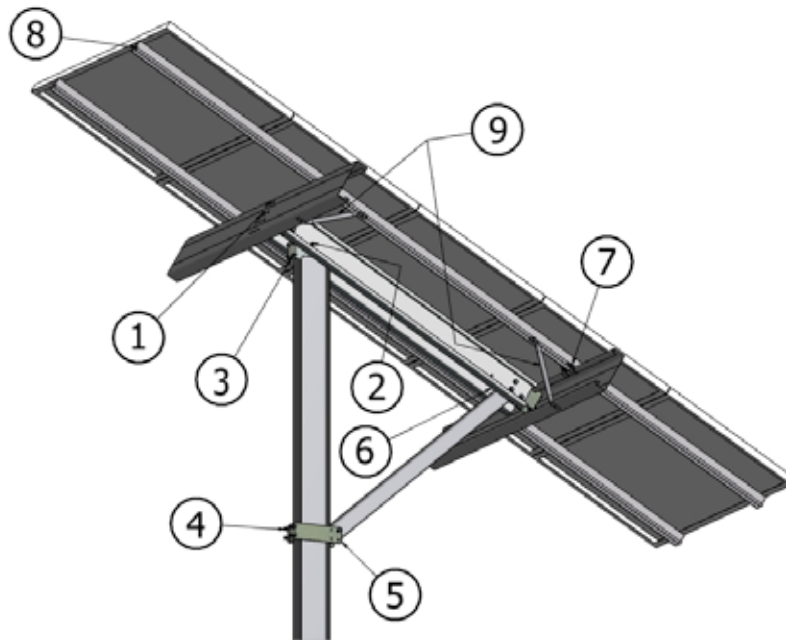


ISYS Ground 2.0 Technical Datasheet

Pub 111206-1td • Rev. 1.1 • December 2011

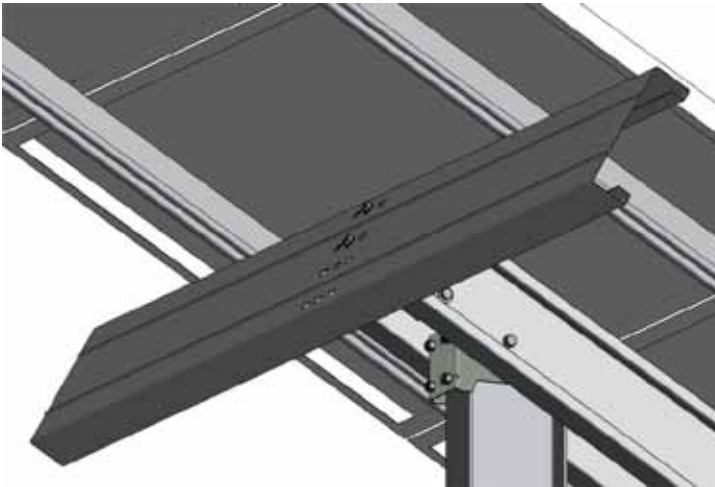
ISYS Ground Connections	1
East West Beam to Top-Chord Assembly	2
Top-Chord Assembly to Top U-Clamp	2
Top U-Clamp to Vertical Column	3
Bottom U-Clamp to Vertical Column	3
Diagonal Brace to Bottom U-Clamp at Column	4
Diagonal Brace to Top-Chord Assembly	4
East West Beam to North South Rail	5
North South Rail to Framed Module	5
Lateral Brace to East West Beam and North South Rail	6

ISYS Ground Connections

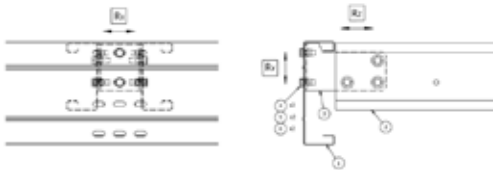


CONNECTION	DESCRIPTION
1	East West Beam to Top-Chord Assembly
2	Top-Chord Assembly to Top U-Clamp
3	Top U-Clamp to Vertical Column
4	Bottom U-Clamp to Vertical Column
5	Diagonal Brace to Bottom U-Clamp
6	Diagonal Brace to Top Chord Assembly
7	East West Beam to North South Rail
8	North South Rail to Module
9	Lateral Brace to East West Beam and North South Rail

