



## Formatting Electronic Documents for Submittal on Development Nexus

Please use the following instructions to prepare your documents for submittal in the Development Services electronic plan review process.

For all application types and permit requests, provide **one set of plans** and **one set of supporting documents**, if applicable, conforming to the instructions outlined in this guide.

- *Plans* include construction drawings, civil drawings, paving plans, utility plans, structural engineering, details, or other sheets typically formatted and included within a construction plan set.
- *Supporting documents* include, but are not limited to, structural calculations, reports, cut sheets, project narratives, or other associated information not considered plans.

Plans and supporting documents have different submittal recommendations. Be sure to retain a copy of your submitted file(s) to reference the filename and sheet order when preparing resubmittal documents for subsequent reviews.

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### Submittal Requirement Quick Notes

- |  |  |
|--|--|
| ✓ File names comply with naming requirements | ✓ PDF is <b>flattened/optimized</b>            |
| ✓ All files shall be <b>PDF</b> only         | ✓ Each file is <b>less than 195 MB</b> in size |
| ✓ Saved file is <b>PDF 1.4</b> or greater    | ✓ Paper size maximum is <b>36" x 48"</b>       |
|  | ✓ Resolution maximum is <b>200 DPI</b>         |

### File Name Requirements

#### *Naming Plan Sets*

1. Prefix each filename with a discipline code. Queen Creek modified an industry standard naming convention to meet the needs of most plan submittals and application types. Choose the discipline code the most closely represents your plan or plan set using the chart below.

**NOTE:** Building permit applications shall be submitted as a **complete package** with all disciplines combined into one pdf file.

2. **Do not** include special characters in the filename: **! \* \ ; : @ & = + \$ , / ? % # [ ] " < > |**
3. Maximum length for filenames is **140 characters**.



4. Recommended file name after the separator (\_) includes project address/name, and type of plan/document. **Example:** RES\_lot 100 QC Station Pool.pdf, COM\_Red Robin TI.pdf, B\_HomeDepot Site Plan.pdf, V\_Terravella FinalPlat.pdf

**NOTE:** File name must be consistent at each submittal cycle. See additional information below for Submitting Revisions.



### Queen Creek Electronic Document File Name Requirements

Discipline	Discipline Code	Separator	Example Filenames w/Discipline Code
<b>BUILDING, FIRE, or SIGN PERMITS</b>			
Commercial complete package	COM	_	COM_Project Name completepackage.pdf*
Residential complete package	RES	_	RES_Project Name completepackage.pdf
Permanent sign package	SIGN	_	SIGN_Project Name completepackage.pdf
Electrical	E	_	E_Project Name Electrical.pdf
Fire Protection	F	_	F_Project Name FireSprinklerLayout.pdf
Mechanical	M	_	M_Project Name Mechanical.pdf
Plumbing	P	_	P_Project Name Plumbing.pdf
<b>ENGINEERING or PLANNING APPLICATIONS</b>			
Architectural	A	_	A_Project Name FloorPlans.pdf
Site Plan	B	_	B_Project Name SitePlan.pdf
Civil	C	_	C_Project Name Civil.pdf
Grading/Drainage	D	_	D_Project Name GradingDrainage.pdf
Electrical	E	_	E_Project Name Electrical.pdf
Fire Protection	F	_	F_Project Name FireSprinklerLayout.pdf
General	G	_	G_Project Name GeneralCover.pdf
Elevations (Architectural)	I	_	I_Project Name Elevations.pdf
Final Plat	J	_	J_Project Name Final Plat.pdf
As-Built Plans	K	_	K_Project Name AsBuiltPlans.pdf
Landscape & Irrigation	L	_	L_Project Name Landscape Irrigation.pdf
Mechanical	M	_	M_Project Name Mechanical.pdf
Notes/Details	N	_	N_Project Name Details.pdf
Photometrics/Site Lighting	O	_	O_Project Name Photometrics.pdf
Plumbing	P	_	P_Project Name Plumbing.pdf
Structural	S	_	S_Project Name Structural.pdf
Dry Utilities/Telecommunications	T	_	T_Project Name Telecommunications.pdf
Utilities-Water, Sewer	U	_	U_Project Name Water Plans.pdf
Survey Maps/Dedication/Easements	V	_	V_Project Name ALTASurvey.pdf
SWPP/Storm Water Pollution Prevention	W	_	W_Project Name SWPP.pdf
Street light/Traffic Signals	X	_	X_Project Name Street Lights.pdf
Signing/Striping	Y	_	Y_Project Name SigningStriping.pdf
Paving/Street Improvement	Z	_	Z_Project Name Paving.pdf

