How Core Samples Reveal The Earth’s History

Did you know that with a major construction project like the Waterway Protection Tunnel, it’s not just engineers at work, but geologists too? Before construction began on the tunnel, a series of rock core borings were drilled along the proposed tunnel alignment to collect rock core samples. These samples help give geologists and engineers a better understanding of the physical characteristics of the bedrock in the project area.

Fossilized remains of sea creatures that once existed when the present-day Louisville area was located south of the equator 500 million years ago were found in the samples, including horn corals, clam-like brachiopods, and rugose coral. They are being stored in a rock core library, where engineers may inspect them during the course of the tunnel construction project.

Select sections of the rock core underwent testing and analysis at the Earth Mechanics Institute, located at the Colorado School of Mines, in Golden, Colorado. At the
laboratory, the engineering properties of the bedrock samples were determined. This data, as well as other geotechnical data that was collected and analyzed locally, was then used in the tunnel design.

Once the construction of the Waterway Protection Tunnel is completed, the core samples likely will be shown in local science museums. Some of the samples may be donated to the Kentucky Geological Survey’s Well Sample and Core Library.

Many of the fossils found in the core samples are similar to those seen at the fossil beds at the Falls of the Ohio State Park just across the river in Clarksville, Indiana, which is open to the public seven days per week.

ROAD CLOSURE UPDATE

LEXINGTON ROAD AND BAXTER AVENUE INTERSECTION

Work continues on this intersection and completion of the work is expected to be no later than August 7. MSD is installing a large sewer main for the tunnel project in this location.

To learn more about the Waterway Protection Tunnel visit LouisvilleMSD.org/tunnel.

BORING NEWS JULY 2018

The longest tunnel in the world is the Delaware Aqueduct in New York. Constructed from 1937 to 1953, it’s 85 miles long and is part of the system that supplies water to NYC from the Delaware River near its source and from other streams in the Catskill Mountains.