

GeoGIS Manual

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1.0 Introduction

This guide will describe the features of the GeoGIS site, beginning with the privileges granted to General Users, followed by privileges granted to Consultants, Engineers, and finally Administrators. Each section of this manual will explain the features associated with each user type. This manual will also explain how to add and edit projects within the GeoGIS webpage using SQL Server and ArcGIS functions. The User Guide was originally written during Phase II of GeoGIS. The User Guide has been updated to keep up with changes to the website during Phase III.

2.0 GeoGIS User Types

GeoGIS is a structured system that allows users of different classifications to perform different operations depending on their user type. There are four user types: general user, consultant, ALDOT engineer, and administrator. These are listed in order of increasing privileges. Each classification has privileges that allow users to perform certain tasks. Each higher classification can perform all the tasks of the lower classifications. The general user can view the map, view and retrieve documents and document details, and search for data. These are the only tasks the general user can perform. The purpose of the consultant user is to allow outside consulting firms and ALDOT employees the ability to upload documents to a temporary storage space where the data awaits approval. The consultant can also view the map, documents, and search the system. The purpose of the ALDOT engineer user is to approve documents. An ALDOT engineer can also upload documents and perform the other tasks related to the lower level users. In addition, the ALDOT Engineer can initiate a project, which places the project on the map and allows documents to be uploaded to the project that has been initiated. The administrator can create or change user names, passwords, and privilege levels for GeoGIS users. The administrator can also initiate projects, as well as perform any action that can be performed by the lower level users.

2.1 General User Type

The GeoGIS website requires a valid login ID and password. Only a user with Administrator status can create a login ID and password. Contact the administrator for a login ID and password. This section will discuss the privileges associated with the general user. A general GeoGIS user is restricted to a “view only” status and therefore cannot edit, add, or delete any information in the system

2.1.1 Login Page

The GeoGIS website is located on a secure server. At the time of this Users Guide, GeoGIS is located at the following link geogis.caps.ua.edu. Navigate to this address using a web browser to bring up the GeoGIS Login Page. Figure 1 below shows the Login Page. Before logging in, the user will be unable to access any feature within the site.

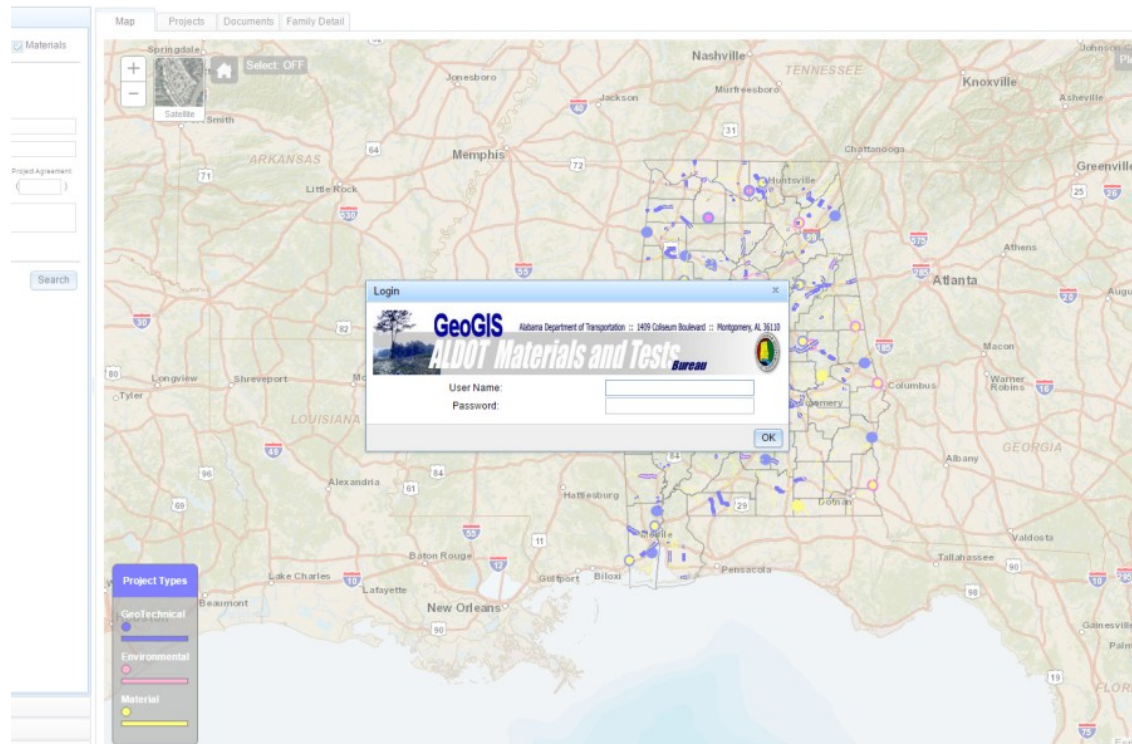


Figure 1

As mentioned previously, a valid login ID and password must be created for each GeoGIS user. After a valid user name and password is entered, the user can click the Login button and the GeoGIS site will be accessible to the user.

2.1.2 GeoGIS Homepage

The GeoGIS homepage is shown in Figure 2. This page is the starting point for a GeoGIS user. The left hand side of the page contains four tabs that help navigate the user in selecting, editing and uploading projects. These tabs include Search, Map Details, Help, and Regs and Specs. Four more tabs are located at the top of the map. These tabs are windows that display information of selected projects and their locations. The windows included in the site are Map, Projects, Documents, and Family Details. From this page, a user can select any function, but the user can only perform the functions that are within the privileges of the user type.

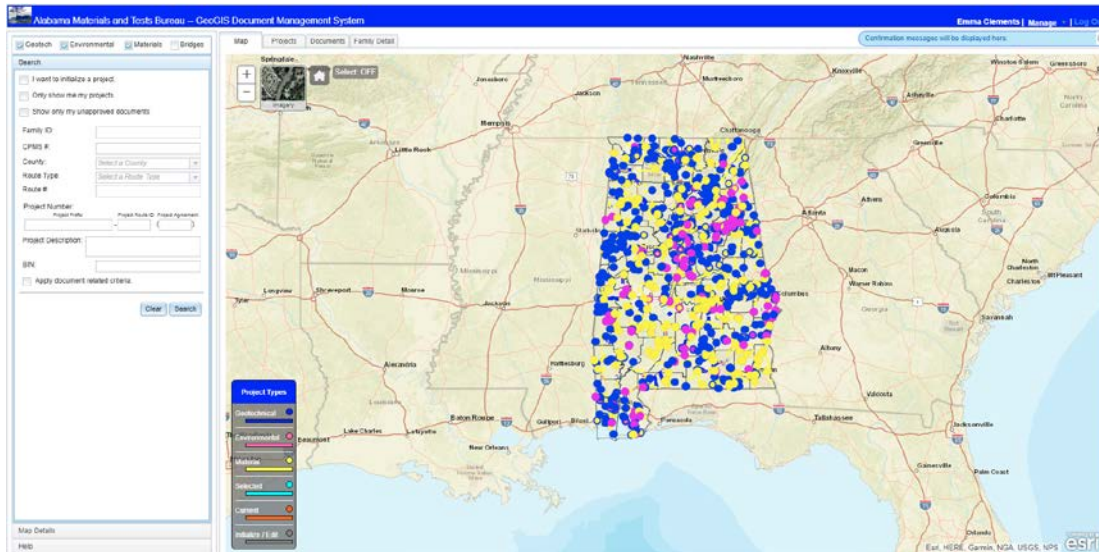


Figure 2

2.1.3 GeoGIS Map

Clicking the Map button will open a new window containing the GeoGIS map. The map initially displays outlines of the counties in Alabama with county names appearing on hover. Figure 3 shows the map for Alabama with all projects displayed.

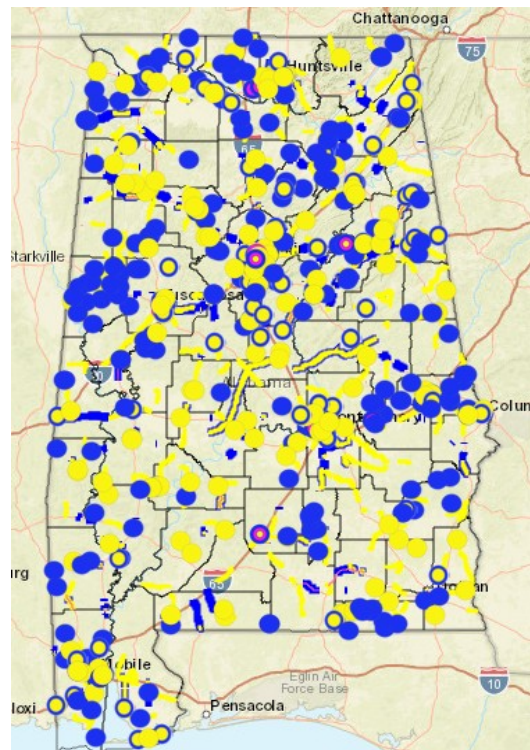


Figure 3

To view a project, the user selects the line or point that contains the project of interest. After a selection is made, a project changes color to bright blue (similar to ArcGIS) to notify the selection. A project will display an orange color to signal the current project selected. Furthermore, after a selection is made the project information is displayed on the left hand side of the page in the Map Details tab. A project can also be selected by toggling the select option on at the top of the page and clicking on a point or line or dragging to select multiple projects. After a project is selected by this method, a pop up appears above the point displaying project information. Figure 4 displays the information of a project in Tuscaloosa County.

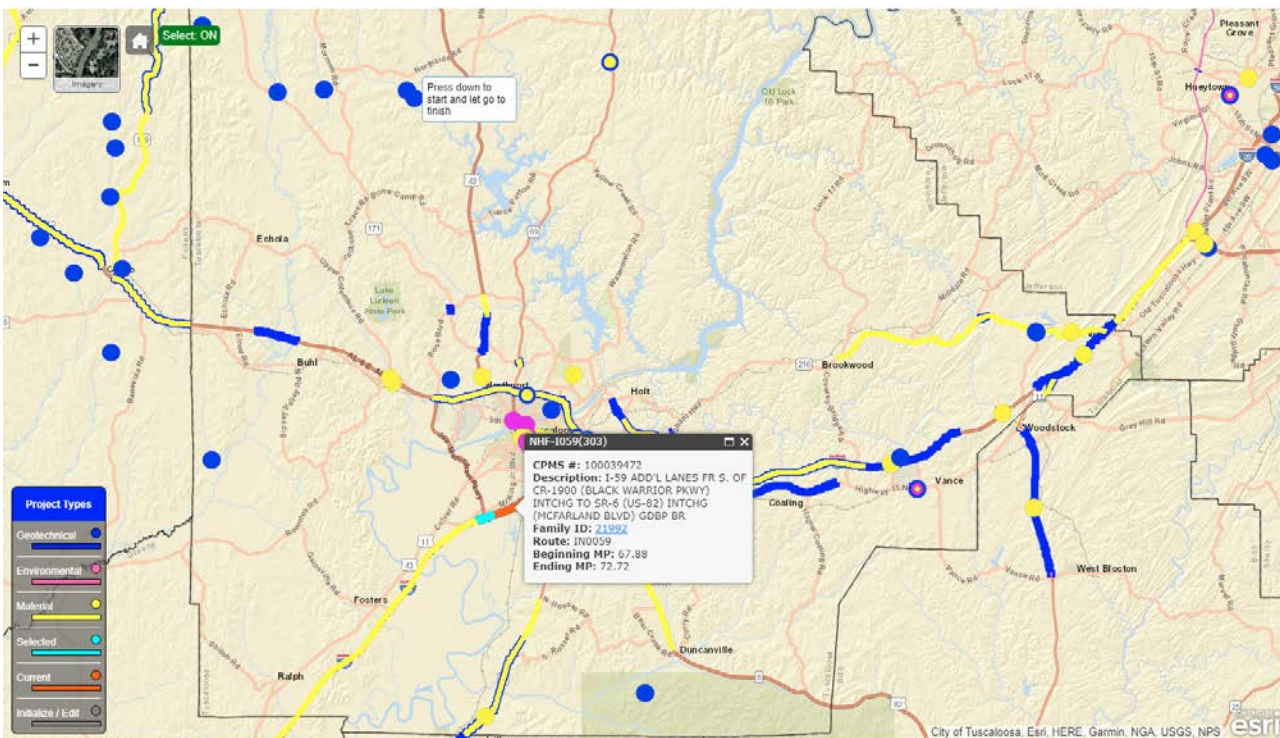


Figure 4

To move around the map, a user can simply click, hold, and move the map to pan (the select option must be “OFF”). Clicking a point on the map will “grab” that point and move the map with the cursor. This will let a user easily locate an area of interest. The “House” button to the upper left of the map allows the user to quickly view the full extent of the state. To the upper left of the map are two adjacent buttons containing addition and subtraction symbols, these buttons contribute to the zoom feature. To zoom in incrementally, the user can click the plus button on top. To zoom out, the user can click the minus button on the bottom.

The quickest way of zooming in and out of the map is by using the mouse wheel. Moving the mouse wheel forward will zoom in to the cursor. Moving the mouse wheel back will return to the original view of the map. The mouse wheel allows quick and accurate zooming, and reduces the need to pan the map. Figure 5 on the next page is a zoomed view of the street map.

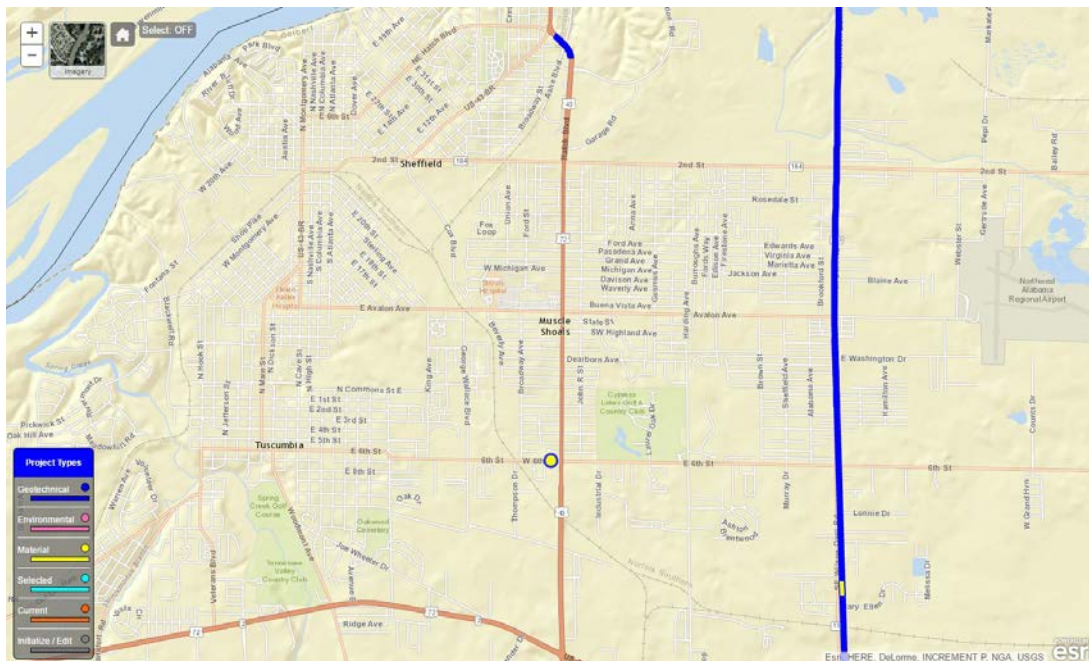


Figure 5

There are two different base map views available in GeoGIS: Streets and Satellite, which are shown in Figure 6 and can be selected by clicking on the street/satellite thumbnail in the top left corner of the map window. Figure 6 (a) shows the street view map layer containing roads, road names, water bodies, and shaded relief. The Satellite layer shown in Figure 6(b) shows a detailed aerial view. All map view options will display the GeoGIS project layers as seen in Figure 6.

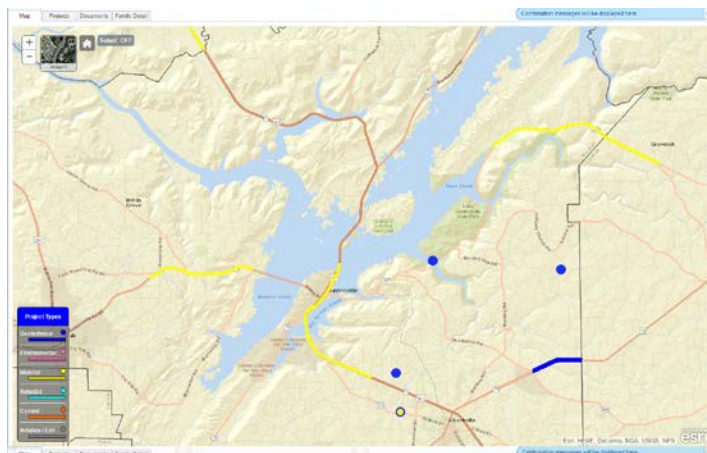


Figure 6(a)

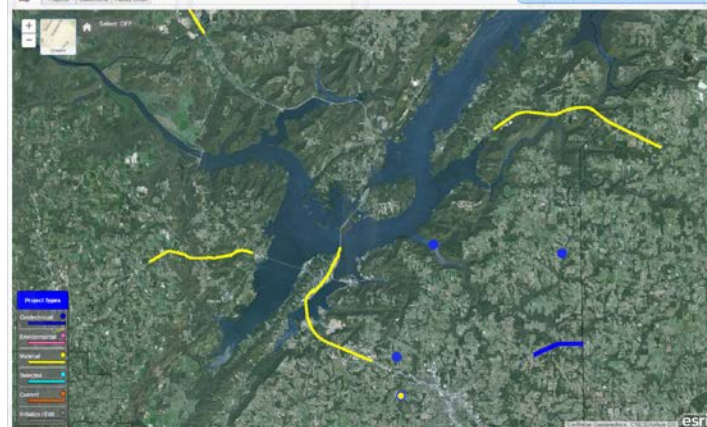


Figure 6(b)

There are seven feature types included in GeoGIS: geotechnical points, geotechnical lines, environmental points, environmental lines, materials points, materials lines, and bridge points. Geotechnical projects are represented by blue features, environmental projects by magenta features, materials projects by yellow features, bridges related to GeoGIS projects by green features, and bridges with no GeoGIS projects by orange features. A project line is used for projects that extend a distance longer than 1/10 of a mile. A project point is used for all other projects. Each set of features for a project represents the location of project data. However, the purpose of GeoGIS is to provide a spatially explicit method for organizing geotechnical documents. To access documents, a user can simply click any of the GeoGIS features on the map for a particular project. Documents for the project will be displayed in the Map Details accordion tab, and family details can be viewed for the project by selecting the Family Details tab or by clicking a link to the window on the Map Details accordion tab.

