

Vermeer BorePlan

User's Guide



EN_o1_01 original instructions
Order No. 105400FK7



Vermeer[®]

EQUIPPED TO
DO MORE.[®]

Introduction

This manual explains the proper operation of the Vermeer BorePlan application. Study and understand these instructions thoroughly before using this product. Consult your Vermeer dealer if you do not understand the instructions in this manual or need additional information.

The instructions, illustrations, and specifications in this manual are based on the latest information available at time of publication. Vermeer BorePlan may have product improvements and features not yet contained in this manual.

Vermeer Corporation reserves the right to make changes at any time without notice or obligation.

TRADEMARKS

VERMEER, VERMEER Logo and EQUIPPED TO DO MORE are trademarks of Vermeer Manufacturing Company.

Table of Contents

Safety	10-1	Graphs	50-1
		Graph Navigation - Profile View	50-1
Intended Use	20-1	Target Point - Profile View	50-2
		Utility - Profile View	50-4
Getting Started	30-1	Topography - Profile View	50-6
Accessing BorePlan	30-1	Aerial View	50-8
Google Play for Android	30-1	Utility - Aerial View	50-9
App Store for iPhone	30-3		
Accessing the Application for First Time Users	30-5	Rod-by-Rod Plan	55-1
Creating an Account	30-6	Rod-by-Rod Table	55-1
Email Account Verification	30-7		
Establishing a Password	30-8	Rod Overbend Indicator	60-1
Accessing the Application	30-9	Rod Overbends	60-1
Disclaimer	30-12	Graph Indicator of Overbends	60-1
		Rod-by-Rod Indicator of Overbends	60-1
		Rod-by-Rod Indicator of Intersections	60-1
Landing Page	40-1		
BorePlan Options	40-1	Vermeer BorePlan	70-1
Create a New Bore Plan	40-1		
Existing Bore Plans	40-6		
Opening an Existing Bore Plan	40-6		
Deleting an Existing Bore Plan	40-7		
Rig Setup and Settings	40-8		

This page intentionally left blank.

Section 10: Safety

The information provided is dependent upon the accuracy and quality of user-supplied data. The information is “as-is” and Vermeer Corporation does not guarantee or warrant the accuracy, reliability, or completeness of this information or its usefulness in achieving any purpose. The accuracy of any information is dependent upon accurate data gathering, data input, and proper use of the software. You are responsible for using your own judgment when using this information and for following all applicable laws and industry best practices. Vermeer Corporation shall not be liable for any loss, damage, or cost incurred by your reliance on this information.



WARNING: The accuracy of the data obtained by the Vermeer BorePlan application is highly dependent upon accurate data gathering, data input and proper use of the software. The data is not intended to replace the need for future onsite utility locating, measuring and verification procedures, which are essential for accurate placement of new underground installations and avoidance of existing utilities.



WARNING: Always contact your local One-Call system before the start of your digging project. The Vermeer BorePlan application is intended to be used with other utility locating methods, such as the use of the One-Call system and the exposing of existing utilities by potholing.

Locate utilities before drilling. Call 811 (U.S. only) or 1-888-258-0808 (U.S. or Canada) or local utility companies or national regulating authority.

Before you start any digging project, call the local One-Call system in your area and any utility company that does not subscribe to the One-Call system. For areas not represented by One-Call Systems International, contact the appropriate utility companies or national regulating authority to locate and mark the underground installations. If you do not call, you may have an accident or suffer injuries; cause interruption of services; damage the environment; or experience job delays.

The One-Call representative will notify participating utility companies of your proposed digging activities. Utilities will then mark their underground facilities by using the following international marking codes:

Red	Electric	Green/Brown	Sewer
Yellow	Gas, Oil or Petroleum	White	Proposed Excavation
Orange	Communication, Telephone, TV	Pink	Surveying
Blue	Potable Water		

OSHA CFR 29 1926.651 requires that the estimated location of underground utilities be determined before beginning the excavation or underground drilling operation. When the actual excavation or bore approaches an estimated utility location, the exact location of the underground installation must be determined by a safe, acceptable and dependable method. If the utility cannot be precisely located, it must be shut off by the utility company.



WARNING: Failure to follow any of the preceding safety instructions, or those that follow within this manual, could result in death or serious injury. This system is to be used only for those purposes for which it was intended, as explained in this manual.

Section 20: Intended Use

Vermeer BorePlan application is a resource tool intended to assist experienced HDD contractors, engineering consultants and project owners in pre-bore planning and design. It is intended to incorporate known characteristics and traits of key project components, together with their calculated relationships with the subsurface and bore path to provide the experienced user with a powerful stream of planning information. This application only allows for straight line bores. It is not intended to replace onsite utility locating, measuring and verification procedures which are essential for accurate placement of new underground installations and avoidance of existing utilities.

To obtain best results:

- Follow instructions included with Vermeer BorePlan.
- Confirm bore data entered in Vermeer BorePlan application is accurate.
- The BorePlan's free *Base Tier* does not provide left/right calculations. The *Base Tier* requires the user to provide left/right calculations.
- Upgrades to *Silver* and *Gold* subscriptions will be available with future application releases. The *Silver* and *Gold Tiers* will offer left/right calculations that are editable.

This page intentionally left blank.

Section 30: Getting Started

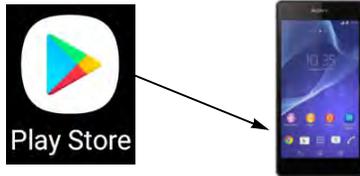
BorePlan is a mobile application built by Vermeer to display information related to bore planning and drilling. The BorePlan application will be available for download to mobile devices.

ACCESSING BOREPLAN

To access BorePlan, download the application from Google Play or App Store depending on the mobile device used.

Google Play for Android

Step 1: Open Google *Play* on a mobile device.



Step 2: Sign in with Google Account.



