Overview: Creating a subsurface log of the soil materials in a profile view can be done with the use of the Soil Profile dynamic block found in the NRCS Symbols & Blocks tool palette.
Note: The geologists have gINT software for this purpose.

Software: AutoCAD Civil 3D 2018, NRCS C3D 2018 tool palette customization.

Prerequisite: A Profile View needs to exist for the soil borings to be placed on. The location of the soil boring was surveyed and is showing in the plan view. A log showing the depths of the sub-surface materials is needed.

Verify the Profile View
1) Review the Profile View elevations and allow enough room at the bottom for the depth of the soil boring logs.
    a. Select the Profile View, right-click *Profile View Properties…* click the *Elevations* tab. To change the elevation range displayed checkmark *user specified height* and input the *Minimum* and *Maximum Elevations* that you need.
    b. The *Stations* tab can have user specified adjustments also.
    c. **Important:** On the *Information* tab set the correct final scale for output. **Important.** Note the scale and H/V ratio for use later. E.g. for *50Hx10V* , H/V=50/10 = **5**
    d. Click Ok.

Mark the location of the Soil boring in the Profile View
2) Click *Annotate.. Labels & Tables… Add Labels▼ … Profile View… Station Elevation…*
3) Select the Profile View grid
4) Input {'SPE} Press Enter (Profile Station Elevation from COGO Point 🔧)
5) Click on the surveyed soil boring survey shot in the plan view area to obtain the station
6) Input {'SPE} Press Enter
7) Click on the surveyed soil boring survey shot to obtain the elevation
8) A label will be placed in the Profile View. Press ESC.
9) Repeat 2-8 for each soil boring.

Insert the Soil boring block into the Profile View
10) Click the NRCS Tool Palettes – *11x17 Symbols B… bSoilProfile Dynamic*
11) Input {S} for scale. Press Enter.
12) Input the horizontal scale of the Profile View. E.g for *50Hx10V* input {50}. Press Enter.
13) Shift Right-click *Insert*
14) Click the insertion marker at the Station Elevation label of the soil boring location in the Profile View.
15) Repeat for each soil boring
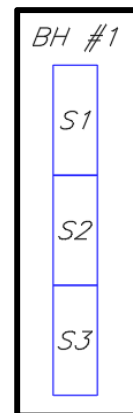
Set the number of layers logged & depth of each layer

16) Select the block for the boring hole #1 log.
17) Click the *Number of Layers* dropdown and set the number of layers logged. (Click A in image)
18) At the lower left corner of each layer click the *Thickness of Layer* dropdown. (Click B in image) The value to input is the depth of material x the H/V ratio that was noted earlier. (E.g. H/V =5. If material thickness is 7', then value to input is 7 x 5 = **35**). Press enter to set the thickness. Repeat for each layer.
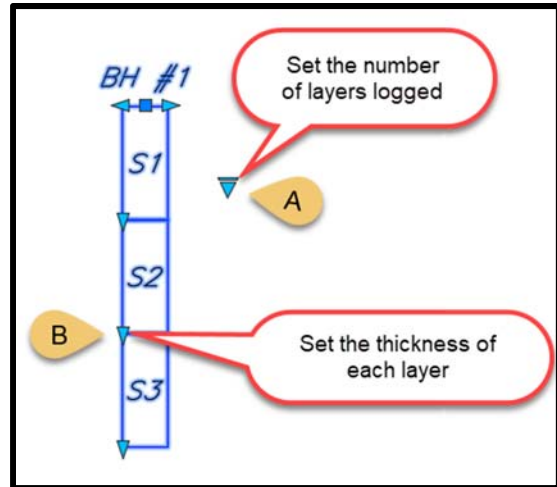
Set the Boring Hole ID and the material for each layer

19) Right click on the block and click *Properties*.
20) In the Block:bSoilProfile section click in the right column by BH (Click C in image)
21) Input the ID of the boring hole. Press Enter
22) In the S1 row (See D in image), input the material for the highest layer. E.g. {CL}. Press Enter
23) Repeat for all of the layers
24) Verify that the log shows the correct depth. Note that in the Custom section the thicknesses are the material thicknesses x H/V.
25) ESC ESC

26) Station/Elevation labels.
    a. Delete any unwanted labels, Or
    b. Select the label. Right click *Properties…* Set the *Profile Station and Elevation Label = Elevation (Horizontal Right)*

Custom	
Number of S...	Number of layers...
Thickness3	55.000
Thickness2	100.000
Thickness1	25.000
Distance11	10.000
Block:bSoilProfile	
BH	BH #1
S1	S1
S2	S2
S3	S3
S4	S4
S5	S5
S6	S6
S7	S7
S8	S8
S9	S9
S10	S10