

Archiving of Project Information

A project archive must be created or augmented whenever a work product (e.g. geotechnical report, memorandum, boring log, consultant report review) is completed. The types of documents and information to be archived are listed in the *GS Document Archive List*. Items marked “Required” must be archived if they were developed during the course of project investigation, design, reporting, or construction. Working documents not archived, such as drilling requests, USA clearances, original work requests etc., must be maintained by the geotechnical professional throughout the life of the project. These documents may be destroyed upon completion of construction.

The geotechnical task manager is responsible for ensuring proper archiving occurs. Project archiving should occur as soon as possible after completion of the final work product and no later than 30 days after marking the GS project tracking “*Status*” field as “Complete”. Time for project archiving is charged to the appropriate project EA and activity code for the final work product.

GS Document Archive List

Document Type	Required (R) or Optional (O)	Native Format	Archive Format *
Planning Phase			
Relevant historical data from literature search	O	Paper, PDF	PDF
Relevant site reconnaissance results (notes, photos, sketches, geology field maps)	O	Paper	PDF, JPG, GIF, BMP
Reports (e.g., Preliminary Foundation Report)	R	DOC, PDF, XLS, other	Single PDF of entire report
Design Phase			
Laboratory test results	R	PDF	PDF
Rock core photos	O	JPG, GIF, BMP	PDF, JPG, GIF, BMP
LOTB, As-Built LOTB, Boring Records	R	PDF, TIF, DGN, gINT	PDF
Existing As-Built Plans not available in BIRIS or DRS	R	Paper, PDF	PDF
Field instrumentation measurements or results	R	PDF, XLS, CSV, TXT, and proprietary	Retain relevant file format
Reports (e.g., Foundation, Geotechnical, Geophysical, Geological)	R	DOC, PDF, XLS, other	Single PDF of entire report
Copy of geotechnically relevant plans (GP, FP, Abut/Bent Details)	O	PDF, DGN, TIF	PDF
Borehole Backfill Data Sheet	R	Paper	PDF
Construction Phase			
Notes or correspondence confirming field verification of geotechnical conditions	R	Paper, email	PDF, JPG, GIF, BMP
Recommendations relating to change orders, claims, or pile mitigation	R	DOC, PDF, XLS, other	Single PDF of entire report
Pile driving records/ logs	R	Paper	PDF
Foundation testing reports (PDA, PLT, GGL, CSL)	R	DOC, PDF, XLS, other	Single PDF of entire report
Field instrumentation measurements or results (e.g. soil nail tests, ground anchor tests, shop drawings)	R	PDF, XLS, CSV, TXT, and proprietary	Retain relevant file format

* ZIP as appropriate

For consultant-prepared work, archive the final (approved) work product and the approval correspondence signed by the geoprofessional. Draft reports or comments on draft reports are not archived.

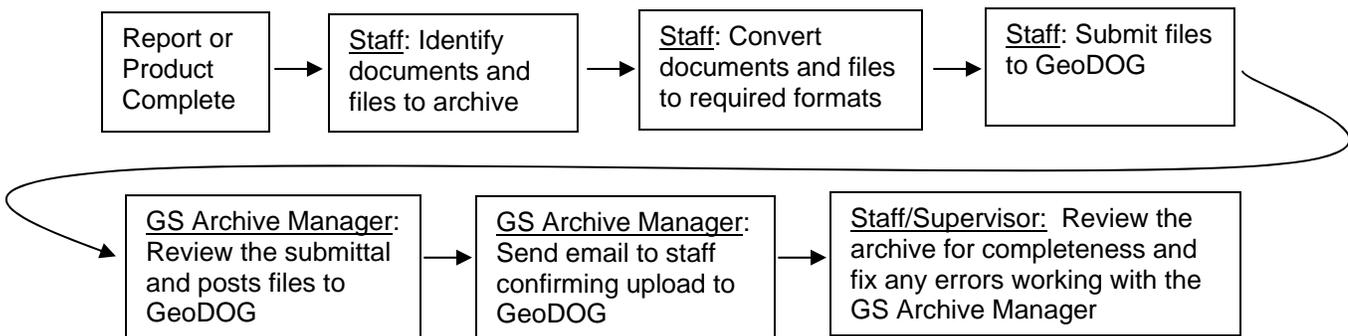
Archiving Procedure

1. Identify the project documents and/or electronic files to archive by referring to the *GS Document Archive List*.
2. Convert paper documents and electronic files to the proper archive format(s).
3. Go to the archive website (GeoDOG) at <http://svgcgeodog.dot.ca.gov/> and follow the directions to submit your electronic files.