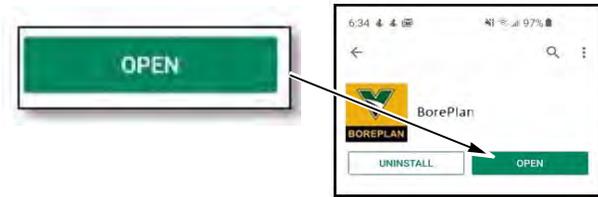
Step 3: Type **BorePlan** into the search box and tap the *Search* key at the bottom right corner.



Step 4: Select the BorePlan application and tap *Install* below the name of the application.



Step 5: When the installation is complete, launch the application by tapping *Open*.



App Store for iPhone

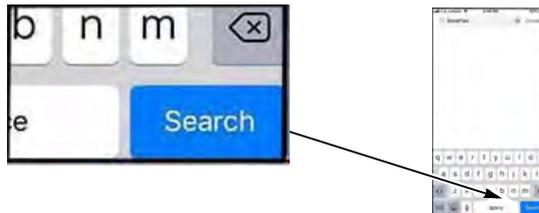
Step 1: Open *App Store*.



Step 2: Tap the *Search* icon  at the bottom right-hand corner and type **BorePlan** in the Search Bar.



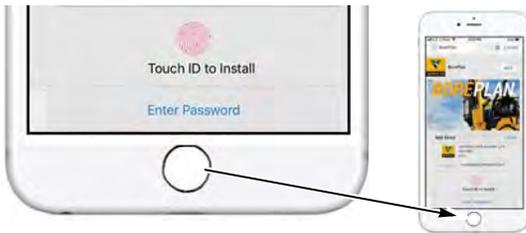
Step 3: Tap *Search* in the bottom right-hand corner of the keyboard.



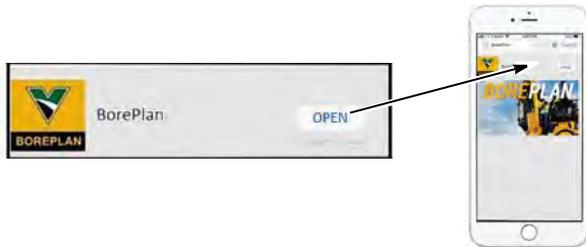
Step 4: Select the app and tap *GET*.



Step 5: Tap *ID to Install* or enter your Apple ID password.



Step 6: When the installation is complete, tap *Open* to launch the app.



ACCESSING THE APPLICATION FOR FIRST TIME USERS

After downloading the application, the BorePlan icon (1) will be on the mobile device. Follow the steps below to gain access to the application.

Step 1: Locate the BorePlan icon (1) on the mobile device and tap to open. The application will open to the Login page (2) to enter user information.



Step 2: Tap *Create Account* (3).

NOTE: If the user already has a username and password, please tap *LOG IN* and go to page 30-9



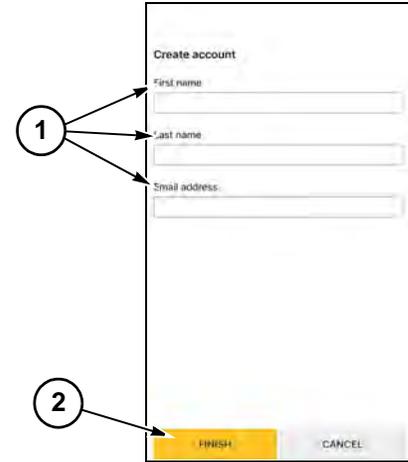
CREATING AN ACCOUNT

Step 1: Enter first name, last name and email address **(1)**.

Step 2: Tap *Finish* **(2)**.

Step 3: A box indicating **Success** will display, tap *OK* **(3)**.

Step 4: Account verification and the next steps will be sent to the user's email.



The screenshot shows a mobile application screen titled "Create account". It features three input fields: "First name", "Last name", and "Email address". A circled number "1" has three arrows pointing to each of these input fields. At the bottom of the screen, there are two buttons: "FINISH" (highlighted in yellow) and "CANCEL". A circled number "2" has an arrow pointing to the "FINISH" button.



EMAIL ACCOUNT VERIFICATION

- Step 1:** User will receive a verification email in their indicated email account. Open verification email.
- Step 2:** Tap *Verify Email* (1).
- Step 3:** After the email address is confirmed, the user will be directed to set up an account password.



ESTABLISHING A PASSWORD

Step 1: Type the desired password in the first text box (1).

NOTE: Password must adhere to the requirements listed (A).

Step 2: Type the password again in the *Confirm Password* text box (2).

Step 3: Tap *Submit* (3).

Step 4: The user will be redirected to the login page.

Vermeer

PLEASE SET A PASSWORD

A Password is case sensitive.
Must be at least 10 characters long.
Must include at least 1 number.
Must have at least 1 lowercase letter.
Must not include part of your name or user name.
Must not include a common word or commonly used sequence of characters.
New password may not have been used previously.

1 Password

2 Confirm Password

3 SUBMIT

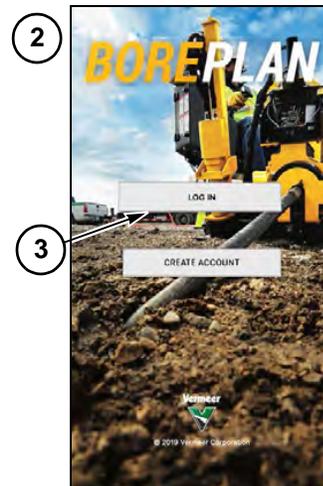
ACCESSING THE APPLICATION

After downloading the application, the BorePlan icon (1) will be on the mobile device. Follow the steps below to gain access to the application.

Step 1: Locate the BorePlan icon (1) on the user's mobile device and tap to open.

