

# Submission and Formatting Requirements for Electronic Plans


## Submission Requirements

The City of Mesa Development Services Department accepts electronic plan submittals via the City's online portal known as DIMES. Plans are uploaded to the City during the online permit application process.

For questions regarding the electronic submittal process, please call 480-644-3338.

## Electronic Plans/Documents Submission Process

### 1. Uploading Plans and Documents

1.1 Click the "Add" button  and then click "Add" again when the File Upload window opens.

1.2 Select the files to be uploaded and click "Continue".

1.3 Select the file "Type" from the dropdown menu for each file.



1.4 Enter a description of the file contents (e.g. Structural Calculations) and click "Save".

### 2. Resubmittals

If resubmittals are required, enter the submittal number (e.g. 2<sup>nd</sup> Submittal) at the beginning of the file description in step 1.4. A complete set of revised drawings must be uploaded with all revisions clearly marked or clouded. DO NOT submit individual plan sheets as separate PDF documents.

### 3. Drawings Format Requirements

Provide a 4-inch by 4-inch empty box on the cover sheet of the plans for City stamps.

### 4. Approval

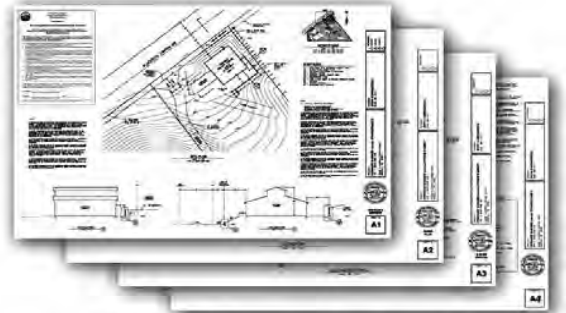
Once all review activities are completed and approved, applicants will receive an email notification that the permit is ready to be issued. After the permit fee is paid, a copy of the permit and the City stamped permit set of drawings can be downloaded from the DIMES website.

Applicants are responsible for printing a City stamped set of plans for use in the field by contractors and inspectors.

## PDF Formatting Requirements

The City of Mesa only accepts Portable Document Format (PDF) files for plan review. PDF files must be properly formatted as described below.

- A. All drawing sheets (architectural, civil, mechanical, electrical, plumbing, fire protection, etc.) must be consolidated into one plan set up to a maximum size of 1 Gig.
- B. Each supporting document (e.g. calculations, reports, comment responses) must be uploaded independently.
- C. Layers: No multiple layers. Layers must be merged or flattened.
- D. Do not lock files. Plans examiners need to add stamps and/or comments to plans.
- E. Format: Resolution: 300 pixels per inch (PPI)
- F. Color Depth: Monochrome (1-bit)
- G. Grouping: Multiple-sheet PDF (single file with multiple sheets)
- H. Remove AutoCAD drawing texts from comments section before converting to PDF (See Q&A below for instructions).

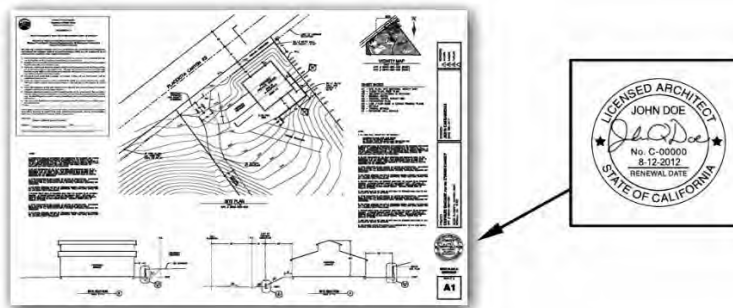


plans.pdf (multiple sheets)

✓Correct

### IMPROPERLY FORMATTED PLANS CAN DELAY THE PLAN REVIEW PROCESS

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 electronically sealed and signed by the designer of record.



✓Correct



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

## Formatting Q&A:

### Question: *Why does Mesa only accept PDF plans?*

**Answer:** *Mesa 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.*

### Question: *Are raster-based PDF files acceptable*

**Answer:**

*Yes, provided that they meet the size limitation requirements. Vector-based PDF files are typically much larger than raster-based files. However, the City prefers vector-based files given the ability to scale these files.*

### 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. 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 specify “compressed.”*

### Question: *How do I convert a vector-based PDF to a raster-based PDF if my file size is too large?*

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

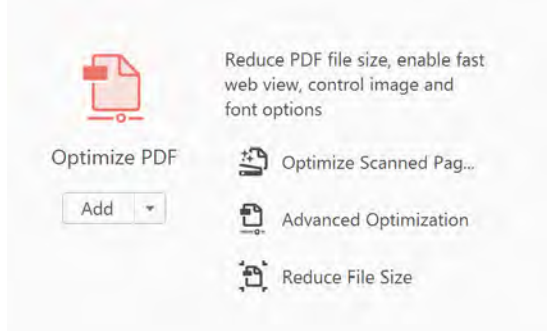
### Question: *Some raster images are loading slowly in the PDF reader. What am I doing wrong?*

