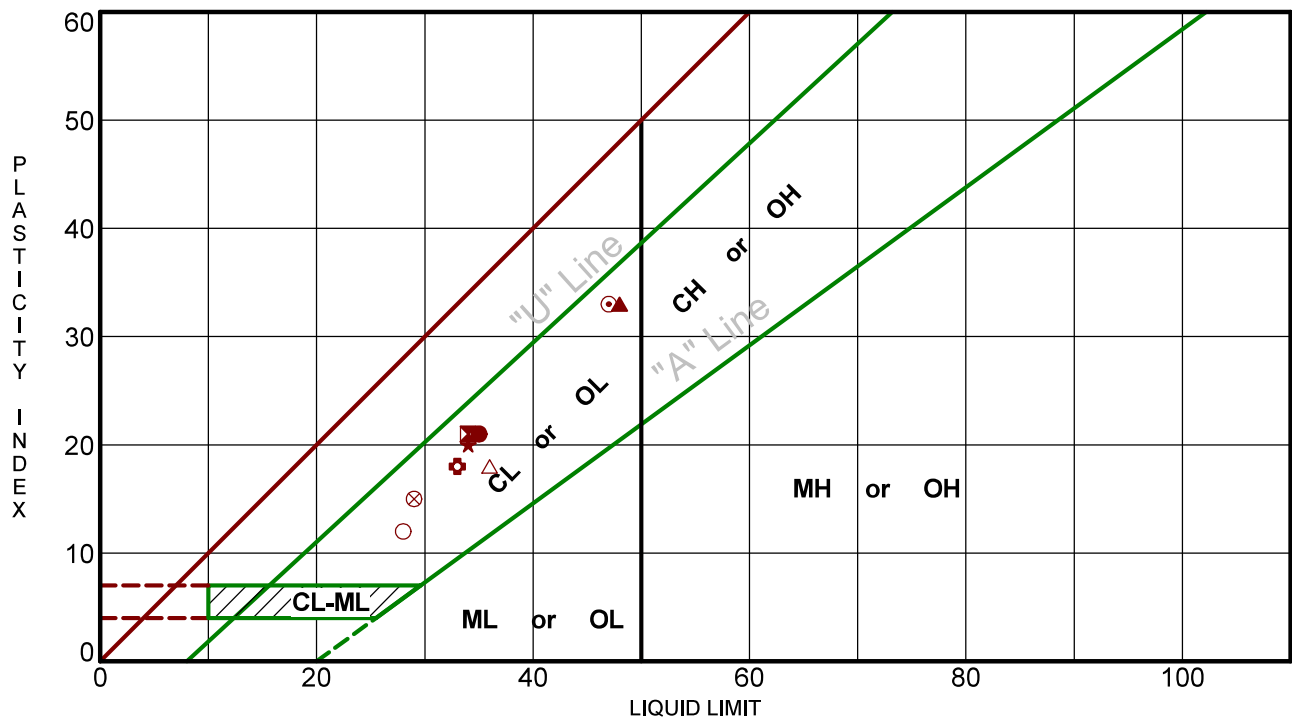


ASTM D4318

[illegible]

PROJECT: Clermont County Solar

SITE: 4438 OH-276
batavia, OH

Terracon
800 Morrison Rd
Gahanna, OH

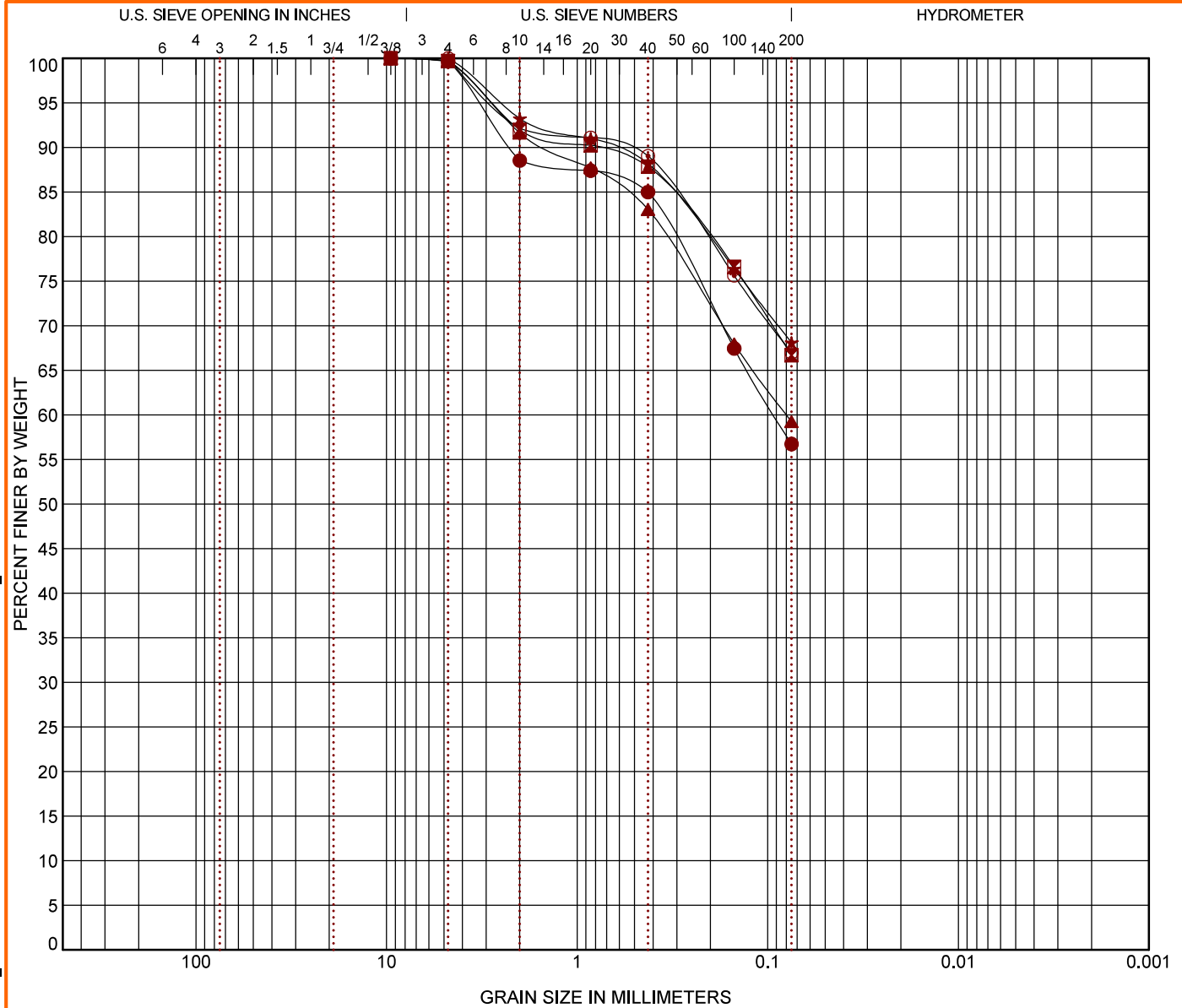
PROJECT NUMBER: N4225037

CLIENT: Savion, LLC
Kansas City, MO

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Boring ID		Depth	USCS Classification				WC (%)	LL	PL	PI	Cc	Cu
●	B-2	1 - 5	SANDY LEAN CLAY (CL)					35	14	21		
✠	B-2	2.5 - 4	SANDY LEAN CLAY (CL)					34	13	21		
▲	B-4	6.5 - 7.5	SANDY LEAN CLAY (CL)					48	15	33		
★	B-8	1 - 5	SANDY LEAN CLAY (CL)					34	14	20		
⊙	B-10	2.5 - 4	SANDY LEAN CLAY (CL)				24.0	47	14	33		
Boring ID		Depth	D ₉₀	D ₅₀	D ₃₀	D ₁₀	%Gravel	%Sand	%Silt	%Fines	%Clay	
●	B-2	1 - 5	2.242				0.3	42.9		56.7		
✠	B-2	2.5 - 4	0.793				0.3	33.0		66.7		
▲	B-4	6.5 - 7.5	1.402				0.3	40.5		59.3		
★	B-8	1 - 5	0.664				0.0	31.9		68.1		
⊙	B-10	2.5 - 4	0.586				0.0	33.0		67.0		

PROJECT: Clermont County Solar

SITE: 4438 OH-276
batavia, OH

Terracon
800 Morrison Rd
Gahanna, OH

PROJECT NUMBER: N4225037

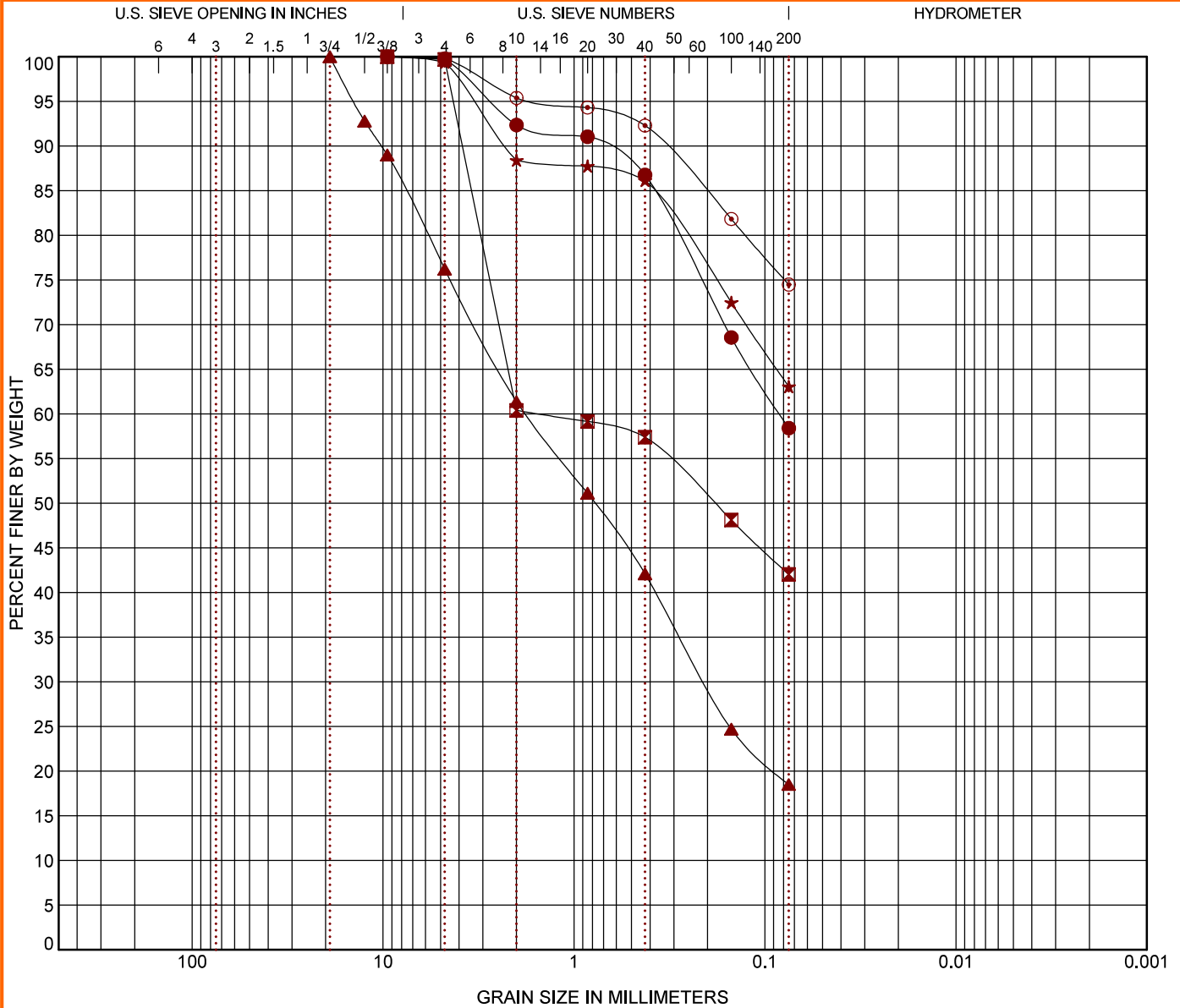
CLIENT: Savion, LLC
Kansas City, MO

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE USCS-2_SCOUR N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22

GRAIN SIZE DISTRIBUTION

ASTM D422 / ASTM C136

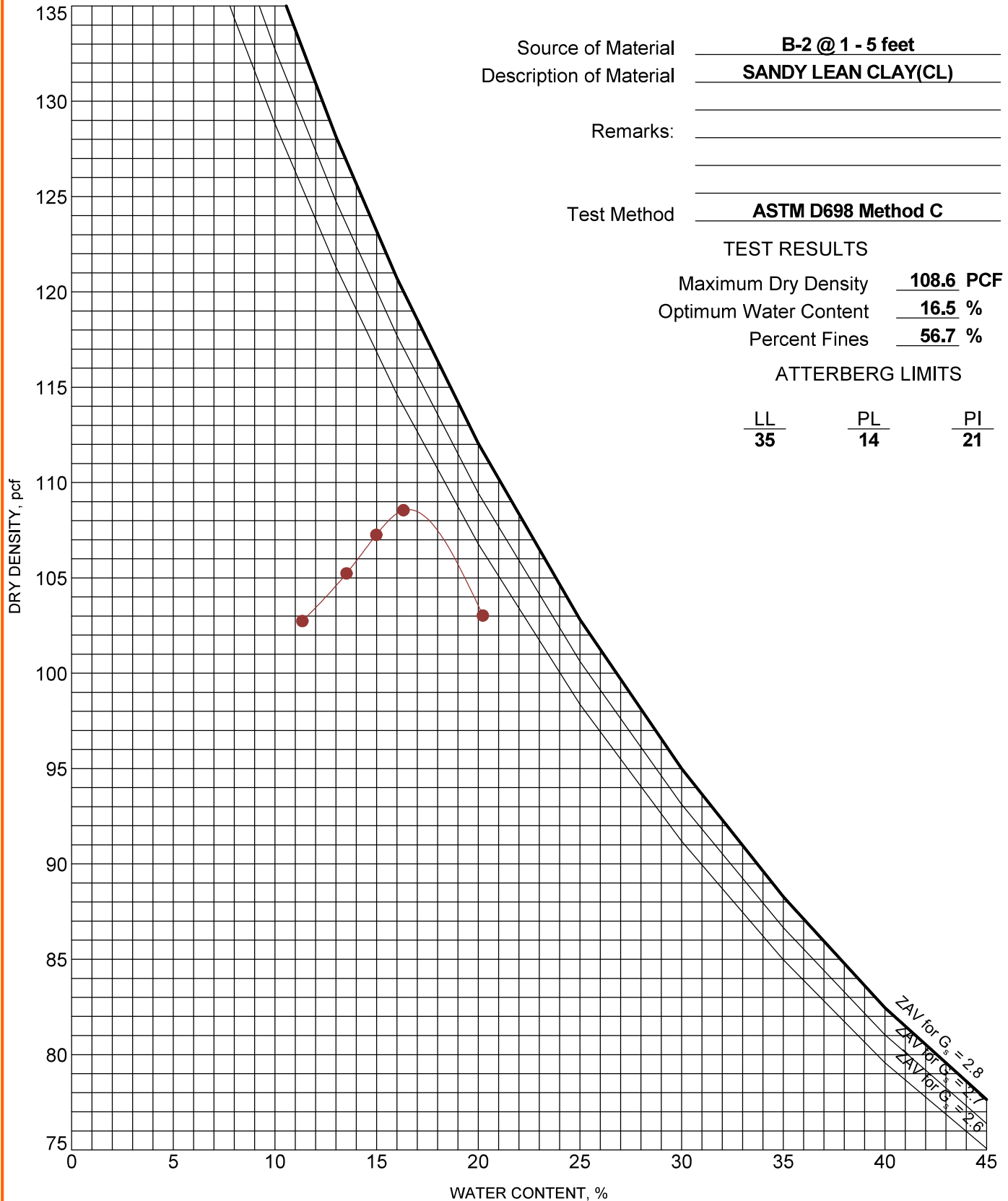
LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GRAIN SIZE USCS-2_SCOUR N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22



MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22



PROJECT: Clermont County Solar

SITE: 4438 OH-276
batavia, OH

Terracon
800 Morrison Rd
Gahanna, OH

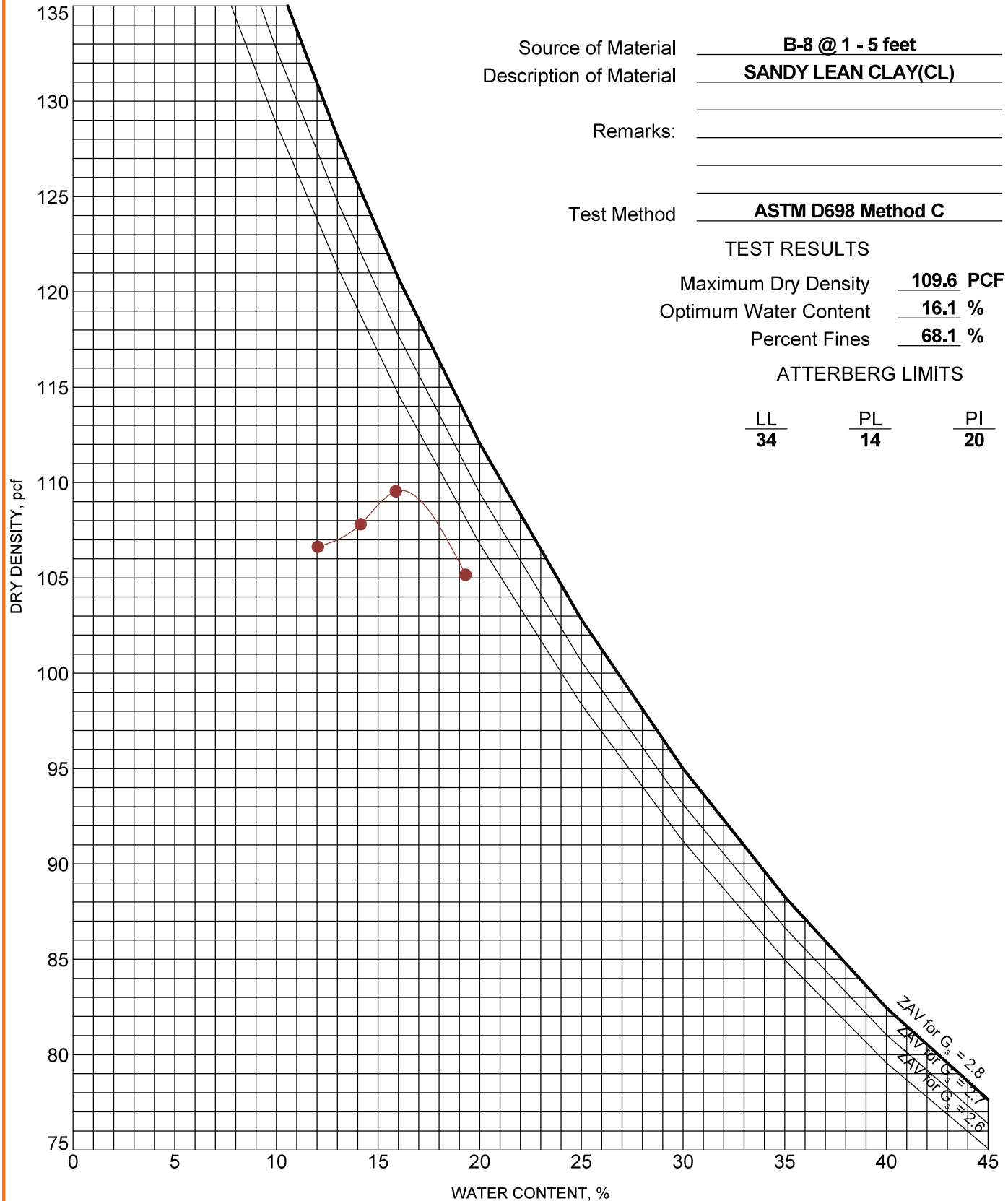
PROJECT NUMBER: N4225037

CLIENT: Savion, LLC
Kansas City, MO

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22



PROJECT: Clermont County Solar

SITE: 4438 OH-276
batavia, OH

Terracon
800 Morrison Rd
Gahanna, OH

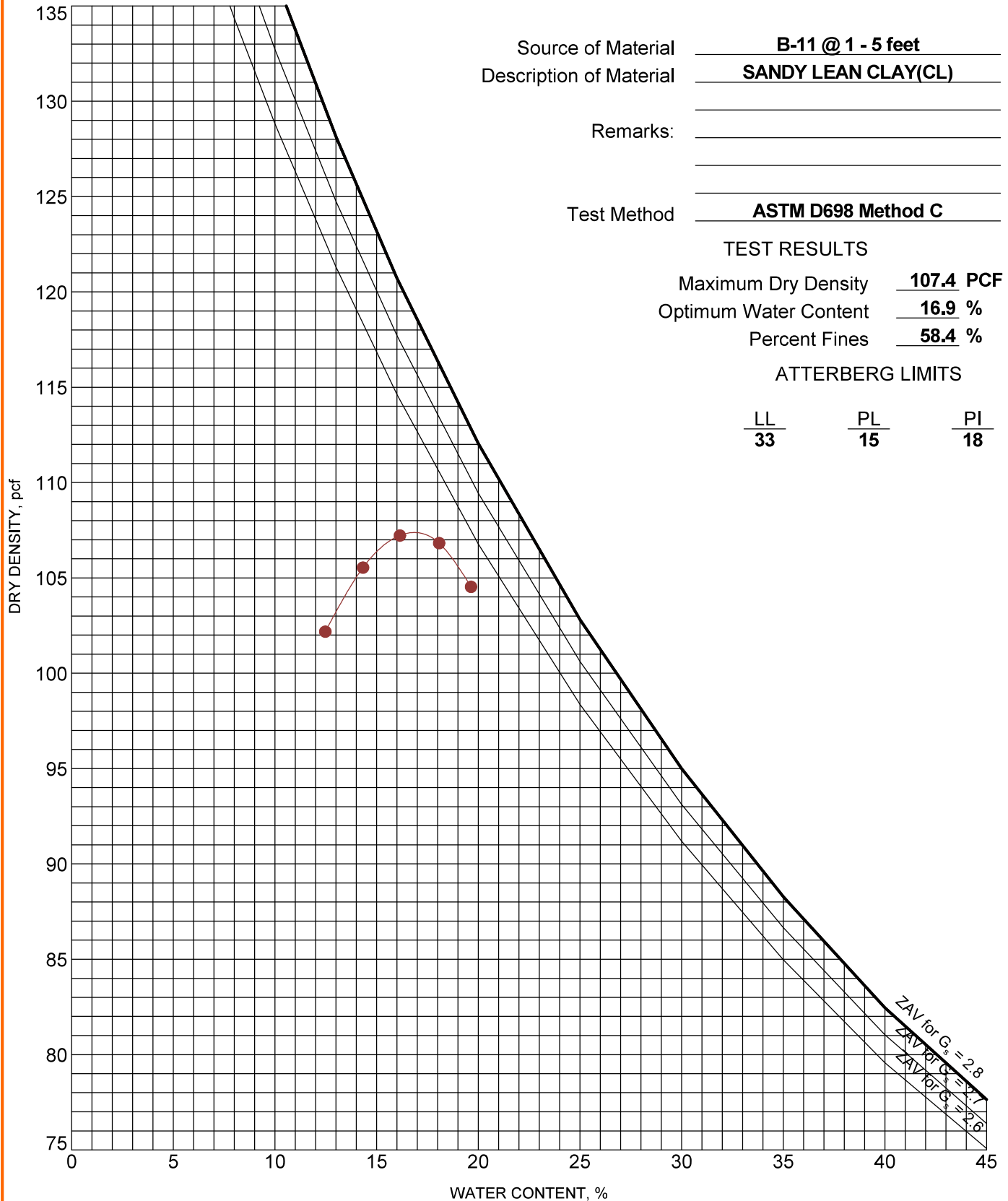
PROJECT NUMBER: N4225037

CLIENT: Savion, LLC
Kansas City, MO

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22



PROJECT: Clermont County Solar

SITE: 4438 OH-276
batavia, OH

Terracon
800 Morrison Rd
Gahanna, OH

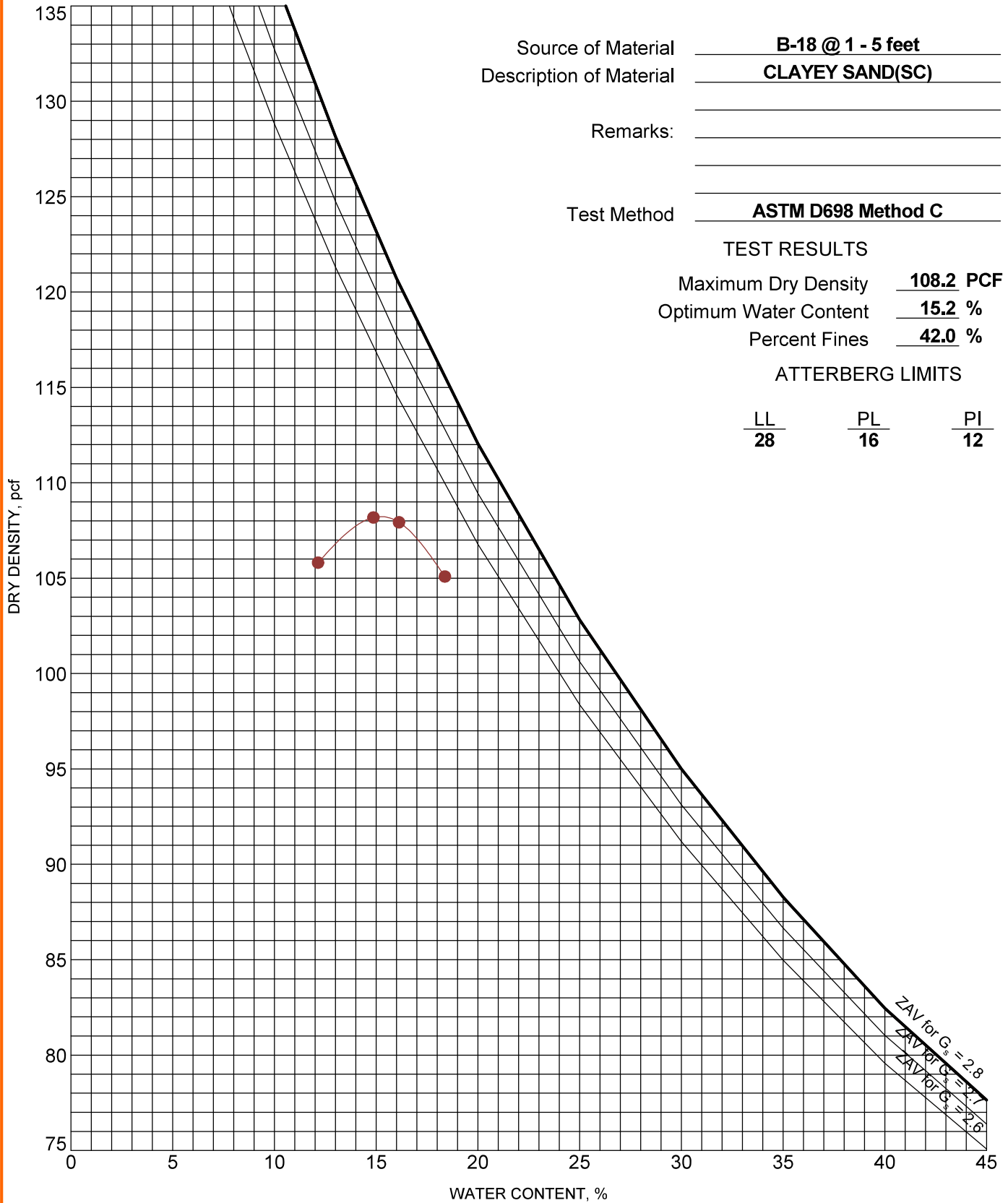
PROJECT NUMBER: N4225037

CLIENT: Savion, LLC
Kansas City, MO

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22



PROJECT: Clermont County Solar

SITE: 4438 OH-276
batavia, OH

Terracon
800 Morrison Rd
Gahanna, OH

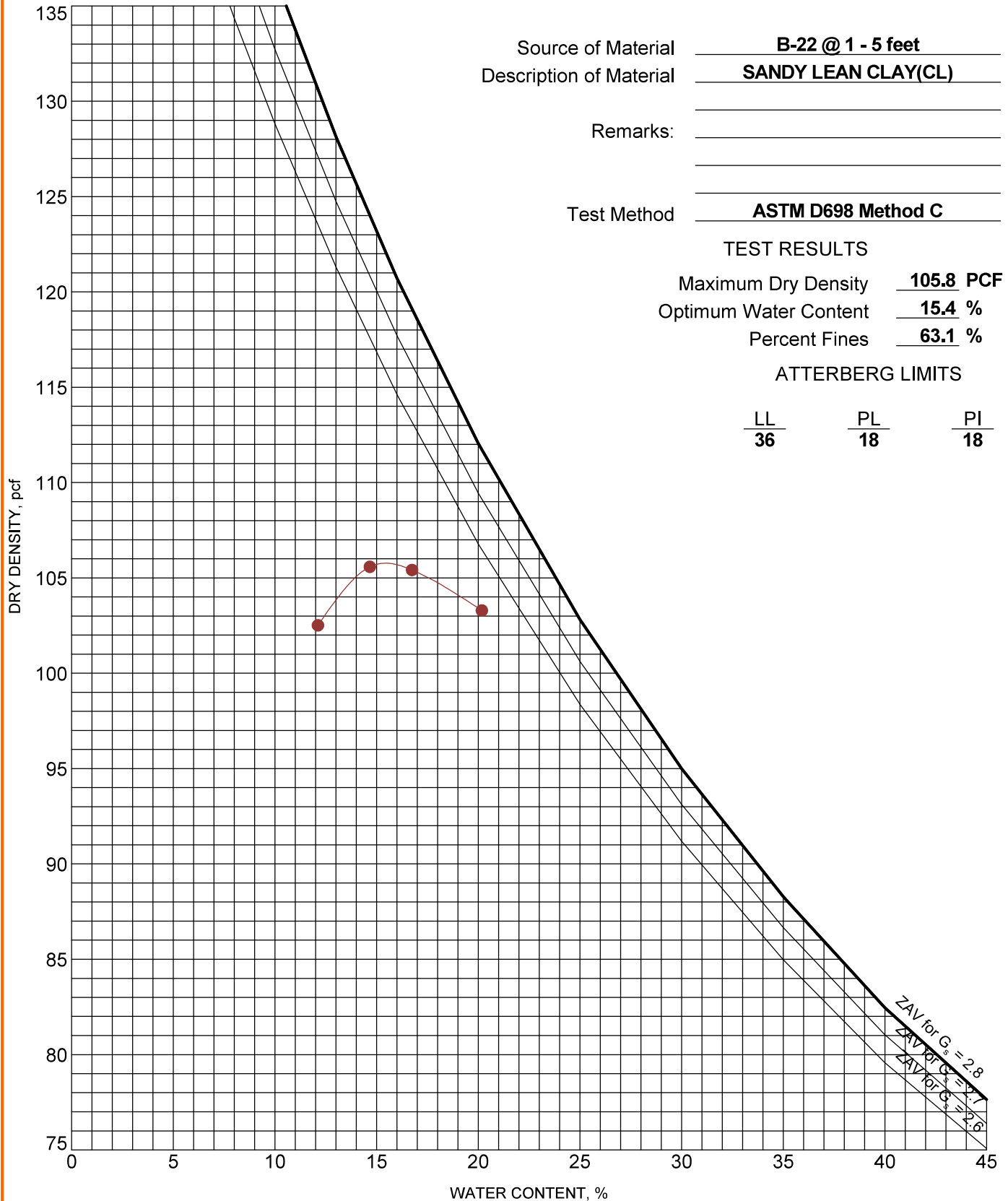
PROJECT NUMBER: N4225037

CLIENT: Savion, LLC
Kansas City, MO

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22



PROJECT: Clermont County Solar

SITE: 4438 OH-276
batavia, OH

Terracon
800 Morrison Rd
Gahanna, OH

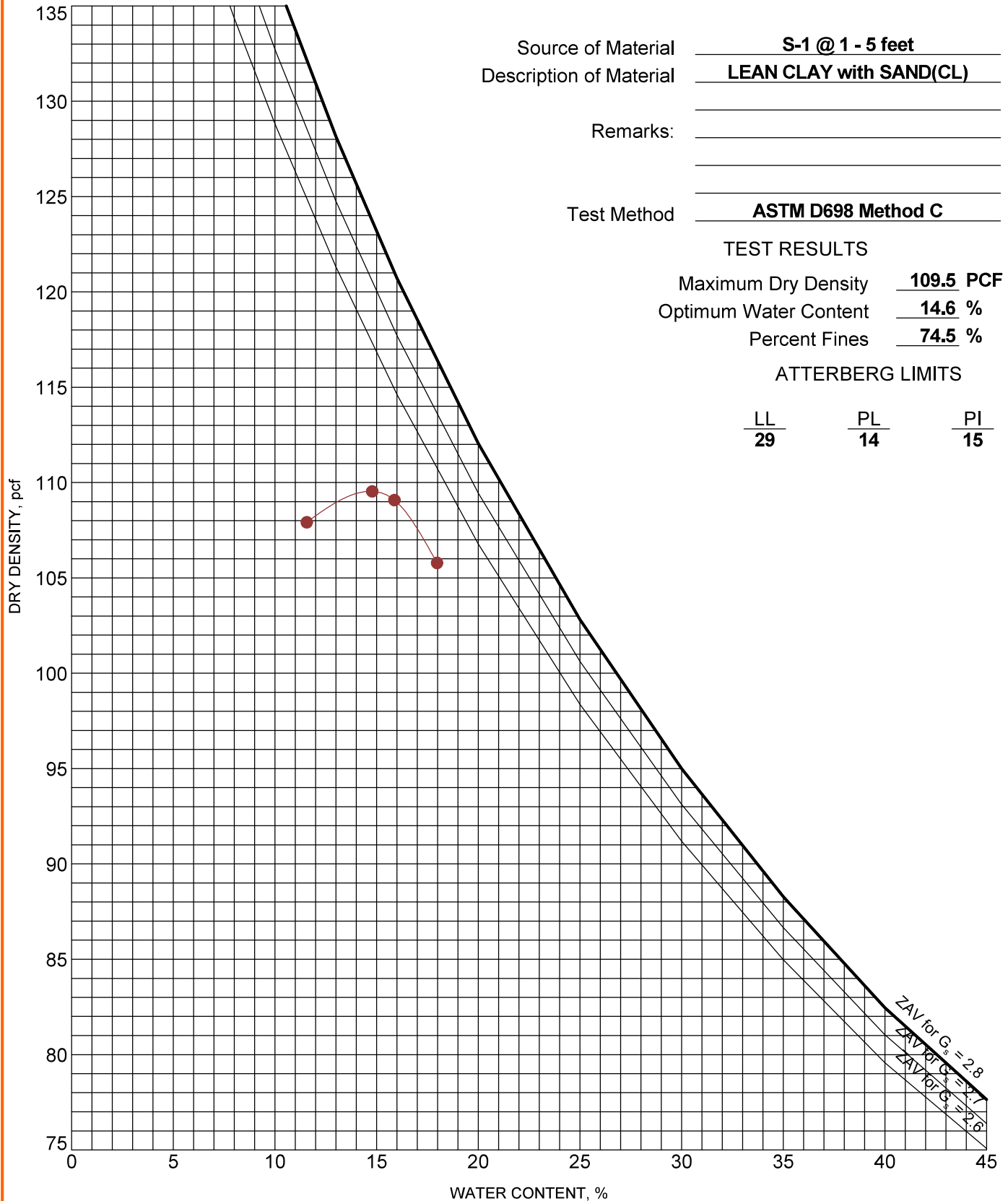
PROJECT NUMBER: N4225037

CLIENT: Savion, LLC
Kansas City, MO

MOISTURE-DENSITY RELATIONSHIP

ASTM D698/D1557

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. COMPACTION - V2 N4225037 CLERMONT COUNTY S.GPJ TERRACON_DATATEMPLATE.GDT 5/25/22



