MONTANA
Department of Transportation

PLP SHEET – MICROSTATION (ENHANCED)

Contents

Overview

Development of a Utility Plan Plan and Profile sheet in the Microstation Enhanced workspace.

Process Provenance

- Date of development: N/A
- Revision date: *N/A*
- Application/Tool(s): *MicroStation V8i SS10 / Power GEOPAK V8i SS10*
- Version(s): *N/A*
- Environment(s): *OpenRoads (Enhanced) Workspace*
- Author: *MDT EngOps Workflow Steering Committee*

Statement of Need

This process develops a sheet that is a part of the Utility plans which play a vital role in moving MDT Highway projects toward completion.

Process Description and Examples

Section I. PLP Sheet Creation

Procedure

1. Download the file from the RD workgroup in DMS that contains the plan and profile, usually named 1234000RDPLP001. Copy this file to the directory c:\dgn\ref for referencing.

2. Create a new UT Plan and Profile sheet from the UT Seed files found at ..\CaddStdOR\SEED\UT_Plans (ex. 1234000**UTPLP001.DGN**).

3. In 'Active file' 'View Attributes', ensure Level Overrides are turned on.

4. Attach RD Plan Sheet as a reference.

    - Within the Reference dialog, choose "Tools", "Attach"

    - Within the Attach Reference dialog, select the RD Plan or Plan sheet, then choose "Open".

    - Insert RDPLP-1 as the logical name.

    - Select "Coincident – World" from the orientation options. Adjust Nested Attachments option to "Copy Attachments", then choose "OK".

    - Select each duplicated occurrence of RDSHEET.REF but leave SHT", then choose "Tools", "Detach".

    - Check reference prefixes and fix as needed or use the reference macro.

5. Turn off sheet labels from the RD Plan Sheet, typically level "P_Sheets_Plan_Label_Sheet_Text" and "S_SHEETS_DesignBlock_Data_Fields". If the labels are on a different level, adjust accordingly or mask the reference file as outlined below.

    - Select the pink clip boundary around the bottom of the first sheet to create a fence. Within the Reference dialog, select the RDDET-1 Road Design detail sheet reference file, then choose "Tools", "Clip Boundary then accept the pink shape outlining the plan data fields in sheet 1.

    - Repeat for sheet 2 and sheet 3 as needed.

6. Adjust drawing scale as necessary for line style and text annotation scale.

7. In ‘Reference’ ‘Settings’ ‘Level Manager’, choose RDPLP references, set all style and weight attributes off, color attributes to 0 (white).

8. In ‘Reference’ ‘Settings’ ‘Display’, set all horizontal design references (RDMAP-H#) to display construction related items (Centerline, construction limits, pipes, etc.).

    - In ‘Reference’ ‘Settings’ ‘Level Manager’, set all style and weight attributes off, color attributes to 0 (white) except:

    - Wetland delineation levels to color 40 (gray).

9. In ‘Reference’ ‘Settings’ ‘Display’, choose all vertical design references (RDMAP-V#) and turn off soil boring information.

    - In ‘Reference’ ‘Settings’ ‘Level Manager’, set all style and weight attributes off, color attributes to 0 (white) except:

    - Dig out hatching levels to color 40 (gray).

10. In ‘Reference’ ‘Settings’ ‘Level Manager’, choose any Environmental (Wetland) references and set all style and weight attributes off, color attributes to 40 (gray).

11. In ‘Reference’ ‘Settings’ ‘Level Manager’, select the survey map references (PHMAP, DIMAP) and set all style and weight attributes off, color attributes as follows:

**LEVEL DISPLAY ** NOT A COMPLETE LIST, FOR EXAMPLE ONLY		LEVEL MANAGER
NUMBER	NAME	COLOR
1100	E_Barrier_Fence_Cattleguard	80
1103	E_Barrier_Fence_Fence	80
1106	E_Barrier_Fence_Gate	80
1112	E_Barrier_Guardrail	80
1118	E_Drainage_Culvert_CulvertInlet	80
1123	E_Drainage_Irrigation_IrrigationFeature	80
1147	E_Drainage_Water_Headgate	80
1131	E_Drainage_Water_InletRound	80
1209	E_Natural_Vegetation_Shrub	80
1211	E_Natural_Vegetation_Tree	80