2.1.4 Family Details Page

The Family Details window, shown in Figure 7, is the main page to access project information and related documents. The page consists of three columns. The left hand column (not the accordion tabs) displays all the projects selected. Each project has a boxed check mark next to its number that allows the user to toggle the project on and off. The middle column displays all documents associated with Preconstruction for all the projects that are selected and toggled on. The right column displays all documents associated with Construction Projects. All documents in both columns are grouped by type. The documents in each document type are grouped by type. Figure 7 displays the Family Details page for an example project. The project number and a short description of the project location are listed under their respected sub-columns. Spanning across each column are the three project types, Geotechnical, Environmental, and Materials. Each project type has a boxed check mark that allows for toggling on and off for each type. If any type is toggled off, then documents for that type will no longer appear in either Document columns. Figure 7 displays a sample Family ID screen.

The screenshot shows the 'Family Detail' tab selected in the top navigation bar. The main content area is titled 'Family ID: 32932' and is divided into three columns:

- Project List:** A table with columns 'Project #' and 'Project Description'. It contains one entry:

Project #	Project Description
<input checked="" type="checkbox"/> IM-1059()	RESURFACE I-59 FROM CR-1900 (BLACK WARRIOR PKWY) TO I-359 (EXIT 71)
- Preconstruction Documents:** A list of document categories with counts in parentheses:
 - Soil Survey (0)
 - Materials Report (1)
 - IM-1059(362) Approved MR ADD4.pdf
 - Slope Study Report (0)
 - Retaining Wall Report (0)
 - Culvert Report (0)
 - Other Geotechnical Reports (0)
 - Geohydrologic Report (0)
 - Geotechnical Data (0)
 - Foundation Analysis (0)
 - Correspondence (0)
 - Photo (0)
 - Foundation Report (0)
 - Landslide Report (0)
 - Sinkhole Report (0)
 - ADEM Correspondence (0)
 - Clearance Letter (0)
 - HazMat Report (0)
 - Environmental Site Map (0)
 - ALDOT Internal (0)
 - Other (0)
- Construction Documents:** A list of document categories with counts in parentheses:
 - Bridge Card Image (0)
 - Bridge Identification Number (0)
 - Hammer Submittal (0)
 - Bearing Curves (PDA Results) (0)
 - Test Pile Driving Record (0)
 - Drilled Shaft Excavation Log (0)
 - Drilled Shaft Pouring Record (0)
 - Load Test (0)
 - Plan (0)
 - Correspondence (0)
 - Photo (0)
 - Field Monitoring (0)
 - Signs & Lighting (0)
 - ALDOT Internal (0)
 - Other (0)

Figure 7

There are eleven documents associated with the example project in Figure 7. The documents are shown in blue, and listed under specific document types. The Family Details page shows a user exactly which documents and documents types are available.

There are several options for a user to use to view a document. Hovering over a specific document on the Family Details page will bring up a thumbnail, as shown in Figure 8 below. The thumbnail view in GeoGIS is a powerful tool to quickly scan through project documents. The ability to thumb through digital documents without opening each document is a common request from document management system users. GeoGIS was specifically designed to contain this valuable functionality.

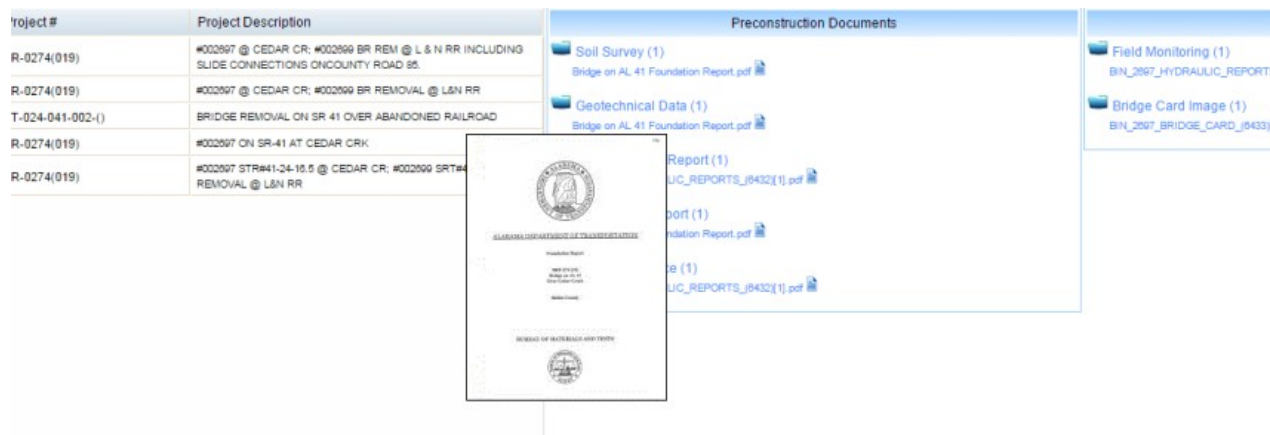


Figure 8

Clicking on a document name will automatically open a pdf file in another tab within the internet browser. Figure 9 displays this completed action.

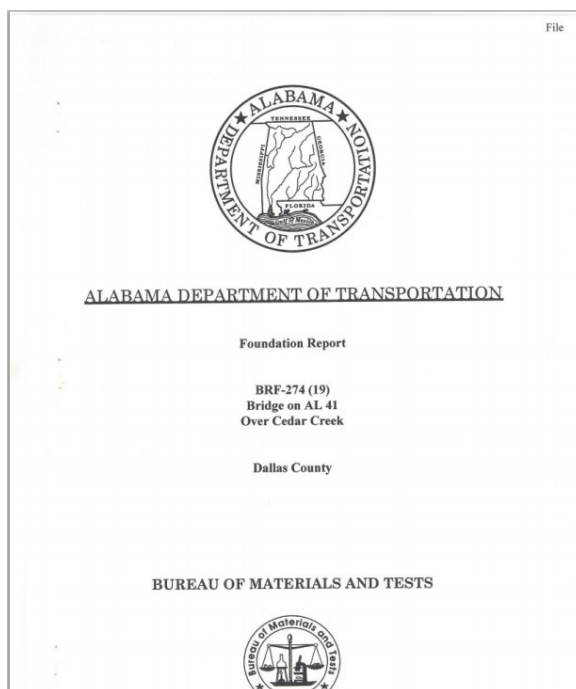


Figure 9

Another way to view a document from the Family Details page is by clicking the information symbol that is displayed beside each document. This will cause the Document Details page to pop up, which is discussed in the following section.

2.1.5 Document Details Page

The document details page lists database information about a document and displays a low resolution image of the document on the left side of the screen. If a document contains more than one page, only the first will appear in the thumbnail. Figure 10 shows the Document Details page for a plan sheet. A document can be opened by clicking the name of the document at the right of the Document Details page.



Figure 10

The document details page allows a user to see information such as upload and approval dates, the users that uploaded and approved the document, the type and size of the document, the family and project details.

2.1.6 Search Page

The search accordion tab is designed to allow a user to search the GeoGIS database based on a CPMS number, a document name, a document type, a concatenated project number, any of the fields used in concatenation of the project number, a bridge identification number or any keyword associated with a document or project. Figure 11 shows the GeoGIS search accordion tab.

Geotech
 Environmental
 Materials
 Bridges

Search

I want to initialize a project.
 Only show me my projects.
 Show only my unapproved documents

Family ID:
 CPMS #:
 County:
 Route Type:
 Route #:

Project Number:
 Project Prefix: - Project Route ID: Project Agreement:

Project Description:
 BIN:

Apply document related criteria.

Figure 11

If a user wants to find all documents that are associated with the CPMS Number 100001736, for example, the user enters "100001736" into the text box labeled "CPMS #" on the Search page (shown in Figure 11), and clicks the "Search" button. The results of this search are displayed on the Document Search results page shown in Figure 12.

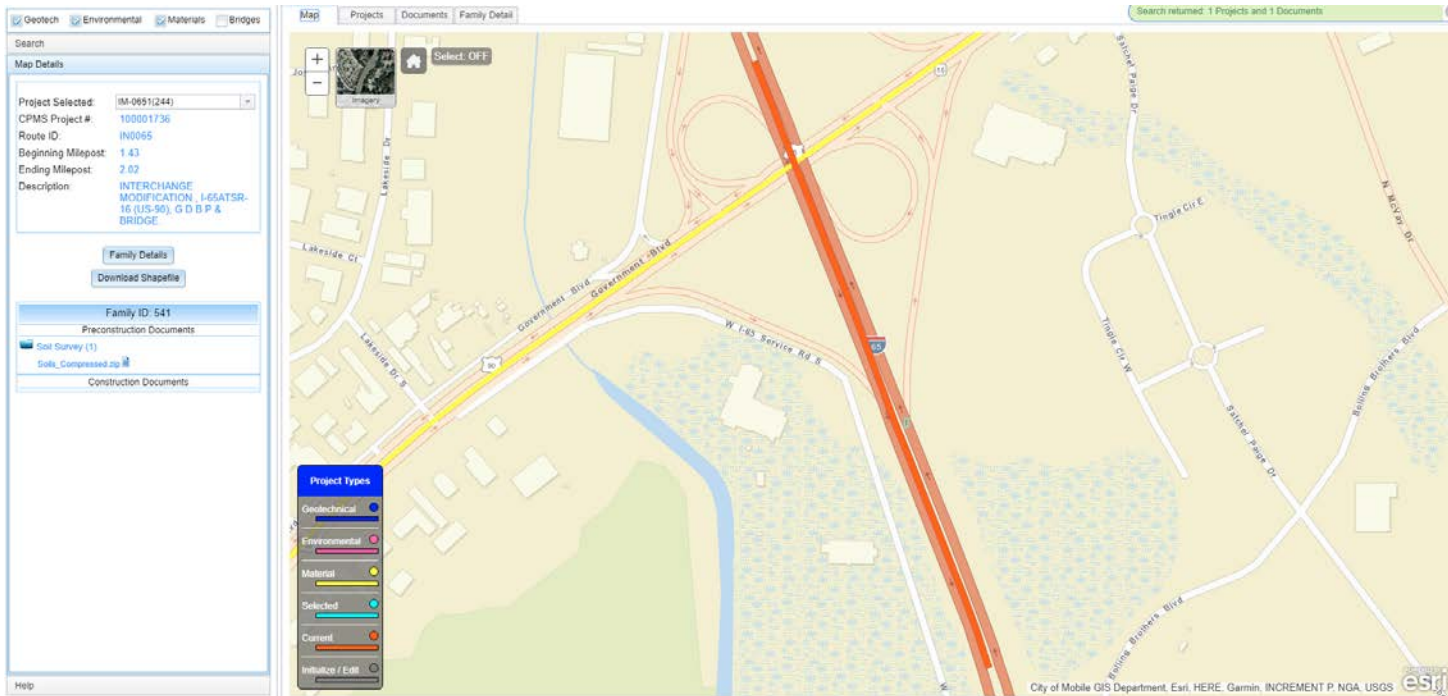


Figure 12

The result of the search is a list of documents that met the search criteria. The list contains a thumbnail view of each document, a hyperlink to the document through the document name (which can be used to open the document in PDF format), the database field the search matched (in this example the search had a “Description” match for each document), the document type, the project ID, project number, project description, and links to the Document Details and the Family Details pages. One document is shown as a result of the search based on the CPMS number 100001736. If a user had typed in a project number, all documents associated with that search criteria would have been displayed. Furthermore, the map zooms to the selection to display the actual project.

Users can also perform a wild card search in the CPMS field. A wild card search prevents a user from being required to type in an entire CPMS number. For example, a user can type in “10001” in the CPMS field and press the search button. The returned projects are all projects whose CPMS begins with “10001.” Figure 13 shows the search field for a CPMS wild card search, and Figure 14 displays all of the returned projects.

The screenshot shows a search panel with the following elements:

- Search** (header)
- I want to initialize a project.
- Only show me my projects.
- Show only my unapproved documents
- Family ID:
- CPMS #:

Figure 13

Family ID	Project #	CPMS #	Scope	County	Description	BINs
2714	I-HR-ID-5655(016)	100011372	CN	Madison	I-565 FROM EAST END OF INDIAN CREEK BRIDGE TO MADISON PIKE UNDERPASS	
2714	I-5655(017)	100011373	PE	Madison	FROM SPACE & ROCKET CENTER TO E OF JORDAN LANE	
2714	I-5655(022)	100011388	PE	Madison	>W OF HOLMES AVE TO E OF MEMORIAL PKWY	
2714	I-5655(031)	100011400	PE	Madison	I-565 BETWEEN LIMESTONE CO LINE & E OF WALL-TRIANA HWY	
307	HPP-NCPD-TRIMPF-0035(010)	100016616	PE	Montgomery	MGM OUTER LOOP - SR-6 (US-231) TO CR-85 (CARTERS HILL RD)	

Figure 14

2.1.7 OCR Search

GeoGIS has an optical character recognition feature that reads each uploaded scanned document, stores a list of pertinent words within the website’s database, and allows users to search for keywords within the documents themselves.

To perform an OCR search, the user needs to access the search pane and select the “Apply Document Criteria checkbox” as shown in Figure 15.

The screenshot shows a search interface with the following elements:

- Checkboxes for **Geo**, **Env**, and **Mat** are checked.
- Search** section with three unchecked checkboxes:
 - I want to initialize a project.
 - Only show me my projects.
 - Show only my unapproved documents.
- Form fields for **Family ID**, **CPMS #**, **County** (dropdown menu), **Route Type** (dropdown menu), and **Route #**.
- Project Number** section with three sub-fields: **Project Prefix**, **Project Route ID**, and **Project Agreement**.
- Project Description** text area.
- BIN** text area.
- A red rectangular box highlights the checked checkbox: **Apply document related criteria.**
- File Name** text area.
- Key Words** text area.
- Two checkboxes: **Select All Pre-Construction** and **Select All Construction**.
- A list of document types with checkboxes:
 - (PreCon) ADEM Correspondence
 - (PreCon) ALDOT Internal
 - (PreCon) Clearance Letter
 - (PreCon) Correspondence
 - (PreCon) Culvert Report
 - (PreCon) DIGGS
 - (PreCon) DIGGS Atterberg
 - (PreCon) DIGGS Compaction Test
 - (PreCon) DIGGS Cone Penetration Test
 - (PreCon) Environmental Site Map

Figure 15

Then the user enters their desired keywords into the “Key Words” field, as shown in Figure 16, and selects the “search” button. The OCR tool will perform a search of all the important stored words and locate those documents that contain the desired key words.

This close-up shows the following details:

- The checked checkbox: **Apply document related criteria.**
- File Name:** [Empty text box]
- Key Words:** [black warrior]

Figure 16

2.1.8 Change Password

The Change Password feature is designed to allow users to modify personal user accounts. Users can utilize the Change Password feature to change the password associated with personal usernames. The “Change Password” option is located in the top right hand corner of the window. The pop up window is shown in Figure 17.

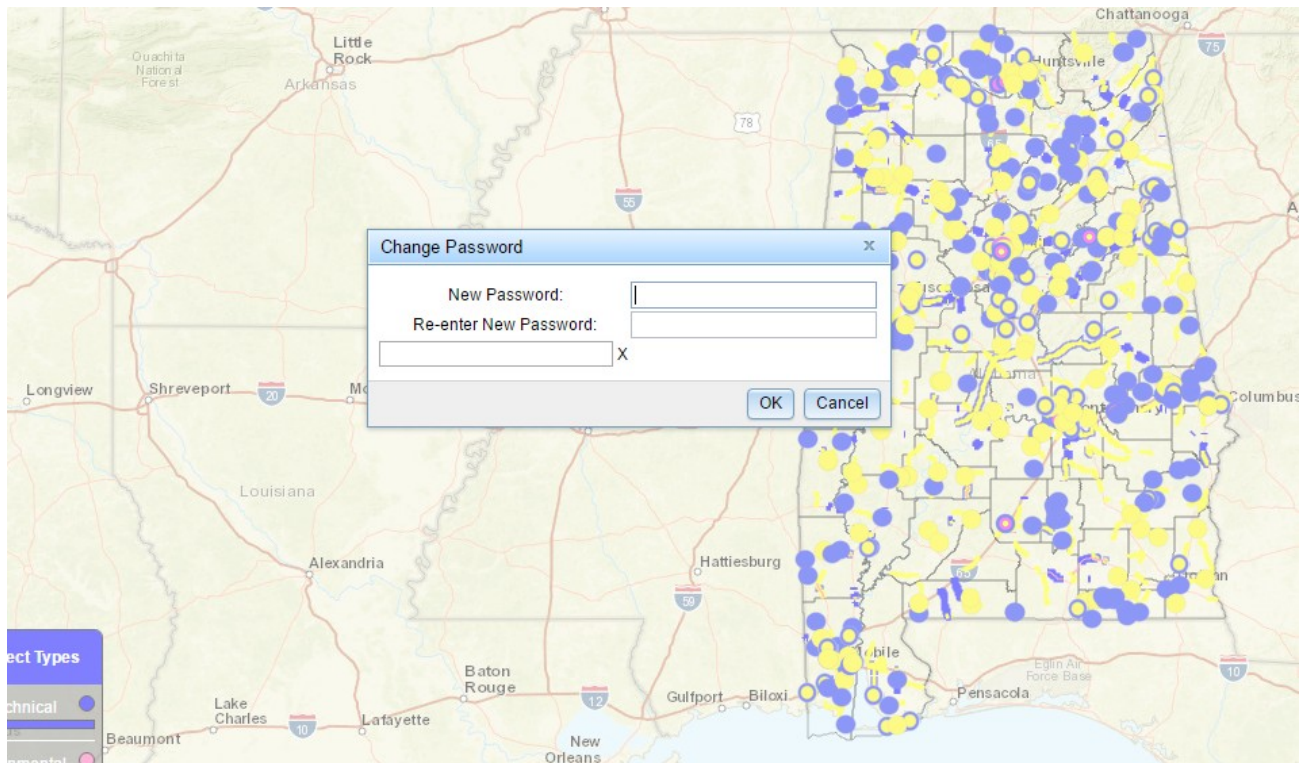


Figure 17

2.1.9 User Help Menu

The help accordion tab provides a number of options for users. Users can report a problem with descriptions in the fields provided. Clicking the “Submit” button sends an email to geogishelp@gmail.com, which is managed by site administrators. Figure 18 shows the Report Problem page. The help accordion tab also includes a number of links that provide helpful information. Clicking “GeoGIS User Guide” will open the GeoGIS User Guide in PDF format. Likewise, clicking either “List of Abbreviations” or “More Abbreviations” will open both of these links in PDF format.

