

# Student Steel Bridge Competition - Category Ranking

Competition: National Finals

Location: San Diego, California

Date: Saturday, June 3, 2023

Die Roll Result: 6

#### **Not Ranked**

Full Name	Ineligibility	Reason
		Judges deem the
University of New Orleans	-	bridge unsafe to
University of New Orleans	5	compete for any
		reason
		Excessive
	44.5	deflection/sway or
University of Texas at El Paso	11.5	loading stopped by
		judges
		Excessive
		deflection/sway or
SUNY College of Technology at Canton	11.5	loading stopped by
		judges
		Excessive
		deflection/sway or
University of South Alabama	11.5	loading stopped by
		judges
		Construction Time
University of Tennessee, Knoxville	10.8.2	Limit Exceeded. 45
oniversity of remiessee, knowing	10.0.2	minutes
United States Military Academy	None	illillates
University of Wisconsin, Platteville	None	
University of Connecticut	None	
Vanderbilt University	None	
University of British Columbia	None	
California State University, Northridge	None	
Kennesaw State University	None	
South Dakota School of Mines and Technology	None	
University of Alaska, Anchorage	None	
Iowa State University	None	
University of California, Berkeley	None	
South Dakota State University	None	
Virginia Tech	None	
University at Buffalo	None	
Kansas State University	None	
University of Arizona	None	
Brigham Young University	None	
California State Polytechnic University, Pomona	None	
University of Puerto Rico, Mayagüez	None	
Western New England University	None	
Youngstown State University	None	
Colorado School of Mines	None	
University of Florida	None	
University of Michigan	None	
University of Washington	None	
Lafayette College	None	
University of Alaska, Fairbanks	None	

University of Illinois at Urbana-Champaign	None	
Tufts University	None	
Manhattan College	None	
Christian Brothers University	None	
Harding University	None	
North Carolina State University	None	
University of Minnesota, Duluth	None	
Missouri University of Science and Technology	None	
New Jersey Institute of Technology	None	
University of California, San Diego	None	
University of Texas at Arlington	None	

# **Construction Speed**

Full Name	Time (minutes)	Rank
University of Florida	5.80	1
University at Buffalo	5.85	2
South Dakota School of Mines and Technology	8.82	3
Missouri University of Science and Technology	9.70	4
California State Polytechnic University, Pomona	10.17	5
University of British Columbia	11.22	6
California State University, Northridge	11.87	7
Virginia Tech	11.92	8
Lafayette College	12.48	9
New Jersey Institute of Technology	13.17	10
Youngstown State University	14.13	11
University of Connecticut	15.35	12
University of California, Berkeley	15.82	13
University of Alaska, Anchorage	17.12	14
University of Puerto Rico, Mayagüez	17.22	15
University of Alaska, Fairbanks	17.45	16
University of Wisconsin, Platteville	18.42	17
University of Illinois at Urbana-Champaign	18.92	18
University of Michigan	20.12	19
University of Minnesota, Duluth	20.37	20
Harding University	21.00	21
Kennesaw State University	21.10	22
Brigham Young University	21.68	23
Manhattan College	24.02	24
University of California, San Diego	24.43	25
Colorado School of Mines	25.15	26
University of Texas at Arlington	26.12	27
Kansas State University	28.33	28
United States Military Academy	29.38	29
University of Washington	32.92	30
Tufts University	33.82	31
South Dakota State University	35.75	32
Iowa State University	40.97	33
University of Arizona	41.42	34
Western New England University	41.72	35
Christian Brothers University	65.22	36
North Carolina State University	183.75	37
Vanderbilt University	190.25	38
SUNY College of Technology at Canton	19.47	NR
University of New Orleans	33.23	NR
University of South Alabama	20.65	NR
University of Tennessee, Knoxville	9999.00	NR
University of Texas at El Paso	44.08	NR