Once submitted to GeoDOG, the project information and archive files are reviewed, and if correct, then posted to the GS Project Archive (GeoDOG). The geoprofessional will receive an email confirming that the file(s) has been posted and is available on the GeoDOG server. It is anticipated that reviews will occur within 10 business days of submittal.

4. Upon receipt of the confirmation email, the geoprofessional is encouraged to review the archive and resolve any errors by working with the GS Archive Manager (Natalie Cornell).

Archive Procedure:



The goal of this process is to create a project archive that is complete, comprehensive, well organized, and is a useful resource for current and future GS staff. To achieve that end geoprofessionals must properly prepare and organize all archive documents and electronic files so they are easy to search, view, and use. The following additional information is provided to aid staff in their archiving:

Archive File Formats

The required archive file formats are presented on the *GS Document Archive List*. The PDF file format is preferred for archiving of most documents. However, it is recognized that other file formats such as XLS, DGN, or other proprietary formats may be appropriate for archiving.

PDF files can be created and read using Acrobat Professional. In all cases where PDF file format is required for archiving, electronic conversion is preferred in lieu of digital scanning (see Appendix A). In cases where documents cannot be converted electronically, they should be scanned at a minimum resolution of 300 dpi.

Combining similar documents, such as photos or pile driving records, into one multi-page PDF file or the ZIP format is desirable to create a neatly organized and easily searchable archive. The WinZip program is available on most staff computers and should be used to zip similar files. Appendix B provides guidance on how to create a ZIP file.

Reports

Reports are typically created using MS Word. Reports must be archived in PDF format, which must be done electronically using Acrobat or other program.

It is preferable to insert your electronic signature and stamp into a document prior to converting the document to a PDF format. Appendix C provides guidance on how to insert a scanned electronic signature and stamp into an electronic file.

LOTB and Boring Records

Log of Test Borings (LOTB) and Boring Records are prepared in DGN and gINT file formats. The Engineering Graphics Unit can provide PDF files of any LOTB they create.

Plan Sheets

Structures Design and the District Design Offices provide plans in DGN formats but also have the ability to create PDF files. Plan sheets submitted for archiving should be in a PDF format. Plan sheets that are archived should be the plan(s) associated with the geotechnical recommendations.

Pile Quantities

Pile quantities (e.g. pile driving records, pile drilling records, etc) should be scanned (300 dpi resolution) or preferably electronically converted to a PDF file format and zipped if appropriate.

Technical Documents

Technical documents consist of the many types of documents and electronic files produced during the geotechnical investigation such as laboratory data, geophysical test results, settlement curves, cross-sections, etc. These documents and electronic files should be organized as orderly as possible for the next user. An example might be settlement data, which were measured at several locations. In this case, it is requested that these files be combined into one multi-page PDF file titled "settlement data".

Proprietary files should be archived in their original formats and should be zipped as appropriate.

Other Documents

Other documents consist of many types of documents and electronic files such as emails, historical/construction observations, site photos, core photos, etc. Documents must be converted to PDF and should be combined or zipped as appropriate. Electronic files not converted into PDF should be combined as appropriate into one ZIP file. An example might be numerous core photos, which were taken during a field investigation. In this case, it is recommended that these files be combined into one ZIP file titled “*Boring R-2-09 core photos*”.

Appendix A: Creating a PDF file from a MS Word file and combining multiple documents using Adobe Acrobat Professional.

Purpose:

This document describes how to create PDF files from common desktop software (e.g. Microsoft Word) and, further, combine individual PDF files into a single PDF file.

