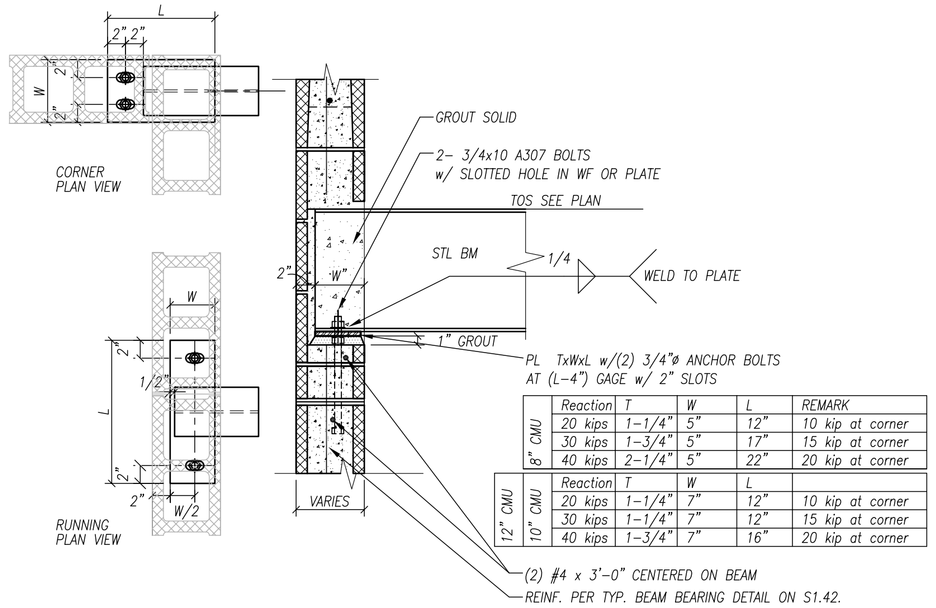


	Reaction	T	W	L	REMARK
8" CMU	20 kips	1-1/4"	5"	12"	10 kip at corner
	30 kips	1-3/4"	5"	17"	15 kip at corner
	40 kips	2-1/4"	5"	22"	20 kip at corner

	Reaction	T	W	L	
12" CMU 10" CMU	20 kips	1-1/4"	7"	12"	10 kip at corner
	30 kips	1-1/4"	7"	12"	15 kip at corner
	40 kips	1-3/4"	7"	16"	20 kip at corner

TYPICAL BEAM POCKET IN MASONRY WALL

1 SCALE : 1" = 1'-0"

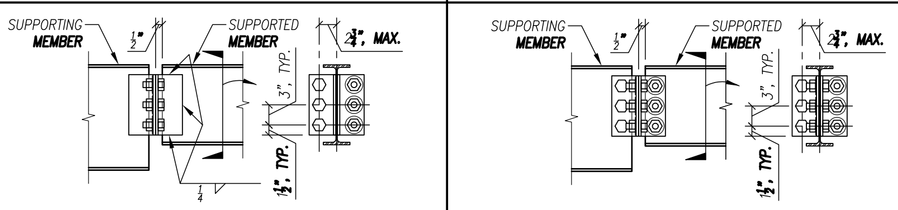
TYP. BEAM POCKET IN MASONRY WALL.dwg

Typ. Beam Shear Splice - Double Angle Connection

¾"ø A325-N BOLTS – E70XX ELECTRODES – Fy = 36 ksi ANGLES – Fy = 50 ksi BEAMS – ANGLE = (4) L4x4x¼

TYPE GA: CONNECTION TO BEAM: WELDED

TYPE GB: CONNECTION TO BEAM: BOLTED



MEMBER DEPTH	ROWS OF BOLTS	CAPACITY (k)	MEMBER DEPTH	ROWS OF BOLTS	CAPACITY (k)
W8	2	17 (21)	W8	2	11 (15)
W10	2	19 (21)	W10	2	12 (15)
W12	3	30 (36)	W12	3	25 (30)
W14	3	35	W14	3	29
W16	4	50	W16	4	48
W18	5	73	W18	5	64
W21	6	100	W21	6	89
W24	7	129	W24	7	116
W27	8	168	W27	8	154
W30	9	189	W30	9	175
W33	10	220	W33	10	230
W36	11	238	W36	11	261

