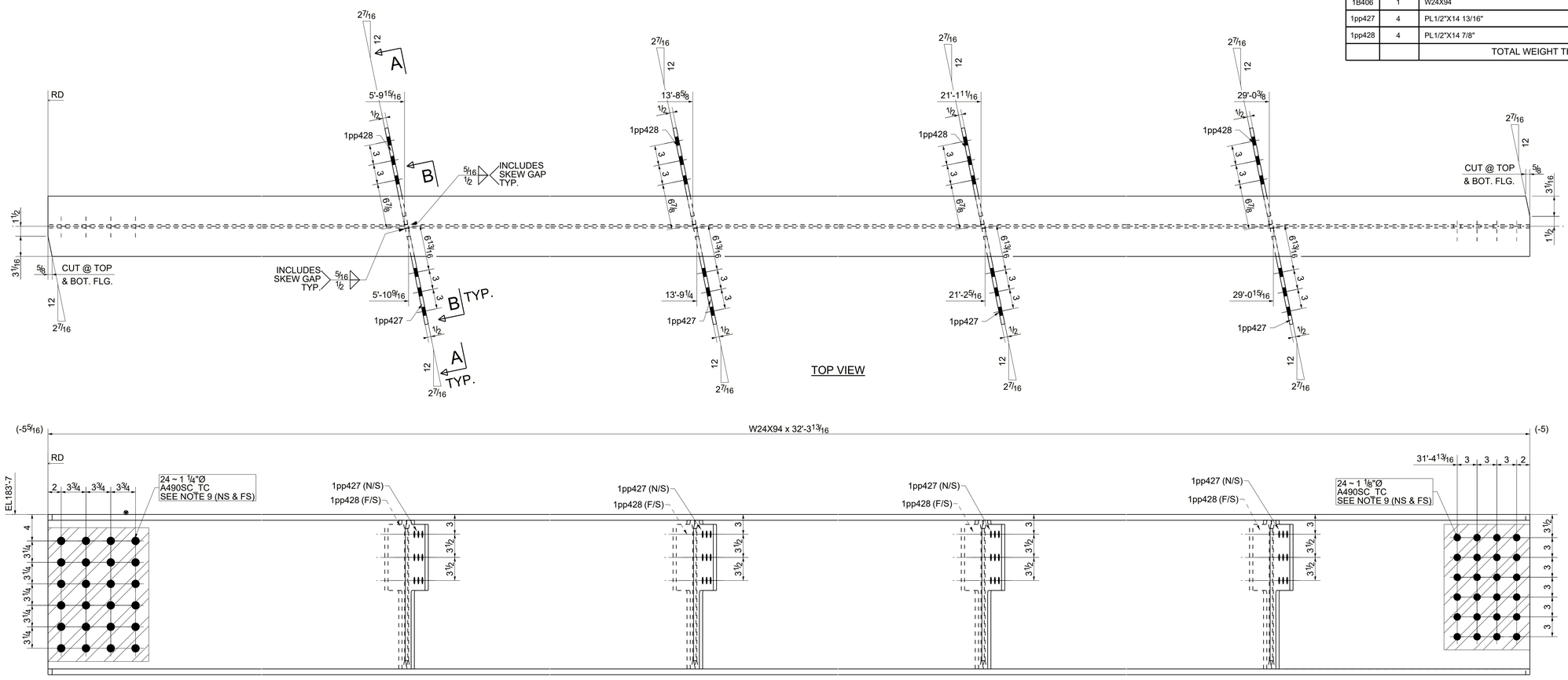
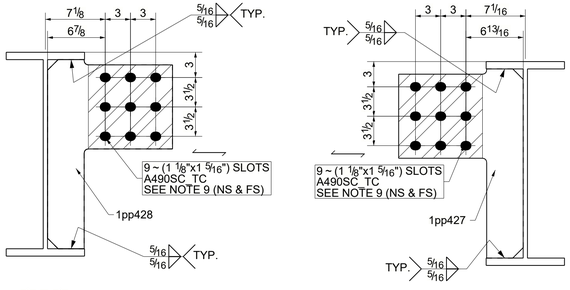
BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
1B406	1	BEAM			SQ-2
1B406	1	W24X94	32'-3 13/16"	3046	A992
1pp427	4	PL1/2"X14 13/16"	1'-10 1/2"	114	A572-50
1pp428	4	PL1/2"X14 7/8"	1'-10 1/2"	114	A572-50
		TOTAL WEIGHT THIS DRAWING		3275	



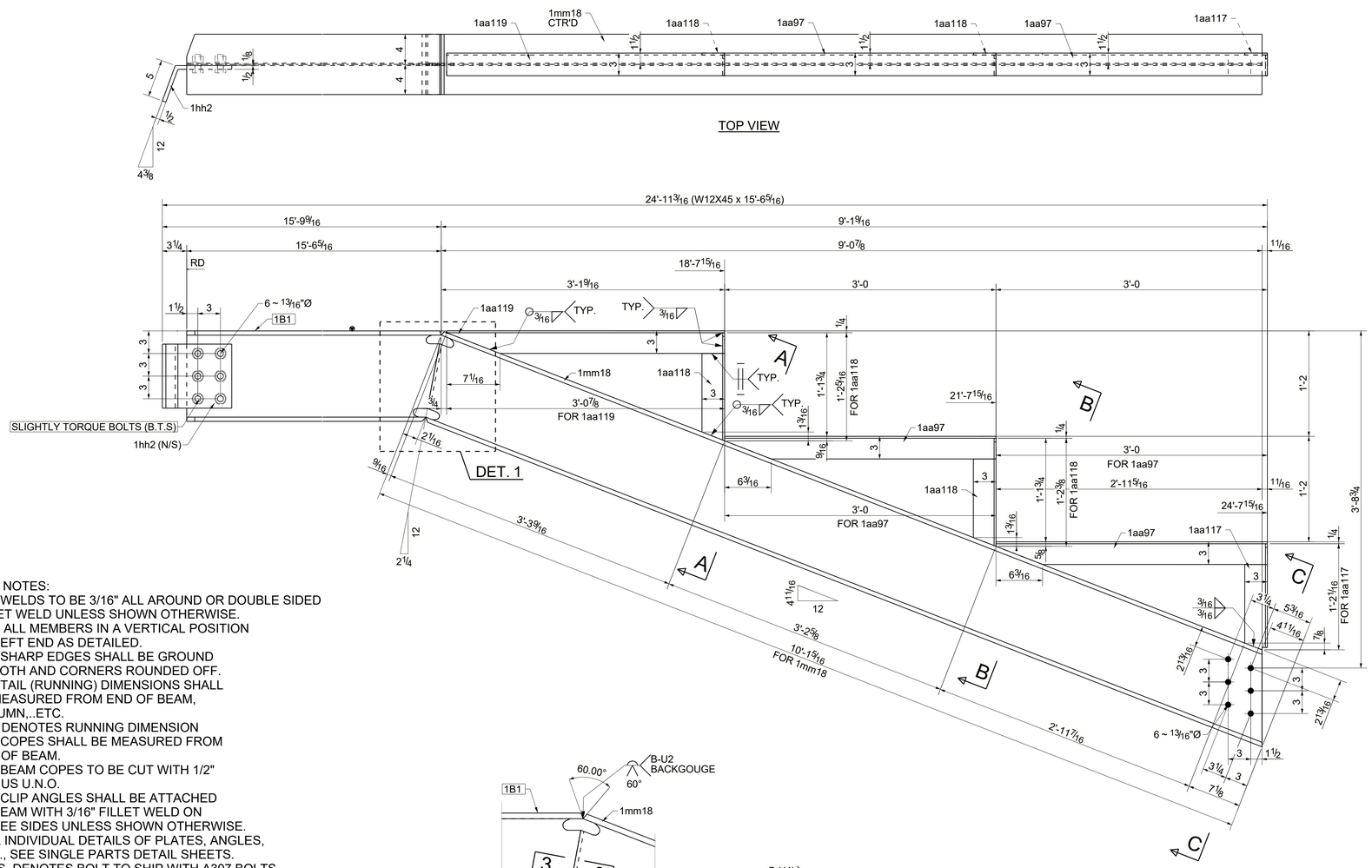
SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
8. B.T.S.DENOTES BOLT TO SHIP"SNUG TIGHT" WITH NOTED BOLTS. ASSEMBLE AFTER PAINTING/GALV.
9. HOLE PATTERNS NOTED "A325SC-TC" OR "A490SC-TC" ARE FOR SLIP CRITICAL BOLTS. PROVIDE SHERWIN WILLIAMS ZINC CLAD 4100 ORGANIC ZINC-RICH EPOXY PRIMER AT CONTACT SURFACES. SURFACE PREP: SSPC-SP6 THE MINIMUM AREA OF THIS PAINT IS THE HOLE DIAMETER +2" AT HATCH AREAS SHOWN THUS:

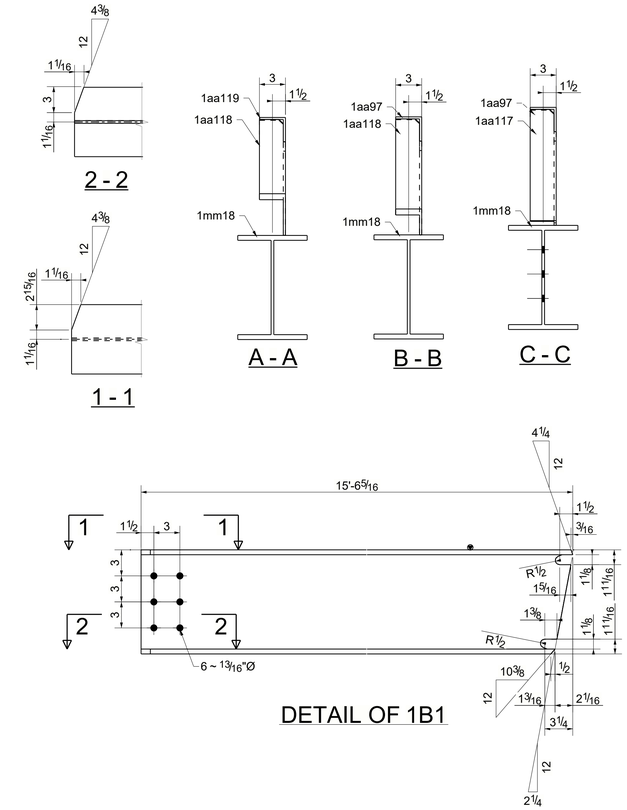


A - A

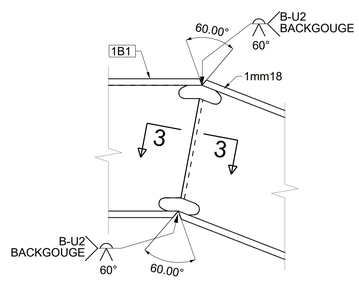
B - B

ONE - BEAM - 1B406

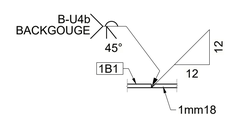




SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. HOLE PATTERNS NOTED "A325SC-TC" ARE FOR SLIP CRITICAL BOLTS. DO NOT ADD PAINT AT CONTACT SURFACES. CONTACT SURFACES ARE TO BE FREE OF BURRS AND ALL FOREIGN MATERIAL.
11. SHOP CLOSE ALL GAPS.



DETAIL 1



3 - 3

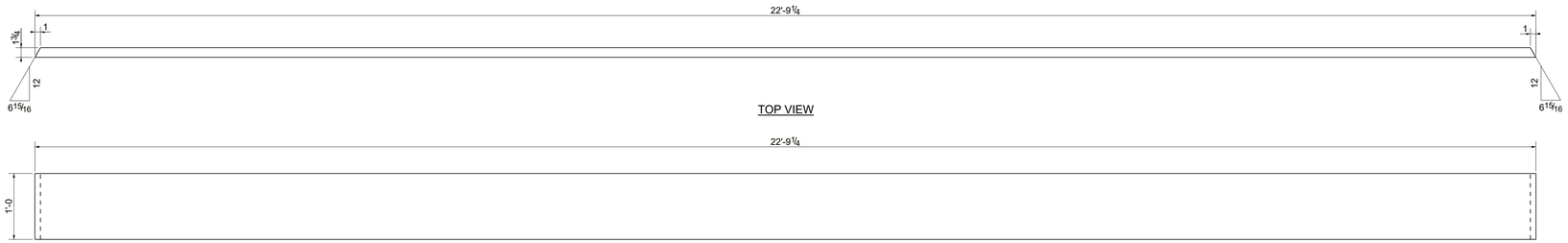
ONE - BEAM - 1B1

BILL OF MATERIAL

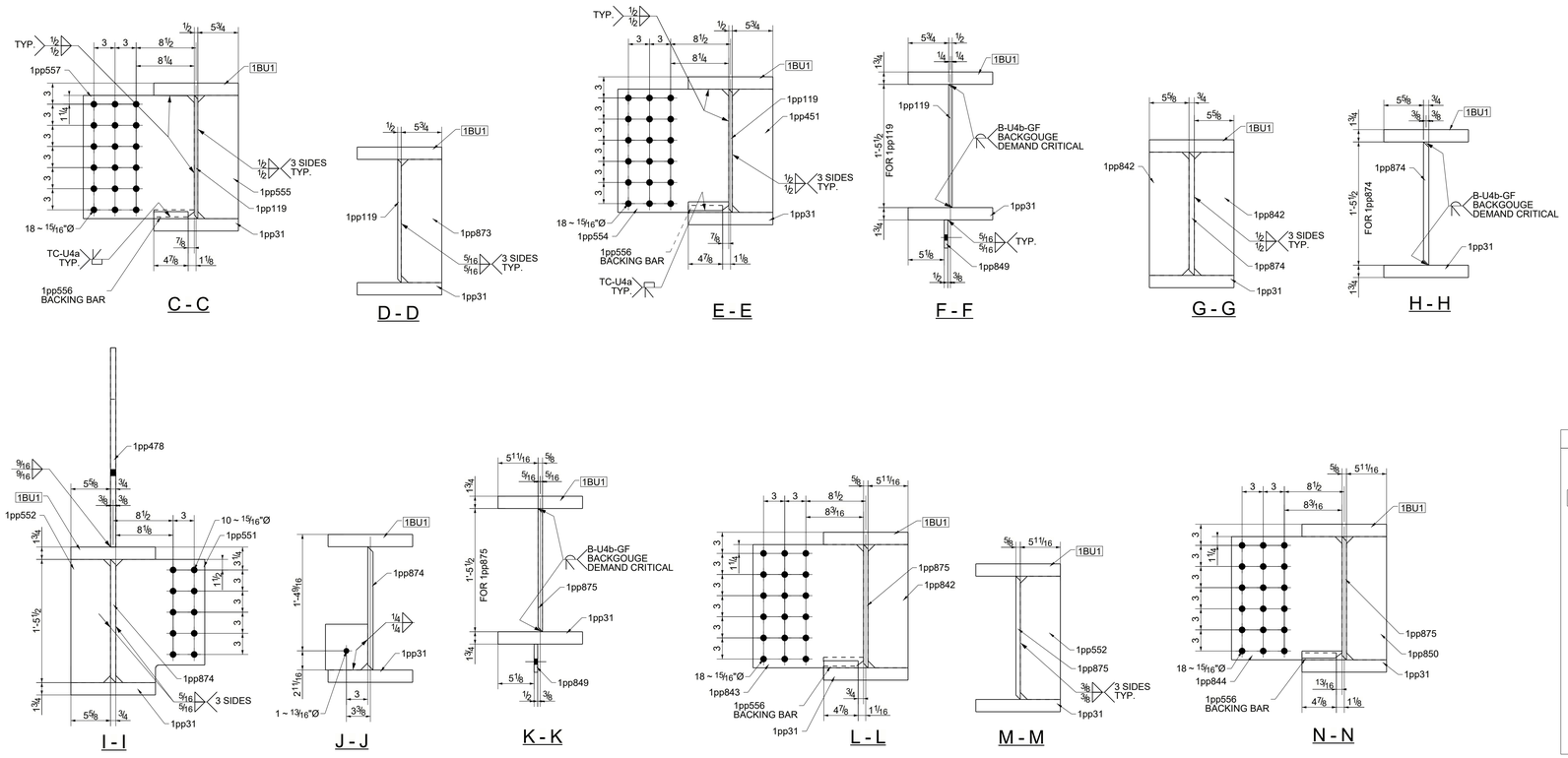
MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
1B1	1	BEAM			SQ-1/BEV-1
1B1	1	W12X45	15'-6 5/16"	692	A992
1aa97	2	L3X3X1/4	3'-0"	29	A36
1aa117	1	L3X3X1/4	1'-2 1/16"	6	A36
1aa118	2	L3X3X1/4	1'-2 5/16"	12	A36
1aa119	1	L3X3X1/4	3'-0 7/8"	15	A36
1hh2	1	BPL1/2"X8 1/2"	0'-11 13/16"	15	A572-50
1mm18	1	W12X45	10'-1 5/16"	451	A992
		TOTAL WEIGHT THIS DRAWING		1219	

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
1BU1	1	PLATE			BEV-2
1BU1	1	PL1 3/4"X12"	22'-9 1/4"	1621	SFRS A572-50
1pp31	1	PL1 3/4"X12"	22'-9 1/4"	1621	A572-50
1pp119	1	PL1/2"X17 1/2"	4'-8 5/8"	134	A572-50
1pp451	1	PL1 1/4"X5 3/4"	1'-5 1/2"	35	A572-50
1pp478	1	PL3/4"X28 5/16"	4'-7 1/16"	286	A572-50
1pp551	1	PL5/8"X12 5/8"	1'-5 1/2"	36	A572-50
1pp552	3	PL5/8"X5 5/8"	1'-5 1/2"	52	A572-50
1pp554	1	PL1 1/4"X15 3/4"	1'-5 1/2"	96	A572-50
1pp555	1	PL1"X5 3/4"	1'-5 1/2"	28	A572-50
1pp556	4	PL1/4"X1"	0'-4 7/8"	1	A36
1pp557	1	PL1"X15 3/4"	1'-5 1/2"	77	A572-50
1pp842	5	PL1 1/4"X5 11/16"	1'-5 1/2"	173	A572-50
1pp843	1	PL1 1/4"X15 11/16"	1'-5 1/2"	95	A572-50
1pp844	1	PL1"X15 11/16"	1'-5 1/2"	76	A572-50
1pp849	2	PL1/2"X4"	0'-6"	7	A572-50
1pp850	1	PL1"X5 11/16"	1'-5 1/2"	28	A572-50
1pp873	3	PL1/2"X5 3/4"	1'-5 1/2"	42	A572-50
1pp874	1	PL3/4"X17 1/2"	14'-3"	609	A572-50
1pp875	1	PL5/8"X17 1/2"	3'-9 5/8"	133	A572-50
1pp887	1	PL3/8"X6"	0'-6 1/2"	4	A36
		TOTAL WEIGHT THIS DRAWING		5157	



DETAIL OF 1BU1



SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN...ETC.
"RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC... SEE SINGLE PARTS DETAIL SHEETS.
8. B.T.S.DENOTES BOLT TO SHIP"SNUG TIGHT" WITH NOTED BOLTS. ASSEMBLE AFTER PAINTING/GALV.
9. HOLE PATTERNS NOTED "A325SC-TC" OR "A490SC-TC" ARE FOR SLIP CRITICAL BOLTS.
PROVIDE SHERWIN WILLIAMS ZINC CLAD 4100 ORGANIC ZINC-RICH EPOXY PRIMER AT CONTACT SURFACES.
SURFACE PREP: SSPC-SP6
THE MINIMUM AREA OF THIS PAINT IS THE HOLE DIAMETER +2" AT HATCH AREAS SHOWN THUS:

SEISMIC SHOP NOTE :

SUMMARY of SFRS Requirements

(REF: S0.1 Section G)

PROTECTED ZONE NOTE: (from Section F4.5C AISC 341)

HATCHED AREAS SHOWN INDICATE SFRS PROTECTED ZONES THAT INCLUDE THE STEEL CORE OF BRACES AND ELEMENTS THAT CONNECT STEEL CORE TO BEAMS AND COLUMNS, AND SHALL SATISFY THE REQUIREMENTS OF SECTION D1.3 (AISC 341)

THE PROTECTED ZONE OF BRACING MEMBERS INCLUDES THE CENTER ONE-QUARTER OF THE BRACE LENGTH, AND A ZONE ADJACENT TO EACH CONNECTION EQUAL TO THE LARGEST DIMENSION OF THE BRACE CROSS SECTION MINIMUM. THE PROTECTED ZONE ALSO INCLUDES GUSSET PLATES AND AREAS WHERE BOLTS, WELDS, ANGLES, ETC. CONNECT THE BRACE TO THE GUSSET PLATE.

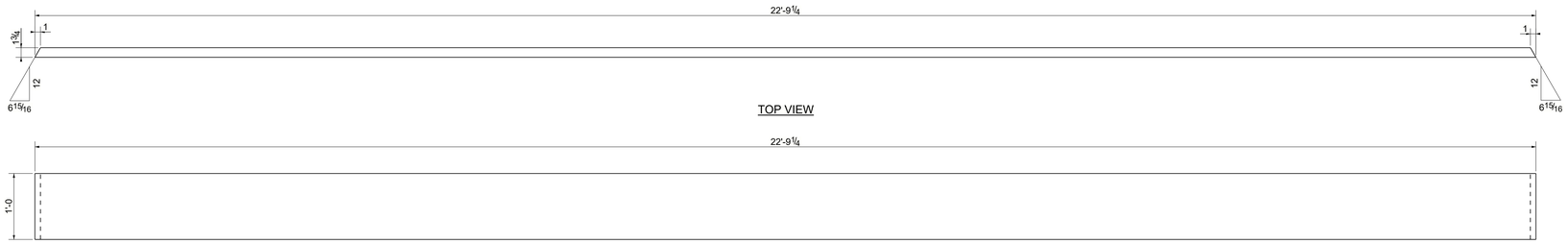
WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING ARE PROHIBITED.

WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS OR OTHER ATTACHMENTS ARE PROHIBITED WITHIN THE PROTECTED ZONE.

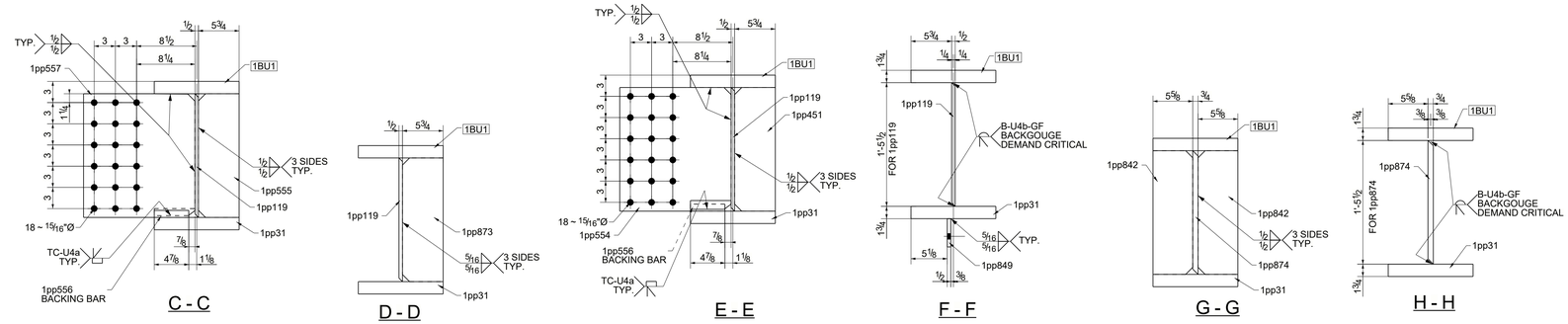
WORK THIS SHEET WITH 1BU

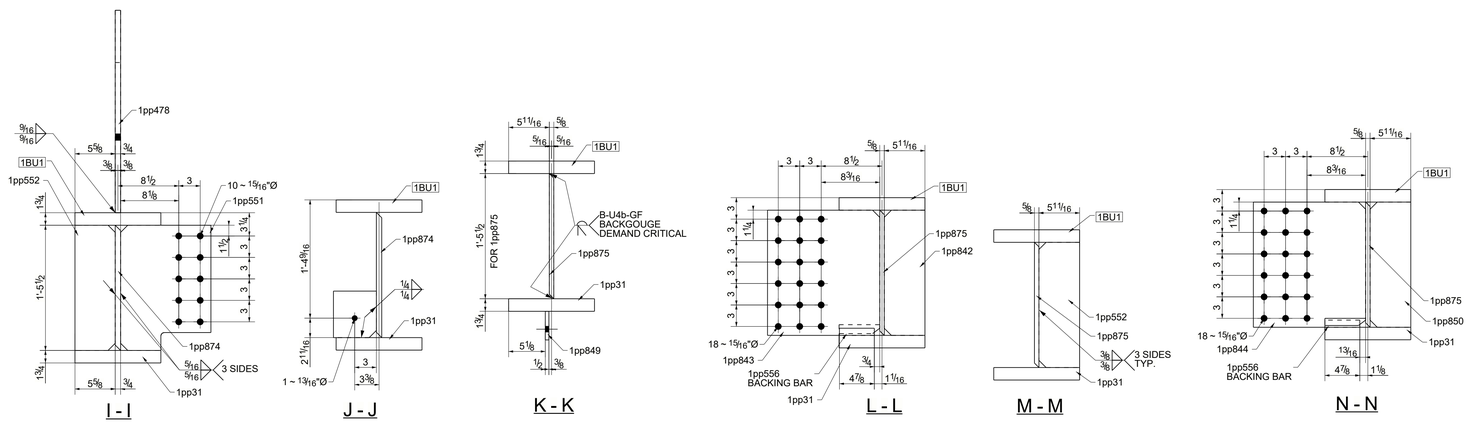
DEMAND CRITICAL WELD NOTE:
WELDS NOTED "DEMAND CRITICAL" ARE TO BE PER SECTION A3.4B & 12.3 OF AISC-341-16.