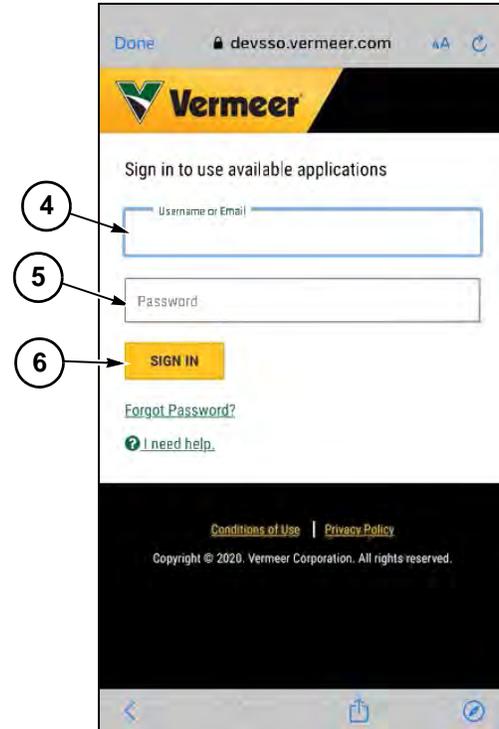
Step 2: The application will open to the login page (2). Tap *LOG IN* (3).

NOTE: If the user needs to set up an account, tap *Create Account* and refer back to page 30-6.



Step 3: Sign in by entering Username or Email (4) and Password (5).

Step 4: Tap *SIGN IN* (6).



Step 5: The End User License Agreement (EULA) (7) will be displayed. At the bottom of the EULA are terms to accept. The application requires the user to check the three gray buttons (8) to indicate the following requirements are met:

- I have read and agree to [the notice of personal information processing](#).
- I am 18 years or older.
- I have read and agree to the [Vermeer privacy policy](#), terms and conditions.

NOTE: Tap on the green underlined text at the bottom of the EULA to review *the notice of personal information processing* and the *Vermeer privacy policy*.

Step 6: Tap *AGREE and CONTINUE* (9) to proceed to the last step of the registration.

NOTE: Selecting *I DISAGREE* will not allow the user to continue with the registration process or gain access to the application.

This registration process will only be required once upon the first login and additionally if the application is updated.

7 End-User License Agreement

with Paragraph 5 of this Program Addendum or Section 9.2(c) of the Master license.

4. License fees: Each license which Vermeer hereby grants Customer for the use of BorePlan is fully paid up and royalty-free.

5. License term and termination: Customer's license for the use of BorePlan commences when Customer downloads BorePlan and shall continue until terminated by Vermeer or by Customer. Customer may terminate its BorePlan license at any time by deleting all copies of the BorePlan application from its mobile devices. Vermeer may terminate Customer's BorePlan license in Vermeer's sole discretion, for any reason and at any time, with or without notice to Customer and without liability to Customer of any kind. Customer's right to continue to use BorePlan terminates immediately upon the termination of Customer's BorePlan license, whether terminated by Customer or by Vermeer. Termination does not limit any of Vermeer's rights or remedies at law or in equity.

6. Maintenance program: Nothing in this Program Addendum shall obligate Vermeer to maintain, update or patch a particular version of BorePlan. However, Customer will be entitled to receive all Updates and Error corrections (as defined in the Master license) which Vermeer chooses to make in its sole discretion. Customer agrees to download and install all Updates and Error corrections promptly.

7. Collection and use of Customer information: Customer acknowledges Vermeer may collect Customer Data related to Customer's use of BorePlan for the purposes identified in Section 4 of the Master license. At all times, Vermeer will treat Customer Data in accordance with its Privacy Policy, which is incorporated by reference into this Program addendum.

8. Limitations of liability, indemnification, dispute resolution: Customer expressly acknowledges its use of BorePlan is subject to the provisions of Sections 7 and 8 of the Master license, including, without limitation, the limitations of liability, disclaimer of warranties, indemnification, and arbitration provisions contained therein.

I have read and agree to [the notice of personal information processing](#).

I am 18 years or older.

I have read and agree to the [Vermeer privacy policy](#), terms and conditions.

8

9

AGREE & CONTINUE **I DISAGREE**

DISCLAIMER

ALERT: Before the use of BorePlan is permitted, the user needs to tap *AGREE* and *CONTINUE* (1) to indicate the Disclaimer has been read and approved.

This Disclaimer will be displayed each time the user enters the application.

DISCLAIMER

Before being permitted to use BorePlan, you must read and agree with the disclaimer statement below. The information provided is dependent upon the accuracy and quality of user-provided data. The information is provided "as-is" and Vermeer Corporation does not guarantee or warrant the accuracy, reliability, or completeness of this information or its usefulness in achieving any purpose. The accuracy of any information is dependent upon accurate data gathering, data input, and proper use of the software. You are responsible for using your own judgment when using this information and for following all applicable laws and industry best practices. Vermeer Corporation shall not be liable for any loss, damage, or cost incurred by your reliance on this information.

AGREE and CONTINUE

1

Section 40: Landing Page

BOREPLAN OPTIONS

1. Create a New Bore Plan
2. Open an Existing Bore Plan
3. Rig Setup and Settings

CREATE A NEW BORE PLAN

Step 1: To start a new Bore Plan, tap *Create a New Bore Plan* (1) to enter the bore setup information.

NOTE: Required entries in Step 2 and Step 3 include Bore Name, Centerline Distance, Rod Length*, and First Rod Length* to be able to save a Bore Plan.

*Rod Length is pre-populated for user based on Rig Settings.



Step 2: Enter the Bore Specifications.

1. Bore Name (required)
 - Enter a name for the bore.
2. Entry Point **(A)** and Exit Point **(B)** GPS Coordinates
 - Latitude geographic coordinate that specifies the north-south position on the Earth's surface. Latitude will populate with the coordinates from the GPS device, but the field can be edited if desired.
 - Longitude geographic coordinate that specifies the east-west position on the Earth's surface. Longitude will populate with the coordinates from the GPS device, but the field can be edited if desired.
3. Centerline Distances (required)
 - The length of the bore when drawing a straight line from the entry point to the exit point across a flat surface.
4. Bore Length
 - Bore Length is determined by following the Rod-by-Rod plan exactly. Refer to "Graph Navigation - Profile View," [page 50-1](#).
5. Entry Angle
 - Angle at which the rod enters the ground. The angle is automatically calculated or it may be edited if the Entry Angle is known.
6. Exit Angle
 - Angle at which the rod exits the ground. The angle is automatically calculated or may be edited if the Exit Angle is known.
7. Start Point Depth
 - Depth at the starting point for the bore. This is an editable field.
8. End Point Depth
 - Depth at the ending point for the bore. This is an editable field.

