

Title Sheet Map Inset Request

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This document's purpose is to educate a Titlesheet Map **requestor** of what is involved when they request a Titlesheet Map for their Titlesheet in CAD. It also describes what type of file will be returned. For requestors that have access to the GIS program called **Maps2**, there is a step by step instruction on how they can create their own titlesheets.

The document is broken into four sections.

1. Titlesheet Overview
2. Titlesheet Request
3. Making the Titlesheet map using Maps2
4. GIS GeoProcessing Model (for the GIS Analyst to read)

1. Titlesheet Overview

A titlesheet is the first page of a project CAD design package. Currently CAD designers use MicroStation and InRoads. The titlesheet page consists of many details and information describing the project. One component of the titlesheet is the map inset. The vector (the drawing portion) information currently comes from the GIS section when a requestor asks for it but it loses its GIS intelligence in the conversion. We return a CAD DXF file that has the following layers:

- GIS_HIGHWAYS
- GIS_MAJOR_ROADS
- GIS_LOCAL_ROADS
- GIS_RAMPS_FRONTAGE_ROADS
- GIS_CITIES
- GIS_BRIDGES – Point feature
- GIS_PLSS
- GIS_STREAMS
- GIS_LAKES
- GIS_RAIL_LINES_100K
- GIS_MILEPOINTS

NOTE: There is no text in the DXF file since in a GIS we let the software pick where to place the labels.

2. Titlesheet Request

This section defines what a requestor should request. When a request is initiated, someone in the GIS section will copy and paste this section in an email or just send this whole document to the requestor to fill out.

Titlesheet Request form

Please fill out the following section if you are going to request the GIS section to send you the GIS data for the county where your project is in. You will be receiving a CAD DXF file **GIS_Titlesheet_<County>.dxf** with all the GIS data in separate layers. You will only have the vector linework. There will not be any text in the CAD file and all the layers will have the same linetype, weight and color set. You will have to clip out your area of interest, set up your layer properties and anything else that you do in CAD.

Alternatively, you can use Maps2 to create the map and export it as an image that you can bring into MicroStation. For more details, go to *Section 3 - Making the Titlesheet map using Maps2*.

Please complete the following.

Name: _____

Department: _____

Email: _____

Phone: _____

Project Route (i.e. 025A): _____

From reference point (miles): _____

To reference point (miles): _____

Project in these county(s): _____

Required Date (allow at least 3 to 5 days): _____


Are there any additional GIS layers that you desire that are not in the following list?

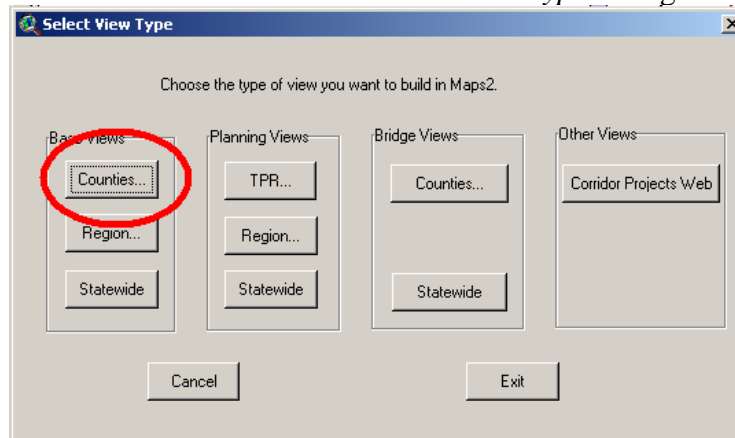
Please specify by the name that layer appears in any of the GIS applications that the GIS section supports such as Maps2 or the Straight Line Diagram.

