McAlister Engineering
4508 STADIUM BLVD. SUITE D
JONESBORO, AR 72404

Date:

10/31/2024

RE: Ginger Drive Extension/Pipe Size Determination/Variance Application

Address:
325 GINGER DRIVE
JONESBORO, AR 72401

To whom it may concern:

RODNEY & CHERIKA WINFREY wish to improve the current drainage conditions along with extending the pavement of Ginger Drive to their property listed as 325 Ginger Dive. They wish to construct a driveway from said drive across an open channel ditch by means of installing an appropriately sized driveway culvert. The current condition of this area involves and raised dirt road where the original Ginger Drive was constructed but not paved along with open channel ditches on both the north and south sides of said road that then release into Lost Creek Tributary 2. Since this original construction, the flow path of the ditch on the south side of said road has changed course to the northwest and the sides and bottom of this ditch have eroded substantially. The Winfreys would like this flow path corrected back to its intended course and the existing condition repaired to allow for this proposed Ginger Drive extension and driveway installation.

The area of the sub-basin that will ultimately enter the proposed driveway culvert has an approximated area of 4.20 acres and a TOC of 25.8 minutes. The predominant soil type in the area is Type C, and a Curve Number of 75 was chosen for the calculations. This results in a Qpk of 19.50 cfs. By using these parameters, it has been determined that a Reinforced Concrete Pipe with a minimum inside diameter of 24 inches laid on a minimum grade of 1.00% is required to convey a Craighead County, AR 100yr storm event.

Due to the characteristics of Ginger Drive up to this proposed extension and the 100yr storm runoff volume and velocity, the client wishes to seek a variance on the requirement to install curb and gutter along this proposed road section.

The technical data follows along with proposed construction drawings:

Clarence W. McAlister, PE, PS