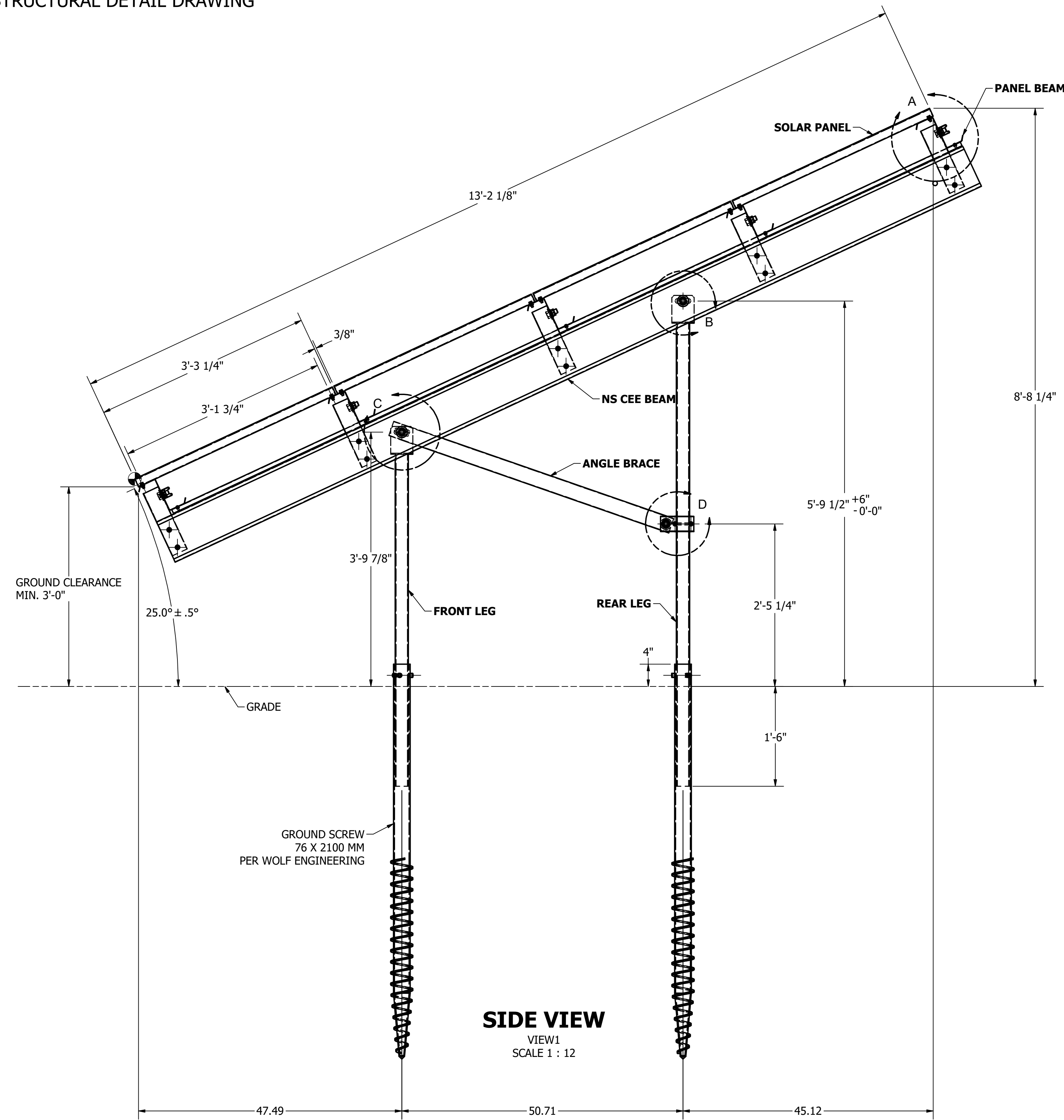
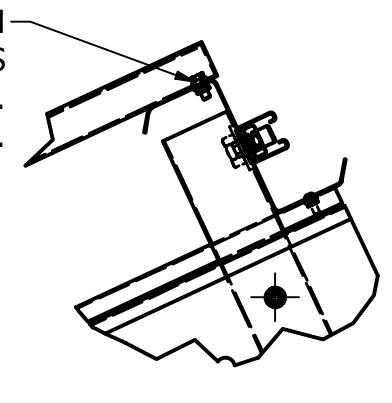


**APPENDIX- A  
STRUCTURAL DETAIL DRAWING**

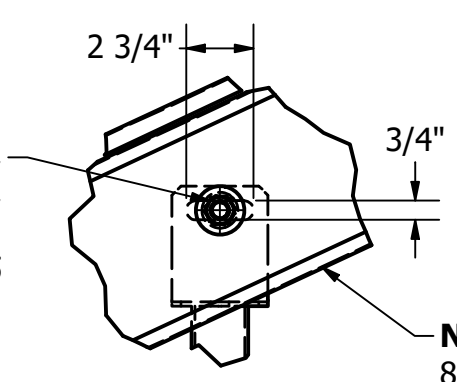


PANEL ATTACHES TO PANEL BEAMS WITH (4) 5/16-18 X 3/4" SERRATED FLANGE CAP SCREWS AND 5/16-18 SERRATED FLANGE NUTS. TORQUE TO 15 FT-LBS.



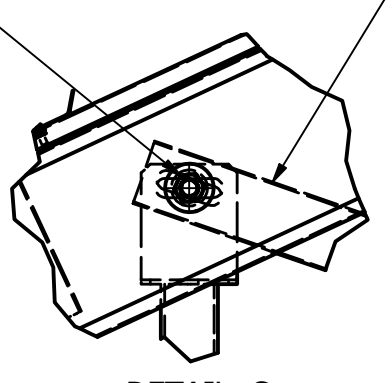
DETAIL A  
SCALE 1 / 8

WELDED LEG ADAPTER BRACKET A36 STEEL, HSS2.375X0.154, A500 C, HOT DIP GALVANIZED TO ASTM A123. ATTACHES TO NS BEAM WITH (1) 3/4-10 X 1.5" GRADE 5 STEEL HHCS, WASHER, AND SERRATED FLANGE NUT. TORQUE TO 250 FT-LBS.



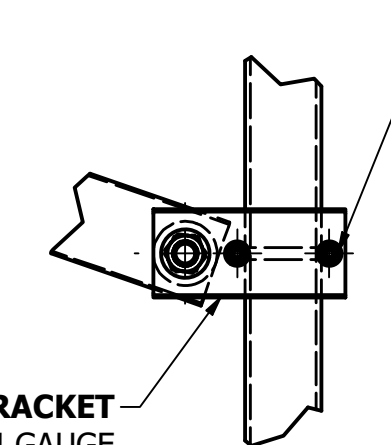
DETAIL B  
SCALE 1 / 8

NS CEE BEAM ATTACHES TO ANGLE BRACE WITH (1) 3/4-10 X 1.5" GRADE 5 STEEL HHCS, WASHER, AND SERRATED FLANGE NUT. TORQUE TO 250 FT-LBS



DETAIL C  
SCALE 1 / 8

CHANNEL BRACKET 2.75" X 1.75" U-CHANNEL, 14 GAUGE ASTM A653 GRADE 50 SS STEEL G115 GALVANIZED. ATTACHES TO ANGLE BRACE WITH (1) 3/4-10 X 1.5" GRADE 5 STEEL HHCS, WASHER AND SERRATED FLANGE NUT. TORQUE TO 250 FT-LBS



DETAIL D  
SCALE 1 / 6

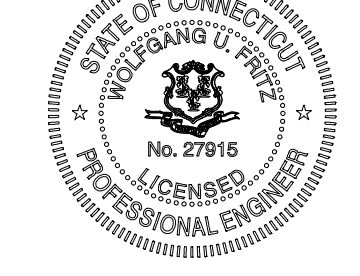
CHANNEL BRACKET ATTACHES TO LEG ADAPTER USING (1) 3/8-16 U-BOLT AND (2) SERRATED FLANGE NUTS. TORQUE TO 20 FT-LBS

**PROJECT INFORMATION**  
INSTALLATION ADDRESS: LOT 33 PROSPECT STREET, BURLINGTON, CT 06013

**Structural General Notes**

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Snow Loads:  
-Ground Snow Load  $p_g = 40$  psf  
-Importance Factor  $I_s = 0.8$   
-Exposure Factor  $C_e = 1.0$   
-Slope Snow Load  $p_s = 30$  psf  
Wind Loads:  
-Basic Wind Speed  $V = 110$  mph (MRI = 0.93 or 25 year)  
- $I_w = 1$   
-Exposure = C  
-Wind Design performed in accordance with the requirements of ASCE - Wind Tunnel Procedure. Refer to Wind Tunnel Report by UWOLBLWT Laboratory dated 12/11/14.  
Seismic Loads:  
-SS = 0.182g, S1 = 0.065g  
-Site Class = D  
-SDS = 0.190g, SD1 = 0.100g  
-Seismic Design Category = B  
-Ordinary Steel Cantilever Column System
- Material strengths:  
-Hot-rolled structural steel ASTM A992 GR50 w/80 ksi yield.  
-Cold Formed Steel Sections comply w/ASTM A1003, structural grade, galvanized to Grade as noted.  
-Formed Steel Brackets - ASTM A653 Grade 50 SS, G115 HDG  
-I-Beams - A992, 50 ksi, Hot Dip Galvanized to ASTM 123 Grade 85  
-Plate - A36 Steel, Hot Dip Galvanized  
-Connectors - Stainless Steel unless otherwise noted.
- Members and connections have been designed for worst-case loading associated with exterior zones of the array per the wind tunnel report.
- Foundation embedment depths are to be calculated and sealed by a CT State Licensed Geotechnical engineer.
- For the purposes of this project, all arrays are classified as Exterior Arrays.
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Engineer of Record



