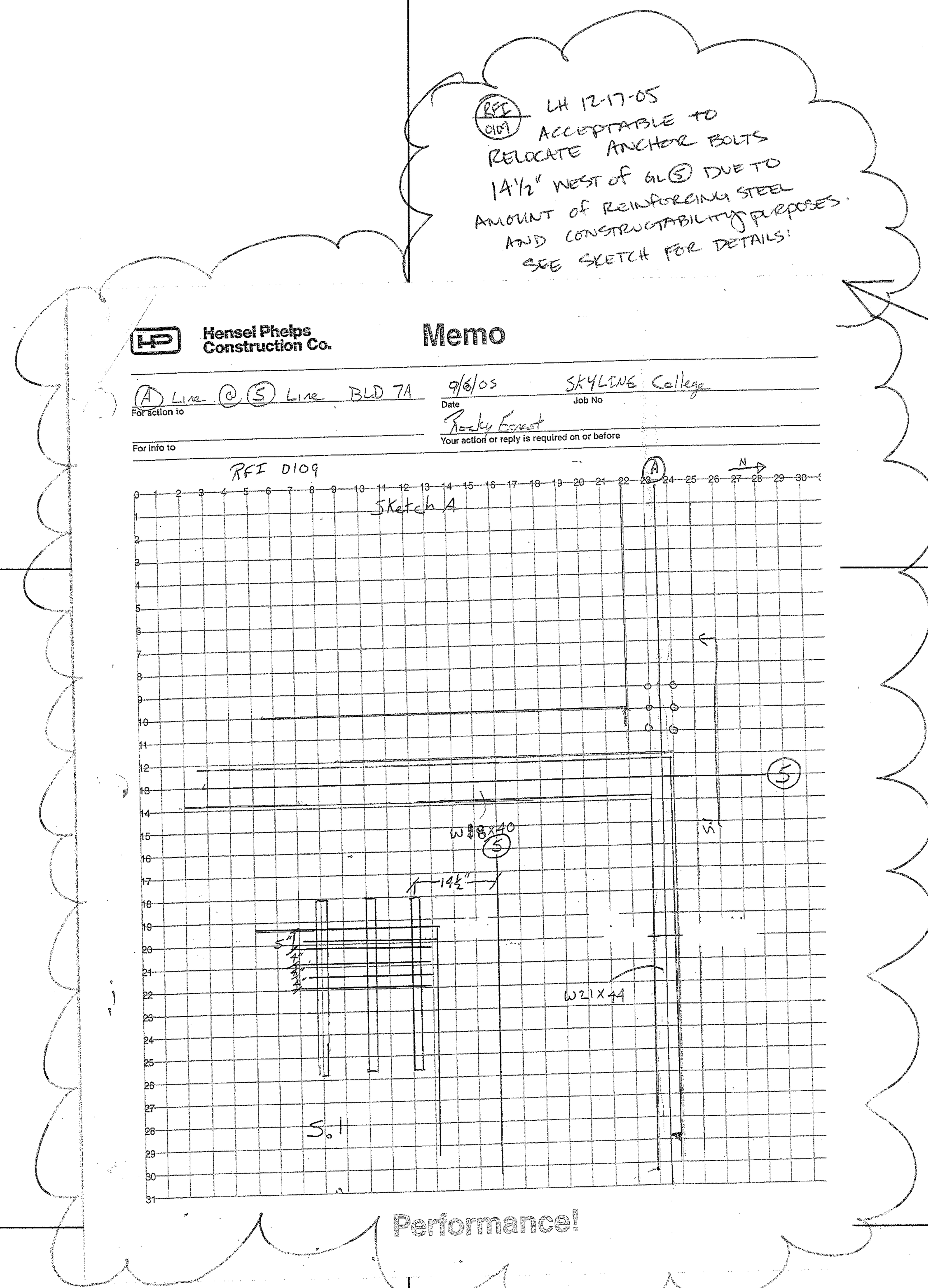
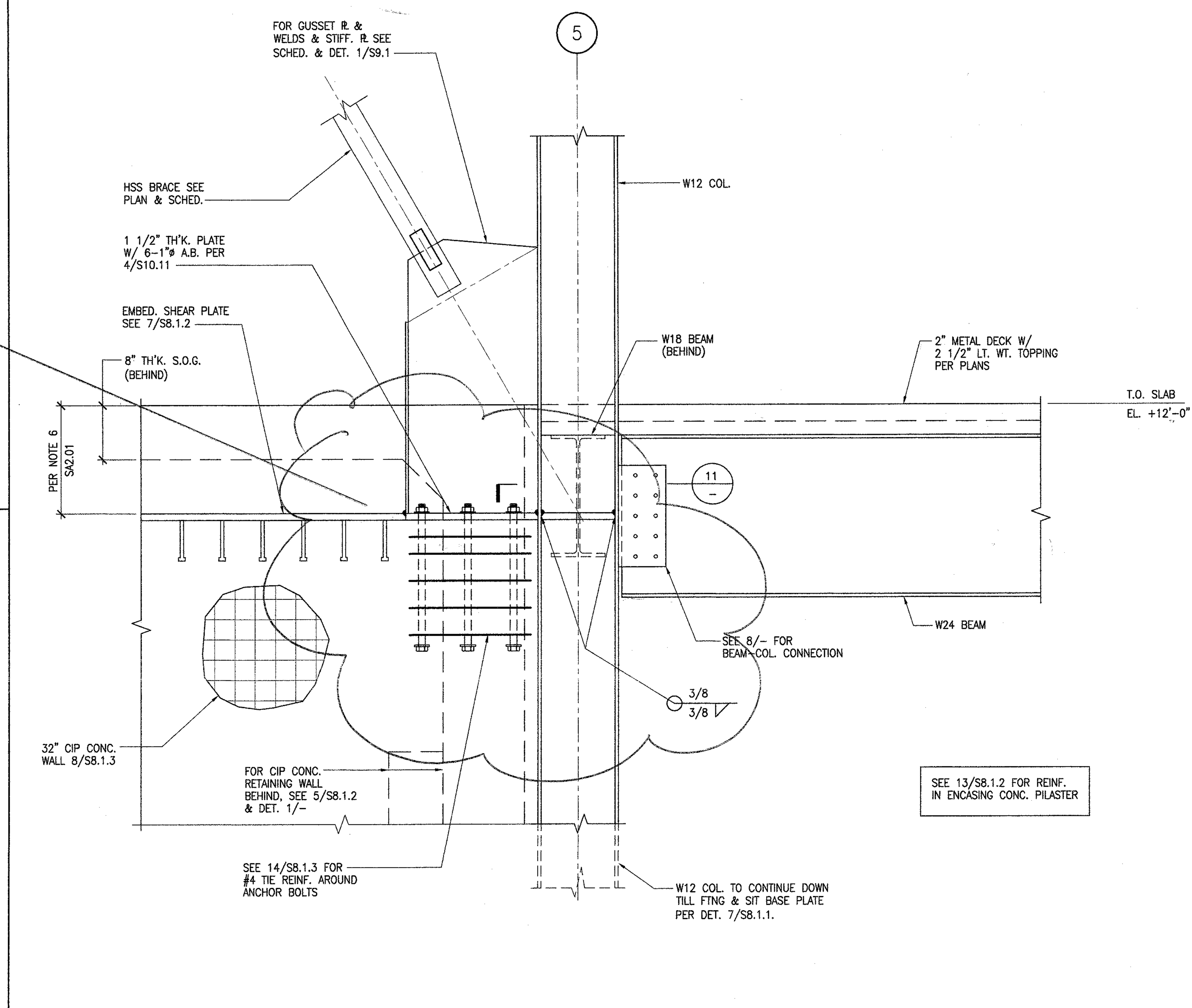
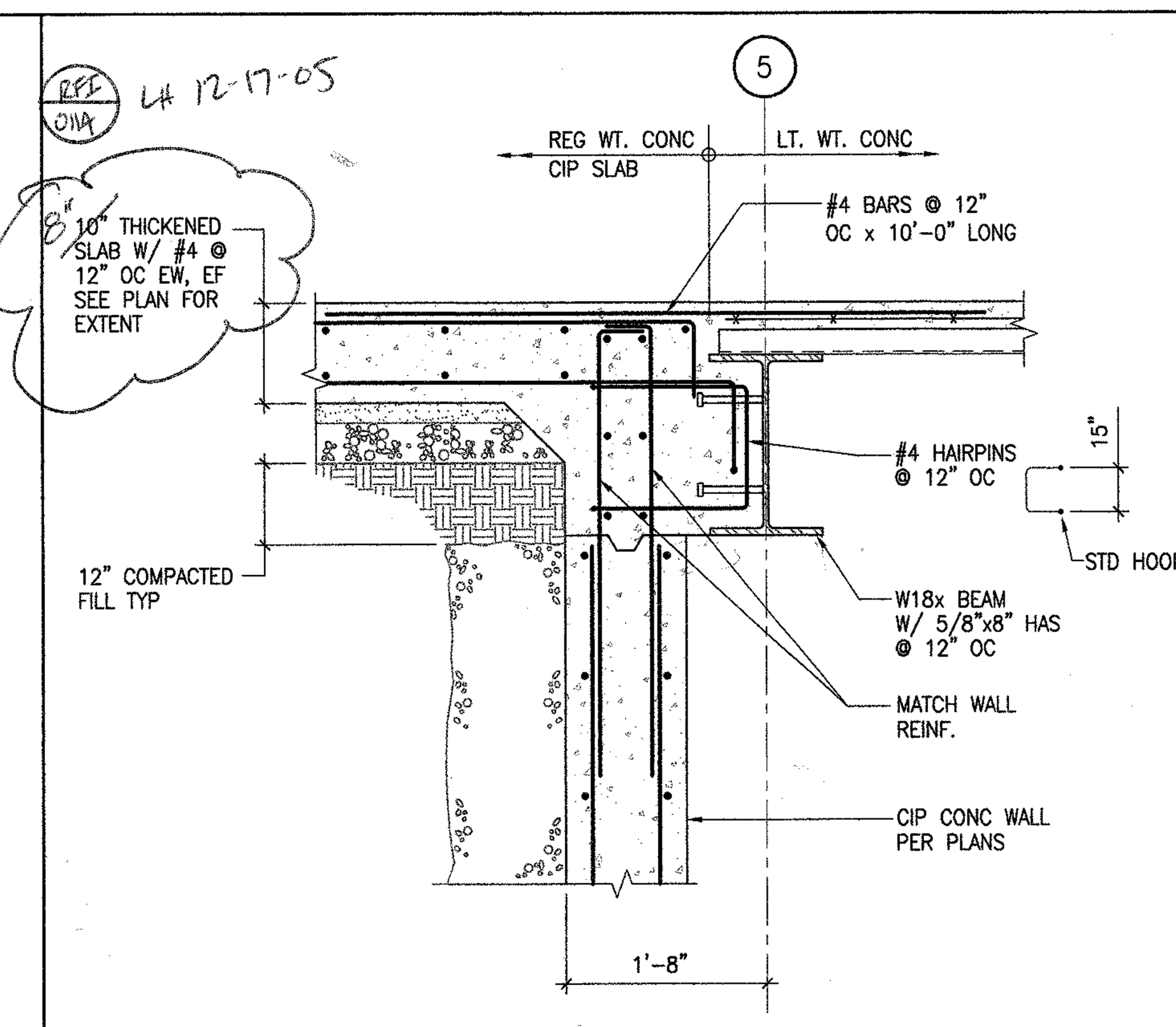
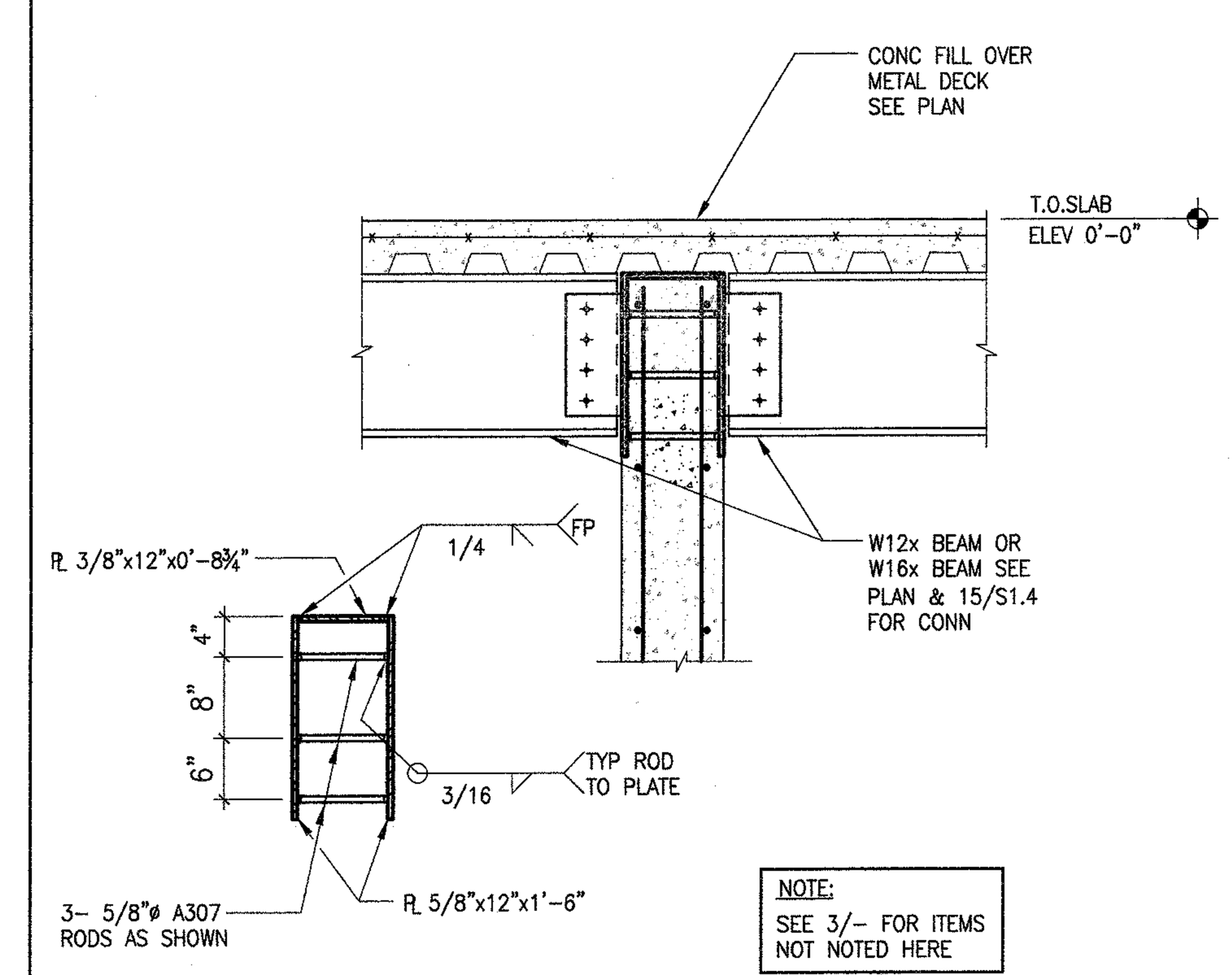




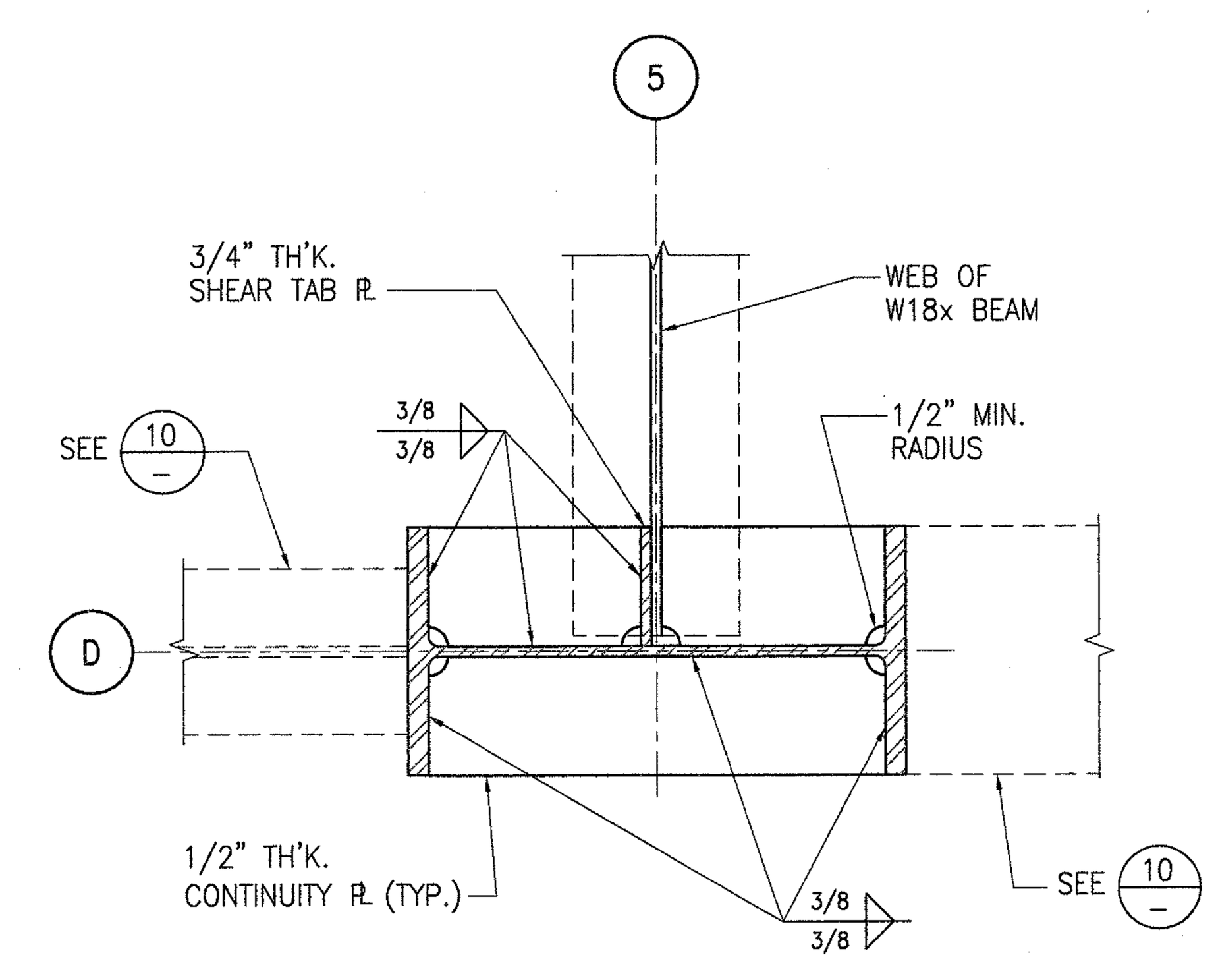
10 SECTION
SCALE: 1"=1'-0"



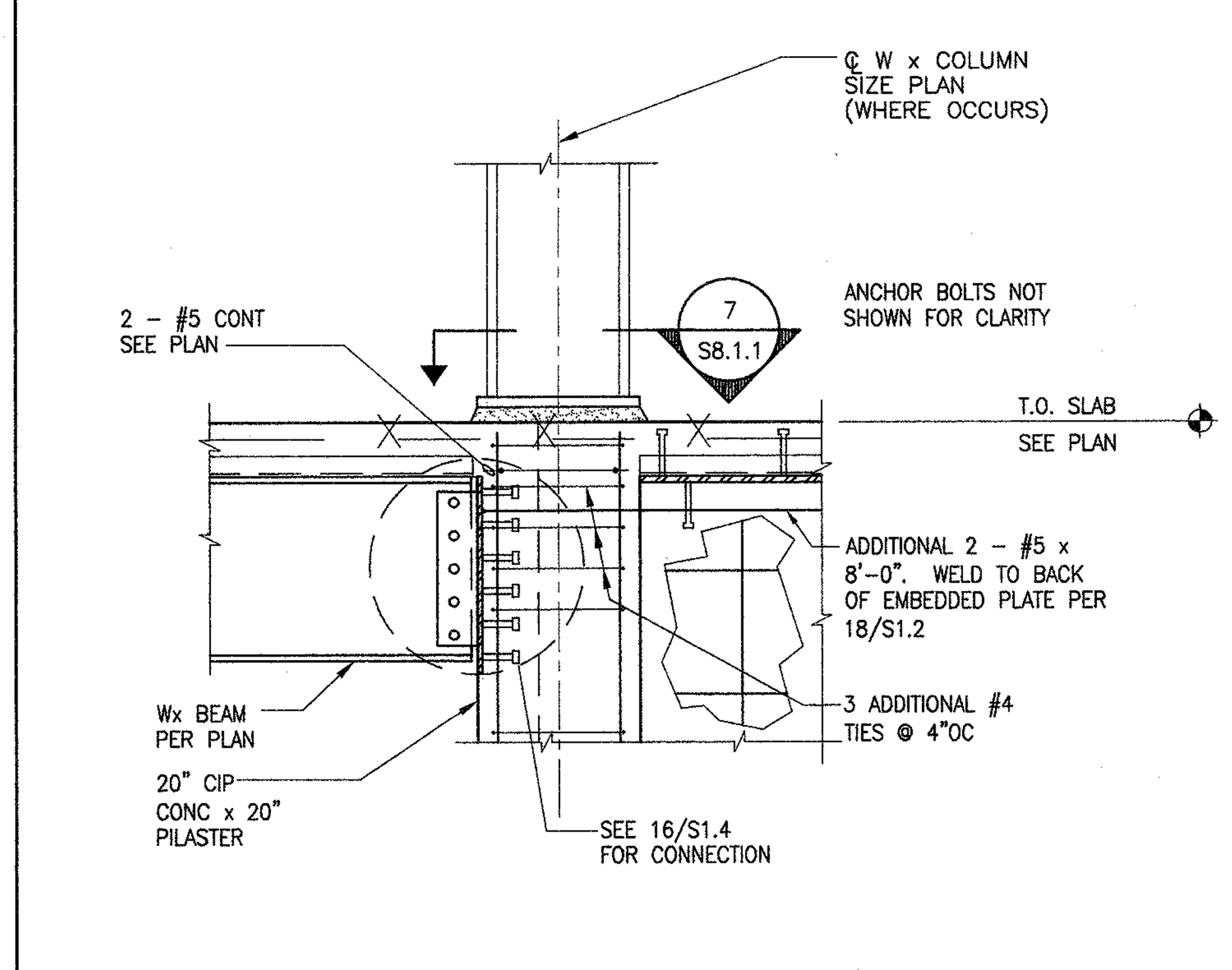
1 SECTION @ RET. WALL
SCALE: 3/4"=1'-0"



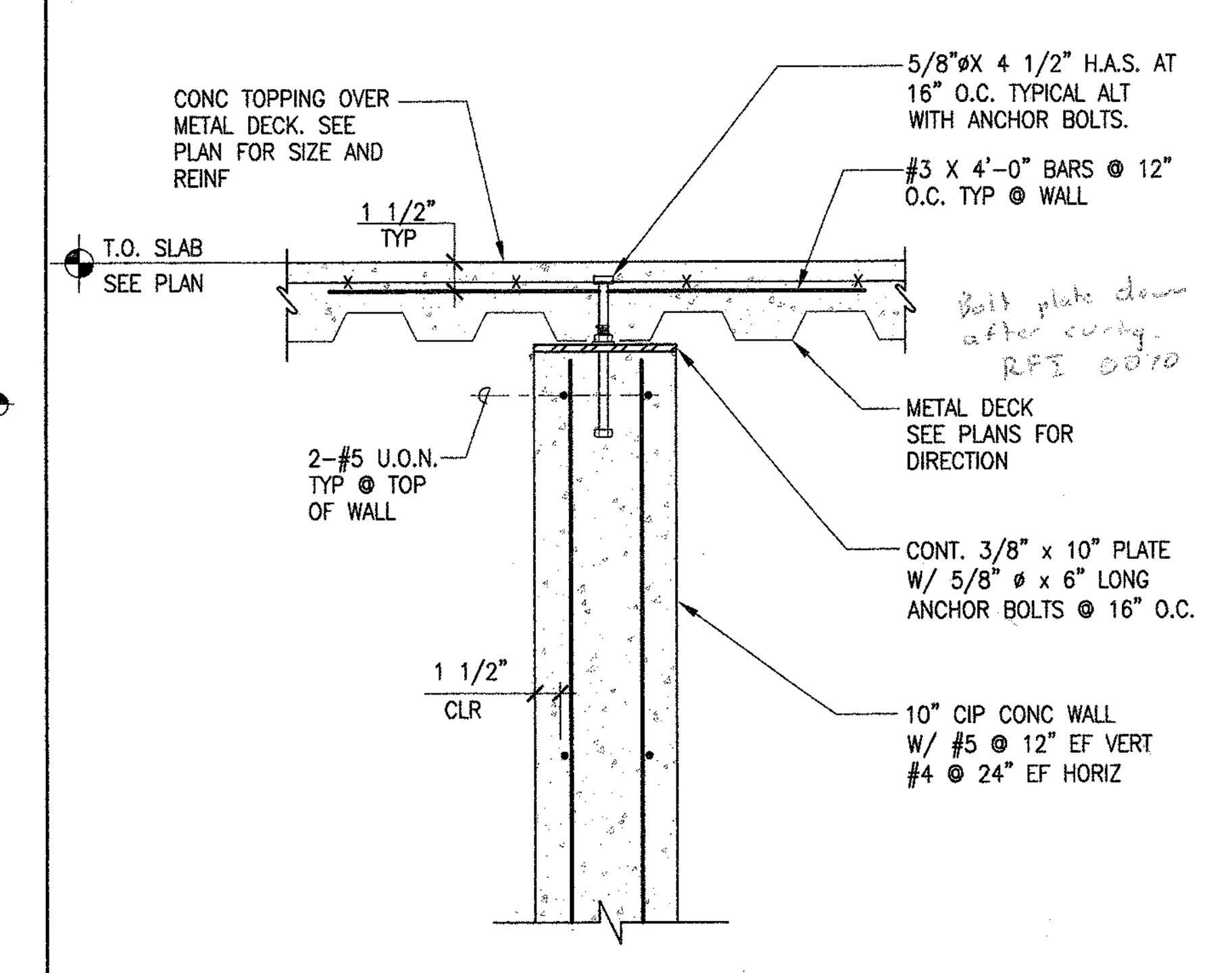
2 SECTION @ BEAM EMBED
SCALE: 3/4"=1'-0"



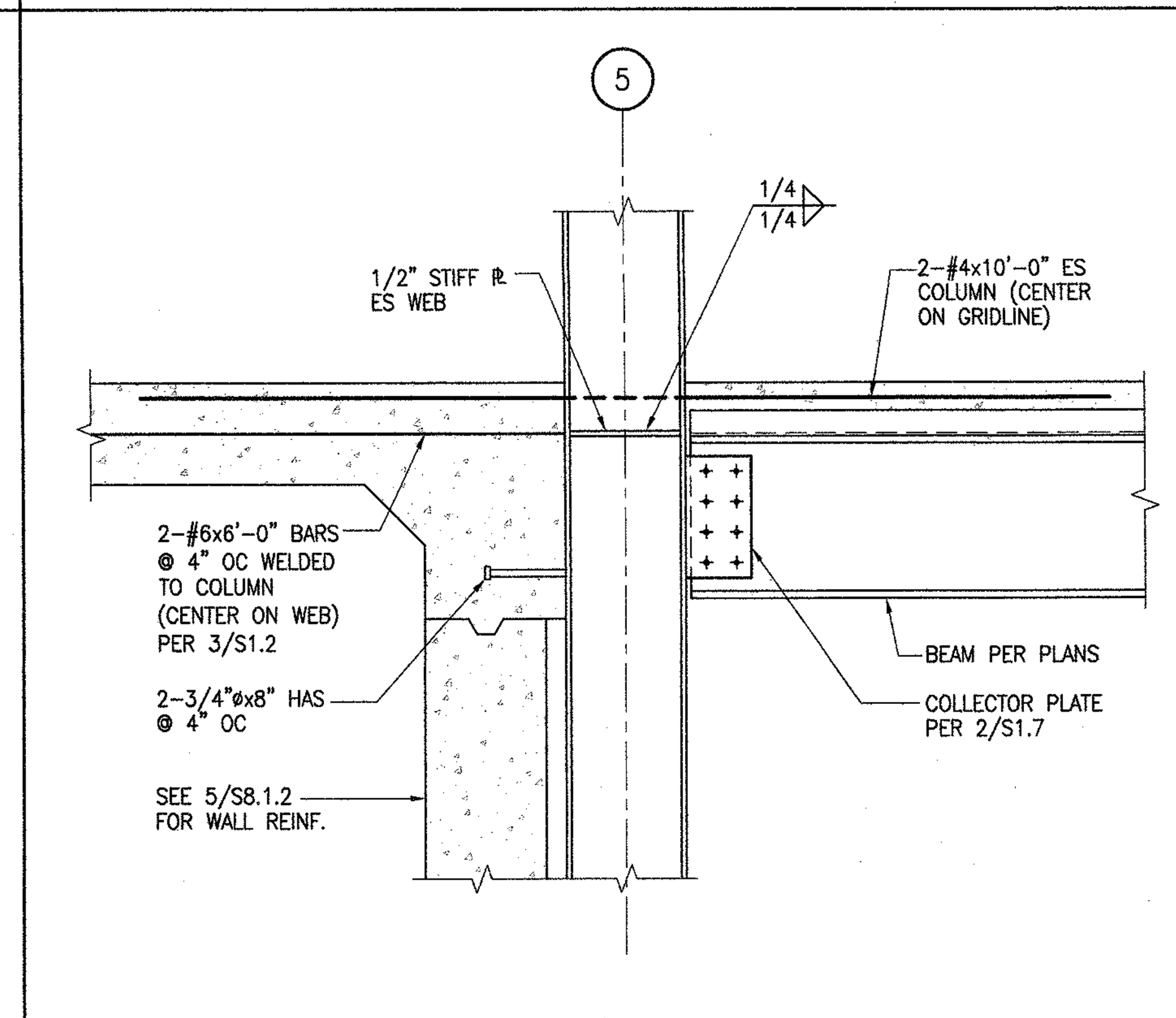
11 SECTION
1 1/2" = 1'-0"



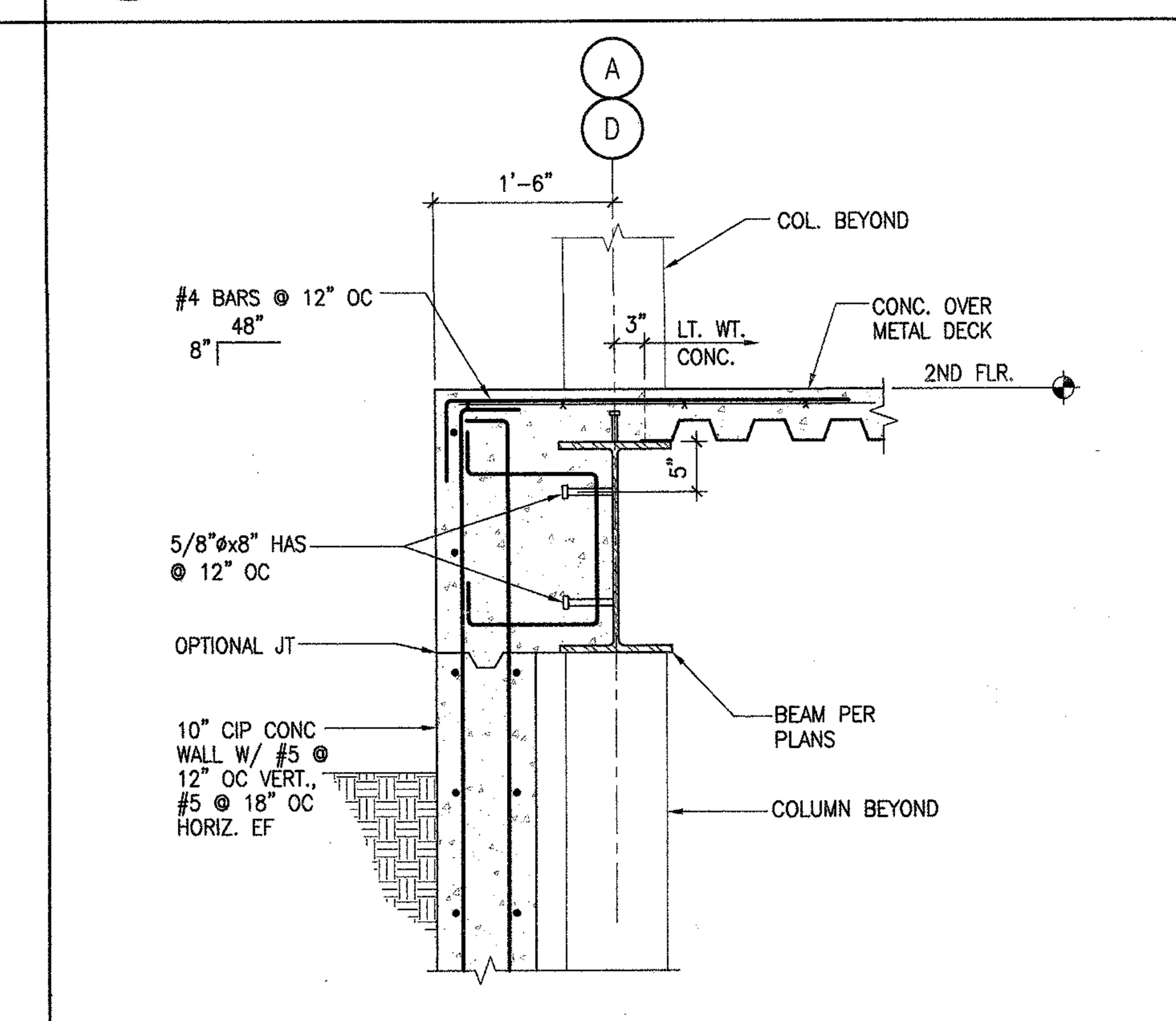
7 SECTION @ CONC PILASTER
SCALE: 3/4"=1'-0"



3 SECTION AT STAIRS
SCALE: 1"=1'-0"



8 SECTION @ COLUMN
SCALE: 3/4"=1'-0"



4 SECTION @ EXTERIOR
SCALE: 3/4"=1'-0"

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Architecture Planning Interiors
60 Pierce Avenue San Jose CA 95110 408.295.5446 tel 408.295.5928 fax

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REGISTERED PROFESSIONAL ENGINEER COLIN BLANEY No. S4377 EXP. 6/30/06 STRUCTURAL STATE OF CALIFORNIA

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ISSUED FOR:	DATE:
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DRAWING TITLE
SECTIONS AND DETAILS
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S8.2.1

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Question

Reference Increment No. 1 drawings sheet SB2.02 and SB2.03 as well as sheets S8.3.1 detail 8 and S8.3.2 details 14 and 13.

Also reference attached sketch.

The flat beams for the feature wall on gridline E are to be connected using a 1/2" thick stiffner plate to the beam's flanges. Although these pieces are correct per drawings and details, the offset between the centerlines has been found to be unacceptable to weld properly as specified. (See sketch) This situation occurs in two locations

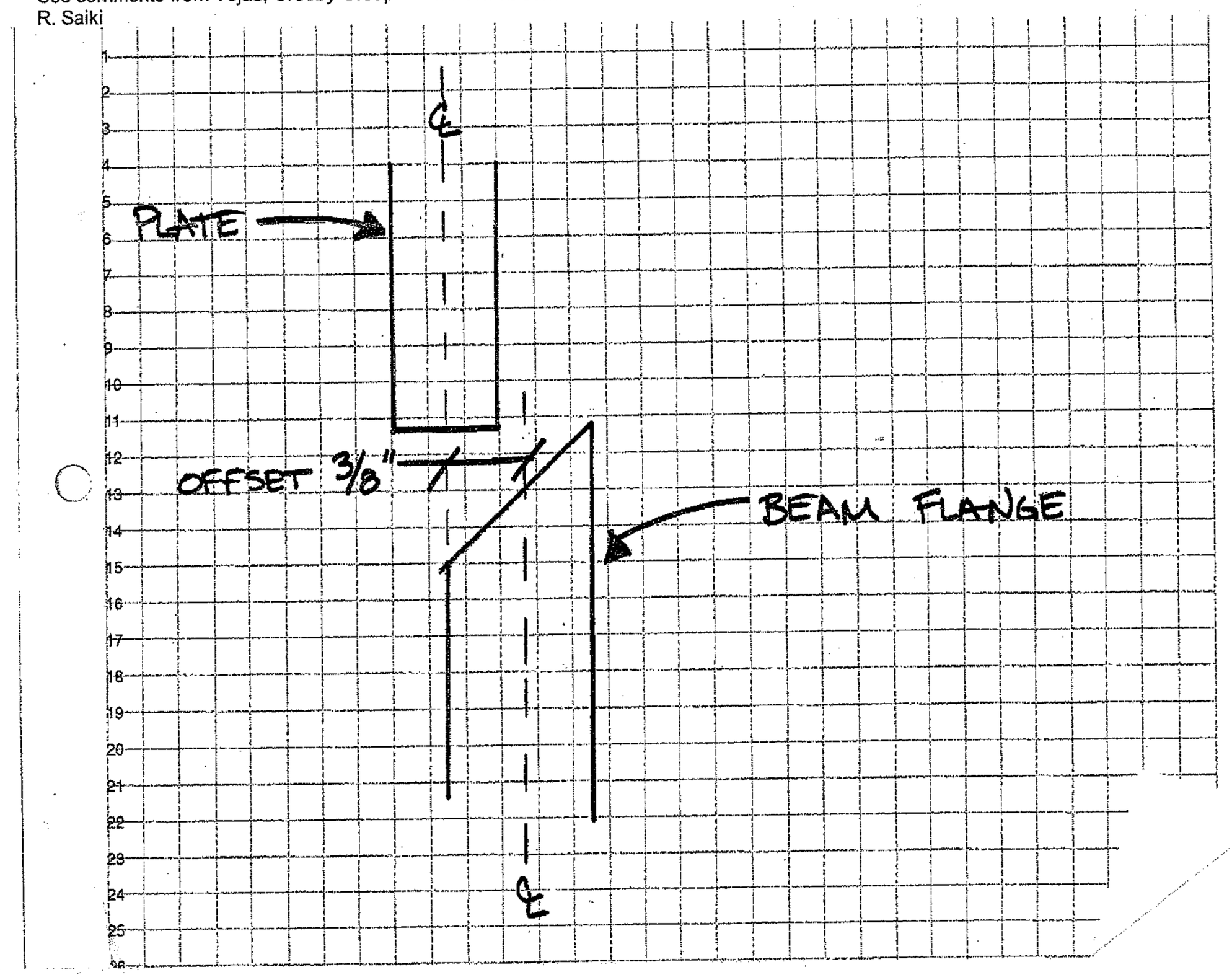
Please advise.