The screenshot shows a web interface with a 'Help' accordion tab selected. Inside the tab, there is a 'Report Problem' section with the following elements:

- User:** Input field containing 'Ima Admin'
- Reply Email:** Input field containing 'admin@me.com'
- Description:** A text area with the prompt 'Please describe your problem, including what you were doing and any related documents, project numbers, etc.'
- Submit:** A blue button to submit the report.

Below the form, there are two sections of links:

- Help Links:** Contains a blue link labeled 'User Guide'.
- Video Links:** Contains three blue links: 'Search', 'Project Initiation', and 'Document Upload'.

Figure 18

2.1.10 Regulations and Specifications Tab

The Regs and Specs accordion tab is located on the left side of the Home screen, below the Map Details accordion tab. The Regs and Specs tab provides a hyperlink to ALDOT’s standard drawings list for highway construction, and links to ALDOT’s Specifications for Highway Construction and ADEM regulations that will open in PDF format. The Regs and Specs tab within GeoGIS is depicted in Figure 19.

Search

Map Details

Regs and Specs

ALDOT Standard Drawings

[Standard Drawings](#)

ALDOT Specifications

[ALDOT Specifications 2018](#)

[ALDOT Specifications 2012](#)

[ALDOT Specifications 2008](#)

[ALDOT Specifications 2006](#)

[ALDOT Specifications 2002](#)

[Award and Execution of Contract \(State Projects Only\)](#)

[Procurement Time](#)

[Early Award](#)

[Cross Slope on HMA Pavements \(NHS\)](#)

[Cross Slope on HMA Pavements \(non-NHS\)](#)

[Delay Begin Work Date](#)

[Sign Materials](#)

[Structural Materials for Traffic Control Devices and Highway Lighting](#)

[Steel Pile Encasement](#)

ADEM Regulations

[General Administration](#)

[Environmental Management Commission](#)

[Air Pollution Control Program](#)

[Scrap Tire Program](#)

[Uniform Environmental Covenants Program](#)

[Water Quality Program \(NPDES\)](#)

[Water Quality Program \(UST\)](#)

[Reclaimed Water Reuse Program](#)

[Water Supply Program](#)

[Coastal Program](#)

[Well Driller Licensing Program](#)

[Water Division Operator Certification Program](#)

[State Revolving Fund Programs](#)

[Solid Waste Program](#)

[Hazardous Waste Program](#)

Figure 19

2.2 Consultant User Type

The consultant user type was created to allow a user to upload documents, but not approve documents. The consultant user type may include geotechnical firms, contractors, and other agencies that may own or create documents that are important to ALDOT. This user type can provide more efficient upload, since the consultant can upload the document as soon as the document is created, rather than sending the document to ALDOT for upload. The documents uploaded by this user type will still require approval from an ALDOT engineer user with higher GeoGIS privileges. It should be noted that in addition to document upload, a consultant has all the privileges of a general user.

2.2.1 Document Upload Page

The Document Upload pop up is designed to facilitate quick and accurate uploads of geotechnical information by consultants. Figure 20 shows the Document Upload pop up before any information has been entered. To upload documents for a project, the project must exist in GeoGIS and be initiated by an ALDOT Engineer or Administrator. In addition, the user uploading the documents must be assigned to the project by an ALDOT Engineer or Administrator. Once initiated, the project is available for document uploads. Creating a new project in the situation that a project does not exist in GeoGIS is explained in the Administrator User Type section of this Users Guide. The Upload Documents button is located in the Projects window (which can be accessed by the Projects tab at the top of the screen). Once a project is selected, the Upload Documents button is available for use.

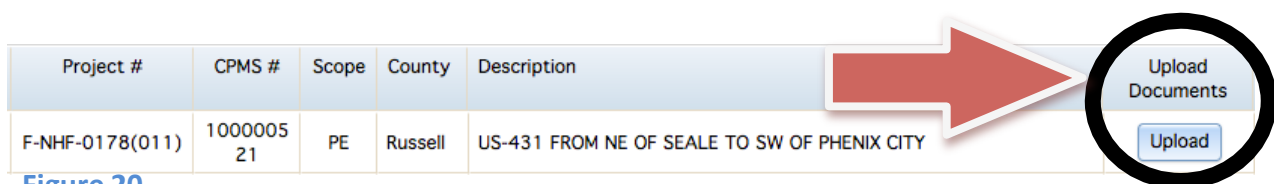


Figure 20

Once the Document Upload Button has been activated and clicked, a pop up box appears that allows the user to browse for files to add and also removed documents from the selection. Figure 21 displays the pop up box. Consultant and ALDOT Engineer user types can only upload documents to their assigned projects.

Once the appropriate documents are selected for

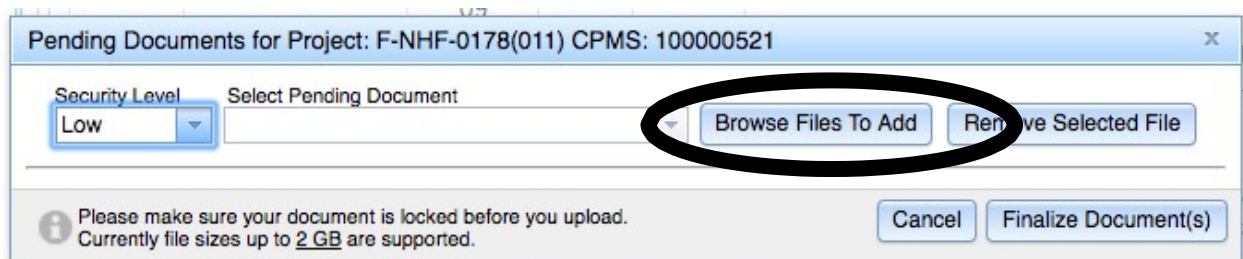


Figure 21

upload, the pop up box extends allowing the user to input information concerning the documents type. A thumbnail of the document is also created for the user to view before uploading. To specify which document type is being entered into GeoGIS, select either the Preconstruction or Construction buttons,

and then check the boxes of all the document types that apply. The document types that are available correspond to the type of project that was initiated. If a document type is grayed out, that means that the corresponding project type was not selected when the project was initiated. As discussed previously, the uploaded documents can be viewed on the Family Details page; however, documents cannot be viewed on the Family Details page until they have been approved by an ALDOT engineer. The Document Approval page is only available to an ALDOT engineer user type or the site administrator. Once all the correct information has been entered, the Finalize Document(s) button finishes the upload process. Figure 22 displays a document ready for upload.

Pending Documents for Project: F-NHF-0178(011) CPMS: 10000521

Security Level: Low

Select Pending Document: ALDOT CORRES 7.2.92. US-431 from NE

Browse Files To Add Remove Selected File

Intended Approver Type: Geotechnical

Document Type: Preconstruction Construction

(PreCon) Geotechnical Data
 (PreCon) ADEM Correspondence
 (PreCon) Clearance Letter
 (PreCon) Correspondence
 (PreCon) Culvert Report
 (PreCon) DIGGS
 (PreCon) DIGGS Atterberg
 (PreCon) DIGGS Compaction Test
 (PreCon) DIGGS Cone Penetration Test
 (PreCon) Environmental Site Map
 (PreCon) Foundation Analysis
 (PreCon) Foundation Report
 (PreCon) Geohydrologic Report
 (PreCon) ALDOT Internal
 (PreCon) GINT

Comments:

Please make sure your document is locked before you upload.
 Currently file sizes up to 2 GB are supported.

Cancel Finalize Document(s)

Figure 22

On the document upload page, users can also include comments about a document by typing in the document comment box. The comment can include anything the user wants, and words within the comment are searchable in the search accordion tab.

For example, an engineer may want to include a map of boring locations for a project. There is not a document type for boring locations, and since borings pertain to foundations, the best place to store this document is within the Foundation Report document type. Including a comment will help the engineer find the document again in the future. Figure 23 depicts a document ready for upload to GeoGIS with a comment in the document comment box.

Pending Documents for Project: HPP-NCPD-TRIMPF-0035(010) CPMS: 100016616

Security Level: Low | Select Pending Document: Boring Location Map HPP-0035(10) Montg | Browse Files To Add | Remove Selected File

Intended Approver Type: Geotechnical | Document Type: Preconstruction Construction

(PreCon) Geotechnical Data
 (PreCon) ALDOT Internal
 (PreCon) Culvert Report
 (PreCon) DIGGS
 (PreCon) DIGGS Atterberg
 (PreCon) DIGGS Compaction Test
 (PreCon) DIGGS Cone Penetration Test
 (PreCon) Foundation Analysis
 (PreCon) Foundation Report
 (PreCon) Geohydrologic Report
 (PreCon) Correspondence
 (PreCon) GINT
 (PreCon) Landslide Report
 (PreCon) Materials Report
 (PreCon) Other

Figure 2 Boring Location Map
Project No. HPP-0035(10) | Location

Comments: Boring locations

Please make sure your document is locked before you upload. Currently file sizes up to 2 GB are supported. | Cancel | Finalize Document(s)

Figure 23

2.2.2 My Projects

The My Projects box is designed to assist a consultant or ALDOT Engineer in rapidly finding documents that the consultant uploaded. The My Projects box is included in the search accordion tab. The My Projects box can be toggled on in the Search tab to display search results that belong specifically to the consultant. Figure 24 displays the My Projects toggle box.

Figure 24

Once the My Projects box has been toggled on, the consultant can use the Map Details accordion tab or view the Family Details of the selected projects to view documents belonging to that specific user.

2.3 ALDOT Engineer User Type

The ALDOT Engineer user type is designed for ALDOT personnel to initiate projects and approve documents if the documents are valid for specific projects within GeoGIS. The ALDOT Engineer has all the privileges of a consultant and general GeoGIS user and can also initiate projects and approve documents. The next section describes the Document Approval and Project Initiation pages.

2.3.1 Document Approval Page

An uploaded document cannot be viewed in GeoGIS until the document has been approved. Figure 25 shows the Approval box located in the Documents window.

Family ID	Edit Documents	Approved
541	Edit Document	<input checked="" type="checkbox"/>

Figure 25

ALDOT Engineer and Administrator user types are able to search for projects and approve documents within the projects by toggling the check mark in the Approved box. Furthermore, both of these types can edit documents for projects by selecting the Edit Documents Button seen in Figure 26. Once selected, the Edit Documents pop up window appears. In the editing window, an engineer can correct any mistakes concerning the documents. The Edit Documents pop up window is shown in Figure 20.

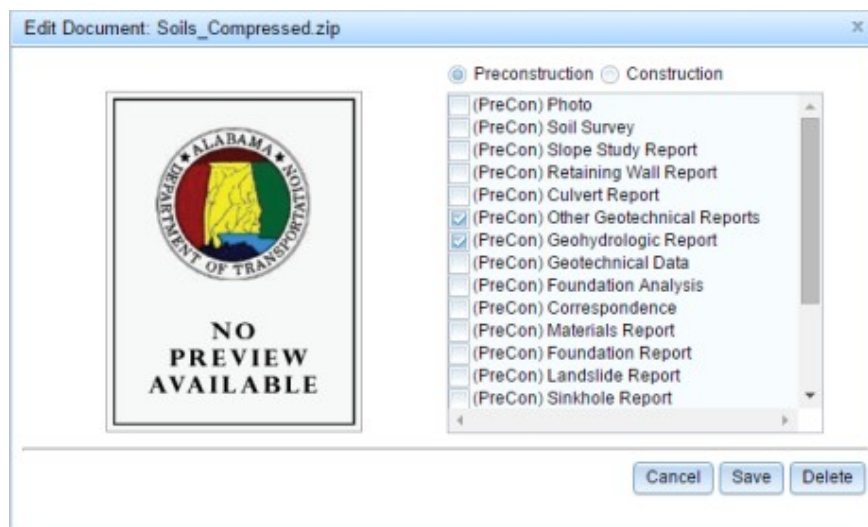


Figure 26

2.3.2 Project Initiation

The Project Initiation function is available to users with an ALDOT Engineer classification or higher. This page allows projects to be shown on the map and enables documents to be uploaded to the project. To begin initializing projects, a search for uninitialized projects must be conducted. In the Search accordion tab, the boxed checkmark labeled "I want to initialize a project" filters the search results to include only those projects that have yet to be initialized. Figure 27 displays this check box.

Geotech
 Environmental
 Materials
 Bridges

Search

I want to initialize a project.

Only show me my projects.

Show only my unapproved documents

Family ID:

CPMS #:

County:

Route Type:

Route #:

Project Number:

Project Prefix: Project Route ID: Project Agreement:

- ()

Project Description:

BIN:

Apply document related criteria.

Figure 27

Once the search action is performed, a list of uninitialized projects will appear in the Projects window. ALDOT Engineer and Administrator user types will be able to initialize projects with the Initialize button located in the right hand column. Figure 28 displays this button.

Family ID	Project #	CPMS #	Scope	County	Description	BINs	Initialize	...	Project Type
10004	BCP 04-26-82-()	100021820	PE	Bibb	BIBB COUNTY COMMISSION (BCP-04-26-82)		Initialize	...	
10004	BRZ-0400(003)	100011646	CN	Bibb	#037-04-031Z OVER CAFFEE BRANCH AT WOODSTOCK		Initialize	...	
10005	RS-0404(101)	100005425	CN	Bibb	CO RD 16 FROM SR-25 AT PONDVILLE TO CO RD 1		Initialize	...	
10005	BCP 04-25-82-()	100021821	PE	Bibb	BIBB COUNTY COMMISSION (BCP-04-25-82)		Initialize	...	
10006	OLC-004-000-001-()	100029275	CN	Bibb	CO RD 27 FR CAHABA RIVER BRIDGE TO OLD HIGHWAY NO. 5		Initialize	...	
10006	OLC-004-000-002-()	100029276	CN	Bibb	VARIOUS BIBB COUNTY ROADS		Initialize	...	
10006	BCP 04-27-82-()	100021822	PE	Bibb	BIBB COUNTY COMMISSION (BCP-04-27-82)		Initialize	...	
10007	BCP 04-28-82-()	100021823	PE	Bibb	BIBB COUNTY COMMISSION (BCP-04-28-82)		Initialize	...	
10007	BRZ-0400(009)	100011652	CN	Bibb	#010-04-017X OVER SHULTZ CRK		Initialize	...	
10008	BRZ-0400(007)	100011650	CN	Bibb	#042-04-064Z OVER BEAVER DAM CRK NEAR BIBB MILL		Initialize	...	
10008	BRZ-0400(005)	100011648	CN	Bibb	#014-04-0045Z OVER LICKLOG CREEK		Initialize	...	
10008	BCP 04-29-83-()	100021824	PE	Bibb	BIBB COUNTY COMMISSION (BCP-04-29-83)		Initialize	...	
10008	BRZ-0400(006)	100011649	CN	Bibb	#015-04-046Z OVER BRANCH NEAR PONDVILLE		Initialize	...	
10009	BRZ-0400(008)	100011651	CN	Bibb	#003-04-027Z OVER AFFONEE CRK		Initialize	...	
10009	BCP 04-30-84-()	100021825	PE	Bibb	BIBB COUNTY COMM (BCP-04-30-84)		Initialize	...	
10009	BRZ-0400(010)	100011653	CN	Bibb	#022-04-059Z OVER SANDY CREEK		Initialize	...	
1001	BR-0264(005)	100002975	RW	Lamar	>REPL BR ON US-278ATTURKEY CR, MP 4.35 BIN #001817 STR #118-38-4.3		Initialize	...	
1001	BR-0264(005)	100002977	PE	Lamar	BIN #001817 ON US-278ATTURKEY CRK		Initialize	...	

Figure 28

Once the Initialize button is selected, the Initialize Project accordion tab automatically opens. The user can then enter information related to the project type, the users that are assigned to the

project, and the point shape (whether it be a line or a point) representing the project. If there is not a line or point representing the project, then the initializer must enter the point manually. This can be done by zooming into the location of the project. Figure 29 shows the Initialize Project accordion tab.

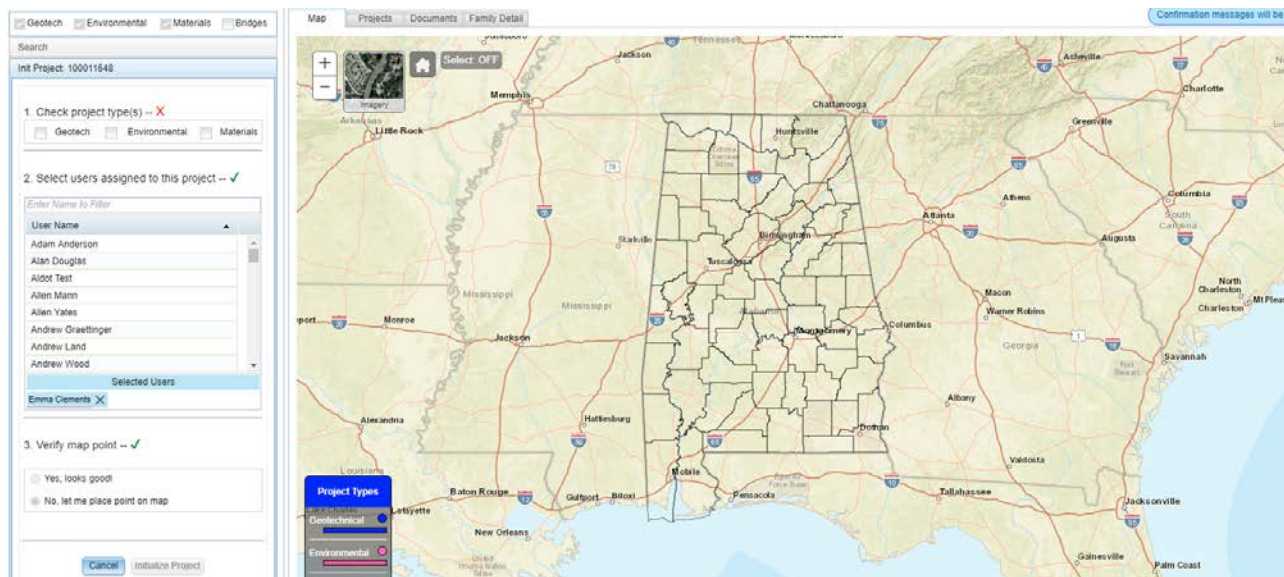


Figure 29

Once the appropriate information is entered and a point has been placed, the initialize project button at the bottom of the accordion tab will complete the action. Immediately following the project initialization, the map will zoom to the project point and the family details window will display whatever documents are associated with newly initialized project(s).

