Sage 300 Construction and Real Estate

(formerly Sage Timberline Office)

Version 16.1

User's Guide

Contents: 16.1 User's Guide

Introduction

Release information

Along with this *User's Guide*, see the following documentation for additional information that will help you install and use version 16.1:

- The Installation Checklist contains a brief description of the steps involved in upgrading your software.
- The *Important* document contains critical topics.
- The *Release Notes* provide details about new features, database changes, resolved issues, and known issues.

You can access a complete library of supported product documents.

About this guide

This *User's Guide* is designed to help you learn about installing the software. It also contains information about systems, security, ODBC, and Crystal reports.

Conventions used in this document

This document uses the following conventions:

- The names of windows, fields, and other features displayed by the software are **bold**.
- Text that you type into the windows is **green**, as in the following example:
  Type **Miscellaneous**.
- Names of keys are shown in capitals; for example, **ENTER**, **TAB**. A plus sign (**+**) between two key names indicates that you should press both keys at the same time; for example, **SHIFT + TAB**.
- The names of buttons that you can click with your mouse are **bold** and enclosed in brackets; for example, [**OK**] and [**Post**].

Tip: Helpful information to make your experience better.

Note: Additional information of interest, such as information not included in steps.

Caution! Information that can help you avoid a costly or time-consuming error.

Important! Information that is of critical importance.

Menu paths

In this document, menu paths show you the steps required to start a task, such as:

PR: Tools > Download Taxes

To follow this path, open the Payroll module. From the **Tools** menu, select **Download Taxes**.

Support and assistance

Online help

Each Sage 300 Construction and Real Estate application includes online help, which provides answers to your questions about procedures as well as items in the windows.

To access the online help in Sage 300 Construction and Real Estate:

- In a window, click the [**Help**] button, click ⊚ (the help icon button), or press **F1** to display the help topic for that window.

- In an application or Desktop, select **Help > Help Topics**.

> **Tip:** From Desktop, you can access the online help for an application by clicking **Applications**, clicking the name of the application, and then clicking **Help > Help Topics** in the list of menu items for that application.

To aid you in finding the information you need, the online help includes the following tabs:

- **Contents** tab with an outline of the help with links to the help topics.

- **Index** tab with keywords that link to help topics related to that keyword.

- **Search** tab or Search text box, where you can type text and click [Search] to locate that text in the help topics.

Technical assistance

When you need assistance, refer to the How do I get technical support for Sage 300 Construction and Real Estate? article to determine which service works best for you.

Training

Sage University offers live and recorded online training sessions to help you get the most out of your software. To access Sage University, either:

- From an application, select **Help > Web Resources > Sage University**.

- From Desktop, select **Help > Sage University**.

- From your browser, visit http://www.sageu.com/.

Contact your business partner for local training.

Chapter 1: System Requirements

For assistance in selecting the right business-class computers for your Sage 300 Construction and Real Estate software, contact your authorized business partner. For information about system environments, see "Chapter 5: System Guidance," on page 32.

To install and use Sage 300 Construction and Real Estate version 16.1, your server and workstations must have Internet access due to Pervasive licensing requirements.

Refer to the System Requirements article in the Sage Knowledgebase for information about:

- Hardware requirements
- Supported operating systems
- Software requirements

This chapter includes the following sections:

- Privilege settings required for installation and use (the next section)
- "Compatible versions" on page 6
- "Supported upgrade paths" on page 6
- "Required data file upgrades" on page 6
- "Required custom report upgrades" on page 7

Privilege settings required for installation and use

The following sections describe the access rights you need to successfully install and use Sage 300 Construction and Real Estate.

Elevate permissions

You must elevate your permissions before upgrading Sage 300 Construction and Real Estate.

You can usually start a program with elevated privileges by right-clicking the application and selecting **Run as Administrator**. In Sage 300 Construction and Real Estate, the application is usually installed in the following path: **/Program Files/Sage Timberline Office/Accounting**.

During certain installation tasks, you will receive another prompt to elevate your privileges. If you do not acknowledge each prompt within two minutes, the installation process will quit the task. If this occurs, you will receive a separate prompt asking you to retry the task. Click [**Retry**] and then elevate your privileges at the prompt.

Sage 300 Construction and Real Estate program files and data files

You must have full control access rights to all folders or shares that contain Sage 300 Construction and Real Estate program files and data files.

Windows 7 and Windows Server 2008 have stricter default access rights settings than earlier Microsoft operating systems.

When you create a share for a folder, users get read access instead of full control access. For example, when you create a shared folder to which you will install Sage 300 Construction and Real Estate, you must manually grant full control access to users who will access this folder.

Full control of specific files and folders required

To use Sage 300 Construction and Real Estate, you must have full control of the following files and folders on your file server, terminal server, and workstations that have Sage 300 Construction and Real Estate installed. Make sure that your system administrator also gives you full control of all the subfolders and files.

Product	Operating systems	Required folders and files	Location and specifications
Sage 300 Construction and Real Estate	All	32-bit: *[Drive]*: \Program Files \Timberline Office 64-bit: Program Files (86)\Timberline Office	This folder is located on the server, terminal server, and workstations where you installed Sage 300 Construction and Real Estate. It is the default installation location for Sage 300 Construction and Real Estate. However, depending on your system configuration, your company may have renamed this folder or installed it to a different location.
Sage 300 Construction and Real Estate	Windows 7 Windows Server 2008	*[Drive]*: \Users *[username]*	This folder is located on the workstation or terminal server where you use Sage 300 Construction and Real Estate. Sage 300 Construction and Real Estate installs necessary files to this folder and requires that the user has full control of it. Typically, the user has full control of this folder by default.
Sage 300 Construction and Real Estate	All	Company data folder	Typically, the data folder is located on the server where you installed Accounting and Management Products.

Product	Operating systems	Required folders and files	Location and specifications
Sage 300 Construction and Real Estate	Windows 7 Windows Server 2008	*[Drive]*: \ProgramData \Sage \Timberline Office	This folder is located on the server or host machine where you use Accounting and Management Products. This folder must be shared. Sage 300 Construction and Real Estate installs necessary files to this folder and requires that all users have full control permissions to this folder and all of its subfolders.
Sage Estimating	All	Database and estimates	Typically, these files are located on the server and the workstation where you installed Estimating Products.
Sage Estimating	Windows 7 Windows Server 2008	*[Drive]*: \Users \Public \Estimating	This folder is located wherever you use Estimating Products. Sage 300 Construction and Real Estate installs necessary files to this folder and requires that all users have read/write permissions to this folder and all of its subfolders.

> **Note:**
> Some of these folders may be hidden. To view them on:
>
> - Windows 7 or Windows Server 2008: Open Windows Explorer, select **Organize > Folder and Search Options**, click the **View** tab, and then select **Show hidden files and folders**.
>
> - Windows 8, Windows 8.1, Windows 10, Windows Server 2012, or Windows Server 2012 R2: Open Windows Explorer, click the **View** tab, and then select the **Hidden items** check box.

Full control of and read access to specific registry keys required

To use Sage 300 Construction and Real Estate, you must have full control of the following Windows registry key on your file server, terminal server, and workstations that have Sage 300 Construction and Real Estate installed. Make sure that your system administrator also gives you full control of all subkeys.

- HKEY_CURRENT_USER

- HKEY_Local_Machine\Software\ODBC

- HKEY_Local_Machine\Software\Pervasive Software

- HKEY_Local_Machine\Software\Timberline

> **Caution!** Incorrectly editing the Microsoft Windows registry may severely damage your system. Sage is not responsible for damage to your system caused by editing the registry. Before making changes to the registry, contact your system administrator for assistance and make a backup copy of all valued data. System administrators should see Microsoft Registry Editor Help topics for detailed instructions.

Compatible versions

> **Caution! Residential Management** - **There is no 16.1 version of Residential Management. DO NOT install the 16.1 version of Accounting if you use Residential Management.**

The following versions of Sage 300 Construction and Real Estate are compatible with each of the others:

- Sage 300 Construction and Real Estate (formerly Sage Timberline Office)16.1
- Sage Document Management 16.1
- Sage Estimating 16.1 (Pervasive)
- Sage Estimating (SQL)

Supported upgrade paths

This section covers the upgrade paths for Accounting and Estimating.

Accounting upgrade paths (without Document Management)

If you are on Sage 300 Construction and Real Estate (Accounting) version 14.1 or 15.1, you can upgrade directly to version 16.1. If you are on version 13.1 or earlier, upgrade to 14.1 or 15.1 and upgrade your data before upgrading to version 16.1.

Accounting upgrade paths (with Document Management)

If your Accounting and Document Management products are on version 14.1 or 15.1, you can upgrade directly to version 16.1. If your products are on version 13.1 or earlier, upgrade both products to 14.1 or 15.1 and upgrade your data before upgrading both products to version 16.1.

Estimating upgrade path

You can upgrade any Windows-based version of Estimating products (beginning with 1.0) to Estimating 16.1.

Required data file upgrades

You must upgrade all Accounting and Management application data files after you install version 16.1.

You can upgrade the data files for Accounting applications (except for Service Management, Purchasing, and Inventory) from Sage Desktop. In the **Applications** pane, select **Common Tasks > Tools > Upgrade files**.

> **Caution!** Service Management, Purchasing, and Inventory data files upgrade the first time you open those applications. You must open the application and perform the upgrade at the server. Upgrading this data on a workstation will incorrectly set DSNs and cause data access errors after the upgrade is performed.

Required custom report upgrades

If you have custom Crystal Reports report designs that were created for use with version 13.1 or earlier, they must be upgraded to be used with version 16.1 and 16.1.

To use the upgrade tool:

1 Click [**Start**], select **All Programs > Sage > Sage 300 Construction and Real Estate > Reporting and Other Tools**, right-click **Upgrade Crystal Reports**, and then select **Run as administrator**.

2 In the **Upgrade Crystal Reports - Select Option** window, select **Specific report or folder**, and then click [**Continue**].

3 In the upper part of the **Upgrade Crystal Reports** window, specify the report file or folder containing the reports that you want to upgrade. You can click the browse icon or folder icon to search for the report files and folders.

4 Select the **Also upgrade reports in subfolders** check box if you want the upgrade tool to upgrade all of the reports found in subfolders as well.

5 Near the bottom of the **Upgrade Crystal Reports** window, click [**Upgrade Reports**] to start the upgrade.

6 Review the messages in the window.

7 When you are finished, click [**Close**].

If you want to see details about the upgrade, view the **CrystalReportsUpgradeLog.txt** log file, which is located in the **C:\ProgramData\Sage\Timberline Office\9.5** folder.

Chapter 2: Install Sage 300 Construction and Real Estate

A. Before you install

- Read the *Release Notes* for more details about this release of Sage 300 Construction and Real Estate.
- Refer to the System Requirements article in the Sage Knowledgebase for information.
- Review the Installation Checklist.

> **Important!** If you use third-party products that integrate with Sage 300 Construction and Real Estate, check with your software vendor prior to upgrading to ensure their product is fully compatible with this release. We **do not** support rolling Sage 300 Construction and Real Estate back to a previous version and **do not** recommend it.

Special installation considerations

- **Estimating:** If you use Sage Estimating, install Sage 300 Construction and Real Estate version 16.1 **before** installing Sage Estimating version 16.1.
- **Document Management:** The 15.1 release of Document Management includes changes to DocuVault indexes, which may take a long time to complete. If you are upgrading from a version prior to 15.1, we recommend that you plan the timing of your upgrades so they will complete during non-work hours.

1 If you are upgrading, create a complete backup of all Sage 300 Construction and Real Estate data and program files.

2 Install the appropriate operating system service pack, make sure sufficient hard disk space is available, and verify that your server and workstations meet all other hardware and software requirements.

 If you are upgrading from 9.7 or earlier, the upgrade to 9.8 may cause file sizes to increase up to 200% of the current size of your data. Be sure to allow for increased disk space requirements when you upgrade. Do not install Sage 300 Construction and Real Estate products unless you have sufficient hard disk space available.

3 Make sure that you have full control of the required folders, files, and registry keys on your file server, terminal server, and workstations that will have Accounting and Management Products installed. For a list of the required folders, files, and registry keys for your operating system, see "Privilege settings required for installation and use" on page 3.

4 Quit all programs and services for the duration of the installation. This includes programs that may be running in the background, such as anti-virus, email, and backup programs.

5 For Windows 7 and Windows Server 2008, you must elevate your permissions before installing version 16.1. During certain installation tasks, you will receive a prompt to elevate your privileges. If you do not acknowledge each prompt within two minutes, the installation process will quit the task. If this occurs, you will receive a separate prompt asking you to retry the task. To retry the task, click [**Retry**] and then elevate your privileges at the prompt.

6 Verify the upgrade path (see page 6). If you are upgrading from an older version, you may need to install several versions to become current.

7 Determine which installation instructions to read in this document. Most users should start with <u>"B. Install to a server or stand-alone computer" on page 9</u>. If you have a terminal server or peer network, start with <u>"D. Other installation scenarios" on page 12</u>. If you are installing Sage Estimating only, see <u>"Chapter 3: Install Sage Estimating" on page 17</u>.

B. Install to a server or stand-alone computer

> **Important!** Do not install Sage 300 Construction and Real Estate unless you have sufficient hard disk space available. Refer to the <u>System Requirements article in the Sage Knowledgebase</u> for information.

> **Note:** The installation process may restart your server or stand-alone computer several times.

1 At the server or stand-alone computer, log on with full administrative rights. Full administrative rights are defined as write access to the Windows registry and all folders on the computer (including rights to the root of all hard drives). If you are unsure whether you have full administrative rights, ask your network administrator for assistance. Alternately, you can ask your network administrator to log on with the network administrator ID before you start the installation.

2 Follow the instructions you received in the 16.1 download notice.

3 Open the **161_Rev7_Accounting** folder and double-click **Install.exe** to begin the installation process.

4 In the **Welcome** window, click **Install Software**, then follow the on-screen instructions to accept the License Agreement, enter your company's **Registration name** and **Client number**, and begin installing prerequisites.

ABOUT INSTALLING PREREQUISITES:

- If you receive a firewall warning message during the installation of the Pervasive database engine, work with your network administrator to allow the Pervasive database engine to communicate through your firewall software. For example, if a Microsoft Windows Firewall **Security Alert** window lists the **Database Service Manager** by **Pervasive Software Inc.**, confirm with your network administrator that you want to proceed. Then, select **Unblock this program** and click [**OK**].

- You may receive a similar message during the installation of Sage Service Host. Follow the same steps to proceed.

- If you are required to restart your computer, remember to stop antivirus, backup, and other services that may have automatically started again after you restart your computer.

5 After the prerequisites are successfully installed, click [**Continue**] to begin the main installation. If this is a new installation or a migration, follow the on-screen prompts to enter your activation codes, and select appropriate industry reports and data sets. Click [**Install**] to begin installing Sage 300 Construction and Real Estate.

6 At the conclusion of the installation, you will be prompted to restart your computer. After you restart and log on with the same user name that you used when you installed (user name must have full administrative rights), wait until the message **All configuration tasks for Sage 300 Construction and Real Estate completed successfully**. Do not attempt to start any Sage 300 Construction and Real Estate applications until after you have received this message. It may take a few minutes before you see the message.

7 Some of the data and report folders and files will be hidden by default. At the end of the installation, you can view these hidden files and folders. To view them on:

- Windows 7 or Windows Server 2008: Open Windows Explorer, select **Organize > Folder and Search Options**, click the **View** tab, and then select **Show hidden files and folders**.

- Windows 8, Windows 8.1, Windows 10, Windows Server 2012, or Windows Server 2012 R2: Open Windows Explorer, click the **View** tab, and then select the **Hidden items** check box.

Automatic creation of Timberline Office Share

The installation automatically creates a shared Timberline Office folder at the following locations on the server if one does not already exist.

Windows 7 or Windows Server 2008:
*[Drive]:***\ProgramData\Sage\Timberline Office**

Read and write permissions are automatically granted to **Everyone** for this folder. If the Timberline Office folder is already present and shared, the installation will skip this step. The system will not change any permissions you have already set up.

You will connect your workstations to the shared **Timberline Office** folder in the next section.

C. Install to a workstation connected to a network

After you install to a server ("B. Install to a server or stand-alone computer" on page 9), you can install to your workstations or to a computer that functions as a terminal server.

> **Important!** Do not install Sage 300 Construction and Real Estate unless you have sufficient hard disk space available. Refer to the System Requirements article in the Sage Knowledgebase for information.

> **Note:** The installation process may restart your workstations several times.

Installing to a terminal server

If you are installing to a computer that will be used as a terminal server, follow the preceding installation steps A, B, and C.

If your terminal server does not host Sage 300 Construction and Real Estate programs and data files, after installing, verify that the Pervasive.SQL database service on the terminal server uses an account with access to all Sage 300 Construction and Real Estate program and data files on the server.

To verify your account and access rights, select **Start > Programs > Administrative Tools > Services** on the terminal server. In the **Services** window, right-click the **Pervasive.SQL** service and select **Properties**. Then, on the **Log On** tab, select **[Use this account]**.

Work with your network administrator to enter an account that has the access rights of the **Local System** account and access to all Sage 300 Construction and Real Estate program and data files on the file server; for example, a domain administrator account.

> **Note:** If you use an account with insufficient access rights, you may receive a Pervasive status code 94 or 3119 error.

Installing to a workstation

1 At the workstation, log on with full administrative rights. Full administrative rights are defined as write access to the Windows registry and all folders on the computer (including rights to the root of all hard drives). If you are unsure whether you have full administrative rights, ask your network administrator for assistance. Alternately, you can ask your network administrator to log on with the network administrator ID before you start the installation.

2 Click [**Start**] > **Run**, click [**Browse**], navigate to the **\\[Server name]\Timberline Office\9.5\Accounting\WinInst\Install.exe** folder on the server, and then double-click **Install.exe**.

3 In the **Installation** window, click **Install Software** to install components necessary to run Sage 300 Construction and Real Estate applications.

> **Note:** If you receive a firewall warning message during the installation of the Pervasive database engine, work with your network administrator to allow the Pervasive database engine to communicate through your firewall software. For example, if a Windows Firewall **Security Alert** window lists the **Database Service Manager** by **Pervasive Software Inc.**, confirm with your network administrator that you want to proceed. Then, select **Unblock this program** and click [**OK**].
>
> You may also receive this message during the installation of Sage Service Host. Follow the same steps to proceed.

4 Repeat steps 1–3 for each workstation.

5 At the conclusion of the installation, you will be prompted to restart your workstation.

6 Some of the data and report folders and files will be hidden by default. At the end of the installation, you can view these hidden files and folders. To view them on:

- Windows 7 or Windows Server 2008: Open Windows Explorer, select **Organize > Folder and Search Options**, click the **View** tab, and then select **Show hidden files and folders**.

- Windows 8, Windows 8.1, Windows 10, Windows Server 2012, or Windows Server 2012 R2: Open Windows Explorer, click the **View** tab, and then select the **Hidden items** check box.

D. Other installation scenarios

Peer server networks with Estimating products

Follow installation steps A, B, and C, but perform this step after the installation:

At the peer server, browse to the same shared folder that the workstations use. Use this path to access Address Book data.

E. Upgrade data files

If you upgraded to a new version of Sage 300 Construction and Real Estate, read and follow the information in this section. If this is a first-time installation, skip to "G. Install Crystal Reports Designer (optional)" on page 14.

> **Caution!** Service Management, Purchasing, and Inventory have specific upgrade requirements. First, log onto the file server as an administrator. Then open and upgrade Service Management, Purchasing, and Inventory data files at the server the first time you open these applications. Upgrading this data on a workstation will incorrectly set DSNs and cause data access errors after the upgrade is completed.

Prepare to upgrade files

For optimal performance, we recommend that you upgrade your data from the server. If you prefer to upgrade your data from a workstation instead, you must ensure that the same version and update are installed on both the server and the workstation before starting the **Upgrade Files** process.

1 Back up your data files.

2 Make sure all users have closed Sage 300 Construction and Real Estate applications.

3 Log in to Sage 300 Construction and Real Estate as the application administrator.

4 Open Sage Desktop, select your company, and click [**OK**]. If you do not see your company:

  a Click [**Specify Folders**].

  b In the **Specify Data Folders Path** window, click [**Browse**], select the UNC path to the folder that contains your Sage 300 Construction and Real Estate data, and click [**OK**].

  c Select your data folder from the **Specified Folders** area and click [**OK**].

  d Select your company from the list of companies in the **Select Company** window and click [**OK**].

5 If you use File Locations and the path is not accessible from the server (for example, you use mapped drives instead of specific paths), modify the locations to point to files on the local hard drive of your server.

> **Tip:** We recommend that you convert your mapped drives to the equivalent UNC paths using the following instructions. If you convert now, you will not have to perform this step during future upgrades, and you can skip to "Restore file locations" on page 14.

a From Sage Desktop in the **Applications** pane, select **Common Tasks > File > Company Settings > File Locations**.

b In the **File Locations** window, look for network paths in the **Data Folder** column.

c If you have network paths, write them down (you need this information when you restore the file locations later) and then modify each network path to point to the appropriate file on the local hard drive of your server.

d Click [**OK**] to close the **File Locations** window.

6 Repeat steps 4 and 5 for each data folder you will upgrade.

Upgrade files

Files cannot be in use while they are being upgraded.

1 From Sage Desktop in the **Applications** pane, select **Common Tasks > Tools > Upgrade files**.

2 In the **Upgrade Files - Print Selection** window, select the data folders to upgrade:

▫ **Current data folder:** Upgrades only the files in the data folder in which you currently work.

▫ **All data folders:** Upgrades files in all data folders that appear in the **Open Company** window. This may include data folders on other drives. The upgrade process can take a long time if you have many data folders.

> **Note:** We recommend that you upgrade all data folders after you install version 16.1.

3 Click [**Start**].

4 In the **Print File Selection** window for **File name**, type a name for the upgrade report file, and then click [**Save**].

The upgrade process begins in the background.

5 When the process is complete, review the report.

Restore file locations

If you use UNC paths, you can skip this step now and in future upgrades.

If you use mapped drives instead of UNC paths and the modified file locations and path are not accessible from the server, restore the previous file location entries.

1 From Sage Desktop in the **Applications** pane, select **Common Tasks > File > Company Settings > File Locations**.

2 In the **File Locations** window, find the file locations you changed previously and change them back to the original network path.

3 Click [**OK**] to close the **File Locations** window.

F. Upgrade custom Crystal Reports designs

If you upgraded from version 13.1 or earlier and have custom Crystal Reports designs, you must upgrade them before they can be used in Sage 300 Construction and Real Estate. You can use the new Upgrade Crystal Reports Tool, which is on the programs menu; click [**Start**], select **All Programs > Sage > Sage 300 Construction and Real Estate > Reporting and Other Tools**, right-click **Upgrade Crystal Reports**, and then select **Run as administrator**. For more information, click 🕐 (the help button) in the tool's window.

G. Install Crystal Reports Designer (optional)

If you own Crystal Reports Designer, you must install Crystal Reports For Sage 2013 SP2, which is compatible with Sage 300 Construction and Real Estate versions 14.1 through 16.1. If you have already installed it, you can skip this step. For more information about setting up Crystal Reports with Sage 300 Construction and Real Estate, see "Chapter 8: Crystal Reports," on page 78.

> **Caution!** Crystal Reports For Sage 2013 SP2 software only runs on Windows 7 SP1, Windows Server 2008, or higher operating systems (not Windows Vista).

To install Crystal Reports For Sage 2013 SP2:

1 Ensure all Windows programs are closed.

2 On the server or workstation where your report designs are kept, open the email with the download information, click the download link, run the download, and select the folder for the download files.

3 Click [**Yes**] to run the setup wizard.

4 In the **Crystal Reports For Sage 2013 SP2 setup** window, click [**Next**] and follow the on-screen instructions to run the installation.

5 When you see the message that Crystal Reports For Sage 2013 SP2 has been successfully installed, click [**Finish**].

H. After you install

Some of the data and report folders and files will be hidden by default. At the end of the installation, you can view these hidden files and folders. To view them on:

- Windows 7 or Windows Server 2008: Open Windows Explorer, select **Organize > Folder and Search Options**, click the **View** tab, and then select **Show hidden files and folders**.

- Windows 8, Windows 8.1, Windows 10, Windows Server 2012, or Windows Server 2012 R2: Open Windows Explorer, click the **View** tab, and then select the **Hidden items** check box.

Elevated permission levels after installing

If you install Service Management (SM), Purchasing (PO), and Inventory (IV) on Windows 7 or Windows Server 2008, you should elevate your permission level. Crystal Reports may not run correctly in these applications if the permission level is set too low. If you encounter an error message when starting SM, PO, or IV for the first time after installation, close the application, elevate your permission level, and start the application again. To do this:

1 Close the Pervasive Workgroup engine (Right-click the Pervasive Database icon in the systems tray and select **Stop Engines and Exit**.)

2 Navigate to **SM.exe**, **PO.exe**, or **IV.exe**. The default location for these files is **C:\Program Files (x86)\Timberline Office\Shared**.

3 Select **Run as Administrator**.

4 Open each company data set at the server.

5 Repeat these steps for each company data folder.

If you have Purchasing, Inventory, or Service Management data in Program Files

If, before upgrading, your company data folder was inside the **Program Files** folder in Purchasing (PO), Inventory (IV), or Service Management (SM), follow these steps at the server to move your data to a shared location and make the data available to your users.

1 Move the data files to a shared location. The default shared location is:
\\[Server name]\Timberline Office\Data

2 At the server, remove all Pervasive System DSNs and User DSNs for each Sage 300 Construction and Real Estate installation:

a Click **Start > All Programs > ODBC > 32bit ODBC Administrator**.

b In the **ODBC Data Source Administrator** window on the **System DSN** tab, select the first **Name** associated with a **Pervasive ODBC Engine Interface Driver**, and then click [**Remove**].

c Repeat this process to remove each **Name** associated with a **Pervasive ODBC Engine Interface Driver**.

d On the **User DSN** tab, select the first **Name** associated with a **Pervasive ODBC Client Interface Driver**, and then click [**Remove**].

e Repeat this process to remove each **Name** associated with a **Pervasive ODBC Client Interface Driver**.

f Click [**OK**].

3 At the server, delete the **DBNAMES.CFG** file:

  a From **\\[Server name]\WINDOWS**, right-click **DBNAMES.CFG**, and select **Delete**.

  b In the **Confirm File Delete** window, click [**Yes**].

4 Add each company to the company list:

  a In TS-Main, select **File > Open Company**.

  b Click [**Specify Folders**].

  c Click [**Browse**] and browse to the shared location from step 1.

  d Select a folder and click [**OK**].

  e At the server, open the SM, PO, or IV applications for each Sage 300 Construction and Real Estate company.

  f Repeat these steps for each company folder that you want to add.

5 If you use security, give the appropriate users rights to the companies; in Sage Desktop, select **Options > Security Administration**, click **User Setup**, and then click **Companies**.

If you have Estimating-only workstations

To access Address Book, Job Cost, and tax data on a server, see **Additional Steps for Network Installations** in <u>"D. Other installation scenarios," on page 12</u>. Workstations that have both Estimating and Sage 300 Construction and Real Estate have already been configured as part of the Sage 300 Construction and Real Estate installation and do not require these steps. The steps apply to both upgrades and first-time installations.

I. Final steps

1 Restart all programs and services that you shut down for the installation.

2 Review the following guidelines for custom reports or custom third-party applications.

  a If you have custom reports that use the Crystal Reports format, be sure to open these reports in Crystal Reports Professional, select **Database > Verify Database**, and then save the report.

  b If you use Inventory, Purchasing, or Service Management custom Crystal reports, see <u>page 106</u> or <u>page 110</u> in Chapter 9 for special information and detailed instructions about upgrading these reports.

  c As with any release, database changes in Sage 300 Construction and Real Estate applications may affect your custom report designs or custom third-party applications. Contact your authorized business partner to discuss any issues relating to custom reports or third-party applications.

3 If you set up a shortcut to Desktop, you must re-create it after installing version 16.1 by selecting the Desktop.exe in **C:\ProgramFiles\Timberline Office\Shared**. All other application shortcuts will continue to work after installing version 16.1.

Chapter 3: Install Sage Estimating

A. Before you install or upgrade

1 Review the *Estimating Release Notes* for information regarding this release of Sage Estimating.

2 If you are upgrading, create a complete backup of all Sage 300 Construction and Real Estate data and program files.

3 If you are upgrading from 9.8, ensure that you are running Estimating 9.8 Rev 3 before upgrading to version 16.1. Verify your software version in **Help > About**.

Modifying or uninstalling the original 9.8.0 Rev. 2 may result in a loss of data. 9.8.0 Rev 3 corrects the issue and overwrites Rev 2. Download Estimating 9.8 Rev 3 and install it over Rev 2.

