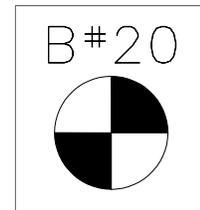




To improve the consistency and quality in the presentation of the construction plan sets that are generated for the Delaware Department of Transportation it is recommended that subsurface information be displayed on the construction plan and profiles sheets as follows.

Soil Boring Data

The soil boring horizontal location shall be denoted on the **Construction Plan** sheet, with the appropriate cell (FS_BORE), at the location the soil boring was obtained. The soil boring location shall also be identified with a unique label and number such as "B#1", "B#2", "B#3" etc.

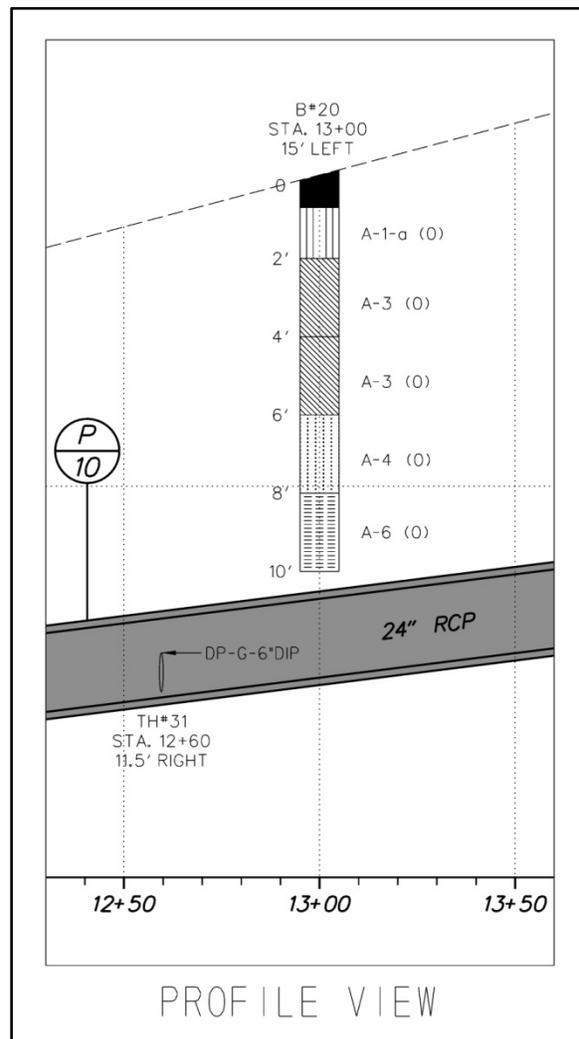


The soil boring data such as material types and depths, for roadway or non-structural borings, shall be denoted on the **Profile** sheet at the station the soil boring was obtained. The following items must be displayed for each boring location:

- Boring Number
- Construction Baseline Station
- Construction Baseline Offset
- Total Depth of Soil Boring
- Soil Group Classification
- Soil Group Index

In the sample soil boring data shown, the soil between 2'-4' is identified as "A-3 (0)". The "A-3" term is the Soil Group Classification and the "(0)" term is the Soil Group Index. Patterns for each Soil Classification type can be found in the GO.cel cell library.

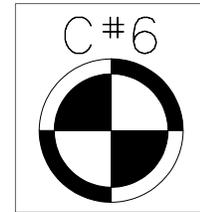
In cases where the soil boring data may be obscured by other data in the profile view, it may be placed above the existing ground line.





Roadway Core Data

The roadway core horizontal location shall be denoted on the **Construction Plan** sheet, with the appropriate cell (FS_UTEST), at the location the roadway core was obtained. The roadway core location shall also be identified with a unique label and number such as "C#1", "C#2", "C#3" etc.

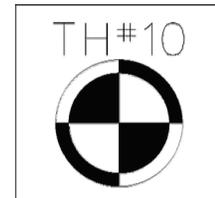


The roadway core data such as material types and depths shall be denoted in schedule format on the **Construction Plan** sheet using the appropriate cells (CP_RC01 and CP_RC02), as shown below.

ROADWAY CORE SCHEDULE			
NO.	STATION	OFFSET	DESCRIPTION
C-6	25+50	27' RT	3 1/2" ASPHALT OVER 8 1/2" STONE

Utility Test Hole Data

The utility test hole horizontal location shall be denoted on the **Construction Plan** sheet, with the appropriate cell (FS_UTEST), at the location the utility test hole was obtained. The utility test hole location shall also be identified with a unique label and number such as "TH#1", "TH#2", "TH#3" etc.



The utility test hole data such as utility owner, size and cover shall be denoted in schedule format on the **Construction Plan** sheet using the appropriate cells (CP_UTH01 and CP_UTH02), as shown below.

UTILITY TEST HOLE SCHEDULE						
NO.	UTILITY	STATION	OFFSET	GRND EL.	COVER	O. D. & MATERIAL
TH-9	DP-G	120+50	11.8' RT	50.70'	3.97'	12" STEEL

The utility test hole data such as utility owner and size shall also be displayed on the **Profile** sheet at the station the utility test hole was obtained, as shown in the "**Profile View**" example above, to help determine if potential conflicts exist.



General Classification		Granular Materials (35% or Less Passing a No. 200 Sieve)							Silt-Clay Materials (More Than 35% Passing a No. 200 Sieve)						
		A-1		A-3	A-2			A-4	A-5	A-6	A-7*		A-8		
Group Classification		a	b		4	5	6	7				5	6		
Standard Symbol/Pattern															
Sieve Analysis Percent Passing															
No. 10		50 Max.													
No. 40		30 Max.	50 Max.												
No. 200		15 Max.	25 Max.	10 Max.	35 Max.	35 Max.	35 Max.	35 Max.	35 Min.	36 Min.	36 Min.	36 Min.	36 Min.		
Characteristics of Fraction Passing No. 40															
Liquid Limit					40 Max.	41 Min.	40 Max.	41 Min.	40 Max.	41 Min.	40 Max.	41 Min.	41 Min.	42-400	
Plasticity Index		6 Max.	6 Max.	N.P.	10 Max.	10 Max.	11 Min.	11 Min.	10 Max.	10 Max.	11 Min.	11 Min.	11 Min.	0-60	
Group Index		0	0	0	0	0	4 Max.	4 Max.	8 Max.	12 Max.	16 Max.	20 Max.	20 Max.		
General Subgrade Rating		Excellent	Good	Good	Good	Good	Fair	Fair	Poor	Poor	Poor	Very Poor	Very Poor	Unsat.	
Material		Well graded gravels and sands.	Clean sand and gravelly sand.	Poorly graded, silty or clayey sands and gravel.	Silty soils.	Elastic silts.	Plastic clays.	Expansive plastic clays.	Muck-peat.						

* Plasticity Index of A-7-5 is less than or equal to (Liquid Limit - 30)
 * Plasticity Index of A-7-6 is greater than (Liquid Limit - 30)
 Source: 1970 DeIDOT Standard Construction Details, Sheet S-3