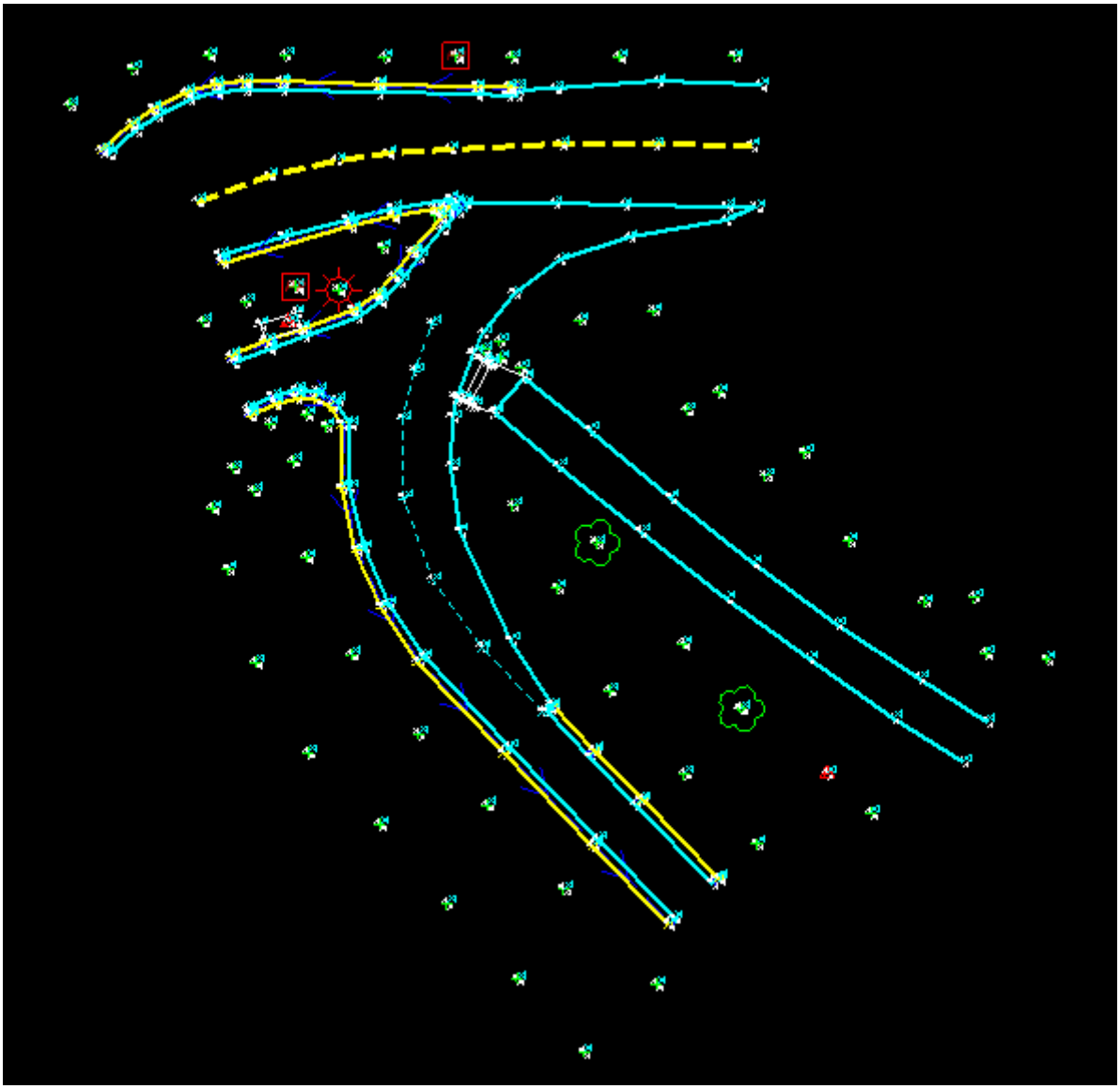
Measuring points with feature codes



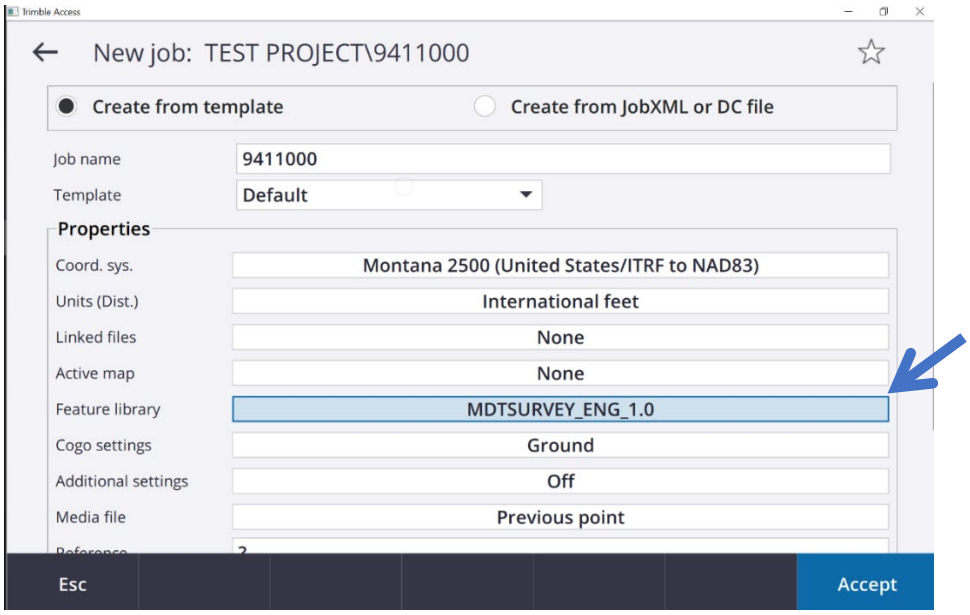
Access 2018.22

4/2019

This section provides information on using codes from the feature library to code points as you measure them and, if required, fill out attributes for the measured point. This coding will allow for the creation of field to finish line strings, symbols, and DTM generation.

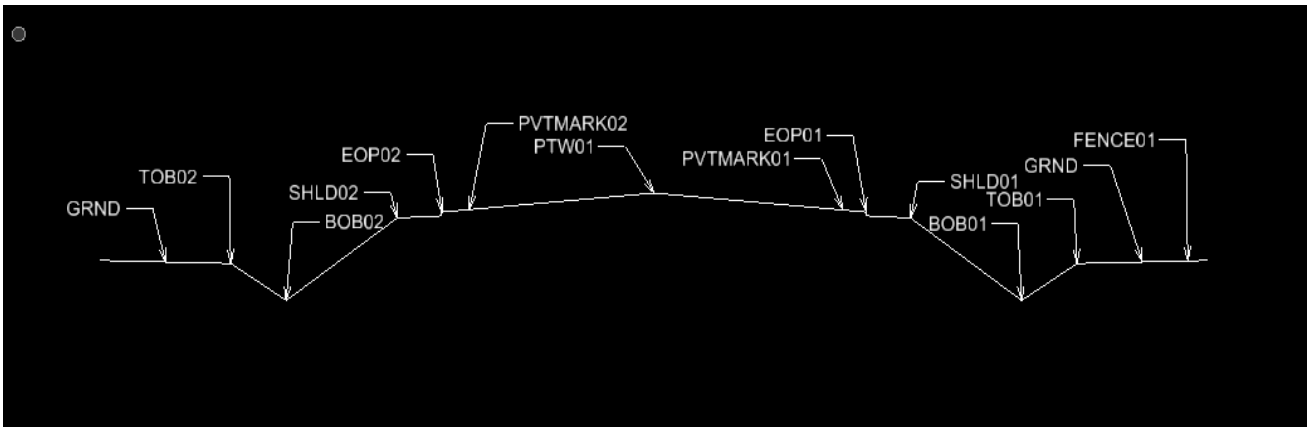
Feature Code File (.fxl)