ONE - PLATE - 1BU1



DETAIL OF 1BU1





WORK THIS SHEET WITH 1BU

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
1BU1	1	PLATE			BEV-2
1BU1	1	PL1 3/4"X12"	22'-9 1/4"	1621	SFRS A572-50
1pp31	1	PL1 3/4"X12"	22'-9 1/4"	1621	A572-50
1pp119	1	PL1/2"X17 1/2"	4'-8 5/8"	134	A572-50
1pp451	1	PL1 1/4"X5 3/4"	1'-5 1/2"	35	A572-50
1pp478	1	PL3/4"X28 5/16"	4'-7 1/16"	286	A572-50
1pp551	1	PL5/8"X12 5/8"	1'-5 1/2"	36	A572-50
1pp552	3	PL5/8"X5 5/8"	1'-5 1/2"	52	A572-50
1pp554	1	PL1 1/4"X15 3/4"	1'-5 1/2"	96	A572-50
1pp555	1	PL1"X5 3/4"	1'-5 1/2"	28	A572-50
1pp556	4	PL1/4"X1"	0'-4 7/8"	1	A36
1pp557	1	PL1"X15 3/4"	1'-5 1/2"	77	A572-50
1pp842	5	PL1 1/4"X5 11/16"	1'-5 1/2"	173	A572-50
1pp843	1	PL1 1/4"X15 11/16"	1'-5 1/2"	95	A572-50
1pp844	1	PL1"X15 11/16"	1'-5 1/2"	76	A572-50
1pp849	2	PL1/2"X4"	0'-6"	7	A572-50
1pp850	1	PL1"X5 11/16"	1'-5 1/2"	28	A572-50
1pp873	3	PL1/2"X5 3/4"	1'-5 1/2"	42	A572-50
1pp874	1	PL3/4"X17 1/2"	14'-3"	609	A572-50
1pp875	1	PL5/8"X17 1/2"	3'-9 5/8"	133	A572-50
1pp887	1	PL3/8"X6"	0'-6 1/2"	4	A36
		TOTAL WEIGHT THIS DRAWING		5157	

SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN...ETC.
"RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC... SEE SINGLE PARTS DETAIL SHEETS.
8. B.T.S.DENOTES BOLT TO SHIP"SNUG TIGHT" WITH NOTED BOLTS. ASSEMBLE AFTER PAINTING/GALV.
9. HOLE PATTERNS NOTED "A325SC-TC" OR "A490SC-TC" ARE FOR SLIP CRITICAL BOLTS.
PROVIDE SHERWIN WILLIAMS ZINC CLAD 4100 ORGANIC ZINC-RICH EPOXY PRIMER AT CONTACT SURFACES.
SURFACE PREP: SSPC-SP6
THE MINIMUM AREA OF THIS PAINT IS THE HOLE DIAMETER +2" AT HATCH AREAS SHOWN THUS:

SEISMIC SHOP NOTE :

SUMMARY of SFRS Requirements

(REF: S0.1 Section G)

PROTECTED ZONE NOTE: (from Section F4.5C AISC 341)

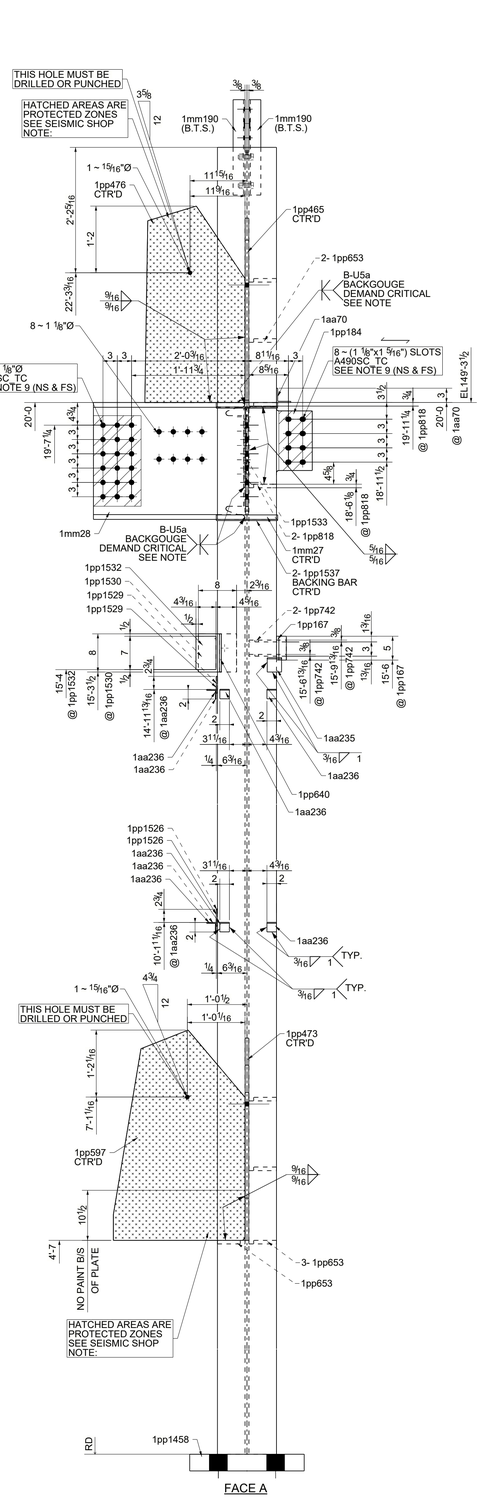
HATCHED AREAS SHOWN INDICATE SFRS PROTECTED ZONES THAT INCLUDE THE STEEL CORE OF BRACES AND ELEMENTS THAT CONNECT STEEL CORE TO BEAMS AND COLUMNS, AND SHALL SATISFY THE REQUIREMENTS OF SECTION D1.3 (AISC 341)

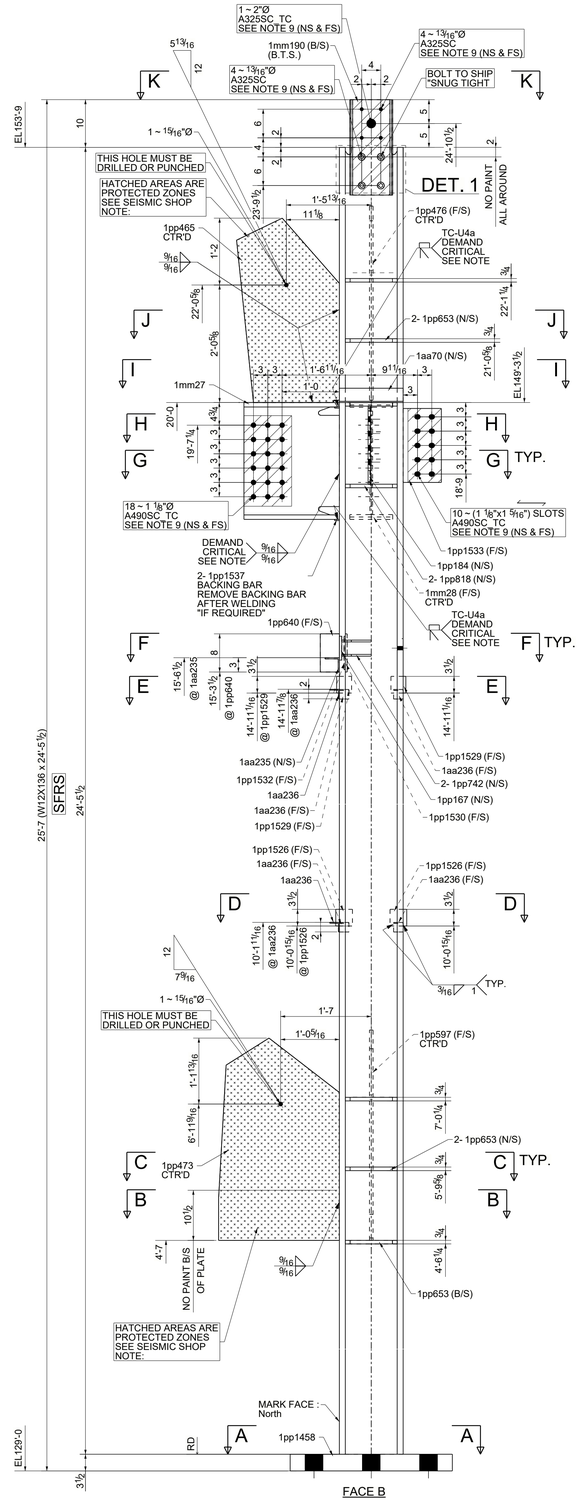
THE PROTECTED ZONE OF BRACING MEMBERS INCLUDES THE CENTER ONE-QUARTER OF THE BRACE LENGTH, AND A ZONE ADJACENT TO EACH CONNECTION EQUAL TO THE LARGEST DIMENSION OF THE BRACE CROSS SECTION MINIMUM. THE PROTECTED ZONE ALSO INCLUDES GUSSET PLATES AND AREAS WHERE BOLTS, WELDS, ANGLES, ETC. CONNECT THE BRACE TO THE GUSSET PLATE.

WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING ARE PROHIBITED.

WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS OR OTHER ATTACHMENTS ARE PROHIBITED WITHIN THE PROTECTED ZONE.

ONE - PLATE - 1BU1





ONE - COLUMN - 1C59

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
1C59	1	COLUMN			SQ-2
1C59	1	W12X136	24'-5 1/2"	3321	SFRS A992
1aa70	1	L3X3X1/4	1'-1 3/8"	5	A36
1aa235	1	L3X3X1/4	0'-3"	1	A36
1aa236	8	L2X2X3/16	0'-2"	3	A36
1mm27	1	W24X131	1'-8"	219	A992
1mm28	1	W24X103	2'-7 3/4"	273	A992
1mm190	2	C9X15	1'-8"	50	A36
1pp167	1	PL1/2"X2 1/16"	0'-5"	1	A36
1pp184	1	PL1/2"X13 5/16"	1'-4 3/8"	27	A572-50
1pp465	1	PL3/4"X21 9/16"	3'-2 11/16"	142	A572-50
1pp473	1	PL3/4"X25 5/16"	3'-6 7/16"	199	A572-50
1pp476	1	PL3/4"X21"	3'-5 3/16"	161	A572-50
1pp597	1	PL3/4"X27 5/8"	3'-8 1/16"	211	A572-50
1pp640	1	PL3/8"X4"	0'-8"	3	A36
1pp653	6	PL3/4"X5 3/4"	0'-10 7/8"	79	A572-50
1pp742	2	PL3/8"X6 3/16"	0'-7 7/8"	7	A36
1pp818	2	PL3/4"X5 3/4"	0'-10 7/8"	26	A572-50
1pp1458	1	PL3 1/2"X24"	2'-10"	810	A572-50
1pp1526	2	PL1/4"X3 1/2"	0'-3 1/2"	2	A36
1pp1529	2	PL1/4"X3 1/8"	0'-3 1/2"	2	A36
1pp1530	1	PL3/8"X8"	0'-8"	7	A36
1pp1532	1	PL1/4"X4 3/16"	0'-7"	2	A36
1pp1533	1	PL1/2"X8"	1'-3 1/2"	18	A572-50
1pp1537	2	PL1/4"X1"	1'-0 7/8"	2	A36
	4	3/4"Ø A325SC BOLT	0'-2 3/4"	3	Workshop
		TOTAL WEIGHT THIS DRAWING		5573	

SEISMIC SHOP NOTE :

SUMMARY of SFRS Requirements

(REF: S0.1 Section G)

PROTECTED ZONE NOTE: (from Section F4.5C AISC 341)

HATCHED AREAS SHOWN INDICATE SFRS PROTECTED ZONES THAT INCLUDE THE STEEL CORE OF BRACES AND ELEMENTS THAT CONNECT STEEL CORE TO BEAMS AND COLUMNS, AND SHALL SATISFY THE REQUIREMENTS OF SECTION D1.3 (AISC 341)

THE PROTECTED ZONE OF BRACING MEMBERS INCLUDES THE CENTER ONE-QUARTER OF THE BRACE LENGTH, AND A ZONE ADJACENT TO EACH CONNECTION EQUAL TO THE LARGEST DIMENSION OF THE BRACE CROSS SECTION MINIMUM. THE PROTECTED ZONE ALSO INCLUDES GUSSET PLATES AND AREAS WHERE BOLTS, WELDS, ANGLES, ETC. CONNECT THE BRACE TO THE GUSSET PLATE.

WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING ARE PROHIBITED.

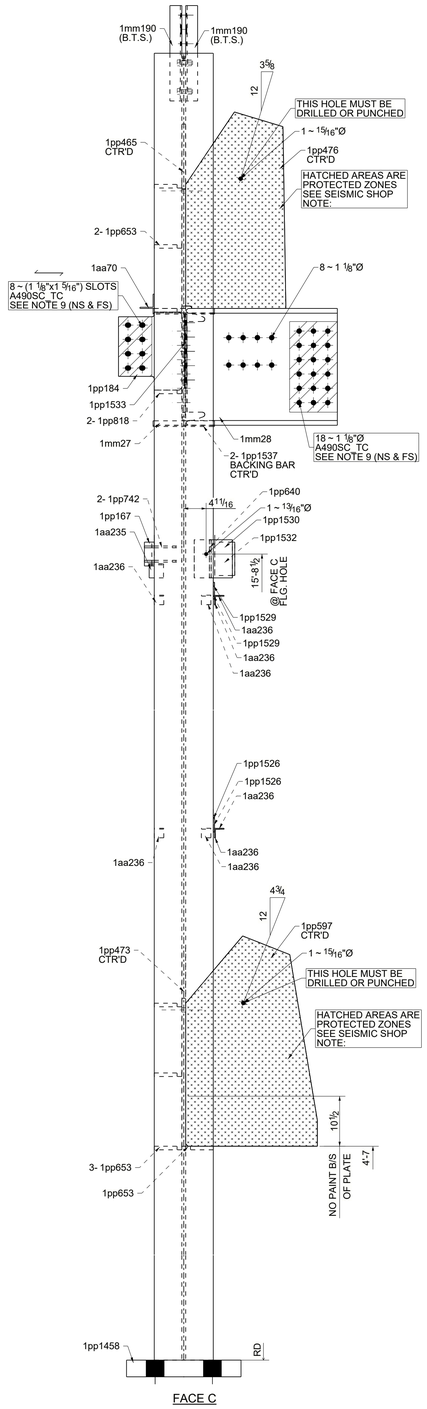
WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS OR OTHER ATTACHMENTS ARE PROHIBITED WITHIN THE PROTECTED ZONE.

REFER TO SPECIFICATIONS FOR TESTING REQUIREMENTS FOR BASE PLATES WITH THICKNESS GREATER THAN OR EQUAL TO 2".

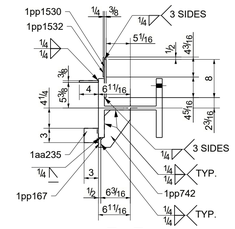
DEMAND CRITICAL WELD NOTE:
WELDS NOTED "DEMAND CRITICAL" ARE TO BE PER SECTION A3.4B & 12.3 OF AISC-341-16.

SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
8. B.T.S.DENOTES BOLT TO SHIP"SNUG TIGHT" WITH NOTED BOLTS. ASSEMBLE AFTER PAINTING/GALV.
9. HOLE PATTERNS NOTED "A325SC-TC" OR "A490SC-TC" ARE FOR SLIP CRITICAL BOLTS. PROVIDE SHERWIN WILLIAMS ZINC CLAD 4100 ORGANIC ZINC-RICH EPOXY PRIMER AT CONTACT SURFACES. SURFACE PREP: SSPC-SP6 THE MINIMUM AREA OF THIS PAINT IS THE HOLE DIAMETER +2" AT HATCH AREAS SHOWN THUS:

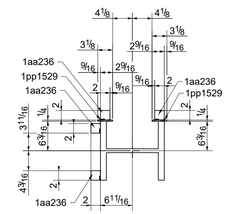
WORK THIS SHEET WITH 1C59-1



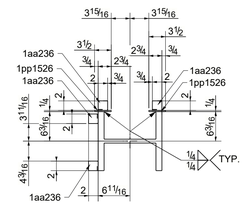
FACE C



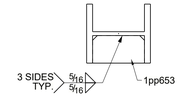
F - F



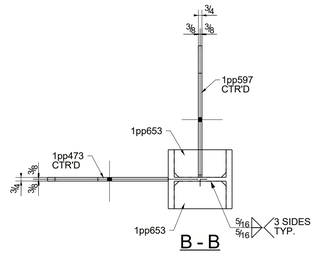
E - E



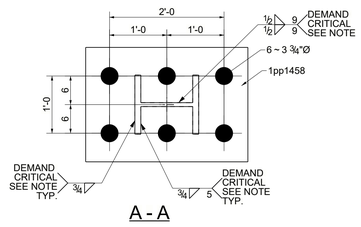
D - D



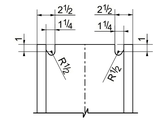
C - C



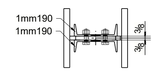
B - B



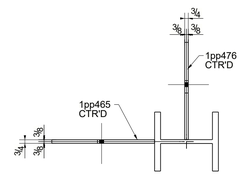
A - A



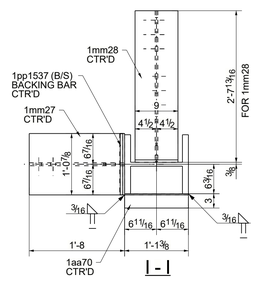
DETAIL 1



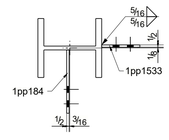
K - K



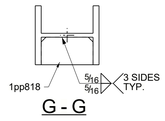
J - J



I - I



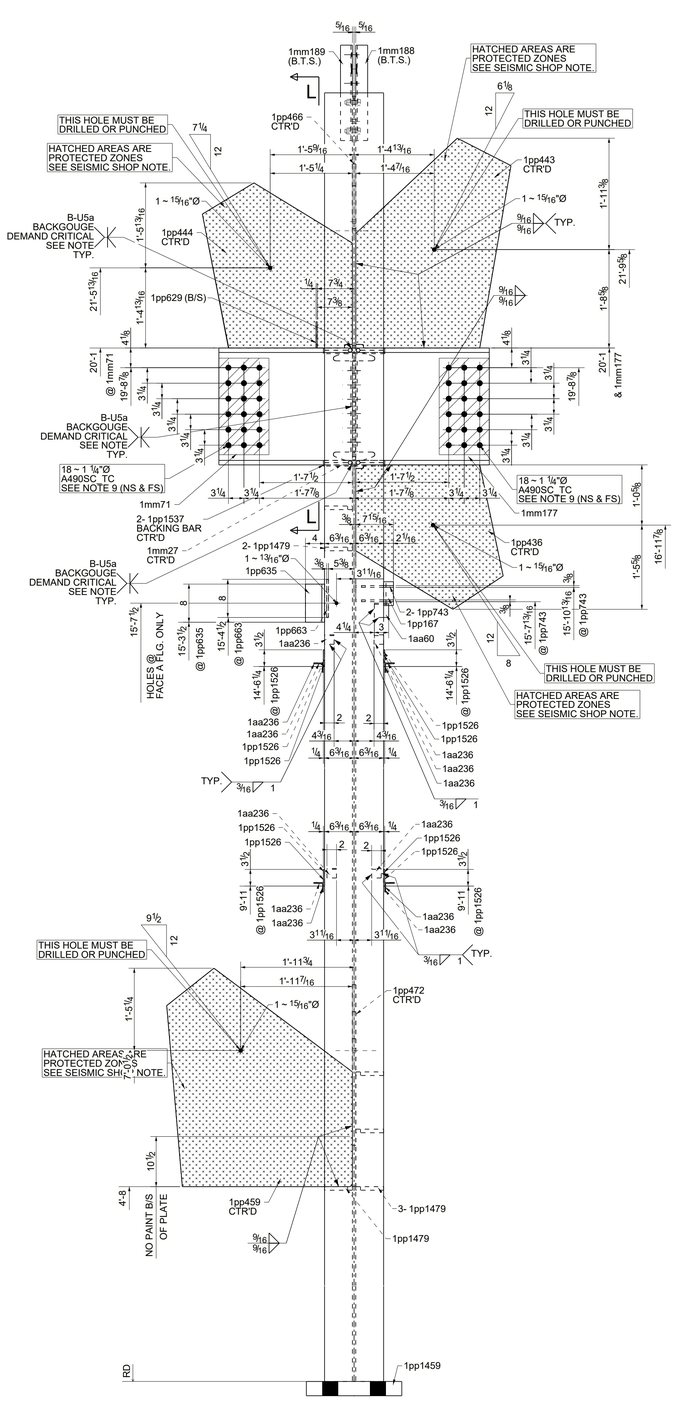
H - H

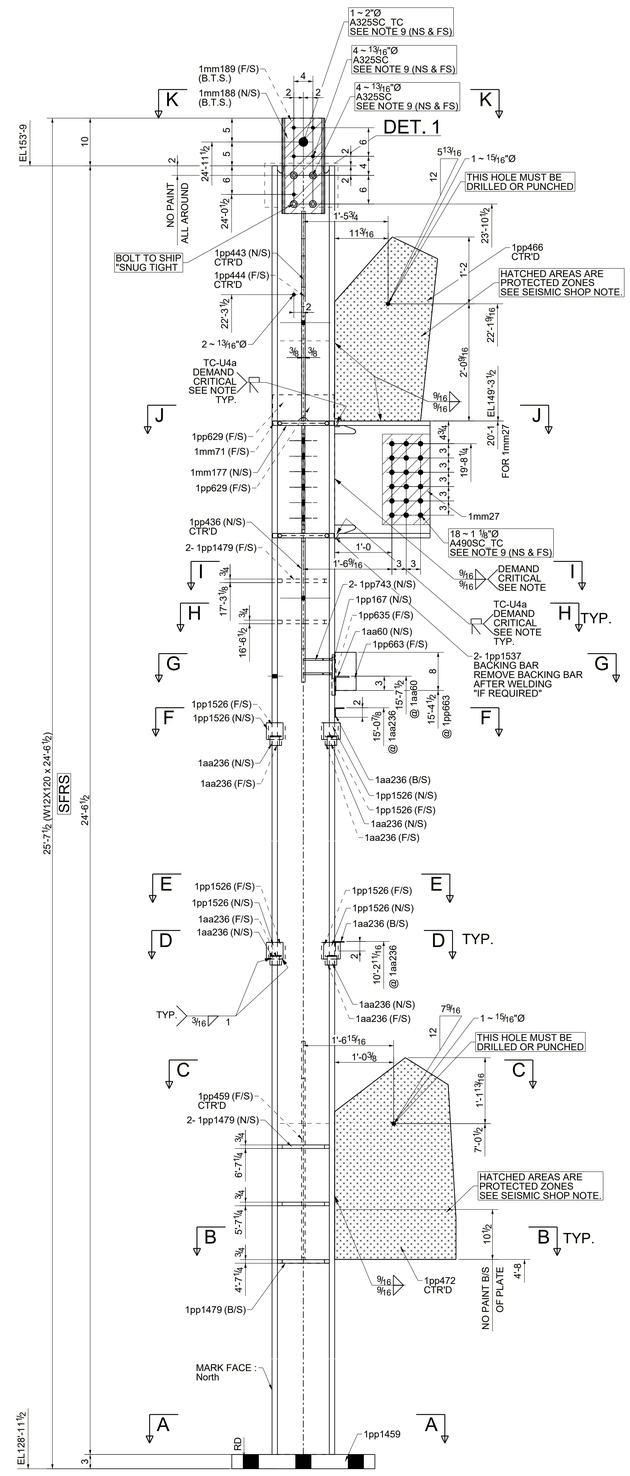


G - G

WORK THIS SHEET WITH 1C59

ONE - COLUMN - 1C59





BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
1C62	1	COLUMN			SQ-2
1C62	1	W12X120	24'-6 1/2"	2940	SFRS A992
1aa60	1	L3X3X1/4	0'-3"	1	A36
1aa236	12	L2X2X3/16	0'-2"	5	A36
1mm27	1	W24X131	1'-8"	219	A992
1mm71	1	W24X131	2'-4"	307	A992
1mm177	1	W24X131	2'-4"	307	A992
1mm188	1	C9X15	1'-8"	25	A36
1mm189	1	C9X15	1'-8"	25	A36
1pp167	1	PL1/2"X2 1/16"	0'-5"	1	A36
1pp436	1	PL3/4"X30 5/16"	2'-6 15/16"	152	A572-50
1pp443	1	PL3/4"X32 9/16"	3'-8"	225	A572-50
1pp444	1	PL3/4"X31 7/16"	2'-10 5/8"	180	A572-50
1pp459	1	PL3/4"X38 15/16"	3'-9 13/16"	291	A572-50
1pp466	1	PL3/4"X21 9/16"	3'-2 5/8"	142	A572-50
1pp472	1	PL3/4"X25 7/16"	3'-6 5/16"	199	A572-50
1pp629	2	PL1/4"X5 1/2"	0'-6 1/16"	5	A36
1pp635	1	PL3/4"X4"	0'-8"	6	A36
1pp663	1	PL3/8"X4 1/2"	0'-8"	4	A36
1pp743	2	PL3/8"X6 1/16"	0'-7 15/16"	7	A36
1pp1459	1	PL3"X20"	2'-6"	510	A572-50
1pp1479	6	PL3/4"X5 13/16"	0'-10 7/8"	80	A572-50
1pp1526	8	PL1/4"X3 1/2"	0'-3 1/2"	7	A36
1pp1537	2	PL1/4"X1"	1'-0 7/8"	2	A36
	4	3/4"Ø A325SC BOLT	0'-2 3/4"	3	Workshop
		TOTAL WEIGHT THIS DRAWING		5642	

SEISMIC SHOP NOTE :

SUMMARY of SFRS Requirements

(REF: S0.1 Section G)

PROTECTED ZONE NOTE: (from Section F4.5C AISC 341)

HATCHED AREAS SHOWN INDICATE SFRS PROTECTED ZONES THAT INCLUDE THE STEEL CORE OF BRACES AND ELEMENTS THAT CONNECT STEEL CORE TO BEAMS AND COLUMNS, AND SHALL SATISFY THE REQUIREMENTS OF SECTION D1.3 (AISC 341)

THE PROTECTED ZONE OF BRACING MEMBERS INCLUDES THE CENTER ONE-QUARTER OF THE BRACE LENGTH, AND A ZONE ADJACENT TO EACH CONNECTION EQUAL TO THE LARGEST DIMENSION OF THE BRACE CROSS SECTION MINIMUM. THE PROTECTED ZONE ALSO INCLUDES GUSSET PLATES AND AREAS WHERE BOLTS, WELDS, ANGLES, ETC. CONNECT THE BRACE TO THE GUSSET PLATE.

WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING ARE PROHIBITED.

WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS OR OTHER ATTACHMENTS ARE PROHIBITED WITHIN THE PROTECTED ZONE.

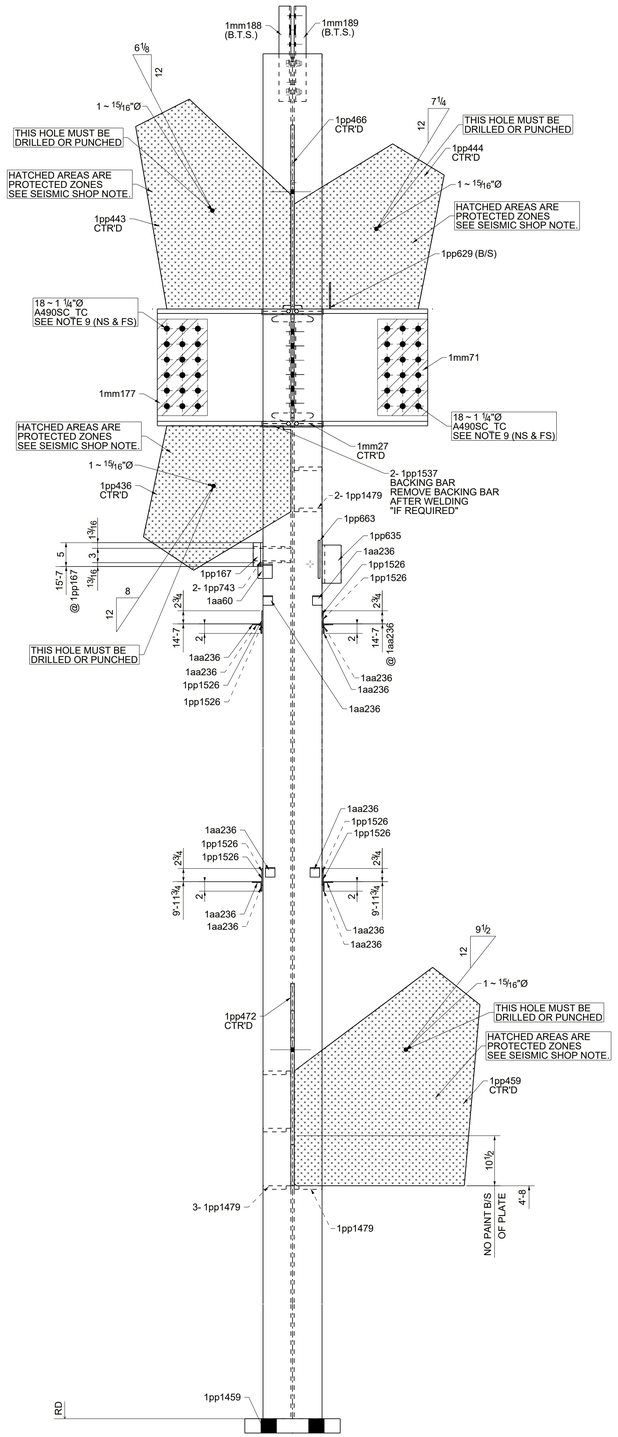
SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
8. B.T.S.DENOTES BOLT TO SHIP"SNUG TIGHT" WITH NOTED BOLTS. ASSEMBLE AFTER PAINTING/GALV.
9. HOLE PATTERNS NOTED "A325SC-TC" OR "A490SC-TC" ARE FOR SLIP CRITICAL BOLTS.
PROVIDE SHERWIN WILLIAMS ZINC CLAD 4100 ORGANIC ZINC-RICH EPOXY PRIMER AT CONTACT SURFACES.
SURFACE PREP: SSPC-SP6
THE MINIMUM AREA OF THIS PAINT IS THE HOLE DIAMETER +2" AT HATCH AREAS SHOWN THUS:

DEMAND CRITICAL WELD NOTE:
WELDS NOTED "DEMAND CRITICAL" ARE TO BE PER SECTION A3.4B & 12.3 OF AISC-341-16.

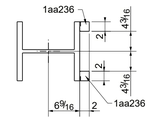
REFER TO SPECIFICATIONS FOR TESTING REQUIREMENTS FOR BASE PLATES WITH THICKNESS GREATER THAN OR EQUAL TO 2".

WORK THIS SHEET WITH 1C62-1

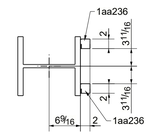
ONE - COLUMN - 1C62



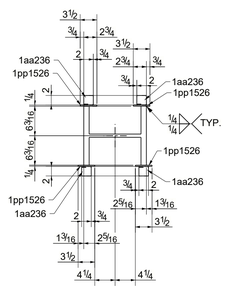
FACE C



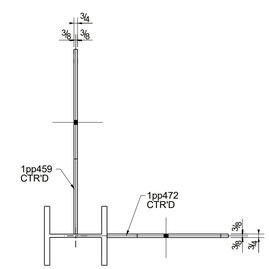
F - F



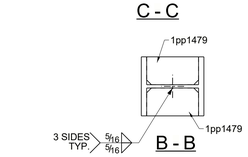
E - E



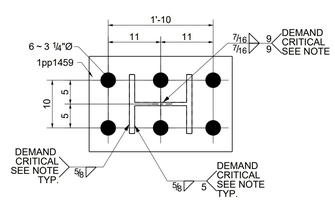
D - D



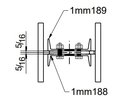
C - C



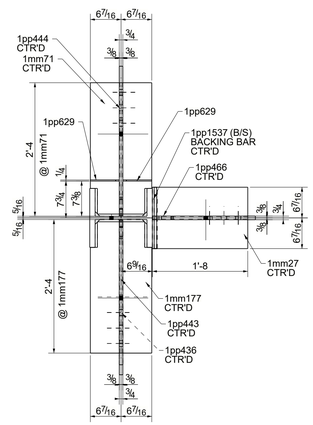
B - B



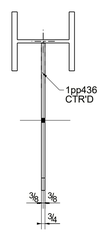
A - A



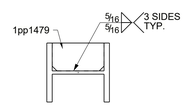
K - K



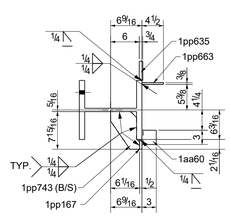
J - J



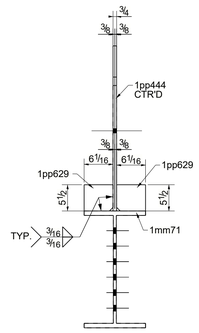
I - I



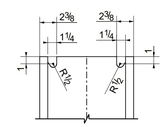
H - H



G - G



L - L



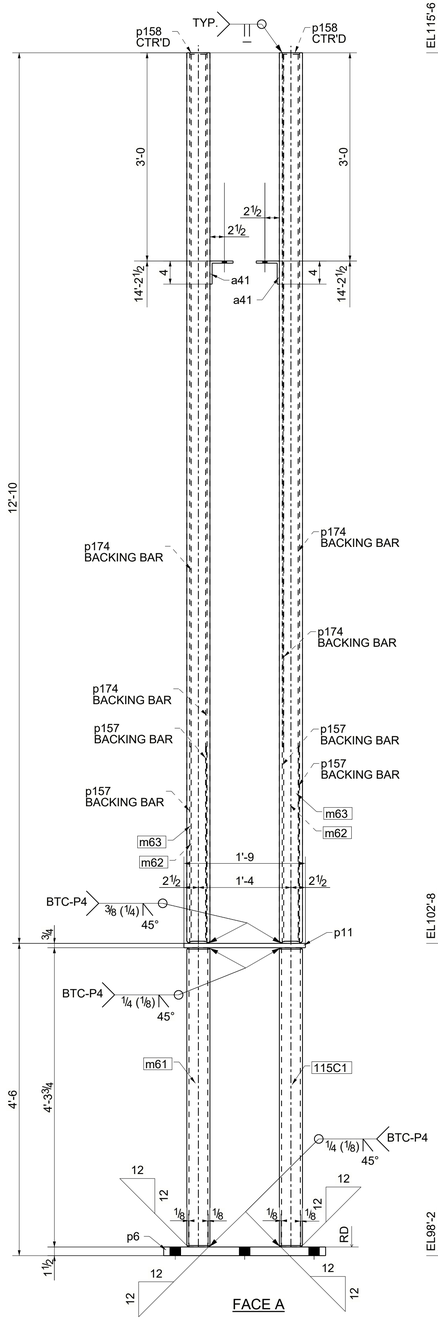
DETAIL 1

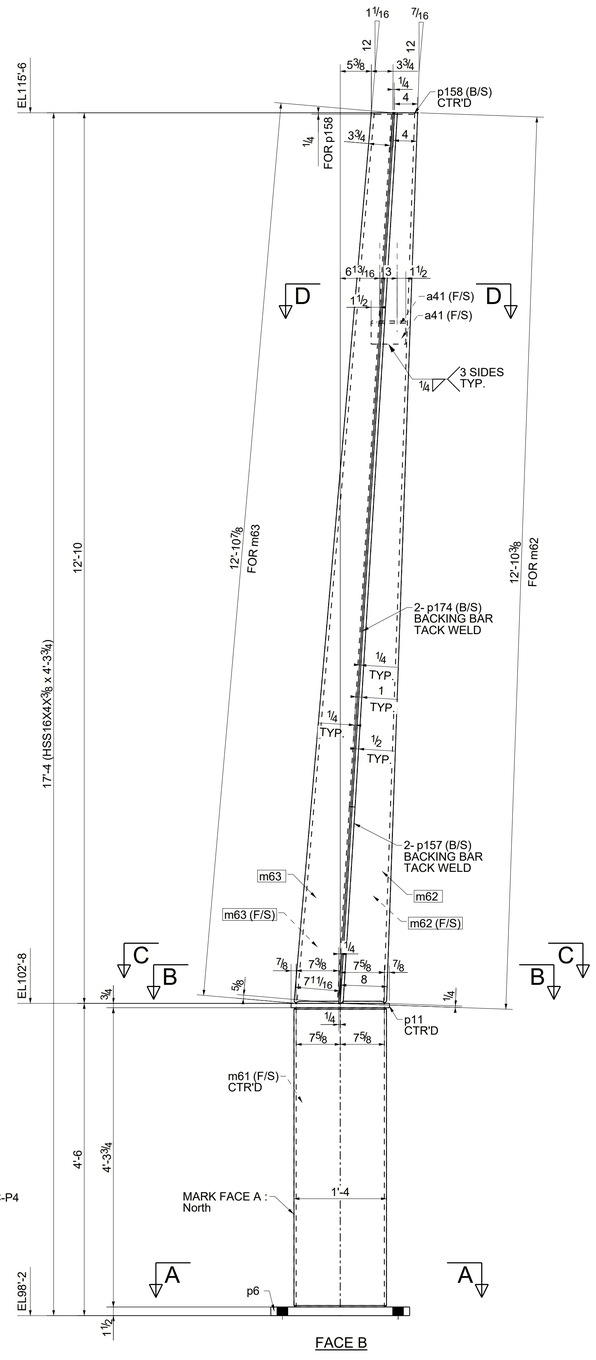
WORK THIS SHEET WITH 1C62

ONE - COLUMN - 1C62

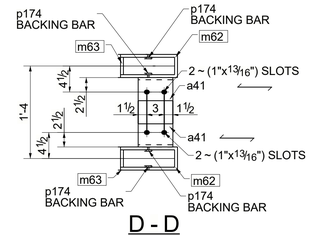
BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
115C1	2	COLUMNS			SQ-2
115C1	2	HSS16X4X3/8	4'-3 3/4"	387	A500-GR.B
a41	4	L4X4X3/8	0'-6"	19	A36
m61	2	HSS16X4X3/8	4'-3 3/4"	387	A500-GR.B
m62	4	HSS12X4X1/2	12'-10 3/8"	2364	A500-GR.B
m63	4	HSS12X4X1/2	12'-10 7/8"	2372	A500-GR.B
p6	2	PL1 1/2"X24"	2'-4"	572	A36
p11	2	PL3/4"X17"	1'-9"	152	A36
p157	8	PL1/4"X1"	2'-10 1/16"	19	A36
p158	4	PL1/4"X3"	0'-7"	6	A36
p174	8	PL1/4"X1"	10'-0"	68	A36
		TOTAL WEIGHT THIS DRAWING		6347	

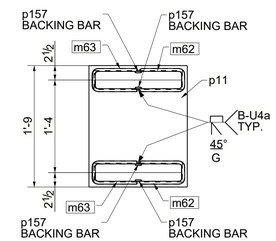




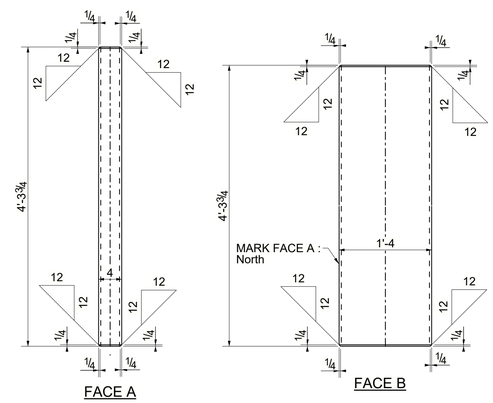
2 - COLUMNS - 115C1



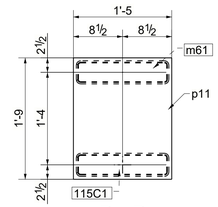
D - D



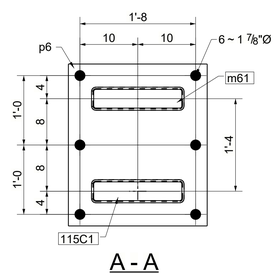
C - C



DETAIL OF 115C1

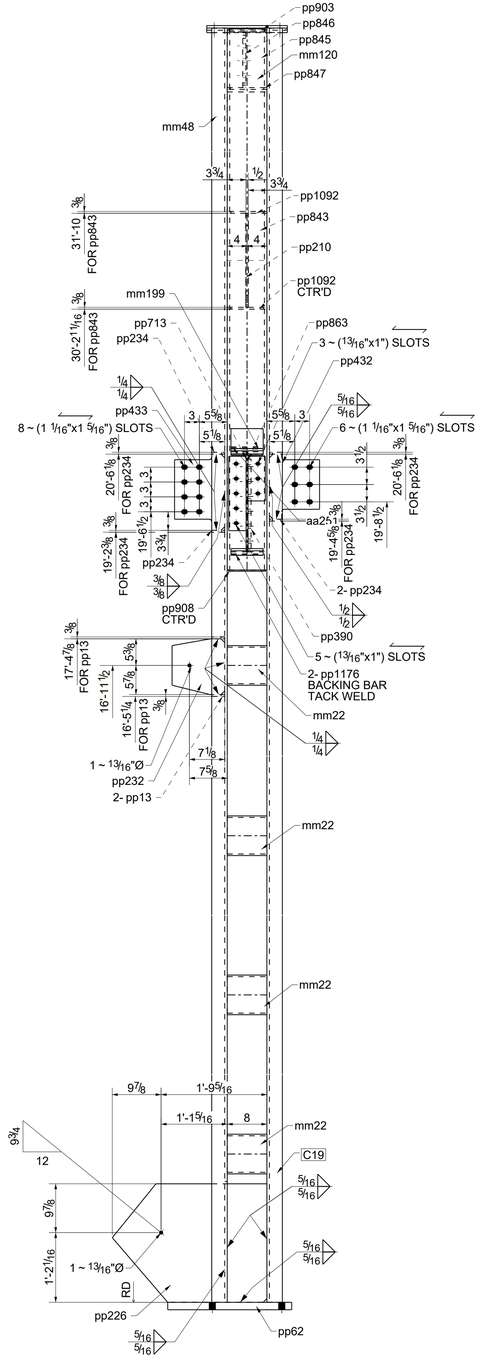


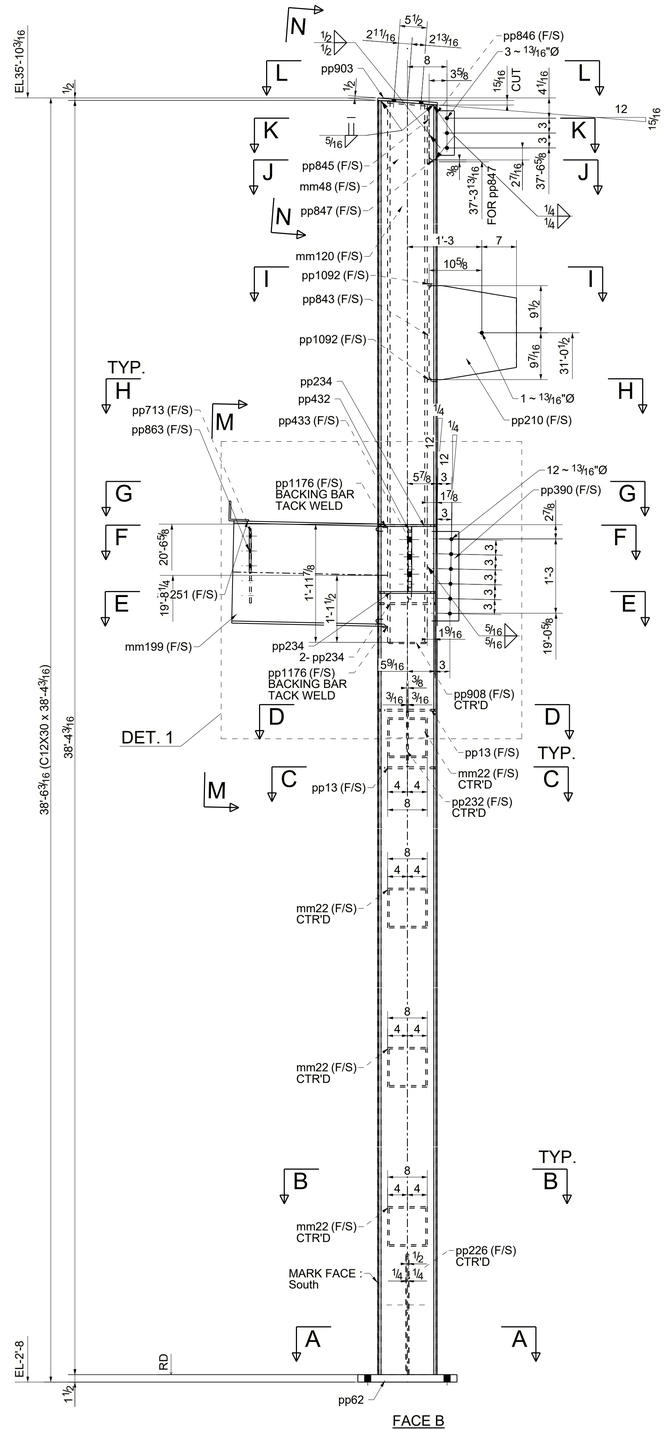
B - B

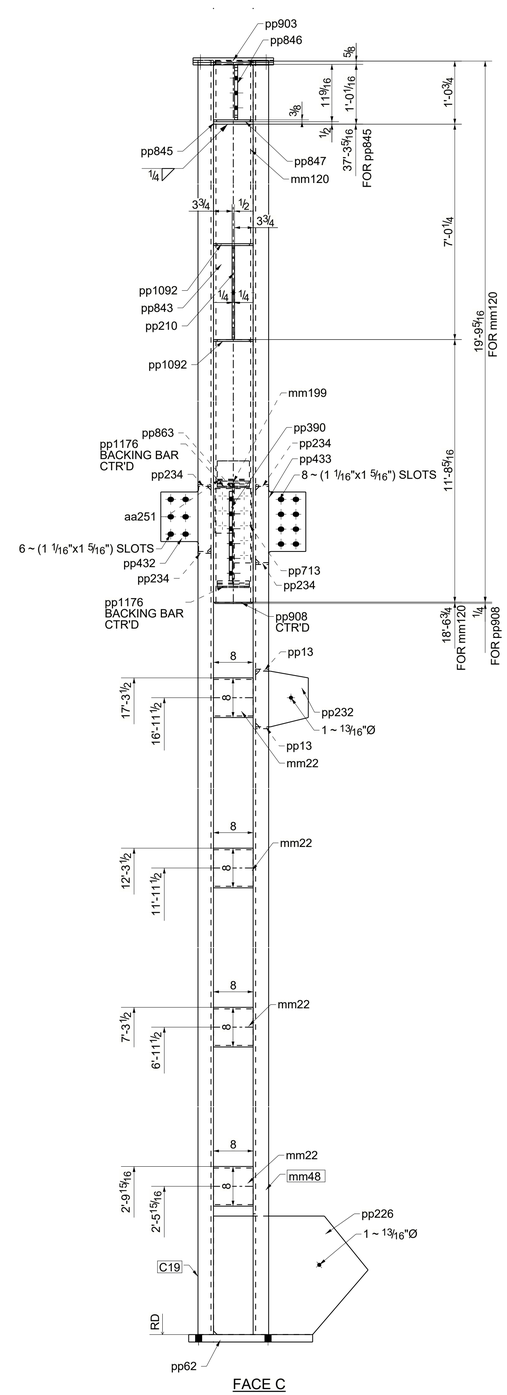


A - A

GRID LOCATION	BOTTOM ELEVATION
4/E	-2'-8"

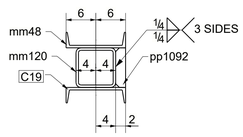




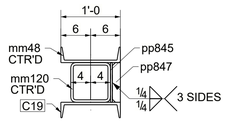


ONE - COLUMN - C19

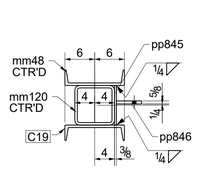
GRID LOCATION	BOTTOM ELEVATION
4/E	-2'-8"