- HIGHWAYS
- MAJOR_ROADS
- LOCAL_ROADS
- RAMPS_FRONTAGE_ROADS
- CITIES
- BRIDGES – Point feature
- PLSS
- STREAMS
- LAKES
- RAIL_LINES_100K
- MILEPOINTS

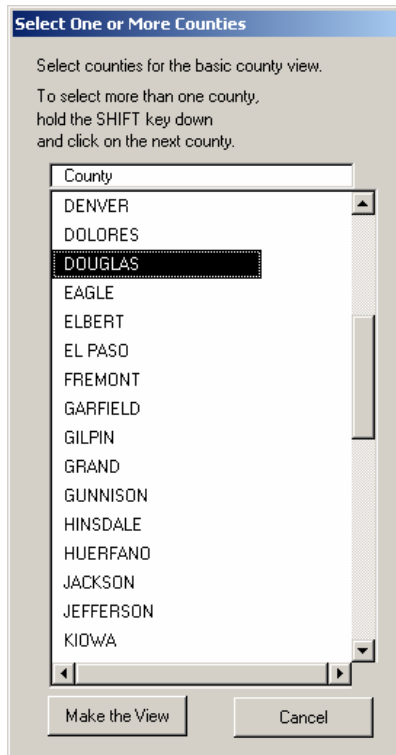
3. Making the Titlesheet map using Maps2

The purpose of this section is to give instructions for someone to create a titlesheet in Maps2 GIS. If you do not have Maps2 installed contact Alice Moy and she will get you set up. We also provide a one day class at head quarters and Alice handles the registration for that class as well. She can be reached at 303-757-9523 or alice.moy@dot.state.co.us.

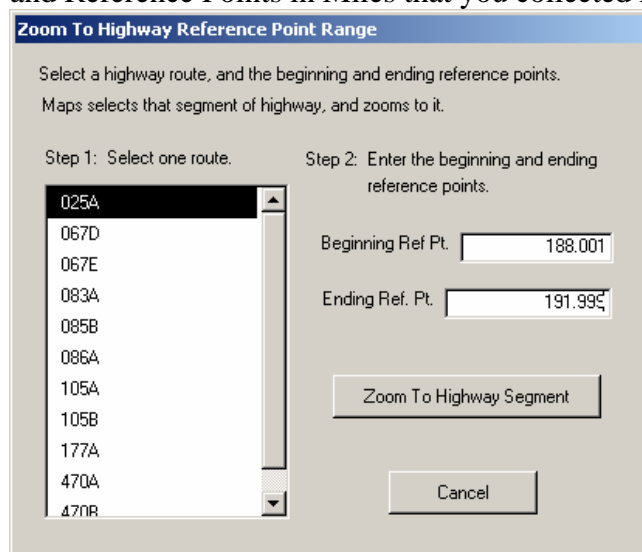
- Figure out where your project is. You will need to know the County, Route and the reference point range in miles. For this example I'm going to use Interstate I25 (Route: 025A) from MP 188 to MP 192 in Douglas County.
- Click the *Build New View* button .
- Clicking the *Counties...* button on the *Select View Type* dialog.



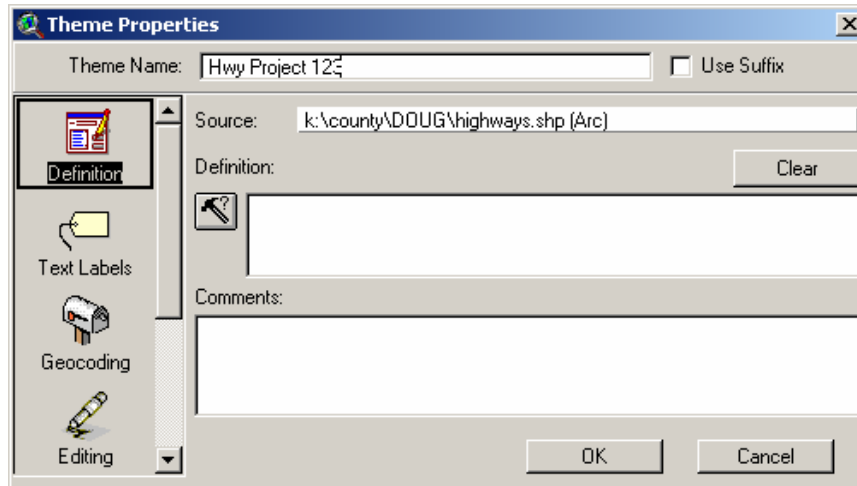
- Select the county that your project is in. For this example select DOUGLAS.