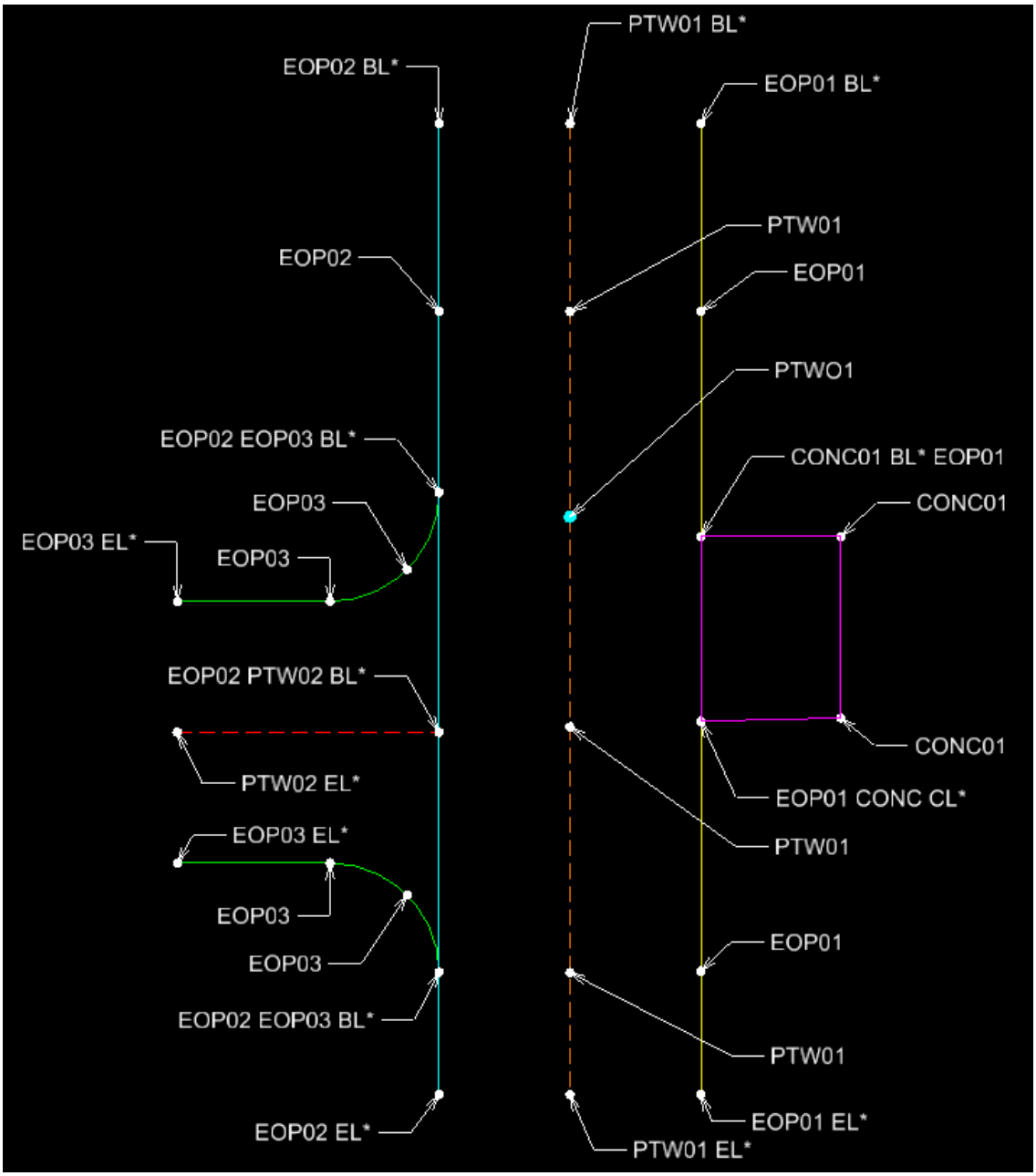
Before you can use the codes, you must make sure the .fxl file is in the correct place and linked to the job. The **Feature Code** file will be provided to you along with the **Geoids** and **Survey Styles.** All data used by the Trimble Access software must be stored in the appropriate folder in the **C:\ProgramData\Trimble\Trimble Data\System Files** folder. With the file in the appropriate location, the feature Codes must be linked to the job. See the **S5** or **R8s GPS Quick Guides** on setting up a job.



Line strings

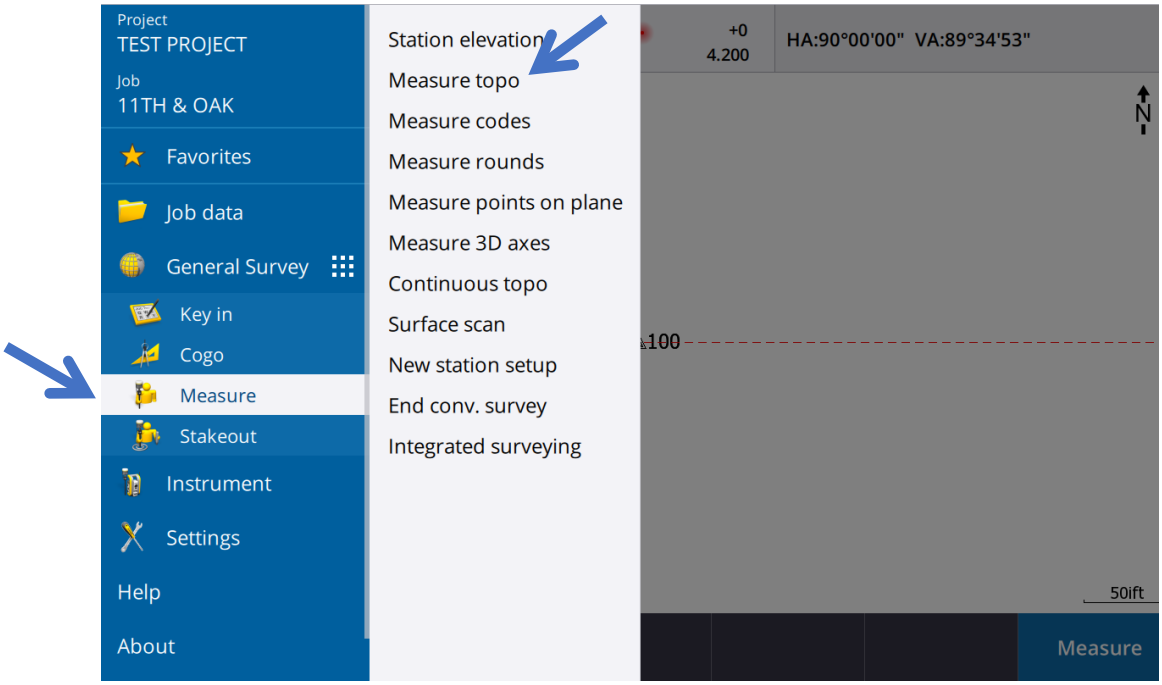
With Trimble Access comes the ability to now use line strings instead of chains while mapping. This gives the user the ability to use codes over and over by beginning and ending lines. After ending a line string, that same code (EOP01) can be started over. To begin a line, simply add a space after the code and insert BL* (EOP01 BL*). To end a line, insert a space and add EL* (EOP01 EL*). To close a line back on itself, use the close command by inserting a space and adding CL* (CONC01 CL*). You can run as many lines as you desire by increasing a numeric at the end of your code (EOP02). Line strings also allow for multiple codes on a single shot.

