

# Indian Run Falls

## Columbus, OH

**Project Type:** *Pervious Pavement, Natural Resource Protection*

**Description:** Within the center of the City of Dublin lies a significant natural area along the South Fork Indian Run in the Scioto River watershed. This natural area is home to the creeping rock cress, a state-listed endangered plant species. The City of Dublin's Parks and Opens Space Department wanted to make this area more accessible to the public in a way that preserves its natural characteristics. Therefore, several low impact development techniques were incorporated into the project, including the use of natural pervious trail surfacing materials, trail routing to avoid sensitive plant communities, recycled building materials, and pervious concrete pavement in the new parking area. This design eliminated the need for traditional storm water management structures such as catch basins, pipes and detention basins. A gravel retention base was designed under the parking lot to allow for temporary storage of storm water. It is designed to hold and infiltrate storm water up to a 50-year, 24-hour storm event. A perforated overflow pipe was installed just below the base of the pavement to allow excess water to flow out of the retention base. This project also involves a monitoring component to determine infiltration capacity and runoff reductions.



**Size:** This commercial application of 18 parking spaces was the first of its kind in central Ohio.



**Design:** Hull and Associates, Inc. provided civil and geotechnical engineering and ecological services for the project. Kinzleman Kline Grossman provided planning and design services. Smock-Fansier Corp out of Indianapolis, Indiana was the contractor (at the time there was a very limited number of contractors in Ohio).

**Maintenance:** The City of Dublin funded the project and will provide long-term maintenance at the site. The overall cost was approximately \$10 per square foot (includes excavation, sub-base material, pavement and curbs). The City of Dublin is anticipating a very small amount of maintenance will be needed at the site. It has been demonstrated in other cold weather climates that the warmth of the earth ("igloo affect") will actually melt the snow and ice

faster on pervious pavements than on conventional. Traditional methods of snow removal such as salt and sand will not be used because they clog the voids and decrease drainage capacity in the pervious pavement.

**Application:** Ideal for parking lot applications, pedestrian area, sidewalks, walking paths, or other areas of low traffic.

**Contact Information:** Mark J. Bonifas, PE  
Engineering Division Leader  
Hull and Associates, Inc.  
(614)793-8777  
mbonifas@hullinc.com