Electronic Plan Review Document Submittal Recommendations

Please use the following instructions to prepare your documents for electronic plan check. Note that *Plans* have different submittal recommendations than supporting documents/attachments. All PDF files must be under **195MB** in size. Filenames should not exceed 140 characters in length and paper sizes should not exceed 36x48 inches. Resolution not to exceed 200 DPI. **Files must be saved in PDF 1.4 or greater**.

- Retain a copy of the submitted file to later verify the filename and sheet order (during resubmittal).

- **Revision/Resubmittals may be rejected if not submitted with a filename that exactly matches the original submittal filename. See instructions in Section 'C.'**

A. PREPARING PLANS FOR SUBMITTAL

Creating PDF's: Each 'Plan' (or 'Plan set') must be saved 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' cannot be processed.

Saving PDF's with consistently formatted, sequential bookmarks is helpful and encouraged. If multiple PDF's are merged, verify that bookmarks are consistent. Nested bookmarks are not officially supported. Ideally, a bookmark consists of the Sheet number and a short description (*example*: G1.0 General Notes)

Naming Plan Sets:

We require grouping and submitting plans in smaller, logical sets to facilitate the electronic plan review. One way to accomplish this is to prefix each filename with an industry standard discipline code (see the Discipline Code Chart below). Choose the appropriate discipline code and insert an underscore character (_) between this code and the filename, as shown in these examples. **Each set may contain up to 69 sheets per discipline. Example: All A_Architectural drawings need to be grouped as (1) PDF file that may contain up to 69 sheets.**

Do not include # or + or & characters in the filename. Files need to be grouped under these disciplines

Discipline Code	Separator	Submitted Filenames w/ Discipline Code
S	_	S_Structural
P	_	P_Plumbing
F	_	F_Fire Protection

DISCIPLINE CODE CHART

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A _ Architectural	L _ Landscape
C _Civil	M _ Mechanical
E _ Electrical	P _ Plumbing
F _Fire Protection	Q _ Equipment
G _ General	S _ Structural
K _ Food Service	

- **Page Orientation and Alignment**

1. Pages must all be properly *oriented*, meaning upright, **not** sideways or upside down, so that the document can be viewed without rotation. Failure to submit correctly oriented plans may result in a 'Hold' being placed on a submittal, which will delay review.

   To verify that pages are properly oriented, open the document in your PDF application and do a **'print preview'**. Scroll through each page in the preview window to make sure the pages are properly oriented. Make sure the correct paper size is selected.
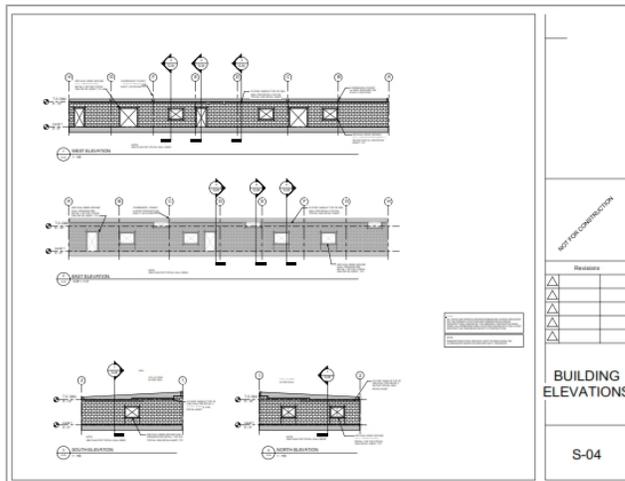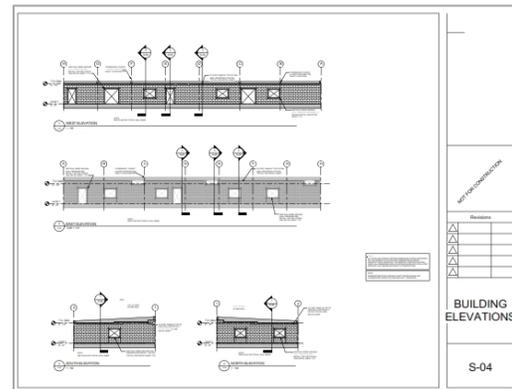
|	
CORRECT	**NOT CORRECT**

2. Alignment: Plan drawings must be created in your CAD program so that drawing perimeters 'line up' exactly when overlaid electronically.

   - Revised/corrected plans must 'line up' with the original submittal to facilitate comparing versions electronically.

3. Plans must be saved 'to-scale' to ensure proper measuring of lines and areas electronically.

   - Include a scale on each sheet or include the measurements for each object.

4. Plans should be plotted/drawn using a black and white plot style. Grayscale, monochrome and colored pens are not encouraged.

5. Do not submit password protected or locked PDF documents. Plan reviews are conducted on copies of the original files provided. The original PDF's are not changed in any manner.

6. After saving the CAD files to PDF format, do an annotation check to **ensure that no 'comments' or 'editable content' exists** in the file. (Embedded hyperlinks are acceptable.)

7. Paper plans scanned from a photocopy to PDF format are acceptable, but should be clearly legible and follow the same rules noted above.