Bore Setup

Bore specifications

- 1 Bore name
- 2 (A) Entry point GPS coordinates
 - Latitude
 - Longitude
- 2 (B) Exit point GPS coordinates
 - Latitude
 - Longitude
- 3 Centerline distance
- 4 Bore length
- 5 Entry angle
- 6 Exit angle
- 7 Start point depth
- 8 End point depth

Step 3: Enter Tooling Specifications.

1. Machine
 - Drop-down list of all Vermeer Horizontal Directional Drills.
2. Rod Type
 - Drop-down list of all rods associated with the selected drill.
3. Rod Diameter
 - Diameter of the rod selected. This field is editable if *Other* is selected.
4. Rod Length (required)
 - Length of rod selected. This field is editable if *Other* is selected.
5. Rod Bend Radius
 - The limit allowed for the rod to bend. The Bore Plan takes the greater value between the rod and product bend limits for Rod-by-Rod calculations.
6. First Rod Length (required)
 - Length of the first rod entering the ground. This value is defaulted to 70% of the rod length, but can be edited.
7. Drill Bit
 - Drop-down list of all Drill Bits available to the user via the Vermeer Bore Store.
8. Drill Bit Diameter
 - Drop-down list of all Drill Bits available to the user via the Vermeer Bore Store. If the desired drill bit is not displayed in the list, select *Other* and enter the Drill Bit Diameter.

The image shows a mobile application interface for 'Bore Setup'. The title bar is black with a white back arrow and the text 'Bore Setup'. Below the title bar is a section titled 'Tooling specifications'. The form contains several input fields, each with a circled number from 1 to 8 indicating its location:

- 1. Machine: A dropdown menu.
- 2. Rod type: A dropdown menu.
- 3. Rod diameter: A text input field with 'in' as a unit.
- 4. Rod length: A text input field with 'ft' as a unit.
- 5. Rod bend radius: A text input field with 'ft' as a unit.
- 6. First rod length: A text input field with 'ft' as a unit.
- 7. Drill bit: A dropdown menu.
- 8. Drill bit diameter: A text input field with 'in' as a unit.

9. Reamer

- Drop-down list of all Reamers available to the user via the Vermeer Bore Store. If the desired reamer is not in the displayed list, select *Other* and enter the Reamer type.

10. Reamer Diameter

- Diameter of the Reamer selected.

The screenshot shows a mobile application interface titled "Bore Setup". At the top left is a back arrow icon. Below the title, there are two input fields. The first field is labeled "Reamer" and is a drop-down menu with a downward arrow on the right. The second field is labeled "Reamer diameter" and is a text input field with a unit selector "in" to its right. Two red circles with white numbers "9" and "10" are overlaid on the left side of the screen, pointing to the "Reamer" and "Reamer diameter" labels respectively.

Step 4: Enter Product Specifications.

1. Product Type
 - Type of product inserted into the ground: HDPE, MDPE, Steel, PVC, Fiberglass
2. Product Diameter
 - Diameter of product entering the ground
3. Product Thickness
 - Thickness of the product type or thickness of product wall
4. Product Bend Radius Limit
 - The limit allowed for the product to bend. The Bore Plan takes the greater value between the rod and product bend limit fields for Rod-by-Rod calculations.

The screenshot shows a form titled "Product specifications" with four numbered callouts: 1. "Product type" with a dropdown menu; 2. "Product diameter" with a text input field and "in" unit; 3. "Product thickness" with a text input field and "in" unit; 4. "Product bend radius limit" with two text input fields, one labeled "ft" and one labeled "in".

Step 5: Save the Bore Plan.

1. Notes may be added in the Comments section.
2. Save Bore Plan by tapping *Save*.

The bore will be displayed in a graphical view along with the Rod-by-Rod plan.

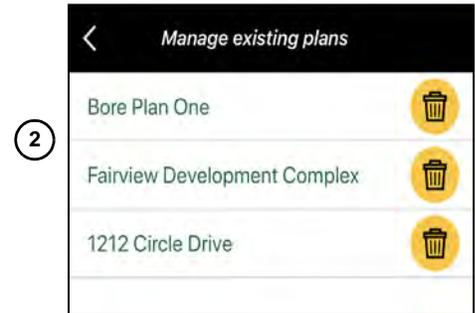
The screenshot shows a "Comments" section with a text input field and a yellow "SAVE" button at the bottom. A numbered callout 2 points to the "SAVE" button.

EXISTING BORE PLANS

Opening an Existing Bore Plan

Step 1: To open a list of existing Bore Plans, tap *Manage Existing Plans* (1).

Step 2: Tap the title of a Bore Plan (2) to display the profile graphical view of the bore and the Rod-by-Rod table.



Deleting an Existing Bore Plan

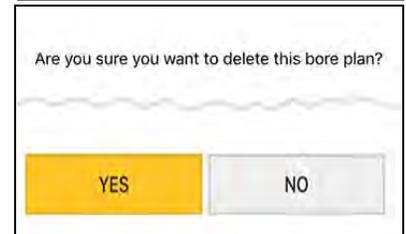
Step 1: Tap *Manage Existing Plans* (1).



Step 2: Find the Bore Plan to delete and tap the *trash* icon.



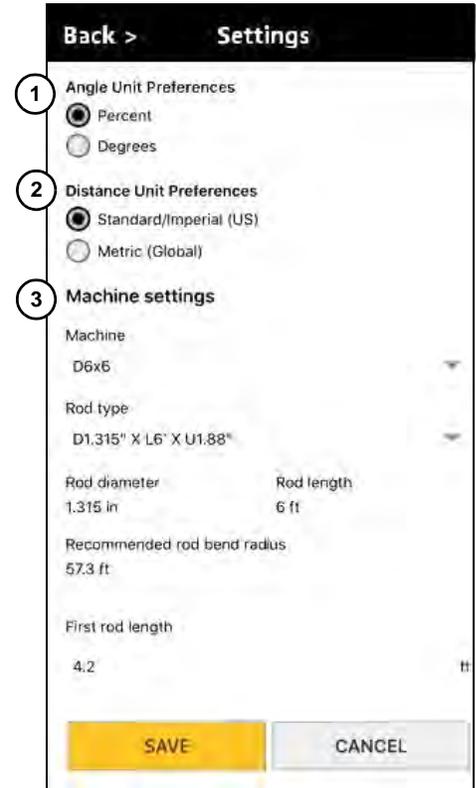
Step 3: The message "*Are you sure you want to delete this bore plan?*" will appear. Tap *YES* to delete the plan or tap *NO* to keep the plan.