# Lightness

Full Name	Weight (lbs)	Rank
University of Texas at Arlington	190.8	1
Virginia Tech	193.0	2
South Dakota School of Mines and Technology	201.1	3
University of California, Berkeley	212.1	4
Lafayette College	214.9	5
University at Buffalo	241.2	6
Harding University	245.7	7
University of Connecticut	248.5	8
United States Military Academy	250.3	9
University of Alaska, Fairbanks	255.5	10
University of Puerto Rico, Mayagüez	258.9	11
University of Florida	266.7	12
Youngstown State University	268.8	13
California State University, Northridge	275.0	14
University of California, San Diego	275.9	15
Manhattan College	276.2	16
University of Minnesota, Duluth	286.8	17
California State Polytechnic University, Pomona	302.7	18
Kansas State University	303.8	19
University of Alaska, Anchorage	323.8	20
North Carolina State University	340.8	21
South Dakota State University	343.2	22
Kennesaw State University	351.0	23
University of Wisconsin, Platteville	363.8	24
Missouri University of Science and Technology	363.9	25
Brigham Young University	377.4	26
University of British Columbia	389.0	27
University of Michigan	470.3	28
Colorado School of Mines	477.2	29
New Jersey Institute of Technology	505.7	30
Vanderbilt University	559.2	31
University of Illinois at Urbana-Champaign	581.5	32
University of Arizona	591.7	33
Tufts University	625.9	34
University of Washington	717.1	35
Christian Brothers University	762.4	36
Iowa State University	913.3	37
Western New England University	918.3	38
SUNY College of Technology at Canton	219.3	NR
University of New Orleans	554.1	NR
University of South Alabama	334.6	NR
University of Tennessee, Knoxville	452.5	NR
University of Texas at El Paso	489.0	NR

#### **Aesthetics**

Full Name	Score	Rank
Youngstown State University	12.80	1
Virginia Tech	12.60	2
University of Alaska, Anchorage	11.80	3
University of California, San Diego	11.75	4
University of Alaska, Fairbanks	11.40	5
University of Michigan	11.40	6
University of Wisconsin, Platteville	11.20	7
Manhattan College	10.80	8
University of Illinois at Urbana-Champaign	10.80	9
University of Texas at Arlington	10.60	10
University of Tennessee, Knoxville	10.60	11
United States Military Academy	10.60	12
Iowa State University	10.40	13
University of British Columbia	10.40	14
University of Minnesota, Duluth	10.20	15
California State University, Northridge	10.20	16
University of Texas at El Paso	10.20	17
University at Buffalo	9.80	18
Missouri University of Science and Technology	9.60	19
Christian Brothers University	9.60	20
Western New England University	9.40	21
South Dakota State University	9.40	22
Colorado School of Mines	9.40	23
University of Connecticut	9.40	24
South Dakota School of Mines and Technology	9.20	25
University of Puerto Rico, Mayagüez	9.20	26
University of Florida	9.00	27
New Jersey Institute of Technology	9.00	28
University of California, Berkeley	9.00	29
Lafayette College	9.00	30
Tufts University	8.85	31
Brigham Young University	8.80	32
California State Polytechnic University, Pomona	8.80	33
Kansas State University	8.60	34
University of Arizona	8.40	35
SUNY College of Technology at Canton	8.40	36
University of Washington	8.20	37
University of South Alabama	8.00	38
Harding University	8.00	39
Vanderbilt University	8.00	40
North Carolina State University	7.95	41
Kennesaw State University	7.00	42
University of New Orleans	5.20	43