PROJECT: Clermont County Solar

SITE: 4438 OH-276
batavia, OH

Terracon
800 Morrison Rd
Gahanna, OH

PROJECT NUMBER: N4225037

CLIENT: Savion, LLC
Kansas City, MO

Project Name: Clemont Country Solar

Project Number: N4225037

Sample ID: B2 @ 1'-5'

Soil Type: LEAN CLAY

Standard/Modified Proctor: ASTM D 698-A

Max Dry Density, pcf: 108.6

Optimum Moisture Content, %: 16.5

Target % Compaction: 85

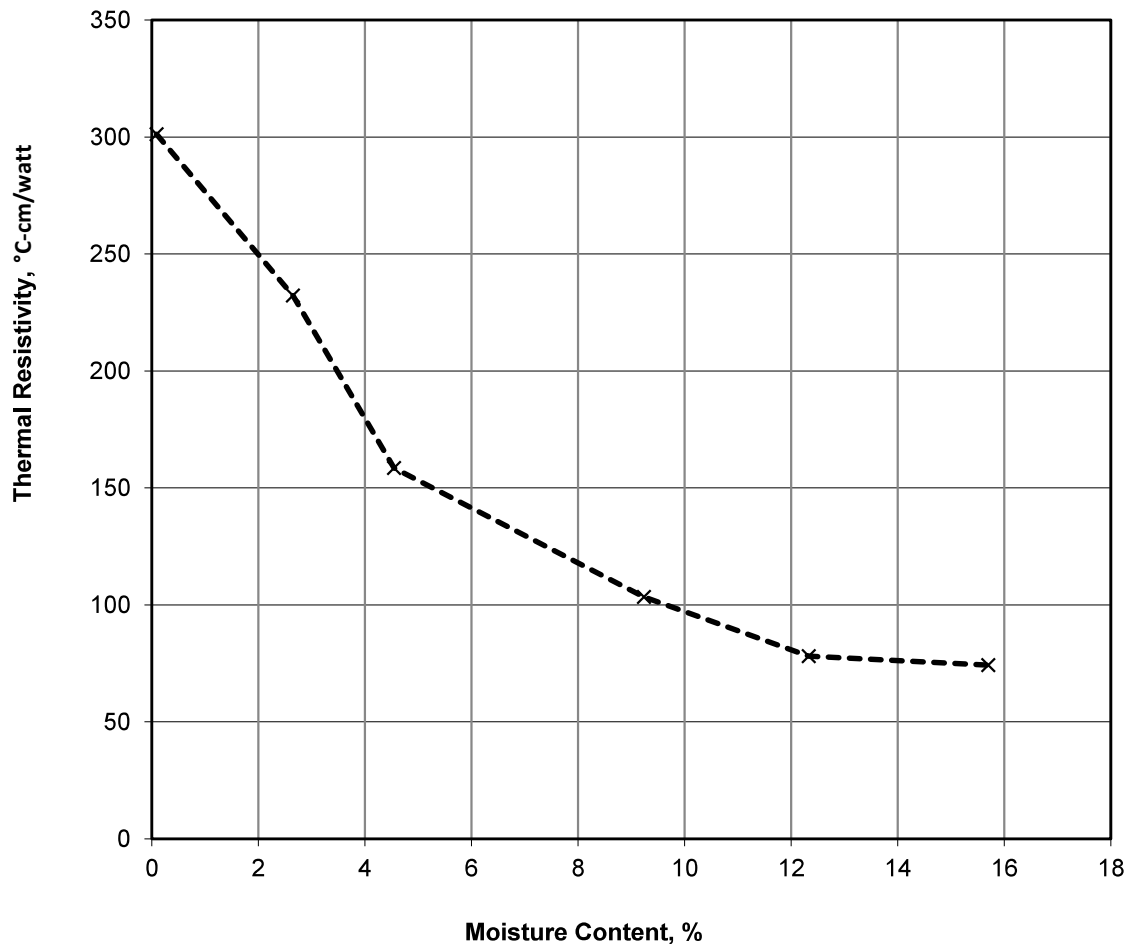
Sample Dry Density, pcf: 93

Sample % Compaction: 85

Thermal Resistivity Test Results

Moisture Content (%)	Thermal Resistivity (°C-cm/watt)	Temperature (°C)
0.1	301	22.6
2.6	232	20.7
4.5	158	22.4
9.2	103	21.1
12.3	78	22.1
15.7	74	19.9

Thermal Resistivity Dry-Out Curve



Date: 6/3/2022

Run By: AMM

Reviewed By: BWP

Terracon

Project Name: Clemont Country Solar

Project Number: N4225037

Sample ID: B8 @ 1'-5'

Soil Type: LEAN CLAY

Standard/Modified Proctor: ASTM D 698-A

Max Dry Density, pcf: 109.6

Optimum Moisture Content, %: 16.1

Target % Compaction: 85

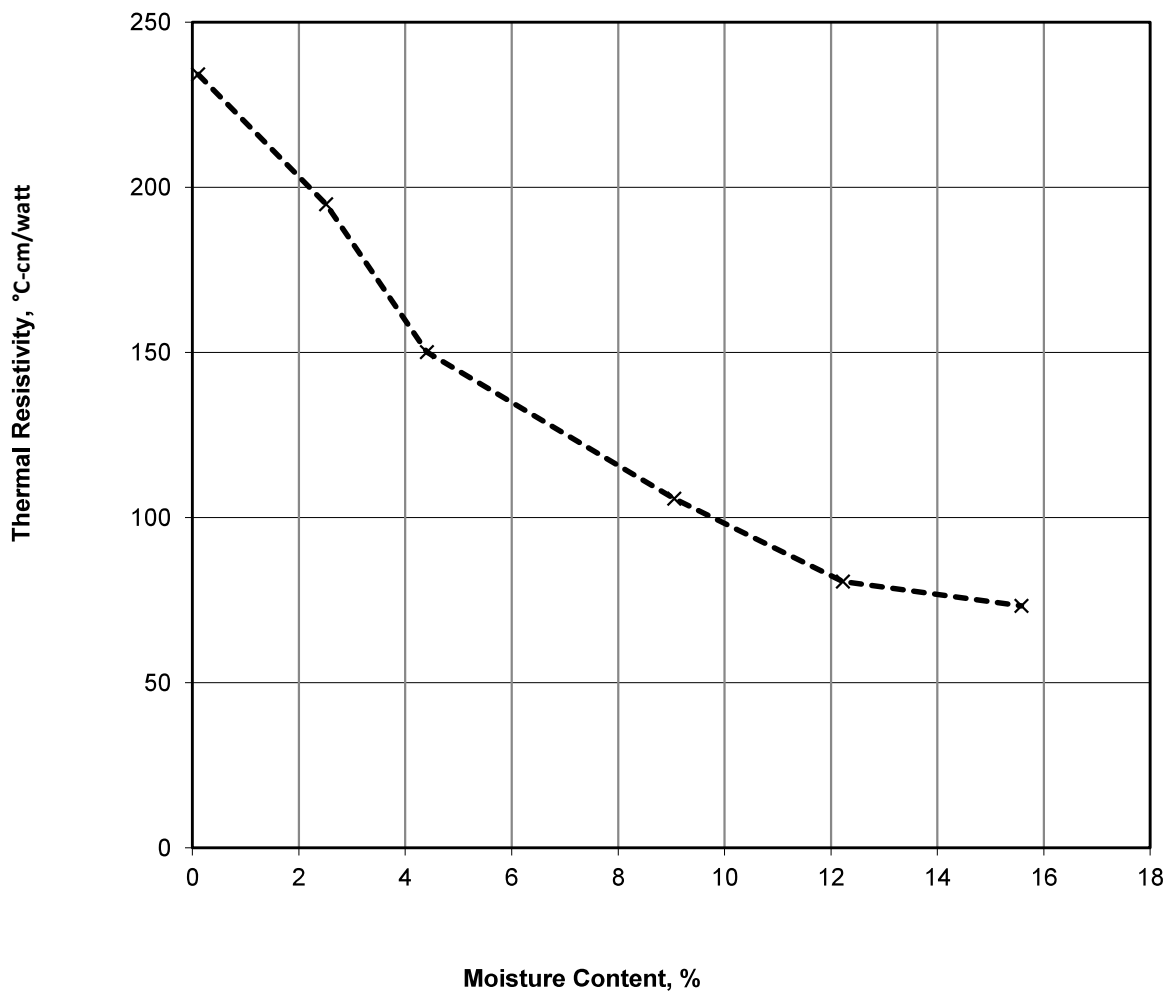
Sample Dry Density, pcf: 93

Sample % Compaction: 85

Thermal Resistivity Test Results

Moisture Content (%)	Thermal Resistivity (°C-cm/watt)	Temperature (°C)
0.1	234	21.2
2.5	195	21.0
4.4	150	22.1
9.1	106	19.6
12.2	81	19.6
15.6	73	20.1

Thermal Resistivity Dry-Out Curve



Date: 6/3/2022

Run By: AMM

Reviewed By: BWP

Terracon

Project Name: Clemont Country Solar

Project Number: N4225037

Sample ID: B11 @ 1'-5'

Soil Type: LEAN CLAY

Standard/Modified Proctor: ASTM D 698-A

Max Dry Density, pcf: 107.4

Optimum Moisture Content, %: 16.9

Target % Compaction: 85

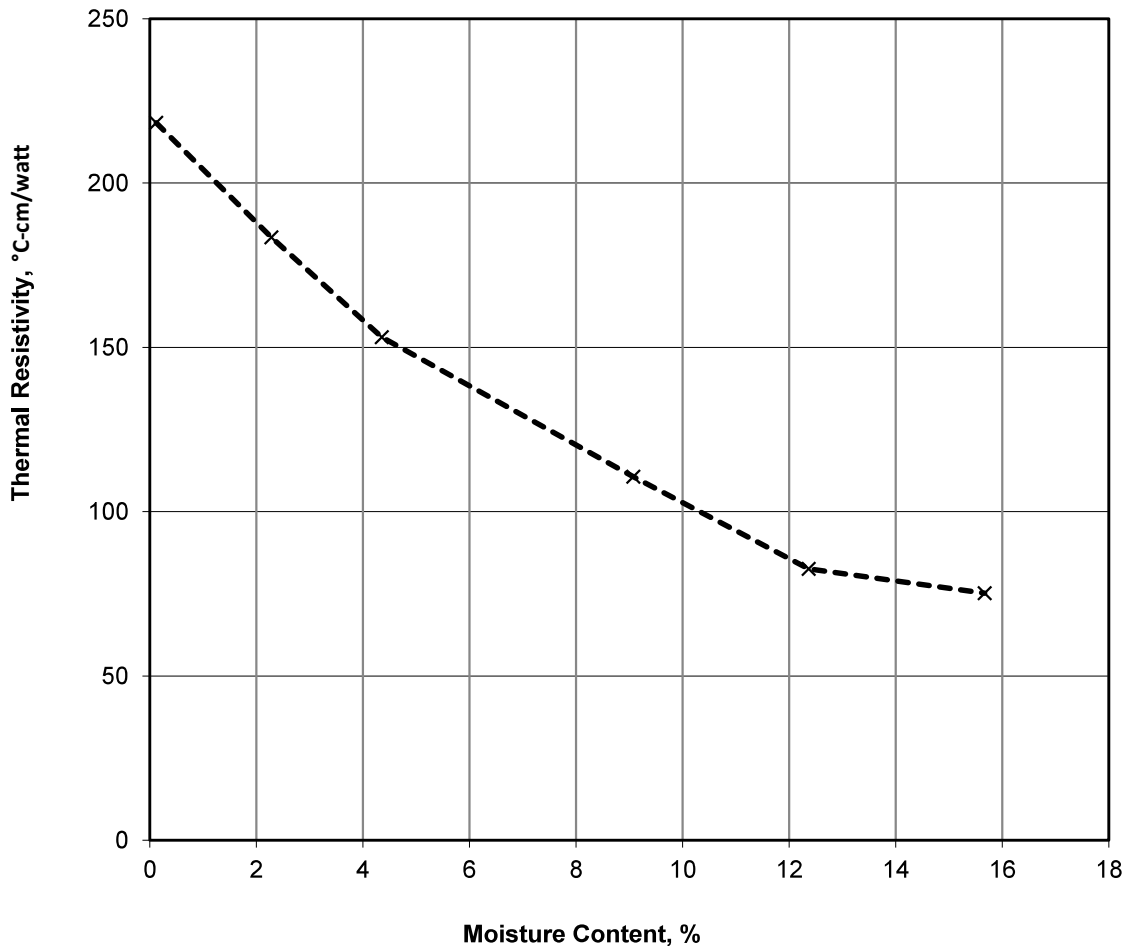
Sample Dry Density, pcf: 91

Sample % Compaction: 85

Thermal Resistivity Test Results

Moisture Content (%)	Thermal Resistivity (°C-cm/watt)	Temperature (°C)
0.1	218	21.6
2.3	183	20.7
4.4	153	23.6
9.1	111	21.5
12.4	83	19.4
15.7	75	22.1

Thermal Resistivity Dry-Out Curve



Date: 6/3/2022

Run By: AMM

Reviewed By: BWP

Terracon

Project Name: Clemont Country Solar

Project Number: N4225037

Sample ID: B18 @ 1'-5'

Soil Type: LEAN CLAY

Standard/Modified Proctor: ASTM D 698-A

Max Dry Density, pcf: 108.2

Optimum Moisture Content, %: 15.2

Target % Compaction: 85

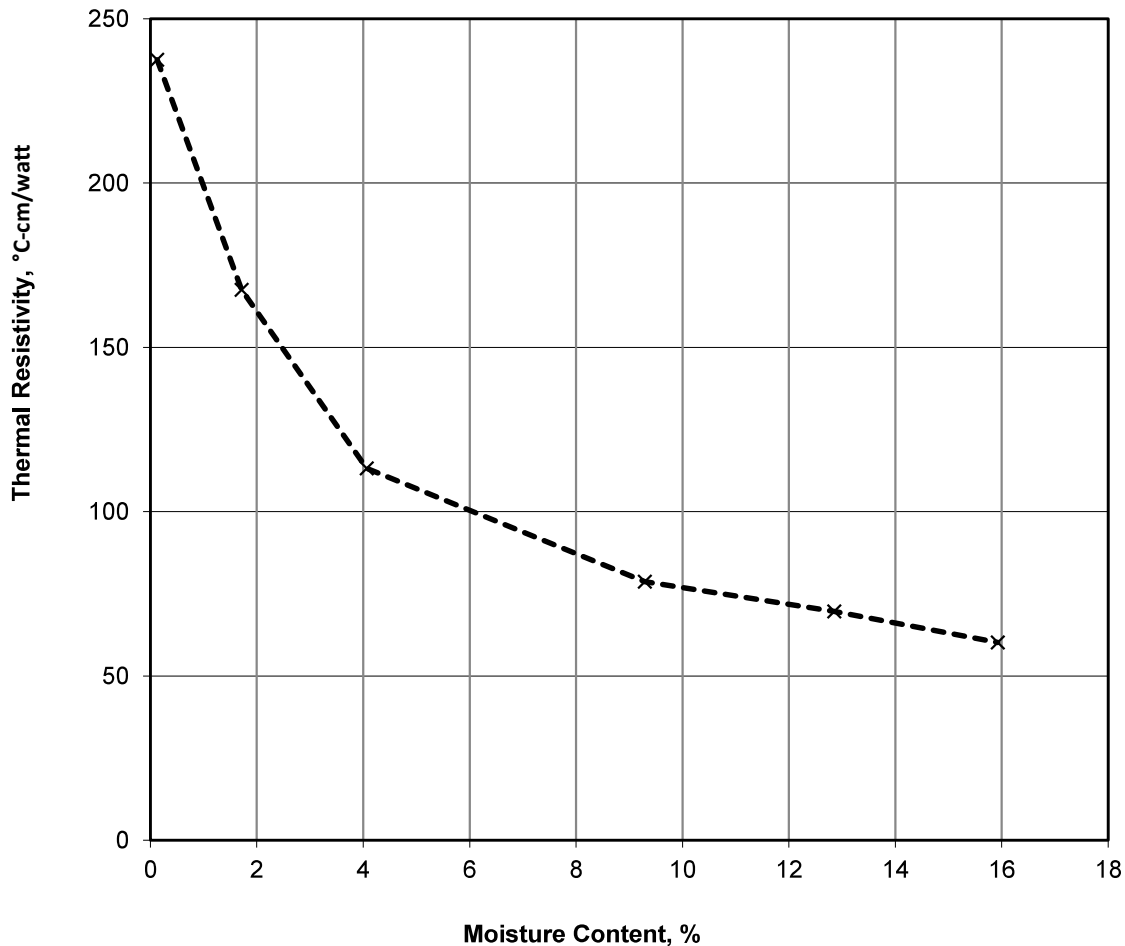
Sample Dry Density, pcf: 92

Sample % Compaction: 85

Thermal Resistivity Test Results

Moisture Content (%)	Thermal Resistivity (°C-cm/watt)	Temperature (°C)
0.1	238	21.4
1.7	168	21.5
4.1	113	21.7
9.3	79	21.3
12.9	70	21.7
15.9	60	20.3

Thermal Resistivity Dry-Out Curve



Date: 6/3/2022

Run By: AMM

Reviewed By: BWP

Terracon

Project Name: Clemont Country Solar

Project Number: N4225037

Sample ID: B22 @ 1'-5'

Soil Type: LEAN CLAY

Standard/Modified Proctor: ASTM D 698-A

Max Dry Density, pcf: 105.8

Optimum Moisture Content, %: 15.4

Target % Compaction: 85

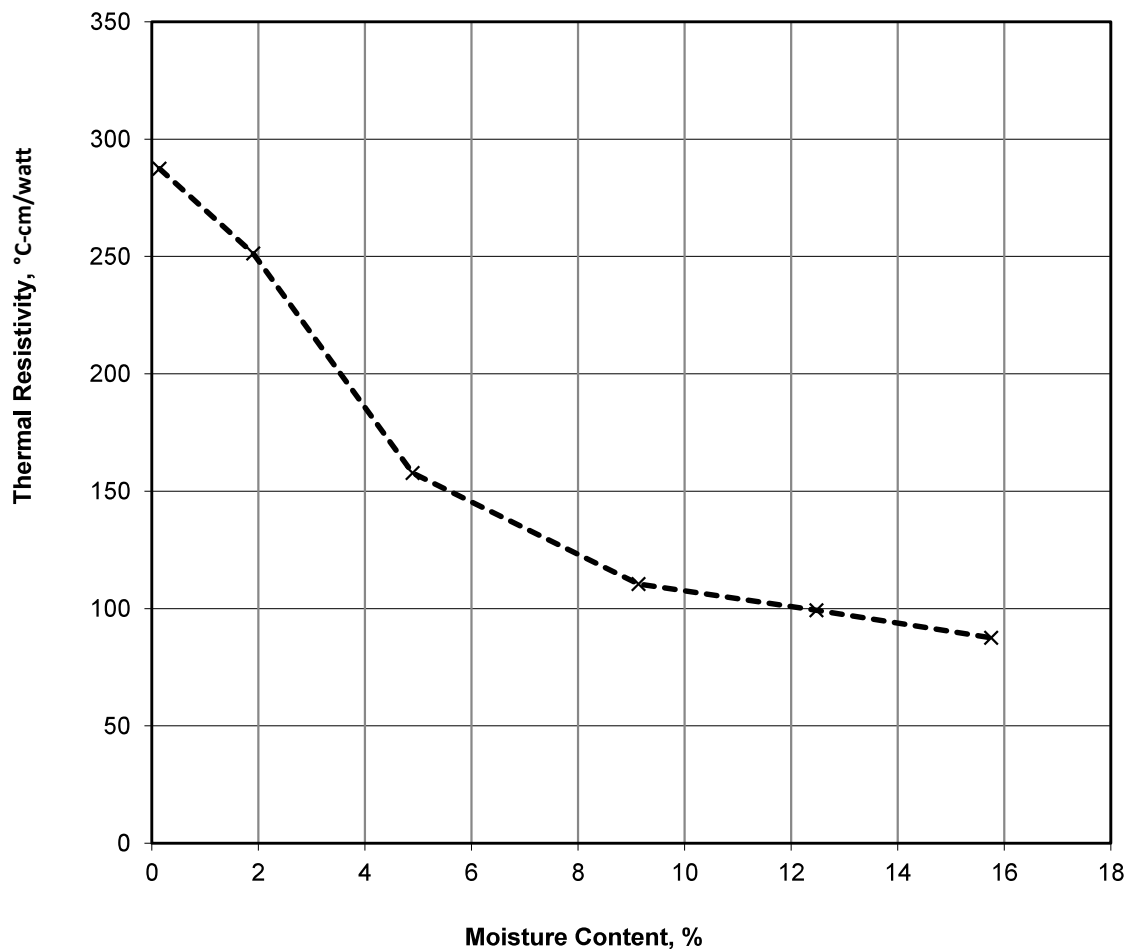
Sample Dry Density, pcf: 90

Sample % Compaction: 85

Thermal Resistivity Test Results

Moisture Content (%)	Thermal Resistivity (°C-cm/watt)	Temperature (°C)
0.1	287	22.0
1.9	251	20.6
4.9	158	22.3
9.1	110	20.9
12.5	99	20.5
15.8	88	20.0

Thermal Resistivity Dry-Out Curve



Date: 6/3/2022

Run By: AMM

Reviewed By: BWP

Terracon

Project Name: Clemont Country Solar

Project Number: N4225037

Sample ID: S1 @ 1'-5'

Soil Type: LEAN CLAY

Standard/Modified Proctor: ASTM D 698-A

Max Dry Density, pcf: 109.5

Optimum Moisture Content, %: 14.6

Target % Compaction: 85

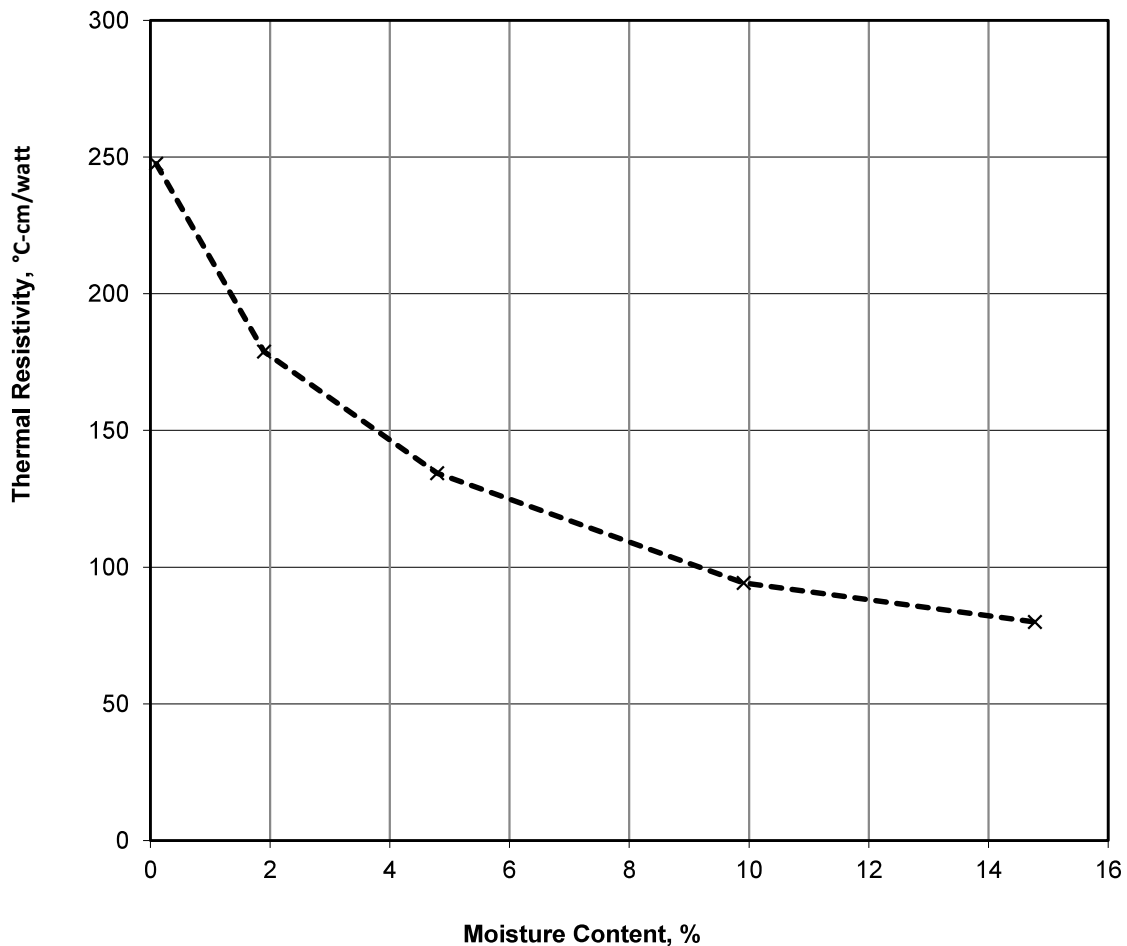
Sample Dry Density, pcf: 93

Sample % Compaction: 85

Thermal Resistivity Test Results

Moisture Content (%)	Thermal Resistivity (°C-cm/watt)	Temperature (°C)
0.1	248	21.0
1.9	179	22.1
4.8	134	20.6
9.9	94	19.0
14.8	80	19.8

Thermal Resistivity Dry-Out Curve



Date: 6/3/2022

Run By: AMM

Reviewed By: BWP

Terracon

15 Marway Cir Ste 2B
Rochester, NY 14624
(585) 247-3471



Client

Savion, LLC
Kansas City, MO

Project

Clermont County Solar
N4225037

Date Received: 5/11/2022

Results from Corrosion Testing

Sample Location	B-1	B-4	B-7	B-12
Sample Depth (ft.)	0.0'-2.0'	0.0'-2.0'	0.0'-2.0'	0.0'-2.0'
pH Analysis, ASTM G 51	6.73	5.66	5.71	5.78
Water Soluble Sulfate (SO ₄), ASTM C 1580 (ppm)	29	5	57	49
Sulfides, AWWA 4500-S D, (mg/kg)	Nil	Nil	Nil	Nil
Chlorides, ASTM D 512, (ppm)	41	44	104	34
Red-Ox, ASTM G 200, (mV)	+511	+534	+524	+530
Total Salts, AWWA 2520 B, (mg/kg)	728	305	1148	762
Resistivity (Saturated), ASTM G 57, (ohm-cm)	1320	3600	971	2350

Analyzed By: ChrisAnne Ross
Field Geologist

The tests were performed in general accordance with applicable ASTM and AWWA test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

15 Marway Cir Ste 2B
Rochester, NY 14624
(585) 247-3471



Client

Savion, LLC
Kansas City, MO

Project

Clermont County Solar
N4225037

Date Received: 5/11/2022

Results from Corrosion Testing

Sample Location	B-19	B-23	S-1
Sample Depth (ft.)	0.0'-2.0'	0.0'-2.0'	0.0'-2.0'
pH Analysis, ASTM G 51	5.35	5.12	5.56
Water Soluble Sulfate (SO ₄), ASTM C 1580 (ppm)	28	65	20
Sulfides, AWWA 4500-S D, (mg/kg)	Nil	Nil	Nil
Chlorides, ASTM D 512, (ppm)	103	38	94
Red-Ox, ASTM G 200, (mV)	+531	+543	+511
Total Salts, AWWA 2520 B, (mg/kg)	644	784	467
Resistivity (Saturated), ASTM G 57, (ohm-cm)	1080	857	2640

Analyzed By: ChrisAnne Ross
Field Geologist

The tests were performed in general accordance with applicable ASTM and AWWA test methods. This report is exclusively for the use of the client indicated above and shall not be reproduced except in full without the written consent of our company. Test results transmitted herein are only applicable to the actual samples tested at the location(s) referenced and are not necessarily indicative of the properties of other apparently similar or identical materials.