East West Beam to Top-Chord Assembly



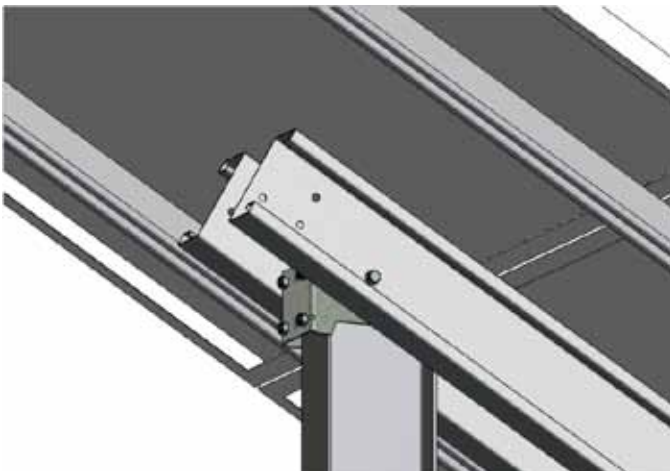
	DESCRIPTION	MATERIAL
1	EAST WEST C-CHANNEL	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 14GA
2	TOP CHORD CHANNELS	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 14GA
3	8.5" U-CLAMP	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 0.1875" THK.
4	1/2 " BOLT	SAE J429-GRADE 5
5	1/2 FLAT WASHER	ANSI, B, N
6	1/2 " FLANGE NUT	SAE J995-GRADE 5



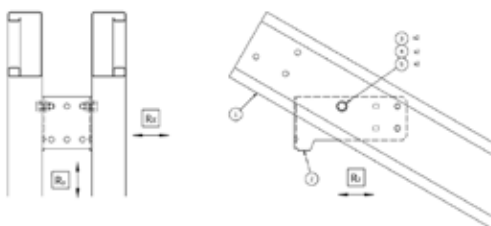
APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs(N)
R _x	5374 (23,904)	1930 (8585)	2960 (13,166)	2765 (12,299)
R _y	9660 (42,970)	4830 (21,484)	6762 (30078)	4830 (21,484)
R _z	9660 (42,970)	4830 (21,484)	6762 (30078)	4830 (21,484)

Note: Load values based on two (2) bolts at single East West Beam to Top-Chord connection

Top-Chord Assembly to Top U-Clamp



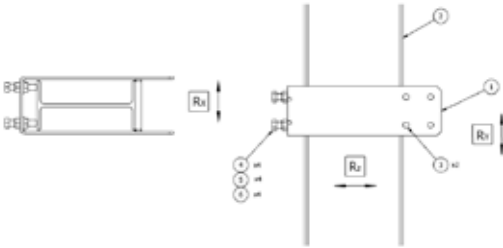
	DESCRIPTION	MATERIAL
1	TOP CHORD CHANNELS	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 14GA
2	10.5" U-CLAMP	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 0.1875" THK.
3	1/2 " BOLT	SAE J429-GRADE 5
4	1/2 FLAT WASHER	ANSI, B, N
5	1/2 " FLANGE NUT	SAE J995-GRADE 5



APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs(N)
R _x	12,600 (56,047)	5040 (22,419)	7560 (33,628)	6,300 (28,023)
R _y	12,600 (56,047)	5040 (22,419)	7560 (33,628)	6,300 (28,023)
R _z	12,600 (56,047)	5040 (22,419)	7560 (33,628)	6,300 (28,023)