RIG SETUP AND SETTINGS

Step 1: Select *Rig Setup And Settings* to define user preferences and machine settings.

1. Angle Unit Preferences
 - Planner/Driller is able to display the Angle Unit Preference in degrees or percentages.
2. Distance Unit Preferences
 - Displays Distance Unit Preferences in Metric (Global) or Standard/Imperial (US).
3. Machine Settings
 - Machine: Drop-down list of all Vermeer Horizontal Directional Drills
 - Rod Type: Drop-down list of all rods associated with the selected drill
 - Rod Diameter: Diameter of the rod selected
 - Rod Length: Length of rod selected
 - Recommended Rod Bend Radius: Rod and product bend limits for Rod-by-Rod calculations
 - First Rod Length: Length of the first rod entering the ground. This value defaults to 70% of the rod length but can be edited.



Section 50: Graphs

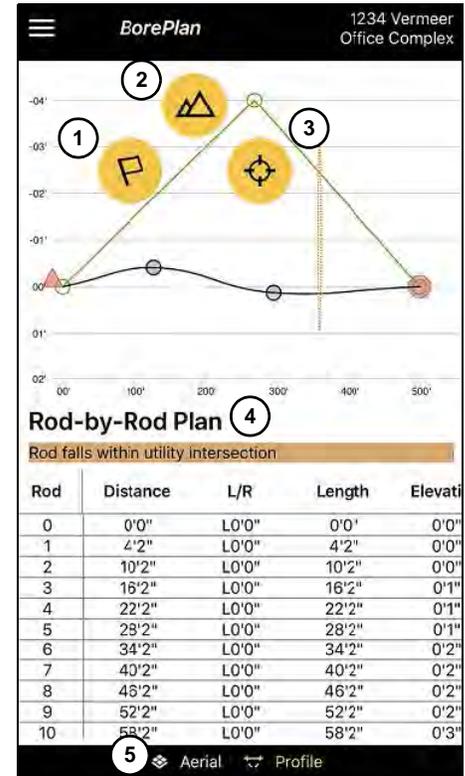
GRAPH NAVIGATION - PROFILE VIEW

The following section explains how to navigate a graph and create/modify points within a graph from the Profile View.

- Tapping anywhere on the graph will display two floating action buttons:
 - Add a utility (1)
 - Add a topography point (2)
 - Add a target point (3)
- Below the graph is the Rod-by-Rod Plan (4).

Both sections are critical to building the bore to the user's specifications.

NOTE: The BorePlan application displays the bore in Aerial View by default. Refer to "Aerial View," [page 50-8](#), for instructions to toggle between the Aerial View and the Profile View (5).

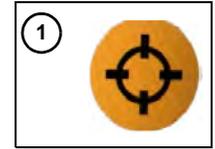


Target Point - Profile View

A Target Point is a point designated to hit a “target” during the drilling process.

- Add a Target Point

Create a Target Point (1) by tapping the desired point on the graph or along the bore line. Tap the *Add a Target Point* icon. After adding a Target Point, a window opens to set Target Point details.



- Target Point Details

Enter the Distance Along Centerline (2).

Enter the Depth (3) which is the distance below ground level.

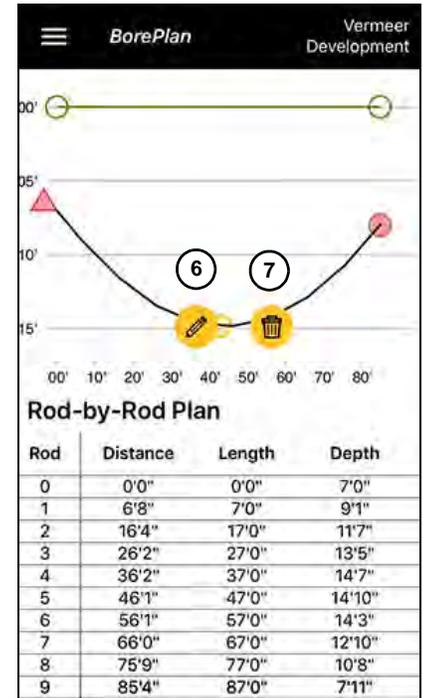
Pitch (4) is the pitch of the rod where the Target Point was logged. The Pitch is auto calculated but may be edited by the user.

Azimuth (5) is an angular measurement in a spherical coordinate system and is auto calculated.

Tap *Save* (6).



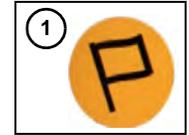
- **Edit a Target Point**
 Tap the desired Target Point along the bore line.
 Select the *Edit/Pencil* icon (6) to display the Target Point Details for modification.
- **Delete a Target Point**
 Tap the desired Target Point along the bore line.
 Tap on the *Trash* icon (7) and the Target Point will be deleted.
- **Deselect a Point**
 Tap on a point anywhere on the graph and the point will be deselected



Utility - Profile View

- Add a Utility Point

Tap the *Add a Utility Point* icon (1) to be directed to the Utility Details (2) page.



- Utility Details

Enter the Utility Type (3).

Enter the Utility Name (4).