FIELD ELECTRICAL RESISTIVITY TEST DATA

Clermont Solar ■ Clermont County, OH

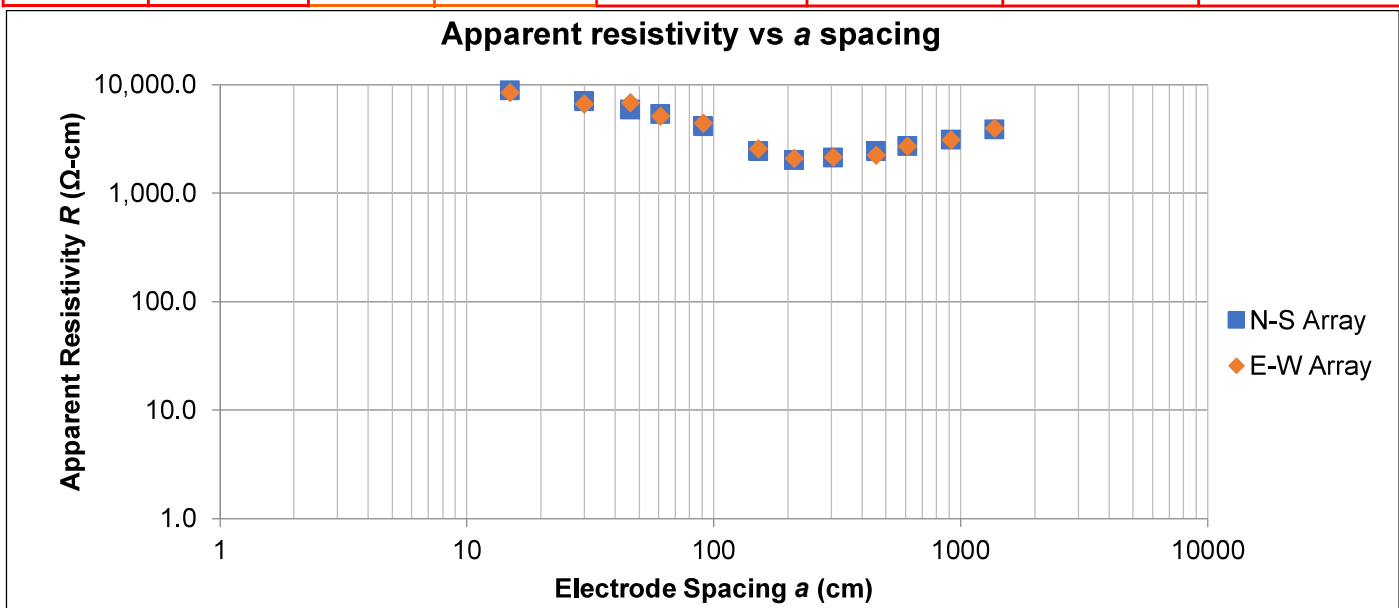
May 11, 2022 ■ Terracon Project No.N4225037



Array Loc.	EER-1-SUB (39.094766, -84.092650)		
Instrument	Megger DET 2/2	Weather	85°/Sunny
Serial #	RMR002720	Ground Cond.	Lean Clay
Cal. Check	9/23/2021	Tested By	IM
Test Date	5/11/2022	Method	Venner 4-pin (ASTM G57-06 (2012); IEEE 81-2012)
Notes & Conflicts			

Apparent resistivity ρ is calculated as :
$$\rho = \frac{4\pi aR}{1 + \frac{2a}{\sqrt{a^2 + 4b^2}} - \frac{a}{\sqrt{a^2 + b^2}}}$$

Electrode Spacing <i>a</i>		Electrode Depth <i>b</i>		N-S Test		E-W Test	
(feet)	(centimeters)	(inches)	(centimeters)	Measured Resistance <i>R</i>	Apparent Resistivity ρ	Measured Resistance <i>R</i>	Apparent Resistivity ρ
				Ω	(Ω -cm)	Ω	(Ω -cm)
0.5	15	6	15	55.60	8830	53.50	8490
1	30	6	15	28.30	7020	26.90	6670
1.5	46	6	15	17.40	5830	20.40	6840
2	61	6	15	12.61	5300	12.19	5120
3	91	12	30	6.20	4120	6.67	4430
5	152	12	30	2.38	2420	2.52	2560
7	213	12	30	1.45	2010	1.50	2080
10	305	12	30	1.10	2130	1.10	2140
15	457	12	30	0.84	2420	0.77	2230
20	610	12	30	0.70	2690	0.70	2690
30	914	12	30	0.54	3110	0.54	3110
45	1372	12	30	0.45	3870	0.46	3940
80	2438	12	30	0.32	4930	0.44	6760
150	4572	12	30	0.272	7810	0.26	7470
200	6096	12	30	0.235	9000	0.23	8810
300	9144	12	30	0.72	41370	0.17	9770



FIELD ELECTRICAL RESISTIVITY TEST DATA

Clermont Solar ■ Clermont County, OH

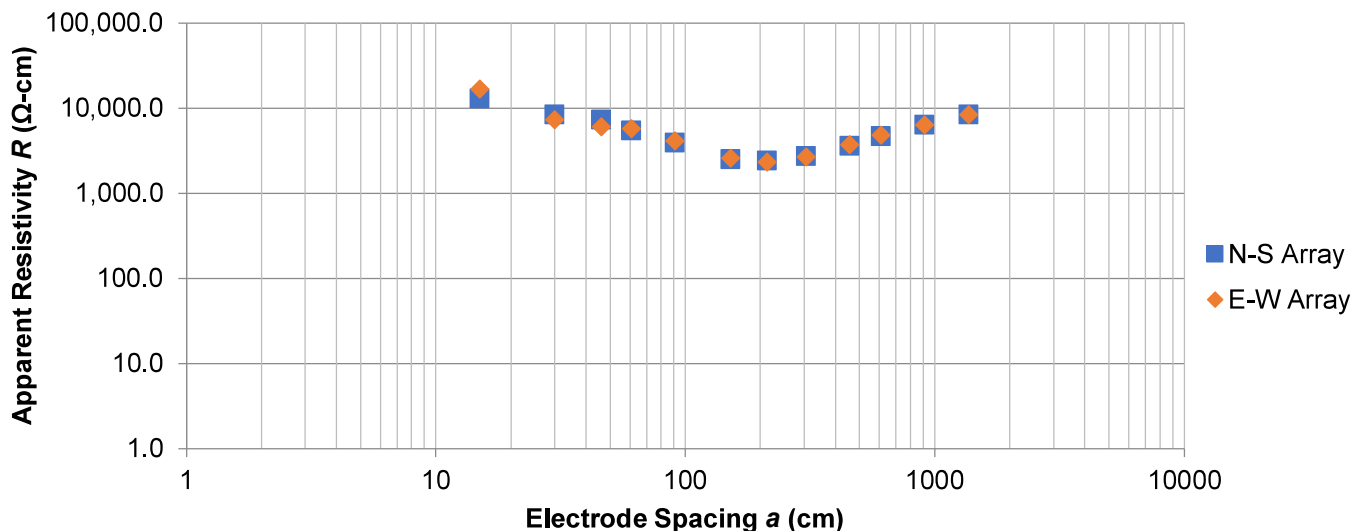
May 16, 2022 ■ Terracon Project No.N4225037



Array Loc.	EER-2 (39.108087, -84.077294)		
Instrument	Megger DET 2/2	Weather	60°/Cloudy
Serial #	RMR002720	Ground Cond.	Lean Clay
Cal. Check	9/23/2021	Tested By	IM
Test Date	5/16/2022	Method	Venner 4-pin (ASTM G57-06 (2012); IEEE 81-2012)
Notes & Conflicts			

Apparent resistivity ρ is calculated as :
$$\rho = \frac{4\pi aR}{1 + \frac{2a}{\sqrt{a^2 + 4b^2}} - \frac{a}{\sqrt{a^2 + b^2}}}$$

Electrode Spacing a		Electrode Depth b		N-S Test		E-W Test	
(feet)	(centimeters)	(inches)	(centimeters)	Measured Resistance R	Apparent Resistivity ρ	Measured Resistance R	Apparent Resistivity ρ
				Ω	(Ω -cm)	Ω	(Ω -cm)
0.5	15	6	15	81.50	12940	105.00	16670
1	30	6	15	33.40	8290	29.30	7270
1.5	46	6	15	21.60	7240	18.00	6030
2	61	6	15	12.97	5450	13.61	5720
3	91	12	30	5.86	3900	6.17	4100
5	152	12	30	2.45	2490	2.52	2560
7	213	12	30	1.73	2390	1.68	2320
10	305	12	30	1.39	2710	1.36	2650
15	457	12	30	1.24	3590	1.28	3700
20	610	12	30	1.21	4660	1.25	4810
30	914	12	30	1.10	6330	1.10	6330
45	1372	12	30	0.97	8340	0.97	8390
70	2134	12	30	0.80	10680	0.80	10740
100	3048	12	30	0.59	11280	0.63	12110
150	4572	12	30	0.44	12530	0.44	12640
200	6096	12	30	0.32	12330	0.32	12410

Apparent resistivity vs a spacing

FIELD ELECTRICAL RESISTIVITY TEST DATA

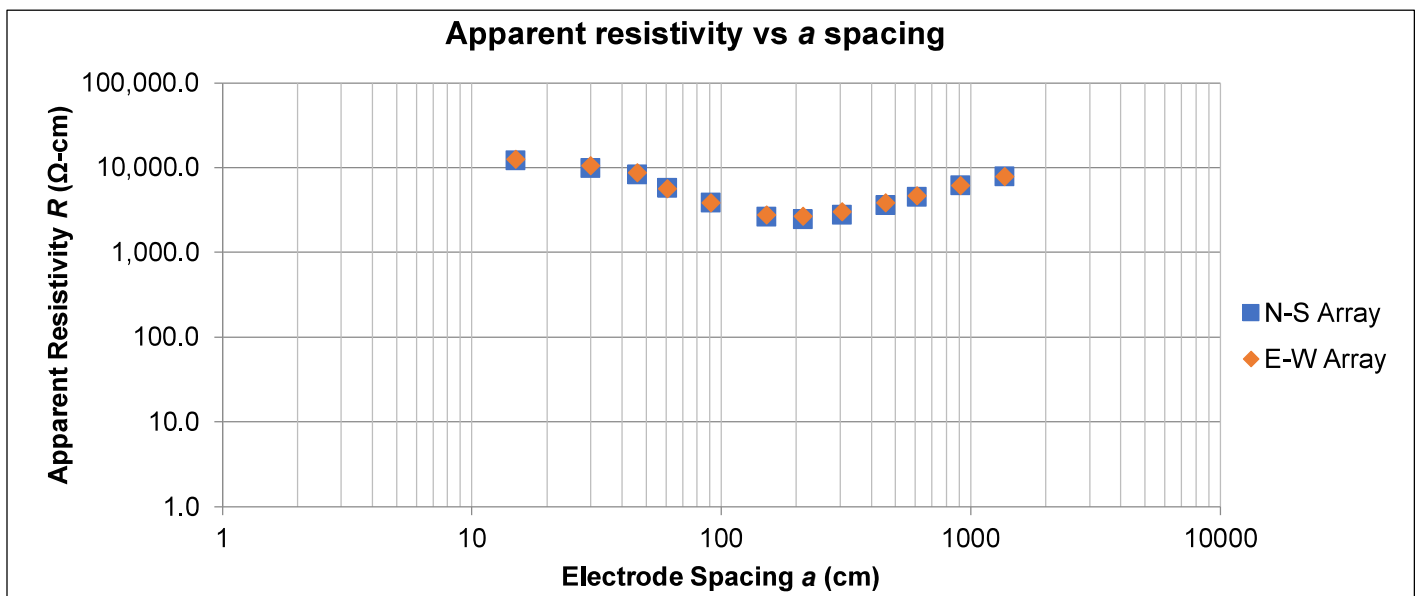
Clermont Solar ■ Clermont County, OH
May 16, 2022 ■ Terracon Project No.N4225037



Array Loc.	EER-3 (39.102724, -84.087725)		
Instrument	Megger DET 2/2	Weather	60°/Cloudy
Serial #	RMR002720	Ground Cond.	Lean Clay
Cal. Check	9/23/2021	Tested By	IM
Test Date	5/16/2022	Method	Venner 4-pin (ASTM G57-06 (2012); IEEE 81-2012)
Notes & Conflicts			

Apparent resistivity ρ is calculated as :
$$\rho = \frac{4\pi aR}{1 + \frac{2a}{\sqrt{a^2 + 4b^2}} - \frac{a}{\sqrt{a^2 + b^2}}}$$

Electrode Spacing a		Electrode Depth b		N-S Test		E-W Test	
(feet)	(centimeters)	(inches)	(centimeters)	Measured Resistance R	Apparent Resistivity ρ	Measured Resistance R	Apparent Resistivity ρ
				Ω	(Ω -cm)	Ω	(Ω -cm)
0.5	15	6	15	75.40	11970	78.00	12380
1	30	6	15	39.10	9700	42.30	10490
1.5	46	6	15	24.70	8280	26.00	8720
2	61	6	15	13.60	5720	13.40	5630
3	91	12	30	5.79	3850	5.81	3860
5	152	12	30	2.58	2620	2.72	2760
7	213	12	30	1.76	2430	1.91	2640
10	305	12	30	1.40	2730	1.53	2980
15	457	12	30	1.23	3560	1.32	3820
20	610	12	30	1.16	4460	1.21	4660
30	914	12	30	1.06	6100	1.06	6100
45	1372	12	30	0.90	7770	0.90	7760
70	2134	12	30	0.81	10860	0.82	11040
100	3048	12	30	0.62	11910	0.64	12260
150	4572	12	30	0.42	12070	0.42	12070
200	6096	12	30	0.32	12260	0.32	12070



FIELD ELECTRICAL RESISTIVITY TEST DATA

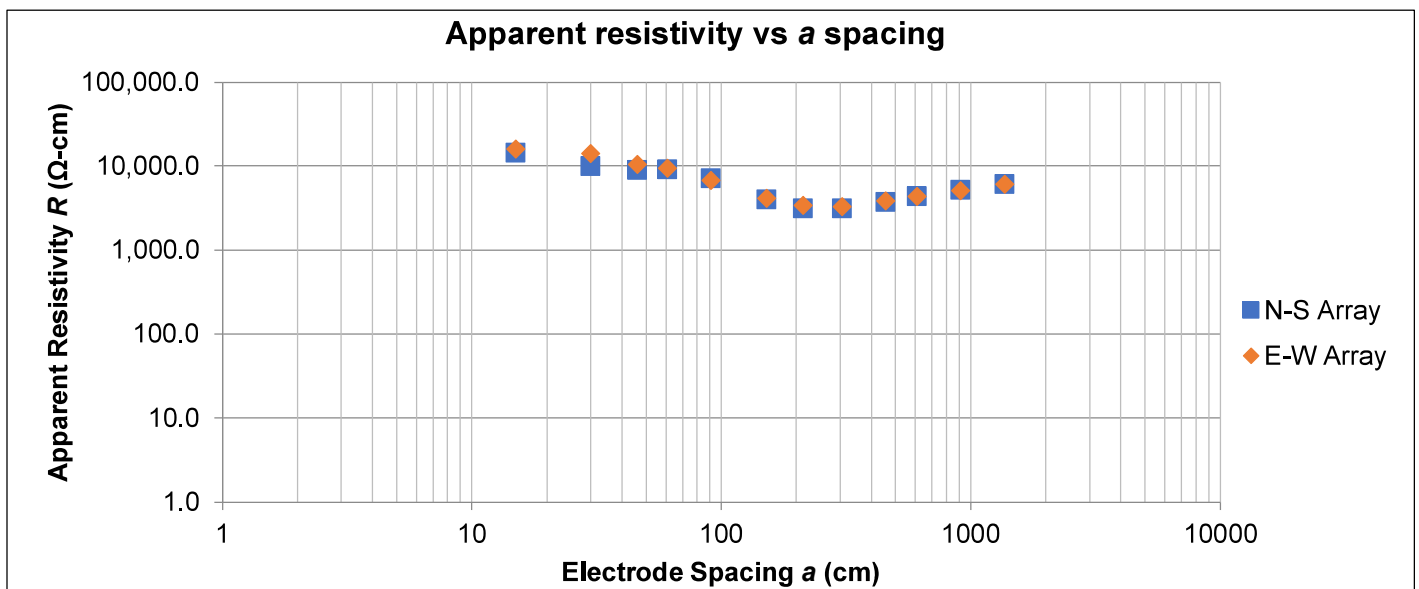
Clermont Solar ■ Clermont County, OH
May 12, 2022 ■ Terracon Project No.N4225037



Array Loc.	EER-4 (39.100085, -84.080086)		
Instrument	Megger DET 2/2	Weather	65°
Serial #	RMR002720	Ground Cond.	Lean Clay
Cal. Check	9/23/2021	Tested By	IM
Test Date	5/12/2022	Method	Venner 4-pin (ASTM G57-06 (2012); IEEE 81-2012)
Notes & Conflicts			

Apparent resistivity ρ is calculated as :
$$\rho = \frac{4\pi aR}{1 + \frac{2a}{\sqrt{a^2 + 4b^2}} - \frac{a}{\sqrt{a^2 + b^2}}}$$

Electrode Spacing a		Electrode Depth b		N-S Test		E-W Test	
(feet)	(centimeters)	(inches)	(centimeters)	Measured Resistance R	Apparent Resistivity ρ	Measured Resistance R	Apparent Resistivity ρ
				Ω	(Ω -cm)	Ω	(Ω -cm)
0.5	15	6	15	90.70	14400	99.30	15760
1	30	6	15	40.00	9920	56.60	14040
1.5	46	6	15	26.70	8950	31.30	10490
2	61	6	15	21.70	9120	22.20	9330
3	91	12	30	10.61	7050	10.10	6710
5	152	12	30	3.90	3960	4.03	4100
7	213	12	30	2.25	3110	2.44	3370
10	305	12	30	1.58	3080	1.67	3250
15	457	12	30	1.28	3700	1.32	3810
20	610	12	30	1.13	4350	1.12	4310
30	914	12	30	0.89	5140	0.88	5090
45	1372	12	30	0.70	6050	0.70	6060
70	2134	12	30	0.57	7660	0.58	7730
100	3048	12	30	0.49	9350	0.51	9810
150	4572	12	30	0.37	10690	0.39	11290
200	6096	12	30	0.30	11340	0.32	12260



FIELD ELECTRICAL RESISTIVITY TEST DATA

Clermont Solar ■ Clermont County, OH

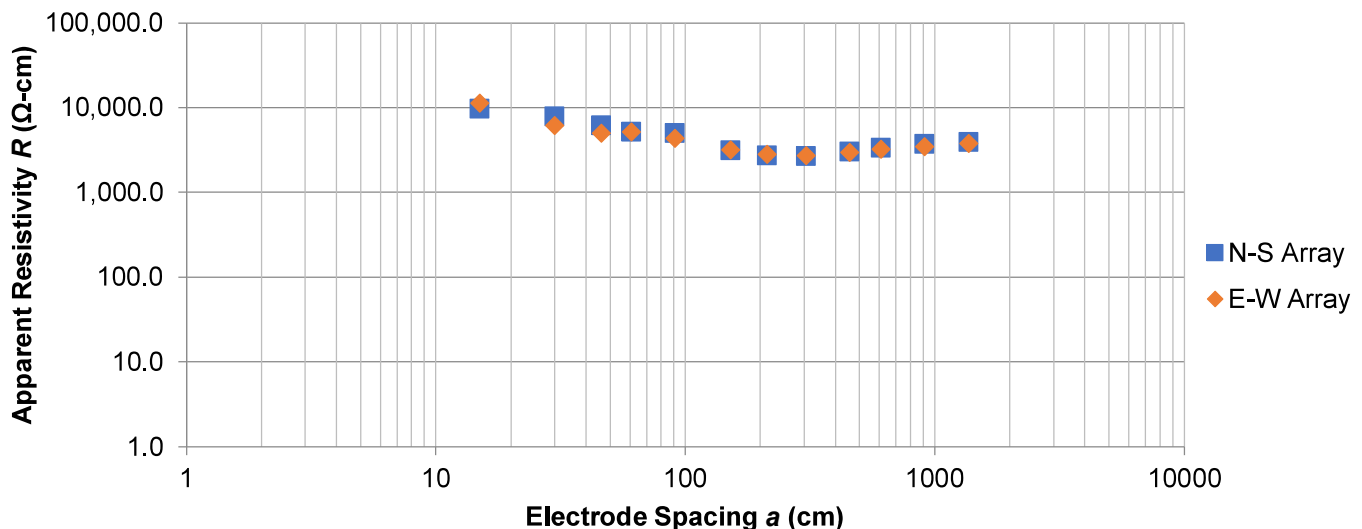
May 12, 2022 ■ Terracon Project No.N4225037



Array Loc.	EER-5 (39.092025, -84.082188)		
Instrument	Megger DET 2/2	Weather	65°
Serial #	RMR002720	Ground Cond.	Lean Clay
Cal. Check	9/23/2021	Tested By	IM
Test Date	5/12/2022	Method	Venner 4-pin (ASTM G57-06 (2012); IEEE 81-2012)
Notes & Conflicts			

Apparent resistivity ρ is calculated as :
$$\rho = \frac{4\pi aR}{1 + \frac{2a}{\sqrt{a^2 + 4b^2}} - \frac{a}{\sqrt{a^2 + b^2}}}$$

Electrode Spacing <i>a</i>		Electrode Depth <i>b</i>		N-S Test		E-W Test	
(feet)	(centimeters)	(inches)	(centimeters)	Measured Resistance <i>R</i>	Apparent Resistivity ρ	Measured Resistance <i>R</i>	Apparent Resistivity ρ
				Ω	(Ω -cm)	Ω	(Ω -cm)
0.5	15	6	15	60.80	9650	70.80	11240
1	30	6	15	31.50	7810	24.70	6130
1.5	46	6	15	18.20	6100	14.90	4990
2	61	6	15	12.18	5120	12.21	5130
3	91	12	30	7.47	4960	6.52	4340
5	152	12	30	3.07	3120	3.09	3140
7	213	12	30	1.96	2710	2.03	2810
10	305	12	30	1.36	2650	1.38	2690
15	457	12	30	1.04	3010	1.02	2960
20	610	12	30	0.87	3360	0.84	3240
30	914	12	30	0.64	3670	0.60	3450
45	1372	12	30	0.46	3930	0.43	3740
70	2134	12	30	0.34	4510	0.33	4480
100	3048	12	30	0.28	5440	0.28	5400
150	4572	12	30	0.24	6890	0.23	6720
200	6096	12	30	0.28	10840	0.20	7810

Apparent resistivity vs *a* spacing

FIELD ELECTRICAL RESISTIVITY TEST DATA

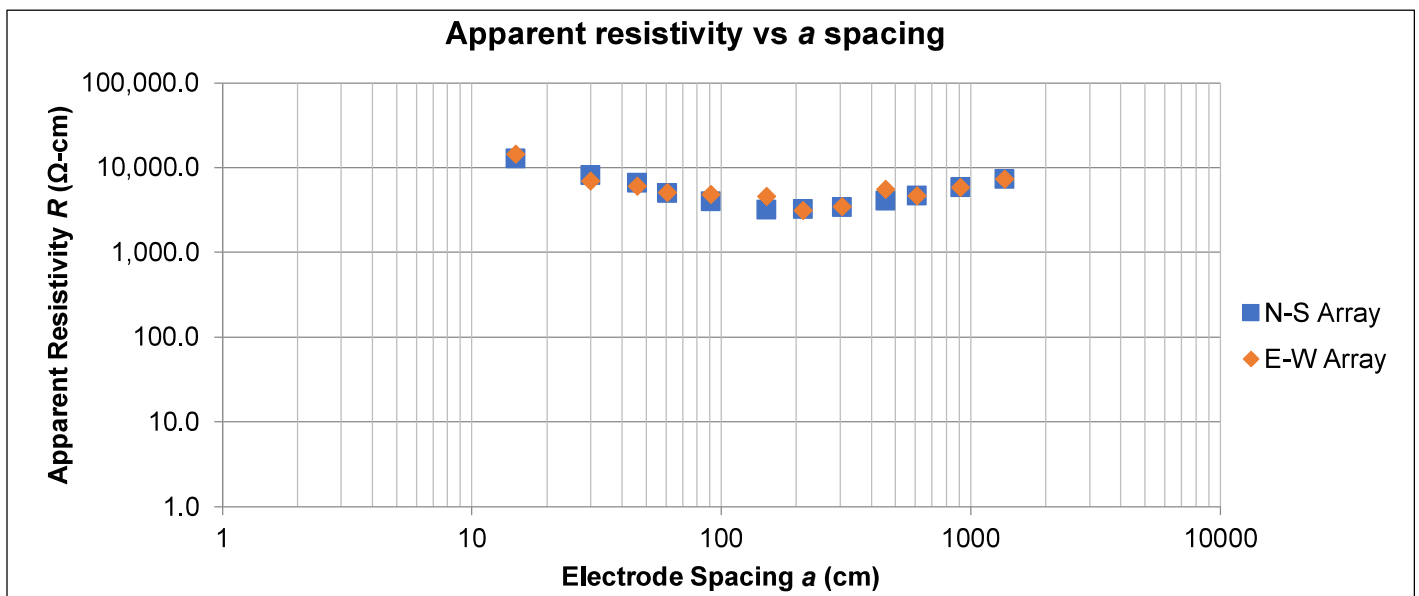
Clermont Solar ■ Clermont County, OH
May 12, 2022 ■ Terracon Project No.N4225037



Array Loc.	EER-6 (39.080806, -84.086515)		
Instrument	Megger DET 2/2	Weather	65°
Serial #	RMR002720	Ground Cond.	Lean Clay
Cal. Check	9/23/2021	Tested By	IM
Test Date	5/12/2022	Method	Venner 4-pin (ASTM G57-06 (2012); IEEE 81-2012)
Notes & Conflicts			

Apparent resistivity ρ is calculated as :
$$\rho = \frac{4\pi aR}{1 + \frac{2a}{\sqrt{a^2 + 4b^2}} - \frac{a}{\sqrt{a^2 + b^2}}}$$

Electrode Spacing a		Electrode Depth b		N-S Test		E-W Test	
(feet)	(centimeters)	(inches)	(centimeters)	Measured Resistance R	Apparent Resistivity ρ	Measured Resistance R	Apparent Resistivity ρ
				Ω	(Ω -cm)	Ω	(Ω -cm)
0.5	15	6	15	79.40	12610	89.60	14220
1	30	6	15	32.70	8110	28.00	6950
1.5	46	6	15	19.70	6600	18.00	6030
2	61	6	15	11.80	4960	12.00	5040
3	91	12	30	5.98	3980	7.25	4820
5	152	12	30	3.11	3160	4.46	4530
7	213	12	30	2.31	3200	2.26	3130
10	305	12	30	1.75	3420	1.79	3480
15	457	12	30	1.39	4020	1.90	5500
20	610	12	30	1.20	4610	1.21	4660
30	914	12	30	1.01	5800	1.02	5860
45	1372	12	30	0.84	7280	0.84	7230
70	2134	12	30	0.68	9120	0.69	9300
100	3048	12	30	0.56	10630	0.58	11010
150	4572	12	30	0.45	12870	0.45	12960
200	6096	12	30	0.38	14590	0.36	13940



FIELD ELECTRICAL RESISTIVITY TEST DATA

Clermont Solar ■ Clermont County, OH

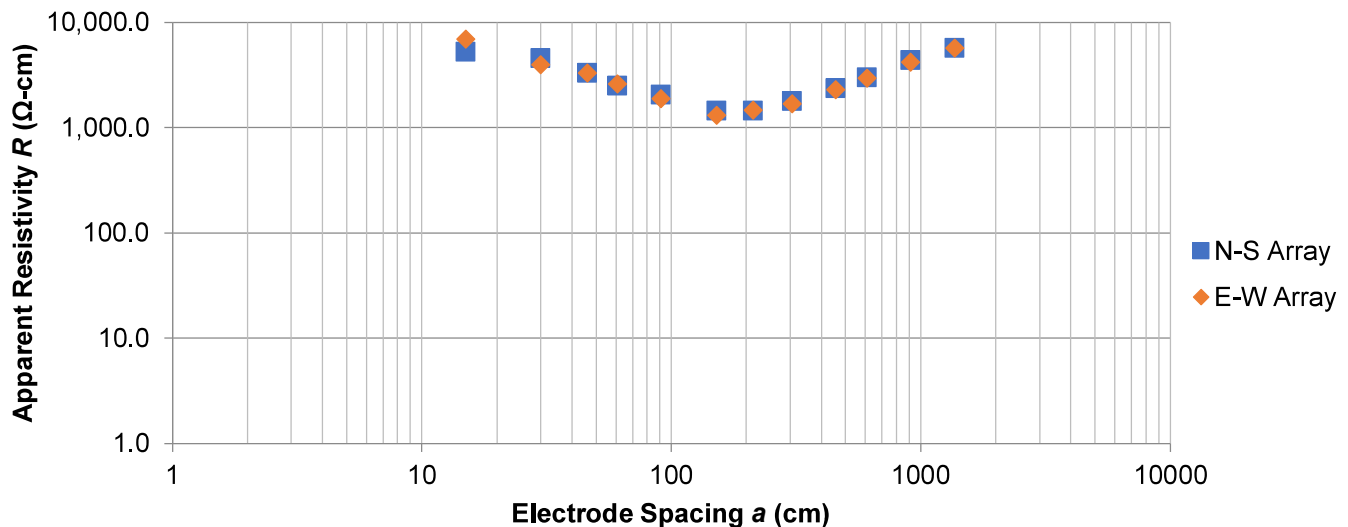
May 12, 2022 ■ Terracon Project No.N4225037



Array Loc.	EER-7 (39.080051, -84.102370)		
Instrument	Megger DET 2/2	Weather	65°
Serial #	RMR002720	Ground Cond.	Lean Clay
Cal. Check	9/23/2021	Tested By	IM
Test Date	5/12/2022	Method	Venner 4-pin (ASTM G57-06 (2012); IEEE 81-2012)
Notes & Conflicts			

Apparent resistivity ρ is calculated as :
$$\rho = \frac{4\pi aR}{1 + \frac{2a}{\sqrt{a^2 + 4b^2}} - \frac{a}{\sqrt{a^2 + b^2}}}$$

Electrode Spacing <i>a</i>		Electrode Depth <i>b</i>		N-S Test		E-W Test	
(feet)	(centimeters)	(inches)	(centimeters)	Measured Resistance <i>R</i>	Apparent Resistivity ρ	Measured Resistance <i>R</i>	Apparent Resistivity ρ
				Ω	(Ω -cm)	Ω	(Ω -cm)
0.5	15	6	15	33.00	5240	43.20	6860
1	30	6	15	18.40	4560	15.80	3920
1.5	46	6	15	9.75	3270	9.80	3280
2	61	6	15	5.90	2480	6.15	2590
3	91	12	30	3.08	2050	2.83	1880
5	152	12	30	1.42	1440	1.29	1310
7	213	12	30	1.05	1450	1.06	1470
10	305	12	30	0.91	1770	0.87	1690
15	457	12	30	0.81	2350	0.80	2300
20	610	12	30	0.78	3000	0.77	2940
30	914	12	30	0.75	4320	0.72	4150
45	1372	12	30	0.65	5640	0.65	5640
70	2134	12	30	0.58	7820	0.59	7900
100	3048	12	30	0.47	8930	0.52	10040
150	4572	12	30	0.36	10280	0.42	12120
200	6096	12	30	0.28	10800	0.34	12870

Apparent resistivity vs *a* spacing



INFILTRATION TEST DATA SHEET

PROJECT NAME: <u>Clermont Solar</u>	TEST ID: <u>TP-1</u>
PROJECT NUMBER: <u>N4225037</u>	PERSONNEL: <u>M. Evener</u>
LOCATION: <u>Clermont County, OH</u>	DATE: <u>May 3, 2022</u>

TEST METHOD: Infiltration (Falling Head)