**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.*

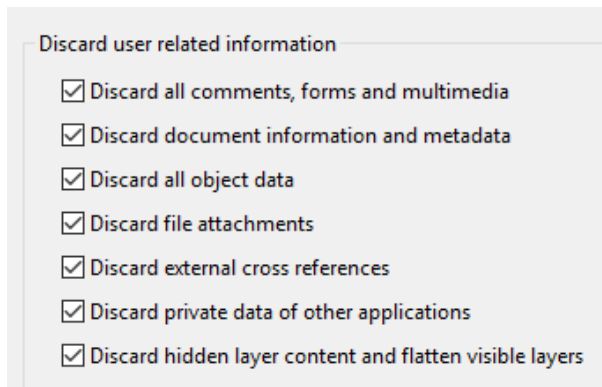
**Question: How do I remove AutoCAD drawing texts comments from PDFs?**

**Answer:** The following steps should remove AutoCAD comments from PDF documents in Adobe Acrobat:

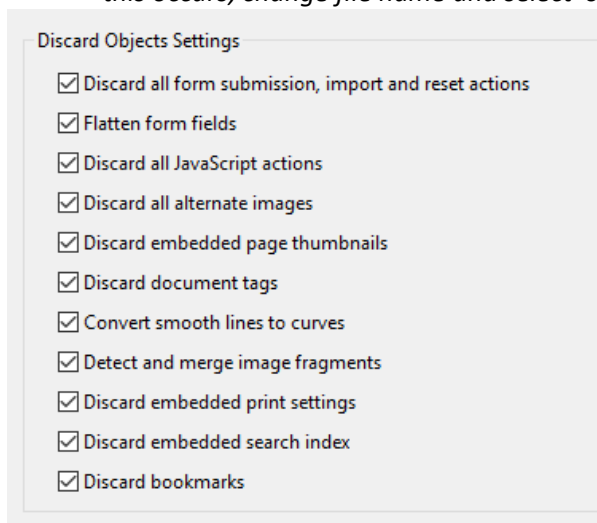
1. Open the PDF file from your computer
2. Right Click on the PDF file, select 'open with', and select Acrobat DC or Acrobat Pro (**Not** Acrobat Reader).
3. Go to 'Tools'
4. Select 'Advanced Optimization' or sometimes called 'Optimize PDF'. If you cannot locate this setting, just search one of these titles in Adobe's search bar.



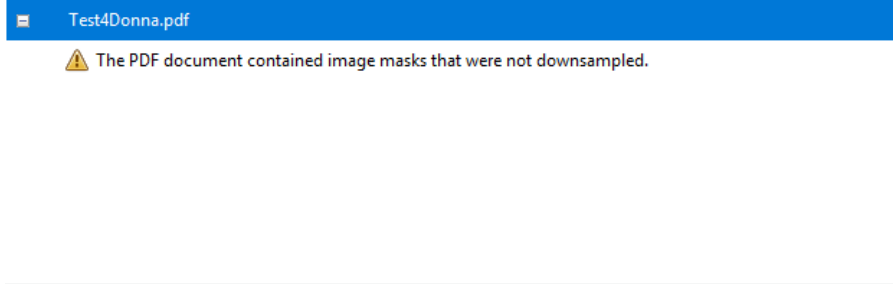
5. Select 'Discard User Data' and check all boxes in this section



6. Select 'Discard Objects' and check all boxes in this section, then select 'OK'.
  - a. In some cases, after selecting 'OK', a window will appear stating 'Save Optimized As'. If this occurs, change file name and select 'save' (if this message appears, skip number 7).



7. Select 'File' then 'Save-as' and give the PDF file a new name (important to rename file). If the following message appears, this is normal and not a concern.



8. Upload the new PDF into DIMES.
9. Email [permitservices@mesaaz.gov](mailto:permitservices@mesaaz.gov) to inform the City that the PDF is fixed. Include the PMT number.

**Note:** If you do not have Acrobat DC or Acrobat Pro, you may visit Development Services at 55 N. Center and you can use the lobby computer kiosk. If you use a kiosk, the PDF documents must be on a USB compatible drive (aka thumb-drive or dongle).

**Note:** There are other methods to remove AutoCAD comments from PDF documents. If you select another method, please verify the AutoCAD comments have been removed before uploading the PDF to DIMES.

**Question:** *How do I remove AutoCAD drawing texts from comment section in AutoCAD?*

**Answer:** On the command line in AutoCAD, enter EPDFSHX and change the value to 0 (zero). In AutoCAD 2016, Service Pack 1 must be installed to make this command available. If you are unable to change file type using EPDFSHX, try using AutoCAD 2015 or an older version to create PDFs, use a third-party PDF driver, or change the text in your drawing to a TrueType font. If you are still having issues, please contact the software developer.