What You Need:

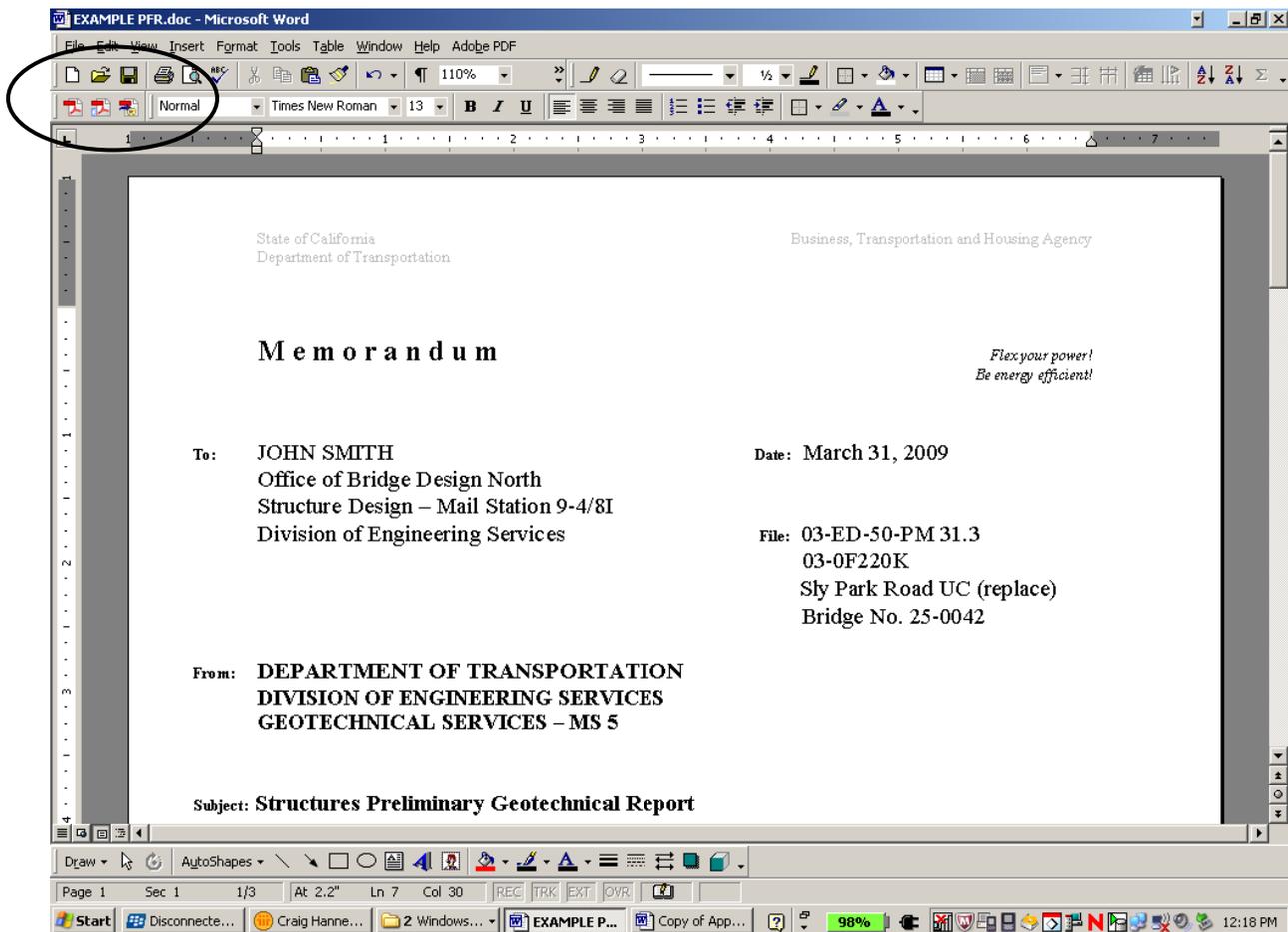
This example requires a PC workstation with Adobe Acrobat Professional.

Example:

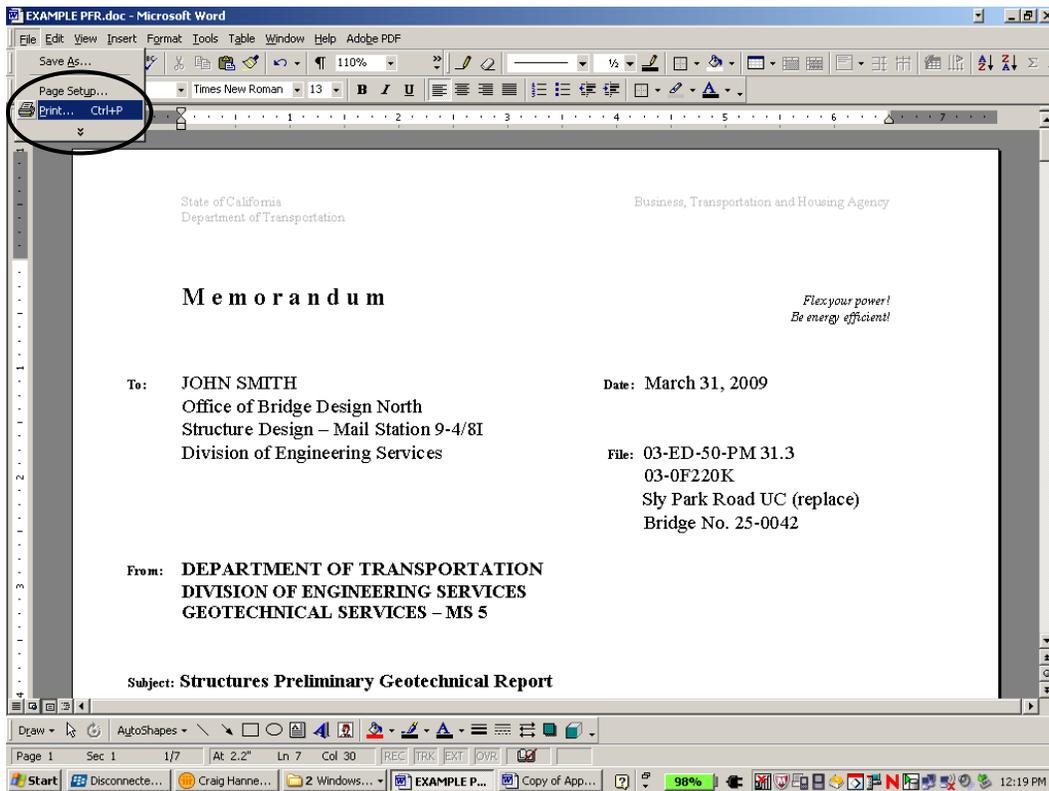
The following example demonstrates the process of creating a PDF file from MS Word, and appending that PDF file with another PDF file. This process can be used to combine multiple PDF files (or documents) together into one file. In this example a structures preliminary geotechnical report (MS Word file) and another MS Word file containing a geology map (report attachment) are converted to PDF and combined to result in one PDF file, which can be emailed to clients and placed in the GS Archive.

Step 1: How To Create a PDF

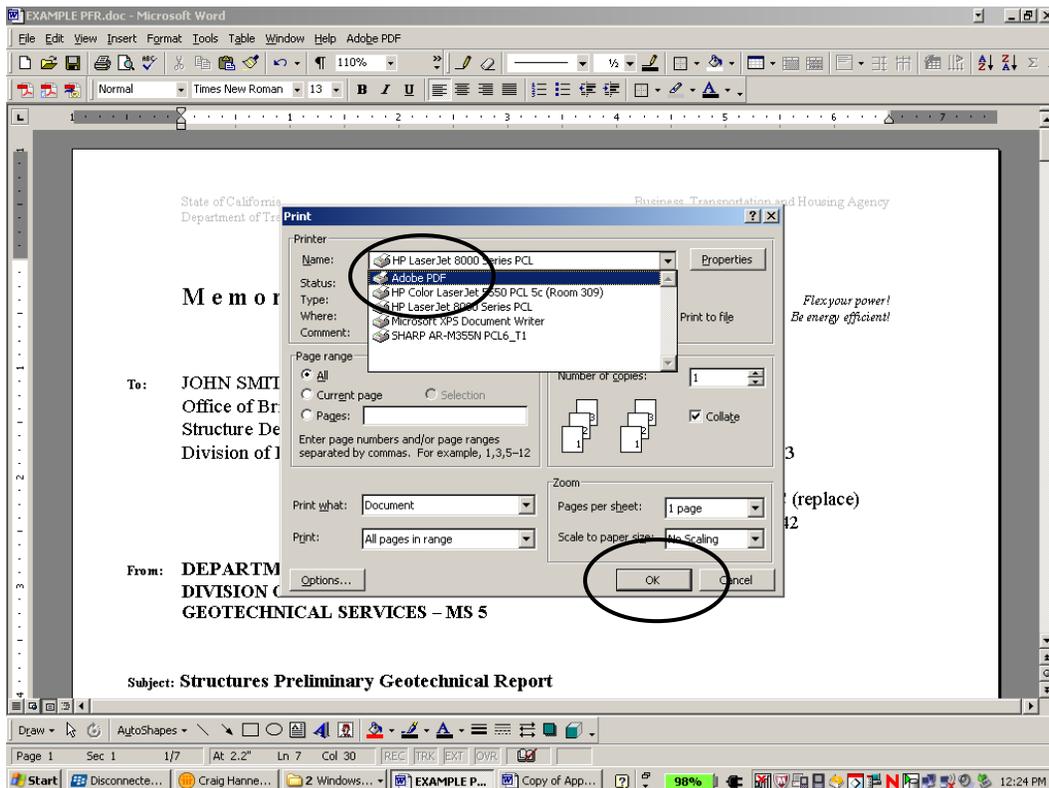
- A. Open the file containing the geotechnical report with MS Word.
- B. If the Acrobat Professional icon appears on the toolbar, select **Convert to Adobe PDF** and proceed to Step 2.



