

# Fall 2024 Pervious Concrete Competition

Sponsored by the American Concrete Institute and ACI 522

Competition Date: 3-Nov-2024

\* = late submittal, 10% penalty    \*\* = dimensional problem, 30% penalty

$$\text{PerformanceScore} = [(0.60)(P) + (0.40)(S)] / (M/100)$$

|    | School Name  | Team ID | Rule Compliance |        |      | Weight (g) | Avg Length (mm) | Avg Diameter (mm) | Permeability Time (seconds) | Split Tensile Load (lbs) | Split Tensile Load (kN) | Mix Score (%) | Unit Weight (kg/m³) | Split Tensile Strength (MPa) | Permeability (Falling Head) cm/s | Best in Show Eligible? | Best in Show Score | Permeability Ranking | Split Tensile Ranking | Mix Ranking | Best In Show Ranking | Performance Score | Perform Ranking |
|----|--|---------|-----------------|--------|------|------------|-----------------|-------------------|-----------------------------|--------------------------|-------------------------|---------------|---------------------|------------------------------|----------------------------------|------------------------|--------------------|----------------------|-----------------------|-------------|----------------------|-------------------|-----------------|
|    |  |         | Material        | Curing | Size |            |                 |                   |                             |                          |                         |               |                     |                              |                                  |                        |                    |                      |                       |             |                      |                   |                 |
| 1  | Polytechnic University of Puerto Rico                      | PUOPR   | x               | x      | x    | 2305       | 155.9           | 102.9             | 16.4                        | 6582                     | 29.3                    | 75            | 1779.0              | 1.16                         | 0.786                            | N                      |                    | 19                   | 23                    | 17          |                      | 27.47             | 21              |
| 2  | Pittsburg State University                                 | PSU01   | x               | x      | x    | 2543       | 204.9           | 99.6              | 4.7                         | 3292                     | 14.6                    | 73            | 1592.4              | 0.46                         | 3.226                            | N                      |                    | 1                    | 29                    | 19          |                      | 23.90             | 18              |
| 3  | California State University, Chico                         | CHICO   | x               | x      | x    | 2162       | 153.7           | 101.7             | 6.8                         | 4754                     | 21.1                    | 74            | 1731.3              | 0.86                         | 1.922                            | N                      |                    | 9                    | 27                    | 18          |                      | 21.89             | 15              |
| 4  | California State Polytechnic University, Pomona            | 91769   | x               | x      | x    | 2253       | 153.6           | 101.6             | 9.5                         | 9606                     | 42.7                    | 94            | 1807.3              | 1.74                         | 1.382                            | Y                      | 14                 | 12                   | 11                    | 5           | 1                    | 12.34             | 3               |
| 5  | Universidad Mariano Galvez de Guatemala Campus Jutiapa     | UMGJT   | x               | x      | x    | 2371       | 151.7           | 100.8             | 29.8                        | 13364                    | 59.4                    | 86            | 1958.5              | 2.48                         | 0.446                            | Y                      | 11                 | 27                   | 4                     | 13          | 4                    | 20.70             | 13              |
| 6  | Universidad Nacional de Ingenieria                         | UNIPL   | x               | x      | x    | 2236       | 151.3           | 102.0             | 7.4                         | 5743                     | 25.5                    | 88            | 1807.9              | 1.05                         | 1.746                            | Y                      | 1                  | 10                   | 24                    | 10          | 14                   | 17.73             | 10              |
| 7  | Universidad Catolica de Cuenca                             | Eagle   | x               | x      | x    | 2388       | 153.7           | 102.2             | 25.9                        | 15387                    | 68.4                    | 76            | 1895.5              | 2.77                         | 0.502                            | N                      |                    | 26                   | 1                     | 16          |                      | 21.05             | 14              |
| 8  | Universidad Panamericana campus Guadalajara                | UPGDL   | x               | x      | x    | 2107       | 148.6           | 100.8             | 16.3                        | 8371                     | 37.2                    | 87            | 1778.6              | 1.58                         | 0.808                            | N                      |                    | 18                   | 16                    | 11          |                      | 19.77             | 12              |
| 9  | Universidad Central del Ecuador                            | UCE24   |                 |        |      |            |                 |                   |                             |                          |                         |               |                     | DQ                           | N                                |                        |                    |                      | DQ                    | DQ          |                      |                   |                 |
