

## **Attachment B**

### **Drill-Hole Site Description and Location Maps Bessemer and New Castle South 7.5-Minute Quadrangles, Lawrence County**

Note: This attachment contains the site description and location maps for three proposed sonic drilling sites (3 holes total) one in the Bessemer and two in the New Castle South 7.5-minute topographic quadrangles, Lawrence County. To assist prospective bidders in understanding the probable subsurface geology and drilling conditions to be encountered, descriptions of the likely geologic formations and rock types to be penetrated by the borehole are included. These descriptions (assessments) are a reasonable attempt by the Department to provide objective geologic information about the work site. As such, they should be considered average probable conditions for the drill hole, including estimated footages, and should not be considered guarantees. Unanticipated rock types and/or drilling conditions may occur.

#### **Site 1**

1264 State Rt 168, Three Rivers Aggregates, North Beaver Township, Lawrence County, Pennsylvania. 80° 23' 35.45", 40° 54' 27.589".

**Well Number:** LAW073\_2466

**Anticipated Total Depth:** 50 feet

#### **Access/Site Description**

The work site is located off the east side of State Rt 168, within the boundaries of the Lawrence County property parcel 26182700. The property is owned by Three Rivers Aggregates for gravel mining. Farm field can be accessed from the highway or property driveway. Based on field inspection, there are no known underground or above ground obstructions, and the terrain at the drilling site is flat.

#### **Travel Directions**

Traveling north on Interstate-376 take the State Rt 168 exit west and south towards New Galilee. Travel approximately one mile, property is on left. Alternately, property is approximately three miles north of Interstate-76 on State Rt. 168 500 feet north of Mallory Road, on right.

**Water Availability:** The stream Jenkins Run can be accessed within the same property ownership across State Rt 168 on the southwest side of the field.

#### **Site 2**

3112 Wampum Road, North Beaver Township, Lawrence County, Pennsylvania.  
80° 22' 10.157", 40° 54' 51.945".

**Well Number:** LAW073\_2467

**Anticipated Total Depth:** 70 feet

**Access/Site Description**

The work site is located off the east side of Wampum Road, within the boundaries of the Lawrence County property parcel 26169100. The property is owned by Three Rivers Aggregates for gravel mining. Driveway accesses the property from the road. Based on field inspection, there are no known underground or above ground obstructions, and the terrain at the drilling site is flat.

**Travel Directions**

The site is located in North Beaver Township. Traveling north on Interstate-376 take the State Rt 168 exit east towards West Pittsburg. Travel one-half mile to Wampum Road and turn south. Drive south approximately one-half mile and property is on left.  
Water Availability: The Beaver River can be accessed from the property.

**Site 3**

River Road and Blake Road, Three Rivers Aggregates, Taylor Township, Lawrence County, Pennsylvania. 80° 21' 49.486", 40° 55' 29.797".