2.4 Administrator User Type

An administrator user has all the privileges available to an ALDOT Engineer, Consultant, or a general GeoGIS user, plus additional management privileges. The main privilege of the administrator is the ability to create, retire, and modify user names, passwords, and user types. A GeoGIS user must contact the administrator to create a user name and password.

2.4.1 Administration Page

The Administration page allows an administrator to create and edit users. Administration features include manage user and historic document features. These can be accessed through the

Manage Users button located in the top right hand corner of the site. Figure 30 displays the Manage Button.



Figure 30

The Manage Users button allows the administrator to edit the existing users of the site. Once selected, the button initiates a separate pop up window with user information. Figure 31 shows the initial Manage Users window.

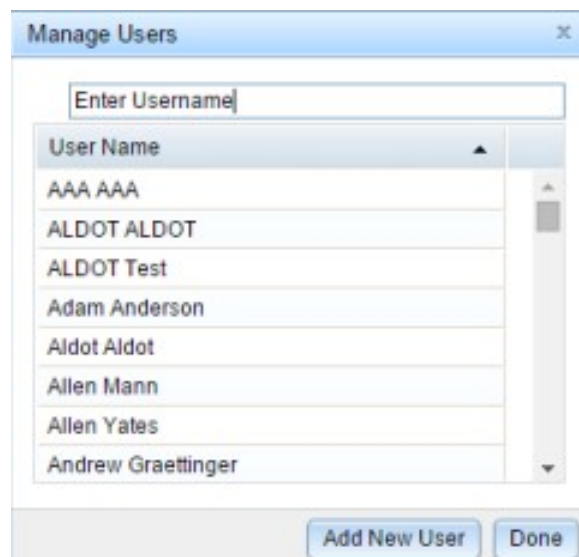


Figure 31

To add users, select the Add New User button. Another pop up window will replace the existing Manage Users Window and provide blank fields for new user information to be filled out. To add the user select the Add User button once each field is appropriately filled out. Figure 32 displays this New User Window.

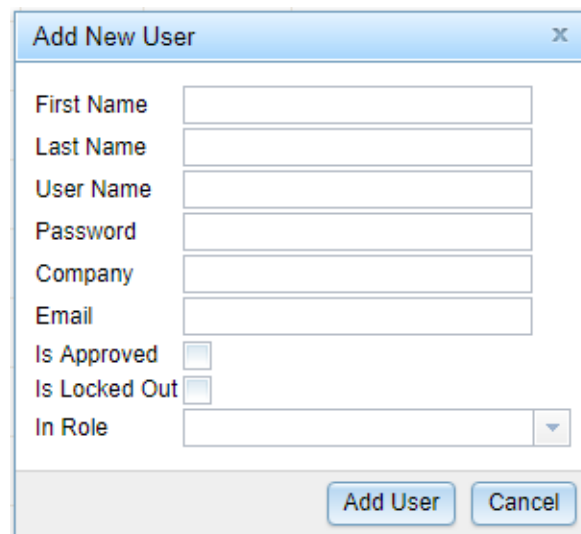
A window titled 'Add New User' with a close button (X) in the top right. It contains several form fields: 'First Name', 'Last Name', 'User Name', 'Password', 'Company', 'Email', 'Is Approved' (with a checkbox), 'Is Locked Out' (with a checkbox), and 'In Role' (with a dropdown arrow). At the bottom of the window are two buttons: 'Add User' and 'Cancel'.

Figure 32

User information can be updated by an administrator through the Manage Users button. Once selected, the Manage Users pop up box appears displaying a full list of users. Users can be searched for using the search option. The administrator can alter a range of information specific to the user. User information can only be altered after a username has been selected. This selection will initiate an additional pop up containing the user's current information. This feature is displayed in Figure 33.

The screenshot shows a 'Manage Users' dialog box with a search bar containing 'John'. Below the search bar is a list of users: John Jennings, John Reece, John Smith (highlighted with a dashed border), and John Washington. To the right is a 'User Details' form with the following fields:

User Details	
First Name	John
Last Name	Smith
User Name	
Change Password	<input type="checkbox"/>
Company	JS Co.
Email	jsco@me.com
Is Active	<input type="checkbox"/>
In Role	test

At the bottom of the dialog are three buttons: 'Add New User', 'Update User', and 'Done'.

Figure 33

Once the appropriate adjustments have been made to the user, the Update User button will save the adjustments within the site. The Done button will conclude the Manage Users feature of GeoGIS.

Users can also be retired. The GeoGIS system does not remove users from the site entirely, but rather restricts their access to the site through retirement. Users can be retired through the edit user function displayed above. Retired users will have the "Is Active" box unchecked. This feature acknowledges work done by a specific user, but restricts further involvement with the site. Figure 34 displays an inactive user.

The screenshot shows the 'Manage Users' dialog box with the search bar containing 'john'. The list of users is the same as in Figure 33. The 'User Details' form is identical, but the 'Is Active' checkbox is unchecked.

User Details	
First Name	John
Last Name	Smith
User Name	
Change Password	<input type="checkbox"/>
Company	JS Co.
Email	
Is Active	<input type="checkbox"/>
In Role	test

At the bottom of the dialog are three buttons: 'Add New User', 'Update User', and 'Done'.

Figure 34

Administrators can also create Historic Projects. These are projects that have either been completed or discontinued but still have documents of value associated with them. Only administrators have the ability to create Historic Projects.

Some projects may not have a CPMS number yet. An engineer may choose to upload documents from a project to GeoGIS before a CPMS number is created. This type of project does not need to be classified as a historic project. As such, there is a checkbox located in the “Create Historic Project” pop up box. By clicking this checkbox, a user can go back and remove the temporary project later, after the project has received a CPMS. Many new projects Figure 35 displays the Create Historic Project pop up box.

The screenshot shows a "Create Historic Project" dialog box with the following fields and controls:

- CPMS #:** 900000200
- Project Number:** Project Prefix, Project Route ID, Project Agreement
- Route Id:**
- Route Type:** Select a Route Type
- Family Id:**
- Beginning:**
- End Post:**
- Temporary Project:** (circled in black)
- Project Description:** Text area
- Character Count:** 0/250
- Buttons:** Cancel, Create, Initialize

Figure 35

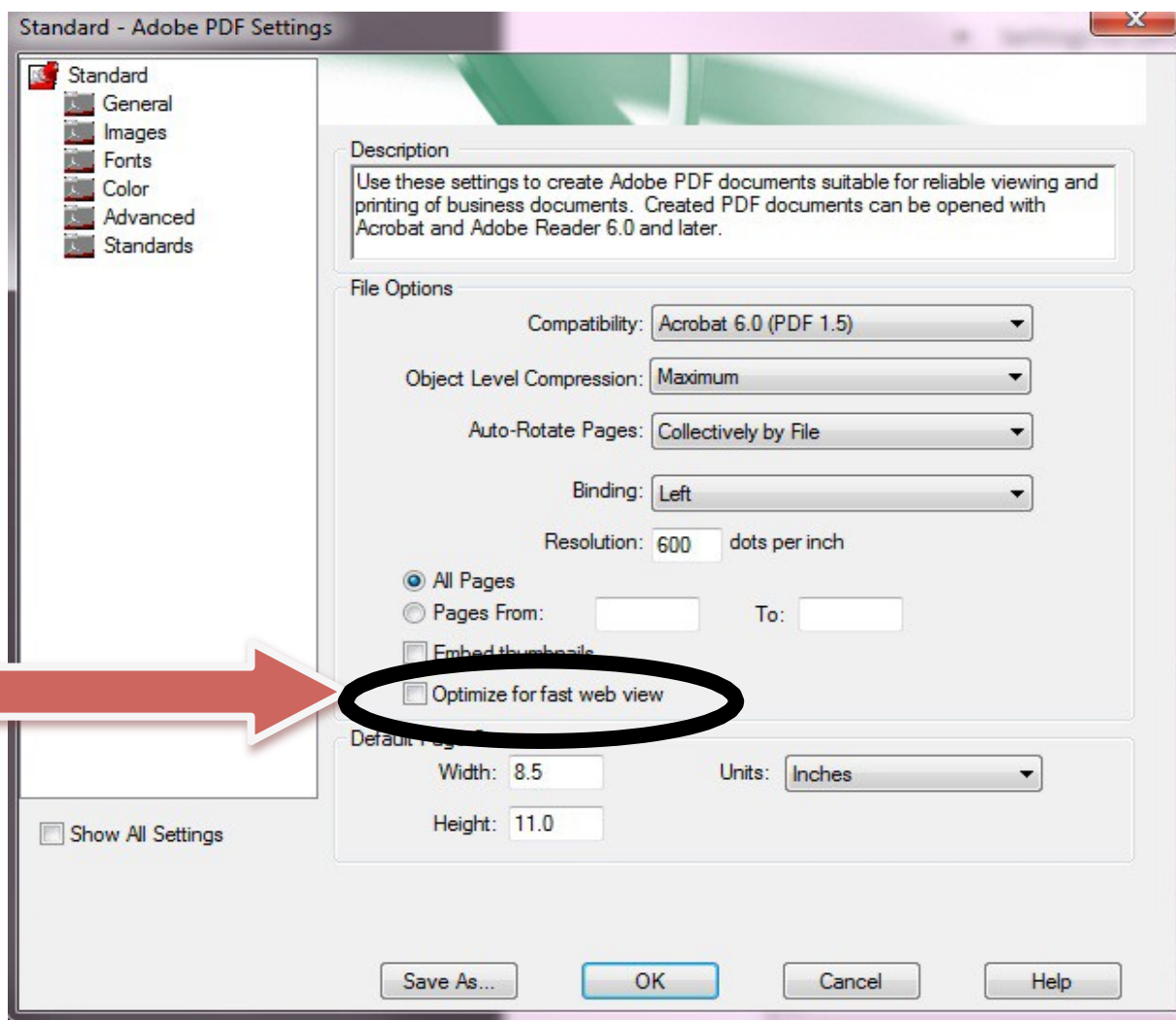
3.0 Procedures for Producing Live Documents

Step 1: Set Preferences

You will need to set up your preferences for Microsoft Word, Microsoft Excel, and Adobe Acrobat Professional to be able to combine live documents. The preferences that need to be set are searchable document, dots per inch (dpi) resolutions, page size, and optical character recognition (OCR). These preferences are required to meet our minimum standard requirements for live documents.

Microsoft Word:

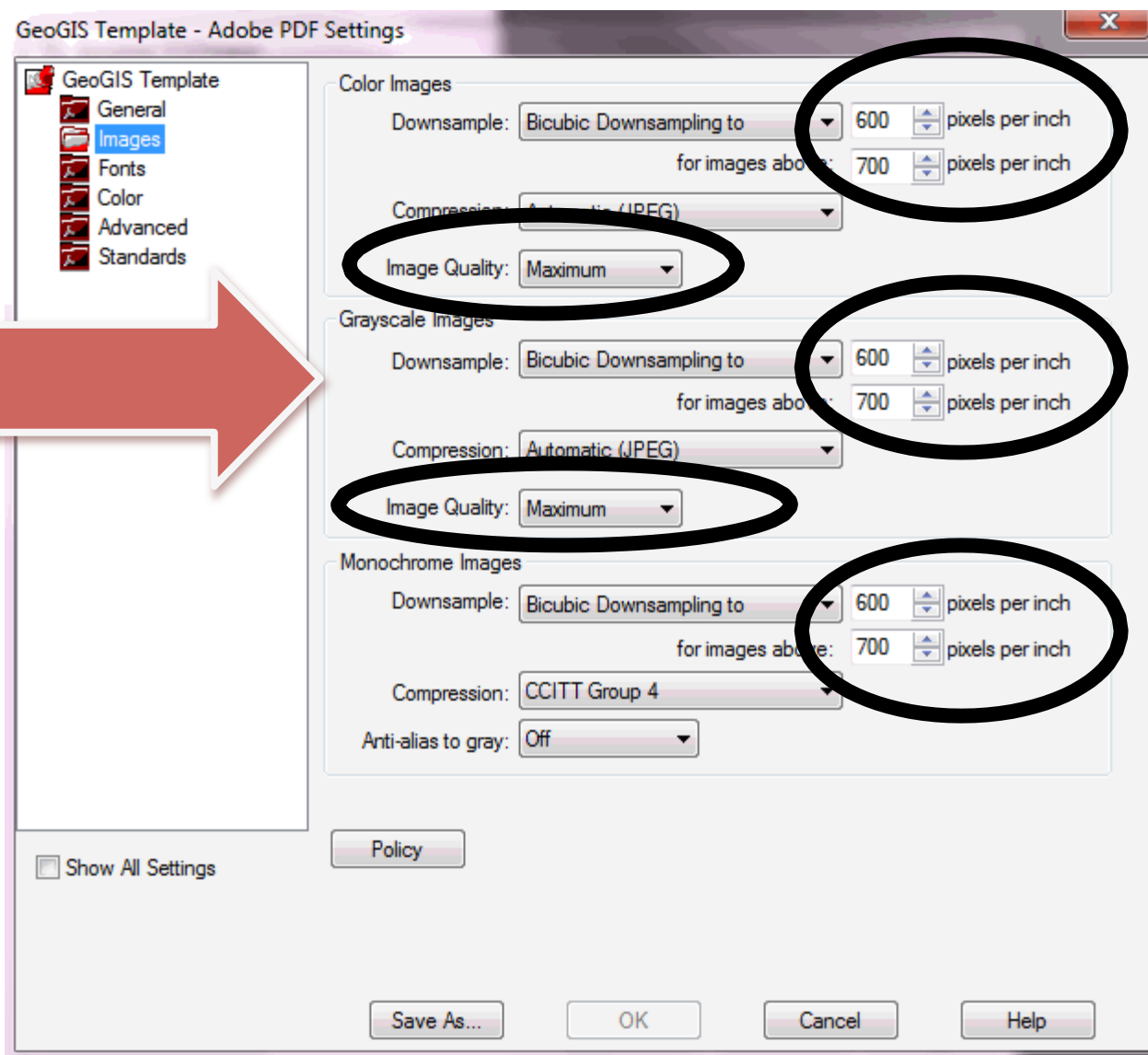
- Searchable Document
 - No preferences will need to be set as Microsoft automatically makes their documents searchable.
- DPI Resolutions
 - Click the **“Acrobat Tab”** on the main menu of Microsoft Word.
 - ▮ Click the **“Preferences Tab”** and then click **“Advanced Settings”**
 - ▮ Uncheck the **“Optimize Fast Web View”**



Step 1: Set Preferences (cont.)

Microsoft Word (cont.):

- DPI Resolutions (cont.)
 - Click the **“Acrobat Tab”** on the main menu of Microsoft Word. (cont.)
 - Next click the **“Images tab”** under the Standard Tab.
 - The downsample for Color, Grayscale, and Monochrome Images should be changed to **600 pixels per inch for images above 700 pixels per inch**. Also change the image quality to **“Maximum”** under the Color and Grayscale Images section.



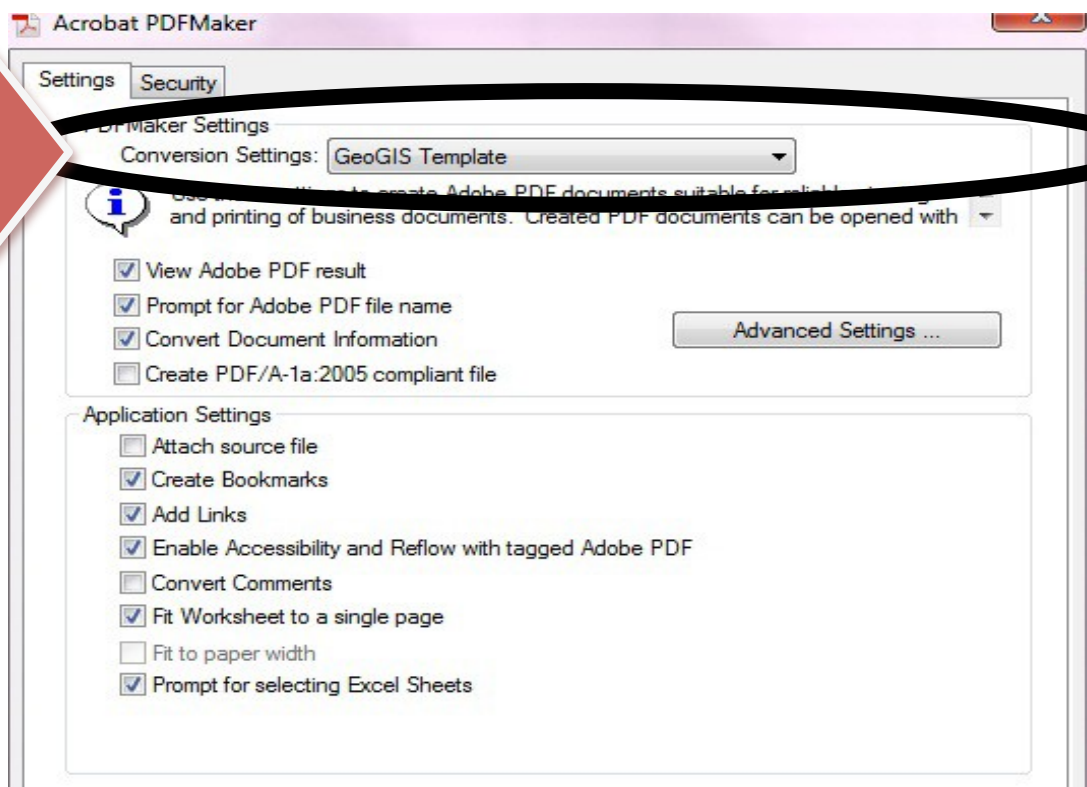
Step 1: Set Preferences (cont.)

Microsoft Word (cont.):

- DPI Resolutions (cont.)
 - Then click the **“Save As”** tab at the bottom of the screen. You will need to save this template for future use in other Microsoft office programs. I would suggest saving it as **“GeoGIS template”**. Once you have saved the template click the **“Ok”** button.
- Page Size
 - Microsoft programs automatically sets the paper size.
- OCR
 - No preferences need to be set.

