

City of Santa Clarita BUILDING & SAFETY

ePlans - Formatting Requirements for Electronic Plans

Portable Document Format (PDF) is the industry standard for electronic plans. Building & Safety only accepts PDF files for plan review. PDF files must be properly formatted as described below. Please read the following instructions carefully. Improperly formatted plans can delay the plan review process for your project.

PDF File Requirements:

Multiple Layers: No. Layers must be merged or flattened.

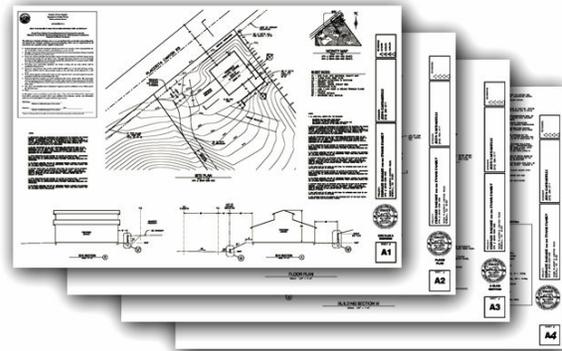
Format: Raster

Resolution: 300 pixels per inch (PPI)

Color Depth: Monochrome (1-bit)

File Size: Maximum 1 megabyte (MB) average per sheet

Grouping: Multiple-sheet PDF (single file with multiple sheets)

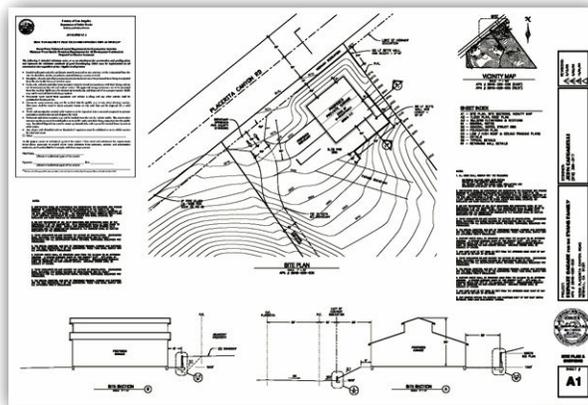


plans.pdf (multiple sheets)

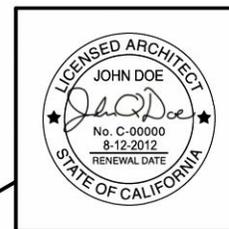
✓Correct

See "Formatting Q&A" on page 3 for more information on PDF file formatting and tips on how to create, convert, and merge PDF files.

Each sheet of the plans must be sealed and signed by the designer of record. The signature may be applied to the drawing electronically (CCR Title 16, Div. 5, Sec. 411e).

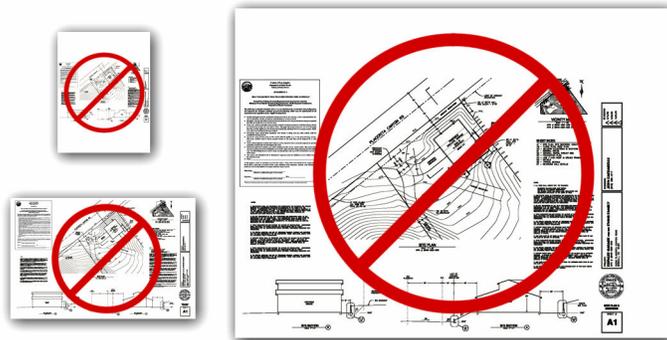


✓Correct

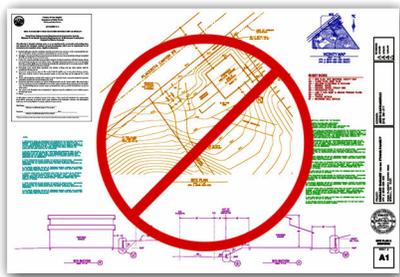


For large plan sets (more than 20 sheets), provide a PDF file for each trade which contains all of the sheets for that trade. For example: Architectural.pdf, Structural.pdf, Mechanical.pdf, etc.