- Turn on all the layers that you want on your map. (i.e. Bridges, Ramps/Ftg Roads, Highways, Major Roads, Minor Roads, Streams, Lakes, Cities, PLSS, County Line)
- Change symbols if you wish or just accept the defaults.
- Zoom to your area of interest by activating Highways in the table of contents and using the *Zoom to Feature* function (*View > Zoom to Feature...*). Enter in your project Route and Reference Points in Miles that you collected in step one.




- Make a copy of highways in your view so it appears twice by activating Highways and then click *Edit > Copy Themes* and then *Edit > Paste*.
- Activate the top copy of Highways and then click *Theme > Properties*.
- Change the Theme Name to something different such as *Hwy Project 123*.



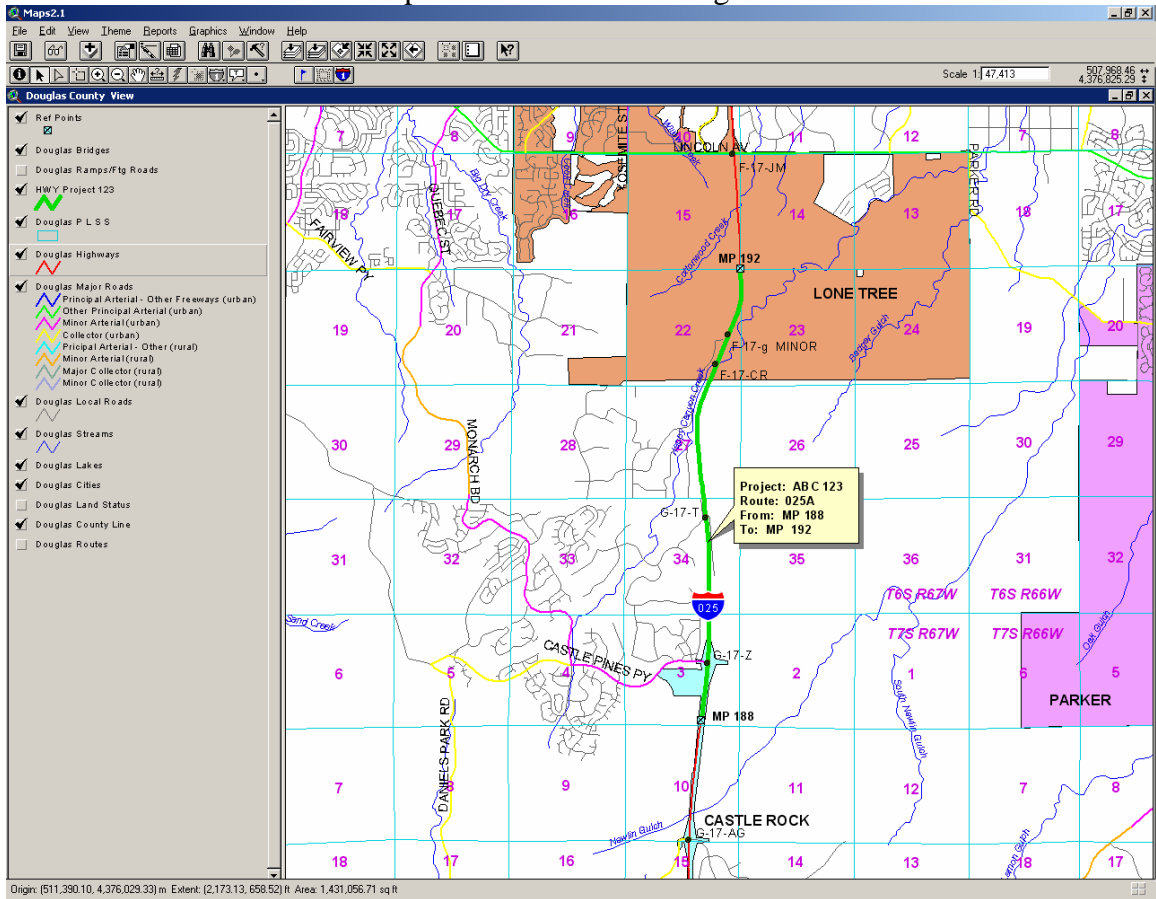
- Use the Maps2 function *Set Definition to Selection* (*Theme > Set Definition to Selection*) on the Highway copy you just made.
- Change the color and line thickness to differentiate it from the other highway layer. Try a line thickness of 4 with the color green.
- Label all the features that you wish using the *Label* tool  or Auto Label (Read ArcView help if you don't know how to label. Just go to *Help > Help Topics* with the keyword *Label*).