Microsoft Excel:

- Searchable Document
 - No preferences will need to be set as Microsoft automatically makes their documents searchable.
- DPI Resolutions
 - Click the **“Acrobat Tab”** on the main menu of **“Microsoft Excel”** and then click **“Preferences”**.
 - Click the **“Conversion Settings”** menu and click **“GeoGIS Template”** (or what you named your template in Microsoft Word).



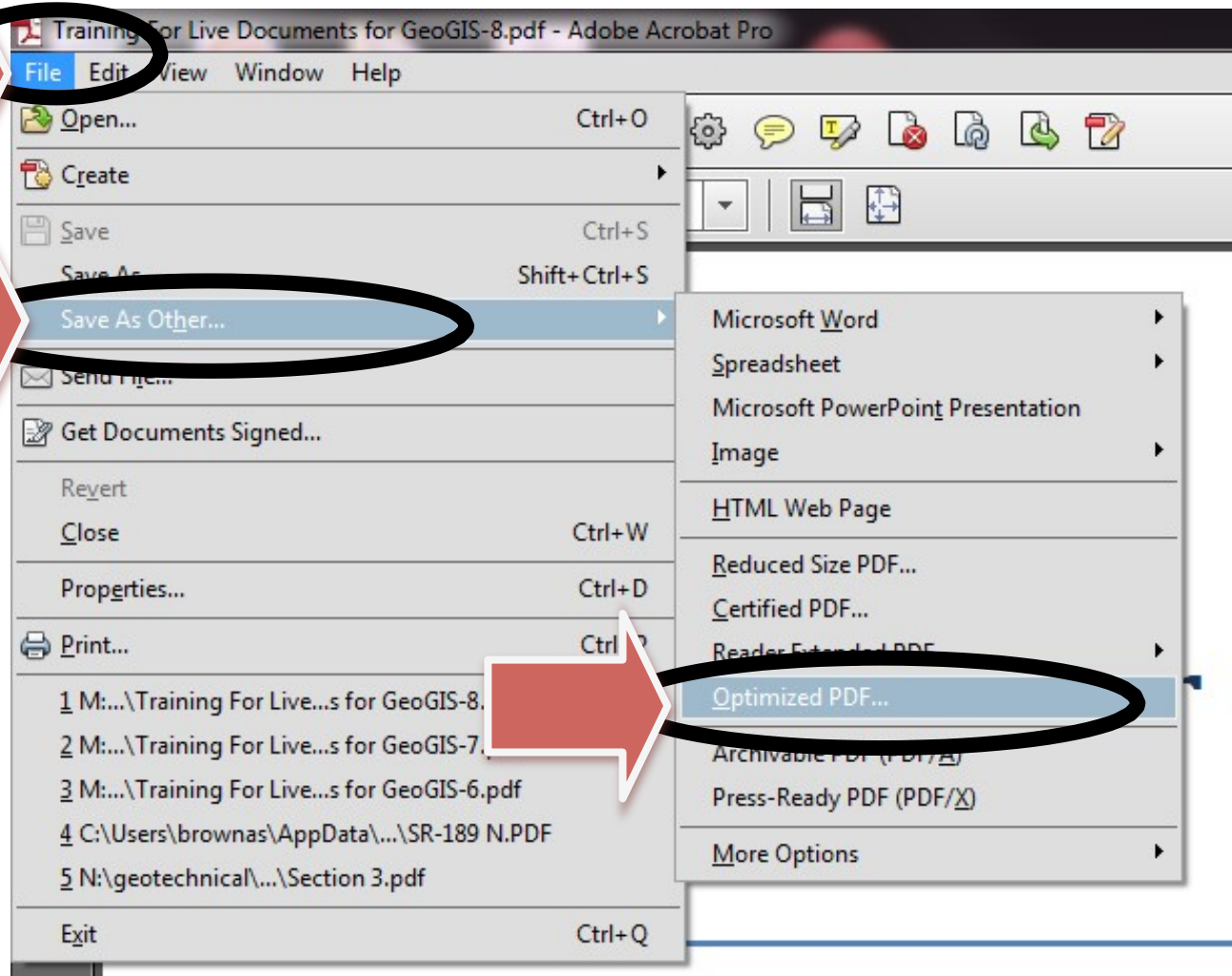
Step 1: Set Preferences (cont.)

Microsoft Excel: (cont.)

- Verify that all settings under the Acrobat tab are still set correctly as stated under the Microsoft Word Section on page 5 and 6.
- Page Size
 - Will vary for each document.
- OCR
 - No Preferences will need to be set.

Adobe Acrobat:

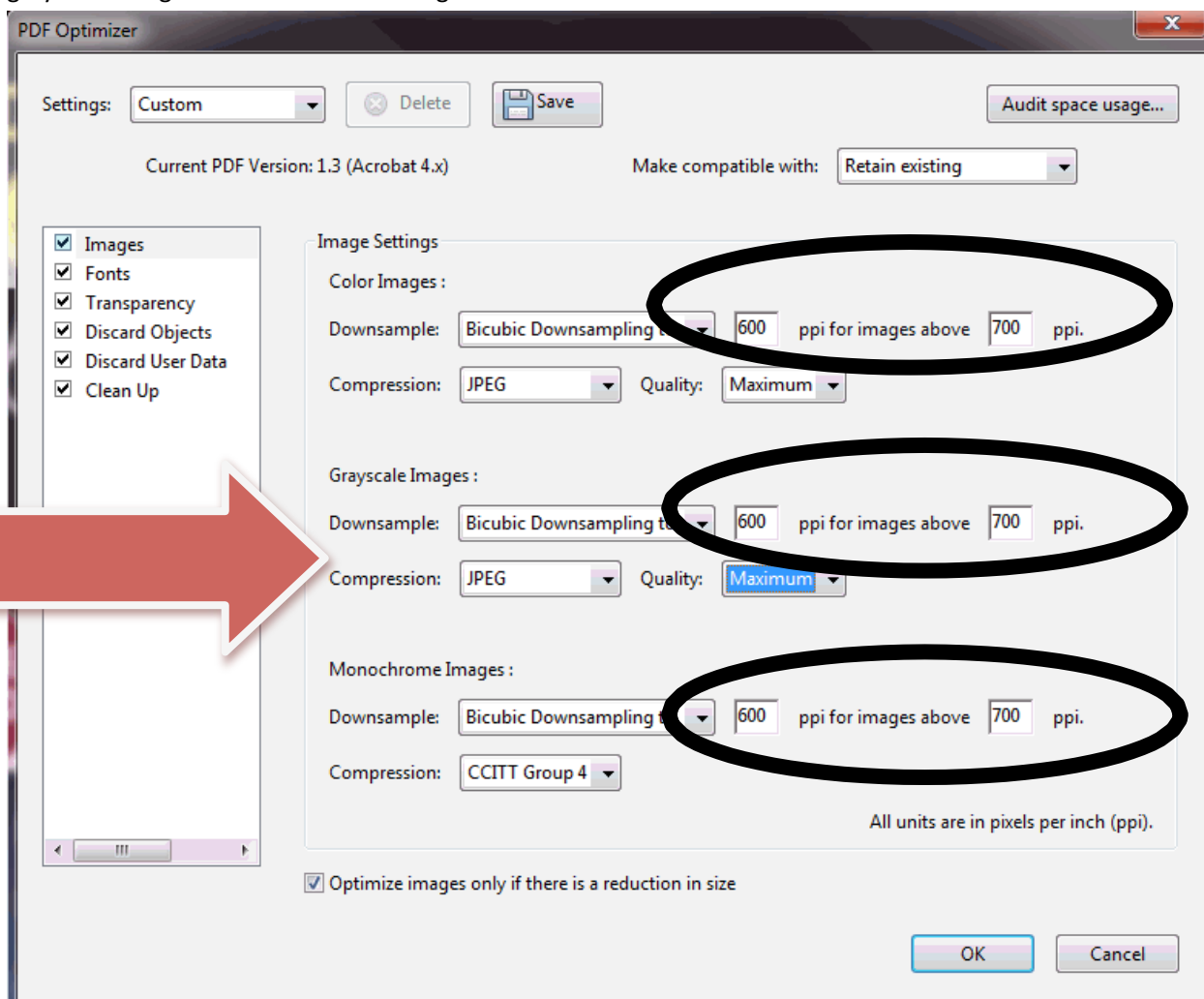
The only preference that needs to be set in Adobe Acrobat is the PDF Optimizer. To access the PDF Optimizer tool, open up a document in Adobe Acrobat. Go to **“File”**, then to **“Save As Other”**, then to **“Optimized PDF”**.



Step 1: Set Preferences (cont.)

Adobe Acrobat: (cont.)

Once the “**Optimized PDF**” screen has opened, you need to change the “**downsample**” images for Color, Grayscale, and Monochrome to “**600 ppi for images above 700 ppi.**” The quality for color images and grayscale images will need to be changed to “**Maximum**”



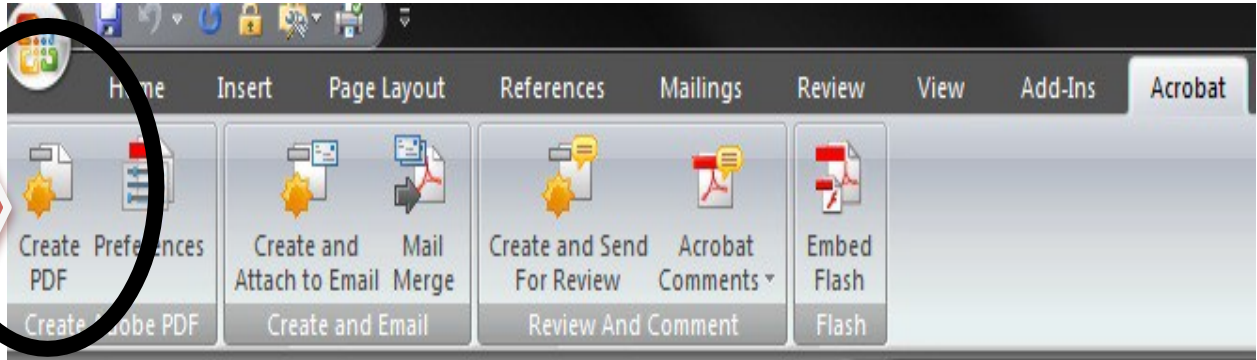
You can also save these settings in the PDF Optimizer screen. Click the “**Save**” button on the top left of the PDF Optimizer screen.

Step 2: Create a PDF from the Original Document

For a list of documents that need to be converted and uploaded to GeoGIS please see **Appendix A**.

Microsoft Word and Excel

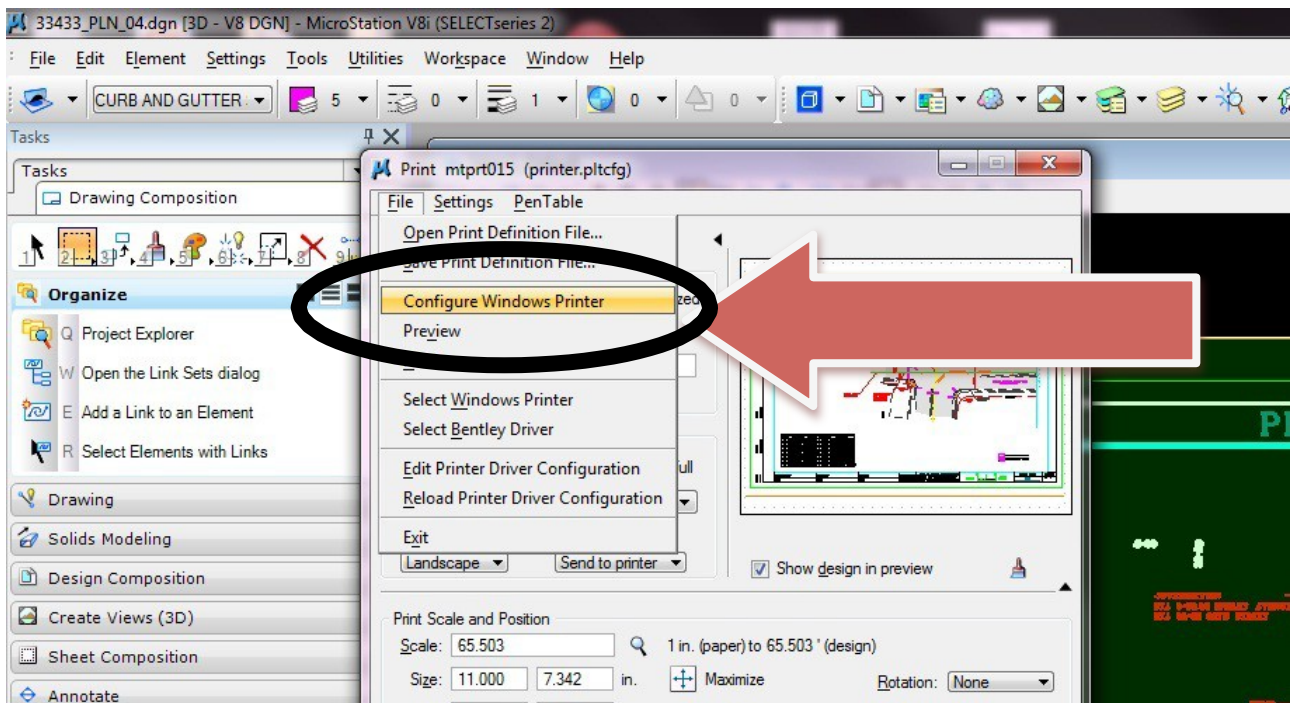
- Click the **“Acrobat Tab”** and then click **“Create PDF”**.



- Make sure to check the location of where the document will be saved.
- Once the PDF has been created, Adobe should automatically open the document.

Microstation

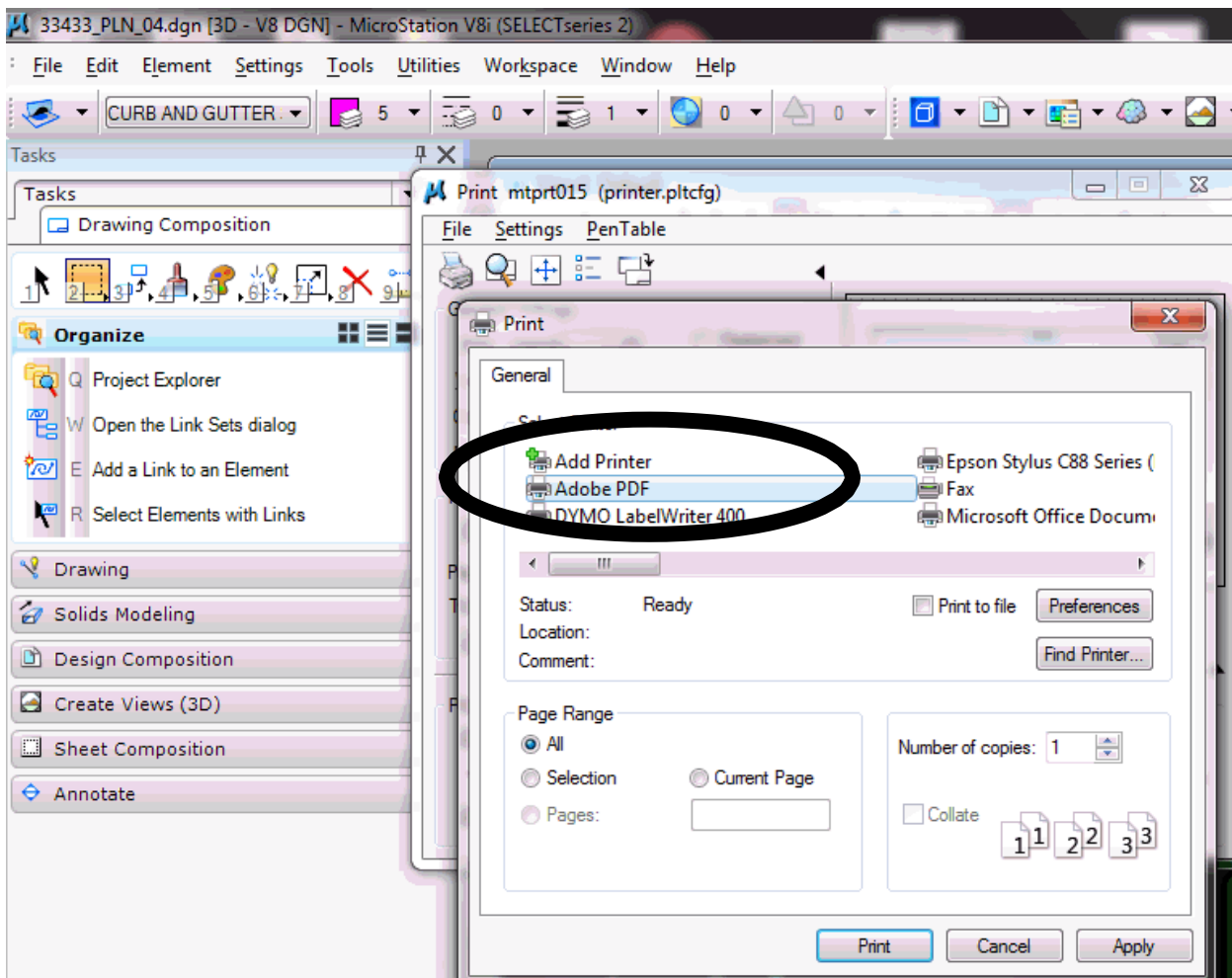
- Open up the file that needs to be converted to PDF.
- Next, place **“a fence”** around the drawing that needs to be converted to PDF.
- Once the fence is placed, you will then select **“File Tab”** and then click **“Print”**.
- Make sure your paper size is correct.
- Then select the **“File Tab”** and click **“Configure Windows Printer”**.



Step 2: Create a PDF from the Original Document (Cont.)

Microstation (Cont.)

- Next, select the “**Adobe PDF**” and click “**Print**” and then click “**Print**” again.



