

**SECTION 02950
KBI FLEX-PAVE HD 2000 POROUS PAVEMENT**

PART 1 GENERAL

1.1 REQUIREMENTS, CODES

- A. All applicable portions of Division 1 - General Requirements shall be considered as included with this section.
- B. The following are minimum requirements and shall govern except that all Federal, Local and/or State Codes and Ordinances shall govern when their requirements are in excess hereof.

1.2 KBI FLEX-PAVE HD 2000 POROUS PAVEMENT

- A. The Flexible Porous Pavement shall be KBI-Flexi-Pave HD2000 made from recycled passenger tires, crushed stone and a urethane binding agent as manufactured by K.B. Industries, Inc. (KBI), 7300 Bryan Dairy Road, Suite 400, Large FL 33777, Tel 727-723-3300, www.kbiglobal.com
- B. All components, materials and compounds shall be 100% sourced and manufactured in the USA.
- C. The Flexible Porous Paving shall be supplied by a manufacturer with at least 10 years experience that can supply references for similar applications and installations in the USA.

1.3 SECTION INCLUDES

- A. Furnishing, placement and compaction of KBI Flex-Pave HD 20000 Porous Pavement in Trailway Extension areas.

1.4 RELATED SECTIONS

- A. Section 02200 –General Earthwork
- B. Construction Drawings

1.5 ENVIRONMENTAL REQUIREMENTS

- A. Determine environmental effects associated with proposed work and safeguard those concerns as regulated by law and local governing agencies by reasonable and practical methods.

1.6 SCOPE

- A. The flexible pavement shall be furnished and placed to the depth as indicated in the standard detail for KBI Flex-Pave HD 2000 on the contract documents.

**EXTENSION OF TRAILS AT IRENE SHELDON
MEMORIAL PARK**

1.7 SUBMITTALS

- A. The Flexible Porous Paving manufacturer shall submit;
- B. Certificates stating that materials meet or exceed the specified contract requirements.
- C. Site handling and storage instructions.
- D. Mixing and installation instructions.
- E. A sample that reflects the characteristics of the material to be installed. The sample, upon approval, shall be maintained as the standard of minimum quality for all the proposed surfacing and paving work required for the project.

1.8 CONTRACTOR

- A. The Contractor installing the Flexible Porous Paving shall be a Certified Installer of KBIFlexi-Pave HD2000.
- B. Contractors bidding for installation of the KBI Flexi-Pave HD2000 may become Certified Installers by contacting KBI and successfully completing the Certified Installer program.
- C. The Contractor shall;
 - a. Furnish all labor, materials, tools, equipment, and incidentals required to install KBIFlexi-Pave HD2000.
 - b. Provide an adequate numbers of skilled workers who are trained and experienced with installing KBI Flexi-Pave HD2000 and are familiar with the specified contract requirements and the methods needed for its installation.
 - c. Install the crushed stone sub-base as described in the specifications and shown on the contract drawing unless the sub-base is installed/provided.
 - d. Install the KBI Flexi-Pave HD2000 to depth and width as described in the specifications and shown in the contract drawings.
 - e. Reduce the risk of damage to the Flexible Porous Paving surface by not allowing track vehicles (metal or rubber), forklifts (warehouse-variable reach), main lifts (booms or scissors), and/or dumpsters or roll-off containers on the KBI Flexi-Pave HD 2000 either during or following installation. Any explicit or implied warranty is voided through failure to comply with this section.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Recommended Sub-base

**EXTENSION OF TRAILS AT IRENE SHELDON
MEMORIAL PARK**

- B. For load bearing applications KBI Flexi-Pave HD2000 shall be installed over a minimum of 4"(100mm) of compacted crushed concrete or crushed stone aggregate to a density of 95% minimum.
- C. The sizing of the stone and base soil will directly represent the desired "Curve Number" (percolation rate) required.
- D. KBI Flexi-Pave HD2000.
- E. The KBI Flexi-Pave HD2000 shall be installed in accordance with the manufacturers written instructions to an average depth of 1.5 inches over the prepared sub-base.
- F. The KBI Flexi-Pave HD2000 shall be Black/ Cypress/ Redwood/ Bark Brown/ Green in color (To be selected by Owner).
- G. The KBI Flexi-Pave HD2000 shall be cured and fit for use within 24 hours of installation.