REVISION HISTORY			
REV	DESCRIPTION	DATE	DESIGNER
0	STRUCTURAL DETAIL DRAWING	7/15/2020	JSCOTT

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	Weight:	1752.640 lbmass	
	Description:	CT-BF-DB, RISEN SOLAR RSM144-6-380BMDG, 4x5, 25 DEG, BURLINGTON SOLAR ONE - BIFACIAL - RISEN SOLAR, VEROGY	
	Project:	BURLINGTON SOLAR ONE - BIFACIAL - RISEN SOLAR	
Drawn:	JSCOTT	Date:	7/15/2020
Scale:		Sheet:	1 of 3
 19410 Jetton Rd, Ste 220 Cornelius, NC, 28031 www.dcesolar.com Phone: 1-704-659-7474	Format:	Part Number	Rev:
	D	4635	0

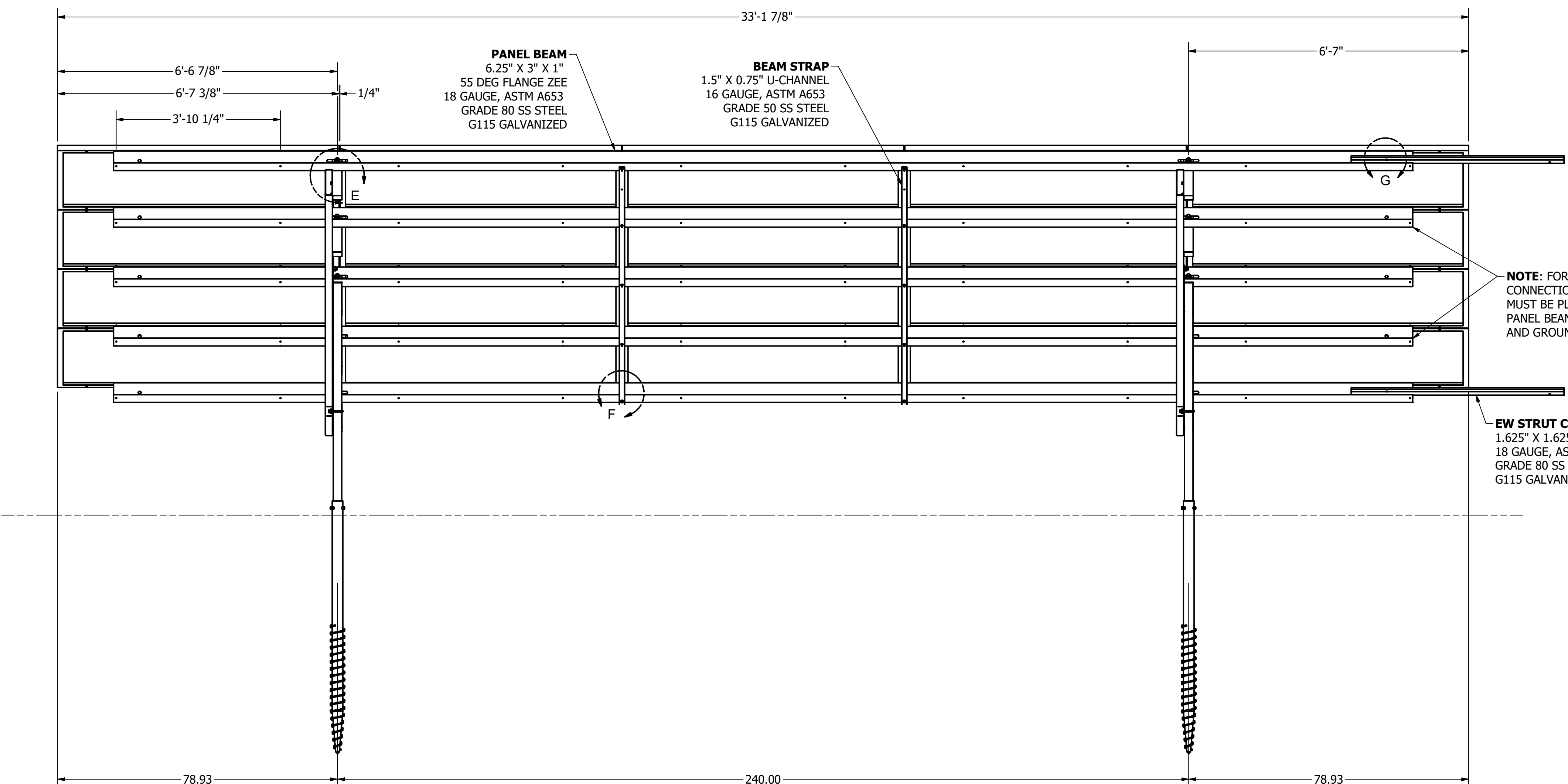
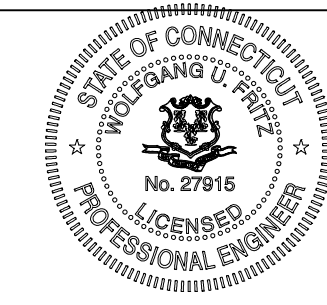
STRUCTURAL DETAIL DRAWING - REAR

PROJECT INFORMATION  
 INSTALLATION ADDRESS: LOT 33 PROSPECT STREET, BURLINGTON, CT 06013

Structural General Notes

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 -Importance Factor  $I_s = 0.8$   
 -Exposure Factor  $C_e = 1.0$   
 -Slope Snow Load  $p_s = 30$  psf  
 Wind Loads:  
 -Basic Wind Speed  $V = 110$  mph (MRI = 0.93 or 25 year)  
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 -Exposure = C  
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 -SS = 0.182g, S1 = 0.065g  
 -Site Class = D  
 -SDS = 0.190g, SD1 = 0.100g  
 -Seismic Design Category = B  
 -Ordinary Steel Cantilever Column System
- Material strengths:  
 -Hot-rolled structural steel ASTM A992 GR50 w/80 ksi yield.  
 -Cold Formed Steel Sections comply w/ASTM A1003, structural grade, galvanized to Grade as noted.  
 -Formed Steel Brackets - ASTM A653 Grade 50 SS, G115 HDG  
 -I-Beams - A992, 50 ksi, Hot Dip Galvanized to ASTM 123 Grade 85  
 -Plate - A36 Steel, Hot Dip Galvanized  
 -Connectors - Stainless Steel unless otherwise noted.
- Members and connections have been designed for worst-case loading associated with exterior zones of the array per the wind tunnel report.
- Foundation embedment depths are to be calculated and sealed by a CT State Licensed Geotechnical engineer.
- For the purposes of this project, all arrays are classified as Exterior Arrays.
- Scope of work by Structural Engineer includes member design, connection design, and determination of design base reactions only. Layout of PV arrays such that they do not conflict with existing site obstructions, determination of site-specific foundation and geotechnical parameters, and all other work not specifically noted is by others.

Engineer of Record



**PANEL BEAM**  
 6.25" X 3" X 1"  
 55 DEG FLANGE ZEE  
 18 GAUGE, ASTM A653  
 GRADE 80 SS STEEL  
 G115 GALVANIZED

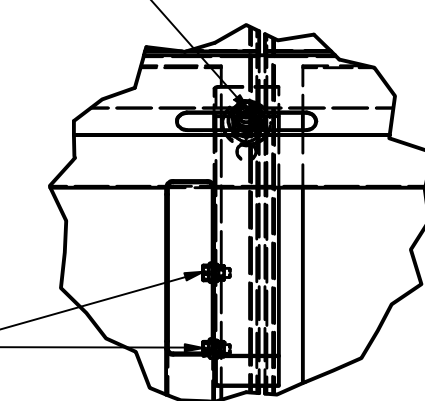
**BEAM STRAP**  
 1.5" X 0.75" U-CHANNEL  
 16 GAUGE, ASTM A653  
 GRADE 50 SS STEEL  
 G115 GALVANIZED

**NOTE:** FOR ALTERNATE ARRAY CONNECTIONS, STRUT CONNECTORS MUST BE PLACED ON 2ND & 4TH EW PANEL BEAMS PER INSTALLATION MANUAL AND GROUND MOUNT LAYOUT

**EW STRUT CONNECTOR**  
 1.625" X 1.625" U-CHANNEL  
 18 GAUGE, ASTM A653  
 GRADE 80 SS STEEL  
 G115 GALVANIZED

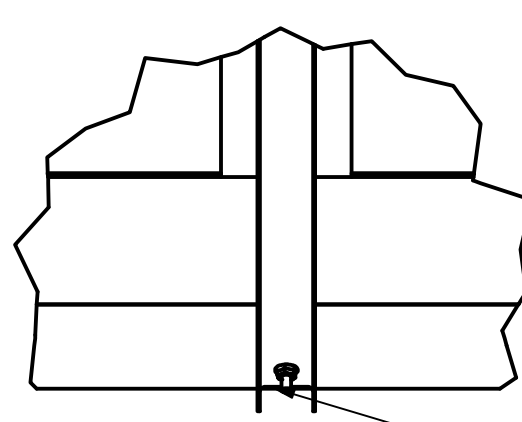
**REAR VIEW**  
 VIEW3  
 SCALE 1 / 20

ZEE BEAM ATTACHES TO PIVOT BRACKET USING (1) 3/4-10 GRADE 5 STEEL HHCS, WASHER, AND SERRATED FLANGE NUT. TORQUE TO 250 FT-LBS.