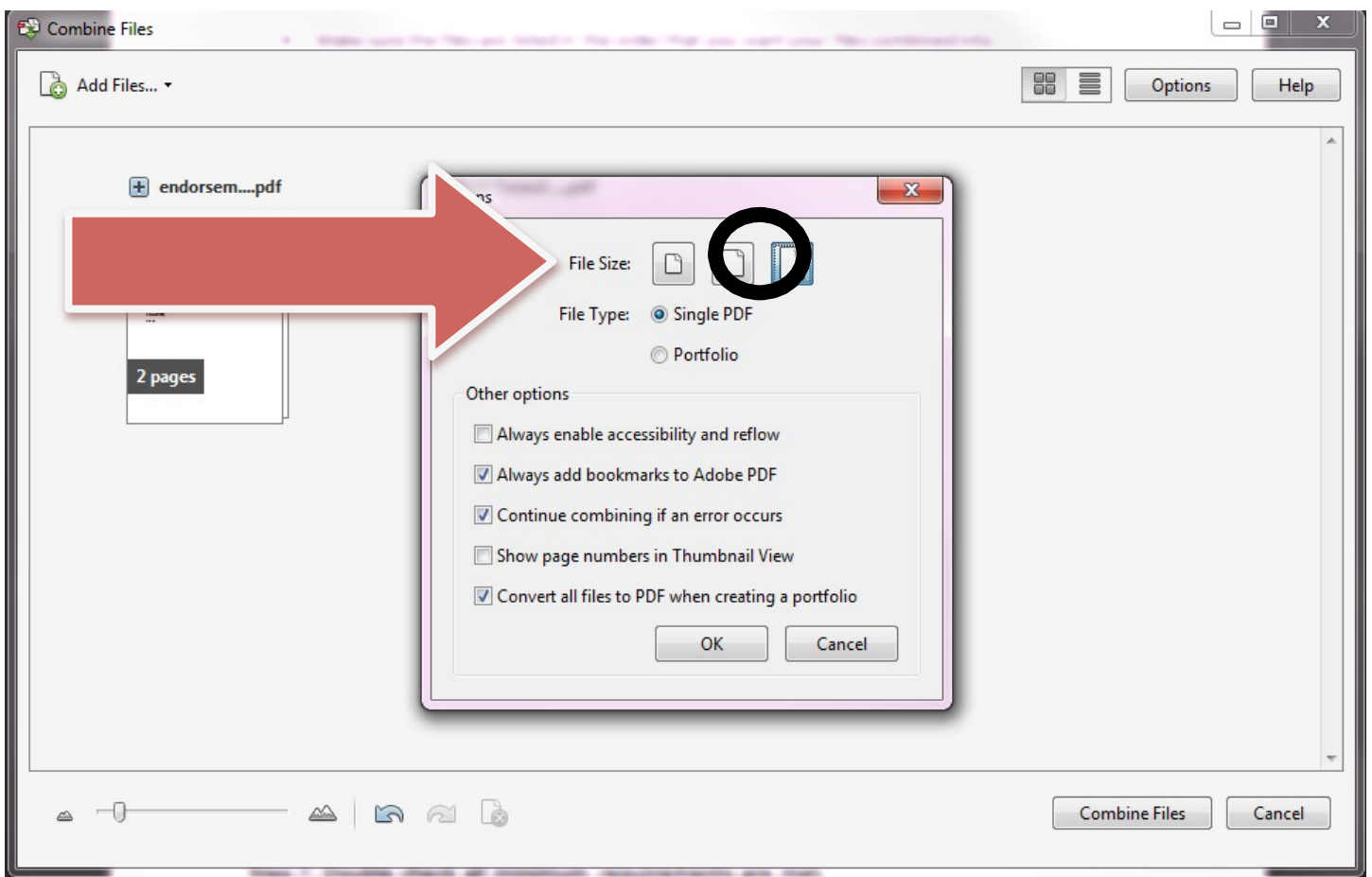
- The “**Save PDF File As**” screen will pop up and you will need to save the PDF document in the correct location.

For any documents that need to be scanned, please see Appendix B.

Step 3: Combine Documents

Adobe Acrobat

- Open Adobe Acrobat, click the file menu and then hover over **Create PDF**. Click **“Merge Files into a Single PDF”** and then click **“Add Files”**.
- Select the files that you want to combine into a single PDF.
- Make sure the files are listed in the order that you want your files combined into.
- Your file size needs to be set at **“Maximum”**. To make sure your file size is at maximum, click the **“Options Button”**, and then click the **“third option”** for file size.



- Click **“Ok”** and then click **“Combine Files.”**

Step 4: Check/Set Orientation

Check the pages in the document for correct orientation. The top of the page needs to be at the top of the screen. If the pages are not correct, then the orientation needs to be corrected.

Step 5: File Nomenclature

A file nomenclature system has been set up by the GeoGIS Committee. The file name needs to include the Type of Document, Description, Project Number, and County. The GeoGIS committee has decided on two options for naming files. One option is to spell the entire file name out and the other option is to use abbreviations in case the file name is too long.

Examples for the two options are listed below:

- Bridge Foundation Report for Bridge Replacement on SR---145 over Yellow Leaf Creek
BR---412 (10) Chilton
- BFND RPT for BR on SR---145 over Yellow Leaf CRK BR---412 (10) Chilton
 - a. **Appendix C** contains a list of abbreviations for document types.

Step 6: Review

Make sure that all minimum requirements have been met in **Steps 1---6** and **Appendix B**.

Step 7: Save file to server

Save the document in the correct place for your Region/office.

4.0 Procedures for Scanning Historical Documents

The Scanner is responsible for Steps 1 - 6.

Step 1: Sign File Out in File Room

- Sign out the file/box from the file room.
- Use the sign out sheet to sign out the files.

Step 2: Information that needs to be scanned into GeoGIS

- Pull out the documents that need to be scanned in based on the *Documents Required for GeoGIS* located in *Appendix A*.
- If there are multiple documents of the same report, please use the best document that is available.

Step 3: Is the project initiated in GeoGIS?

- Check and see if the project is initiated in GeoGIS.
- If the project is initiated in GeoGIS, check to see if any documents that were pulled in Step 2 are already in GeoGIS.
- If the project is not initiated in GeoGIS, please contact the appropriate personnel to have the project initiated.

Step 4: Number the pages in the bound document

- Before you unbind the report, count the number of pages in the document.
- Next you will need to number the bottom right corner of the back page of the document with a yellow highlighter.
 - This will ensure that the document stays in the original order.
 - For example, label the back of the page 1/24, 2/24, etc.
 - If the document is double-sided just label the bottom right hand corner of each page.
- If the document already has page numbers, then skip this step.

Step 5: Scan and Assemble the Physical and Electronic Document

- Review *Requirements for Scanned Documents* located in *Appendix B*

Step 6: Reconstruct File Folder

- Reconstruct the file folder in chronological order, most current documents at the top.
- The scanned documents that need to be reviewed should be clipped together in the file folder.

Step 7: Reviewer 1

Once the Scanner has reconstructed the file folder, he or she will give the folder to Reviewer 1. Reviewer 1 will be responsible for making sure that all the requirements were met that are outlined in

Requirements for Scanned Documents located in ***Appendix B***.

- If all the requirements were met, then Reviewer 1 will give the folder to Reviewer 2.
- If all requirements were not met, then the Reviewer 1 will email the Scanner notifying them that all of the requirements were not met and which documents will need to be fixed.
- Once the Scanner has fixed the documents, then he or she will give the documents back to Reviewer 1.
- The Scanner will need to make sure that the file is labeled revision 1 if the document needs to be corrected. This will allow Reviewer 1 to review the initial document with the revised document. For Example:
 - a. Original File Name: Bridge Foundation Report for Bridge Replacement on SR---145 over Yellow Leaf Creek BR---412 (10) Chilton
 - b. Revised File Name: Revision 1 Bridge Foundation Report for Bridge Replacement on SR---145 over Yellow Leaf Creek BR---412 (10) Chilton
 - c. Revised File Name (Abbreviated): REV 1 BFND RPT for BR on SR---145 over Yellow Leaf CRK BR---412 (10) Chilton
- If the Scanner has multiple revisions to one file then add A, B, C, etc. after Revision 1 to the file name.

Step 8: Reviewer 2

Once Reviewer 1 has checked to ensure that all documents meet the ***Requirements for Scanned Documents*** located in ***Appendix B***, then Reviewer 1 will give all documents to Reviewer 2 for their review. Reviewer 2 will be responsible for making sure that all the requirements outlined in

Requirements for Scanned Documents located in ***Appendix B*** were met.

- If all the requirements were met, then Reviewer 2 will then notify the scanner that the document is ready to be uploaded to GeoGIS.
- If all of the requirements were not met, then the Reviewer 2 will email the Scanner, copying the Reviewer 1, notifying them that all of the requirements were not met and which documents will need to be fixed.

Step 8: Reviewer 2 (cont.)

- Once the Scanner has fixed the documents, then the scanner will give the documents to Reviewer 2 again so they can check the corrections.
- The Scanner will need to make sure that the file is labeled revision 2 if the document needs to be corrected. This will allow Reviewer 2 to review the initial document with the revised document. For Example:
 - a. Original File Name: Bridge Foundation Report for Bridge Replacement on SR---145 over Yellow Leaf Creek BR---412 (10) Chilton
 - b. Revised File Name: Revision 2 Bridge Foundation Report for Bridge Replacement on SR---145 over Yellow Leaf Creek BR---412 (10) Chilton
 - c. Revised File Name (Abbreviated): REV 2 BFND RPT for BR on SR---145 over Yellow Leaf CRK BR---412 (10) Chilton
- If the scanner has multiple revisions to one file then add A, B, C, etc. after Revision 2 to the file name.

Step 9: Verification

- Once the document has been uploaded, by the Scanner, to GeoGIS, the Verifier will be responsible for logging into GeoGIS and approving the document.
- The Verifier will be responsible for saving a copy of the document onto the server

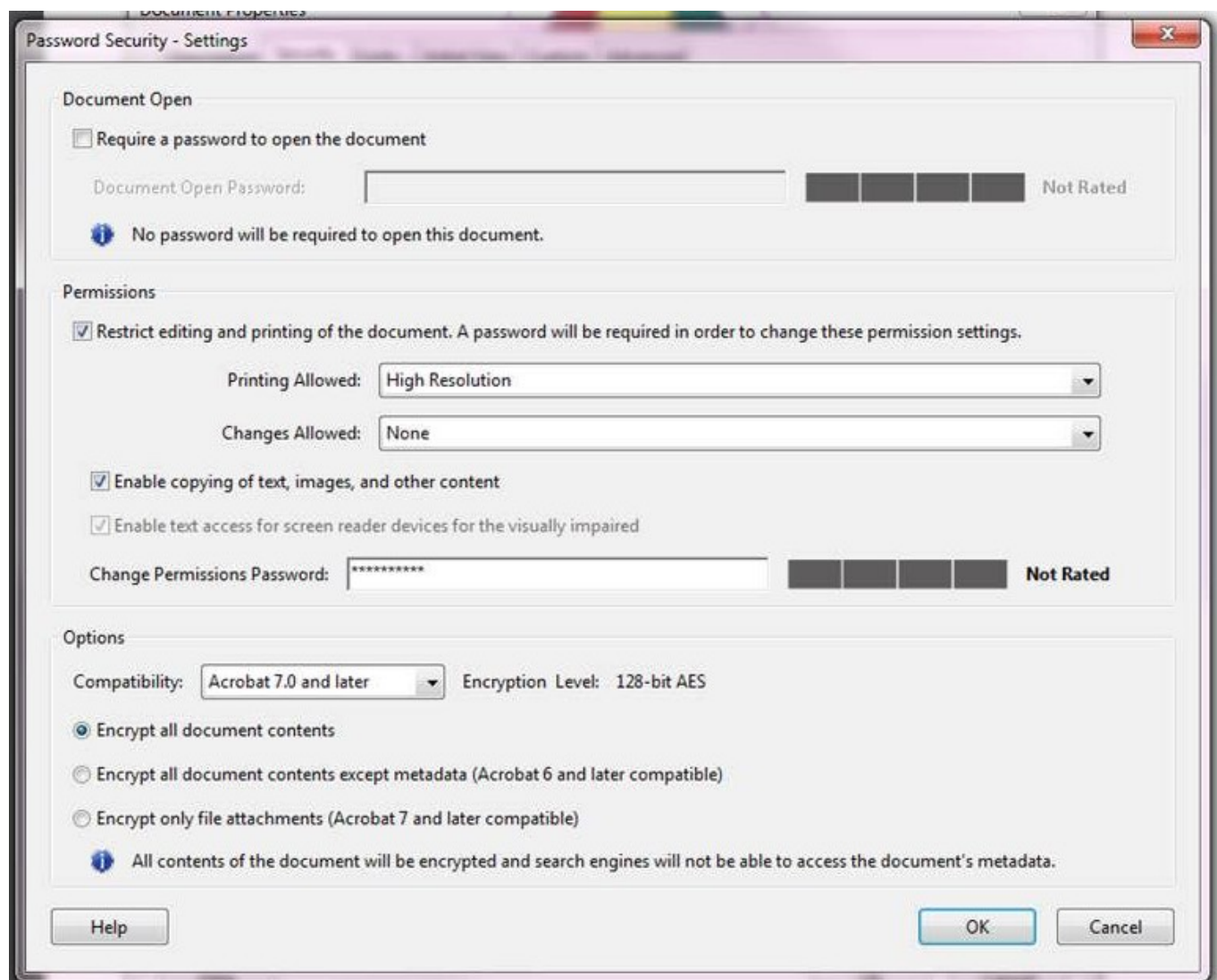
Step 10: Reconstruct the File Folder

- Once the document has been approved in GeoGIS by the Verifier, the Verifier will give the file folder back to the Scanner to reconstruct the file folder. Once the file folder has been reconstructed, then the Scanner will file the folder in the file room and sign the file back in on the sign---out sheet.

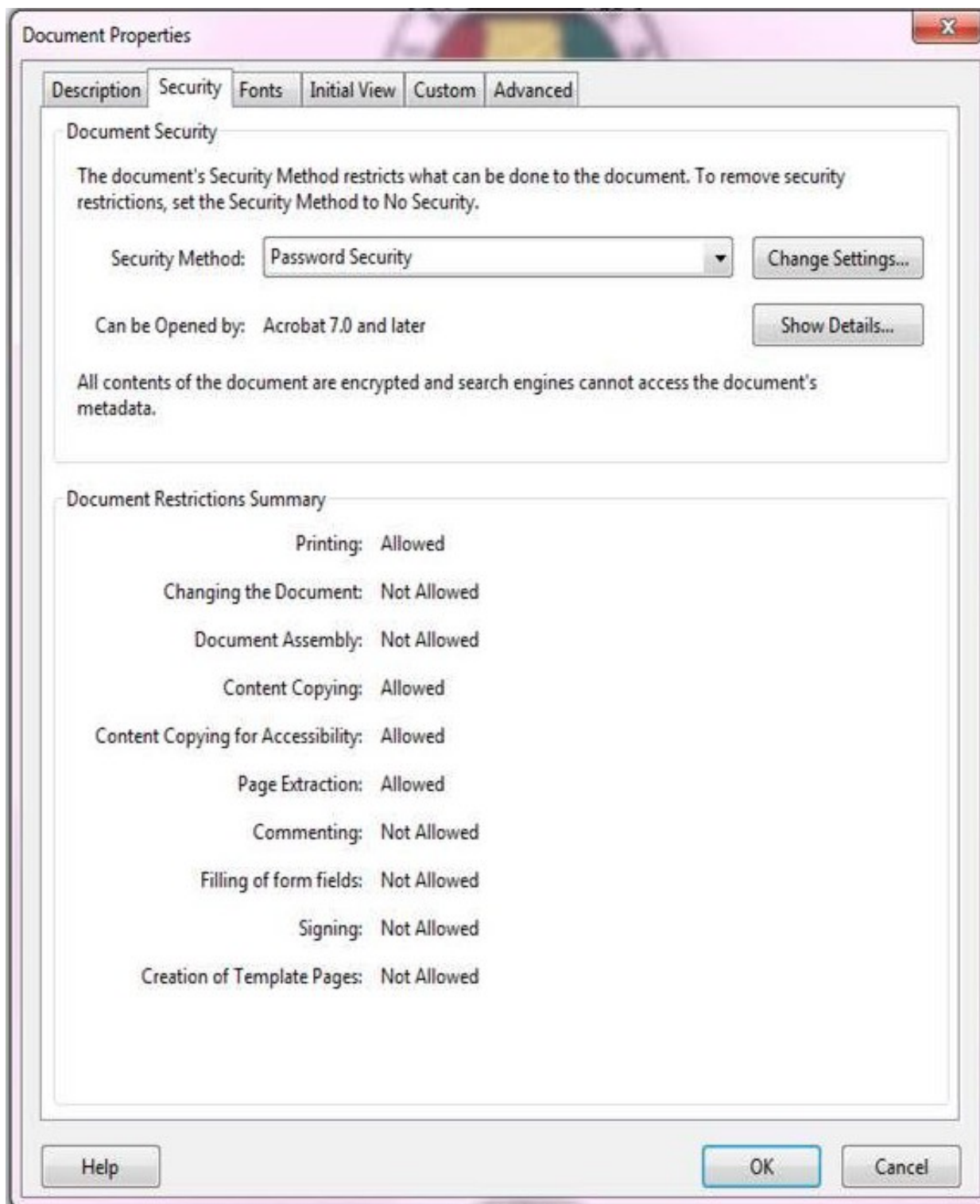
5.0 Procedures for Uploading Secure Documents

Step 1: Check PDF Security Settings

- Go to File Menu in Adobe Acrobat and click “Properties”
- Click “Security Menu”
- Click the drop down box for Security Method and choose “Password Security”
- The password security settings need to look like the following below:
 - Under the Permissions settings, please click “Restrict Editing and printing of the document. A password will be required in order to change these permission setting.”
 - Under the Printing Allowed drop down menu click “High Resolution”
 - Click “Enable copying of text, images, and other content”
 - Change the Permissions Password—these are specific to the type of document being uploaded

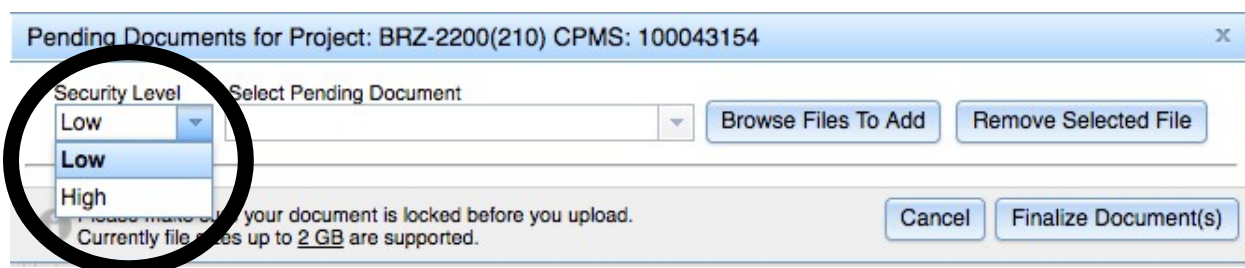


- The document properties will need to look like this once the security settings have been saved:

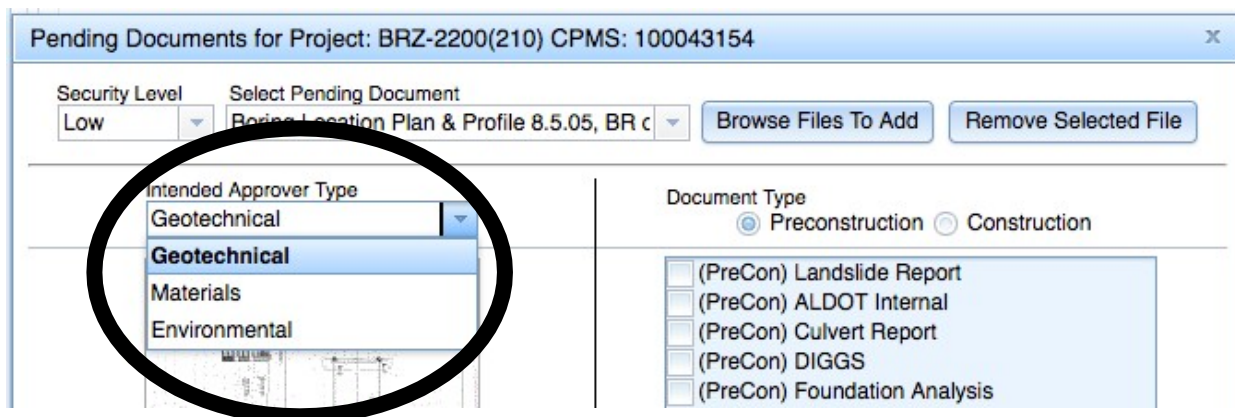


Step 2: Upload to GeoGIS

- Login to GEOGIS. (geogis.caps.ua.edu)
- Search for the project the documents will be uploaded to in the **“Project Number”** search bar.
 - a. If you are not authorized to upload the project, please contact the following for:
 - Hazardous Materials Projects--- Hope Gwin at (334) 206---2292 or by email at gwina@dot.state.al.us.
 - Geotechnical Projects--- Matt Revell at (334) 206---2257 or by email at revells@dot.state.al.us.
 - Materials Projects--- John Jennings at (334) 206---2314 or by email at jenningsj@dot.state.al.us.
- Once you have approval to upload the document or if you are already authorized, click the **“Upload”** button under the **“Upload Documents”** column.
 - a. Refer to Section 2.2.1 for more detailed instructions
- **“Browse Files To Add”** and once the file has been chosen click the **“Open”** button.
- Once the file has been opened, choose a **“Security Level”**.
 - b. **“Low”** is standard ALDOT security settings for the document
 - c. **“High”** adds additional copy restrictions to the document.

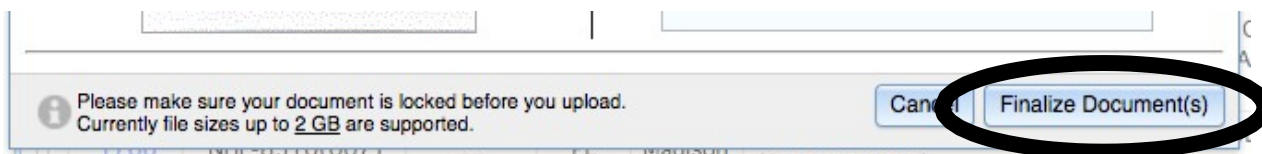


- It is also necessary to choose an **“Intended Approver Type”** based on the type of document being uploaded.

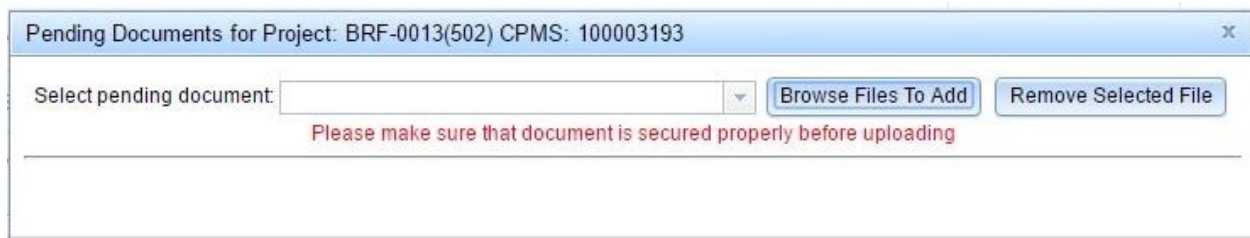


Step 3: Submit document for approval

- When the correct settings have been chosen, select a **“Document Type”** appropriate to the document (more than one type can be chosen), and then click **“Finalize Document”**.



- If an error message like the one below is displayed, return to the PDF and check that all settings and the permissions password are correct before attempting to re---upload the document.



- Once you have submitted the document, the Approver will receive an email to approve your document. Once the document has been approved, you will receive notification from GeoGIS, that the document has been approved.

6.0 Additional Geotechnical Features

6.1.1 Bridges

GeoGIS stores spatial information about all of the bridges in the state of Alabama. To turn the bridge layer on, select the “bridges” checkbox located on the map page, as shown in Figure 36. A purple bridge dot represents a bridge that does not currently have a bridge card associated with it, while a green bridge dot represents a bridge that has a bridge card associated with it. Selecting a green bridge dot will open a pop- up box that contains all of that bridge’s information, such as the features the bridge intersects and the bridge’s location, as well as a link to the associated bridge card, as shown in Figure 37.

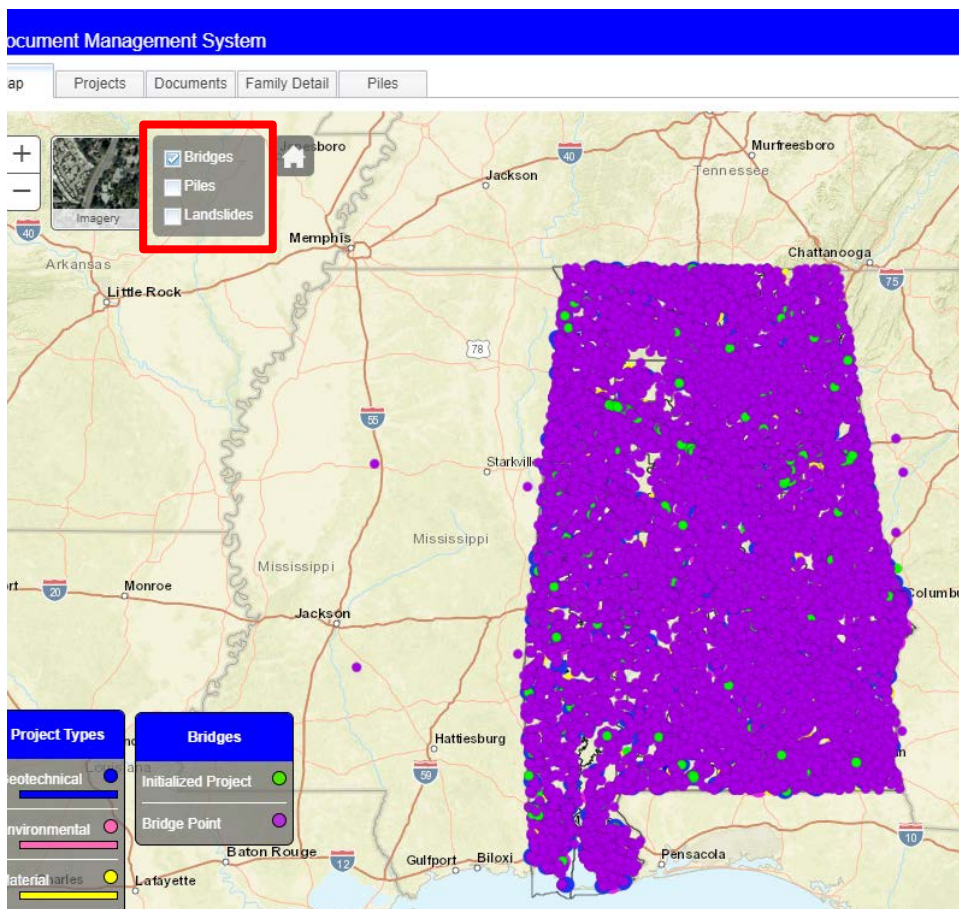


Figure 36

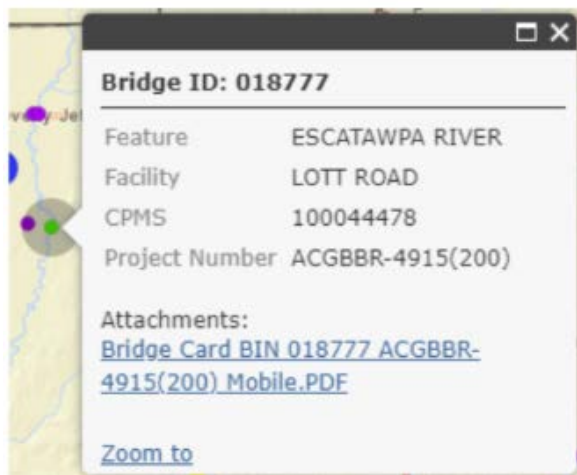


Figure 37

6.1.2 Piles

GeoGIS stores information about deep pile foundations throughout the state of Alabama. By storing spatial and attribute information about piles, users can complete searches to easily retrieve pile information and establish trends.

To turn on the pile layer, users should toggle on the “pile” checkbox located on the GeoGIS map. The checkbox will turn on the location of all the piles whose information is entered into GeoGIS, as shown in Figure 38. By clicking on a pile dot, a pop up box will be displayed that lists the associated attributes with a pile, as shown in Figure 39.

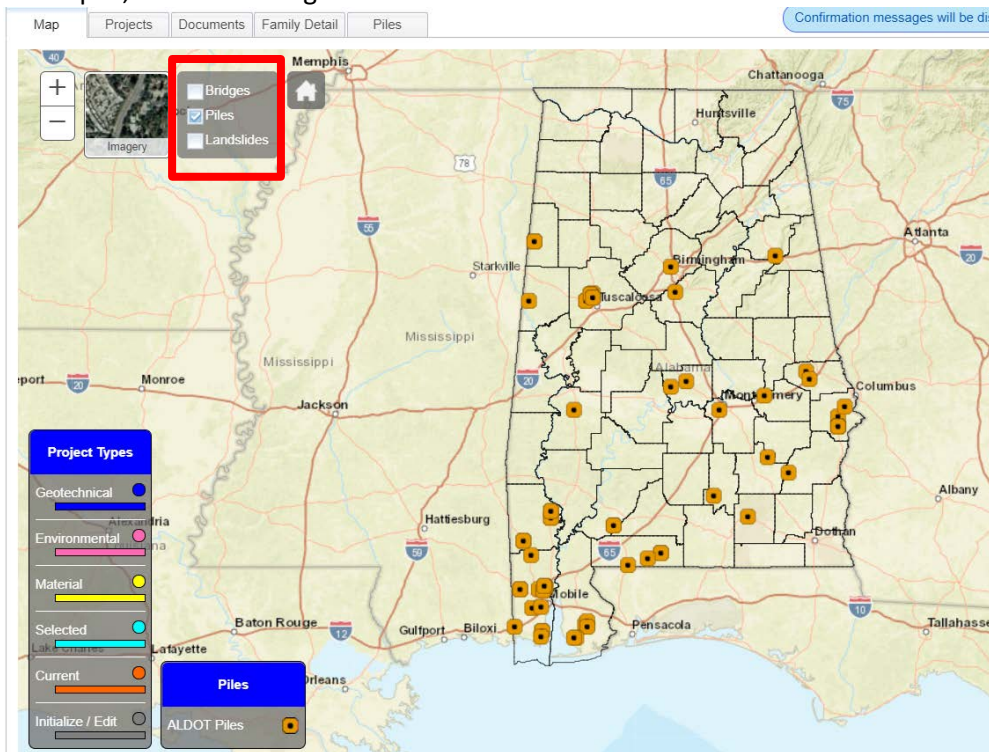


Figure 38

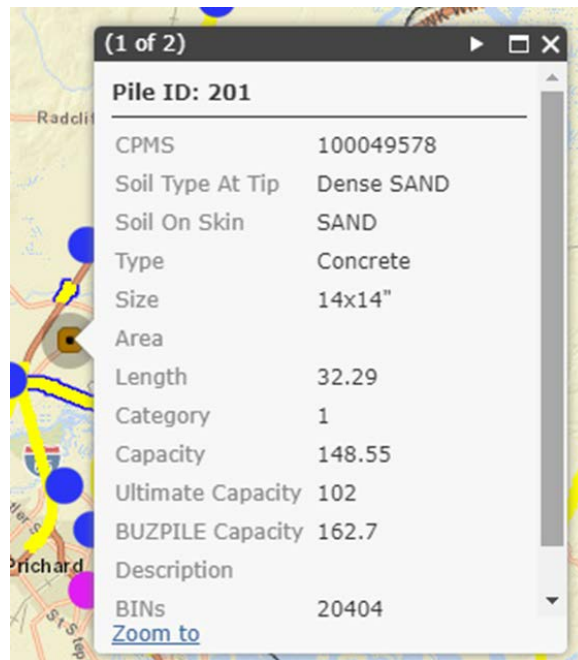


Figure 39

6.1.3 Landslides

GeoGIS stores information about landslides that have occurred throughout the state of Alabama. By storing spatial and attribute information about landslides, users can complete searches to easily retrieve landslide information and establish trends.

To turn on the landslide layer, users should toggle on the "landslide" checkbox located on the GeoGIS map. The checkbox will turn on the location of all the landslides whose information are entered into GeoGIS, as shown in Figure 40. By clicking on a landslide dot, a pop-up box will be displayed that lists the associated attributes with a landslide, as shown in Figure 41.

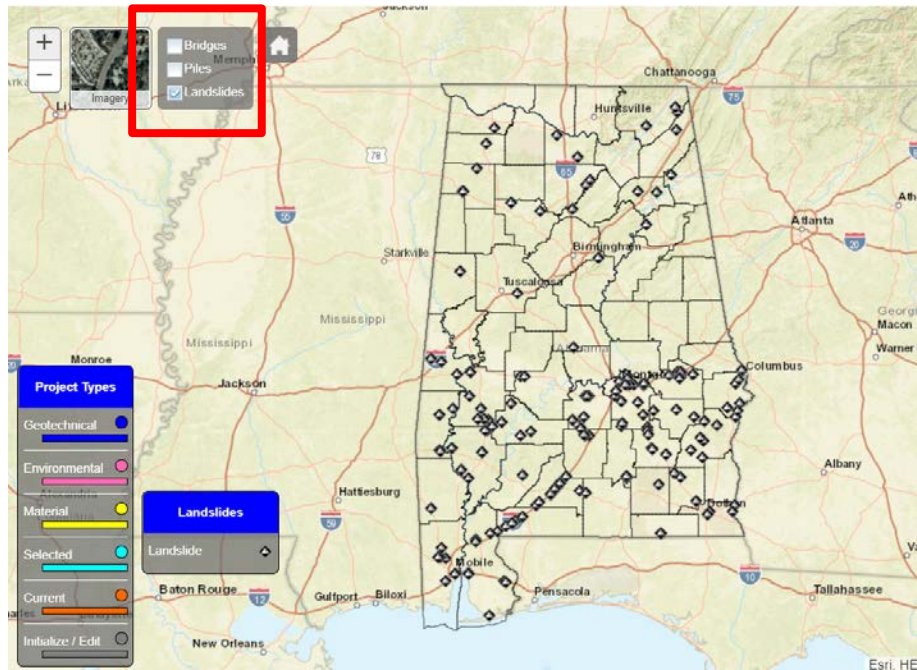


Figure 40

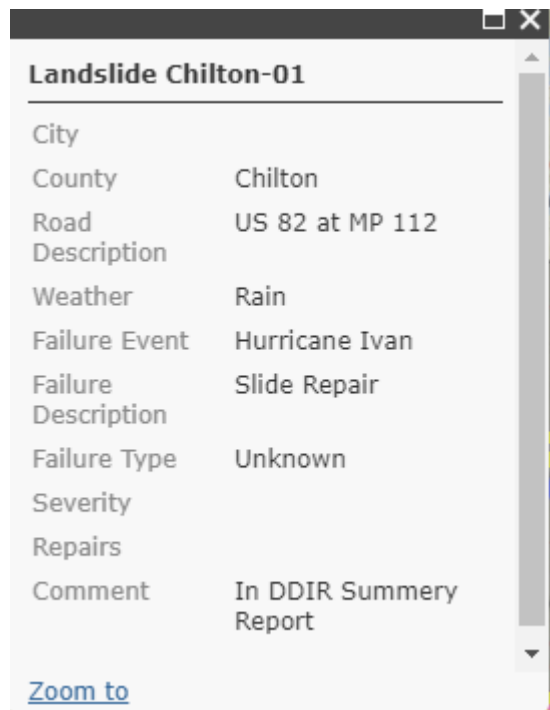


Figure 41

6.1.4 DIGGS

Geotechnical engineering professionals perform tests and gather an abundance of data every day. Typically, engineering companies have different formats for displaying pertinent information, which are tailored to the focuses of each company. Although this method works for individual companies, when data is transferred among companies, states, or other agencies, the variety of display formats and standards can be problematic, since most software packages are unlikely to have the means to understand all data formats. Data Interchange for Geotechnical and Geoenvironmental Specialists (DIGGS) is a data transfer format that is a solution to this problem. DIGGS provides a standard international format for transferring geotechnical data. While GeoGIS is a file-based system, functionality was added to verify, store and display DIGGS data.

The DIGGS data format was incorporated into the web system. DIGGS files for an Atterberg limits test, cone penetration test, and compaction test were generated. A user simply uploads the XML file to the associated project within GeoGIS, as shown in Figure 42. The DIGGS validation tool was incorporated into the GeoGIS system to verify the DIGGS format of uploaded files and check for errors before files are accepted into the site. If the format of the file is invalid based on the DIGGS format, GeoGIS alerts the user that the file is an invalid DIGGS file, as shown in Figure 43.

The DIGGS XML contains test type tags, such as “Atterberg Limits Test” or “Cone Penetration Test,” and on upload, GeoGIS reads these tags to determine what test the DIGGS file represents.