4 Install the appropriate operating system service pack level, make sure that there is sufficient hard disk space available, and make sure that your server and workstations meet all other hardware and software requirements. Refer to the System Requirements article in the Sage Knowledgebase for information.

5 Make sure that you have full control of the necessary folders, files, and registry keys on your file server, terminal server, and workstations that will have Sage 300 Construction and Real Estate installed. For a list of the required folders, files, and registry keys for your operating system, see "Privilege settings required for installation and use" on page 3.

6 **Windows 7 and Windows Server 2008:** You must elevate your permissions before installing Sage 300 Construction and Real Estate. During certain installation tasks, you will receive another prompt to elevate your privileges. If you do not acknowledge each prompt within two minutes, the installation process will quit the task. If this occurs, you will receive a separate prompt asking you to retry the task. To retry the task, click [**Retry**] and then elevate your privileges at the prompt.

7 Quit all programs and services for the duration of the installation. This includes programs that may be running in the background, such as antivirus, email, and backup programs.

8 If Sentinel protection devices are not already attached to your computer, delay attaching these devices until after you install Estimating. If you already have Sentinel protection devices attached, you can leave these devices in place during the Estimating installation.

Decide which installation instructions to read in this document. Most readers should start with "B. Install to a workstation" on page 18. If you have Sage 300 Construction and Real Estate, a terminal server, or a peer network, start with "D. Other installation scenarios" on page 20.

B. Install to a workstation

> **Important!** Do not install Estimating until you have sufficient hard disk space available. Refer to the System Requirements article in the Sage Knowledgebase for information.

> **Note:** The installation process may restart your workstations several times.

1 At the workstation, log on with full administrative rights. Full administrative rights are defined as write access to the Windows registry and all folders on the computer (including rights to the root of all hard drives). If you are unsure whether you have full administrative rights, ask your network administrator for assistance. Alternately, you can ask your network administrator to log on with the network administrator ID before you start the installation.

2 Follow the instructions you received in the 16.1 download notice.

3 Open the **161_Rev7_Estimating** folder and double-click **Install.exe** to begin the installation process.

4 Click **Install Software**, then follow the on-screen instructions to accept the License Agreement and begin installing the prerequisites.

5 After the prerequisites are installed, click [**Continue**] to start the main installation. Follow the on-screen prompts to install Estimating 16.1 and enter which location, features, activation codes, and whether you want to install databases. You can install databases to your workstations, or you can install databases to a server. Install databases at your server if you want to share databases across your network.

> **Note:** If you receive a firewall warning message during the installation of the Pervasive database engine, work with your network administrator to allow the Pervasive database engine to communicate through your firewall software. For example, if a Windows Firewall **Security Alert** window lists the **Database Service Manager** by **Pervasive Software Inc.**, confirm with your network administrator that you want to proceed. Then, select **Unblock this program** and click [**OK**].

6 If you are upgrading from Estimating 9.5 or later, you can skip to step 8. After restarting, Estimating will automatically bring up the **Estimating User Account Control and Configuration Setup** window. This process sets up all default User Account Control (UAC) compliant folders, transfers all Windows registry settings, scans and copies any data found in Program Files, and copies relevant application data to a UAC-compliant location.

  ■ If this is the first time Estimating is being installed on your computer, this process ensures that your data will be stored in a UAC-compliant location and your computer is configured properly.

  ■ If you are upgrading from a previous version of Estimating, this process ensures any data stored in a non-UAC compliant location is copied to a UAC-compliant location.

  Click [**Click to Begin**] to start the upgrade process.

7 **Windows 7 and Windows Server 2008:** You must elevate your permissions before installing Sage 300 Construction and Real Estate. During certain installation tasks, you will receive another prompt to elevate your privileges. If you do not acknowledge each prompt within two minutes, the installation process will quit the task. If this occurs, you will receive a separate prompt asking you to retry the task. To retry the task, click [**Retry**] and then elevate your privileges at the prompt.

> **Note:** For more information on User Account Control, see the User Account Control topics in Estimating Help.

8 Repeat steps 1–7 for each workstation to which you want to install Estimating.

9 At the conclusion of the installation, you will be prompted to restart your computer. After you restart your computer and log on with full administrative rights, wait until you see the **All configuration tasks completed successfully** message. Do not attempt to start Estimating until you see this message.

> **Note:** It may take some time before you see the **All configuration tasks completed successfully** message.

If you plan to install Estimating to a server or if you plan to share estimates and databases from a server, continue with "C. Install to a server," on page 19. Otherwise, skip to "E. Set up Stand-Alone Security Devices" on page 22.

C. Install to a server

> **Important!** Do not install Estimating unless you have sufficient hard disk space available. Refer to the System Requirements article in the Sage Knowledgebase for information.

> **Note:** The installation process may restart your server several times.

Many users choose to share databases and estimates across their network. They also install Estimating to their server so they can more efficiently perform file maintenance on their data. Follow these steps if you want to install Estimating or share databases or estimates from your server.

Even if you do not install Estimating on your server, you still need to follow these steps to install required components that enable you to access data.

1 At the server or stand-alone computer, log on with full administrative rights. Full administrative rights are defined as write access to the Windows registry and all folders on the computer (including rights to the root of all hard drives). If you are unsure whether you have full administrative rights, ask your network administrator for assistance. Alternately, you can ask your network administrator to log on with the network administrator ID before you start the installation.

2 Follow the instructions you received in the 16.1 download notice.

3 Open the **161_Rev7_Estimating** folder and double-click **Install.exe** to begin the installation process.

4 If you want to install Estimating on the server, skip to step 5. If you want to access databases and estimates from the server, but you do not want to install Estimating, cancel the installation when the **License Agreement** window appears. Pervasive SQL Database Engine and SQL Server Express are automatically installed with the prerequisites.

   ▪ After you canceled the installation, run the Sage System Verifier (SSV). This sets the Pervasive settings to the recommended minimums. If Sage 300 Construction and Real Estate is installed, you can run the Sage System Verifier (SSV) from Sage Desktop. In the **Applications** pane, select **Common Tasks > Tools > System Verification**.

   ▪ Run SSV by browsing to and double-clicking **\...\Estimating\AdditionalInstalls\SSV\SageSystemVerifierSA.exe**.

5 In the **Installation** window, click **Install Software**. In the resulting installation, choose to install databases, Estimating products, or both.

   You can install Estimating to a server in order to perform file maintenance, but you should not perform other Estimating tasks at the server. These tasks should be performed at workstations.

   > **Note:** If you receive a firewall warning message during the installation of the Pervasive database engine, work with your network administrator to allow the Pervasive database engine to communicate through your firewall software. For example, if a **Windows Firewall Security Alert** window lists the Database Service Manager by Pervasive Software Inc., confirm with your network administrator that you want to proceed. Then, select **Unblock this program** and click **[OK]**.

D. Other installation scenarios

Additional steps for network installations that have Sage 300 Construction and Real Estate

To access Accounting data on a server, follow these steps on each Estimating-only workstation. (Workstations that have both Estimating and Sage 300 Construction and Real Estate have already been configured as part of the Sage 300 Construction and Real Estate installation and do not require these steps.)

The following steps apply to both upgrades and first-time installations.

1 Note the shared **Timberline Office** folder on the server or peer server where the Sage 300 Construction and Real Estate data folder is installed. This shared folder should be the parent to the folder where the application data is installed.

   Windows 7 and Windows Server 2008:
   *[Drive]:***\ProgramData\Sage\Timberline Office**.

2 Click [**Start**] **> Run**.

3 In the **Run** window, click [**Browse**]. Browse to **\\[Server name]\Timberline Office\9.5\Accounting\WinInst\Install.exe**. Click [**Open**]. Then, click [**OK**].

4 In the **Installation** window, click **Install Sage Estimating** and follow the instructions as they appear in the windows.

Note: If you receive a firewall warning message during the installation of the Pervasive database engine, work with your network administrator to allow the Pervasive database engine to communicate through your firewall software. For example, if a Windows Firewall **Security Alert** window lists the **Database Service Manager** by **Pervasive Software Inc.**, confirm with your network administrator that you want to proceed. Then, select **Unblock this program** and click [**OK**].

You may also receive this message during the installation of Sage Service Host. Follow the same steps to proceed.

5 Repeat steps 1–4 for each Estimating-only workstation. When finished, follow the steps in "B. Install to a workstation" on page 18.

6 At the conclusion of the installation, you will be prompted to restart your computer. After you restart your computer and log on with full administrative rights, wait until the "All configuration tasks completed successfully" message. Do not attempt to start any Sage 300 Construction and Real Estate applications until after you have received this message. It may take several minutes before you see the message **All configuration tasks completed successfully**.

7 Some of the data and report folders and files will be hidden by default. At the end of the installation, show hidden files and folders:

- Windows 7 or Windows Server 2008: Open Windows Explorer, select **Organize > Folder and Search Options**, click the **View** tab, and then select **Show hidden files and folders**.

- Windows 8, Windows 8.1, Windows 10, Windows Server 2012, or Windows Server 2012 R2: Open Windows Explorer, click the **View** tab, and then select the **Hidden items** check box.

8 If you set up a shortcut to other applications, you must re-create them after installing 16.1. Locate the **application.exe** file in **C:\ProgramFiles\Timberline Office\Shared**. Right-click and select **Create shortcut**.

Terminal server

Follow the installation steps for a Windows server, with these exceptions:

- If you install on a Windows Server 2008 terminal server, begin the installation by selecting **Control Panel > Install Application on Terminal Server**. Follow the prompts and browse to the **install.exe** file.

- In Windows Server 2008 R2, "terminal services" is called "Remote Desktop ".
Open **Start > Control Panel > Install Application on Remote Desktop**
or **Start > Control Panel > Programs > Install Application on Remote Desktop**. Follow the prompts and browse to the **install.exe** file.

- If you use another server to host Estimating databases, you can install only Estimating applications to the terminal server.

Note: If you install Estimating Products on a terminal server that uses Windows Server 2003, you must log on to the terminal server with full administrative rights when you use Estimating Products. This ensures that Estimating Products have proper access to the Windows registry.

Pervasive manual installation

The Pervasive database engines are installed automatically with other prerequisite software when you install Sage 300 Construction and Real Estate.

To manually install this program, download the software and install the prerequisites. Then, cancel the installation at the **License Agreement** window. Pervasive SQL Database Engine is automatically installed with the prerequisites.

After you have canceled the installation, you should run the Sage System Verifier (SSV), which will set Pervasive settings to the Sage 300 Construction and Real Estate recommended minimums.

If Sage 300 Construction and Real Estate is installed, you can run the Sage System Verifier (SSV) from Sage Desktop. In the **Applications** pane, select **Common Tasks > Tools > System Verification**.

If Sage 300 Construction and Real Estate is not installed, run SSV by browsing to and double-clicking **...\Estimating\AdditionalInstalls\SSV\SageSystemVerifierSA.exe**.

> **Note:** Some Sage System Verifier checks may not pass if Sage 300 Construction and Real Estate is not installed. This is acceptable if you ensure the **Sage Timberline Office—Pervasive PSQL License** and **Sage Timberline Office—Pervasive PSQL Settings** checks are completed successfully when you run the Sage System Verifier.

E. Set up Stand-Alone Security Devices

If you use License Manager to provide license security, skip to "F. Set up License Manager" on page 22.

If you already use stand-alone security devices, skip to "G. Upgrade estimates and databases" on page 25.

Install the Sentinel driver

The Estimating installation program automatically installed a Sentinel driver if you did not have one. For instructions to install the Sentinel driver manually, access the Sage Knowledgebase at https://support.na.sage.com, log on, and search for Article ID **22112**.

Attach protection devices to workstations

1 If you have a parallel port protection device, disconnect any hardware or peripheral devices attached to the parallel port of a workstation.

2 Plug a protection device into the parallel port or USB port of the workstation.

3 If you disconnected devices in step 1, reconnect these devices.

4 Repeat steps 1–3 for each workstation. Then, skip to "G. Upgrade estimates and databases" on page 25.

F. Set up License Manager

If you use stand-alone security devices to provide license security, see "E. Set up Stand-Alone Security Devices" on page 22.

Guidelines

Please note the following:

- You must install License Manager to a Windows server or workstation.

- All license-managed servers and workstations must use the same network protocol (TCP/IP).

- You cannot install License Manager to a terminal server. If you have a terminal server, install to a workstation.

- If you use firewall software on your license server, you may not be able to use the WlmAdmin or WCommute applications to view or check out licenses. To resolve this issue, discuss the server's firewall security with your network administrator. If you are willing to adjust your firewall security settings on the license manager server, consider granting access to the **lservnt.exe** file.

- Check in any licenses before upgrading.

For more information:

- *Getting Started With License Management*

- *Sentinel License Manager System Administrator Online Help* (index.html). This file is in **...\Estimating\AdditionalInstalls\LicenseManager\SysAdminHelp**.

Install the Sentinel driver

The Estimating installation program automatically installed a Sentinel driver if you did not have one. For instructions to install the Sentinel driver manually, access the Sage Knowledgebase at https://support.na.sage.com, log on, and search for Article ID **22112**.

Attach a protection device to the computer that will have License Manager

1 If you have a parallel port protection device, disconnect any hardware or peripheral devices attached to the parallel port.

2 Plug the protection device into the parallel port or USB port.

3 If you disconnected devices in step 1, reconnect these devices.

Install License Manager

If you already have License Manager installed, skip to "Upgrade License Manager," on page 24.

1 Log on with full administrative rights. Full administrative rights are defined as write access to the Windows registry and all folders on the computer (including rights to the root of all hard drives). If you are unsure whether you have full administrative rights, ask you network administrator for assistance. Alternately, you can ask your network administrator to log on with the network administrator ID before you start the installation.

2 Open and double-click **...\Estimating\AdditionalInstalls\LicenseManager\Server\Setup\Setup.exe**.

3 Follow the on-screen prompts. The installation automatically installs the appropriate software for the operating system.

> **Note:** Be sure to accept the default installation path when you install License Manager. If you need to change the default installation path, change it to a local drive. You cannot install License Manager to a network drive.

Install license codes

The number of network licenses purchased for an application indicates the total number of concurrent network uses allowed for that application. To install license codes, follow these steps:

1 Verify that the Sentinel License Manager service is running. Click **[Start]**. Then select **Settings > Control Panel > Administrative Tools > Services**. Look for **Sentinel RMS License Manager** in the list of services.

2 Download the software.

> **Note:** Consider copying the entire **License Tools** folder to your local hard drive. This makes License Tools more accessible for future maintenance.

3 Expand "Subnet Servers".

4 Install license codes using one of the following methods.

   - **To enter license codes from a file:** In the **WlmAdmin** window, right-click your server and select **Add Feature > From a File > To Server and Its File**. In the **Open** window, select your license file and click **[Open]**. This installs all license codes in the file.

   - **To type license codes:** In the **WlmAdmin** window, right-click your server and select **Add Feature > From a String > To a Server and its File**. In the **Add feature to server** window, type your license code exactly as it appears in the license file or on the packing slip. (The code is not case-sensitive.) Be sure to select the **Add feature to server's file** check box.

When you enter a license code, the software adds this code to a file named **Lservrc** (which has no file extension) in the License manager installation path.

5 If you receive a message that a license is invalid or already exists, review the information in *Getting Started With License Management* .

6 Enter license codes.

Upgrade License Manager

To upgrade License Manager, you must use the following steps to remove the previous version of License Manager and then install the new version. Perform these steps at the computer where License Manager is installed.

1 Check in any licenses before upgrading.

2 Run **LoadLS.exe**, located in the folder where you installed the previous version of License Manager (typically, **C:\Program Files\Rainbow Technologies\SentinelLM7x.x.xServer\English**). Click **[Remove]**, and then click **[OK]** to remove the Sentinel LM license manager.

3 Remove the previous License Manager version. Remove **Sentinel LM x.x.x.x. Server**.

4 Install the new version of License Manager. "Install License Manager" on the previous page.

5 Copy the **Lservrc** file from the directory you identified in step 2 to the directory of License Manager, which is typically **C:\Program Files\Common Files\SafeNetSentinel\Sentinel RMS License Manager\WinNT**.

6 Click [**Start**] and then select **Settings > Control Panel > Administrative Tools > Services**. Find **Sentinel RMS License Manager** in the list of services, right-click the service, and then select [**Restart**].

G. Upgrade estimates and databases

If you upgraded to a new version of Estimating Products, read the information in this section. If this is a first-time installation of Estimating Products, skip to "H. After you install" on page 25.

> **Note:** If you manually create a backup, clear the check box to auto-create a backup.

1 If you access data on another computer, map a drive to the network shared folder in which you have data. Use the same drive letter for all workstations. To avoid network disruptions and to maximize performance, upgrade files at the computer that hosts your data.

2 Back up your data files.

3 In Estimating Tools, select **Upgrade Files**.

4 In the **Upgrade Files** window, select the **Upgrade - For current users of Estimating for Windows** option.

5 Select the folder containing the estimates or databases that you want to upgrade. Click [**Browse**] to browse for a folder.

6 Complete the remaining fields in the window.

7 Click [**Finish**] to upgrade the selected files. During the upgrade, a progress bar in the lower right corner of the **Estimating Tools** window shows the name and path of each file as well as the name of each record type. Afterwards, you can print (**File > Print Audit**) or save (**File > Save Audit**) the information shown in the window.

8 If you are prompted to upgrade Address Book data, follow the steps in "E. Upgrade data files" on page 12.

> **Tip:**
> Keep the following in mind if you are upgrading from an earlier version:
>
> - If you are upgrading from a version earlier than 6.0, you must upgrade databases before you upgrade estimates. The update occurs automatically if the database and the estimates are in the same folder. If Estimating Tools cannot upgrade an estimate because it cannot find the associated database, use **File > File Tools** to move the estimate and database to the same folder; then, upgrade the single estimate. Click [**Yes**] when asked if you want to use the database that is in the same folder as the estimate.
>
> - When you move a database to a different location, the estimates that were created must be re-associated with the database's new location.

H. After you install

1 Restart all programs and services that you shut down for the installation.

2   If necessary, configure Estimating to access the Sage 300 Construction and Real Estate data folder. For instructions, see "Selecting a company data folder for Address Book and Job Cost information" in Estimating Help or "Select a company data folder for Address Book and accounting information" in Buyout Help.

3   If you upgraded and your Estimating data resided in the **Program Files** folder, your Estimating data was copied to a shared location. Verify proper operation of your files after upgrading, and then delete the original data in the **Program Files** folder. Update any workstation maps to point to the new shared location.

4   Click [**Help**] in any window for detailed procedural information. Select **Help > Product Documents** for release notes and technical information about your system.

I. Upgrade your Estimating Explorer data

If upgrading from 9.4.x, perform a back-up and restore operation to upgrade your existing Estimating Explorer data from MSDE to SQL Server Express.

Backup Estimating Explorer

1   Have all users close Estimating.

2   Log on to the computer where you store your Estimating data.

3   Start Explorer on the computer where the data source resides.

4   Close any open data sources by selecting **Close Data Source** from the Estimating Explorer **File** menu.

5   From the **File** menu, select **Data Source Tools**. Click [**Next**] in the **Data Source Tools** window.

6   Select the name or address of the SQL Server where the data source you want to back up resides. If you do not see the server in the list, click [**Refresh**] to update the list of available servers or type the server's computer name; for example, **[Server name]** or **[Server name]\instance**.

7   Click [**Next**].

8   Select **Back up the Explorer data source** and click [**Next**].

9   Browse to the location of the folder where you want to create the backup. You must select a folder located on the computer that hosts the data source.

10 Click [**Start**]. If a backup copy already exists in the folder, Estimating Explorer warns you that the backup copy will be overwritten. If you get this warning, click [**OK**] to continue. Otherwise, click [**Cancel**].

11 When you finish working with the data source tools, click [**Finish**].

Restore Estimating Explorer data

1   Close any open data sources by selecting **Close Data Source** from the **File** menu.

2   From the **File** menu, select **Data Source Tools**.

3   In the **Run As** window, select the user account to use with **Data Source Tools**. Note that the user account you select must be an administrator account on the local computer.

4   If you select **Current user**, clear the **Protect my computer and data from unauthorized program activity** check box.

5   Click [**OK**], and then click [**Next**] in the **Data Source Tools** window.

6 Select the name or address of the SQL server on the destination computer.

If you do not see the server in the list, click [**Refresh**] to update the list of available servers or type the server's computer name. For example, type **[Server name]\SQLEXPRESS** for the default instance of SQL Server Express or **[Server name]\instance** for a named instance of SQL Server Express.

7 Click [**Next**]. Select **Restore an Explorer data source from a previous backup** and click [**Next**] again.

8 Click [**...**] to browse to the folder that contains the data source backup. Then, click [**Start**].

If an Explorer data source already exists on the server, Explorer warns you that the existing data source will be overwritten.

9 To overwrite the existing data source, click [**OK**]. Otherwise, click [**Cancel**].

10 Click [**Finish**] to close **Data Source Tools**.

Chapter 4: Server Migration

The server and data migration tool enables you to easily copy and transfer your Sage 300 Construction and Real Estate Accounting data and customizations to a new server. Items transferred include:

- Company data
- Security settings
- Custom fields
- User formulas
- Reports and reports menu
- Inquiries
- Macros
- Attachments

You can select which companies you want to copy, giving you the flexibility to include all companies or only selected companies.

> **Tip:** Click [**Help**] in any of the server migration windows for more information.

Things to know before you begin

- You must first install Sage 300 Construction and Real Estate Accounting version 16.1 on your new server to access the server migration tool.

- The server migration process copies data from the old server to the new server. Data is not removed from the old server.

- You can migrate data from Sage 300 Construction and Real Estate version 9.6 or later.

- You must have administrative rights to the new server and a minimum of read permission to the old server.

- Your new server must have enough disk space to hold the information from the old server.

- If you added reports to the **Report** menus on your old server using mapped drives, create identical drive mapping for reports on your new server before performing the migration.

- Macros that you want to migrate must be in the **Company** folder on the old server prior to migration. You can copy the macros to the **Company** folder, if necessary. If the macros are not in the **Company** folder, you will need to recreate them on the new server after the migration.

- If you are using File Locations (**File>Company Settings>File Locations**) and the path to the file points to the old server location, you should update this path prior to upgrading your data. During a data upgrade, the program follows the path selected in File Locations to upgrade the data file. If that path is the old location, data files in the old location/server are upgraded instead of data in the new location/server.

- We recommend that you perform a test migration, then validate that all of your data, reports, macros and settings work properly on the new server. You can then stop work on the old server and perform the migration again with the latest files.

- The migration will overwrite companies and security on the new server. You should perform the migration before setting up companies and security (for example, before setting up a new job).

■ Most of the migration tasks are performed in a few minutes. However, moving attachments can take more time. If you have many attachments, consider transferring them during non-business hours.

■ Estimating and Document Management items are not included in the migration. For additional information, access the Knowledgebase at https://support.na.sage.com, log on, and search for the following articles:

  ■ Document Management—Article ID: 22160

  ■ Estimating —Article ID: 23263

  ■ Migration—Article ID: 22043

After you migrate your server, you must uninstall and then reinstall Sage 300 Construction and Real Estate on all workstations so they interact with the data on the new server instead of the old.

Recommended procedure

Preparing your new server

If you have not already installed and run Sage 300 Construction and Real Estate, do so now.

1. Install Sage 300 Construction and Real Estate Accounting version 16.1 on your new server.

2. Click **Start > All Programs > Sage > Sage System Verifier**.

3. In the **Sage System Verifier** window, click [**Scan System**].

4. When the system verification has completed, click [**Close**].

5. Set up administrative rights on the new server.

6. Set up existing or new printers on your new server. The TS PDF printer cannot be the only printer on your system and cannot be selected as the default.

Migrating your server

1. On the new server, open your program files folder and **\Timberline Office\Shared**, and then double-click **Sage.STO.ServerMigrator.exe**.

2. In the **Server Migration Tool** window for **Old server location**, type the path or browse to the location where Sage 300 Construction and Real Estate installed on your old server.
For example: **\\oldservername\Timberline Office\9.5**

3. Verify or change the server migration log path (on the new server) for **Log file path**. For example: **\\newservername\Timberline Office\9.5\Accounting\Migration\ServerMigrationLog 1.pdf**

4. Click [**Validate**] to perform a test of the files to be transferred.

5. When you see the **Validation complete** message and the validation is successful, click [**Migrate**].

6. When you see the **Migration complete** message, view the server migration log (that you set up in Step 3) to ensure that all files were transferred correctly.

Migrating your data folders

1. On the new server, open your program files folder and **\Timberline Office\Shared**, and then double-click **Sage.STO.ServerDataMigrator.exe**.

2. In the **Server Data Location** window, verify or change the data folder migration log name and path (on the new server) for **Log file path**. For example:**\\newservername\Timberline Office\9.5\Accounting\Migration\ServerDataMigrationLog 1.pdf**

3. Select the companies whose data you want to copy.

4. Click [**Validate**] to perform a test of the files to be copied.

5. When you see the **Validation complete** message and the validation is successful, click [**Migrate data folders**].

6. When you see the **Migration complete** message, view the server data migration log (that you set up in Step 2) to ensure that all files were copied correctly.

Migrating your macros

Any macros that you have must be in the Company folder on the old server prior to migration. You can copy the macros to the Company folder, if necessary. If the macros are not in the Company folder, you will need to recreate them on the new server after the migration.

1. If the **Server Data Location** window is not already open on the new server, open your program files folder and **\Timberline Office\Shared**, and then double-click **Sage.STO.ServerDataMigrator.exe**.

2. In the **Server Data Location** window, verify or change the macro migration log name and path (on the new server) for **Log file path**. For example: **\\newservername\Timberline Office\9.5\Accounting\Migration\MacroMigration.pdf**

3. Select the companies whose macros you want to copy.

4. Click [**Migrate Macros**].

5. In the **Macro Printer List** window, verify the printers that you want to use are listed. Click [**Change**] if you want to select different printers.

6. Click [**Migrate Macros**].

7. When you see the **Macro migration complete** message, view the macro migration log (that you set up in Step 2) to ensure that all macros were transferred correctly.

Migrating your attachments

> **Note:** Migrating attachments can take some time. If you have many attachments, you may want to consider migrating them during non-business hours.

1. If the **Server Data Location** window is not already open on the new server, open your program files folder and **\Timberline Office\Shared**, and then double-click **Sage.STO.ServerDataMigrator.exe**.

2. In the **Server Data Location** window, verify or change the attachment migration log name and path (on the new server) for **Log file path**. For example: **\\newservername\Timberline Office\9.5\Accounting\Migration\AttachmentMigration.pdf**

3. Select the companies whose attachments you want to copy.

4. Click [**Migrate attachments**].

5. In the **Attachment Paths** window, review the table showing the old and new locations for each set of attachments. You can change the new location.

   a. If you want to change the new attachment path for all rows to the default location on the new server, click [**Use default location**].

   b. If you want to replace portions of the new paths in specific rows, select the check box in front of the rows that you want to change, click [**Replace selected**], type the old text (for **Find**), type the new text (for **Replace**), and then click [**OK**].

   c. If you want to change the new path for one row, either:

      - Click in the **New attachment path** column and type the new path.

      - Click [**Change**], specify the new path, and then click [**OK**].

6. When the rows display the desired new attachment paths, click [**Migrate attachments**].

7. When you see the **Attachment migration complete** message, view the attachment migration log (that you set up in Step 2) to ensure that all attachments were transferred correctly.

Updating your workstations

After you migrate your server, you must uninstall and then reinstall Sage 300 Construction and Real Estate on all workstations so they interact with the data on the new server instead of the old.

1. On the workstation, uninstall the program by opening the **Control Panel**, selecting **Uninstall a program**, right-clicking **Sage 300 Construction and Real Estate** and selecting **Uninstall**.

2. Follow the instructions on page 11 for installing Sage 300 Construction and Real Estate on a workstation.

3. Repeat these steps for every workstation running Sage 300 Construction and Real Estate.

Chapter 5: System Guidance

General information

Review the hardware and software requirements. For details about installing, see "Chapter 2: Install Sage 300 Construction and Real Estate" on page 8.

We strongly recommend that you use third-party software to back up all Sage 300 Construction and Real Estate data files to external media daily.

> **Note:** For information about backing up Document Management, see the *Document Management User's Guide*.

Consider the following as you develop your backup plan:

- Use third-party backup software for all backups.

- Verify that when a folder is included in a backup, the backup software also includes the subfolders. The backup software should support recursive backups.

- Schedule the backup during off-peak hours, since all users must close Sage 300 Construction and Real Estate before you back up files.

- Always back up your entire Sage 300 Construction and Real Estate dataset. Do not perform incremental backups.

