

# Table of Contents

<b>CHAPTER 20 - GEOTECHNICAL STANDARDS .....</b>	<b>20-1</b>
20.1 GENERAL .....	20-1
20.2 STANDARD FILE NAMES .....	20-1
20.3 ENGINEERING DATA.....	20-2
20.4 SOIL SURVEY.....	20-3
20.5 SOIL BORING DATA.....	20-3

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# Chapter 20 - GEOTECHNICAL STANDARDS

## 20.1 GENERAL

Geotechnical Plans are included in the Roadway Plan Set as Soil Survey, Soil Boring and Bridge Data Sheets.

## 20.2 STANDARD FILE NAMES

Florida Department of Transportation (FDOT) utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: **AAAABB##.ext**

Where **AAAA** = abbreviated file description, **BB** = Discipline Denotation, **##** =Sequence number.

*Note* Please see Chapter 5 of this document for more information.

Files that are associated with specific bridges will be prepended with a B# prefix corresponding to the appropriate bridge number.

*Note* See Chapter 18 of this document for bridge specific filenames & sheet numbering requirements.

The following table defines the Geotechnical File Name Standards in regards to FDOT Projects with the understanding the each file name will include sequence numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

*Note* See Chapter 4 for the symbology standards for each applicable Standard Rule.

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Geotech		clvgeo*	default	Box Culvert Auger & SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		ltgeo*	default	Lighting Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		mtgeo*	default	Mitigation Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		pdgeo*	default	Pond Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		rdgeo*	default	Augers Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		rdssgeo*	default	Roadway Soil Survey Sheet	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		sggeo*	default	Signal SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		snggeo*	default	Signs SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		cptgeo*	default	CPT Soundings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		msewgeo*	default	MSE Wall SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		nwgeo*	default	Noise Wall SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		rtwgeo*	default	Retaining Wall SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		spgeo*	default	Sheet Pile Wall SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Structures		B#BORING*	default	Report of Core Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Structures		B#CPTGEO*	default	CPT Soundings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt
Structures		B#MSEWGEO*	default	MSE Wall SPT Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt
Structures		B#NWGEO*	default	Noise Wall SPT Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt
Structures		B#RTWGEO*	default	Retaining Wall SPT Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt
Structures		B#SPGEO*	default	Sheet Pile Wall SPT Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt

## 20.3 ENGINEERING DATA

Engineering Data to be delivered with each project should be located in the ... \eng\_data directory and include:

- ASCII files containing Q/C reports
- Image files of each sheet in the plan set
- Soil boring data

The image files are to be printed from the graphics design files containing the sheets. If the project is electronically Signed & Sealed, the sheet image files located in the ... \Eng\_data directory are the files to be Signed & Sealed.

Geotechnical information shall be delivered in CSV Format as shown in the examples below. FDOT has adopted the following standard file naming convention for CSV file imports for the Geotechnical Utility in Geopak:

**Borehole** *Boreholetpk.brh* - Borehole location data and seasonal high water and design high water data.

**Material** *Material.mtl* - Strata Data and Core data.

Standard Penetration Test (SPT) boring information may be drawn using the FDOT Report a Core Boring Tool.

### Example: Boreholetpk.brh

*borehole\_name,chain\_name,station,offset,water\_elev\_type,water\_elev\_0,water\_elev\_0\_date,water\_elev\_24,water\_elev\_24\_date*

Borehole-01,CLCON,78+00.00,15,DOC,3,8/9/2007,5,8/10/2007

Borehole-02,CLCON,80+00.00,3,DOC,2,8/20/2007,4,8/21/2007

Borehole-03,CLCON,83+00.00,3,DOC,3,8/23/2007,5,8/24/2007

Borehole-04,CLCON,85+00.00,4,DOC,2,8/24/2007,4,8/25/2007

**Example:** Material.mtl

*borehole\_name,material\_name,doc\_or\_se,type\_of\_elev*

Borehole-01,1,10,DOC

Borehole-02,1,5,DOC

Borehole-02,2,7,DOC

Borehole-02,3,9,DOC

Borehole-03,1,3,DOC

Borehole-03,2,6,DOC

Borehole-04,1,2,DOC

Borehole-04,2,5,DOC

Borehole-04,3,7,DOC

Borehole-04,4,10,DOC

## 20.4 SOIL SURVEY

The plans will include the information about the soil classification on the soil survey sheet and by showing the boring data soil boxes on the cross section sheets.

## 20.5 SOIL BORING DATA

The soil boring data shall be provided to the Roadway designer in a format to facilitate the drawing of the data on the cross section sheets.

**Note** For help and instructions on specific functions and use of GEOPAK's Geotechnical Tool, please see the GEOPAK help file.

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