### **Stiffness**

University of California, Berkeley University of California, San Diego University of Wisconsin, Platteville	0.77 0.78 0.81 0.89	2
	0.81	
University of Wisconsin, Platteville		_
	0.80	3
University of Florida	0.09	4
University of Alaska, Anchorage	0.93	5
University of Alaska, Fairbanks	0.96	6
Youngstown State University	0.97	7
University of Minnesota, Duluth	1.03	8
University of Michigan	1.08	9
California State University, Northridge	1.14	10
California State Polytechnic University, Pomona	1.14	11
Virginia Tech	1.17	12
Lafayette College	1.21	13
University at Buffalo	1.26	14
University of Illinois at Urbana-Champaign	1.41	15
University of Puerto Rico, Mayagüez	1.55	16
South Dakota State University	1.59	17
Brigham Young University	1.61	18
Vanderbilt University	1.71	19
United States Military Academy	1.72	20
Kennesaw State University	1.76	21
North Carolina State University	1.90	22
Missouri University of Science and Technology	1.97	23
South Dakota School of Mines and Technology	1.98	24
University of Texas at Arlington	2.45	25
Kansas State University	2.45	26
University of Connecticut	2.60	27
Harding University	2.65	28
Tufts University	2.68	29
Western New England University	2.74	30
University of Washington	2.75	31
Manhattan College	2.76	32
Iowa State University	2.80	33
New Jersey Institute of Technology	2.89	34
Colorado School of Mines	3.11	35
University of Arizona	3.11	36
Christian Brothers University	3.14	37
University of British Columbia	3.17	38
SUNY College of Technology at Canton	0.00	NR
University of New Orleans	0.00	NR
University of South Alabama	0.00	NR
University of Tennessee, Knoxville	1.47	NR
University of Texas at El Paso	0.00	NR

#### **Cost Estimate**

Full Name	Estimate	Rank
University of Alaska, Fairbanks	\$ 9,324.36	1
South Dakota School of Mines and Technology	\$ 51,590.50	2
University of Arizona	\$ 195,610.36	3
South Dakota State University	\$ 282,122.47	4
University of Minnesota, Duluth	\$ 313,089.19	5
Youngstown State University	\$ 338,519.78	6
University of Puerto Rico, Mayagüez	\$ 353,734.69	7
University of California, Berkeley	\$ 382,141.41	8
University of Florida	\$ 566,241.22	9
Vanderbilt University	\$ 612,815.01	10
University at Buffalo	\$ 720,560.82	11
University of Michigan	\$ 826,062.22	12
University of Wisconsin, Platteville	\$ 885,646.28	13
Brigham Young University	\$ 1,168,555.39	14
United States Military Academy	\$ 1,214,636.75	15
Missouri University of Science and Technology	\$ 1,260,652.69	16
Virginia Tech	\$ 1,430,857.48	17
California State University, Northridge	\$ 1,447,552.52	18
University of California, San Diego	\$ 1,461,478.46	19
Manhattan College	\$ 1,715,159.23	20
California State Polytechnic University, Pomona	\$ 1,832,937.85	21
University of Alaska, Anchorage	\$ 2,034,953.46	22
University of Illinois at Urbana-Champaign	\$ 2,814,079.49	23
Harding University	\$ 2,850,433.37	24
Lafayette College	\$ 2,885,376.67	25
University of Texas at Arlington	\$ 3,017,142.65	26
Western New England University	\$ 3,020,494.70	27
New Jersey Institute of Technology	\$ 4,119,109.41	28
Kansas State University	\$ 4,207,644.64	29
Tufts University	\$ 4,261,785.48	30
Iowa State University	\$ 5,660,920.14	31
Colorado School of Mines	\$ 5,895,048.56	32
Kennesaw State University	\$ 7,171,106.04	33
North Carolina State University	\$ 10,776,704.22	34
University of Connecticut	\$ 14,017,471.39	35
University of British Columbia	\$ 14,883,371.19	36
University of Washington	\$ 15,132,884.18	37
Christian Brothers University	\$ 15,305,989.71	38
SUNY College of Technology at Canton	\$ 713,642.17	NR
University of New Orleans	\$ 4,627,534.14	NR
University of South Alabama	\$ 3,992,236.40	NR
University of Tennessee, Knoxville	\$ 5,966,645,250.30	NR
University of Texas at El Paso	\$ 4,522,973.34	NR