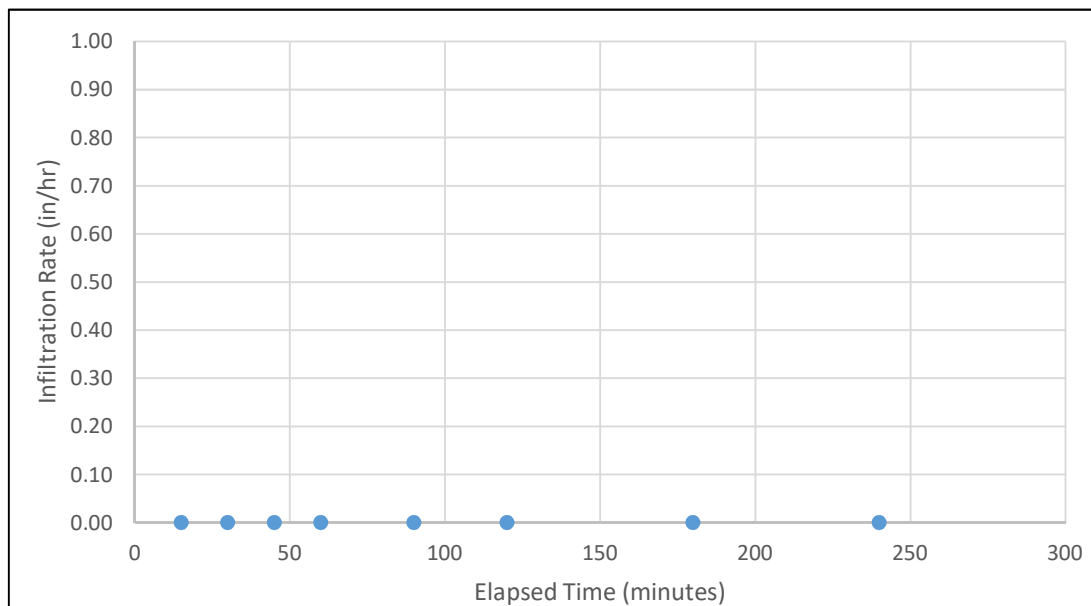
PERCOLATION HOLE DIAMETER: 12"

BOREHOLE SECTION AREA: 12.57 sq. inches

DEPTH OF TEST (feet): 3' Distance from the bottom of the inner ring/hole to measuring pt: 9"
(min water column of 6-8 inches)

MEASURING POINT: Indicator Mark

TIME	ELAPSED TIME SINCE START OF TEST (minutes)	WATER LEVEL PERCOLATION HOLE (feet)	VOLUME OF WATER ADDED AT EACH CYCLE (gallons)	Change in Volume of Water (cu. Inches)	INFILTRATION RATE (in/hr)	REMARKS
TEST DATA						
12:30	0	0.75	(5 gal.)	-	-	
	15	0.75	0 (Falling Head)	0.00	0.00	
	30	0.75	0	0.00	0.00	
	45	0.75	0	0.00	0.00	
	60	0.75	0	0.00	0.00	
	90	0.75	0	0.00	0.00	
	120	0.75	0	0.00	0.00	
	180	0.75	0	0.00	0.00	
	240	0.75	0	0.00	0.00	



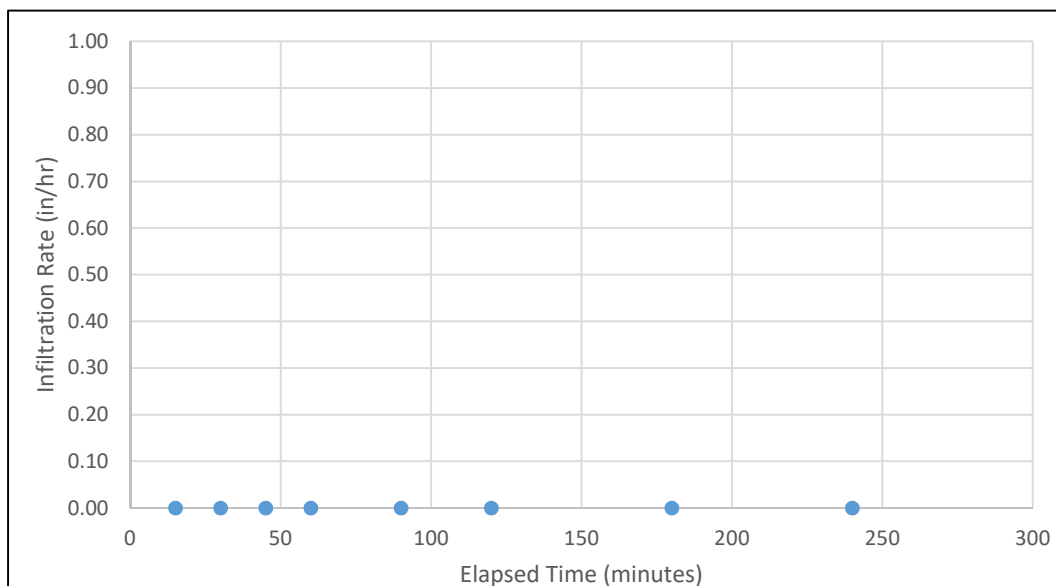


INFILTRATION TEST DATA SHEET

PROJECT NAME: <u>Clermont Solar</u> PROJECT NUMBER: <u>N4225037</u> LOCATION: <u>Clermont County, OH</u>	TEST ID: <u>TP-2</u> PERSONNEL: <u>M. Evener</u> DATE: <u>May 3, 2022</u>
--	---

TEST METHOD: <u>Infiltration (Falling Head)</u>
PERCOLATION HOLE DIAMETER: <u>12"</u>
BOREHOLE SECTION AREA: <u>12.57</u> sq. inches
DEPTH OF TEST (feet): <u>3'</u> Distance from the bottom of the inner ring/hole to measuring pt: <u>9"</u> (min water column of 6-8 inches)
MEASURING POINT: <u>Indicator Mark</u>

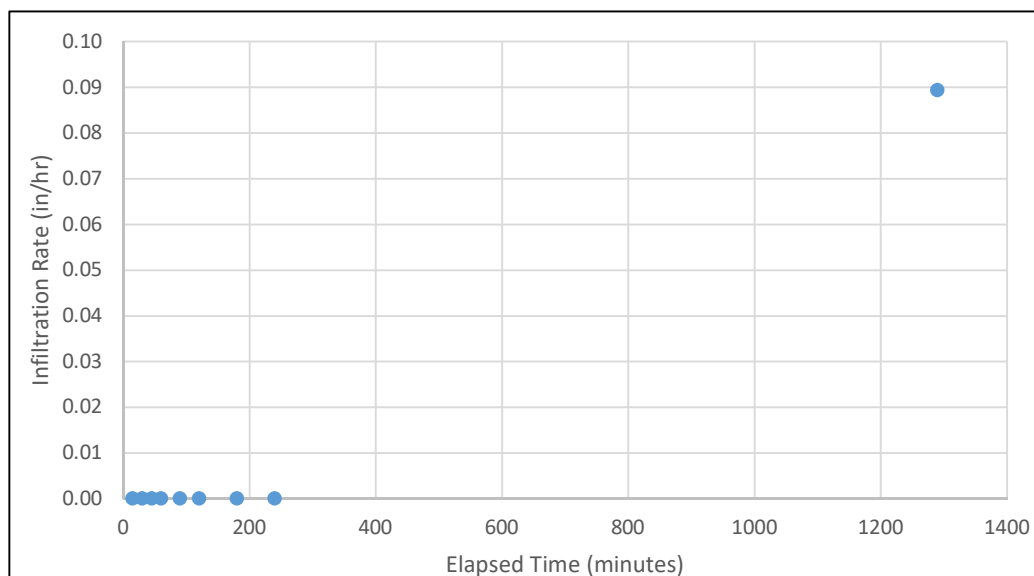
TIME	ELAPSED TIME SINCE START OF TEST (minutes)	WATER LEVEL PERCOLATION HOLE (feet)	VOLUME OF WATER ADDED AT EACH CYCLE (gallons)	Change in Volume of Water (cu. Inches)	INFILTRATION RATE (in/hr)	REMARKS
TEST DATA						
14:15	0	0.75	(5 gal.)	-	-	
	15	0.75	0 (Falling Head)	0.00	0.00	
	30	0.75	0	0.00	0.00	
	45	0.75	0	0.00	0.00	
	60	0.75	0	0.00	0.00	
	90	0.75	0	0.00	0.00	
	120	0.75	0	0.00	0.00	
	180	0.75	0	0.00	0.00	
	240	0.75	0	0.00	0.00	





INFILTRATION TEST DATA SHEET

PROJECT NAME: <u>Clermont Solar</u> PROJECT NUMBER: <u>N4225037</u> LOCATION: <u>Clermont County, OH</u>	TEST ID: <u>TP-3 Trial #1</u> PERSONNEL: <u>M. Evener</u> DATE: <u>May 2, 2022</u>					
TEST METHOD: <u>Infiltration (Falling Head)</u>						
PERCOLATION HOLE DIAMETER: <u>12"</u> BOREHOLE SECTION AREA: <u>12.57</u> sq. inches DEPTH OF TEST (feet): <u>3'</u> Distance from the bottom of the inner ring/hole to measuring pt: <u>9"</u> (min water column of 6-8 inches) MEASURING POINT: <u>Indicator Mark</u>						
TIME	ELAPSED TIME SINCE START OF TEST (minutes)	WATER LEVEL PERCOLATION HOLE (feet)	VOLUME OF WATER ADDED AT EACH CYCLE (gallons)	Change in Volume of Water (cu. Inches)	INFILTRATION RATE (in/hr)	REMARKS
TEST DATA						
12:30	0	0.75	(5 gal.)	-	-	
	15	0.75	0 (Falling Head)	0.00	0.00	
	30	0.75	0	0.00	0.00	
	45	0.75	0	0.00	0.00	
	60	0.75	0	0.00	0.00	
	90	0.75	0	0.00	0.00	
	120	0.75	0	0.00	0.00	
	180	0.75	0	0.00	0.00	
	240	0.75	0	0.00	0.00	
May 3 - 9:00 AM	1290	0.58	0.9112	210.49	0.09	





INFILTRATION TEST DATA SHEET

PROJECT NAME: <u>Clermont Solar</u> PROJECT NUMBER: <u>N4225037</u> LOCATION: <u>Clermont County, OH</u>	TEST ID: <u>TP-4 Trial #1</u> PERSONNEL: <u>M. Evener</u> DATE: <u>May 2, 2022</u>
--	--

TEST METHOD: Infiltration (Falling Head)

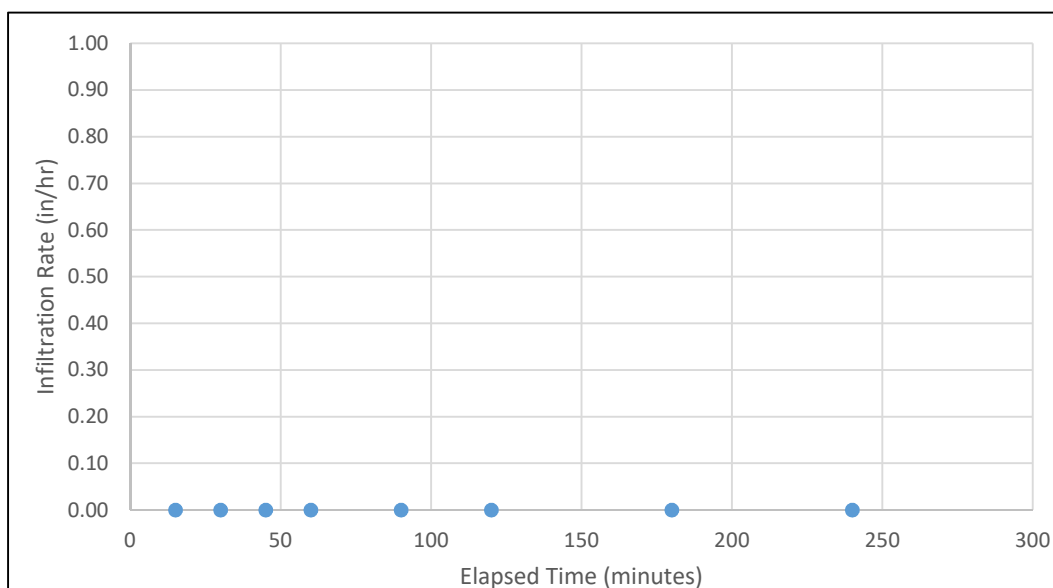
PERCOLATION HOLE DIAMETER: 12"

BOREHOLE SECTION AREA: 12.57 sq. inches

DEPTH OF TEST (feet): 3' Distance from the bottom of the inner ring/hole to measuring pt: 9"
 (min water column of 6-8 inches)

MEASURING POINT: Indicator Mark

TIME	ELAPSED TIME SINCE START OF TEST (minutes)	WATER LEVEL PERCOLATION HOLE (feet)	VOLUME OF WATER ADDED AT EACH CYCLE (gallons)	Change in Volume of Water (cu. Inches)	INFILTRATION RATE (in/hr)	REMARKS
TEST DATA						
1:20	0	0.79	(5 gal.)	-	-	
	15	0.79	0 (Falling Head)	0.00	0.00	
	30	0.79	0	0.00	0.00	
	45	0.79	0	0.00	0.00	
	60	0.79	0	0.00	0.00	
	90	0.79	0	0.00	0.00	
	120	0.79	0	0.00	0.00	
	180	0.79	0	0.00	0.00	
	240	0.79	0	0.00	0.00	





INFILTRATION TEST DATA SHEET

PROJECT NAME: <u>Clermont Solar</u> PROJECT NUMBER: <u>N4225037</u> LOCATION: <u>Clermont County, OH</u>	TEST ID: <u>TP-5 Trial #1</u> PERSONNEL: <u>M. Evener</u> DATE: <u>April 29, 2022</u>
--	---

TEST METHOD: Infiltration (Falling Head)

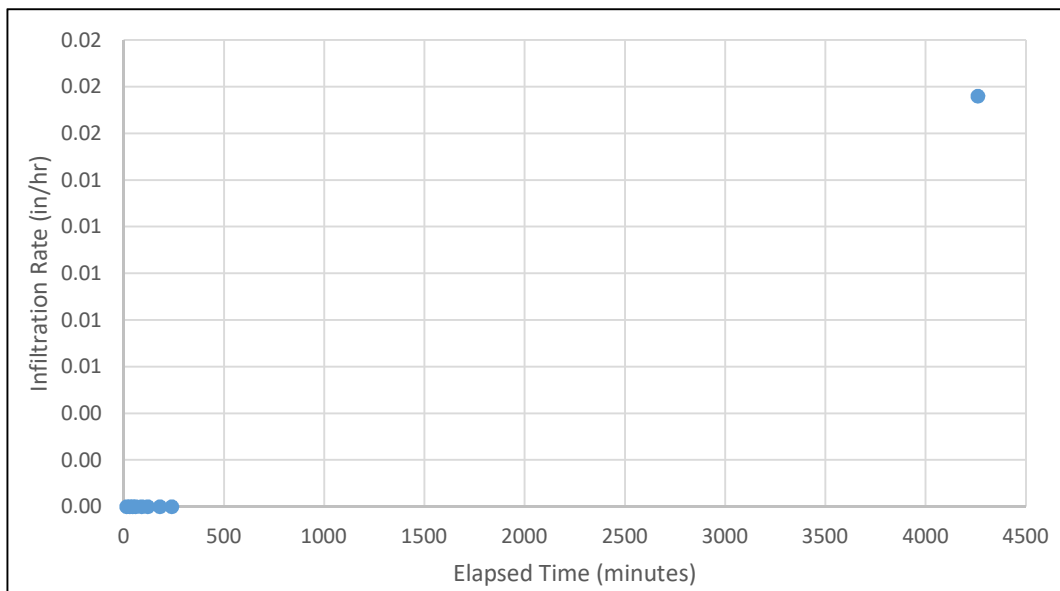
PERCOLATION HOLE DIAMETER: 12"

BOREHOLE SECTION AREA: 12.57 sq. inches

DEPTH OF TEST (feet): 3' Distance from the bottom of the inner ring/hole to measuring pt: 9"
 (min water column of 6-8 inches)

MEASURING POINT: Indicator Mark

TIME	ELAPSED TIME SINCE START OF TEST (minutes)	WATER LEVEL PERCOLATION HOLE (feet)	VOLUME OF WATER ADDED AT EACH CYCLE (gallons)	Change in Volume of Water (cu. Inches)	INFILTRATION RATE (in/hr)	REMARKS
TEST DATA						
11:15	0	0.75	(5 gal.)	-	-	
	15	0.75	0 (Falling Head)	0.00	0.00	
	30	0.75	0	0.00	0.00	
	45	0.75	0	0.00	0.00	
	60	0.75	0	0.00	0.00	
	90	0.75	0	0.00	0.00	
	120	0.75	0	0.00	0.00	
	180	0.75	0	0.00	0.00	
	240	0.75	0	0.00	0.00	
May 2 - 10:15 AM	4260	0.65	0.5931	137.00	0.02	

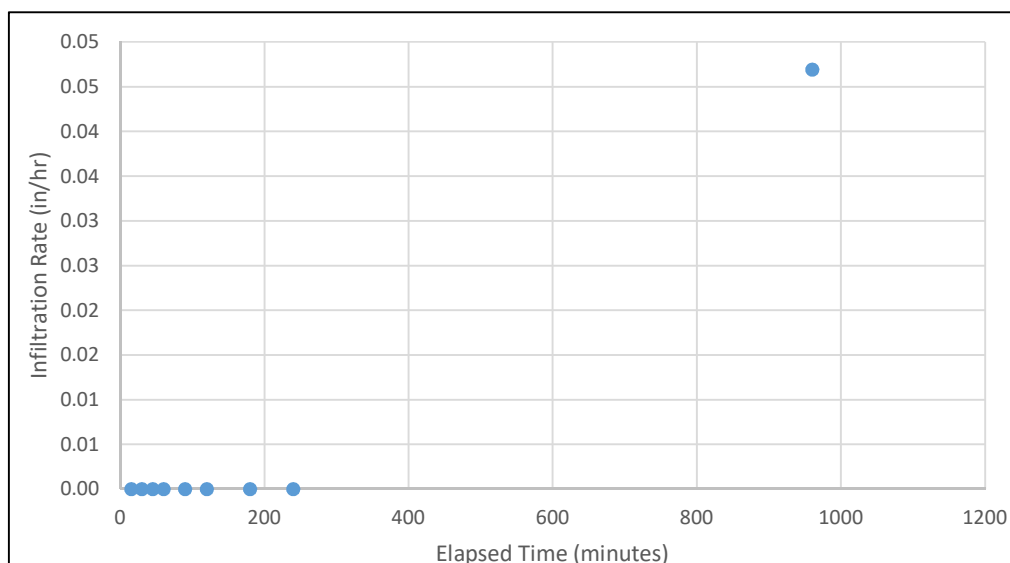




INFILTRATION TEST DATA SHEET

PROJECT NAME: <u>Clermont Solar</u> PROJECT NUMBER: <u>N4225037</u> LOCATION: <u>Clermont County, OH</u>	TEST ID: <u>TP-6 Trial #1</u> PERSONNEL: <u>M. Evener</u> DATE: <u>May 2, 2022</u>
TEST METHOD: <u>Infiltration (Falling Head)</u>	
PERCOLATION HOLE DIAMETER: <u>12"</u>	
BOREHOLE SECTION AREA: <u>12.57</u> sq. inches	
DEPTH OF TEST (feet): <u>3'</u> Distance from the bottom of the inner ring/hole to measuring pt: <u>9"</u> (min water column of 6-8 inches)	
MEASURING POINT: <u>Indicator Mark</u>	

TIME	ELAPSED TIME SINCE START OF TEST (minutes)	WATER LEVEL PERCOLATION HOLE (feet)	VOLUME OF WATER ADDED AT EACH CYCLE (gallons)	Change in Volume of Water (cu. Inches)	INFILTRATION RATE (in/hr)	REMARKS
TEST DATA						
16:15	0	0.75	(5 gal.)	-	-	
	15	0.75	0 (Falling Head)	0.00	0.00	
	30	0.75	0	0.00	0.00	
	45	0.75	0	0.00	0.00	
	60	0.75	0	0.00	0.00	
	90	0.75	0	0.00	0.00	
	120	0.75	0	0.00	0.00	
	180	0.75	0	0.00	0.00	
	240	0.75	0	0.00	0.00	
May 3 - 8:15 AM	960	0.69	0.3558	82.20	0.05	



PILE DRIVING AND LOAD TESTING RESULTS

Contents:

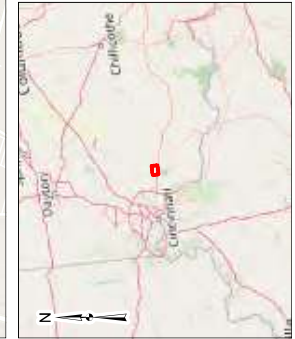
Pile Zone Location Plan	(3 Pages)
Pile Driving Time Graphs	(3 pages)
Lateral Pile Load Testing Results	(18 pages)
Tension Pile Load Testing Results	(18 pages)



DATA SOURCES:
ESRI - World Topographic Map



- Site Location
- ▲ PLT Location



Project No.:	N4225037
Date:	Jun 2022
Drawn By:	SN
Reviewed By:	NS



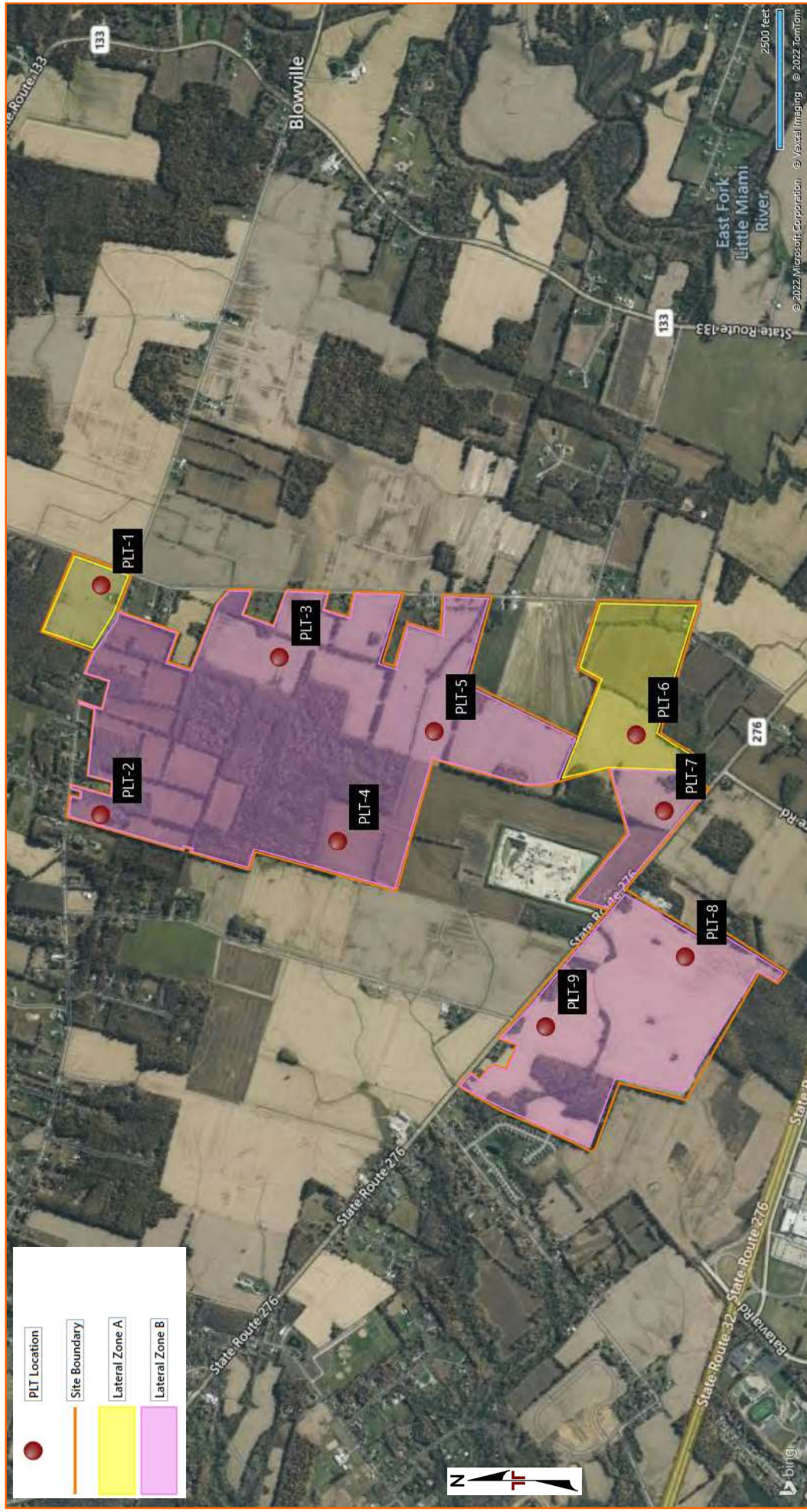
Terracon
800 Morrison Rd
Gahanna, OH
PH. 614-863-3113
terracon.com

PLT Location Map

16105 W, 113th Street, Suite 105
Clermont Country Solar Facility
Clermont County, Ohio

Exhibit	4
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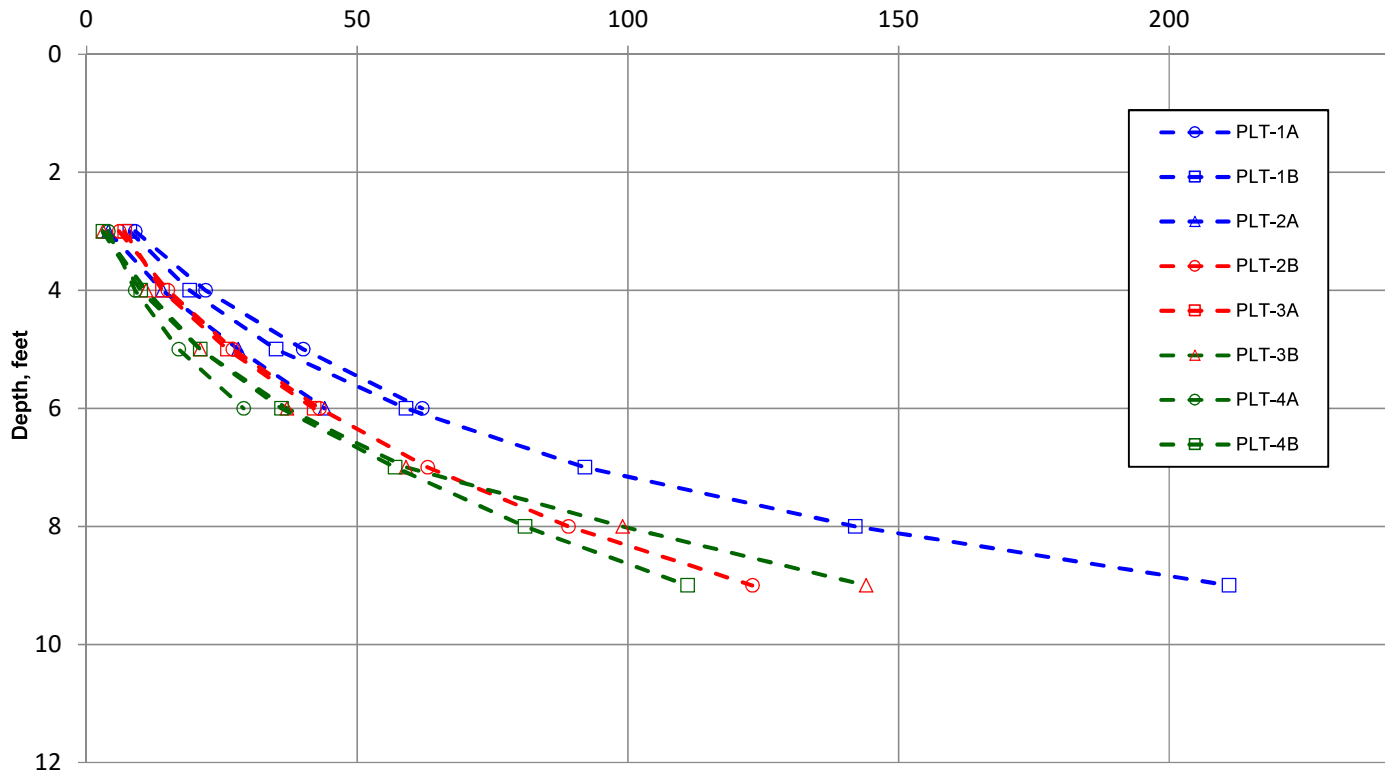




PROJECT - TEST PILE DRIVING RECORDS

Clermont Solar, N4225037

Cumulative Drive Time, seconds



Depth, feet	Cumulative Driving Time, seconds										
	PLT-1A	PLT-1B	PLT-2A	PLT-2B	PLT-3A	PLT-3B	PLT-4A	PLT-4B			
1	Pre-drilled to 2 feet										
2											
3	9	8	4	6	7	3	4	3			
4	22	19	14	15	14	11	9	10			
5	40	35	28	27	26	21	17	21			
6	62	59	44	43	42	37	29	36			
7		92		63		59		57			
8		142		89		99		81			
9		211		123		144		111			
10											
Embedment Depth, ft	6	9	6	9	6	9	6	9			
Total Drive Time, sec	62	211	44	123	42	144	29	111			
Average, sec/ft	15.5	30.1	11.0	17.6	10.5	20.6	7.3	15.9			

NOTES:

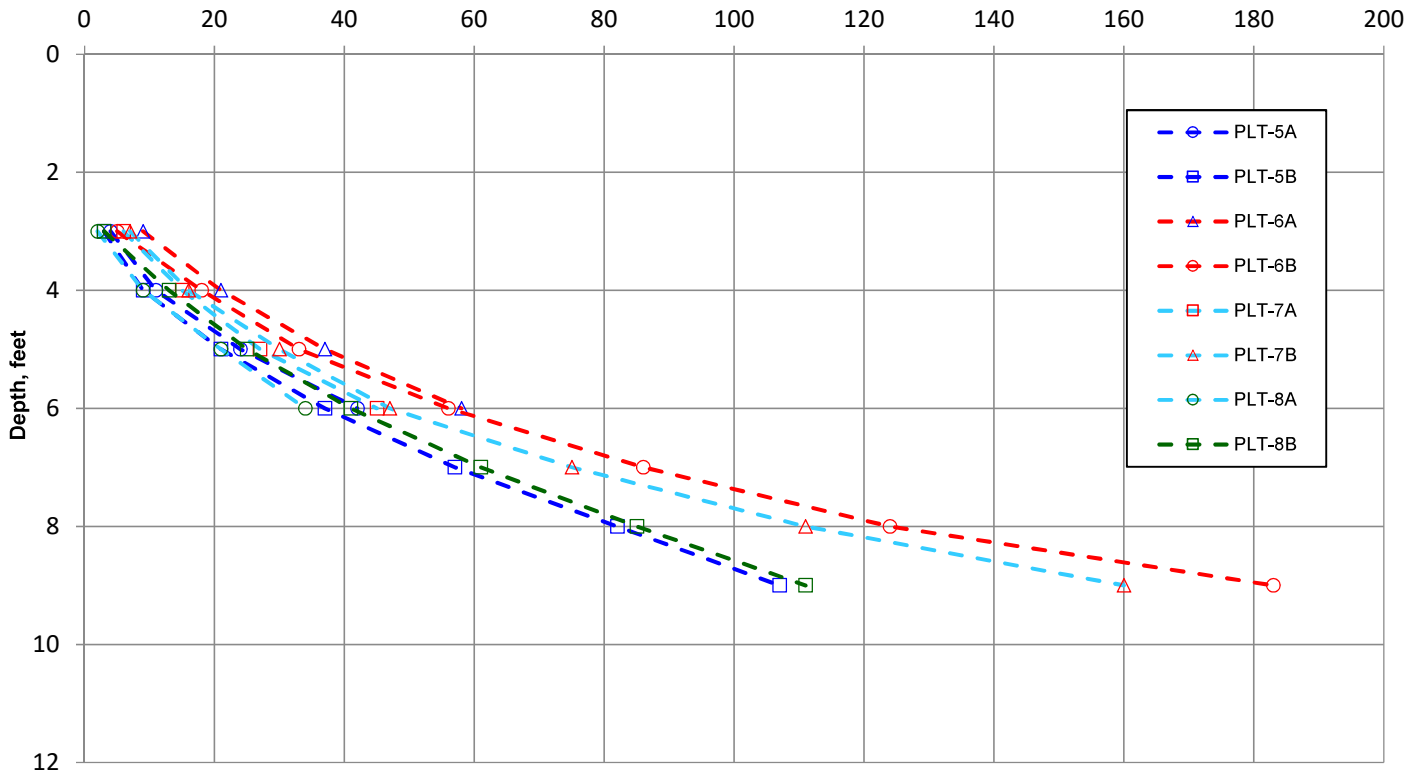
Piles advanced with a Vermeer PD-10 rig on April 21 and April 22, 2022