\* To avoid file size maximum for large commercial projects, separate the civil plans to upload as a second file. Example: COM\_Safeway bldg package.pdf and C\_Safeway civilpackage.pdf

#### *Naming Supplemental Documents or Reports*

1. Supplemental documents are any files that are not plan sets including: applications, project narratives, soils reports, water/wastewater reports, drainage reports, traffic impact analysis, other



types of reports, calculations, images, product cut sheets, or other documents associated with your submittal.

2. Supplemental documents shall be in PDF format as a separate file. **Do not** include supplemental documents combined into a PDF with plan sheets.
3. Recommended file name includes project address/name and type of plan/document.  
**Example:** HastingsFarm soil report.pdf, Gateway Quarter drainage report.pdf, Barney Farms project narrative.pdf.

## Preparing Plans for Submittal

### *Creating PDF's*

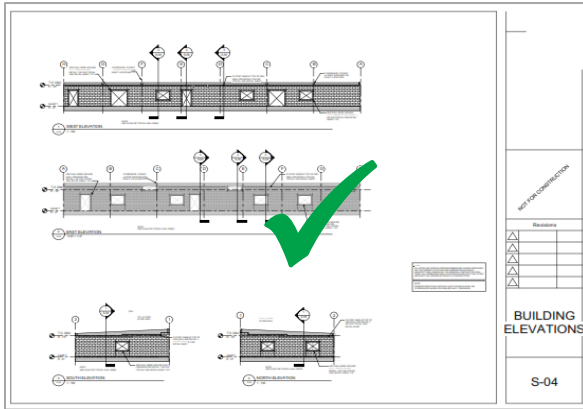
1. Convert plans created in another format to **PDF 1.4** or greater.
2. Save each 'Plan' (or 'Plan set') as a **flattened/optimized PDF**. Flatten the drawing layers in your CAD program prior to creating the PDF, or use the 'Save As/Flattened' and/or optimized PDF option available in your PDF tool. Plans that have 'layers' are not acceptable as they often introduce corrupted metadata.
3. Saving PDF's with consistently formatted, sequential bookmarks is helpful and encouraged. When merging multiple PDF's, verify that bookmarks are consistent. Do not use nested bookmarks. Bookmarks should consist of the Sheet number and a short description (*example:* G1.0 General Notes.)
4. We recommend grouping drawings and submitting plans in smaller, logical sets to facilitate the electronic plan review and reduce file size. Each file size cannot exceed 195 MB.
5. Remove all comments and editable content from PDFs.
6. Unlock or remove protections from the PDF file. Do not submit password protected or locked PDF documents. Plan reviews use copies of the original PDF files.
7. Paper plans scanned into PDF format are acceptable, but should be clearly legible and follow the same formatting rules for converted drawings.
8. Open each PDF using *Adobe Reader/Adobe Pro* and select 'File/Save As'. Adobe is the best tool for resolving corrupted or malformed files. Do not submit PDFs if Adobe reports errors, submitting corrupted files may result in returning the submittal for reformatting which will delay review.
  - a. Ensure the file name and file size meet recommendations noted above.
  - b. Ensure that ***no layers, 'comments' or 'editable content' exists*** in the file. Embedded hyperlinks and sequential bookmarks are acceptable. (See "FAQs & Tips" section for additional information.)