NOTES:
1. CONNECTION CAPACITY MUST MEET OR EXCEED DEMAND SHOWN ON PLAN. OTHERWISE USE ALTERNATE CONNECTION.
2. PROVIDE FULL DEPTH ANGLES AT ALL CONNECTIONS UNLESS NOTED OTHERWISE.
3. ALL HOLES ARE STANDARD HOLES.
4. THE NUMBER OF BOLTS IS THE MAXIMUM NUMBER THAT CAN BE PUT WITHIN THE DEPTH OF THE BEAM BASED ON TYPICAL BOLT SPACING AND EDGE DISTANCES.
5. NUMBERS IN () ARE FOR BEAM SIZES EQUAL TO OR GREATER THAN W8X15, W10X17 OR W12X19
6. CAPACITIES ARE UNFACTORED.
7. SEE F/S1.50 FOR BLOCK SHEAR CAPACITY LIMITS ON WEB.

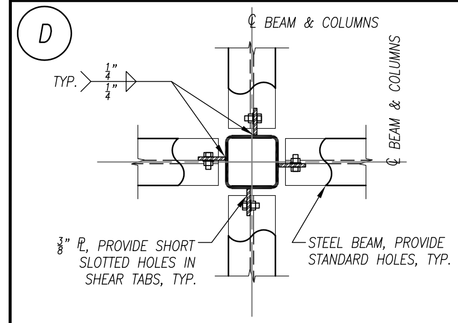
G

Typ. Shear Tab Connections

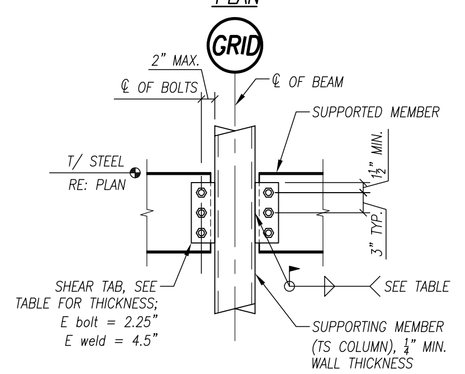
¾"ø A325-N BOLTS – E70XX ELECTRODES – Fy = 46 ksi HSS – Fy = 35 ksi PIPES – PLATE THICKNESS = ⅜"

