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## **417 Water Tank Road**

### **Embankment Placement Summary**

April 28, 2021

The afore mentioned Property had 2+ Million Cubic Yards of Earthen Material recently placed on it, thus creating the current profile it now has.

The Earthen Material was installed by Vecellio & Grogan, Inc from Beckly, West Virginia. V&G was the NCDOT Contractor on the nearby US 221 Highway Widening Project. The Embankment placement started on/or about June 2017 and was completed on/or about August 2020.

V&G used Cat 745C and Cat 777G haul units to transport the material into the above Property. These haul units where able to drive over the new embankment during all phases of construction. A loaded Cat 745C haul unit weights 164,000 lbs. (82 tons), and a loaded Cat 777G haul units weights 294,000 lbs. (147 tons).

If someone want to verify the Compaction and/or Stability of the Earthen Embankment, one could hire a Geotechnical Engineer to perform a wide range of tests on the said area of Earthen Embankment. One of these tests, is commonly referred to as a "Proof Roll". Where a loaded Road-legal Tandem Dump Truck, is driven across an area, to see if the area "fails" (or sinks) as the Truck goes over the area. A loaded Road-legal Tandem weights 55,000 lbs (27.5 tons) or less.

Therefore if a Geotechnical Engineer is going to use a 27.5 ton Dump Truck to verify Compaction, and the Contractor used 82 ton and 147 ton Haul Units to install the Embankment, and the Embankment supported the Heavier Haul Units during Construction, one could reasonable expect the Earthen Embankment would support any type of Residential or Farm-type Structure.