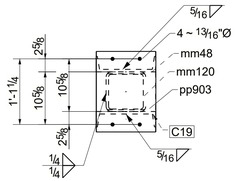
H - H



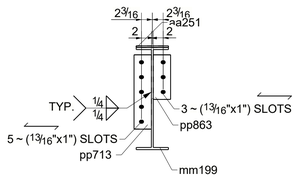
J - J



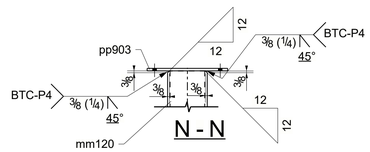
K - K



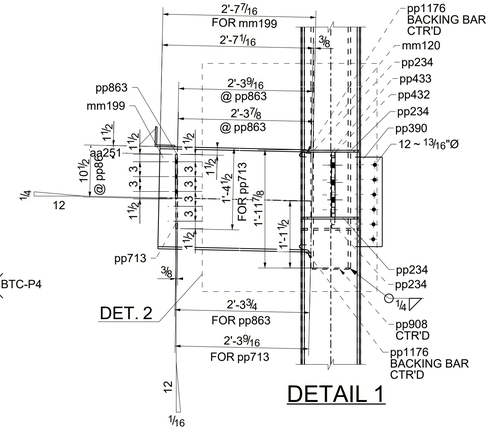
L - L



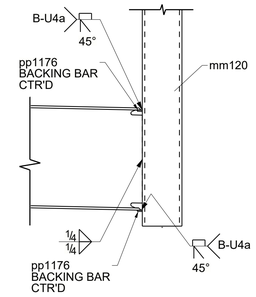
M - M



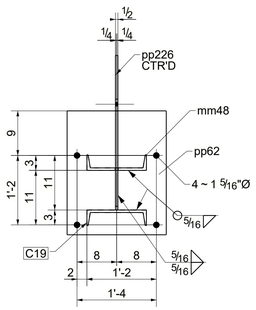
N - N



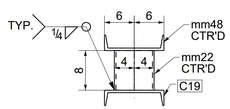
DETAIL 1



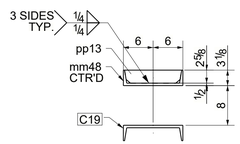
DETAIL 2



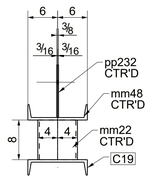
A - A



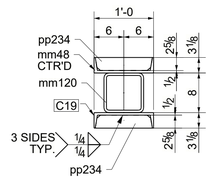
B - B



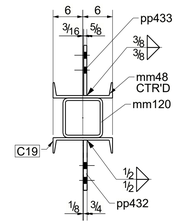
C - C



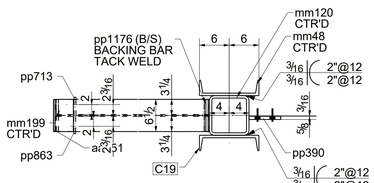
D - D



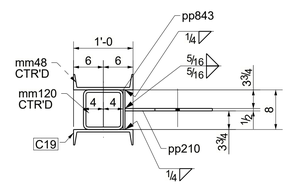
E - E



F - F



G - G



I - I

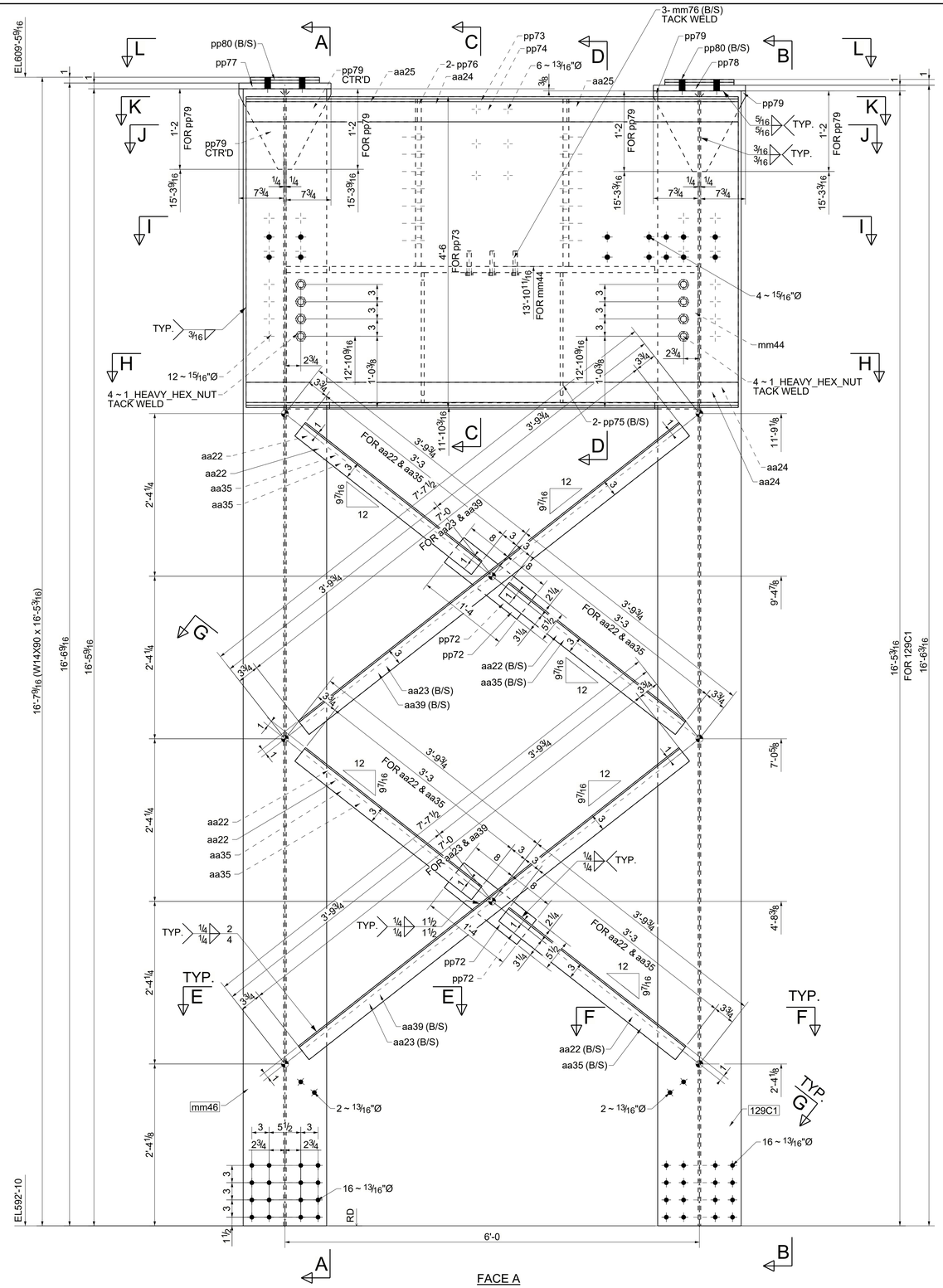
BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
C19	1	COLUMN			SQ-1/BEV-1
C19	1	C12X30	38'-4 3/16"	1150	A572-GR.50
aa251	1	L4X4X5/16	0'-6 1/2"	4	A36
mm22	4	HSS8X8X5/16	0'-8"	79	A500-GR.B
mm48	1	C12X30	38'-4 3/16"	1150	A572-GR.50
mm120	1	HSS8X8X1/2	19'-9 5/16"	909	A500-GR.B
mm199	1	W21X44	2'-7 7/16"	116	A992
pp13	2	PL3/8"X2 5/8"	0'-11 1/2"	6	A36
pp62	1	PL1 1/2"X20"	2'-1"	213	A36
pp210	1	PL1/2"X17 5/8"	1'-6 15/16"	42	A36
pp226	1	PL1/2"X23 15/16"	2'-7 3/16"	89	A36
pp232	1	PL3/8"X10 5/8"	0'-11 1/4"	11	A36
pp234	4	PL3/8"X2 5/8"	0'-11 1/2"	12	A36
pp390	1	PL5/8"X6 3/8"	1'-6 1/16"	20	A36
pp432	1	PL3/4"X10 1/8"	1'-1 1/8"	23	A572-GR.50
pp433	1	PL5/8"X10 1/8"	1'-3 3/8"	23	A36
pp713	1	PL3/8"X3 1/2"	1'-3"	6	A36
pp843	1	PL3/8"X8"	1'-6 15/16"	16	A36
pp845	1	PL3/8"X8"	1'-0 1/16"	10	A36
pp846	1	PL5/8"X5 1/8"	0'-11 3/16"	9	A36
pp847	1	PL3/8"X1 5/8"	0'-8"	1	A36
pp863	1	PL3/8"X3 1/2"	0'-9"	3	A36
pp903	1	PL1/2"X12 1/16"	1'-4 1/4"	28	A36
pp908	1	PL1/4"X7 1/2"	0'-7 1/2"	4	A36
pp1092	2	PL3/8"X2"	0'-8"	3	A36
pp1176	2	PL1/4"X1"	0'-6 1/2"	1	A36
		TOTAL WEIGHT THIS DRAWING		3929	

SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
9. HOLE PATTERNS NOTED "A325SC-TC" ARE FOR SLIP CRITICAL BOLTS. DO NOT ADD PAINT AT CONTACT SURFACES. CONTACT SURFACES ARE TO BE FREE OF BURRS AND ALL FOREIGN MATERIAL.
10. SHOP CLOSE ALL GAPS.

WORK THIS SHEET WITH C19-1

ONE - COLUMN - C19



FACE A

ONE - COLUMN - 129C1

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
129C1	1	COLUMN			SQ-2
129C1	1	W14X90	16'-5 3/16"	1482	A572-GR.50
aa22	8	L4X3X1/4	3'-3"	150	A36
aa23	4	L4X3X1/4	7'-0"	161	A36
aa24	3	L4X4X1/2	7'-1 1/2"	273	A36
aa25	2	L4X4X1/2	2'-5 3/4"	63	A36
aa35	8	L4X3X1/4	3'-3"	150	A36
aa39	4	L4X3X1/4	7'-0"	161	A36
mm44	1	W24X146	5'-11 1/2"	872	A992
mm46	1	W14X90	16'-5 9/16"	1485	A572-GR.50
pp72	4	FL5/8"X5 1/2"	1'-4"	62	A36
pp73	1	PL1"X54"	7'-1 1/2"	1309	A36
pp74	1	PL1"X54"	7'-1 1/2"	1309	A36
pp75	4	PL1/2"X6 1/8"	1'-10 5/8"	78	A36
pp76	2	PL1"X14"	2'-5 1/2"	234	A36
pp77	1	PL1"X16"	1'-4"	73	A36
pp78	1	PL1"X16"	1'-4"	73	A36
pp79	4	PL1/2"X7 13/16"	1'-2"	37	A36
pp80	4	FL1"X3 1/2"	1'-0"	44	A36
	6	3/4_HEAVY_HEX_NUT		4	
	8	1_HEAVY_HEX_NUT		3	
		TOTAL WEIGHT THIS DRAWING		8015	

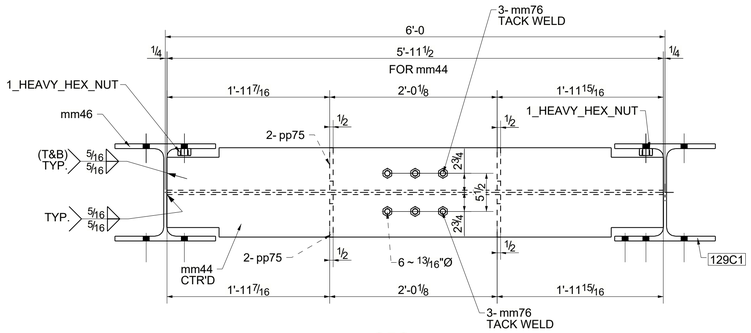
WORK THIS SHEET WITH 129-1, 129-2

SHOP NOTES :

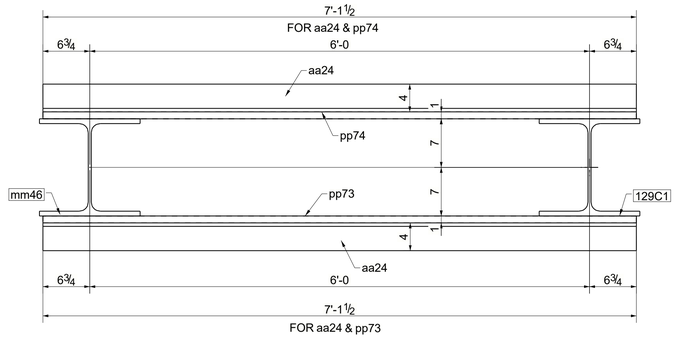
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC.
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
7. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PART SHEET DETAILS.
8. ALL COPE CORNERS ARE 1/2" RADIUS U.N.O

GENERAL SHOP NOTES:

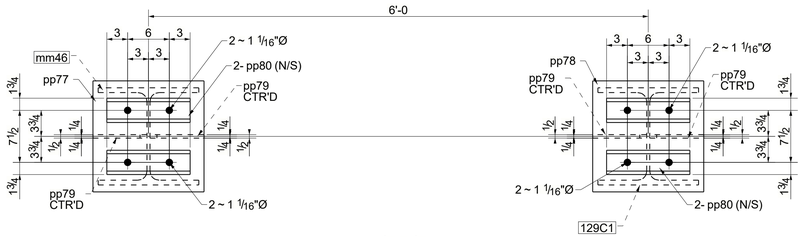
MATERIAL: WF & WT's: A992 (U.N.)
PIPES : A53-GR.B
ALL OTHER MATERIAL: A36
WELD: E70XX
SURFACE PREP: SSPC-SP3
PAINT: ONE OR MORE COATS OF SHERWIN-WILLIAMS KEM BOND HS UNIVERSAL METAL PRIMER #B50WZ4(OFF WHITE) 3.0 D.F.T MIL



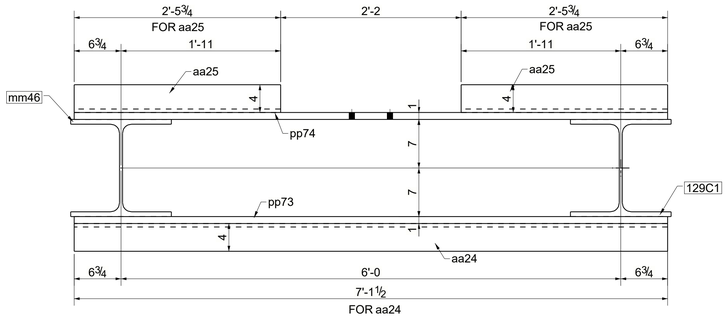
I - I



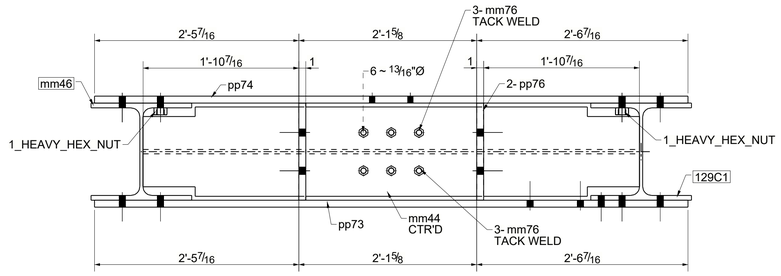
H - H



L - L

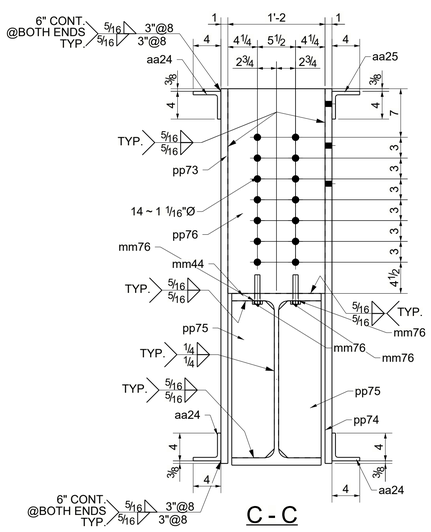


K - K

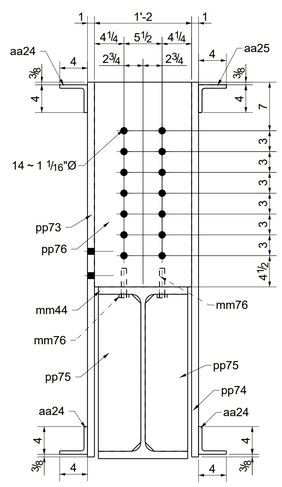


J - J

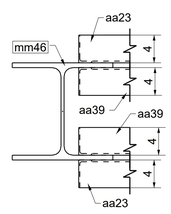
WORK THIS SHEET WITH 129, 129-2



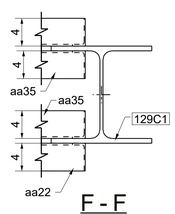
C - C



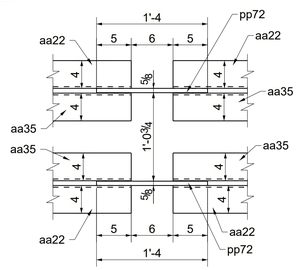
D - D



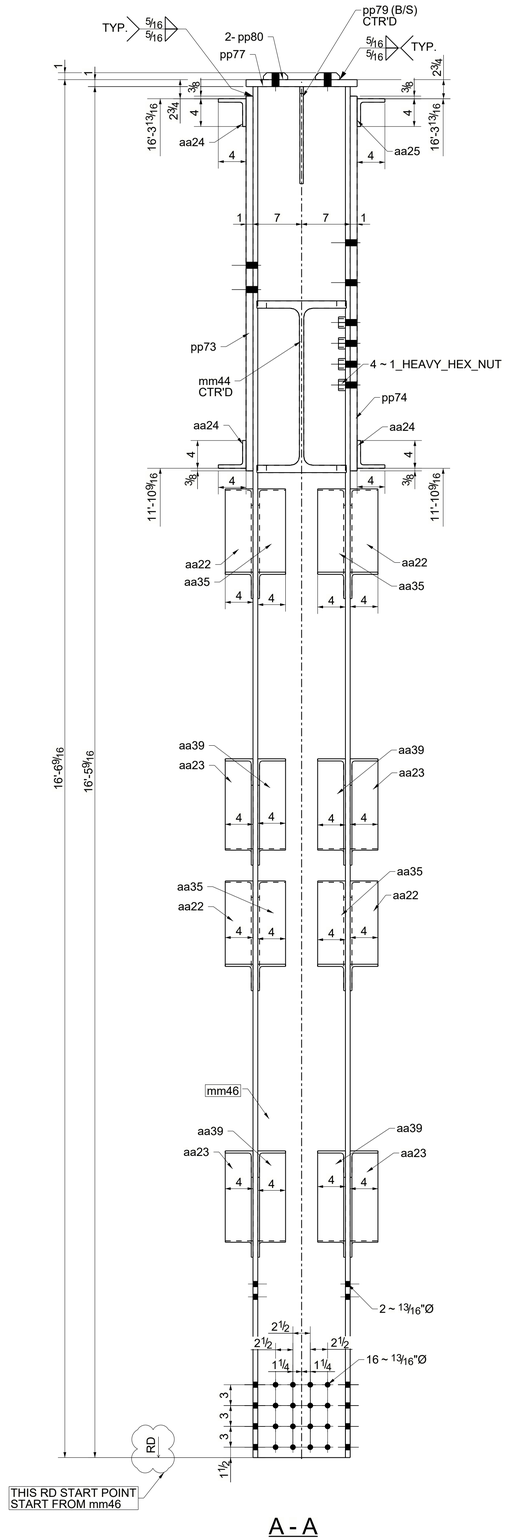
E - E



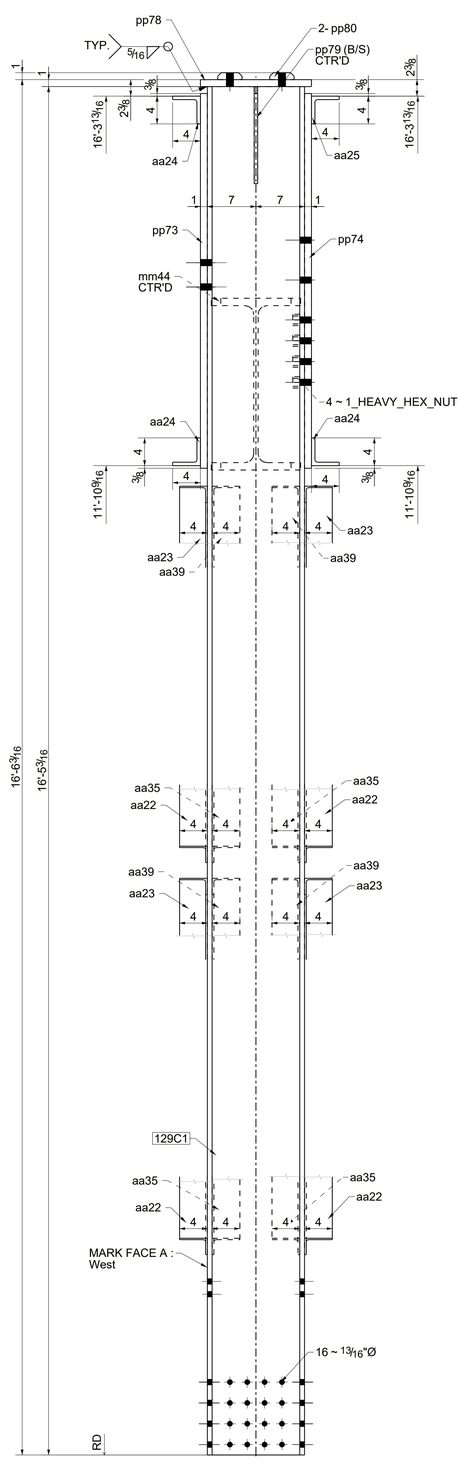
F - F



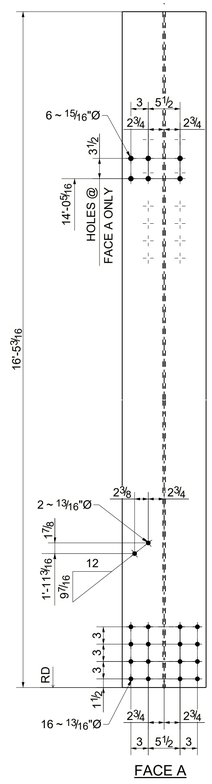
G - G



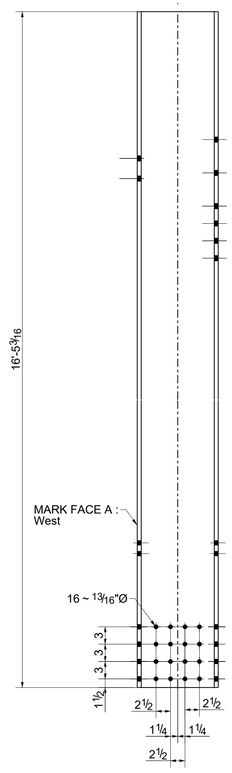
A - A



B - B

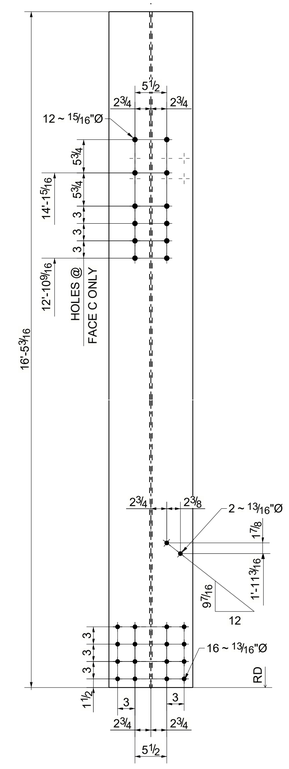


FACE A



FACE B

DETAIL OF 129C1

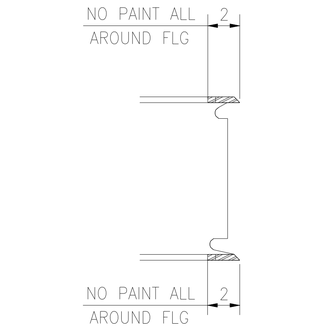


FACE C

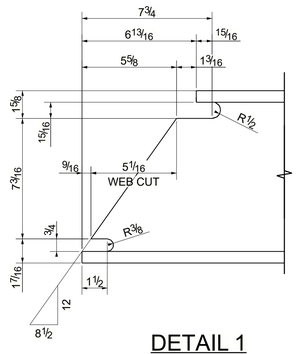
WORK THIS SHEET WITH 129, 129-1

BILL OF MATERIAL

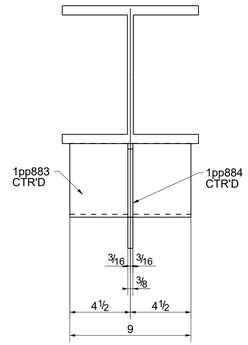
MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
1D77	1	VERTICAL BRACE			SQ-1/BEV-1
1D77	1	W10X60	15'-1 3/4"	912	SFRS A992
1pp883	1	PL3/8"X6 3/4"	0'-9"	6	A36
1pp884	1	PL3/8"X4"	0'-9 9/16"	3	A36
		TOTAL WEIGHT THIS DRAWING		922	



TYP PAINT BLOCK DETAIL
@ MOMENT PREP BRACE END



DETAIL 1



A - A

SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN...ETC.
"RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
8. B.T.S.DENOTES BOLT TO SHIP"SNUG TIGHT" WITH NOTED BOLTS. ASSEMBLE AFTER PAINTING/GALV.
9. HOLE PATTERNS NOTED "A325SC-TC" OR "A490SC-TC" ARE FOR SLIP CRITICAL BOLTS.
PROVIDE SHERWIN WILLIAMS ZINC CLAD 4100 ORGANIC ZINC-RICH EPOXY PRIMER AT CONTACT SURFACES.
SURFACE PREP: SSPC-SP6
THE MINIMUM AREA OF THIS PAINT IS THE HOLE DIAMETER +2" AT HATCH AREAS SHOWN THUS:

SEISMIC SHOP NOTE :

SUMMARY of SFRS Requirements

(REF: S0.1 Section G)

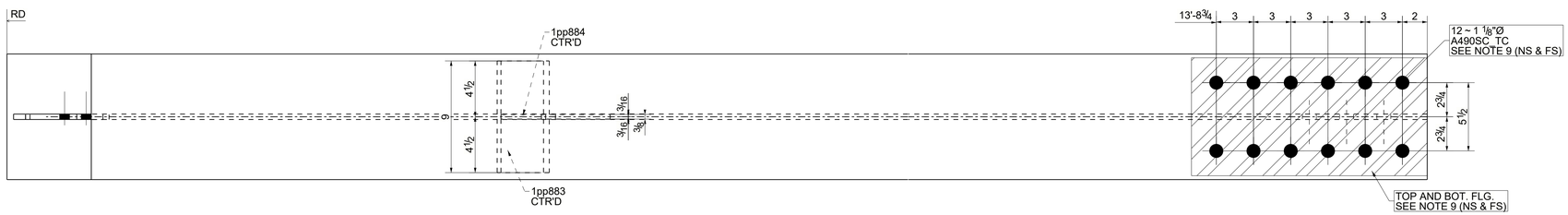
PROTECTED ZONE NOTE: (from Section F4.5C AISC 341)

HATCHED AREAS SHOWN INDICATE SFRS PROTECTED ZONES THAT INCLUDE THE STEEL CORE OF BRACES AND ELEMENTS THAT CONNECT STEEL CORE TO BEAMS AND COLUMNS, AND SHALL SATISFY THE REQUIREMENTS OF SECTION D1.3 (AISC 341)

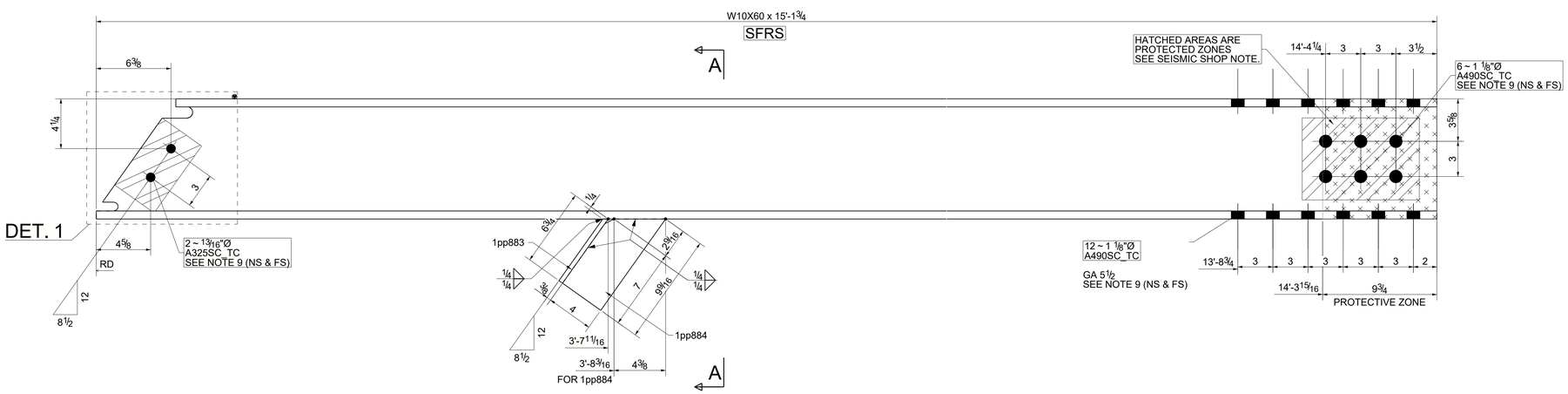
THE PROTECTED ZONE OF BRACING MEMBERS INCLUDES THE CENTER ONE-QUARTER OF THE BRACE LENGTH, AND A ZONE ADJACENT TO EACH CONNECTION EQUAL TO THE LARGEST DIMENSION OF THE BRACE CROSS SECTION MINIMUM. THE PROTECTED ZONE ALSO INCLUDES GUSSET PLATES AND AREAS WHERE BOLTS, WELDS, ANGLES, ETC. CONNECT THE BRACE TO THE GUSSET PLATE.

WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING ARE PROHIBITED.

WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS OR OTHER ATTACHMENTS ARE PROHIBITED WITHIN THE PROTECTED ZONE.



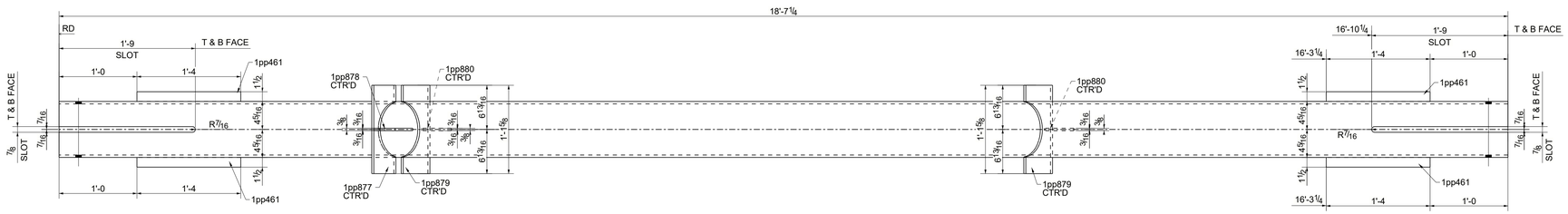
TOP VIEW



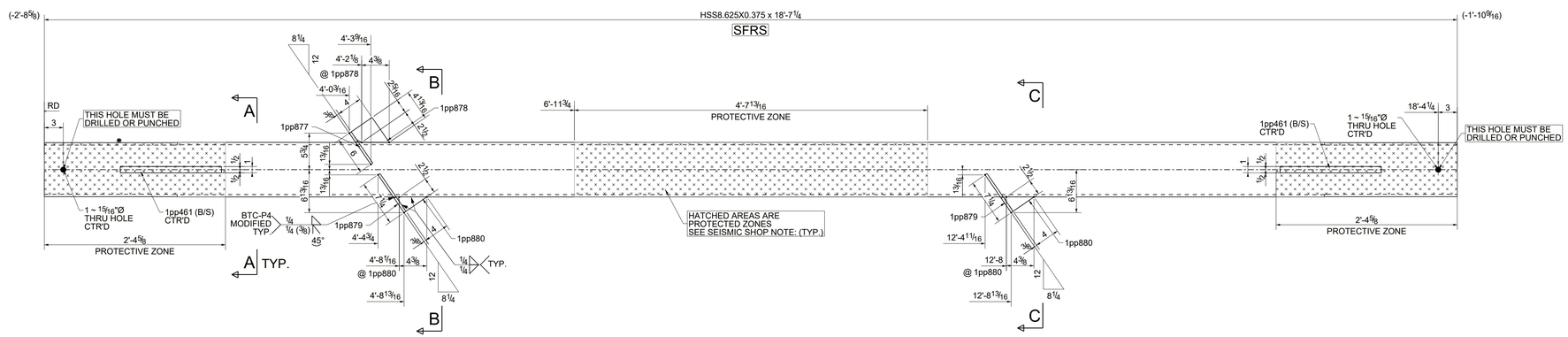
ONE - VERTICAL BRACE - 1D77

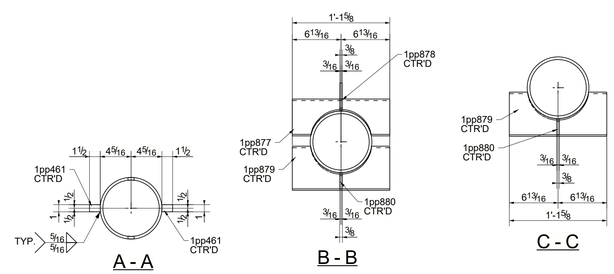
BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
1D78	1	VERTICAL BRACE			SQ-2
1D78	1	HSS8.625X0.375	18'-7 1/4"	574	SFRS A500-GR.C
1pp461	4	PL1"X1 1/2"	1'-4"	27	A572-50
1pp877	1	PL3/8"X6"	1'-1 5/8"	6	A36
1pp878	1	PL3/8"X4"	0'-4 3/4"	1	A36
1pp879	2	PL3/8"X7 1/4"	1'-1 5/8"	15	A36
1pp880	2	PL3/8"X2 1/2"	0'-4"	1	A36
		TOTAL WEIGHT THIS DRAWING		625	



TOP VIEW





SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
8. B.T.S.DENOTES BOLT TO SHIP"SNUG TIGHT" WITH NOTED BOLTS. ASSEMBLE AFTER PAINTING/GALV.

SEISMIC SHOP NOTE :

SUMMARY of SFRS Requirements

(REF: S0.1 Section G)

PROTECTED ZONE NOTE: (from Section F4.5C AISC 341)

HATCHED AREAS SHOWN INDICATE SFRS PROTECTED ZONES THAT INCLUDE THE STEEL CORE OF BRACES AND ELEMENTS THAT CONNECT STEEL CORE TO BEAMS AND COLUMNS, AND SHALL SATISFY THE REQUIREMENTS OF SECTION D1.3 (AISC 341)

THE PROTECTED ZONE OF BRACING MEMBERS INCLUDES THE CENTER ONE-QUARTER OF THE BRACE LENGTH, AND A ZONE ADJACENT TO EACH CONNECTION EQUAL TO THE LARGEST DIMENSION OF THE BRACE CROSS SECTION MINIMUM. THE PROTECTED ZONE ALSO INCLUDES GUSSET PLATES AND AREAS WHERE BOLTS, WELDS, ANGLES, ETC. CONNECT THE BRACE TO THE GUSSET PLATE.

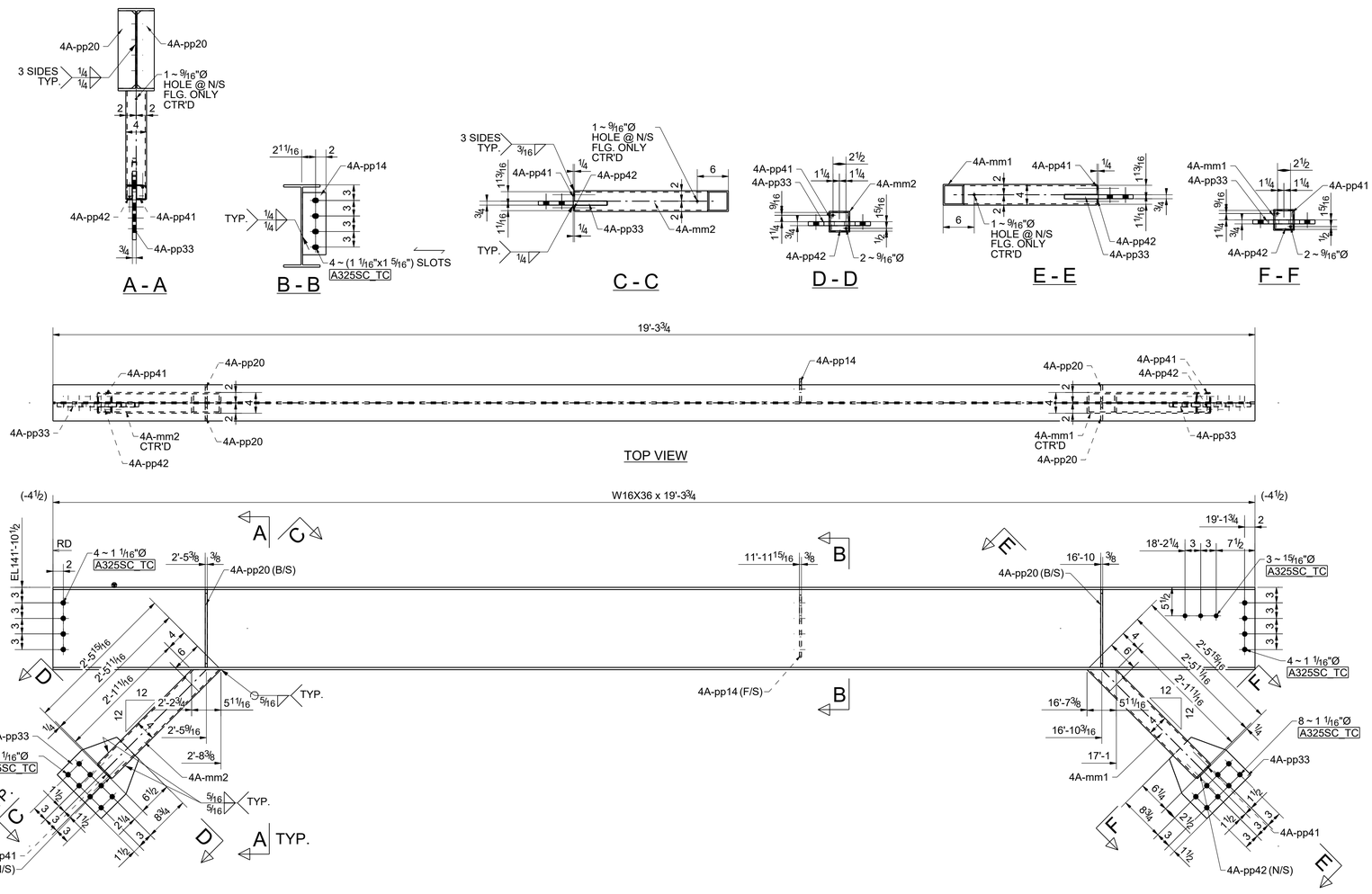
WITHIN THE PROTECTED ZONE, DISCONTINUITIES CREATED BY FABRICATION OR ERECTION OPERATIONS, SUCH AS TACK WELDS, ERECTION AIDS, AIR-ARC GOUGING AND THERMAL CUTTING ARE PROHIBITED.

WELDED, BOLTED, SCREWED OR SHOT-IN ATTACHMENTS OR OTHER ATTACHMENTS ARE PROHIBITED WITHIN THE PROTECTED ZONE.

ONE - VERTICAL BRACE - 1D78

BILL OF MATERIAL

NO PCS	DESCRIPTION	MARK	LENGTH	TOTAL WEIGHT	UNIT WEIGHT	WEIGHT	PRELIM MARK	REMARKS
1	W16X36	4A-B20	19'-3 3/4"			697		GALV. A992
1	HSS4X4X1/4	4A-mm1	2'-5 11/16"			28		A500-GR.C
1	HSS4X4X1/4	4A-mm2	2'-5 11/16"			28		A500-GR.C
1	PL3/8"X4 1/2"	4A-pp14	1'-0"			6		A36
4	PL3/8"X3 5/16"	4A-pp20	1'-3"			21		A36
2	PL3/4"X12"	4A-pp33	1'-1 1/4"			59		A36
2	PL1/4"X1 13/16"	4A-pp41	0'-3 5/8"			1		A36
2	PL1/4"X1 1/16"	4A-pp42	0'-3 5/8"			1		A36



SHOP NOTES :

1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE 24" X 36" SINGLE PARTS DETAILS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. HOLE PATTERNS NOTED "A325SC-TC" ARE FOR SLIP CRITICAL BOLTS. DO NOT ADD PAINT AT CONTACT SURFACES. CONTACT SURFACES ARE TO BE FREE OF BURRS AND ALL FOREIGN MATERIAL.
11. SHOP CLOSE ALL GAPS.
12. ALL JOINTS TO BE SEAL WELDED WITH CONT. 1/8" FILLET OR BUTT WELD AS REQ'D
13. PROVIDE VENT HOLES AS REQ'D FOR GALV.
14. PLUG VENT HOLES AFTER GALV.

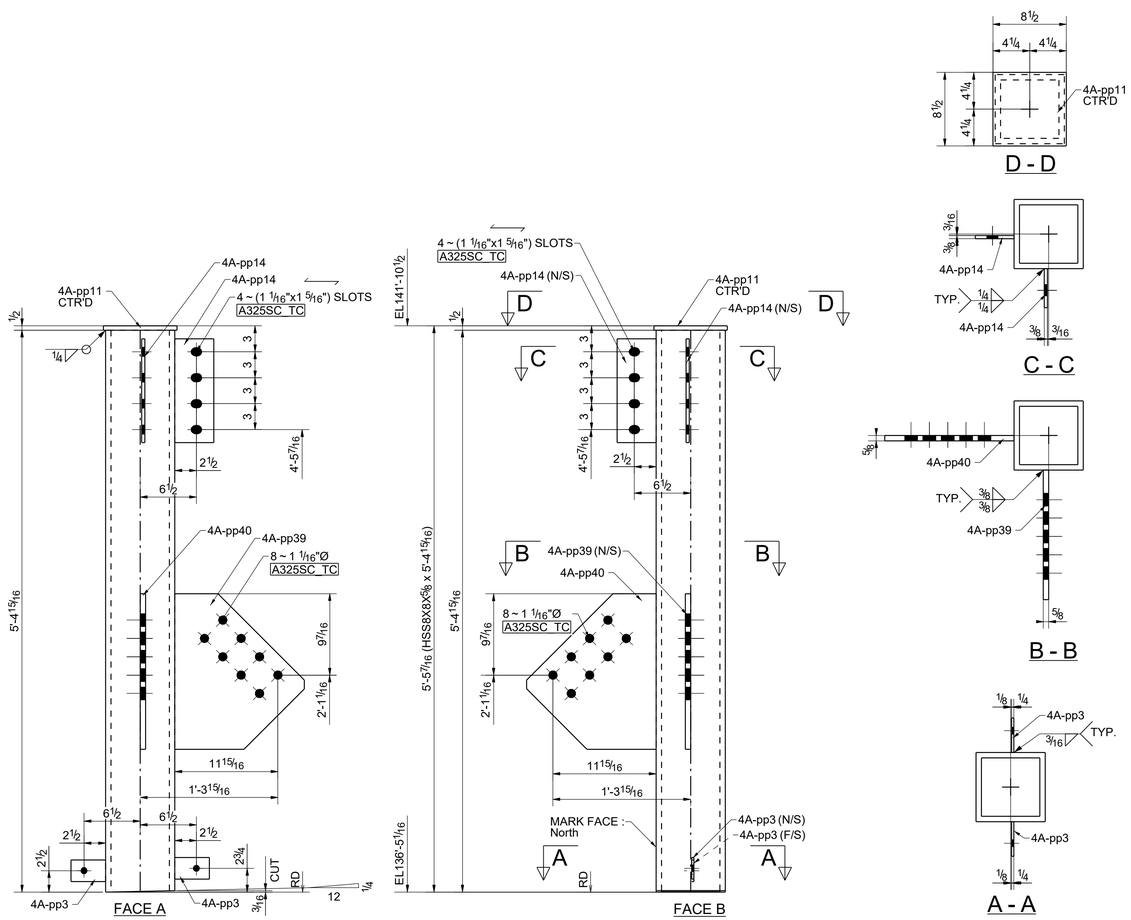
ONE - BEAM - 4A-B20

BILL OF MATERIAL

NO PCS	DESCRIPTION	MARK	LENGTH	TOTAL WEIGHT	UNIT WEIGHT	WEIGHT	PRELIM MARK	REMARKS
1	HSS8X8X5/8	4A-C15	5'-4 15/16"			302		GALV. A500-GR.C
2	PL1/4"X2 1/2"	4A-pp3	0'-4"			1		A36
1	PL1/2"X8 1/2"	4A-pp11	0'-8 1/2"			10		A36
2	PL3/8"X4 1/2"	4A-pp14	1'-0"			11		A36
1	PL5/8"X15"	4A-pp39	1'-6"			35		A36
1	PL5/8"X14 15/16"	4A-pp40	1'-6"			35		A36

SHOP NOTES :

1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE 24" X 36" SINGLE PARTS DETAILS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. HOLE PATTERNS NOTED "A325SC-TC" ARE FOR SLIP CRITICAL BOLTS. DO NOT ADD PAINT AT CONTACT SURFACES. CONTACT SURFACES ARE TO BE FREE OF BURRS AND ALL FOREIGN MATERIAL.
11. SHOP CLOSE ALL GAPS.
12. ALL JOINTS TO BE SEAL WELDED WITH CONT. 1/8" FILLET OR BUTT WELD AS REQ'D
13. PROVIDE VENT HOLES AS REQ'D FOR GALV.
14. PLUG VENT HOLES AFTER GALV.

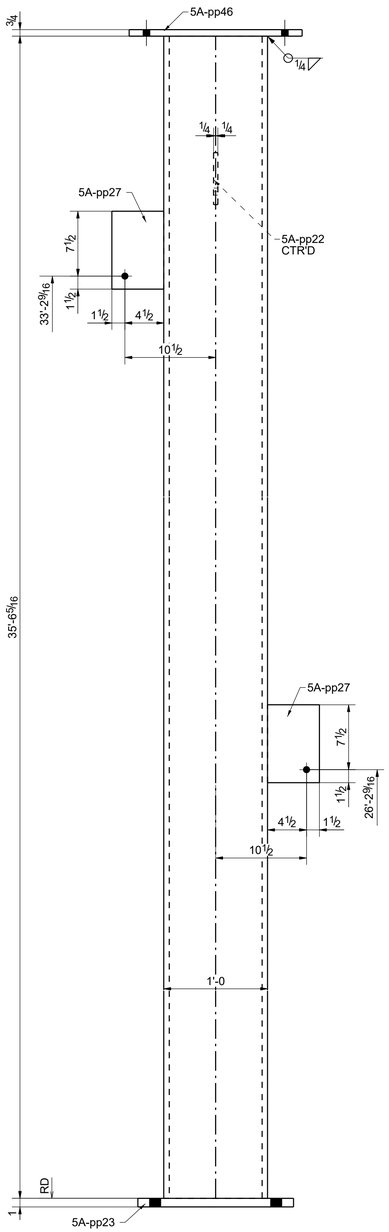


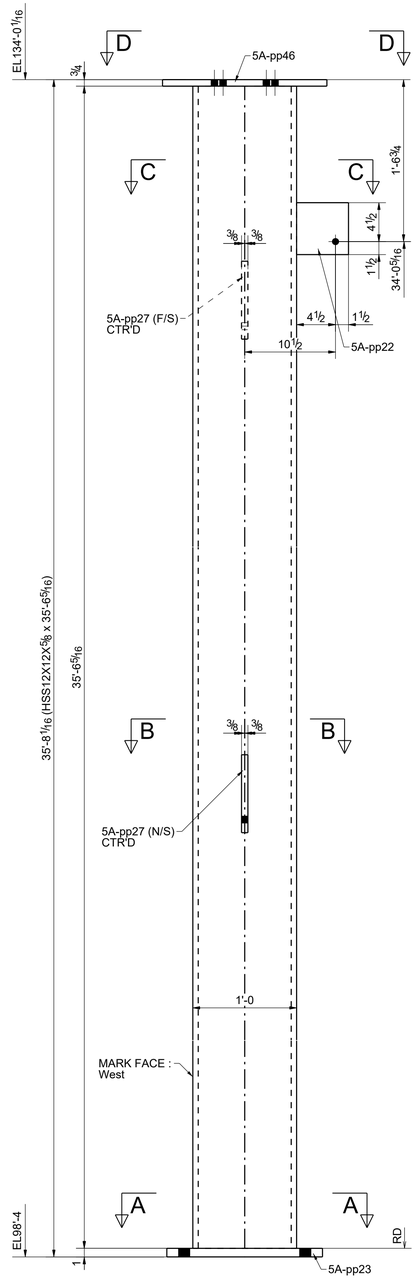
GRID LOCATION	BOTTOM ELEVATION
G.4/2.2	136'-5"1/16

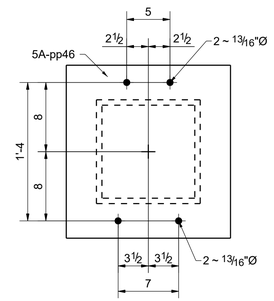
ONE - COLUMN - 4A-C15

BILL OF MATERIAL

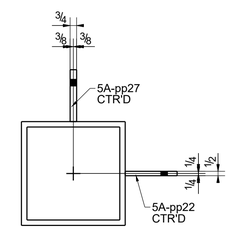
NO PCS	DESCRIPTION	MARK	LENGTH	TOTAL WEIGHT	UNIT WEIGHT	WEIGHT	PRELIM MARK	REMARKS
1	HSS12X12X5/8	5A-C14	35'-6 5/16"			3107		A500-GR.C
1	PL1/2"X6"	5A-pp22	0'-6"			5		A36
1	PL1"X18"	5A-pp23	1'-6"			92		A36
2	PL3/4"X6"	5A-pp27	0'-9"			23		A36
1	PL3/4"X19"	5A-pp46	1'-8"			81		A36



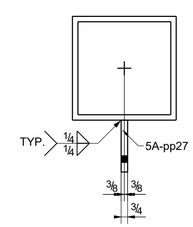




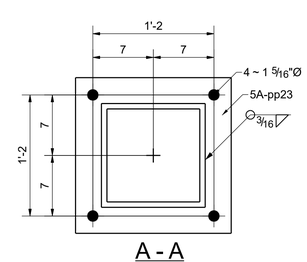
D - D



C - C



B - B

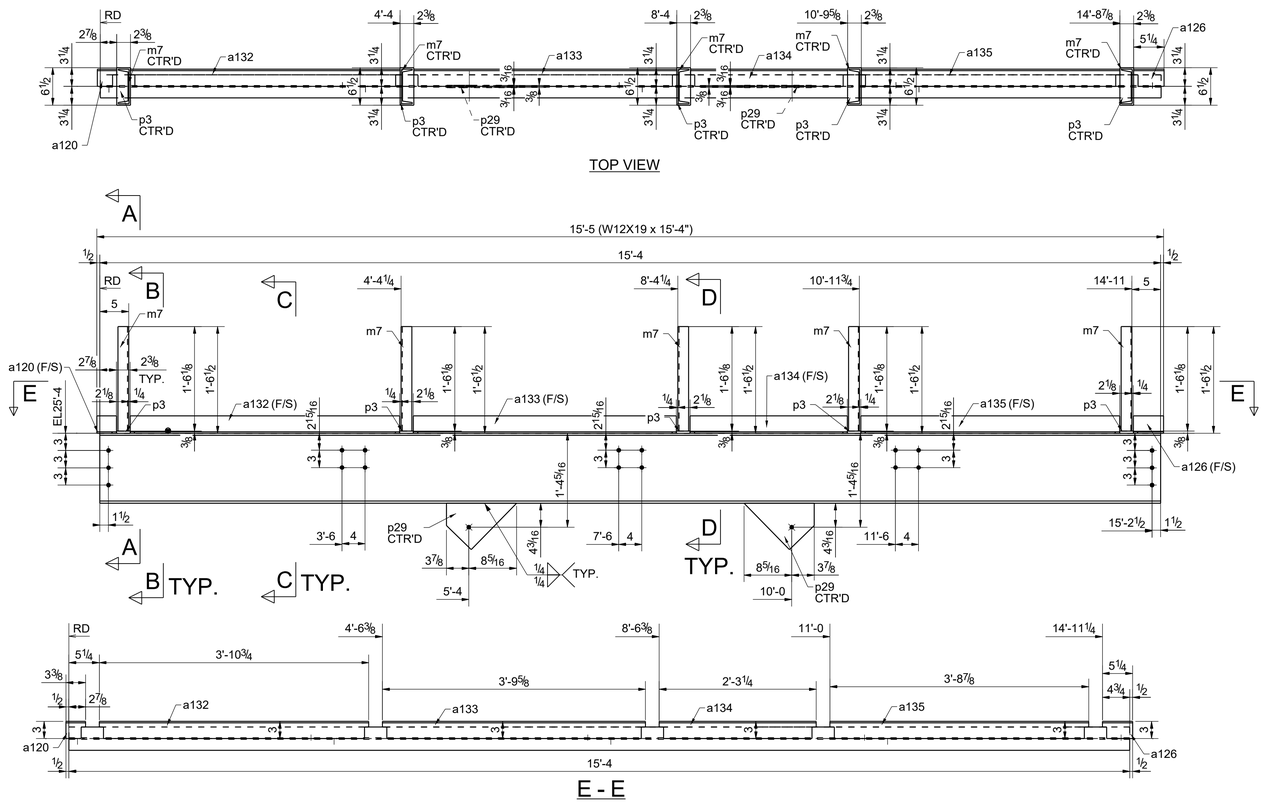


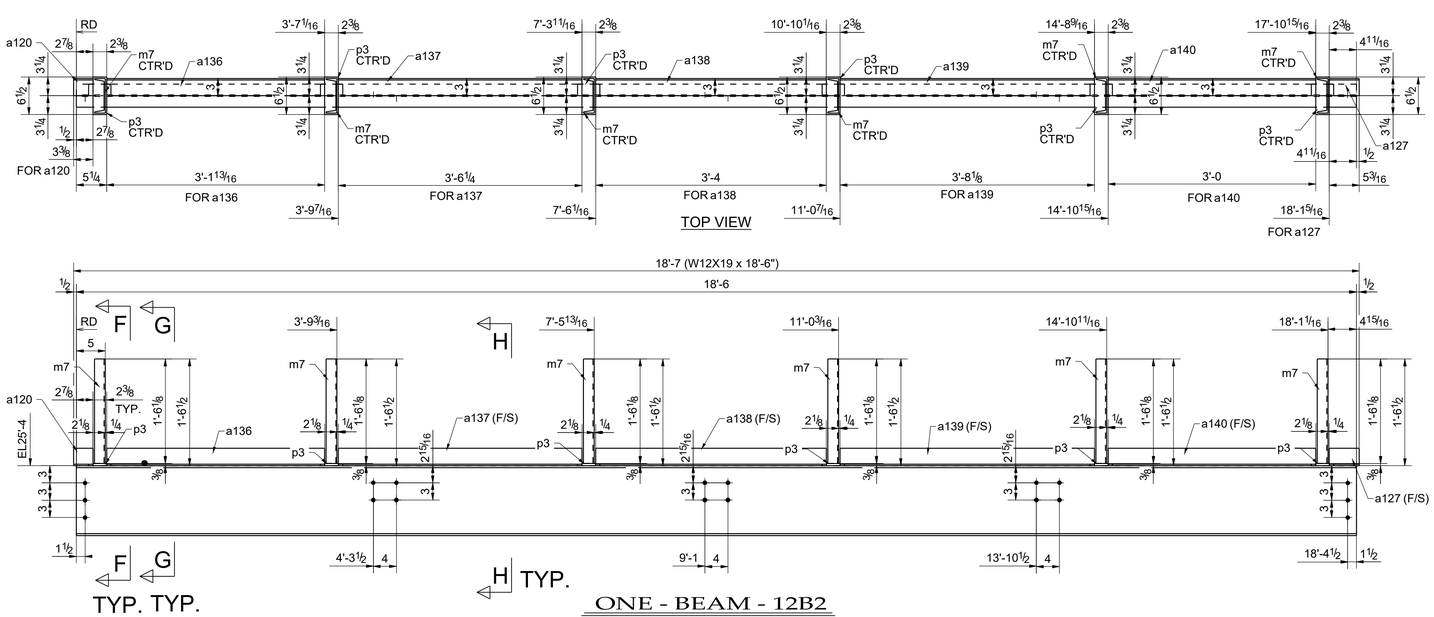
A - A

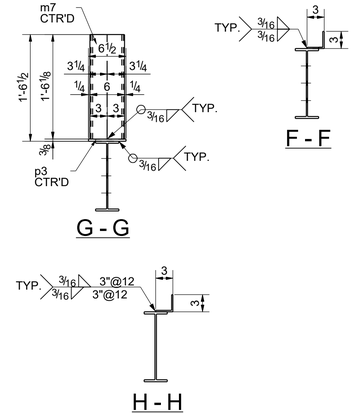
SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. SHOP CLOSE ALL GAPS.
11. HOLE PATTERNS NOTED "A325SC-TC" ARE FOR SLIP CRITICAL BOLTS. DO NOT ADD PAINT AT CONTACT SURFACES. CONTACT SURFACES ARE TO BE FREE OF BURRS AND ALL FOREIGN MATERIAL.