### *Plan/Drawing Formatting*

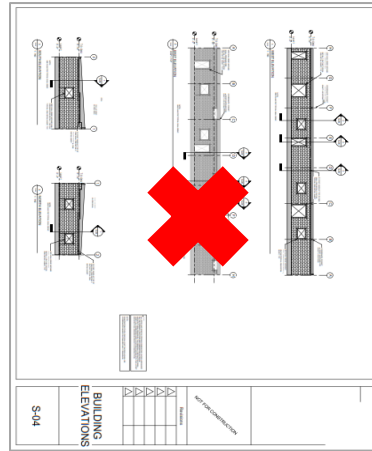
1. Orientation: Landscape orientation is preferred, **not** portrait or upside down to allow viewing without rotation. Failure to submit correctly oriented plans may result in returning the submittal for reformatting, which will delay review. To verify page orientation, view the document in print preview mode in your PDF application. Scroll through each page in the preview window to make sure



the pages are properly oriented.



**CORRECT**



**INCORRECT**

2. Sheet Size: Format the plan so that each sheet is maximum dimension of 36" x48".
3. Plan Alignment: Create plan drawings in your CAD program so that drawing perimeters line up exactly when overlaid electronically. Revised or corrected plans must line up with the original submittal to facilitate comparing versions electronically during the plan review process.
4. Drawing Scale: Save plans to-scale to ensure proper measuring of lines and areas during the plan review process. Be sure to include a scale on each sheet; or, include measurements for each object.
5. Plot Color: Use a black and white style to draw/plot drawings. Grayscale, monochrome and colored pens are discouraged.

### Submitting Revisions, Corrected or Updated Documents

1. Second or subsequent submittals of plans or plan sets should be organized and formatted consistent with your original submittal.
2. **Do not *reorder, extract* or *insert* pages in the middle of your corrected plan sets.** For example, if a 4–page set of structural plans was returned to you for corrections, resubmit a 4–page set of corrected structural plans in the same page order. *Rearranging, extracting or inserting pages out of order will result in delays for completing your plan review.*
  - A. If submitting *new (additional)* plans, plan sets or supplemental documents:
    - I. Submit revised/corrected plans **in the same page order** as the previous submittal.
    - II. Place **new pages at the end of the corrected** plan set document.
    - III. **Do not** place new pages in the middle or beginning of the document. Do not reorder pages within the document.

The chart below shows two new pages in the *U\_Project Name Water Plans.pdf* with the added pages placed at the end of the set, as page 4–5. Notice that file name is the same for 1<sup>st</sup> and 2<sup>nd</sup> submittal. Revision to a previously approved plan set adds REV to the end of the filename.

1 <sup>st</sup> Submittal Filename (Original)	Pages	2 <sup>nd</sup> , 3 <sup>rd</sup> , etc. Resubmittal Filename	Pages
B_Project Name SitePlan.pdf	10	B_Project Name SitePlan.pdf	10



U_Project Name Water Plans.pdf	3	U_Project Name Water Plans.pdf	5
<b>3<sup>rd</sup> Submittal Filename (Approved)</b>	<b>Pages</b>	<b>Revision to Previously Approved File (New Review)</b>	<b>Pages</b>
L_Project Name Landscape.pdf	10	L_Project Name Landscape <b>REV</b> .pdf	10

- B. Removing Pages: If pages need to be removed from the plan set, instead of excluding/deleting them, place a ‘slash’ across those pages in CAD, mark them as ‘Omit’ and include the date they were omitted.

## FAQs & Tips

Electronic plan review software relies on correct **PDF/A-compliant** information embedded in every PDF document (the *metadata*). *For intellectual property and security reasons, plan review software does not change incoming files.* Below are some additional guidelines and tips for resolving potential issues before you submit your plans.

**CAUTION:** Failure to submit correctly formatted plans may result in returning the submittal for reformatting, which will delay review.

### Submitting Construction Plans for a Building Permit:

- Building permit submittals shall be uploaded as a single file, with all disciplines combined into one single pdf file.
- All electronic submittals require the same document types (site plan, architectural, electrical, structural, etc.) as required for paper submittals. Refer to the [Application Checklists](#) for more information.
- For large projects, civil plans may be uploaded separately from the architectural package.  
Example: *COM\_newshoppingcenter.pdf* for architectural, structural, electrical, plumbing etc. and *C\_newshoppingcentercivils.pdf* for the civil improvement plans.