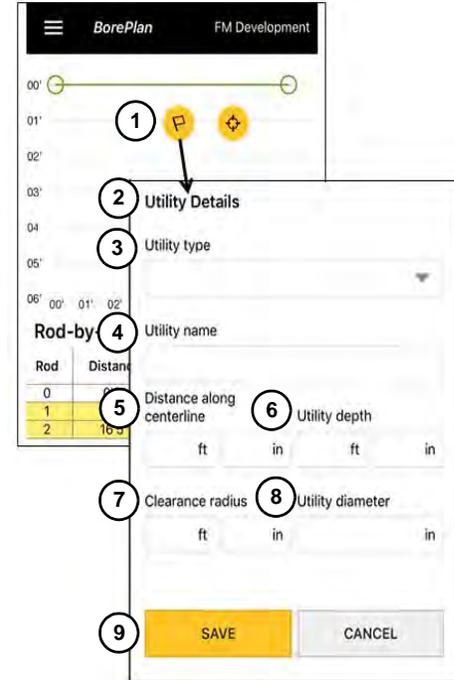
Enter Distance Along Centerline (5).

Enter Utility Depth (6).

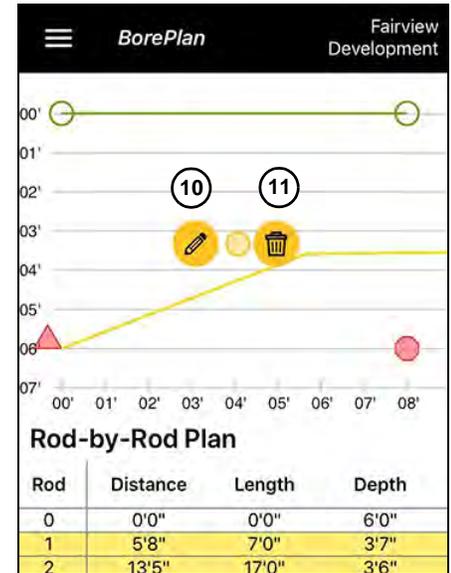
Enter Clearance Radius (7).

Enter Utility Diameter (8).

Tap Save (9).

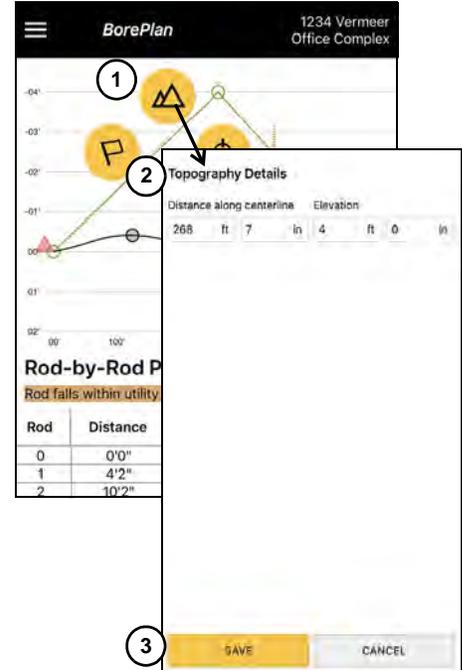
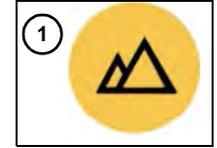


- **Edit a Utility**
Tap the desired Utility Point along the bore line.
Tap the *Edit/Pencil* icon **(10)** to display the Utility Details for modification.
- **Delete a Utility**
Tap the desired Utility Point along the bore line. Tap on the *Trash* icon **(11)** and the Utility Point will be deleted.
- **Deselect a Utility**
Tap on a point anywhere on the graph and the point will be deselected.



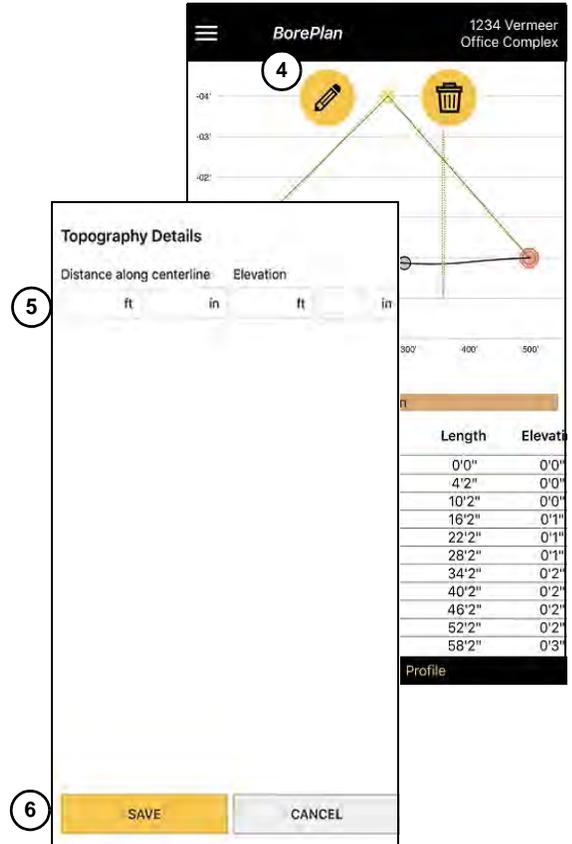
Topography - Profile View

- Add a Topography Point (1)
Tap the desired Topography point along the bore line.
- Topography Details
A Topography Details box (2) will display measurements defaulting to the placement on the screen. The user may modify the measurements.
- Tap *SAVE* (3) when the desired measurement has been entered.



- **Edit a Topography Point**
 Tap the desired Topography Point along the bore line.
 Tap the *Edit/Pencil* icon (4) to display the Topography details for modification.
 Edit measurements (5) accordingly.
 Tap *SAVE* (6) to continue.

- **Move a Topography Point**
 Touch the desired Topography Point along the bore line.
 While touching the Topography Point, drag the point to the new desired location.



AERIAL VIEW

The BorePlan application displays the bore in Aerial View by default.

To toggle from the Profile View (1) to the Aerial View (2), tap on the link at the bottom of the screen to navigate between the two viewpoints.

NOTE: Only the Utility Point can be added when in an Aerial View.



