

**SCOPE OF WORK**

- WHEN APPLICABLE, THE DOWN PLACEMENT PLANS ARE PROVIDED TO COORDINATE THE RUN NAMES INDICATED ON SHEET ZA-02 WITH THE RUN NAMES INDICATED ON THE STRUCTURAL DOCUMENTS. SEE ATTACHED SHEETS.
- SYSTEM PROVIDED IS FROM THE COUPLER AT THE EMBEDDED ANCHOR AND ABOVE, UNLESS NOTED OTHERWISE.
- BUILDING CODE: IBC.
- JURISDICTION: N/A
- FIRE TREATED LUMBER NOT REQUIRED.

**SYSTEM DESCRIPTION**

ZONE FOUR "QUICK CONNECT" IS A CONTINUOUS ROD SYSTEM USED IN WOOD FRAMED SHEAR WALLS CONSISTING OF A CINCH NUT, THREADED STEEL ROD, AND STEEL BEARING PLATES. THE SYSTEM WILL RESIST SHEAR WALL UPLIFT WHILE COMPENSATING FOR SETTLEMENT, SHRINKAGE, AND COMPRESSION LOADING BY THE CONTINUAL DOWNWARD ACTUATION OF THE CINCH NUT AS RECOGNIZED IN LA CITY RR 25623 AND ICC (ESR 2190) REPORTS.

**GENERAL NOTES**

- CINCH NUT - SEE DETAIL 1
  - THE ZONE FOUR CINCH NUT IS A SHRINKAGE COMPENSATION DEVICE THAT CONNECTS THE WOOD FRAMING TO THE ALL THREAD ROD. WHEN THE WOOD FRAMING SHRINKS OR SETTLES THE CINCH NUT RATCHETS DOWN THE ALL THREAD TO PROVIDE PERPETUAL SHRINKAGE COMPENSATION.
  - CINCH NUT IS IN COMPLIANCE WITH 2006 IBC, 2006 IRC & 1997 UBC. TESTING OF THE CN IS IN ACCORDANCE WITH ICC-ES AC308 RESEARCH REPORT: COLA RR 25623, ICC REPORT ESR-2190
  - CINCH NUTS USED IN THE QUICK CONNECT PLATED SYSTEM ATTACH TO THE WOOD LAG SCREWS WITH MINIMUM WOOD PENETRATION OF 1" WITH (2) LAG SCREWS ARE INSTALLED WITH MINIMAL TORQUE AGAINST THE CINCH NUT TOP SO AS NOT TO BEND THE CINCH NUT TOP.
- PLATE WASHERS - SEE DETAIL 2
  - ZONE FOUR PLATE WASHERS ARE PAINTED DIFFERENT COLORS TO VISUALLY DIFFERENTIATE LOAD CAPACITIES AND IMPROVE INSTALLATION ACCURACY.
  - ZONE FOUR PLATE WASHERS ARE MANUFACTURED WITH ASTM A36 STEEL AND ARE REQUIRED TO MAINTAIN TIGHT CONTACT AGAINST THE WOOD MEMBER.
- COUPLING NUT - SEE DETAIL 3
  - SIGHT HOLES ARE INCLUDED WITH ALL ZONE FOUR COUPLER NUTS
  - COUPLER REDUCING NUTS MAY BE REQUIRED AT FOUNDATION OR FLOOR TO FLOOR CONNECTIONS.
  - REDUCING COUPLERS SHOULD HAVE THE LARGER DIAMETER ROD FULLY SEATED FIRST, THEN TIGHTEN THE SMALLER ROD.
  - STANDARD COUPLERS CONFORM TO ASTM A-563 GRADE A, SAE GRADE 2.
  - HIGH STRENGTH COUPLERS CONFORM TO ASTM A-563 GRADE C, SAE GRADE C AND ARE DIFFERENTIATED WITH A "SAW CUT" MARKING.
  - CONTRACTOR TO VERIFY COUPLERS ARE THREADED HALF WAY INTO COUPLER FROM EACH SIDE.
- THREADED ROD - SEE DETAIL 4 & 5
  - ZONE FOUR QUICK CONNECT USES STANDARD GRADE AND HIGH STRENGTH ALL THREAD ROD. STANDARD GRADE ROD CONFORMS WITH ASTM-A36 AND HAS PAINTED BLUE ENDS. HIGH STRENGTH ROD CONFORMS WITH ASTM-A311-1045 AND HAS YELLOW PAINTED ENDS.
  - ZONE FOUR QUICK CONNECT USES UNIFORM NATIONAL COURSE THREADED ROD
  - THREADED ROD INSTALLATION AT BOTTOM PLATE AND FLOOR FRAMING CAN USE OVERSIZE HOLES PER DETAIL 5 & 11. HOLES IN THE FLOOR FRAMING THAT ARE NOT OVERSIZED CAN BIND AND BOW THE ROD AS THE BUILDING SETTLES.
  - MAXIMUM CUT OF PLUMB FOR ROD IS 2" FOR EVERY 100" OF FLOOR HEIGHT. (SEE DETAIL 5)
  - FOUNDATION ANCHOR ROD DIAMETERS CAN DIFFER FROM 1ST FLOOR ROD FOR TWO REASONS:
    - 1ST FLOOR ROD CAN BE LARGER THAN FOUNDATION ANCHORS AS IT IS DESIGNED FOR ELONGATION AND TENSION WHILE THE FOUNDATION ANCHOR IS ONLY DESIGNED FOR TENSION;
    - 1ST FLOOR ROD CAN BE SMALLER THAN FOUNDATION ANCHORS WHEN FOUNDATION ANCHORS ARE PLACED ALL THE SAME SIZE TO MINIMIZE ERRORS.
- FOUNDATION ANCHORS - SEE DETAIL 6
  - ANCHOR BOLT SHALL BE A MINIMUM OF 7 INCHES ABOVE CONCRETE.
- COMPRESSION POST - SEE DETAILS 7 & 8
  - DESIGN ENGINEER SHALL CHECK WOOD MEMBER DESIGN CAPACITY FOR CONDITIONS SUBJECT TO ADDITIONAL LOADS: BEAM OR HEADER REACTIONS.
  - COMPRESSION POST MAY BE INTERRUPTED FOR SUPPORT OF BEAMS OR HEADERS IF CAPACITY IS ADEQUATE.
  - WHERE QUANTITY OF COMPRESSION POSTS ARE GREATER THAN THE SPACE BETWEEN ROD OR BEARING PLATE AND THE END OF THE SHEAR WALL THE ADDITIONAL POSTS REQUIRED WILL BE ADDED TO THE OPPOSITE SIDE OF THE ROD.
  - COMPRESSION MEMBERS ARE PERMITTED PER 2006 IBC 2308.5.10 TO BE NOTCHED TO A DEPTH NOT TO EXCEED 25% OF ITS WIDTH. NOTCHED POSTS MUST BE TO EXACT THICKNESS & AREA OF THE STEEL PLATE IN ORDER TO MAINTAIN FULL BEARING CONTACT OF COMPRESSION MEMBER.
  - IN LIEU OF NOTCHING, PLYWOOD SHIMS MATCHING THE EXACT THICKNESS OF THE BEARING PLATE CAN BE INSTALLED.
  - COMPRESSION POST SHALL BE SIZE, GRADE & SPECIES PER STRUCTURAL PLAN. COMP. POST NOT SPECIFIED SHALL BE EQUAL TO OR GREATER THAN THE REQUIRED UPLIFT CAPACITIES ON STRUCTURAL PLANS.

