

### Final Score

	<b>Category</b>	<b>Score</b>	<b>Out of</b>
1	Design Report		21
2	Fabrication, Aesthetics, Compliance, Leaks & Deformation		14
3	Uplift Capacity		65
	<b>TOTAL FINAL SCORE</b>		100

### Grading Sheet for Design Report

<b>1</b>	<b>Formatting</b>	<b>Maximum Points</b>	<b>Judge 1 Assigned Points</b>	<b>Judge 2 Assigned Points</b>	<b>Judge 3 Assigned Points</b>
1.1	Was the entire design report submitted on time and in a single pdf format file with a filename of 2017GeoPile.School_Name.pdf?	1			
1.2	Page Length 3, Not including cover page and References?	1			
1.3	One-inch margins, single spaced, and 12 point Times New Roman font?	1			
1.4	Does the cover page contain the information specified in the rules?	1			
1.5	Do all pages after the cover page contain a header identifying the team and a footer with the page number?	1			
<b>2</b>	<b>Rationale &amp; Accuracy of Design Method</b>				
2.1	Analytical, Empirical or Numerical approach clearly identified?	1			
2.2	Equations and methods clearly specified?	1			
2.3	Input for the equations and/or computer models clearly stated?	1			
2.4	All assumptions clearly stated?	1			
<b>3</b>	<b>Material Properties &amp; Geometry</b>				
3.1	Methods and properties for sand are reasonable and are clearly presented?	2			
3.2	Methods and properties for wooden pile are reasonable and are clearly presented?	2			
3.3	Methods and properties for paper reinforcements are reasonable and are clearly presented?	2			
3.4	Geometry and placement of all reinforcing elements clearly presented?	2			
3.5	A complete description of the geometry of the pile, including all dimensions, and the weight of the pile with the hook presented?	2			
3.6	Magnitude of surcharge and resulting uplift capacity of the pile clearly presented?	2			
<b>4</b>	<b>Late Submission Penalties</b>				
4.1	If received before, 5 PM, 15 <sup>th</sup> March:	No Penalty			
4.2	If received before, 5 PM, 16 <sup>th</sup> March:	-1			
4.3	If received before, 5 PM, 17 <sup>th</sup> March:	-3			
4.4	If received before, 5 PM, 20 <sup>th</sup> March:	-5			
4.5	If received before, 5 PM, 25 <sup>th</sup> March:	-10			
4.6	If received AFTER, 5 PM, 25 <sup>th</sup> March, the team will be removed from the competition.				
<b>TOTAL</b>		<b>21</b>			

**Notes:**

1. Each team will receive a score that is the arithmetic mean of the total score from each of the three judges.
2. If a grading related conflict(s) arises, the judges will rule and the ruling will be final.

### Grading Sheet for Fabrication, Aesthetics, Compliance, Leaks & Deformation

4	<b>Compliance</b>	<b>Maximum Points</b>	<b>Judge 1 Assigned Points</b>	<b>Judge 2 Assigned Points</b>	<b>Judge 3 Assigned Points</b>
4.1	Does the sand box comply with the specifications?	2			
4.2	Does the pile comply with the specifications?	2			
5	<b>Aesthetics of the Sand Box</b>				
5.1	Overall aesthetics of the sand box	2			
6	<b>Fabrication, Leaks and Deformation</b>				
6.1	Does the fabrication of reinforcements comply with the specifications?	2			
6.2	Does the wall facing comply with the specifications?	2			
6.3	Did the deformation of the wall facing not exceed 0.75 in (after placing the design surcharge before the uplift testing)?	2			
6.4	Did less than 80 g sand leak throughout the testing?	2			
<b>TOTAL</b>		<b>14</b>			

**Notes:**

1. Each team will receive a score that is the arithmetic mean of the total score from each of the three judges.
2. If a grading related conflict(s) arises, the judges will rule and the ruling will be final.

**Grading Sheet for Pile Uplift Capacity**

<b>7</b>	<b>Uplift Testing</b>	<b>Parameter</b>	<b>Units</b>
7.1	Weight of the Pile with the hook	1.5	lbs
7.2	Uplift Capacity <sup>1</sup>	22	lbs
7.3	Net Uplift Capacity	20.5	lbs
7.4	Max. Net Uplift Capacity	35	lbs
7.5	<b>Uplift Capacity Score for the Team (Maximum Points = 65)</b>	<b>38.07</b>	

This is equal to Uplift capacity minus weight of the pile with the hook

This is the maximum of net uplift capacities scored by all teams

This is = (Net Uplift X 65)/Max. Net Uplift

The numbers presented above are for illustration only.

Notes.

1. Uplift capacity is the maximum uplift force at  $\leq 1$  inch deformation, or just before the wall fails, or just before the pile or hook fails (structural), whichever comes first.
2. If a grading related conflict(s) arises, the judges will rule and the ruling will be final.