Top U-Clamp to Vertical Column

	DESCRIPTION	MATERIAL
1	10.5" U-CLAMP	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 0.1875" THK.
2	VERTICAL COLUMN	A572 GRADE 50
3	U-CLAMP PIN	AISI 1018 STEEL
4	1/2 " X 2 1/2 HEX SOC, SET SCREW, CONE POINT	ALLOY STEEL, ASTM F912-04, ASME 18.3
5	1/2 " FLANGE NUT	SAE J995-GRADE 5
6	1/2 " HEX NUT	SAE J995-GRADE 5

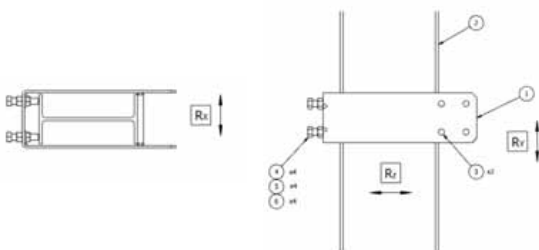


APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs (N)
R_x	8,365 (37,209)	3452 (15,355)	5,293 (23,544)	4182(18,023)
R_y	8,365 (37,209)	3452 (15,355)	5,293 (23,544)	4182(18,023)
R_z	8,365 (37,209)	3452 (15,355)	5,293 (23,544)	4182(18,023)

Bottom U-Clamp to Vertical Column



	DESCRIPTION	MATERIAL
1	12.5" U-CLAMP	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 0.1875" THK.
2	VERTICAL COLUMN	A572 GRADE 50
3	U-CLAMP PIN	AISI 1018 STEEL
4	1/2 " X 2 1/4 HEX BOLT	SAE J429-GRADE 5
5	1/2 " FLANGE NUT	SAE J995-GRADE 5
6	1/2 " HEX NUT	SAE J995-GRADE 5

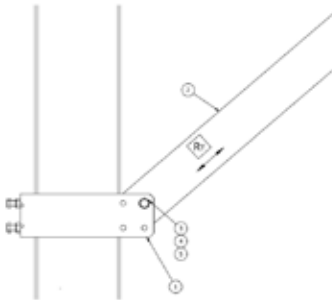


APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs (N)
R_y	8,365 (37,209)	3452 (15,355)	5,293 (23,544)	4182(18,023)

Diagonal Brace to Bottom U-Clamp at Column

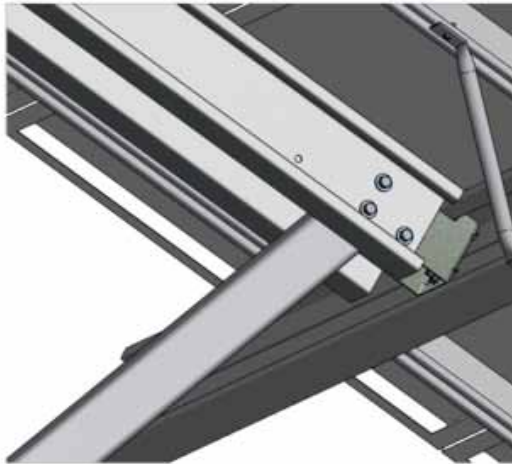


	DESCRIPTION	MATERIAL
1	12.5" U-CLAMP	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 0.1875" THK.
2	DIAGONAL BRACE	4x4 SQUARE TUBE, A572 GRADE 50/ ROLL-FORMED CHANNEL, ASTM A653 GRADE 50
3	1/2 "BOLT	SAE J429-GRADE 5
4	1/2 " FLAT WASHER	ANSI, B, N
5	1/2 " HEX NUT	SAE J995-GRADE 5
6	1/2 " HEX NUT	SAE J995-GRADE 5

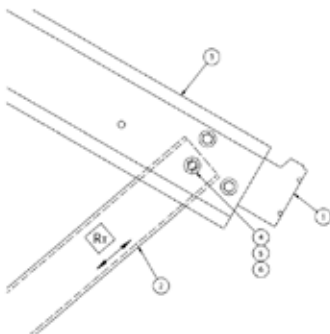


APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs(N)
R _T	21,168 (94,159)	8,820 (39,233)	13,750 (61,163)	8820 (94,159)

