



CHANNEL DESIGN: Inserting Additional Lines

By Pat Sanders

Who says you can't teach an old dog new tricks? During one of the recent volume classes, I was explaining a tedious procedure for adding additional sections inside of CHANNEL DESIGN. One of the students then asked me, "Why don't you just use the tool in the 2D-view?". "What tool? Wow! That's much easier!"

FIGURE 1. Sample Channel with Turning Basin

In Figure 1, we have a turning basin. I have generated the lines automatically, every 75' and the resulting lines are shown. I'd like to add a survey line with its channel template info right at the turn in the centerline.

FIGURE 2. Insert Profile Icon

In Figure 2, the arrow points to the Insert Profile icon in the tool bar. Click this icon then on the centerline (red) where you want to create a new planned line.

Tip: It helps if you zoom way in if you want to hit the exact point.

The program creates a new planned line at that point, but the angle is not correct. That's because we have used smart corners to generate the previous lines and this routine doesn't know about smart corners. However, there is an easy fix!

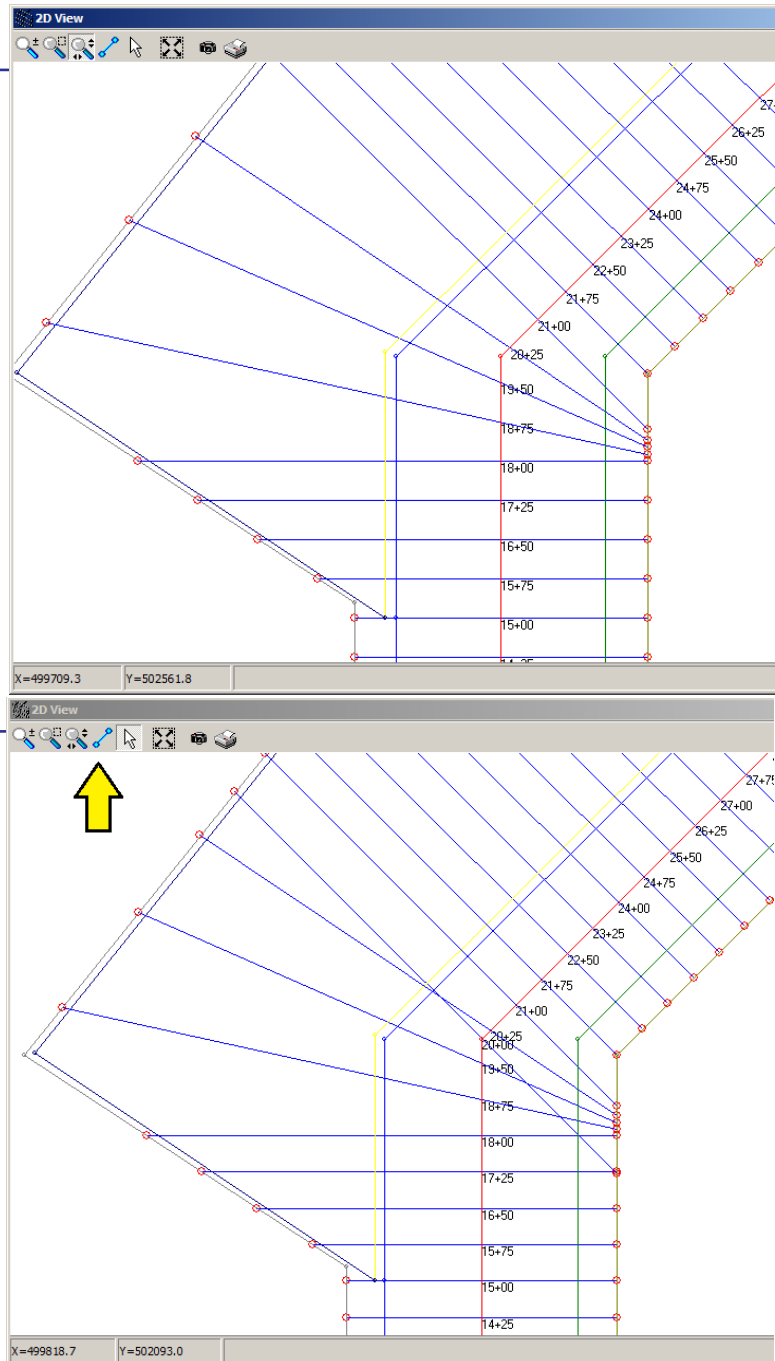


FIGURE 3. New Line with Corrected Angle

Just click the Cursor Mode icon, then press the CTRL key and click and drag the end waypoint to where you want it.