Consultant Comments

If this alignment issue is occuring in the 7ft or 9ft long segments as shown in det 8/S8.3.1, then it would be aceptable to align the beam skewed (max. 3/8" as shown in your sketch) to provide CPW. Confirm with Architects and coordinate as necessary that this does not affect metal-stud framing. If the 3/8" skew occurs in 2'9" segment on detail 8/S8.3.1 then relocate the 1/2" thick plates at column web to their designed locations per 13/S8.3.2 and/or 14/S8.3.2 ... Tejas, Crosby Group

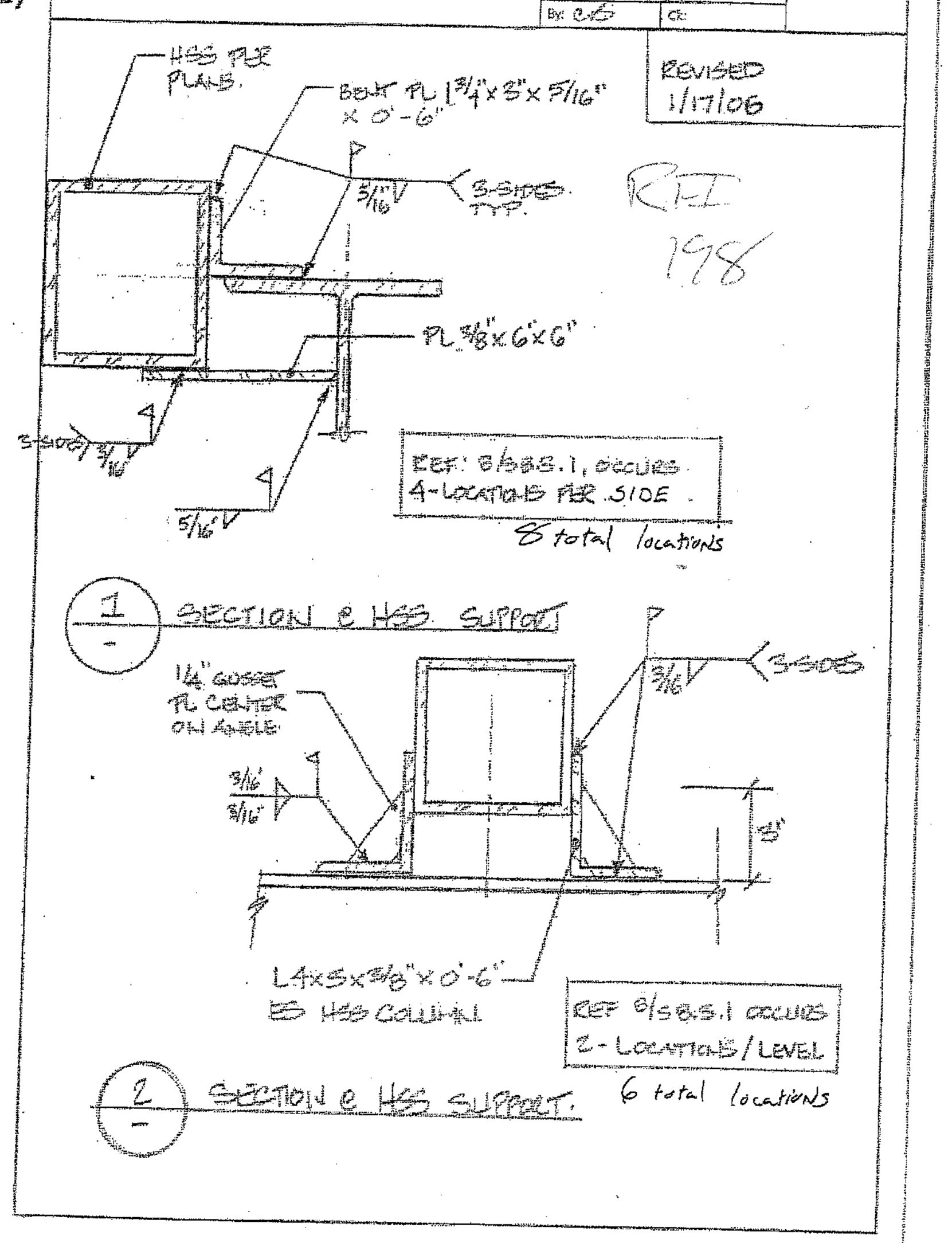
Answer **Date Answered: 12/12/2005**

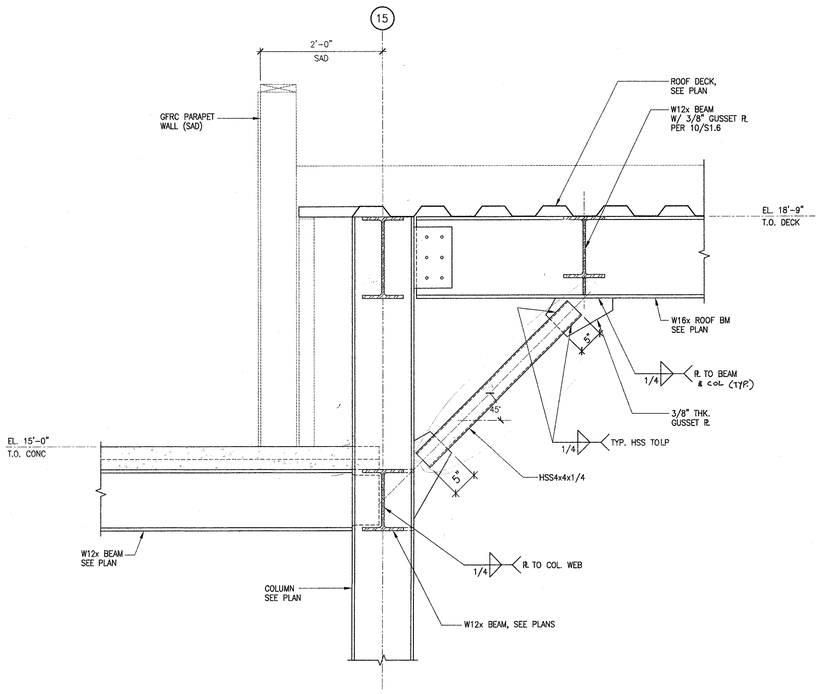
See comments from Tejas, Crosby Group. The skewed conditions should not affect stud framing.
R. Saiki



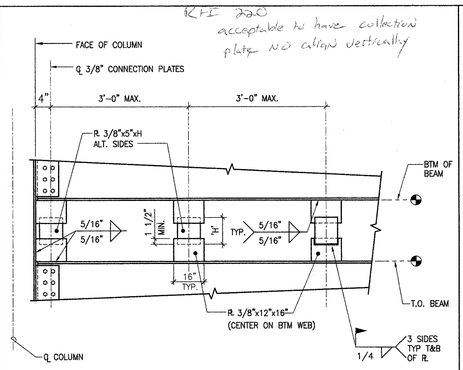
Crosby Group

Project: SKYLINE	Job No.	
Description:	Date: 1/8/06	Sht:
	By: CJS	Ck:

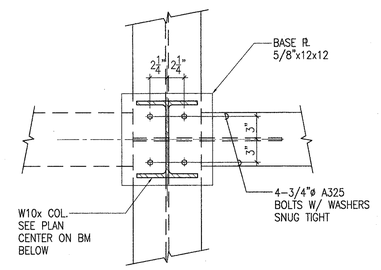


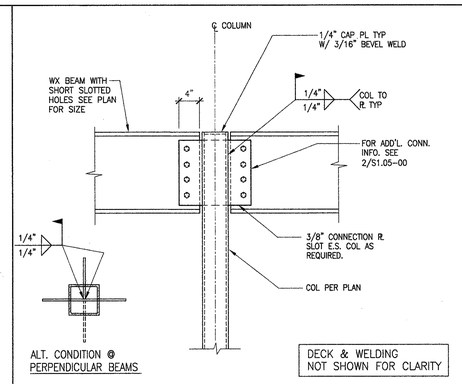


18 SECTION AT STAIRS
SCALE: 1"=1'-0"

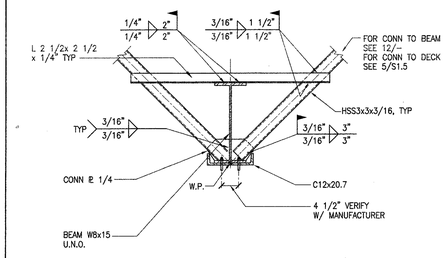


9 SECTION @ BRACED FRAME
SCALE: 3/4"=1'-0"

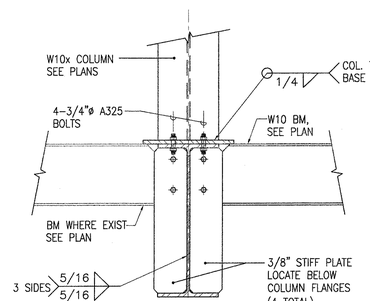




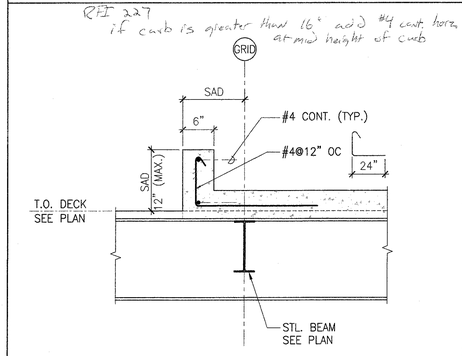
1 BEAM TO COLUMN CONNECTION
SCALE: 1"=1'-0"



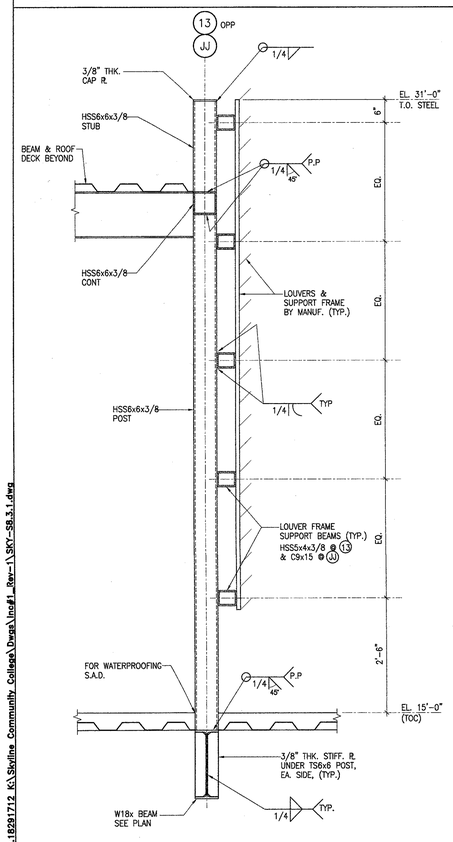
SECTION @ FOLDING PARTITION HEAD
10 SCALE: 3/4"=1'-0"



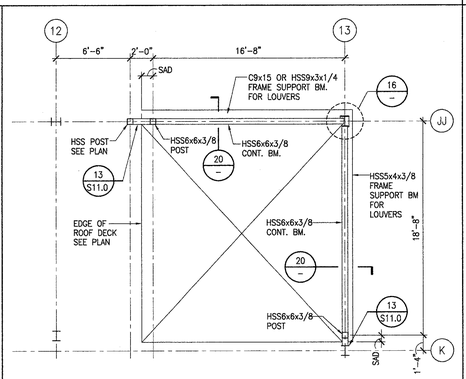
6 SECTION AT TRANSFER BEAM
SCALE: NONE



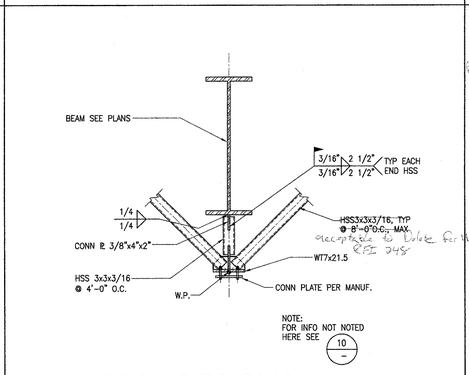
2 SECTION AT PENTHOUSE CURB
SCALE: 1"=1'-0"



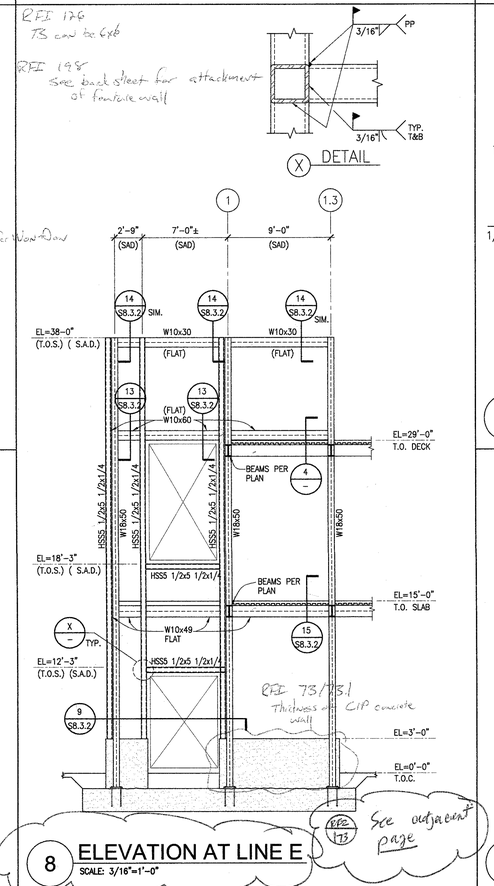
20 SECTION
SCALE: 3/4"=1'-0"



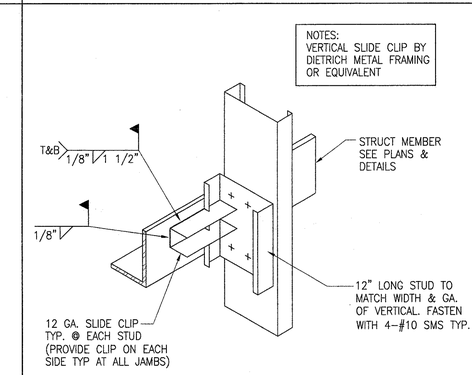
15 PLAN VIEW
SCALE: 3/16"=1'-0"



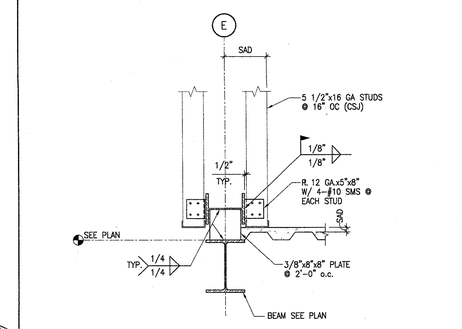
SECTION @ FOLDING PARTITION HEAD
11 SCALE: 3/4"=1'-0"



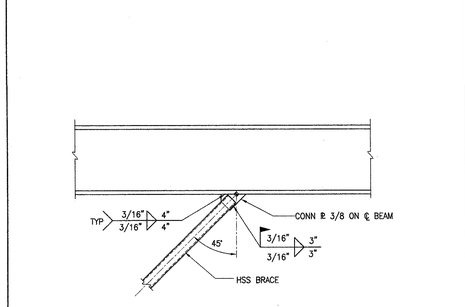
8 ELEVATION AT LINE E
SCALE: 3/16"=1'-0"



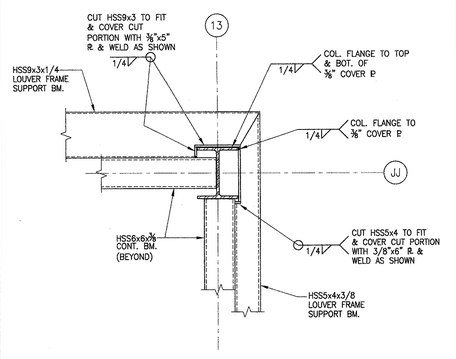
3 SLIDE CLIP DETAIL
SCALE: NONE



4 SECTION @ WALL
SCALE: 3/4"=1'-0"



12 TYPICAL DIAGONAL BRACE CONN.
SCALE: 3/4"=1'-0"



16 SECTION
SCALE: 1"=1'-0"

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SKYLINE COLLEGE
STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

DRAWING TITLE
SECTIONS AND DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S8.3.1

REVIEW SET

20050420.18291712 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S8.3.1.dwg

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Question RFI 019 12-17-05 LH

Please Reference Increment 1 Drawing S8.3.2, and Increment 2 DSA Stamped Drawing AA2.01 thru AA2.31

On Detail 6 of S8.3.2 there are structural steel members shown to provide a walk way from Science Annex Building 7A to Existing Building 7. There is also a noted that states: 3'-0" (max.) SAD.

Referencing the architectural drawing the only information provided is that the passage way is to be 6'-6" wide as stated on AA2.01 and AA2.02.

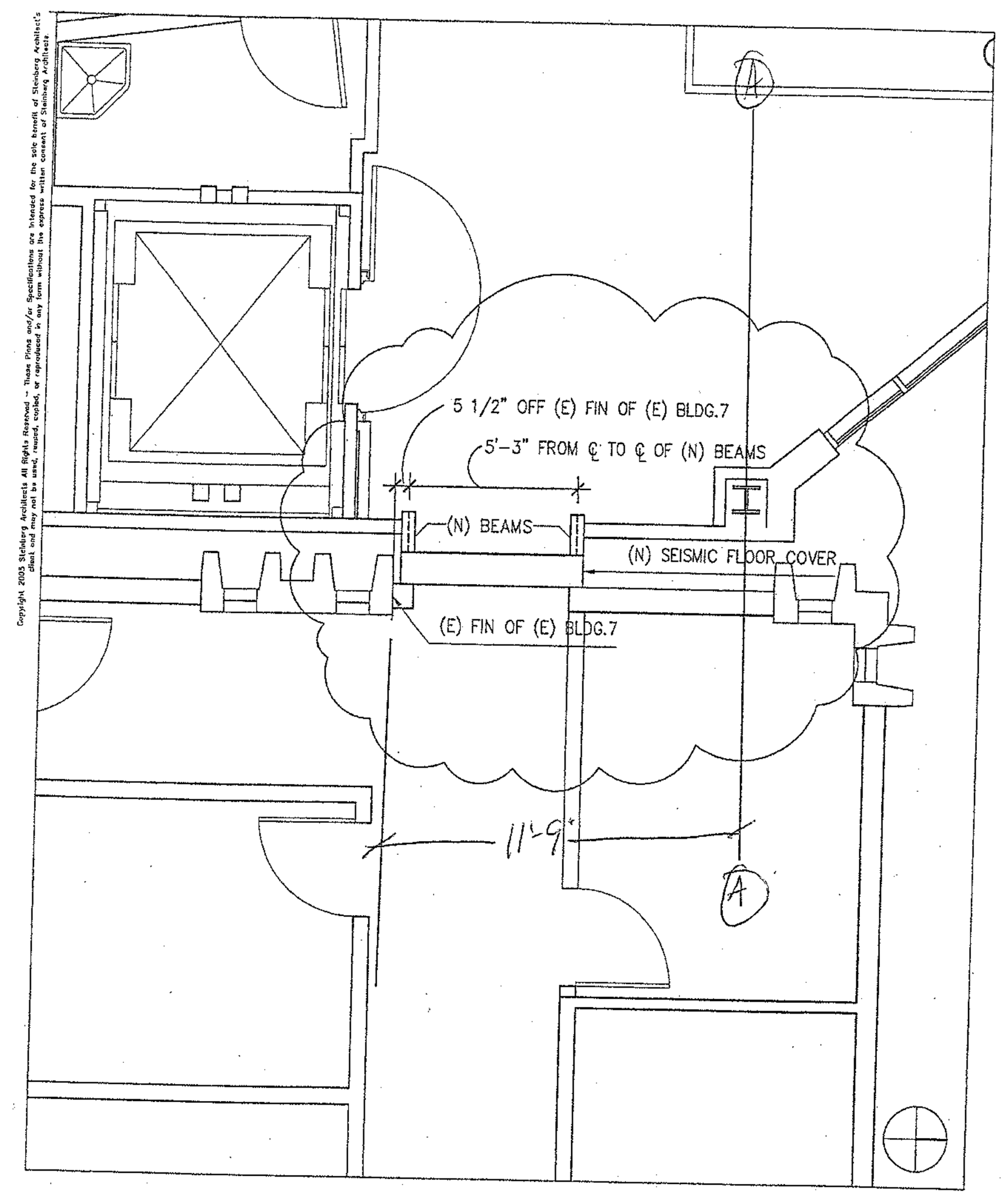
1) What is the location in respect to gridline A on all floors.
2) How far does this walk way extend toward Existing Building 7? Structurals state a MAX not actual dimension.
3) What provision are needed to maintain 2 hour rating between building?
4) Is there a door on the building 7A side of the fire rating joint? If so please provide door type, quantity, and jamb/header details.

Consultant Comments

Answer Date Answered: 11/8/2005

1. See attached linked file. The dimension for locating the two beams for the "bridge" must be determined by the existing location of the fin at building 7 due to the new layout of walls for rooms in the building. The new 2 hour door that will separate the two buildings also affect the opening location. We will follow with an ASI to clarify the conditions.
2. The walkway (edge of deck) extends to Bldg 7 and must stop 3" clear of Bldg 7 to allow for seismic movement and the seismic joint. The joint may be required to be installed with Bldg 7 modernization work since a connetion to an opening in Bldg 7 is required to install the joint. The beams are 5' 3" center to center. The edge of the deck and shaft walls in the E/W direction connection the two bldgs is 2 1/2" beyond the center line of the beams.
3. 2 hour shaft wall systems is required to maintain the 2 hour rating. The seismic joints specificed should have a 2 hour rating where the 3" seismic separation for movement is required. Details will follow.
4. Although not show in the bridging documents, a 2 hr door will be required. Details will follow. Proposed wall locations in Bldg 7 are affecting the door location and opening width. Verifying the requirements for Bldg 7 must be completed prior to determining the door size and location.
R. Saiki

Cc: Company Name **Contact Name** **Copies** **Notes**



rev. date issue

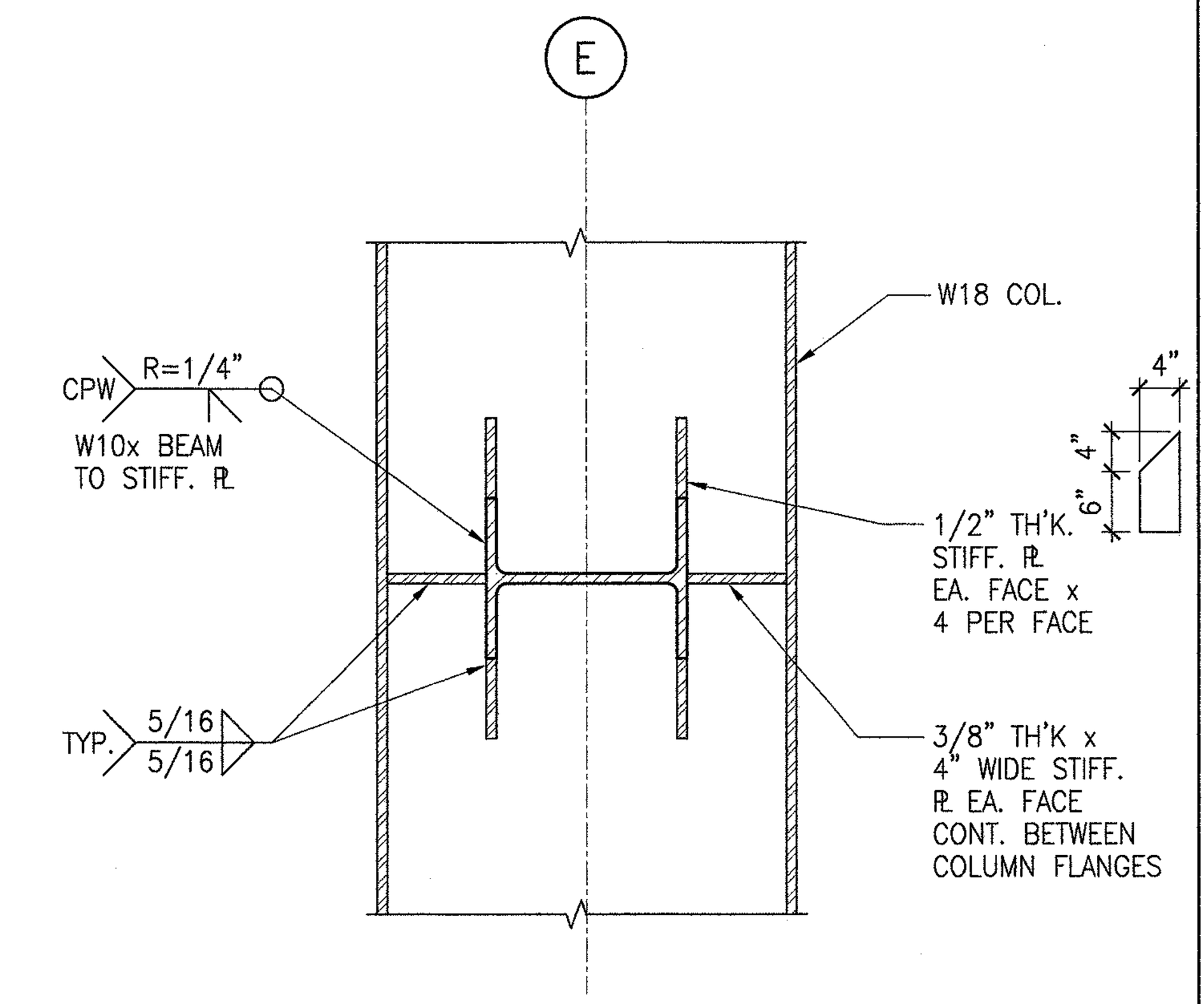
architect
Steinberg Architects
60 Pierce Avenue
San Jose CA 95110

Skyline College
3300 College Drive, San Bruno CA
File No. 41-C1/Appl. No. 01-106658
DSA Increment # 1+2

San Mateo Community College District
3401 CSM Drive
San Mateo CA

STEINBERGARCHITECTS
project no: 04043 date: 11-8-05
drawn by: KO checked by: RS
scale: 1/4" = 1'-0" ref: AA2.02 & 2.03

RFI 119
PLAN AT BRIDGE BLDG 7A
CO-A20



13 SECTION
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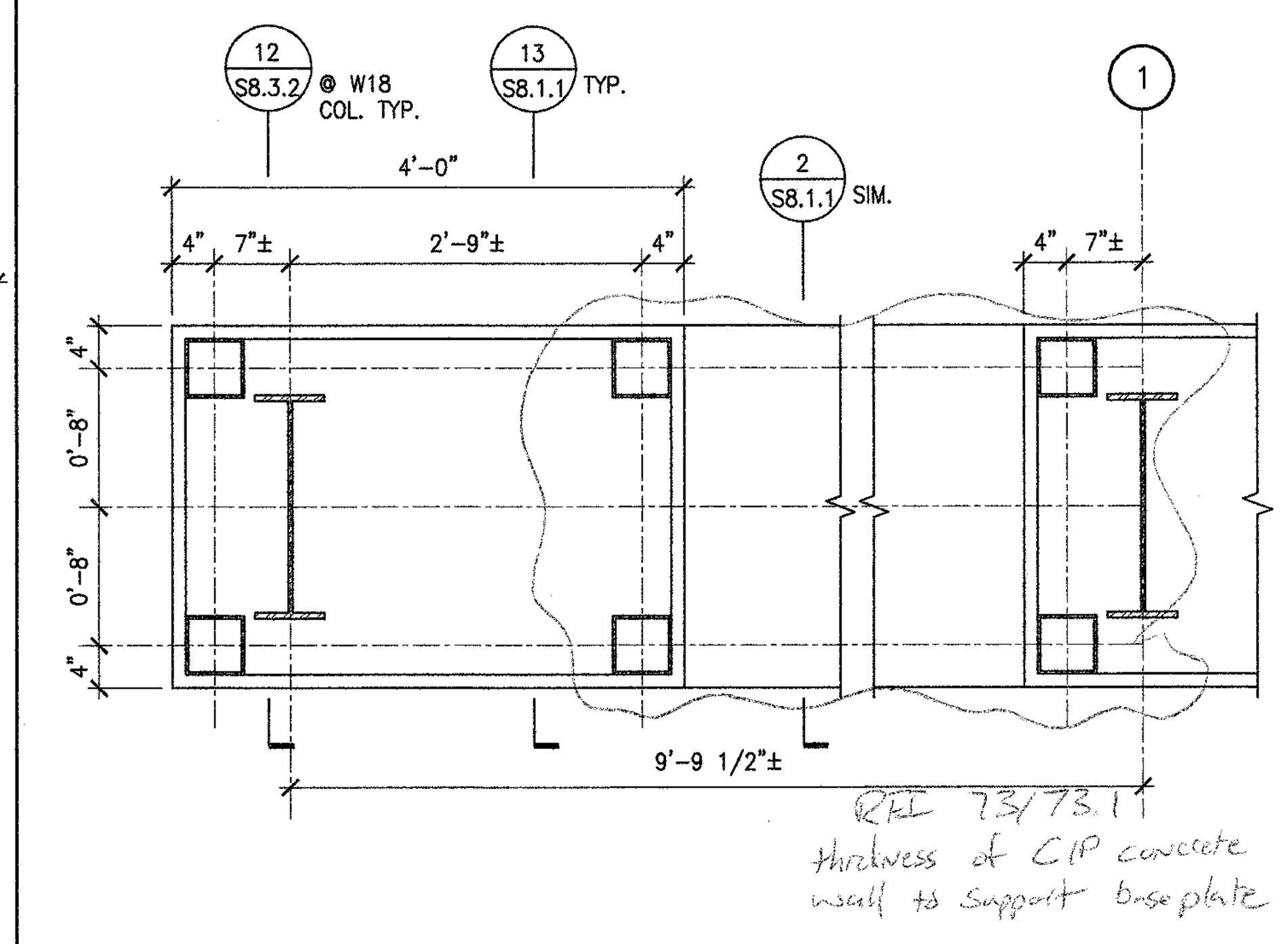
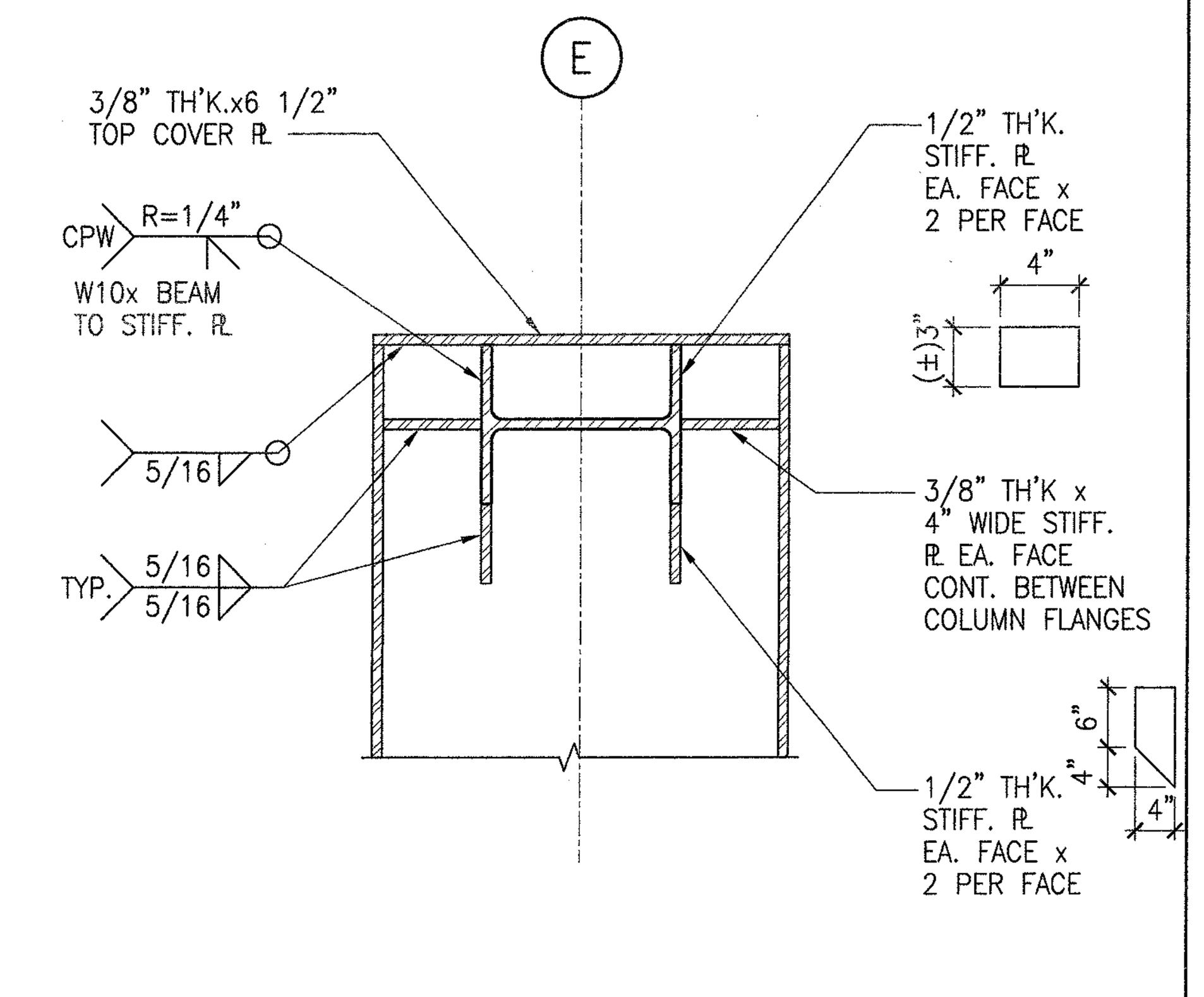


9 SECTION
SCALE: 3/4"=1'-0"



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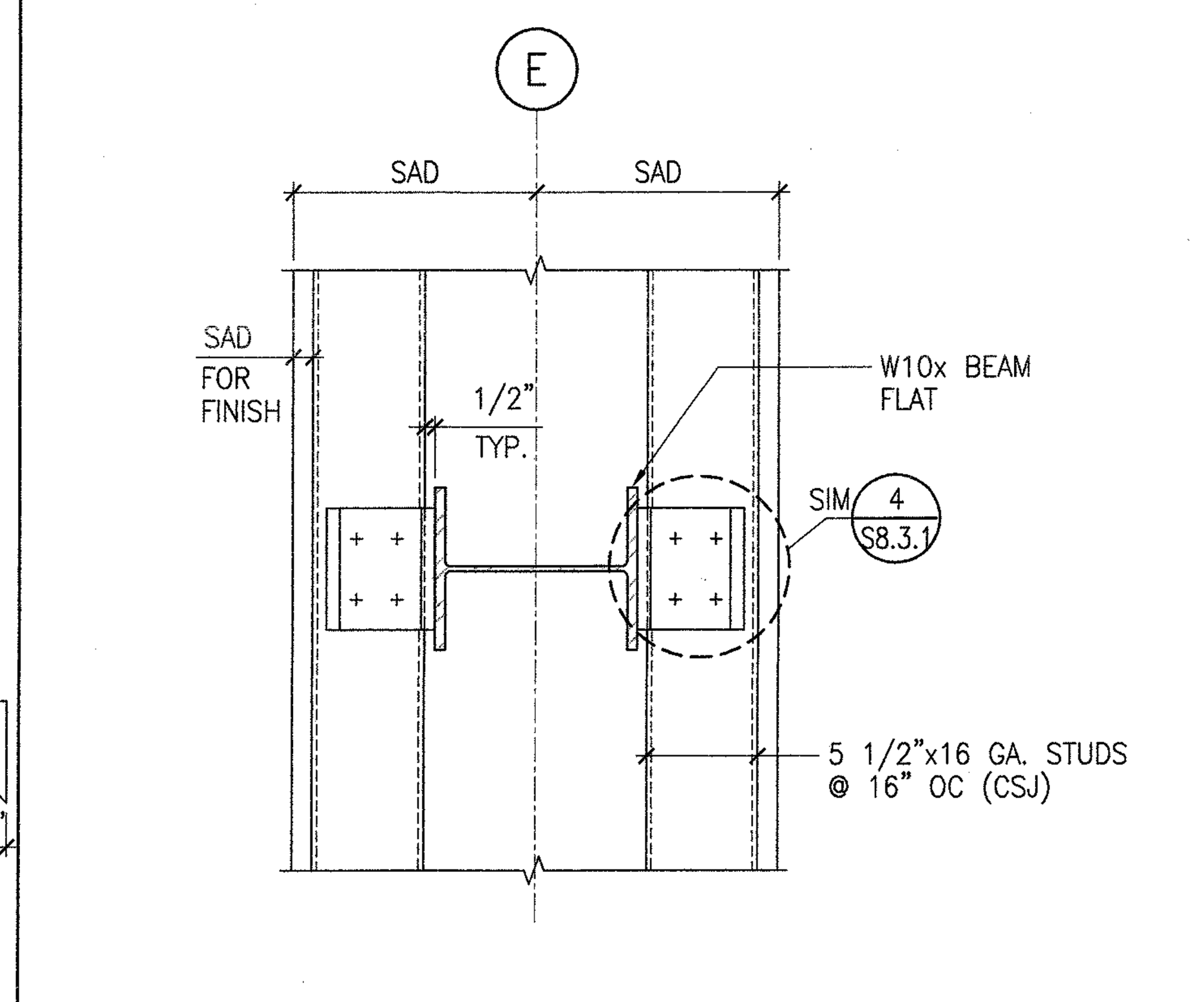

10 SECTION
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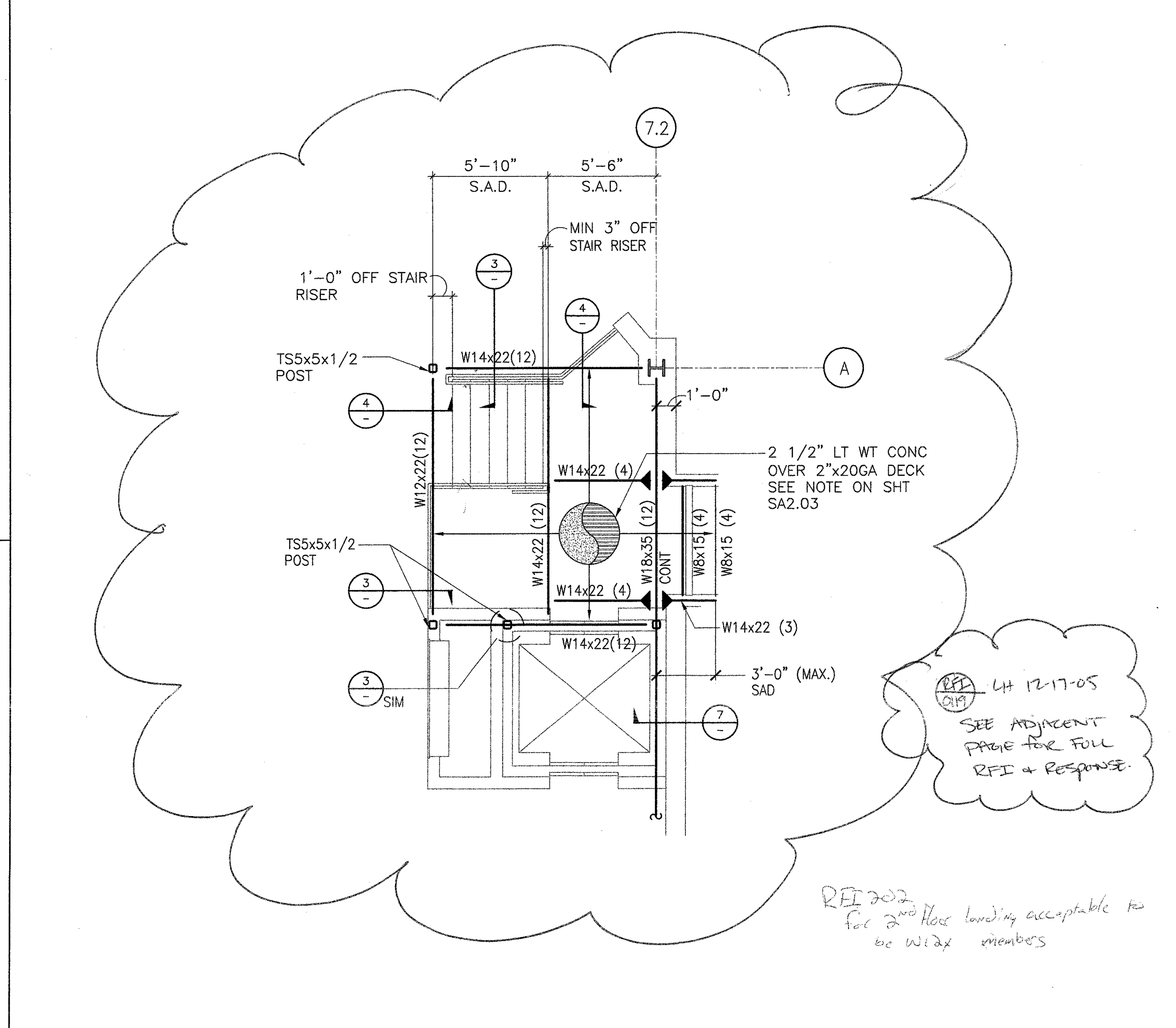
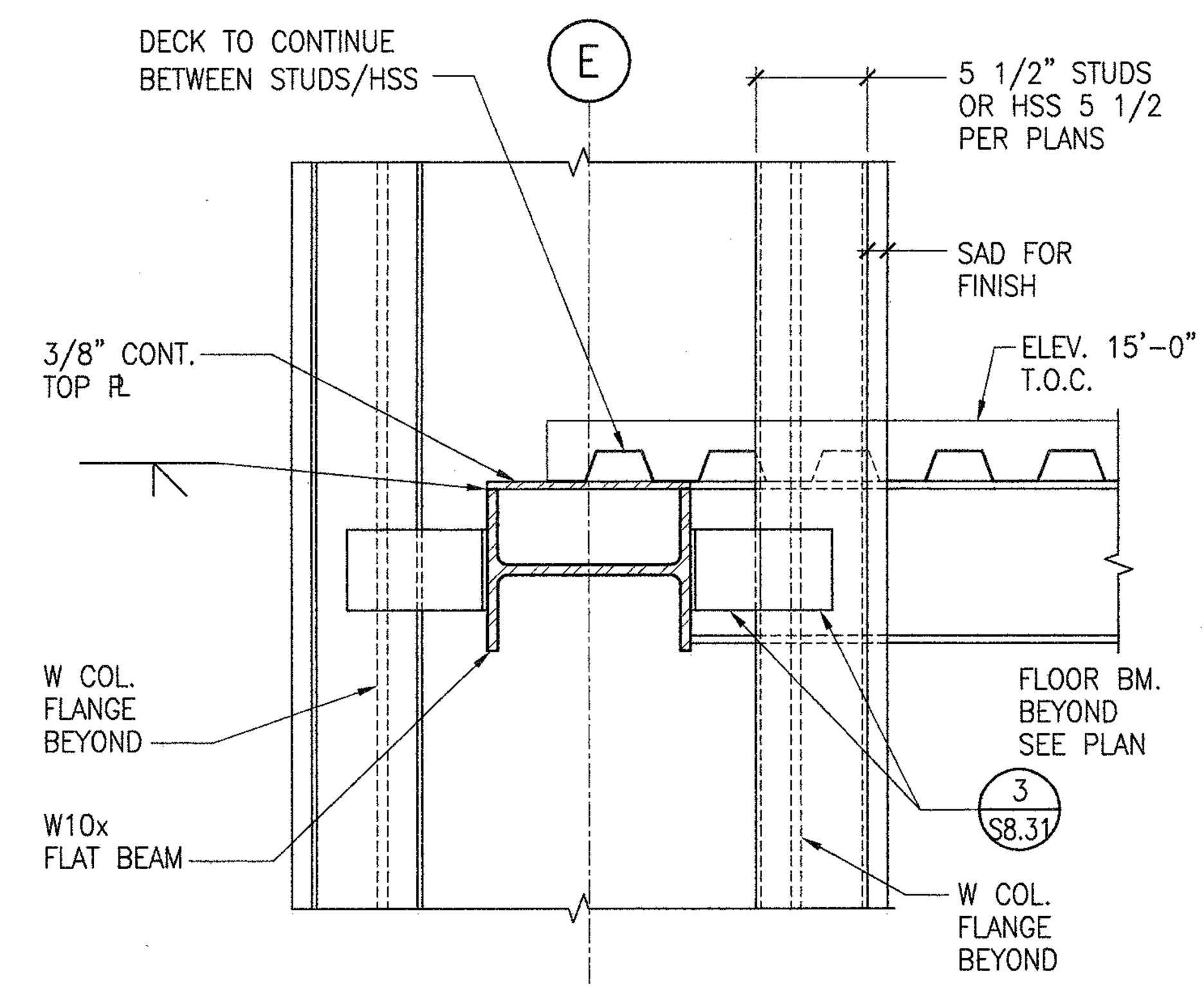
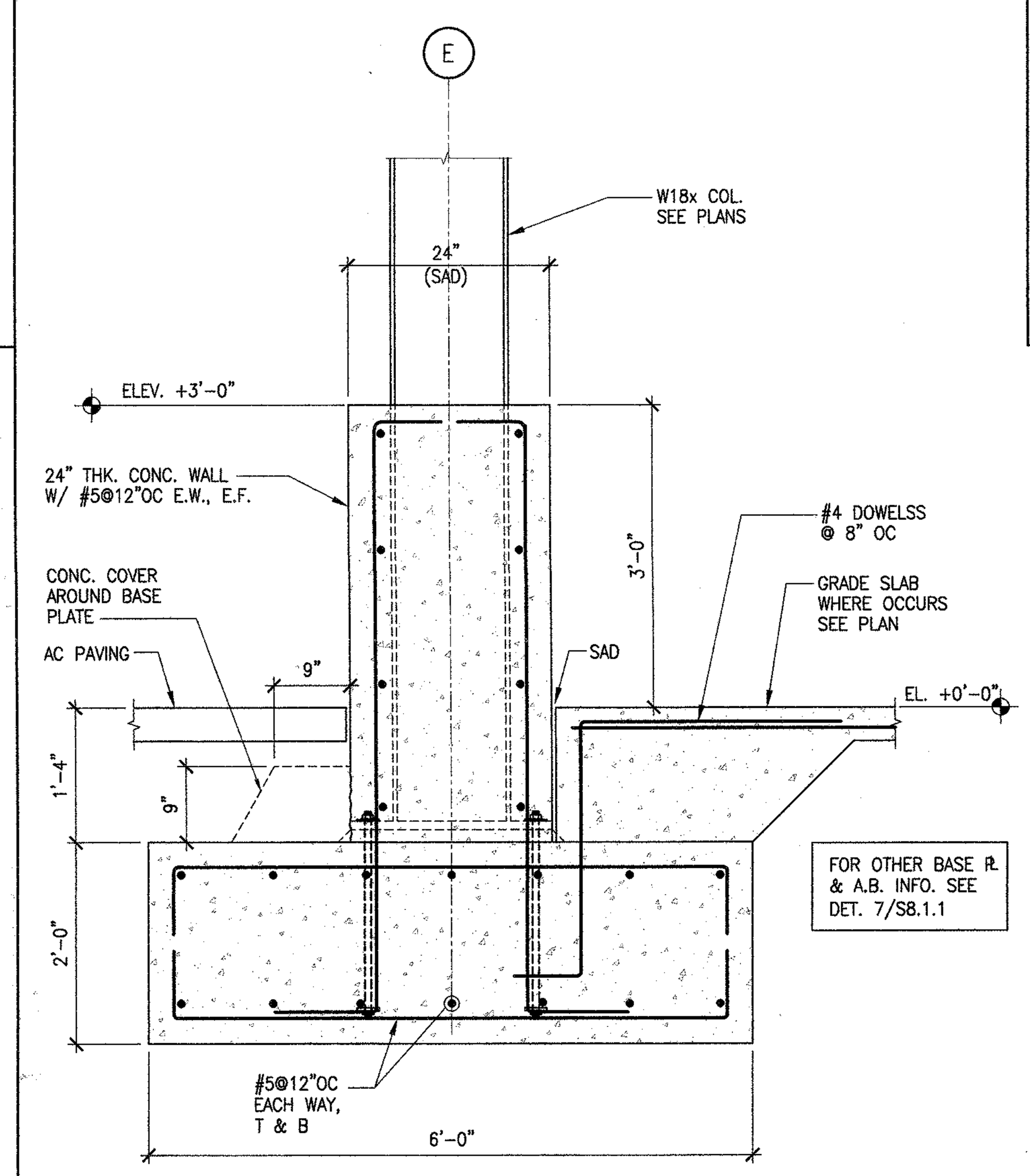