Diagonal Brace to Top-Chord Assembly

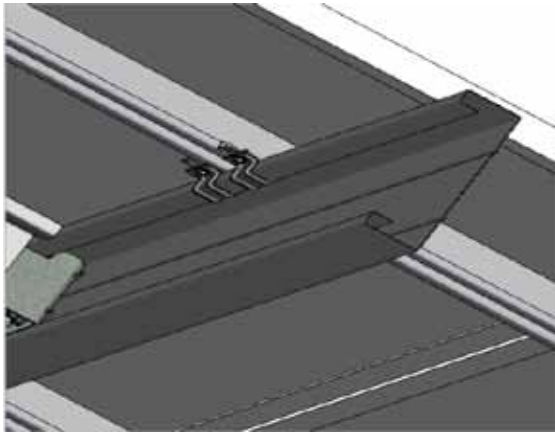


	DESCRIPTION	MATERIAL
1	8.5" U-CLAMP	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 0.1875" THK.
2	DIAGONAL BRACE	4x4 SQUARE TUBE, A572 GRADE 50/ ROLL-FORMED CHANNEL, ASTM A653 GRADE 50
3	1/2 "BOLT	SAE J429-GRADE 5
4	Top Chord Channels	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 14 GA
5	1/2 " FLAT WASHER	ANSI, B, N
6	1/2 " HEX NUT	SAE J995-GRADE 5

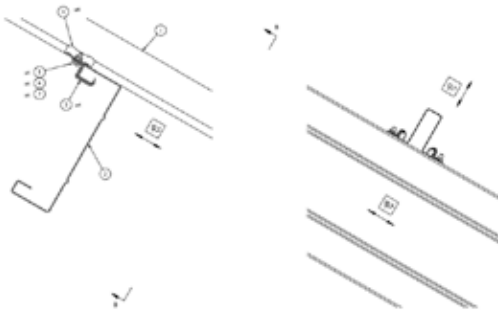


APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs(N)
R _T	21,168 (94,159)	8,820 (39,233)	13,750 (61,163)	8820 (94,159)

East West Beam to North South Rail



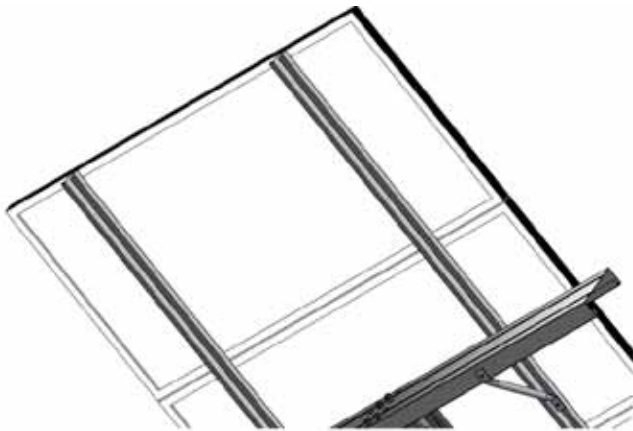
	DESCRIPTION	MATERIAL
1	NORTH SOUTH RAIL	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 18 GA
2	EAST WEST BEAM	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 14 GA
3	LARGE BEAM CLIP	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 14 GA
4	SMALL BEAM CLIP	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, 14 GA
5	1/4 " BOLT	SAE J429-GRADE 5
6	1/4 " FLANGE NUT	SAE J995-GRADE 5
7	1/4 " FLAT WASHER	SAE J995-GRADE 5