### **Economy**

Full Name	Сс	Rank
University of Florida	\$ 2,320,000.00	1
University at Buffalo	\$ 2,340,000.00	2
Youngstown State University	\$ 2,839,166.67	3
California State Polytechnic University, Pomona	\$ 3,879,166.67	4
Virginia Tech	\$ 4,279,166.67	5
California State University, Northridge	\$ 4,296,666.67	6
Lafayette College	\$ 4,468,333.33	7
University of California, San Diego	\$ 5,149,166.67	8
South Dakota School of Mines and Technology	\$ 5,290,000.00	9
Missouri University of Science and Technology	\$ 5,645,000.00	10
University of Connecticut	\$ 5,652,500.00	11
New Jersey Institute of Technology	\$ 5,708,333.33	12
University of Puerto Rico, Mayagüez	\$ 5,911,666.67	13
University of Alaska, Fairbanks	\$ 6,080,000.00	14
University of California, Berkeley	\$ 6,101,666.67	15
University of Alaska, Anchorage	\$ 6,696,666.67	16
University of Illinois at Urbana-Champaign	\$ 6,704,166.67	17
Kennesaw State University	\$ 7,352,500.00	18
University of Minnesota, Duluth	\$ 7,696,666.67	19
University of Michigan	\$ 7,784,166.67	20
Brigham Young University	\$ 7,960,833.33	21
University of Wisconsin, Platteville	\$ 8,833,333.33	22
Colorado School of Mines	\$ 9,385,000.00	23
University of British Columbia	\$ 9,420,833.33	24
Harding University	\$ 9,750,000.00	25
United States Military Academy	\$ 10,853,333.33	26
Manhattan College	\$ 11,133,333.33	27
Tufts University	\$ 11,951,666.67	28
University of Texas at Arlington	\$ 12,957,500.00	29
Kansas State University	\$ 14,812,500.00	30
University of Arizona	\$ 18,462,500.00	31
South Dakota State University	\$ 18,737,500.00	32
University of Washington	\$ 19,987,500.00	33
Iowa State University	\$ 20,292,500.00	34
Western New England University	\$ 20,917,500.00	35
Christian Brothers University	\$ 23,030,000.00	36
Vanderbilt University	\$ 74,562,500.00	37
North Carolina State University	\$ 108,937,500.00	38
SUNY College of Technology at Canton	\$ 6,436,666.67	NR
University of New Orleans	\$ 14,865,000.00	NR
University of South Alabama	\$ 7,360,000.00	NR
University of Tennessee, Knoxville	\$ 5,999,400,000.00	NR
University of Texas at El Paso	\$ 20,762,500.00	NR

# **Efficiency**

Full Name	Cs	Rank
University of California, Berkeley	\$ 2,922,137.08	1
University of California, San Diego	\$ 3,619,358.71	2
University of Florida	\$ 3,696,241.22	3
University of Alaska, Fairbanks	\$ 3,790,007.64	4
Youngstown State University	\$ 3,935,187.11	5
Virginia Tech	\$ 3,978,690.81	6
University of Alaska, Anchorage	\$ 4,210,907.64	7
Lafayette College	\$ 4,256,145.34	8
University of Minnesota, Duluth	\$ 4,416,422.53	9
California State University, Northridge	\$ 4,459,417.86	10
University at Buffalo	\$ 4,614,768.82	11
University of Wisconsin, Platteville	\$ 4,686,782.95	12
California State Polytechnic University, Pomona	\$ 4,885,191.19	13
University of Puerto Rico, Mayagüez	\$ 5,442,068.03	14
United States Military Academy	\$ 5,961,303.42	15
Brigham Young University	\$ 6,166,722.05	16
South Dakota School of Mines and Technology	\$ 6,266,343.54	17
South Dakota State University	\$ 6,580,377.53	18
University of Michigan	\$ 6,924,633.35	19
Kennesaw State University	\$ 6,954,877.55	20
North Carolina State University	\$ 7,223,704.91	21
University of Texas at Arlington	\$ 7,482,716.56	22
University of Illinois at Urbana-Champaign	\$ 7,745,811.79	23
Missouri University of Science and Technology	\$ 7,878,033.69	24
Kansas State University	\$ 8,340,907.64	25
University of Connecticut	\$ 8,364,972.20	26
Harding University	\$ 8,477,267.37	27
Manhattan College	\$ 9,067,325.90	28
Vanderbilt University	\$ 9,845,219.99	29
Tufts University	\$ 10,310,118.81	30
New Jersey Institute of Technology	\$ 10,401,627.59	31
Colorado School of Mines	\$ 11,431,981.56	32
University of Arizona	\$ 11,872,029.36	33
Iowa State University	\$ 13,069,844.14	34
Christian Brothers University	\$ 13,479,918.71	35
Western New England University	\$ 13,562,005.30	36
University of British Columbia	\$ 20,424,370.85	37
University of Washington	\$ 21,479,564.18	38
SUNY College of Technology at Canton	\$ 964,126.42	NR
University of New Orleans	\$ 2,016,109.14	NR
University of South Alabama	\$ 1,764,535.60	NR
University of Tennessee, Knoxville	\$ 7,245,250.30	NR
University of Texas at El Paso	\$ 2,106,473.34	NR