Only one hard copy of the plans will be required for the job site. This copy must be wet-signed by the designers and Building & Safety.



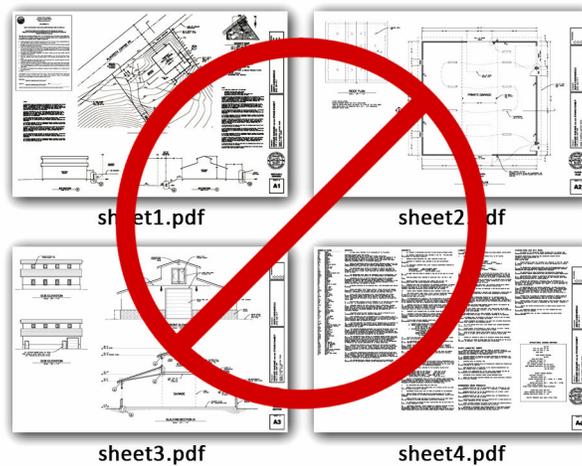
Incorrect sheet size, scale, or margins will not be accepted.



Color plans will not be accepted.



Incorrect orientation will not be accepted.



Individual files for each sheet of the plans will not be accepted.

Formatting Q&A:

Question: *Why does Building & Safety only accept a specific type of PDF?*

Answer: *Building & Safety is responsible for maintaining records of plans and providing the public with access to them. Files kept in our electronic database must be compatible with a wide range of computer software for storage, viewing, and printing. In addition, the file sizes must be manageable for transfer and for use by the public and City staff.*

The PDF standard is constantly evolving. Newer PDF files support transparent objects, layers, and rich media (sound and video). These types of files are not compatible with some PDF viewing and printing software.

Question: *Are vector-based PDF files acceptable?*

Answer: *No. Vector-based PDF files are typically much larger than properly formatted raster-based files. Many vector-based files contain thousands of transparent objects, making them difficult to view in PDF reader software.*

Question: *How do I convert a vector-based PDF to a raster-based PDF?*

Answer: *The industry standard software for working with PDF files is Adobe Acrobat; however, there are numerous PDF tools freely available on the internet.*

Step 1: Save the vector-based PDF files as raster images (TIF or PNG). The format of the raster images is important (300 ppi, monochrome). We recommend TIF files with LZW compression.

Step 2: Convert the raster images back to compressed PDF files.

Step 3: Merge the individual PDF files into a single multi-sheet PDF file.

Question: *How do I combine multiple PDFs into a single file?*

Answer: *There are numerous PDF tools freely available on the internet which can be used to merge, rotate, and rearrange PDF files.*

Question: *My PDF files are too big (larger than 1MB per sheet). What am I doing wrong?*

Answer: *Properly formatted and compressed raster PDF files should not exceed 1MB per sheet. If your files are larger, you may have made one of the following errors:*

- *Saving the plans as 8-bit (grayscale) or 24-bit (full-color) raster files will drastically increase the file size. Even if the images contain only black and white objects, 8-bit and 24-bit files still contain all of the shade and color data. Plans must be saved as 1-bit (monochrome).*
- *Uncompressed files are much larger than compressed files. Construction plans contain mostly white space. The data required to store this white space can be significantly reduced. When converting your PDFs to raster images, be sure to use a form of lossless compression (such as LZW). When creating or saving PDF files, remember to specify "compressed."*

Question: *Some raster images are loading slowly in the PDF reader. What am I doing wrong?*

Answer: *Transparent raster images require considerable resources to display. Even though the source image is not transparent, your CAD software may be plotting it with transparency (white pixels plotted as see-thru). Be sure to set image transparency "off" before plotting.*