Note: You should set the symbol properties on the Symbol Palette (*Ctrl-P* or *Window > Show Symbol Window*) **before** creating a label so that labels get placed with a size and color that you specify rather than the same 14 pt Arial font.

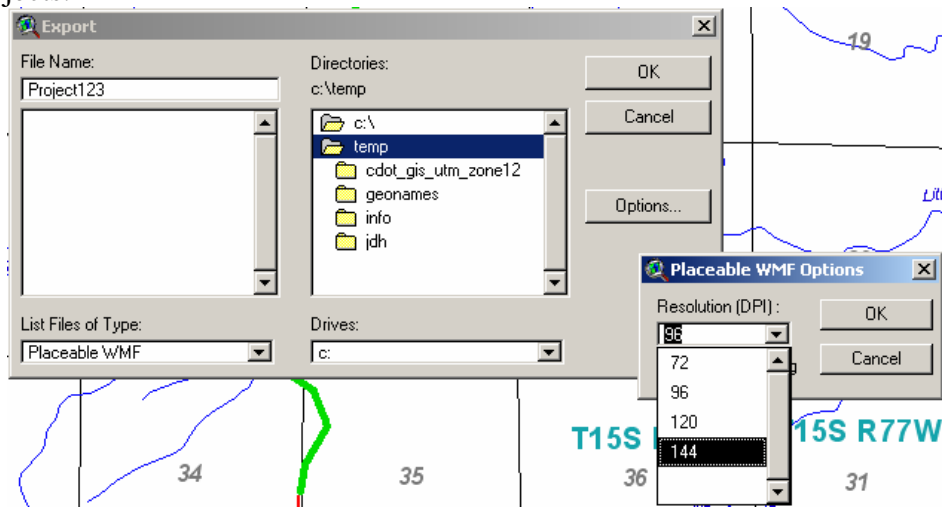
- o For this example I labeled the following layers all using Arial font:
 - PLSS Sections – Size 14, Bold, Magenta
 - PLSS Township Name (Tname) – Size 14, Bold Italic, Magenta
 - Major Roads – Size 12, Bold, Black
 - Streams – Size 7, Italic, Navy Blue
 - Cities – Size 14, Bold, Black
 - Bridges – Size 12, Normal, Black
 - Ref Points – Size 12, Bold, Black
 - Project call out box using the *Callout Text* tool .
 - Highways - Label the highways using one of the *Highway Label* tools. Click and hold the *Label* tool for the other tools to appear.