| 10 | Escuela Superior Politecnica del Litoral                   | ESPOL   |                 |        |      |            |                 |                   |                             |                          |                         |               |                     | DQ                           | N                                |                        |                    |                      | DQ                    | DQ          |                      |                   |                 |
| 11 | Universidad Autonoma de Nuevo Leon                         | UANL1   | x               | x      | x    | 2111       | 151.1           | 99.4              | 5.5                         | 6799                     | 30.2                    | 69            | 1802.3              | 1.28                         | 2.475                            | Y                      | 3                  | 4                    | 21                    | 21          | 12                   | 15.65             | 6               |
| 12 | California State University, Sacramento                    | CSUS1   | x               | x      | x    | 2496       | 153.6           | 101.5             | 24.2                        | 9519                     | 42.3                    | 55            | 2008.5              | 1.73                         | 0.545                            | N                      |                    | 25                   | 13                    | 24          |                      | 36.73             | 26              |
| 13 | Universidad Catolica de Cuenca campus Azogues              | TUCA1   | x               | x      | x    | 2142       | 151.0           | 102.9             | 5.9                         | 7422                     | 33.0                    | 26            | 1704.9              | 1.35                         | 2.176                            | N                      |                    | 6                    | 19                    | 30          |                      | 43.08             | 29              |
| 14 | San Jose State University                                  | SJSU    | x               | x      | x    | 2756       | 155.5           | 102.0             | 80.2                        | 14088                    | 62.7                    | 87            | 2168.3              | 2.51                         | 0.163                            | Y                      | 7                  | 30                   | 3                     | 11          | 8                    | 22.07             | 16              |
| 15 | University of Houston Downtown                             | UHD24   | x               | x      | x    | 2950       | 209.2           | 100.7             | 16.2                        | 11633                    | 51.7                    | 42            | 1769.5              | 1.56                         | 0.924                            | N                      |                    | 16                   | 17                    | 27          |                      | 50.76             | 30              |
| 16 | Texas A&M University                                       | AGGIE   | x               | x      | x    | 2405       | 152.9           | 101.4             | 35.8                        | 12615                    | 56.1                    | 73            | 1948.9              | 2.30                         | 0.369                            | N                      |                    | 29                   | 6                     | 19          |                      | 29.84             | 22              |
| 17 | University of Florida                                      | \$t0n3  | x               | x      | x    | 1740       | 152.4           | 101.5             | 5.5                         | 5467                     | 24.3                    | 94            | 1411.0              | 1.00                         | 2.388                            | Y                      | 2                  | 5                    | 25                    | 5           | 13                   | 13.83             | 5               |
| 18 | New Jersey Institute of Technology                         | NJIT1   | x               | x      | x    | 2667       | 199.0           | 98.2              | 4.9                         | 599                      | 2.7                     | 42            | 1769.9              | 0.09                         | 3.197                            | N                      |                    | 2                    | 30                    | 27          |                      | 40.86             | 28              |
| 19 | Arizona State University                                   | ASU24   | x               | x      | x    | 2271       | 155.6           | 101.6             | 18.8                        | 11567                    | 51.5                    | 46            | 1800.2              | 2.07                         | 0.705                            | N                      |                    | 22                   | 8                     | 25          |                      | 35.65             | 24              |
| 20 | Middle Tennessee State University                          | MTCIM   | x               | x      | x    | 2340       | 152.9           | 102.1             | 12.3                        | 9688                     | 43.1                    | 83            | 1871.4              | 1.76                         | 1.056                            | N                      |                    | 15                   | 10                    | 14          |                      | 15.66             | 7               |