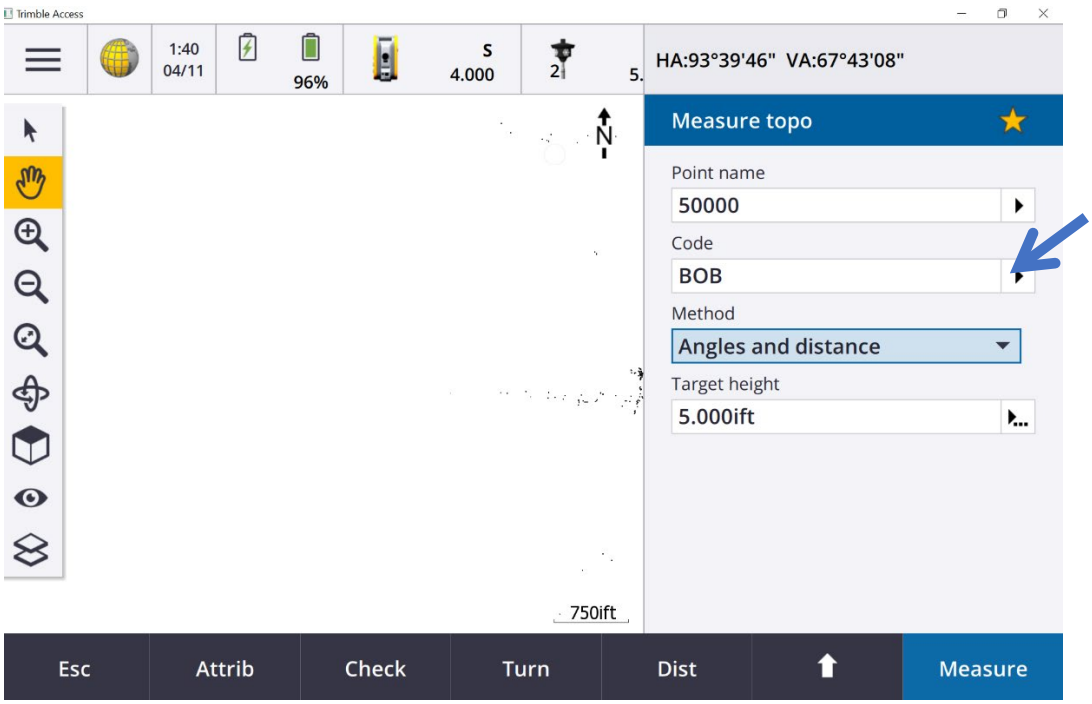

GRND
TOB02
SHLD02
BOB02
EOP02
PVTMARK02
PTW01
PVTMARK01
EOP01
SHLD01
BOB01
TOB01
GRND
FENCE01

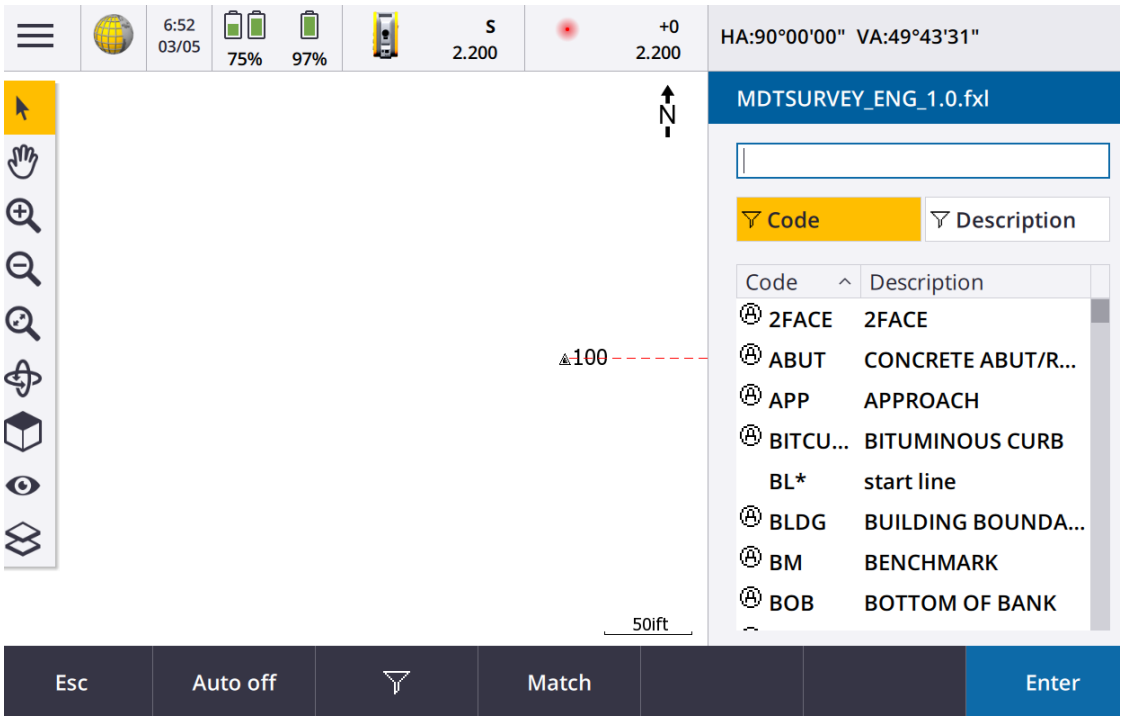

EOP02 BL*
PTW01 BL*
EOP01 BL*
EOP02
PTW01
EOP01
PTWO1
EOP02 EOP03 BL*
CONC01 BL* EOP01
CONC01
EOP03
EOP03 EL*
EOP03
EOP02 PTW02 BL*
CONC01
PTW02 EL*
EOP01 CONC CL*
EOP03 EL*
PTW01
EOP03
EOP01
EOP03
EOP02 EOP03 BL*
PTW01
EOP02 EL*
EOP01 EL*
PTW01 EL*

Measure Topo

After setting up the instrument of choice, refer to **S5** or **R8 GPS Quick Guides** on setting up instrument and job, navigate to **Measure** and select **Measure topo**. This will take you to the next screen to enter **Point name**, **Code**, **Method**, and **Target height**. When you click in the code window, Access will navigate to the feature codes.