- Review the backup to be sure all data has been included. Back up all data and files, even if they are outside the default folders. For most Accounting and Management products, you can see a list of folders that are outside the current data folder.

  From Sage Desktop in the **Applications** pane, select **Common Tasks > File > Company Settings > File Locations**.

- Back up all data and application files within the Sage folder:

  On **Windows 2008 and Windows 7**–*[Drive:]***\Program Data\Sage**

- Store backup media in a secure location outside your building.

- Test backups by restoring them to test folders. These tests are important because backup media may have a limited life, backup devices may malfunction, and you may have incorrect software settings in your backup software.

> **Caution!** When you test a backup, keep the restored data separate from your production data.

Using File Tools for Inventory, Purchasing, and Service Management

To use File Tools with Inventory or Purchasing, start Sage Desktop or another application (not Inventory or Purchasing) and include the **POIV Data** folder in the File Tools operation.

To use File Tools with Service Management, start Sage Desktop or another application (not Service Management) and include the **SMDataData** folder in the File Tools operation.

> **Note:** To use Sage 300 Construction and Real Estate, users must have full control of the Pervasive installation folder and subfolders. For information on using Pervasive, see "Pervasive Database Engines" on page 35.

Do not actively scan Pervasive program files, Sage 300 Construction and Real Estate program files, or Sage 300 Construction and Real Estate data files for viruses

> **Important!** Scan these files at a time when they are not in use. For example, schedule a daily scan overnight.

If you actively scan Pervasive program files, Sage 300 Construction and Real Estate program files, or Sage 300 Construction and Real Estate data files for viruses, this may cause Sage 300 Construction and Real Estate to run slowly or to close unexpectedly. Typical folders that contain files that you should not scan include:

- Sage 300 Construction and Real Estate program files: (for example, *[Drive]*:**\Program Files\Timberline Office**)

- Sage 300 Construction and Real Estate data files: (for example, *[Drive]*:**\TSData**)

- Pervasive program files:

    Windows Server 2008 and Windows 7: **C:\Program Data\Pervasive Software**

Windows User Account Control (UAC)

Sage 300 Construction and Real Estate is designed to work with the Windows User Account Control (UAC) security scheme. With Windows 7 and Windows Server 2008 and later, you cannot save a file to a folder to which you do not have read/write permissions assigned. If such an attempt is made, Windows security diverts your data to a copy of the data file or report and associates the copy with your user profile, thereby possibly compromising the integrity of your application. To prevent this, Sage 300 Construction and Real Estate applications present you with an error message if you try to save a file to such a location. See page 38 for more information about moving your data folders for compliance with UAC.

Accounting and Management products

- New installations of Sage 300 Construction and Real Estate on Windows 7 or Windows Server 2008 operating systems will place data files in the *Drive]*:**\ProgramData\Timberline Office** folder.

- Upgrades to existing installations on Windows 7 or Windows Server 2008 require you to share the data folders and assign read/write permissions or move the folders to a shared location and assign read/write permission to the shared location.

> **Note:** You can share the data files before installing the upgrade. You can move data folders after completing the upgrade installation. If you move your data files and you use **File Locations** (**File > Company Settings > File Locations**) to allow other data folders to access the folder's data files, be sure you update the locations using **File Locations** for each affected data folder.

If you install in a client/server environment, note that the WinInst folder and corresponding Install.exe file was moved in 9.5. The path to the WinInst folder is:

Windows 7 and Windows 2008: *[Drive]*:**\Program Data\\Sage\Timberline Office\9.5\Accounting\WinInst\Install.exe**

Estimating products

If you are upgrading Sage Estimating, all of the Sage Estimating data files and reports previously residing in the Program Files folder will be copied automatically to a shared location.

- In Windows 7 and Windows Server 2008, these files will be copied to the *[Drive]*:**\Users\Public\Estimating** folder.

After installation, verify your application operates correctly and you have access to your data then remove the original data files from the Program Files folder.

View hidden folders

Some folders may be hidden. To view them on:

- Windows 7 or Windows Server 2008: Open Windows Explorer, select **Organize > Folder and Search Options**, click the **View** tab, and then select **Show hidden files and folders**.

- Windows 8, Windows 8.1, Windows 10, Windows Server 2012, or Windows Server 2012 R2: Open Windows Explorer, click the **View** tab, and then select the **Hidden items** check box.

Do not use NTFS file compression on data or program files for Sage 300 Construction and Real Estate

Using Microsoft Windows NTFS file system to compress files causes Sage 300 Construction and Real Estate to run very slowly.

Terminal services

Configure terminal services to maintain an operator's session during connection breaks

Configuring terminal services to maintain an operator's session during connection breaks prevents a program from closing unexpectedly and helps preserve data integrity. To set up this aspect of Windows Terminal Services, use the Terminal Services Configuration program.

For more information about using terminal services, see

Do not use fast user switching

Sage 300 Construction and Real Estate does not support fast user switching on Windows 7.

Pervasive Database Engines

The Pervasive database engines provide access to Sage 300 Construction and Real Estate data files. To use Sage 300 Construction and Real Estate, users must have full control of the Pervasive installation folder and subfolders.

Do not use the Subst or Netdrv commands in windows

The Subst and Netdrv commands may cause Pervasive status code 11 or 116 errors.

Do not exclusively use the NetBEUI network protocol

We do not support the NetBEUI network protocol. If NetBEUI is your only network protocol, you must install TCP/IP before you install Sage 300 Construction and Real Estate. If no applications require the NetBEUI protocol, consult with a network technician about removing it.

Firewalls and Sage Service Host

Beginning with Sage 300 Construction and Real Estate version 9.5, the Sage Service Host uses TCP instead of named pipes for inter-machine communication. Sage Service Host is a Windows service that runs on Sage 300 Construction and Real Estate servers and workstations. This service facilitates communication between Sage 300 Construction and Real Estate applications.

If you use Windows Firewall, you do not need to take any action, as Windows Firewall is configured during installation to work correctly with Sage 300 Construction and Real Estate. However, if you use a non-Windows firewall, you may need to manually adjust some settings to ensure proper performance.

Setting up Sage Service Host on firewalls other than Windows Firewall

If you use a firewall other than Windows Firewall, you may be prompted during installation that the Sage Service Host is attempting to access the internet or is attempting to act as a server. The Sage Service Host must be given permission to perform these types of activities.

If you need to manually set up this exception, make the following changes on every machine where Sage 300 Construction and Real Estate is installed:

- Set up your firewall to allow an exception for the Sage Service Host. Refer to the Windows Firewall instructions below and your firewall documentation for specific instructions.

- If you have other software that uses TCP ports 8101 and 8102, you may need to manually configure either the other software or the Sage Service Host to use different port numbers.

The Sage Service Host port numbers can be configured in the **Sage.STO.9.5.xml** file. This file is located in **Documents and Settings\All Users\Application Data\Sage\LS1\ServiceHost\1.0\Configuration**. If you need to change the default port numbers for Sage Service Host, this file should be changed on every machine on the network where Sage 300 Construction and Real Estate is being installed, including the accounting server.

Setting up Sage Service Host on a Windows Firewall

Windows Firewall is automatically configured during installation to work correctly with Sage Service Host. However, if you need to manually set up Sage Service Host to communicate on a Windows Firewall, do the following:

- Open Windows Firewall and select the **Exceptions** tab. If Sage Service Host is not on the list, you can add it by selecting [**Add Program**], and then browsing to the following path: *[Drive]:* **\Program Files\Common Files\Sage\LS1\ServiceHost\1.0\ Sage.LS1.ServiceHost.exe**.

- By default, the exception is set for any computer on the network. You can adjust this setting by selecting [**Change Scope**].

- If you have other software that uses TCP ports 8101 and 8102, you may need to manually configure either the other software or the Sage Service Host to use different port numbers.

The Sage Service Host port numbers can be configured in the **Sage.STO.9.5.xml** file. This file is located in **Documents and Settings\All Users\Application Data\Sage\LS1\ServiceHost\1.0\Configuration**. If you need to change the default port numbers for Sage Service Host, this file should be changed on every computer on the network where Sage 300 Construction and Real Estate is being installed, including the accounting server.

Troubleshooting

This section contains answers to the following questions:

- "If Sage 300 Construction and Real Estate stops responding during the workstation installation, how can I resolve this?"

- "When I start Estimating or Buyout on my workstation, a message that begins with "Unable to connect to the Address Book database" appears. How do I connect to the Address Book database?"

- "How do I move Accounting and Management products from one server to another?" on page 38

- "I upgraded from Sage 300 Construction and Real Estate 9.4. Do I need to move my data folders or reports to comply with User Account Control (UAC) requirements?" on page 38

- "Which Accounting and Management files were moved for Sage 300 Construction and Real Estate?" on page 38

- "Why am I getting an error message when I try to save data or reports?" on page 39

Depending on your service plan, you may be able to take advantage of the technical support offered by Sage 300 Construction and Real Estate.

If Sage 300 Construction and Real Estate stops responding during the workstation installation, how can I resolve this?

Try the following:

- Turn off antivirus software and unnecessary programs before you install.

- Verify that you have full user rights to the parent folder of the application data folders containing files needed so that Sage 300 Construction and Real Estate can run correctly.

  For Accounting and Management applications, the default location is:

  - Windows 7 and Windows Server 2008: *[Drive]:***\Program Data\Sage**.

  For Estimating applications, the default location is:

  - Windows 7 and Windows Server 2008: *[Drive]:***\Users\Public\Estimating**.

When I start Estimating or Buyout on my workstation, a message that begins with "Unable to connect to the Address Book database" appears. How do I connect to the Address Book database?

You must perform an additional installation and then configure Estimating and Buyout to access shared Address Book, Job Cost, and tax data.

For instructions about the additional installation, see the ""D. Other installation scenarios" on page 20".

For instructions about configuring Estimating and Buyout to access shared Address Book, Job Cost, and tax data, see "Selecting a company data folder for Address Book and Job Cost information" in Estimating Help or "Select a company data folder for Address Book and accounting information" in Buyout Help.

How do I move Accounting and Management products from one server to another?

Use the server migration tool found in Sage 300 Construction and Real Estate. For detailed instructions, see "Chapter 4: Server Migration" on page 28. You can also access the Knowledgebase at https://support.na.sage.com, log on, and search for Article ID **22043**.

> **Caution!** Incorrectly moving Sage 300 Construction and Real Estate data folders may severely damage your system. Sage Software is not responsible for damage to your data caused by incorrectly moving your Sage 300 Construction and Real Estate data folders. Before making changes to your Sage 300 Construction and Real Estate data, contact your system administrator for assistance and make a backup copy of all valued data.

> **Note:** Versions of Sage 300 Construction and Real Estate prior to 9.5 will not install correctly on a Windows 2007 or Microsoft Server 2008 operating system.

I upgraded from Sage 300 Construction and Real Estate 9.4. Do I need to move my data folders or reports to comply with User Account Control (UAC) requirements?

For Accounting & Management applications, you do not need to move folders to comply with UAC requirements unless you also install the Windows Server 2008 operating system.

If you install on Windows Server 2008 or Windows 7, you do not need to move folders if they are already shared. If your data and report folders are not already shared, you will need to share the location or move them to a shared location and then update their location at **File > Open Company > [Specify Folders]**. Refer to "Which Accounting and Management files were moved for Sage 300 Construction and Real Estate?" (the next question) for information on folder locations.

The Sage 300 Construction and Real Estate folder continues to exist under Program Files but contains only the essential binary files required for the applications to operate.

For Estimating applications, your folders will be copied automatically to a shared location during upgrade.

In Purchasing (PO) and Inventory (IV), if you originally set up your company (data) folder inside the Program Files folder, your data will not be accessible after you upgrade.

To prevent this issue, you should move your data from the Program Files folder to a different location prior to upgrading, as described in "Windows User Account Control (UAC) " on page 33.

Opening Purchasing or Inventory from a workstation before opening on a server will cause the DSN to be set incorrectly. After Purchasing or Inventory has been opened at the server, the applications can be opened at any workstation.

This issue is not specific to UAC but the solution to resolve it is the same.

After installation, verify your application operates correctly and you have access to your data, then remove the original data files from the Program Files folder.

Which Accounting and Management files were moved for Sage 300 Construction and Real Estate?

Many Sage 300 Construction and Real Estate folders were moved from the Program Files folder to a shared location beginning with the 9.5 release. A list of the affected Accounting & Management application folders is

provided in the following table.

> **Note:**
> Some folders may be hidden. To view them in:
>
> - Windows 7 or Windows Server 2008: Open Windows Explorer, select **Organize > Folder and Search Options**, click the **View** tab, and then select **Show hidden files and folders**.
>
> - Windows 8, Windows 8.1, Windows 10, Windows Server 2012, or Windows Server 2012 R2: Open Windows Explorer, click the **View** tab, and then select the **Hidden items** check box.

File/Original Location	New Location (Windows Server 2008)
[Program Files]\Timberline Office\Accounting\Formula	ProgramData\Sage\TimberlineOffice\9.5\Accounting\Formula
[Program Files]\Timberline Office\Accounting\Inquiry	ProgramData\Sage\TimberlineOffice\9.5\Accounting\Inquiry
[Program Files]\Timberline Office\Accounting\Report	ProgramData\Sage\TimberlineOffice\9.5\Accounting\Report
[Program Files]\Timberline Office\Accounting\Template	ProgramData\Sage\TimberlineOffice\9.5\Accounting\Template
[Program Files]\Timberline Office\Accounting\[Sample Data Folders]	ProgramData\Sage\TimberlineOffice\Data\[Sample Data Folders]
[Program Files]\Timberline Office\Accounting\Wininst	ProgramData\Sage\TimberlineOffice\9.5\Accounting\Wininst
[Program Files]\Timberline Office\Documents	ProgramData\Sage\TimberlineOffice\9.5\Documents

Why am I getting an error message when I try to save data or reports?

You cannot save data or report files to a location for which you do not have read/write permissions. This is to comply with Windows security requirements. To save the file, you must first have read/write permissions assigned or else save the file to another location to which you already have these permissions.

Terminal services

Windows Terminal Services is a component of Microsoft Windows Server. Terminal Services consists of a terminal server and one or more remote workstations. It enables users to access programs or data stored on a remote computer by a phone, network, Internet connection, or other communication methods.

Remote network connections do not provide adequate bandwidth to run Sage 300 Construction and Real Estate products without the use of Terminal Services. Terminal Services provides remote users with a stable and well-performing experience.

> **Note:** You must use License Manager in order to use Estimating with Terminal Services.

> **Important!** If you use Citrix MetaFrame, you must install it before you install Sage 300 Construction and Real Estate.

You can install Sage 300 Construction and Real Estate applications on your terminal server (as described in Chapter 2), or you can use Terminal Services in conjunction with a server for Sage 300 Construction and Real Estate.

> **Note:** Sage does not support the administrative configuration of Terminal Services with Sage 300 Construction and Real Estate products because it is a partially configured version of Terminal Services.

Printers

General guidelines

Sage 300 Construction and Real Estate supports the use of business-class laser printers.

We no longer support the use of dot matrix printers for printing 1099 and W-2 forms.

Instead, use a laser printer or dot matrix printer. Some reports that use the Crystal Reports® format require a laser printer. For example, you must use a laser printer to generate cost and contract invoices (AIA documents) in Billing, Service Management, Purchasing, and Inventory.

You should use inkjet or bubble jet printers only as backup printers; we do not test inkjet or bubble jet printers.

Printer driver

We strongly recommend that you use a PCL 5e printer driver.

Most new printers also support a PCL 6 printer driver. A PCL 6 driver supports higher resolutions than a PCL 5e driver (1200 dots per inch versus 600 dots per inch). However, because of its higher resolution (and, thus, greater memory needs), PCL-6-based printing uses more toner, is slower, and is sometimes unstable.

Many printers come with both PCL 5e drivers and PCL 6 drivers. If your printer does not come with a PCL 5e driver, your printer manufacturer probably offers one for free online.

Try using the PCL 5e driver first. Switch to a PCL 6 driver only if your printer does not function properly with a PCL 5e driver.

Margins

The following margins work with most laser printers.

Products	Top margin	Bottom margin	Left margin	Right margin
Accounting and Management products	0.25 inches	0.5 inches	0.25 inches	0.5 inches

Products	Top margin	Bottom margin	Left margin	Right margin
Estimating products with portrait printouts	0.2 inches	0.2 inches	0.3 inches	0.3 inches
Estimating products with landscape printouts	0.3 inches	0.3 inches	0.2 inches	0.2 inches

Install, move, or remove Sage 300 Construction and Real Estate products

Sage 300 Construction and Real Estate uses Microsoft Installer (MSI) for the installation, repair, modification, and removal of Accounting and Management Products.

Installation

The MSI installation occurs automatically when you install Accounting and Management Products. Use the Microsoft® Event Viewer to review the final status of the installation. You can find the **Event Viewer** in the **Control Panel > Administrative Tools** folder. For information about installing, see:

- "Chapter 2: Install Sage 300 Construction and Real Estate" on page 8 (Accounting and Management)
- "Chapter 3: Install Sage Estimating" on page 17

Auto-repair feature

This feature occurs automatically when you start an application and does not require any action or response. MSI tracks important groupings of files that are necessary for an application to run. If an important component is missing, MSI restores these files from the original installation source.

If MSI detects missing components, you may notice a brief delay of approximately two minutes while MSI validates them. In a Sage 300 Construction and Real Estate server configuration, you will be prompted for the installation DVD unless the installation source was copied and installed from the hard drive. On a workstation running Sage 300 Construction and Real Estate, the utility retrieves the missing files from the shared Sage 300 Construction and Real Estate server if a valid network connection exists.

Use the Microsoft Event Viewer to review the changes made to the installation. You can find the **Event Viewer** in the **Control Panel > Administrative Tools** folder.

Modify option

Use to add new programs or change program uses. This option is available when you reinstall a currently installed version of Accounting and Management Products on the server.

This utility proceeds through the traditional installation routine with the exception that you cannot change your registration name or client number.

To start the utility, begin the installation process by double-clicking **Install.exe**. In the **Accounting Server - InstallShield Wizard** window, select **Modify**.

Remove utility

Use the **Remove** utility to permanently remove Sage 300 Construction and Real Estate products from a server or workstation. For additional information, see "Removing Accounting and Management products entirely" (the next section)

This utility removes application files and application registry folders which are created during the application installation process. It does not necessarily return the server or workstation to its original state. Files and registry values modified or created during the use of Accounting and Management products will still exist (for example, **\HKEY_CURRENT_USER\Software\Timberline**).

To start the utility, open the Windows **Add or Remove Programs** option, select **Timberline Accounting Server** or **Timberline Accounting Client**, and then click [**Remove**].

Removing Accounting and Management products entirely

A complete removal of the Accounting and Management Products includes running the uninstall program first, then manually deleting the Program folder for Sage 300 Construction and Real Estate, manually deleting the application data folder for Sage 300 Construction and Real Estate, manually deleting the Current User registry keys for Sage 300 Construction and Real Estate, and uninstalling any third-party prerequisite products. If you decide to reinstall after doing a complete removal of Accounting and Management Products, you must restore all Accounting and Management Products folders and files from a backup and then reinstall the Accounting and Management Products.

Summary of removal steps

1 Back up the Sage 300 Construction and Real Estate program folder and all company data. Confirm that the backup was successful before continuing.

2 Remove Sage 300 Construction and Real Estate as described above.

3 Use Windows Explorer to delete the Sage 300 Construction and Real Estate folder (typically installed at **X:\Program Files\Timberline Office**).

4 Use Windows Explorer to delete the Sage application data folder. This is typically installed at **[Drive]:\Program Data\Sage** for Windows Server 2008.

5 *(Optional)* Use the Microsoft Registry Editor to delete the registry key **\HKEY_CURRENT_ USER\Software\Timberline**.

6 Use Windows **Add or Remove Programs** to remove Pervasive.SQL Server from the Sage 300 Construction and Real Estate Server. Use Windows **Add or Remove Programs** to remove Pervasive.SQL Workgroup from Sage 300 Construction and Real Estate workstations.

Chapter 6: Security

Security overview

If you have many people working in your office, you may not want each one to have access to all the features of the software. For instance, you may not want all staff members to be able to print checks or to print reports that include sensitive data.

You can use the security function in Sage 300 Construction and Real Estate to restrict access to various areas of the software.

Sage 300 Construction and Real Estate security is set up through the Security Administration tool in Sage Desktop (by selecting **Options > Security Administration**).

User types

The Security Administration tool for Sage 300 Construction and Real Estate includes three types of users: security administrators, application administrators, and Sage 300 Construction and Real Estate users.

- **Security administrators** set up and maintain accounts for users. For a complete list of tasks that a security administrator can perform, see "Setting up security " on page 52

- **Application administrators** can restrict access to software features and data that each user has permission to access. They define roles and assign users to the roles. For a complete list of tasks that an application administrator can perform, see "Setting up security " on page 52

- **Users** have task permissions defined by the application administrator. These permissions can range from none to almost as extensive as an application administrator. Users can have the same level of file and record access as an application administrator. Users can have access to one or more companies.

- A **role** represents a group of users who have the same security requirements. A role has its own user name and its own task, record, file, and company permissions.

The use of roles often saves setup time, because the application administrator can assign permissions to new users simply by assigning them to an existing role. The use of roles can also clarify your company's security plan because the application administrator can create roles that correspond to the company's organizational structure. For example, the application administrator can create roles for Accounts Payable clerks, Payroll clerks, property managers, and project managers.

Types of security

- **Task security** restricts access to menu items and certain tasks. For example, you can control who can set up vendors in Accounts Payable.

  With task security, an application administrator can restrict access to menu items and certain tasks found within windows. For example, task security can control access to the **Setup > Vendors** menu item in Accounts Payable (AP.) Also, task security can control whether you can approve a change order in the **Item Status** field of the **Enter Change Order Items - Scope of Change** window in Job Cost.

In the following example of task security, an application administrator assigns task permissions based on the tasks that the employees need to perform.

Role	Permission to AP Settings?	Permission to Post Invoices?	Permission to AP Reports?
CONTROL (controller)	Yes	Yes	Yes
APCLERK (AP clerk)		Yes	Yes
PROJMGR (project manager)			Yes

- **File security** blocks all access to a file and restricts ODBC access. For example, you can restrict access to sensitive payroll files.

File security allows application administrators to block all access to a file. This includes access through open database connectivity and through all related tasks, reports, and inquiries. This differs from task security, which allows application administrators to block tasks selectively and does not allow them to control ODBC access.

In the following example of file security, a company has two Payroll (PR) master files. One is for the executive staff and the other is for the field staff. In order to keep the executive payroll information private, the company creates a separate role for users that handle the executive PR master file.

Role	Users	Access to Exec PR Master File?	Access to Field PR Master File?
EXECPR (executive payroll)	Controller and a senior payroll clerk	Yes, for all users assigned to this role	
FIELDPR (field payroll)	Controller and all payroll clerks		Yes, for all users assigned to this role

In this example, the senior payroll clerk is a member of both the EXECPR and FIELDPR roles. A user can belong to more than one role.

- **Record security** controls access to certain records so that reports and inquiries display only the records to which the user has security access. For example, you can restrict reporting and inquiries on jobs or bank accounts.

- **Company security** restricts access to which companies a user can see. Application administrators can grant a user access to specific companies. Security administrators and application administrators have access to all companies.

- **Application security** prevents unauthorized users from accessing Sage 300 Construction and Real Estate. When application administrators turn on application security, all users must enter a user name and password to access the software. They can restrict access to software features and data that each user has permission to access. Security Administration offers four types of application security: task, file, record, and company.

Application security also lets application administrators hide applications from users and roles. When an application administrator uses the Security Administration tool to deny a user or role access to all tasks in

an application and sets secured menu items to not display, users cannot see the application in Sage Desktop.

Log settings

By default, logging is turned on. Security administrators can turn off Application, Security, or Setup logging.

The Audit Setup, Field Report, and System logs are required. You cannot turn them off.

The Posting Recap and Task Summary logs are for future use. No logs are created at this time.

Required Log	Log Type	Description
No	Application	Logs the start and end of Accounting applications and tasks.
Yes	Audit Setup	Logs changes when the audit setup activity is selected in an Accounting application.
Yes	Field Report	Logs changes to finalized field reports in Project Management.
Yes	Posting Recap	Logs recaps created while posting entries in Accounting. (For future use.)
No	Security	Logs events in the Security Administration tool.
No	Setup	Logs changes to setup information in Accounting.
Yes	System	Logs Accounting system events.
Yes	Task Summary	Logs summaries created during an Accounting task. (For future use.)

Applications with Security Administration

The following applications feature Security Administration:

- Accounts Payable
- Accounts Receivable
- Address Book
- Billing
- Cash Management
- Contacts

- Equipment Cost
- Financial Statements
- General Ledger
- Information Assistant
- Inquiry Designer
- Job Cost

- Payroll
- Project Management
- Property Management
- Remote Time
- Report Designer

The following applications have limited Security Administration:

- **Document Management** security features are managed in two areas: Security Administration and Document Management settings. Security administrators manage Document Management users and roles in Security Administration. Application administrators manage Document Management task security (inbox, scan queue, and query) in Security Administration. Privileged operators manage document security and document type security in Document Management settings. For more information, see Document Management Help.

- **Estimating** is affected by file security and task security. Application administrators cannot set up Security Administration for Estimating but, if Security Administration has been set up in one of the applications listed previously, you must type a user name and password before you use Estimating.

  Estimating offers its own form of file security on estimate and database files. Although similar to Security Administration, it is different because it is not set up from the Security Administration tool and it requires a password but not a user name.

- **Purchasing and Inventory** are affected by task security. Like Estimating, application administrators cannot set up Security Administration for these applications but you must type your user name and password if Security Administration is on. Purchasing and Inventory also offer their own form of task security. For more information, see Help in these applications.

- **Service Management** uses task security. Application administrators can create users and roles and set up task security for Service Management just as you would in the bulleted list of applications above.

Record security

With record security, you can control access to four records:

- Cash Management bank account
- General Ledger prefix
- Job Cost and Project Management job
- Property Management property

In addition, you can select or clear the **Give all users access to records with blank security IDs** check box. Select the box if you want records with blank security IDs to be accessible to all users. Clear the box if you want only application administrators to access these records. For more information, see "Set up record security" on page 56.

When record security is active, reports and inquiries display only the records to which the user has access. For more information, see "Effect of record security on reports" on page 47 and see "Effect of record security on inquiries" on page 49.

Record security also affects Job Cost, Contracts, and Project Management tasks. In these applications, you can type or select only jobs to which you have access. For more information, see "Effect of record security on tasks" on page 51.

Example—using record security

In the following example, a property manager, Accounts Payable (AP) clerk, and Property Management (PM) clerk work as a team on certain properties. Another project manager, AP clerk, and PM clerk work as a team on different properties.

With the following record security setup, these employees have access to only their team's properties.

Role	Users	Access to TEAM1 Properties?	Access to TEAM2 Properties?
TEAM1	Proj Mgr 1 AP Clerk 1 JC Clerk 1	Yes, for all TEAM1 users assigned to this role	
TEAM2	Proj Mgr 2 AP Clerk 2 JC Clerk 2		Yes, for all TEAM2 users assigned to this role

Effect of record security on reports

When record security is active on a report, the report displays only the records that are accessible to the current user. Moreover, totals on the report adjust to reflect only the accessible records.

For example, in Job Cost, a **Cost Entries by Job** report (simplified for this example) would look like the following to an application administrator:

Job	Cost Code	Category	Amount
01-002	3-110	L (labor)	100.00
01-003	2-520	M (material)	350.00
		Report Total	**450.00**

To a user with permissions to only job 01-002, the same report would look like the following:

Job	Cost Code	Category	Amount
01-002	3-110	L (labor)	100.00
		Report Total	**100.00**

> **Note:** Some reports list information from several different records on the same line. If you lack access rights to the report's driving record (the primary record upon which the report is based), the report skips the entire line. If you lack access rights to one of the non-driving records, the report skips only the information from that record.

Report record security settings

Each report has security settings that control whether record security can affect the report. If you own Report Designer, you can modify these settings (**Report Designer >Design Security**). If you do not own Report Designer, an application administrator can control record security on reports only by turning on or turning off record security. (For more information, see .)

Sage 300 Construction and Real Estate defines the security settings on stock reports based on whether (a) the report contains sensitive information or (b) the report's content should be tailored to the user. For example, Sage 300 Construction and Real Estate allows the bank record on the Cash Management Check Register report to be secured so that, if record security is on, you can generate reports that list only the entries for the banks to which the current user has access.

In some cases, for practical reasons, Sage 300 Construction and Real Estate does not allow record security to affect a report. For example, in Cash Management, you can type any bank in data entry tasks (bank account record security currently only affects reports and inquiries). Therefore, Sage 300 Construction and Real Estate does not secure the bank account record on the Cash Management Journal report.

