

B-PERMIT PLAN CHECKING MANUAL

7. Electronic Plan Checking

The impetus for the Bureau of Engineering to promote electronic plan checking is twofold. Foremost is the desire to accelerate the plan checking process. The second reason is “customer friendly” service to minimize unnecessary trips by the public and or private engineers to City offices.

Electronic plan checking may some day soon be the dominant plan checking technique for B-Permit plans. Currently, it is in a pilot program phase that is being expanded. Certain private engineers are cooperating with the Bureau of Engineering and submitting their B-Permit plan electronically. So far we have limited the program to small submittals (three sheets or less) from requested private engineers who have a reputation for quality work.

The program will be expanded as more plan checkers are trained and we accept more private engineers into the program. Formal training class will be available and will probably be required for B-Permit plan checkers if we increase the use of on-screen checking.

The tools needed to do electronic checking:

1. two twenty inch or larger monitors to do the work. [Two monitors are needed so you can keep continuity on adjacent plan sheets or compare different plans at the same location (ie: Grading vs. Street Plans)].
2. The computer program currently being used in the pilot program is “Volo View Express”. An updated program called “Auto Desk DWF Composer”, which creates separate comment layers, must now be purchased,

The process starts with the private engineer submitting the plans using Auto CADD or MicroStation to the Bureau of Engineering electronically. We can convert MicroStation submittals into PDF or DXF formats ourselves prior to checking them. The plans are logged in for processing and then forwarded to the plan checker. The plan checker using “Volo View Express” or the newer “Auto Desk DFW Composer” can now create a new layer of corrections using the “electronic pen” controlled by the mouse and the “typewriter function” controlled by the keyboard. You can zoom in on the plan and enlarge any section you want to see in more detail. The correction layer is then sent back to the private engineer. There is also a viewer made by MicroStation that is similar to the Auto Desk version.

Another method for electronic plan checking is to download the Auto CADD version sent by the private engineer and using Acrobat Professional create a pdf of the plans. Then, you can be mark up over the pdf and send it back to the private engineer or print it.

Because of the viewing limitations on a computer screen, especially for large jobs, it may be better to just download the electronic submittal and print paper sheets to check in the traditional manner. The marked up plans would then be scanned and sent back electronically to the private engineer along with a separate check sheet indicating needed corrections. In order to make this work efficiently, new plan size engineering copiers will be needed with copy, scan and print functions. Color scanning capability would also be a benefit in that the red corrections would be more visible to the private engineer when the plans were electronically returned. If this is the final agreed upon method for larger plan set, it should be used for all size submittals.

Another alternative is having the private engineer mail a paper set of plans to the Bureau of Engineering. The paper set is then marked up with corrections and scanned. The scan is then attached to the permit as a record and e-mailed back to the private engineer for the making of corrections. The marked up paper copy can also be scanned and mailed back to the private engineer..

Even with electronic checking, the rule of bringing in the private engineer after two checks and the engineer and owner after three checks should still be adhered.