ELECTRONIC PLAN REVIEW

DOCUMENT SUBMITTAL RECOMMENDATIONS

Please use the following instructions to prepare your documents for electronic plan check. Note that there are slightly different submittal recommendations depending on the type of project being submitted, and whether you are submitting plan sheets or supporting documents/attachments.

> ➢ Providing a complete review package at first submittal will aide in a timely plan review process. Incomplete packages, including incomplete plan sets and missing information, reports or documents, will delay the review process. This may also cause added review cycles as well as additional plan review fees, if a fourth submittal becomes necessary.

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

- Different types of plan submittals and/or permits have different review processes, therefore, may require separate submittals and City of Chandler (COC) Record/Permit numbers. Please review all plan review submittal forms, guidelines and requirements prior to starting the online submittal process. Onsite improvement plans, off site improvement plans and plats (final, preliminary and minor land division) have different review processes and are given different COC Record/Permit Numbers. Therefore, they each must be a completely separate submittal, not just a separate PDF.

A. PREPARING PLANS FOR SUBMITTAL

CIVIL REVIEW

- Plan sheets must be 24"x36"

- Each plan set which has its own separate cover sheet must be submitted as a separate PDF. Most projects will have multiple PDF sets submitted. Erosion-Sediment Control plans, Street Light plans, and Landscape plans should each be a separate PDF.

- Always retain a copy of the submitted file(s) to later verify the sheet order (necessary for proper resubmittals)

BUILDING REVIEW

- Plan sheets may be any standard paper size up to 30"x42".

- If you have building or tenant improvement plan sets of more than about 30 pages it is best to break up the plans into logical sets such as "Architectural", "Structural", etc. or something like "Arch .pdf" with an "MEP.pdf" Just keep it logical.

- Always retain a copy of the submitted file(s) to later verify the sheet order (necessary for proper resubmittals).

CREATING PDFS:

Each 'plan' (or 'plan set') should 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 in your PDF tool.

All pdf files should be under **95MB** in size. There is no upper page limit to each file. Resolution should not exceed 200 DPI. **Files must be saved in PDF 1.4 or greater**.

Filenames should be unique and may not exceed 100 characters. The first four letters (4) of the filename are used in the corrections report to identify which pdf was marked up, so starting the filename with a unique descriptor is important. Starting filenames with standard discipline codes such as "civil", "site, "architectural", "mechanical", or some other descriptive name is recommended.

Do not use special characters in your file name ".)(*&^%$#@!?/>'. You may use letters, numbers, underscores, or hyphens.

Do not submit password protected or locked PDF documents. Plan reviews are conducted on copies of the original files provided. The original PDFs are not changed in any manner but protected documents may keep us from being able to place correction comments or approval stamps on the plans.

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. Incorrectly orientated plans may result in a rejected submittal.

   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.
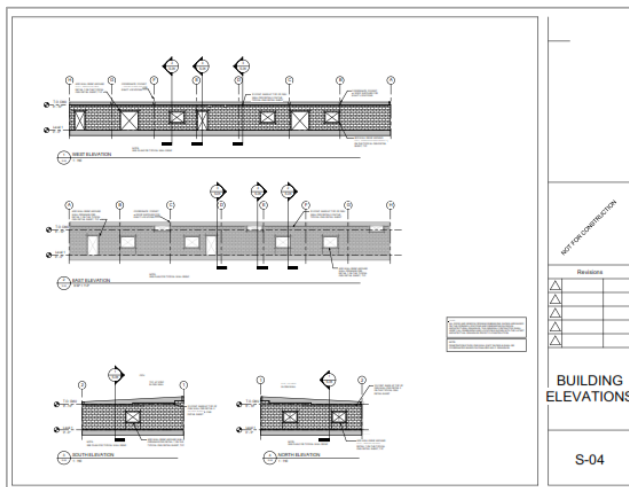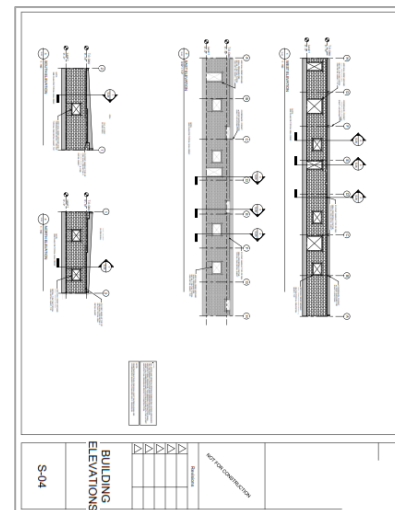
<div align="center">CORRECT   NOT CORRECT</div>

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

- Corrected plans <u>must 'line up' with the original submittal</u> to facilitate comparing versions electronically.

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

   - Include an engineer or architectural scale, whichever is applicable on each sheet.