C. Otherwise select **File > Print**.



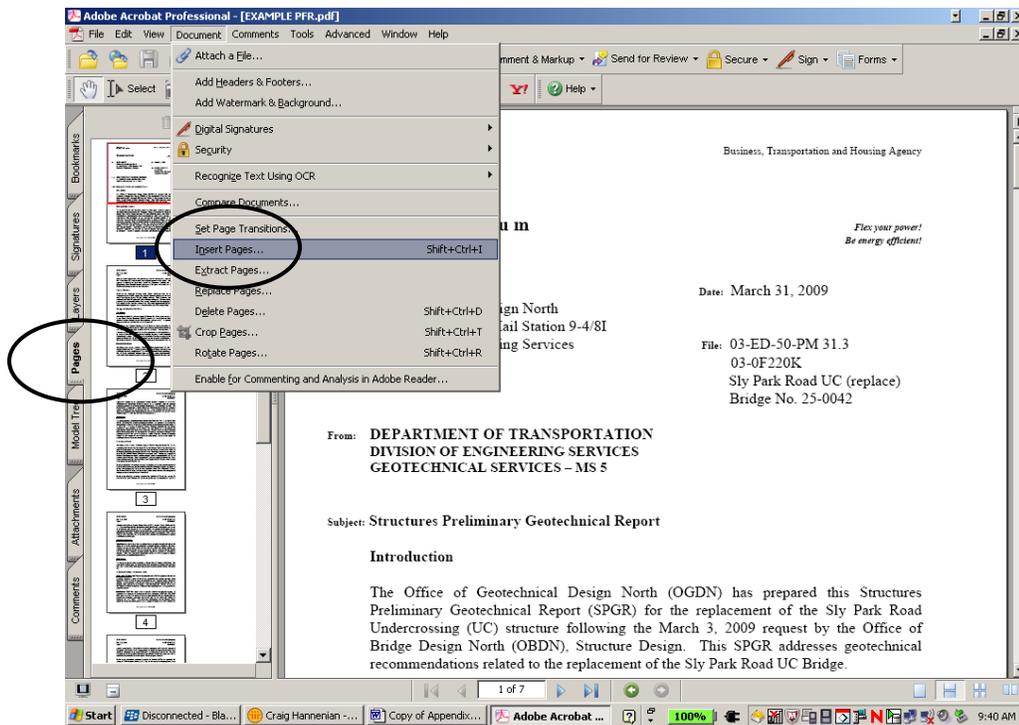
D. Select **Adobe PDF** from the printer menu and click **OK**.