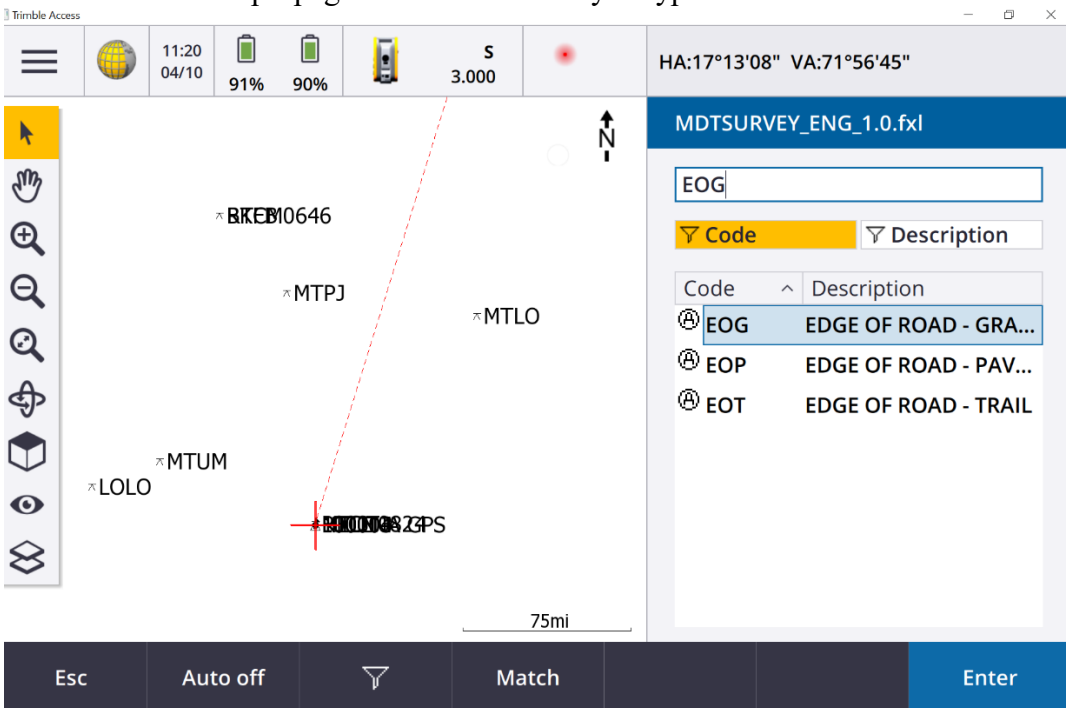






To select feature codes

1. Select the code from the list or type it in the field near the top of the screen. The codes will auto propagate with each letter you type into the code box.



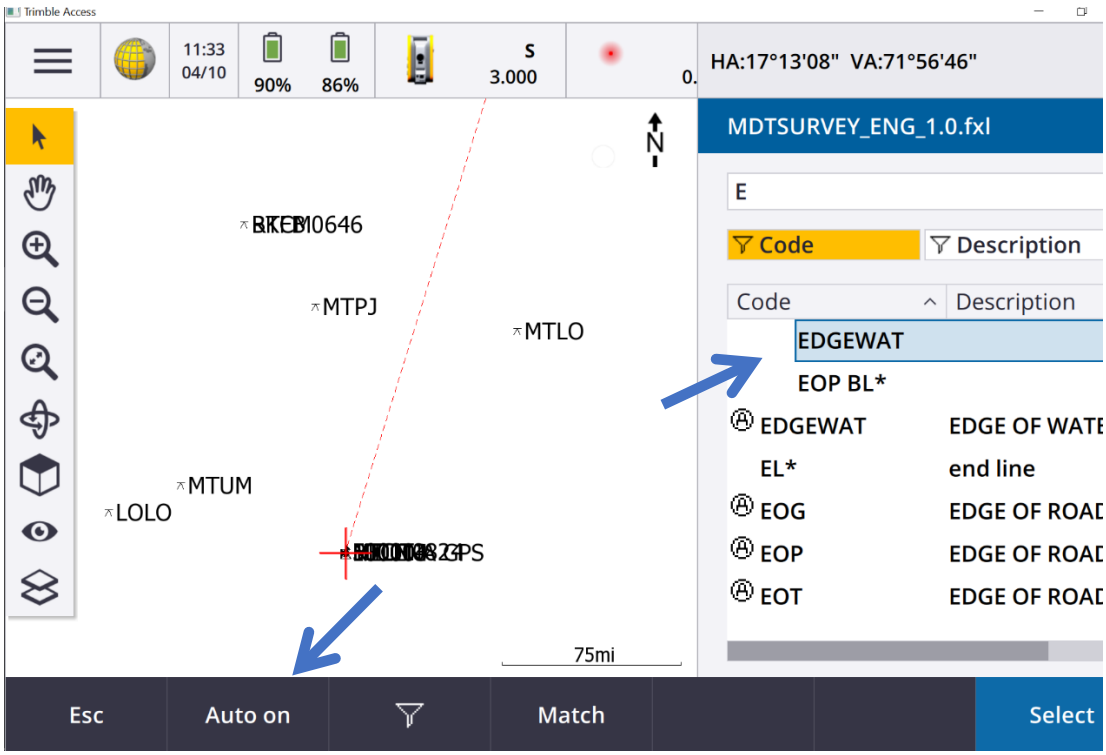
2. To enter multiple codes, for example to locate a tree and take a ground shot

(**TREE GRND**), select each code in turn from the list. The software automatically enters a **space** to separate each code. If you enter codes through the controller keypad, you must enter a **space** after each code to display the entire code list again before you enter the next code.

3. Tap **Enter**.

To disable auto-complete

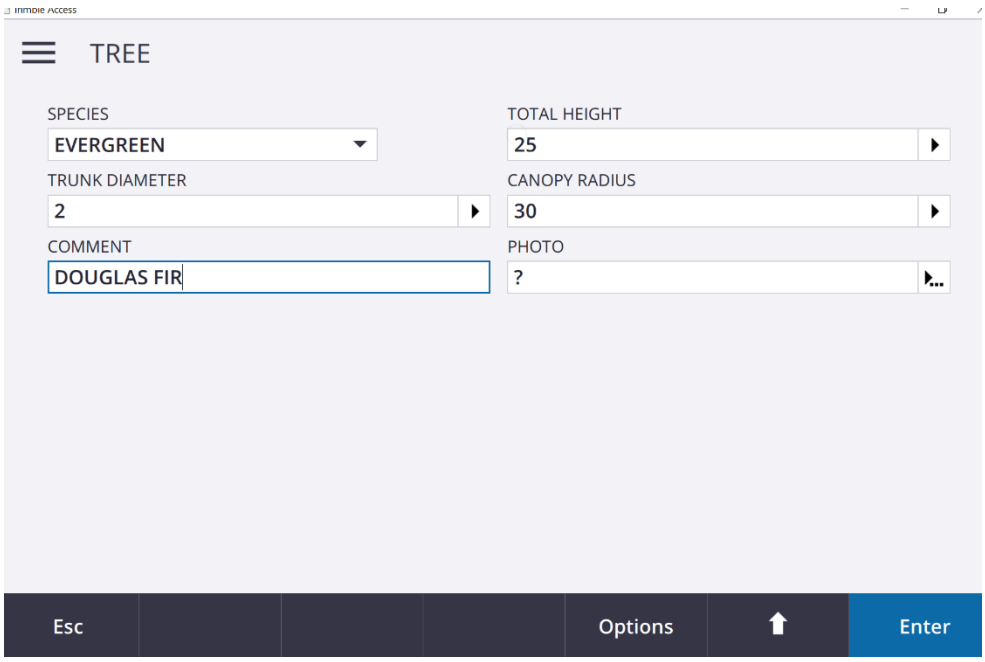
By default, auto-complete is enabled. To disable auto-complete, tap the **Auto off** softkey. When auto-complete is turned off, recently used codes appear at the top of the code list. Multiple entry codes are remembered as a single entry in the recently used list. This allows you to quickly select recently used codes, especially multiple code entries.