**ABBREVIATIONS**

AB	ANCHOR BOLT	MIN	MINIMUM
ATR	ALL THREAD ROD	PW	PLATE WASHER
CN	CINCH NUT	QC	QUICK CONNECT
CPR	COUPLER	STD	STANDARD
DF	DOUGLAS FIR - LARCH	TYP	TYPICAL
DIA	DIAMETER	OC	ON CENTER
EA	EACH	UNO	UNLESS NOTED OTHERWISE
HS	HIGH STRENGTH	UNC	UNIFORM NATIONAL COURSE THREAD PITCH

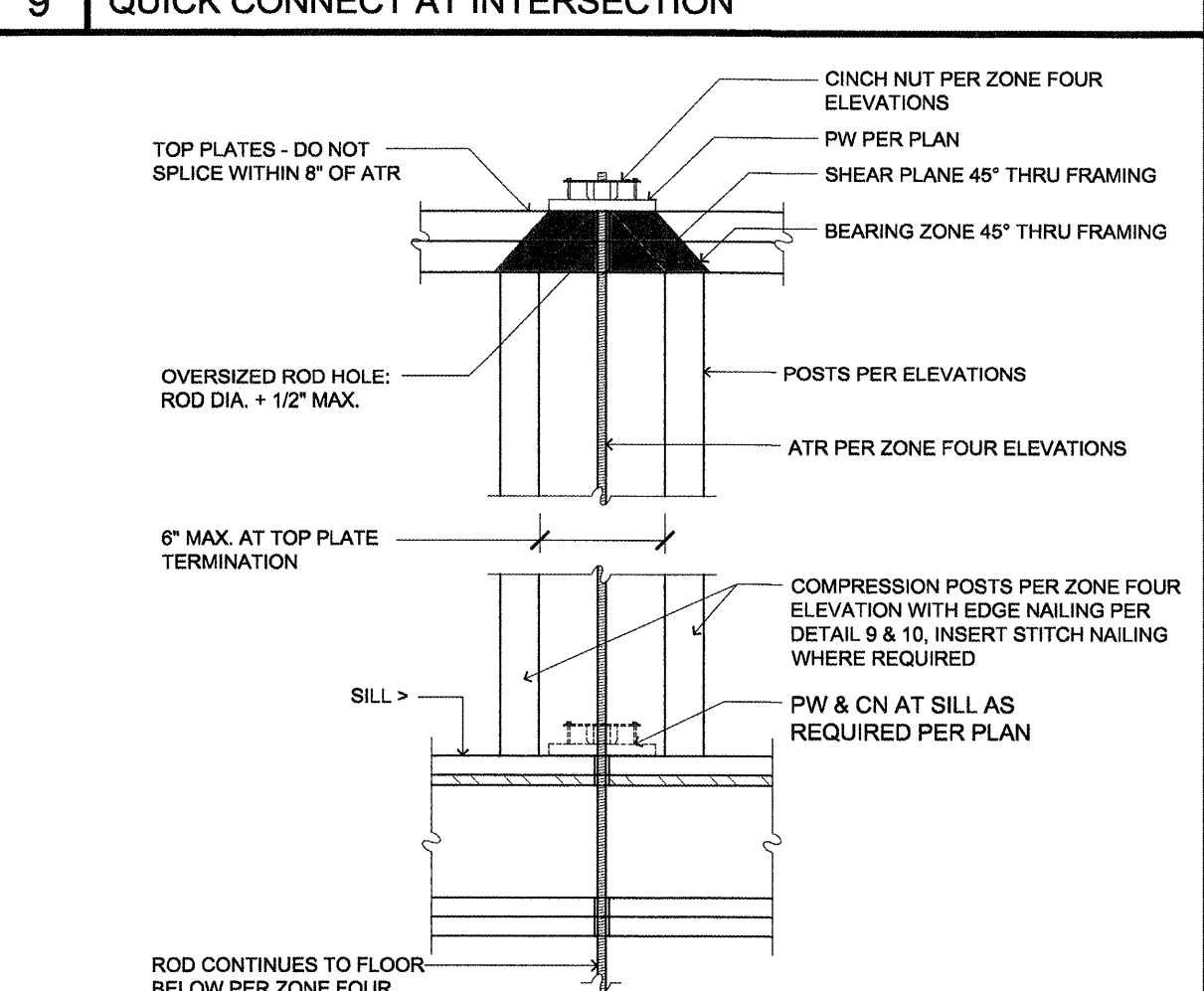
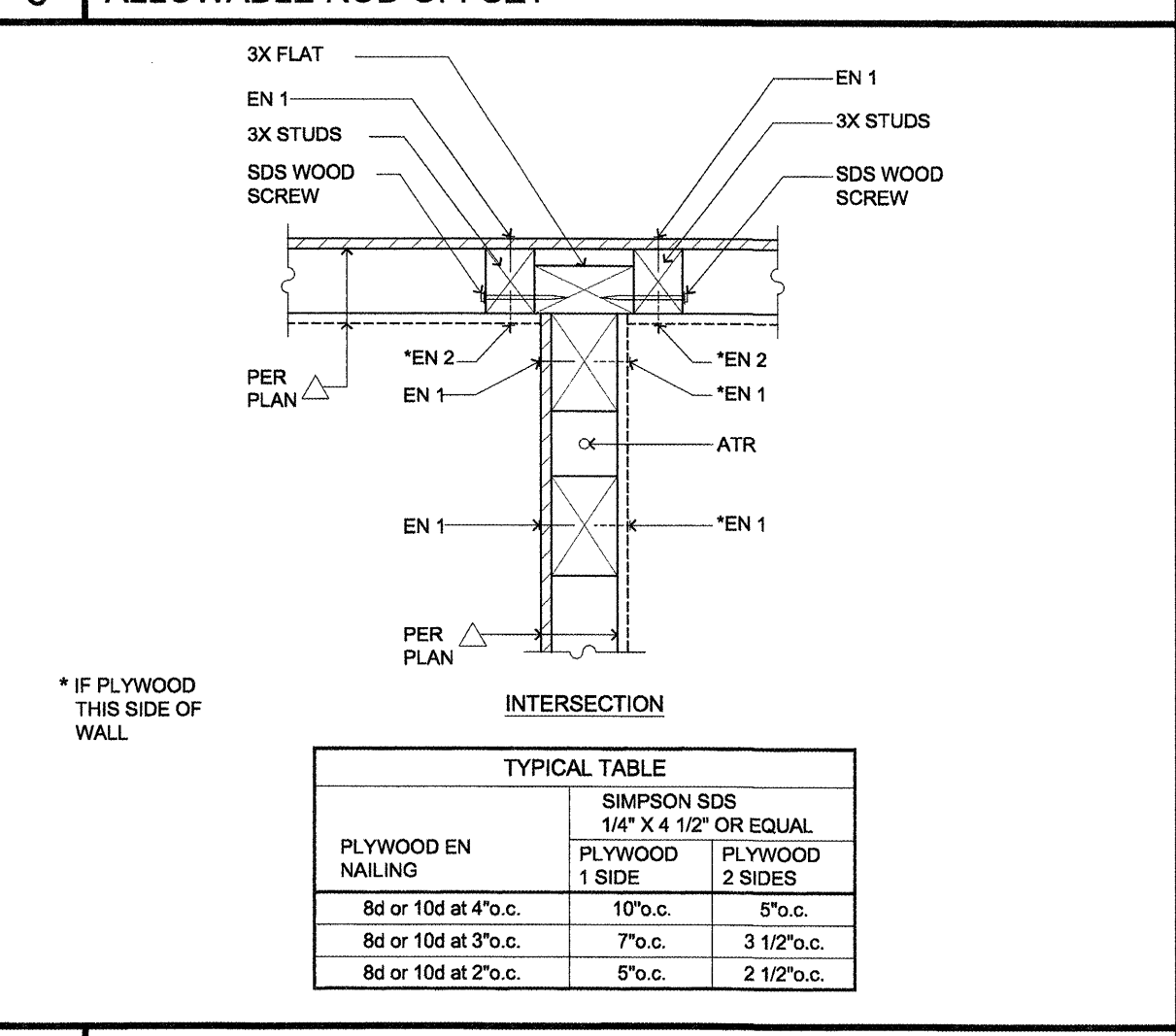
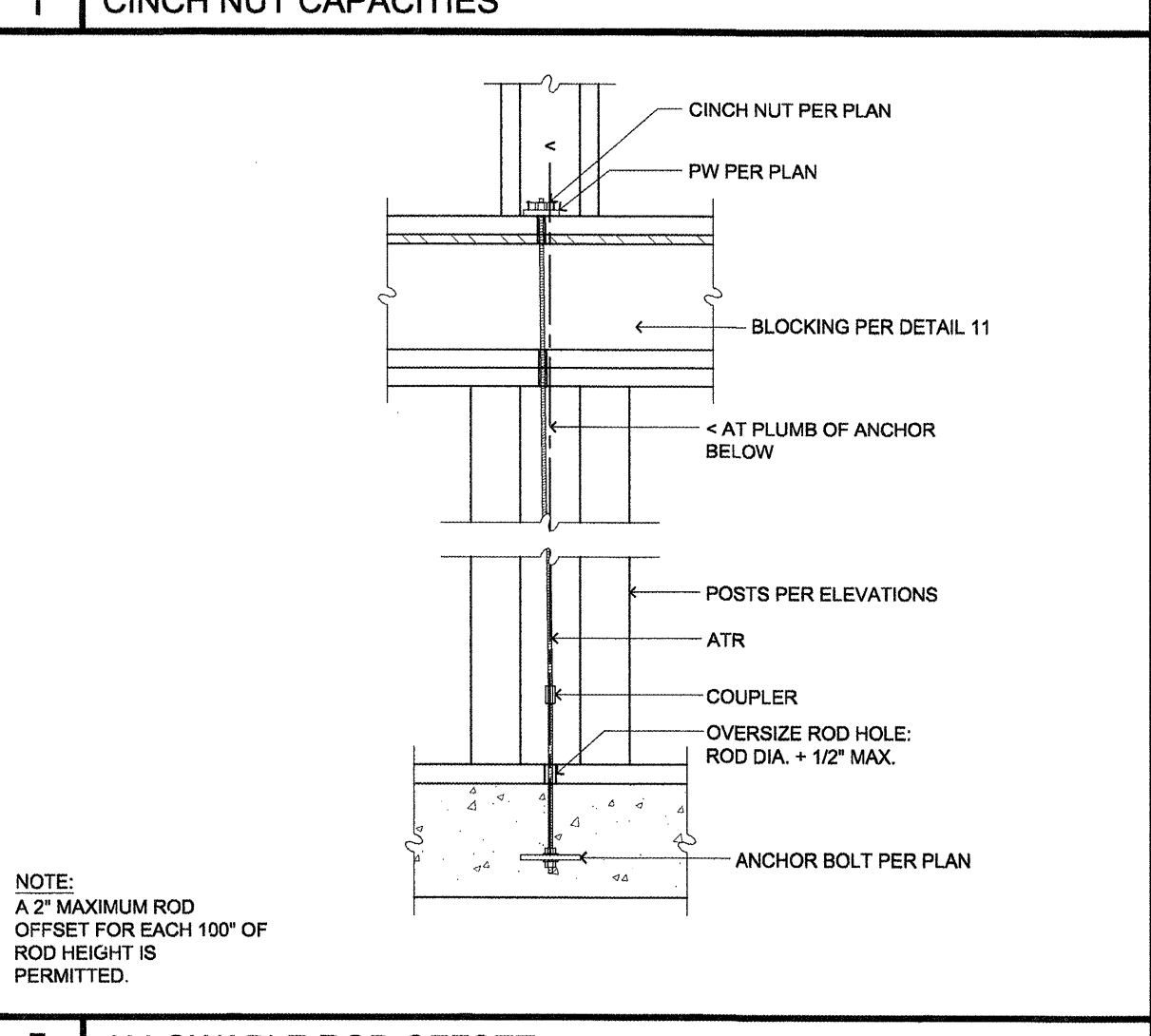
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**CINCH NUT ALLOWABLE TENSION CAPACITIES**