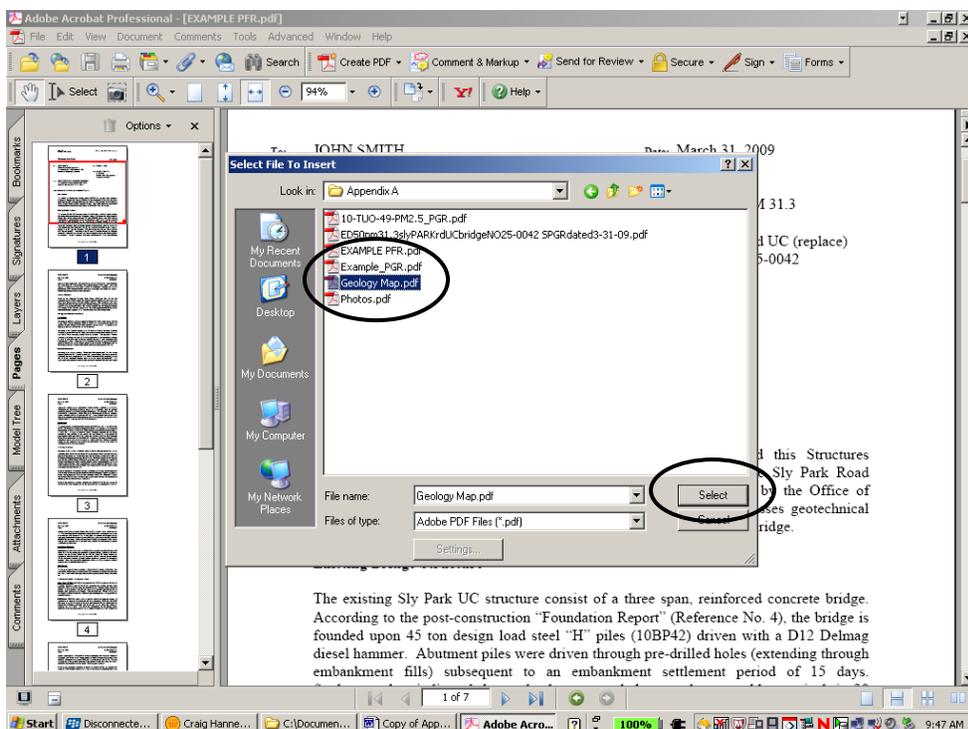
- E. A PDF file will be created given a file name you select.
- F. Repeat Step 1 for the second MS Word file containing the geology map.

Step 2: How To Combine Multiple PDF files

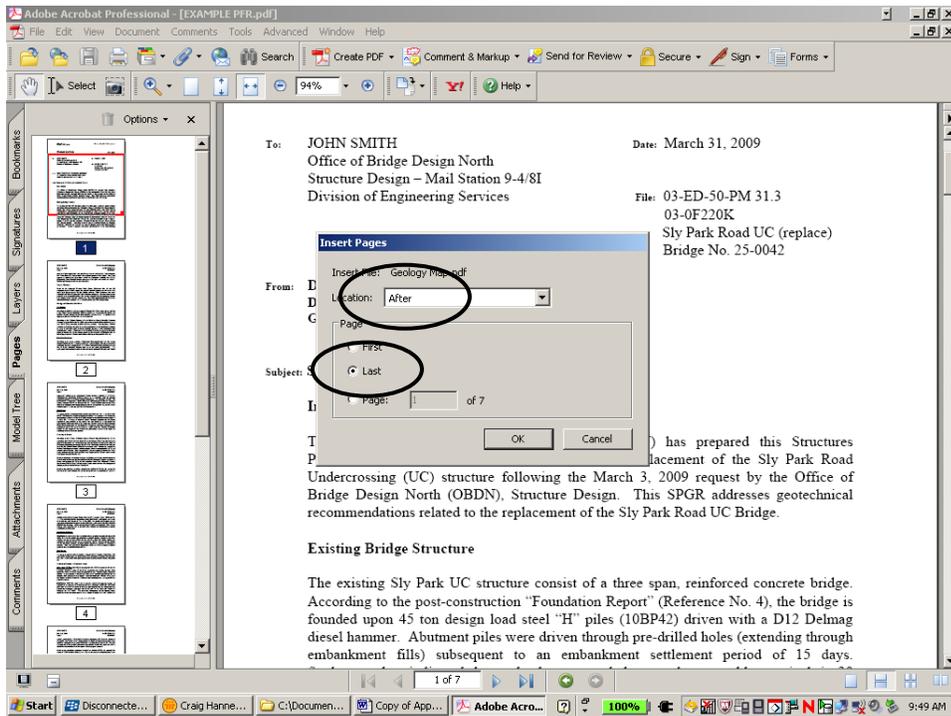
- A. Open the report PDF file using Adobe Acrobat Professional.
- B. Select the **Pages** tab to display the seven individual page icons.
- C. Select **Document > Insert Pages**.