#### **Overall**

Full Name	Cc + Cs	Rank
University of Florida	\$ 6,016,241.22	1
Youngstown State University	\$ 6,774,353.78	2
University at Buffalo	\$ 6,954,768.82	3
Virginia Tech	\$ 8,257,857.48	4
Lafayette College	\$ 8,724,478.67	5
California State University, Northridge	\$ 8,756,084.52	6
California State Polytechnic University, Pomona	\$ 8,764,357.85	7
University of California, San Diego	\$ 8,768,525.38	8
University of California, Berkeley	\$ 9,023,803.74	9
University of Alaska, Fairbanks	\$ 9,870,007.64	10
University of Alaska, Anchorage	\$ 10,907,574.31	11
University of Puerto Rico, Mayagüez	\$ 11,353,734.69	12
South Dakota School of Mines and Technology	\$ 11,556,343.54	13
University of Minnesota, Duluth	\$ 12,113,089.19	14
University of Wisconsin, Platteville	\$ 13,520,116.28	15
Missouri University of Science and Technology	\$ 13,523,033.69	16
University of Connecticut	\$ 14,017,472.20	17
Brigham Young University	\$ 14,127,555.39	18
Kennesaw State University	\$ 14,307,377.55	19
University of Illinois at Urbana-Champaign	\$ 14,449,978.45	20
University of Michigan	\$ 14,708,800.02	21
New Jersey Institute of Technology	\$ 16,109,960.92	22
United States Military Academy	\$ 16,814,636.75	23
Harding University	\$ 18,227,267.37	24
Manhattan College	\$ 20,200,659.23	25
University of Texas at Arlington	\$ 20,440,216.56	26
Colorado School of Mines	\$ 20,816,981.56	27
Tufts University	\$ 22,261,785.48	28
Kansas State University	\$ 23,153,407.64	29
South Dakota State University	\$ 25,317,877.53	30
University of British Columbia	\$ 29,845,204.19	31
University of Arizona	\$ 30,334,529.36	32
Iowa State University	\$ 33,362,344.14	33
Western New England University	\$ 34,479,505.30	34
Christian Brothers University	\$ 36,509,918.71	35
University of Washington	\$ 41,467,064.18	36
Vanderbilt University	\$ 84,407,719.99	37
North Carolina State University	\$ 116,161,204.91	38
SUNY College of Technology at Canton	\$ 7,400,793.08	NR
University of New Orleans	\$ 16,881,109.14	NR
University of South Alabama	\$ 9,124,535.60	NR
University of Tennessee, Knoxville	\$ 6,006,645,250.30	NR
University of Texas at El Paso	\$ 22,868,973.34	NR