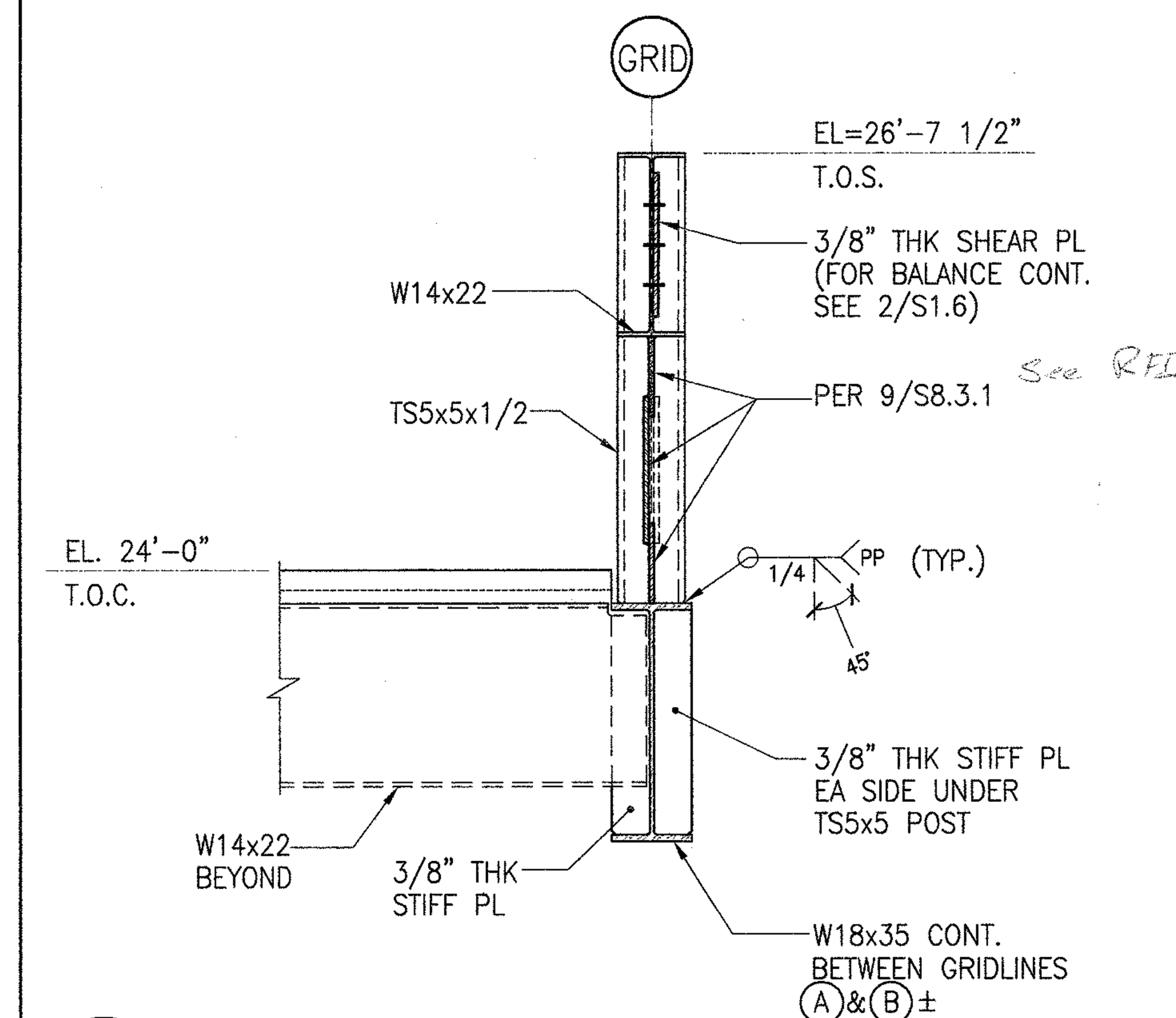
6 PARTIAL FRAMING PLAN @ T.O.SLAB EL. 24'-0"
SCALE: 1/4"=1'-0"



15 SECTION @ 2ND FLOOR
N.T.S.
RFI 48 see bucket sheet S8.3.1 for attachment



12 SECTION
SCALE: 3/4"=1'-0"



7 SECTION
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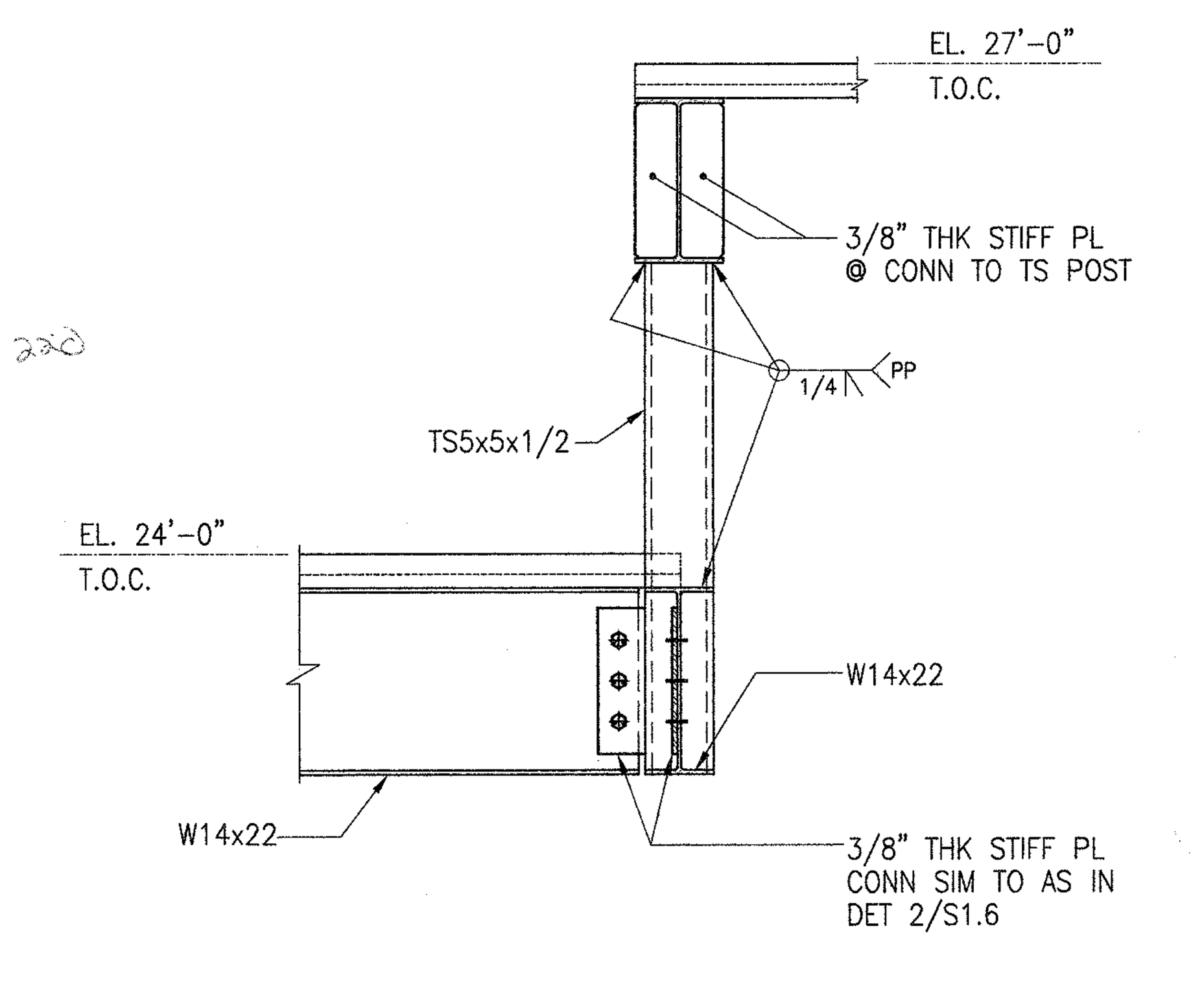

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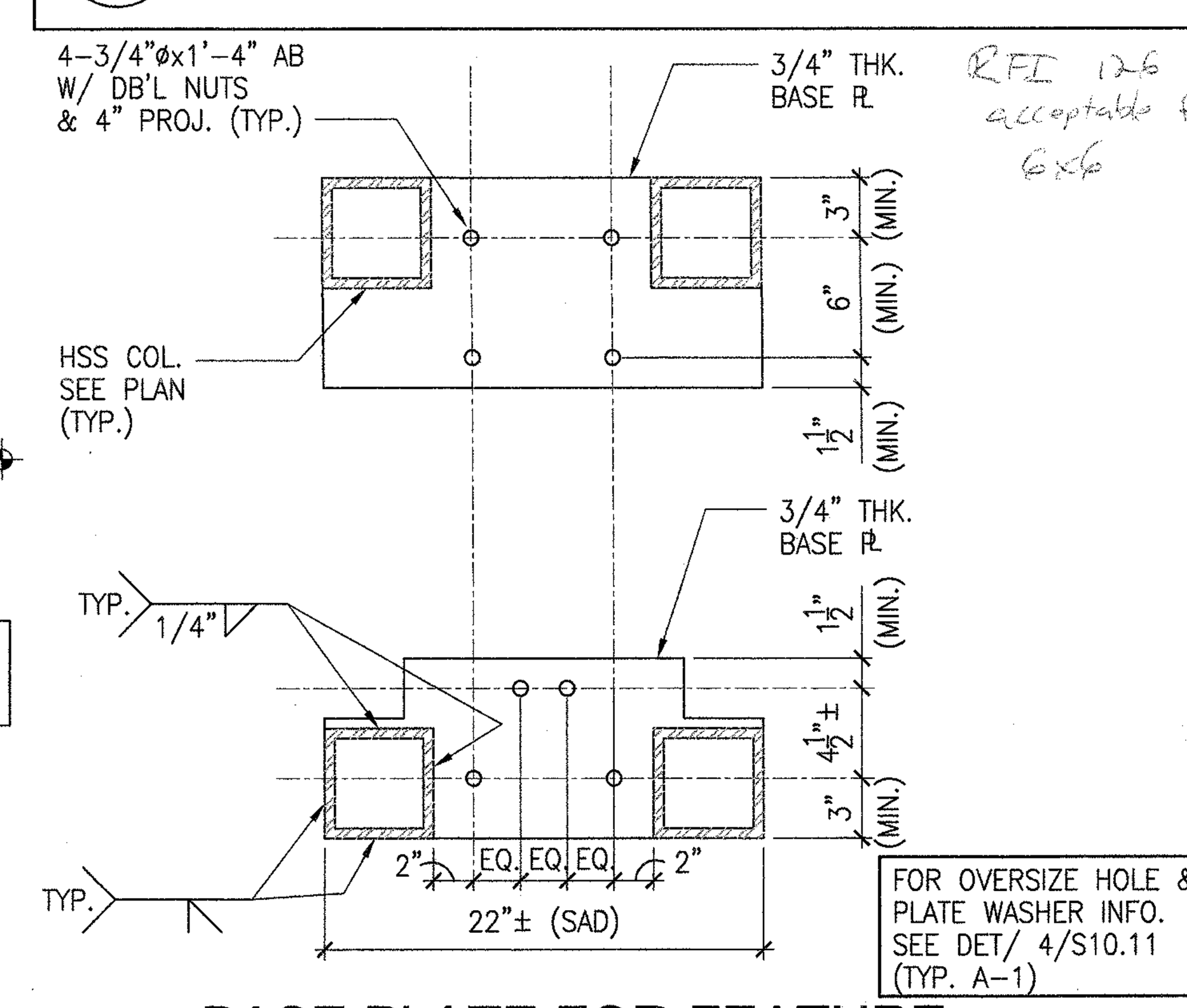
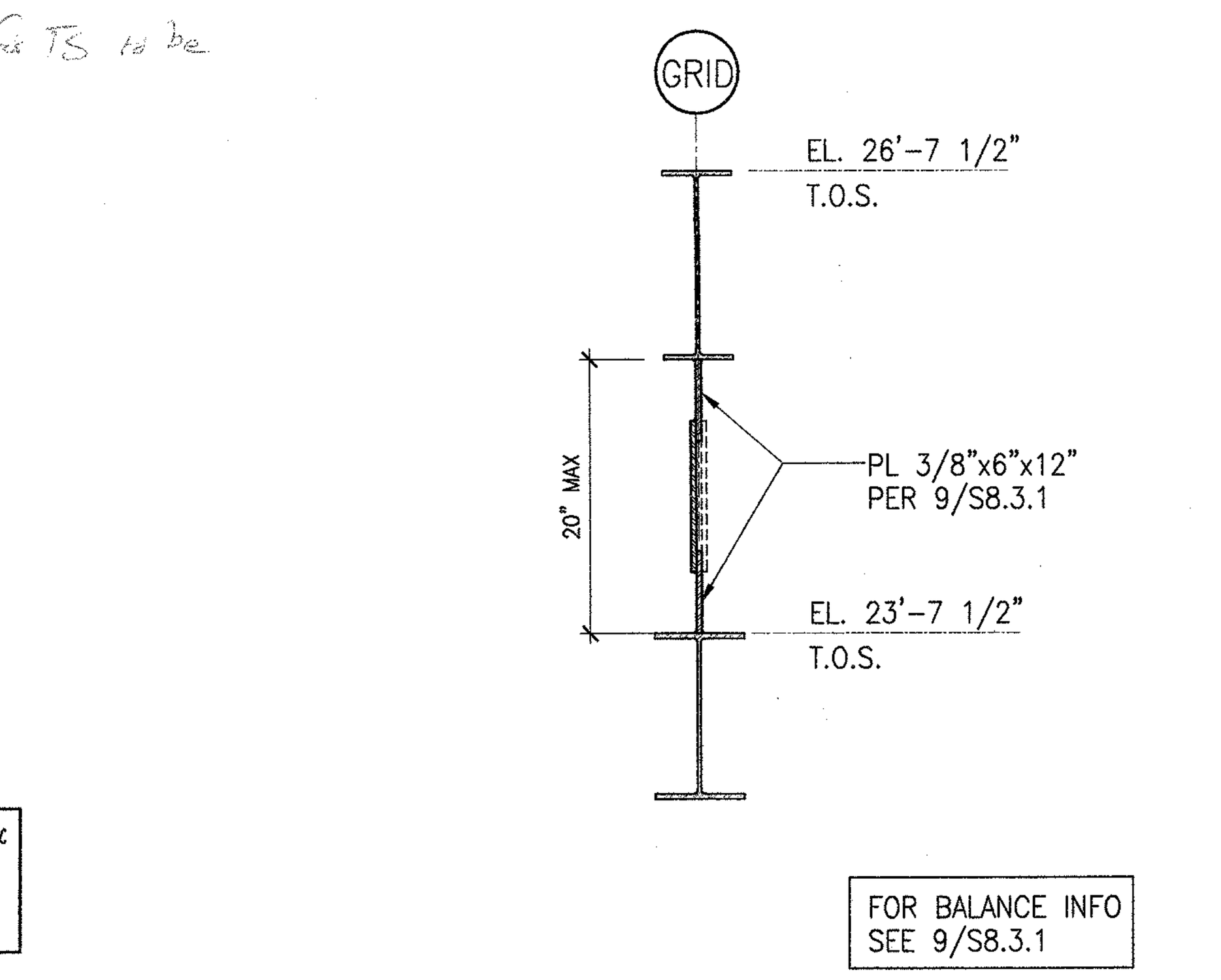


8 BASE PLATE FOR FEATURE WALL HSS COLUMNS
N.T.S.



4 SECTION
SCALE: 1"=1'-0"

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SKYLINE COLLEGE

STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES

DRAWING TITLE
PARTIAL FRAMING PLAN & SECTIONS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S8.3.2

REVIEW SET

20050420.18295782 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S8.3.2.dwg

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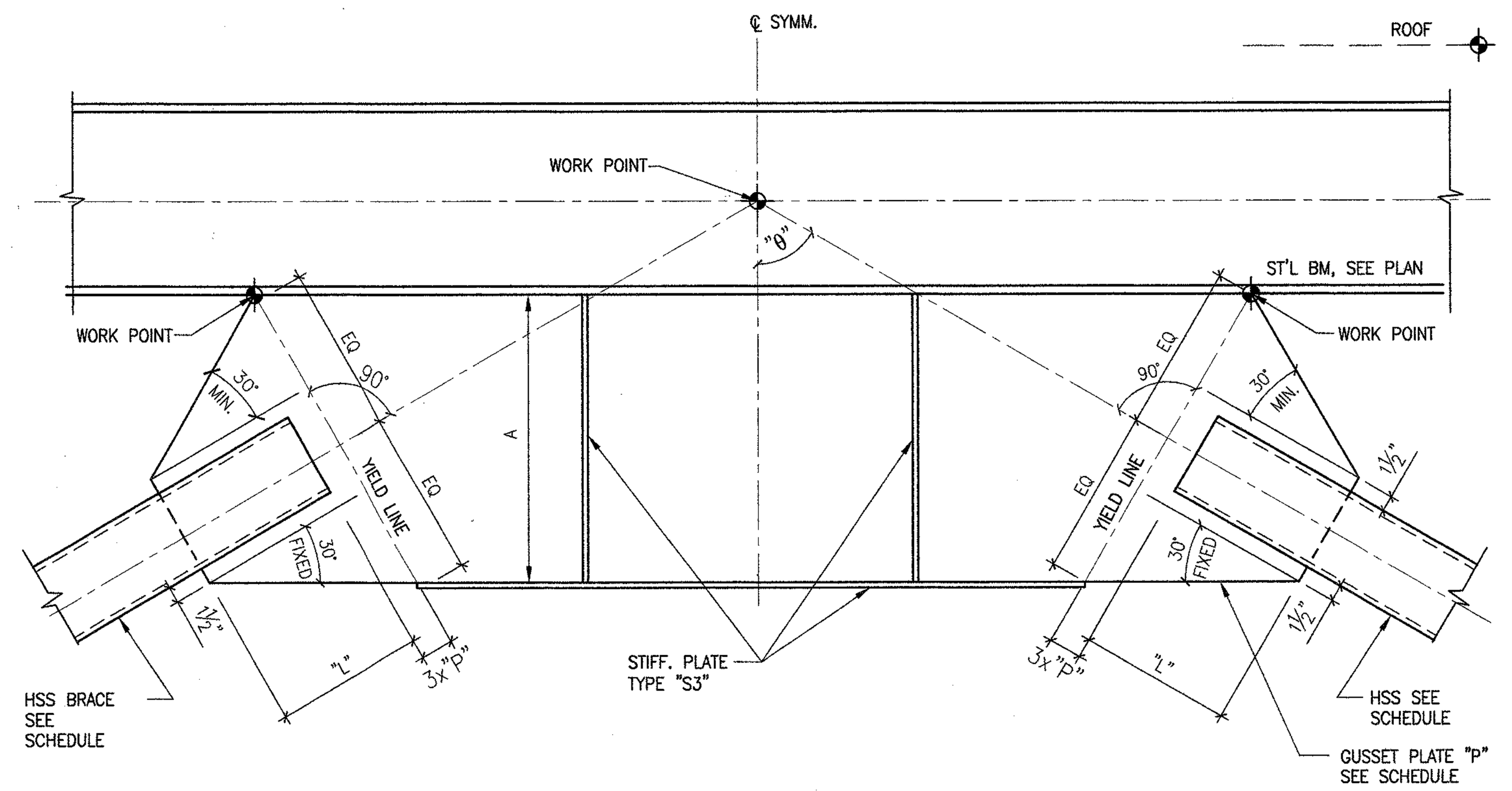
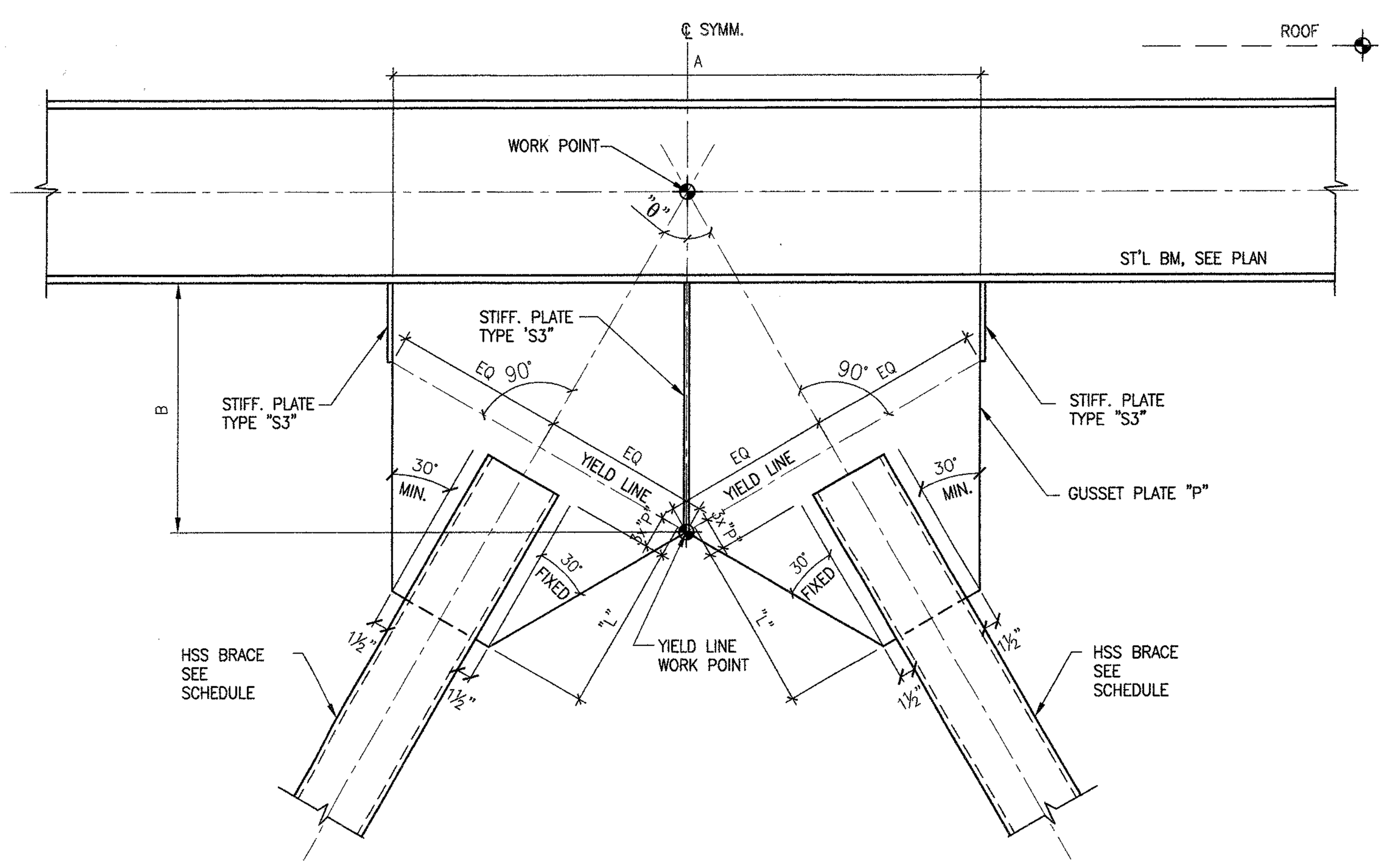
SEE RFI 0028 for 30° Angle



B	=	TO BE DETERMINED BY G.C./ FABRICATOR
3P	=	3x THICKNESS OF PLATE
L	=	REQUIRED WELD LENGTH ALONG BRACE
A	=	TO BE DETERMINED BY G.C./ FABRICATOR
θ	=	DETERMINED FROM PLAN GEOMETRY (SAD)

YIELD LINES START AT THE FLANGE OF BEAM



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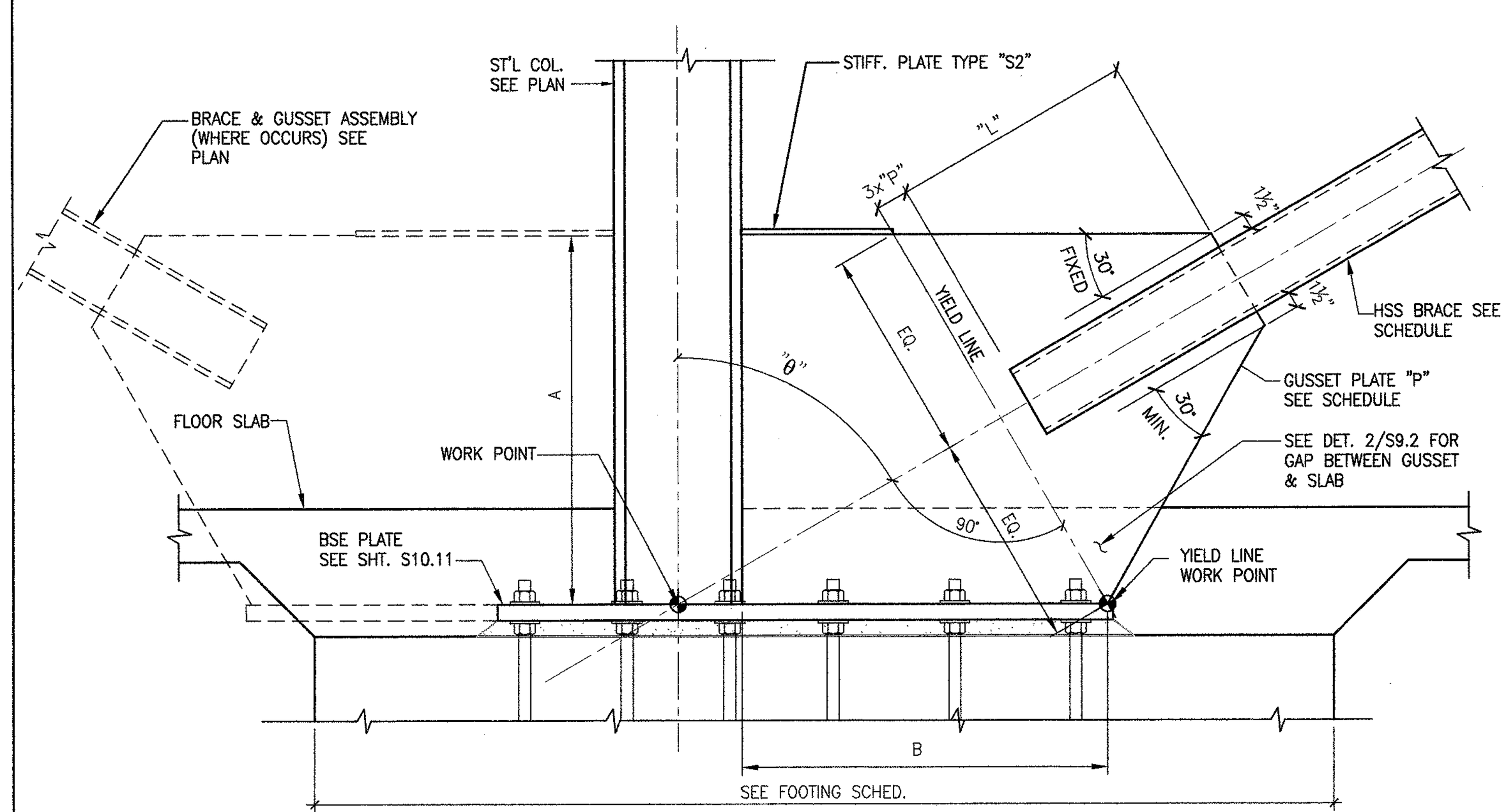
YIELD LINES START AT THE CENTER LINE OF GUSSET PLATE

8 TYPICAL BRACE TO BEAM MIDSPAN

SCALE: NTS



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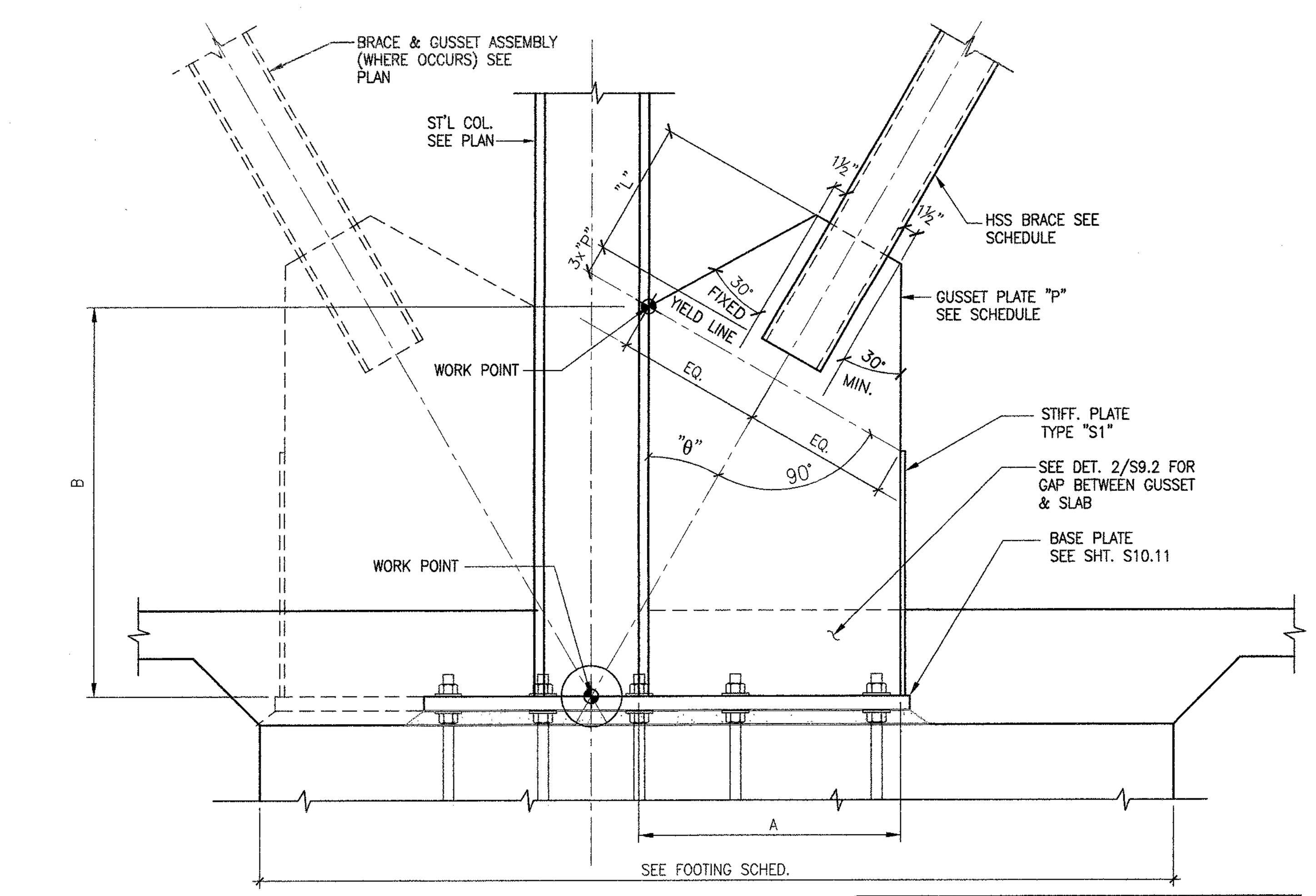
L	=	REQUIRED WELD LENGTH ALONG BRACE
A	=	TO BE DETERMINED BY G.C./ FABRICATOR
θ	=	DETERMINED FROM PLAN GEOMETRY (SAD)

YIELD LINE STARTS AT THE TOP OF BASE PLATE



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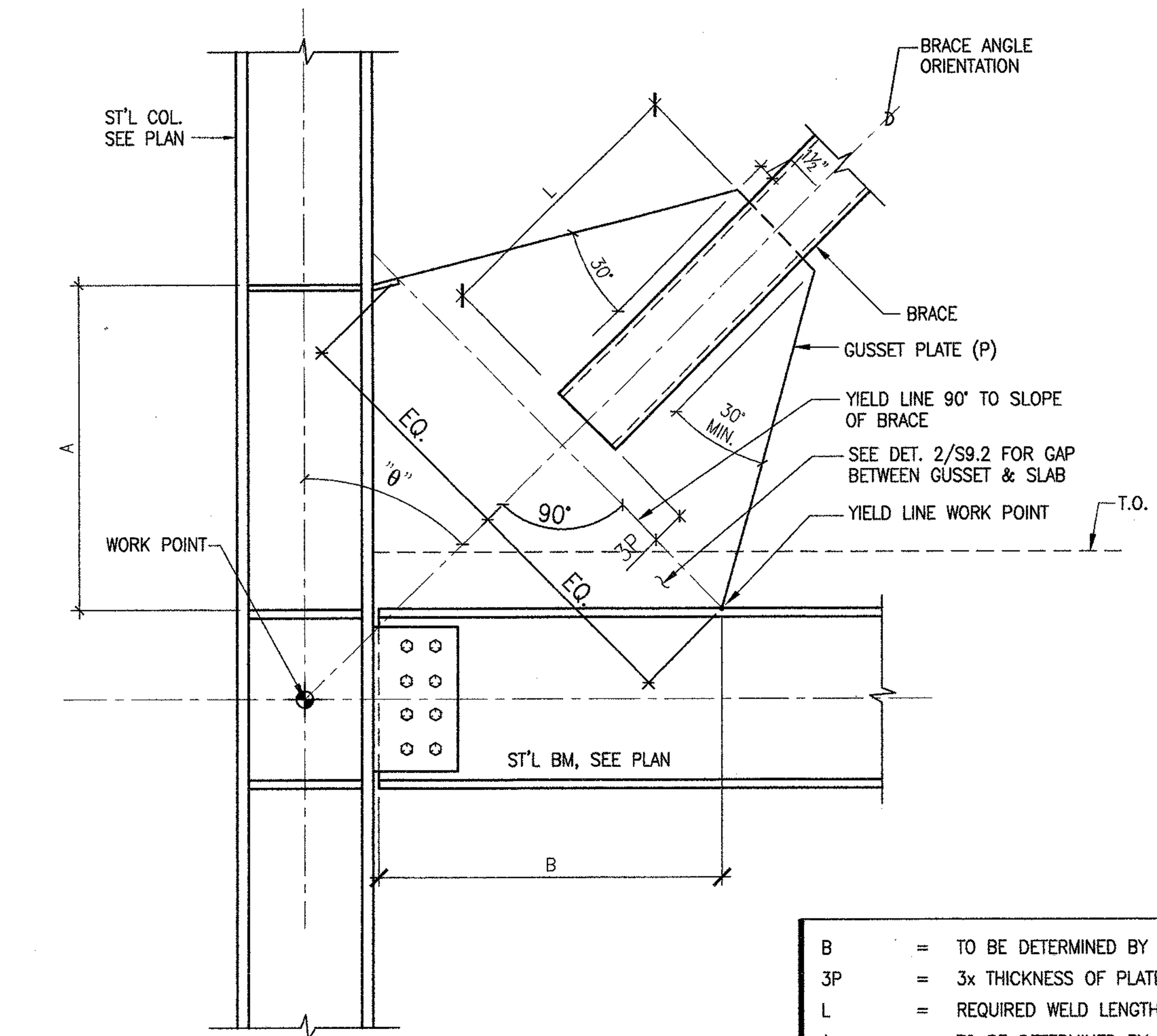
L	=	REQUIRED WELD LENGTH ALONG BRACE
A	=	TO BE DETERMINED BY G.C./ FABRICATOR
θ	=	DETERMINED FROM PLAN GEOMETRY (SAD)

YIELD LINE STARTS AT THE FLANGE OF COLUMN

5 TYPICAL BRACE TO COLUMN

SCALE: NTS



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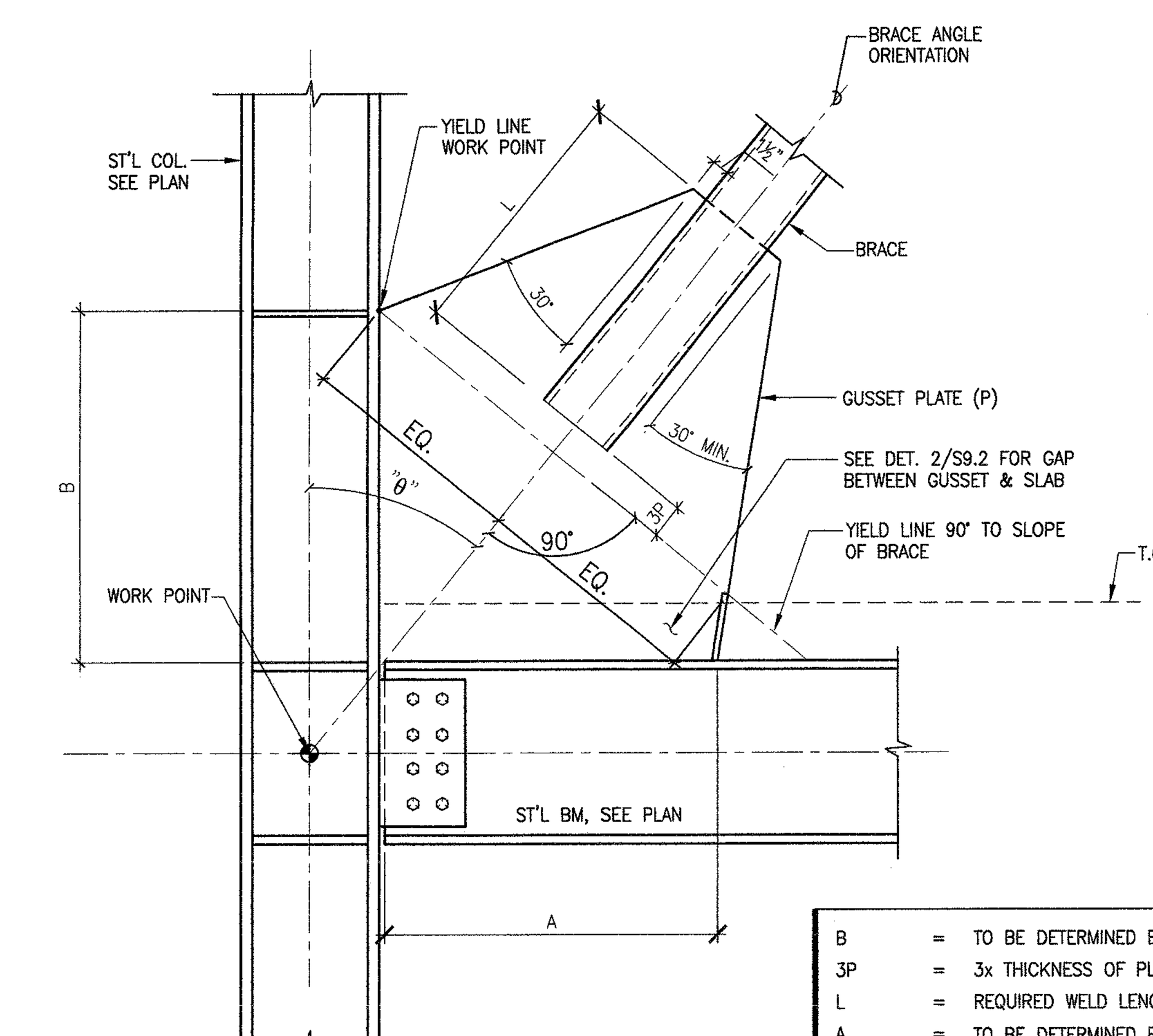
L	=	REQUIRED WELD LENGTH ALONG BRACE
A	=	TO BE DETERMINED BY G.C./ FABRICATOR
θ	=	DETERMINED FROM PLAN GEOMETRY (SAD)

EXAMPLE OF YIELD LINE WORK POINT AT BEAM



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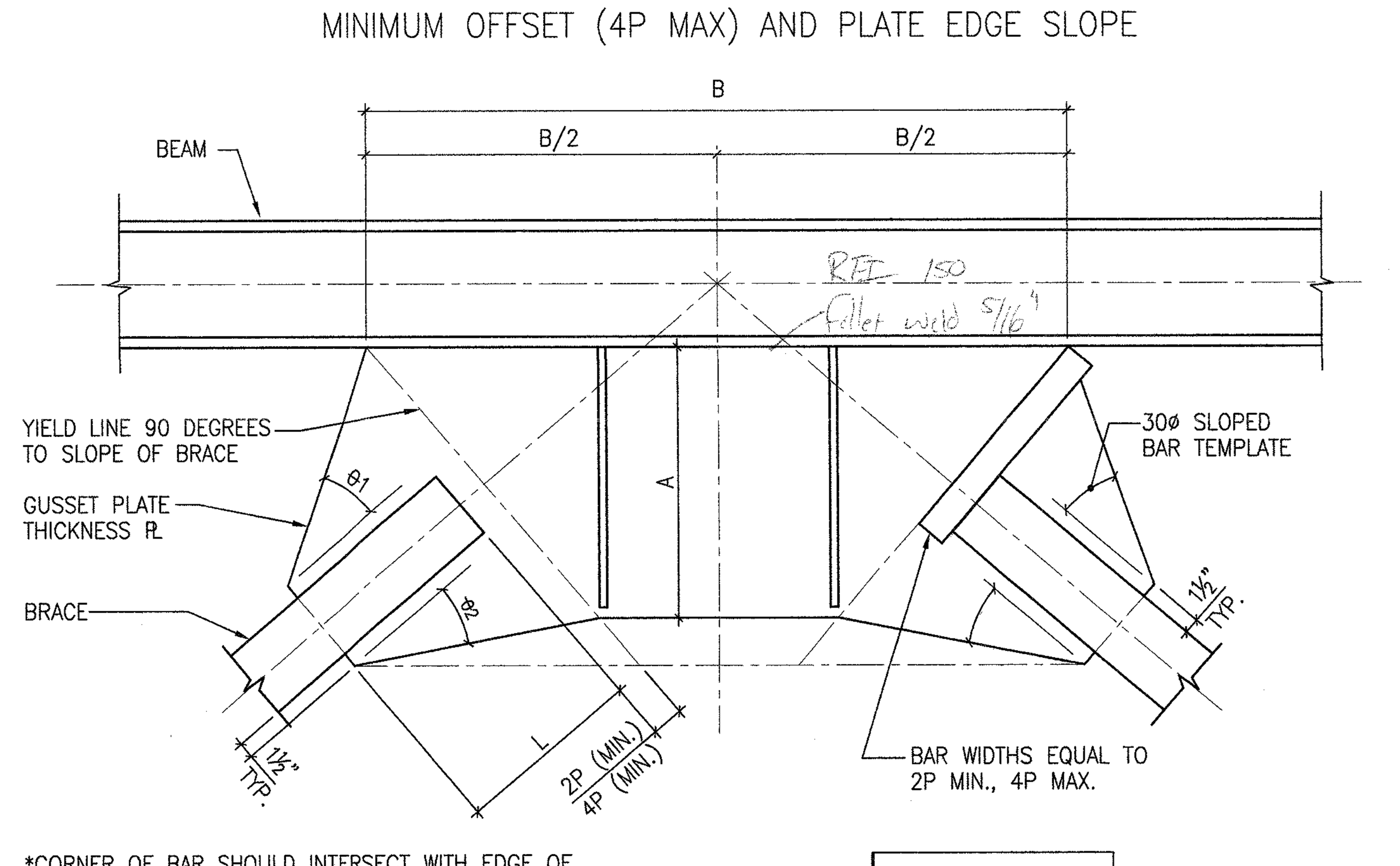
L	=	REQUIRED WELD LENGTH ALONG BRACE
A	=	TO BE DETERMINED BY G.C./ FABRICATOR
θ	=	DETERMINED FROM PLAN GEOMETRY (SAD)

EXAMPLE OF YIELD LINE WORK POINT AT COLUMN

2 TYPICAL BRACE TO BEAM/COLUMN

SCALE: NTS

FIELD CHECK TO VERIFY COMPLIANCE OF 2P MINIMUM OFFSET (4P MAX) AND PLATE EDGE SLOPE



*CORNER OF BAR SHOULD INTERSECT WITH EDGE OF GUSSET PLATE PRIOR TO HITTING BEAM FLANGE

θ1 = 30° MINIMUM
θ2 = 30° FIXED

9 RECOMMENDED FIELD CHECKS

SCALE: NTS

FIELD CHECK NOTES

INSPECTOR OF RECORD TO VERIFY:

1. THAT THE 2P MINIMUM (4P MAX.) OFFSET IS MAINTAINED EACH END OF BRACE BEFORE WELDING OF BRACE AND AFTER WELDING OF BRACE (INCLUDE DIAGRAM OF FIELD CHECK METHOD).
2. VERIFY 1½" OFFSET AND ANGLE SLOPE ALONG EDGE OF GUSSET PLATE.
3. ISOLATION OF GUSSET PLATE YIELD LINE FROM SLAB (IF DETAILED) AND STIFFENER PLATE LOCATIONS, PER DET. 2/S9.2.
4. DISCUSS INSPECTION CRITERIA WITH STRUCTURAL ENGINEER PRIOR TO WELDING OF BRACES.

