EXHIBIT D



128 Northpark Blvd. ♦ Covington, Louisiana 70433 ♦ Phone: 985.624.5001 ♦ Fax: 985.624.5303

March 28, 2024

St. Charles Parish Government 15045 River Rd Hahnville, Louisiana 70057 Attn: Mr. Sam Scholle

EMAIL ONLY

Montz Pump Station #2 Drainage Improvements

Culvert Loading Memorandum

Dear Sam,

As designed, the new 36" RCP is structurally adequate for the tracked vehicle weights stated by Entergy. No less than 2 ft of cover must be maintained over the pipe. During equipment movement, continuous matting from across the berm and pipe is required to prevent displacement of the berm and pipe cover. See attached plan/profile drawing, and background information below.

Under the request of Entergy and St. Charles Parish, load calculations and recommendations for a side drain pipe located within a new proposed drainage canal have been performed. A 36" Reinforced Concrete Pipe has been recommended and used to calculate the loads provided by Entergy on the pipe. The below loads were provided by Entergy for equipment that is to be used in the area.

Flextrack 105' bucket	59,860 Ibs	10'2" Wide
Flextrack Crane	80,000 Ibs	136" Wide
45T Mantis Crane	93'904 Ibs	18'4" Wide
77T Mantis Crane	137,554 Ibs	18'8" Wide

Calculations were performed on each load case and the following recommendations were made. A minimum of 2 feet of cover shall be placed above the pipe. Class V concrete shall be used for the Reinforced Concrete Pipe to ensure maximum strength in concrete. All movement with heavy equipment across the pipe shall have timber mats placed on top until the entire machine has been moved from the pipe. Below are the approximations of the loads that will be placed on the pipe with a minimum of 2 feet of fill.

•	Flextrack 105' bucket	59,860 Ibs	10'2" Wide	- Approximately 950 lbs/ft
•	Flextrack Crane	80,000 Ibs	136" Wide	- Approximately 1150 lbs/ft

PRINCIPAL Infrastructure®

PRINCIPAL Engineering®

Architecture ♦ Engineering ♦ Construction

Page 2 of 2

- 45T Mantis Crane 93'904 Ibs 18'4" Wide Approximately 1000 lbs/ft (extended); 1075 lbs/ft (retracted)
- 77T Mantis Crane 137,554 Ibs 18'8" Wide Approximately 1350 lbs/ft (extended); 1450 lbs/ft (retracted)

Sincerely,

PRINCIPAL Engineering, Inc.

John Rayer, P.E. Project Engineer