GRID LOCATION	BOTTOM ELEVATION
J/7-6.9	98'-4"

ONE - COLUMN - 5A-C14







BILL OF MATERIAL

SHIP MARK	PIECE MARK	QTY	DESCRIPTION	LENGTH	REMARKS
12B1		1	W12X19	15'-4"	SQ-2 A992
	a120	1	L3X3X1/4	0'-0'-3 3/8"	A36
	a126	1	L3X3X1/4	0'-0'-5 1/4"	A36
	a132	1	L3X3X1/4	3'-10 3/4"	A36
	a133	1	L3X3X1/4	3'-9 5/8"	A36
	a134	1	L3X3X1/4	2'-3 1/4"	A36
	a135	1	L3X3X1/4	3'-8 7/8"	A36
	m7	5	C6X8.2	1'-6 1/8"	A36
	p3	5	PL3/8"X2 3/8"	0'-0'-6 1/2"	A36
	p29	2	PL3/8"X8 1/16"	1'-0 3/16"	A36
12B2		1	W12X19	18'-6"	SQ-2 A992
	a120	1	L3X3X1/4	0'-0'-3 3/8"	A36
	a127	1	L3X3X1/4	0'-0'-5 3/16"	A36
	a136	1	L3X3X1/4	3'-1 13/16"	A36
	a137	1	L3X3X1/4	3'-6 1/4"	A36
	a138	1	L3X3X1/4	3'-4"	A36
	a139	1	L3X3X1/4	3'-8 1/8"	A36
	a140	1	L3X3X1/4	3'-0"	A36
	m7	6	C6X8.2	1'-6 1/8"	A36
	p3	6	PL3/8"X2 3/8"	0'-0'-6 1/2"	A36

SHOP NOTES :

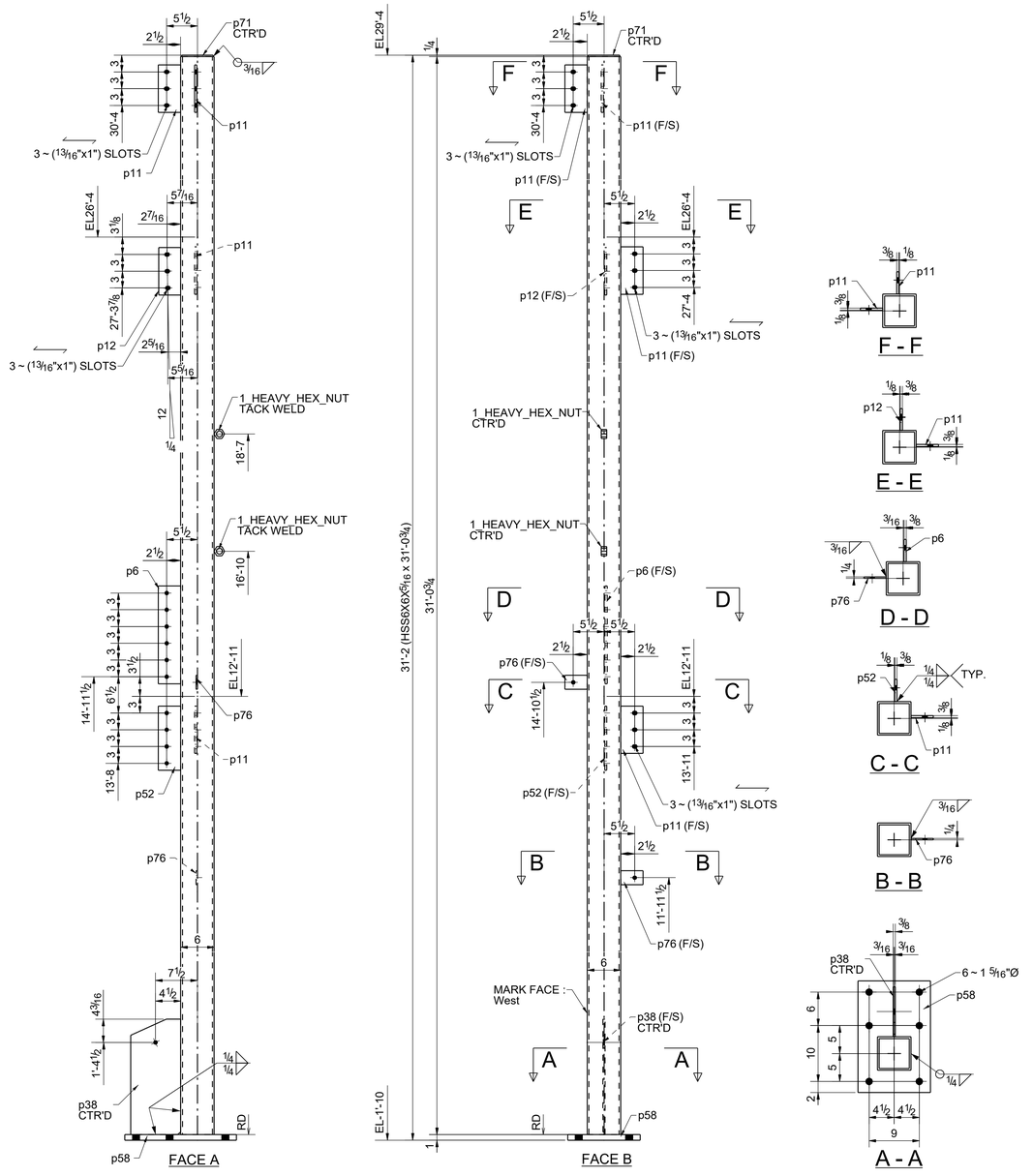
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE GATHER SHEETS/ SINGLE PART SHEETS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. SHOP CLOSE ALL GAPS.

BILL OF MATERIAL

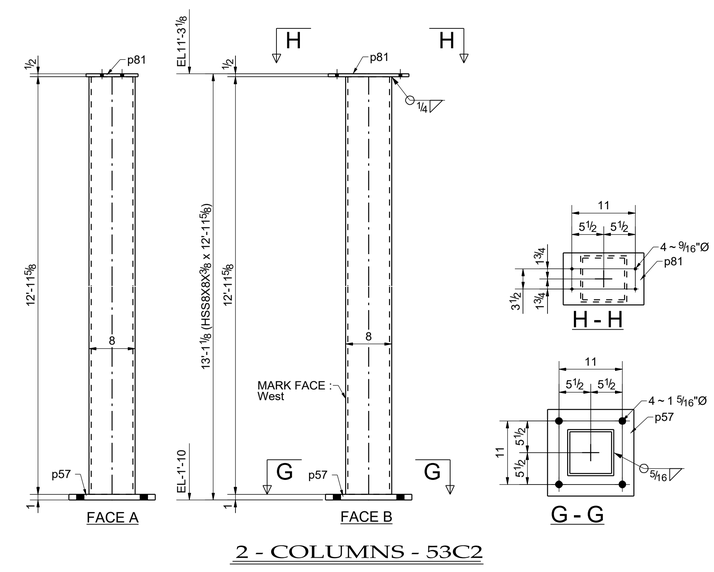
SHIP MARK	PIECE MARK	QTY	DESCRIPTION	LENGTH	REMARKS
53C1		1	HSS6X6X5/16	31'-0 3/4"	SQ-2 A500-GRB
	p6	1	PL3/8"X4"	1'-5 1/2"	A36
	p11	4	PL3/8"X4"	0'-0'-8 1/2"	A36
	p12	1	PL3/8"X3 15/16"	0'-0'-8 1/2"	A36
	p38	1	PL3/8"X8 15/16"	1'-8 11/16"	A36
	p52	1	PL3/8"X4"	0'-0'-11 1/2"	A36
	p58	1	PL1"X13"	1'-8"	A36
	p71	1	PL1/4"X5 5/8"	0'-0'-5 5/8"	A36
	p76	2	PL1/4"X2 1/2"	0'-0'-4"	A36
		2	1_HEAVY_HEX_NUT		A36
53C2		2	HSS8X8X3/8	12'-11 5/8"	SQ-2 A500-GRB
	p57	2	PL1"X15"	1'-3"	A36
	p81	2	PL1/2"X9"	1'-2"	A36

SHOP NOTES :

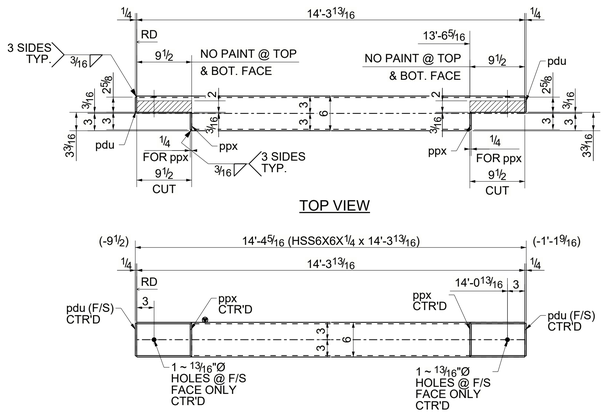
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE GATHER SHEETS/ SINGLE PART SHEETS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. SHOP CLOSE ALL GAPS.



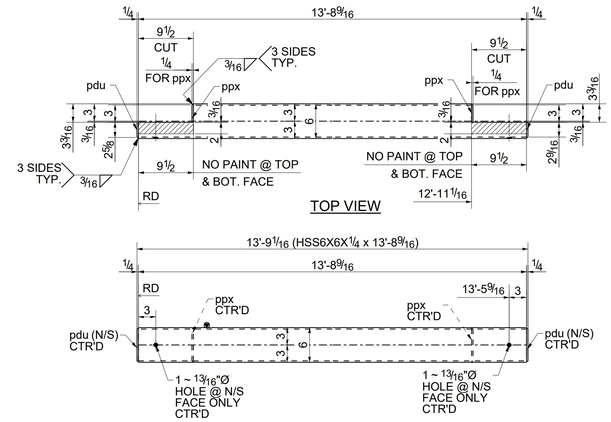
ONE - COLUMN - 53C1



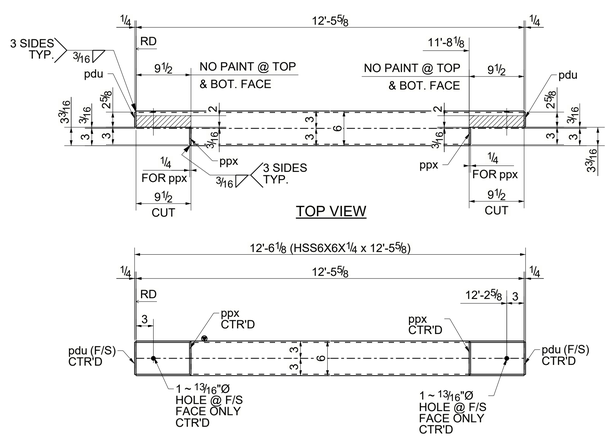
2 - COLUMNS - 53C2



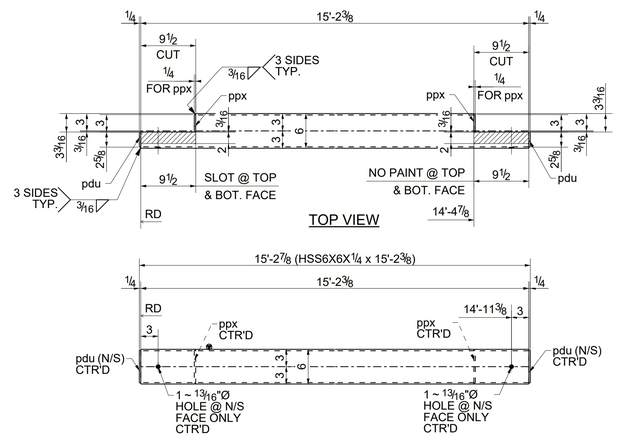
2 - VERTICAL HSS BRACE - 125D1



ONE - VERTICAL HSS BRACE - 125D2



2 - VERTICAL HSS BRACE - 125D3



2 - VERTICAL HSS BRACE - 125D4

BILL OF MATERIAL

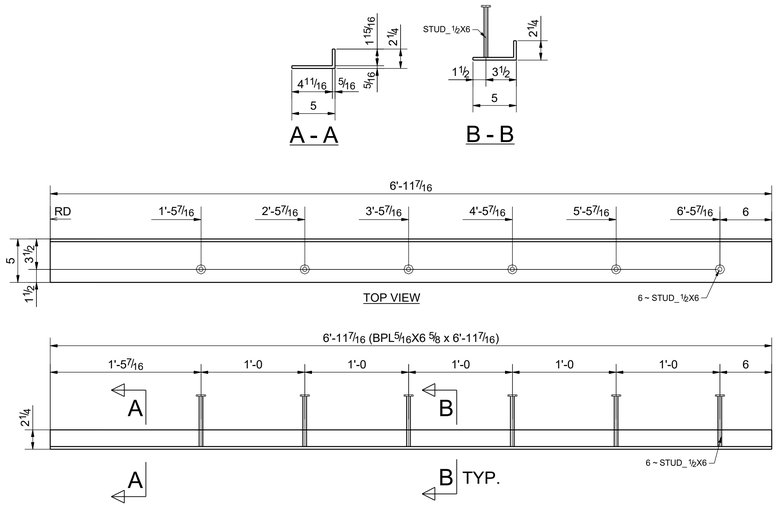
MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
125D1	2	VERTICAL HSS BRACES			SQ-2
125D1	2	HSS6X6X1/4	14'-3 13/16"	511	A500-GR.B
pdu	4	PL1/4"X2 5/8"	0'-5 5/8"	4	A36
ppx	4	PL1/4"X3"	0'-5 5/8"	5	A36
125D2	1	VERTICAL HSS BRACE			SQ-2
125D2	1	HSS6X6X1/4	13'-8 9/16"	245	A500-GR.B
pdu	2	PL1/4"X2 5/8"	0'-5 5/8"	2	A36
ppx	2	PL1/4"X3"	0'-5 5/8"	2	A36
125D3	2	VERTICAL HSS BRACES			SQ-2
125D3	2	HSS6X6X1/4	12'-5 5/8"	445	A500-GR.B
pdu	4	PL1/4"X2 5/8"	0'-5 5/8"	4	A36
ppx	4	PL1/4"X3"	0'-5 5/8"	5	A36
125D4	2	VERTICAL HSS BRACES			SQ-2
125D4	2	HSS6X6X1/4	15'-2 3/8"	542	A500-GR.B
pdu	4	PL1/4"X2 5/8"	0'-5 5/8"	4	A36
ppx	4	PL1/4"X3"	0'-5 5/8"	5	A36
		TOTAL WEIGHT THIS DRAWING		1773	

BILL OF MATERIAL

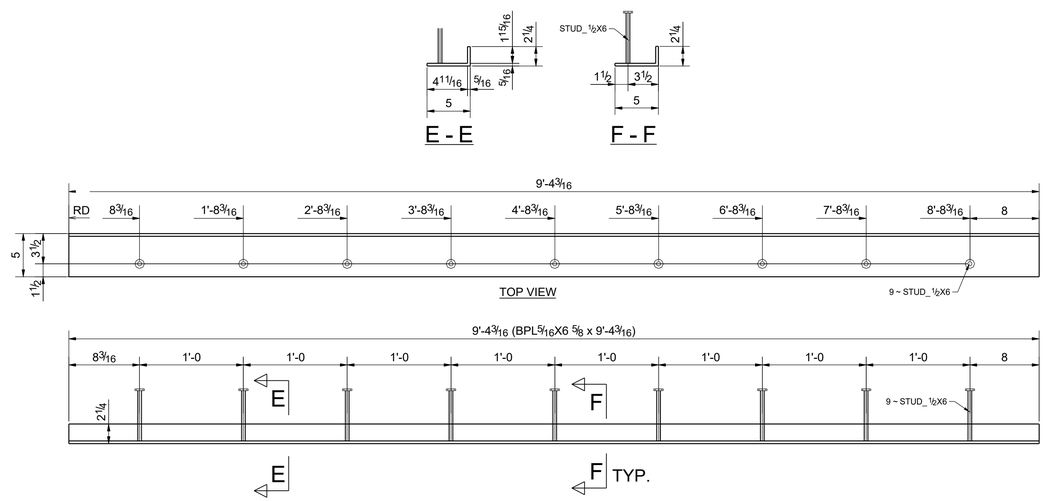
SHIP MARK	PIECE MARK	QTY	DESCRIPTION	LENGTH	REMARKS
90BPL1		1	BPL5/16"X6 5/8"	0'-6 5/8"	SQ-2 A36
		6	1/2"Ø STUD	0'-6"	
90BPL2		1	BPL5/16"X6 5/8"	0'-6 5/8"	SQ-2 A36
		7	1/2"Ø STUD	0'-6"	
90BPL3		1	BPL5/16"X6 5/8"	0'-6 5/8"	SQ-2 A36
		9	1/2"Ø STUD	0'-6"	

SHOP NOTES :

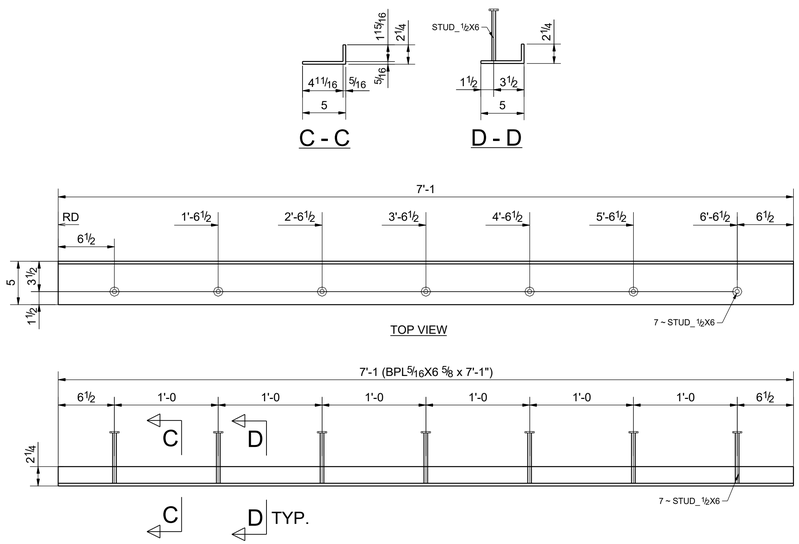
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE GATHER SHEETS/ SINGLE PART SHEETS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. SHOP CLOSE ALL GAPS.



ONE - BENT PLATE - 90BPL1



ONE - BENT PLATE - 90BPL3

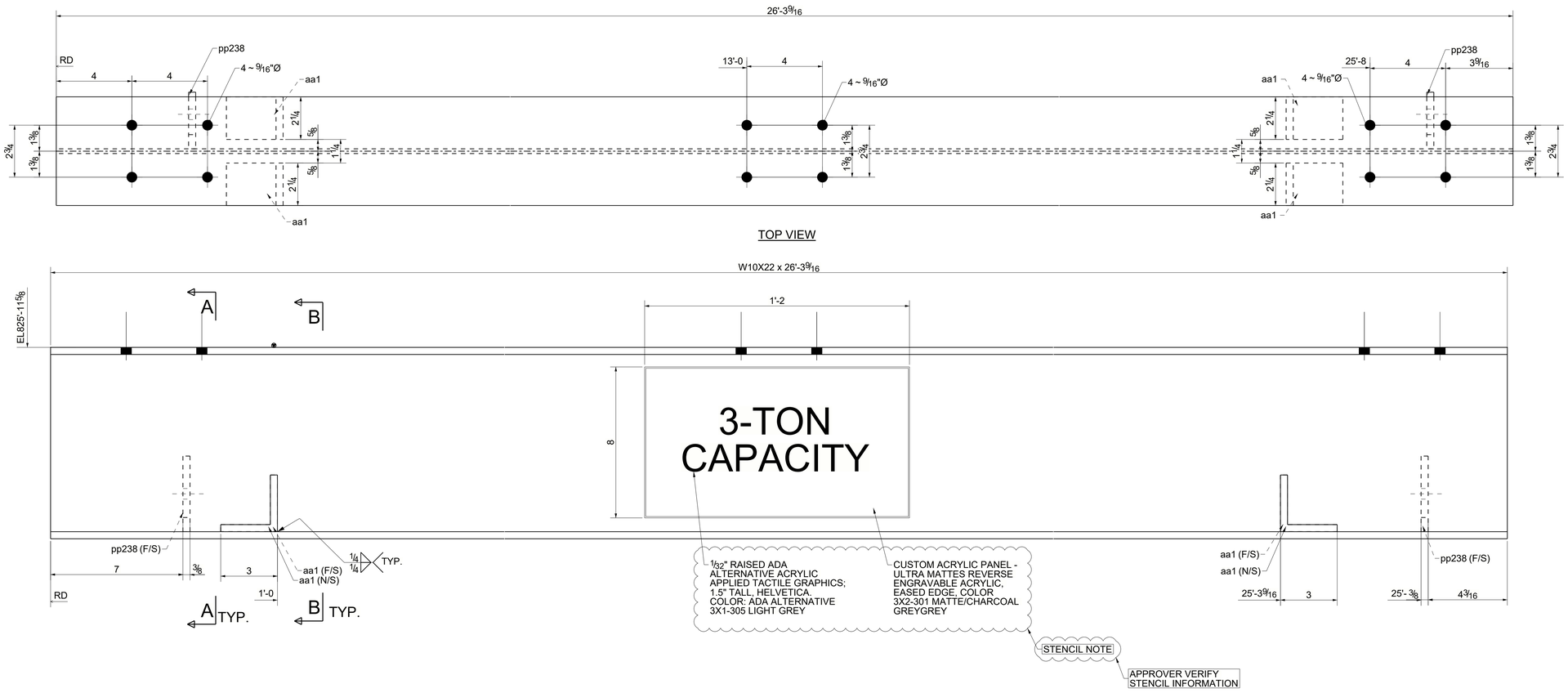


ONE - BENT PLATE - 90BPL2

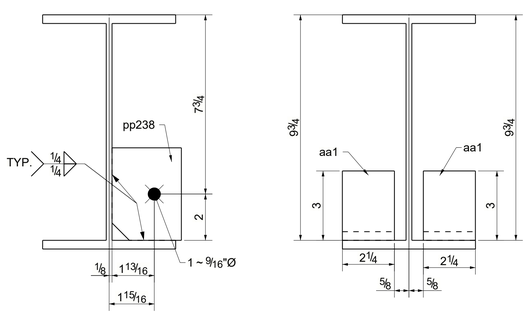
QTY	NAME
1	STEEL FRAMING

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
B18	1	MONORAIL			SQ-2
B18	1	W10X22	26'-3 9/16"	581	A992
aa1	4	L3X3X3/8	0'-2 1/4"	5	A36
pp238	2	PL3/8"X3"	0'-4"	2	A36
		TOTAL WEIGHT THIS DRAWING		589	



SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. SHOP CLOSE ALL GAPS.
11. ALL JOINTS TO BE SEAL WELDED WITH CONT. 1/8 FILLET OR BUTT WELD AS REQ'D
12. PROVIDE VENT HOLES AS REQ'D FOR GALV.
13. PLUG VENT HOLES AFTER GALV.