Indicators that record security affects a report

Record security always affects a Crystal report, which has a "(CR)" in its name, unless the report uses a special formula to disable record security. To check for this formula, you must open the report in Crystal Decisions Crystal Reports. (You cannot use a Sage 300 Construction and Real Estate application to check for this formula.) Add to Crystal section or link to/from

> **Note:** If you create reports in Report Designer, then you can secure those reports with Security Administration. You must be an application administrator and own Report Designer to modify security settings on new report designs.

If you do not own Report Designer: the report's cover page indicates whether record security is on. You have the following options regarding cover pages:

- If you want to print a cover page every time you print any report, select **Tools > Options**. On the **Reports** tab, select **Attach to report**.

- If you want to print a cover page only some of the time, you must choose to print a cover page at the time of printing. From an applications **Tools** menu, select the report and from the **Print Selection** window, click [**Page Setup**]. Then select **Attach to report**.

If you own Report Designer: in addition to the report cover page (see above), record security information can appear in three additional areas.

- A report's design information (**Tools > Design Info**) lists the report's record security settings.

- A report's page heading (defined in **File > Page Setup > Page Headings**) indicates whether record security is on.

- If you open a report created in Report Designer 7.x or earlier and the report contains secured records, you will receive an on-screen message that lists the secure records on that report. Once you save the report, you will no longer receive this message.

Effect of an upgrade on reports

When you upgrade from Sage 300 Construction and Real Estate Accounting products 7.x or earlier to Sage 300 Construction and Real Estate 8.0 or later, the following changes take place with reports.

Stock reports

New stock reports replace your existing stock reports. The new reports have settings that control whether record security can affect the reports. However, these settings take effect only if you activate record security.

Custom reports

If you open a custom report created in Report Designer 7.x or earlier, the software displays a message that lists the secure records on that report. Once you save the report, you no longer receive this message.

The software also modifies the report's security settings. It changes these settings to allow record security, if active, to affect all securable records on the report.

You must use Report Designer to change a report's settings. If you do not own Report Designer, the only way to control record security on a report is for an application administrator to turn on or turn off record security.

Effect of record security on inquiries

When record security for an inquiry is on, the inquiry displays only records that are accessible to the current user.

For example, in Cash Management, a Bank List inquiry would look like the following to an application administrator:

Bank Account	Description	Account Number	Register Balance
First	First Bank	042134526	56,650.97
Liberty	Liberty S&L	874613754	91,450.44

To a user with permissions to only First Bank, the same inquiry would look like the following:

Bank Account	Description	Account Number	Register Balance
First	First Bank	042134526	56,650.97

Note: Some inquiries list information from several different records on the same line. If you lack access rights to the inquiry's driving record (the primary record upon which the inquiry is based), the inquiry skips the entire line. If you lack access rights to one of the non-driving records, the inquiry skips only the information from that record.

Inquiry record security settings

Each inquiry has record security settings that control whether record security can affect the inquiry. These settings take effect in the following scenarios:

- New installations of Sage 300 Construction and Real Estate 8.0 or later.

- Subsequent upgrades of a new 8.0 or later installation.

If you upgrade from Sage 300 Construction and Real Estate Accounting and Management products 7.x or earlier to Sage 300 Construction and Real Estate 8.0 or later, these settings do not take effect. Instead, record security automatically affects your inquiries if it is on. For more information, see "Effect of an upgrade on inquiries" (the next section).

Sage 300 Construction and Real Estate selects inquiry record security settings based on whether the inquiry contains sensitive information or whether its information should be tailored to the user. For example, Sage 300 Construction and Real Estate allows the bank record on the Cash Management Bank Register inquiry to be secured so that, if record security is on, your inquiry displays entries for only the banks to which you have access.

If you own Inquiry Designer, you can modify inquiry security settings. For more information, see "Change design security on an inquiry" on page 65.

If you do not own Inquiry Designer, application administrators can control record security on inquiries only by turning on or turning off record security. For more information, see "Turn off record security," on page 61.

Indicators that record security affects an inquiry

A button with a lock on it appears in the upper right corner of the inquiry. If you click this button, a Record Security window appears that lists which records are secured on the inquiry.

> **Note:** In this window, an application administrator can select or clear records to secure. However, the selections affect only the current user's session. Therefore, selections are inconsequential because an application administrator already has permission to view all records.

Effect of an upgrade on inquiries

If your Sage 300 Construction and Real Estate Accounting products installation started with 7.x or earlier, record security affects your stock and custom inquiries to the extent that it is on. (Installations that started with 8.0 or later are different; see next section). For example, if record security is on for the Cash Management bank account record and the Job Cost and Project Management job records, these records are automatically secured on the inquiry. If record security is on for only the Cash Management bank account record, only this record is secured on the inquiry.

If you own Inquiry Designer, you can specify settings on each inquiry that control whether record security affects the inquiry.

Difference between upgrades and new installations

New installations of Sage 300 Construction and Real Estate (and subsequent upgrades) use Sage 300 Construction and Real Estate's predefined inquiry record security settings. These settings control whether record security can affect an inquiry. For example, if an inquiry's settings do not allow Cash Management

bank account record security, this record is not secured on the inquiry (even if record security is on). For an upgrade, record security automatically affects the bank account record because the inquiry does not use the predefined record security settings.

Effect of record security on tasks

Record security can restrict access to the job record in certain Job Cost (JC), Contracts (CN), and Project Management (PJ) tasks. When record security is turned on for jobs, you cannot view a job in a list or type a job unless you have security access for that job. For example, in the **PJ Job Setup** window (**PJ > Setup > Jobs**), when you click [**Find**] to list jobs that have been previously set up, you see only jobs to which you have access.

In addition, you can select or clear the **Give all users access to records with blank security IDs** check box. Select the box if you want records with blank security IDs to be accessible to all users. Clear the box if you want only application administrators to access these records. For more information, see "Set up record security" on page 56.

Job record security affects the following tasks:

Contracts

- **Edit > Link**
- **Edit > Add/Edit JC CO link**
- **Edit > JC CO Item Link Details**

Job Cost

- **Setup > Jobs**
- **Tasks > Enter Estimates**
- **Tasks > Change Orders**
- **Tasks > Commitments**
- **Tasks > Commitment Change Orders**
- **Tasks > Enter Misc Worksheets**

Project Management

All tasks that involve the job record (for example, job setup and document creation).

Setting up security

This section contains the tasks that security administrators and application administrators need to perform to set up security. Some tasks can be performed by either administrator role. Other tasks must be performed by a specific administrator role. The best practice is for the security administrator to perform steps 1 through 8 and for the application administrator to perform steps 9 through 13. Steps 6, 12, and 13 are optional.

Whether you can perform this tack if you have this role:	Security Administrator	Application Administrator
1 "Turn on security"	Yes	No
2 "Add a security administrator"	Yes	No
3 "Add an application administrator"	Yes	No
4 "Log on"	Yes	No
5 "Restart Sage 300 Construction and Real Estate"	Yes	No
6 "Turn off logging" (optional)	Yes	No
7 "Add roles"	Yes	No
8 "Add users"	Yes	No
9 "Add users to roles"	Yes	Yes
10 "Add tasks to roles"	Limited	Yes
11 "Grant users access to companies"	No	Yes
12 "Restrict access to files" (optional)	No	Yes
13 "Set up record security" (optional)	No	Yes

Turn on security

To prevent unauthorized users from accessing your software, we recommend that you turn on application security. When you turn on application security, all users must enter a user name and password to access the software. Application administrators can restrict access to software features and data that each user has permission to access.

> **Note:** You must be a security administrator to turn on security.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Security Settings**.

3 Select the **Turn on application security** check box.

4 Click [**OK**].

Add a security administrator

When you turn on security, you must add a security administrator. Security administrators set up and maintain accounts for users. For back-up purposes, we recommend adding at least two security administrators.

To add or change a security administrator later, go to **Security Administration > User Setup**. You must be a security administrator to add another security administrator.

Add an application administrator

When you turn on security, you must add an application administrator. Application administrators define roles and assign users to the roles. For back-up purposes, we recommend adding at least two application administrators.

To add or change an application administrator later, go to **Security Administration > User Setup**.

Log on

1 From the **Log On** window, type your **User name**.

2 Type your **Password**.

3 Click [**Log On**].

Restart Sage 300 Construction and Real Estate

For the security settings to take effect, all users must restart Sage 300 Construction and Real Estate.

1 When the **Restart** message appears, click [**OK**].

2 Close Sage 300 Construction and Real Estate (**File > Exit**), and then reopen it.

3 Request all users to restart Sage 300 Construction and Real Estate.

Turn off logging

This task is optional.

Security administrators can only turn off **Application**, **Security**, or **Setup** logging.

The **Audit Setup**, **Field Report**, and **System** logs are required. You cannot turn them off.

The **Posting Recap** and **Task Summary** logs are for future use. No logs are created at this time.

> **Note:** You must be a security administrator to turn on logging.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Log Settings**.

3 In the **On** column, clear the types of logs that you want to turn off.

4 Click [**OK**].

Add roles

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Role Setup**.

3 On the **Roles** pane, click [**Add**].

4 On the **Role Details** pane, type the **Name** of the role (for example, AP Clerk.)

5 *(Optional)* Type the **Description** for this role.

6 *(Optional)* Select the tasks for this role. For more information, see "Add tasks to roles," on page 55.

7 *(Optional)* Select the users for this role. For more information, see "Add users to roles" on page 54.

8 Click [**Save Changes**].

Add users

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **User Setup**.

3 On the **Users** pane, click [**Add**].

4 On the **User Details** pane, type the **User name**.

5 *(Optional)* Type the **Full name** and **Windows user** associated with the user name.

6 *(Optional)* On the **Settings** tab, select the **User Account Settings** and **Password Settings**.

7 Click the **Roles** tab, and then select or add roles for the user.

8 *(Optional)* Click the **Companies** tab, and then select the companies for the user. For more information, see "Grant users access to companies" on page 55.

> **Note:** You must be an application administrator to grant a user access to companies. If you cannot perform this step, the application administrator must do it before the user can log on to Sage 300 Construction and Real Estate.

9 Click [**Save Changes**].

Add users to roles

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **User Setup**.

3 On the **Users** pane, select the **User Name.**

4 Click the **Roles** tab, and then select roles for the user.

5 Click [**Save Changes**].

6 For the change to take effect, the users associated with this role must restart Sage 300 Construction and Real Estate.

Add tasks to roles

Application administrators can add all tasks to roles.

Security administrators can only add the following tasks to a role:

- **Log Viewer** (**Tasks > Common Tasks > Tools > Log Viewer**)

- **Audit Setup Activity** (**Tasks > Common Tasks > Tools > Options > Audit Setup Activity**)

- **View System Activity** (**Tasks > Common Tasks > Security > View System Activity**)

- **Change Audit Setup Fields** (**Tasks > Common Tasks > Security > Change Audit Setup Fields**)

You cannot change the tasks for the application administrator and security administrator roles.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Role Setup**.

3 On the **Roles** pane, select the role that you want to edit.

4 On the **Roles Details** pane, click the **Tasks** tab.

5 In the tasks tree, navigate to the tasks or sub-tasks that you want to add and select the tasks.

6 Click [**Save Changes**].

7 For the change to take effect, the users associated with this role must restart Sage 300 Construction and Real Estate.

Grant users access to companies

You must be an application administrator to grant a user access to companies.

Security administrators and application administrators have access to all companies.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Company**.

3 On the **Companies** pane, select the **Company Name** to which you want to add users.

4 On the **Company Security Details** pane, click [**Add**].

5 In the **Company Setup - Add Users** window, select the users.

6 Click [**OK**].

7 Click [**Save Changes**].

8 For the change to take effect, the user associated with this company must restart Sage 300 Construction and Real Estate.

Restrict access to files

This step is optional.

> **Note:** You must be an application administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Files**.

3 Select the **Company** for which you want to restrict access to files.

4 Select the **Role** that will have access to the corresponding **File Name**.

5 Click [**OK**].

6 After securing a file, make sure that users can still perform their required tasks.

7 For the file restriction to take effect, all users not assigned to the role must restart Sage 300 Construction and Real Estate.

Set up record security

This step is optional.

> **Note:** You must be an application administrator to perform these tasks.

A. Setting up record security

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, select **Records**. The **Record Security** window opens.

3 On the **Activation** tab, select **Activate record security**.

4 Select or clear the **Give all users access to records with blank security IDs** check box. Select the box if you want records with blank security IDs to be accessible to all users. Clear the box if you want only application administrators to access these records.

5 In the **Securable record types** box, select the records that you want to secure.

B. Assigning security IDs to records

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, select **Records**. The **Record Security** window opens.

3 Select the tab for the record to which you want to assign security IDs.

4 In the **Security ID** column, type the ID of a role. You can type only a single ID.

5 Click [**OK**].

> **Note:** Record tabs in the **Record Security** window are accessible only if you have turned on record security for that record on the **Activation** tab.

Modifying security

This section contains the following topics:

Change password settings

> **Note:** You must be a security administrator to change the password settings.

When you turn on security, you must set up password strengths and requirements for all users. To change these settings later, go to **Security Administration > Security Settings**.

To change the password settings for a user name, go to **Security Administration > User Setup > Settings**.

For the password settings to take effect, all users must restart Sage 300 Construction and Real Estate.

Set strong passwords

To prevent unauthorized users from accessing your software, we recommend that you require strong passwords. Strong passwords must meet the following conditions for complexity:

- Passwords must be at least eight characters long.

- Passwords must contain at least three of the following four character groups:

English uppercase characters (A through Z)

English lowercase characters (a through z)

Numbers (0 through 9)

Special characters (~ ! @ # $ % ^ & * ( ) - + = { } [ ] | \ : ; < , > . ? /)

- Passwords expire every 90 days.

- You are warned 10 days before your password expires.

- You cannot reuse your three previous passwords.

- You must wait 10 days before changing your password.

When you turn on security, the password settings default to these strong password conditions.

Change password strengths and requirements for all users

> **Note:** You must be a security administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Security Settings**.

3 If security is turned off, select the **Turn on application security** check box.

4 In the **Password Settings** area, move the slider to select the password strength.

5 If you choose **Custom** (top setting on the slider), set the requirements:

   a Click [**Custom Password Settings**].

   b In the **Password Settings** window, clear the check boxes that you do not want or change the requirements for the settings.

   c Click [**OK**] to save the custom password settings.

6 Click [**OK**] to save the security setting changes.

7 If you are strengthening the password requirements, the following message appears, "Existing passwords may not meet the new requirements. Do you want users to create new passwords the next time they log on?" Click [**Yes**].

8 For the password settings to take effect, all users must restart Sage 300 Construction and Real Estate.

Change password settings for a user name

> **Note:** You must be a security administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **User Setup**.

3 On the **Users** pane, select the **User Name** for which you want to change the password settings.

4 On the **User Details** pane, click the **Settings** tab.

5 Select or clear the **Password Settings** options.

6 If you want to add or change the password for the user:

   a Click [**Set Password**].

   b From the **Set Password** window, type the same password in the **Password** and **Confirm password** fields.

   c Click [**OK**].

   > **Note:** When you add or change the password, the **User must change password at next log on** option is automatically selected.

7 Click [**Save Changes**].

8 For the password settings to take effect, the user must restart Sage 300 Construction and Real Estate.

Delete a user

> **Note:** You must be a security administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **User Setup**.

3 On the **Users** pane, select the **User Name** that you want to delete.

4 Click [**Delete**].

5 When you receive a confirmation message, click [**Yes**].

Delete a role

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Role Setup**.

3 On the **Roles** pane, select the role that you want to delete.

4 Click [**Delete**].

5 When you receive the confirmation message, click [**Yes**].

Copy a user

Use the copy feature when you want a new user to have the same permissions as an existing user.

> **Note:** You must be a security administrator and an application administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **User Setup**.

3 On the **Users** pane, select the **User Name** that you want to copy.

4 Click [**Copy**].

5 On the **User Details** pane, type the **User** name.

6 *(Optional)* Type the **Full name** and **Windows user** associated with the user name.

7 Click [**Save Changes**].

Copy a role

Use the copy feature when you want a new role to have the same tasks and users as an existing role.

> **Note:** You must be an application administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Role Setup**.

3 On the **Roles** pane, select the role that you want to copy.

4 Click [**Copy**].

5 On the **Role Details** pane, type the **Name** of the role (for example, AP Clerk.)

6 *(Optional)* Type the **Description** for this role.

7 Click [**Save Changes**].

Turn off security

> **Notes:**
> - You must be a security administrator to turn off application security.
> - To prevent unauthorized users from accessing your software, we recommend that you leave application security turned on.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Security Settings**.

3 Clear the **Turn on application security** check box.

4 Click [**OK**].

5 For the security settings to take effect, all users must restart Sage 300 Construction and Real Estate.

Remove file restrictions

> **Note:** You must be an application administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Files**.

3 Select the **Company** for which you want to remove a file restriction.

4 In the **Role** column for the corresponding **File Name**, select **(None.)**

5 Click [**OK**].

6 For the file setting to take effect, all users must restart Sage 300 Construction and Real Estate.

Turn off record security

> **Note:** You must be an application administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, select **Records**. The **Record Security** window opens.

3 Select the **Activation** tab.

4 If you want to turn off all record security, clear the **Activate record security** check box.

5 If you want to turn off record security for a particular record, clear the check box for that record.

6 Click [**OK**].

> **Notes:**
> - When you turn off record security, the **Security ID** field disappears from related record setup windows. However, Sage 300 Construction and Real Estate security saves your security ID assignments. If you reactivate record security, these settings take effect again.
> - In addition to record security settings in Security Administration, each Sage 300 Construction and Real Estate report and inquiry has record security settings.

Turn on tasks

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Tasks**.

3 On the **Tasks** pane, navigate to the tasks or sub-tasks that you want to turn on.

4 On the **Task Security Details** pane, clear **Turn off task**.

5 Click [**Save Changes**].

6 For the task settings to take effect, all users must restart Sage 300 Construction and Real Estate.

Turn off tasks

> **Note:** You cannot turn off tasks for the security administrator and application administrator roles.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Tasks**.

3 On the **Tasks** pane, navigate to the tasks or sub-tasks that you want to turn off.

4 On the **Task Security Details** pane, select **Turn off task**.

5 If the **Restart Sage 300 Construction and Real Estate** message displays, click [**OK**].

6 Click [**Save Changes**].

Add a role to a task

Application administrators can add roles to all tasks.

Security administrators can only add roles to the following tasks:

- **Log Viewer** (**Tasks > Common Tasks > Tools > Log Viewer**)
- **Audit Setup Activity** (**Tasks > Common Tasks > Tools > Options > Audit Setup Activity**)
- **View System Activity** (**Tasks > Common Tasks > Security > View System Activity**)
- **Change Audit Setup Fields** (**Tasks > Common Tasks > Security > Change Audit Setup Fields**)

To add a role to a task:

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Tasks**.

3 On the **Tasks** pane, navigate to the task or sub-task to which you want to add a role.

4 On the **Task Security Details** pane, select the roles that you want to add.

5 Click [**Save Changes**].

Remove a role from a task

Application administrators can remove roles from all tasks.

Security administrators can only remove roles from the following tasks:

- **Log Viewer** (**Tasks > Common Tasks > Tools > Log Viewer**)
- **Audit Setup Activity** (**Tasks > Common Tasks > Tools > Options > Audit Setup Activity**)
- **View System Activity** (**Tasks > Common Tasks > Security > View System Activity**)
- **Change Audit Setup Fields** (**Tasks > Common Tasks > Security > Change Audit Setup Fields**)

To remove a role from a task:

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Tasks**.

3 On the **Tasks** pane, navigate to the task or sub-task that you want to remove from a role.

4 On the **Task Security Details** pane, clear the roles.

5 Click [**Save Changes**].

Restrict access to files

> **Note:** You must be an application administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Files**.

3 Select the **Company** for which you want to restrict access to files.

4 Select the **Role** that will have access to the corresponding **FileName**.

5 Click [**OK**].

6 After securing a file, make sure that users can still perform their required tasks.

7 For the file restriction to take effect, all users not assigned to the role must restart Sage 300 Construction and Real Estate.

Restrict access to additional files

Application administrators will only see additional files if named files are selected for a securable file type (**Sage 300 Construction and Real Estate > Common Tasks > File > Company Settings > File Locations > Ask Name.**)

> **Note:** You must be an application administrator to perform this task.

To restrict a file that is not in the **File Security Setup** grid:

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, click **Files**.

3 Select the **Company** for which you want to restrict access to files.

4 Click [**Find Files**].

5 From the **File Security Setup** - **Find File** window, select the **File Type**.

6 Click [**OK**].

7 Browse to the file location and select the **File name** that you want to restrict.

8 Click [**Open**]. The file is added to the grid.

9 Select the **Role** that will have access to the corresponding **File Name**.

10 Click [**OK**].

11 After securing a file, make sure that users can still perform their required tasks.

12 For the file restriction to take effect, all users not assigned to the role must restart Sage 300 Construction and Real Estate.

Modify record security permissions

Change the security ID in a Record Security window

> **Note:** You must be an application administrator to perform this task.

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, select **Records**. The **Record Security** window opens.

3 Select the tab for the record you want to change.

4 In the **Security ID** column, change the security ID.

5 Click [**OK**].

> **Note:** Record tabs in the **Record Security** window are available only if you have turned on record security for that record.

Change the security ID in a Record Setup window

> **Note:** You must be an application administrator or have security access to the **Change Security ID** task.

1 Open the record setup window of a securable record (Cash Management bank account, General Ledger prefix, Job Cost and Project Management job, and Property Management property.)

2 Click the **Security ID** field and change the ID.

Change design security on reports

> **Note:** You must be an application administrator to modify report design security.

1 Start Report Designer.

2 Open the report design (**File > Open Design**.)

3 From the **Tools** menu, select **Security > Design**.

4 In the **Design Record Security** box, select or clear the check boxes.

5 Click [**OK**].

> **Note:** The **Design Record Security** box lists all available records regardless of whether the report uses all the records. If record security is off, the check box for that record will be unavailable.

Change design security on an inquiry

> **Note:** You must be an application administrator to modify the inquiry design security.

1 Start Inquiry Designer.

2 From the **Inquiry** menu, select **Inquiry Manager**.

3 In the **Applications** window, select an application and click [**OK**].

4 In the **Inquiry Manager** window, select the inquiry; then click [**Change**].

5 In the **Change Inquiry** window, click [**Record Security**].

6 In the **Record Security** window, select or clear the check boxes.

7 Click [**OK**] in successive windows; then click [**Close**].

> **Note:** The **Record Security** window lists all available securable records regardless of whether the inquiry uses all the records. If record security is not selected, the check box for that record will be unavailable.

Review record security settings

> **Note:** You must be an application administrator to perform this task

1 From the Sage Desktop, select **Options > Security Administration**.

2 On the **Security Administration** tab, select **Records**. The **Record Security** window opens.

3 Review the selections on the **Activation** tab. They control whether record security is on and how the software interprets blank security IDs.

4 Select one of the record tabs.

5 Review the users and roles in the **Security ID** column.

6 Repeat steps 4 and 5 for each record.

> **Note:** Every report and inquiry has settings that control whether record security can affect the report or inquiry.

Troubleshooting security

This section contains information about the following issues:

I cannot see a security ID in a Record Setup window

The **Security ID** field appears in a record setup window only if record security is on for that record. For more information, see "Set up record security" on page 56.

I cannot change a security ID in a Record Setup window

During the setup of a new record, anyone can type a security ID. Once the record has been saved, only application administrators or users with permission to access the **Change Security ID** task can change the security ID.

I know a job was set up, but I cannot see it in the software

In most Sage 300 Construction and Real Estate applications, record security affects only reports and inquiries. In certain Contracts, Job Cost, and Project Management tasks, however, record security also affects whether you can type jobs or select jobs from lists. For more information, see "Effect of record security on tasks" on page 51.

Jobs may not appear for several reasons:

- The job may have a status of closed; some lists do not display closed jobs.

- The job may have been moved to a different file, such as a history file.

- Record security may be active on the job and you do not have permission to access that job.

I forgot my password

If you are an application administrator or user, request a new password from one of your company's security administrators.

If you are the only security administrator and you forgot your password, you must call Customer Support to restore access to your software. See "Technical assistance" on page 2.

> **Note:** For back-up purposes, we recommend having at least two security administrators.

My report or inquiry is missing information

A report or inquiry can be missing information for several reasons. One explanation could be that you lack record security permissions. To investigate this possibility, see the following topics.

Reports

- "Effect of an upgrade on reports" on page 49
- "Indicators that record security affects a report" on page 48
- "Report record security settings" on page 48
- "Review record security settings" on page 65

Inquiries

- "Effect of record security on inquiries" on page 49
- "Indicators that record security affects an inquiry" on page 50
- "Inquiry record security settings" on page 50

Menu items and fields are unavailable

Menu items and fields can be unavailable for two reasons.

First, the task associated with the menu item or field requires a previous task that has not been performed. For example, the **Edit > Paste** menu is unavailable if you have not previously cut or copied anything.

Second, you lack task security permissions (for example, access to **PM > Setup > Properties**.)

I cannot delete a user name

> **Note:** You must be a security administrator to delete a security administrator.

If security is on and only one user name is assigned to the Security Administrator role, you cannot delete the user name assigned to that role.

To delete the user name, you must assign another user name to the Security Administrator role. For more information, see "Add a security administrator" on page 53.

For back-up purposes, we recommend adding at least two security administrators.

I cannot make an account unavailable

If security is on and only one available user name is assigned to the security administrator or application administrator role, you cannot make the account unavailable.

To make the account unavailable, you must assign another available user to that administrator role.

> **Note:** You must be a security administrator to assign a user to an administrator role.

For back-up purposes, we recommend adding at least two security administrators and two application administrators. If necessary, you can assign two user accounts to both roles.

I cannot end account availability

If security is on and only one user name is assigned to the security administrator or application administrator role as of this date, you cannot end account availability.

To end account availability, you must assign another available user name to that administrator role.

> **Note:** You must be a security administrator to assign a user to an administrator role.

For back-up purposes, we recommend adding at least two security administrators and two application administrators. If necessary, you can assign two user accounts to both roles.

I cannot remove a user name

> **Note:** You must be a security administrator to delete a security administrator.

If security is on and only one user name is assigned to the Security Administrator role, you cannot remove the user name assigned to that role.

To remove the user name, you must assign another user name to the Security Administrator role. For more information, see "Add a security administrator" on page 53.

For back-up purposes, we recommend adding at least two security administrators.

I cannot turn on security

> **Note:** You must be a security administrator to turn on application security.

If a user name is not assigned to the Security Administrator role, you cannot turn on application security.

To turn on security, you must assign a user name to the Security Administrator role. For more information, see "Add a security administrator" on page 53.

For back-up purposes, we recommend adding at least two security administrators.

For the security settings to take effect, all users must restart Sage 300 Construction and Real Estate.

I cannot save changes

> **Note:** You must be a security administrator to remove users from the Security Administrator role.

If security is on, you cannot remove all users from the Security Administrator role.

To remove all the existing users from the Security Administrator role, first you must assign another user name to that role. For more information, see "Add a security administrator" on page 53.

For back-up purposes, we recommend having at least two security administrators.

Security tips

This section contains the following tips:

- "Be careful with print files"
- "Create separate roles for task and record security" on page 69
- "Consider limiting access to Crystal Decisions Crystal Reports" on page 70
- "Specify how secured tasks appear" on page 70

Be careful with print files

If you print to a folder that is not secure, others may have access to your reports.

By default, Sage 300 Construction and Real Estate prints files to your data folder. If you run the software over a network, all users print to this location. Although you can change the default file location in **File > Data Folder Settings > File Locations > Printouts**, all network users will still print to whatever location you designate.

To print to a different folder, you must redirect the print job at the time of printing. From a **Print Selection** window, click [**Printer Setup**]. Then, click [**Select File**] and browse to the desired location.

Create separate roles for task and record security

Administrators may need to create certain roles for task security and other roles for record security. For example, a company has the following users:

- Project Manager 1
- Project Manager 2
- Accounts Payable (AP) Clerk 1
- AP Clerk 2

Project Manager 1 and AP Clerk 1 always work together on jobs. Project Manager 2 and AP Clerk 2 always work together on a different set of jobs. In terms of record security, these two teams of users should be members of different roles because they need access to different jobs.

Project Managers 1 and 2 perform tasks such as approving change orders (COs.) AP Clerks 1 and 2 perform tasks such as entering invoices. In terms of task security, the project managers should be in one role and the AP clerks should be in a different role.