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PROJECT - TEST PILE DRIVING RECORDS

Clermont Solar, N4225037

Cumulative Drive Time, seconds



Depth, feet	Cumulative Driving Time, seconds										
	PLT-5A	PLT-5B	PLT-6A	PLT-6B	PLT-7A	PLT-7B	PLT-8A	PLT-8B			
1	Pre-drilled to 2 feet										
2											
3	4	3	9	5	6	7	2	3			
4	11	9	21	18	15	16	9	13			
5	24	21	37	33	27	30	21	25			
6	42	37	58	56	45	47	34	41			
7		57		86		75		61			
8		82		124		111		85			
9		107		183		160		111			
10											
Embedment Depth, ft	6	9	6	9	6	9	6	9			
Total Drive Time, sec	42	107	58	183	45	160	34	111			
Average, sec/ft	10.5	15.3	14.5	26.1	11.3	22.9	8.5	15.9			

NOTES:

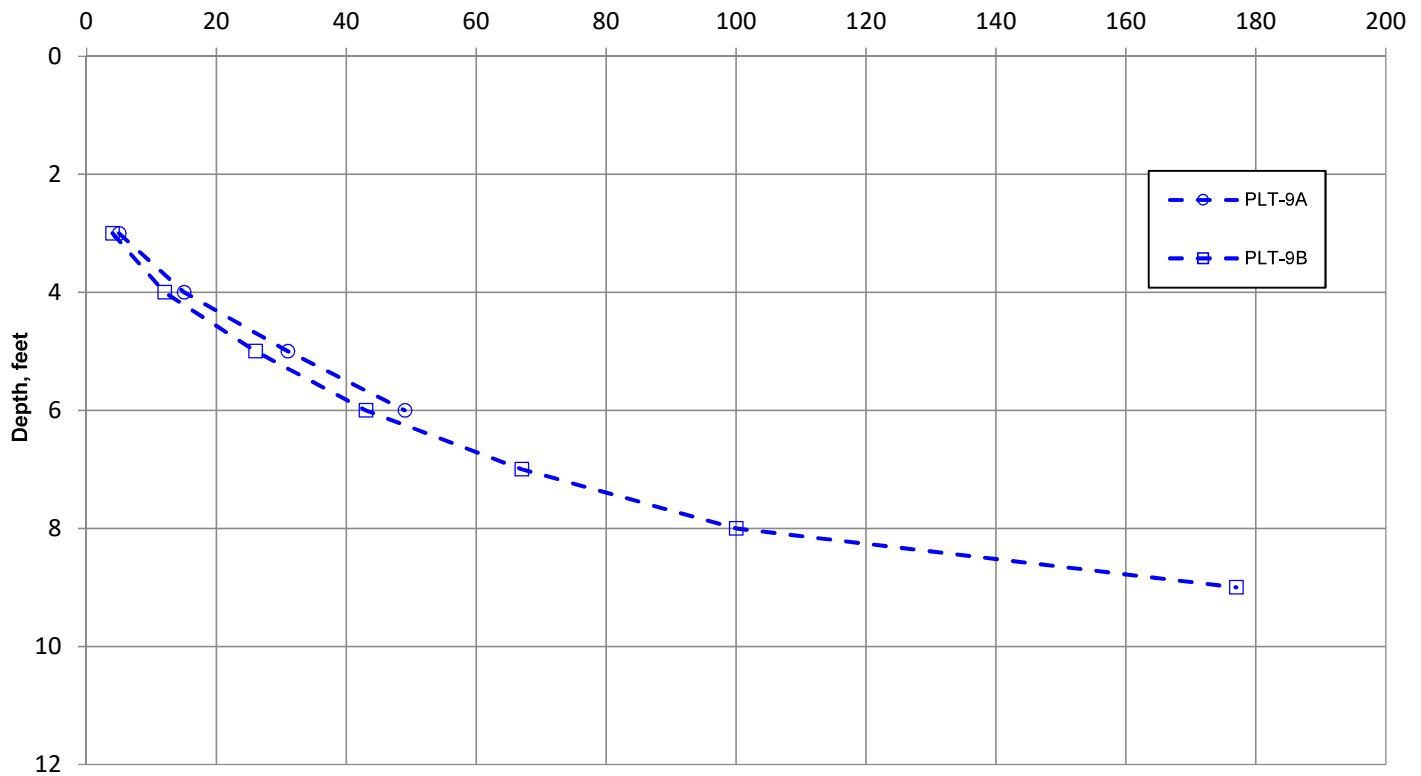
Piles advanced with a Vermeer PD-10 rig on April 21 and April 22, 2022.

Terracon

PROJECT - TEST PILE DRIVING RECORDS

Clermont Solar, N4225037

Cumulative Drive Time, seconds



Depth, feet	Cumulative Driving Time, seconds									
	PLT-9A	PLT-9B								
1	Pre-drilled to 2 feet									
2										
3	5	4								
4	15	12								
5	31	26								
6	49	43								
7		67								
8		100								
9		177								
10										
11										
12										
13										
14										
15										
16										
Embedment Depth, ft	6	9								
Total Drive Time, sec	49	177								
Average, sec/ft	12.3	25.3								

NOTES:

Piles advanced with a Vermeer PD-10 rig on April 22, 2022



Lateral Load Test Result for PLT-1A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

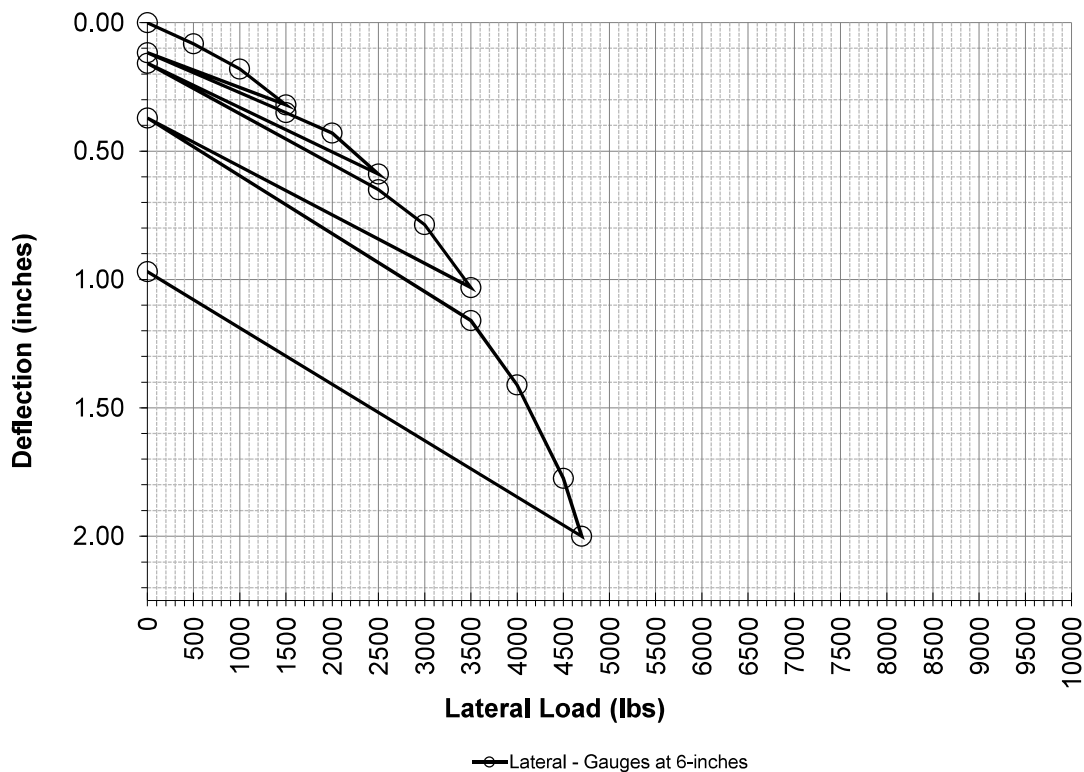
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-1A
Latitude: 39.10716
Longitude: -84.07615
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 62

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.083	
14%	1000	0.180	
21%	1500	0.320	
0%	0	0.117	
21%	1500	0.350	
29%	2000	0.430	
36%	2500	0.590	
0%	0	0.158	
36%	2500	0.650	
43%	3000	0.787	
50%	3500	1.032	
0%	0	0.371	
50%	3500	1.160	
57%	4000	1.411	
64%	4500	1.774	
67%	4700	2.000	
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	0.970	



Lateral Load Test Result for PLT-1B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

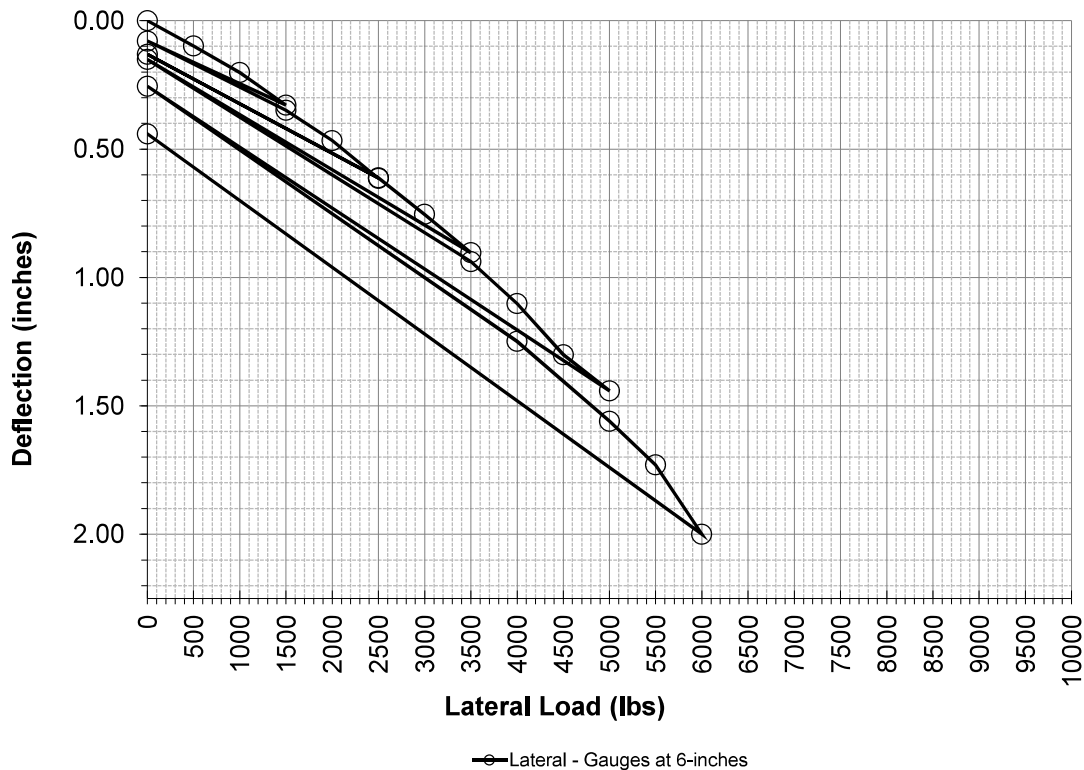
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-1B
Latitude: 39.10716
Longitude: -84.07615
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 211

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.098	
14%	1000	0.202	
21%	1500	0.329	
0%	0	0.079	
21%	1500	0.349	
29%	2000	0.467	
36%	2500	0.614	
0%	0	0.131	
36%	2500	0.613	
43%	3000	0.755	
50%	3500	0.904	
0%	0	0.151	
50%	3500	0.939	
57%	4000	1.102	
64%	4500	1.301	
71%	5000	1.442	
0%	0	0.255	
57%	4000	1.249	
71%	5000	1.561	
79%	5500	1.731	
86%	6000	2.000	
93%	6500		
100%	7000		
0%	0	0.441	



Lateral Load Test Result for PLT-2A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

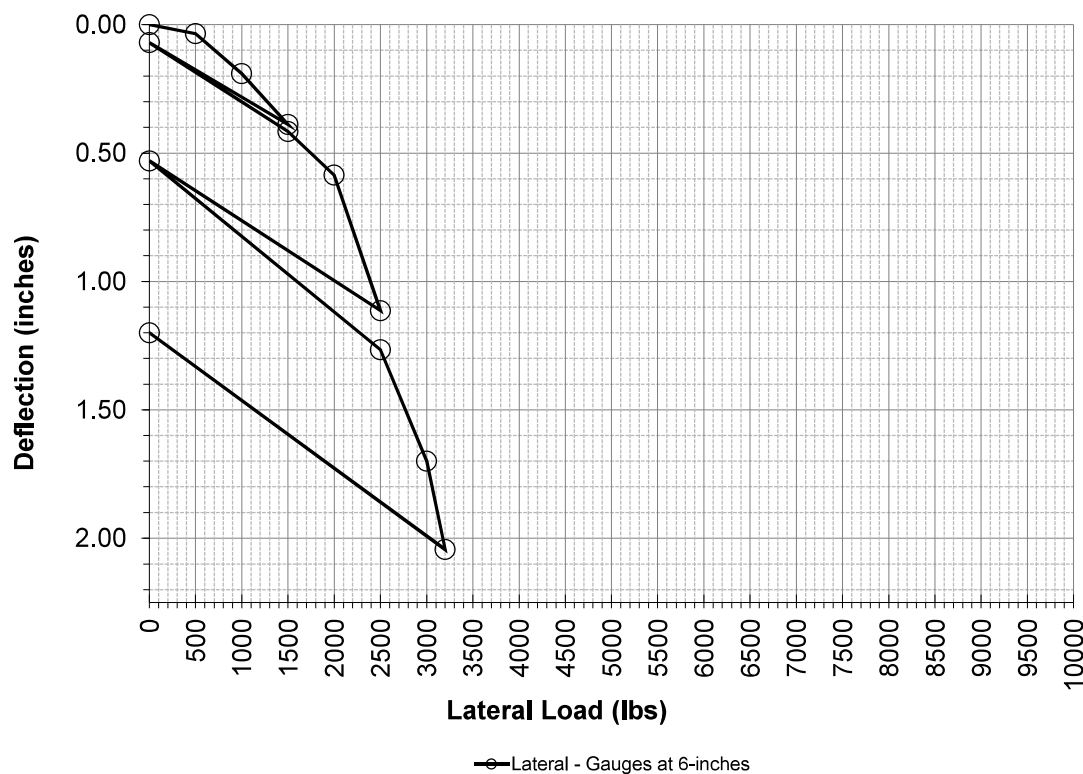
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-2A
Latitude: 39.10719
Longitude: -84.09067
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 44

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.035	
14%	1000	0.191	
21%	1500	0.388	
0%	0	0.070	
21%	1500	0.416	
29%	2000	0.586	
36%	2500	1.114	
0%	0	0.530	
36%	2500	1.266	
43%	3000	1.700	
46%	3200	2.044	
0%	0		
50%	3500		
57%	4000		
64%	4500		
71%	5000		
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	1.200	



Lateral Load Test Result for PLT-2B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

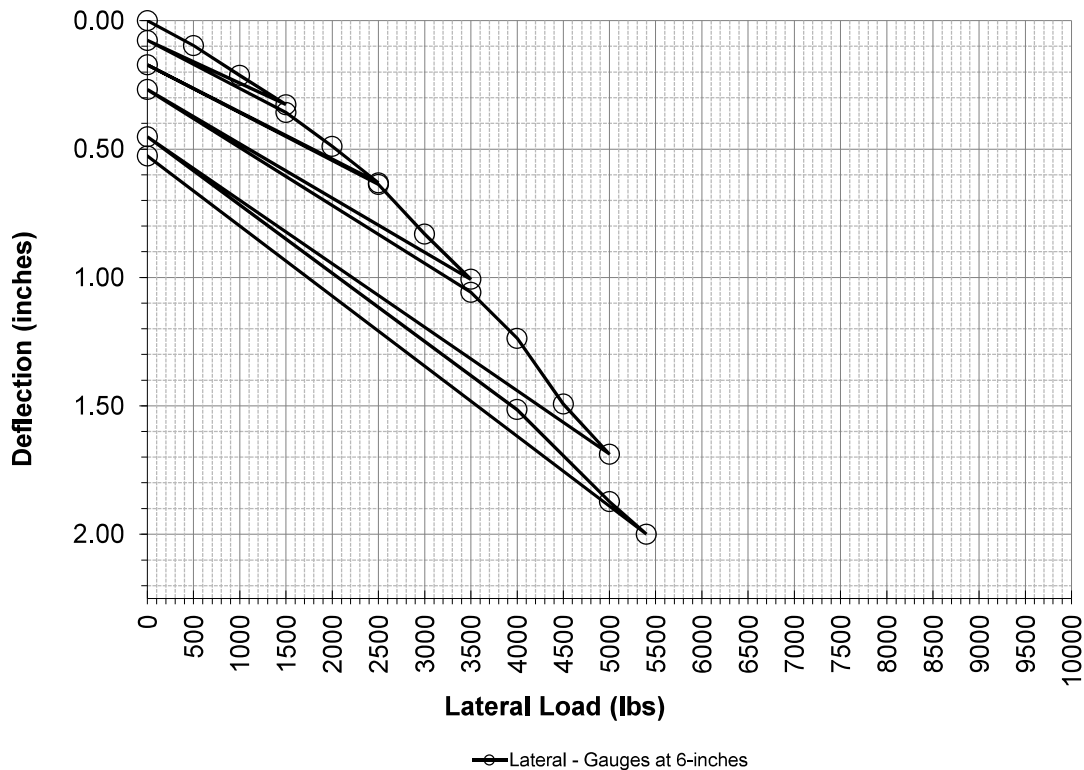
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-2B
Latitude: 39.10719
Longitude: -84.09067
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 123

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.097	
14%	1000	0.213	
21%	1500	0.327	
0%	0	0.077	
21%	1500	0.358	
29%	2000	0.490	
36%	2500	0.632	
0%	0	0.172	
36%	2500	0.638	
43%	3000	0.831	
50%	3500	1.007	
0%	0	0.268	
50%	3500	1.058	
57%	4000	1.237	
64%	4500	1.493	
71%	5000	1.689	
0%	0	0.452	
57%	4000	1.515	
71%	5000	1.873	
77%	5400	2.000	
86%	6000		
93%	6500		
100%	7000		
0%	0	0.527	



Lateral Load Test Result for PLT-3A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

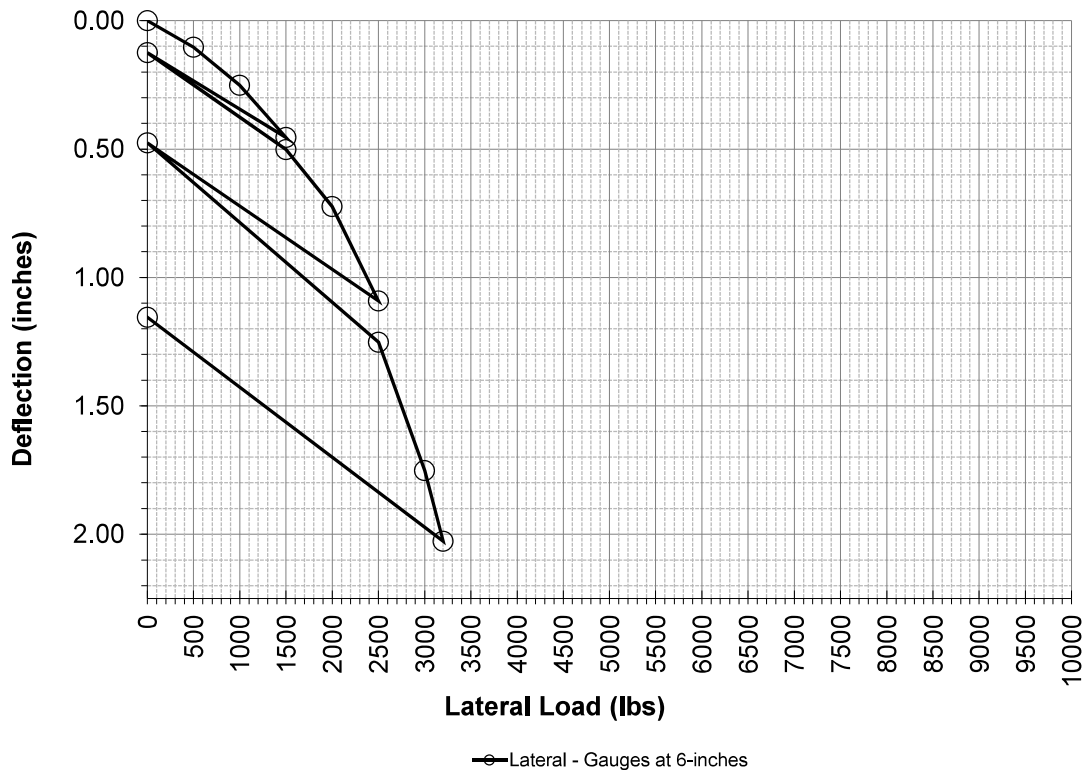
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-3A
Latitude: 39.09840
Longitude: -84.08072
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 42

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.103	
14%	1000	0.252	
21%	1500	0.456	
0%	0	0.125	
21%	1500	0.502	
29%	2000	0.724	
36%	2500	1.091	
0%	0	0.476	
36%	2500	1.252	
43%	3000	1.753	
46%	3200	2.027	
0%	0		
50%	3500		
57%	4000		
64%	4500		
71%	5000		
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	1.155	



Lateral Load Test Result for PLT-3B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

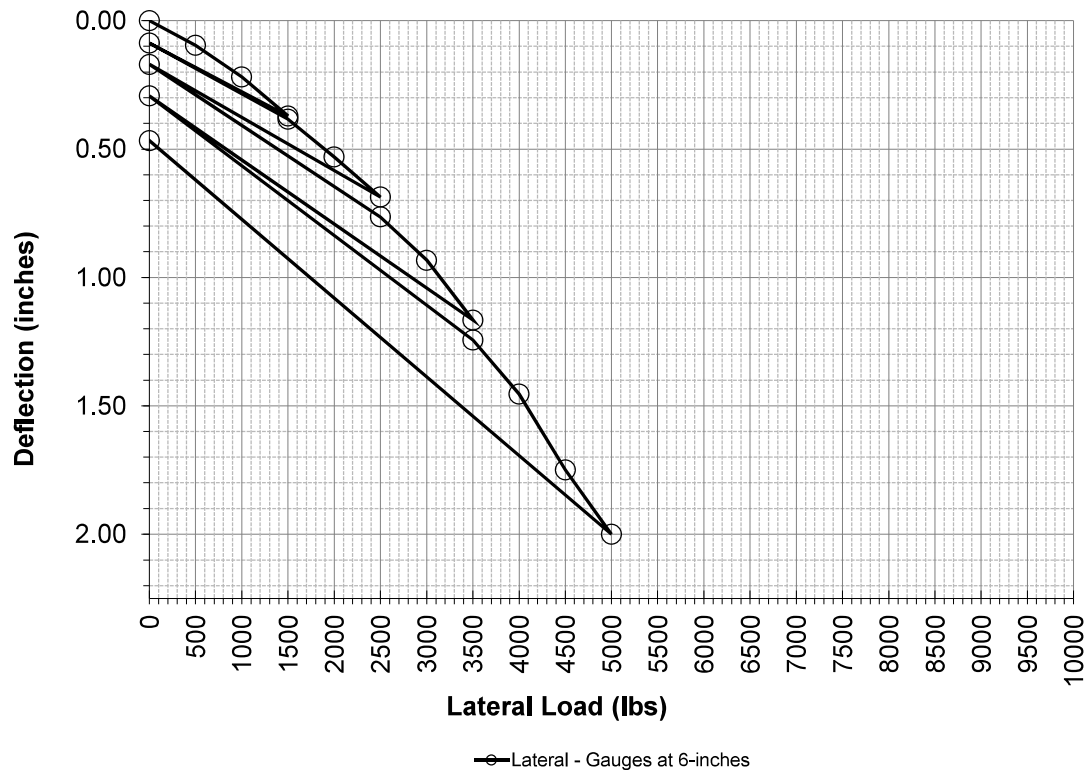
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-3B
Latitude: 39.09840
Longitude: -84.08072
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 144

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.096	
14%	1000	0.219	
21%	1500	0.371	
0%	0	0.088	
21%	1500	0.384	
29%	2000	0.531	
36%	2500	0.687	
0%	0	0.170	
36%	2500	0.765	
43%	3000	0.933	
50%	3500	1.166	
0%	0	0.293	
50%	3500	1.245	
57%	4000	1.454	
64%	4500	1.749	
71%	5000	2.000	
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	0.468	



Lateral Load Test Result for PLT-4A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

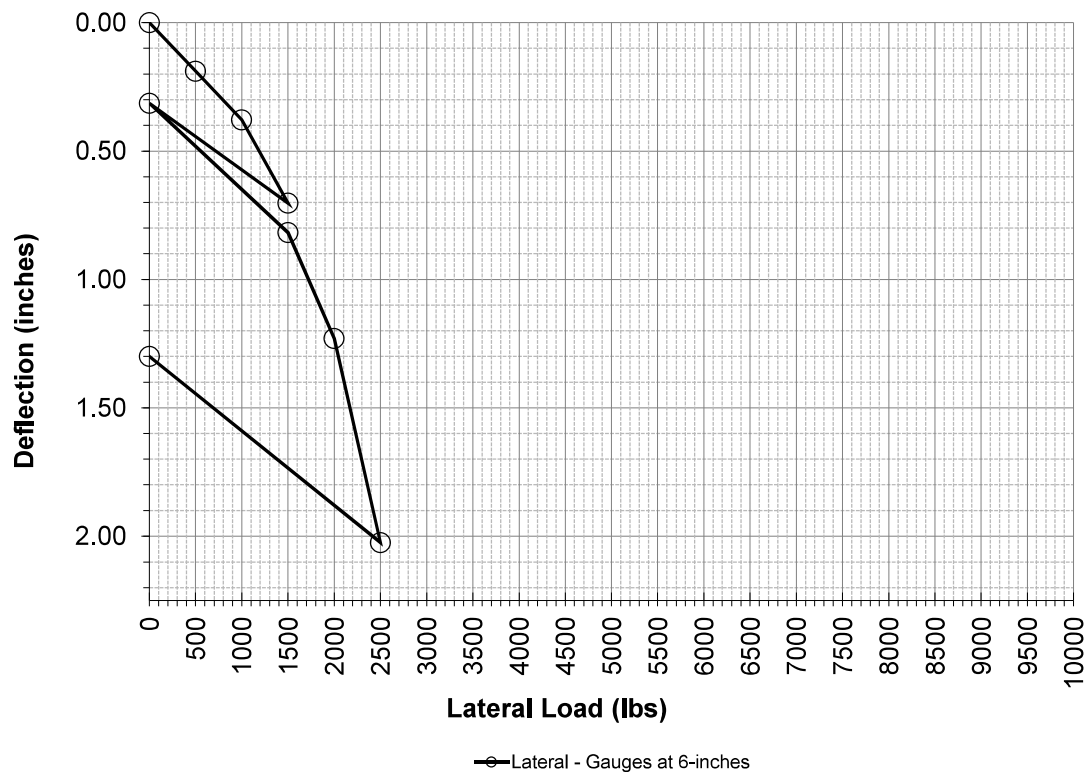
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-4A
Latitude: 39.09553
Longitude: -84.09236
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 29

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.189	
14%	1000	0.379	
21%	1500	0.704	
0%	0	0.314	
21%	1500	0.818	
29%	2000	1.231	
36%	2500	2.025	
0%	0		
36%	2500		
43%	3000		
50%	3500		
0%	0		
50%	3500		
57%	4000		
64%	4500		
71%	5000		
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	1.300	



Lateral Load Test Result for PLT-4B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

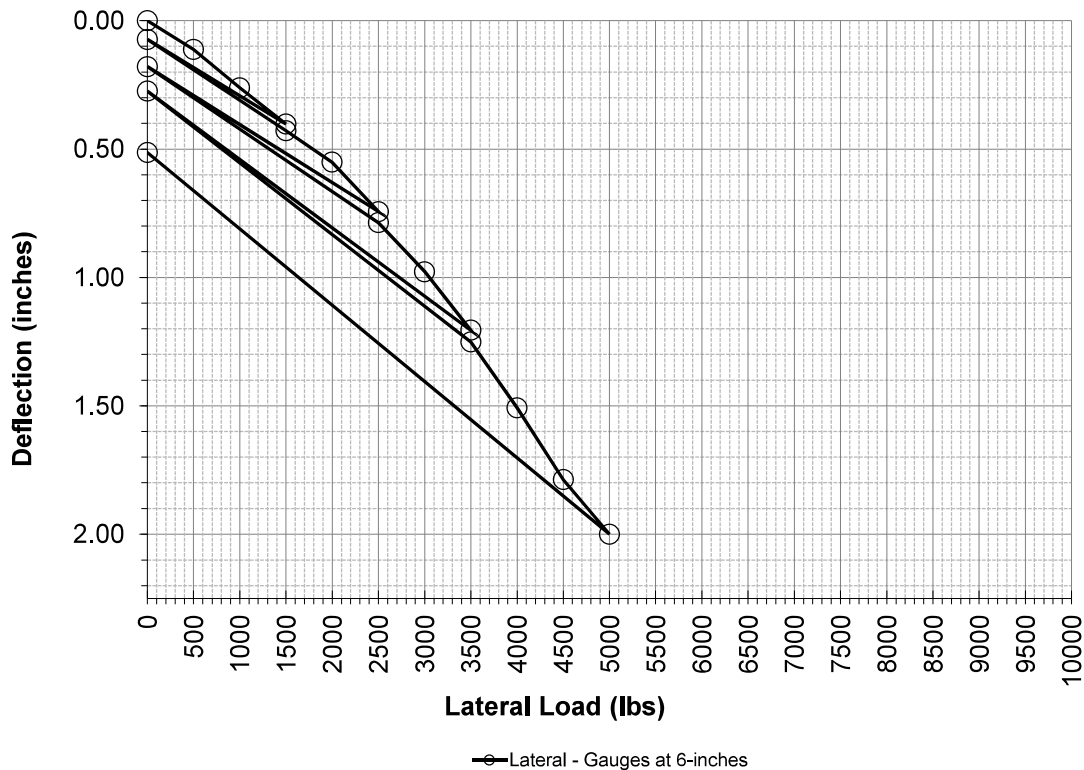
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-4B
Latitude: 39.09553
Longitude: -84.09236
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 111

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.112	
14%	1000	0.262	
21%	1500	0.403	
0%	0	0.073	
21%	1500	0.428	
29%	2000	0.551	
36%	2500	0.744	
0%	0	0.179	
36%	2500	0.787	
43%	3000	0.978	
50%	3500	1.206	
0%	0	0.275	
50%	3500	1.252	
57%	4000	1.508	
64%	4500	1.787	
71%	5000	2.000	
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	0.513	



Lateral Load Test Result for PLT-5A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