6 FIELD CHECKS

SCALE: NTS

GENERAL BRACE FRAME CONNECTION NOTES

1. ALL DETAILS INCORPORATED INTO SUBTITLED SHOP DRAWINGS SHALL BE DRAWN TO SCALE.
2. GENERAL CONTRACTOR SHALL SUBMIT COMPREHENSIVE SHOP DRAWING FOR EACH BRACE/GUSSET ASSEMBLY AS REQUIRED BY PLANS & SPECIFICATIONS. EACH CONNECTION SHALL BE FULLY DETAILED WITH THE INFORMATION GIVEN IN DETAILS, ALL APPLICABLE SCHEDULES, OR THAT INFORMATION WHICH CAN BE DETERMINED FROM GIVEN MEMBER SIZES AND PLAN GEOMETRY.
3. ITEMS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY. SEE SHEETS S9.1 THROUGH S9.5 FOR BRACE FRAME CONNECTION REQUIREMENTS.

SUGGESTED DETAILING SEQUENCE FOR BRACE TO BEAM COLUMN CONNECTION.

1. DETERMINE BRACE ANGLE ORIENTATION AND CONNECTION WORK POINT BASED UPON PLAN DIMENSIONS AND MEMBER SIZES
2. DETERMINE LENGTH OF WELD ALONG TUBE STEEL BRACE TO GUSSET PLATE. SET BOTH ANGLE TO 30 DEGREES INITIALLY.
3. ENSURE YIELD LINE IS PERPENDICULAR TO BRACE ANGLE.
4. DETERMINE YIELD LINE WORK POINT. YIELD LINE WORK POINT OCCURS AT BEAM OR COLUMN DEPENDING UPON GEOMETRY. THIS CAN BE FOUND BY LOWERING BRACE ASSEMBLY ALONG BRACE ORIENTATION LINE UNTIL EITHER BEAM OR COLUMN IS INTERSECTED.
5. VERIFY EXTENSION OF YIELD LINE DOES NOT INTERSECT THE PLATE DIMENSION "A".
6. NOTIFY THE STRUCTURAL ENGINEER IF ANY OF THE ABOVE ITEMS CAN NOT BE MET.
7. DETAILER MAY ADJUST THE "A" AND "L" DIMENSIONS (+/-1/8")*, AS NEEDED IN ORDER TO FACILITATE FABRICATION OF THE PLATE.
8. * DENOTES ACTUAL ALLOWANCE SHALL BE BASE UPON ENGINEERS DISCRETION AND DESIGN TOLERANCES.
9. SUGGESTED DETAILING (SHOP DRAWING) OF BRACE/GUSSET ASSEMBLY TO FOUNDATION & BEAM SIMILAR TO THAT SHOWN ABOVE.
10. PROVIDE BRACE OVERSLOT REINFORCEMENT PLATE AS SHOWN IN DET. 9/S10.11 (TYP.).

3 GENERAL NOTES AND SUGGESTED FABRICATION SEQUENCE

SCALE: NTS

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INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

DRAWING TITLE
BRACE FRAME DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S9.0

REVIEW SET

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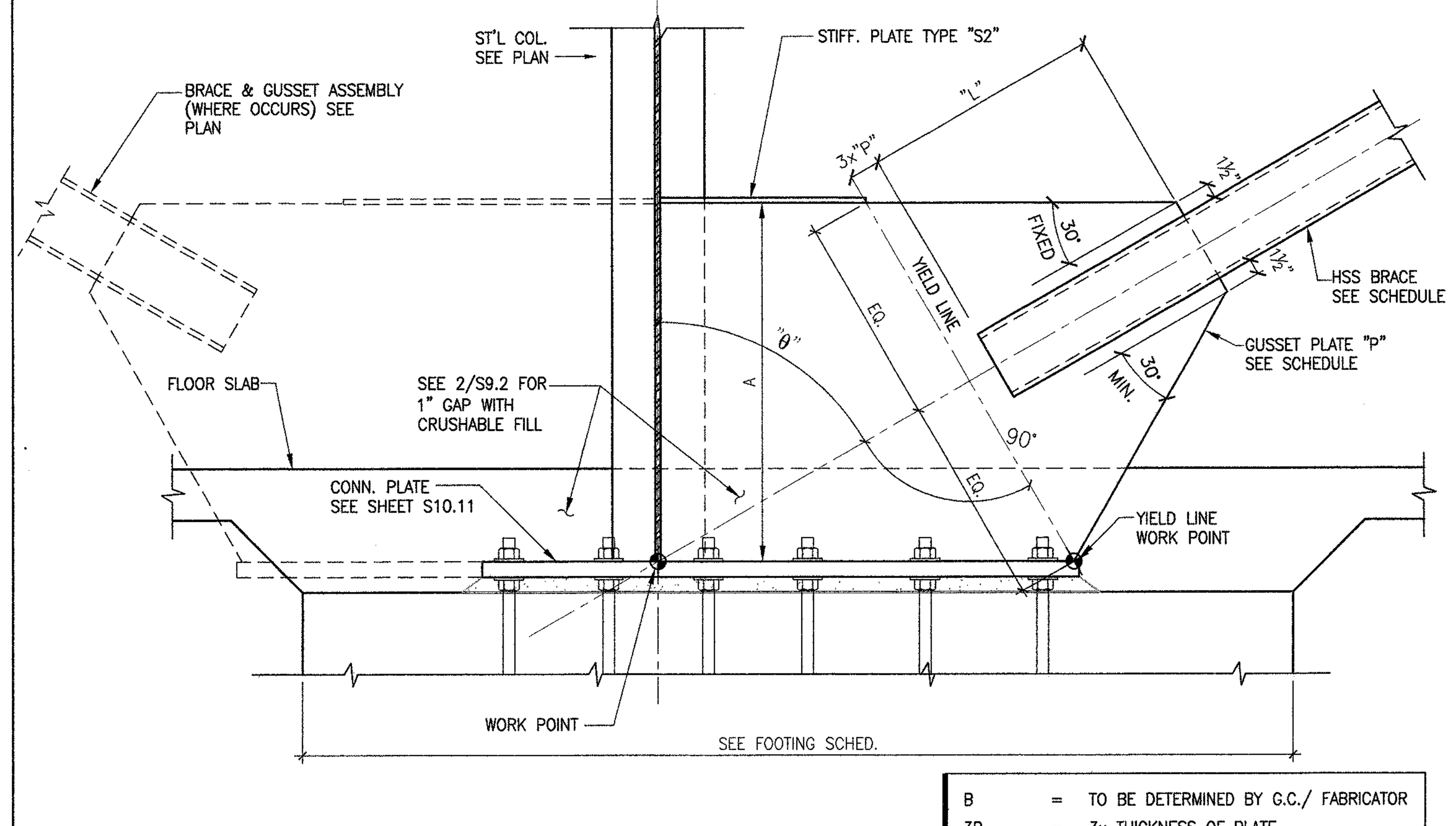
SEE RFI 0028 for 30° Angle



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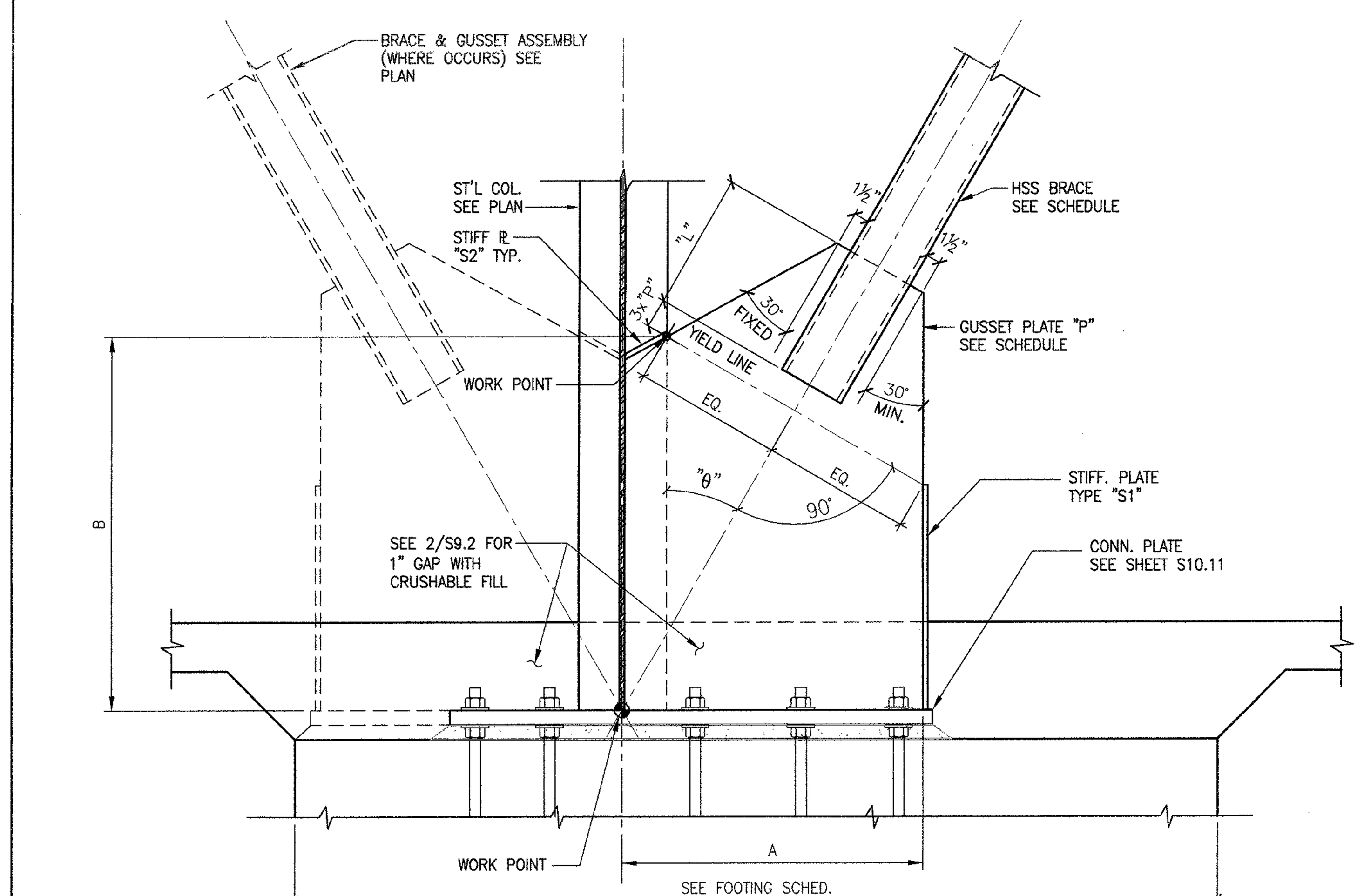
3P	=	3x THICKNESS OF PLATE
L	=	REQUIRED WELD LENGTH ALONG BRACE
A	=	TO BE DETERMINED BY G.C./ FABRICATOR
θ	=	DETERMINED FROM PLAN GEOMETRY (SAD)

YIELD LINE STARTS AT THE TOP OF FLOOR SLAB



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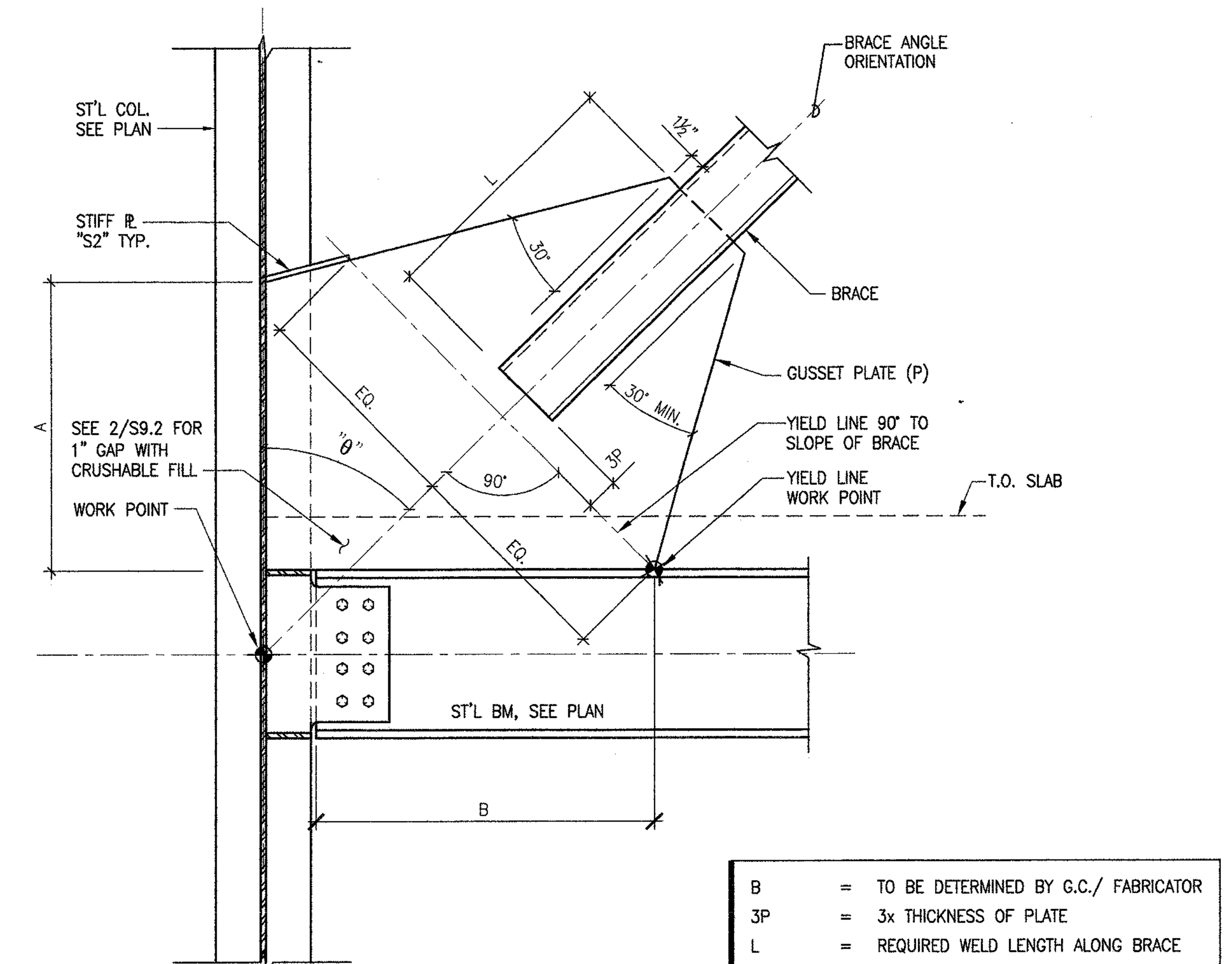
YIELD LINE STARTS AT THE FLANGE OF COLUMN

5 TYPICAL BRACE TO COLUMN (WEAK AXIS)

SCALE: NTS



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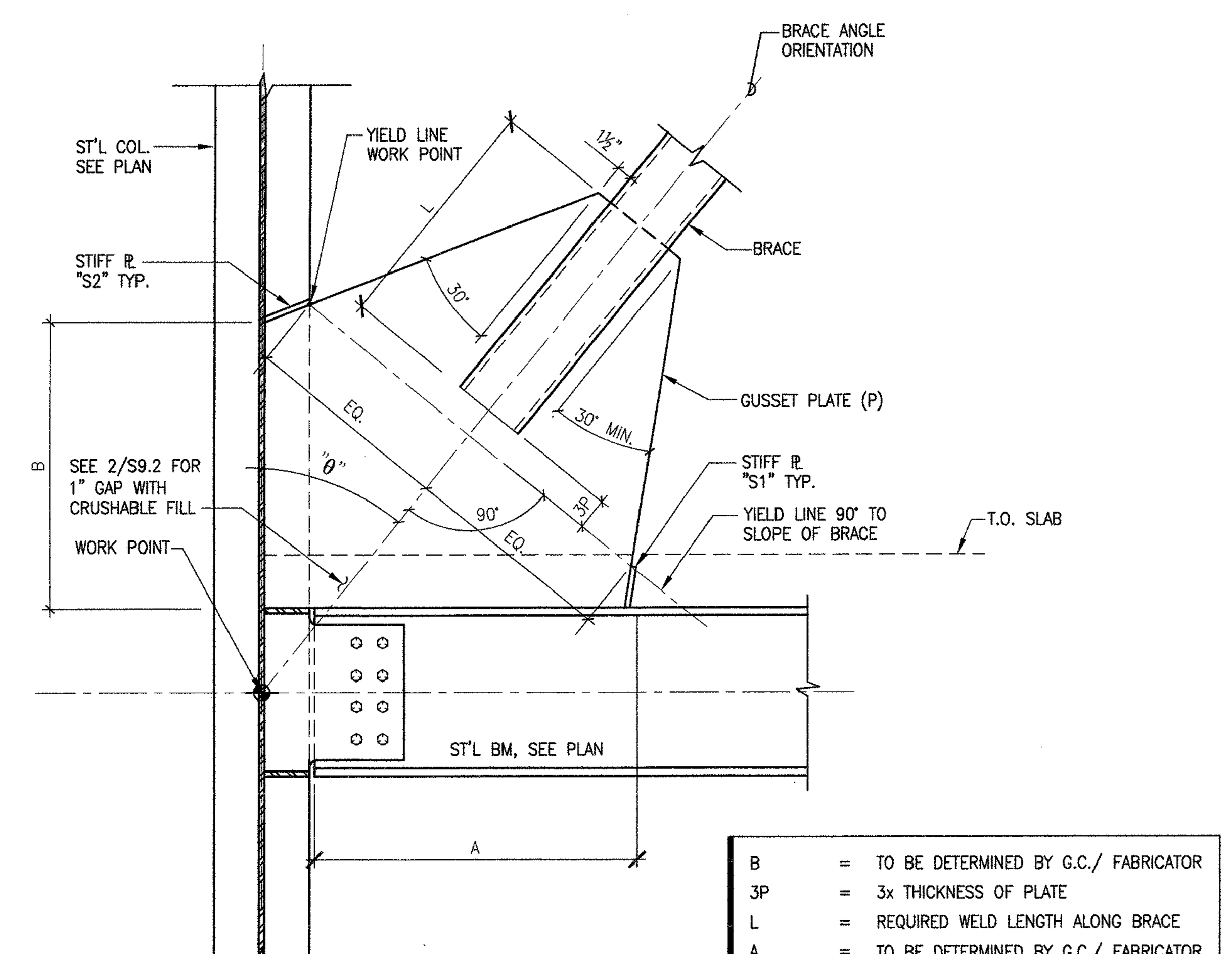
EXAMPLE OF YIELD LINE WORK POINT AT BEAM



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EXAMPLE OF YIELD LINE WORK POINT AT COLUMN

2 TYPICAL BRACE TO BEAM/COLUMN (WEAK AXIS)

SCALE: NTS

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DRAWING TITLE

BRACE FRAME DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S9.01

REVIEW SET

20050420.17030655 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S9.01.dwg

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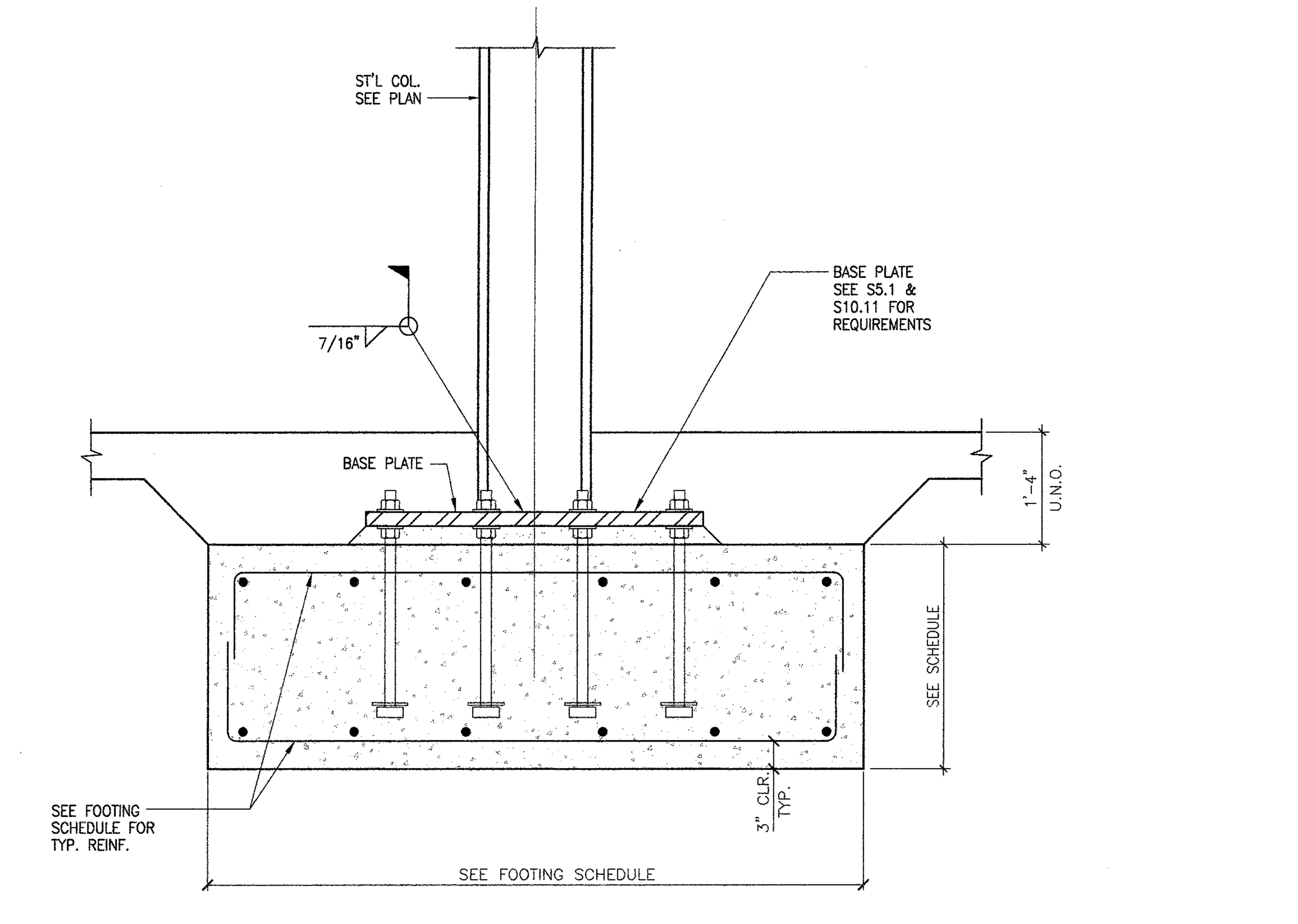
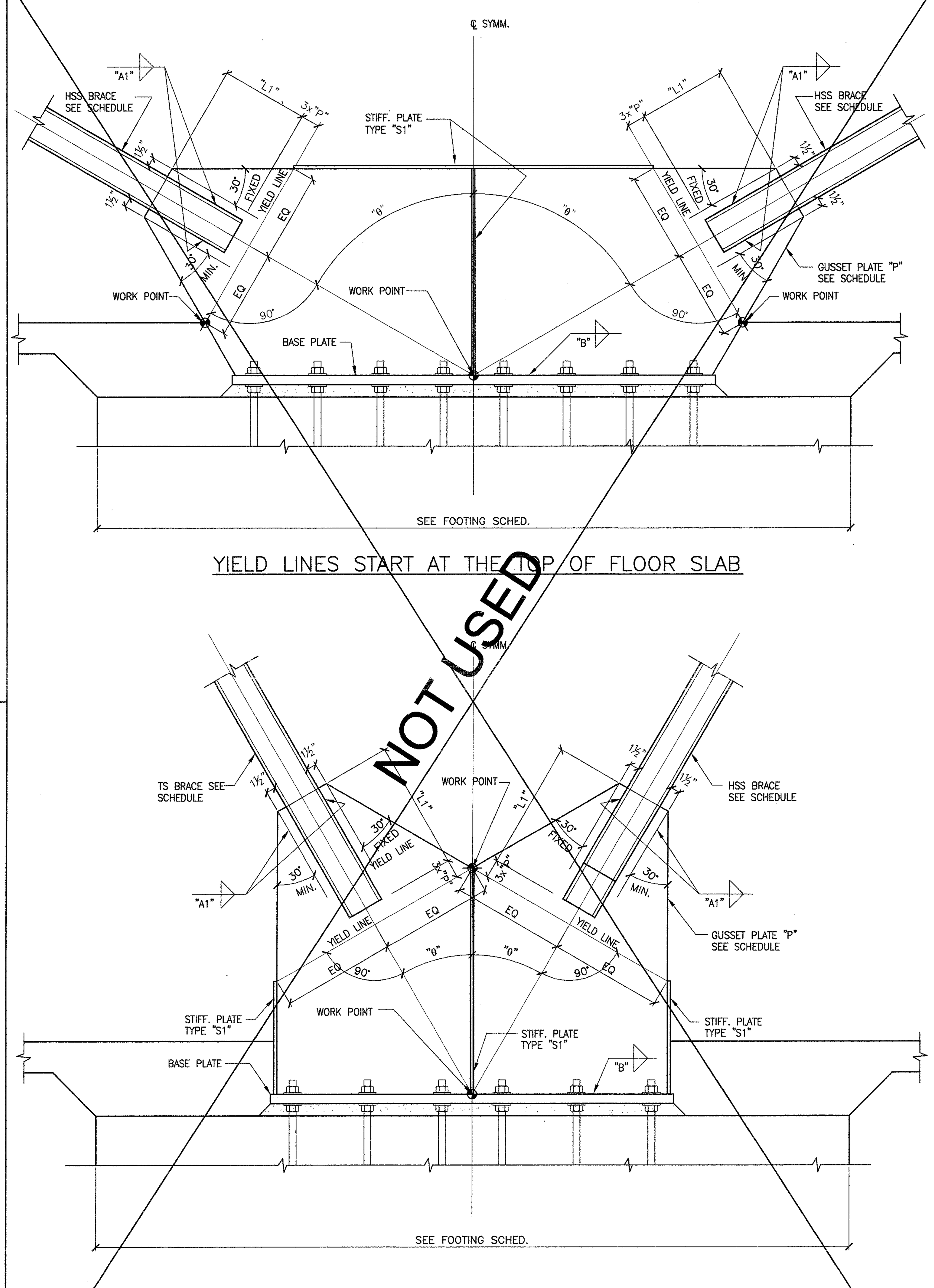
SEE RFI 0028 for 30° Angle



SEE S9.2 FOR ADDITIONAL INFORMATION

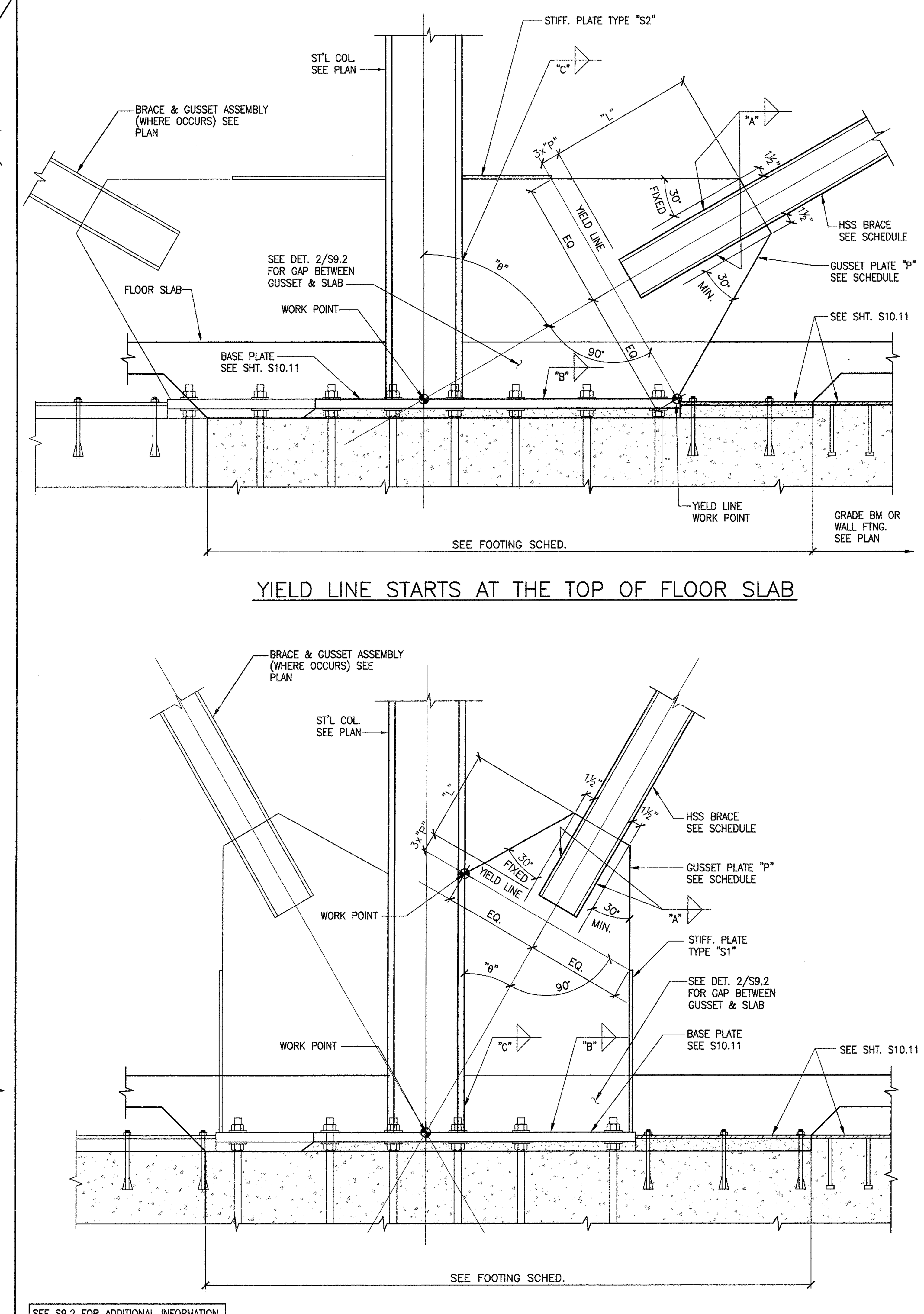
3 CONNECTION DETAIL BF-1C, BF-1D, BF-2C

SCALE: N.T.S.



2 CONNECTION DETAIL

SCALE: N.T.S.



SEE S9.2 FOR ADDITIONAL INFORMATION

1 CONNECTION DETAIL BF-1A, BF-1B, BF-1C, BF-2A BF-2B, BF-2C, BF-1E

SCALE: N.T.S.

TYPICAL NOTES:

1. THE DETAILS PROVIDE GENERAL GUIDELINE FOR BRACE CONNECTION CONFIGURATION ONLY. THE CONTRACTOR SHALL SUBMIT DETAILING SHOP DRAWINGS TO THE ENGINEER FOR REVIEWING AND APPROVAL BEFORE FABRICATING ALL STEEL COMPONENTS. SEE S9.00 & S9.01 FOR DETAILING PROCEDURE & ADDITIONAL REQUIREMENTS.
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3. THE WIDTH AND THICKNESS OF STIFFENER PLATE TYPE "S1" SHALL BE SAME AS BRACE MEMBER. WELDING THE STIFFENER PLATE TO THE ADJACENT STEELS WITH DOUBLE SIDES 5/16" FILLET WELDS ALL AROUND.
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5. THE WIDTH AND THICKNESS OF STIFFENER TYPE "S3" SHALL BE SAME AS BEAM FLANGE. WELDING STIFFENER PLATE TO THE ADJACENT STEELS WITH DOUBLE SIDES 5/16" FILLET WELD ALL AROUND.
6. FOR BASE PLATE TYPES AND DETAILS, SEE DRAWING SHEETS S10.11.
7. ALL WELDS SHOWN CAN EITHER BE SHOP OF FIELD WELDS AND ARE AT THE DISCRETION OF THE GENERAL CONTRACTOR.
8. PROVIDE BRACE OVERSLOT REINFORCEMENT PLATE AS SHOWN IN DET. 9/S10.11 (TYP.).

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INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA - INC #1	10.21.04

DRAWING TITLE

BRACE FRAME CONNECTION DETAILS

DATE: 10.21.04

PROJECT # 04043

SHEET NUMBER

S9.1

REVIEW SET

20050420.17034851 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S9.1.dwg

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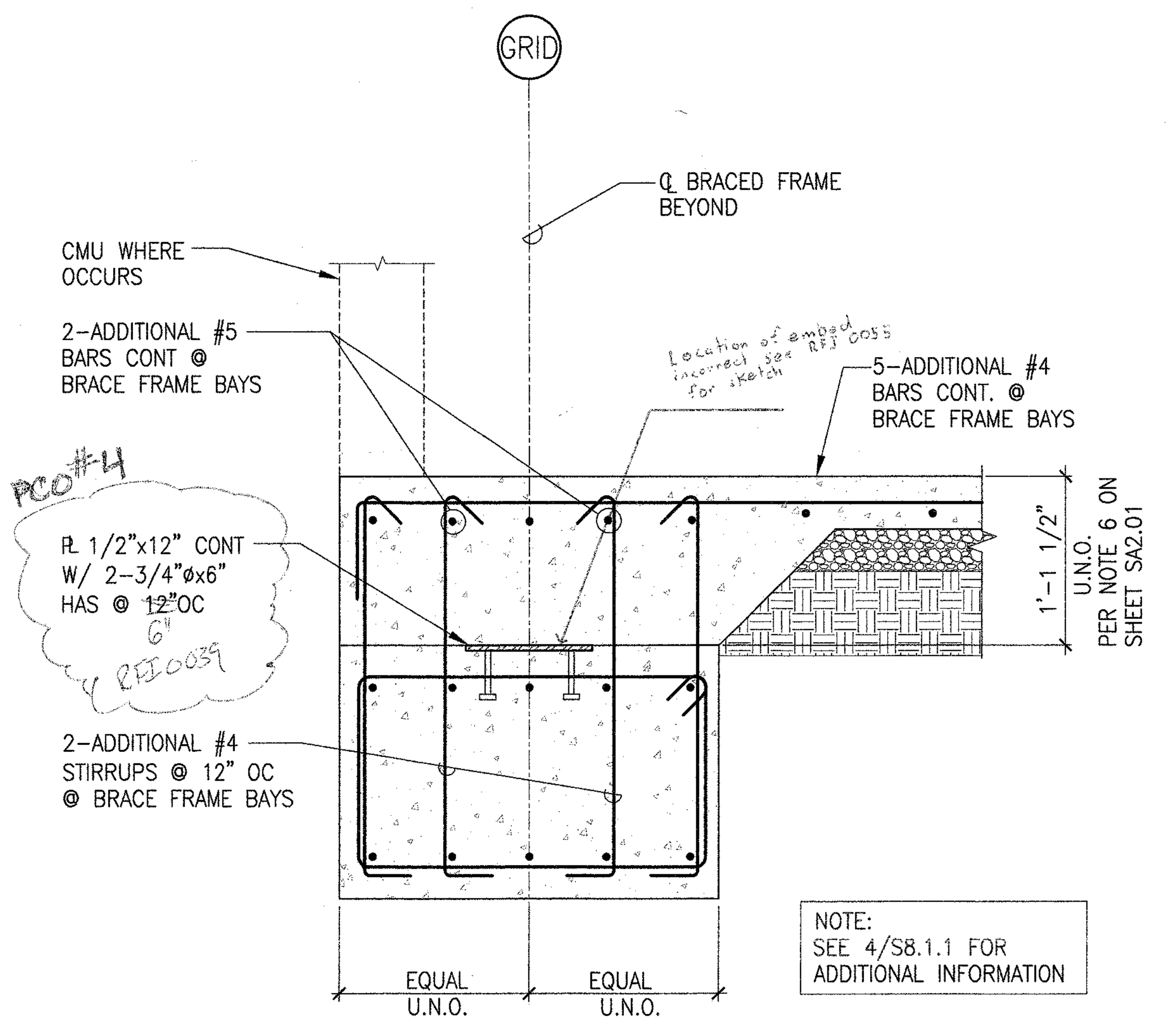
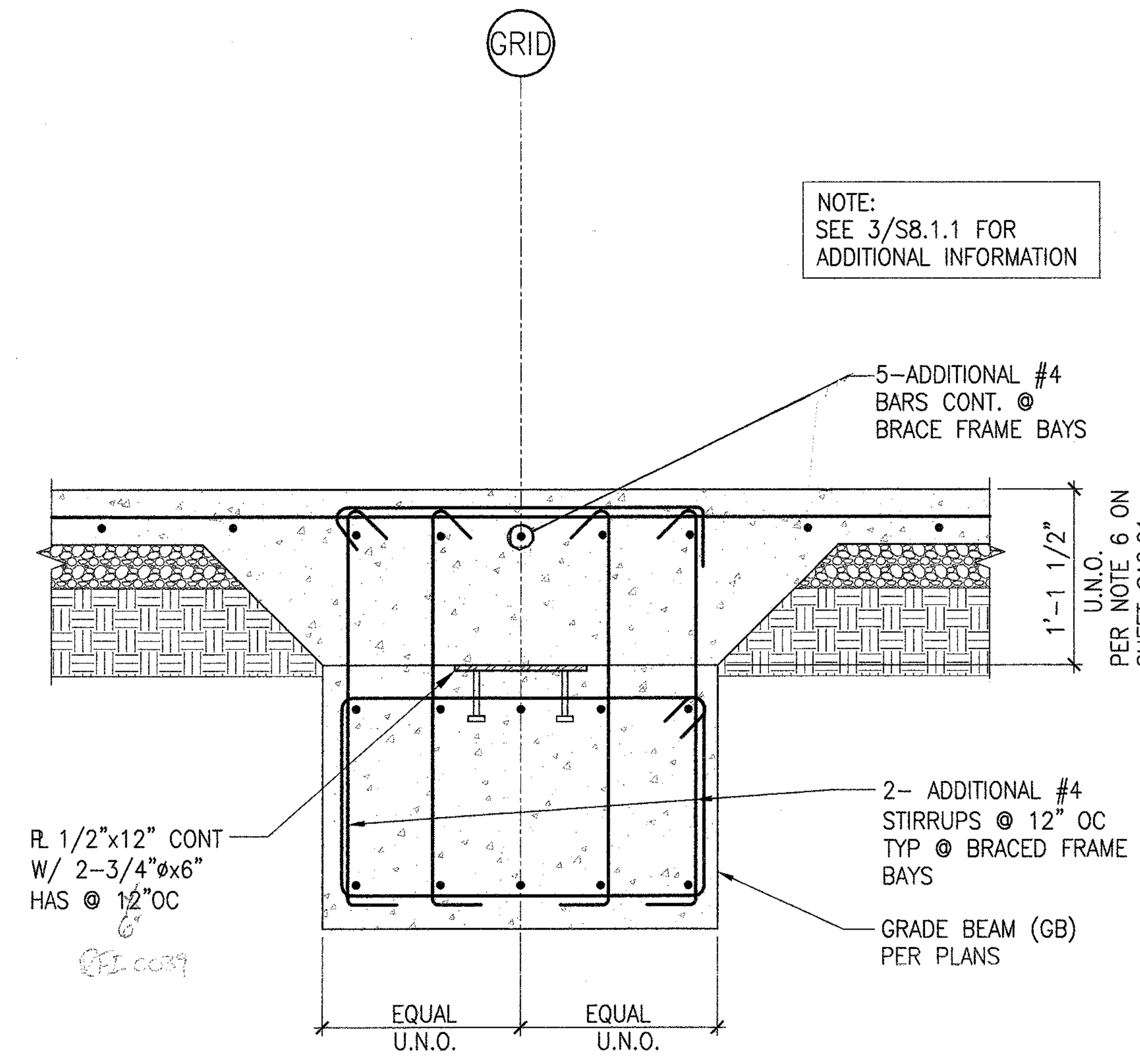
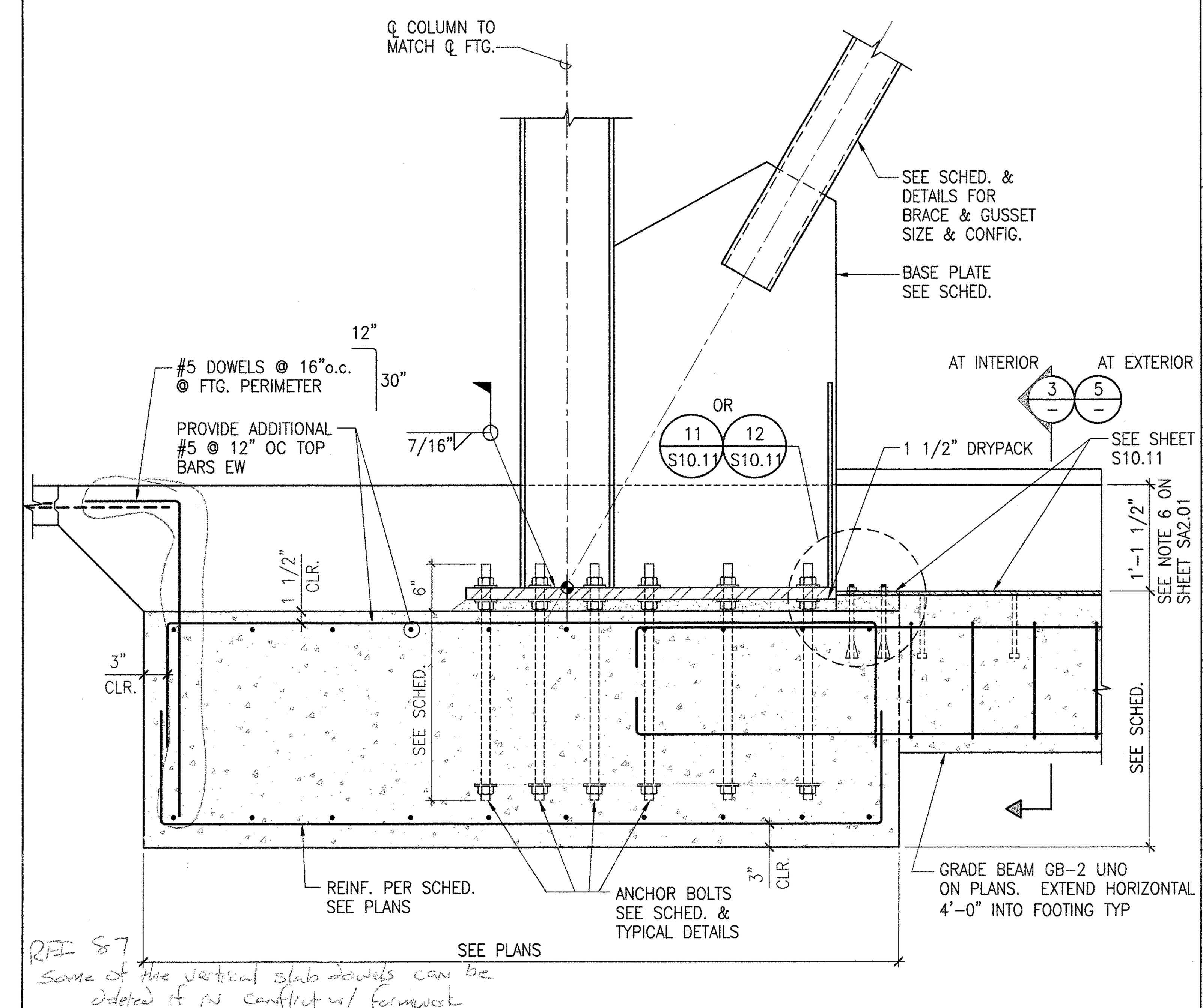
See RFI 28 for angle clarification



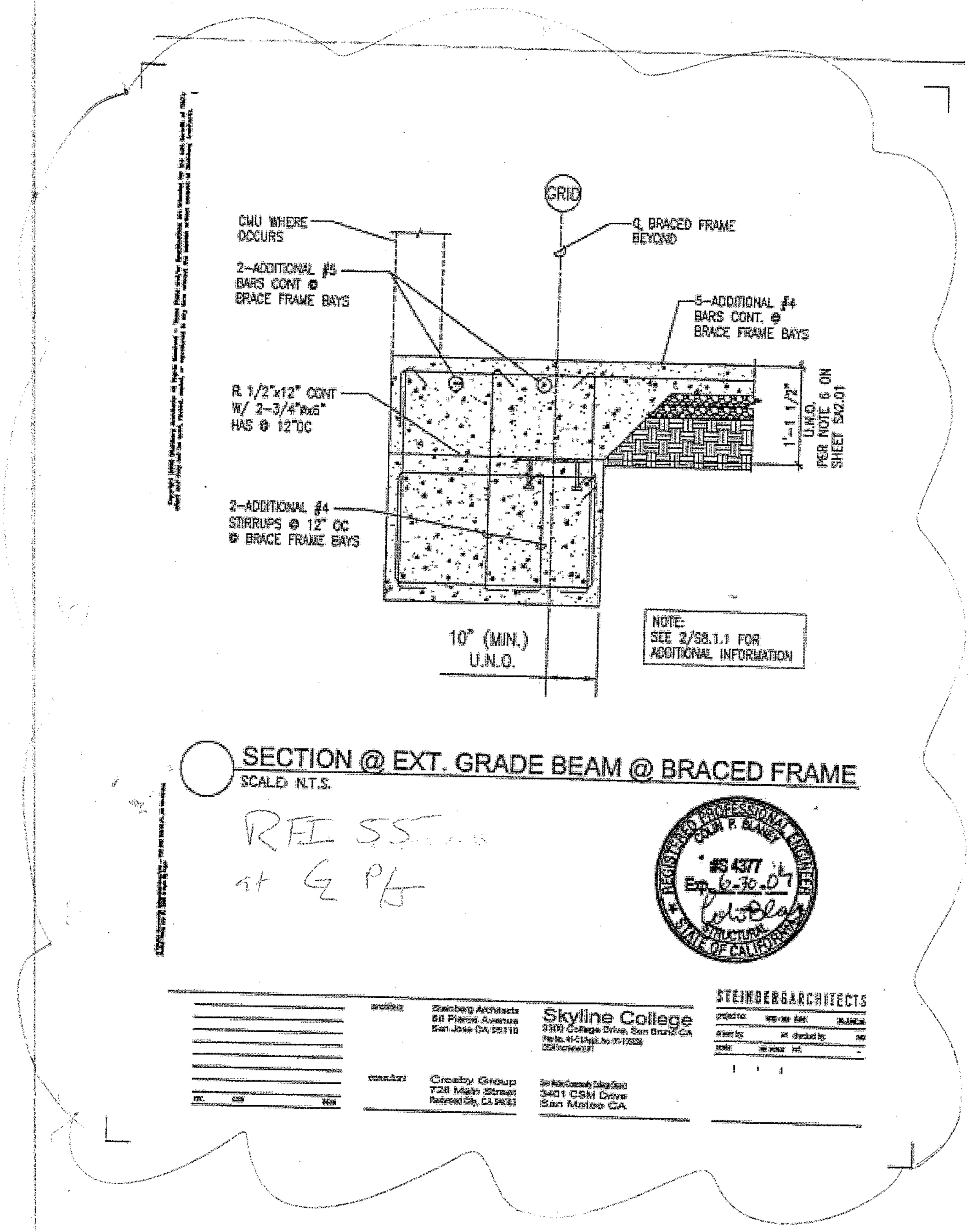
5 **SECTION @ EXTERIOR GRADE BEAM @ BRACED FRAME**
SCALE: N.T.S.