The overall security assignment for these users should look like the following:

Role	Users	Task Permissions	Record Permissions
PROJMGR	Proj managers	Approve COs	
APCLERK	AP clerks	Enter invoices	
TEAM1	Proj Mgr 1 and AP Clerk 1		Team 1 jobs
TEAM2	Proj Mgr 2 and AP Clerk 2		Team 2 jobs

Consider limiting access to Crystal Decisions Crystal Reports

A user can use Crystal Decisions Crystal Reports to disable record security settings on Crystal reports. If you own Crystal Decisions Crystal Reports, guard against unwanted modification of reports by limiting who can use this software. You may want to allow only administrators of Sage 300 Construction and Real Estate security to use Crystal Decisions Crystal Reports.

Specify how secured tasks appear

Most securable tasks have an associated menu item or field. Application administrators can specify how these menu items and fields appear to a user who does not have access to them. You can specify whether the menu items and fields are hidden or whether they appear gray (which indicates that they are unavailable.)

1 Select **Tools > Options**.

2 In the **Options** window, look in the **Secured Menu Items** box. Select **Don't display** or **Display as disabled**.

3 Click [**OK**].

> **Notes:**
> - You must be an application administrator to perform this task.
> - The menu is subject to task security. You may not be able to see this menu item if the application administrator has selected **Don't display** in the **Secured Menu Items** box.
> - Application administrators need to specify this setting in only one application for the effect to be seen in all applications.

Glossary of security terms

Application Administrator

An application administrator has unrestricted access to all features in Sage 300 Construction and Real Estate. They can set up task security and set up most aspects of record security in the Security Administration tool. For a complete list of tasks that an application administrator can perform, see "Setting up security " on page 52.

Like other users, an application administrator has a user name and password. If security is on, application administrators must type this user name and password after they start an application.

Only security administrators can create users.

Application Log

Logs the start and end of Accounting applications and tasks.

Application Security

Application administrators can prevent unauthorized users from accessing Sage 300 Construction and Real Estate by turning on application security. When application administrators turn on application security, all users must enter a user name and password to access the software. They can restrict access to software features and data that each user has permission to access. Security Administration offers four types of application security: task, file, record, and company.

Application security also lets application administrators hide applications from users and roles. When an application administrator uses the Security Administration tool to deny a user or role access to all tasks in an application and sets secured menu items to not display, users cannot see the application in the Sage Desktop.

Audit Setup Log

Logs changes when the audit setup activity is selected in an Accounting application.

Company Security

Company security allows an application administrator to grant a user access to specific companies.

Security administrators and application administrators have access to all companies.

Estimating Security

Estimating products allow you to secure certain files. This file security is similar to Security Administration file security but is different in that it uses only a password and not a combination of user name and password.

You can assign a full access password to all securable Estimating files. This password allows you to both read a file and write to a file.

With Estimating databases, you can also assign a read-only password. This password allows you to take off items from a database but not modify a database.

Field Report Log

Logs changes to finalized field reports in Project Management.

File Security

File security allows application administrators to block all access to a file. This includes access through open database connectivity and through all related tasks, reports, and inquiries. This differs from task security, which allows application administrators to block tasks selectively and does not allow them to control ODBC access.

Open Database Connectivity (ODBC)

Open Database Connectivity (ODBC) allows a Sage 300 Construction and Real Estate database and a third-party program such as Microsoft Access to communicate. Once you set up an ODBC connection (which requires a special ODBC driver), you can send data between the two programs.

Posting Recap Log

Logs recaps created while posting entries in Accounting. (For future use. No logs are created at this time.)

Record Security

With record security, you can control access to the Cash Management bank account, General Ledger prefix, Job Cost and Project Management job, and Property Management property records.

When record security is active, reports and inquiries display only the records to which the user has access.

Record security also affects Job Cost, Contracts, and Project Management tasks. In these applications, you can type or select only jobs to which you have access.

Roles

A role represents a group of users who have the same security requirements. A role has its own user account and its own task, record, file, and company permissions.

Security Administration

With Security Administration, application administrators can restrict access to tasks, files, records, and companies. For example, they can use task security to restrict who can set up vendors in Accounts Payable. With file security, they can restrict access to sensitive payroll files. With record security, they can produce reports that display only the jobs to which the user has security access. Finally, with company security, they can restrict access to which company information a user sees.

Security Administrator

Security administrators set up and maintain accounts for users. For a complete list of tasks that a security administrator can perform, see .

Security Log

Logs events in the Security Administration tool.

Setup Log

Logs changes to setup information in Accounting.

Strong Passwords

Strong passwords must meet the following conditions for complexity:

- Passwords must be at least eight characters long.
- Passwords must contain at least three of the following four character groups:

English uppercase characters (A through Z)

English lowercase characters (a through z)

Numbers (0 through 9)

Special characters (~ ! @ # $ % ^ & * ( ) - + = { } [ ] | \ : ; < , > . ? /)

- Passwords expire every 90 days.
- You are warned 10 days before your password expires.
- You cannot reuse your three previous passwords.
- You must wait 10 days before changing your password.

System Log

Logs Accounting system events.

Task Security

With task security, an application administrator can restrict access to menu items and certain tasks found within windows.

Task Summary Log

Logs summaries created during an Accounting task. (For future use. No logs are created at this time.)

User

A user has restricted access to the Sage 300 Construction and Real Estate. A user can have security permissions that range from very restrictive to almost as complete as an application administrator.

All users have a user name and password. If Security Administration is on, you must type a user name and password immediately after you start an application.

Chapter 7: Sage 300 Construction and Real Estate ODBC

This chapter presents an overview of Sage 300 Construction and Real Estate open database connectivity (ODBC). After you install ODBC, you should refer to the ODBC Help for detailed information about how to use the driver to access databases.

ODBC overview

ODBC is a standard interface that serves as a translator between different database file structures and different software. The ODBC driver lets applications collect data from databases in other applications. Applications that are can access data via ODBC are commonly referred to as front-end applications and can include databases (for example, Microsoft® Access), word processors (for example, Microsoft Word), and spreadsheets (for example, Microsoft Excel). Applications such as Sage 300 Construction and Real Estate that make their data available through ODBC are referred to as back-end applications. Both the front-end and back-end applications must support the ODBC protocol for them to communicate with one another.

The Sage 300 Construction and Real Estate ODBC driver lets you read most Accounting and Management Products and Estimating Products records as well as create and delete some selected records. You cannot delete individual fields, but you can replace many fields with new data. See the "About record topics" topic in ODBC Help for a list of records and fields that you can edit. To access the Help file, click **Start > All Programs > Sage > Sage 300 Construction and Real Estate > Accounting > ODBC Help**.

> **Note:** You cannot use the Sage 300 Construction and Real Estate ODBC driver to access Purchasing, Inventory, or Service Management data. To access Purchasing, Inventory, or Service Management data through ODBC, use the Pervasive ODBC Engine Interface and Pervasive ODBC Client Interface drivers. For more information, see the Pervasive Help at **Start > All Programs > Pervasive.PSQL 10 > Control Center and Documentation**. Under **Documentation Library**, click **User's Guide > Using Pervasive PSQL > Setting Up ODBC Database Access**.

Important issues for ODBC users

This section contains important information. You should read it before you use the Sage 300 Construction and Real Estate ODBC driver.

ODBC Support Policy

Sage 300 Construction and Real Estate ODBC interfaces with a variety of third-party products. Because other products are involved, Sage cannot guarantee that our Customer Support can resolve all ODBC-related problems. Any multiple-vendor software arrangement requires a significant level of technical expertise. Technical conflicts between databases from different vendors may require you to seek assistance from a vendor other than Sage.

> **Important!** Currently, we test only Microsoft Office (Access, Word, and Excel) for compatibility with the Sage 300 Construction and Real Estate ODBC driver. We do not test for compatibility with any other products or programming languages, including Microsoft Visual Basic for Applications, which can be run from a macro within Microsoft Office. Although you may find success using another product, Customer Support can address only issues and problems that relate to the use of Microsoft Office (Access, Word, and Excel) to access data via the ODBC driver.

Data loss

ODBC processing leaves no audit trail of changes made, and its misuse can create untraceable data discrepancies. If Customer Support is unable to reproduce a data-dependent problem using Sage 300 Construction and Real Estate software and data, it is assumed that the problem is specific to a data discrepancy introduced with ODBC.

Points to consider before you use ODBC

For fields like notes and memos, Sage 300 Construction and Real Estate software simply stores the values. Some fields have a data dependency (the value in one field can affect the value of another field). In other fields, the software requires the value to have a certain format or be within a specified range. When you make changes through a Sage 300 Construction and Real Estate application, the software handles dependencies automatically. ODBC does not handle dependencies. It is up to you to be aware of these issues and make any necessary edits. To be safe, you should always back up any database before you modify it through ODBC.

Consider the issues that follow before you write changes to a data file through ODBC:

- **Data Dependencies:** the values in some fields change based on the value contained in another field.

  An example of data dependency in Estimating is the item record's labor and equipment price fields. These two price fields require the item to have an empty crew field. When you enter a labor or equipment crew into the item's crew field, Estimating removes the corresponding cost category's price, because the price is now derived from the labor/equipment rate table for that crew. ODBC will allow you to write a crew to the item record without removing the cost category's price. This results in an invalid record.

- **Referential Integrity:** some records which reside in one data file relate to records in another file.

  An example of referential integrity in Estimating is the item record. The item record (pei) references its phase record, which is stored in the standards file (pes.dat). This same item may be part of an assembly, which exists in the assembly file (pwa.dat). With ODBC, you can write a change to the phase of a given item record. This change would not automatically carry through to the assembly file. The assembly would then reference a phase or item that no longer existed. It would even be possible to assign a phase to the item for which there was no corresponding phase record in the standards file.

  An example of referential integrity in Accounting is the relationship between a job record and one of its subsidiary category records. Amounts that you enter through a miscellaneous worksheet into a category's miscellaneous category amount field directly affect the total miscellaneous category amount field in the job record. If you modify one of those fields through ODBC and do not modify the other, the Job Cost Master file becomes out of balance.

- **Formatting:** Sage 300 Construction and Real Estate applications expect the value stored in some fields to be formatted in a certain way.

An example of expected formatting in Estimating Products is the phase record. The General Information screen in your database displays the value entered in the Estimating phase suffix field. Phases you enter through Estimating will automatically conform to this setting. Through ODBC, you can to enter a phase which does not match the formatting specified in your General Information.

Proper use of ODBC requires a thorough understanding of these dependencies to make sure referential integrity is preserved.

Special considerations for Sage Estimating users

The following is a brief sample of fields and record types with which Estimating users should be thoroughly familiar before they use ODBC. This list is not complete and is no substitute for an in-depth understanding of the application's records and fields. Estimating software is continually enhanced to keep up with customer requests and industry trends. As a result of these enhancements, fields and their attributes change. Refer to ODBC Help for lists of Estimating records and fields.

- If you create or add to an existing price link, you must also make applicable changes to the item prices.

- Each record has one or more key fields, and some records have alternate keys. These fields distinguish one record from another and must be unique. For instance, on the subcontractor record, the key field is the sub number. While two or more subcontractors may have the same address or sub type, each must possess a unique sub number and spreadsheet name (alternate key). You should be familiar with the key fields for any records you intend to modify through ODBC. In ODBC Help, key fields are marked with **(k)**.

- Avoid changing hierarchical flags on existing records. For example, the Group phase field on the phase record and the Group workpackage field on the workpackage record.

- Do not change values that result from a calculation. For instance, do not change the estimate total amount or sequence numbers in an estimate.

- Delphi users should be aware that the Delphi Database Engine supports the read capabilities of Sage 300 Construction and Real Estate ODBC, but does not fully support the write capabilities.

- Refer to the "About the possible characters in Estimating database records" topic in ODBC Help for detailed information on allowable entries to specific fields.

- ODBC provides the ability to use non-Estimating tools for data manipulation and reporting. When you use ODBC to write to Estimating files, you become responsible for many tasks which Estimating handles automatically.

ODBC adds power and flexibility, but demands care and knowledge. If you elect to write to your Estimating files, use caution and a realistic assessment of your own knowledge of the Estimating system as a guide.

Set up a data source

Before you can use the ODBC driver, you must first set up a link to a Sage 300 Construction and Real Estate data source. The data source contains the data a user wants to access and its associated Database Management System. The data is pulled from a back-end application, for example, General Ledger. The data is then sent to a front-end application, such as Microsoft Excel. Each data source you set up has a data source name (DSN), which you provide.

When you set up a data source, you specify a particular ODBC driver to be attached to the data source. These drivers are programs that access the information in the database and translate it into a format that the front-end application (Microsoft Excel, for example) can read.

You must set up a DSN for each Sage 300 Construction and Real Estate database. For example, your company might maintain one database for its construction business and another for its remodeling business. Because these databases are stored in separate folders, you must set up a DSN for each database folder.

For detailed instructions on how to set up a DSN, see .

Use the ODBC driver

After you install ODBC and set up a data source, you can use the driver to access Sage 300 Construction and Real Estate information from the database. Procedures to collect this data depend on the front-end application being used. ODBC Help provides detailed instructions for accessing and inserting Sage 300 Construction and Real Estate data into Microsoft Query, Excel, Access, and Word. Refer to the How To section on the Help Contents tab for links to the applicable topics.

Other software manufacturers' ODBC-compliant products can access data through the Sage 300 Construction and Real Estate ODBC driver. Refer to those manufacturers' ODBC documentation for instructions on using ODBC.

Chapter 8: Crystal Reports

Introduction

If you already have technical experience using Crystal Reports®, this chapter will help you customize reports and invoices that you use in Sage 300 Construction and Real Estate applications. Please review the entire chapter before making changes to your reports.

If you do not have experience using Crystal Reports, contact your Sage certified consultant for help with creating custom reports that fit your business needs. You can also attend training sessions in Crystal Reports; visit http://www.sagesoftwareuniversity.com/ for more information.

Updated Crystal Reports runtime components

Sage 300 Construction and Real Estate version 16.1 updated the ODBC interface used by Crystal Reports for data access. On average, most reports now run faster; some reports run significantly faster.

Crystal Reports Designer

If you use the Crystal Reports Designer, you will need to verify that you have installed Crystal Reports For Sage 2013 SP2. This software only runs on Windows 7 SP1, Windows Server 2008, or higher operating systems (not Windows Vista). If you create new custom CR designs, use the Upgrade Crystal Reports Tool before using the designs in Sage 300 Construction and Real Estate.

DSN setup options in ODBC

The Timberline Data Source is automatically created the first time you open Sage 300 Construction and Real Estate. However, you must configure the Timberline Data Source before you customize reports and invoices.

> **Note:** Beginning with Sage 300 Construction and Real Estate version 16.1, you must have a properly configured DSN to run "Custom Description" reports—even though these reports may have run without a properly configured DSN in 15.1 and earlier versions of Sage 300 Construction and Real Estate.

To set up portability options for a report in the **ODBC Setup** window:

1 From the **Start** menu, select **All Programs > ODBC > 32bit ODBC Administrator** to open the **Data Source Administrator** window.

2 From the **User DSN**, **System DSN**, or **File DSN tab**, select **Timberline Data Source** and click **[Configure]**.

3 In the **Timberline Data ODBC Setup** window, click [**Options**] to open the **Data Source Options**.

> **Note:** Crystal report designs in Sage 300 Construction and Real Estate that use the Timberline Data Source use the following options: **Standard descriptions** for **Table and Field Naming**, **Use maximum table segment size** selected, and **Shorten field and table names** cleared.

The Table and Field Naming selection determines how table and field names appear when you access data using this data source name (DSN). Three options are available:

Naming Option	Description
Standard descriptions	(Recommended) Use this mode when you design a report for use in multiple databases. The default descriptions appear on the report design in Crystal Reports Designer. However, the operators' custom descriptions appear when the report is generated in Sage 300 Construction and Real Estate. If you select this option, you can use this report with all databases.
Custom descriptions	Use this mode when you design reports for a specific database. The custom descriptions for that database appear on the report design in Crystal Reports Designer. The custom descriptions also appear when the report is generated in Sage 300 Construction and Real Estate. If you select this option, you can only use it with databases that have the same custom descriptions as the database used when creating the report. If the custom descriptions in that database change, the report may break.
Dictionary names	Use this mode only when modifying Billing invoice reports and reports that were designed in Crystal Reports with dictionary names for Sage 300 Construction and Real Estate earlier than version 8.0.0. Dictionary names are internal table and field names that are less descriptive than the standard descriptions but provide the same functionality. If you select this option, you can use this report with all databases.

The following table uses the Accounts Receivable customer field as an example to show how different Field Naming options affect how the field appears.

Naming Option	Display Table and Field Name	Comments
Standard descriptions	ARM_MASTER_CUSTOMER.Customer	No change regardless of custom descriptions for **AR Customer**. Standard descriptions are always the default descriptions.
Custom descriptions	MASTER_ARM_CUSTOMER.Customer	If the custom description for **AR Customer** is "client," the field appears as MASTER_ARM_CLIENT.client
Dictionary names	MASTER_ARM_RECORD_1.CUST	No change regardless of custom descriptions. Internal names always appear in dictionary names.

To use reports in Sage 300 Construction and Real Estate that were designed using the Timberline Data Source, you must select the **Use maximum table segments size** check box when you design the reports. If you clear the **Use maximum table segment size** check box and you access a table with more than 255 columns, the table is split into two tables. If you select this option, tables remain intact regardless of size.

For example, the Job Cost JC job record contains more than 255 columns. If you clear the **Use maximum table segment size** check box, the table splits into two tables (JCM_Master_Job_1 and JCM_Master_Job_ 2). If you select the **Use maximum table segment size check box, the table does not split (JCM_ Master_Job)**.

> **Important!** Some programs, including Microsoft® Access, do not support the use of maximum table segment size. Clear the check box when you use DSNs associated with those programs. You should set up a separate DSN for these programs.

Before ODBC 8.00.3 (you can find the version number on the **Drivers** tab of the **ODBC Data Source Administrator**), the Timberline ODBC driver shortened table names longer than 36 characters and shortened field names longer than 25 characters. With the Accounting and Management Products 8.0.0 and Estimating Products 6.5.0 release, the ODBC driver stopped shortening table and field names. This change could cause previously designed reports and queries created with ODBC to stop working. A new option has been added to the ODBC driver setup to let you select the appropriate mode for the data source.

Select the **Shorten field and table names** check box to create a DSN compatible with reports that were designed with versions of the software earlier than Accounting and Management Products 8.0.0 and Estimating Products 6.5.0. Clear the check box to create a DSN compatible with reports that were designed later (when the table and field names were not shortened).

Crystal Reports integration

Requirements

You should use Crystal Reports For Sage 2013 SP2 (version 13) to modify or create report designs for Accounting and Management Products. For instructions on upgrading custom reports created with version 9 or later, see . For instructions on upgrading custom reports that were created using a version prior to 9, see .

> **Note:**
> For the data source name (DSN):
>
> - Use **Timberline Data Source** for all Crystal reports that you will use with Accounting and Management report menus.
>
> - Use **TS Billing Field Names** for Crystal reports that you will use for Billing invoice designs; see for more information .

Setting up printers

By default, the "No Printer" option (**Crystal Reports: File > Page Setup**) is selected for all Crystal report designs that ship with Sage 300 Construction and Real Estate. We recommend selecting this option for all Crystal reports you use to avoid potential printer error messages when using Sage 300 Construction and Real Estate applications with the Windows 7 operating system.

When printing a report in Crystal Reports, the data may print as cryptic symbols even though the report displays correctly in preview mode. This is because Crystal Reports requires Unicode functions to print. If your printer driver does not support Unicode, you must update your printer driver. To determine whether your printer driver supports Unicode, see the printer driver manufacturer's support web site.

> **Note:** In Crystal Reports, you must select **Crystal Syntax** as the **Default Formula Language** (**File>Options>Formula Editor** tab > **Default Formula Language**).

Integration formulas

This section provides a list of acceptable formulas to use for generating reports.

Designs created in Crystal Reports use formulas to convey required report information to Sage 300 Construction and Real Estate. These formulas query the Sage 300 Construction and Real Estate application for, or provide it with, required information that is not already in a database table field. For example, you may need to set the margins of the report when it prints. You use a formula to provide the margin information to the application.

> **Caution!** Name the formulas exactly as they are named in this document. Formulas may be case sensitive and may not work unless the formula name matches the corresponding formula written in Sage 300 Construction and Real Estate code.

> **Important!** Do not type @ in front of formula fields. In Crystal Reports, "@" automatically appears in front of formula fields; for example, when you create a formula and type tsDesignMode, the formula appears as @tsDesignMode.

> **Note:** Integration formulas need only to be included in the report design to function. You do not need to include these formulas on the report itself.

Formula: tsAlternateSMFolder	
Description	This formula allows you to select whether you want a Service Management report to include current or historical information.
Syntax	None. Leave the formula value blank.
Example	@tsAlternateSMFolder=

Formula: tsApp	
Description	Use this formula to specify the application abbreviation for the report. This formula is required on all Service Management primary reports and subreports. The formula is not required on any report that uses the ODBC driver to access Sage 300 Construction and Real Estate data.
Syntax	"<Two-letter application abbreviation>"
Example	@tsApp = "SM"

Formula: tsAskFile	
Description	Use the tsAskFile formula to limit the file types the operator can choose when the report runs. This formula applies to the main report. It also applies to all subreports unless you use the tsSubAskFile formula on the subreports. This formula does not have file merging capabilities. If you use the following formula example on a report design, the report will prompt the operator to choose between the New.glt file and the Current.glt file when the report runs. Without the formula on the report, the operator could choose whatever file codes are available. For more information click "Formula: tsSubAskFile"
Syntax	"[<file type>(<file code name>[,<file code name>]*)]" **<file type>** = the abbreviation of the data file type; for example: BLI, GLT, APT, etc. <file code name> = the file code name of the data file; for example: new, current, history, active, standard, etc.
Example	@tsAskFile = "GLT(new,current)" or "GLT(new, current)JCT(current)"

Note: You can also use one file code name in the tsAskFile function to force the report to use a specific file; for example, use @tsAskFile = "JCT(new)".

Formula: tsDataFolder	
Description	Use this formula to specify the data folder to use for previewing the report in Crystal Reports Designer. This formula is ignored when the report is generated in Sage 300 Construction and Real Estate; the report uses the current data folder path instead.
Example	@tsDataFolder = "C:\Timberline Office\YourCompanyDataFolder"

> **Caution!** If you place this formula on a primary report and you want to use it on a subreport, you must pass the formula to the subreport as a shared variable. Subreports do not automatically read the formula from the primary report.

You can use the tsDataFolder formula with any of the following functions:

tsarContractCustomerDetail	tsarContractOnlyDetail
tsarCustomerDetailWithRetainage	tsarJobCustomerDetail
tsarJobOnlyDetail	tsControlData
tsCustomDescription	tsFieldSection
tsFieldSectionDesc	tsglFiscalEntityInfo
tsHeaderData	tsItemDesc
tsLetterheadStyle	

For more information on these functions, see .

Set the tsDataFolder formula to the same data path appearing in the **Database** box of the **ODBC Setup** window for the DSN if the report uses any of these user-defined functions:

- tsControlData

- tsHeaderData

- tsCustomDescription

Formula: tsDesignMode	
Description	This formula specifies the DSN mode used to create the report design. The DSN mode of the report design must match the mode selected for the Table and Field Naming option when you access or process the report. Do not use this formula on report designs that use custom descriptions as the naming option. When you run the report from Sage 300 Construction and Real Estate, the tsCrystal interface looks to the report design for the tsDesignMode formula. If the formula exists on the design, the system takes the value of the formula and sets the Table and Field Naming option to match it. If the formula is not on the report, the Table and Field Naming option automatically sets to custom descriptions.
Syntax	"<mode>"; mode can be "Dictionary" (dictionary names) or "SDesc" (standard description)
Example	@tsDesignMode = "SDesc"

> **Note:** Custom Billing invoice formats and subreports must include the tsDesignMode formula with a value of "Dictionary". See "Customizing Crystal Reports" on page 103 for more information.

Formula: tsDesktopId	
Description	If you use security and you link a Desktop home page to an estimate, Sage 300 Construction and Real Estate will ask for your user name and password when you open the estimate. Use the tsDesktopId formula together with the TSEstimatingDKM function to suppress the request for user name and password when you open an estimate from a home page. "Function: tsEstimatingDKM" on page 93 for more information on applying this function. Add the tsDesktopId function to the main report. Add the TSEstimatingDKM function to hyperlinks that link to estimates.
Example	@tsDesktopId = ""

Formula: tsLetterhead	
Description	Use this formula in conjunction with the tsLetterheadStyle function. This formula dynamically places the letterhead image when the report runs. This formula is not required. This formula dynamically places the letterhead image only when the formula is set to "Y" and you have selected the Use this letterhead image below for my forms option in the Options window (Tools > Options > Letterhead tab > Use the letterhead image below for my forms). Sage 300 Construction and Real Estate will not dynamically place the letterhead image if any of the following conditions are true: You set the formula to "N." You select one of the other letterhead options in the Options window You do not include the formula on the report. For more information on the tsLetterheadStyle function, see "Function: tsLetterheadStyle" on page 98.

Formula: tsMargins	
Description	Use the tsMargins formula to display the [**Page Setup**] button on the **Print Selection** window when you run the report from the **Report** menu in Sage 300 Construction and Real Estate. The tsMargins formula allows you to the set margins for the report.
Example	@tsMargins =

Formula: tsReportType	
Description	Use this formula to identify the report type with the SQL Server database.
Syntax	SQL
Example	@tsReportType = "SQL"

Formula: tsSubAskFile	
Description	Use the tsSubAskFile formula on subreports only. Use this formula to limit the file types the operator can choose for the subreport when it runs. To limit the file types the operator can choose for the main report, use the tsAskFile formula. See "Formula: tsAskFile" on page 82 for more information. The tsSubAskFile formula applies to only the subreport on which you use it, not to other subreports. This formula does not have file merging capabilities. If you use the following formula example on a report design, the report will prompt the operator to choose between the New.jct file and the Current.jct file when the report runs. Without the formula on the report, the operator could choose from the new, current, or history file.
Syntax	"[<file type>(<file code name>[,<file code name>]*)];Prompt Text" <file type> = the abbreviation of the data file type; for example: BLI, GLT, APT, etc. **<file code name>** = the file code name of the data file; for example: new, current, history, active, standard, etc. **Prompt Text** = Text to inform the person that runs the report. You can use the prompt text to indicate which subreport requires this selection.
Example	@tsSubAskFile = "JCT(new,current);Select a file for the Job Cost Transaction subreport"

Note: You can also use one file code name in the tsSubAskFile function to force the report to use a specific file: for example, use @tsSubAskFile = "JCT(new)".

User-defined functions

You can use the Sage 300 Construction and Real Estate user-defined functions in conjunction with Crystal Reports formulas on all reports. These user-defined functions instruct the application how to transform the data retrieved by a formula. To select a user-defined function, in the **Formula Editor,** click **Functions** > **Additional Functions**.

Function: pjLastJobUsed	
Description	If you use this function on a field in the report design and if you selected the **Use last job** option in PJ Settings (Project Management: File > Company/Data Folder Settings > PJ Settings), the field retrieves the job number from of the last job used.
Syntax	pjLastJobUsed
Example	pjLastJobUsed()

Function: rmCurrentPropertyID	
Description	Use to retrieve the current Residential Management (RM) property. The current property is the property currently open or the last property opened in the RM application.
Example	rmCurrentPropertyID()

Function: rmSetupInfo	
Description	Use to retrieve setting information based on the Residential Management property you specify. The design retrieves the setting for the property if it is specific to the property; otherwise, it retrieves the system setting.
Syntax	rmSetupInfo(property, setting) **Property:** The Property ID **Setting:** The system setting you want to retrieve
Example	rmSetupInfo(rmCurrentPropertyID()"DefaultDepositCode")

Function: tsarContractCustomerDetail	
Description	Use this function to determine whether Accounts Receivable (AR) details should print for the specified contract and customer.