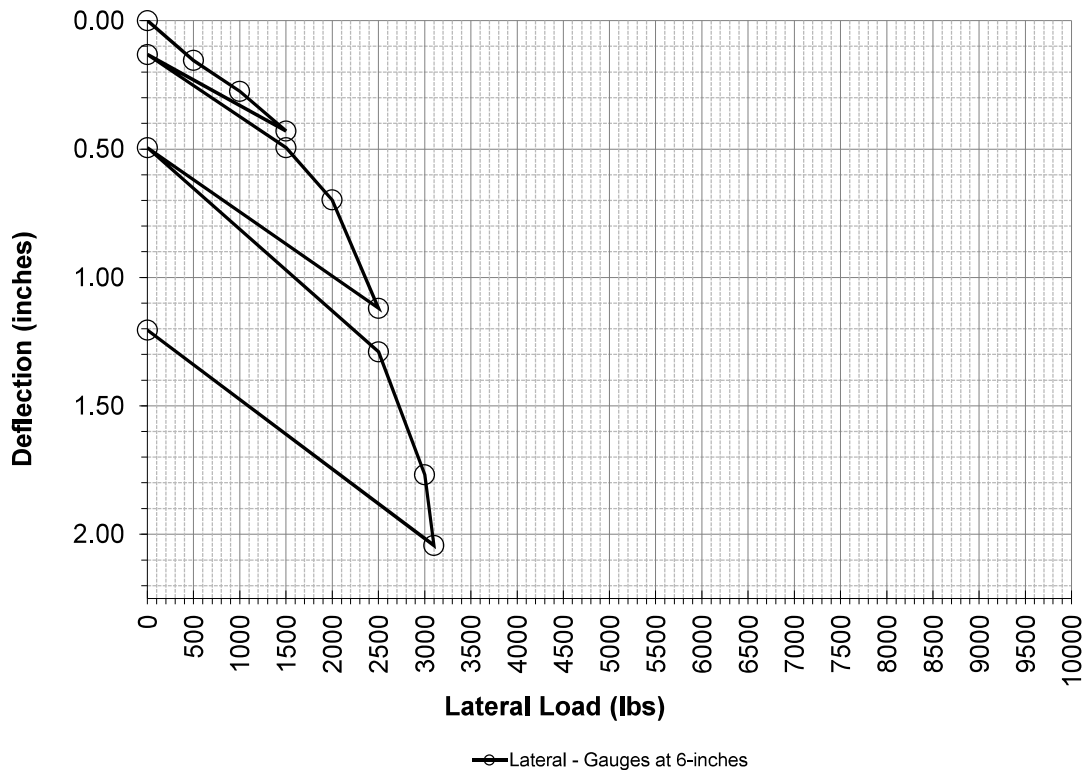
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-5A
Latitude: 39.09075
Longitude: -84.08538
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 42

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.155	
14%	1000	0.275	
21%	1500	0.430	
0%	0	0.132	
21%	1500	0.495	
29%	2000	0.698	
36%	2500	1.120	
0%	0	0.495	
36%	2500	1.290	
43%	3000	1.768	
44%	3100	2.044	
0%	0		
50%	3500		
57%	4000		
64%	4500		
71%	5000		
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	1.205	



Lateral Load Test Result for PLT-5B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

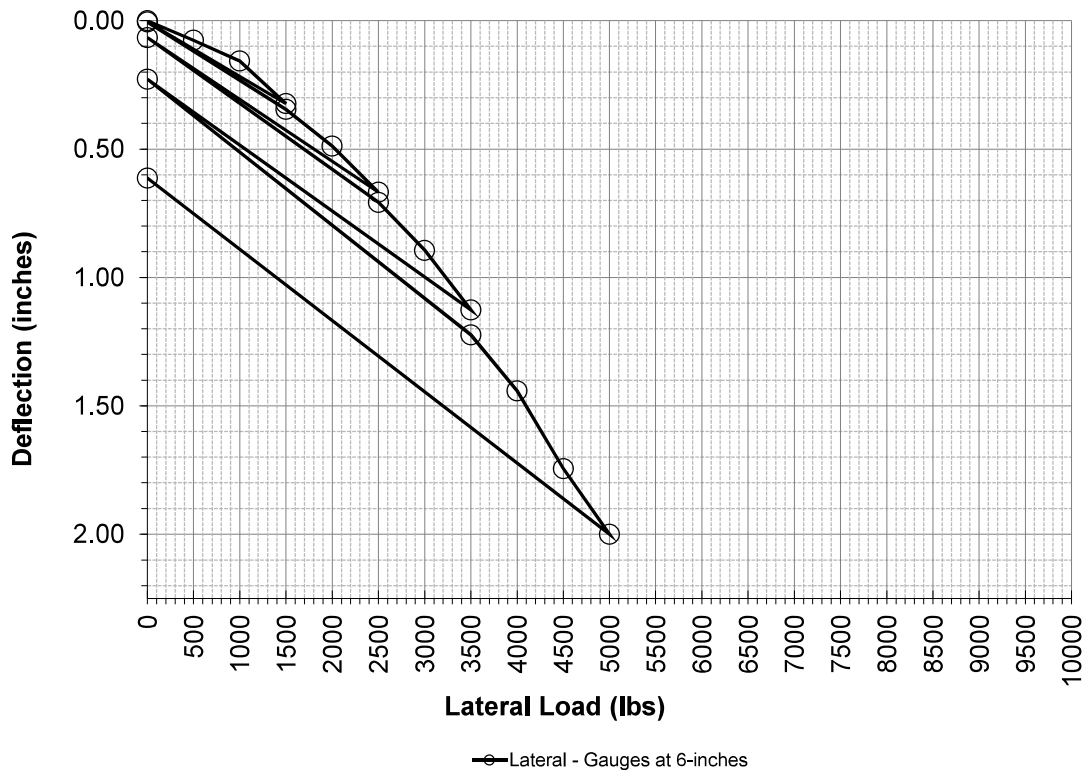
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-5B
Latitude: 39.09075
Longitude: -84.08538
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 107

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.076	
14%	1000	0.157	
21%	1500	0.323	
0%	0	0.005	
21%	1500	0.346	
29%	2000	0.488	
36%	2500	0.668	
0%	0	0.066	
36%	2500	0.708	
43%	3000	0.894	
50%	3500	1.127	
0%	0	0.228	
50%	3500	1.223	
57%	4000	1.441	
64%	4500	1.745	
71%	5000	2.000	
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	0.613	



Lateral Load Test Result for PLT-6A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

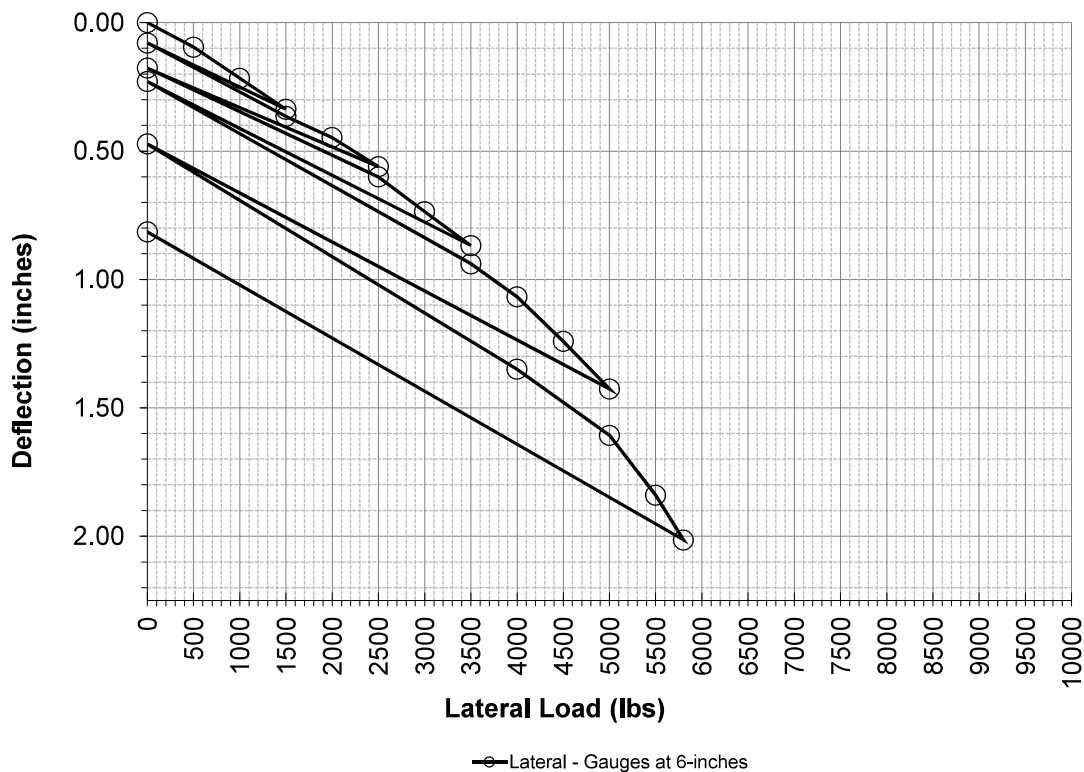
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-6A
Latitude: 39.08080
Longitude: -84.08559
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 58

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.095	
14%	1000	0.216	
21%	1500	0.337	
0%	0	0.079	
21%	1500	0.365	
29%	2000	0.448	
36%	2500	0.561	
0%	0	0.178	
36%	2500	0.601	
43%	3000	0.736	
50%	3500	0.868	
0%	0	0.230	
50%	3500	0.939	
57%	4000	1.068	
64%	4500	1.242	
71%	5000	1.427	
0%	0	0.473	
57%	4000	1.350	
71%	5000	1.608	
79%	5500	1.841	
83%	5800	2.015	
93%	6500		
100%	7000		
0%	0	0.815	



Lateral Load Test Result for PLT-6B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

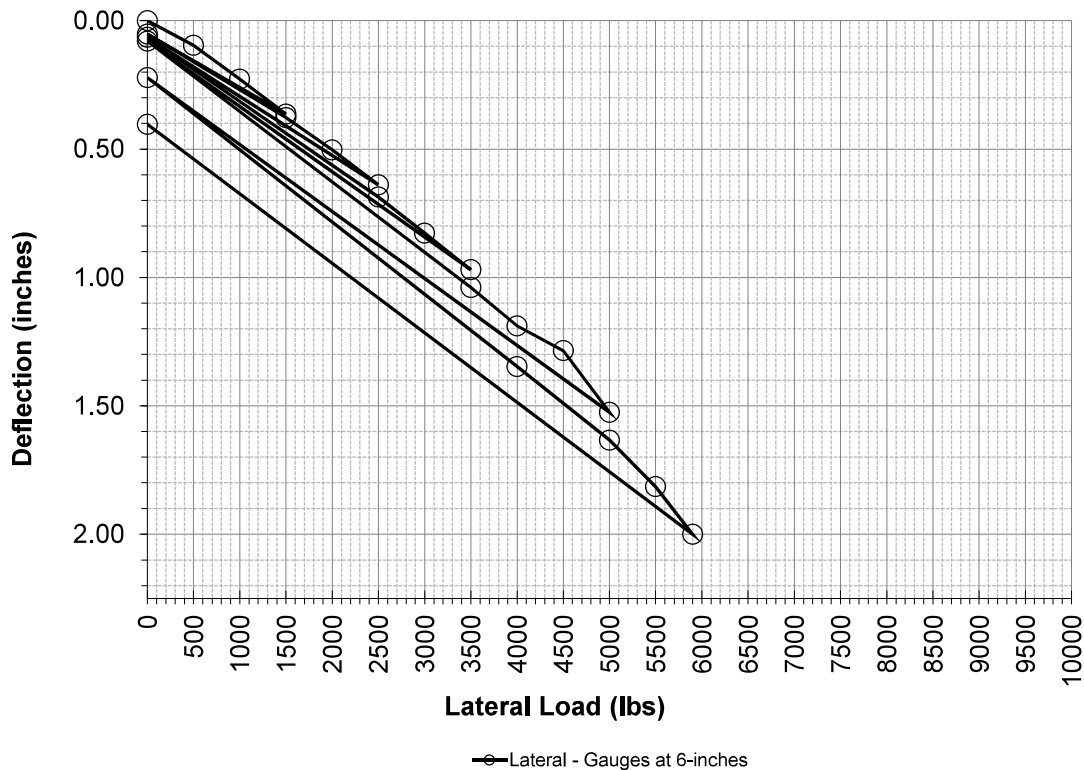
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-6B
Latitude: 39.08080
Longitude: -84.08559
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 183

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.096	
14%	1000	0.228	
21%	1500	0.365	
0%	0	0.052	
21%	1500	0.377	
29%	2000	0.503	
36%	2500	0.639	
0%	0	0.065	
36%	2500	0.687	
43%	3000	0.827	
50%	3500	0.970	
0%	0	0.080	
50%	3500	1.039	
57%	4000	1.189	
64%	4500	1.285	
71%	5000	1.526	
0%	0	0.222	
57%	4000	1.347	
71%	5000	1.634	
79%	5500	1.815	
84%	5900	2.000	
93%	6500		
100%	7000		
0%	0	0.404	



Lateral Load Test Result for PLT-7A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

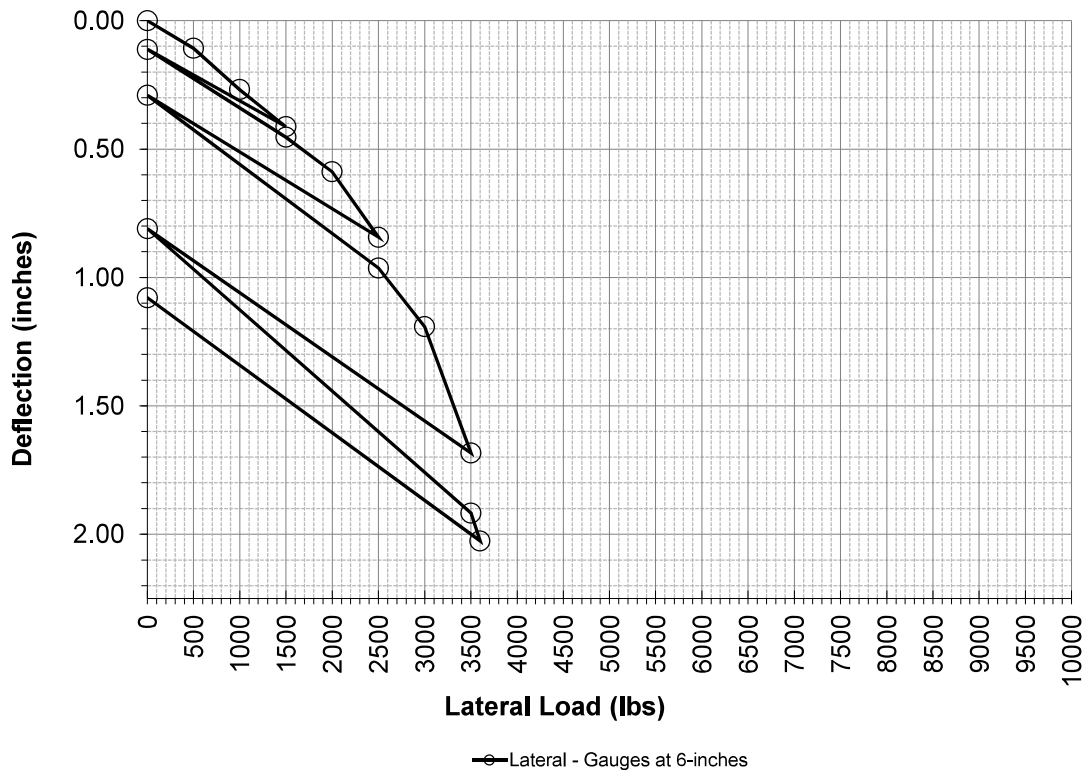
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-7A
Latitude: 39.07942
Longitude: -84.09047
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 45

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.108	
14%	1000	0.269	
21%	1500	0.413	
0%	0	0.112	
21%	1500	0.454	
29%	2000	0.588	
36%	2500	0.843	
0%	0	0.291	
36%	2500	0.964	
43%	3000	1.192	
50%	3500	1.684	
0%	0	0.810	
50%	3500	1.918	
51%	3600	2.026	
64%	4500		
71%	5000		
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	1.079	



Lateral Load Test Result for PLT-7B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

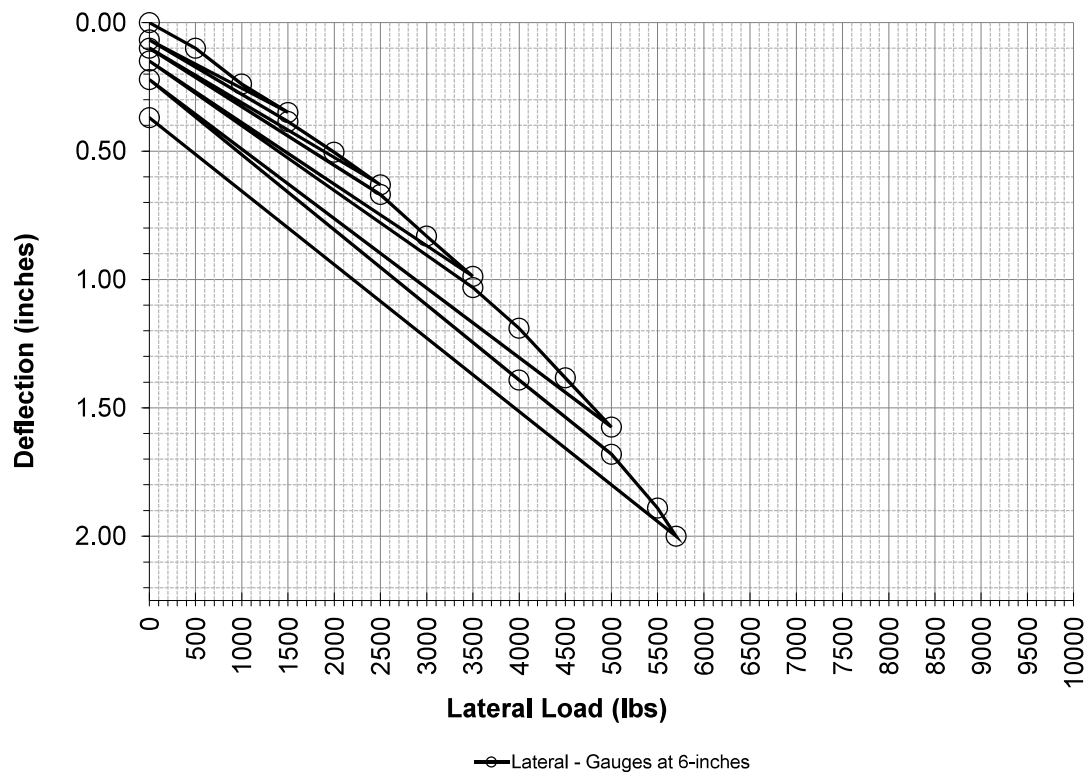
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-7B
Latitude: 39.07942
Longitude: -84.09047
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 160

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.099	
14%	1000	0.240	
21%	1500	0.350	
0%	0	0.068	
21%	1500	0.385	
29%	2000	0.505	
36%	2500	0.631	
0%	0	0.099	
36%	2500	0.669	
43%	3000	0.832	
50%	3500	0.988	
0%	0	0.150	
50%	3500	1.032	
57%	4000	1.190	
64%	4500	1.383	
71%	5000	1.575	
0%	0	0.221	
57%	4000	1.392	
71%	5000	1.681	
79%	5500	1.891	
81%	5700	2.000	
93%	6500		
100%	7000		
0%	0	0.370	



Lateral Load Test Result for PLT-8A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

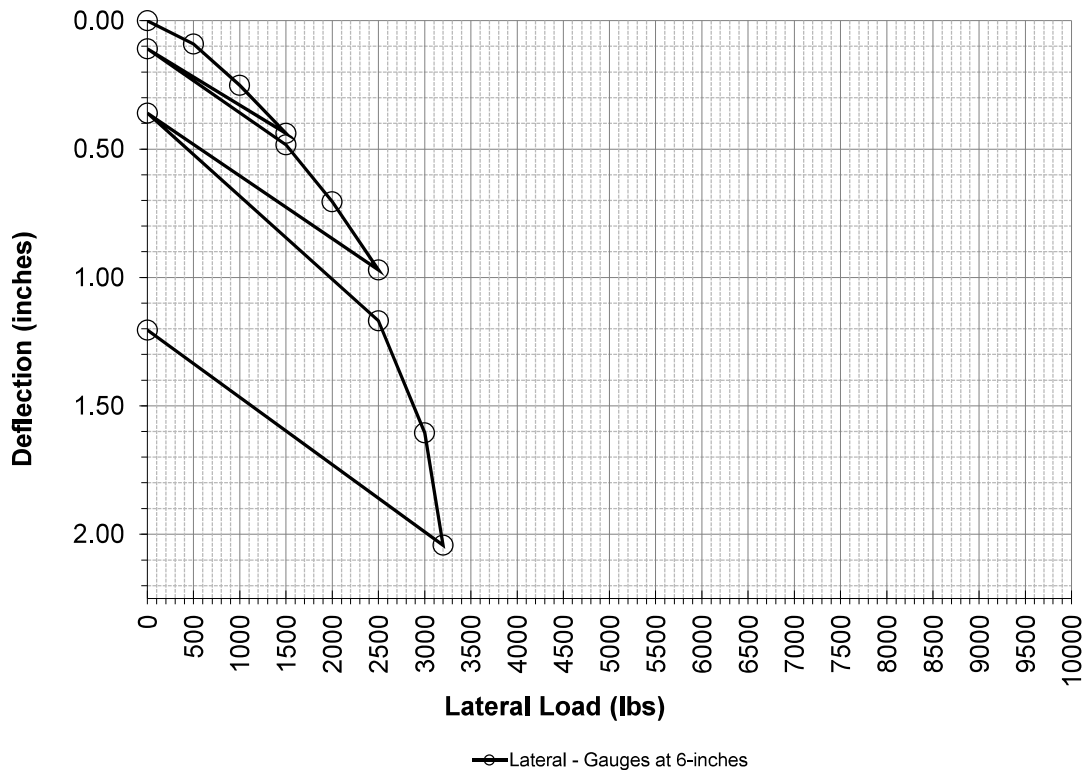
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-8A
Latitude: 39.07839
Longitude: -84.09975
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 34

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.091	
14%	1000	0.252	
21%	1500	0.440	
0%	0	0.109	
21%	1500	0.484	
29%	2000	0.705	
36%	2500	0.971	
0%	0	0.360	
36%	2500	1.169	
43%	3000	1.605	
46%	3200	2.043	
0%	0		
50%	3500		
57%	4000		
64%	4500		
71%	5000		
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	1.205	



Lateral Load Test Result for PLT-8B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

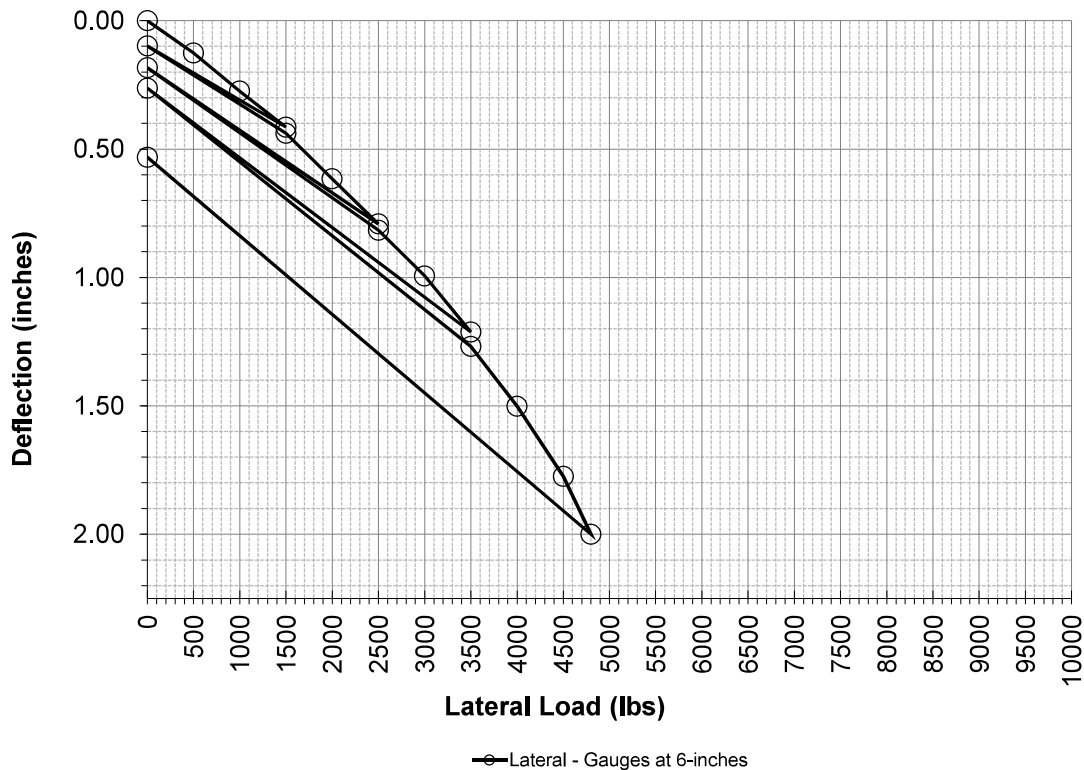
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-8B
Latitude: 39.07839
Longitude: -84.09975
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 111

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.125	
14%	1000	0.275	
21%	1500	0.415	
0%	0	0.099	
21%	1500	0.438	
29%	2000	0.616	
36%	2500	0.792	
0%	0	0.183	
36%	2500	0.816	
43%	3000	0.994	
50%	3500	1.213	
0%	0	0.263	
50%	3500	1.269	
57%	4000	1.502	
64%	4500	1.775	
69%	4800	2.000	
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	0.533	



Lateral Load Test Result for PLT-9A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

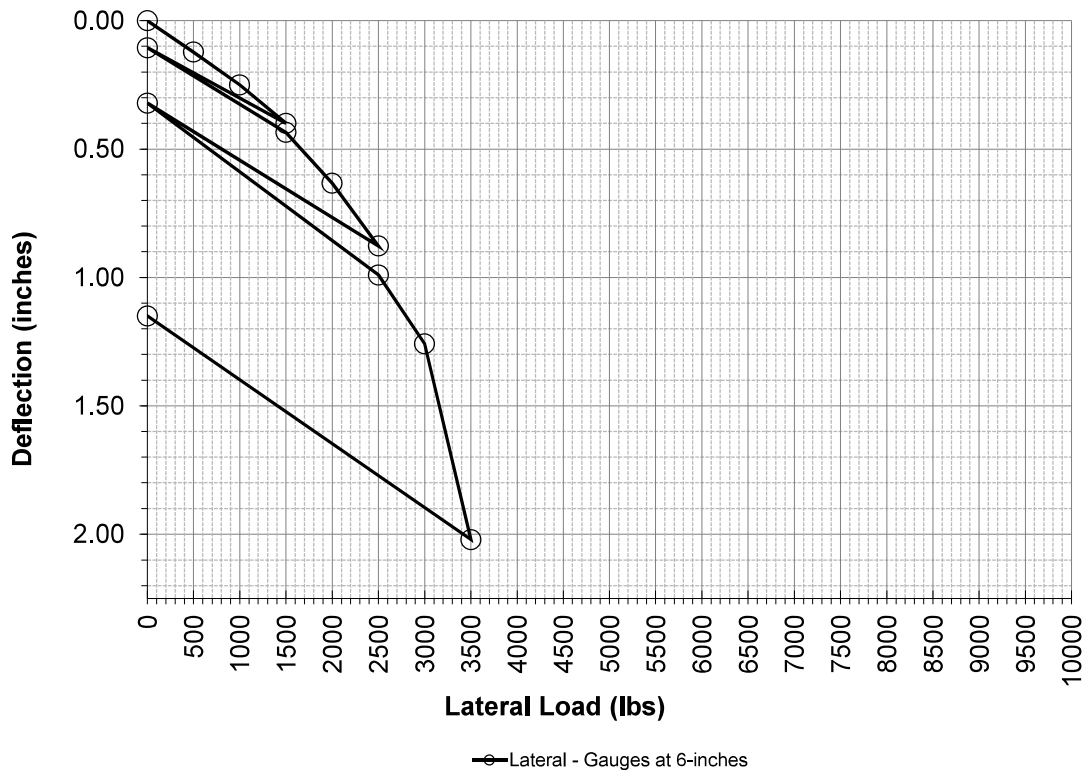
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-9A
Latitude: 39.08526
Longitude: -84.10418
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 49

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.122	
14%	1000	0.250	
21%	1500	0.400	
0%	0	0.105	
21%	1500	0.435	
29%	2000	0.633	
36%	2500	0.877	
0%	0	0.321	
36%	2500	0.990	
43%	3000	1.258	
50%	3500	2.021	
0%	0		
50%	3500		
57%	4000		
64%	4500		
71%	5000		
0%	0		
57%	4000		
71%	5000		
79%	5500		
86%	6000		
93%	6500		
100%	7000		
0%	0	1.150	



Lateral Load Test Result for PLT-9B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Lateral Load Test Set Up

Number of Top Gauges: 0
Number of Bottom Gauges: 2
Height of Top Gauges [in]: --
Height of Bottom Gauges [in]: 6
Height of Applied Load [in]: 36
Load Cell: 25k Ed Jr.