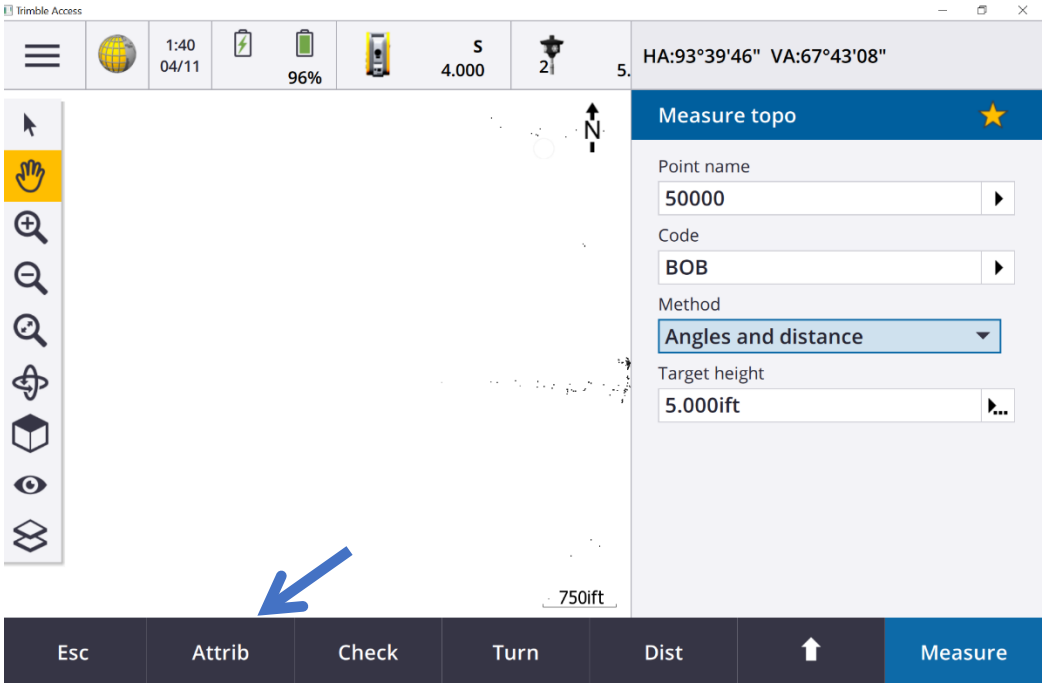
To enter attribute values when measuring a point

1. Enter the point name and select a code. If the code has attributes, the **Attrib** softkey appears in the **Measure** screen. Feature codes that have attributes have an attribute icon Ⓐ next to the feature code in the library.
2. To make the attribute form appear when a point is stored for which there are required attributes, but no value has yet been entered, tap **Options** and select **Prompt for attributes**.

Here is an example of the attributes associated with the code **TREE (units in feet)**

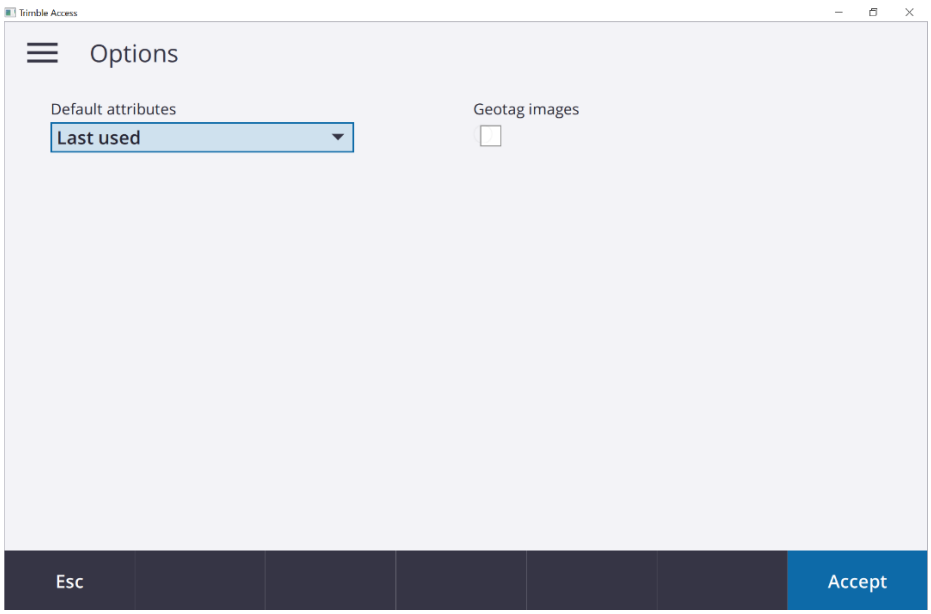


3. To enter attributes, tap the **Attrib** softkey.



4. To select the default attribute values, tap **Options** and select

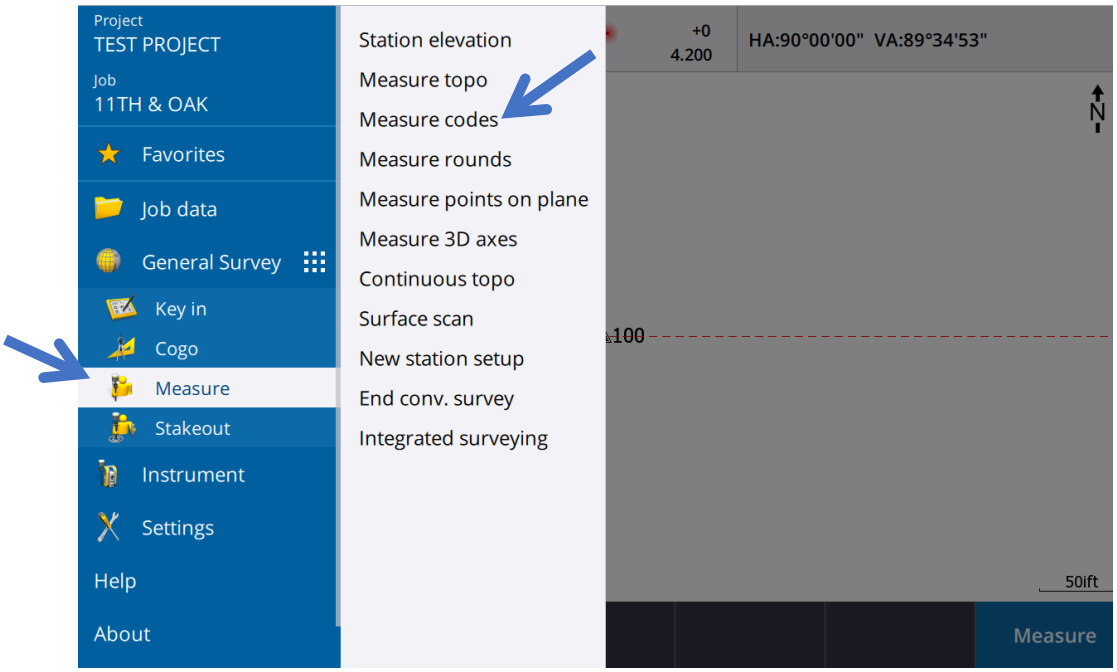
- **Last used** to use the attribute values for the last measured point
- **From library** to use the default attribute values from the feature library

