Overview: Plotting from a paperspace layout tab involves setting up a viewport that displays the desired items at useable scales. Plan views, profiles, or cross sections can be plotted on individual pages or combined on one page using multiple viewports. Civil 3D dimensioning is done in modelspace. Bar scales, and north arrows for plan views along with construction notes are typically done in the paperspace mode.

Software: AutoCAD Civil 3D 2016, NRCS C3D 2016 template

Notation: Button to Press  Displayed Text Icon  Action {Text to Enter}  Menu Item...

Create an Additional Drawing Page using Paperspace Layout - (Optional)

Insert an additional layout tab
1. Right-Click on any layout tab Click From Template...
2. Select the 11x17EngTemplate.dwt...(Note: Do NOT use a C3D template.)
3. Click Open
4. From the Insert Layout box select Layout w Doc Fields... Click Ok
5. Customize this layout tab as needed.

Rename the Layout tab
6. Right-Click on the Layout w Doc Fields tab and click Rename..
7. Input the new descriptive name e.g. Plan View. Press enter.

Edit drawing value fields used in the title blocks
8. Click Application menu... Drawing Utilities... Drawing Properties...
9. Click Custom tab
10. Click into the Values for the items to change: Designed by, Draw by, etc. The user needs to click into the Values cells order to change them.
11. Click Ok

Freezing & Thawing Layers to Control items Displayed in a Viewport

1. Double click inside of the viewport. PAPER status will switch to MODEL.
2. Open the Layer Manager: Home... Layers... click Layer Properties
3. Scroll through the layer list (or use filters) to find the layer name to freeze/thaw within this viewport using the VP Freeze column.
   Note: Refer to the HowTo Plan View Grading Cleanup C3D document for layers related to grading.
4. Click on the VP Freeze icon for the intended layer to toggle its status.
5. You can now close out of Layer Manager palette. (This palette can be docked or put into Auto-hide mode also.)

Note: The **On** and **Freeze** columns apply to the entire drawing and can prevent objects from displaying in a viewport also.

Note: The **Layer Freeze** command can be used for plan AutoCAD objects. Use **VP Freeze** for Civil 3D objects.

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### Preparing a Plan View for Plotting in a Layout Tab

#### Setting up Viewport

1. **Click** on a layout tab. E.g. **Plan View**
2. **Double click** inside of the viewport. **PAPER** will switch to **MODEL** and the viewport border will appear thicker.
3. **Zoom in** on the area to view by
   a. Using the mouse wheel to zoom the window to the area that you want, **Or**
   b. **Click** **View... Views...** and **highlight** the named view that you want to appear in this viewport. E.g. **Dam**.

#### Rotating the Display of a Viewport - (Optional)

4. **While** in **MODEL** of the viewport
5. **Type** `{mvsetup}` Press Enter
6. **Type** `{a}` Press Enter
7. **Type** `{r}` Press Enter
8. **Click** near the center of the viewport.
9. **Input** the clockwise rotation angle relative to the original survey orientation. E.g. `{45}` Press Enter (Use this rotation angle to set the North arrow.)
10. Press Enter
11. Press Enter

#### Setting the Scale & Locking the View.

12. **While** in the viewport or with the viewport selected note the Drawing status bar:

#### Place Plan View Dimensioning (Modelspace)

17. **Tool Palettes->NRCS 11x17B... click** **11x17 Text Dims**
18. **Click** on the correct dimension tool. E.g. **Aligned Dimension(MS)**
19. **Osnap** to the beginning point of the object to dimension.
20. **Osnap** to the ending point of the object to dimension.
21. Click to place the dimensioning in a useable location. Refer to the Annotative Dimensions document for more details.

**Place a North Arrow onto the Page (Paperspace)**

22. Switch to paperspace of the layout

23. Tool Palettes>NRCS 11x17B… click 11x17 Symbols… bNArrow

24. Click the location where you want to place the North Arrow.

25. Input the clockwise rotation angle used for the viewport if it was rotated. E.g. {45} (See “Rotating the Display of a Viewport”) If it was not rotated leave the value as {0}.

26. Press Enter
   (Note: When you look at the rotation value in the Properties for the North Arrow it will show up as 90 degrees more what you had entered.)

**Place Notes onto the Page (Paperspace)**

27. From the AutoCAD Tool Palettes click 11x17 Text_Dims

28. Click on Notes - Multiline(PS)

29. Click to the set first corner of the text box.

30. Click to the set opposite corner of the text box

31. Input the text.

32. Click OK when done.

**Adding an Extra Viewport to a Layout (Optional)**

Setting up more than one viewport in a layout allows any combination of profiles, cross sections, or plan views to be plotted on the same sheet.

1. Click on the Layout Tab where you want to add a viewport.

2. Tool Palettes>NRCS 11x17B… select Profile Click Viewport (F3 toggles Osnaps on/off.)

3. Click in the layout to specify the lower left corner of the new viewport.

4. Click in the layout to specify the upper right corner of the new viewport.

**Creating Multiple Viewport in a Layout (Optional)**

Set up 2 or more viewports for multiple cross section views or profile views.
Note: The Profiles layout tab in the NRCS template has 2 viewports already created.

1. Switch to paperspace of the layout

2. Click Layout Tools… Viewports… Named…

3. On the New Viewports tab select one of Standard viewports. Click Ok.

4. Click in the layout to specify the lower left corner of the new viewport.

5. Click in the layout to specify the upper right corner of the new viewport.

6. Select the Viewports and set their Layer to 2.Vprt
Preparing a Profile View for Plotting in a Layout Tab

1. Double click inside of the viewport. PAPER will switch to MODEL.
2. Zoom in on the area to view by
   a. Using the mouse wheel to zoom the window to the area that you want, Or
   b. Click View... Views... and highlight the profile named view that you want to
      appear in this viewport. E.g. CL dam profile.
3. On the drawing status bar, pulldown the Viewport Scale that matches the Profile
   View’s horizontal scale. E.g. For 50Hx10V use 1”=50’
4. Pan the view so that the left edge of the Profile View grid lines up with the guideline
   that is ½” inside of the title block border.
5. Click the Viewport Lock on the drawing status bar to lock it. With Viewport Locked
   you cannot change the scale of the viewport or pan the viewport.
6. Click and drag the viewport grips in order to resize the viewport border if needed.

Plotting from a Layout Tab

Select the Printer & Paper Size.
1. Click on the layout tab to be plotted. E.g. Plan View
2. Right Click the Plan View Tab and Click Page Setup Manager...
3. Click Modify
4. Pulldown the printer/plotter that you will use. E.g. {BizHub}
5. Pulldown Plot style table to NRCS BWgray.ctb for gray plotting of gray lines.
   (Use Monochrome.ctb for B&W only plotting.)
6. Pulldown the paper size E.g. {11 x 17}. Plot Scale is typically left at 1:1.
7. Click Plot area = Extents and in Plot offset checkmark Center the plot.
8. Click OK. Click Close

Previewing & Plotting the Page.
9. Right Click the Plan View Tab and Click Plot...
10. Click Preview... to review the planned plot.
11. Press Enter to return to the Plot screen.
12. Click OK to Plot.