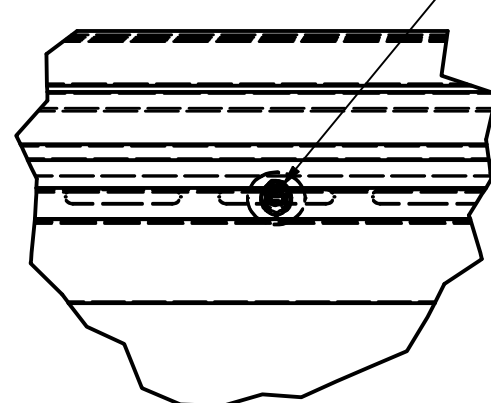
DETAIL E  
 SCALE 1 / 8

ZEE BEAM ATTACHES TO CEE BEAM USING PIVOT BRACKET 3" X 2.7" X 12.375" 14G CHANNEL ASTM A653 GRADE 80 SS STEEL G115 GALVANIZED. BRACKET ATTACHES TO NS BEAM WITH (2) 18-8 SS 3/8-16 SERRATED FLANGE CAP SCREWS AND SERRATED FLANGE NUTS. TORQUE TO 20 FT-LBS



DETAIL F  
 SCALE 1 / 5

BEAM STRAP ATTACHES TO PANEL BEAMS WITH (4) 18-8 SS 1/4-20 BUTTON HEAD CAP SCREWS AND SERRATED FLANGE NUTS. TORQUE TO 15 FT-LBS



DETAIL G  
 SCALE 1 / 5

NEIGHBORING TABLES BONDED WITH 18G CHANNEL STRUTS. STRUTS CONNECT TO EW PANEL ZEE BEAMS WITH (2) 18-8 SS 3/8-16 SERRATED FLANGE CAP SCREWS, FENDER WASHERS, AND SERRATED FLANGE NUTS. TORQUE TO 20 FT-LBS.

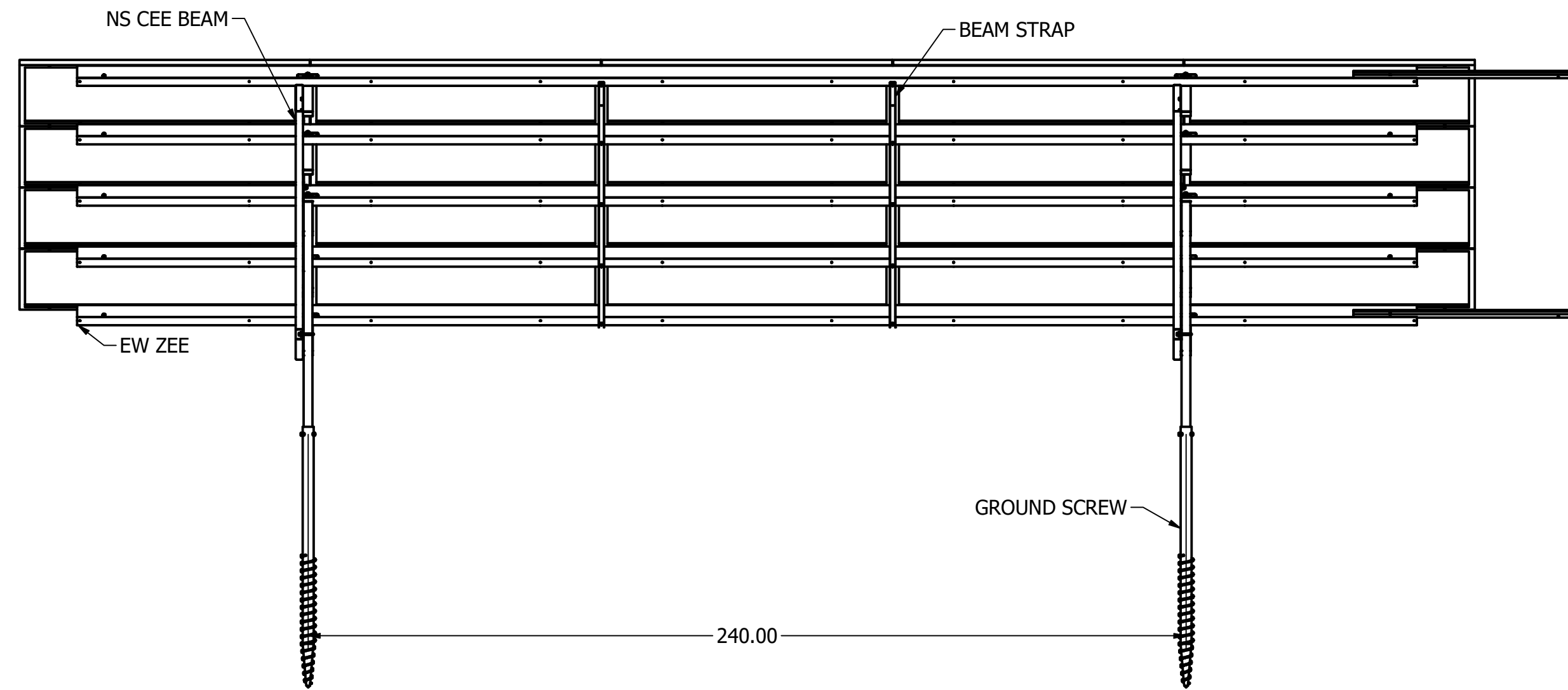
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 .XX = ± 0.015" (0.38mm)  
 .XXX = ± 0.005" (0.127mm)  
 ANGLE = ± 5°  
 MIN. BREAK = 0.012" (0.3mm)  
 SURFACE FINISH = 63 (US)

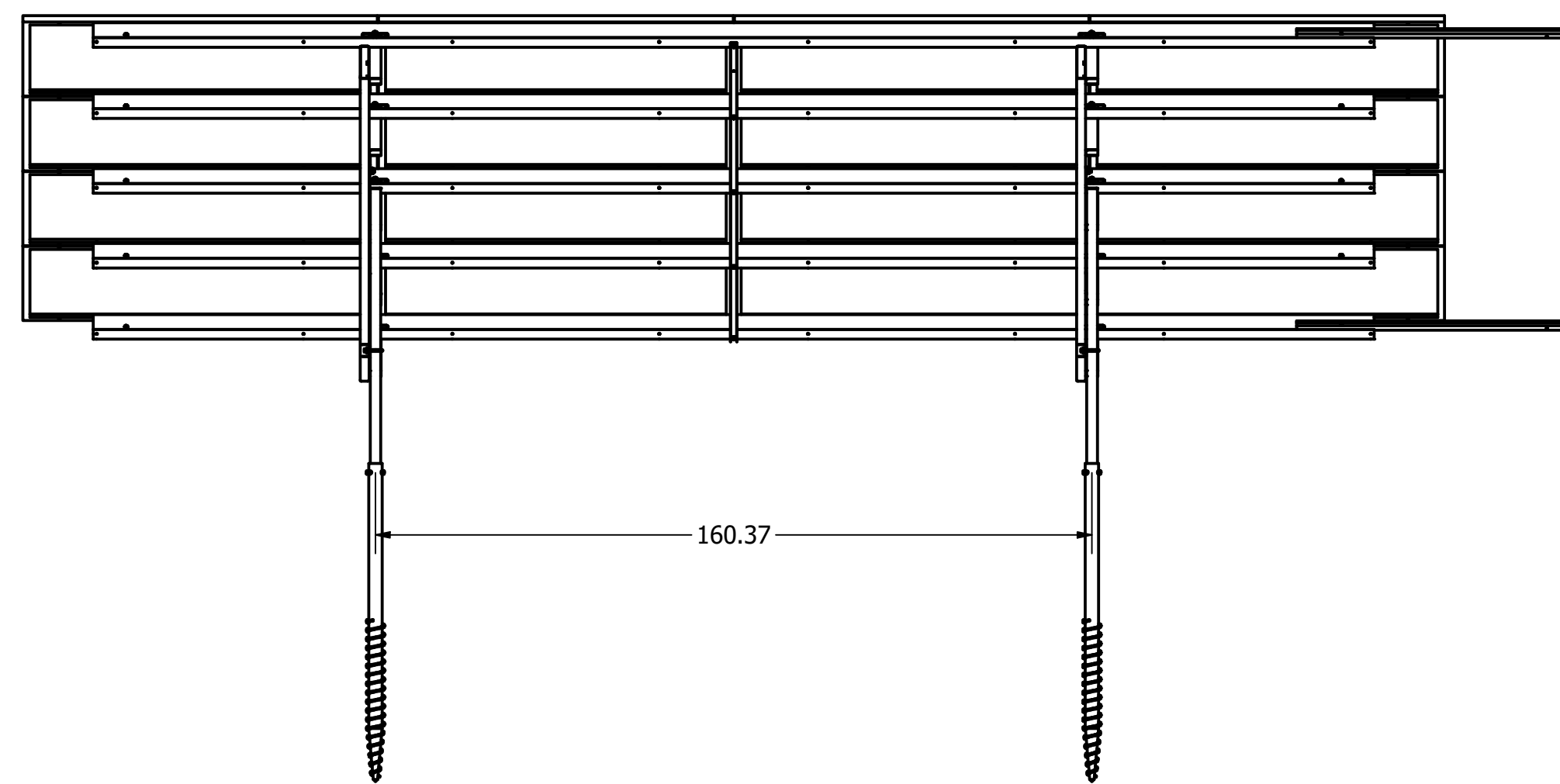
Material:	Weight: 1752.640 lbmass
Description:	CT-BF-DB, RISEN SOLAR RSM144-6-380BMDG, 4x5, 25 DEG, BURLINGTON SOLAR ONE - BIFACIAL - RISEN SOLAR, VEROGY
Project:	BURLINGTON SOLAR ONE - BIFACIAL - RISEN SOLAR
Drawn:	JSCOTT
Date:	7/15/2020
Scale:	2 of 3