- D. Select the PDF file containing the geology map.

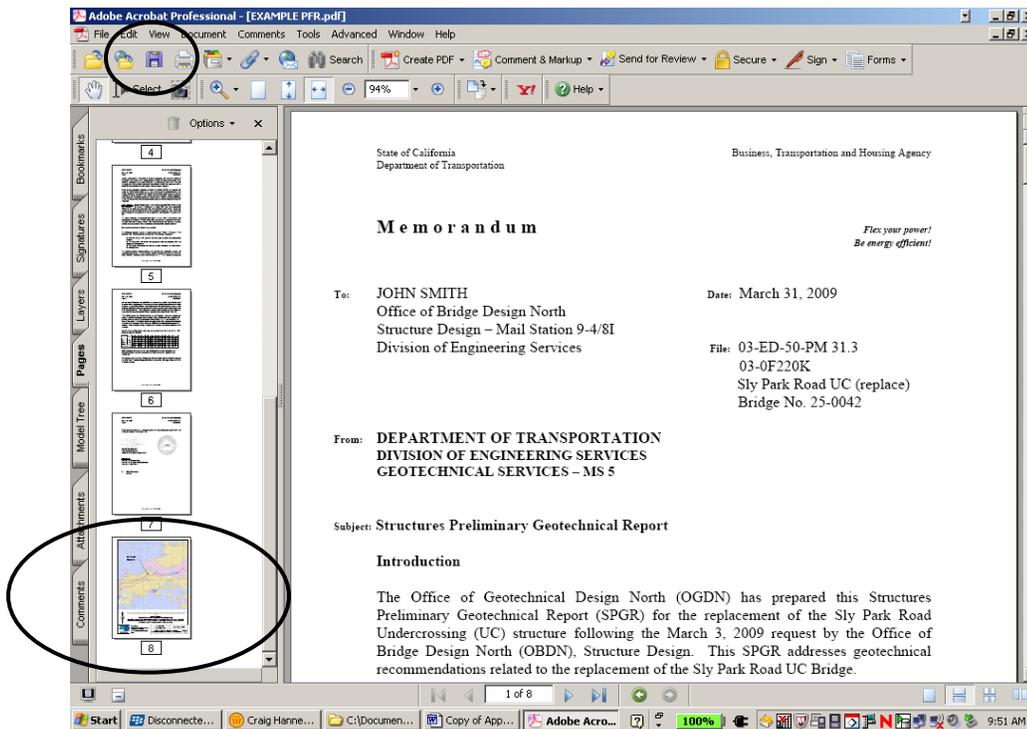


E. Select the appropriate location to insert the photo page, in this case **After > Last Page**.



The geology map is now page 8 of the geotechnical report file.

F. **Save** the file and you're done.



Appendix B: Creating a ZIP file

Purpose:

Description of how to create ZIP file, which may be used to combine similar documents such as photos or data files.

What You Need:

This example requires a PC workstation with Windows 7.

- A. Combine all files you want to zip together into one folder on your computer giving the folder a descriptive name.
- B. Select all files.
- C. Select **File > 7-Zip > Add to "Folder Name.7z"**
- D. A File named **"Folder Name.7z"** will be written to your folder.

Appendix C: Creating an Electronic Signature and Stamp and inserting them into a MS Word Document.

Purpose:

Presents steps to convert your signature and stamp to electronic format for insertion into MS Word documents, such as a geotechnical report.

(Note that this presents only one of many ways of creating electronic signatures and stamps. Any method that accomplishes the goal of insertion of electronic signatures and stamps into your documents is acceptable.)

What You Need:

This example requires a PC workstation with Adobe Acrobat Professional and access to an email scanner or desktop scanner.

- A. Place your signature and dated stamp on an 8 ½ x 11 sheet of paper.
- B. Scan the sheet via a desktop scanner or email scanner saving the file in PDF format.
- C. Open the file on your computer using Adobe Acrobat Professional.
- D. Select your signature by highlighting a box around it then select "Copy."
- E. "Paste" your signature into your MS Word file.
- F. You may have to resize the signature.
- G. Click on the signature and select **Format > Picture**. From the Layout tab, select **In Front of Text**. This will allow you to move your signature over the text and place it in the appropriate location.
- H. Repeat D through G to place your stamp in the document. **Save** your document and you are done.