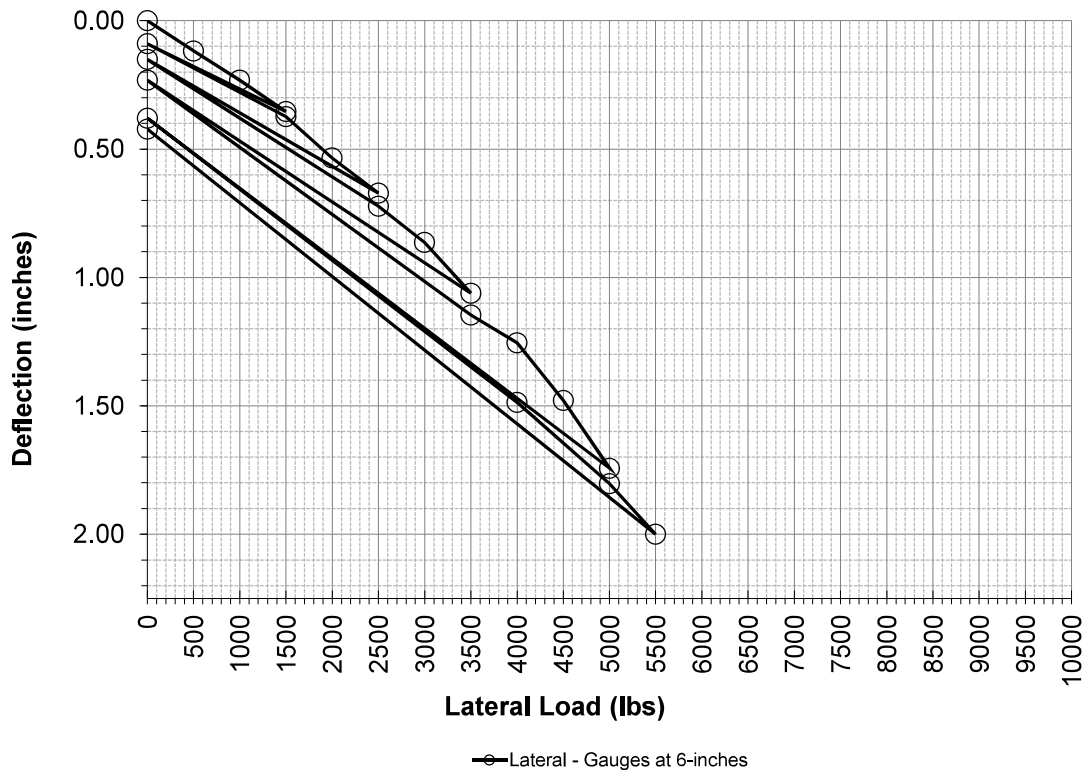
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-9B
Latitude: 39.08526
Longitude: -84.10418
Pile Type: W6X9
Pile Embedment Depth [in]: 108
Pile Stick-Up [in]: 24
Lateral Design Load [lbs]: 7000
Drive Time [sec]: 177

% of Design Load	Lateral Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Comments
0%	0	0.000	
7%	500	0.118	
14%	1000	0.232	
21%	1500	0.354	
0%	0	0.090	
21%	1500	0.373	
29%	2000	0.535	
36%	2500	0.672	
0%	0	0.151	
36%	2500	0.723	
43%	3000	0.864	
50%	3500	1.061	
0%	0	0.232	
50%	3500	1.146	
57%	4000	1.255	
64%	4500	1.479	
71%	5000	1.744	
0%	0	0.380	
57%	4000	1.487	
71%	5000	1.804	
79%	5500	2.000	
86%	6000		
93%	6500		
100%	7000		
0%	0	0.422	



Tension Load Test Result for PLT-1A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

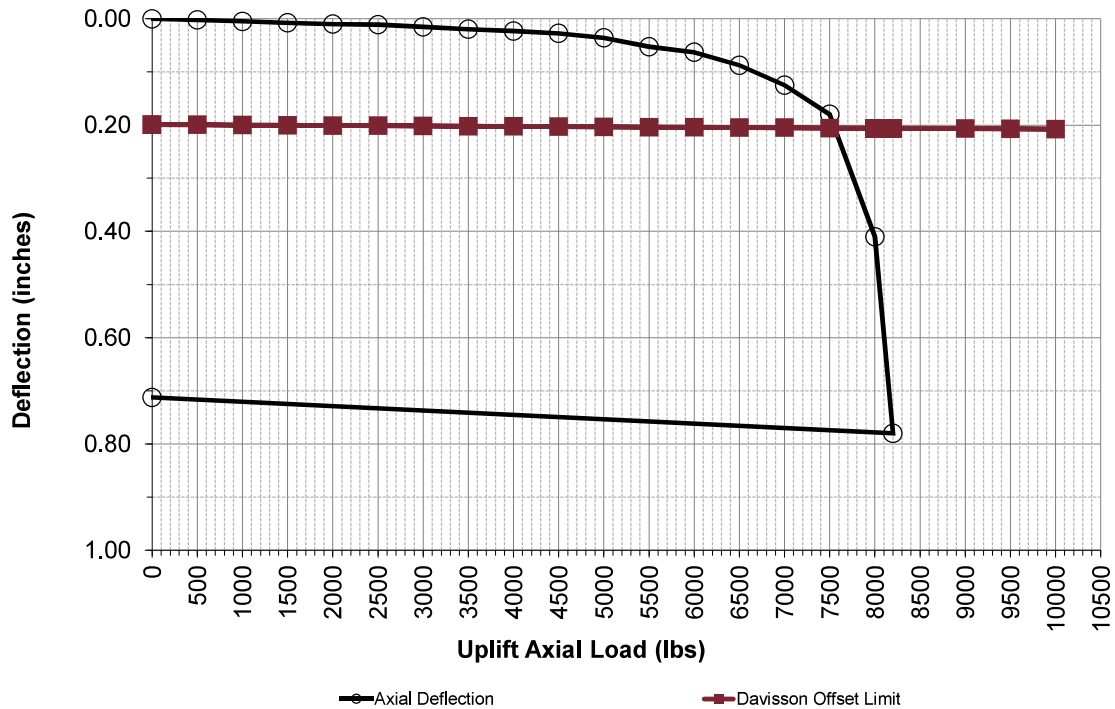
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-1A
Latitude: 39.10716
Longitude: -84.07615
Pile Type: WV6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 62

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) ($0.15+D/120+(PL/AE)$)	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.002	0.000	0.200	
10%	1000	0.005	0.001	0.200	
15%	1500	0.008	0.001	0.200	
20%	2000	0.010	0.002	0.201	
25%	2500	0.011	0.002	0.201	
30%	3000	0.015	0.003	0.202	
35%	3500	0.020	0.003	0.202	
40%	4000	0.023	0.003	0.203	
45%	4500	0.028	0.004	0.203	
50%	5000	0.036	0.004	0.203	
55%	5500	0.053	0.005	0.204	
60%	6000	0.063	0.005	0.204	
65%	6500	0.088	0.005	0.205	
70%	7000	0.125	0.006	0.205	
75%	7500	0.180	0.006	0.205	
80%	8000	0.410	0.007	0.206	
82%	8200	0.780	0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.713	0.000	0.199	



Tension Load Test Result for PLT-1B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

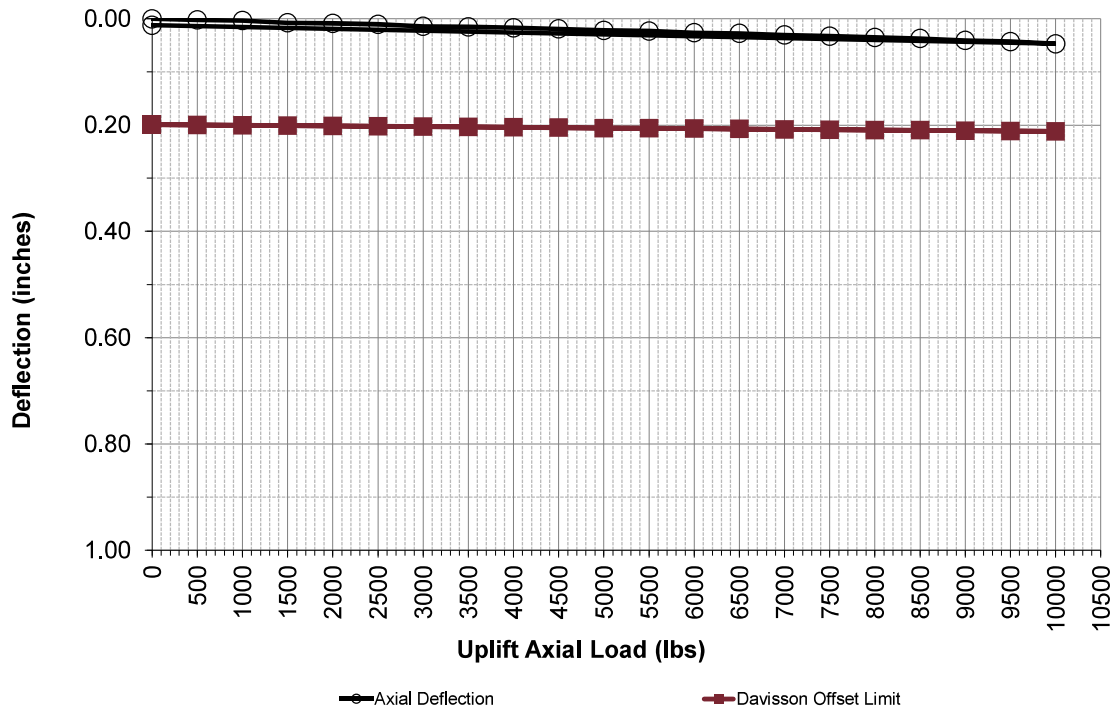
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-1B
Latitude: 39.10716
Longitude: -84.07615
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 211

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.002	0.001	0.200	
10%	1000	0.004	0.001	0.200	
15%	1500	0.008	0.002	0.201	
20%	2000	0.009	0.003	0.202	
25%	2500	0.011	0.003	0.202	
30%	3000	0.014	0.004	0.203	
35%	3500	0.015	0.004	0.204	
40%	4000	0.017	0.005	0.204	
45%	4500	0.019	0.006	0.205	
50%	5000	0.022	0.006	0.205	
55%	5500	0.023	0.007	0.206	
60%	6000	0.026	0.008	0.207	
65%	6500	0.028	0.008	0.207	
70%	7000	0.031	0.009	0.208	
75%	7500	0.033	0.009	0.209	
80%	8000	0.035	0.010	0.209	
85%	8500	0.037	0.011	0.210	
90%	9000	0.041	0.011	0.210	
95%	9500	0.043	0.012	0.211	
100%	10000	0.047	0.013	0.212	
0%	0	0.012	0.000	0.199	



Tension Load Test Result for PLT-2A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

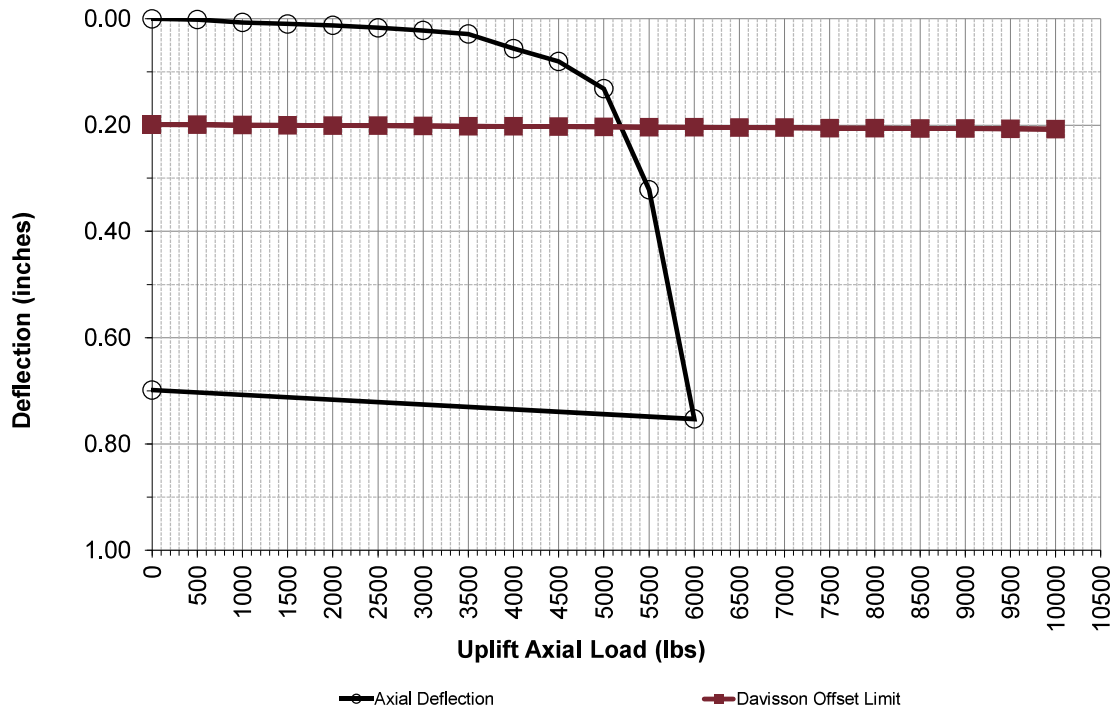
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-2A
Latitude: 39.10719
Longitude: -84.09067
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 44

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.001	0.000	0.200	
10%	1000	0.007	0.001	0.200	
15%	1500	0.010	0.001	0.200	
20%	2000	0.013	0.002	0.201	
25%	2500	0.017	0.002	0.201	
30%	3000	0.022	0.003	0.202	
35%	3500	0.029	0.003	0.202	
40%	4000	0.056	0.003	0.203	
45%	4500	0.081	0.004	0.203	
50%	5000	0.132	0.004	0.203	
55%	5500	0.322	0.005	0.204	
60%	6000	0.753	0.005	0.204	
65%	6500		0.005	0.205	
70%	7000		0.006	0.205	
75%	7500		0.006	0.205	
80%	8000		0.007	0.206	
85%	8500		0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.699	0.000	0.199	



Tension Load Test Result for PLT-2B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

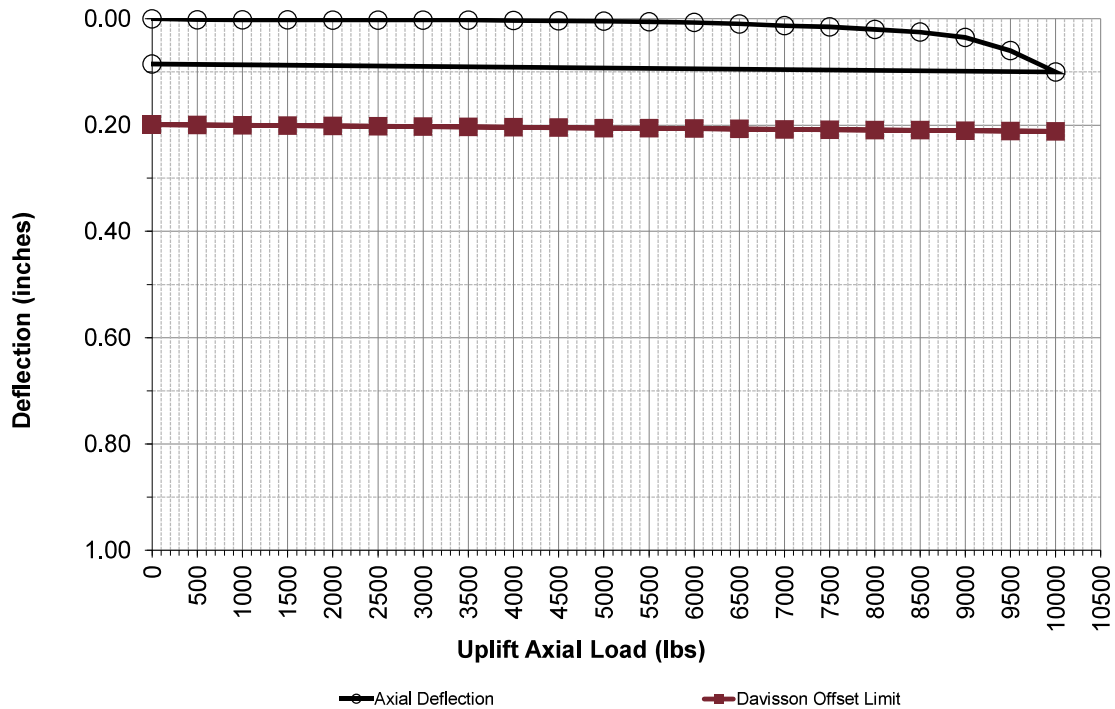
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-2B
Latitude: 39.10719
Longitude: -84.09067
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 123

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.002	0.001	0.200	
10%	1000	0.002	0.001	0.200	
15%	1500	0.002	0.002	0.201	
20%	2000	0.003	0.003	0.202	
25%	2500	0.003	0.003	0.202	
30%	3000	0.003	0.004	0.203	
35%	3500	0.003	0.004	0.204	
40%	4000	0.004	0.005	0.204	
45%	4500	0.004	0.006	0.205	
50%	5000	0.005	0.006	0.205	
55%	5500	0.006	0.007	0.206	
60%	6000	0.007	0.008	0.207	
65%	6500	0.010	0.008	0.207	
70%	7000	0.013	0.009	0.208	
75%	7500	0.015	0.009	0.209	
80%	8000	0.020	0.010	0.209	
85%	8500	0.025	0.011	0.210	
90%	9000	0.035	0.011	0.210	
95%	9500	0.060	0.012	0.211	
100%	10000	0.100	0.013	0.212	
0%	0	0.085	0.000	0.199	



Tension Load Test Result for PLT-3A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

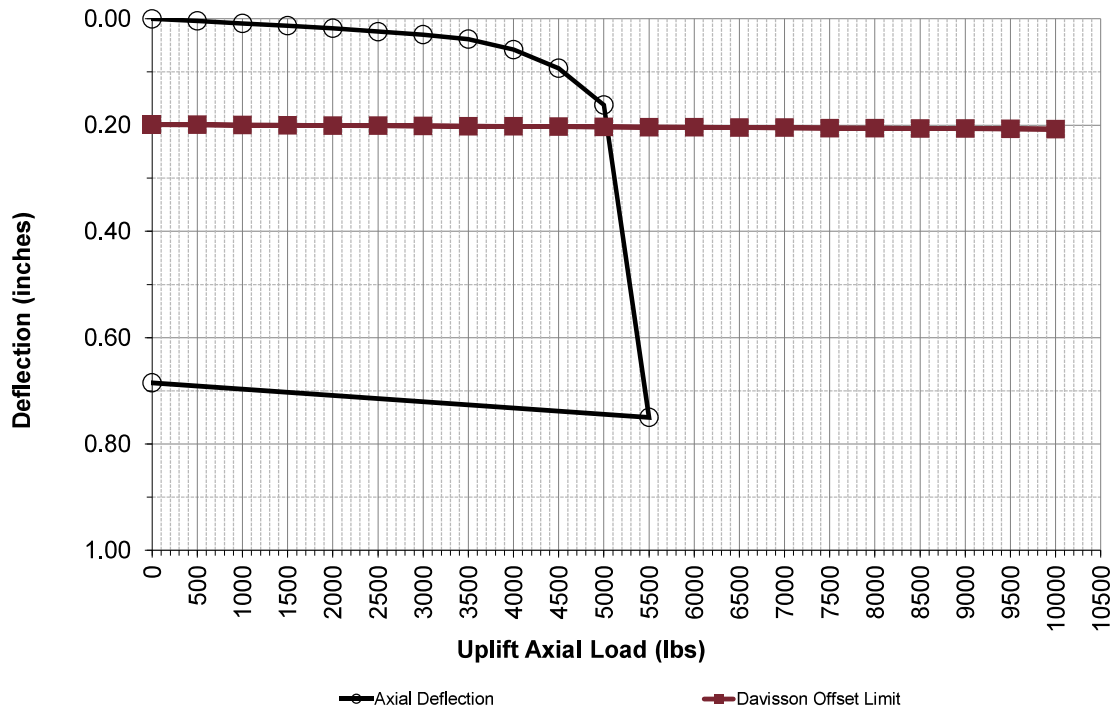
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-3A
Latitude: 39.09840
Longitude: -84.08072
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 42

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.004	0.000	0.200	
10%	1000	0.009	0.001	0.200	
15%	1500	0.013	0.001	0.200	
20%	2000	0.018	0.002	0.201	
25%	2500	0.024	0.002	0.201	
30%	3000	0.030	0.003	0.202	
35%	3500	0.038	0.003	0.202	
40%	4000	0.058	0.003	0.203	
45%	4500	0.093	0.004	0.203	
50%	5000	0.162	0.004	0.203	
55%	5500	0.750	0.005	0.204	
60%	6000		0.005	0.204	
65%	6500		0.005	0.205	
70%	7000		0.006	0.205	
75%	7500		0.006	0.205	
80%	8000		0.007	0.206	
85%	8500		0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.685	0.000	0.199	



Tension Load Test Result for PLT-3B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

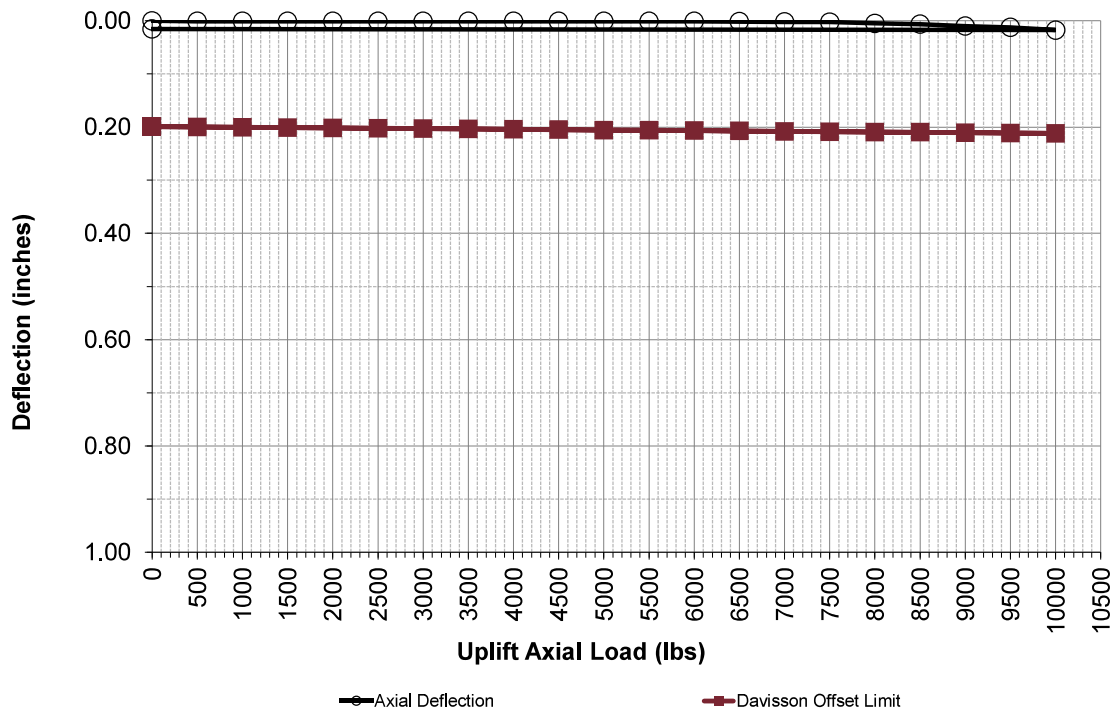
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-3B
Latitude: 39.09840
Longitude: -84.08072
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 144

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.001	0.001	0.200	
10%	1000	0.001	0.001	0.200	
15%	1500	0.001	0.002	0.201	
20%	2000	0.001	0.003	0.202	
25%	2500	0.001	0.003	0.202	
30%	3000	0.001	0.004	0.203	
35%	3500	0.001	0.004	0.204	
40%	4000	0.001	0.005	0.204	
45%	4500	0.001	0.006	0.205	
50%	5000	0.001	0.006	0.205	
55%	5500	0.001	0.007	0.206	
60%	6000	0.001	0.008	0.207	
65%	6500	0.002	0.008	0.207	
70%	7000	0.002	0.009	0.208	
75%	7500	0.003	0.009	0.209	
80%	8000	0.005	0.010	0.209	
85%	8500	0.007	0.011	0.210	
90%	9000	0.010	0.011	0.210	
95%	9500	0.013	0.012	0.211	
100%	10000	0.018	0.013	0.212	
0%	0	0.016	0.000	0.199	



Tension Load Test Result for PLT-4A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

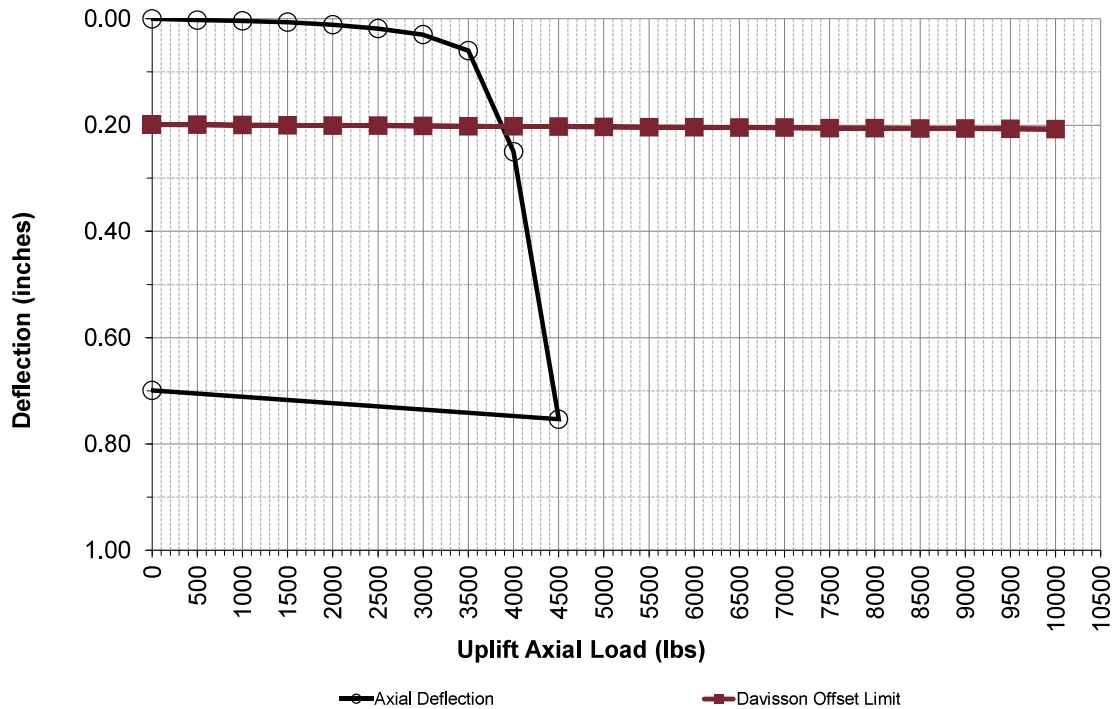
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-4A
Latitude: 39.09553
Longitude: -84.09236
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 29

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.003	0.000	0.200	
10%	1000	0.004	0.001	0.200	
15%	1500	0.007	0.001	0.200	
20%	2000	0.012	0.002	0.201	
25%	2500	0.019	0.002	0.201	
30%	3000	0.030	0.003	0.202	
35%	3500	0.060	0.003	0.202	
40%	4000	0.250	0.003	0.203	
45%	4500	0.754	0.004	0.203	
50%	5000		0.004	0.203	
55%	5500		0.005	0.204	
60%	6000		0.005	0.204	
65%	6500		0.005	0.205	
70%	7000		0.006	0.205	
75%	7500		0.006	0.205	
80%	8000		0.007	0.206	
85%	8500		0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.699	0.000	0.199	



Tension Load Test Result for PLT-4B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

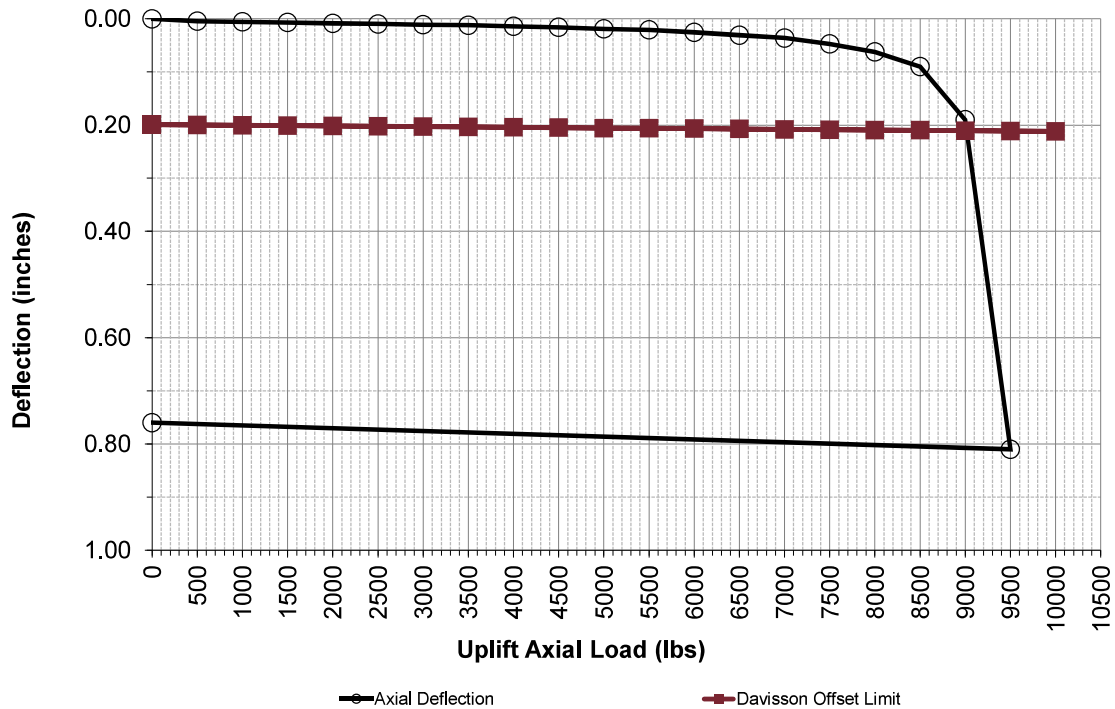
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-4B
Latitude: 39.09553
Longitude: -84.09236
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 111

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.005	0.001	0.200	
10%	1000	0.006	0.001	0.200	
15%	1500	0.007	0.002	0.201	
20%	2000	0.009	0.003	0.202	
25%	2500	0.010	0.003	0.202	
30%	3000	0.012	0.004	0.203	
35%	3500	0.012	0.004	0.204	
40%	4000	0.014	0.005	0.204	
45%	4500	0.016	0.006	0.205	
50%	5000	0.019	0.006	0.205	
55%	5500	0.021	0.007	0.206	
60%	6000	0.026	0.008	0.207	
65%	6500	0.031	0.008	0.207	
70%	7000	0.036	0.009	0.208	
75%	7500	0.048	0.009	0.209	
80%	8000	0.063	0.010	0.209	
85%	8500	0.090	0.011	0.210	
90%	9000	0.190	0.011	0.210	
95%	9500	0.810	0.012	0.211	
100%	10000		0.013	0.212	
0%	0	0.760	0.000	0.199	



Tension Load Test Result for PLT-5A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

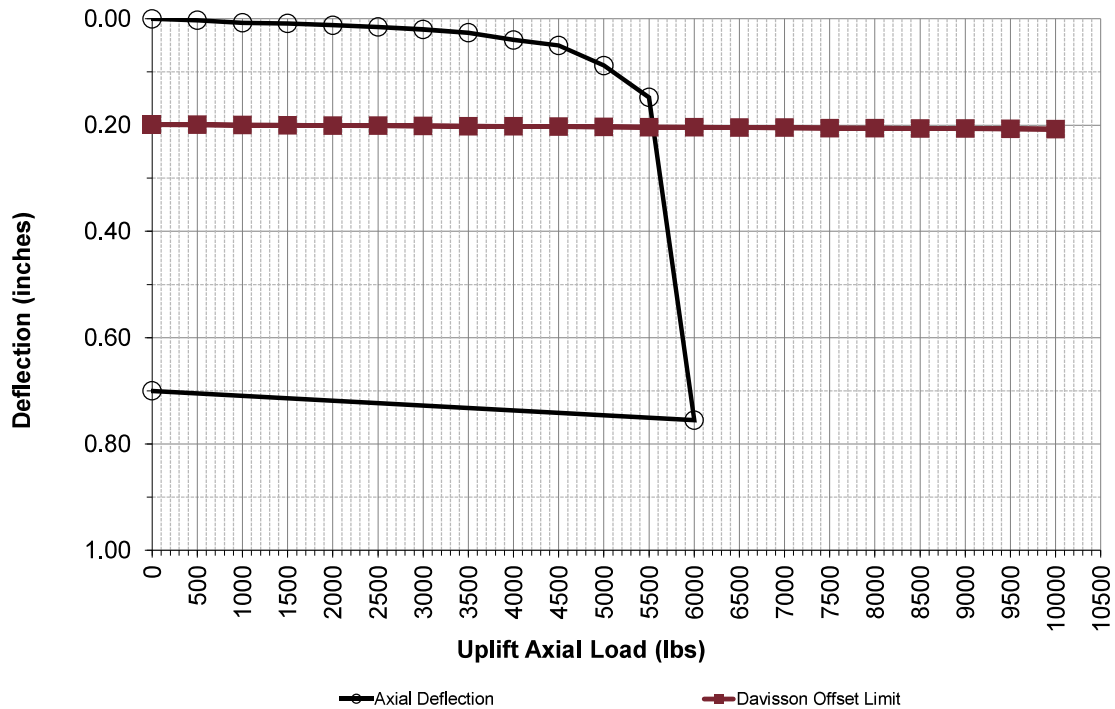
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-5A
Latitude: 39.09075
Longitude: -84.08538
Pile Type: WV6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 42

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.003	0.000	0.200	
10%	1000	0.008	0.001	0.200	
15%	1500	0.009	0.001	0.200	
20%	2000	0.012	0.002	0.201	
25%	2500	0.016	0.002	0.201	
30%	3000	0.020	0.003	0.202	
35%	3500	0.026	0.003	0.202	
40%	4000	0.040	0.003	0.203	
45%	4500	0.050	0.004	0.203	
50%	5000	0.088	0.004	0.203	
55%	5500	0.148	0.005	0.204	
60%	6000	0.755	0.005	0.204	
65%	6500		0.005	0.205	
70%	7000		0.006	0.205	
75%	7500		0.006	0.205	
80%	8000		0.007	0.206	
85%	8500		0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.700	0.000	0.199	



Tension Load Test Result for PLT-5B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