19410 Jetton Rd, Ste 220 Cornelius, NC, 28031 www.dcesolar.com Phone: 1-704-659-7474	Format: D	Part Number: 4635	Rev: 0
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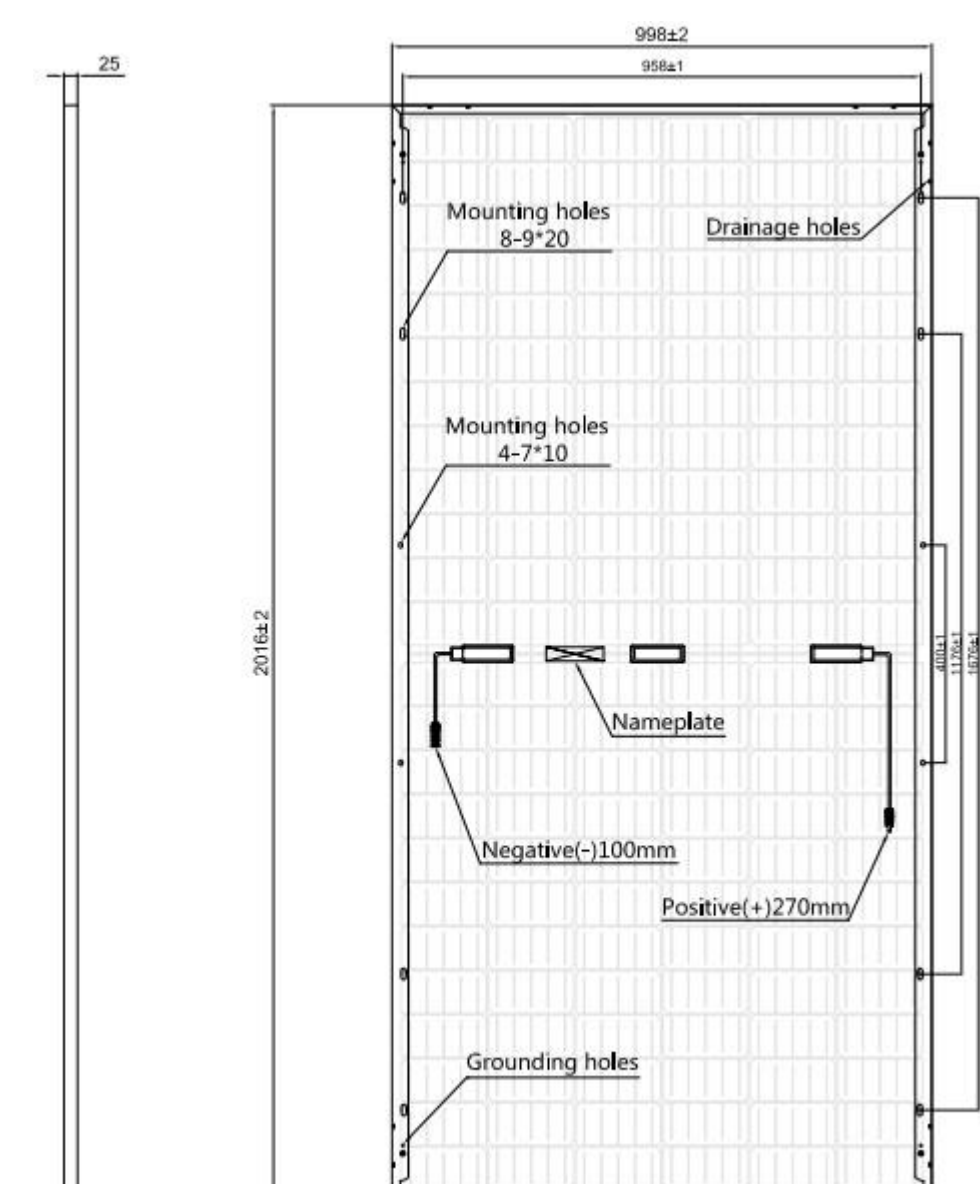


**REAR VIEW**  
4X5 ARRAY  
VIEW13  
SCALE 0.03 : 1



**REAR VIEW**  
4X4 ARRAY  
VIEW19  
SCALE 0.03 : 1

PANEL SPECIFICATION				PROJECT INFORMATION
NAME	DESCRIPTION			INSTALLATION ADDRESS: LOT 33 PROSPECT STREET, BURLINGTON, CT 06013
MANUFACTURER	RISEN SOLAR TECHNOLOGY			Structural General Notes
MODEL	RSM144-6-380BMDG			
LENGTH (mm)	2016			
WIDTH (mm)	998			
THICKNESS (mm)	25			
MATERIAL DESCRIPTION				<p>1. The contractor will be solely responsible for all construction means, methods, techniques, sequences and procedures and shall at all times take reasonable precautions for the safety of its employees on the project, and shall comply with all applicable provisions of federal, state, and municipal safety laws and building construction codes.</p> <p>2. If existing conditions make it necessary to revise structural details, consult DCE Solar before proceeding with any change.</p> <p>3. These drawings and notes are for this specific project and no other use is authorized.</p> <p>4. Structure designed in accordance with the 2018 Connecticut State Building Code, ASCE 7-10, AISC 360-10 (14th Edition), and AISI S100-12: ASD</p> <p>Snow Loads: -Ground Snow Load pg = 40 psf -Importance Factor Is=0.8 -Exposure Factor Ce=1.0 -Slope Snow Load ps= 30 psf</p> <p>Wind Loads: -Basic Wind Speed V= 110 mph (MRI = 0.93 or 25 year) -Iw = 1 -Exposure = C -Wind Design performed in accordance with the requirements of ASCE - Wind Tunnel Procedure. Refer to Wind Tunnel Report by UWOLBLWT Laboratory dated 12/11/14.</p> <p>Seismic Loads: -SS = 0.182g, S1 = 0.065g -Site Class = D -SDS = 0.190g, SD1 = 0.100g -Seismic Design Category = B -Ordinary Steel Cantilever Column System</p> <p>5. Material strengths: -Hot-rolled structural steel ASTM A992 GR50 w/80 ksi yield. -Cold Formed Steel Sections comply w/ASTM A1003, structural grade, galvanized to Grade as noted. -Formed Steel Brackets - ASTM A653 Grade 50 SS, G115 HDG -I-Beams - A992, 50 ksi, Hot Dip Galvanized to ASTM 123 Grade 85 -Plate - A36 Steel, Hot Dip Galvanized -Connectors - Stainless Steel unless otherwise noted.</p> <p>6. Members and connections have been designed for worst-case loading associated with exterior zones of the array per the wind tunnel report.</p> <p>7. Foundation embedment depths are to be calculated and sealed by a CT State Licensed Geotechnical engineer.</p> <p>8. For the purposes of this project, all arrays are classified as Exterior Arrays.</p> <p>9. Scope of work by Structural Engineer includes member design, connection design, and determination of design base reactions only. Layout of PV arrays such that they do not conflict with existing site obstructions, determination of site-specific foundation and geotechnical parameters, and all other work not specifically noted is by others.</p>
MEMBER	SHAPE	MATERIAL	GAGE	
PANEL BEAM	6.25Z3X1X55DEG	A653 SS Gr80	18GA	
NS CEE BEAM	8CS2X0.625	A653 SS Gr80	14GA	
KICKER BRACE	2.75CU1.75	A653 SS Gr50	14GA	
BEAM BRACE	1.5CU0.75	A653 SS Gr50	16GA	
FRONT/REAR LEG	HSS2.375x0.154	A500 GRADE C	-	
PULL TEST LOADS (GROUNDSCREW)				
	REAR (lbs)	FRONT (LBS)		
UNFACTORED UPLIFT	2,300	450		
UNFACTORED ADJUSTED UPLIFT*	2,950	1,800		
UNFACTORED COMPRESSIVE	4,200	2,550		
UNFACTORED LATERAL	900	100		
NOTES				
*ADJUSTED UPLIFT IS ASSUMED AS 70% OF THE DOWNWARD LOAD. IT'S RECOMMENDED TO USE THIS LOAD FOR PULL TEST IN CASE PUSH TEST CANNOT BE PERFORMED.				
1: USE ADJUSTED UPLIFT IF NO REFUSAL IS ENCOUNTERED.				
2: USE UPLIFT FORCE IN CASE OF REFUSAL.				
3: FOR UPLIFT AND LATERAL FORCES USE SAFETY FACTOR OF 1.5 AND 2, RESPECTIVELY.				
IN-FIELD PILE REMEDIATION				
ANY IN-FIELD REMEDIATION REQUIRING THE CUTTING OR DRILLING OF GALVANIZED MATERIAL SHOULD FOLLOW ONE OF THESE TWO GUIDELINES TO COAT AND TREAT METALS THAT ARE EXPOSED TO GALVANIZATION DAMAGE:				
1. USE PAINTS CONTAINING ZINC DUST (IN ACCORDANCE WITH "ASTM A 780-01" SECTION A2)				
2. USE ZINC SPRAY (IN ACCORDANCE WITH "ASTM A 780-01" SECTION A3) ONE OF THE ABOVE GUIDELINES MUST BE FOLLOWED TO MAINTAIN THE DCE WARRANTY REQUIREMENTS.				



