



**Building Safety Office**

**Design Professional  
Electronic Plan Review Registration**

Please complete the following (all information is REQUIRED):

Firm Name: \_\_\_\_\_

Licensee Name: \_\_\_\_\_

Business Mailing Address:

Street: \_\_\_\_\_

Suite: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_

Zip Code: \_\_\_\_\_

License Number: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Email Address: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Please affix a wet ink seal and original signature in non-black ink below:

Please submit a scanned copy of this document to [buildingsafety@lansingmi.gov](mailto:buildingsafety@lansingmi.gov) and the original hard copy to;  
Building Safety Office, Attention Plan Review, 316 N. Capitol Suite C-1, Lansing, MI, 48933

# 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 100 characters in length and paper sizes should not exceed 36x48 inches. Resolution should not exceed 200 DPI.

- 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' are not acceptable.

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 recommend 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.

Discipline Code	Separator	Submitted Filenames w/ Discipline Code
S	_	S_Floor Plans.pdf
P	_	P_HVAC Plans.pdf
F	_	F_Sprinkler Diagram Plans.pdf

### DISCIPLINE CODE CHART

A – Architectural  
 B – Geotechnical  
 C – Civil  
 D – Process  
 E – Electrical  
 F – Fire Protection  
 G – General  
 H – Hazardous Material  
 I – Interiors  
 J – Justice / Detention  
 K – Food Service  
 L – Landscape

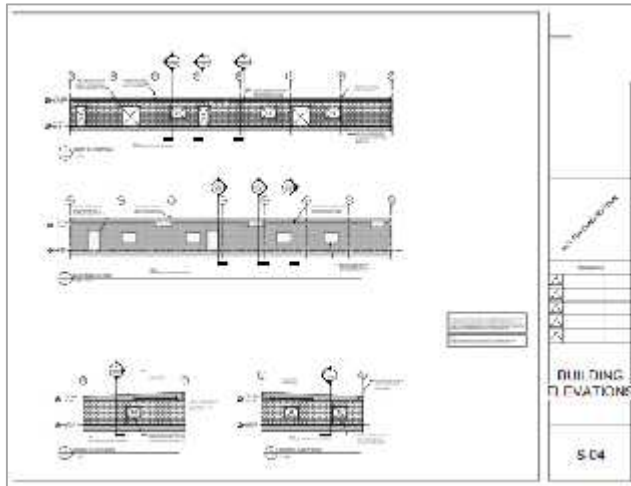
M – Mechanical  
 O – Operations  
 P – Plumbing  
 Q – Equipment  
 S – Structural  
 T – Telecommunication  
 U – Railway  
 V – Survey / Mapping  
 W – Civil Works  
 X – TITLE 24 / Other Disciplines  
 Y – Security  
 Z – Contractors / Shop Drawings

If you choose not to use the Discipline codes, please ensure that the filenames are *descriptive* and *unique*. This will assist the plan review staff with distributing the documents.

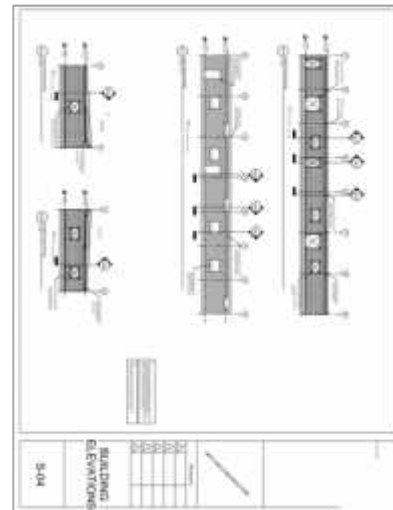
▪ **Page Orientation and Alignment**

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 check 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. This is the best way to check for rotated pages.



**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 acceptable.
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. Paper plans scanned from a photocopy to PDF format are acceptable, but should be clearly legible and follow the same rules noted above.
  - **After scanning a document, open it in Adobe Reader/Pro and select File/Save As.** Adobe is the best tool for resolving corrupted or malformed files.
  - Ensure the file name meets the naming recommendations noted above.

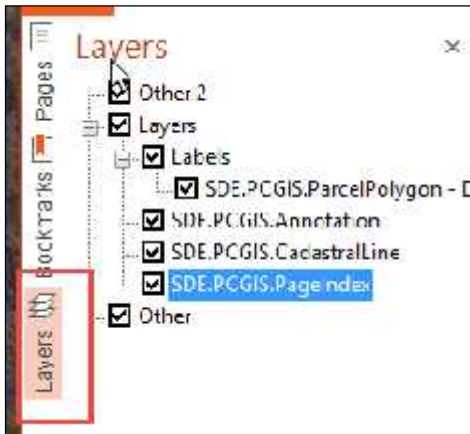
## PREPARING PLANS FOR SUBMITTAL cont.

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.

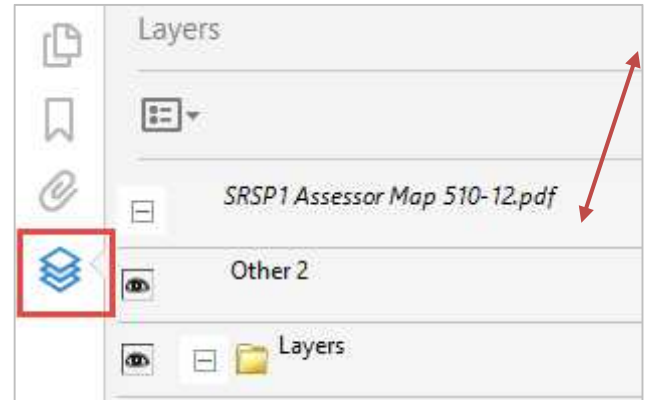
### How can I tell if my PDF has 'Layers' or other 'Editable Content'?

Most *PDF compliant* software (like Adobe Reader, Adobe Pro, Nitro, etc.) display a *Layers icon* in their viewing window on the left when a document contains layers, as shown below.

The Layers icon is not displayed if the file contains no layers 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 of these are found, please flatten the PDF or remove them submitting. These include plans that use *AutoCAD SHX Text* objects – this font that has known issues in 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 handle CAD layers or content. Conversion irregularities may introduce errors into the PDF document itself. For security reasons, it is also not advisable to submit files with *any editable content*.

### 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. Each has different file naming recommendations, as noted below.
  - A. *For required resubmittals:* **Use the EXACT same filename as the original submittal.** 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:* **Provide a revised file name** 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.
3. **For required resubmittals, rearranging, extracting or inserting pages out of order will result in delays for completing your plan review.**
4. If submitting *new (additional)* plans, plan sets or supplemental documents:
  - A. Revised/corrected plans **must** be submitted in the same page order as the previous submittal.
  - B. Place new pages at the end 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 end of the set, as page 4-5.

1 <sup>st</sup> Submittal Filename (Original)	Pages	2 <sup>nd</sup> , 3 <sup>rd</sup> , etc. Required Resubmittal Filename	Pages
S_Floor Plans.pdf	10	S_Floor Plans.pdf	10
F_Sprinkler Diagrams.pdf	<b>3</b>	F_Sprinkler Diagrams.pdf	<b>5</b>
3 <sup>rd</sup> Submittal Filename (Approved)	Pages	Revision to Previously Approved File (New Review)	Pages
S_Floor Plans.pdf	10	S_Floor Plans <b>REV</b> .pdf	10

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 original order 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.