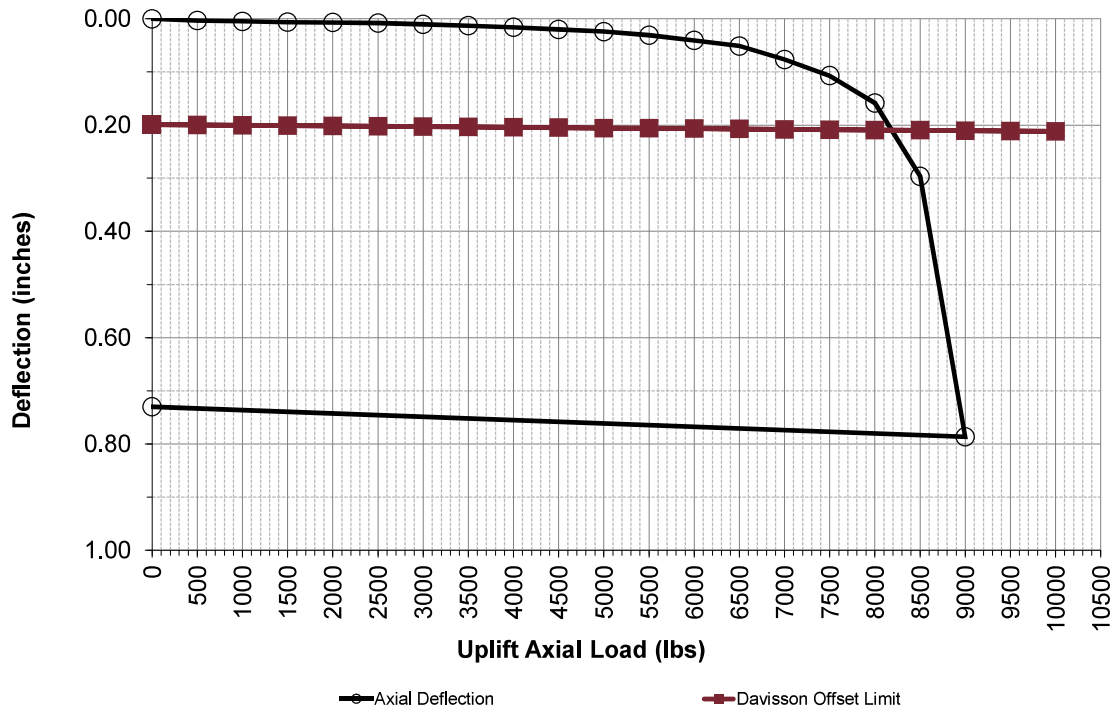
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 4/29/2022

Pile Information

Pile ID: PLT-5B
Latitude: 39.09075
Longitude: -84.08538
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 107

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.004	0.001	0.200	
10%	1000	0.005	0.001	0.200	
15%	1500	0.007	0.002	0.201	
20%	2000	0.007	0.003	0.202	
25%	2500	0.008	0.003	0.202	
30%	3000	0.011	0.004	0.203	
35%	3500	0.013	0.004	0.204	
40%	4000	0.016	0.005	0.204	
45%	4500	0.020	0.006	0.205	
50%	5000	0.024	0.006	0.205	
55%	5500	0.031	0.007	0.206	
60%	6000	0.041	0.008	0.207	
65%	6500	0.051	0.008	0.207	
70%	7000	0.077	0.009	0.208	
75%	7500	0.107	0.009	0.209	
80%	8000	0.159	0.010	0.209	
85%	8500	0.297	0.011	0.210	
90%	9000	0.787	0.011	0.210	
95%	9500		0.012	0.211	
100%	10000		0.013	0.212	
0%	0	0.730	0.000	0.199	



Tension Load Test Result for PLT-6A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

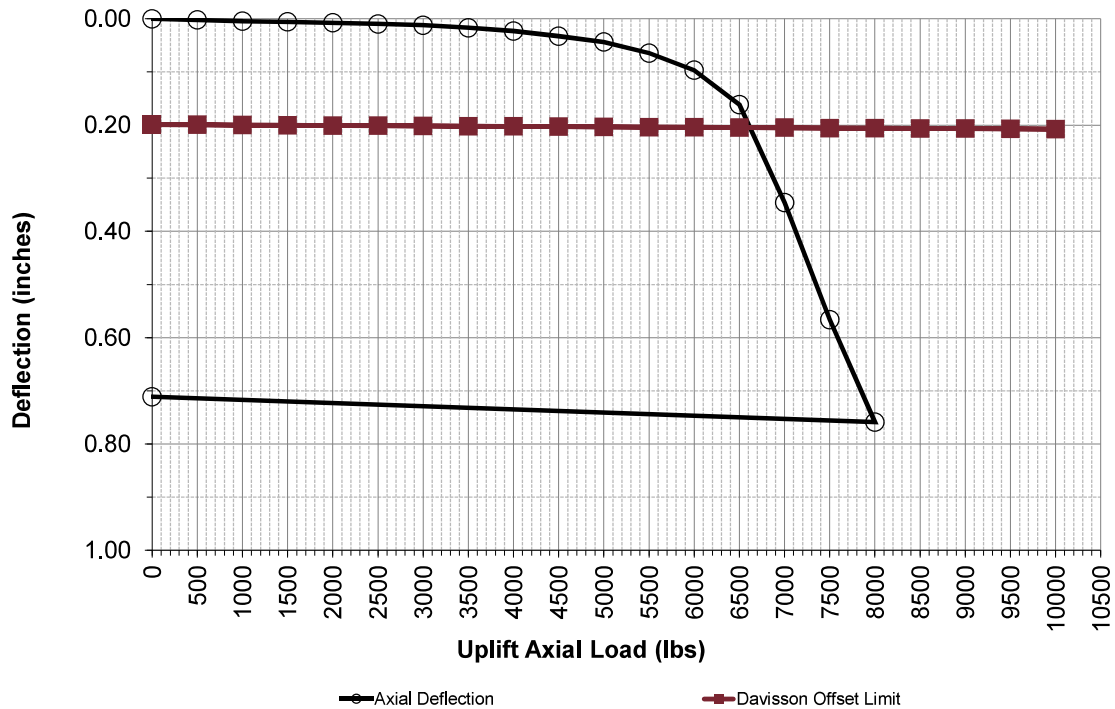
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-6A
Latitude: 39.08080
Longitude: -84.08559
Pile Type: WV6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 58

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.002	0.000	0.200	
10%	1000	0.005	0.001	0.200	
15%	1500	0.006	0.001	0.200	
20%	2000	0.008	0.002	0.201	
25%	2500	0.010	0.002	0.201	
30%	3000	0.012	0.003	0.202	
35%	3500	0.017	0.003	0.202	
40%	4000	0.023	0.003	0.203	
45%	4500	0.033	0.004	0.203	
50%	5000	0.044	0.004	0.203	
55%	5500	0.065	0.005	0.204	
60%	6000	0.097	0.005	0.204	
65%	6500	0.162	0.005	0.205	
70%	7000	0.346	0.006	0.205	
75%	7500	0.566	0.006	0.205	
80%	8000	0.759	0.007	0.206	
85%	8500		0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.711	0.000	0.199	



Tension Load Test Result for PLT-6B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

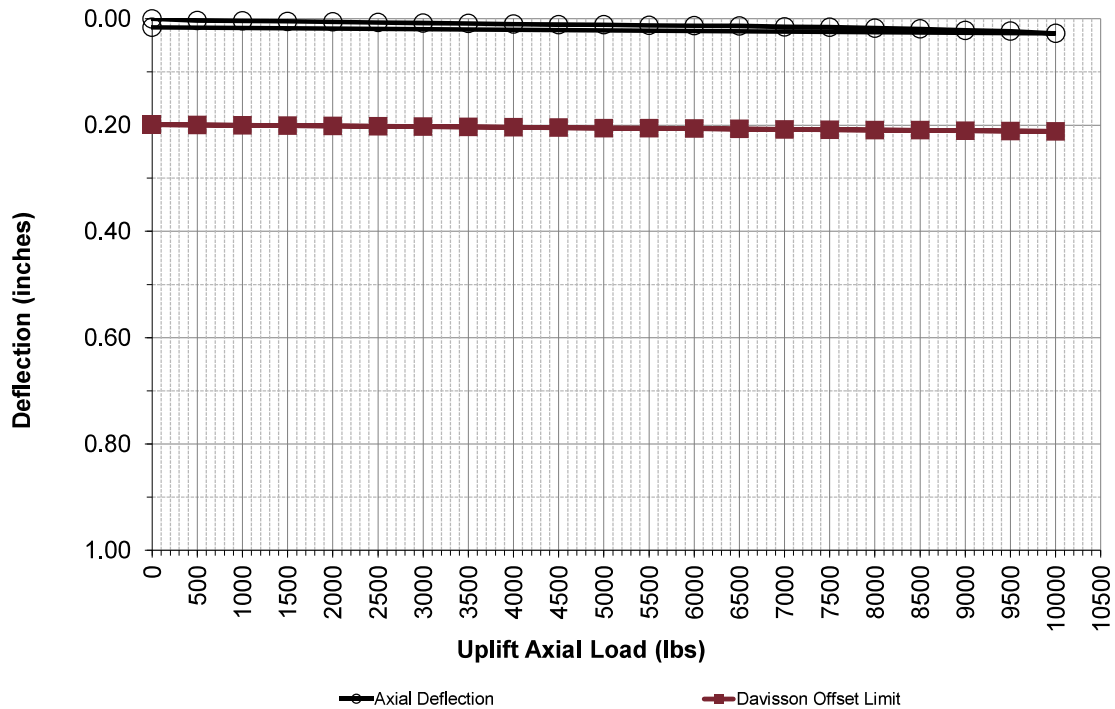
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-6B
Latitude: 39.08080
Longitude: -84.08559
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 183

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.003	0.001	0.200	
10%	1000	0.004	0.001	0.200	
15%	1500	0.005	0.002	0.201	
20%	2000	0.006	0.003	0.202	
25%	2500	0.007	0.003	0.202	
30%	3000	0.008	0.004	0.203	
35%	3500	0.009	0.004	0.204	
40%	4000	0.010	0.005	0.204	
45%	4500	0.011	0.006	0.205	
50%	5000	0.012	0.006	0.205	
55%	5500	0.012	0.007	0.206	
60%	6000	0.013	0.008	0.207	
65%	6500	0.014	0.008	0.207	
70%	7000	0.015	0.009	0.208	
75%	7500	0.016	0.009	0.209	
80%	8000	0.018	0.010	0.209	
85%	8500	0.019	0.011	0.210	
90%	9000	0.022	0.011	0.210	
95%	9500	0.024	0.012	0.211	
100%	10000	0.028	0.013	0.212	
0%	0	0.016	0.000	0.199	



Tension Load Test Result for PLT-7A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

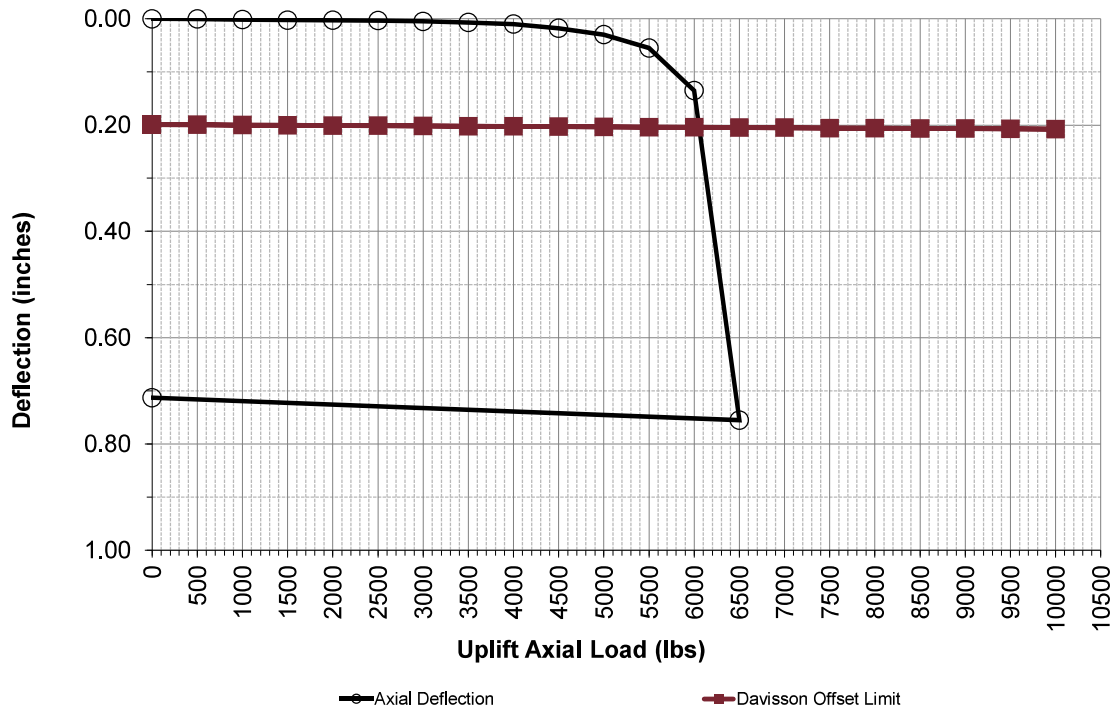
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-7A
Latitude: 39.07942
Longitude: -84.09047
Pile Type: W6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 45

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.001	0.000	0.200	
10%	1000	0.002	0.001	0.200	
15%	1500	0.003	0.001	0.200	
20%	2000	0.003	0.002	0.201	
25%	2500	0.004	0.002	0.201	
30%	3000	0.005	0.003	0.202	
35%	3500	0.007	0.003	0.202	
40%	4000	0.010	0.003	0.203	
45%	4500	0.018	0.004	0.203	
50%	5000	0.030	0.004	0.203	
55%	5500	0.055	0.005	0.204	
60%	6000	0.135	0.005	0.204	
65%	6500	0.755	0.005	0.205	
70%	7000		0.006	0.205	
75%	7500		0.006	0.205	
80%	8000		0.007	0.206	
85%	8500		0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.713	0.000	0.199	



Tension Load Test Result for PLT-7B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

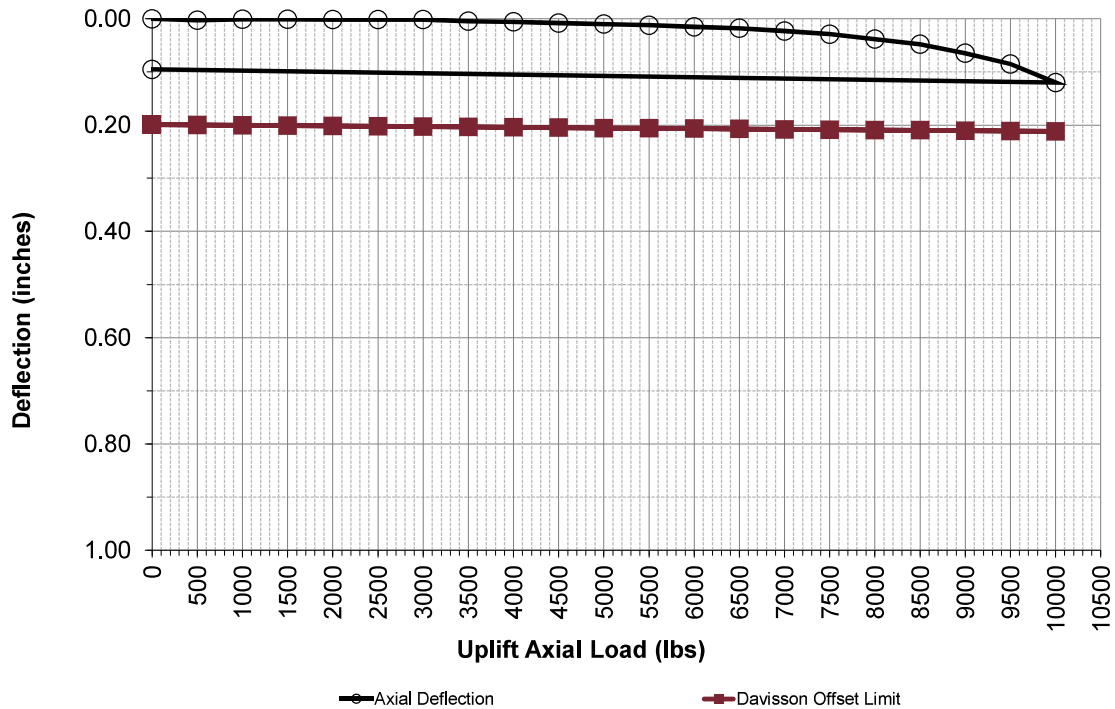
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-7B
Latitude: 39.07942
Longitude: -84.09047
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 160

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.003	0.001	0.200	
10%	1000	0.001	0.001	0.200	
15%	1500	0.001	0.002	0.201	
20%	2000	0.001	0.003	0.202	
25%	2500	0.001	0.003	0.202	
30%	3000	0.002	0.004	0.203	
35%	3500	0.005	0.004	0.204	
40%	4000	0.006	0.005	0.204	
45%	4500	0.008	0.006	0.205	
50%	5000	0.010	0.006	0.205	
55%	5500	0.012	0.007	0.206	
60%	6000	0.015	0.008	0.207	
65%	6500	0.018	0.008	0.207	
70%	7000	0.023	0.009	0.208	
75%	7500	0.029	0.009	0.209	
80%	8000	0.038	0.010	0.209	
85%	8500	0.048	0.011	0.210	
90%	9000	0.065	0.011	0.210	
95%	9500	0.085	0.012	0.211	
100%	10000	0.120	0.013	0.212	
0%	0	0.095	0.000	0.199	



Tension Load Test Result for PLT-8A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

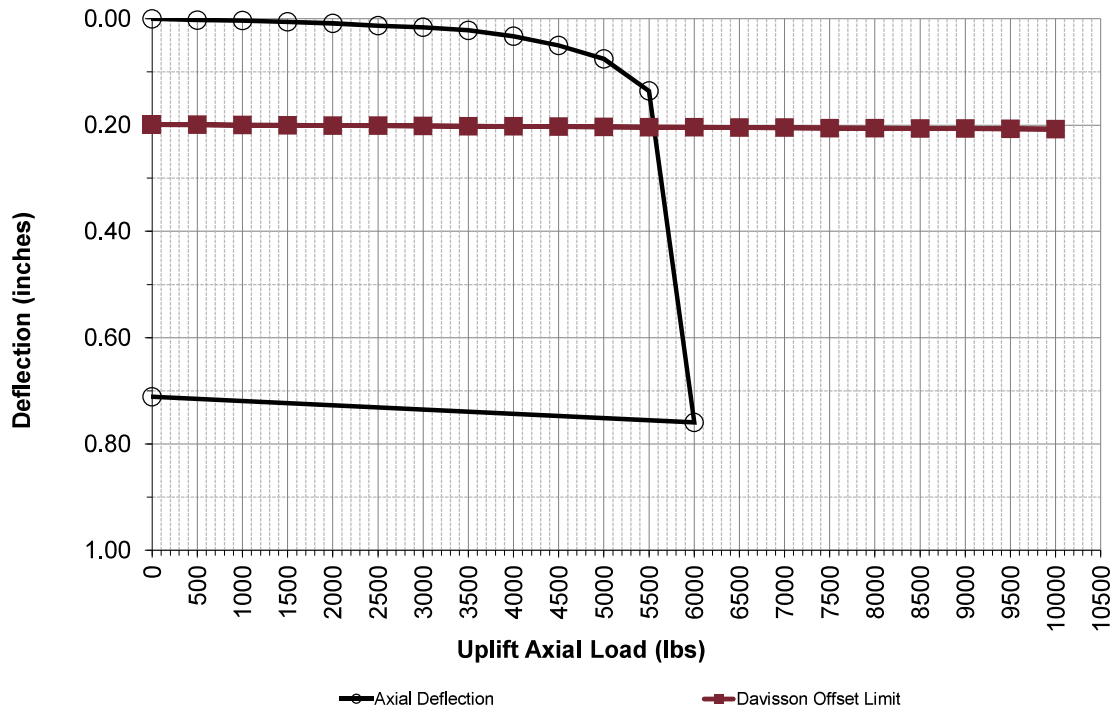
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-8A
Latitude: 39.07839
Longitude: -84.09975
Pile Type: WV6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 34

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.003	0.000	0.200	
10%	1000	0.004	0.001	0.200	
15%	1500	0.006	0.001	0.200	
20%	2000	0.009	0.002	0.201	
25%	2500	0.013	0.002	0.201	
30%	3000	0.016	0.003	0.202	
35%	3500	0.022	0.003	0.202	
40%	4000	0.033	0.003	0.203	
45%	4500	0.050	0.004	0.203	
50%	5000	0.076	0.004	0.203	
55%	5500	0.136	0.005	0.204	
60%	6000	0.760	0.005	0.204	
65%	6500		0.005	0.205	
70%	7000		0.006	0.205	
75%	7500		0.006	0.205	
80%	8000		0.007	0.206	
85%	8500		0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.711	0.000	0.199	



Tension Load Test Result for PLT-8B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

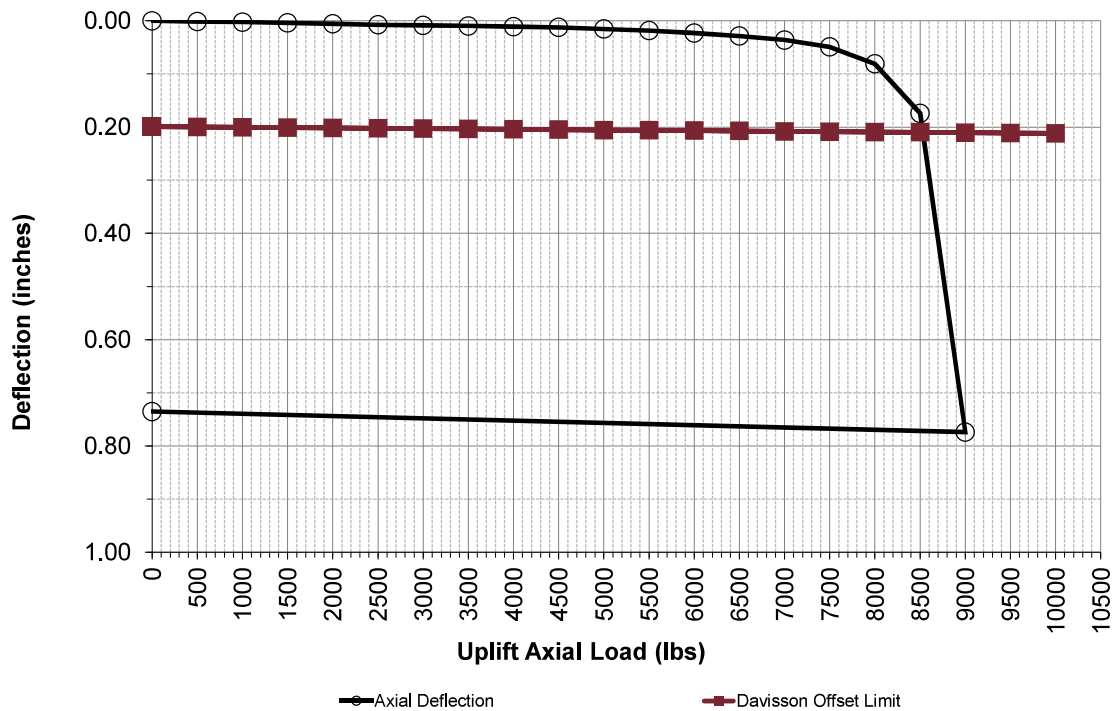
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/2/2022

Pile Information

Pile ID: PLT-8B
Latitude: 39.07839
Longitude: -84.09975
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 111

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.002	0.001	0.200	
10%	1000	0.003	0.001	0.200	
15%	1500	0.004	0.002	0.201	
20%	2000	0.006	0.003	0.202	
25%	2500	0.008	0.003	0.202	
30%	3000	0.009	0.004	0.203	
35%	3500	0.010	0.004	0.204	
40%	4000	0.011	0.005	0.204	
45%	4500	0.013	0.006	0.205	
50%	5000	0.016	0.006	0.205	
55%	5500	0.019	0.007	0.206	
60%	6000	0.023	0.008	0.207	
65%	6500	0.029	0.008	0.207	
70%	7000	0.036	0.009	0.208	
75%	7500	0.049	0.009	0.209	
80%	8000	0.081	0.010	0.209	
85%	8500	0.174	0.011	0.210	
90%	9000	0.774	0.011	0.210	
95%	9500		0.012	0.211	
100%	10000		0.013	0.212	
0%	0	0.735	0.000	0.199	



Tension Load Test Result for PLT-9A

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

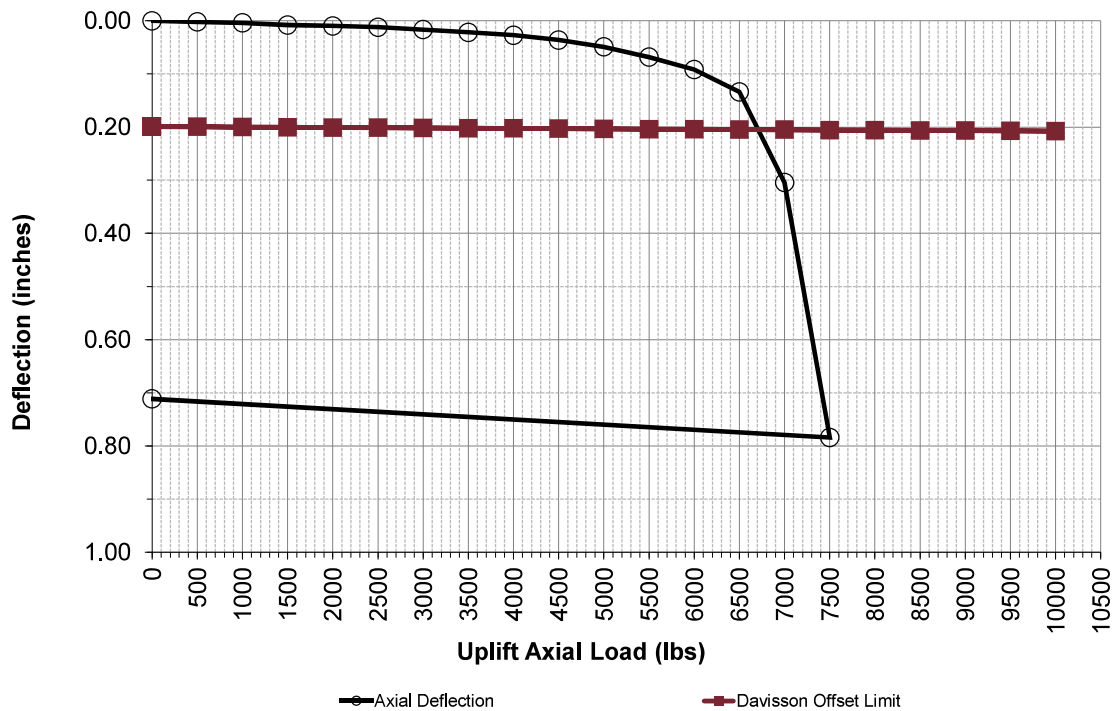
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-9A
Latitude: 39.08526
Longitude: -84.10418
Pile Type: WV6X9
Pile Embedment Depth [in]: 72
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 49

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.002	0.000	0.200	
10%	1000	0.004	0.001	0.200	
15%	1500	0.008	0.001	0.200	
20%	2000	0.010	0.002	0.201	
25%	2500	0.012	0.002	0.201	
30%	3000	0.017	0.003	0.202	
35%	3500	0.022	0.003	0.202	
40%	4000	0.027	0.003	0.203	
45%	4500	0.036	0.004	0.203	
50%	5000	0.049	0.004	0.203	
55%	5500	0.069	0.005	0.204	
60%	6000	0.092	0.005	0.204	
65%	6500	0.134	0.005	0.205	
70%	7000	0.305	0.006	0.205	
75%	7500	0.784	0.006	0.205	
80%	8000		0.007	0.206	
85%	8500		0.007	0.206	
90%	9000		0.008	0.207	
95%	9500		0.008	0.207	
100%	10000		0.008	0.208	
0%	0	0.712	0.000	0.199	



Tension Load Test Result for PLT-9B

Project Information

Project Name: Clermont Solar
Project Location: Clermont County, OH
Project Number: N4225037

Axial Load Test Set Up

Number of Gauges: 2
Height of Gauges [in]: 6
Load Cell: 25k Ed Jr.

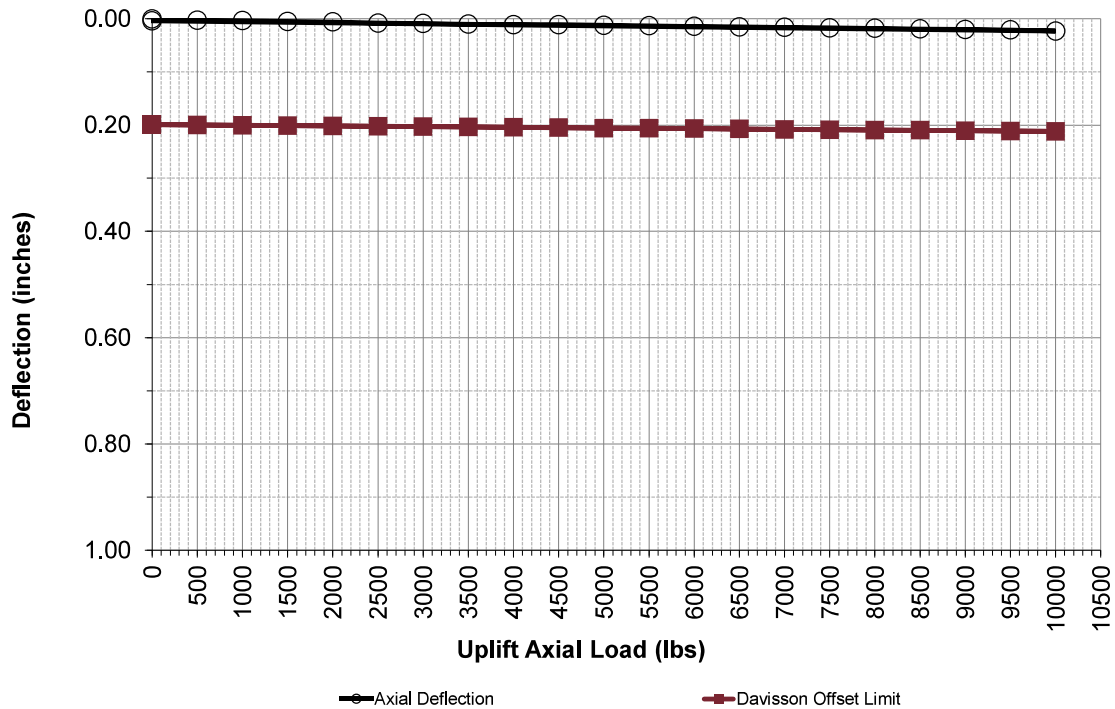
Test Date and Representative

Tested By Terracon Rep: I. McGougan
Date Tested: 5/3/2022

Pile Information

Pile ID: PLT-9B
Latitude: 39.08526
Longitude: -84.10418
Pile Type: WV6X9
Pile Embedment Depth [in]: 108
Pile Diameter [in]: 5.9
Pile Stick-Up [in]: 48
Axial Design Load [lbs]: 10000
Pile Area [sq. in]: 2.96
Elastic Modulus [ksi]: 29,000
Drive Time [sec]: 177

Tension Test Results			Davisson Offset Limit Lines		
% of Design Load	Axial Load [lbs]	Deflection Δ (in.) Gauges #1 & #2	Elastic Data (in) (PL/AE)	Davisson Offset Limit (in) (0.15+D/120+(PL/AE))	Comments
0%	0	0.000	0.000	0.199	
5%	500	0.003	0.001	0.200	
10%	1000	0.004	0.001	0.200	
15%	1500	0.005	0.002	0.201	
20%	2000	0.006	0.003	0.202	
25%	2500	0.008	0.003	0.202	
30%	3000	0.009	0.004	0.203	
35%	3500	0.010	0.004	0.204	
40%	4000	0.011	0.005	0.204	
45%	4500	0.011	0.006	0.205	
50%	5000	0.012	0.006	0.205	
55%	5500	0.013	0.007	0.206	
60%	6000	0.014	0.008	0.207	
65%	6500	0.015	0.008	0.207	
70%	7000	0.016	0.009	0.208	
75%	7500	0.017	0.009	0.209	
80%	8000	0.018	0.010	0.209	
85%	8500	0.019	0.011	0.210	
90%	9000	0.020	0.011	0.210	
95%	9500	0.021	0.012	0.211	
100%	10000	0.023	0.013	0.212	
0%	0	0.004	0.000	0.199	



**This foregoing document was electronically filed with the Public Utilities
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Case No(s). 23-0045-EL-BGN

Summary: Application Exhibit R – Preliminary Geotechnical Engineering Report
Part 2 electronically filed by Teresa Orahod on behalf of Herrnstein, Kara.