Trimble Access - Stakeout EFT Terrace Alignment

Overview: Stakeout the alignment of a terrace that was designed in the NRCS Engineering Field Tools (EFT) v3.4.1.2 software.

- The terrace surface is exported from EFT.
- Iowa NRCS uses survey units of *International Foot* but EFT v3.4.1.2 labels the units as *US Survey Foot* so the surface file must be updated before importing into Trimble Access.
- Determine the details of any Control Points that you will need. They can be linked from the original survey or a coordinate text file of control points can be uploaded to the Trimble unit.
- The alignment only is staked from the Roading component of Trimble Access.

Exporting Terrace Information from NRCS EFT

In NRCS Engineering Field Tools:
Export Surfaces
1. *File...Export... Surfaces...*
2. Input a unique filename {e.g. *Smith terraces*} and <u>click</u> Save. Click Ok.

Using Microsoft Excel:
Prepare Exported Surface file so that International Foot is correctly used as units.
3. Open the *Update EFT Surface Export units.xlsm* spreadsheet.
4. Follow the spreadsheet instructions to open the EFT exported surface. {e.g. *Smith terrace*}
5. Save the converted surface file. {e.g. Smith terrace IFoot.xml} Close the spreadsheet.

Use the **Trimble Access Upload** steps to transfer the converted Surface file to the controller.
   Note: Place the .xml file in the same folder that your .job file will be in.

Setting up Job for Stakeout of Terrace Flagline only

<u>Link Uploaded text file to Job</u>
<u>On TSC3/2 controller</u>
6. Power on TSC3 and <u>press</u> the **Trimble** button to launch Trimble Access.
7. *Roads...Jobs... New Job....*
8. <u>Input</u> a job name for this terrace stakeout survey.
9. <u>Select</u> the template for either GPS or Total station.
10. <u>Click</u> *Linked Files...*
11. <u>Select</u> the file or job with your control points. E.g. **Smith Control.txt**.
12. <u>Click</u> Accept.
13. <u>Click</u> Accept.

<u>Define Terraces Alignments (No Elevations)</u>
14. <u>Click</u> *Define...*
15. <u>Select</u> the EFT surface file with your terraces. E.g. **Smith terrace IFoot.xml**.
16. <u>Click</u> *Edit...*
17. <u>Select</u> the Alignment from the *Road Name* pulldown. {e.g. *A1* for Terrace 1}
18. <u>Click</u> *Edit...*
19. <u>Highlight</u> **Horizontal Alignment**… <u>Click</u> *Edit...*

20. To review the highlighted starting point coordinates Click *Edit*
21. Press *Next* to see more horizontal positions or Press *ESC*
22. Press *ESC* to stop reviewing the horizontal elements
23. Click *Store...*
24. Input a name for the road E.g. **Smith Terrace1**. Click *Ok*
25. Repeat 17 -24 for all terraces
26. Press *ESC* to return to the Roads menu

Stakeout the Terrace Flagline

Set up Instrument
27. Set up total station or GPS for surveying as normal.
28. In Trimble Access click *Roads...*

Open the Job (From Roads Program)
29. Click on *Jobs... Open Job*
30. Highlight the terrace job
31. Click Select.

Backsight for Orientation of Survey (From Roads Program)
32. Click on *Survey...*
       a. For total station click *VX & S Series...*
       b. For GPS click *IaRTN...*
33. Continue with normal setup of survey.

Stakeout Terrace in Roads
34. Click *Survey...Survey Roads...*
35. Highlight the Road from the list. E.g. **Smith terrace1.rxl.** Click *Next*
       a. If asked select the *Traditional Menu* and click *Accept*.
36. Pulldown *Stake = **Station & offset***.
37. Right Arrow Click on the *Station* to select stationing that you are wanting to stake from the **List** option.
38. Screen 2 of 2 shows the station interval which can be changed.
39. Click Start and Move the target to the correct staking location
40. Once Target is at acceptable location click accept.
41. Input As-staked Name E.g {*SO1004* } for StakeOut and a Code (e.g. Flagline T1).
42. Click Enter
43. Click Store
44. Select next station or offset from list and repeat.
45. When done with Stakeout Press ESC.

Finish & Quit out of Survey
46. Switch to General Survey to take a topo shot on a known benchmark or turning point as a final check.
47. When survey is completed, Escape to main menu, & click *Survey... End Survey*
48. Click Yes to Powerdown Instrument. Click Ok & Disconnect the power.
49. Click Exit. Click Yes to Power Off.