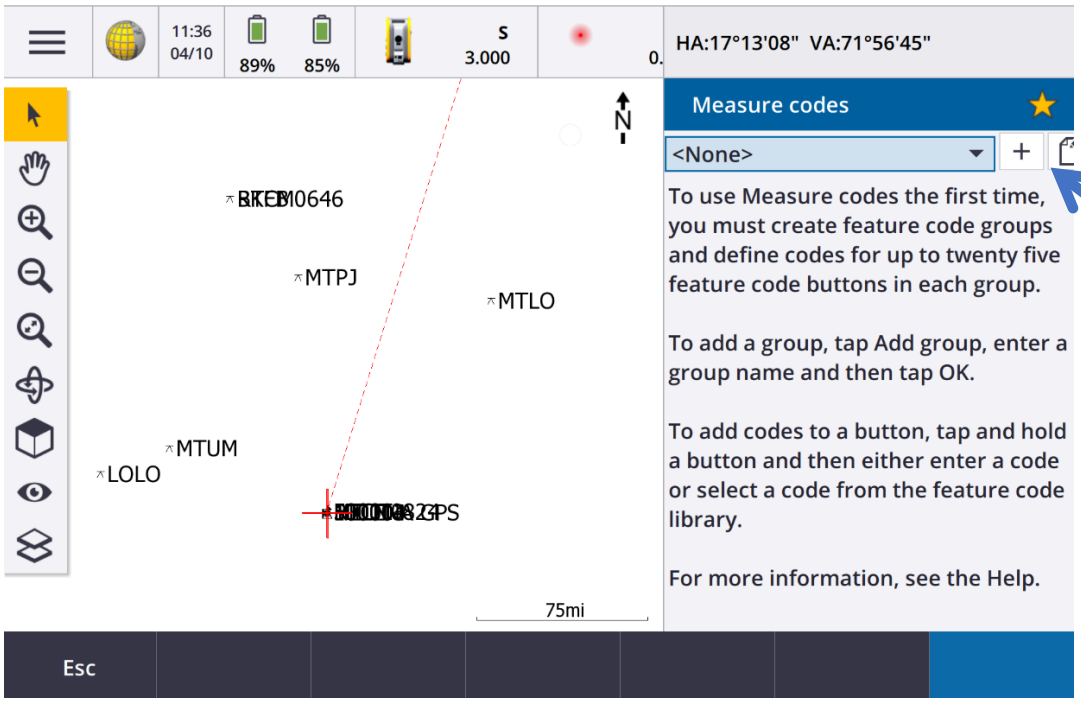


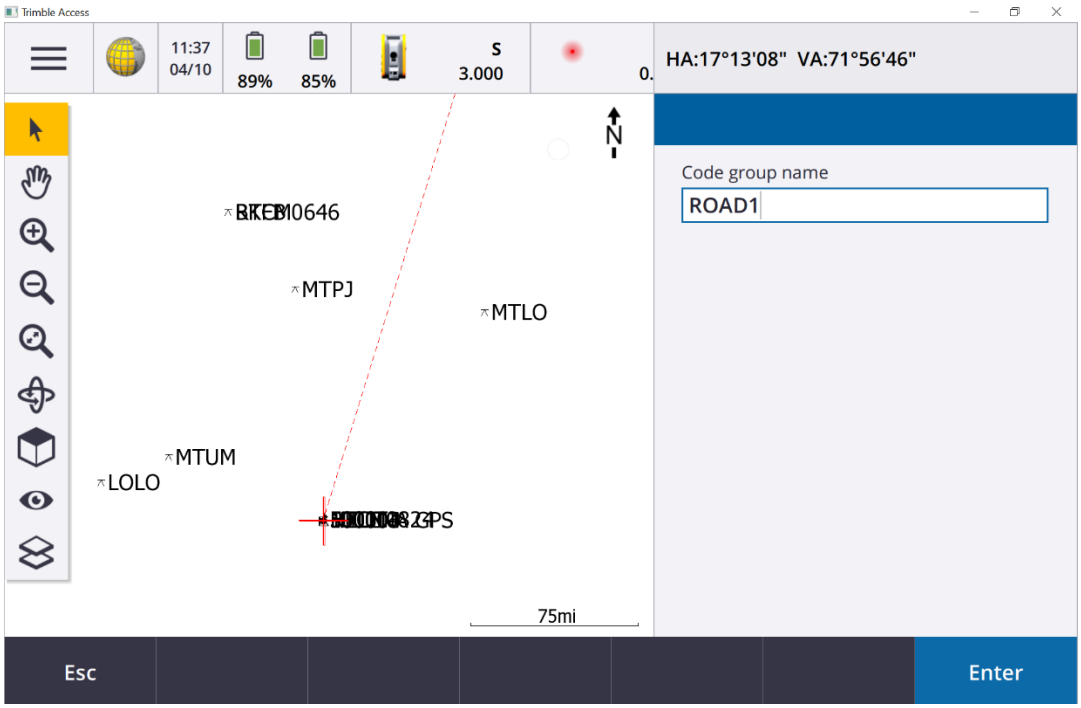
5. Enter the attributes of the point you are measuring.
6. Tap **Store**.

Measure Codes

To measure and code conventional or GNSS observations in one step, select the feature code you want to measure and store from the Measure codes form. The first time you view the Measure codes form, you must select the codes from the feature library that you want to appear on the form. You can define multiple pages of codes, each consisting of up to 25 codes.



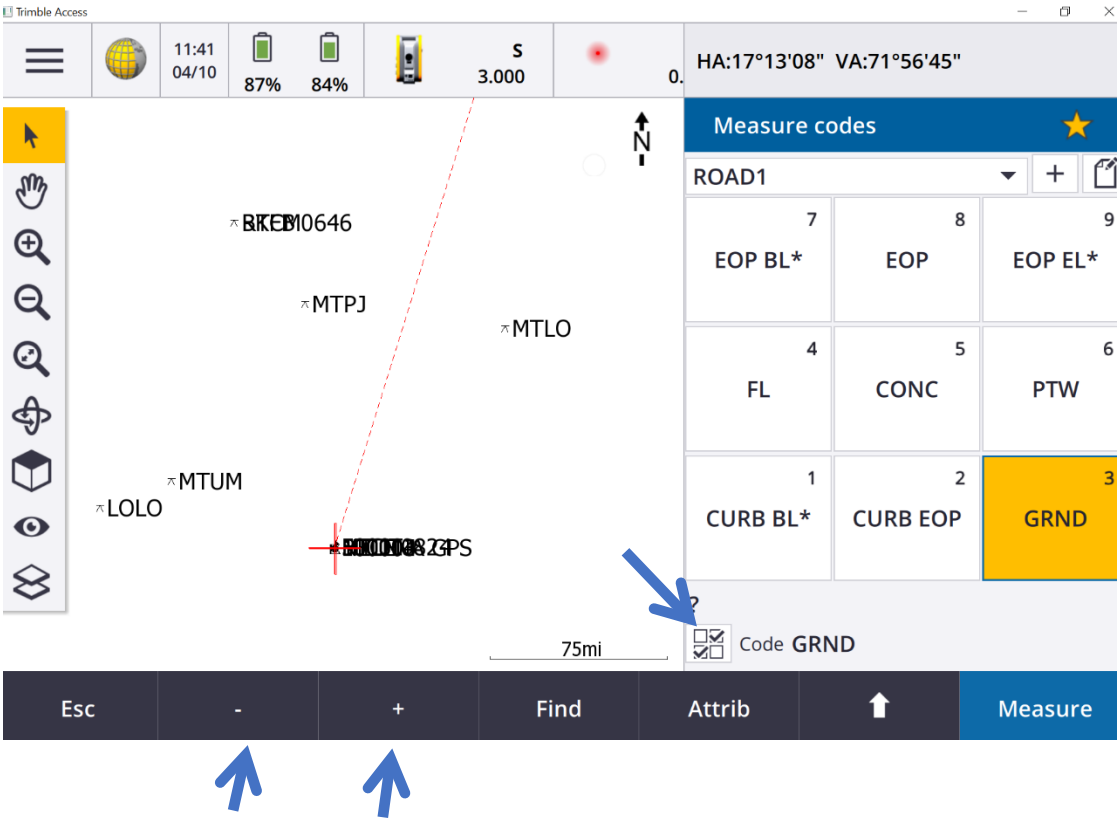




When the code button layout is 3x3 the numeric keypad on the controller can be used. Keys 7, 8, 9, activate the top row of buttons, keys 4, 5, 6 activate the middle row of buttons, keys 1, 2, 3 activate the bottom row of buttons.