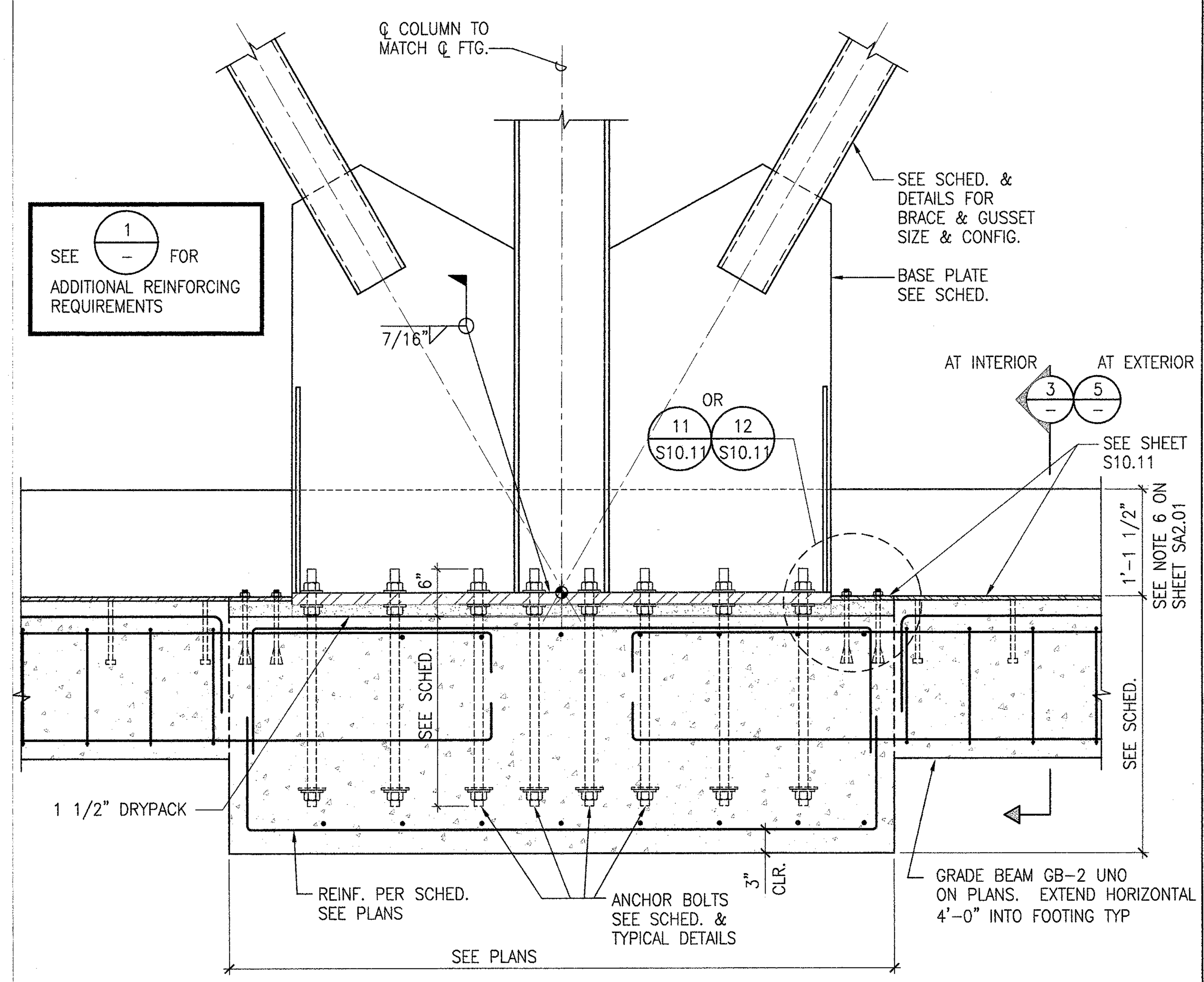


3 **SECTION @ INTERIOR GRADE BEAM @ BRACING FRAME**
SCALE: N.T.S.

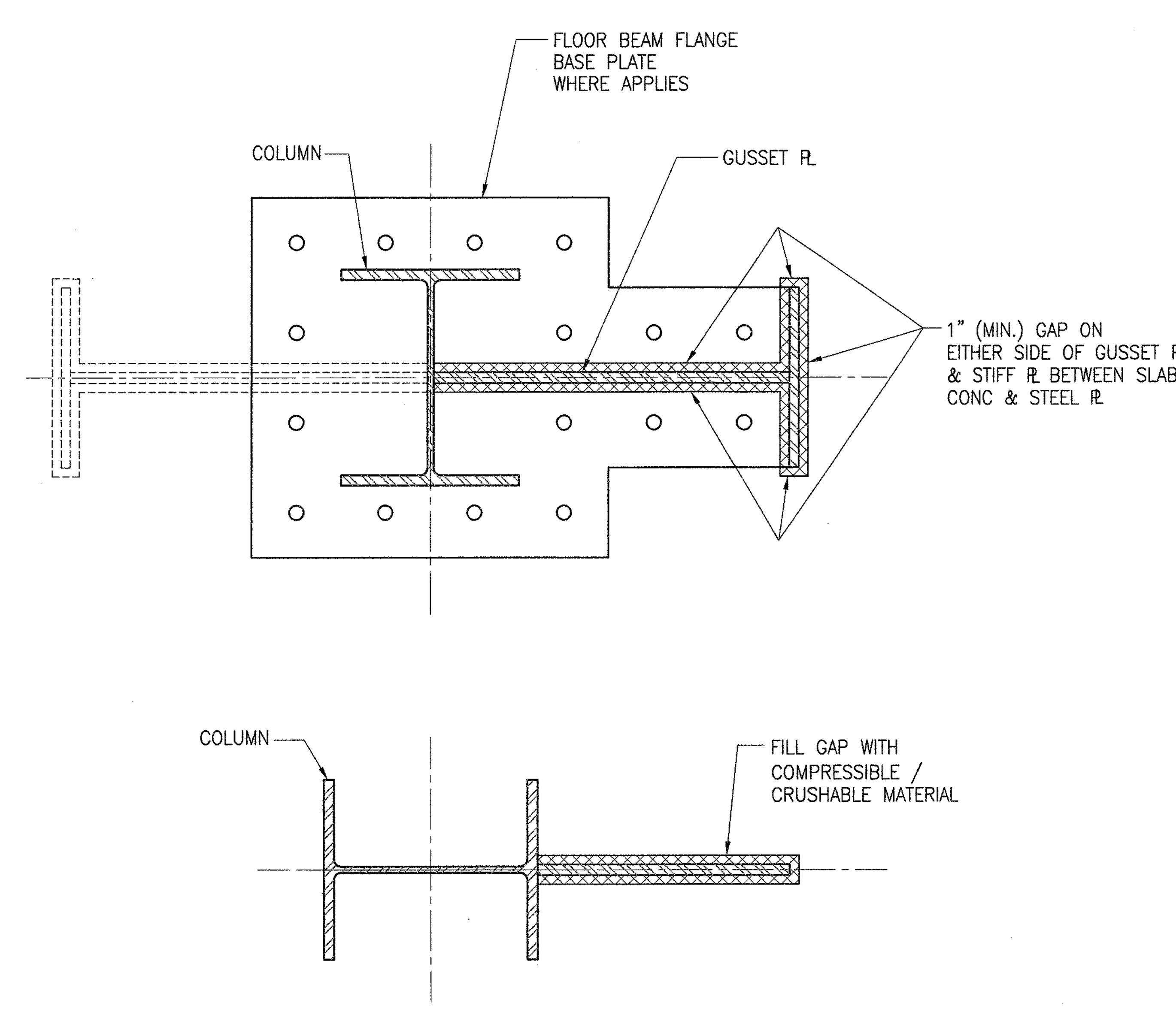


1 **FOUNDATION @ BRACED FRAME**
SCALE: N.T.S.





4 **FOUNDATION @ BRACED FRAME**
SCALE: N.T.S.



2 **FOUNDATION @ BRACED FRAME**
SCALE: N.T.S.

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IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES

DRAWING TITLE
BRACE FRAME CONNECTION DETAILS
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S9.2

REVIEW SET

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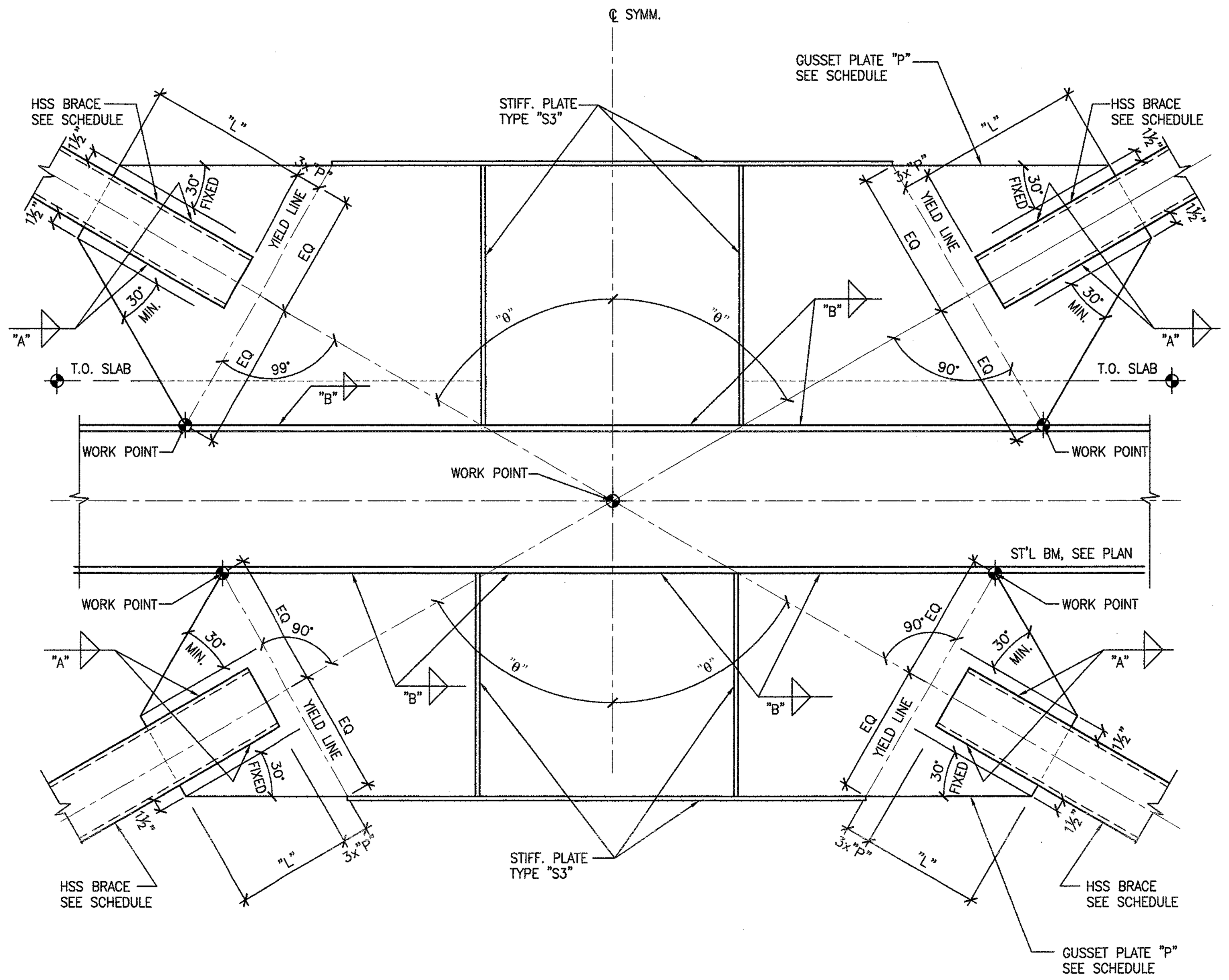
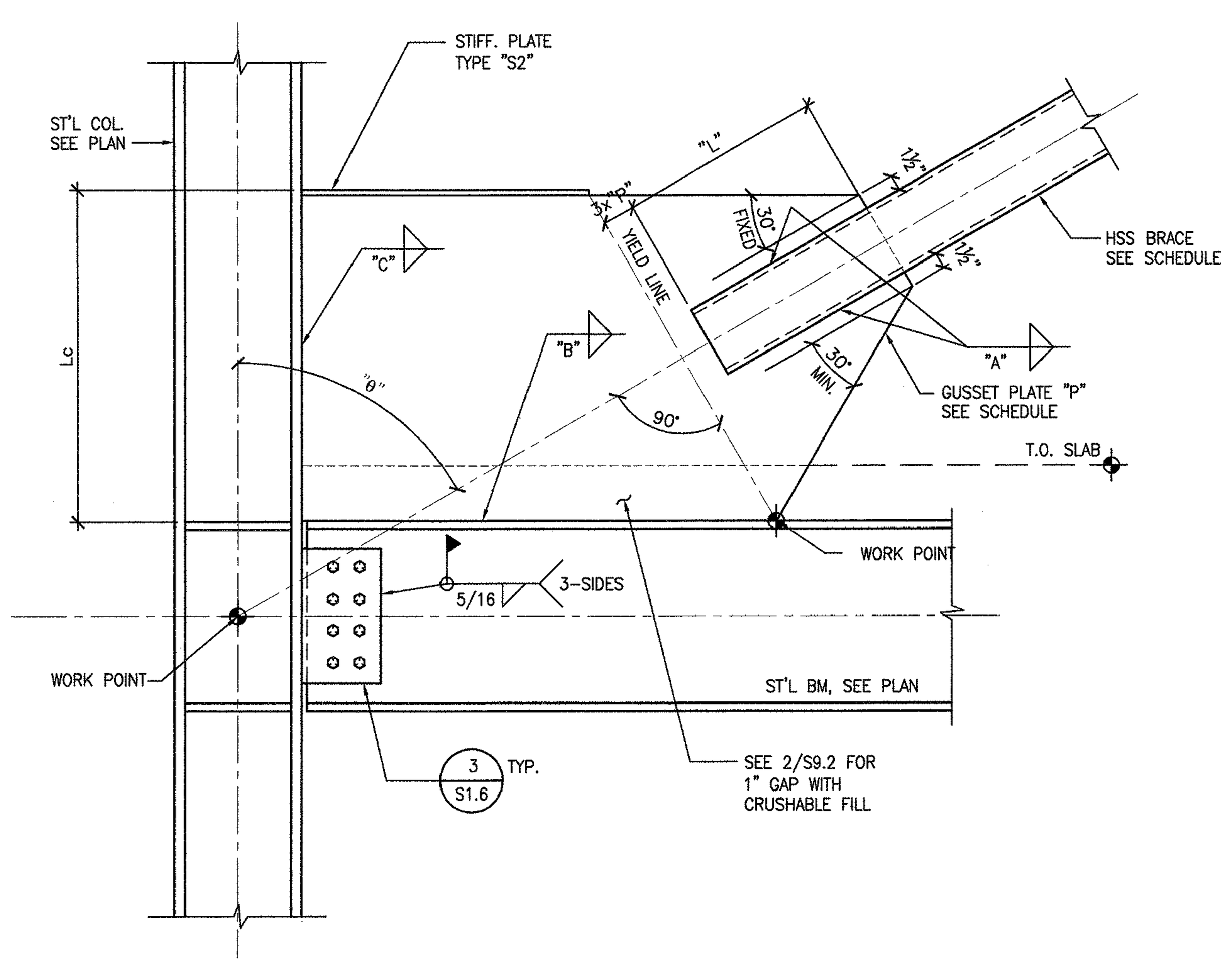
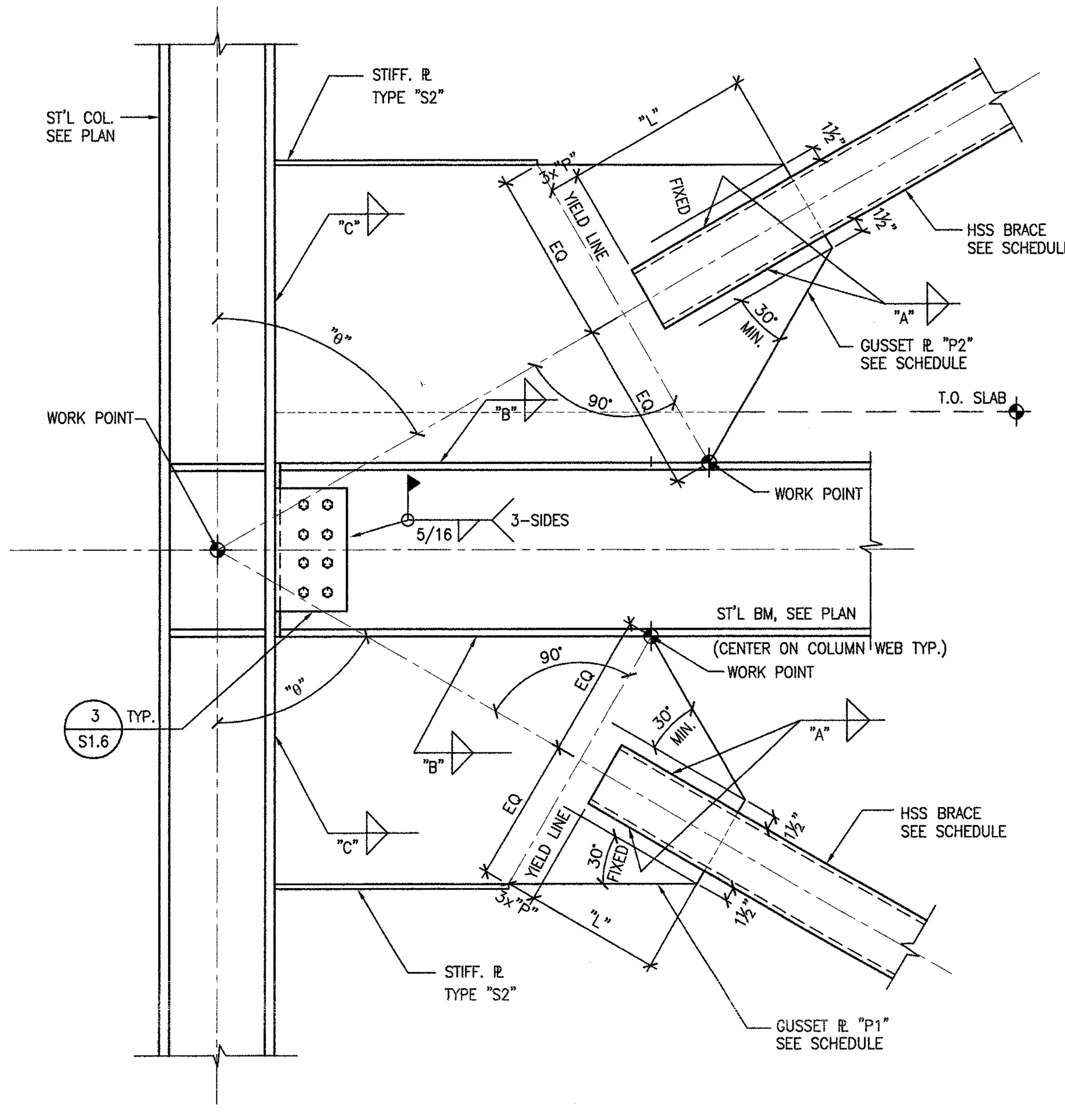
SEE RFI 0028 for 30° Angle



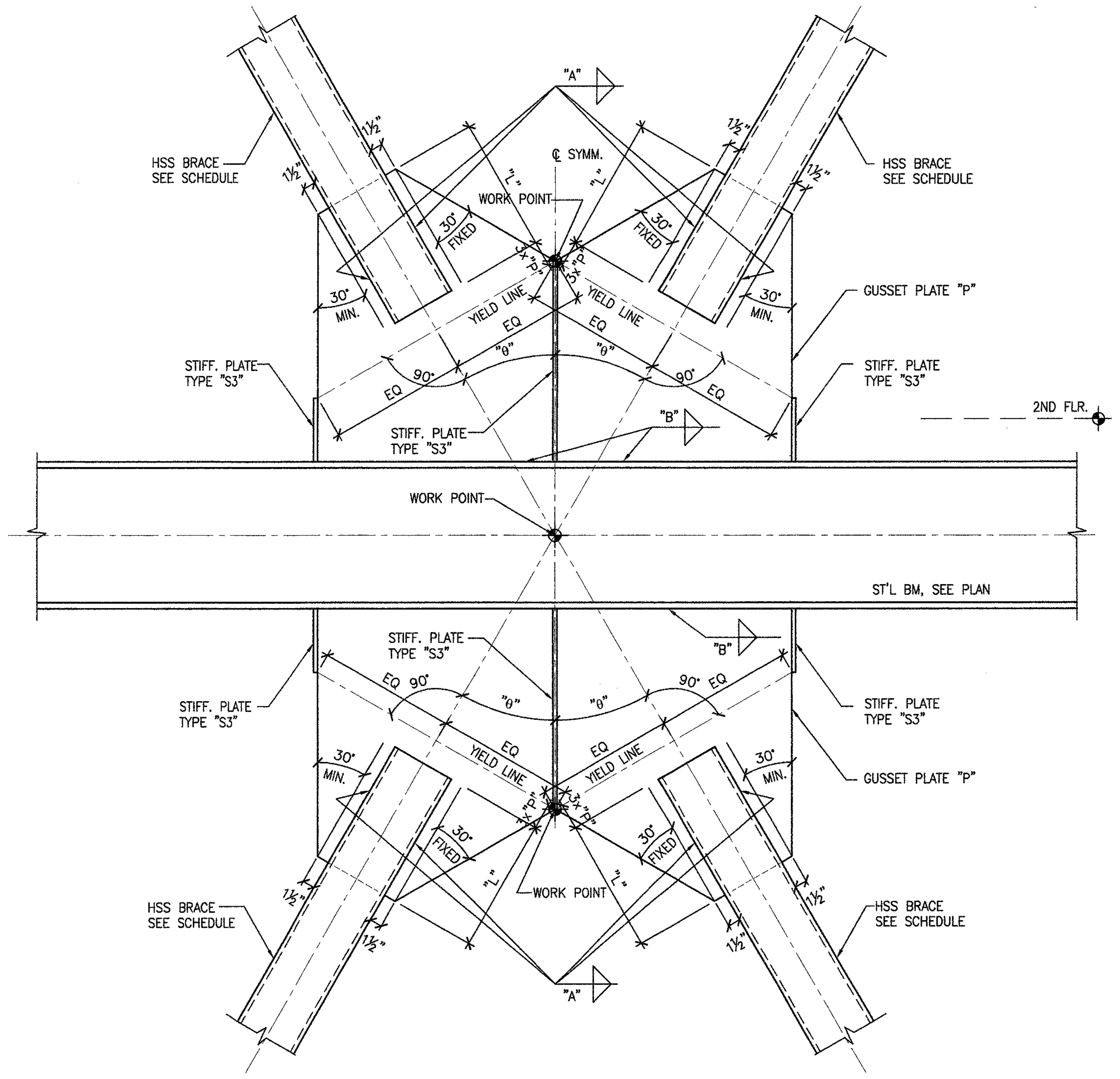
YIELD LINES START AT THE FLANGE OF BEAM/THE TOP OF FLOOR SLAB



YIELD LINE STARTS AT THE TOP OF FLOOR SLAB



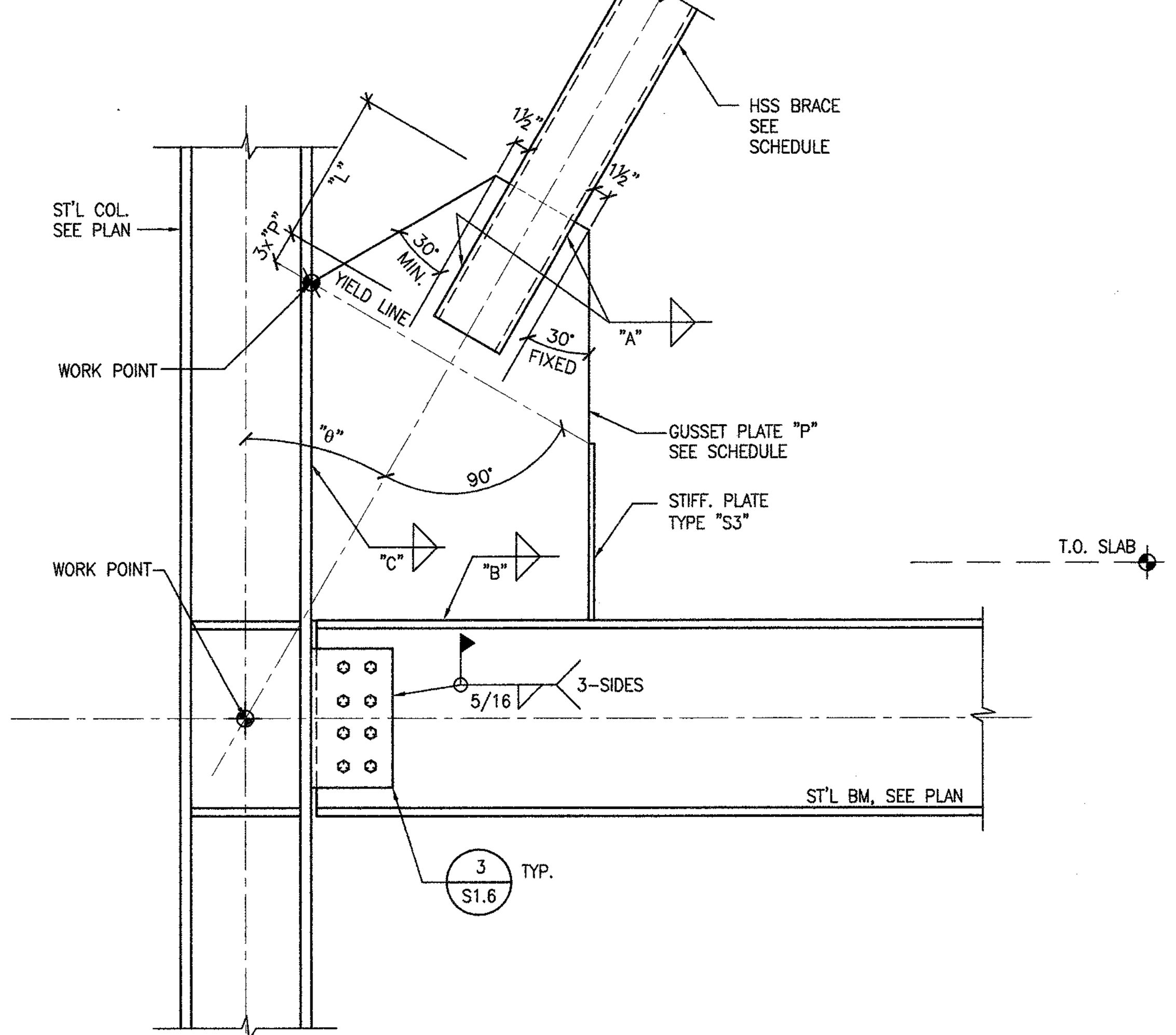
YIELD LINES START AT THE TOP OF FLOOR SALB / THE FLANGE OF BEAM



YIELD LINES START AT THE CENTER LINE OF GUSSET PLATES

3 CONNECTION DETAIL BF-1E

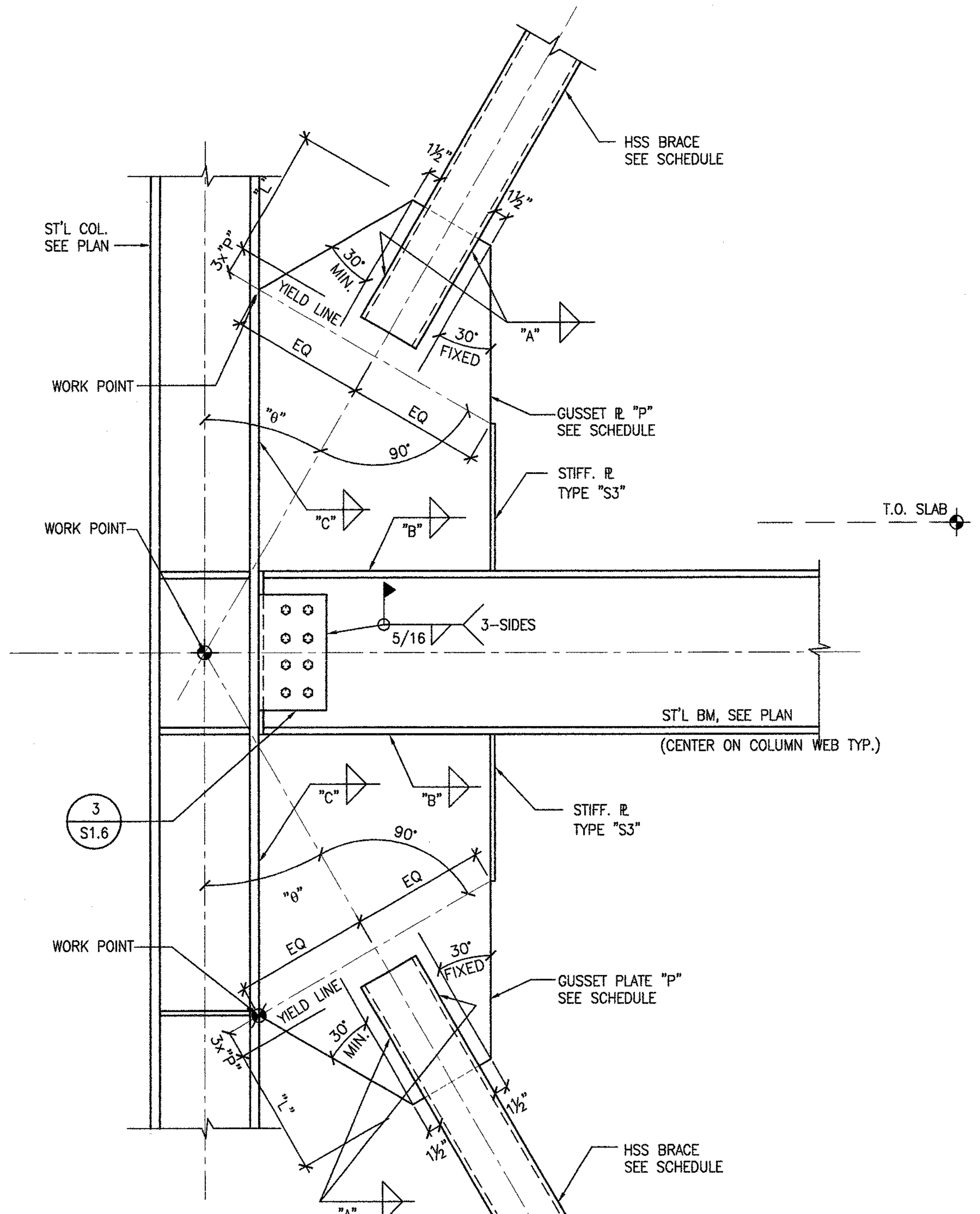
SCALE: N.T.S.



YIELD LINE STARTS AT THE FLANGE OF COLUMN

2 CONNECTION DETAIL BF-1B, BF-1D

SCALE: N.T.S.



YIELD LINES START AT THE FLANGE OF COLUMN

1 CONNECTION DETAIL BF-1C

SCALE: N.T.S.

TYPICAL NOTES:

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INCREMENT ONE - SUBMITTAL

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DRAWING TITLE

BRACE FRAME CONNECTION DETAILS

DATE: 10.21.04

PROJECT # 04043

SHEET NUMBER

S9.3

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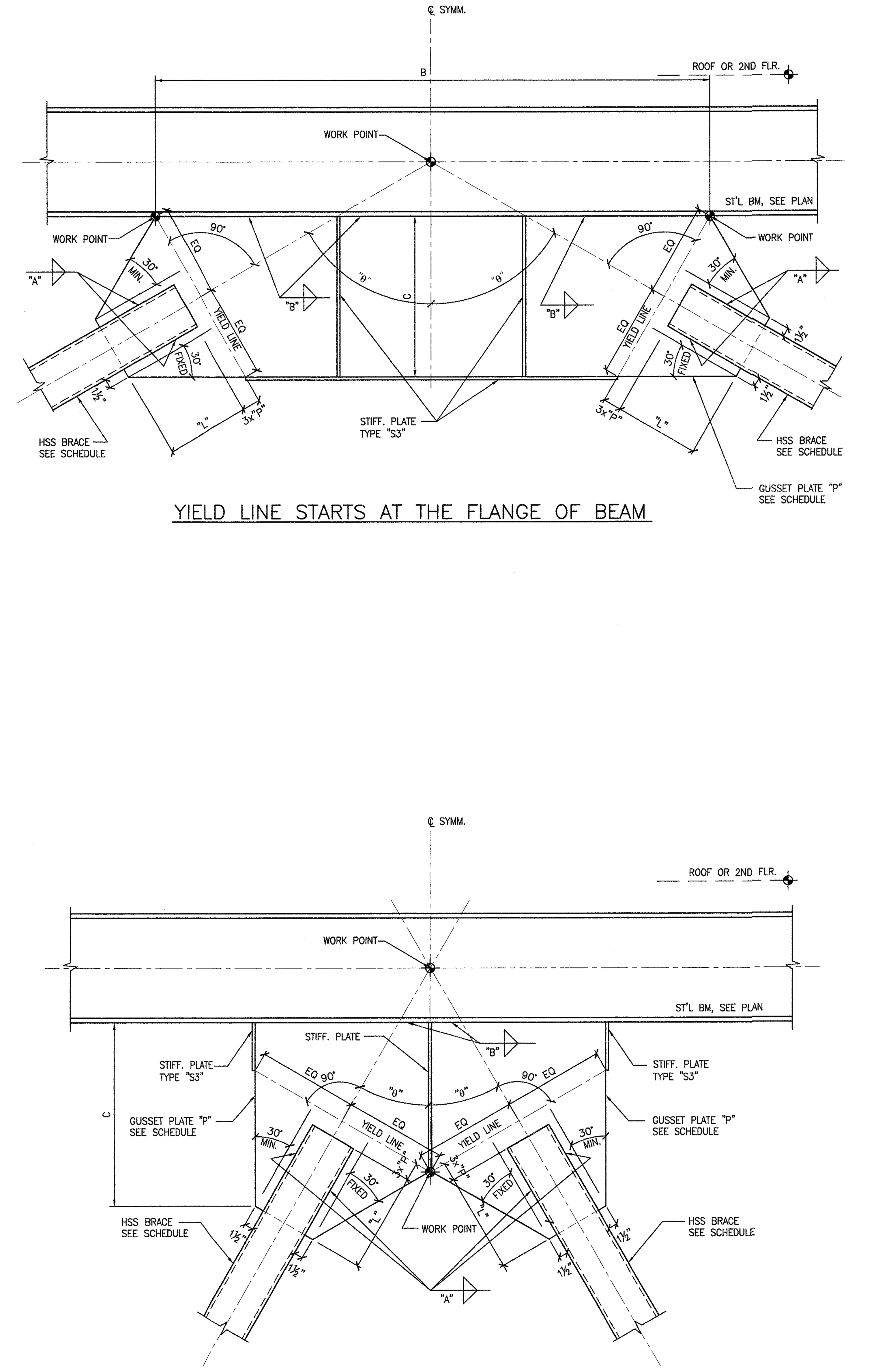
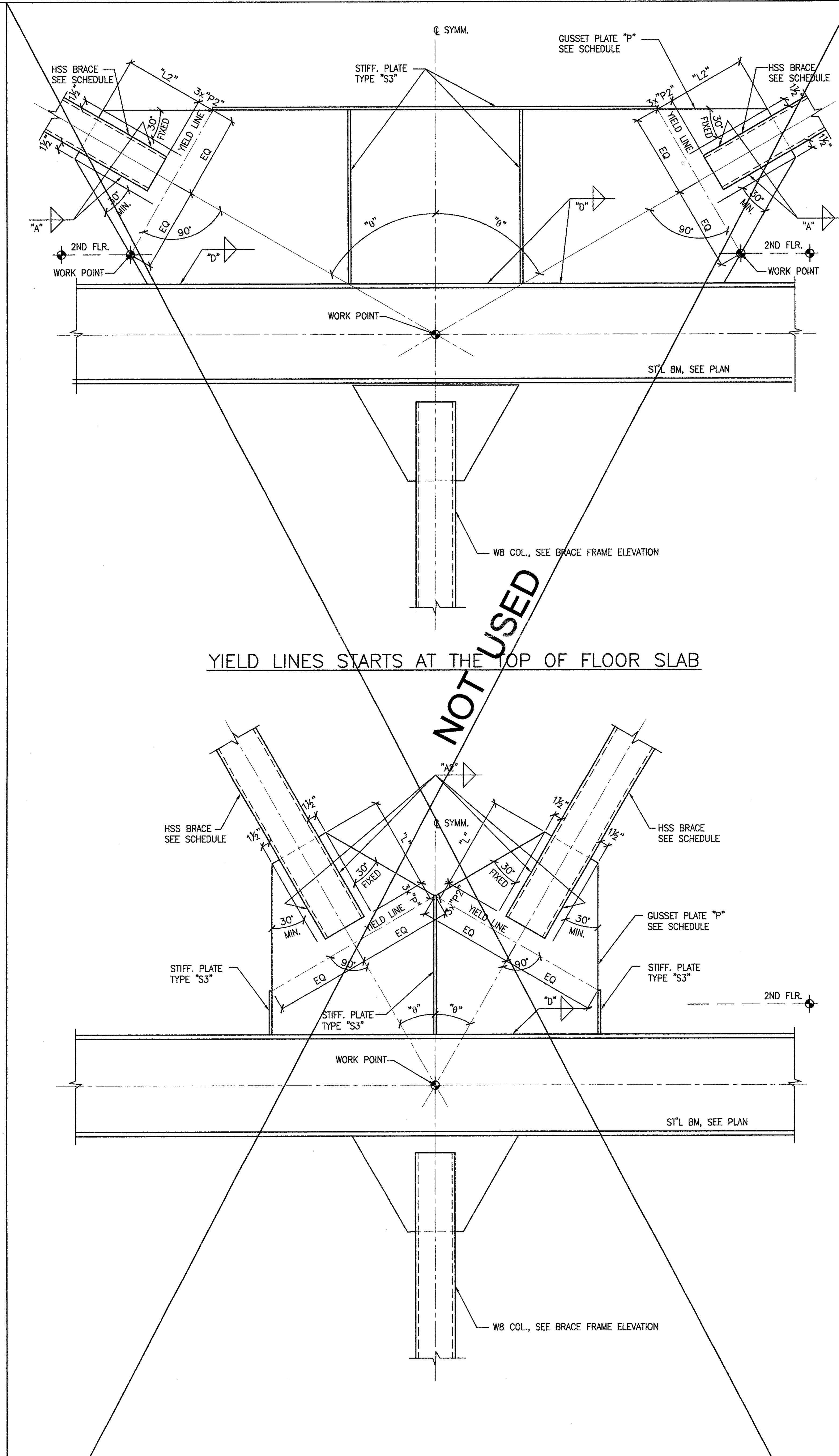
SEE RFI 0078 for 30° Angle



YIELD LINE STARTS AT THE FLANGE OF BEAM

YIELD LINE STARTS AT THE CENTER LINE OF GUSSET PLATE

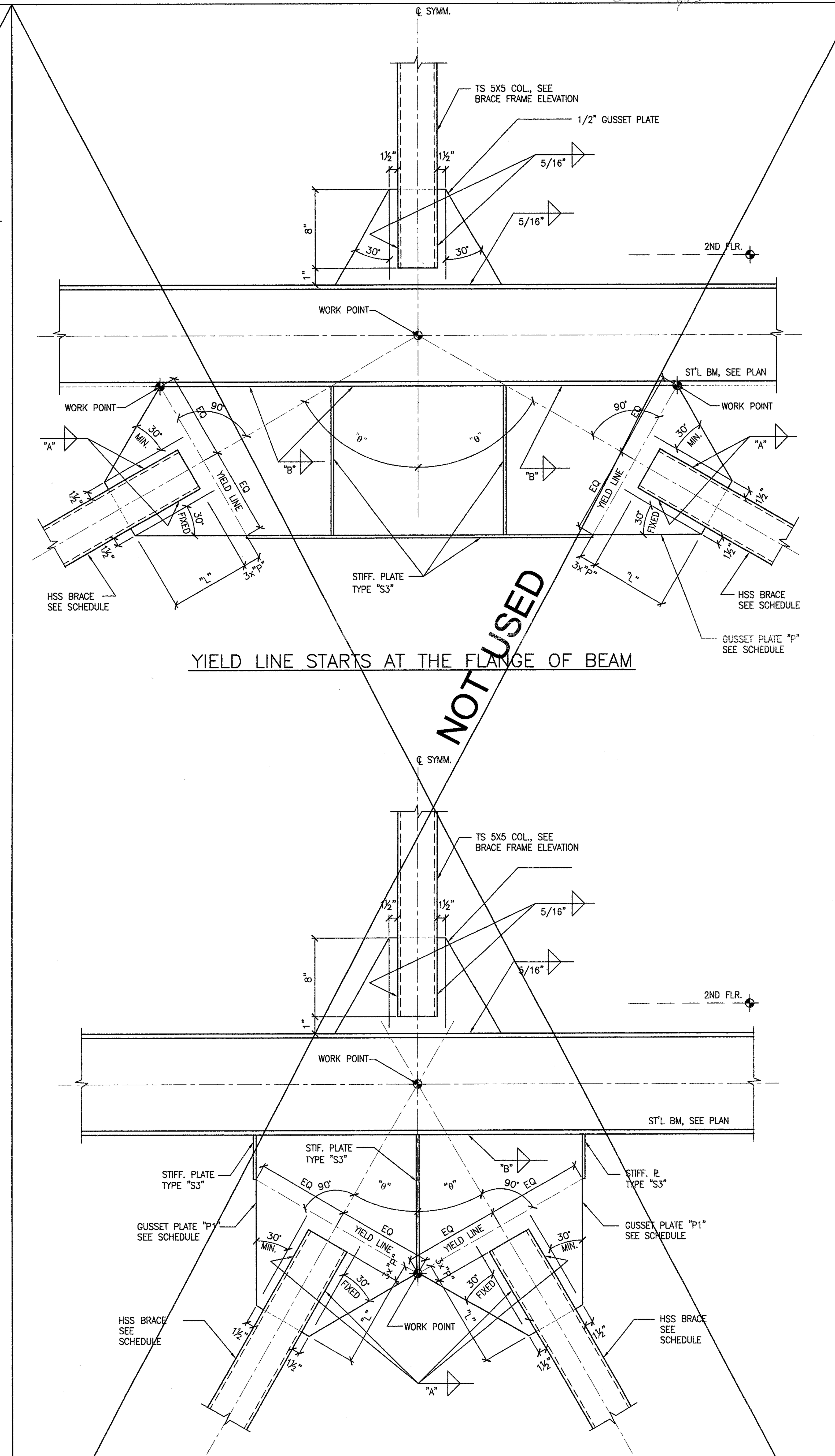
3 CONNECTION DETAIL BF-1B, BF-2A, BF-1A
SCALE: N.T.S.



