

Erosion and Sediment Control Plan Preparation

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Title Sheet Preparation

- a) Using Windows Explorer in U:\rd\prj\COUNPCN#\ **Copy and Paste** title.dgn and **rename** to follow naming convention. (titled.dgn). Edit the file as needed to include “Erosion and Sediment Control Plan” heading, etc.

Or

- b) Use “Creating a Title Sheet” in www.sddot.com/PE/roaddesign/docs/Procedures/CADD-Drafting.pdf

Erosion and Sediment Control Plan sheet preparation

- Using Windows Explorer in U:\rd\prj\COUNPCN#\ **Copy and Paste** all Plan Sheets prepared by Grading Squads and **rename** the files to follow naming convention (STAec.dgn)

The following is a list of some items we want to have shown on our Erosion and Sediment Control Plan Sheets. Other items such as utilities and old pipe that we don’t want to show can be turned off by level.

- Rivers, creeks, streams, wetlands and other waterways that need to be protected from siltation
- Drainage arrows
- Pipe and Box Culverts
- Alignment and stationing
- ROW lines
- Work Limits
- Temporary Easements
- Trees
- Buildings
- Rock Outcroppings
- Plan Sheet Border with Project No.
- Plus other items that affect erosion control

Suggested levels to turn off

Design file: 5, 25, 26, 29, 30, 33, 38, 62

Reference files: d file 3, 4, 5, 12, 24, 25, 26, 28, 31, 36, 37, 38, 39, 42, 44, 45

r file none

t file 1, 3, 5, 9, 10, 11, 16, 21, 25, 33, 36, 40, 41, 42, 43, 44, 49, 55, 56, 57, 58, 59

Note: Some items will need to be deleted.

“Save Settings”, “Compress Design” before exiting file.

Place Erosion Control data on level 1 on Erosion and Sediment Control Plan Sheets graphically and in Table Form. The Table will list the location and quantity of the Erosion Control items. Cells for Erosion Control Data can be found in U:\rd\Bentley\Microstation\cell\rddev.cel.

Display Contours on Erosion and Sediment Control Plan Sheets

Procedure to Display contours in gPCN.dgn file

- Create and open gPCN#.dgn
- From InRoads Site dialogue box: File Open U:\region?\prj\COUNPCN#\Starting InRoads: The key in command is “mdl load civustmk inroads”
- Files of type: select Surfaces(*.dtm) double click on PCN#org.dtm
- **Surface >View Surface >Perimeter**
- **Surface >View Surface >Contours**
- **Preferences...**
 - Choose “Erosion Plans”
 - Load
 - Apply
 - Close

Procedure to Display Contours on Erosion and Sediment Control Plan Sheets

Open Erosion and Sediment Control plan sheet.

- **File >Reference >Tools >Copy**
- snap to lower left corner of “Red” border of Erosion and Sediment Control plan sheet and accept; then snap to lower left corner of “RED” border again and accept again
- double click on copy of dPCN#?.dgn
- change File Name to “gPCN#.dgn”
- change logical name to “g”
- Save Settings

Update Sequencing (Microstation must read “g” first)

Open Reference Dialogue Box

Highlight “g” File

Go to Update Sequencing

Place “g” file first

Erosion Control Note Sheet Preparation

Download from www.sddot.com/pe/roaddesign/downloads.asp
Section D – Erosion Control Notes

Rename the files as U:\rd\prj\COUNPCN#\PCN#ec.doc

Information included in Section

Title Sheet
Estimate of Quantities
Erosion and Sediment Control Notes
Erosion and Sediment Control Legend
Erosion and Sediment Control Plan Sheets
Erosion and Sediment Control Standard Plates

Interplot Files for Erosion and Sediment Control

U:\rd\prj\COUNPCN#\PCN#_SectionD.IPS

Calculating Topsoil Quantities

from Microstation Manager

“File New” to create a new file

U:\rd\prj\COUNTYPCN#

key in filename gPCN#.dgn to name the new file

“OK”

you will now be in the .dgn file gPCN#.dgn

attach the reference file dPCN#r.dgn

load Inroads by keying in “mdl load civustmk” or use the F1 key

from the Menu Bar click on “File Open” - go to “Projects(*.rwk)” and choose Surfaces (*.dtm)

go to “U:\rd\prj\COUNTYPCN# and double click on subgrade.dtm “cancel”

NOTE: mainline is named subgrade.dtm and intersecting roads are named xrdsta??.dtm.

From the Menu Bar click on “Surface” “View Surface” “Perimeter” / “Advanced”

check “Planarize” Set Elevation at: 1500 ”Apply” “Close”

Turn off level 32 in dPCN#r.dgn.

Make sure DEPTH LOCK is on.

Key in: AZ=1500

“File” “Save Settings”

Place Tick Marks in the gPCN#.dgn file at 30 station increments to match grading plan sheets.

Copy 30 station increment numbers to Tick Marks for reference.

Turn off levels 1 and 2.

“Measure Area Flood” at 30 station increments to match grading plan sheets.

Set Max Gap at 1.

CALCULATIONS

Work Limits minus Roadway plus Temporary Easements

LIST TOPSOIL QUANTITIES BY 30 STATION INCREMENTS IN EROSION CONTROL NOTES TO MATCH THE GRADING PLAN SHEETS.

EXAMPLE CALCULATION FOR PLACING TOPSOIL

Station	11+20 to 30+00
(Work Limits measured on Microstation)	252139 SqFt
(Roadway Length x Width)	157714 SqFt
(Work Limits minus Roadway)	252139 SqFt minus 157714 SqFt = 94425 SqFt
(plus 3% for Slopes)	1.03 x 94425 SqFt = 97258 SqFt
(4” of topsoil inside Right-of-Way)	97258 SqFt x 0.33 Ft (4”) = 32095 CuFt
(plus Temporary Easements)	2.8 Acres x 43560 SqFt/Acre = 121968 SqFt
(6” of topsoil on Temporary Easements)	121968 SqFt x 0.17 Ft (2”) = 20735 CuFt
	32095 CuFt plus 20735 CuFt = 52830 CuFt
	52830 CuFt x 1 CuYd/27 CuFt = 1957 CuYd

Record 1957 CuYd in the topsoil table in Erosion and Sediment Control plan notes under PLACING TOPSOIL.