Function: tsarContractCustomerDetail	
Syntax	tsarContractCustomerDetail(Data Folder, AR Activity File, AR Transaction File, Contract, Customer, Aging As Of Date, Aging Basis, Include Retainage, Unpaid Only, Age Finance Charge) **Data Folder:** The report design must use the tsDataFolder formula, which stores the folder path information. **AR Activity File:** The full file path to the AR Activity (activity.ara) file. **AR Transaction File:** The full file path to the current AR Transaction (current.art) file. **Contract:** The Contract ID. **Customer:** The Customer ID. **Aging as of Date:** The cutoff date based on the Aging Basis date. **Include Retainage:** True or False value. A True value takes retainage transactions into account. A False value bypasses retainage transactions. **Unpaid Only:** True or False: A True value considers transactions at the invoice (status) level. A False value considers transactions at the activity level. **Age Finance Charge:** True or False value. A True value includes finance charges. A False value bypasses finance charges.
Example	**(From report AR Statement of Account(CR).rpt)** tsarContractCustomerDetail({tsDataFolder},{@tsFileName(ARA)},{@tsFileName(ART)},{ART_CURRENT_TRANSACTION.Contract},{ART_CURRENT_TRANSACTION.Customer},{?Aging Date},{?Aging Basis},{?Include Retainage?},{?Unpaid only?},{?Include Finance Charges?})

Function: tsarContractOnlyDetail	
Description	Use this function to determine whether Accounts Receivable (AR) details should print for the specified contract.
Syntax	tsarContractOnlyDetail(Data Folder, AR Activity File, AR Transaction File, Contract, Aging As Of Date, Aging Basis, Include Retainage, Unpaid Only, Age Finance Charge) **Data Folder:** The report design must use the tsDataFolder formula, which stores the folder path information. **AR Activity File:** The full file path to the AR Activity (activity.ara) file. **AR Transaction File:** The full file path to the current AR Transaction (current.art) file. **Contract:** The Contract ID. **Aging as of Date:** The transaction cutoff date based on the Aging Basis date. **Aging Basis:** The date that the Aging as of Date uses to determine the cutoff date. **Include Retainage:** True or False value. A True value takes retainage transactions into account. A False value bypasses retainage transactions. **Unpaid Only:** True or False. A True value considers transactions at the invoice (status) level. A False value considers transactions at the Activity level. **Age Finance Charge:** True or False value. A True value includes finance charges. A False value bypasses finance charges.
Example	**(From report AR Statement of Account (CR).rpt)** tsarContractOnlyDetail({@tsDataFolder},{@tsFileName(ARA)},{@tsFileName(ART)},{ART_CURRENT_TRANSACTION.Contract},{?Aging Date},{?Aging Basis}, {?Include Retainage?},{?Unpaid only?},{?Include Finance Charges?})

Function: tsarCustomerDetailWithRetainage	
Description	Use this function to determine whether Accounts Receivable details should print for the specified customer.
Syntax	tsarCustomerDetailWithRetainage(Data Folder, AR Activity File, AR Transaction File, Customer, Aging As Of Date, Aging Basis, Include Retainage, Unpaid Only, Age Finance Charge) **Data Folder:** The report design must use the tsDataFolder formula, which stores the folder path information. **AR Activity File:** The full file path to the AR Activity (activity.ara) file. **AR Transaction File:** The full file path to the current AR Transaction (current.art) file. **Customer:** The Customer ID. **Aging as of Date:** The transaction cutoff date based on the Aging Basis date. **Aging Basis:** The date that the Aging as of Date uses to determine the cutoff date. **Include Retainage:** True or False value. A True value takes retainage transactions into account. A False value bypasses retainage transactions. **Unpaid Only:** True or False. A True value considers transactions at the invoice (status) level. A False value considers transactions at the Activity level. **Age Finance Charge:** True or False value. A True value includes finance charges. A False value bypasses finance charges.
Example	**(From report AR Statement of Account (CR).rpt)** tsarCustomerDetailWithRetainage({@tsDataFolder},{@tsFileName(ARA)}, {@tsFileName(ART)},{ART_CURRENT_TRANSACTION.Customer},{?Aging Date},{?Aging Basis},{?Include Retainage?},{?Unpaid only?},{?Include Finance Charges?})

Function: tsarJobCustomerDetail	
Description	Use this function to determine whether Accounts Receivable details should print for the specified job and customer.
Syntax	tsarJobCustomerDetail(Data Folder, AR Activity File, AR Transaction File, Job, Customer, Aging As Of Date, Aging Basis, Include Retainage, Unpaid Only, Age Finance Charge) **Data Folder:** The report design must use the tsDataFolder formula, which stores the folder path information. **AR Activity File:** The full file path to the AR Activity (activity.ara) file. **AR Transaction File:** The full file path to the current AR Transaction (current.art) file. **Job:** The Job ID. **Customer:** The Customer ID. **Aging as of Date:** The transaction cutoff date based on the Aging Basis date. **Aging Basis:** The date that the Aging as of Date uses to determine the cutoff date. **Include Retainage:** True or False value. A True value takes retainage transactions into account. A False value bypasses retainage transactions. **Unpaid Only:** True or False. A True value considers transactions at the invoice (status) level. A False value considers transactions at the Activity level. **Age Finance Charge:** True or False value. A True value includes finance charges. A False value bypasses finance charges.
Example	**(From report AR Statement of Account (CR).rpt)** tsarJobCustomerDetail({@tsDataFolder},{@tsFileName(ARA)},{@tsFileName (ART)},{ART_CURRENT_TRANSACTION.Job},{ART_CURRENT_ TRANSACTION.Customer},{?Aging Date},{?Aging Basis},{?Include Retainage?}, {?Unpaid only?},{?Include Finance Charges?})

Function: tsarJobOnlyDetail	
Description	Use this function to determine whether Accounts Receivable details should print for the specified job.
Syntax	tsarJobOnlyDetail(Data Folder, AR Activity File, AR Transaction File, Job, Aging As Of Date, Aging Basis, Include Retainage, Unpaid Only, Age Finance Charge) **Data Folder:** The report design must use the tsDataFolder formula, which stores the folder path information. **AR Activity File:** The full file path to the AR Activity (activity.ara) file. **AR Transaction File:** The full file path to the current AR Transaction (current.art) file. **Job:** The Job ID. **Aging as of Date:** The transaction cutoff date based on the Aging Basis date. **Aging Basis:** The date that the Aging as of Date uses to determine the cutoff date. **Include Retainage:** True or False value. A True value takes retainage transactions into account. A False value bypasses retainage transactions. **Unpaid Only:** True or False. A True value considers transactions at the invoice (status) level. A False value considers transactions at the Activity level. **Age Finance Charge:** True or False value. A True value includes finance charges. A False value bypasses finance charges.
Example	**(From report AR Statement of Account (CR).rpt)** tsarJobOnlyDetail({@tsDataFolder},{@tsFileName(ARA)},{@tsFileName(ART)}, {ART_CURRENT_TRANSACTION.Job},{?Aging Date},{?Aging Basis},{?Include Retainage?},{?Unpaid only?},{?Include Finance Charges?})

Function: tsControlData	
Description	Use this function to retrieve information such as company name, address, and phone number from the Ts.ctl file.
Syntax	tsControlData(Data Folder Name, Field Name, Flags) **Data Folder Name:** The report design must use the tsDataFolder formula, which stores the folder path information. **Field Name:** You can type (case sensitive): "Name" "Address" or "Address 1" and "Address 2" "City" "State" "Zip" "Phone" "Fax" "Email" "Web Address" "Accounting Method" "Assign Batch Name" **Flags:** You can type "P" to pluralize. "A" for all capital letters. "I" for initial capital letters. "F" to capitalize the first letter only. "L" for all lowercase. "" to print as it is in the database.
Example	tsControlData(@tsDataFolder, "Name", "A") prints the company name in all capital letters.

Function: tsCustomDescription	
Description	This function retrieves custom descriptions from the ts.fld file.
Syntax	tsCustomDescription(Data Folder Name, Code, Flags) **Data Folder Name:** The report design must use the tsDataFolder formula, which stores the folder path information. **Code:** The custom description field code. **Flags:** You can type: • "P" to pluralize. • "A" for all capital letters. • "I" for initial capital letters. • "F" to capitalize the first letter only. • "L" for all lowercase. • "" to print as it is in the database.
Example	**tsCustomDescription(@tsDataFolder, 13, "A")** prints the JC Change Order custom description in all capital letters.

> **Note:** All custom description codes are stored in the Ts.fld file. Custom descriptions are listed when you print an available fields report (**TR:Tools > Available Fields**) and you select the **Include information for ODBC reporting?** check box in the **PrintAvailable Fields – Print Selection** window.

The tsCustomDescription function was new on Accounting and Management Products 8.0.0 and is used on new Crystal Reports designs. Earlier versions stored a function with a slightly different syntax called tsCustomDesc. The Billing invoice reports still use the older function. Both functions are stored in the u2lts.dll file on Accounting and Management Products 8.0.0 and later.

Function: tsEstimatingDKM	
Description	If you use security and you link a report design used as a Sage 300 Construction and Real Estate Desktop home page to an estimate, Sage 300 Construction and Real Estate will ask for your user name and password when you open the estimate. Use the tsEstimatingDKM function to suppress the request for user name and password when you open an estimate from a home page in Desktop.
Syntax	**tsEstimatingDKM({@tsDesktopID}, {Detail.PATH} & "\" & {Detail.FILENAME});** Detail.PATH and Detail.FILENAME are fields that store the estimate's path and file name in the Estimating Explorer database.

> **Note:** You must add the tsDesktopId formula to the main report when you use the tsEstimatingDKM function in a hyperlink to an estimate.

Function: tsFieldSection	
Description	Use this function to determine the value in a customer-specified field section. A **field section** is any portion of the GL Account, JC Job, or AR Customer that you define. For example, you can define up to 3 prefixes, the base, and the suffix of a GL Account. Therefore, these are field sections. Using the tsFieldSection function, you can retrieve the prefix, base, or suffix field information from the GL Account.
Syntax	tsFieldSection(Data Folder Name, File Type, Field Name, Section, Value) **Data Folder Name:** Type a path to the data folder or use the tsDataFolder formula, which stores the folder path information. **File Type:** The type of file. For example, type "GLM" for the General Ledger account file or "JCM" for the Job Cost master file. **Field Name:** The name of the field. For example, type "AACCT" for the General Ledger account field. **Section:** Section 1, Section 2, or Section 3; Base; Suffix **Value:** The ODBC field name on which to act. For example, **GLT_CURRENT_TRANSACTION.Account** for the Account number from the GLT current transaction file, **GLM_MASTER_ACCOUNT.Account** for the Account number from the GLM Master account record, or **JCM_MASTER_JOB.Job** for the job number from the JCM Job record.
Example	**tsFieldSection(@tsDataFolder, "GLM", "AACCT", "Section 1", GLM_ MASTER_ACCOUNT.Account)** prints the information in section 1 of the **GL Master Account** field.

Function: tsFieldSectionDesc

Description	Use this function to determine the description in a customer-specified field section. A **field section** is any portion of the GL Account, JC Job, or AR Customer that you define. For example, you can define up to 3 prefixes, the base, and the suffix of a GL Account. Therefore, these are field sections. Using the tsFieldSection function, you can retrieve the prefix, base, or suffix field description information from the GL Account.

Syntax	tsFieldSectionDec(Data Folder Name, File Type, Field Name, Section, Flags)
	
	Data Folder Name: Type a path to the data folder or use the tsDataFolder formula, which stores the folder path information.
	File Type: The type of file. For example, type "GLM" for the General Ledger account file or "JCM" for the Job Cost master file.
	Field Name: The name of the field. For example, type "AACCT" for the General Ledger account field.
	Section: Section 1, Section 2, or Section 3; Base; Suffix
	Flags: You can type:
	  • "P" to pluralize.
	  • "A" for all capital letters.
	  • "I" for initial capital letters.
	  • "F" to capitalize the first letter only.
	  • "L" for all lowercase.
	  • "" to print as it is in the database.

Example	**tsFieldSectionDesc(@tsDataFolder, "GLM", "AACCT", "Section 1", "A")** prints the section 1 description of the **GL Master Account** field in all caps.

Function: tsglFiscalEntityInfo	
Description	Use this function to report on the Australian Business Number (ABN) for General Ledger or Accounts Payable accounts. For General Ledger accounts, you can report on the ABN for a General Ledger prefix or the entire account number.
Syntax	tsglFiscalEntityInfo(Data Folder Name, Field Name, Prefix or Account, Account Section) **Data Folder Name:** Type the path to the data folder or use the tsDataFolder formula, which stores folder path information. **Field Name:** You must use "abn" as the field name. **Prefix or Account:** Type a valid prefix number or account number from the general ledger chart of accounts or type a valid accounts payable account number. **Account Section:** Type the section of the account to use. You can type: • "account" • "prefix a" • "prefix b" • "prefix c" • "full prefix"
Example	tsglFiscalEntityInfo(@tsDataFolder,"abn","10-1201","account")
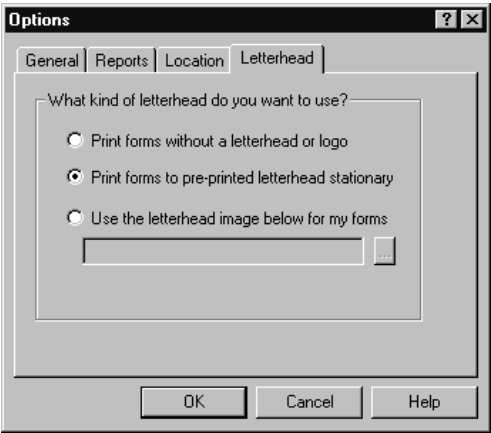
Function: tsHeaderData	
Description	Use to determine the header information, such as header records in the BLM file.
Syntax	tsHeaderData(Data Folder Name, File Name, Header Number, Field Name, Flags) **Data Folder Name:** The report design must use the tsDataFolder formula, which stores the folder path information. **Name:** Use the actual file name; for example, Master.apm or Master.blm. **Header Number:** Identifies the header record from which the field is retrieved. **Field Name:** Use the internal field name; for example, SATXT or PABN. **Flags:** You can type: • "P" to pluralize. • "A" for all capital letters. • "I" for initial capital letters. • "F" to capitalize only the first letter. • "L" for all lowercase. • "" to print as it is in the database.
Example	tsHeaderData(@tsDataFolder, "Master.blm", 2,"SATXT", "PA") retrieves the **Auto Text** field from the **BL Settings Header**, adds an "s" to the end, and prints in all capital letters.

Notes: Internal field names are listed when you print an available fields report (**TR: Tools > Available Fields**) and you select the **Include information for ODBC reporting?** check box in the **Print Available Fields – Print Selection** window.

To retrieve a date field, you must use the Crystal Reports ToDate function to convert the string value to a date. To retrieve a number, you must use the Crystal Reports ToNumber function to convert the string value to a number.

Function: tsItemDesc	
Description	This function returns the description of a list field. Use this function to perform string comparisons on list fields that contain custom descriptions.
Syntax	tsItemDesc(Data Folder Name, File Type, Field Name, Item Name, Format) **Data Folder Name:** Type a path to the data folder or use the tsDataFolder formula, which stores the folder path information. **File Type:** The type of file. For example, type "ART" for the accounts receivable transaction file. **Field Name:** The name of the custom list field. For example, type "TATYPE" for the accounts receivable Amount Type custom list. **Item Name:** The short description of the custom list item. For example, type "PMT" for the cash receipt accounts receivable amount type. **Format:** • "P" to pluralize. • "A" for all capital letters. • "I" for initial capital letters. • "F" to capitalize the first letter only. • "L" for all lowercase. • "" to print as it is in the database.
Example	**tsItemDesc(@tsDataFolder, "ART", "TATYPE","Lab","A")** returns **LAB**

Note: When you use tsItemDesc for literal string comparisons, set the Format parameter to nothing ("") to return the description unchanged.

Function: tsLetterheadStyle	
Description	This function retrieves your Sage 300 Construction and Real Estate letterhead settings (**Tools > Options > Letterhead** tab) and returns one of the following values: "NONE"—No logo prints. The company name and address print in the header section. "PREPRINTED"—No logo prints. Header is blank to accommodate letterhead stationery. "CUSTOM"—Logo prints on the left. Company address prints on the right. To accommodate the use of different database-specific Sage 300 Construction and Real Estate letterhead settings, all report designs created in Crystal Reports and included in the software have separate header sections for all three letterhead options. The tsLetterheadStyle function is used as a suppress condition on a header section. The function determines which letterhead to use and suppresses the unused letterheads when the report prints.
Example	(Page Header—Suppress Condition) **Custom:** tsLetterheadStyle({@tsDataFolder}) <> "CUSTOM" **Preprinted:** tsLetterheadStyle({@tsDataFolder}) <> "PREPRINTED" **None:** tsLetterheadStyle({@tsDataFolder}) <> "NONE"

Function: tsOperator	
Description	Use to determine the identity or the description of the operator printing the report
Syntax	tsOperator("Id") or tsOperator("Desc") **Id:** The identifier for the operator. **Desc:** The description for the operator. For example, the name of the operator.
Example	**tsOperator("Id")** prints the Sage 300 Construction and Real Estate Security Id and tsOperator("Desc") prints the Sage 300 Construction and Real Estate Security operator description.

Function: tsRange	
Description	Use this function to add range values to custom Crystal Report designs that you use in Sage 300 Construction and Real Estate applications. You can select the range values from a database list. To view the database list, do the following: Select **Report Designer: Tools > Available Fields**. Select the record that you want to use, and then click [**OK**]. For example, **AP - Vendor**. On the **Print Available Fields** window, select **Include information for ODBC reporting?**, and then click [**Start**]. **Note:** Use the report created in step 3 above to determine the values to use in the formulas listed below. **Important:** The tsRange parameter must be the last parameter on the report design.

Function: tsRange	
Syntax	**Formula 1:** "File Abbreviation, Record Number, Internal Name, Standard Order Number, Internal Name 2" **Parameter:** tsRange(*Formula 1 Name*) **Formula 2:** ((UBound({?tsRange(*Formula 1 Name*)}) = 1) and ({?tsRange(*Formula 1 Name*)}[1] = "")) or *Database Field* = {?tsRange(*Formula 1 Name*)} **Database Field:** {Table.Field} Expert: Formula 2 Name is True. **Formula Name:** The name of the formula can be whatever you choose. **File Abbreviation:** The three-letter abbreviation for the data file type. **Record Number:** The number of the record in the file. **Internal Name:** This is the key field. For example, VENDOR or JOB. **Standard Order Number:** Optional. This is the alternative key. Use it for sorting the records. **Internal Name 2:** Optional. This is the description field. For example, VNAME. **Database Field:** The field in the database to which the parameter is attached. Value options for the parameter should be set as follows: **Allow custom values:** True **Allow multiple values:** True **Allow discrete values:** True **Allow range values:** False (This is because you are using a Sage 300 Construction and Real Estate range rather than a Crystal range.) Steps to create function: **1** Name the formula and select the fields for the formula (**Formula Workshop > Formula Editor**). **2** Edit the value options for the parameter (**Edit Parameter**). **3** Attach the parameter to the database field (**Select Expert**).
Example	**Formula 1 Name:** VendorRangeSelection **Formula 1:** "APM,9,VENDOR,1,VNAME" **Parameter:** tsRange(VendorRangeSelection) **Formula 2 Name:** SELECT - Vendor Range or NULL **Formula 2:** ((UBound({?tsRange(VendorRangeSelection)}) = 1) and ({?tsRange (VendorRangeSelection)}[1] = "")) or APM_MASTER__VENDOR. Vendor = {?tsRange(VendorRangeSelection)} **Expert:@SELECT - Vendor Range or NULL is True.** Provides a range in vendor number order with a description of vendor name.

Special parameters in process reports

Process reports are reports that print forms and are printed directly from application tasks. This section describes the procedure for defining the process reports to print using Crystal Reports. Although most applications print process reports, only the Job Cost (JC) and Project Management (PJ) applications use Crystal Reports currently to print process reports.

Project Management uses the process reports that follow:

- Change order forms
- Change request forms
- Commitment change order forms
- Drawing logs
- Meeting minutes
- RFI forms
- Submittal forms
- Transmittal forms

Job Cost uses the process reports that follow:

- Change order forms
- Purchase order change order forms
- Purchase order forms
- Subcontract change order forms
- Subcontract forms

> **Note:** Do not type "?" in front of parameter fields. In Crystal Reports, "?" automatically appears in front of parameter fields; for example, when you create a parameter and type tsDocIndex, the parameter appears as **?tsDocIndex**.

Parameter: tsContactIndex	
Description	Only transmittal forms require this additional parameter to retrieve the contact ID created by the process for the report. In Crystal Reports, create the tsContactIndex string parameter. Link the ?tsContactIndex parameter on the main report to the Contact ID on the subreport to print the To contact information.

Parameter: tsDocIndex	
Description	Process reports require this parameter to retrieve the document ID created by the process for the report.
	Use a tsDocIndex parameter when you want a document to print for only a specific document ID.
	This parameter is stored in the u2lxx.dll files. These files are installed in different locations depending on the version of Crystal Reports that you use. If you use Timberline Registry Editor (TSRegEdit) to switch between different versions of Sage 300 Construction and Real Estate applications, always use the latest version of the Registry Editor to ensure that u2lxx.dll files are in the proper location.
	Create a parameter named tsDocIndex. Use **Select Expert (Report > Select Expert)** to set the document index field equal to **?tsDocIndex**. For each report type, use the settings that follow:
	RFIs:{PJD_DOCUMENT_RFI.RFI_INDEX} = {?tsDocIndex}
	Submittals: {PJD_DOCUMENT_SUBMITTAL.SUBMITTAL_INDEX} = {?tsDocIndex}
	Transmittals: {PJD_DOCUMENT_TRANSMITTAL.TRANSMITTAL_INDEX} = {?tsDocIndex}
	Purchase orders and subcontracts: {JCM_MASTER_COMMITMENT.doc_ID} = {?tsDocIndex}
	Change orders: {JCM_MASTER_CHANGE_ORDER.doc_ID} = {?tsDocIndex}
	Purchase order COs and subcontract COs:{JCM_MASTER_COMMITMENT_ CO.doc_ID} = {?tsDocIndex}

Could not open data folder error

If you set the location on all tables and try to preview the report in Crystal, you still may receive an error message stating: **Could not open data folder. Data folder does not exist, it is not a Timberline data folder, or the current operator does not have access.**

This message refers to the path in the report's tsDataFolder formula. The tsDataFolder formula must have a valid path to be previewed from Crystal.

To correct this error, follow these steps:

1 Click **[OK]** to this message.

2 Close the **Formula Workshop** window.

3 Under **Field Explorer**, double-click **Formula Fields** and select **tsDataFolder**.

4 Right-click and select **Edit**.

5 Change the path to match your accounting data folder path.

Customizing Crystal Reports

Add, modify, and create custom report designs

Use **Report Manager** to add Crystal Reports designs to your **Reports** menu.

All Crystal report designs available on the **Reports** menu in Sage 300 Construction and Real Estate use the following options with the Timberline Data Source: **Standard descriptions** for **Table and Field Naming**, **Use maximum table segment size** selected, **Shorten field and table names** cleared.

> **Note:** Crystal Reports integration features are compatible only with Crystal Report designs created with a DSN named "Timberline Data Source." Currently, the only exception is for Billing invoices, which use a DSN named **TS Billing Field Names**. For more information on the **TS Billing Field Names** DSN, see "Billing considerations" on page 105.

> **Note:**
> For the data source name (DSN):
>
> - Use **Timberline Data Source** for all Crystal reports that you will use with Accounting and Management report menus.
>
> - Use **TS Billing Field Names** for Crystal reports that you will use for Billing invoice designs; see "Billing considerations" on page 105 for more information .

If you do not use the Timberline Data Source, then you must do the following:

- On the computer from which you process the report:

  - You must create a data source name (DSN) with the same name DSN name used with the original report.

  - The DSN must use the same table and field naming option as the DSN you used to create the original design.

- If the original report design used the custom description naming option, your custom descriptions must match the custom descriptions used to create the report design.

If you use the Timberline Data Source, follow these steps to add, modify, and create custom report designs.

1 From the **Start** menu, select **Control Panel > Administrative Tools > Data Sources (ODBC))** to open the **ODBC Data Source Administrator** window.

2 From the **User DSN** tab, select **Timberline Data Source**.

3 Click [**Configure**].

4 Click [**Select Folder**] and select your Sage 300 Construction and Real Estate data folder. Click [**OK**].

5 Click [**Options**].

   a In the **Table and Field Naming** list, select **Standard descriptions**.

   b Select the **Use maximum table segment size** check box.

   c Clear the **Shorten field and table names** check box.

d Click [**OK**] twice.

6 Open Crystal Reports.

7 Log on to a Timberline data source.

a If you do not have the report open, from the **File** menu, select **Log On or Off Server**. If you have the report open, from the **Database** menu, select **Log On or Off Server**.

b In the **Data Explorer** window, double-click **Create New Connection**.

c Double-click **ODBC (RDO)**.

d Select **Timberline Data Source** and click **[Next]**.

e If necessary, type your **User ID** and **Password** for Sage 300 Construction and Real Estate.

f Click **[Finish]**.

g Click [**Close**].

8 Open the report design you want to modify and proceed to step 9 If you want to create a new report design, select **File > New**. Select the tables and fields that you want to use on the report; then design the report.

9 Set the location of the database.

a From the **Database** menu, select **Set Datasource Location**.

b Under **Current Data Source**, select the first data source.

c Under **Replace with**, select **Timberline Data Source**.

d Click [**Update**].

e Verify that all table locations in the **Set Datasource Location** window use the same data folder path. You know that all table locations point to the same path if only one group of tables appears under **Current Data Source**.

f Click [**Close**].

10 Repeat step 9 for each table in the report.

11 From the **Database** menu, select **Verify Database**. Click [**OK**] when the message appears that states, "The database is up to date." Repeat step 9 if the database is not up to date.

12 Review the list of formulas, functions, and parameters from section 3. "Crystal Reports integration" on page 80 to determine which to add or modify.

13 When you finish, save the report.

14 Use Reports Manager to add new reports to your Sage 300 Construction and Real Estate Reports menu.

Billing considerations

When upgrading, changing, or creating Billing invoice designs, you must first set the location and verify the database against a DSN called **TS Billing Field Names**.

Creating the TS Billing field names DSN

1 From the **Start** menu, select **All Programs** > **ODBC** > **32bit ODBC Administrator**.

2 Click the **User DSN** tab.

3 Click [**Add**].

4 Select **Timberline Data** as the new data source.

5 Click [**Finish**].

6 In the **Data Source Name** box, type **TS Billing Field Names**.

7 Click [**Select Folder**].

8 Select the folder where the Sage 300 Construction and Real Estate data is located and click [**OK**].

9 Click [**Options**].

10 In the **Table and Field Naming** list, select **Dictionary names.**

11 Select the **Use maximum table segment size** check box.

> **Note:** If the report was created in a version before Accounting and Management Products 8.0.0, you may need to clear the **Use maximum table segment size** check box.

12 Clear the **Shorten field and table names** check box.

13 Click [**OK**] to accept the new DSN.

14 Click [**OK**] to close the ODBC Administrator.

tsDesignMode formula

The Billing invoice format invoice design and all subreports must contain the **tsDesignMode** formula. The value in this formula must be **"Dictionary"**.

If you use a custom Crystal design for your Billing invoice task and it does not contain the **tsDesignMode** formula, you will receive the following error messages: "**Print Engine error 7: unable to connect to database**" and "**File** *report design* **is not a valid invoice design."**

> **Note:** The invoice format designs provided with your Sage 300 Construction and Real Estate software already include these changes.

Purchasing and Inventory considerations

Database record changes

You may need to modify Purchasing and Inventory custom reports to reflect Sage 300 Construction and Real Estate database changes. Refer to the *Accounting and Management Release Notes* to review database changes by application.

> **Notes:**
> - When you open Purchasing, Sage 300 Construction and Real Estate creates the "Timberline Office Data PO" and "Timberline PO Data" data sources. When you open Inventory, Sage 300 Construction and Real Estate creates the" Timberline Office Data IV" and "Timberline IV Data" data sources. These data sources are not available until you open Purchasing or Inventory.
> - Purchasing and Inventory reports have a .crs extension. When you open one of these reports in Crystal Reports, make sure to select **All files** for **Files of type**. This ensures that files with the .crs extensions appear in the **Open** window.

Modify custom reports

To modify custom Purchasing and Inventory reports that were created in a previous version of Crystal Reports.

1 Open the report in the current version of Crystal Reports.

2 For Purchasing or Inventory tables:

    a From the **Database** menu, select **Set Datasource Location**.

    b Under **Replace with**, double-click the **Create New Connection** folder.

    c Double-click the **ODBC (RDO)** folder.

    d In the **ODBC (RDO)** window, select **Select Data Source**.

    e In the **Data Source Name** list, select Timberline PO Data or Timberline IV Data. (Select Timberline PO Data if you are using a PO report; select Timberline IV Data if you are using an IV report).

    f Click [**Finish**].

    g For each table listed under **Current Data Source**, select the table, select the corresponding table in the **Replace with** area, and click [**Update**]. (If all the data sources are the same, you can do this at the data source level instead.)

    h Click [**Close**].

> **Note:** You may have to manually map changed fields.