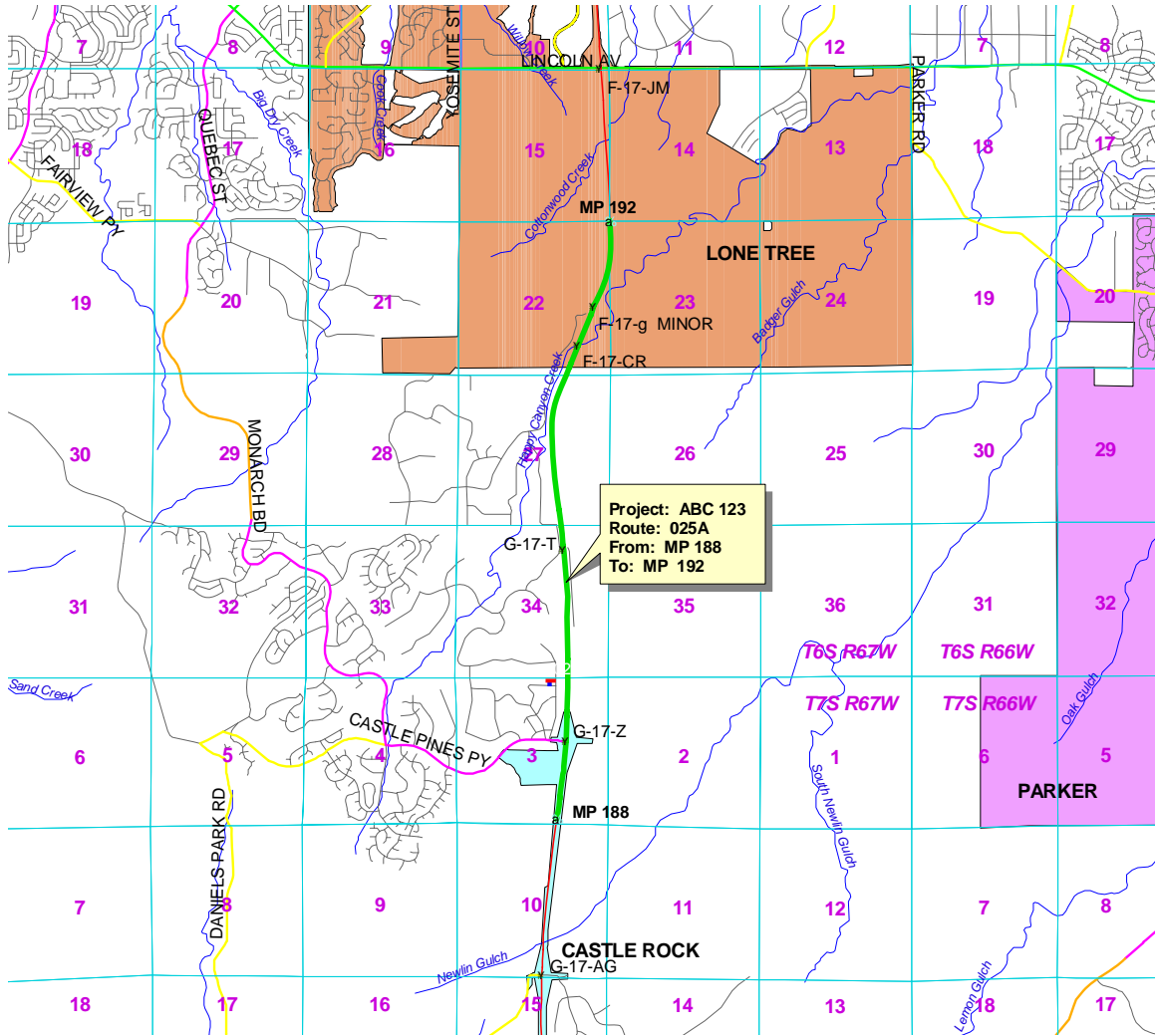
You should now have a map similar to the following:



Export your map to image file – When your map is complete export your view to an image file (*File > Export*). I recommend using the image default type of *Placeable WMF* and increasing the resolution to 144 DPI by clicking the *Options* button. The advantage of the WMF is that the white background is clear rather than white so you can layer with other WMF in CAD or with your own CAD objects.



□ The following image is what I exported as a WMF file and then inserted into this MS Word document. I imagine that Micro Station works the same way.

