Draw Ancillary Features

Overview

This tool replaces input file processing of inplace, underground, linear utilities. IE Utild.inp. This tool will also place utilities in a Profile View however we don't generally do this at Mn/DOT so we won't be showing this feature. This demo will mimic what is accomplished using Utild.inp.

This demo will show the placement of utilities at a specific depth of cover (Vertical Offset) relative to existing ground, however it should be noted that depths of utilities can also be set relative to a TIN surface, or a profile elevation.

Files

util_xs1.dgn Cross section file. utility_atp.dgn – Topog file with only utilities in them mndotutil.afd – Ancillary Feature Database file.

- This file should be copied to your project directory from:

S:\MndotV8stds\DOT_GEOPAK\preference.

- This file has gas, tbur, pbur, water, and sanitary sewer features already set up.

Process

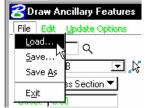
- 1. Open up the Cross Section file (util_xs1.dgn)
- 2. Access the Draw Ancillary Features dialog from the Cross Section tool box.



- 3. Populate the dialog.
 - a) Job: **814**
 - b) Chain: 23EB
 - c) View: Cross Section
 - d) Label Scale Not used, can be left at default value.
 - e) Station Range Begin: 7975+00
 - End: 7976+00

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File Edit Update Options	
Job: 814 Q Chain: 23EB ▼ ぷ Miew: Cross Section ▼ Offset: 0.00	Label Scale: 1.00 Draw Station Range Begin: 7975+00.00 ↔ End: 7976+00.00 ↔

f) Use the File > Load tool to load the mndotutil.afd file from your project directory.



g) Note the Element List and how it is set up.

Element Type	Elevation	Display Setting: 🔺	*⊓
Lv: WTR LINV	Lv: GRND INP,V	Text = WATER	_
Lv: GAS LINV	Lv: GRND INP,V	Cell = 12pipe	년
Lv: GAS LINV	Lv: GRND INP,\	Text = GAS	×
Lv: SAN LINV	Lv: GRND INP,V	Cell = 18p 🛛 🔽	
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h) Verify that the DGN file setting is pointing to the topog file (utility_atp.dgn) for each of the element types.

Level Symbolog Display		
DGN File AES\CLASS\Geopak\V8\dataset\utility_atp.dgn Q		
Extract Elevation Level Symb Vertical Offset: -8.50		
Search Criteria: Display		

4. When the Element Set list is complete, activate by clicking the **DRAW** button in the upper right portion of the dialog.

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Eile Edit Update Options	
Job: 814 Q Chain: 23EB ▼ ↓\$ View: Cross Section ▼ Offset: 0.00	Label Scale: 1.00 Draw Station Range Begin: 7975+00.00 +++ End: 7976+00.00 +++

- 5. Sections will scroll through for each utility element set. (This can be time consuming.)
- 6. When complete, use the XS Navigator to scroll through the sections and verify that the utilities have been drawn.

Cross Sections		×
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Cross Section Navigator		

NOTE: To have utilities set at a profile elevation, set the Intersecting Elements option to Chain, and turn off the Extract Elevation toggle. This action allows the setting of the COGO Profile. - THE CHAIN AND PROFILE STATIONING MUST BE COINCIDENTAL