### Why is the file name so important?

Our plan review software uses the file name to electronically route the plans for review, and track the version of each document. If the file does not meet QC’s naming conventions, it cannot be routed and will delay the review process.

### What does PDF optimization do?

PDF optimization reduces file size by removing embedded fonts, compressing images, removing unused objects and improper metadata. Optimization is critical to reduce or eliminate PDF corruption.

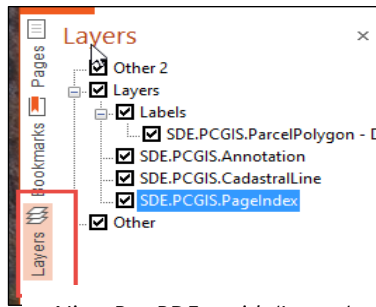
### Why do ‘Layers’ and ‘Editable Content’ need to be removed from the PDF?

Many tools on the market convert CAD drawings/plans to a PDF format. Unfortunately, some of these tools do not properly translate CAD layers or content. Additionally, conversion irregularities introduced by the CAD program or flatbed scanner may introduce errors into the PDF document. Do not submit files with *any editable content*. If an ‘object’ can be edited or deleted in the PDF, the document is not acceptable.

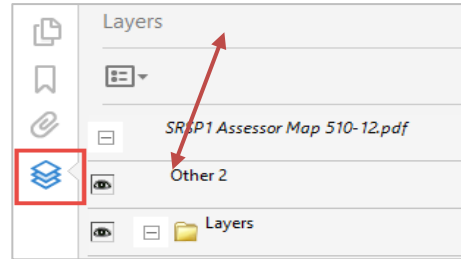
### How can I tell if my PDF has ‘Layers’ or other ‘Editable Content’?



Most PDF compliant software (like *Adobe Reader*, *Adobe Pro*, *Nitro Pro*, etc.) display a Layers icon when a document contains layers, (see below). The Layers icon is not displayed if layers are not used and recognized by the PDF tool.



Nitro Pro PDF – with 'Layers'



Adobe Reader PDF – with 'Layers'

Other 'Editable content' includes active form fields, stamps, comment or text boxes, signatures, or markups that can be deleted from the PDF by any user. Editable fields will have a blue background within the PDF. Open the Comment window in your PDF tool to see these types of objects. If any exist, please flatten the PDF or remove them. These include plans that use *AutoCAD SHX Text* objects – this font type has compatibility issues in many PDF viewers.

### Why is page rotation so important?

PDF tools that allow users to rotate pages should properly record that 'rotation' within the PDF document. When the PDF software does not properly set this rotation, those pages may end up printing upside down or sideways when sent to a printer or displayed on screen. Rotating plan sheets slows the plan review process.

### Why is page order important?

Resubmitting plans with the pages in the **original order** ensures that the Plan Checkers review comments and sketches are properly carried forward to the newer submittal or version by the electronic plan review software. This allows for more accurate and efficient document reviews, and saves time.

### AutoCAD 2016 Compatibility Note:

AutoCAD 2016 includes a feature that automatically and by default converts any existing SHX font text within a CAD file into 'editable content/comment objects' when saving to PDF format. The result is a 'comment' being created for every SHX text object found.

#### Solution:

To ensure that PDFs created with AutoCAD 2016 (or LT) do not contain these editable objects, please install Service Pack 1 patches for AutoCAD 2016 (or LT) and then proceed to modify the AutoCAD's default settings per the instructions provided in the link below:

<https://forums.autodesk.com/t5/autocad-2013-2014-2015-2016-2017/autocad-2016-shx-text-as-comment-in-exported-pdf/td-p/5555583>

Optionally, remove all SHX text from the CAD document and replace it with a True Type Font (TTF) text. After generating the PDF from CAD, open each document using Adobe and do a 'File/Save As'.



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