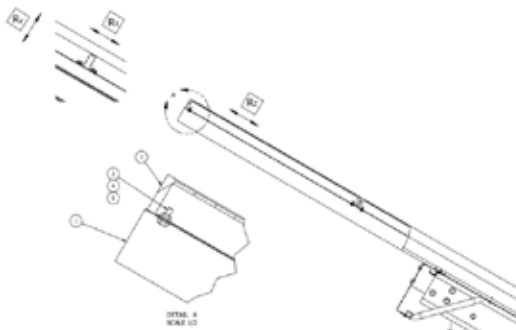
APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs(N)
R_x	549 (2,442)	205 (911)	321 (1,427)	258(1,147)
R_y	1,559 (6,934)	629 (2,798)	986 (4,386)	795(3,536)
R_z	2323 (10,333)	937 (4,167)	1469 (6,534)	1,195 (5,315)

Note: Load values based on two (2) clamps at single East West Beam to North South Rail connection

North South Rail to Framed Module



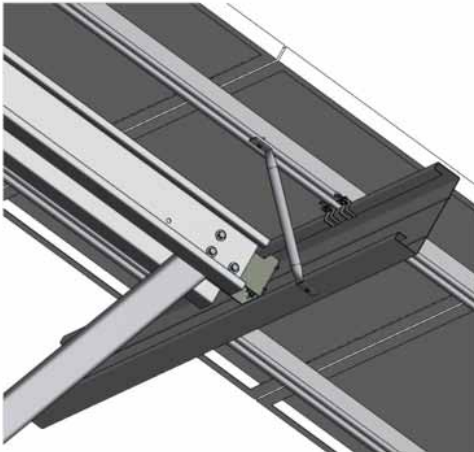
	DESCRIPTION	MATERIAL
1	NORTH SOUTH RAIL	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, MIN G90 GALV, 18 GA
2	MODULE FRAME	ALUMINUM (PER MODULE MFG. SPEC.)
3	1/4 " BOLT	SAE J429-GRADE 5
4	1/4 " FLANGE NUT	SAE J995-GRADE 5
5	1/4 " FLAT WASHER	SAE J995-GRADE 5



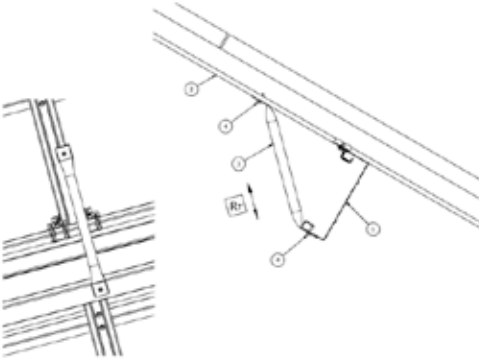
APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs(N)
R_x	1,687 (7,504)	843 (3,750)	1,180 (5,248)	860(3,825)
R_y	1,687 (7,504)	843 (3,750)	1,180 (5,248)	860(3,825)
R_z	634 (2,820)	269 (1,196)	381 (1,695)	300 (1,334)

Note: Load values based on one (1) bolt.

Lateral Brace to East West Beam and North South Rail



	DESCRIPTION	MATERIAL
1	EAST WEST BEAM	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, MIN G90 GALV, 14 GA
2	NORTH SOUTH RAIL	ASTM A653 GRADE 50, MIN TENSILE 60 KSI, MIN G90 GALV, 18 GA
3	LATERAL BRACE	1" GALVANIZED ELECTRICAL METALLIC TUBING, YIELD 30 KSI, ULTIMATE TENSILE 75 KSI
4	1/4-14 X 1" HEX TEK SCREW SELF-DRILLING	SAE J78, 1/4 -14 X 1", #3 POINT



APPLIED LOAD DIRECTION	NOMINAL LOAD lbs (N)	ALLOWABLE LOAD, ASD, (Ω) lbs (N)	DESIGN LOAD, LRFD, (Φ) lbs (N)	DESIGN LOAD, LSD, (Φ) lbs(N)
R_T	1500 (6,672)	500 (2,224)	750 (3,336)	600 (2,668)