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.XXX = ± 0.005" (0.127mm)  
ANGLE = ± 5°  
MIN. BREAK = 0.012" (0.3mm)  
SURFACE FINISH = 63 (US)

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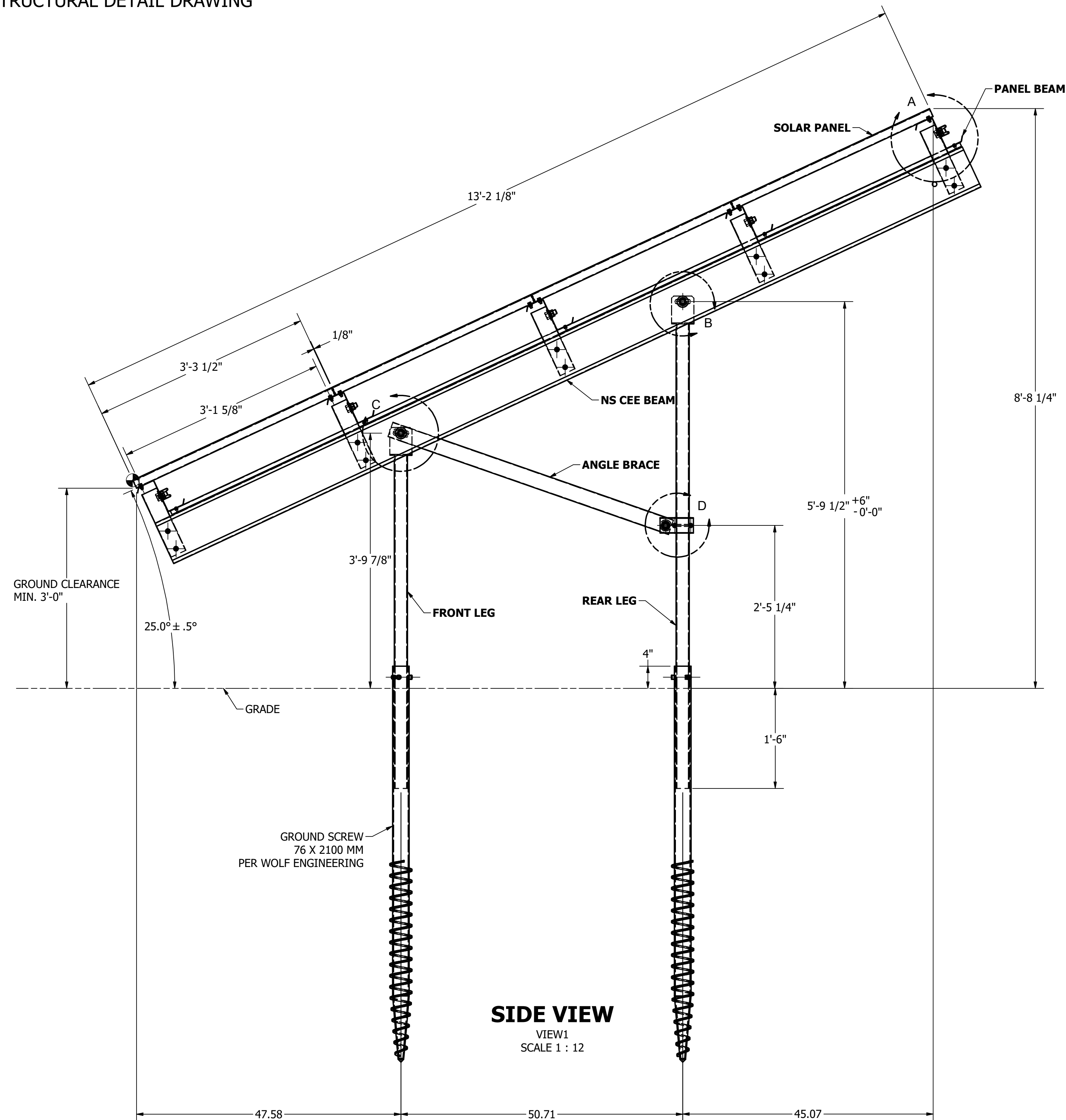


Engineer of Record

Material:	1752.640 lbmass		
Weight:	CT-BF-DB, RISEN SOLAR RSM144-6-380BMDG, 4x5, 25 DEG, BURLINGTON SOLAR ONE - BIFACIAL - RISEN SOLAR, VEROGY		
Description:	BURLINGTON SOLAR ONE - BIFACIAL - RISEN SOLAR		
Project:	JSCOTT	Date:	7/15/2020
Drawn:	JSCOTT	Scale:	3 of 3
Sheet:	3	Part Number:	4635
Rev:	0	Format:	D

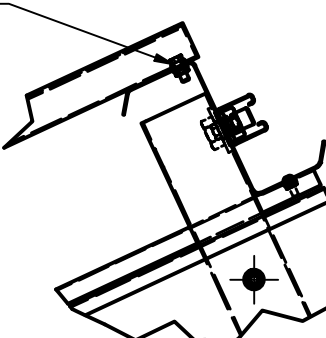
19410 Jetton Rd, Ste 220  
Cornelius, NC, 28031  
www.dcesolar.com  
Phone: 1-704-659-7474

**APPENDIX- A  
STRUCTURAL DETAIL DRAWING**



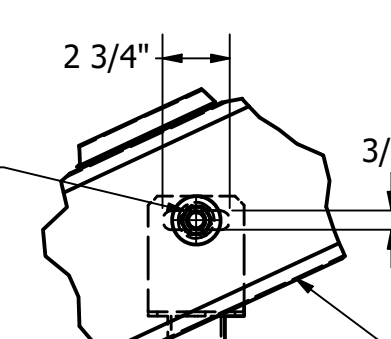
**SIDE VIEW**  
VIEW1  
SCALE 1 : 12

PANEL ATTACHES TO PANEL BEAMS WITH  
(4) 5/16-18 X 3/4" SERRATED FLANGE CAP SCREWS  
AND 5/16-18 SERRATED FLANGE NUTS.  
TORQUE TO 15 FT-LBS.



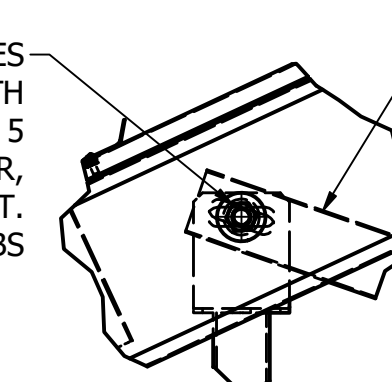
DETAIL A  
SCALE 1 / 8

WELDED LEG ADAPTER BRACKET A36 STEEL,  
HSS2.375X0.154, A500 C,  
HOT DIP GALVANIZED TO ASTM A123.  
ATTACHES TO NS BEAM WITH (1) 3/4-10 X 1.5" GRADE 5  
STEEL HHCS, WASHER, AND SERRATED FLANGE NUT.  
TORQUE TO 250 FT-LBS.



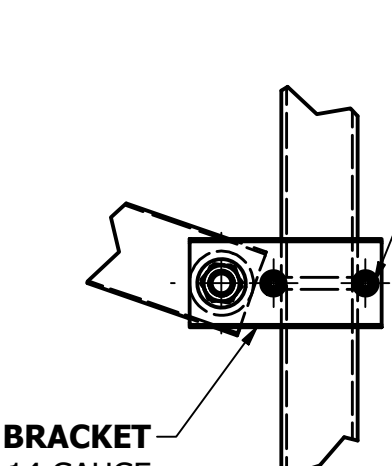
DETAIL B  
SCALE 1 / 8

NS CEE BEAM ATTACHES  
TO ANGLE BRACE WITH  
(1) 3/4-10 X 1.5" GRADE 5  
STEEL HHCS, WASHER,  
AND SERRATED FLANGE NUT.  
TORQUE TO 250 FT-LBS



DETAIL C  
SCALE 1 / 8

**CHANNEL BRACKET**  
2.75" X 1.75" U-CHANNEL, 14 GAUGE  
ASTM A653 GRADE 50 SS STEEL G115 GALVANIZED.  
ATTACHES TO ANGLE BRACE WITH (1) 3/4-10 X 1.5" GRADE 5  
STEEL HHCS, WASHER AND SERRATED FLANGE NUT.  
TORQUE TO 250 FT-LBS



DETAIL D  
SCALE 1 / 6

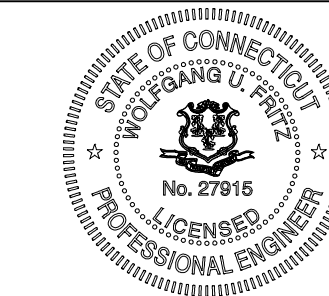
CHANNEL BRACKET ATTACHES  
TO LEG ADAPTER USING  
(1) 3/8-16 U-BOLT AND  
(2) SERRATED FLANGE NUTS.  
TORQUE TO 20 FT-LBS