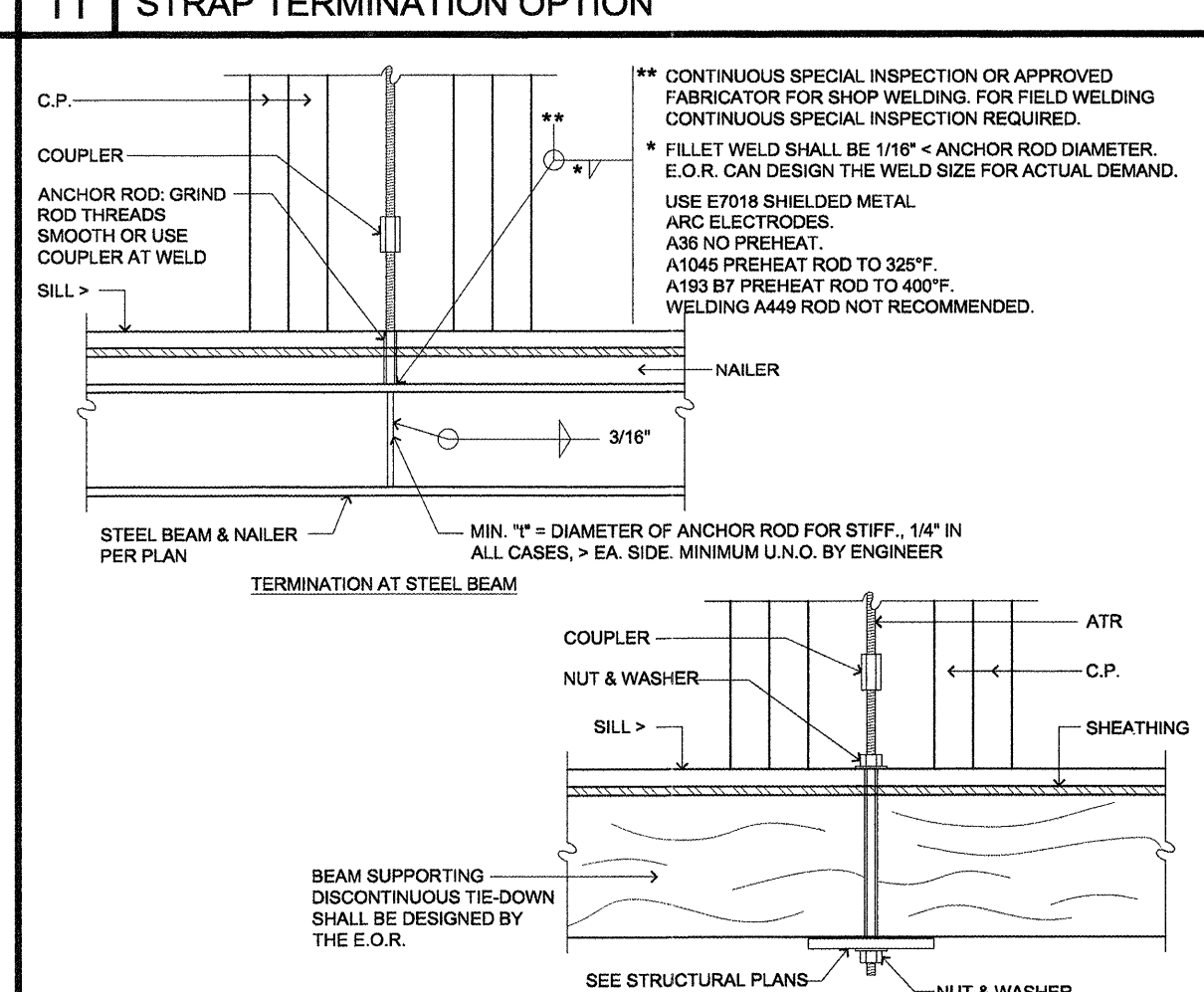
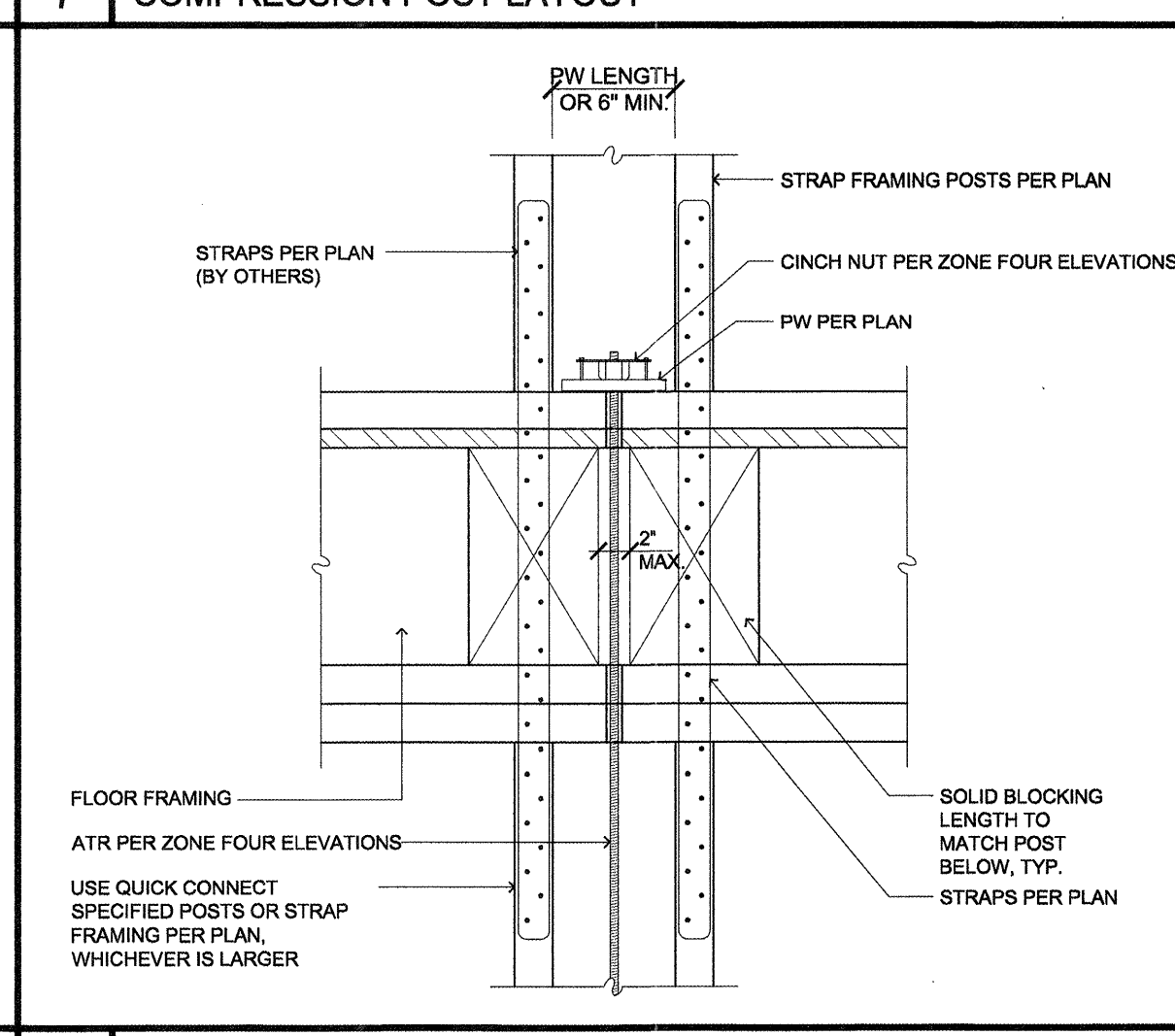
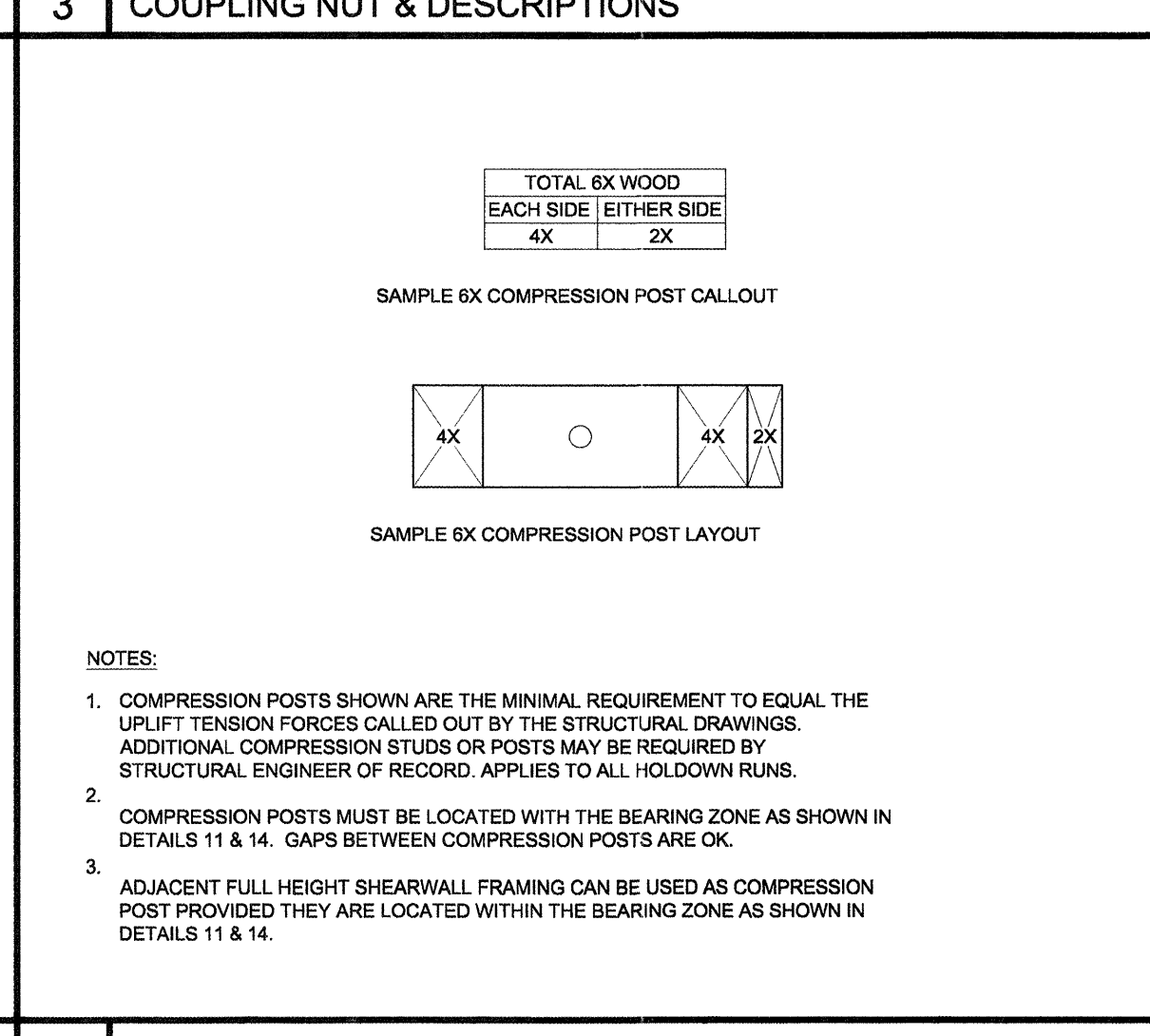
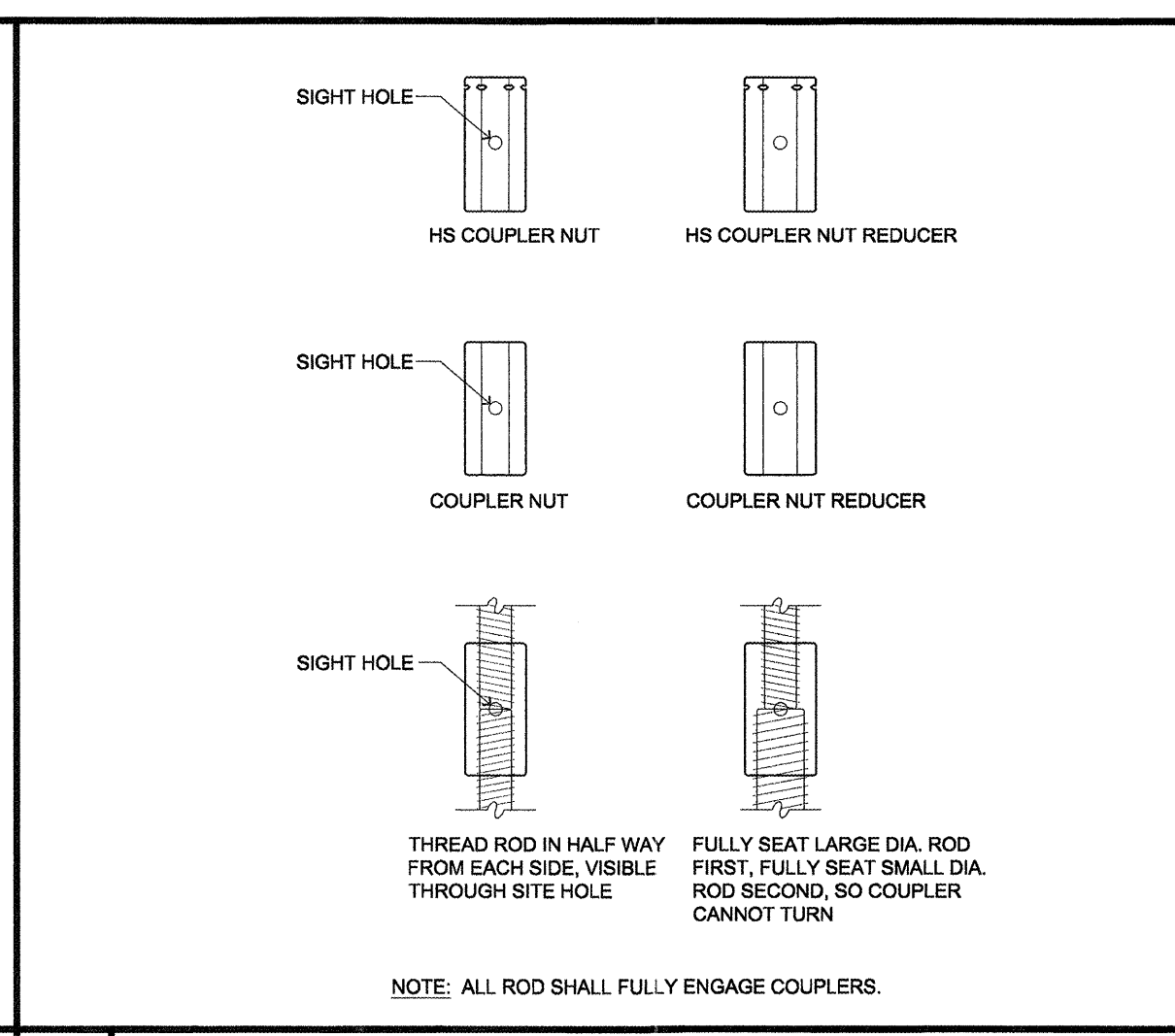