3 For Sage 300 Construction and Real Estate tables:

    a From the **Database** menu, select **Set Datasource Location**.

    b Under **Replace with**, double-click the **Create New Connection** folder.

    c Double-click the **ODBC (RDO)** folder.

    d Click **Make New Connection** if the **Connection Information** window does not appear.

    e In the **ODBC (RDO)** window, select **Select Data Source**.

    f In the **Data Source Name** list, select **Timberline Office Data PO or Timberline Office Data IV.** (Select Timberline Office Data PO if you are using a PO report; select Timberline Office Data IV if you are using an IV report). Click [**Finish**].

    g For each table listed under **Current Data Source**, select the table, select the corresponding table in the **Replace with** area, and click [**Update**]. (If all the data sources are the same, you can do this at the data source level instead.)

    h Click [**Close**].

> **Note:** You may need to rename the report with a .crs extension after you save the report.

Formatted field formulas

Formatted fields are fields that you can format with sections separated by characters. You can create formulas that will print the following as formatted fields on reports:

- Job
- Job cost code
- Equipment
- Equipment cost code
- GL account

Formula content for formatted fields contains only the field name.

Formula Contents and Field Name	Formula Name
Job	FMTJOB + at least one character
Job Cost Code	FMTJCC + at least one character
Equipment	FMTEQU + at least one character
Equipment Cost Code	FMTECC + at least one character
GL Account	FMTGLA + at least one character

If you create a report that has several occurrences of the same fields from different records, you can create multiple formulas with different names; for example, if you create a report that uses the job and job cost code fields from both the **PODetail** and **POHeader** records, you could create the following formulas:

Field	Record	Formula Name
Job	PODetail	FMTJOB1
Job	POHeader	FMTJOB2
Job Cost Code	PODetail	FMTJCC1
Job Cost Code	POHeader	FMTJCC2

> **Note:** Formatting does not print from within Crystal Reports. Formatting does print when you print the report from the Reports menu in Purchasing or Inventory.

Ts.ctl formulas

You can create formulas to include the general company information stored in the control (Ts.ctl) file. Follow these steps.

> **Caution!** If your existing reports contain Purchasing or Inventory control file fields (for example., Companyname, Address1, Address2, etc.), you must replace them with the formulas listed in the following table.

1 Name the new formula according to the following table.

Ts.ctl Field Name	Ts.ctl Formula Name
Company	TSCOMPANY
Address	TSADDRESS
Address 2	TSADDRESS2
City	TSCITY
State	TSSTATE
Zip	TSZIP
Phone	TSPHONE
Folder	TSFOLDER

2 In the **Formula Editor** window, leave the contents of the formula blank.

3 Save the formula.

> **Note:** Return values for these formulas do not print from within Crystal. They do print when you print the report from the Reports menu in Purchasing or Inventory.

Parameter fields

When you print a report with parameter fields, the parameters determine which prompts appear in the print window. For example, if the parameter is a date field, the prompt uses the calendar control; if the parameter is a logic (true or false) field, the prompt uses a check box. For Purchasing and Inventory, name your parameters something specific if the design lets you see a list of available data for the parameter.

Preset parameter sets

All of the following parameter names allow use of drop-down selection lists to print.

Parameter	
STARTDATE	ENDDATE
FIRSTITEM	LASTITEM
FIRSTLOC	LASTLOC
FIRSTCLASS	LASTCLASS
FIRSTJOB	LASTJOB
FIRSTVENDOR	LASTVENDOR
FIRSTPO	LASTPO
FIRSTRECEIPT	LASTRECEIPT

Purchase order form and purchase order change order form parameters

Parameter	Purpose
PONUMBER	You want the report (for example, a purchase order form) to print for a single purchase order. Use also with the CONUMBER parameter as described below.
CONUMBER	You want the report (e.g., a purchase order change order form) to print for a single purchase order change order.

Note: Lists for these parameters do not appear from within Crystal. They work, but you must type a value, not select a value from a list. They do print when you print the report from the Reports menu in Purchasing or Inventory.

Add custom reports to the Purchasing or Inventory Reports menu

Use the steps that follow to add custom report designs to the Purchasing or Inventory **Reports** menu:

1 From the **Reports** menu in Purchasing or Inventory, select **Report Manager**.

2 To add a new report, click **[New]**. To change a report, click **[Change]**.

3 Type the **Report Name** (the name that will appear on the report menu).

4 Select a **Menu Group** from the list, or type the name for a new menu group.

5 Click **[List]** to browse for the report. These must be Crystal Reports designs with a .crs extension.

6 Select the report, and then click [**Open**].

7 Click **[OK]** to close the **Add New Report** window.

8 Click **[Close]** to close the **Reports Manager** window.

DSN error

If you install or upgrade Purchasing or Inventory on a computer that has the Windows 7 operating system, you may need to elevate your permissions level before starting the program or Purchasing/Inventory may not be able to create the DSNs necessary to use Crystal Reports. If you encounter an error message when starting Purchasing or Inventory for the first time after installation, close the program, elevate your permissions level, and start Purchasing/Inventory again.

Service Management considerations

Database record changes

You may need to modify Service Management custom reports to reflect Sage 300 Construction and Real Estate database changes. Refer to the *Accounting and Management Release Notes* to review database changes by application.

Modify custom reports

There are two options for setting up Crystal Reports in Service Management. If the report is designed to switch between the current and history files, see "Option A" (the next section). If the report is *not* designed to switch between current and history files, see "Option B ," on page 112.

Option A

1 Verify the Timberline Data Source is set up correctly. Subreports that pull information from the accounting database use the ODBC Timberline Data Source DSN.

   a From the **Start** menu, select **Control Panel > Administrative Tools > Data Sources (ODBC) to open the ODBC Data Source Administrator** window.

   b From the **User DSN** tab, select **Timberline Data Source**.

   c Click [**Configure**].

   d Click [**Select Folder**] and select your Sage 300 Construction and Real Estate data folder. Click [**OK**].

   e Click [**Options**].

   f Under **Data Source Options**, select **Standard descriptions from the Table and Field Naming list**.

   g Select the **Use maximum table segment size** check box.

   h Clear the **Shorten field and table names** check box.

   i Click [**OK**] twice.

   > **Note:** If you will print this custom report from within Crystal Reports, this DSN must use a valid Sage 300 Construction and Real Estate accounting data set.

2 Set the location to a valid data set.

   a From Crystal Reports, open the custom report you are upgrading.

   b From the **Database** menu, select **Set Datasource Location**.

   c Under **Current Data Source**, select the first data source.

   d Under **Replace with**, double-click **Create New Connection**.

   e Double-click **Btrieve**.

   f In the **Open** window, browse to the folder containing your Service Management data.

   g Select **FILE.DDF** and click [**Open**].

   h Select the data source that should replace the original.

   i Click [**Update**].

   j Repeat steps b through i for all data sources listed under **Current Data Source**.

   k Verify all table locations in the **Set Datasource Location** window point to the same data folder path. All table locations point to the same path if only one group of tables appears under **Current Data Source**.

   You must also set the location on all subreports. If a subreport retrieves Service Management data, follow the procedure in step 2. If a subreport retrieves data from the Timberline Data Source, follow the procedure in step 3 below. The **Current Data Source** window lists subreport data sources in a separate group.

3 Select the data source for the subreport.

   a From the **Database** menu, select **Set Datasource Location**.

   b Under **Current Data Source**, double-click **Subreports** and select the first data source.

    c Under **Replace with**, double-click **Create New Connection**.

    d Double-click **ODBC (RDO)**.

    e Select **Timberline Data Source**.

    f Click [**Finish**].

    g If you have security enabled, type your **Operator ID** and **Password**.

    h Click [**Close**].

4 After you use **Set Datasource Location**, verify the path on each table of the report is correct.

5 From the **Database** menu, select **Verify Database**.

6 From the **File** menu, select **Save**.

Option B

1 Verify the Timberline Data Source is set up correctly. Subreports that pull information from the accounting database use the Timberline Data Source.

    a From the **Start** menu, select **Control Panel > Administrative Tools > Data Sources (ODBC) to open the ODBC Data Source Administrator** window.

    b From the **User DSN** tab, select **Timberline Data Source**.

    c Click [**Configure**].

    d Click [**Select Folder**] and select your Sage 300 Construction and Real Estate data folder. Click [**OK**].

    e Click [**Options**].

    f Under **Data Source Options**, select **Standard descriptions from the Table and Field Naming list**.

    g Select the **Use maximum table segment size** check box.

    h Clear the **Shorten field and table names** check box.

    i Click [**OK**] twice.

2 Verify the Timberline SM Data DSN is set up correctly

    a From the **Start** menu, select **Control Panel > Administrative Tools > Data Sources (ODBC)** to open the **ODBC Data Source Administrator** window.

    b If you are operating in a server/workstation environment, select the **System DSN** tab and verify there is a **Timberline SM Data** DSN.

> **Note:** If **Timberline SM Data** does not appear in the list of data sources, create it automatically by the following steps: 1) Open Service Management at the server and preview any standard report. 2) Open Service Management at each workstation and preview any standard report.

    c If you are operating on a standalone system, perform steps d-h to set up the Timberline SM Data DSN manually; otherwise, continue with step 3.

    d If you are on a standalone system, create the Timberline SM Data DSN manually by selecting **Start > Control Panel > Administrative Tools > Data Sources (ODBC)** to open the **ODBC Data Source Administrator** window.

    e From the **System DSN** tab, click [**Add**].

    f Select the **Pervasive ODBC Engine Interface** driver.

    g Enter the following information in the **Pervasive ODBC Engine DSN Setup** window:

- **Data Source Name:** Timberline SM Data

- **Database Name:** From the list, select the entry starting with the letters **SM** in its label (for example, "SM1FE43AFDF79D459F").

Service Management creates two DSN GUIDs for each dataset. You may select any Service Management DSN GUID when creating the Timberline SM Data DSN manually. During run time, Service Management automatically points to the correct Service Management database.

    h Click [**OK**].

> **Note:** If you will print this custom report from within Crystal Reports, this DSN must use a valid Sage 300 Construction and Real Estate accounting data set.

3 Set the location to a valid data set.

    a From Crystal Reports, open the custom report you are upgrading.

    b From the **Database** menu, select **Set Datasource Location**.

    c Under **Current Data Source**, make note of any paths where *.ddf files exist (for example, C:\Development\Testdata\Field.ddf).

    d Click [**Close**] to close the **Set Datasource Location** window without changing any locations.

    e Based on the information you determined in step c, use Windows Explorer to browse to the location referenced by the custom report. Confirm that these files exist:

- Field.ddf

- File.ddf

- Index.ddf

    f If the files do exist there, copy the .ddf files from your Servmngt folder to the location you determined in step c. Typically, your Servmngt folder is located at X:\Program Files\Timberline Office\Accounting\Servmngt (where **X** represents the drive where your Sage 300 Construction and Real Estate programs are installed).

4 Verify the database.

a Open the report design in the current version of Crystal Reports and select **Database > Verify Database**.

b You may receive several prompts at this point. Respond to these messages as instructed until the **Map Fields** window appears:

- **"The Database file '[file name]' has changed. Proceeding to fix up the report!"** Click [**OK**] at this message.

- **"The database is now up to date."** Click [**OK**] at this message.

- If you receive message other than these (for example, "Remove table" messages), do not proceed. Close the design without saving your changes and then confirm that step 2 was done correctly before proceeding.

5 Open the custom report design in the current version of Crystal Reports and update the data source as follows:

a From the **Database** menu, select **Set Datasource Location**.

b Under **Replace with**, double-click the **Create New Connection** folder.

c Double-click the **ODBC (RDO)** folder.

d In the **ODBC (RDO)** window, select **Select Data Source**.

e In the **Data Source Name** list, select **Timberline SM Data** and then click [**Finish**].

f For each item listed under **Current Data Source**, select the corresponding table in the **Replace with** area and click [**Update**].

g Click [**Close**].

6 Verify the database.

a Select **Database > Verify Database**.

b Respond to the prompts as appropriate.

7 Save the custom report design.

You must also set the location on all subreports. If a subreport retrieves Service Management data, follow the procedure in steps 3-7. If a subreport retrieves data from Timberline Data Source, use the steps that follow. The **Current Data Source** window lists subreport data sources in a separate group.

8 Select the data source for the subreport.

a From the **Database** menu, select **Set Datasource Location**.

b Under **Current Data Source**, double-click **Subreports** and select the first data source. Many of the subreports retrieve information from the Timberline Data Source.

c Under **Replace with**, double-click **Create New Connection**.

d Double-click **ODBC (RDO)**.

e Select **Timberline Data Source**.

f Click [**Finish**].

g If you have security enabled, type your **Operator ID** and **Password**.

h Click [**Close**].

i After you use **Set Datasource Location**, verify that the path on each table of the report is correct.

j From the **Database** menu, select **Verify Database**.

k From the **File** menu, select **Save**.

DSN error

If you install or upgrade Service Management on a computer that has the Windows 7 operating system, you may need to elevate your permissions level before starting the program or Service Management may not be able to create the DSNs necessary to use Crystal Reports. If you encounter an error message when starting Service Management for the first time after installation, close Service Management, elevate your permissions level, and start Service Management again.

Add custom reports to the Service Management Reports menu

Use the steps that follow to add custom report designs to the Service Management **Reports** menu:

1 Open Service Management.

2 From the **Reports** menu, select **Custom Reports Manager**.

3 Click [**New**].

4 Type a **Name** for the new report.

5 Click the **Path** button and select the path to the report.

6 Type a **Submenu** name for the report.

7 To print the report automatically to a file, select the **Print to file** check box and type a **File name**.

8 Click [**Finish**].

9 Click [**Done**].

> **Notes:**
> If you want custom invoice formats in Service Management 8.3.0 and later to be retrieved, add them to the appropriate location. These custom formats include **Call Type**, **Service Location**, **AR Customer**, and **Service Management Settings**.
>
> You can store custom reports in a subdirectory for reports called **Custom** (file path **X:\Program Data\Sage\Timberline Office\9.5\Accounting\Report\Service Management\Custom** in Windows 2008, or **X:\Documents and Settings\All Users\Application Data\Sage\Timberline Office\9.5\Accounting\Report\Service Management\Custom** in all other supported operating systems). You must manually create this folder, but any reports you store there will be retrieved by Service Management before it retrieves the reports stored in the Service Management folder. This prevents custom reports from being overwritten during the upgrade process. This is most common for process-oriented reports like work orders and agreements. You must use the same name as the original report.

tsAlternateSMFolder

You can select whether you want a Service Management report to include current or historical information by adding the **tsAlternateSMFolder** function to the report. You do not need to add a value to the formula. For

more information on the tsAlternateSMFolder function, see "Formula: tsAlternateSMFolder," on page 81

tsApp

All Service Management reports designs and all subreports must contain the **tsApp** formula. The value in this formula must be **"SM."** However, this formula is not required on any report that uses the ODBC driver to access Sage 300 Construction and Real Estate data. For more information on the tsApp formula, see "Formula: tsApp," on page 82

Desktop considerations

You can display Crystal Reports in Sage Desktop. You will want to keep some concepts in mind when you create Crystal Reports designs for use as home pages.

To maximize the performance of Crystal Reports displayed in Sage Desktop:

- If you use subreports, use on-demand subreports.

- Do not use named files.

- If a report takes a long time to process, you may not want to display it in Sage Desktop.

The following formulas do not function on Crystal Reports displayed in Sage Desktop:

- tsAskFile

- tsSubAskFile

- tsLetterhead

Upgrade custom reports created with a version prior to 9

Follow the steps in this section to upgrade custom reports that were created in a version prior to version 9. For custom reports created in version 9 or later, use the Upgrade Crystal Reports Tool; see the "Chapter 8: Crystal Reports" on page 78 for more information.

> **Important!** Upgrading reports requires knowledge of Crystal Reports software. If you do not have experience using Crystal Reports, contact your Sage 300 Construction and Real Estate certified consultant for help with upgrading custom reports and creating custom reports that fit your business needs.

A. Verify that the Timberline Data Source is set up correctly

1 From the **Start** menu, select **All Programs > ODBC > 32bit ODBC Administrator**.

2 Click the **User DSN** tab and select **Timberline Data Source**.

3 Click [**Configure**] and then [**Select Folder**].

4 Select your data folder and click [**OK**].

5 Click [**Options**].

6 In the **Table and Field Naming** list, select **Standard descriptions**.

> **Note:** If the report was not created using standard descriptions, select the same table and field naming type used to create the original report.

7 Select the **Use maximum table segment size** check box.

8 Clear the **Shorten field and table names** check box.

9 Click [**OK**] twice.

B. Connect to the Timberline Data Source

1 If the report that you want to modify is not open, select **File > Log On or Off Server**. If you already have the report open, from the **Database** menu, select **Log On or Off Server**.

2 In the **Data Explorer** window, double-click **Create New Connection**.

3 Double-click **ODBC (RDO)**.

4 Select **Timberline Data Source** and click **[Next]**.

5 If necessary, type your **User ID** and **Password** for Sage 300 Construction and Real Estate.

6 Click **[Finish]**.

7 Click [**Close**].

C. Set the data source location

You may need to modify your custom reports to reflect Sage 300 Construction and Real Estate database changes. Refer to the *Accounting and Management Release Notes* to review database changes by application.

If there are no database changes listed in the *Release Notes* that affect your custom reports, skip to **D. Verify the database** (the next section).

If the database changes in the *Release Notes* includes changes to fields on your custom report:

1 In the **Set Datasource Location** window (**Database > Set Datasource Location**), under **Replace with**, select **Timberline Data Source**.

2 Click [**Update**].

3 Repeat these steps for each subreport.

D. Verify the database

If you are upgrading custom reports that were created for a previous version of Sage 300 Construction and Real Estate, follow these steps for each report design and each subreport design:

1 From the **Database** menu, select **Verify Database.**

2 Whenever a "The database file has changed" message appears, click [**OK**].

3 Whenever a "The database is now up to date" message appears, click [**OK**].

4 Answer the remainder of the messages as they appear.

5 From the **Database** menu, select **Verify Database** again.

6 When the "The database is up to date" message appears, click [**OK**].

7 Save the report design.

E. Add new tables to custom reports

If the database changes includes new tables that you want to use for a custom report:

1 Select **Database > Database Expert**.

2 From the **Available Data Sources** list, select the new table that you need to add to the report, click [**>**] to add the table to the **Selected Tables** list, and then click [**OK**].

3 On the **Links** tab, verify that the new table is linked correctly to the existing data tables, and then click [**OK**].

4 As necessary, replace or add fields to the report and report formulas, and revise the **Select Criteria**.

5 Save the report design.

Chapter 9: Estimating to Accounting Integration

Introduction

This section introduces you to the steps to transfer:

- Estimate information from Estimating to Job Cost.

- Estimate information to Project Management.

- Commitment information from Buyout to Job Cost or Purchasing.

- Commitment information from Purchasing to Job Cost.

> **Note:** Before you begin, be sure Estimating, Job Cost, Buyout, and, if needed, Purchasing and Project Management are set up and configured properly for your company. Contact your business partner or consultant if you have questions.

Sage 300 Construction and Real Estate terminology

Terminology varies between the estimating and accounting disciplines, so the Estimating, Job Cost, Buyout, and Purchasing applications use different terms to describe certain items. Please familiarize yourself with the terms contained in the table below before you proceed.

Job Cost	Estimating	Buyout	Purchasing
Cost Code (custom description*)	Job Cost Phase	Cost code	Reads data from Job Cost
Commitment ID	N/A	Purchase Order #	Purchase Order

*In Job Cost, you can define the description used for cost codes (**File > Company Settings > Custom Descriptions**). `

If your company uses different terms, you should substitute your company's terms for the ones used above.
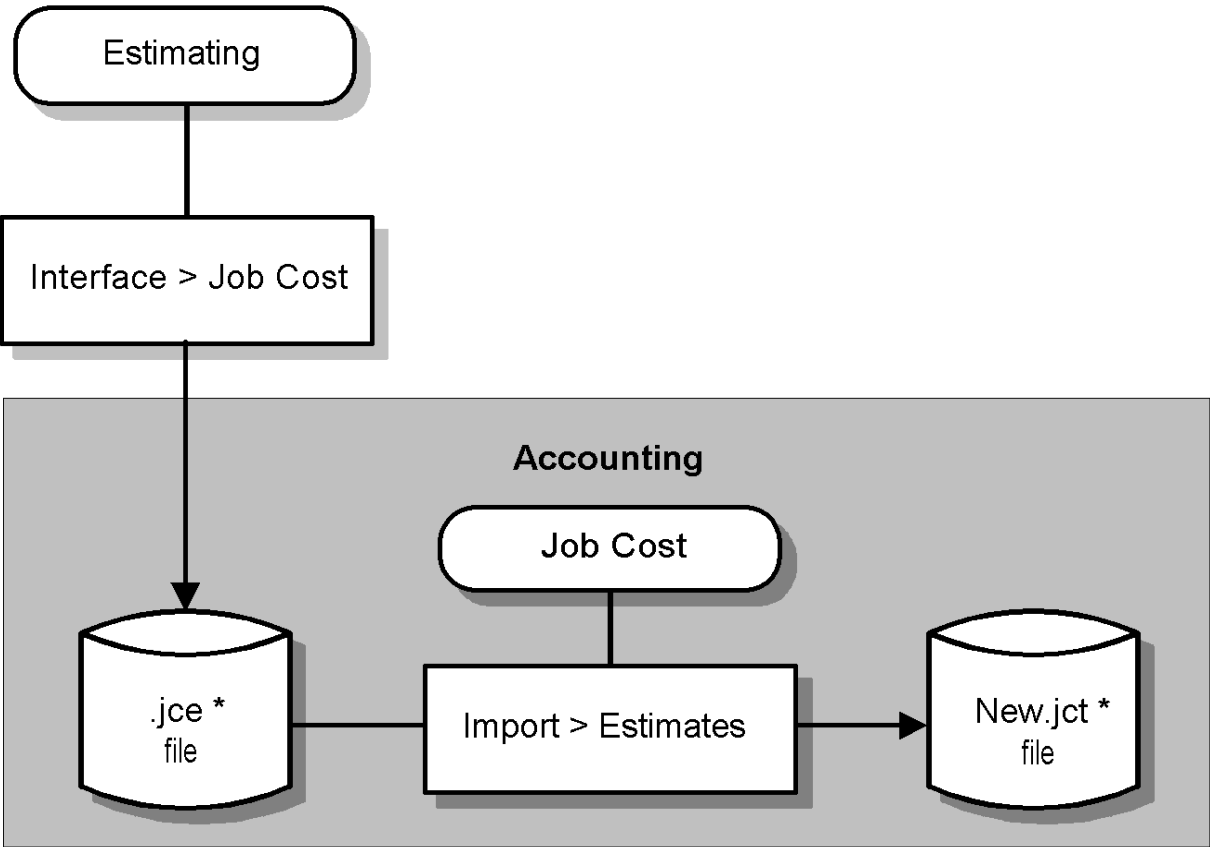
Estimate processing

Introduction

If you transfer estimate information directly into your job costing application, you can efficiently access budget and transaction data without rekeying the information. This section covers the interface between Estimating and Job Cost, which enables this information transfer.

If you use Project Management, you can easily update your change requests by importing information from Estimating.

The Estimating to Job Cost interface

When Estimating sends estimate information to Job Cost, the software creates a file with the extension .jce. When Job Cost accesses the data contained in that file, it transfers the information into the New.jct file.

```
Estimating
    |
    v
Interface > Job Cost
    |
    v
┌─────────────────────────────────────────────────┐
│  Accounting                                      │
│                 Job Cost                         │
│                    |                             │
│  .jce *          Import > Estimates      New.jct*│
│  file       ──>                    ──>   file    │
└─────────────────────────────────────────────────┘
```

* The .jce and .jct files contain job, phase/cost code, category, and item information.

Preparing Job Cost to receive estimates

> **Note:** For detailed information about Job Cost concepts, see the online Help in Job Cost.

To successfully transfer estimate information from Estimating to Job Cost, in Job Cost you must verify three things:

1 All needed standard cost codes are set up.

> **Note:** When you import estimates into Job Cost, you can select the **Allow creation of Cost Codes not on standard Cost Code list** check box (found in the **Import Estimates – Print Selection** window) to have the software create cost codes not on the standard cost code list. When you set up a cost code during the import, only the cost code itself is defined. To define additional attributes, such as the cost code description and the cost and production unit descriptions, set up the standard cost codes ahead of time using **JC: Setup > Standard Cost Codes**.

2 All needed standard categories are set up, if your company uses categories.

3 Import settings are configured appropriately for your company.

Verifying standard cost codes

To see a list of standard cost codes that are already set up in Job Cost, in Job Cost, select **Reports > Lists > Standard Cost Codes**.

If you do not see a cost code that you know exists in the estimate to be imported, you can set up the standard cost code using **Setup > Standard Cost Codes**.

To set up standard cost codes or group cost codes, in Job Cost, select **Setup > Standard Cost Codes**. For information about setting up standard cost codes, in the Job Cost **Help** index type **Standard Cost Codes**. Select the topic titled "setting up".

Verifying standard categories

> **Note:** Using categories is optional. If you do not use categories, proceed to the next section.

To see a list of standard categories that are already set up, in Job Cost, select **Reports > Lists > Standard Categories**.

If you do not see a standard category listed that you know exists in the estimate to be imported, you must set up that standard category.

To set up a standard category, in Job Cost, select **Setup > Standard Categories**.

For information about how to set up standard categories, in the Job Cost help index, type Standard Categories, and then select the topic titled "setting up".

> **Note:** In Job Cost, if you try to import a record that contains a category that does not exist on the standard category list, the import is rejected.

Verifying import settings

To verify Job Cost's import settings:

1 In Job Cost, select **File > Company Settings > JC Settings** and click [**Import**].

2 The **Allow override of default options** check box affects imported commitments, not imported estimates, so you do not need to set this option to import estimates.

3 Select the **Warning Response** option appropriate for your company. The **Warning response** options let you affect how the software responds if the contents of the import file generate a warning during the import. Situations that would produce a warning during import include:

 ▫ The imported commitment contains a category that has already been marked as **Bought Out** in Job Cost.

 ▫ The amount on the imported commitment causes the total amount committed to exceed the estimate.

 The **Warning Response** setting has no effect when a record generates an error. A record that generates an error rejects during the import process.

4 The **Commit method** affects only imported commitments, not imported estimates, so you do not need to set this option to import estimates.

5 When you import estimate information, the software looks at the Estimating description for cost units and compares it to the Job Cost description for cost units. If the two descriptions do not match, the **Override CUD: Reject if different Cost Unit Description** check box controls how the software responds.

 Verify that this check box is selected or cleared, as appropriate for your needs.

To read more information about this setting:

1 Select **Help > Help Topics > Search**.

> **Note:** If necessary, complete the **Setup Wizard** using **Maximize search capabilities**.

2 On the **Search** tab, for step 1, type import cost unit.

3 For step 3, select the box for "About importing the cost unit description."

4 Click [**Display**].

You may also want to read the help about the **Reject if different Cost Unit Description** check box.

Preparing Estimating to send estimates

For detailed information about Estimating concepts, see **Help** in Estimating.

To successfully send estimate information from Estimating to Job Cost, in Estimating you must verify that four settings are set appropriately for your company:

- Database settings

- Database phase settings

- Database item settings

- Database addon settings

> **Note:** Any changes you make to these settings do not affect phases, items, or addons for estimates that already exist. You must change phases, items, and addons individually for each estimate that already exists if you want those estimates to reflect the new settings.

Verify database settings

To verify the database settings:

1 In Estimating, select **Database > Database Settings > Company**.

2 In the **Company Folder** area, verify that the listed path goes to your Sage 300 Construction and Real Estate accounting data folder.

3 Click the **Job Cost** tab.

To interface with Job Cost:

1 For **Job cost interface type**, verify that **Sage Timberline Office** is selected.

> **Note:** To change the interface type from a previously selected option to Sage Timberline Office, you must use Estimating Tools to make the change.

2 Select the **Use Sage Timberline Office Job Cost data** check box. Once selected, the information displayed on the Job Cost tab updates to reflect the job and cost code formats for the **Company Folder** listed on the **Company** tab.

3 Type the path for the estimating transaction file, the .jce file that Estimating creates, in the **Specify the default folder for storing transaction files** field.

4 Select the **Transfer crew units as man hours** check box if you want to convert the crew units to hours for tracking labor and equipment in the estimate. If you want to keep the crew units the same between Estimating and Job Cost, clear this check box. For more information about this check box's function, use **What's This? Help**.

5 Click [**OK**] when you are finished.

Verify database phase settings

Both Estimating and Job Cost use the concept of *phases*. In Job Cost, phases are often called *cost codes*. It is possible that the phase structure used in Estimating is not the same as the cost code structure used in Job Cost. Using the **Database Phase** window, you tell the software how you want the two structures to align. In essence, you create a map for the software to use when you transfer data from a phase in Estimating to a cost code in Job Cost.