**PROJECT INFORMATION**  
INSTALLATION ADDRESS: LOT 33 PROSPECT STREET, BURLINGTON, CT  
06013

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-Exposure Factor  $C_e = 1.0$   
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Wind Loads:  
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Engineer of Record



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		Description:	CT-BF-DB, TRINA SOLAR TSM-DEG15MC.20(11), 4x5, 25 DEG, BURLINGTON SOLAR ONE - BIFACIAL - TRINA SOLAR, VEROGY
		Project:	BURLINGTON SOLAR ONE - BIFACIAL - TRINA SOLAR
		Drawn:	JSCOTT
		Date:	7/15/2020
		Scale:	1 of 3
		Format:	D
		Part Number:	4637
		Rev:	0

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Phone: 1-704-659-7474

REVISION HISTORY			
REV	DESCRIPTION	DATE	DESIGNER
0	STRUCTURAL DETAIL DRAWING	7/15/2020	JSCOTT

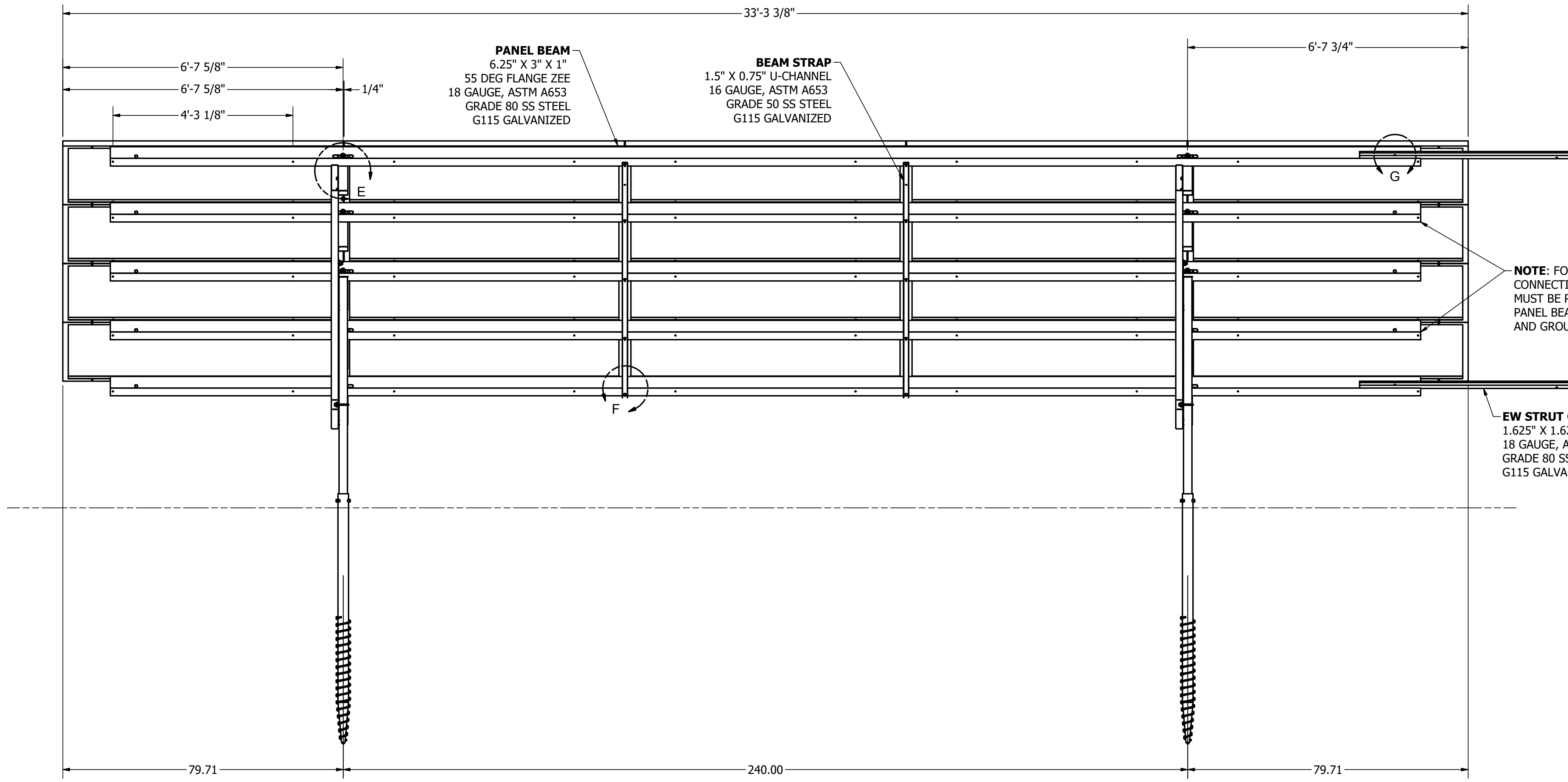
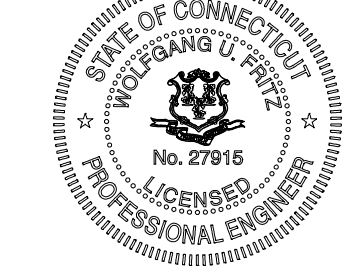
STRUCTURAL DETAIL DRAWING - REAR

PROJECT INFORMATION  
 INSTALLATION ADDRESS: LOT 33 PROSPECT STREET, BURLINGTON, CT 06013

Structural General Notes

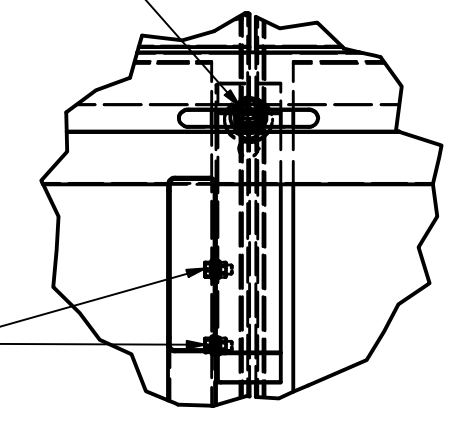
- The contractor will be solely responsible for all construction means, methods, techniques, sequences and procedures and shall at all times take reasonable precautions for the safety of its employees on the project, and shall comply with all applicable provisions of federal, state, and municipal safety laws and building construction codes.
- If existing conditions make it necessary to revise structural details, consult DCE Solar before proceeding with any change.
- These drawings and notes are for this specific project and no other use is authorized.
- Structure designed in accordance with the 2018 Connecticut State Building Code, ASCE 7-10, AISC 360-10 (14th Edition), and AISI S100-12: ASD  
 Snow Loads:  
 -Ground Snow Load  $p_g = 40$  psf  
 -Importance Factor  $I_s = 0.8$   
 -Exposure Factor  $C_e = 1.0$   
 -Slope Snow Load  $p_s = 30$  psf  
 Wind Loads:  
 -Basic Wind Speed  $V = 110$  mph (MRI = 0.93 or 25 year)  
 - $I_w = 1$   
 -Exposure = C  
 -Wind Design performed in accordance with the requirements of ASCE - Wind Tunnel Procedure. Refer to Wind Tunnel Report by UWOLBLWT Laboratory dated 12/11/14.  
 Seismic Loads:  
 -SS = 0.182g, S1 = 0.065g  
 -Site Class = D  
 -SDS = 0.190g, SD1 = 0.100g  
 -Seismic Design Category = B  
 -Ordinary Steel Cantilever Column System  
 5. Material strengths:  
 -Hot-rolled structural steel ASTM A992 GR50 w/80 ksi yield.  
 -Cold Formed Steel Sections comply w/ASTM A1003, structural grade, galvanized to Grade as noted.  
 -Formed Steel Brackets - ASTM A653 Grade 50 SS, G115 HDG  
 -I-Beams - A992, 50 ksi, Hot Dip Galvanized to ASTM 123 Grade 85  
 -Plate - A36 Steel, Hot Dip Galvanized  
 -Connectors - Stainless Steel unless otherwise noted.  
 6. Members and connections have been designed for worst-case loading associated with exterior zones of the array per the wind tunnel report.  
 7. Foundation embedment depths are to be calculated and sealed by a CT State Licensed Geotechnical engineer.  
 8. For the purposes of this project, all arrays are classified as Exterior Arrays.  
 9. Scope of work by Structural Engineer includes member design, connection design, and determination of design base reactions only. Layout of PV arrays such that they do not conflict with existing site obstructions, determination of site-specific foundation and geotechnical parameters, and all other work not specifically noted is by others.

Engineer of Record



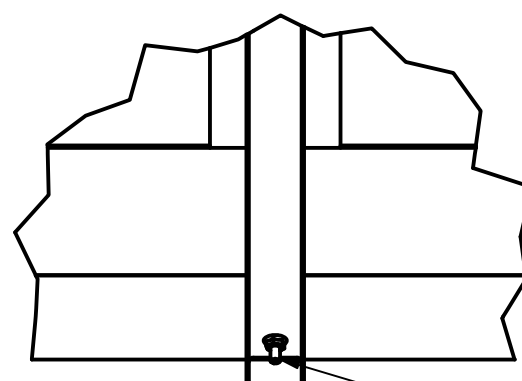
**REAR VIEW**  
 VIEW3  
 SCALE 1 / 20

ZEE BEAM ATTACHES TO PIVOT BRACKET USING (1) 3/4-10 GRADE 5 STEEL HHCS, WASHER, AND SERRATED FLANGE NUT. TORQUE TO 250 FT-LBS.