A - A

B - B

DO STENCIL AFTER GALVANIZING

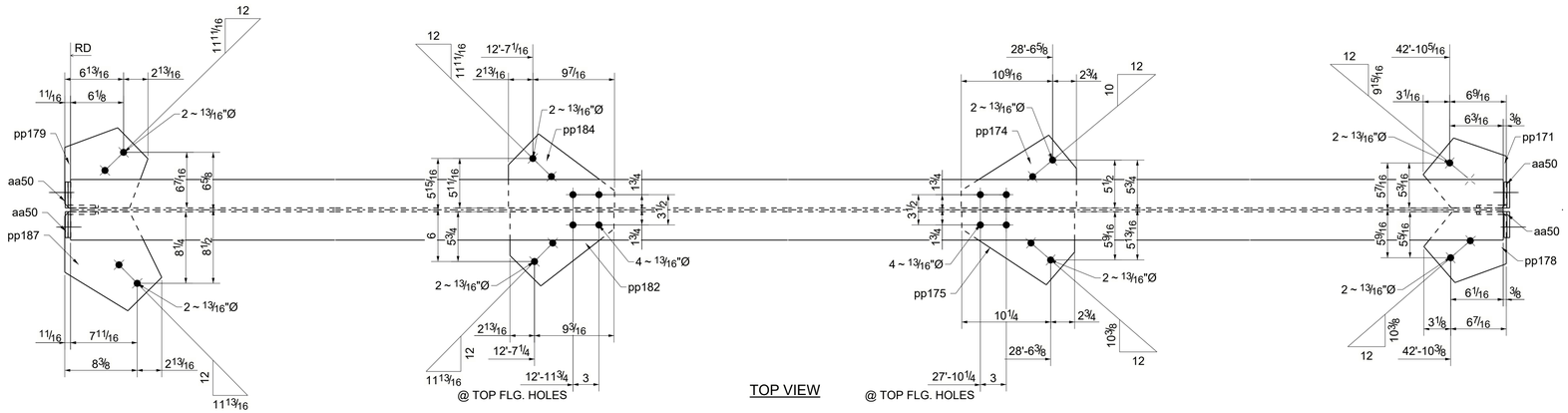
APPROVER VERIFY REQUIREMENT OF SAFETY YELLOW PAINT

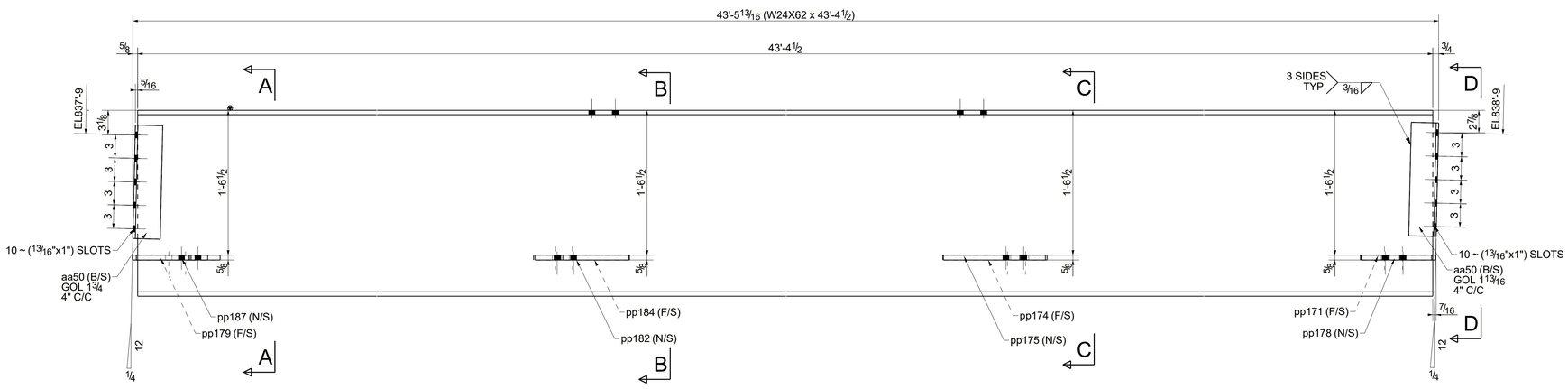
ONE - MONORAIL - B18

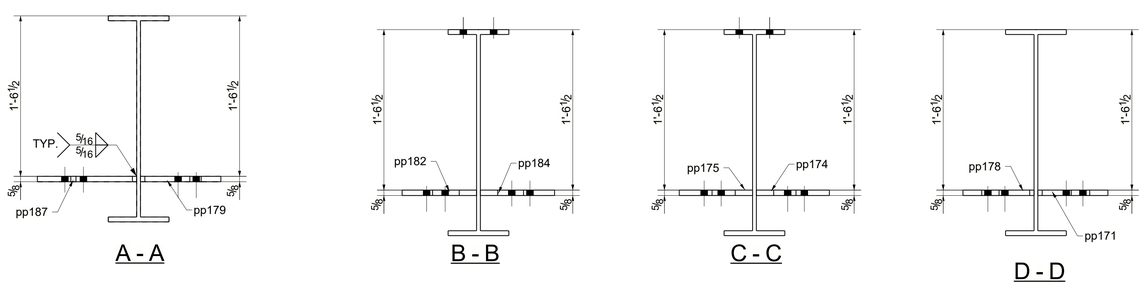
QTY	NAME
1	STEEL FRAMING

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
B44	1	BEAM			SQ-2
B44	1	W24X62	43'-4 1/2"	2686	A992
aa50	4	L3-1/2X3X5/16	1'-2 1/2"	32	A36
pp171	1	PL5/8"X8 11/16"	0'-9 3/4"	10	A36
pp174	1	PL5/8"X8 7/16"	1'-1 5/16"	13	A36
pp175	1	PL5/8"X8 7/16"	1'-1 1/16"	13	A36
pp178	1	PL5/8"X8 5/8"	0'-9 13/16"	10	A36
pp179	1	PL5/8"X9 7/16"	0'-10 5/8"	12	A36
pp182	1	PL5/8"X8 9/16"	1'-0"	12	A36
pp184	1	PL5/8"X8 9/16"	1'-0 1/4"	12	A36
pp187	1	PL5/8"X11 3/16"	0'-11 7/16"	16	A36
		TOTAL WEIGHT THIS DRAWING		2818	







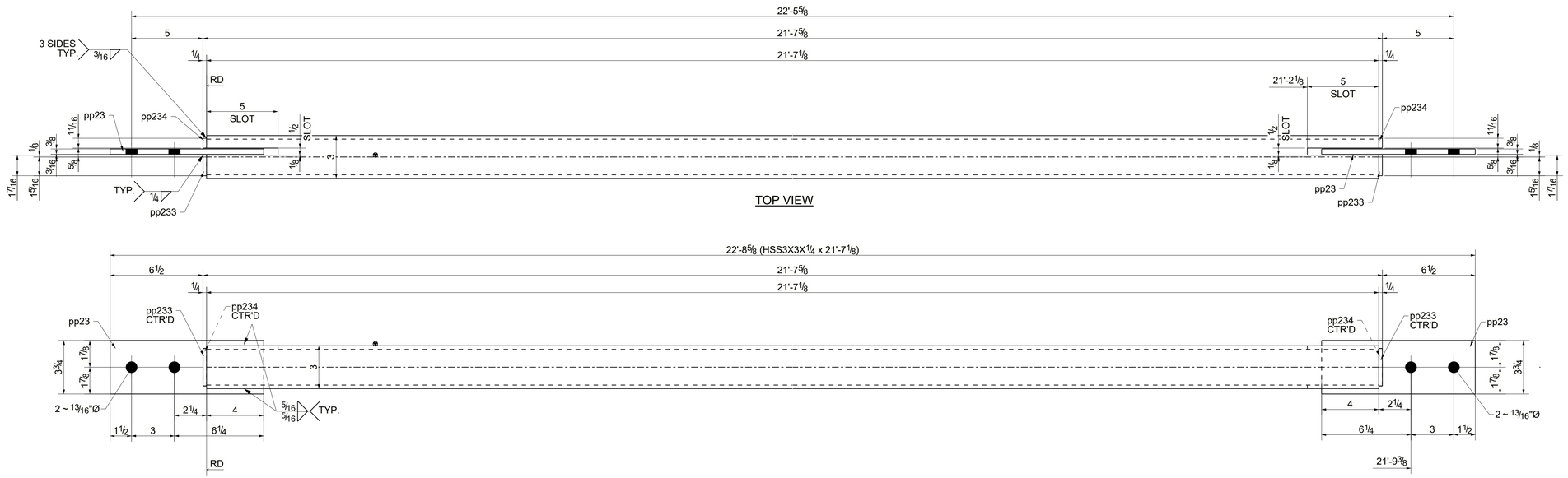
SHOP NOTES:
1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE SINGLE PARTS DETAIL SHEETS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. SHOP CLOSE ALL GAPS.
11. ALL JOINTS TO BE SEAL WELDED WITH CONT. 1/8 FILLET OR BUTT WELD AS REQ'D
12. PROVIDE VENT HOLES AS REQ'D FOR GALV.
13. PLUG VENT HOLES AFTER GALV.

ONE - BEAM - B44

QTY	NAME
1	STEEL FRAMING

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
D1	1	VERTICAL HSS BRACE			SQ-2
D1	1	HSS3X3X1/4	21'-7 1/8"	179	A500-GR.C
pp23	2	PL3/8"X3 3/4"	0'-10 3/4"	9	A36
pp233	2	PL1/4"X1 7/16"	0'-2 5/8"	1	A36
pp234	2	PL1/4"X11/16"	0'-2 5/8"	0	A36
		TOTAL WEIGHT THIS DRAWING		189	



SHOP NOTES:

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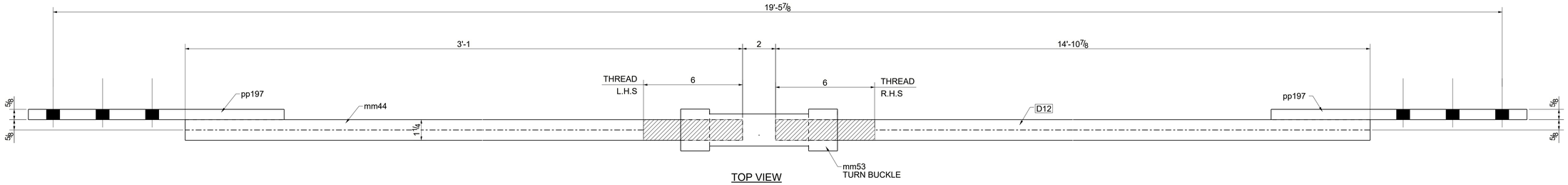
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. SHOP CLOSE ALL GAPS.
11. ALL JOINTS TO BE SEAL WELDED WITH CONT. 1/8 FILLET OR BUTT WELD AS REQ'D
12. PROVIDE VENT HOLES AS REQ'D FOR GALV.
13. PLUG VENT HOLES AFTER GALV.

ONE - VERTICAL HSS BRACE - D1

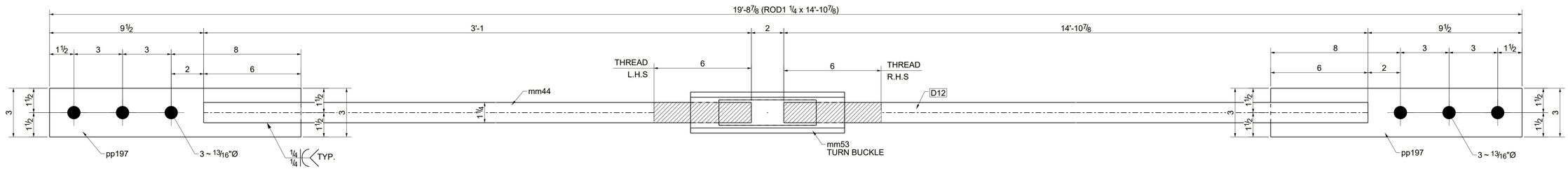
QTY	NAME
1	STEEL FRAMING

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
D12	1	ROD BRACE			SQ-2
D12	1	ROD1 1/4"	14'-10 7/8"	59	A36
mm44	1	ROD1 1/4"	3'-1"	12	A36
mm53	1	PD2 9/16"X5/8"	0'-9 1/2"	6	A36
pp197	2	PL5/8"X3"	1'-3 1/2"	16	A36
		TOTAL WEIGHT THIS DRAWING		94	



TOP VIEW



L.H.S - LEFT HAND SIDE THREAD
R.H.S - RIGHT HAND SIDE THREAD

SHOP NOTES:
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10. SHOP CLOSE ALL GAPS.
11. ALL JOINTS TO BE SEAL WELDED WITH CONT. 1/8 FILLET OR BUTT WELD AS REQ'D
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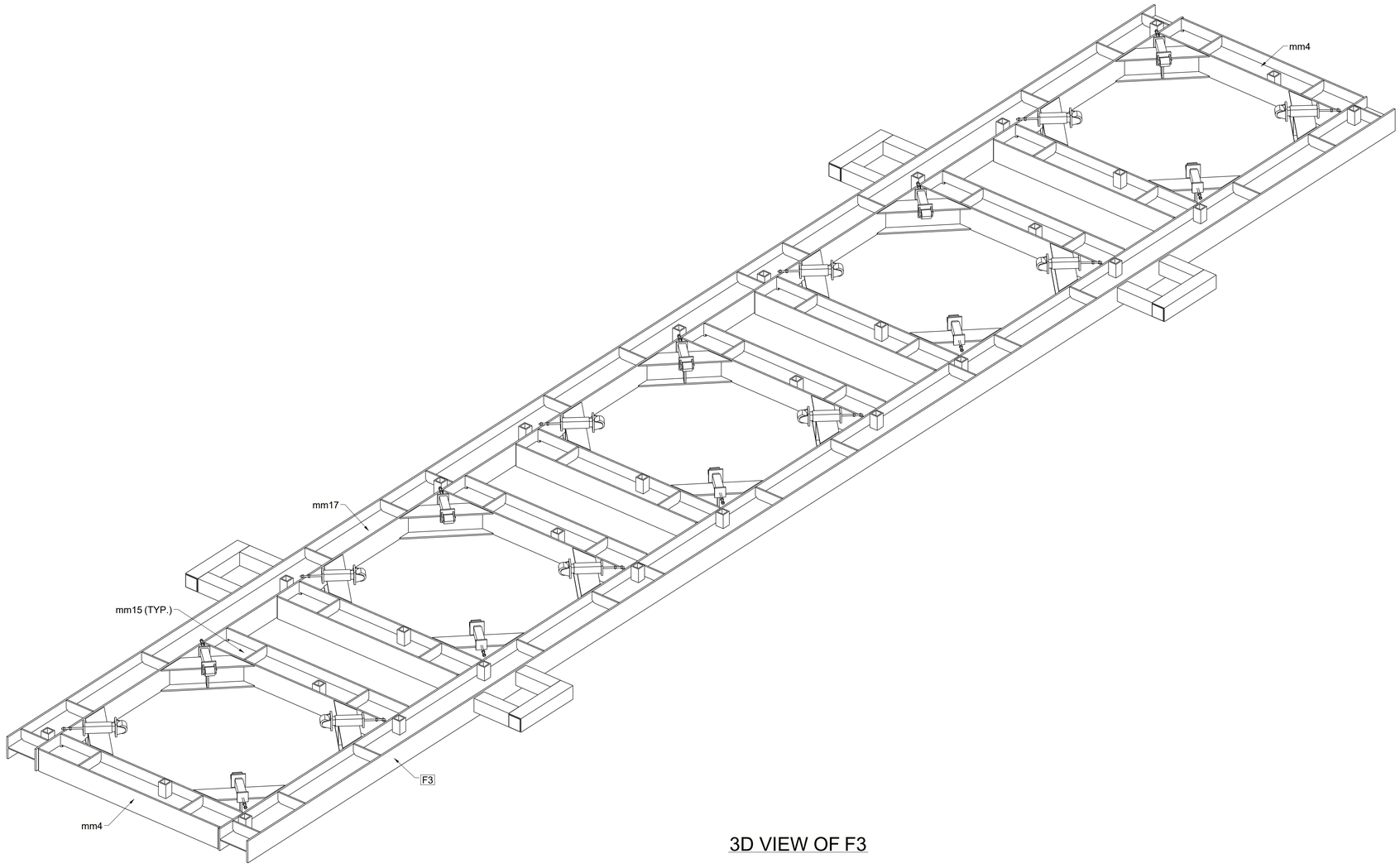
13. PLUG VENT HOLES AFTER GALV.

ONE - ROD BRACE - D12

BILL OF MATERIAL

MARK	QTY	DESCRIPTION	LENGTH	WEIGHT	REMARKS
F3	1	FRAME			SQ-2
F3	1	W12X45	47'-1 1/4"	2100	A992
mm4	2	W12X45	6'-2"	550	A992
mm14	20	W8X28	2'-5 9/16"	1384	A992
mm15	8	W12X45	6'-2"	2199	A992
mm16	8	HSS5X5X3/8	1'-2 1/8"	198	A500-GR.B
mm17	1	W12X45	47'-1 1/4"	2100	A992
mm25	20	McMASTER-CARR PART: 6384K365 BOI			
mm27	4	HSS5X5X3/8	2'-1 9/16"	179	A500-GR.B
mm32	30	HSS3X3X3/8	0'-5"	144	A500-GR.B
mm38	20	HSS2X2X1/4	0'-5 3/4"	49	A500-GR.B
mm39	20	HSS2-1/2X2-1/2X3/16	0'-8 1/2"	74	A500-GR.B
pp2	8	PL1/4"X4 1/2"	0'-4 1/2"	11	A36
pp5	88	PL1/2"X3 13/16"	0'-10 3/4"	506	A36
pp12	20	PL1/2"X3 1/2"	0'-3 1/2"	35	A36
pp13	20	PL1/2"X4 1/2"	0'-4 1/2"	57	A36
pp14	20	PL1/2"X1 3/4"	0'-1 3/4"	9	A36
pp18	8	PL1/2"X3 13/16"	0'-10 3/4"	46	A36
pp24	40	PL3/8"X2 3/4"	0'-3"	25	A36
pp25	20	PL1/8"X3/8"	0'-0 3/8"	0	A36
pp26	36	PL1/2"X3 1/8"	0'-7"	107	A36
rr1	20	ROD1/2"	1'-0"	12	A36
	80	1/2_HEAVY_HEX_NUT		5	
	20	1/2_HEAVY_HEX_NUT		1	
	20	⅝"Ø A325N TYPE-1 BOLT - W/ 4" SMOOTH SHANK	0'-5 1/4"	13	Workshop
		TOTAL WEIGHT THIS DRAWING		9894	



3D VIEW OF F3

SHOP NOTES :

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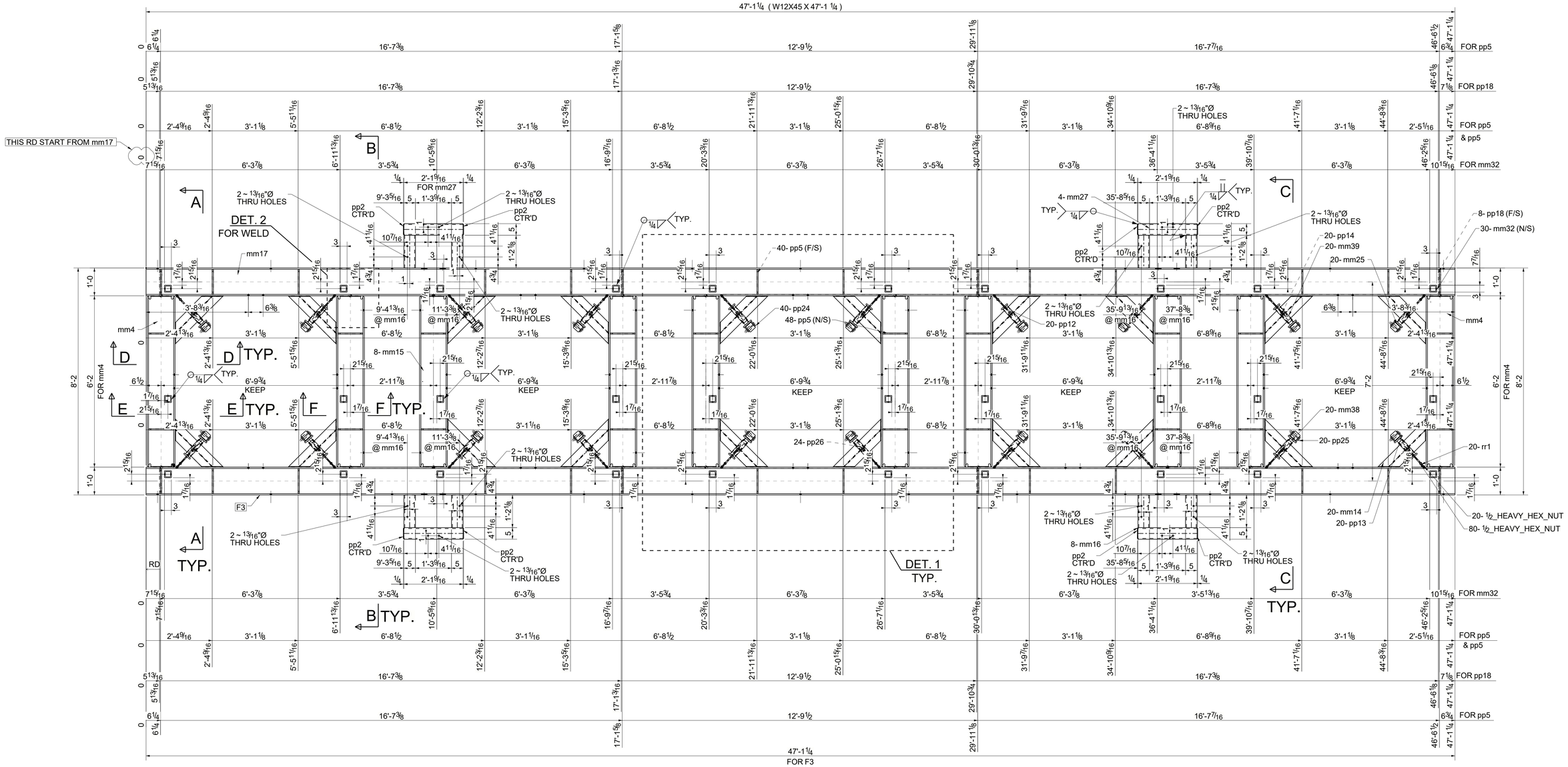
9. SHOP CLOSE ALL GAPS.