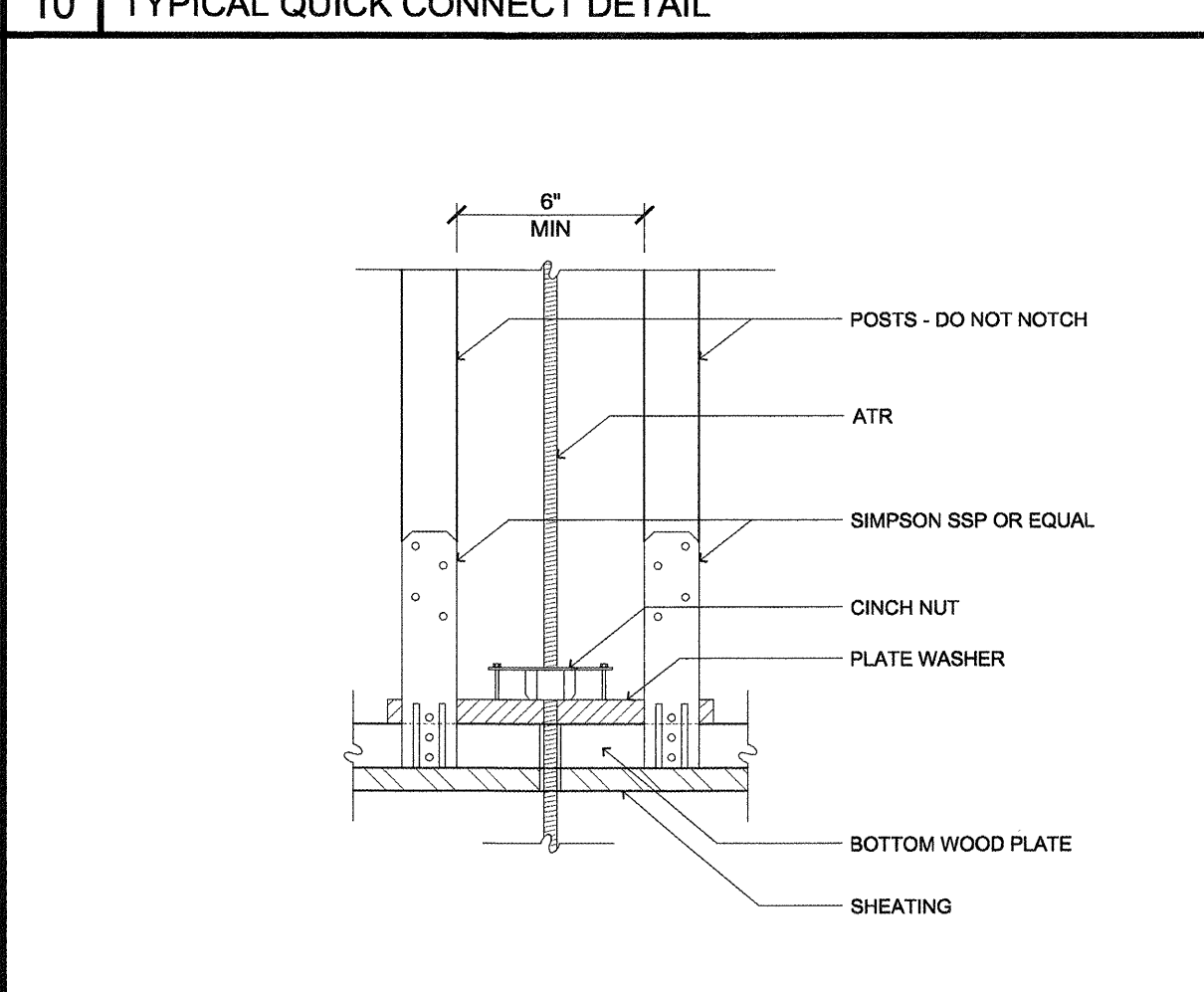
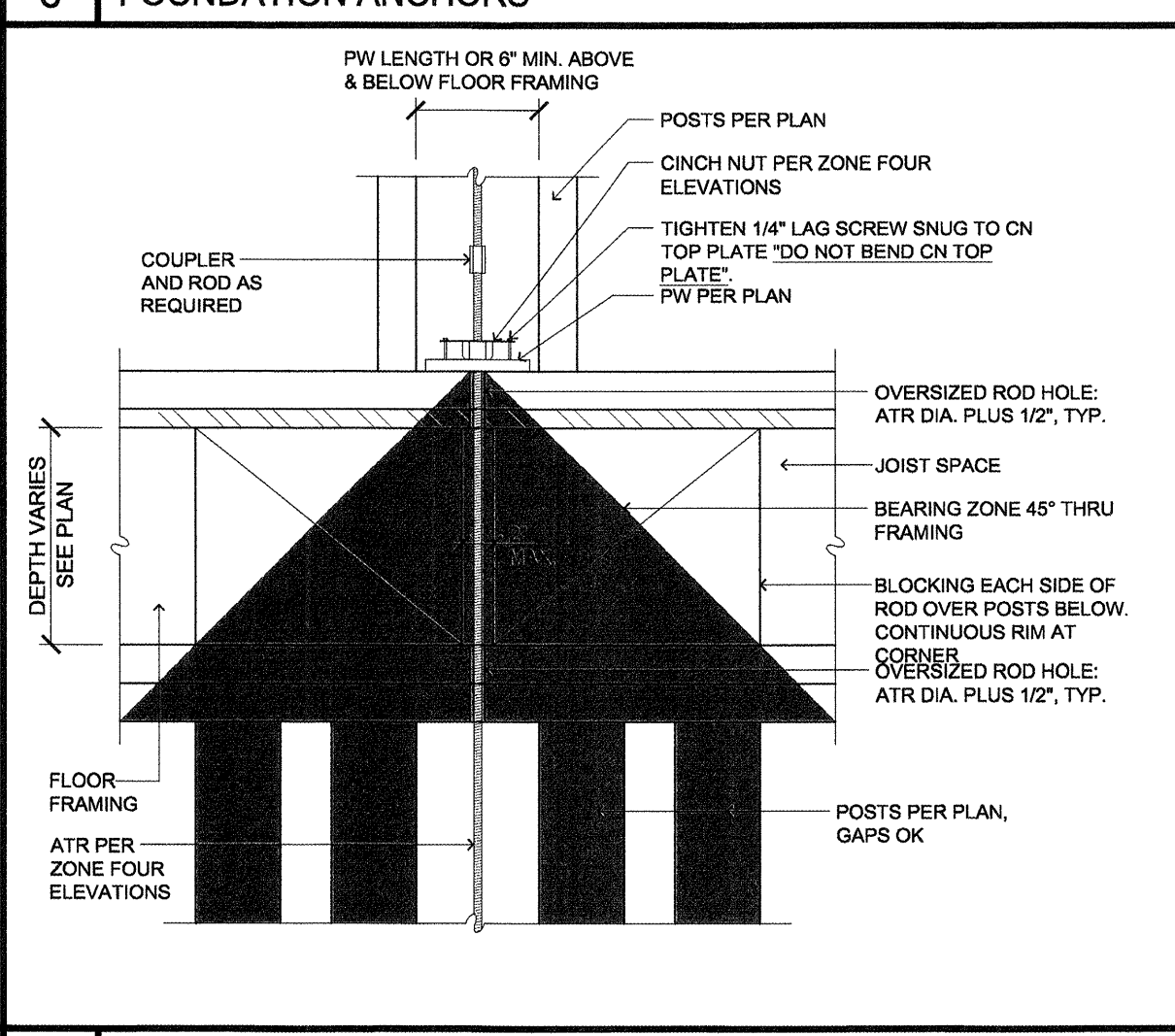
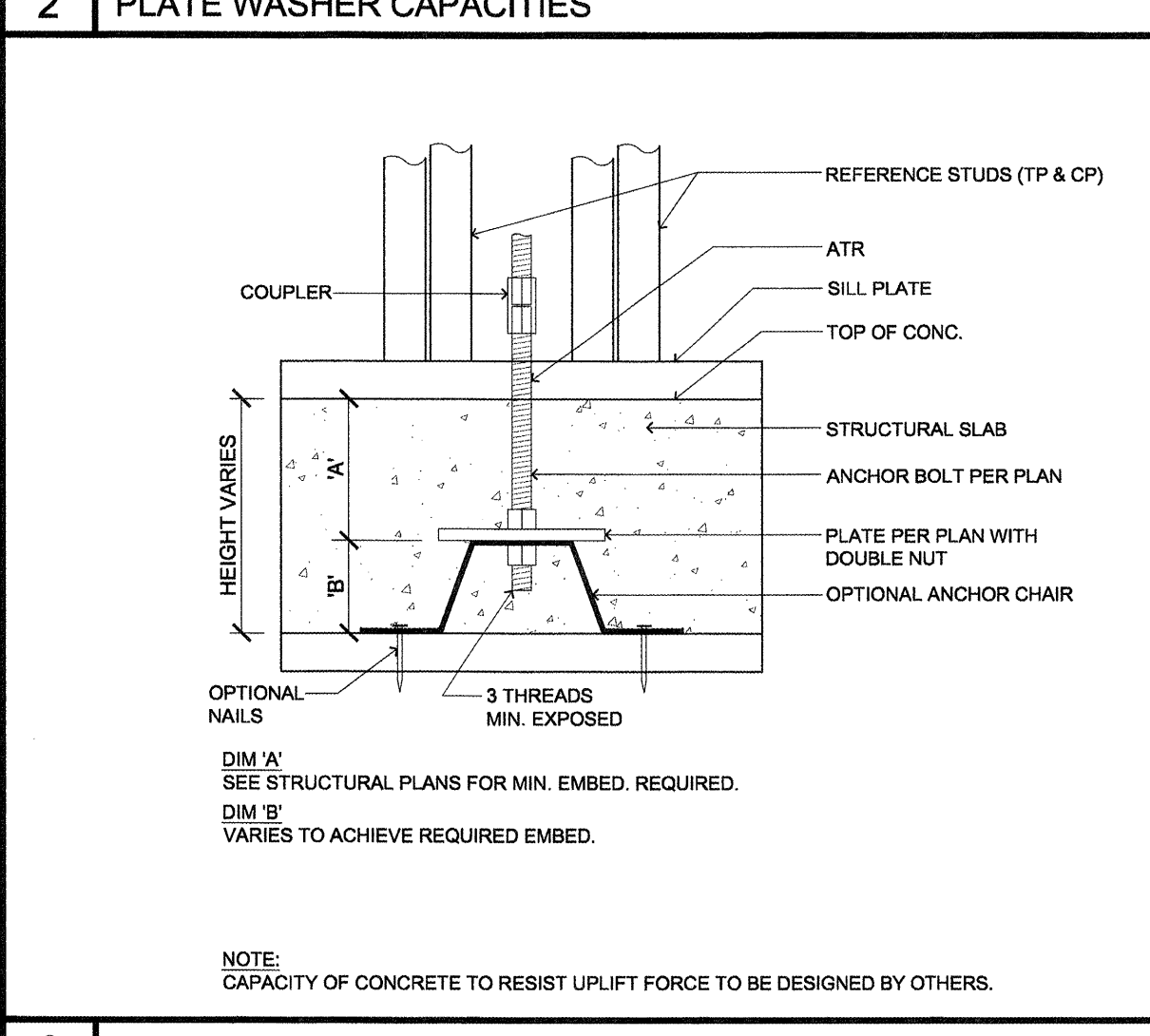
MODEL #	CN5	CN6	CN7	CN8	CN9	CN10
ROD DIAMETER	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"
ICC - ESR-2190	13,575	23,420	32,870	42,130	44,508	60,000