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 PDF's that Adobe indicates are corrupted.

   - Ensure the file name meets the naming recommendations noted above.

PREPARING PLANS FOR SUBMITTAL, continued.

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

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 the file contains no layers recognized by the PDF tool.
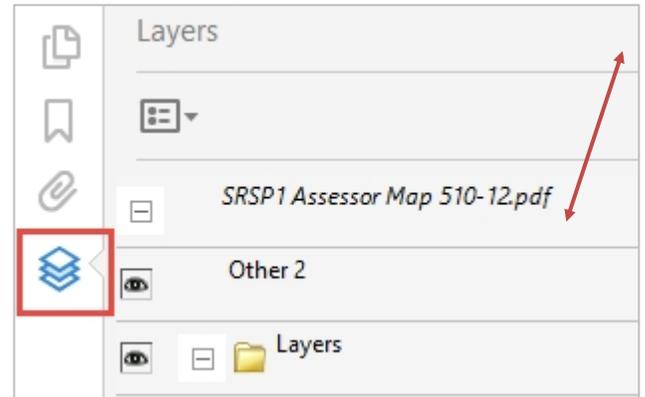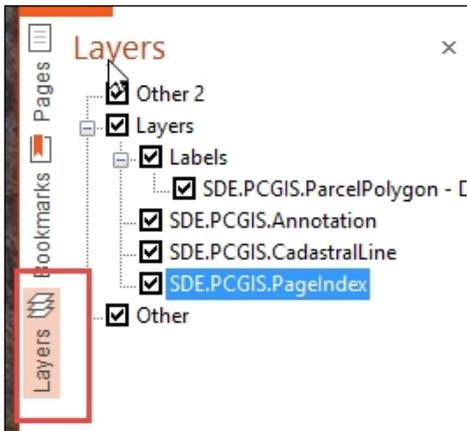
Adobe Reader PDF – with 'Layers'
Nitro Pro PDF – with 'Layers'

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 of these are found, please flatten the PDF or remove them. These include plans that use *AutoCAD SHX Text* objects – this font type that has compatibility issues in many PDF viewers.

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.

Why is page rotation so important?

PDF tools that allow users to 'rotate' pages should properly record that 'rotation' within the PDF document. When this rotation is not properly set by the PDF software, those pages may end up printing upside down or sideways when they are sent to a printer.

What does PDF optimization do?

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

B. NAMING SUPPLEMENTAL DOCUMENTS

Supplemental documents or attachments are any files that are not plan sets. These may include Permit Applications, Soils Reports, Calculations, images, etc. These must also be **submitted in PDF format with a unique, descriptive filename.**

C. SUBMITTING REVISIONS/CORRECTED/UPDATED DOCUMENTS

1. Revised files are typically one of two types: (1) required resubmittals, or (2) revisions to previously approved documents (after the permit has been issued). Each has different file naming requirements, as noted below.

    A. *For required resubmittals:* <u>**Use the EXACT same filename as the original submittal.**</u> Do not change the filename when submitting a new 'version' of your plans or supporting documents – the system tracks versioning automatically. See the chart below.

    B. *For revisions to previously approved documents(after permit is issued):* <u>**Provide a revised file name**</u> instead of using the exact same filename as the originally submitted files. If resubmittals are required, continue to use this revised file name for subsequent resubmittals. See the chart below.

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. <u>Revised/corrected plans **must** be submitted in the same page order as the previous submittal.</u>

        II. Place <u>new pages at the end</u> of the corrected plan set document. **Do not** place new pages in the middle or beginning of the document. Do not reorder pages within the document.

    The chart below shows the addition of two new pages to the *F_Sprinkler Diagrams.pdf*, with the added pages placed at the <u>end of the set</u>, as page 4-5.

1st Submittal Filename (Original)	Pages	2nd, 3rd, etc. Required Resubmittal Filename	Pages
S_Structural.pdf	10	S_Structural.pdf	10
F_Sprinkler Diagrams.pdf	*3*	F_Sprinkler Diagrams.pdf (see above directions for added pages)	*5*
3rd Submittal Filename (Approved)	**Pages**	**Revision to Previously Approved File (New Review)**	**Pages**
S_Structural.pdf	10	S_Structural **REV**.pdf (after permit is issued)	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.

Why is page order important?

Resubmitting plans with the pages in the <u>original order</u> ensures that the Plan Checkers review comments and sketches are properly carried forward to the newer submittal/version by the electronic plan review software. This allows for more accurate, expedited document reviews. Questions on what type of discipline/disciplines will be needed for a project, call 940-761-8872 to inquire.

AutoCAD 2016 Compatibility Note:

AutoCAD 2016 includes a feature that <u>automatically and by default converts</u> any existing SHX font text within a CAD file into 'editable content/comment objects' when saving to PDF format. This results in a 'comment' being created for each and every SHX text object found.

Solution<u>:</u>

To ensure that PDFs created with AutoCAD 2016 (or LT) do not contain these editable objects, please <u>install **Service Pack 1**</u> 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

Once these changes have been made, create the PDFs for submittal for plan review following remaining submittal recommendations above.

Optionally, <u>remove all SHX text</u> 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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