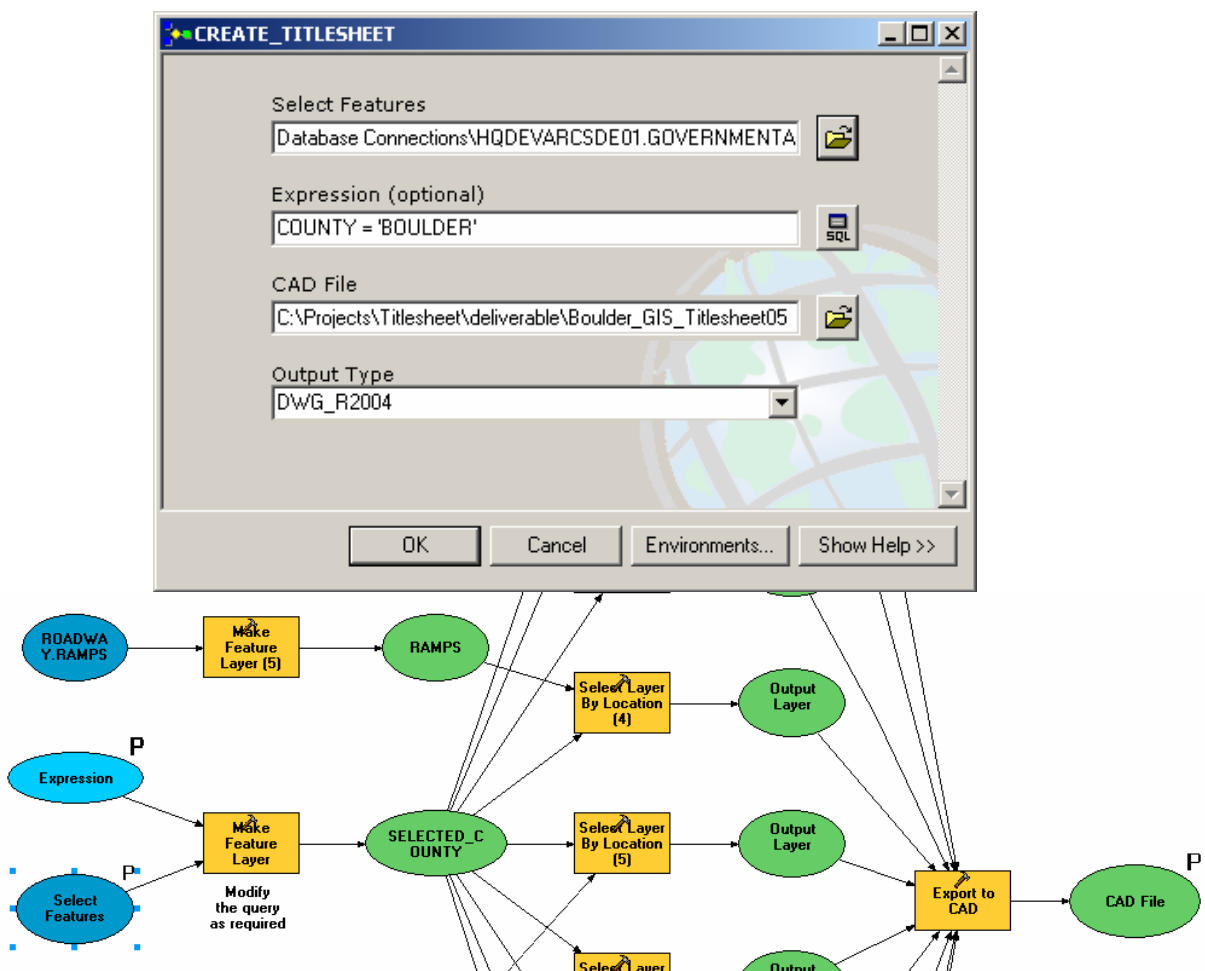


4. GIS GeoProcessing Model (for the GIS Analyst to read)



This section is only relevant to the GIS Section or to someone with access to the ESRI ArcCatalog program and SDE. It is included so that a GIS Analyst can refer to this document when a request is received so that they can recreate a titlesheet in a repeatable and uniform manner.

The following two diagrams illustrate the ESRI GeoProcessing model that is stored in SDE. Database Connections\HQDEVARCSDE01.PUB_BETA.sde, PUB_BETA.TITLESHEET\CREATE_TITLESHEET.



The model has four parameters.

- Select Features – The default is the Counties polygons but it can be changed to any other polygon layer.

- Expression – This expression is based on the previous *Select Feature*. It is a query to only select the features in your area of interest so that a *Select by Location* can be made.
- CAD File – The name of the CAD file that will be created. Remember to include DWG for AutoCAD files.
- Output Type – The default is DXF.

Just run this model and a single CAD file will be created with all the relevant layers. They will not be symbolized and linetypes will not be set. That is up to the CAD Technician/Engineer.