**PLATE WASHER (PW) DIMENSIONS**

MIN. WALL THICKNESS	DESIGNATION	SPF #25 (lbs)			HOLE DIAM.	CAPACITIES
		WIDTH	LENGTH	THICKNESS		
4"	PW-5 (BROWN)	3	3	1/4	1 5/16	3500
	PW-6 (RED)	3 1/4	3 3/8	3/8	1 5/16	4100
	PW-7 (YELLOW)	3 1/4	3 7/8	1/2	1 5/16	4800
	PW-9 (GREEN)	3 1/4	5	5/8	1 5/16	6300
	PW-11 (BLUE)	3 1/4	5 7/8	3/4	1 5/16	7500
	PW-15 (BLACK)	3 1/4	7 3/4	7/8	1 5/16	10300
	PW-20 (WHITE)	3 1/4	10 1/4	1 1/4	1 5/16	13500
	PW-25 (ORANGE)	3 1/2	11 3/4	1 1/2	1 5/16	16900
	PW-30 (SILVER)	3 1/2	14	1 3/4	1 5/16	20200
	PW-36 (GREY)	5	11 3/4	1 1/2	1 5/16	24400
6"	PW-43 (PURPLE)	5	14	1 3/4	1 5/16	29200

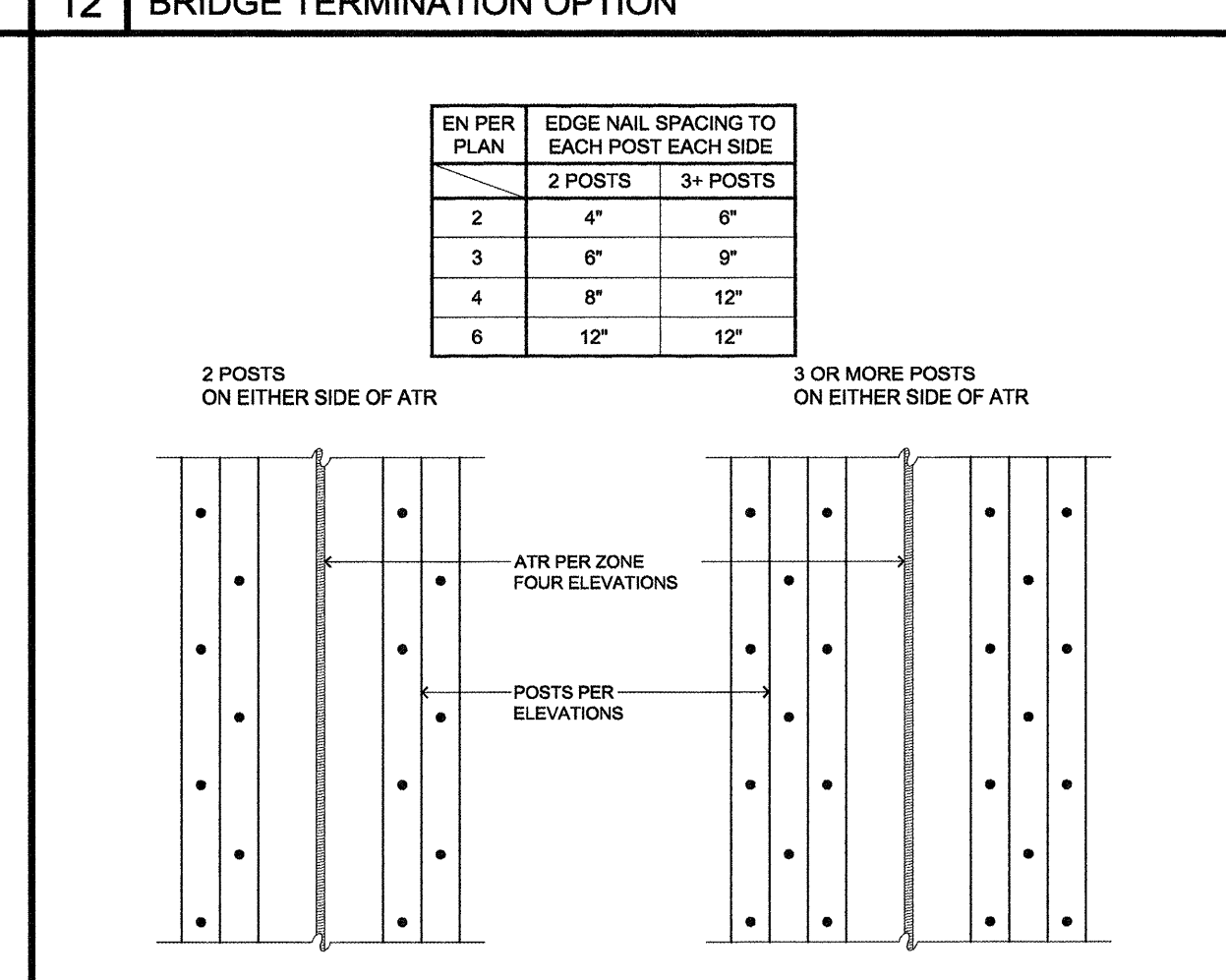