**Well Number:** LAW073\_2465

**Anticipated Total Depth:** 130 feet

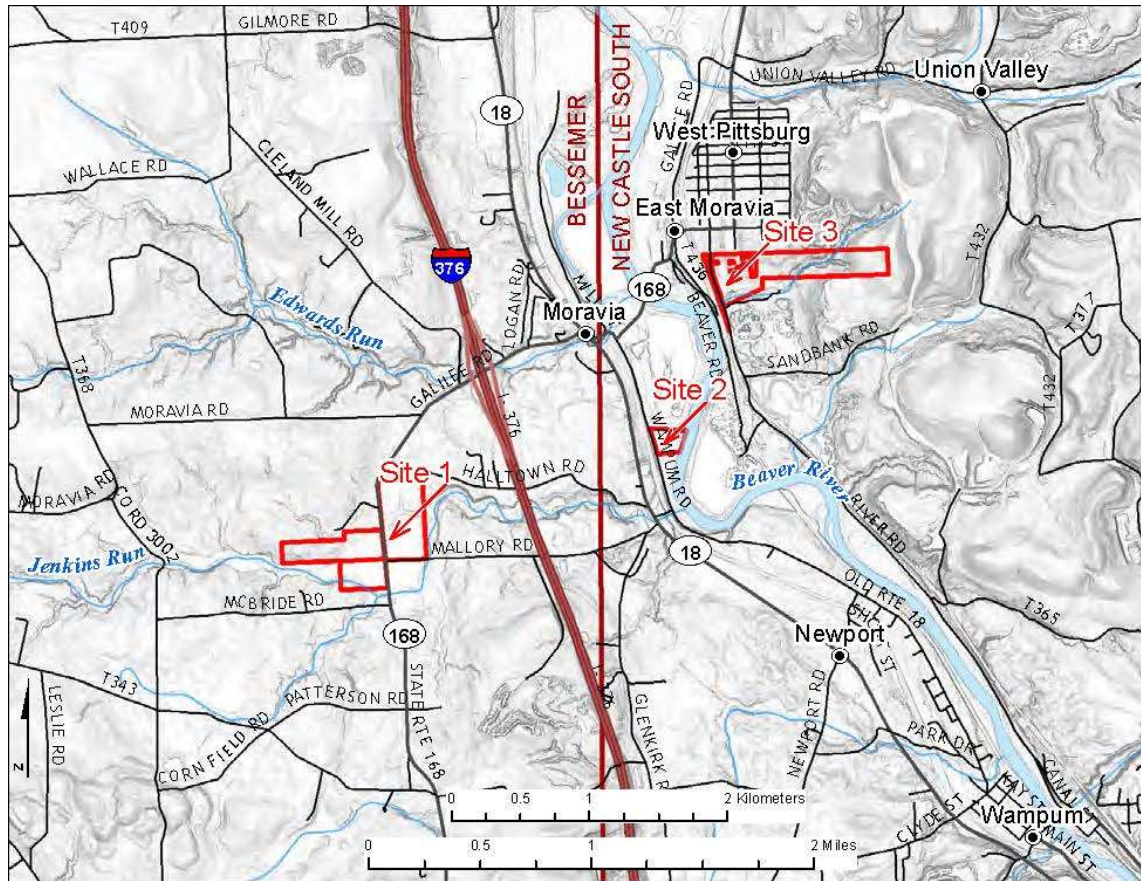
**Access/Site Description**

The work site is located east of River Road, within the boundaries of the Lawrence County property parcel 33081200. The property is owned by Three Rivers Aggregates for gravel mining. A dirt road accesses the property from River road. Based on field inspection, there are no known underground or above ground obstructions, and the terrain at the drilling site is flat.

**Travel Directions**

The site is located in Taylor Township. Traveling north on Interstate-376 take the State Rt 168 exit east one and one-third miles to River Road in West Pittsburg and turn south. Drive south approximately one-quarter mile and property is on left. Drilling location is approximately 375 feet east down dirt road and north of dirt road 70 feet. Dirt road is 760 feet north of Blake Road along River Road.

Water Availability: A small stream runs through the property and may have accessible water.





## **Geologic Setting**

The boreholes are located in up to 130 feet of glacial deposits. These layers could include glacial till, glacial lake clays, and stratified sand and gravel.

Unless unforeseen geologic conditions occur or directed otherwise by the Department representative, the goal is to drill through the entire glacial profile and 5 feet into bedrock. The descriptions below are typical of materials found in this area:

**Alluvium (Stream and Flood Plain Deposits)** - If present it will be the topmost layer of silt, sand, and gravel, ranging from 0 to 20 feet thick.

**Till** - Dominantly clayey silt intermixed with various sizes of gravel, some the size of small boulders.

**Clay** – Dominantly clay to clayey silt layers could occur. Thicknesses are unknown.

**Sand and Gravel** – Stratified sand and gravel ranging in grain sizes from sand to boulder. Due to the impermeability of clay if above a lower sand, there can be sufficient groundwater pressure to cause quicksand conditions.

**Bedrock** - Dominantly gray shale and siltstone.