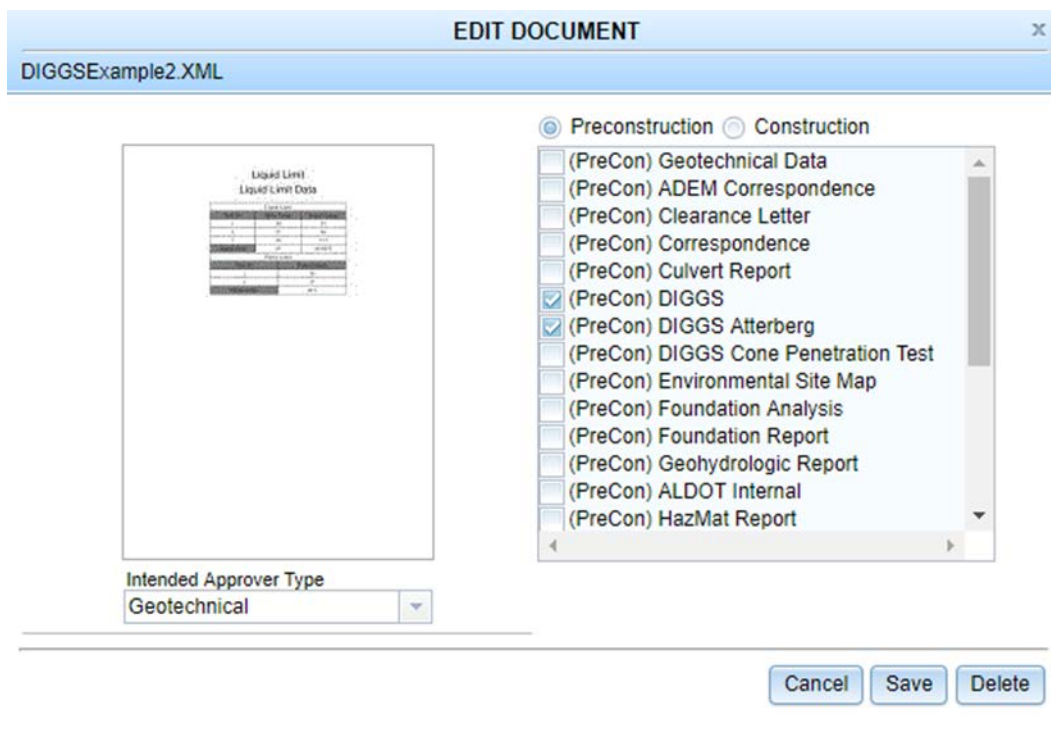


Figure 42

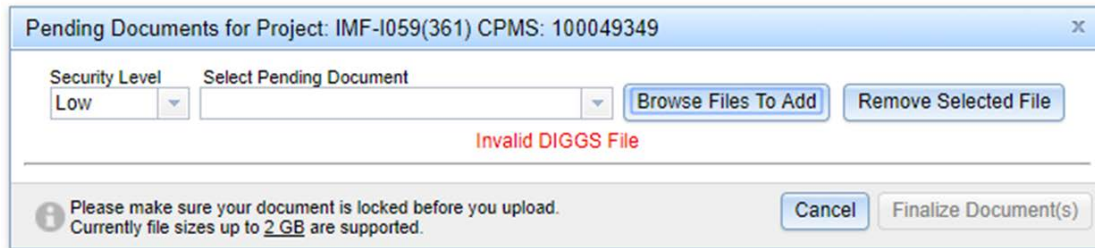


Figure 43

GeoGIS automatically generates an easy to understand PDF view, in a chart or graph format, of the data within the XML file. An example of the Atterberg Limits PDF view is shown in Figure 44. This PDF view also serves as the thumbnail preview for the document.

Atterberg Limits

Liquid Limit		
Trial No	Blow Count	Water Content
1	30	53
2	27	62
3	20	77.7
Liquid Limit	25	65.8575
Plastic Limit		
Trial No	Water Content	
1	20	
2	21	
Plastic Limit	20.5	

Figure 44

Appendix A

Documents Required for GeoGIS

Documents Required for GeoGIS

Environmental Documents

<u>Document</u>	<u>Example</u>	<u>Document Type in GeoGIS</u>
Clearance Letters	CLEARLTR 3.3.02	Clearance Letter
Hazmat Report	HAZRPT 4.11.13 Preliminary Investigation Reports Secondary Investigation Reports Environmental Assessment Reports Site Assessments Re-evaluation Reports Closure Reports ALDOT CORRES containing soil samples/testing	Hazmat Report
ADEM Correspondences	ADEM CORRES 6.4.91 No Further Action Letter	ADEM Correspondences
Site Maps/Photos	Site Map	Environmental Site Map/Photos
NEPA Reports/Correspondence	Finding of No Significant Impact Environmental Impact Statement	NEPA Documentation
HazMat Notification Forms	HazMat Notification Forms 11.2.06 Sites 1-3	Pre-Construction Other
Miscellaneous Documents		Misc. Documents

*Occasionally the correct document classification label does not show up when initially uploading the document. If this occurs, mark it as "Pre-Construction HazMat Report" or as another document type, click save, and then once the upload is complete, click "Edit Document" and the correct classification should appear. Then the document can be reclassified and saved again.

Documents Required for GeoGIS (cont.)

Geotechnical Documents (Preconstruction)

<u>Document</u>	<u>Example</u>	<u>Document Type in GeoGIS</u>
Original Request	Original Request 11.3.05 SR-9 (US-231) from Charles AVE to Knight ST STPOA-0009(504) Elmore Co	Correspondence
Geohydro Report	Geohydro RPT CR-2214 Robertson Branch PCP-55-06-17 () Pike	Geohydrologic Report
Hydraulic Report	Hydraulic RPT Waterway Blvd over Cotton Ck Site 2 ST-002-999-004 Baldwin	Geohydrologic Report
Calculations	Calculations_rev1	Foundation Analysis
Scour Analysis	Scout Analysis 3.21.01 CR on CR-43 over Yellow Leaf CRK ACGBBRZ-1100(204) Chilton Co	Geohydrologic Report
Bridge Report	Bridge Foundation Report CR-85 Mortar Creek FINAL 6-18-15	Foundation Report
Soil Survey & Materials Report	Soil Survey Materials RPT 99-409-022-135-022-135-502 SR-135 Roundabout Baldwin Co	Soil Survey & Materials Report (Both Categories)
Culvert Report	Culvert Foundation Rpt-NHF-0006(564) US-82 from SR-69 to Rice Mine Rd Tuscaloosa	Culvert Report
Slope Study Report	SLP RPT SR-180 Relocation ST-002-180-010 Baldwin	Slope Study Report
Landslide Report	LS Correction RPT on I-59 SB at MP 49.2 99-405-690-000-53 Greene Addendum 1	Landslide Report
Sinkhole Report	Sinkhole Report SR 133 from S of Norfolk Southern RR Br to 700 ft S of Avalon Avenue STPAA-8829(600)	Sinkhole Report
Retaining Wall Report	Retaining Wall Report for SR-158 Ext. from Lott Rd to Schillinger Rd NHF-0158(902) Mobile Co	Retaining Wall Report
Soil Test Data Report	SOIL TEST RESULTS 0077(500) SR77 OVER NORFOLK SOUTHERN RR	Geotechnical Data
Addendums	LS Correction RPT on I-59 SB at MP 49.2 99-405-690-000-513 Greene – Addendum 1	Match appropriate report type
Well Reading/Inclinometer Data	Passive Pressure Diagram (Gulf Bay Road Intsc)	Geotechnical Data
Photo	Photos BR over Hatchechubbee & Highlog Creek on ST-26 BR-0026(501) Russell Co	Photo

Documents Required for GeoGIS (cont.)

Geotechnical Documents (Construction)

<u>Document</u>	<u>Example</u>	<u>Document Type in GeoGIS</u>
Pile Driving Records	Pile Driving Records 2.2.00 BR over Chestnut CRK on CR-7 BRZ-1100(032) Chilton Co	Test Pile Driving Record
Construction Memos	Memo from M&T 6.23.06 BR on Tallapoosa on SR-229 BR-0229(500) Elmore Co	Correspondence
Field Monitoring	NHF-443() ADDENDUM 2 NHF8510(7) US231 MEMORIAL PARKWAY MAINLINE OVER MAX LUTEHER DRIVE	Field Monitoring
Photos	Bent 6 SBL 002	Photos
Hammer Submittal	Hammer Submittal 9.6.01 Bridge Replacement on CR-64 at Eightmile Creek BR-0213(200) Baldwin Co	Hammer Submittal
Signs & Lighting Report	Lighting Pole FND RPT for Lighting IMP on I20-59 at SR-28 (Exit 17) ST-060-I59-001 Sumter	Signs & Lighting
Drilled Shaft Excavation Log	Drilled Shaft Excavation Log 03	Drilled Shaft Excavation Log
Drilled Shaft Pouring Record	BIN 17156 DRILLED SHAFT (22714)[1]	Drilled Shaft Pouring Record
Bearing Curves/ PDA Results	Bearing Curve 7.18.03 Bridge Replacements ACGBBRZ-0200(206) Baldwin Co	Bearing Curves (PDA Results)
Shaft Load Test	Shaft Load Test Widening of SR 133 from S of Norfolk-Souther RR Bridge to 700 S of Avalon Dr STPAA	Foundation Analysis
Other		Other

Documents Required for GeoGIS (cont.)

Material Documents

<u>Document</u>	<u>Example</u>	<u>Document Type in GeoGIS</u>
Materials Report	IM-I020(354) Approved MR	Materials Report
Other		Other

Appendix B

Requirements for Scanned Documents

Requirements for Scanned Documents

Anything less or above these requirements would require prior approval.

1. DPI Resolutions
 - a. Scanning Resolutions
 - i. All historic boring logs/drawings must be scanned in at 600 dpi unless an electronic format is available.
 - ii. All other documents must be scanned in at 600 dpi.
2. Paper Documents
 - a. Use the best paper document available.
 - i. If there are multiple copies of the same document, use the original document if it's available.
 - b. The scanned document must have good clarity.
 - i. The scanned document must be legible.
 - ii. The scanned document cannot have speckles if at all possible.
 - iii. The scanned document must have background uniformity such that lines and gray areas due to scanning are minimized.
 - c. The scanned document cannot be skewed more than a $\frac{1}{4}$ of an inch.
 - i. Review of the scanned document should not require the use of a ruler or other appurtenances to determine the amount of skew. Please see the attached documents for examples
 - d. The scanned document must have correct orientation.
 - i. The top of the page needs to be at the top of the screen. If the pages are not correct, then the orientation needs to be corrected. Click on the page thumbnail bar to the right of the screen and right click on the thumbnail(s) you want to rotate.
 - e. The scanned document pages must maintain the original order as the paper document.
 - f. Bookmarks are not required but if you use them, then there cannot be more than 10 per report unless otherwise approved.
3. The files need to be named as listed below.
 - a. Type of Document, Date (if given), Project Number, County
 - b. Appendix C contains a list of abbreviations for document types.There are two options for naming files:
 - a. Bridge Foundation Report 09.27.2013 BR--- 412 (10) Chilton
 - b. BFND RPT 09.27.2013 BR---412 (10) Chilton

1/4" skewed



*Robert Bentley
Governor*

ALABAMA DEPARTMENT OF TRANSPORTATION
1409 Coliseum Boulevard, Montgomery, Alabama 36110

Bureau of Materials and Tests
3700 Fairground Road, Montgomery, Alabama 36110
Phone (334)206-2200 FAX (334)264-6263



*John R. Cooper
Transportation Director*

May 6, 2011

Mr. Buddy Black, P.E.
State Bridge Engineer

RE: Project No. BR-0077(500)
Bridge On SR 77 Over Norfolk Southern Railroad,
Talladega County.

Dear Sir:

Personnel from the Bureau of Materials and Tests and Southern Earth Sciences, Inc. (SESI) conducted the foundation investigation for the proposed Bridge on SR 77 over Norfolk Southern Railroad in Talladega County between the dates of July 19, 2005, and September 1, 2005, September 28, 2006, October 28-30, 2008, and February 16-17, 2011.

PROCEDURE

Drill crews from the Bureau of Materials and Tests conducted boring and sampling operations at designated locations on the project site using a CME 550X drill rig. The SESI crew conducted Cone Penetrometer Tests (CPT) at designated locations on the project site using a track mounted 20-ton Hogentogler Electronic CPT rig. Borings and CPT were extended through the existing overburden to unyielding subsurface material.

Standard Penetration Tests (AASHTO T-206) were performed as boring progressed. Jar, thin wall tubes (AASHTO T-207), and NX Core (AASHTO T-225) samples were recovered and delivered to the Central Laboratory for evaluation and testing as directed. Results of CPT performed in general accordance with ASTM Specifications D-5778 was provided in report form.

Appendix C

Abbreviations

Abbreviations

Abutment=ABUT	Drawing(s)=DWG
Addendum=ADD	Drilled Shaft or Drilled Shafts=DS
ADEM Correspondences=ADEMCORRES	Drilled Shaft Excavation Log=DSEL
Additional=ADDL	Drilled Shaft Installation Plan=DSIP
Avenue=AVE	Drilled Shaft Pouring Record=DSPR
Bearing Curves=BC	Drive=DR
Birmingham Northern Beltline=BNB	East, East of, Eastern=E
Boring=BOR	Eastbound=EB
Boulevard=BLVD	Exit Number=Exit
Bridge=B	Extension=EXT
Bridge/Building Foundation=BFND	Falling Weight Deflectometer=FWD
Bridge Identification Number=BIN	Foundation=FND
Bridge Replacement=BR	Hammer Submittal=HMR
Bridge Widening=BWDN	Hazmat Report=HAZRPT
Build Up=BU	Highway=HWY
Buzpile/WBuzpile=BUZ	Improvements=IMP
Buzpile/WBuzpile Results=BUZRSLT	Intersection=INT
Calculations=CALC	Interstate=I
Centerline=CL	Kansas City=KC
Clearance Letter=CLEARLTR	Laboratory=LAB
Cone Penetration Test=CPT	Landslide=LS
Correspondence=CORRES	Lane(S)=L
Corridor=CORR	Left=LT
County=CNTY	Letter=LTR
County Line= COL	Materials Report=MR
County Road or County Roads=CR	Mile Marker=MM
Creek=CRK	Mile Post=MP
Culvert=CVT	Modifications=MOD
Division=DIV	North, North of, Northern=N

Abbreviations (cont.)

Northbound=NB

Original, Originals=ORIG

Overpass=OP

Pavement=PVMT

Pile Driving Record=PDR

Railroad=RR

Recommendations=REC

Relief=RLF

Replace or Replacement=R

Report=RPT

Request=REQ

Results=RSLT

Resurfacing=RES

Retaining Wall=RW

Revised or Revision=REV

Right=RT

Right of Entry=ROE

Right of Way=ROW

River=RVR

Road=RD

Sinkhole=SINK

Site Soil Profile=SSP

Slope Study= SLP

Soil Survey=SSVY

Soil Survey and Materials Report=SSVYMR

South, South of, and Southern=S

Southbound=SB

Standard Penetration Test=SPT

State Road or State Route=SR

Station(s) or Stationing=STA

Stream=STR

Street=ST

Summary=SUM

Traffic=TRF

Underpass=UP

Version=VER

West, West of, or Western=W

Westbound=WB

Widen, Widening=WDN

Appendix D

Frequently Asked Questions

Concerning documents to be scanned:

➤➤ What documents should I scan, and which should I not?

To Scan	Do Not Scan
<ul style="list-style-type: none"> • Clearance letters • Any Reports • ADEM Correspondences • HazMat Site Notification Forms from design bureau (some are separated into sites, but they can be scanned together into one file) • Site maps or photos • Project Descriptions • Design Hearing Plans • Scope of Work • Correspondence concerning the allocation of work to contractors (without mention of money) 	<ul style="list-style-type: none"> • Chronology of Events • Plans • Any invoices or documents containing consultant monetary information • Plan---In---Hand memos • PS&E memos

Concerning searching for projects in GeoGIS:

➤➤ What should I do if the project does not come up when I search for it?

If the project can't be found by searching for the full project name, try searching with only the numbers given (leaving out the STPAA, NHF, BR, etc. designation), and the county of the project. If the original search yielded no results, use the 'find' feature in Excel to search through the CPMS spreadsheet with the project number, description, county, or other specific feature. If the project still cannot be found, refer to the question below.

➤➤ What should I do if no CPMS number is found for the project?

If the project cannot be found through either of the methods listed above, then it will need to be uploaded and initialized as a historical project.

➤➤ If the project does not specify a number—for example, HES---62()—and I can only find projects HES---62(11) and HES---62(12) in my search, what projects do I upload the documents to?

Often during environmental work there is not an agreement number assigned to the project as ALDOT is performing a corridor study. When searching for the project, consider the description found in the documents you scanned. If it matches the description of either HES---62(11) or HES---62(12), then the document can be uploaded to that project. If the description of the project matches none of the available ones, then it's possible it is a historical project and will need to be uploaded as such.

Concerning initializing in GeoGIS:

- If I am initializing a project and it's not already designated on the map, what do I do?

It is important to place the project in the correct location. To do this, follow the steps below:

1. Read the project description found on the GeoGIS website or in documents you scanned.
 - a. If a business, highway exit, or other designated place is mentioned, you can use Google maps to search for and locate the specific place.
 - b. If only a road, a bridge, or another obscure/unknown location are mentioned, then you will need to find a map of Alabama counties, locate the one in which your project is located, and scroll to it on Google Maps.
2. From there, you can search for certain roads, rivers, and intersections. Once you have located the area (and you are sure that it is correct), you can place a point and initialize the project. If you have doubts about the location you have found, then refer to the question below.

- What should I do if I am unsure about or can't find the project location on the map when I'm attempting to initialize it?

If the location cannot be found, the user will need to contact the administrator.

- If the project description states that the work covers a certain distance (i.e. "From CR---25 to CR4") and the project is not already marked, how do place a line on the map?

Currently, users cannot place lines on the map, only dots. A missing line on the map when a user is attempting to initialize a project means that data is missing in the CPMS table (and on the ALDOT service that holds data for the GeoGIS website) for the project, and it will have to be corrected. For now, if you can find where the project is located, place the point at the beginning of that location on the map.

- How should I initialize the project on the map if it covers multiple locations/roads in an area?

At this point, there is no way to plot multiple locations for a project, so it is best to choose the first location and place the point there.

Concerning uploading and classifying documents:

- How do I proceed with uploading if the documents that I scanned are listed under two project numbers—for example, BR---5406(102)&(103)?

In this case, the documents will need to be uploaded to both projects.