YIELD LINES STARTS AT THE TOP OF FLOOR SLAB

YIELD LINES START AT THE CENTER OF GUSSET PLATE

2 CONNECTION DETAIL BF-2A
SCALE: N.T.S.



YIELD LINE STARTS AT THE FLANGE OF BEAM

YIELD LINE STARTS AT THE CENTER LINE OF GUSSET PLATE

1 CONNECTION DETAIL BF-1A
SCALE: N.T.S.

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INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
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DRAWING TITLE
BRACE FRAME CONNECTION DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S9.4

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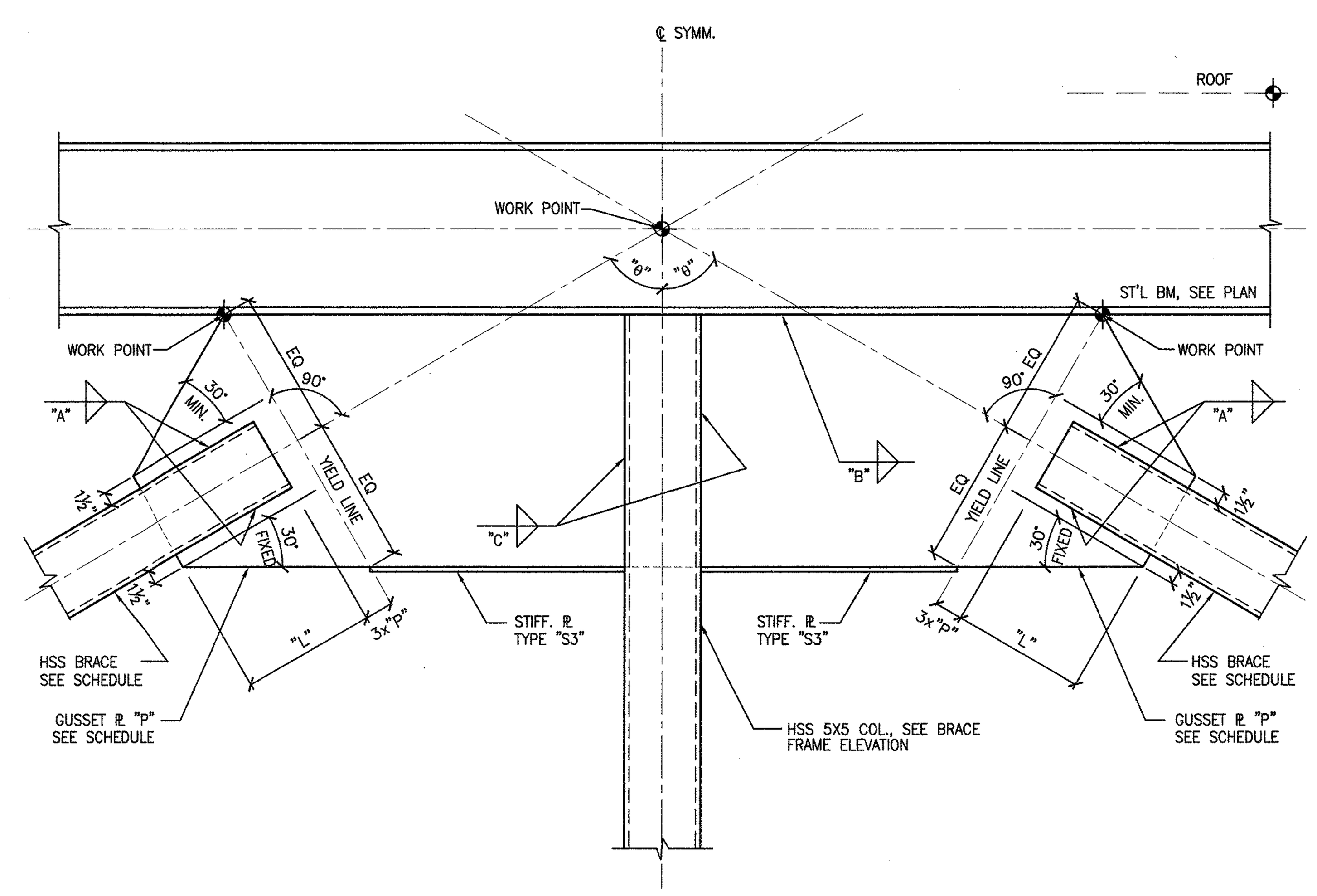
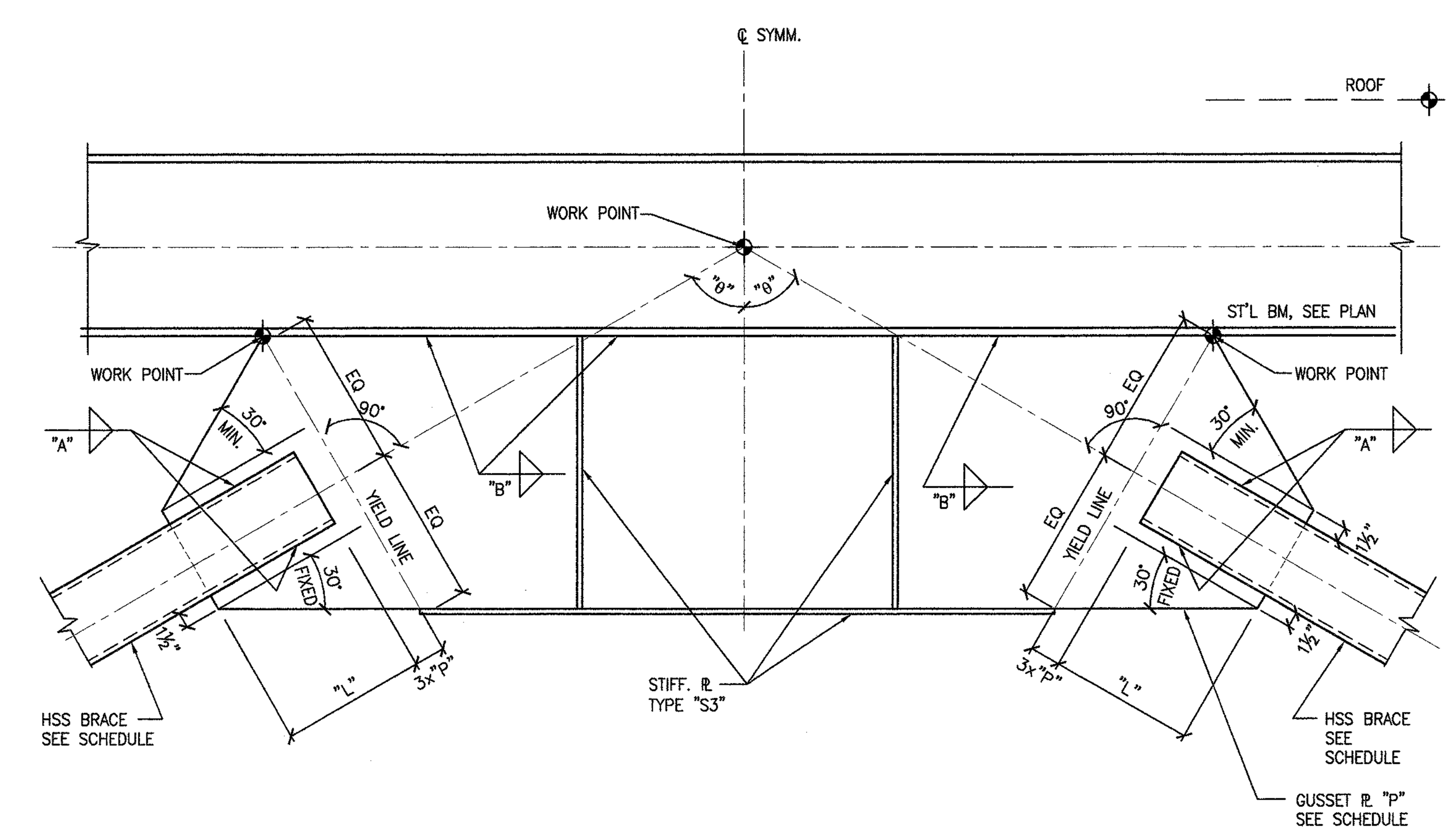
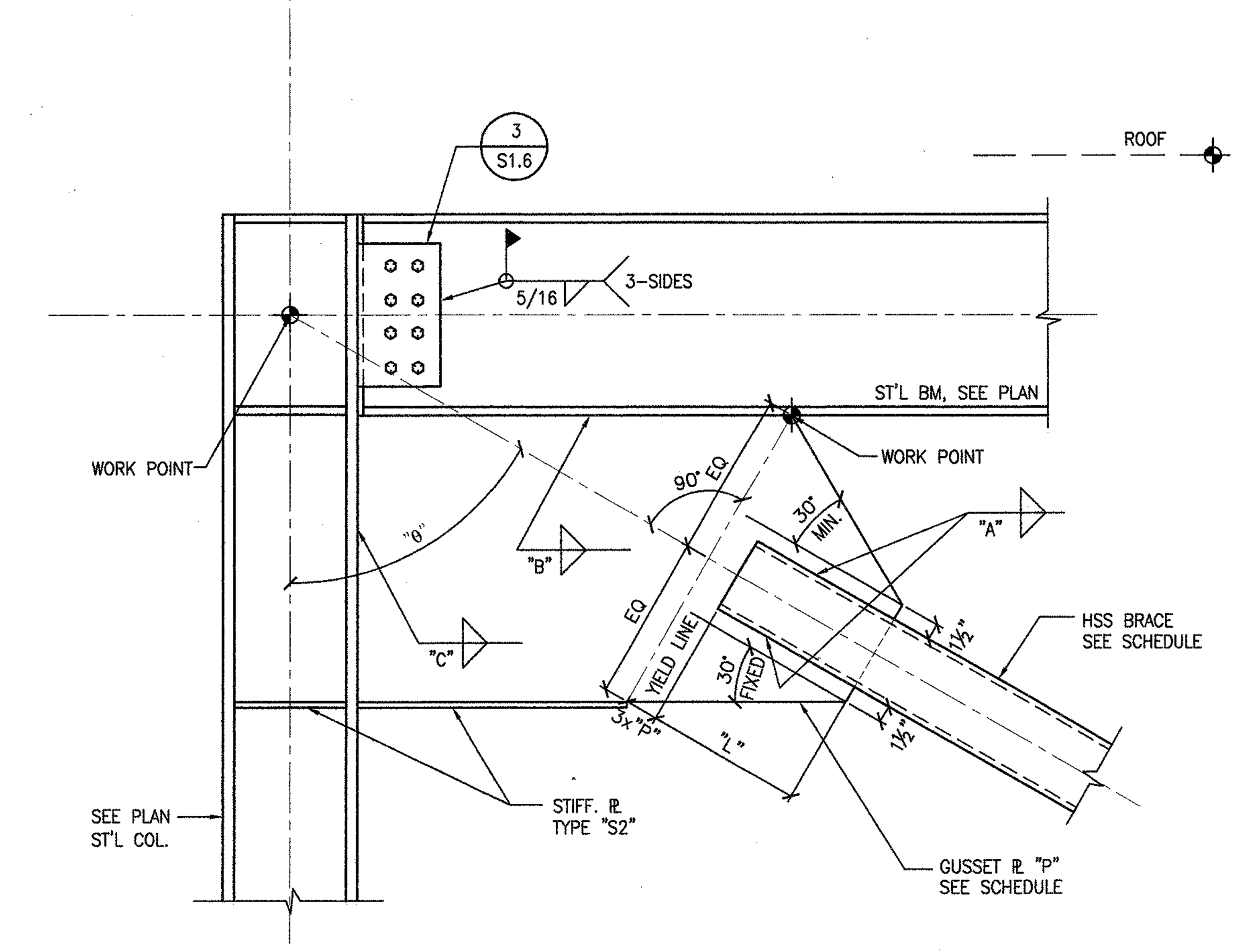
SEE RFI 008 for 30° Angle



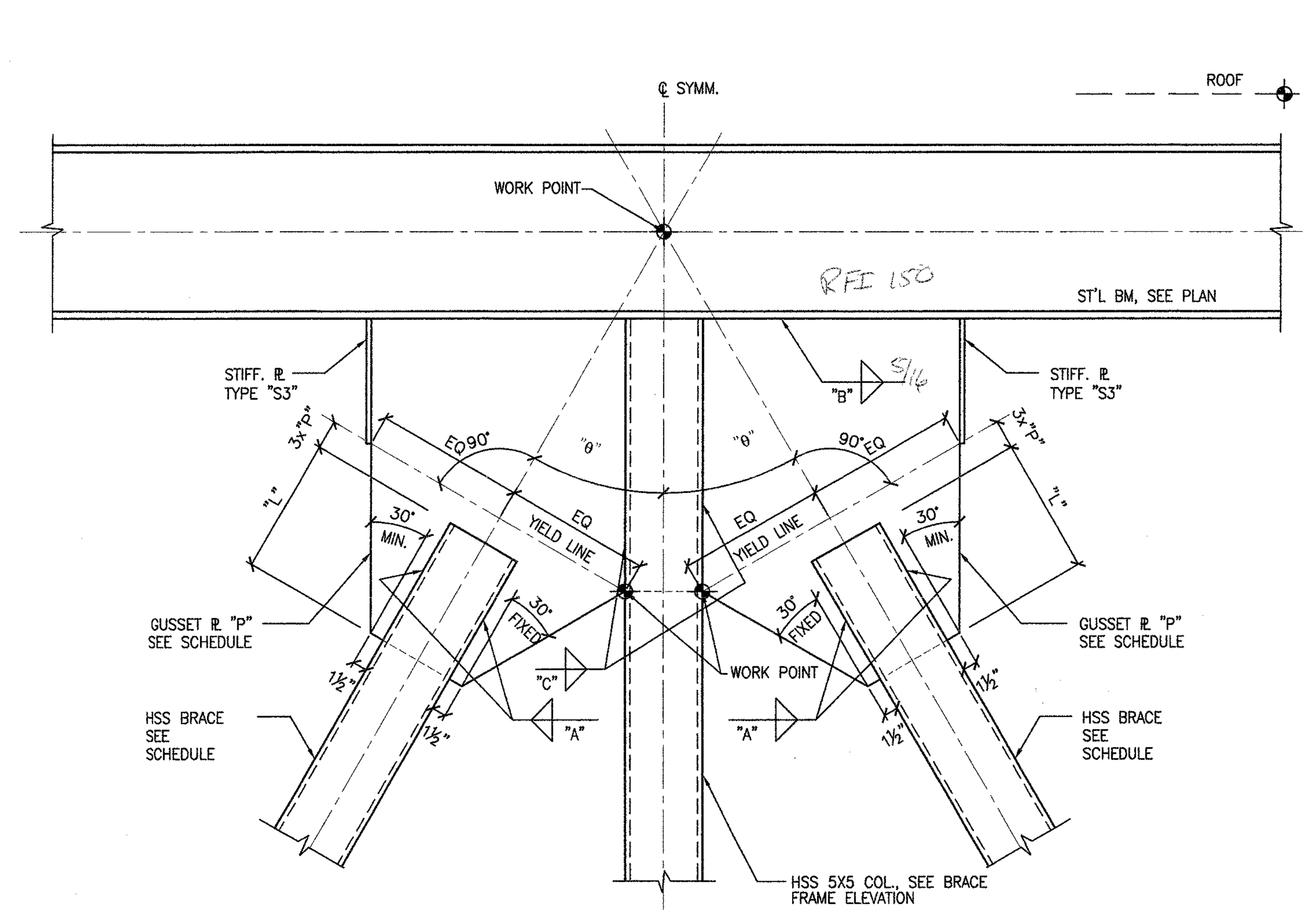
YIELD LINES START AT THE FLANGE OF BEAM



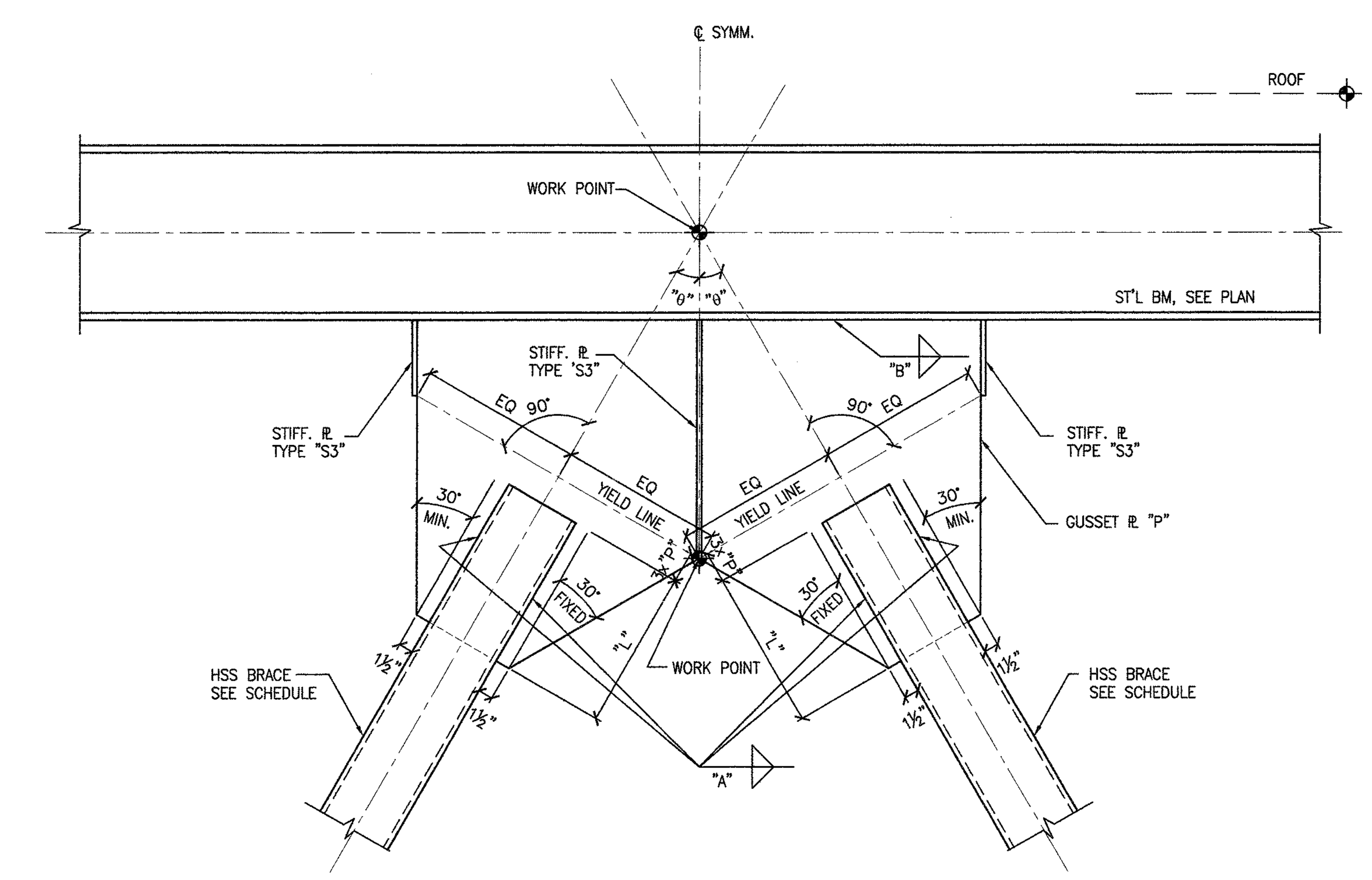
YIELD LINES START AT THE FLANGE OF BEAM



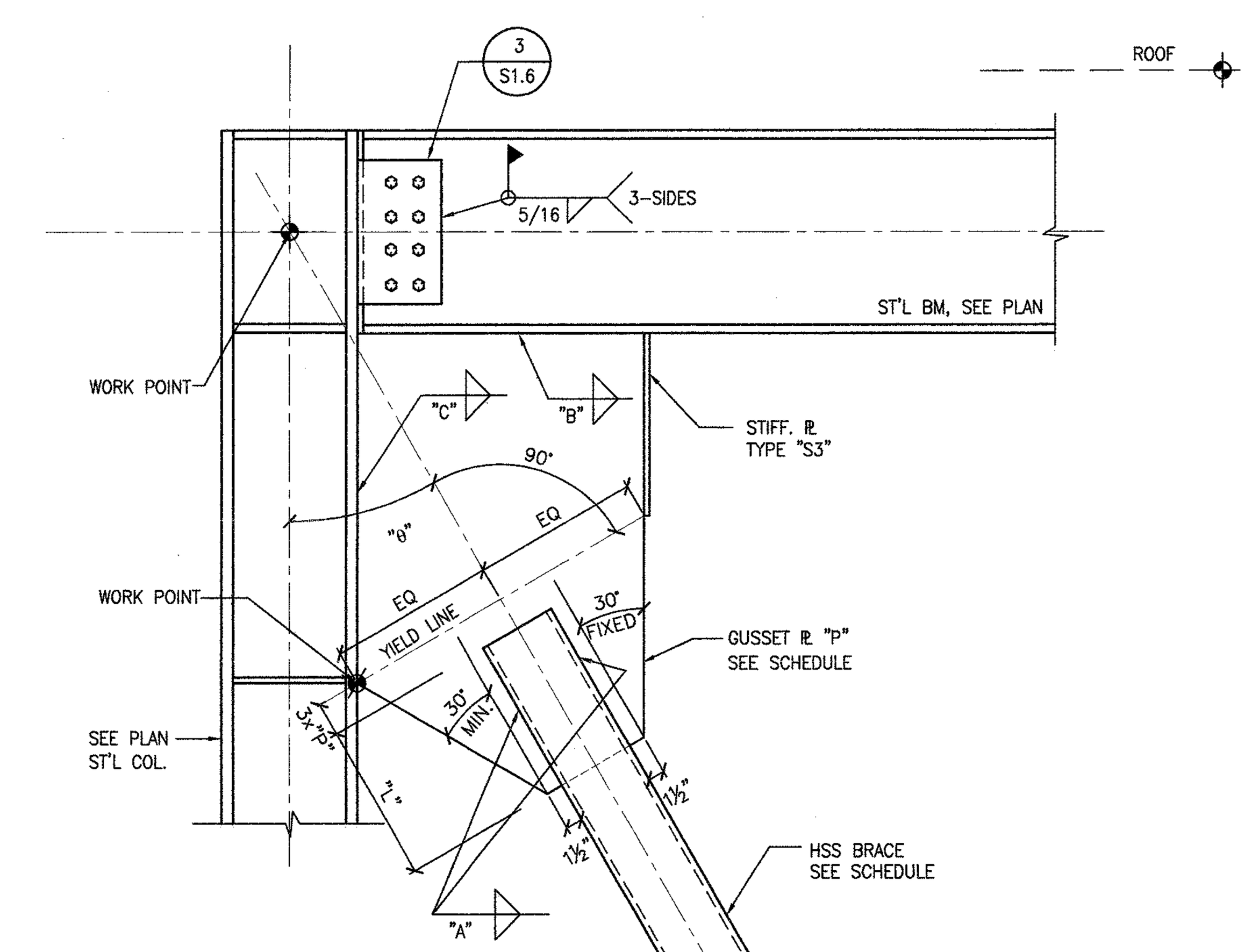
YIELD LINE STARTS AT THE FLANGE OF BEAM



YIELD LINES START AT THE FACES OF COLUMN



YIELD LINES START AT THE CENTER LINE OF GUSSET PLATE



YIELD LINE STARTS AT THE FLANGE OF COLUMN

3 CONNECTION DETAIL BF-2C

SCALE: N.T.S.

2 CONNECTION DETAIL BF-1B, BF-2A, BF-1D, BF-3A

SCALE: N.T.S.

1 CONNECTION DETAIL BF-1C, BF-1E

SCALE: N.T.S.

TYPICAL NOTES:

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DRAWING TITLE

BRACE FRAME CONNECTION DETAILS

DATE: 10.21.04

PROJECT # 04043

SHEET NUMBER

S9.5

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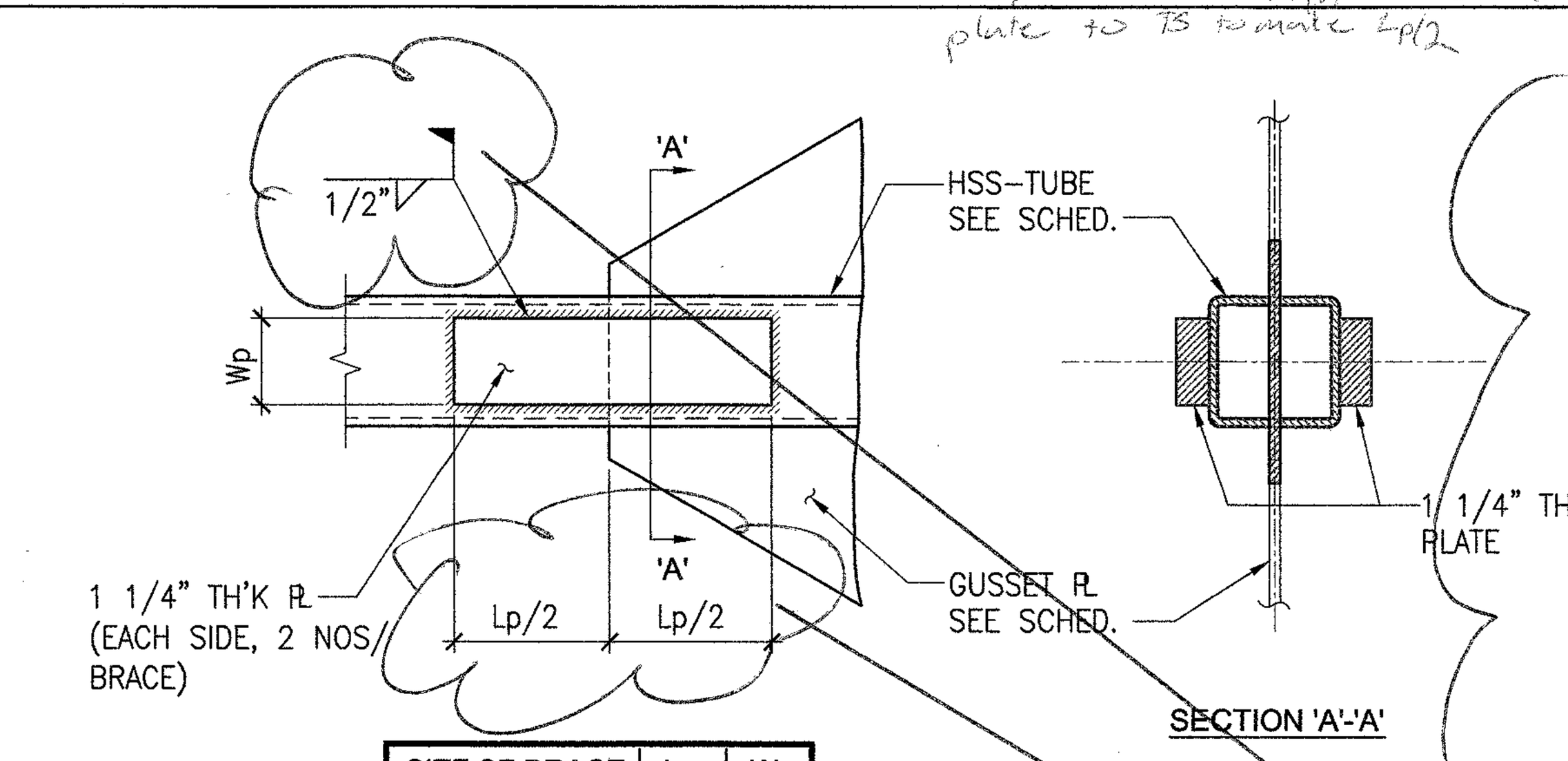
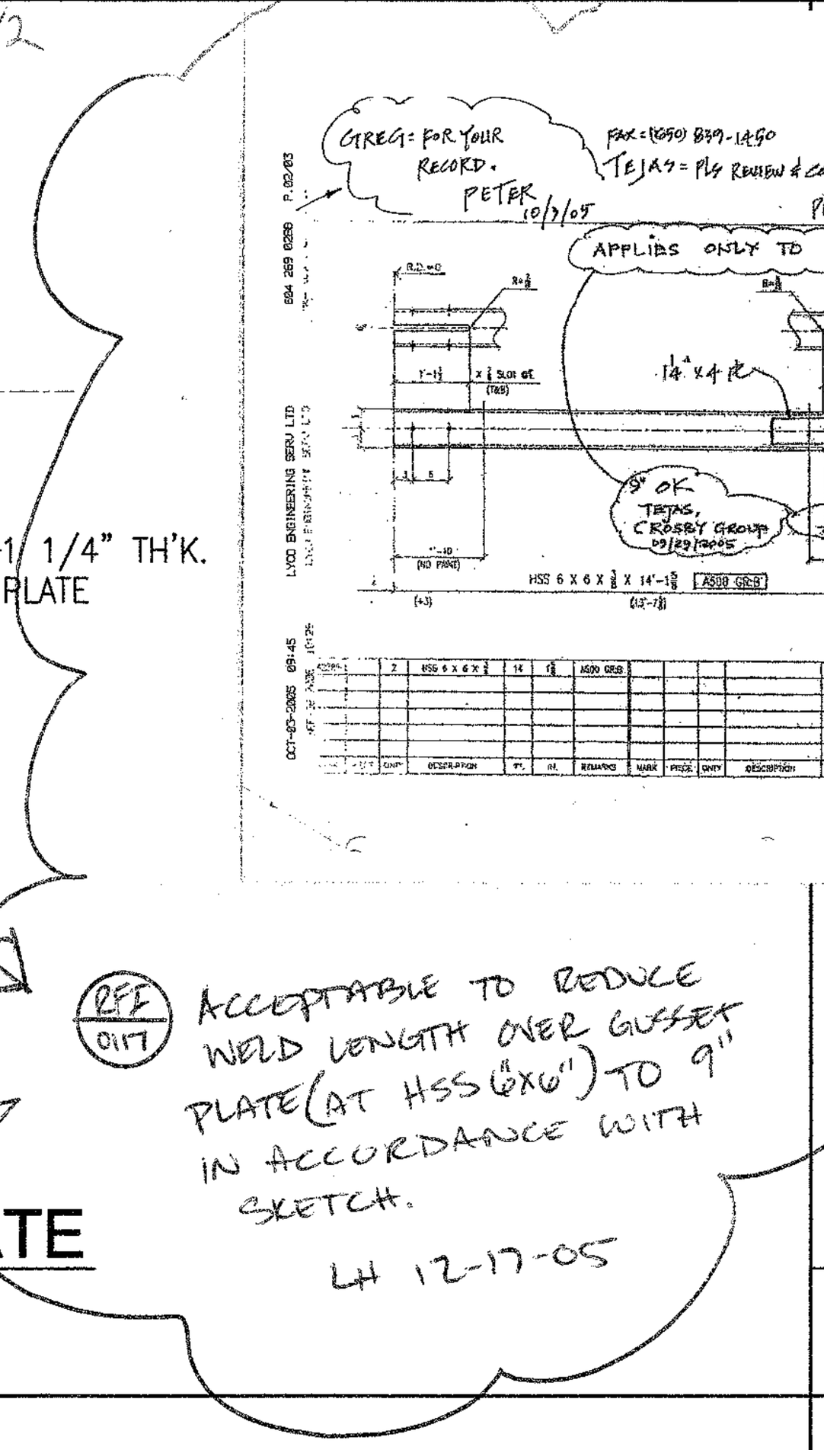
RFI 190 acceptable to weld/extend stiffener plate to 75 to match Lp/2



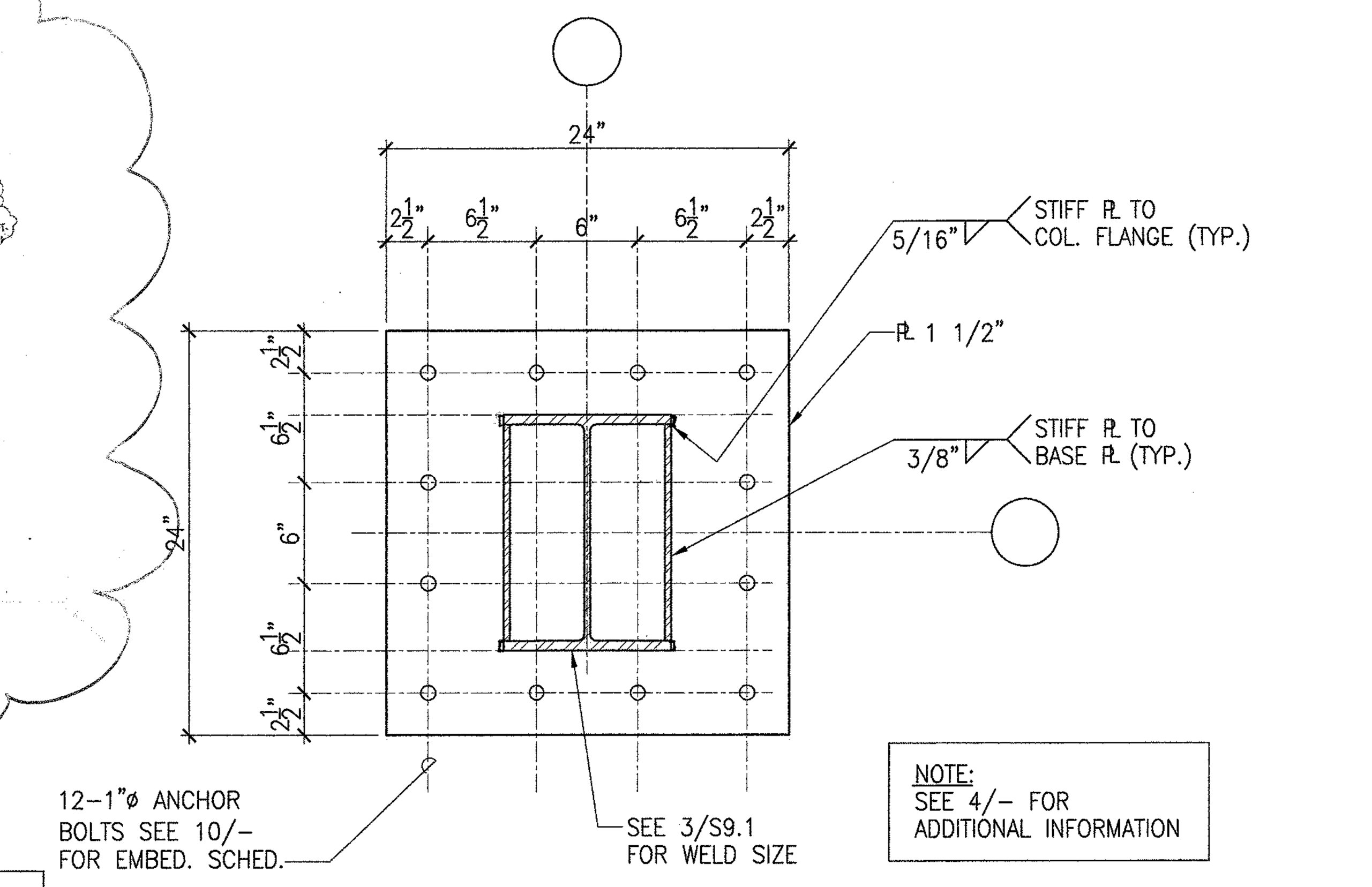
SIZE OF BRACE	Lp	Wp
HSS 6x6	21"	4"
HSS 5x5	18"	3"
HSS 4x4	18"	2.5"

NOTE: BRACE OVER-SLOT NOT TO EXCEED 1 1/2"

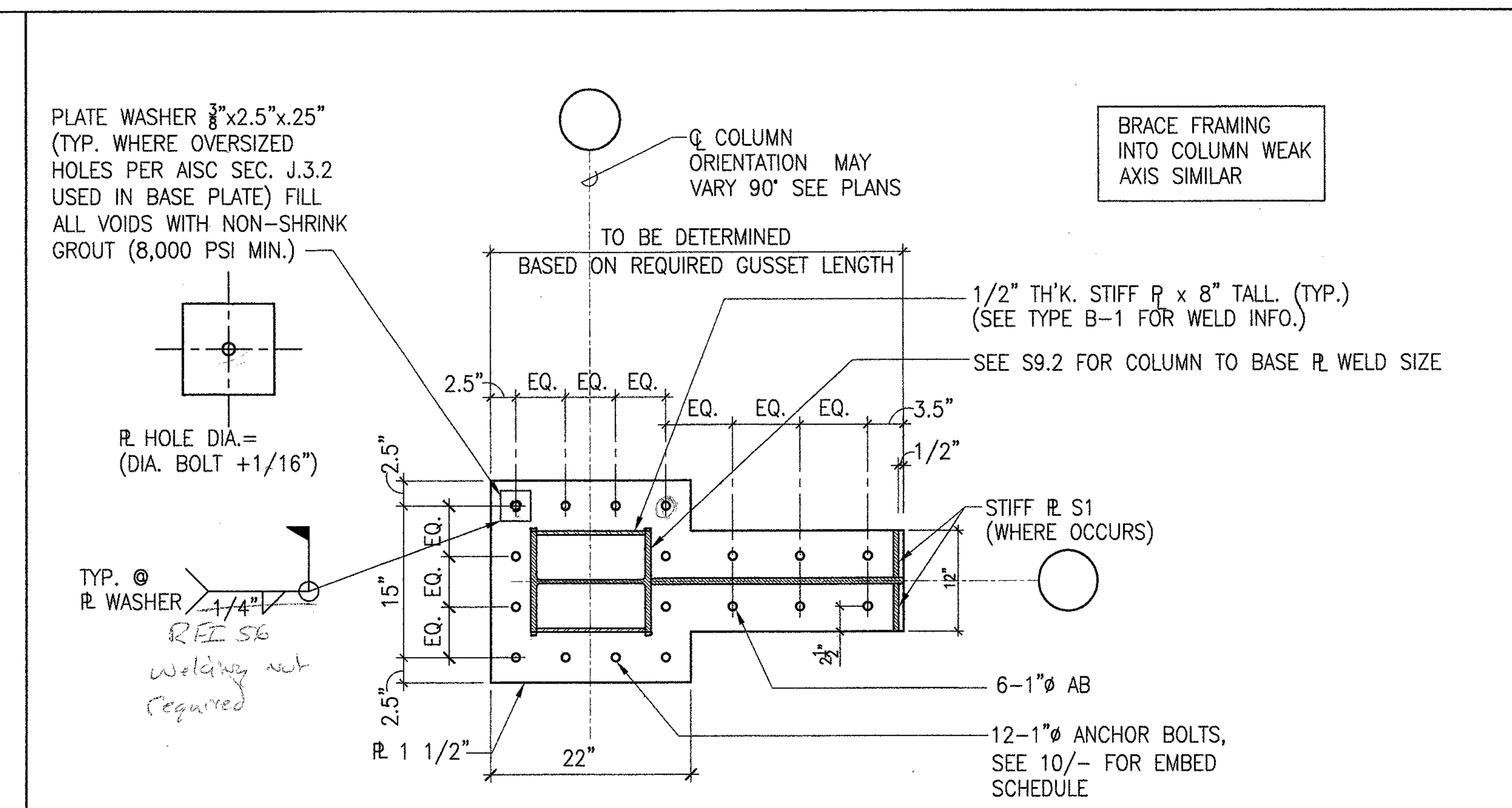
RFI 189 Rolled PL 6 5/16 weld 1/4 plate over brace slot



