



# PLANNING BETTER TRENCHLESS

## Vermeer BoreAid® Design Tool

Performing a bore operation efficiently takes consistent horizontal directional drill (HDD) planning and design methods. Vermeer BoreAid design tool streamlines your planning and design time by considering key aspects of a drill project such as topography and soil for bore path planning, product pipe selection, load calculation and drilling fluid estimation.

In-service Loads	Calculated	Allowable	Factor of Safety	Check
Internal Hoop Stress [psi]	0.0	30240.0	Infinity	OK
Longitudinal Stress [psi]	6414.7	37800.0	5.9	OK
Shear Stress [psi]	3123.7	18900.0	6.1	OK

The Vermeer BoreAid design tool provides a full suite of tools to complete HDD designs following the ASTM F1962 standard for plastic (PE or PVC) pipe and PRCI methodology for steel or fiberglass pipe. It permits complex bore geometrics – multiple compound curves/tangent segments, inadvertent return analysis, and offers the capabilities to perform advanced drill planning and design.



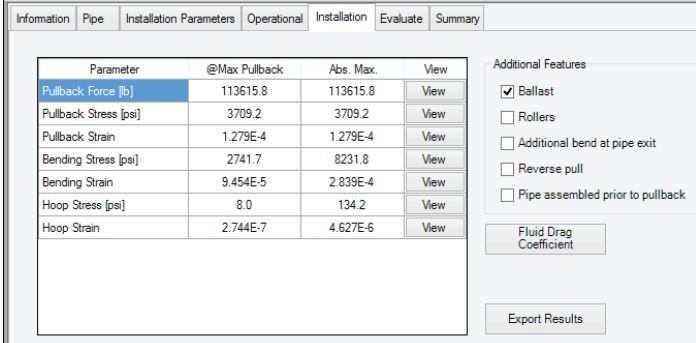
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EQUIPPED TO  
DO MORE.®

## KEY BENEFITS:

- **Helps** plan and design your project in less time.
- **Produces** project design or construction submission documents efficiently.
- **Alerts** the user to potential issues by using the built-in database of typical, or suggested properties (based on current standards and good practice guidelines).
- **Constructs** a detailed design dealing with many aspects of the project, from bore path planning and load calculations, to pipe selection and drilling fluid requirements.
- **Provides** the engineering estimates for required pullback forces to install the product pipe following industry standards.
- **Identifies** the bend radius of the drill rod and product pipe to alert user if rod or pipe is outside of specifications.



The screenshot shows the BoreAid software interface with a table of parameters and a sidebar for additional features. The table has columns for Parameter, @Max Pullback, Abs. Max., and View. The sidebar includes checkboxes for Ballast, Rollers, Additional bend at pipe exit, Reverse pull, and Pipe assembled prior to pullback, along with buttons for Fluid Drag Coefficient and Export Results.

Parameter	@Max Pullback	Abs. Max.	View
Pullback Force [lb]	113615.8	113615.8	View
Pullback Stress [psi]	3709.2	3709.2	View
Pullback Strain	1.279E-4	1.279E-4	View
Bending Stress [psi]	2741.7	8231.8	View
Bending Strain	9.454E-5	2.839E-4	View
Hoop Stress [psi]	8.0	134.2	View
Hoop Strain	2.744E-7	4.627E-6	View

Additional Features

- Ballast
- Rollers
- Additional bend at pipe exit
- Reverse pull
- Pipe assembled prior to pullback

Fluid Drag Coefficient

Export Results