When you tap one of the code buttons in the **Measure codes** form, the code on that button is added to the **Code** field at the bottom of the **Measure codes** form. Typically, you can use the **Code** button to combine codes from multiple code buttons Where features combine you can

apply multiple codes, either from the current group, or a combination of groups. To do this, enable the **Multi-code** button and then tap the required code buttons in the **Measure codes** form.



Stringing support

Measure codes has '+' and '-' softkeys that enable you to apply a suffix to the code on the button. This is useful when you use the stringing method for feature coding. You can configure the suffix to 1, 01, 001, or 0001. When the suffix is configured to 01, tap '+' to increase the code "Fence" to "Fence01". Tap '-' to decrease the code by 01.
Tap **Find** to find the next available string for the currently highlighted button.

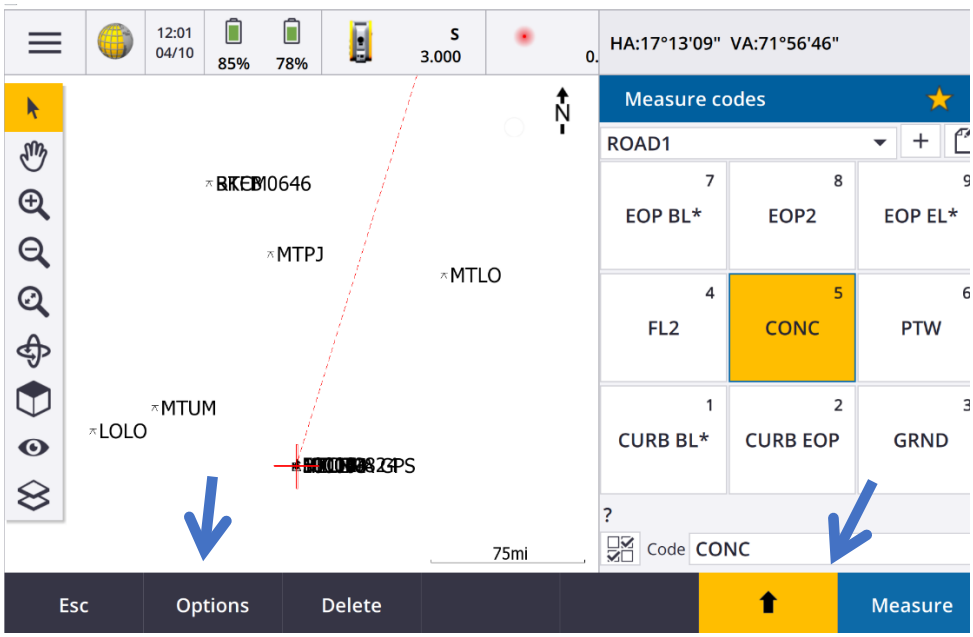
To assign codes to buttons

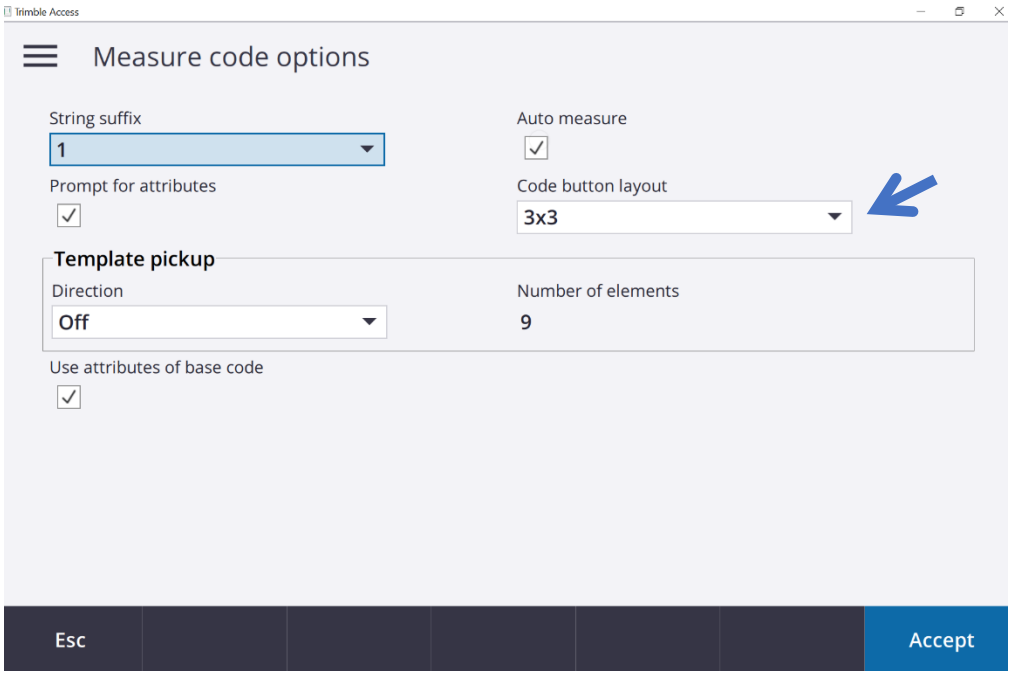
1. Tap and select **Measure / Measure codes.**
2. To create a code group:
    a. Tap +.
    b. Enter the **Code group name**.
    c. Tap **Accept**.
3. To add a code to a button, tap and hold on the button.

NOTE: Alternatively, navigate to the button using the arrow keys, and then press the Space key. The list of codes in the feature library appears.

4. Select the code from the list or type it in the field near the top of the screen.

5. To add another code to the same button, enter a space in the text field next to the first code, and then enter or select the second code.
6. When you have finished adding codes to the button, tap **Enter**. The code you entered now appears on the button.
7. To change the number of code buttons that appear in a group, tap **Options** and change the value in the **Code button layout** field.





To measure and code observations

1. Tap ☰ and select **Measure / Measure codes.**
2. Select the code group from the list.
3. To initiate a measurement, tap the appropriate code button.

NOTE: Alternatively, use the arrows keys to navigate to the button and then press **Enter**, or if the code button layout is 3x3 press the numeric key that corresponds to the appropriate code button.

4. Depending on the type of survey you are in, the **Measure topo** or **Measure point** screen appears. By default, the software starts the measurement when the code button is selected. To change this setting, in the **Measure codes** screen tap **Options** and then clear the **Auto measure** check box.
5. Select the measurement method.
6. Measure the point.
7. If the measurement is not automatically stored, tap **Store**. To change the auto store settings, tap **Options** in the **Measure** screen. Once the measurement is stored, the **Measure codes** form appears, ready for the next measurement.
8. To measure a new point with the same code, tap **Enter**. Alternatively, repeat the steps above to measure a point with a different code.

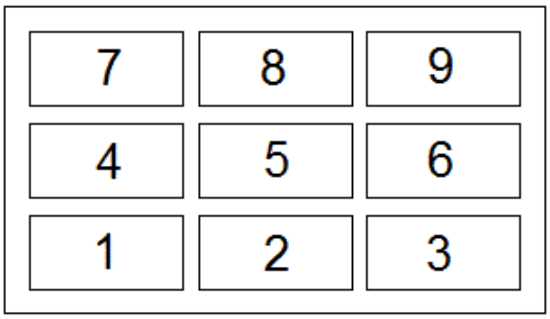
NOTE: The **Measure topo** or **Measure points** form remains open. To change the point name or the measurement method, tap ☰ and select the **Measure** form in the **Return to** list, make your changes, and then tap ☰ and select **Measure codes.**

To create a template of a measurement code sequence

To automatically select the next code button in the **Measure codes** screen after storing a measurement, configure the **Template pickup** settings in the **Options** screen. Template pickup is particularly useful when coding observations in a regular pattern, for example, a road cross section.