CONNECTION TO SUPPORTED MEMBER: BOLTED
CONNECTION TO SUPPORTING MEMBER: WELDED

D

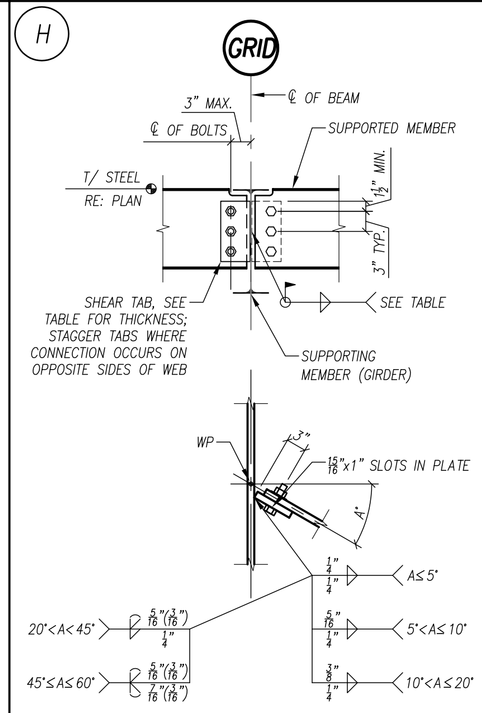


PLAN



CONNECTION TO SUPPORTED MEMBER: BOLTED
CONNECTION TO SUPPORTING MEMBER: WELDED

H



MEMBER DEPTH	ROWS OF BOLTS	℄ THICKNESS	WELD	MIN. HSS WALL THICKNESS	CAPACITY (KIPS)	
					¾"ø BOLTS	⅞"ø BOLTS
W8, W10	2	¼"	¼"	¼"	8.2	8.2
W12, W14	3	¼"	¼"	¼"	16.3	18.2
W16	4	¼"	¼"	¼"	26.1	32.4
W18	5	¼"	¼"	¼"	36.3	49.3
W21	6	⅜"	¼"	¼"	46.3	62.9
W24	7	⅜"	¼"	¼"	56.4	76.5
W27	8	⅜"	5/16"	5/16"	61.8	83.9
W30, W33, W36	9	7/16"	⅜"	⅜"	67.2	91.1
–	–	–	–	–	–	–

NOTES:
ASSUMPTIONS: (DERIVED FROM HSS CONNECTIONS MANUAL, 1997, TABLES 4-8, 4-9, AND 9TH ED. ASD CONNECTIONS MANUAL, VOL. II, TABLE C-1)
1. FLEXIBLE SUPPORT USING A325-N BOLTS IN SHORT SLOTTED HOLES.
2. b/t < 37.3 FOR 46ksi TUBE STEEL. (i.e. ¼" TYPICAL, 5/16" TS8 AND LARGER)
3. E70XX WELD ELECTRODES.
4. Fy = 36ksi FOR SHEAR TABS.
5. BLOCK SHEAR AND BENDING CAPACITY OF COPED MEMBERS MAY GOVERN CAPACITY AND SHOULD BE CHECKED SEPARATELY, SEE F/S1.50.
6. MINIMUM WEB THICKNESS, tw FOR WIDE FLANGE BEAMS IS 5/16".
7. PROVIDE FULL DEPTH SHEAR TABS FOR ALL CONNECTIONS UNLESS NOTED OTHERWISE.
8. WHERE COPED ROOF BEAMS OCCUR, USE 1 LESS BOLT THAN # OF BOLTS REQUIRED.
9. CONNECTION CAPACITY MUST MEET OR EXCEED REACTION SHOWN ON PLAN OTHERWISE CONTACT STRUCTURAL ENGINEER FOR ALTERNATE CONNECTION.
10. SEE TABLE A/S1.50 FOR WIDE FLANGE COLUMN SONNECTION CAPACITIES.

SHEET NOTES

1. Typical details shown on this sheet generally are NOT referenced from any other drawings on the project. It is the general contractor's responsibility to understand and apply typical details where and as applicable on the project as needed.

2. Standard details shown on this sheet MAY be referenced on plans to clarify a particular condition.

3. Detail designations (i.e. 5/SX.X) shown are for convenience in communication between the contractor and engineer.

4. See Structural Notes & General Notes, Sheet S1.0 for additional information.

TWHARTMANN engineering
Consulting Structural Engineers
6790 NORTH FRANKLIN AVENUE
LOVELAND, CO 80538
Ph: (970) 593 6223 FAX: (970) 593 6227
www.twhartmann.com

TwHartmann Inc.
6790 N. Franklin Ave.
Loveland, CO 80538

TwHartmann Inc. Standard Drawing Sheets

TYPICAL CONNECTION NOTES AND DETAILS CONTINUED
(SHEET SIZE: 24x36)

DRAWN BY: NAK
DESIGNED BY: TWH
CHECKED BY: TWH
ISSUED FOR PERMIT:
ISSUED FOR CONSTRUCTION:
FOUNDATION PERMIT:
DRILLED PIER PACKAGE:
FOUNDATION PERMIT PACKAGE:
–
–
–
–
–

STANDARDS

S1.50b