

SPECIFICATIONS OF SCOPE OF WORK

Outdoor Sports Court Tile System

The City of Manchester is requesting bids for an outdoor sports court tile system that will allow users the ability to play basketball, pickleball, and four square.

Location:

Delivery to 328 N. Waite St. Manchester TN 37355. Telephone number is 931-728-0273.

Scope of Work:

Furnishing of materials for an outdoor sports court tile system. The flooring system shall be a modular interlocking suspended plastic tile system. The flooring system shall include installation instructions, application of game lines, and maintenance instructions for the flooring system. The flooring system shall utilize four different color tiles to construct two four square playing surfaces and not utilize paint to make the four square playing surface. The flooring system shall have two pickleball courts and lines for a high school size basketball court painted on the surface. The flooring system shall be a size of a high school regulation basketball court (50'0" x 84'0").

Warranties:

Court tiles shall be warranted by the manufacturer for any defects in materials and workmanship for a period of 5 years from the date of purchase and will be replaced at no cost. For 6 – 8 years the manufacturer will provide a 50% discount off MSRP and then will provide a 30% discount for life for any defects in materials and workmanship. Shipping for replacement of defective materials and workmanship will be paid for by the manufacturer for 5 years from the date of purchase. Replacement of tiles provided manufacturer can exclude labor to complete the work.

Shipping/Installation:

All shipping fees shall be included.

Product:

A. Court Tile Materials

1. Description – An injection molded, high impact plastic tile supplied in preassembled 4 units by 4 units sheets.
2. Size – 10.03" x 10.03" x 3/4" thick
3. Material – Specially blended high impact polypropylene copolymer. UV stabilizer and anti-oxidant additives shall be molded into each tile to insure protection against color fade and plastic deterioration and oxidations. The tile shall also have an anti-static additive which reduces static buildup on players on the court.
4. Surface Texture – Specially designed open grid that provides a high grip surface in all weather conditions.

5. Tile Interlocking Mechanism – The tile interlocking system shall be designed to allow for thermal expansion and contraction without causing the surface to buckle. It shall also provide the players with lateral forgiveness.
6. Colors – Standard colors and custom options available
7. Support Structure – Each tile shall be supported by 155 cross posts. To provide a stable base while at the same time vertical flex.
8. Weight – 7 oz.

B. Court Tile Lines

1. Description – An injection molded, high impact plastic line tile. Used to inlay straight lines in a court.
2. Size – 10.03" x 2" x 3/4" thick
3. Material – Same as tile
4. Surface Texture – Same as tile
5. Tile Interlocking Mechanism – Same as tile
6. Colors – Same as tile
7. Support Structure – Same as tile
8. Weight – 1.5 oz.

C. Court Ramp Tiles

1. Description – An injection molded, high impact plastic ramp tile. Used around the edge of court as ramp from ground to tile level.
2. Size – 10.03" x 2" x 3/4" thick
3. Material – Same as tile
4. Surface texture – Smooth
5. Tile Interlocking Mechanism – Same as tile
6. Colors – Same as tile
7. Support Structure – Same as tile
8. Weight – 1.6 oz.

D. Line Stripe Painting

1. Primer- Used to promote adhesion between the tile surface and the paint.
2. Paint – Used to mark the playing lines required in various sports. Lines shall be primed using Klean Strip's Bulldog adhesion promoter and then painted using Sherwin Williams Acrolon polyurethane paint.

E. Physical Properties

1. Material Test Results
 - i. Rockwell hardness (ASTM D 785): 74
 - ii. Heat Deflection @ .455 MPa (ASTM E 648): 195
 - iii. Flaming at 1000mm (ASTM E 648): 4 min 45s
 - iv. Auto-ignition temperature (ASTM D-1929): 980°F
 - v. Vicat softening point (ASTM D-1525): 260°F

- vi. Low Temperature Brittleness (ASTM D-2137): -25°F
- vii. Coefficient of Linear Thermal Expansion, (ASTM D-696, E-831): 63×10^{-6} (in/in)/°F
- viii. E-Modulus (ASTM D-5418) 126,000 psi (850MPa)
- ix. Flex Modulus (ASTM D-790) 122,000 psi
- x. Tensile Yield Strength (ASTM D-638) 3,300 psi
- xi. Elongation at Yield (ASTM D-638) 18%
- xii. Notched Izod (ASTM D-256) 15 ft-lb / in at 20°C

2. Product Test Results

- i. Flame Spread Index (ASTM E-162): 4 min. 30 sec.
- ii. Smoke Development (ASTM E-162): 1 min. 46 sec.
- iii. Radiant Panel (ASTM E-84,162,648): .12 Watts/cm²
- iv. Friction Test (ASTM C-1028): Dry<.71, wet<.52
- v. Compression vs. Crush (ASTM D-3998): No Break
- vi. Noise Reduction Coefficient (ASTM C-423): 25%
- vii. R-Value: < 1.0
- viii. Flatness: ± 1.5 mm
- ix. Load Bearing Capacity: 180 psi
- x. Vertical Rebound Characteristics (ASTM F2117-10) 97.1%

3. EN 14904 Test

- i. Fire Test: EN 13501-1
- ii. Emission of formaldehyde: EN 717-1
- iii. Emission of pentachlorophenol: Annex D
- iv. Release of other dangerous substances: National Standards
- v. Linear Friction: EN 13036-4 using CEN rubber
- vi. Shock Absorption: EN 14808
- vii. Resistance to a rolling road: EN 1569
- viii. Resistance to wear: EN 5470-1 using taber abrader with H18 wheels with load of 1kg (on lacquer: CS10 wheels with 0.5 kg load)
- ix. Vertical ball rebound: EN 12235 using basketball
- x. Vertical deformation: EN 14809
- xi. Resistance to indentation: EN 1516

4. EN 14877 Test

- i. Linear friction: EN 13036-4 using CEN number
- ii. Shock Absorption: EN 14808: original and after ageing in hot air according to EN 13817 followed by immersion in hot water according to EN 13744
- iii. Vertical deformation: EN 14809
- iv. Vertical ball rebound: EN 12235 using basketball
- v. Resistance to a rolling road: EN 1569
- vi. Water permeability: EN 12616
- vii. Specular reflectance: EN 13745

- viii. Resistance to wear: EN 5470-1 using taber abrader with H18 wheels with load of 1kg and after EN 14836
- ix. Colour loss: EN ISO 20105-A02 after artificial weathering according to EN 14836
- x. Maximum tensile strength: EN 12230: original and after ageing in hot air according to EN 13817 followed by immersion in hot water according to EN 13744
- xi. Absolute thickness EN 1969: method A

Bid Opening:

Bid Opening is _____ at all sealed bids need to be sent to the Finance Office of the City of Manchester at 200 West Fort Street, Manchester TN 37355.