To configure template pickup:

1. Tap ☰ and select **Measure / Measure codes.**
2. Tap **Options**.
3. Configure the template pickup **Direction**. Refer to the following diagram:

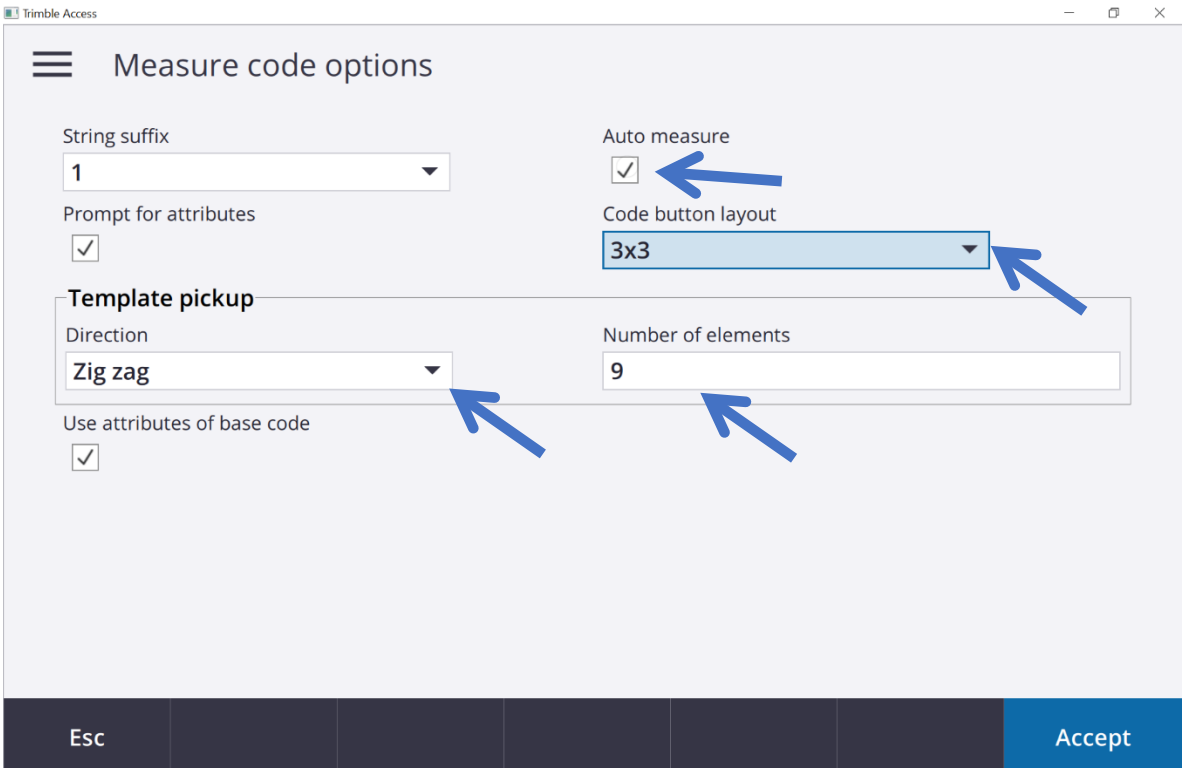
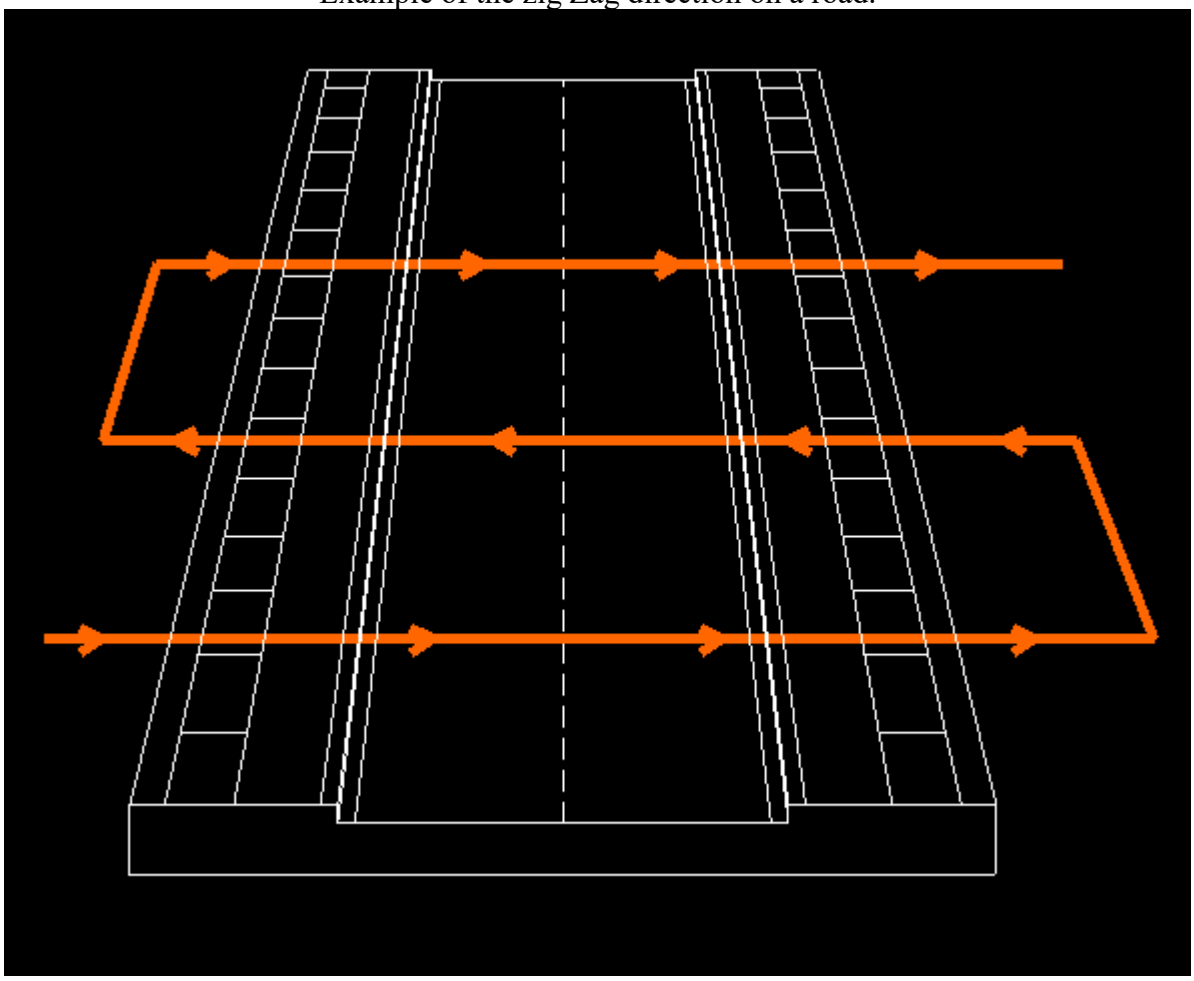


For:

- **Left to right** – The highlight moves from 7–9, then 4–6, then 1–3.
- **Right to left** – The highlight moves from 3–1, then 6–4, then 9–7.
- **Zig zag** – The highlight moves from 7–9, 4–6, 1–3 then 3–1, 6–4, 9–7, then 7–9 and so on.

If the **Direction** is set to **Off**, the highlight remains on the selected button after a measurement is taken. To skip a code, tap a different button, or use the arrow keys to select an alternative code button.

4. Configure the Number of elements. The Number of elements configured should match the number of elements across the template, and the number of buttons in the code group.



Example of the zig Zag direction on a road.