**LEVEL DISPLAY ** NOT A COMPLETE LIST, FOR EXAMPLE ONLY		LEVEL MANAGER
NUMBER	NAME	COLOR
1222	E_Natural_Water_EdgeofWater	80
1247	E_Natural_Water_FlowLineWithFlow	80
1233	E_Natural_Water_Thalweg	80
1236	E_Natural_Water_WaterEdge	80
1239	E_Natural_Water_WetlandBoundary	40
1260	E_Road_RR_Road_Concrete	80
1266	E_Road_RR_Road_EdgeofRoadGravel	80
1269	E_Road_RR_Road_EdgeofRoadPavement	80
1275	E_Road_RR_Road_Mailbox	80
1296	E_Road_RR_Signs_Sign2Face	80
1302	E_Road_RR_Signs_SignMultiPost	80
1305	E_Road_RR_Signs_SignSingle_Post	80
1322	E_Structure_Misc_Building	80

12. Attach RO Map File (ROMAP-#) and RO ALN File (ROALN-#) if not already attached.

    - In ‘Reference’ ‘Settings’ ‘Level Manager’, select the RO Map and RO ALN references and set all style and weight attributes off, color attributes as follows:

****LEVEL DISPLAY**** **NOT A COMPLETE LIST, FOR EXAMPLE ONLY**		**LEVEL** **MANAGER**
NUMBER	NAME	COLOR
905	E_RW_EX_RW_And_Ease_Line	80
918	E_RW_Ownership_Dots	80
920	E_RW_Property_Line	80
926	E_RW_Section_Corners	80
927	E_RW_SectionLine_Exterior	80

LEVEL DISPLAY NOT A COMPLETE LIST, FOR EXAMPLE ONLY		LEVEL MANAGER
NUMBER	NAME	COLOR
947	E_RW_SectionLine_Interior	80
901	E_RW_AliquotPart_And_Lot_Call	0
903	E_RW_CountyRd_CityStreet_Name	0
904	E_RW_EX_RW_And_Ease_Dimension	0
906	E_RW_EX_RW_Call_Leader	0
942	E_RW_WaterwayLabel	0
3001	P_RW_AcquisitionCallout	0
3011	P_RW_ConstPmt_Callout_Dim	0
3012	P_RW_ConstPmt_Line	0
3027	P_RW_New_RW_And_Ease_Callout_And_Dim	0
3047	P_RW_New_RW_And_Ease_Line	0
3033	P_RW_Parcel_Number	0

13. Attach UT map file (UTMAP-#) or (UMSUE#) if not already attached.

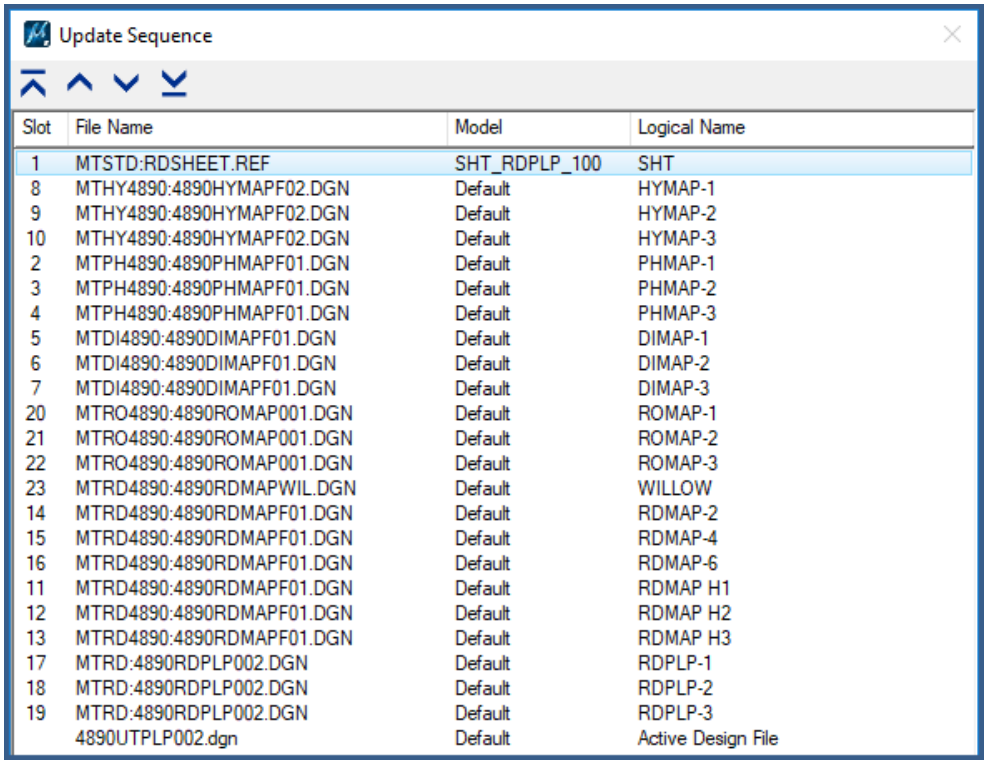
- In ‘Reference’ ‘Settings’ ‘Level Manager’, select the UT references and set all style and weight attributes off, color attributes as follows:

LEVEL DISPLAY NOT A COMPLETE LIST, FOR EXAMPLE ONLY		LEVEL MANAGER
NUMBER	NAME	COLOR
1417	E_Utility_Communication_CableTVOverhead	5
1420	E_Utility_Communication_CableTVUnderground	5
1423	E_Utility_Communication_FiberOpticCableOverhead	54
1426	E_Utility_Communication_FiberOpticCableUnderground	54
1429	E_Utility_Communication_TelegraphPole	54
1431	E_Utility_Communication_TelephoneBooth	54
1433	E_Utility_Communication_TelephoneOverhead	54
1436	E_Utility_Communication_TelephonePedestal	54

****LEVEL DISPLAY**** **NOT A COMPLETE LIST, FOR EXAMPLE ONLY**		**LEVEL MANAGER**
NUMBER	NAME	COLOR
1438	E_Utility_Communication_TelephonePole	54
1440	E_Utility_Communication_TelephoneUnderground	54
1443	E_Utility_Drainage_SanitarySewer	2
1449	E_Utility_Gas_GasMeter	56
1451	E_Utility_Gas_GasUnderground	56
1454	E_Utility_Gas_GasValve	56
1456	E_Utility_Manhole_ManholeElectric	3
1458	E_Utility_Manhole_ManholeMisc	0
1460	E_Utility_Manhole_ManholeSanitarySewer	2
1464	E_Utility_Manhole_ManholeTelephone	54
1466	E_Utility_Misc_GuyPole	3
1468	E_Utility_Misc_GuyWireAnchor	3
1474	E_Utility_Misc_PedestalBase	0
1477	E_Utility_Misc_Tower	0
1479	E_Utility_Misc_UtilityXingOverhead	0
1481	E_Utility_Misc_UtilityXingUnderground	0
1483	E_Utility_Misc_ValveMisc	0
1485	E_Utility_Power_LightPole	3
1487	E_Utility_Power_PowerOverhead	3
1490	E_Utility_Power_PowerPedestal	3
1492	E_Utility_Power_PowerPole	3
1494	E_Utility_Power_PowerUnderground	3
1500	E_Utility_Power_TransmissionTower	3
1507	E_Utility_Water_FireHydrant	1
1509	E_Utility_Water_WaterHydrant	1
1511	E_Utility_Water_WaterMeter	1

LEVEL DISPLAY NOT A COMPLETE LIST, FOR EXAMPLE ONLY		LEVEL MANAGER
NUMBER	NAME	COLOR
1513	E_Utility_Water_WaterUnderground	1
1516	E_Utility_Water_WaterValve	1
1518	E_Utility_Water_Well	1
1558	E_Utility_Misc_Pole	0

14. In ‘Reference’ ‘Settings’ ‘Update Sequence’, change the update sequence similar to the following:



15. Review & correct all plan and profile sheets for errors and/or omissions, readability, etc.

16. Identify and add utility callouts.