| 21 | The University of Alabama                                  | RLTDE   | x               | x      | x    | 2201       | 152.0           | 100.4             | 9.4                         | 8776                     | 39.0                    | 99            | 1828.2              | 1.63                         | 1.430                            | Y                      | 9                  | 11                   | 15                    | 1           | 6                    | 12.73             | 4               |
| 22 | University of Washington - Seattle                         | DAWGS   | x               | x      | x    | 2430       | 152.7           | 101.9             | 18.2                        | 10080                    | 44.8                    | 82            | 1952.1              | 1.84                         | 0.716                            | Y                      | 13                 | 21                   | 9                     | 15          | 2                    | 19.76             | 11              |
| 23 | Universidad Autonoma de Baja California                    | UABC1   | x               | x      | x    | 2225       | 148.7           | 100.0             | 24.6                        | 13371                    | 59.5                    | 68            | 1907.3              | 2.55                         | 0.546                            | N                      |                    | 24                   | 2                     | 22          |                      | 22.35             | 17              |
| 24 | North Carolina State University                            | NCSU1   | x               | x      | x    | 2361       | 153.4           | 101.4             | 16.3                        | 8018                     | 35.7                    | 45            | 1906.7              | 1.46                         | 0.812                            | N                      |                    | 17                   | 18                    | 26          |                      | 38.67             | 27              |
| 25 | Universidad de Santiago de Chile                           | USACH   | x               | x      | x    | 2268       | 155.8           | 100.1             | 10.3                        | 11537                    | 51.3                    | 32            | 1850.7              | 2.10                         | 1.325                            | N                      |                    | 13                   | 7                     | 29          |                      | 36.44             | 25              |
| 26 | University of Illinois at Urbana-Champaign                 | TUIUC   | x               | x      | x    | 2166       | 149.3           | 101.4             | 9.9                         | 6413                     | 28.5                    | 65            | 1799.0              | 1.20                         | 1.319                            | N                      |                    | 14                   | 22                    | 23          |                      | 26.46             | 20              |
| 27 | Universidad Mariano Galvez de Guatemala Sede Quezaltenango | UMGQT   | x               | x      | x    | 2044       | 153.2           | 101.3             | 4.4                         | 7058                     | 31.4                    | 90            | 1655.4              | 1.29                         | 2.989                            | Y                      | 6                  | 3                    | 20                    | 8           | 9                    | 10.89             | 2               |
| 28 | Texas State University                                     | TXST1   | x               | x      | x    | 2110       | 154.2           | 101.3             | 6.5                         | 4433                     | 19.7                    | 95            | 1698.0              | 0.80                         | 2.039                            | Y                      | 10                 | 8                    | 28                    | 3           | 5                    | 16.84             | 8               |
| 29 | Universidad Iberoamericana, Ciudad de Mexico               | IBERO   | x               | x      | x    | 2040       | 152.9           | 99.7              | 6.5                         | 9230                     | 41.1                    | 98            | 1710.3              | 1.72                         | 2.090                            | Y                      | 8                  | 7                    | 14                    | 2           | 7                    | 10.00             | 1               |
| 30 | Southwrm Illinois University Edwardsville                  | COUGS   | x               | x      | x    | 2401.2     | 153.6           | 101.9             | 34.8                        | 9632                     | 42.8                    | 89            | 1915.6              | 1.74                         | 0.375                            | Y                      | 5                  | 28                   | 12                    | 9           | 10                   | 24.27             | 19              |
| 31 | Pontificia Universidad Catolica Madre y Maestra            | PUCMM   | x               | x      | x    | 2465.2     | 150.5           | 100.2             | 23.6                        | 12554.0                  | 55.8                    | 92            | 2077.7              | 2.36                         | 0.568                            | Y                      | 4                  | 23                   | 5                     | 7           | 11                   | 17.17             | 9               |
| 32 | University of Puerto Rico Mauaguez Campus                  | UPRM    | x               | x      | x    | 1841.9     | 140.8           | 100.8             | 17.1                        | 4565.0                   | 20.3                    | 95            | 1638.3              | 0.91                         | 0.754                            | Y                      | 12                 | 20                   | 26                    | 3           | 3                    | 30.65             | 23              |