ONE - FRAME - F3

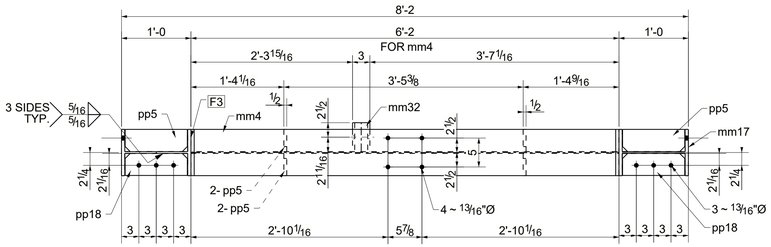
WORK THIS SHEET WITH F3-1, F3-2 & F3-3



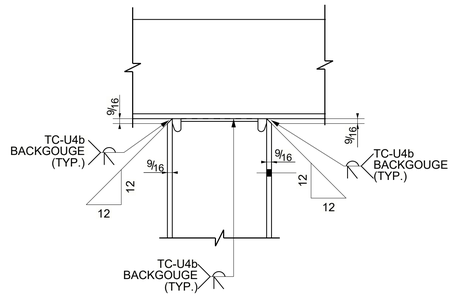
PLAN

WORK THIS SHEET WITH F3, F3-2 & F3-3

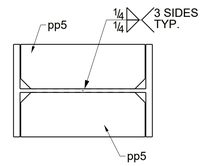
ONE - FRAME - F3



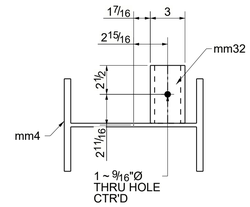
A - A



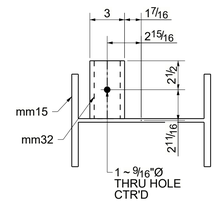
DETAIL 2



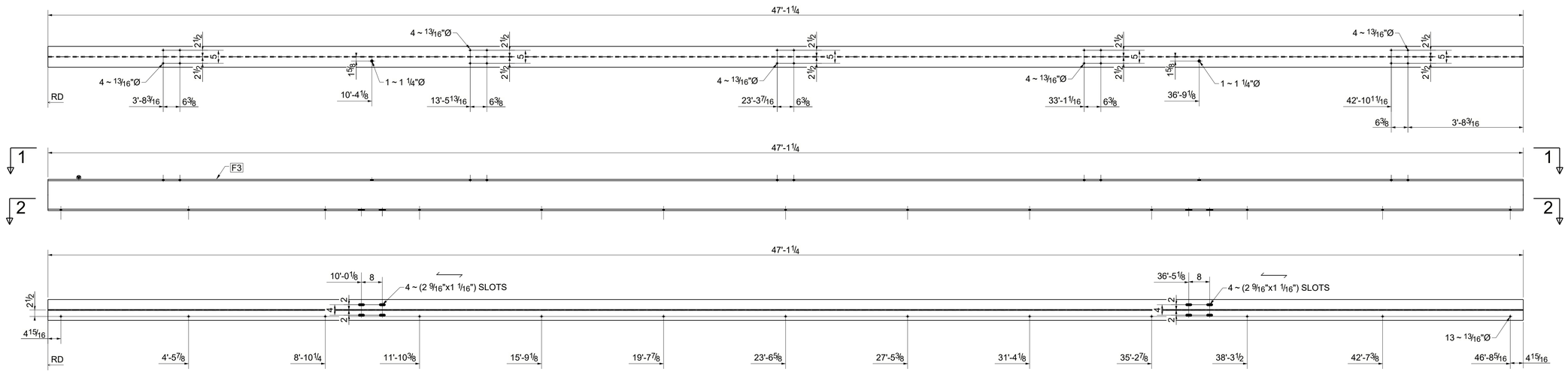
D - D



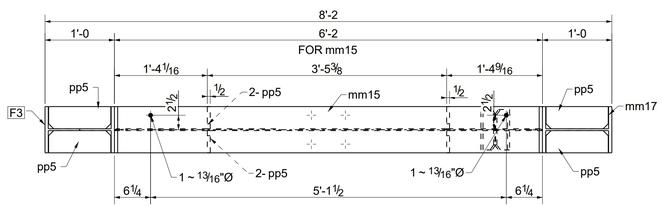
E - E



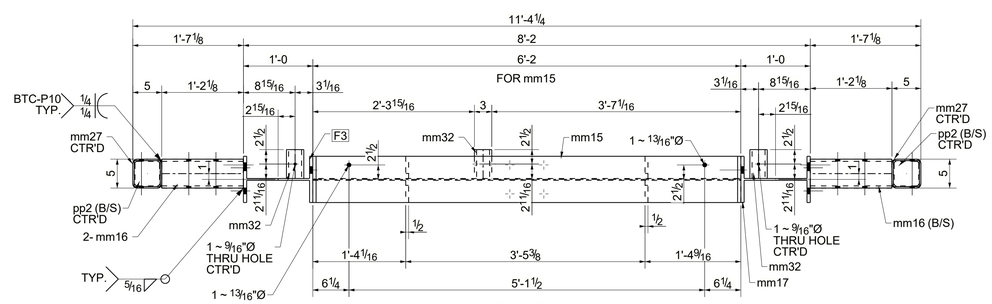
F - F



DETAIL OF F3



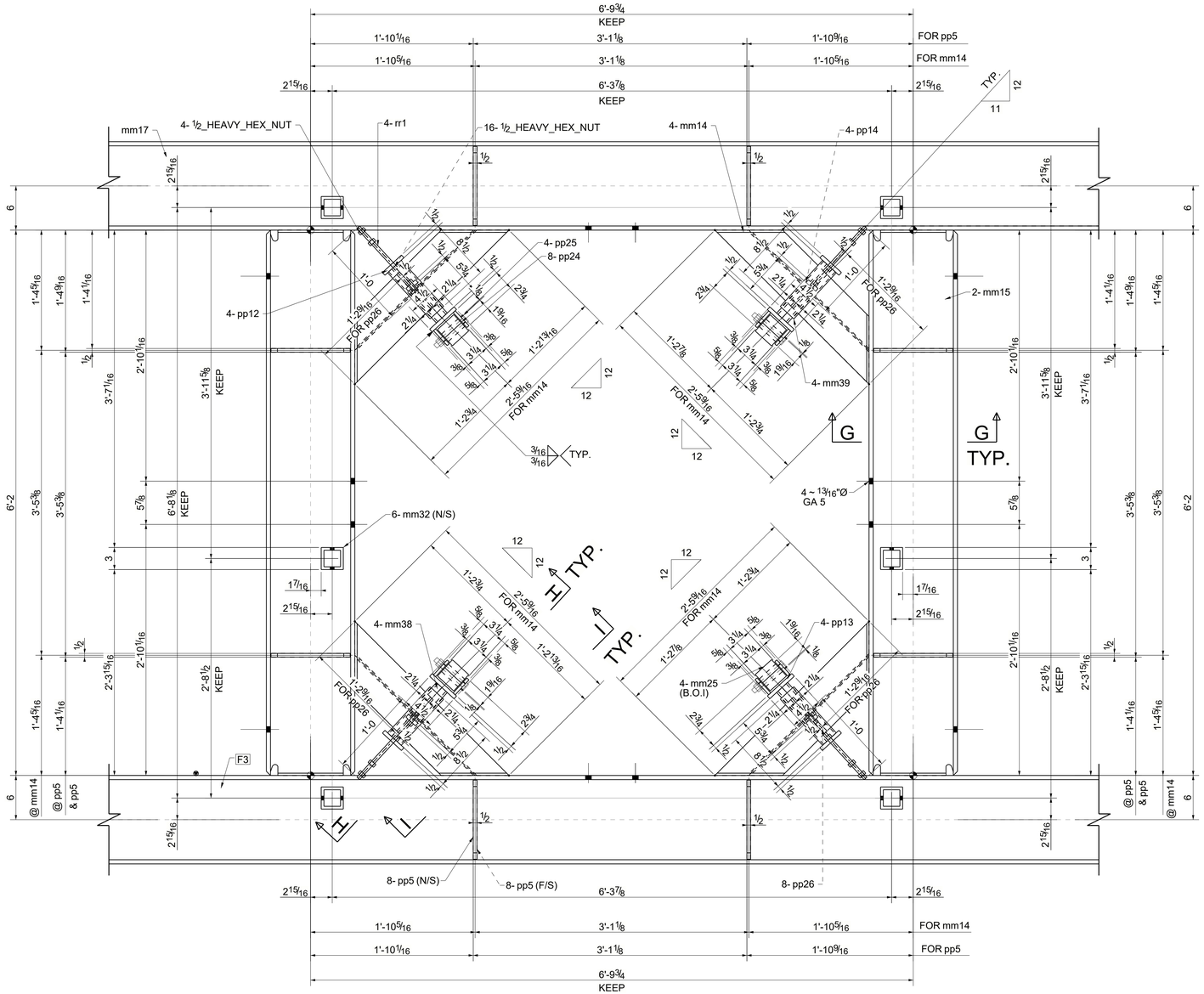
B - B



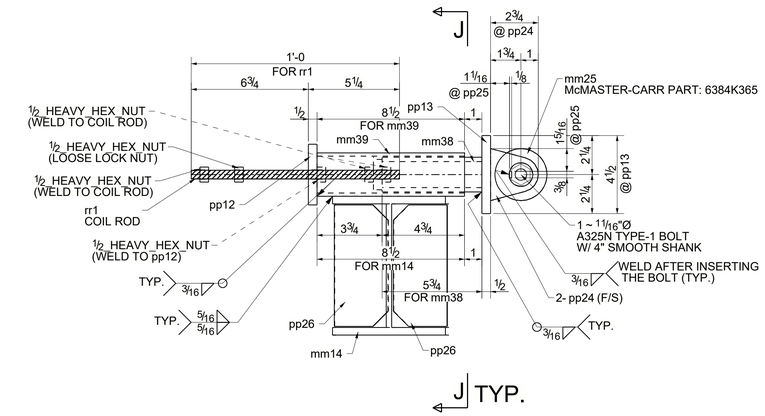
C - C

WORK THIS SHEET WITH F3, F3-1 & F3-3

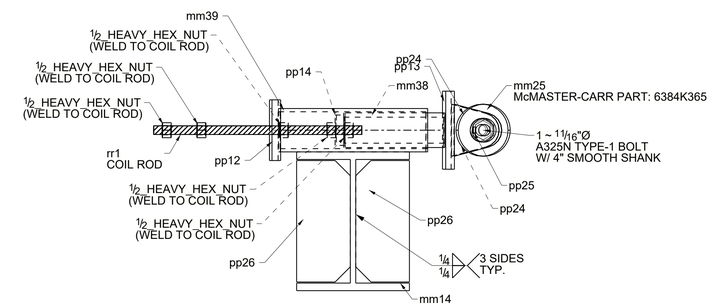
ONE - FRAME - F3



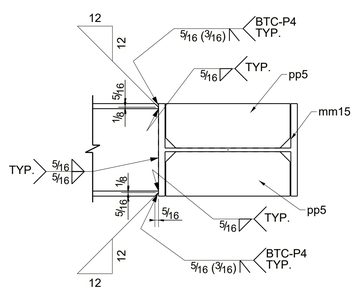
DETAIL 1



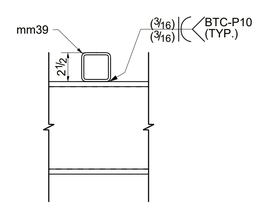
H - H



I - I



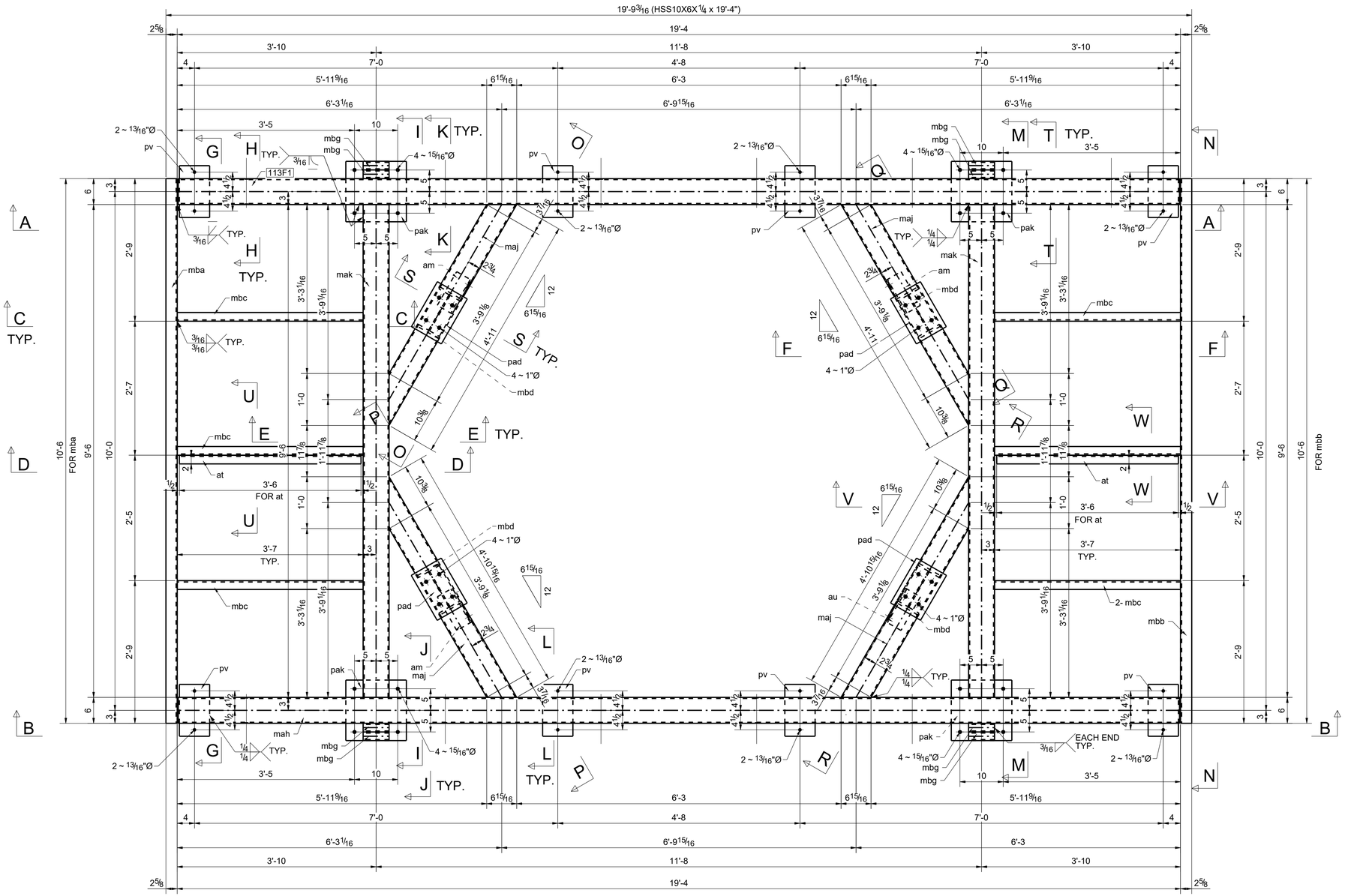
G - G



J - J

ONE - FRAME - F3

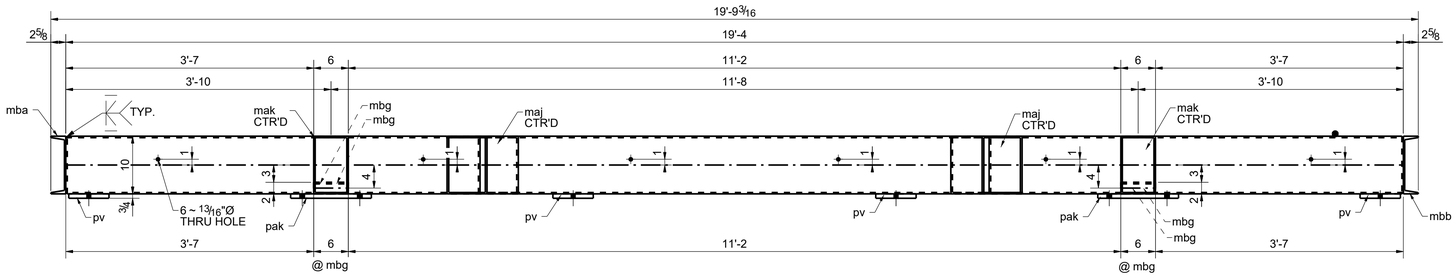
WORK THIS SHEET WITH F3, F3-1 & F3-2



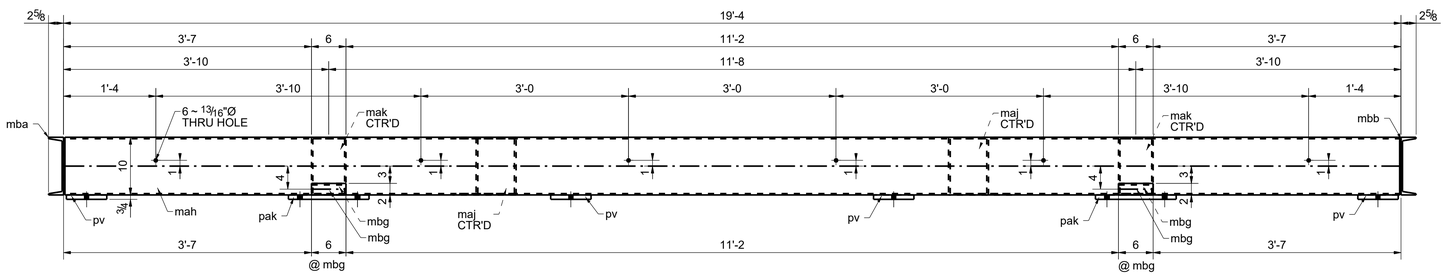
ONE - FRAME - 113F1

WORK THIS SHEET WITH 113-A, 113-B

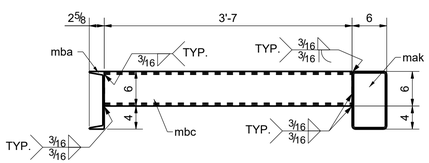
QTY	MARK	DESCRIPTION	LENGTH	GRADE	REMARKS
1	113F1	HSS10X6X1/4	19'-4"	A500-GR.B	
3	am	L4X4X3/8	0'-9"	A36	
2	at	L2X2X1/4	3'-6"	A36	
1	au	L4X4X3/8	0'-9"	A36	
1	mah	HSS10X6X1/4	19'-4"	A500-GR.B	
4	maj	HSS10X6X1/4	4'-11"	A500-GR.B	
2	mak	HSS10X6X1/4	9'-6"	A500-GR.B	
1	mba	C10X15.3	10'-6"	A36	
1	mbb	C10X15.3	10'-6"	A36	
6	mbc	C6X10.5	3'-7"	A36	
4	mbd	W10X30	1'-1 3/8"	A992	
8	mbg	HSS2X2X1/4	0'-6"	A500-GR.B	
4	pad	PL3/4"X8"	1'-0"	A36	
4	pak	PL3/4"X14"	1'-2"	A36	
8	pv	PL3/4"X7"	1'-0"	A36	



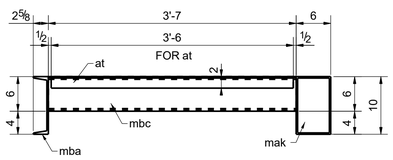
A - A



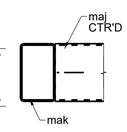
B - B



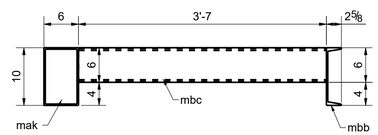
C - C



D - D



E - E

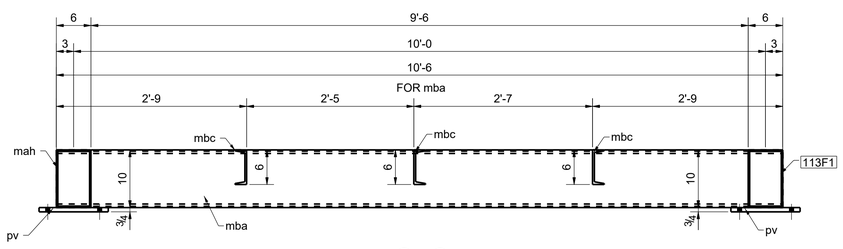


F - F

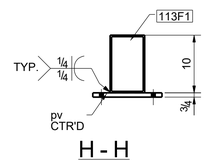
SHOP NOTES :

1. ALL WELDS TO BE 3/16" ALL AROUND OR DOUBLE SIDED FILLET WELD UNLESS SHOWN OTHERWISE.
2. TAG ALL MEMBERS IN A VERTICAL POSITION ON LEFT END AS DETAILED.
3. ALL SHARP EDGES SHALL BE GROUND SMOOTH AND CORNERS ROUNDED OFF.
4. ALL TAIL (RUNNING) DIMENSIONS SHALL BE MEASURED FROM END OF BEAM, COLUMN,..ETC. "RD" DENOTES RUNNING DIMENSION
5. ALL COPES SHALL BE MEASURED FROM END OF BEAM.
6. ALL BEAM COPES TO BE CUT WITH 1/2" RADIUS U.N.O.
7. ALL CLIP ANGLES SHALL BE ATTACHED TO BEAM WITH 3/16" FILLET WELD ON THREE SIDES UNLESS SHOWN OTHERWISE.
8. FOR INDIVIDUAL DETAILS OF PLATES, ANGLES, ETC.., SEE GATHER SHEETS/ SINGLE PART SHEETS.
9. B.T.S. DENOTES BOLT TO SHIP WITH A307 BOLTS. ASSEMBLE AFTER PAINTING/GALV.
10. SHOP CLOSE ALL GAPS.

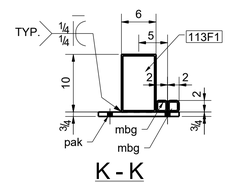
WORK THIS SHEET WITH 113,113-B



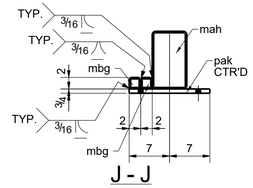
G - G



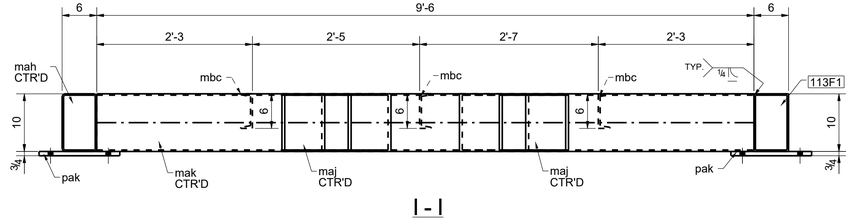
H - H



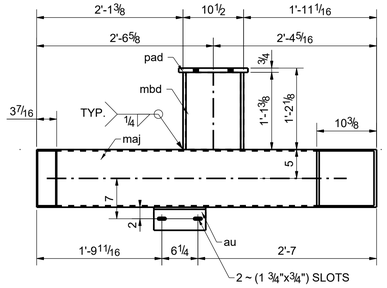
K - K



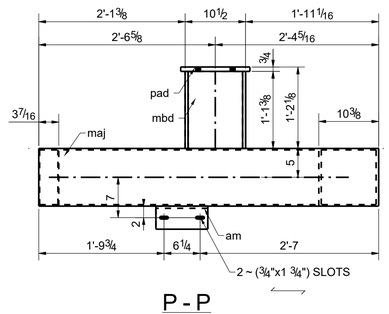
J - J



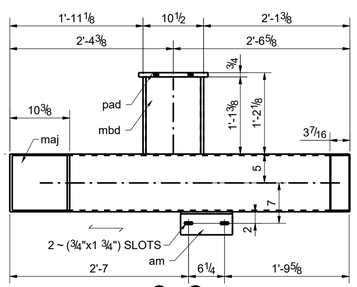
I - I



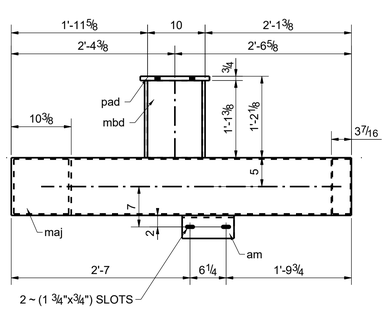
R - R



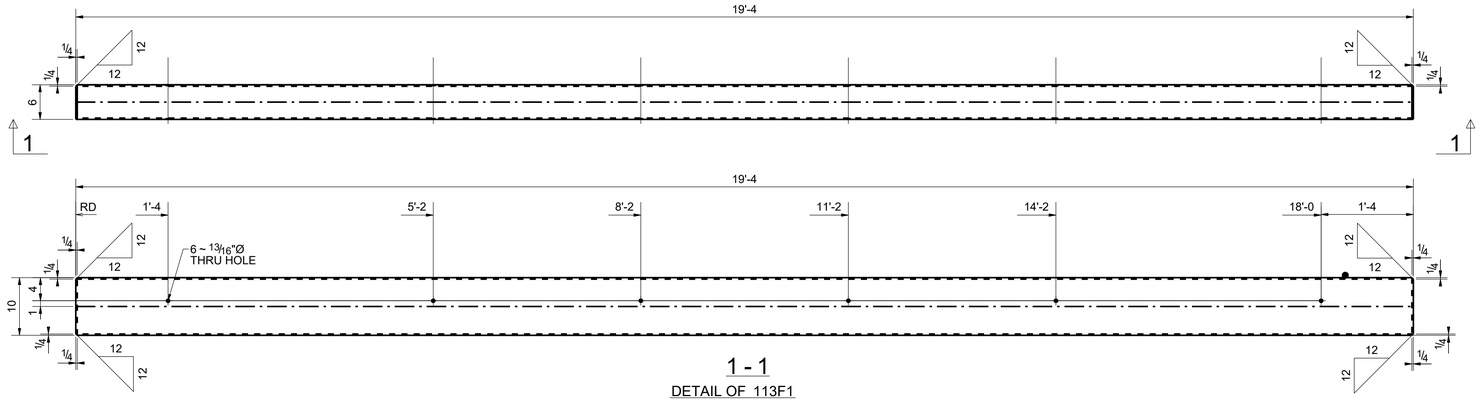
P - P



Q - Q

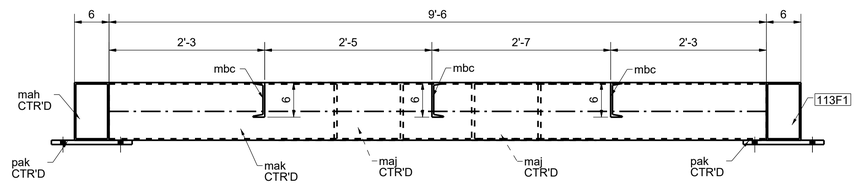


O - O

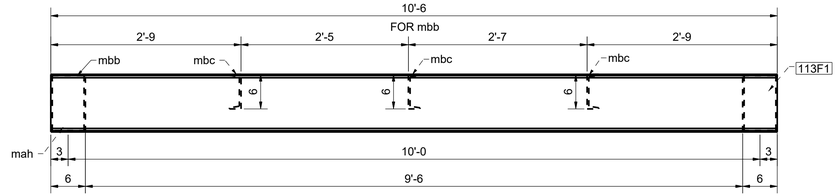


1 - 1

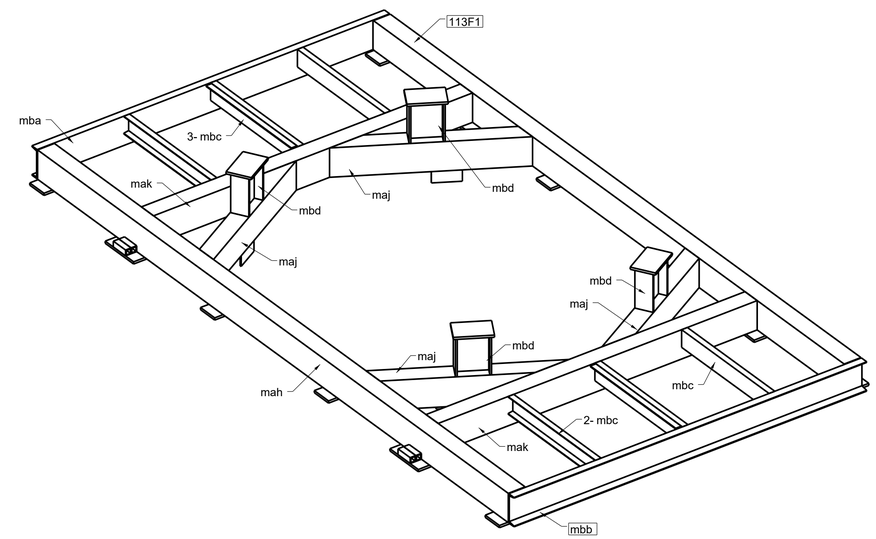
DETAIL OF 113F1



M - M

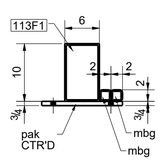


N - N

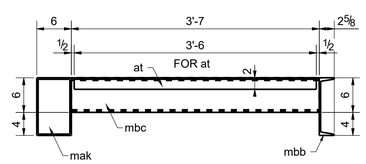


3D-VIEW OF 113F1

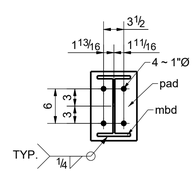
WORK THIS SHEET WITH 113,113-A



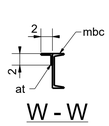
T - T



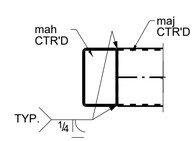
V - V



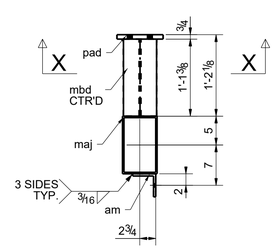
X - X



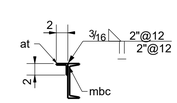
W - W



L - L



S - S



U - U