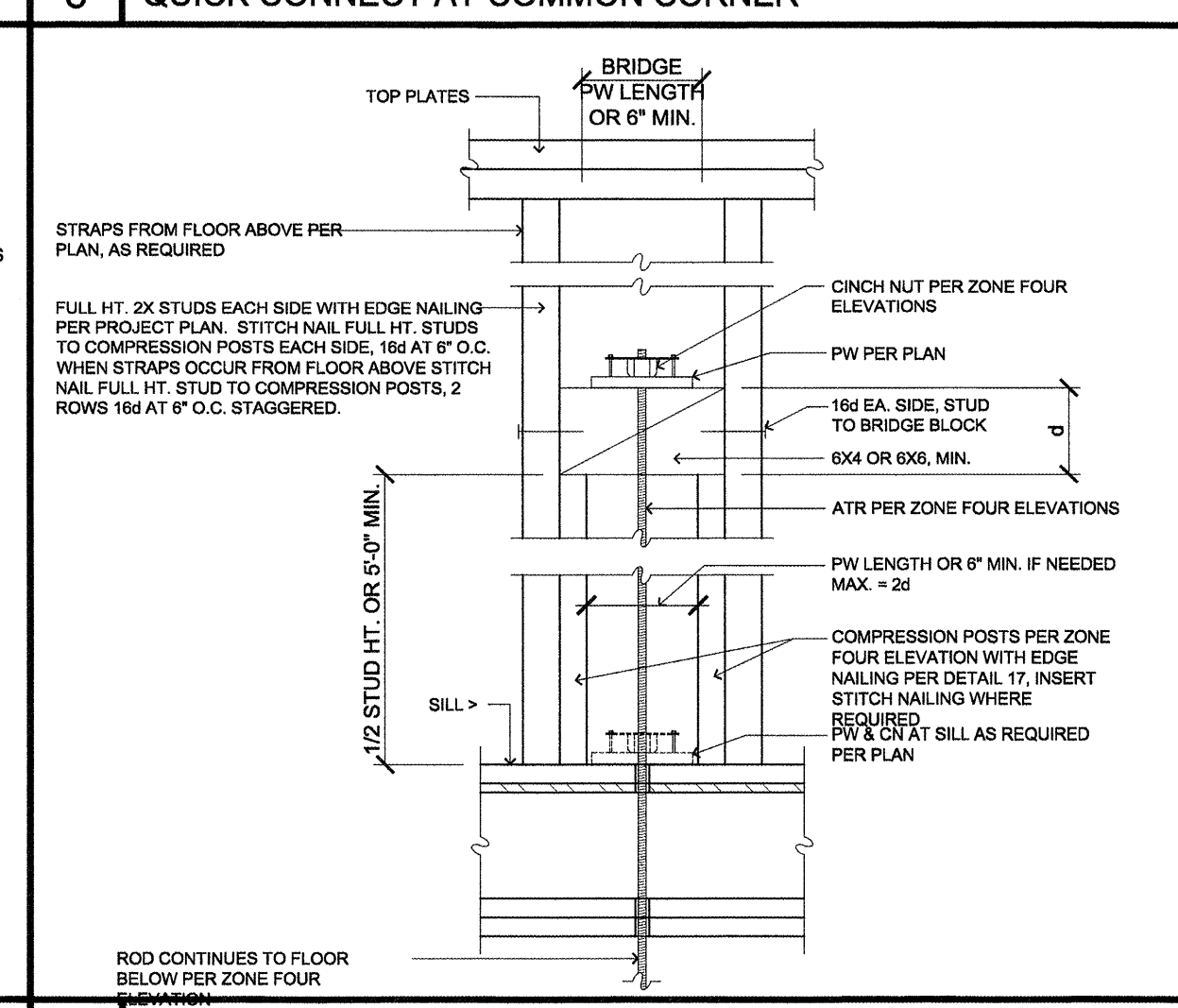
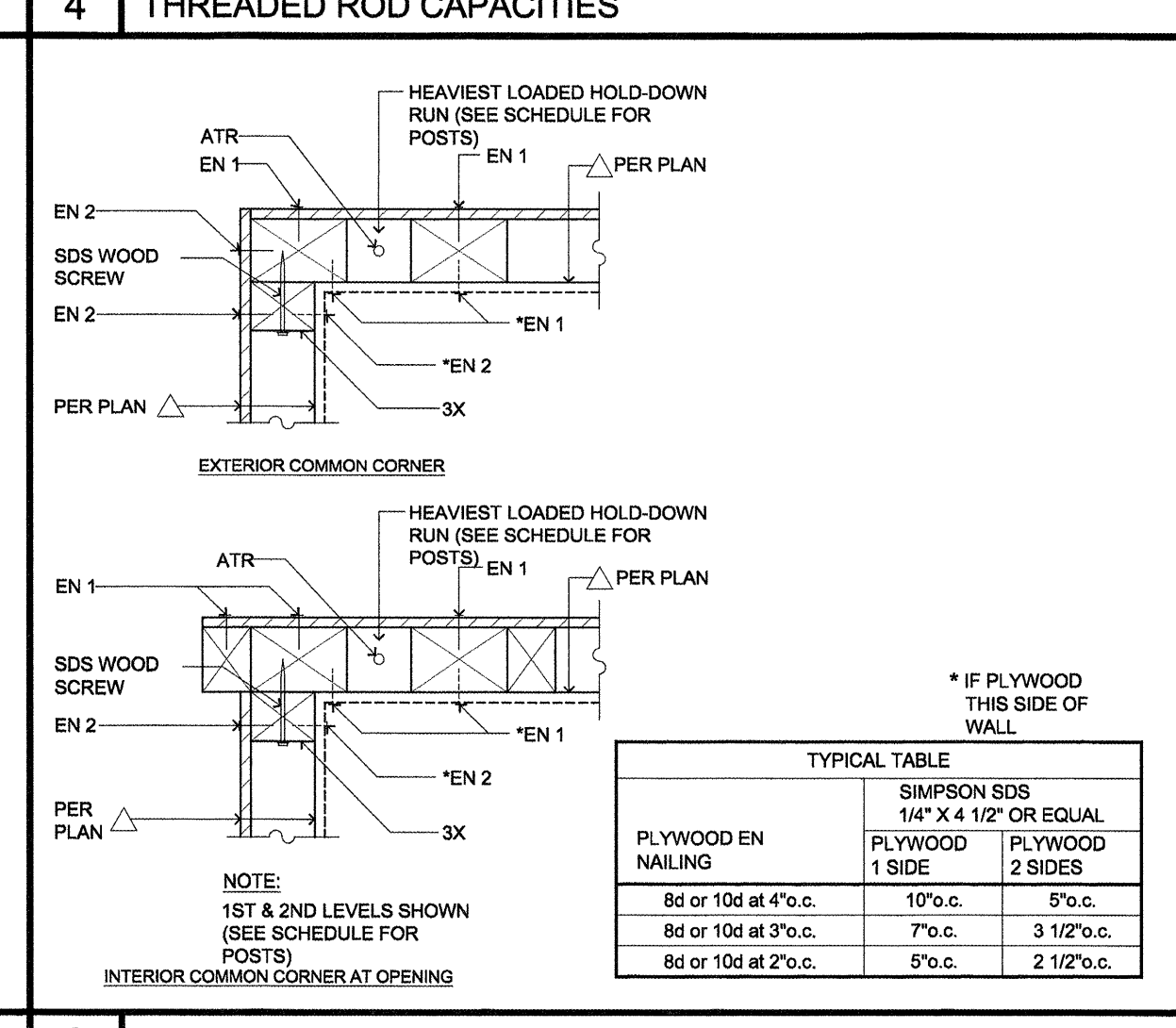
NOTE: VALUES BASED ON AISC 13TH EDITION, SECTION F-11.



**ANCHOR RODS - IBC/COLA**

DIAMETER	ASTM A36	ASTM A311 1045	ASTM A193 B-7
5/8"	8973	13231	14361
3/4"	9609	19052	20709
7/8"	13079	25932	28187
1"	17082	33870	38816
1 1/8"	21620	42867	46956
1 1/4"	26691	52922	57624
1 3/8"	32296	64036	69604
1 1/2"	38435	76208	82835
1 3/4"	52345	103728	112748

NOTE: VALUES BASED ON AISC 13TH EDITION, EQUATION J3-1.



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**ZONE FOUR QUICK CONNECT TYP. DETAILS**

DATE: 8/28/2015  
 REVISED DATE: 9/22/2015

**SHEET S2.7a**