4. Plans should be plotted/drawn using a <u>black and white</u> plot style. Grayscale, monochrome and colored pens are discouraged.

5. After saving the CAD files to PDF format, **ensure that no 'comments' or 'editable content' exists** in the file (embedded hyperlinks are acceptable).

6. Paper plans scanned to PDF format are acceptable, but should be clearly legible and follow the same rules above.

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

Electronic plan review software <u>relies</u> on correct (PDF/A compliant) information that is embedded in every PDF document (*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.) displays a Layers *icon* when a document contains layers (see below). The Layers icon <u>is not displayed</u> if the file contains no layers recognized by the PDF tool.
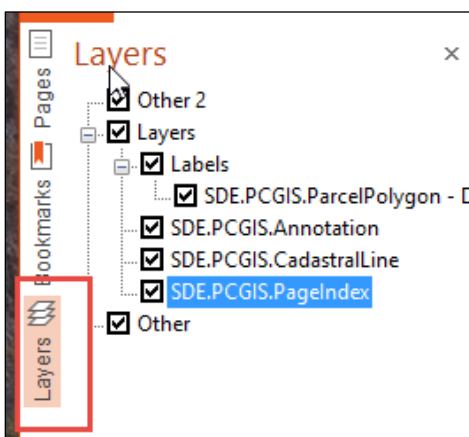
Nitro Pro PDF – with 'Layers'
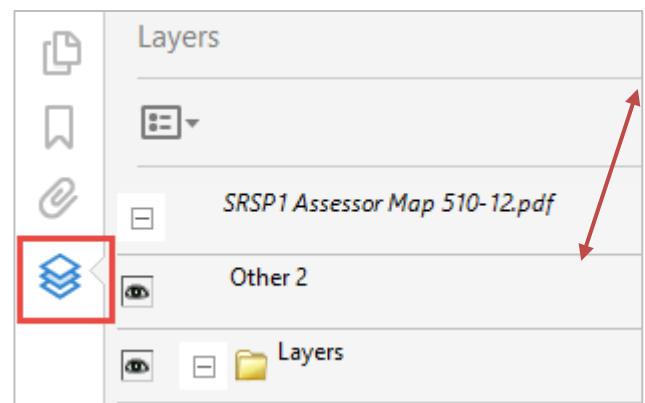
Adobe Reader PDF – with 'Layers'

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

Certain PDF drivers will allow electronic "images" to remain. We recommend using AutoCAD, Adobe Pro or Nitro.

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 <u>should properly record that 'rotation' within the PDF document.</u> 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, Cut Sheets, etc. These must also be **submitted in PDF format with a unique, descriptive filename.**

C. SUBMITTING CORRECTED/UPDATED DOCUMENTS

1. For required resubmittals: **Use descriptive filenames similar to the original marked up submittals.** There will be instances where our staff has changed a file name during the original submittal process to either better identify the PDF or because it was necessary to "fix" PDF metadata for our system. When resubmitting make note of any name changes we may have made.

2. **Do not *reorder, extract* or *insert* pages in the middle of your corrected plan sets.** For example, if a 4-page set of grading plans was returned to you for corrections, resubmit the 4 pages of corrected grading plans in the same page order.

    o **Adding Plan Sheets** If submitting new (*additional*) plan sheets, **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. <u>Do not reorder pages within the document.</u>

    o **Removing Pages:** If pages need to be removed from the plan set either replace them with a blank page or simply cross them out. The page order of the original submittal must be maintained. *In CAD you can mark them as 'Omit' and include the date they were omitted.*

<u>For required resubmittals, rearranging, extracting or inserting pages out of order will result in delays completing your plan review.</u>

Why is page order important?

Resubmitting plans with 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.

SUBMITTING REVISIONS AND/OR DEFERRED ITEMS ASSOCIATED WITH PREVIOUSLY APPROVED PLANS

1. **EMAIL** plans.coordination@chandleraz.gov **AND INCLUDE THE FOLLOWING**

- The original permit or record #
- A brief description of what the deferred submittal or revision entails
- A PDF of the assembled plan sheets (for revisions only include those sheets affected, not the whole set)
- A separate PDF for any cut sheets or structural calculations.

2. **PDF's may be attached to the email if they are less than 30MB in size. For PDF's over 30MB you will need to include a file transfer link to the documents.**

- Do not upload documents as an attachment to the original permit or record.
- Do not create a "new" permit or record.
- Do follow the same pdf formatting guidelines as for the original submittal.

Why are revisions and deferred submittals handled differently?

Revisions to approved plans and deferred submittals are handled differently in our department in that we "link" these types of submittals to the original permit. We do not allow direct creation through our citizen access portal in order to ensure the original designer of record is involved with any changes to their plans, and as a means to ensure regular inspections may be scheduled during the review process.

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