9 BRACE OVER-SLOT REINFORCEMENT PLATE
SCALE: 1 1/2"=1'-0"



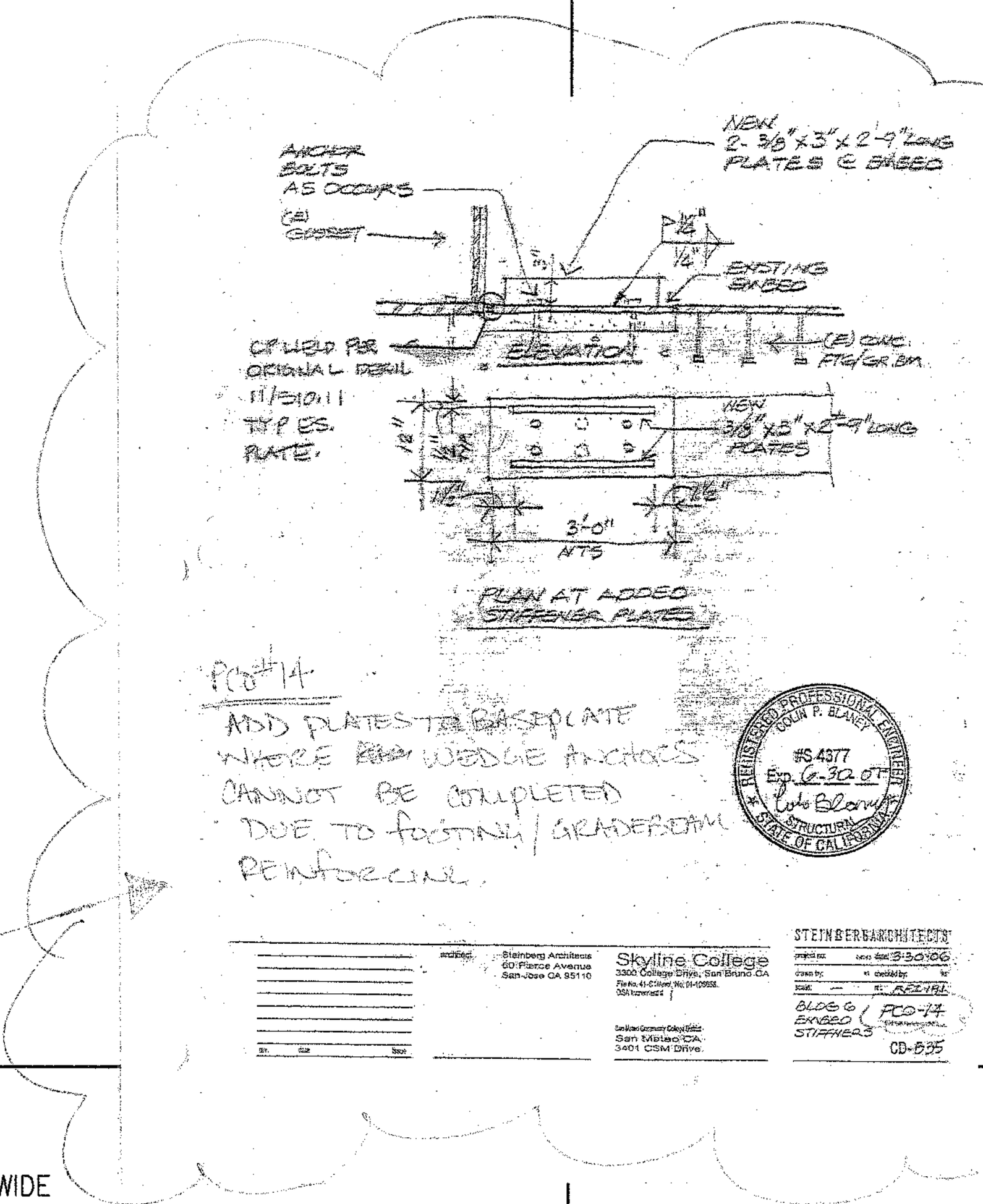
TYPE B-1

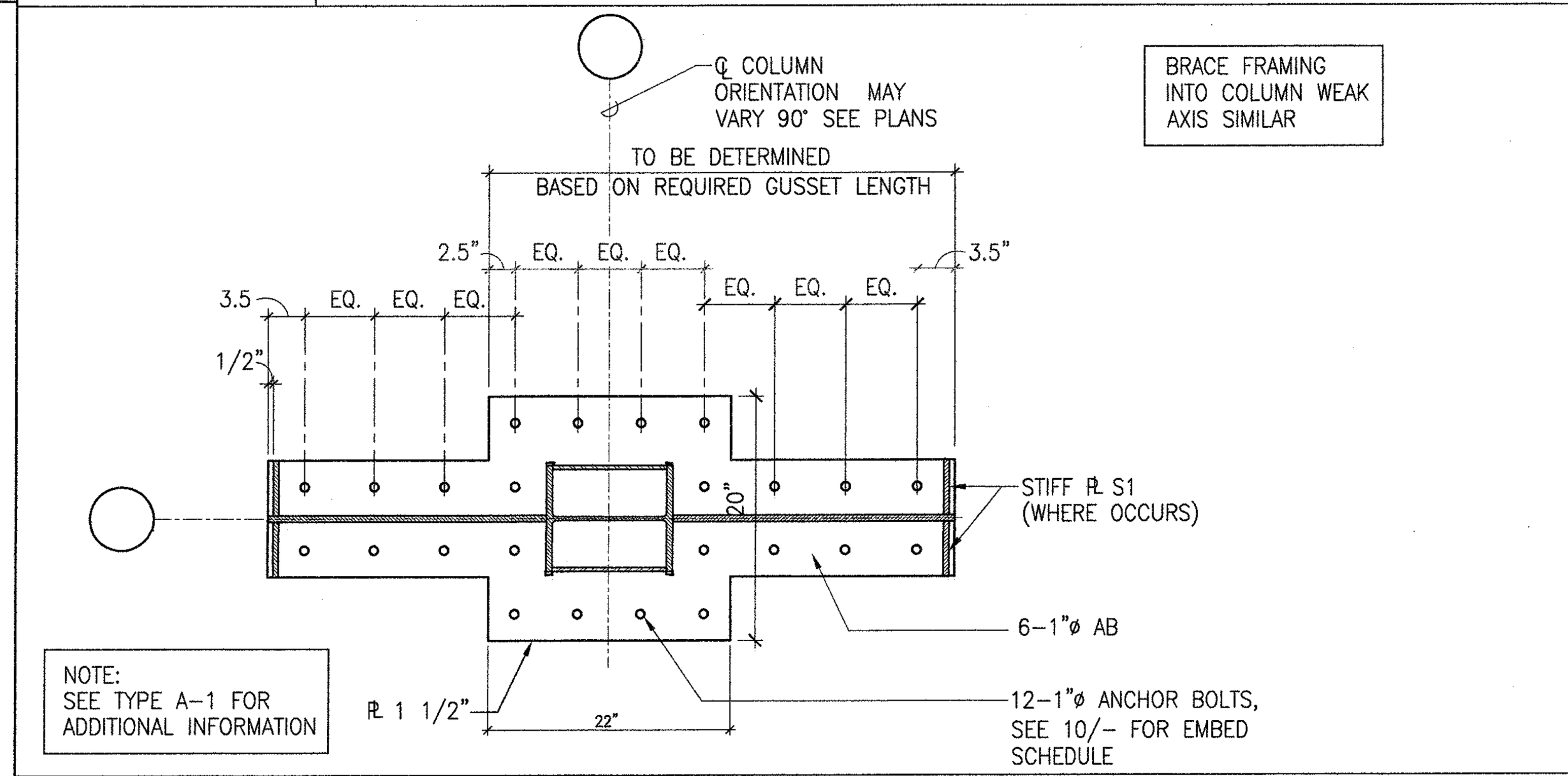


TYPE A-1 SINGLE BRACING TO COLUMN CONDITION

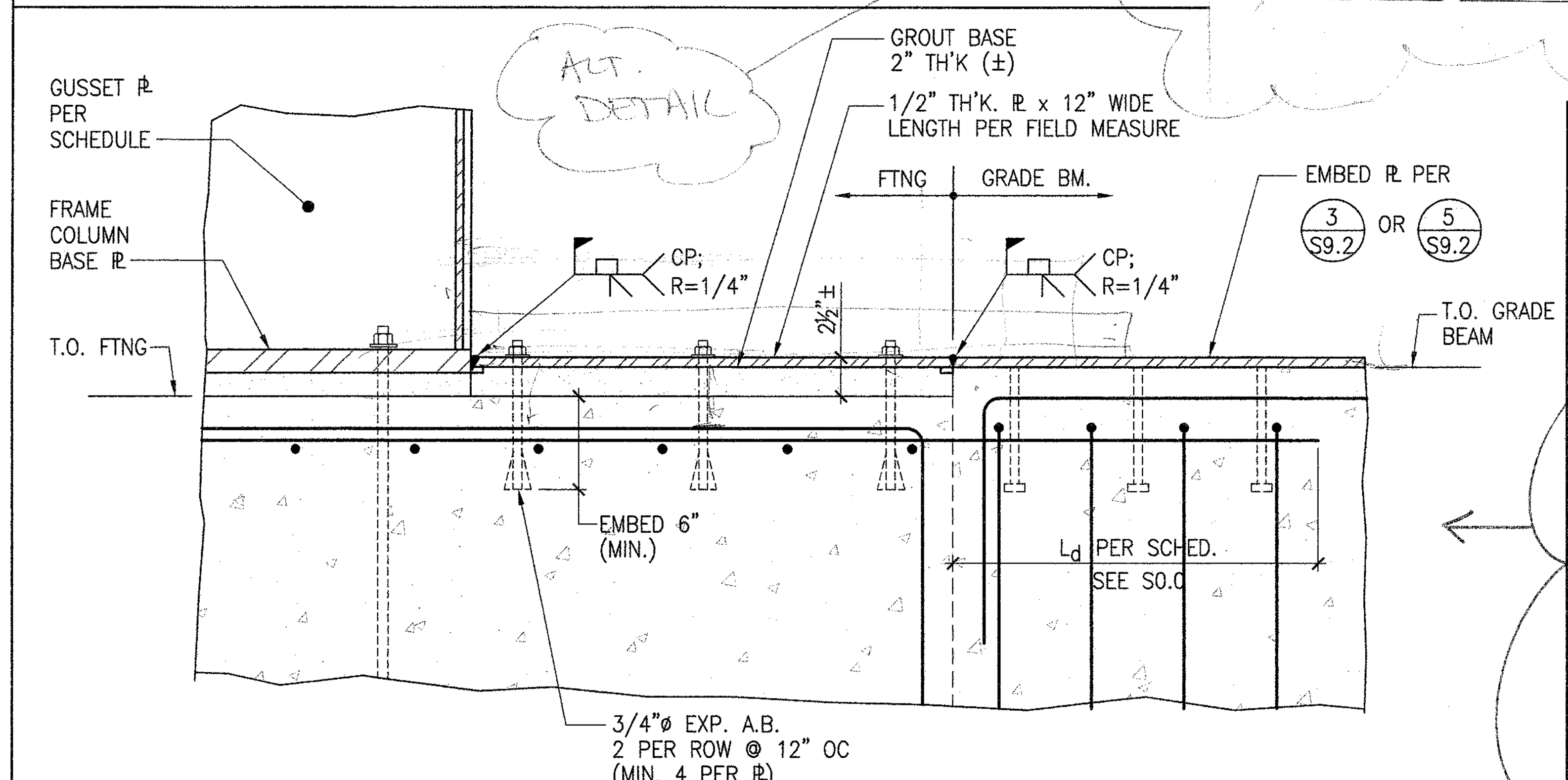
FTNG TYPE	EMBED. IN FTNG	REMARKS
F6	20	–
F7	20	–
F8	24	–
F9	27	–
F10	27	–
F11	33	–
CF-X	24	–
CIP WALL / CONC. PILASTER	36	WHERE FRAME COL. STOPS ON TOP OF CIP WALL / CONC PILASTER

10 FRAME COLUMN ANCHOR BOLT SCHEDULE
SCALE: 1 1/2"=1'-0"

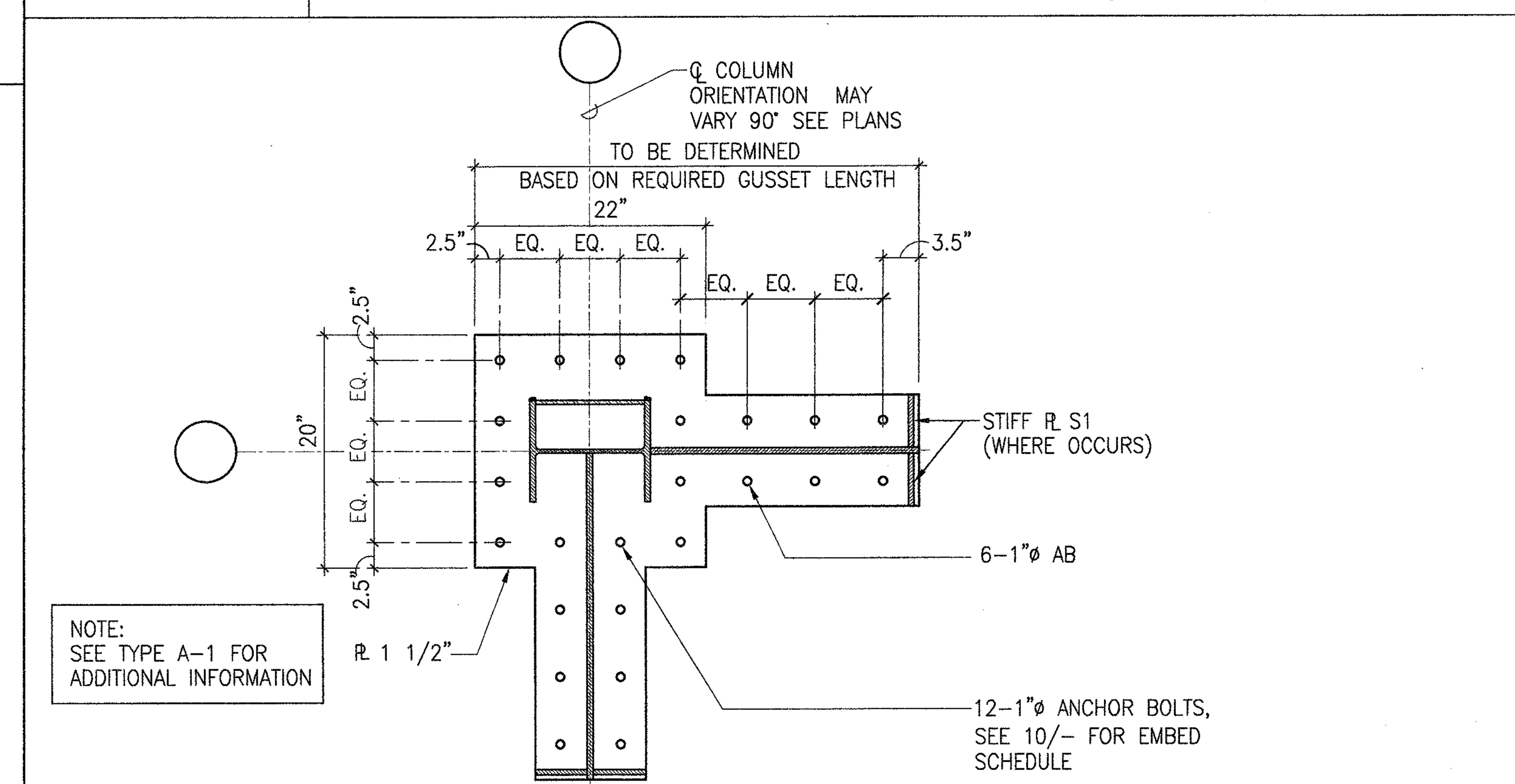




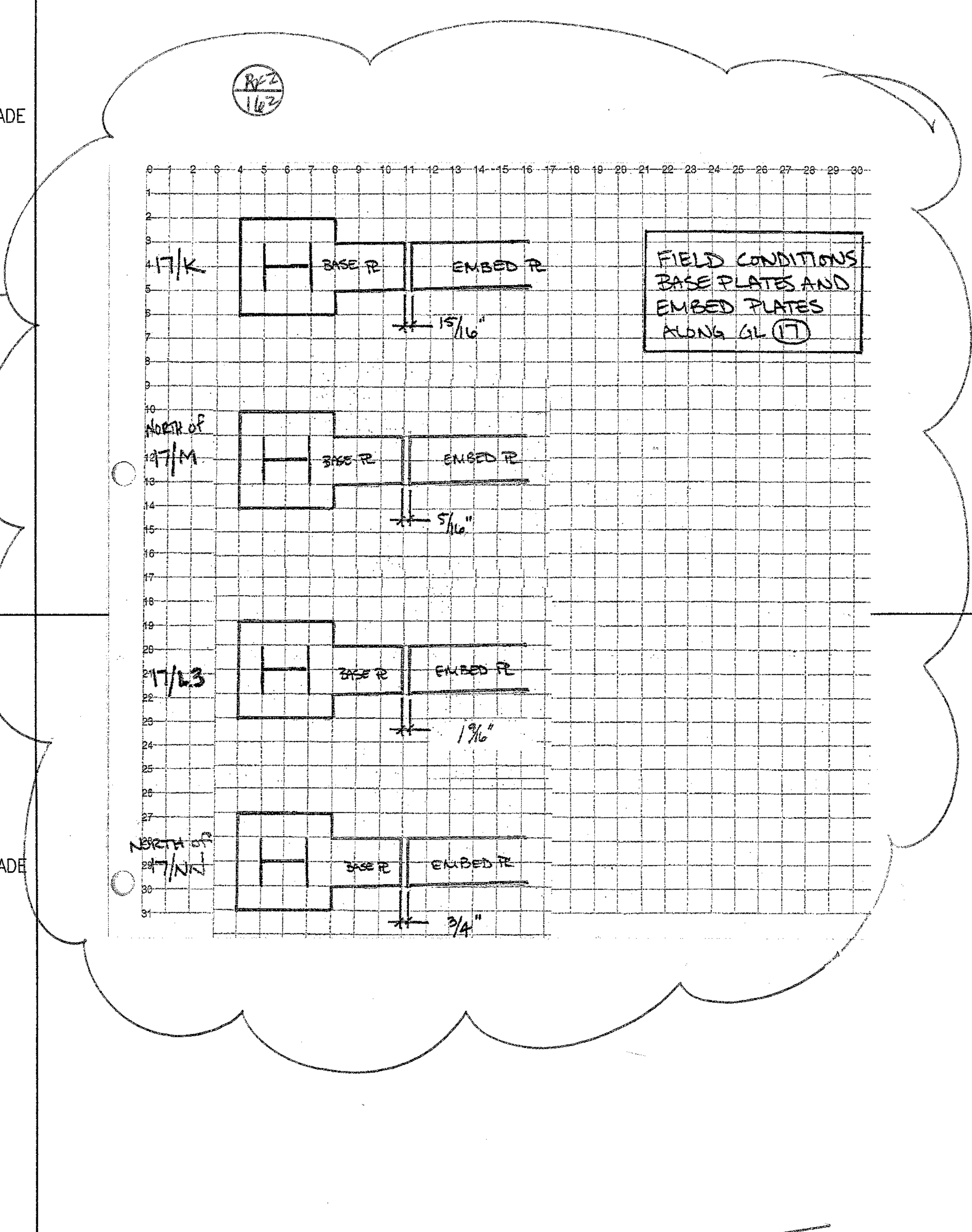
TYPE A-2 MULT. BRACING TO COL. CONDITION (IN LINE)

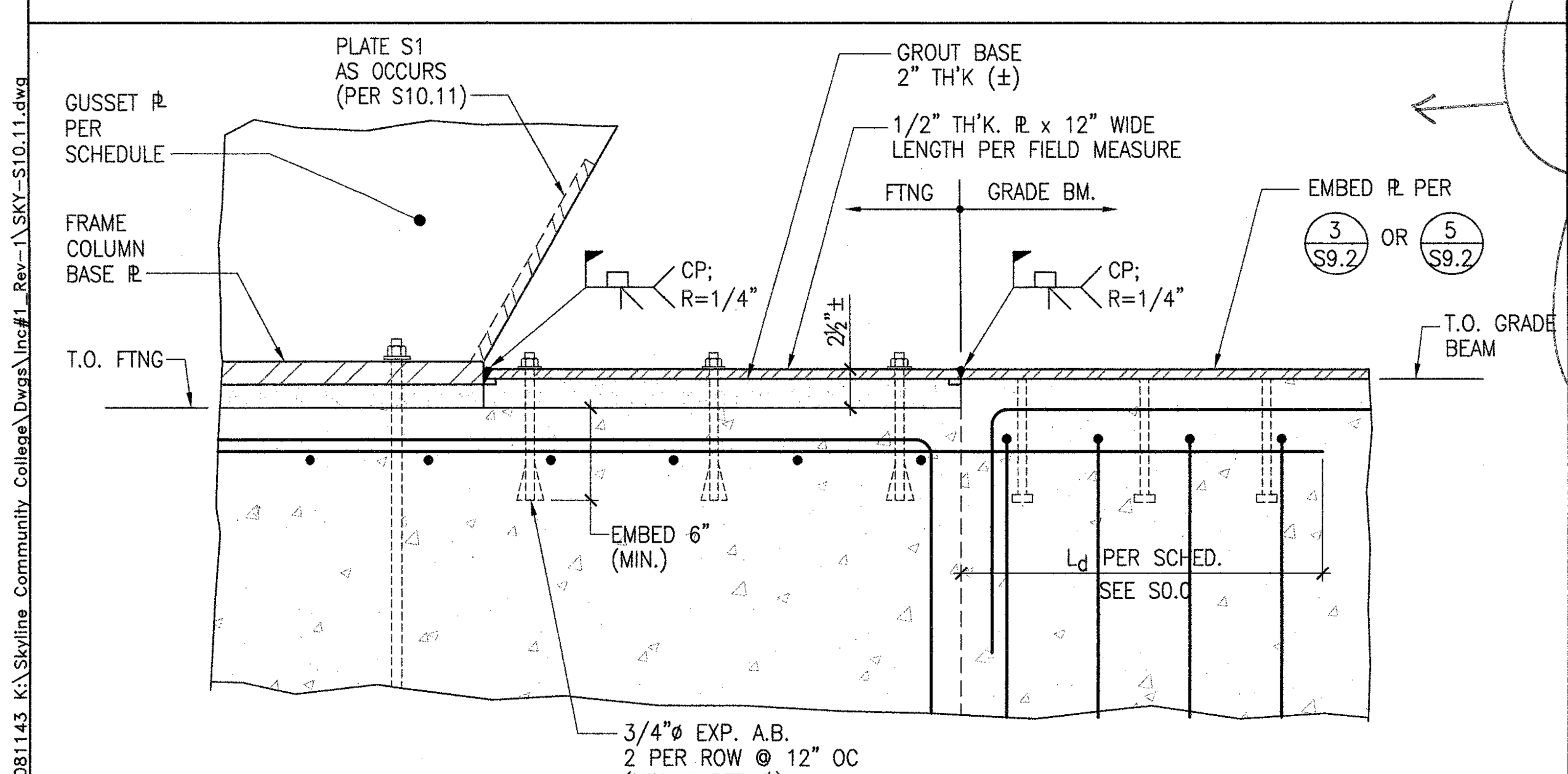


11 ENLARGED SECTION @ BRACE FRAME
SCALE: 1 1/2"=1'-0"



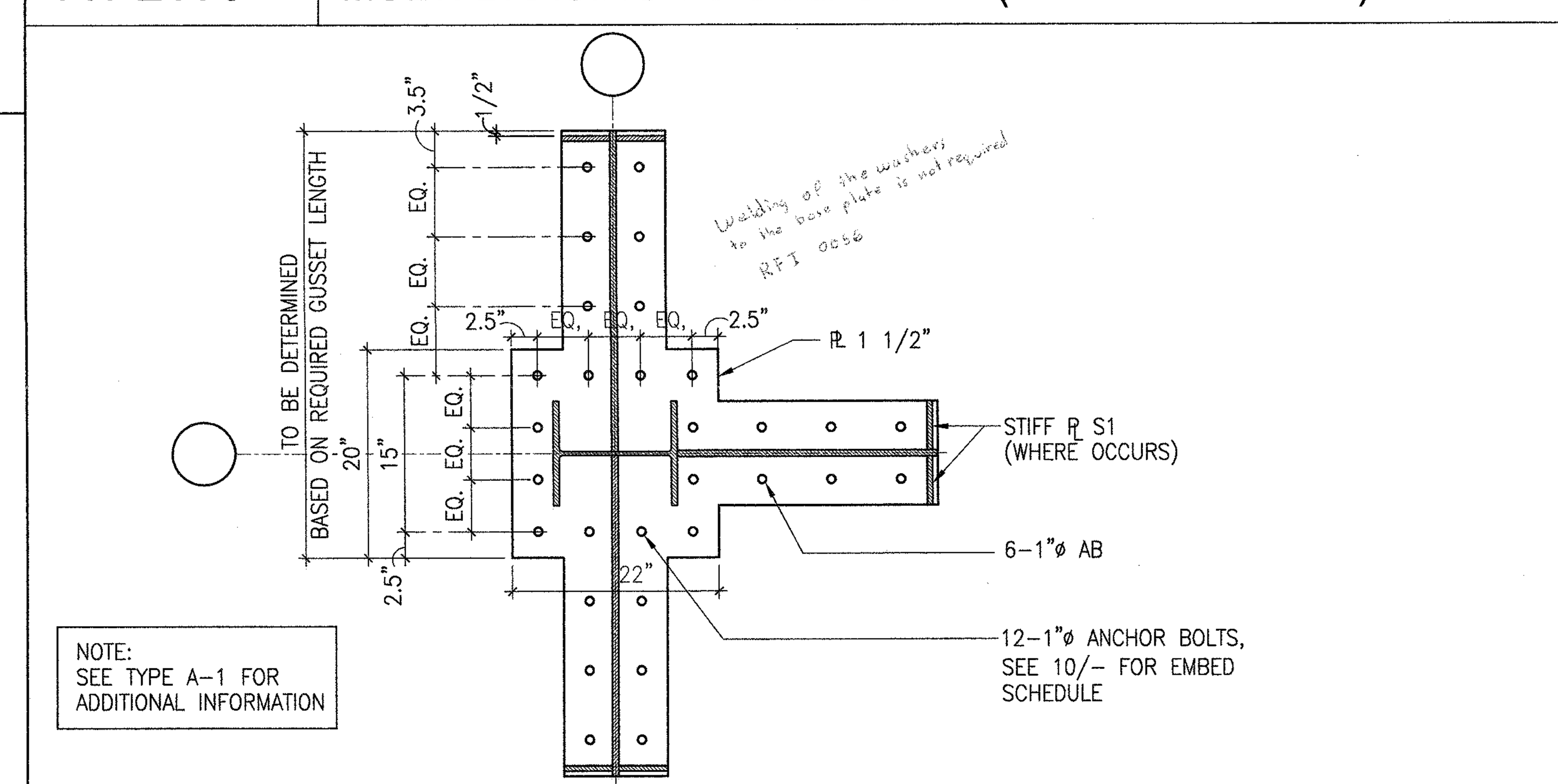
TYPE A-3 MULT. BRACING TO COL. COND. (PERPENDICULAR)





12 ENLARGED SECTION @ BRACE FRAME
SCALE: 1 1/2"=1'-0"

8 ~~TYPE "B" BASE PLATE (W14x COLUMNS)~~
~~SCALE: 1 1/2"=1'-0"~~



TYPE A-4 MULT. BRACING TO COL. COND. (THREE SIDES)

4 TYPE "A" BASE PLATES (W10x & W12x COLUMNS)
SC: 1'=1'-0"

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STUDENT SUPPORT & COMMUNITY SERVICES CENTER AND SCIENCE ANNEX BUILDING
3300 COLLEGE DRIVE, SAN BRUNO, CA 94066
INCREMENT ONE - SUBMITTAL

ISSUED FOR:	DATE:
DSA – INC #1	10.21.04

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES

DRAWING TITLE
BASE PLATE DETAILS
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S10.11

20050420_17081143 K:\Skyline Community College\Dwgs\Inc#1_Rev-1\SKY-S10.11.dwg

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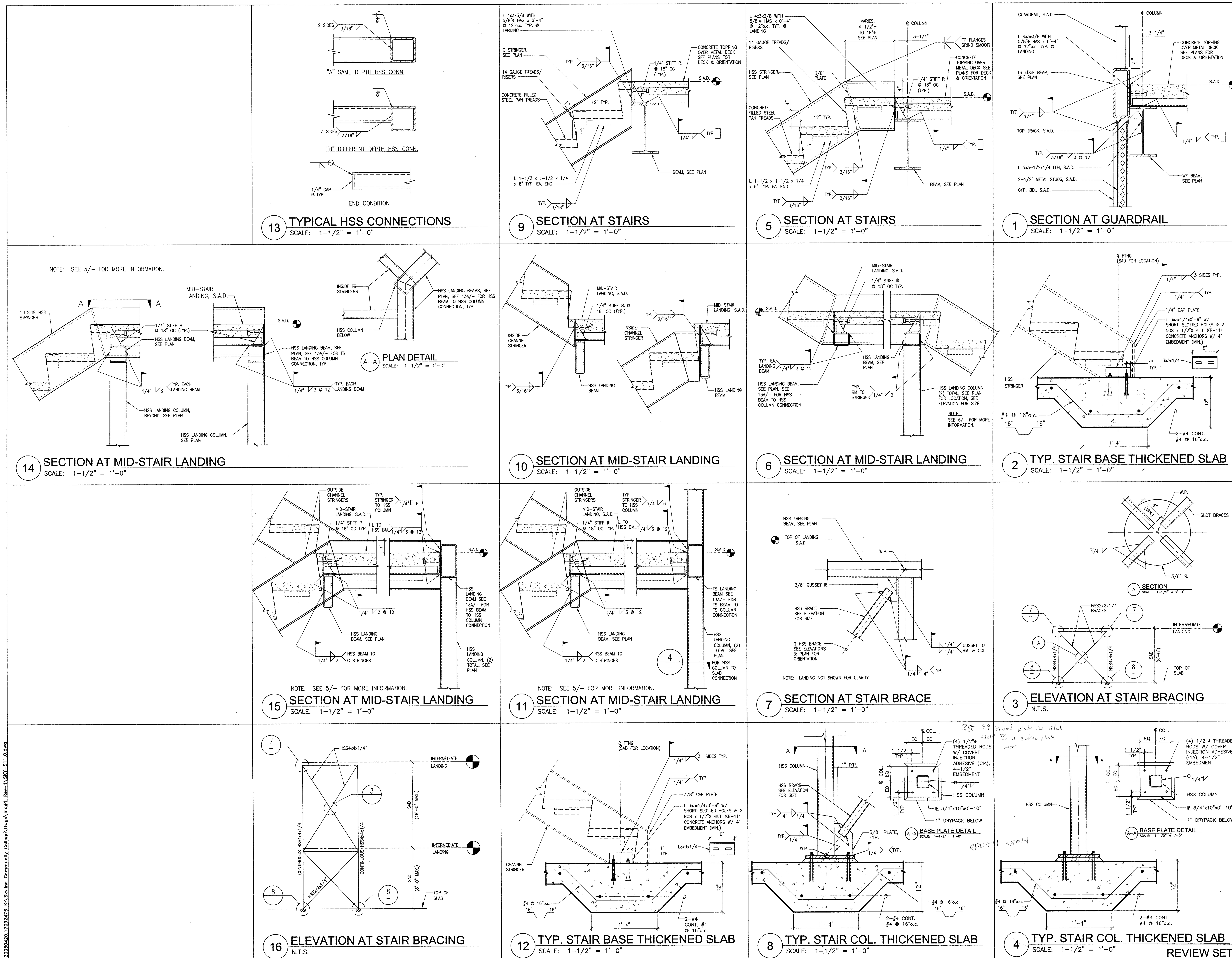

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DSA - INC #1	10.21.04

DRAWING TITLE
TYPICAL STAIR DETAILS
DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S11.0

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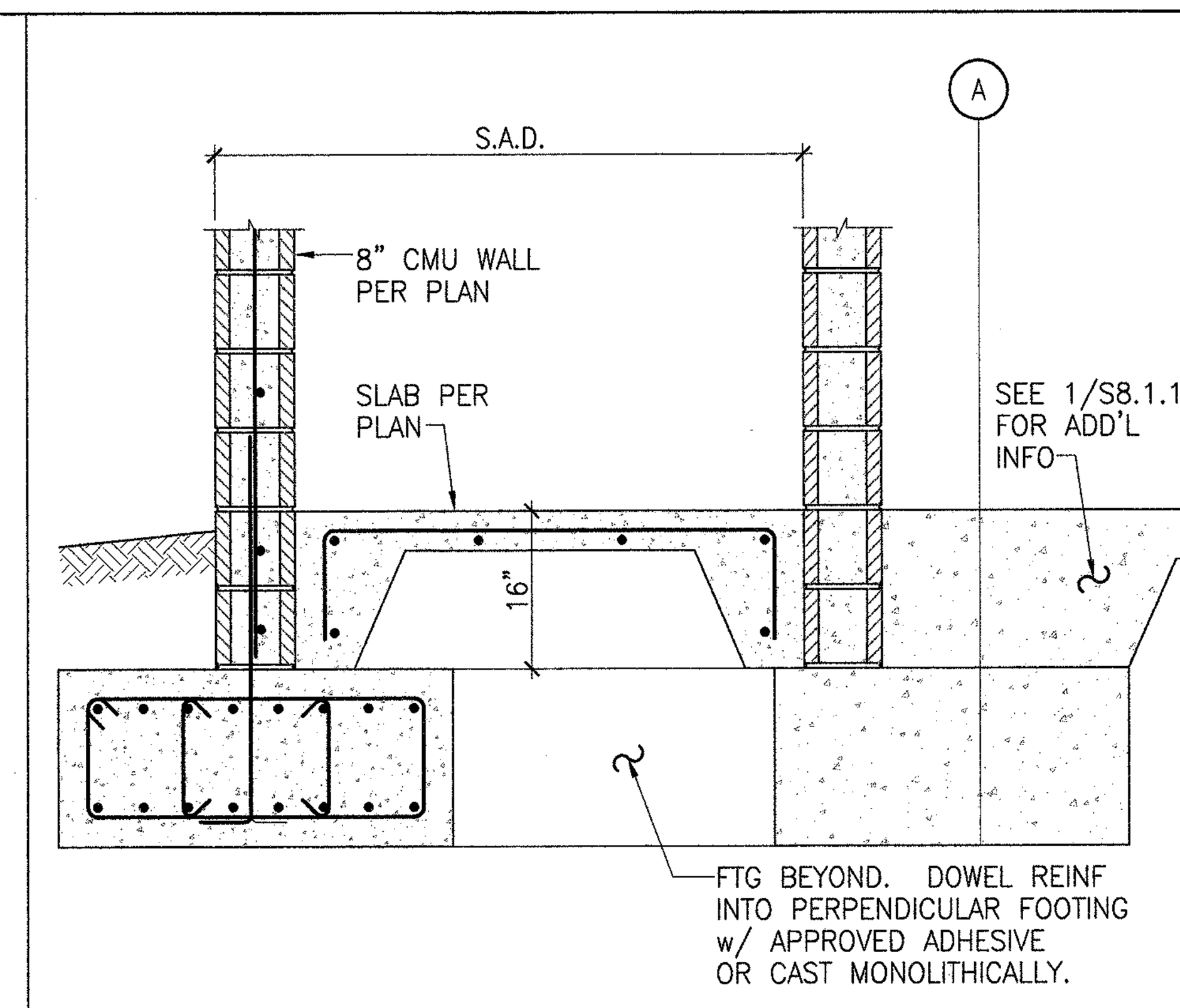
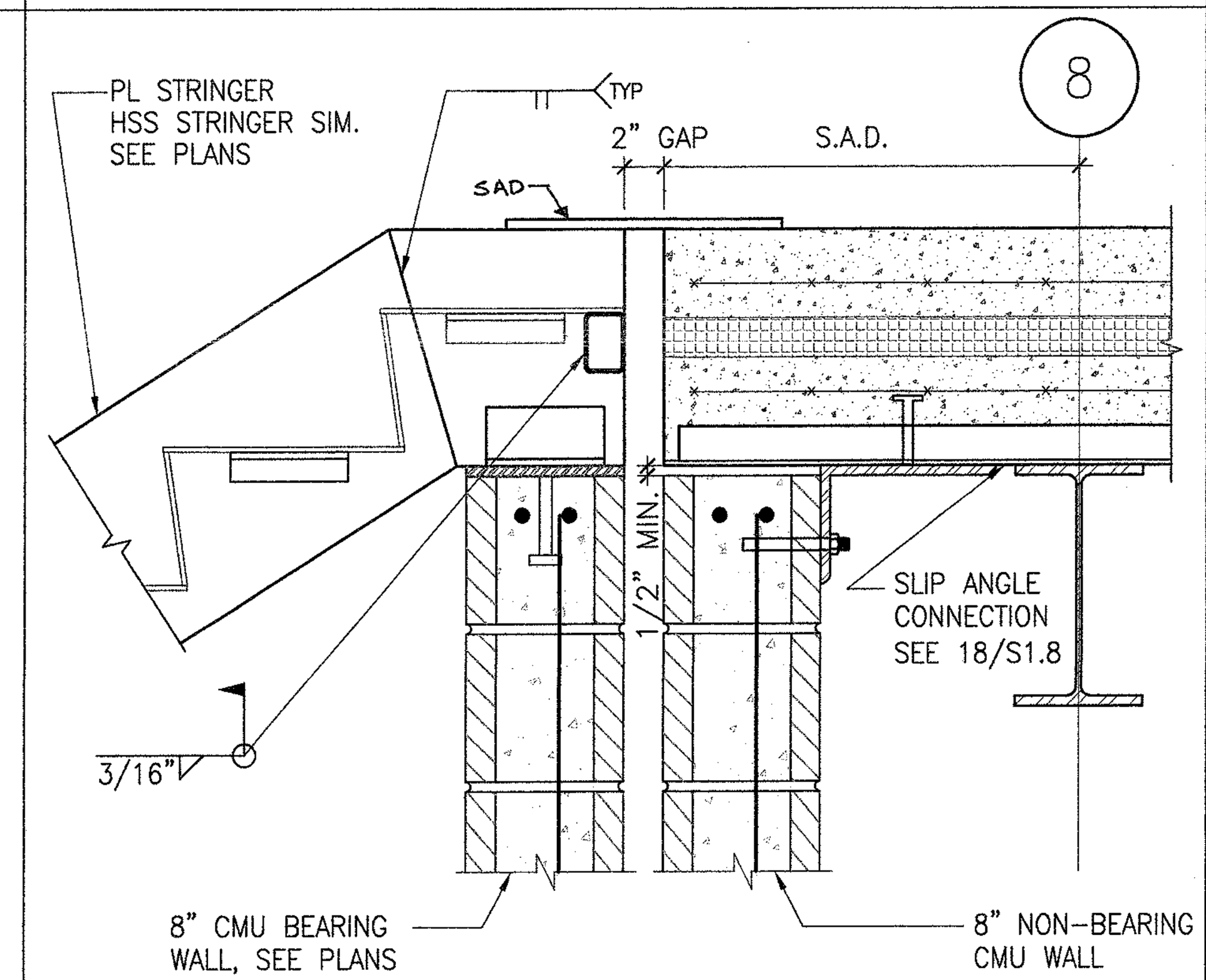
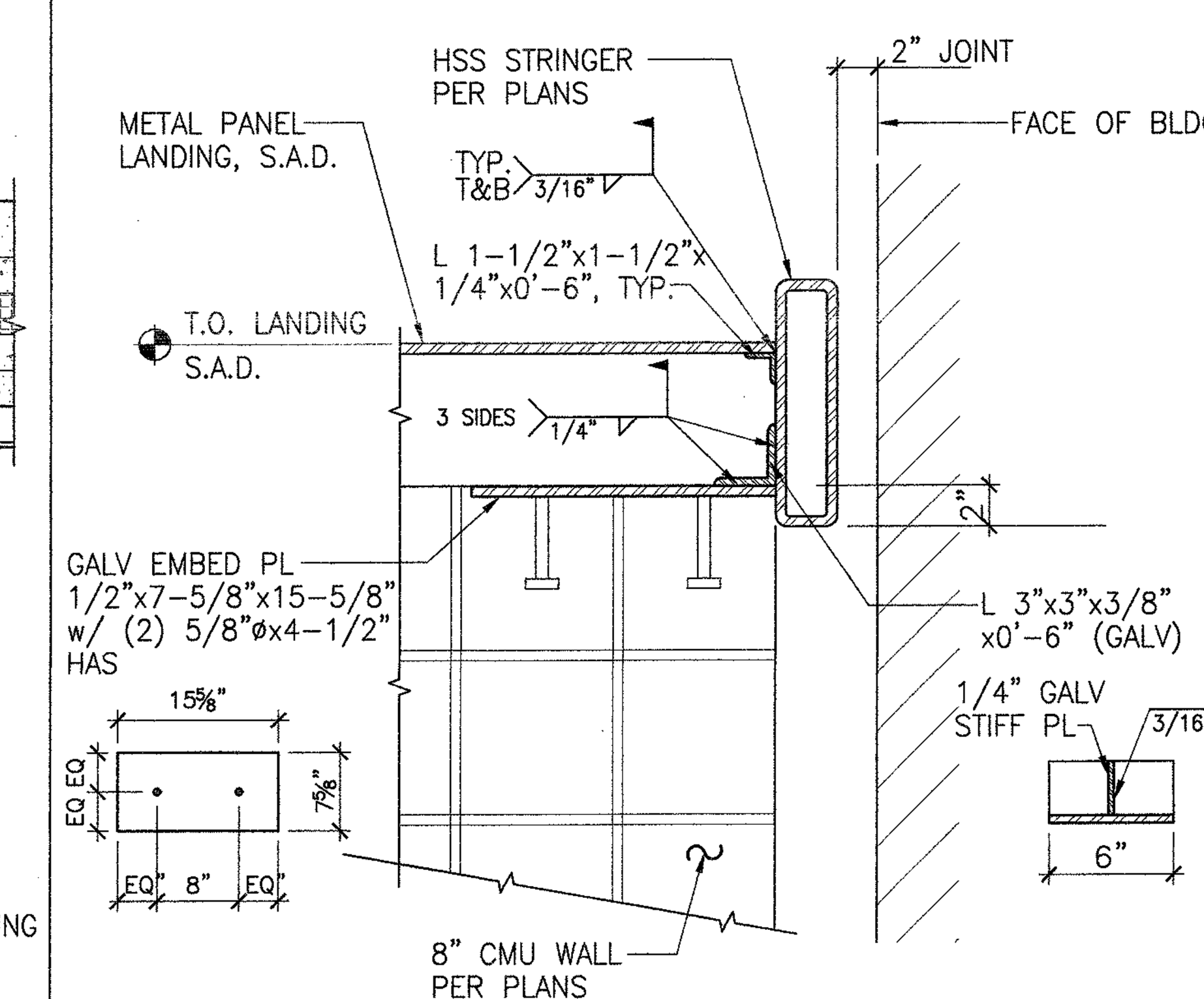