PART 3 EXECUTION

3.1 QUALITY ASSURANCE

- A. The Contractor is responsible for supplying and installing a warranted material that meets, or exceeds, the manufacturer's specifications and testing:
- B. ASTM C 666/C/666M- Freeze-Thaw testing with no cracks or breaks through 300 cycles of testing.
- C. Designated as "Highly Permeable" under FL DOT FM 5-565 permeability testing.
- D. Independent testing showing a perk rate of 2400 gph (40 gpm) per sq. ft. or higher.
- E. Scuff/Power Steering Resistance in accordance with ISSA TB 100 / ISSA TB 139.
- F. Accelerated Weathering using ASTM 4798.
- G. Hamburg Loaded Wheel Testing TX DOT 242-F, must be equivalent or better than 2.3 rut depth at 8,000 cycles and full recovery within 24 hours.
- H. Static Creep Testing TX DOT 231-F, shall be equivalent to or better than total strain +2.703% and permanent strain equal to 0.514%.
- I. Resilient Modulus Testing in accordance with ASTM D 4123 shall be equivalent or better than 68,495 pounds.
- J. Slip resistant and ADA compliant, in accordance with ASTM D 2047 testing.
- K. Heat resilient to 400 degrees in accordance with ASTM D 4123 testing.
- L. Sound absorbent, in accordance with ASTN C423-09a / E795-05 testing.

- M. Compression tested and be able to withstand 250 psi without permanent deformation or damage.
- O. Has a leachate less than 6 parts per billion and containing no organic compounds or heavy metals.
- P. The material shall be resistant to the following elements: transmission, hydraulic, and brake fluids, gasoline, diesel, saltwater, oil, chlorine, ozone, bromine, and muriatic acid.

3.2 PROJECT CONDITIONS

- A. The Contractor shall provide appropriate and adequate protection to adjacent areas including but not limited to:
 - B. Protection of adjacent work space from splashing of Flexible Porous Paving materials.
 - C. Remove all stains from exposed surfaces of paving, structures, and grounds.
 - D. Remove all waste and spillage.
 - E. Provide suitable protection to assure no damage or disturbance to existing improvements or vegetation before starting work and maintain protection throughout the course of the work.
 - F. Restore and repair areas, at no additional cost to the owner, that have been damaged as a result of construction work, including existing paving on or adjacent to the site, to their original condition or repair as directed to the satisfaction of the Owner's Representative.

3.3 WEATHER

- A. KBI Flexi-Pave HD2000 shall not be installed when the ambient air temperature in the shade near the installation site is above 95° F or below 50° F.
- B. The urethane binder shall be stored on site at between 59°- 77° F and used within 6 months of delivery.
- C. The Contractor shall not pave on days when rain is forecast, unless a change in the weather results in favorable paving conditions as determined by the Owner's Representative.
- D. In the event of rain on days prior to installation, the sub base must be dry and not contain any standing or moving water.

3.4 SAFETY AND TRAFFIC CONTROL

- A. When construction work will interfere with existing, traffic and sidewalks the Contractor shall notify and cooperate with local authorities, and other jurisdictional organizations, and provide temporary barriers, signs, warning lights, flaggers, and other protections as required by the authorities to assure the safety of pedestrians and vehicles around the construction area and to organize the smooth flow of traffic.

END OF SECTION 02950

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MEMORIAL PARK**

September 25, 2016

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KBI FLEX-PAVE HD 2000 POROUS PAVEMENT

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