Utility - Aerial View

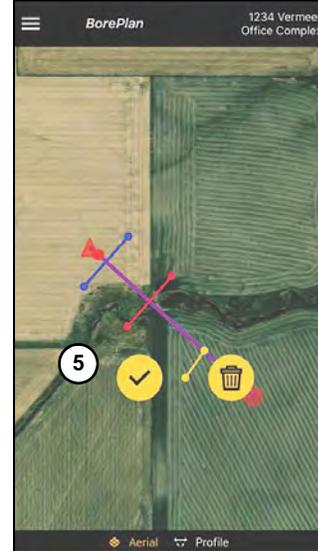
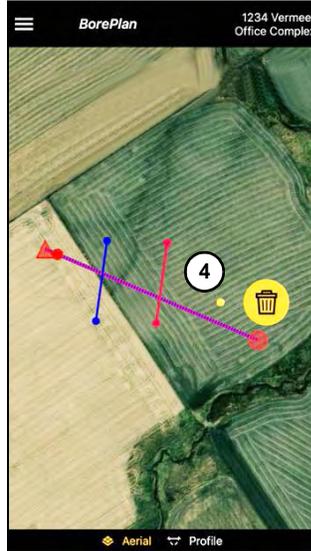
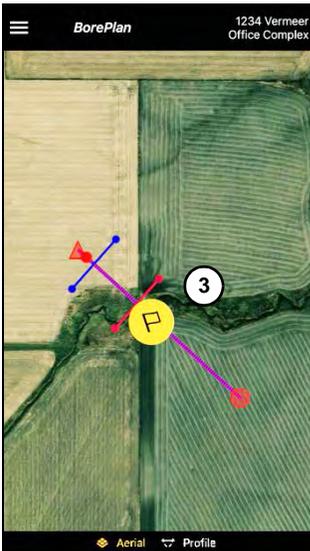
- Add a Utility Point

Tap the desired location for the Utility Point along the bore line.

When the yellow flag (3) displays, tap the flag to mark the starting point of the bore.

Tap a second time to set the end point (4) of the utility.

Tap the checkmark (5) when finished and to be directed to the Utility Details page.



- Utility Details

Enter the Utility Type **(6)**.

Enter the Utility Name **(7)**.

Enter Clearance Radius **(8)**.

Enter Utility Diameter **(9)**.

Enter Utility Depth **(10)**

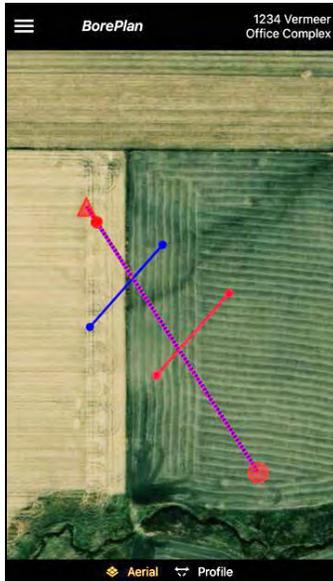
Tap Save **(11)**.

The screenshot shows a mobile application form titled "Utility Details". The form contains the following fields and controls, each indicated by a numbered callout:

- 6**: A dropdown menu for "Utility type".
- 7**: A text input field for "Utility Name".
- 8**: A dual-unit input field for "Clearance radius" with "ft" and "in" units.
- 9**: A text input field for "Diameter" with an "in" unit.
- 10**: A dual-unit input field for "Utility Depth" with "ft" and "in" units.
- 11**: Two buttons at the bottom: a yellow "SAVE" button and a grey "CANCEL" button.

- Moving a Start Point
 - Touch and drag on the start point of a bore or utility.
 - Lift finger when the start point is in the new position.
- Moving an End Point
 - Touch and drag on the end point of a bore or utility.
 - Lift finger when the end point is in the new position.

Moving a Start Point



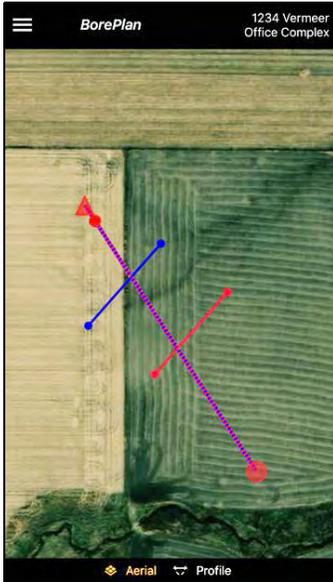
Moving an End Point



- Moving a Utility

To move a utility, touch and hold on the utility, drag and drop to the new position.

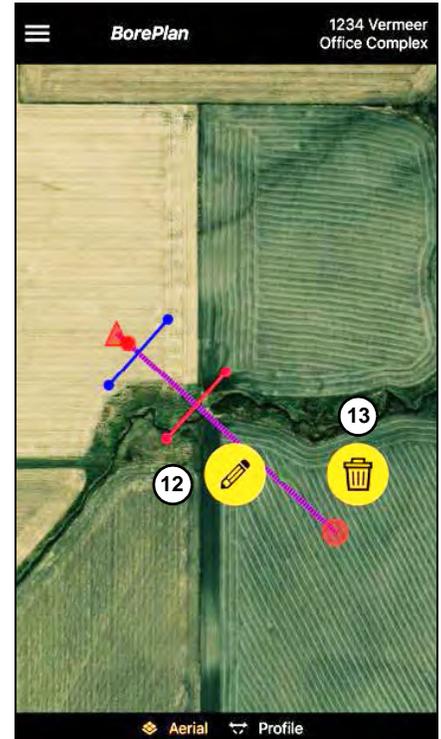
Moving a Start Point



Moving an End Point



- Edit a Utility
 - Tap the desired utility along the bore line.
 - Tap the *Edit/Pencil* icon (**12**) to display the utility for modification.
- Deleting a Utility
 - Tap the desired utility along the bore line.
 - Tap the *Trash* icon (**13**) and the utility will be deleted.
- Deselect a Utility
 - Tap a point anywhere on the graph and the point will be deselected.



- **Zooming In or Out**

To **Zoom In** on a bore, start with two fingers extended apart and pinch together while touching the screen.

To **Zoom Out** on a bore, start with two fingers pinched and extend them apart while touching the screen.

ZOOM IN



ZOOM OUT



Section 55: Rod-by-Rod Plan

ROD-BY-ROD TABLE

The Rod-by-Rod table displays a line for each rod on the selected bore lines. The rod table (1) includes information for the Rod number, Distance (along Center Line), Length, Depth, Pitch, and Bend Radius.