1 DETAIL @ BASE
SCALE: 3/4"=1'-0"

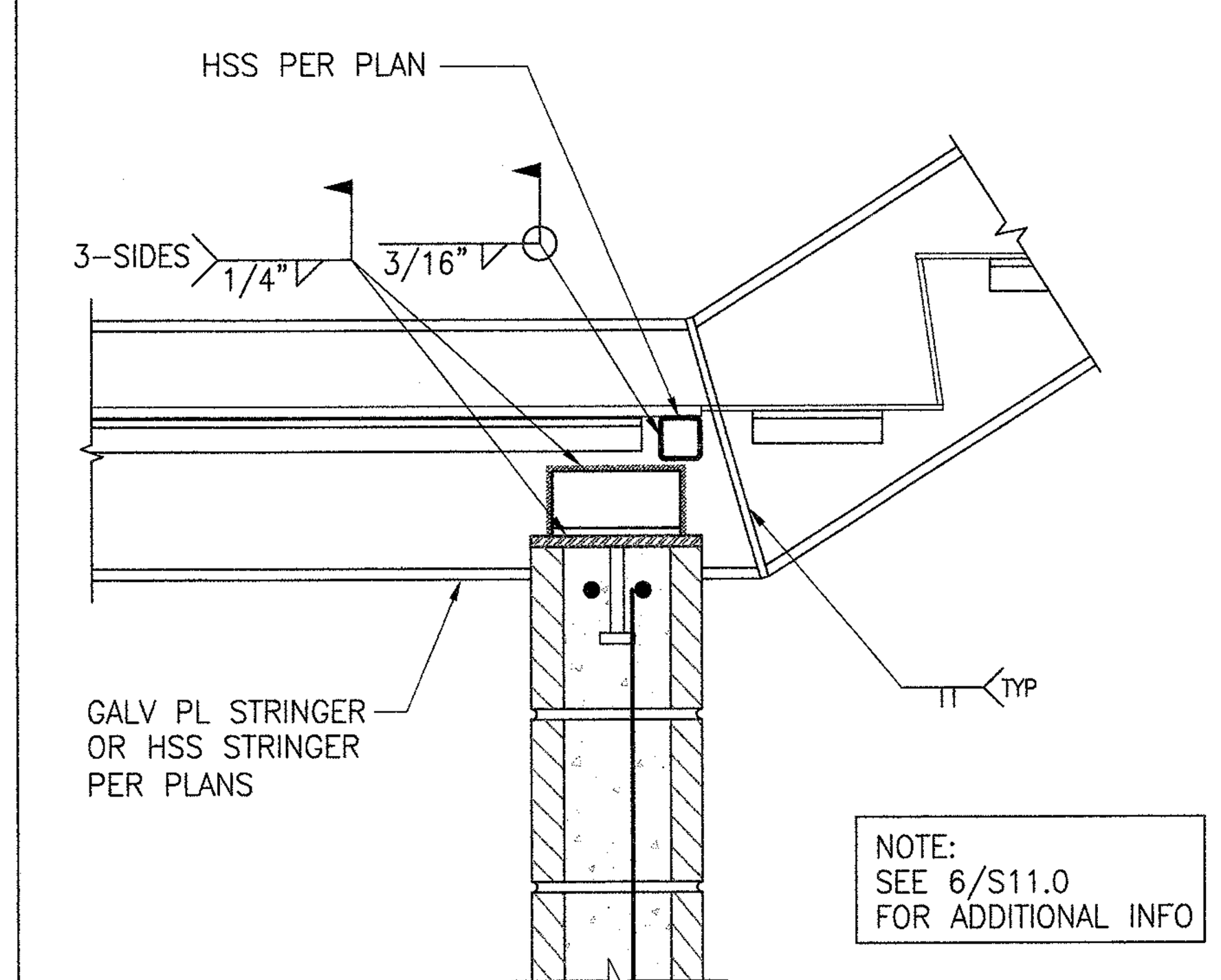


6 SECTION AT STAIR
SCALE: 1 1/2"=1'-0"

NOTE:
SEE 3/- & 9/S11.0
FOR ADDITIONAL INFO

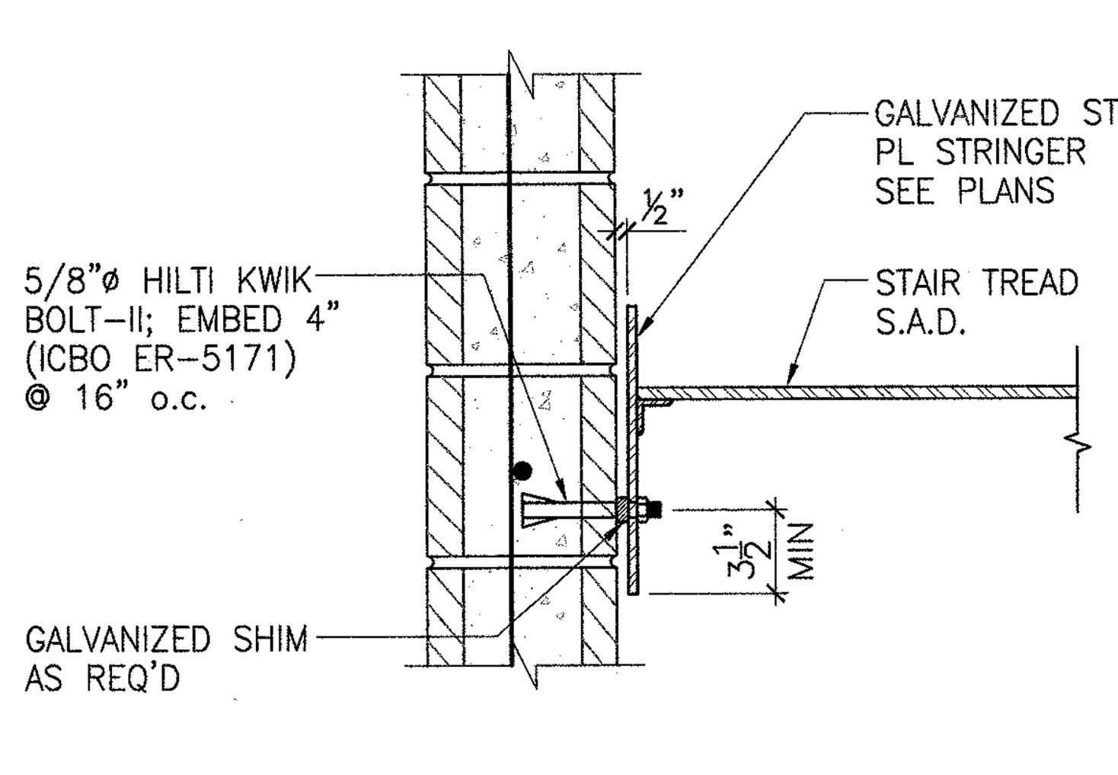


2 SECTION AT STAIR
SCALE: 1 1/2"=1'-0"



NOTE:
SEE 6/S11.0
FOR ADDITIONAL INFO

3 SECTION AT STAIR
SCALE: 1 1/2"=1'-0"



4 SECTION AT STAIR
SCALE: 1 1/2"=1'-0"

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DRAWING TITLE
STAIR DETAILS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S11.01

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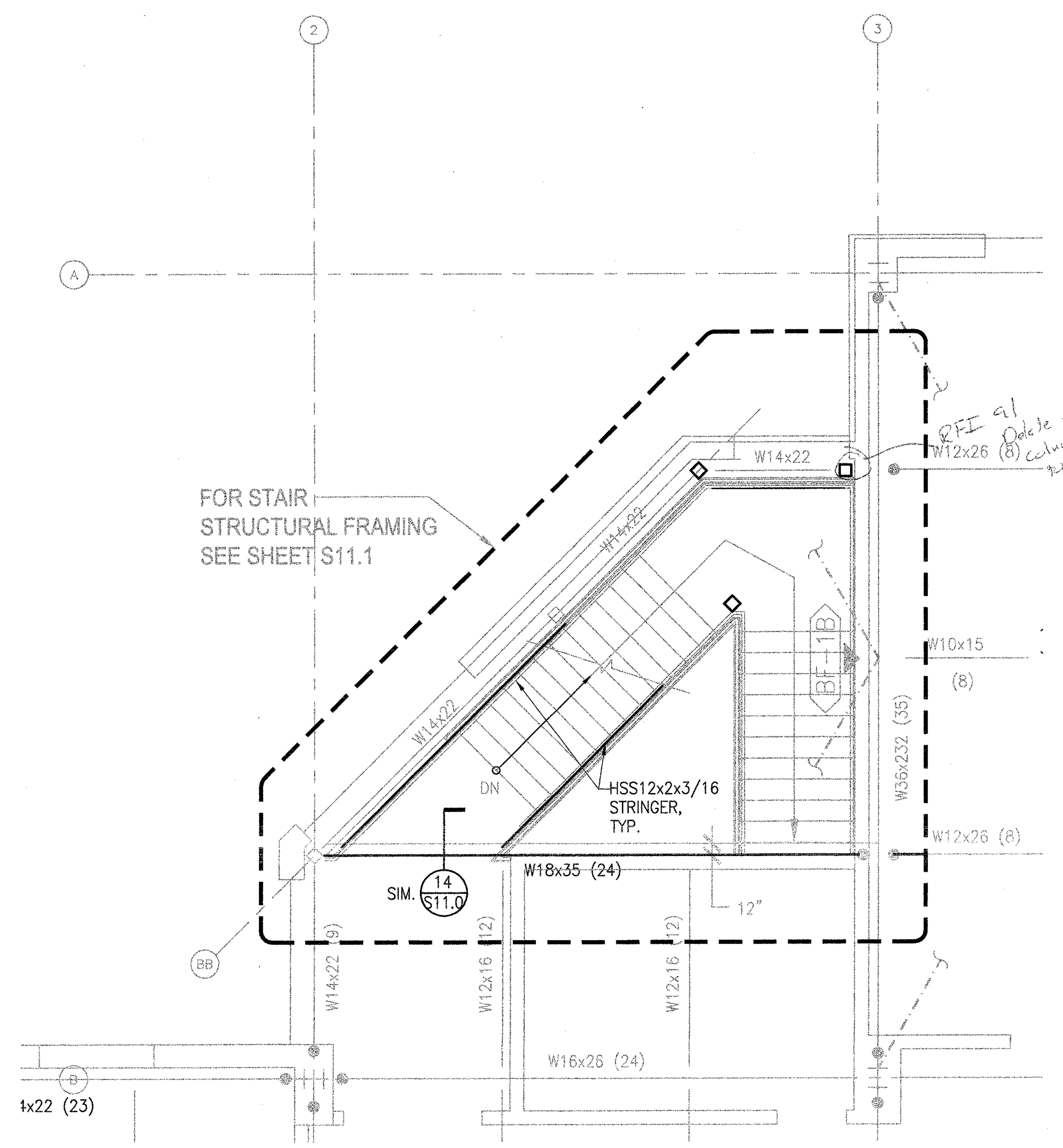
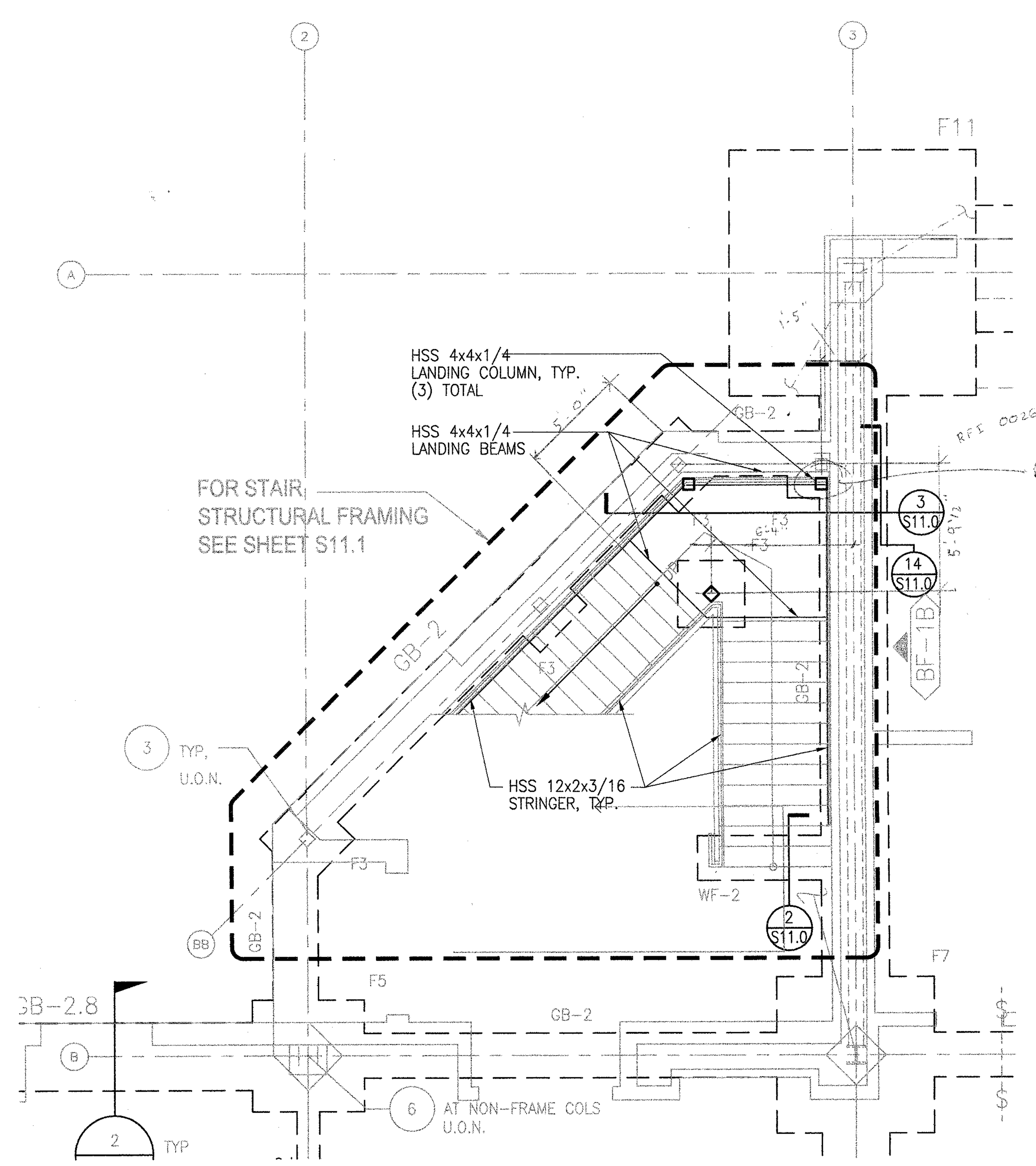
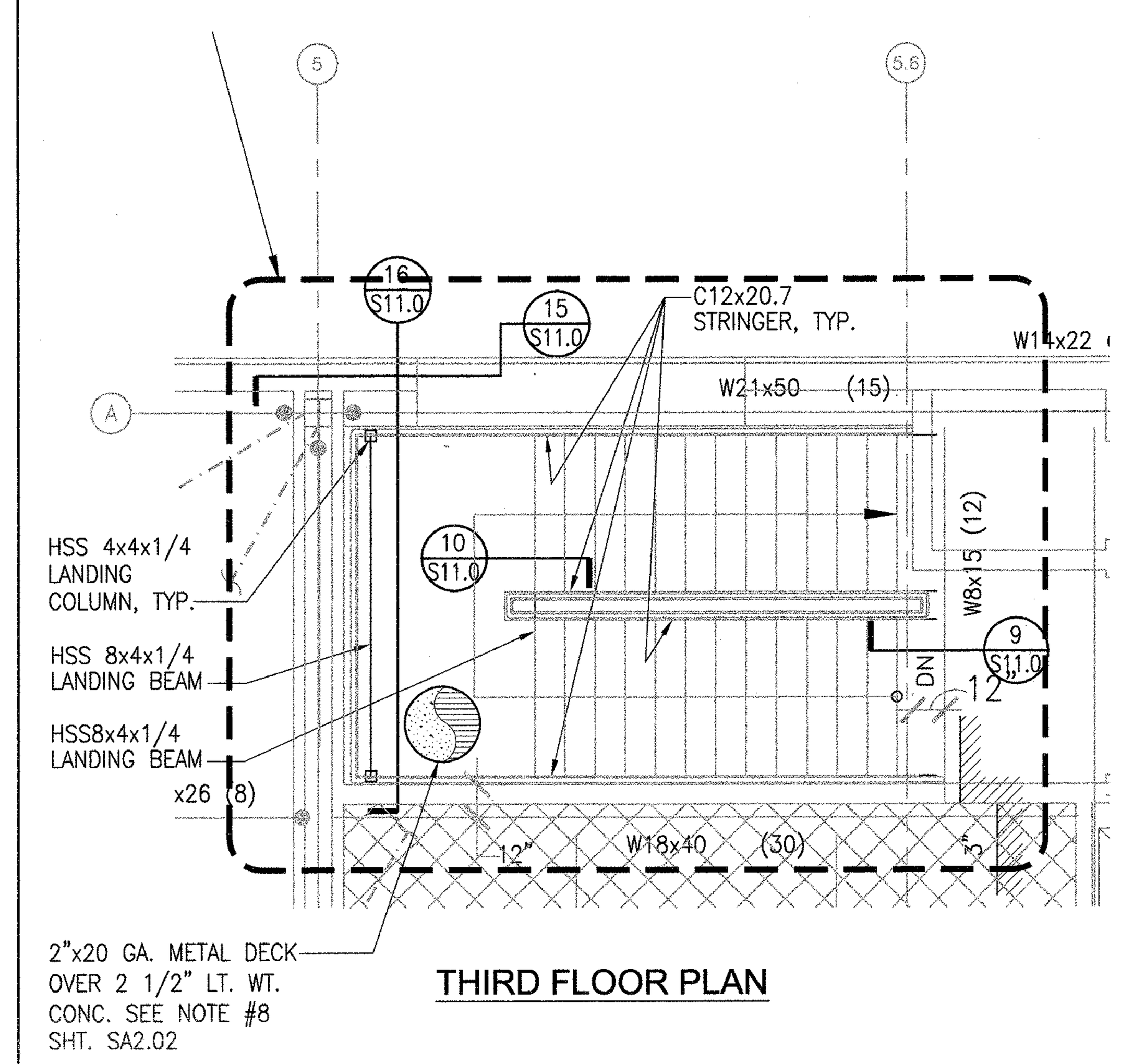


THIRD FLOOR PLAN

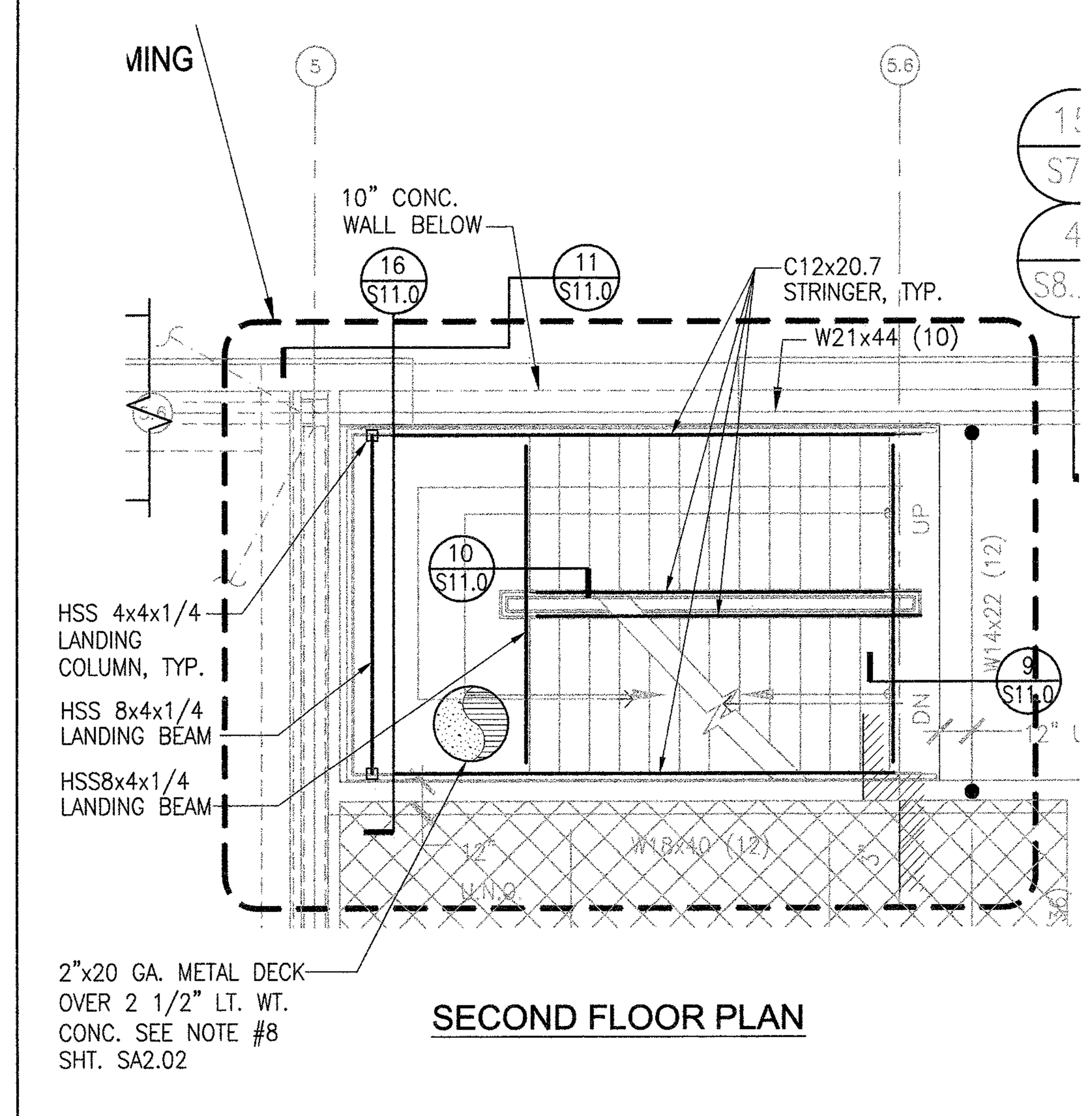


SECOND FLOOR PLAN

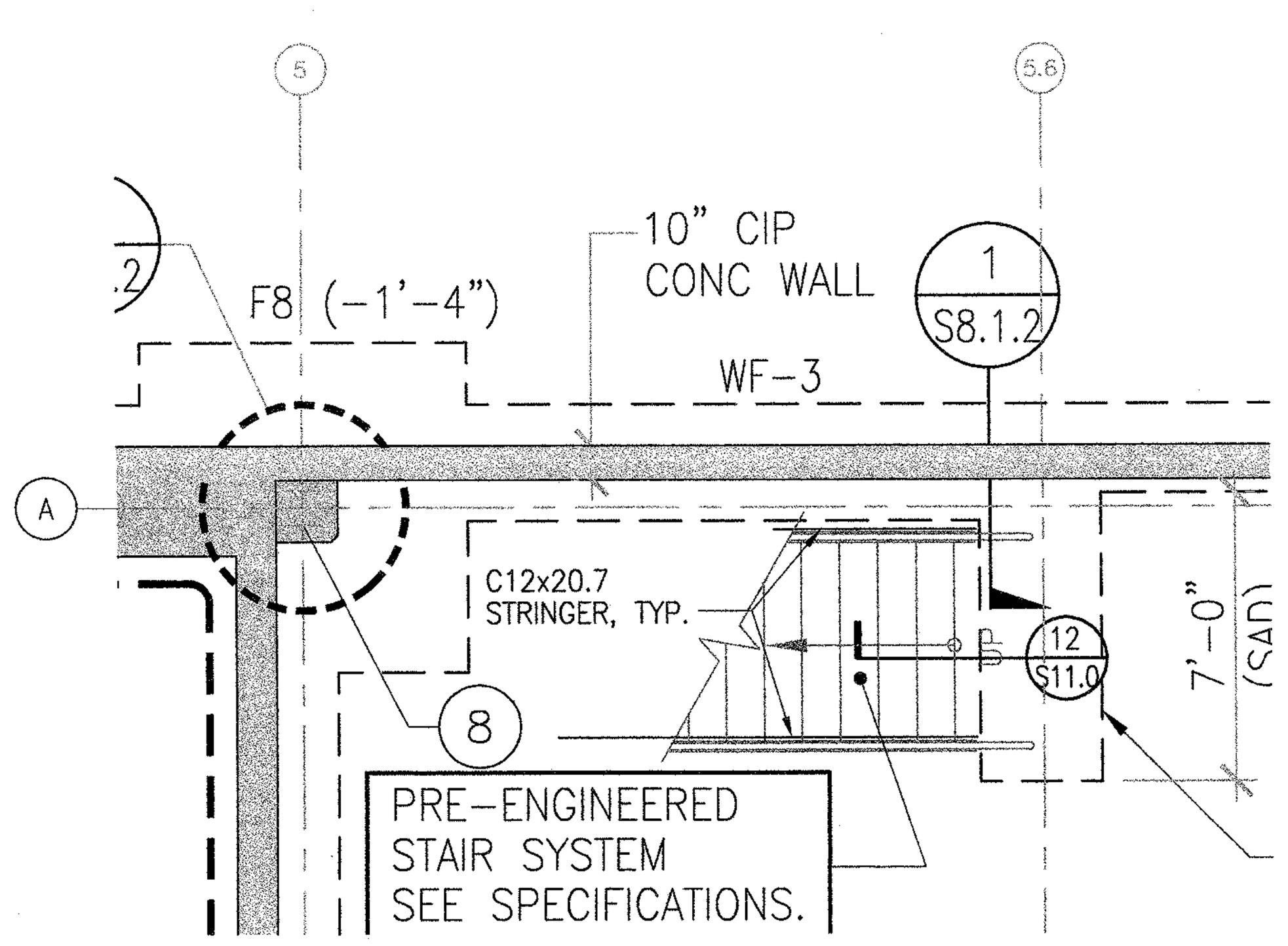
9 BUILDING A: STAIR #2
SCALE: 1/4" = 1'-0"



THIRD FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN

3 BUILDING A: STAIR #1
SCALE: 1/4" = 1'-0"

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ISSUED FOR:	DATE:
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DRAWING TITLE
BUILDING A-STAIR #1 & #2 PLANS

DATE: 10.21.04
PROJECT # 04043
SHEET NUMBER
S11.1

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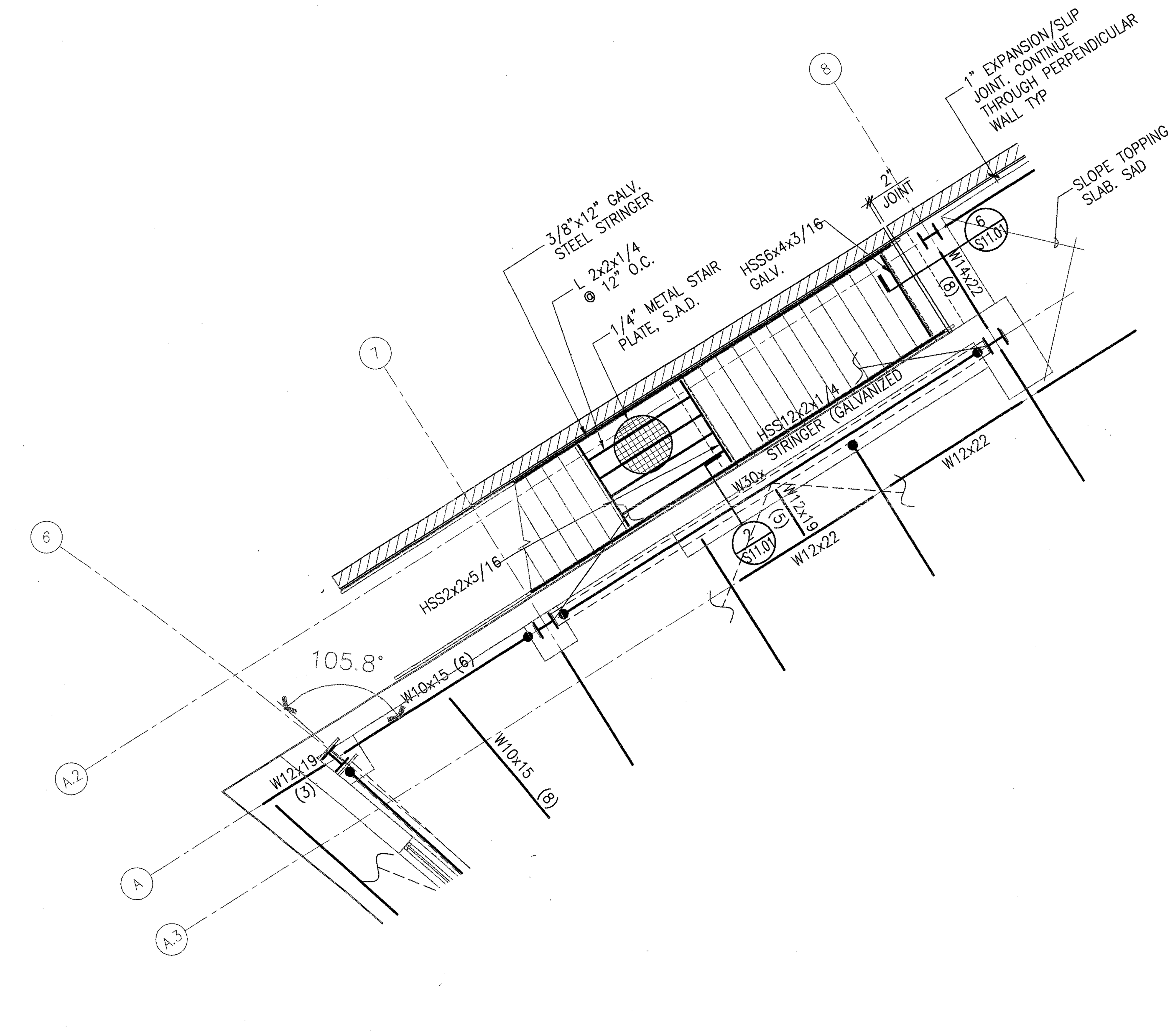
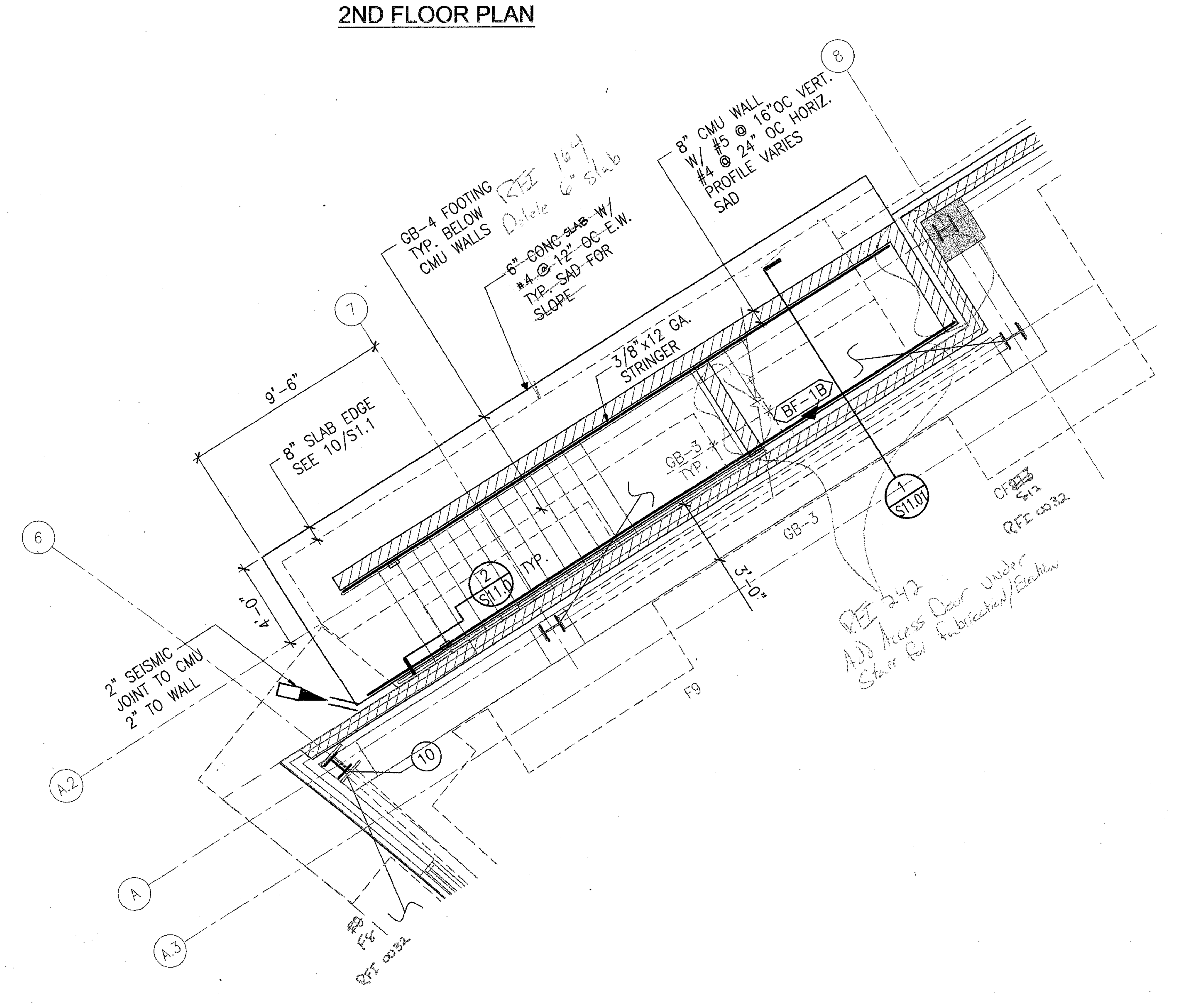
GENERAL PRE-ENGINEERED STAIR NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR PLAN DIMENSIONS, VERTICAL GEOMETRY, AND ELEVATION OF FINISHED LANDING ASSEMBLY.
2. THESE PLANS SHOW TYPICAL STAIR FRAMING ONLY. LOCATION OF DOORS, WINDOWS, ADJOINING WALL, ETC. MAY VARY. SEE ARCHITECTURAL DRAWINGS.
3. ALL MEMBER SIZES AND CONNECTIONS SHOWN ARE MINIMUM DESIGN REQUIREMENTS AND SHALL BE COORDINATED AND VERIFIED BY THE STAIR MANUFACTURER.
4. (symbol) INDICATES 2 1/2" LIGHT WEIGHT CONCRETE TOPPING OVER 2" x 20 GA DECK. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. FOR GENERAL NOTES AND TYPICAL DETAILS, SEE SHEETS S0.0- S0.1, S1.1, S1.2, S1.3, S1.4, S1.5, S1.6, S1.7.
6. GENERAL CONTRACTOR SHALL COORDINATE LOCATION OF HSS COLUMN SUPPORTS FOR STAIR LANDINGS WITH STAIR MANUFACTURER AND PLANS.

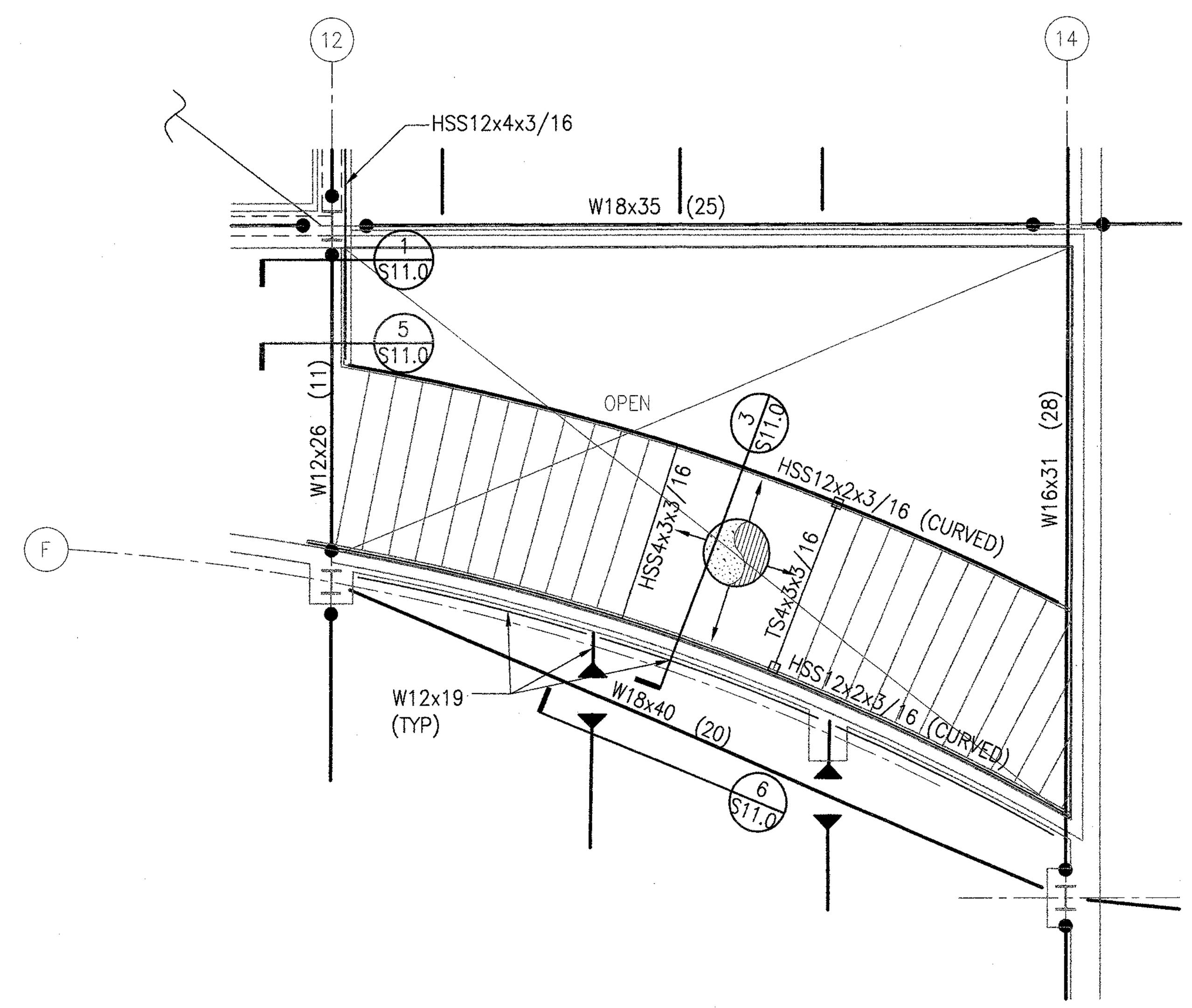


2ND FLOOR PLAN

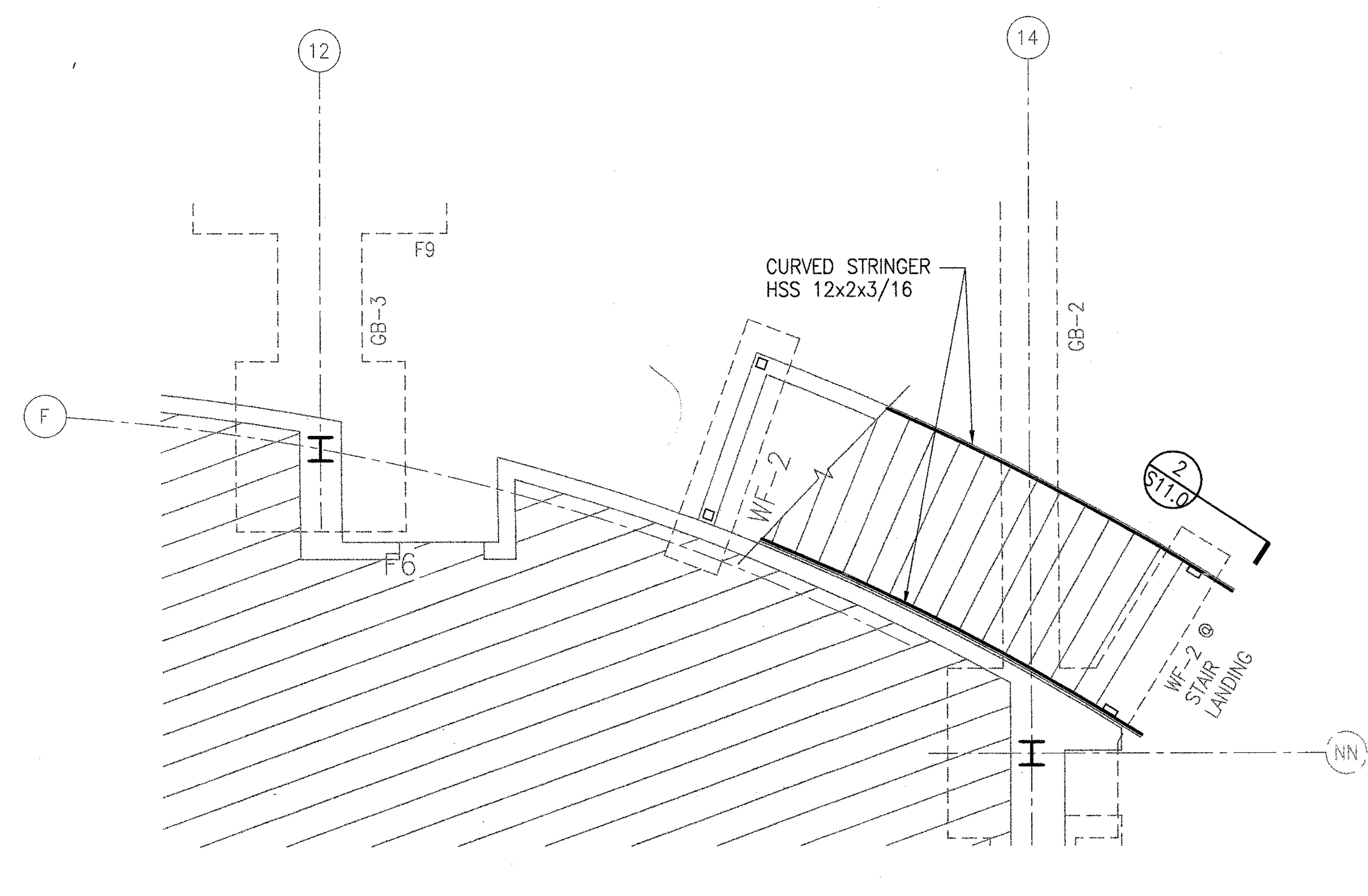


FIRST FLOOR PLAN

9 BUILDING B: STAIR #2
SCALE: 1/4" = 1'-0"



2ND FLOOR PLAN



FIRST FLOOR PLAN

3 BUILDING B: STAIR #1
SCALE: 1/4" = 1'-0"

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DATE: 10.21.04
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