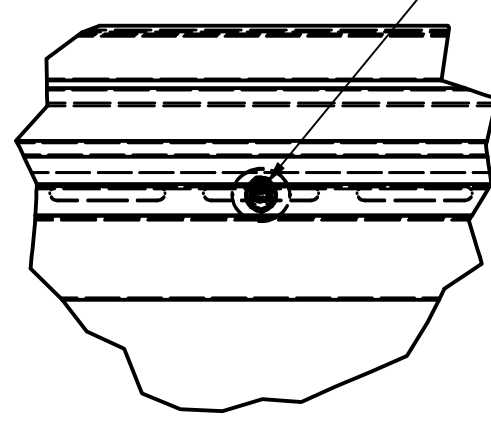
DETAIL E  
 SCALE 1 / 8

ZEE BEAM ATTACHES TO CEE BEAM USING PIVOT BRACKET 3\"/>



DETAIL F  
 SCALE 1 / 5

BEAM STRAP ATTACHES TO PANEL BEAMS WITH (4) 18-8 SS 1/4-20 BUTTON HEAD CAP SCREWS AND SERRATED FLANGE NUTS. TORQUE TO 15 FT-LBS

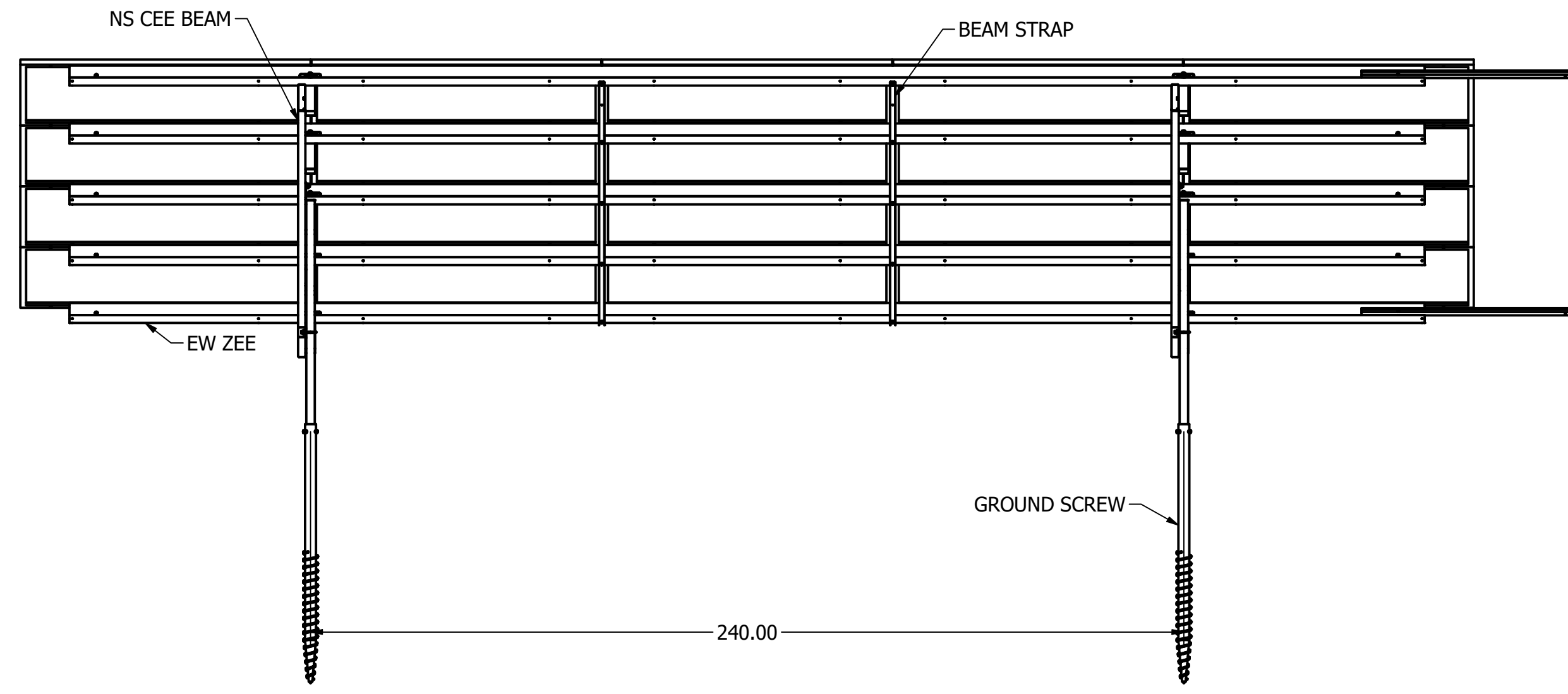


DETAIL G  
 SCALE 1 / 5

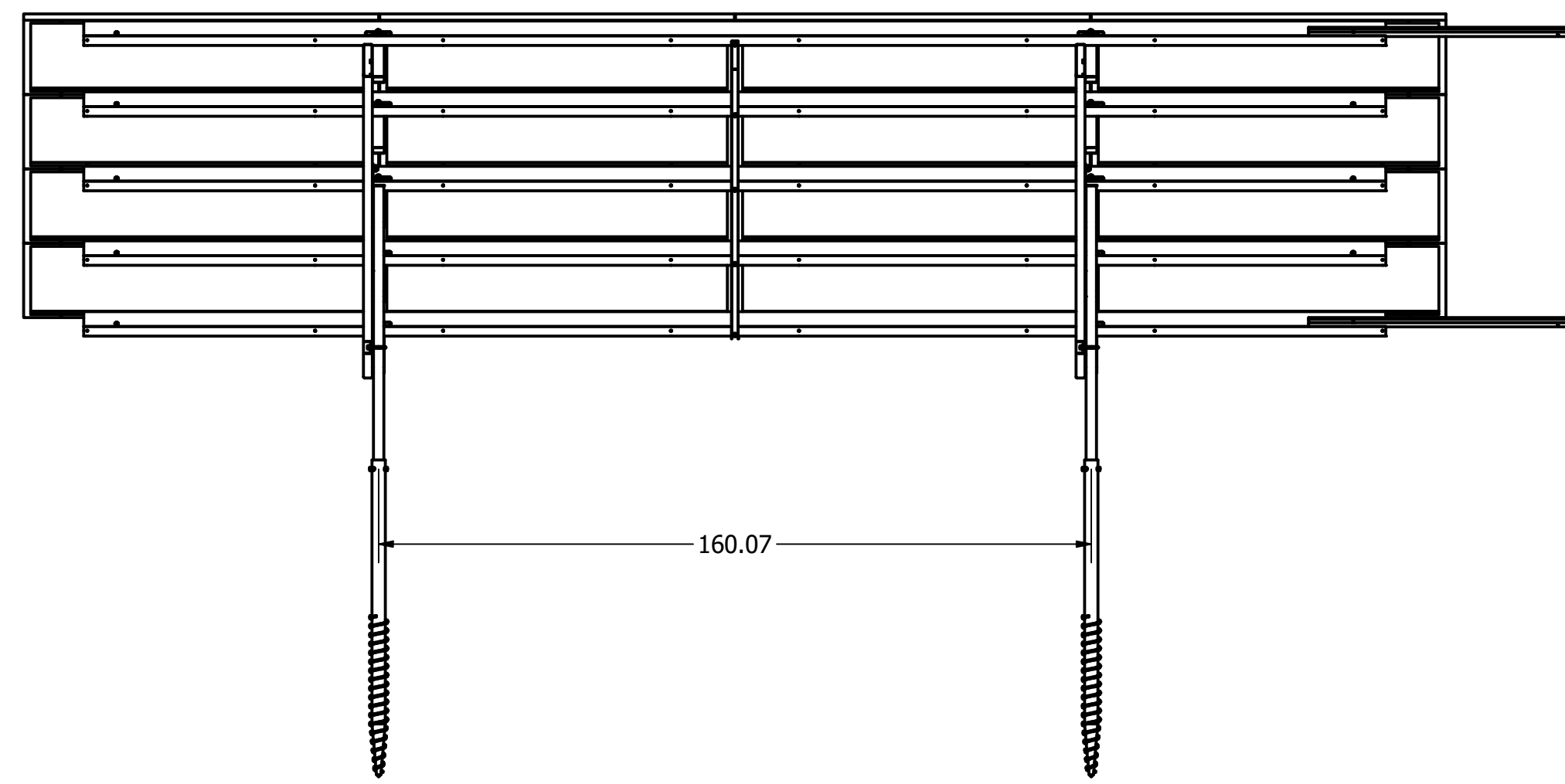
NEIGHBORING TABLES BONDED WITH 18G CHANNEL STRUTS. STRUTS CONNECT TO EW PANEL ZEE BEAMS WITH (2) 18-8 SS 3/8-16 SERRATED FLANGE CAP SCREWS, FENDER WASHERS, AND SERRATED FLANGE NUTS. TORQUE TO 20 FT-LBS.