If a utility line intersects the bore line (in the side view), the Rod-by-Rod report will show intersecting rods with an orange background and a notification in orange above the rod table.

If an individual rod has a radius which falls under the bend limit (set in bore line properties), the Rod-by-Rod report will show the rod that exceeds the bend limit rod with a yellow background and a notification in yellow above the rod table.

1

Rod-by-Rod Plan

Rod	Distance	Length	Depth	Pitch	Bend Radius
0	0'0"	0'0"	0'0"	-10.0%	Infinity
1	10'5"	10'6"	1'0"	-8.8%	900'3"
2	25'5"	25'6"	2'2"	-7.1%	900'3"
3	40'5"	40'6"	3'1"	-5.5%	900'3"
4	55'4"	55'6"	3'10"	-3.8%	900'3"
5	70'4"	70'6"	4'3"	-2.1%	900'3"
6	85'4"	85'6"	4'6"	-1.6%	900'3"
7	100'4"	100'6"	4'9"	-1.2%	3470'3"
8	115'4"	115'6"	4'11"	-0.8%	3470'3"
9	130'4"	130'6"	5'0"	-0.3%	3470'3"
10	145'4"	145'6"	5'0"	0.4%	791'11"
11	160'4"	160'6"	4'10"	2.3%	791'11"
12	175'4"	175'6"	4'4"	4.2%	791'11"

This page intentionally left blank.

Section 60: Rod Overbend Indicator

ROD OVERBENDS

Graph Indicator of Overbends

The bore line is the projected path of the bore. It features multiple data points that depict the depth of the bore. These points are visible in the side view.

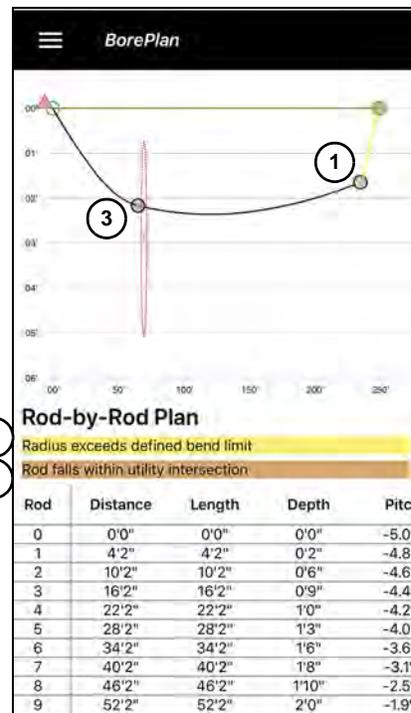
If an overbend occurs on the rod where the radius of a rod exceeds the bend limit, portions of the bore will be highlighted in yellow (1) on the graph. If an intersection occurs on the rod where a utility touches or intersects the bore path, those bore portions will be highlighted in yellow (2).

Rod-by-Rod Indicator of Overbends

If a rod overbend occurs, the rod will be highlighted in yellow on the graph (1) and on the Rod-by-Rod table (2) and will require adjustments to the bore plan.

Rod-by-Rod Indicator of Intersections

If a utility intersects with a bore line, the rod will be highlighted in orange on the graph (3) and on the Rod-by-Rod table (4) and will require adjustments to the bore plan.



This page intentionally left blank.

Section 70: Vermeer BorePlan

Located at the bottom of the landing screen is a link to Vermeer Corporation.

The Vermeer Corporation link information includes:

1. Local Vermeer Dealer
 - Link to your Local Vermeer Dealer.
2. AppSupport@Vermeer.com
 - Link to send an email to Application Support Services.
3. Online Manual
 - Link to the Online Manual, instructions on application use.
4. End User License Agreement
 - Link to the End User License Agreement.
5. Privacy Policy
 - Link to the Vermeer Privacy Policy.
6. Tap *OK* to return to the program landing page.



This page intentionally left blank.

Index

A

Accessing BorePlan, 30-1
Accessing the Application for First Time Users, 30-5
Accessing the Application, 30-9
Aerial View, 50-8
App Store for iPhone, 30-3

B

BorePlan Options, 40-1

C

Create a New Bore Plan, 40-1
Creating an Account, 30-6

D

Deleting an Existing Bore Plan, 40-7
Disclaimer, 30-12

E

Email Account Verification, 30-7
Establishing a Password, 30-8
Existing Bore Plans, 40-6

F

G

Getting Started, 30-1
Google Play for Android, 30-1
Graph Indicator of Overbends, 60-1

Graph Navigation - Profile View, 50-1
Graphs, 50-1

H

I

Intended Use, 20-1

J

K

L

Landing Page, 40-1

M

N

O

Opening an Existing Bore Plan, 40-6

P

Q

R

Rig Setup and Settings, 40-8
Rod Overbend Indicator, 60-1
Rod Overbends, 60-1
Rod-by-Rod Indicator of Intersections, 60-1
Rod-by-Rod Indicator of Overbends, 60-1
Rod-by-Rod Plan, 55-1
Rod-by-Rod Table, 55-1

S

Safety, 10-1

T

Target Point - Profile View, 50-2

Topography - Profile View, 50-6

U

Utility - Aerial View, 50-9

Utility - Profile View, 50-4

V

Vermeer BorePlan, 70-1

Revision History

REVISION	DATE	PAGE(S)	DESCRIPTION
o1_00	09/19	All	First Edition User's Guide Released. Applies to software version 1.0
o1_01	03/20	Section 30-5, 6, 7, 8, 9, 10, 11, Section 40-1, 2, 3, 4, 5, 6, 7, Section 50-4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	Added first time users info including access to app, create an account, email account, establishing password. Added accessing the app for existing users, updated the EULA. Updated the landing page screen, BorePlan options, added bore specifics, tooling specifics, enter product specifics. Added existing bore plans. Added utility - profile view, topography - profile view, aerial view.

**Copyright 2019, 2020. All rights reserved.
Vermeer Corporation
1210 Vermeer Road East, P.O. Box 200
Pella, Iowa 50219-0200**