You want to be careful that the result doesn't intersect with any of the surrounding lines. If it does, your resulting volume computation will have some errors introduced.

Now save your LNW file and the inserted line shows up in sequence with the other lines and has the correct channel template information.

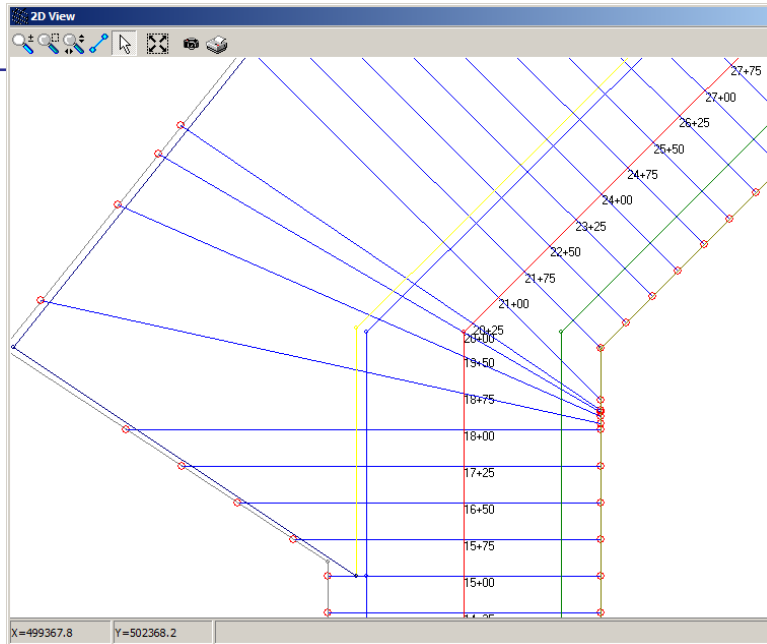
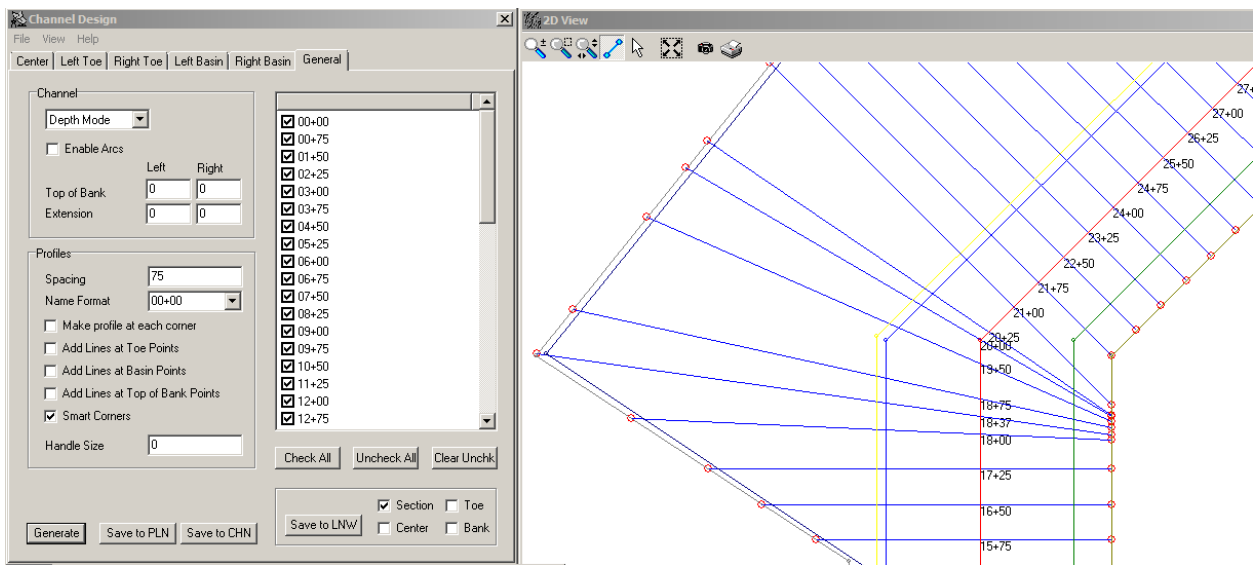


FIGURE 4. Additional Line Added at Westernmost Turning Basin Point



In Figure 4, I have added a line exactly through the westernmost node of the turning basin. This will improve my volume computation.

Important: Remember, when doing any average end area method, or computing volumes in the TIN MODEL using the Philadelphia method, the routines don't know anything that happens to the channel between two pairs of planned lines. If I'm doing one of the TIN vs CHN methods in TIN MODEL, then it knows exactly what is happening.