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DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED TOLERANCES ARE AS FOLLOWS: .X = ± 0.050" (1.27mm) .XX = ± 0.015" (0.38mm) .XXX = ± 0.005" (0.127mm) ANGLE = ± 5° MIN. BREAK = 0.012" (0.3mm) SURFACE FINISH = 63 (US)	Material:	
	Weight:	1758.293 lbmass
	Description:	CT-BF-DB, TRINA SOLAR TSM-DEG15MC.20(11), 4x5, 25 DEG, BURLINGTON SOLAR ONE - BIFACIAL - TRINA SOLAR, VEROGY
	Project:	BURLINGTON SOLAR ONE - BIFACIAL - TRINA SOLAR
	Drawn:	JSCOTT
	Date:	7/15/2020
	Scale:	2 of 3
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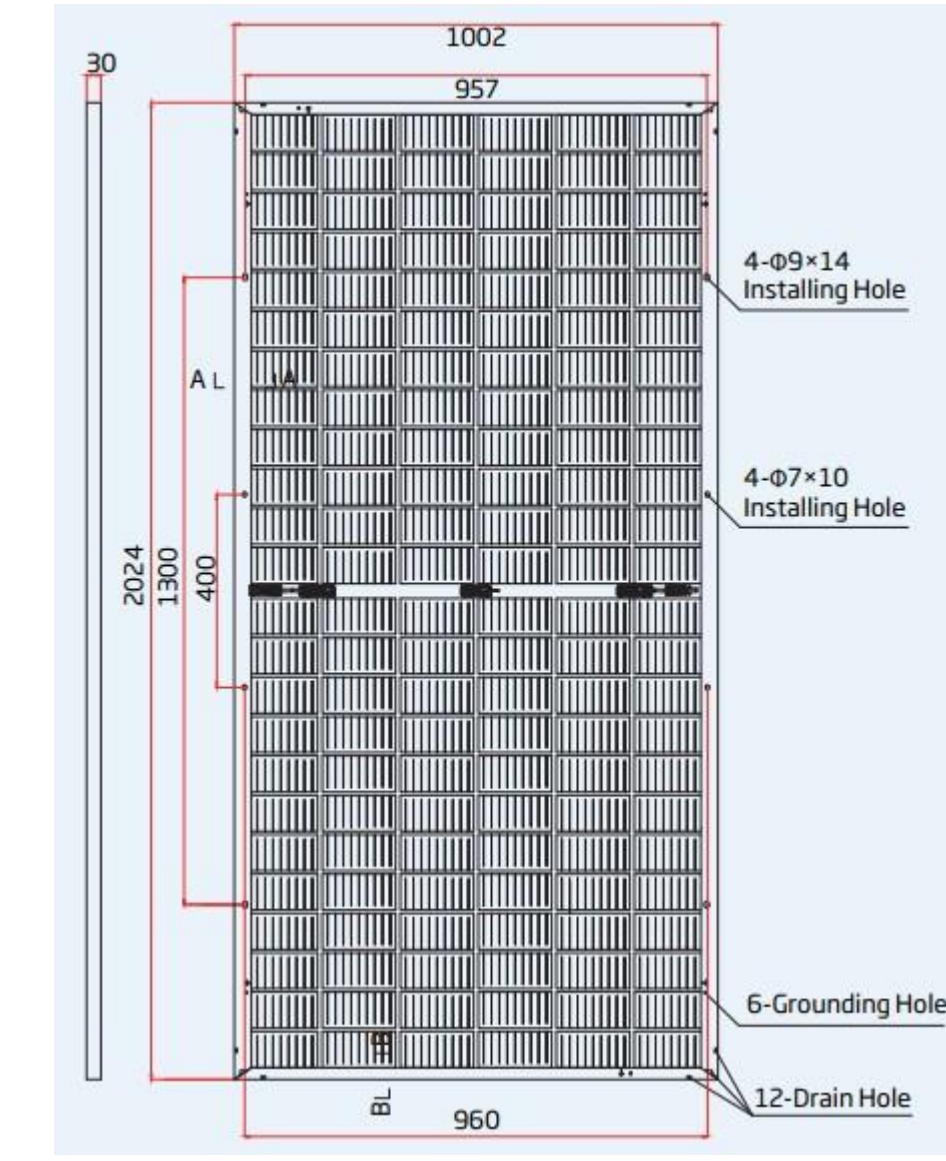


**REAR VIEW**  
4X5 ARRAY  
VIEW13  
SCALE 0.03 : 1



**REAR VIEW**  
4X4 ARRAY  
VIEW19  
SCALE 0.03 : 1

PANEL SPECIFICATION				PROJECT INFORMATION	
NAME	DESCRIPTION			INSTALLATION ADDRESS: LOT 33 PROSPECT STREET, BURLINGTON, CT 06013	
MANUFACTURER	TRINA SOLAR				
MODEL	TSM-DEG15MC.20(II)				
LENGTH (mm)	2024			Structural General Notes	
WIDTH (mm)	1002			1. The contractor will be solely responsible for all construction means, methods, techniques, sequences and procedures and shall at all times take reasonable precautions for the safety of its employees on the project, and shall comply with all applicable provisions of federal, state, and municipal safety laws and building construction codes.	
THICKNESS (mm)	30			2. If existing conditions make it necessary to revise structural details, consult DCE Solar before proceeding with any change.	
MATERIAL DESCRIPTION				3. These drawings and notes are for this specific project and no other use is authorized.	
MEMBER	SHAPE	MATERIAL	GAGE	4. Structure designed in accordance with the 2018 Connecticut State Building Code, ASCE 7-10, AISC 360-10 (14th Edition), and AISI S100-12: ASD	
PANEL BEAM	6.25Z3X1X55DEG	A653 SS Gr80	18GA	Snow Loads: -Ground Snow Load pg = 40 psf -Importance Factor Is=0.8 -Exposure Factor Ce=1.0 -Slope Snow Load ps= 30 psf	
NS CEE BEAM	8CS2X0.625	A653 SS Gr80	14GA	Wind Loads: -Basic Wind Speed V= 110 mph (MRI = 0.93 or 25 year) -Iw = 1 -Exposure = C -Wind Design performed in accordance with the requirements of ASCE - Wind Tunnel Procedure. Refer to Wind Tunnel Report by UWOLBLWT Laboratory dated 12/11/14.	
KICKER BRACE	2.75CU1.75	A653 SS Gr50	14GA	Seismic Loads: -SS = 0.182g, S1 = 0.065g -Site Class = D -SDS = 0.190g, SD1 = 0.100g -Seismic Design Category = B -Ordinary Steel Cantilever Column System	
BEAM BRACE	1.5CU0.75	A653 SS Gr50	16GA	5. Material strengths: -Hot-rolled structural steel ASTM A992 GR50 w/80 ksi yield. -Cold Formed Steel Sections comply w/ASTM A1003, structural grade, galvanized to Grade as noted. -Formed Steel Brackets - ASTM A653 Grade 50 SS, G115 HDG -I-Beams - A992, 50 ksi, Hot Dip Galvanized to ASTM 123 Grade 85 -Plate - A36 Steel, Hot Dip Galvanized -Connectors - Stainless Steel unless otherwise noted.	
FRONT/REAR LEG	HSS2.375x0.154	A500 GRADE C	-	6. Members and connections have been designed for worst-case loading associated with exterior zones of the array per the wind tunnel report.	
PULL TEST LOADS (GROUNDSCREW)				7. Foundation embedment depths are to be calculated and sealed by a CT State Licensed Geotechnical engineer.	
		REAR (lbs)	FRONT (LBS)	8. For the purposes of this project, all arrays are classified as Exterior Arrays.	
UNFACTORED UPLIFT		2,300	450	9. Scope of work by Structural Engineer includes member design, connection design, and determination of design base reactions only. Layout of PV arrays such that they do not conflict with existing site obstructions, determination of site-specific foundation and geotechnical parameters, and all other work not specifically noted is by others.	
UNFACTORED ADJUSTED UPLIFT*		2,950	1,800		
UNFACTORED COMPRESSIVE		4,200	2,550		
UNFACTORED LATERAL		900	100		
NOTES				Engineer of Record	
*ADJUSTED UPLIFT IS ASSUMED AS 70% OF THE DOWNWARD LOAD. IT'S RECOMMENDED TO USE THIS LOAD FOR PULL TEST IN CASE PUSH TEST CANNOT BE PERFORMED.					
1: USE ADJUSTED UPLIFT IF NO REFUSAL IS ENCOUNTERED.					
2: USE UPLIFT FORCE IN CASE OF REFUSAL.					
3: FOR UPLIFT AND LATERAL FORCES USE SAFETY FACTOR OF 1.5 AND 2, RESPECTIVELY.					
IN-FIELD PILE REMEDIATION					
ANY IN-FIELD REMEDIATION REQUIRING THE CUTTING OR DRILLING OF GALVANIZED MATERIAL SHOULD FOLLOW ONE OF THESE TWO GUIDELINES TO COAT AND TREAT METALS THAT ARE EXPOSED TO GALVANIZATION DAMAGE:					
1. USE PAINTS CONTAINING ZINC DUST (IN ACCORDANCE WITH "ASTM A 780-01" SECTION A2)					
2. USE ZINC SPRAY (IN ACCORDANCE WITH "ASTM A 780-01" SECTION A3) ONE OF THE ABOVE GUIDELINES MUST BE FOLLOWED TO MAINTAIN THE DCE WARRANTY REQUIREMENTS.					



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.X = ± 0.050" (1.27mm)  
.XX = ± 0.015" (0.38mm)  
.XXX = ± 0.005" (0.127mm)

ANGLE = ± 5°  
MIN. BREAK = 0.012" (0.3mm)  
SURFACE FINISH = 63 (US)

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Project: BURLINGTON SOLAR ONE - BIFACIAL - TRINA SOLAR  
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