To verify database phase settings:

1 In Estimating, select **Database > Phases**. The **Database Phase** window opens.

2 Click ▤ (the list button located to the right of **Job cost phase**) to select the Estimating phase to be mapped to a cost code in Job Cost. The **Database Phase List** window opens. If you don't see the correct phases, click [**Refresh**].

3 Double-click on the desired phase. You are returned to the **Database Phase** window. The selected **Phase**, its **Description**, **Unit description**, and any previously selected **Job cost phase** prefill in the **Database Phase** window. You can use the same Job Cost phase number for many different estimating phases.

4 Click [**Close**] when you are finished.

Verify database item settings

The **Database Item** window is where you define the **Job Cost phase** and **Job Cost Category** to use with the item, and specify which quantity to send to Job Cost.

To verify database item settings

1 In Estimating, select **Database > Items** and then click the **Job Cost** tab.

The information you enter here creates a map for the software to use when you transfer information from Estimating to Job Cost. For each item in the database, you can select a **Job Cost Phase** (remember, in the Job Cost application, phases are often referred to as cost codes) and a **Job Cost Category**. When Estimating sends this estimating item to Job Cost, the item and its associated information appears under the cost code and category you select in this window.

> **Note:** As with phases, you can use the same **Job Cost Phase** and **Job Cost Category** for any number of estimating items.

2 Click in the **Job Cost Phase** field, and then click ▤ (the list button). The **Database Job Cost Phase List** window opens. If you don't see the correct phases, click [**Refresh**].

3 Locate and double-click the Job Cost phase you want to receive the item information when Estimating interfaces with Job Cost. When you double-click on an item, the **Database Job Cost Phase List** window closes and you are returned to the **Database Item** window. The Job Cost phase you selected appears in the **Job Cost Phase** field.

You can also manually enter a phase. Be sure to follow the format set up in Job Cost, punctuation included. If the phase does not exist in Job Cost, you can create it during the import if you select the **Allow creation of Cost Codes not on standard Cost Code list** check box on the **Import Estimates - Print Selection** window in Job Cost (**Tools > Import > Estimates**).

4 For **Job Cost Category**, select the category to receive the Estimating item information.

You can also manually enter a category. The category must already exist in Job Cost.
Be sure to select **Job Cost Category**, not the database item **Category** (which is used for pricing and does not have any impact on the Job Cost interface).

5 For **Qty to Job Cost**, select the item quantity to send to the selected Job Cost category. Your cost accounting needs should dictate which of the following options to choose:

- **Takeoff qty** – sends to Job Cost the takeoff item quantity for the category.

- **Order qty** – sends to Job Cost the order item quantity for the category.

- **None** – sends to Job Cost the total dollar amount for the job cost phase and job cost category. It does not send quantities, so the unit price field in Job Cost will be blank.

6 When you are done, click [**OK**] and [**Close**].

> **Note:** You can also make changes to the Job Cost phase and category from the estimating spreadsheet itself.

Verify database addon settings

To view the database addon settings:

1 In Estimating, select **Database > Addons**, and then click [**Job Cost**].

2 Select the **Allocatable** check box to make an addon cost eligible* for allocation when the transaction file is sent to Job Cost.

   * To actually allocate the addon, in **Step 2** of the **Job Cost Transfer Wizard**, select **Yes** for the **Allocate addons?** option.

To send the addon costs to a specific Job Cost cost code and category, click [**Job Cost**] and select the **Job cost phase** and **Category** to receive the addon information.

> **Tip:**
> To get additional information about this setting, see the online help:
>
> 1 In Estimating, select **Help > Help Topics**, and click the **Index** pane.
>
> 2 Type **addons**.
>
> 3 Select the "Allocating" topic.

Creating an estimating transaction file

> **Note:** See the online help for each item in the wizard.

A. Create the transaction file in Estimating:

1 In Estimating, select **Interface > Job Cost**. The **Job Cost Transfer Wizard** opens. The wizard creates a .jce file with a transaction for:

   ▫ Each phase for which you have entered a phase quantity in the spreadsheet.

   ▫ Each item category with an amount. The item setup determines whether the transaction includes the takeoff quantity or order quantity.

   ▫ Each addon that is not allocated. The cost of allocated addons is found in the items used to calculate those addons.

   To progress through each step of the wizard, click the tab at the top of the **Job Cost Transfer Wizard** window.

2 Click the **Step 1** tab.

B. On the Step 1 tab:

1 Enter a transaction file name and the date to appear on the transactions contained within the transaction file.

2 The **Sage Timberline Office JC job number** prefills based on the information entered for **Job Cost job number** in **Takeoff > Estimate Information > WBE & Misc**. In needed, you can enter a job number (using the correct punctuation) for a job that already exists in Job Cost—or click ![list button] (the list button) and select a job.

> **Note:** If you selected **Use Sage Timberline Office Job Cost data** (**Database > Database Settings > Job Cost**) and in **Step 1** you enter a job number that does not exist in Job Cost, when you click the **Step 2** tab, you receive the **Save Changes?** message. Click [**Yes**] to advance to the **Step 2** tab or [**No**] to stay on the **Step 1** tab and enter a different job number.

3 Enter the path to the folder that you want to receive the .jce file this wizard creates. If you do not enter a path for the transaction file folder, the file is created in the **Export folder** specified in **Database > Database Settings > Job Cost**.

4 Click the **Step 2** tab.

C: On the Step 2 tab:

1 Select how you want item quantities to be rounded and how to allocate addons.

2 Click the **Step 3** tab.

D. On the Step 3 tab:

> **Note:** If you do not use extras in Job Cost, you do not need to do anything on this tab.

Select whether you want to map estimate information to Job Cost extras and, if so, select which information do you want to use.

In Job Cost, extras are sub-jobs of the main job. Extras allow you to track cost, revenue, and commitments separately from the main job, while still being able to accumulate to the main job.

Some reasons you might need to use extras in Job Cost are:

- The owner or architect requested additional work after the original contract was signed.

- You must track income from certain cost codes separately from the main job.

- Certain costs are billed and tracked separately from the main job.

> **Tip:**
> In Job Cost, you can change the term used for "extra" by changing custom descriptions. For information, see the Job Cost online help:
>
> **1** In Job Cost, select **Help > Help Topics**, and click the **Index** pane.
>
> **2** Type **custom descriptions, specifying**.
>
> **3** Click [**Display**].

To attach information from a work breakdown structure or location to an item as an extra:

1 Select the **Map estimate information to extras in Job Cost** check box. The selected work breakdown structure or location information you will select in step 3 then goes to Job Cost as an extra.

Each item is mapped to a specific cost code and category in Job Cost using **Database > Items**. The mapping you enter on the **Step 3** tab sends a location or work breakdown structure (WBS) code to Job Cost as an extra.

In Estimating, WBS codes enable you to attach additional information to each item. Each WBS code has values underneath it. For example, if you had a WBS code of *CSI Phase*, the values underneath that WBS code might be *field supervision*, *project administration*, *safety coordination*, etc.

In Job Cost, the **Extra ID** field is limited to 10 characters. If your Estimating WBS codes contain more than 10 characters, they are truncated to 10 characters when you import them into Job Cost.

Additionally, you can use a location to relate an item to a specific job area. For example, if you build an office, you might want to assign one item to the first floor and another item to the second floor.

2 For **Sort Level**, select the WBS code or location to send to Job Cost as an extra.

3 When you the **If you choose a sort level, non-allocatable add-ons will not be exported. Choose cancel to export all.** warning, you can click [**Cancel**] if you want all addons included in the export.

4 If you select a WBS code for the **Sort Level**, the **WBS Value Selection** area becomes available.

> **Note:** If you selected **Location** as the **Sort Level**, the name of this area is **Location Selection**. Its function is the same no matter which **Sort Level** you select.

5 Under **WBS Value Selection**, choose whether to send all WBS values to Job Cost or only selected WBS Values.

6 Click the **Step 4** tab.

On the Step 4 tab:

1 Select a report destination if you want the wizard to produce a report that lists job cost phases, units, and amounts included in the transaction file.

2 Select the **Automatically launch Job Cost** check box if you would like to have the wizard automatically open the **Job Cost Import Estimates** window after you start to generate transactions.

3 Click [**Generate Transactions**] to create the transaction file.

If you did not select the **Automatically launch Job Cost** check box, when the **Generate Transactions** process completes the transfer wizard closes.

If you selected the **Automatically launch Job Cost** check box, the **Select Company** window opens.

4 Choose which data folder is to receive the transaction file and click [**OK**]. The **Import Estimates – Print Selection** window opens.

Proceed to the next section for information about how to bring the exported estimate file in to Job Cost.

Receiving estimate transactions into Job Cost

To bring the .jce file from Estimating into Job Cost:

1 In Job Cost, select **Tools > Import > Estimates**. The **Import Estimates – Print Selection** window opens.

> **Note:** If you selected the **Automatically launch Job Cost** check box when you were in the interface wizard, this window opens automatically after you click [**Generate Transactions**] and select a data folder.

2 Verify that **Import file** contains the path to the file you want to import. If you selected Estimating's **Automatically launch Job Cost** check box, the **Import file** field prefills with the name of the exported file.

However, if you did not select Estimating's **Automatically launch Job Cost** check box, the **Import file** field prefills with the name of the last imported file.

You can also type the path to the file you want to import, or click [...] (the browse button) to locate the file.

3 For **Rejected records file**, enter a path and file name to hold any records that are rejected during the import process. Examples of things that cause record rejections are when you:

- Do not have security permissions to access the job contained in the import file.
- Try to import a category that is not on the standard category list.

4 Select the **Allow creation of Cost Codes not on standard Cost Code list** check box if you want the software to automatically create cost codes contained in the import file but not currently found in Job Cost's standard cost code list.

The job ID and description appear in the **Estimate will be applied to: Job** fields. If the job does not exist in Job Cost, it can be created if the operator has security permission to set up jobs in Job Cost.

- If the import file contains data for a single job and a single extra, the extra ID and description appear in the **Estimate will be applied to: Extra** fields. If the extra does not exist in Job Cost, it can be created if the operator has security permission to set up extras in Job Cost.

- If you do not use extras in Job Cost, the **Extra** fields do not appear in the window.

- If the import file contains data for multiple extras, the **Estimate will be applied to Extra** fields are unavailable and their corresponding descriptions display **Extra specified in import file**.

- Additionally, if you want to map the information in the import file to a specific extra, you can type that extra in the **Estimate will be applied to: Extra** field. If the extra does not exist in Job Cost, it can be created if the operator has security permission to set up extras in Job Cost.

5 Click [**Add Job**] to add to or change job information contained in the import file. Information entered in the **Add Job** window overwrites the corresponding information in the import file.

6 Click [**Printer Setup**]. The **Printer Setup – Import Estimates** window appears.

7 Select **Print to file**.

8 Click [**OK**]. The **Import Estimates – Print Selection** window appears.

9 Verify the information in the window is correct.

10 Click [**Start**]. The **Print File Selection – Import Estimates** window opens.

11 Type a file name in the **File name** field.

> **Note:** If you are using security, you may want to send this file to a folder that requires security in order to access it.

12 Click [**Save**].

13 Once the import process is underway, click the **Background Tasks** icon on the menu bar to see whether the import finishes normally. Even if the import finishes normally, that does not guarantee there were no errors.

14 Examine the journal generated by **Import Estimates**.

To locate the Import Estimates journal:

1 From the Job Cost **File** menu, select **Printouts.**

2 Navigate to the file you created in the previous procedure.

3 Double-click on the file name to open the file.

The journal shows records that were added or created, transactions that were created, any records that rejected during import, and the reason for the rejection. If the journal shows rejected records, correct the errors, then import the reject file.

> **Tip:**
> To get additional help for how to correct errors that occur during the import:
>
> **1** In Job Cost, select **Help > Help Topics**.
>
> **2** On the Index tab, type **correcting errors, import estimates**.
>
> **3** Click [Display].

To view the new transactions:

1 In Job Cost, select **Inquiry > Entries > Cost/Estimate Entries**.

2 Select **New**.

3 Click [**OK**].

4 Click [**Go to**].

5 Enter the job number.

6 Click [**Transactions**].

> **Note:** Imported estimate transactions always go into the New.jct file, regardless of whether Job Cost is set up to post automatically. To move the transactions to the Current.jct and Master.jcm, post the transactions using **Tasks > Post Entries** in Job Cost.

Recommendations for a trouble-free interface

To help ensure a smooth data transfer between Estimating and Job Cost, follow these guidelines:

Job Cost

Before you create the transaction file in Estimating, ensure that in Job Cost:

- Standard cost codes exist for each cost code contained in the import file sent from Estimating.

- If you use categories, standard categories exist for each category contained in the import file sent from Estimating.

- The import settings in **JC Settings** (**File > Company Settings > JC Settings > [Import]**) are set correctly for your company.

- The operator doing the import has security permission in Job Cost to set up jobs and extras, if you track extras.

Estimating

Before you create an estimate to send to Job Cost, make sure the database settings for phases, items, and addons are set up correctly for your needs. Any changes made to these settings after an estimate is created do not affect existing phases, items, or addons. Existing phases, items, and addons must be changed individually if you want the new settings to be reflected in the transaction file.

Before you create the transaction file to send to Job Cost, ensure that:

- **Database Settings** are set to **Job cost interface type: Sage Timberline Office** and the **Use Sage Timberline Office Job Cost data** check box is selected.

- **Database Phase** settings are mapped to the desired **Job cost phase**.

- **Database Item** settings are mapped to the desired **Job Cost Phase** and **Job Cost Category.**

- **Database Addon** settings are mapped to the correct **Job Cost Phase** and **Category**.

- Each step of the **Job Cost Transfer Wizard** is configured the way you need it.

- The **BOM description** for the items are 30 characters or less. Job Cost can only accept up to 30 characters for the bill of materials description. To change the description, open Buyout, select the item in the **Items** window, and then click (the Display Item Detail button).

Troubleshooting

Several common error messages are listed below, along with the resolutions to correct the error's cause.

This job exists only in Project Management (not in Job Cost).

The Project Management application can create jobs that the Job Cost application cannot access.

To correct the situation, in Project Management, select the **Create JC Job** check box on the job (in **PJ: Setup > Jobs**) and reimport the estimate.

Cannot add cost code. Standard cost code not found.

To correct the situation, in Job Cost add the cost code to the standard cost code list using **JC: Setup > Standard Cost Codes** or in the **Import Estimates – Print Selection** window select the **Allow creation of Cost Codes not on the standard Cost Code list** check box.

Different cost unit description on Cost Code.

This situation can occur when the file being imported into Job Cost contains a different cost unit description from what Job Cost uses and the check box for **Override CUD: Reject if different Cost Unit Description** (**JC: File > Company Settings > JC Settings > [Import]**) is selected.

One way to correct the situation is clear the check box for **Override CUD: Reject if different Cost Unit Description** (**JC: File > Company Settings > JC Settings > [Import]**) and import the reject file. To learn about what will happen as a result of this approach, read the Help topic titled "About importing the cost unit description."

Another way to correct the situation is to determine which cost unit description you want to use, the one in Estimating or the one in Job Cost, and change cost unit description in the other application.

Importing estimates into Project Management

Project Management change requests are used to capture details about changes in scope, price, and cost. Often, estimates are created to budget for these changes. You can easily import an Estimating estimate into a Project Management change request, saving time and reducing errors.

You can select an existing estimate to import, open and edit an existing estimate before import, or create a new estimate to import.

During the import, the extra, cost code, category, and unit description will be validated. You will be given the opportunity to make corrections during the import for the extra, cost code, or category. These changes are automatically written back to the estimate. Unit description errors require additional review. See "Import validation" on page 133 for more information.

You can import an estimate into a change request multiple times, but only changes and new items are added. All item information on the change request is removed and replaced with the information from the imported estimate.

> **Note:** Always open the estimate from the change request to make changes, or make your changes to the estimate in Estimating and then open the estimate from the change request. If you make changes on the change request but not the estimate, these will not be reflected in the estimate and will be lost if you later import the estimate back into the change request.

Import an estimate into a change request

1 In Project Management, create the change request to which the estimate will be imported (**Contract Control > Change Request**).

2 Select the **Price/Cost Estimate** tab.

3 Click [**Estimate Change Request**] and select the appropriate option:

- **Create New Estimate**: Create a new estimate which can then be imported into a change request.

- **Open Existing Estimate**: View and edit an existing estimate in Estimating prior to importing it into the change request. Or, if you have already imported the estimate into the change request, you can open the imported estimate to view or make changes. The import removes and replaces existing item information on the change request.

- **Select Existing Estimate**: Import a selected estimate into the change request.

4 If you create a new estimate or open an existing estimate, you must select **Interface > Send to Change Request** in Estimating to start the import process. This option is only available on the Estimating menu if you have accessed the estimate through the change request.

5 If any issues are found during the import, you can select [**Yes**] to fix the issues or [**No**] to cancel the import and view a list of issues. For more information, see "Import validation" on page 133.

> **Note:** Changes you make to the estimate in Estimating after importing are not automatically reflected on the change request. To update the estimate information on the change request, you must first open the change request in Project Management and then click [**Estimate Change Request**] on the **Price/Cost Estimate** tab. This opens the estimate and refreshes the change request with any changes that were made outside of Project Management.

Import validation

Import issues

When you import an estimate into a change request, if any of the following issues exist in the estimate, you will be prompted to correct them:

- Extra length is too long (it must be 10 characters or less)

- Cost code format is incorrect

- Cost code does not exist

- Category does not exist

If you choose to make corrections, these changes are written back to the estimate. For example, if you change the length of the extra, this will change the location or WBS values on the estimate.

If you do not choose to fix the import issues, the import stops and issues that were not fixed are displayed.

Unit description

In addition to the issues listed above, the cost unit description on the category in Job Cost must match the item unit description on the estimate if the estimate is set up to send quantities to Job Cost. If these do not match, the import will stop. To correct this issue, either:

- Change the unit description on the estimate to match the cost unit description on the category in Job Cost, or

- Change the cost unit description on the category in Job Cost to match the estimate

After you correct the unit description, you can perform the import again.

> **Note:** Ensure that the correct quantity type is being sent to Job Cost. In the **Category Detail** window of the estimate, you have the option of sending either the takeoff quantity or the order quantity to Job Cost. The option you select determines which quantities and unit descriptions are imported. To view the **Category Detail** window, on the estimate, right-click and select **Detail Window**, then on the **Extensions** tab, right-click and select **Category Detail**.

Commitment processing

You can transfer commitment information from Buyout to Purchasing or from Buyout to Job Cost. If you send the commitment information from Buyout to Purchasing, Purchasing can send that commitment information on to Job Cost.

The Buyout to Purchasing or Job Cost interface

Estimating information is sent from Estimating to Buyout. In Buyout, once you have selected vendors and subcontractors for commitments, you can send the commitment information to Purchasing or to Job Cost.

If you send commitments to Purchasing, Buyout creates a text file (.txt) for Purchasing to import. If desired, you can then have Purchasing send the commitments on to Job Cost.

If you send commitments directly to Job Cost, Buyout creates a Job Cost commitment file (.jcc).
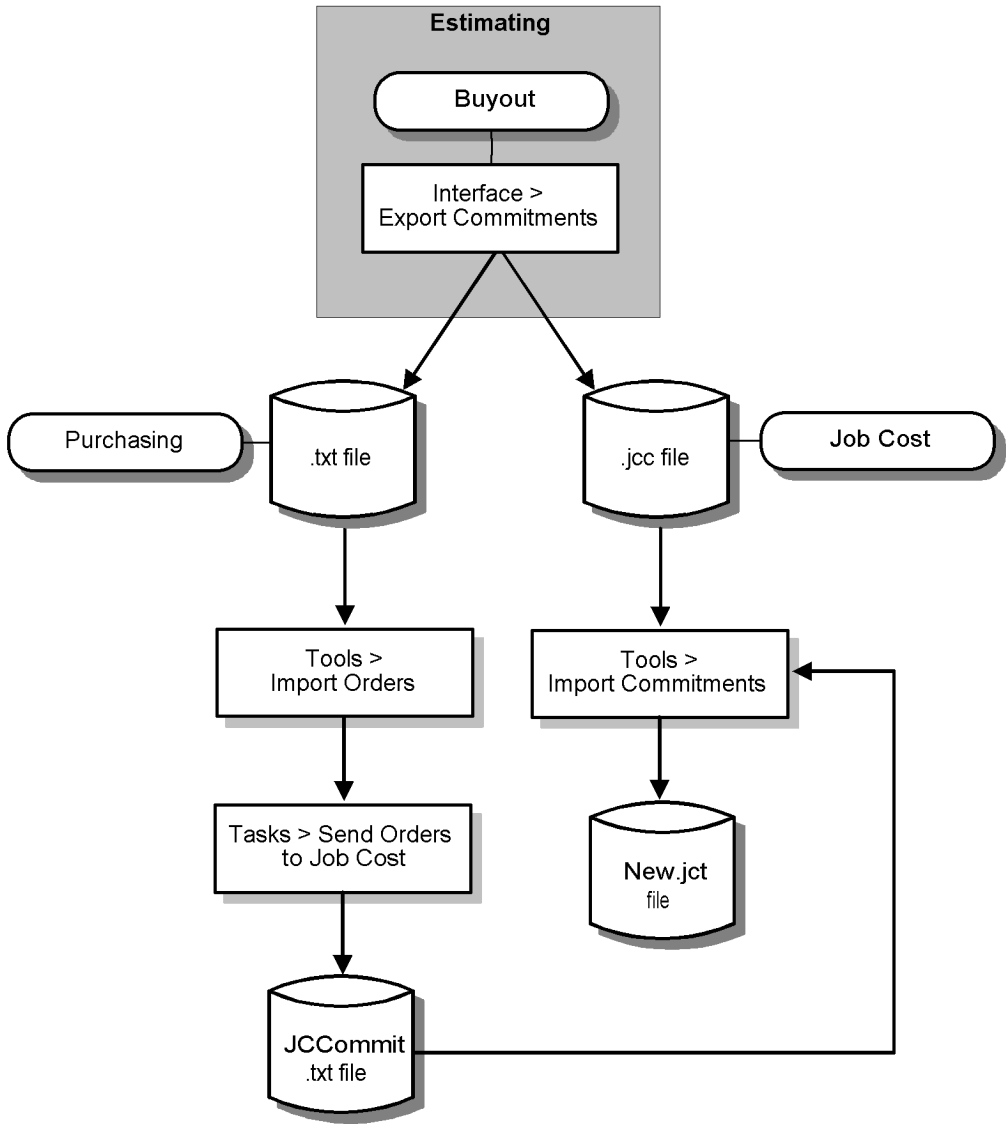
Preparing Purchasing to receive commitments

To prepare Purchasing to receive commitments, verify that the **File Locations** setting for **Location of Export file** is appropriate for your company.

To verify Purchasing's File Locations setting:

1 In Purchasing, select **File > Data Folder Settings > File Locations**.

2 Verify that the path for **Location of Export file** is correct for your company. The field prefills with the location of your Sage 300 Construction and Real Estate data.

Preparing Job Cost to receive commitments

For detailed information about Job Cost concepts, see Job Cost **Help**.

To prepare Job Cost to receive commitments, whether from Buyout or from Purchasing, verify that Job Cost's import settings are set appropriately for your company.

Verify import settings

To verify Job Cost's import settings:

1 In Job Cost, select **File > Data Folder Settings > JC Settings > [Import]**.

2 Select the **Allow override of default options** check box if you want the person who imports the commitments to have the ability to cancel the settings marked in this window for **Warning response** and **Commit method**.

3 Select the **Warning response** appropriate for your company. The **Warning response** options let you affect how the software responds if the contents of the import file generate a warning during the import. Situations that would produce a warning during import include:

- The imported commitment contains a category that has already been marked as **Bought Out** in Job Cost.

- The amount on the imported commitment causes the total amount committed to exceed the estimate.

  The **Warning Response** setting has no effect when a record generates an error. A record that generates an error rejects during the import process.

4 Select the **Commit method** appropriate for your company. The **Commit method** options let you determine how the software responds to the status on the commitment record. All commitment records in the import file have a status of either **Yes** (they are committed in Job Cost), or **No** (they are not committed in Job Cost). After you import the commitments, you can change their status.

  In the **Commit method** area, you can select to:

- Never commit the commitment in Job Cost, regardless of its status in the import file.

- Allow the software to commit or not commit the commitment in Job Cost, based on the commitment's status in the import file.

- Automatically commit valid commitments in Job Cost as they are imported.

> **Note:** If Sage 300 Construction and Real Estate security is active, imported commitments are automatically released to accounting.

Preparing Buyout to send commitments

For detailed information about Buyout concepts, see the online help in Buyout.

In Buyout, once you select a vendor for a quote sheet or issue a purchase order for a quote sheet, you can send commitment information to Purchasing or Job Cost.

Before you send commitment information to either Purchasing or Job Cost, you need to verify that:

- Buyout's database settings for company setup, Job Cost setup, and tax setup are appropriate for your company.
- Buyout's option for how purchase order numbers increment is set appropriately for your company.

Verify the company setup

The company folder assigned on this tab determines where Buyout gets its Address Book, Job Cost, and other information.

To verify the company setup:

1 In Buyout, select **Database > Database Settings > Company Setup**.

2 In the **Company Folder** area, verify that the displayed path reflects the company folder you want to use with Buyout or click [**Select**] to locate the correct company folder.

Verify the Job Cost setup

The Job Cost Setup window allows you to set up the interface between Buyout and Job Cost.

To verify the Job Cost setup:

1 In Buyout, select **Database > Database Settings > Company Setup > [Job Cost Setup]**.

2 Verify that the **Job cost interface type** is set to **Timberline**.

3 Verify that **Setup Options** is set to **Use Timberline Job Cost data**. When you select this option, Buyout brings in from the Job Cost application the format for the job number and cost code. To see the format, click [**View Sections**].

4 Verify that the **Select the application that commitments will be exported to** field reflects the application you plan to export to, either **Job Cost** or **PO/IV**. The export process creates a slightly different file based on what you select here. For more information on file layouts, see Appendix B.

> **Tip:** Job Cost can import both .jcc and .txt files. If you are going to send purchase orders to both applications, select **PO/IV** in the **Select the application that commitments will be exported to** field. Then you can bring the exported commitment file in to either Job Cost or Purchasing.

5 Type the path to the folder you want to hold exported commitment files in the **Specify the default location for storing new commitment files** field. You can click [**Browse**] to locate the desired folder.

Verify the tax setup

If you have tax groups set up in your Accounts Payable application, those tax groups can be used on purchase orders in Buyout, included in the commitment information, and sent to Purchasing or Job Cost. Verify your tax setup in the **Tax Setup** window.

To verify the tax setup:

1 In Buyout, select **Database > Database Settings > Company Setup** and then click [**Tax Setup**].

2 The **Tax Setup** area contains two options. You can select to:

- **Use Timberline tax groups**, in which case tax groups from the Accounts Payable application are used in Buyout. Tax groups assigned to items in Buyout go to Purchasing or Job Cost when you export commitments.

   > **Note:** Only the tax group is included in the export file, not the tax rate or calculated tax amount. Job Cost and Purchasing calculate the tax amount based on the tax group specified on the item.

- Use **User-defined tax groups**, in which case the tax groups are created and used only in Buyout. User-defined tax groups are not included in the export file.

3 The **Default tax group for new work files** lets you define the tax group used for work files created after you accept this setting.

For more information about tax groups, from the **Help** menu, select **Help Topics > Index** and type tax groups.

Once you set up the Job Cost and tax settings, Buyout is ready to send commitment information to Purchasing or Job Cost.

> **Note:** If you are using the Inventory application and want to take advantage of inventory codes that come into Buyout from Estimating, you must set up the Price Code in Estimating to contain the appropriate inventory code in the Price Code field.

Verify Buyout's options

To verify Buyout's options:

1 In Buyout, select **Edit > Options**.

2 Click the **Miscellaneous** tab.

3 In the **PO Numbers** area, select or clear the **Auto-increment purchase orders when issuing** check box, as appropriate for your company.

Creating a commitment transaction file in Buyout

Using the **Export Commitments** command in Buyout, you can create commitments from quote sheets that have a selected vendor or that have been issued as purchase orders.

To create the commitment file in Buyout:

1 Select the quote sheet for which you want to export commitments.

2 From the worksheet view, select **Interface > Export Commitments**.

Under **Quotes to Commit**, you will see a list of quote sheets with the status of **Selected** or **Issued**. You can click [**List Quotes**] to see a complete list of quote sheets with the status **Selected** or **Issued**.

> **Note:** Once the commitment is exported, the quote sheet's status in Buyout changes to Issued.

3 Enter a purchase order number in the **PO Number** field, if necessary. The **PO Number** field prefills in one of three ways:

Quote Sheet Status	Auto-increment check box*	PO Number
Selected	Selected	Prefills, can be changed.
Selected	Cleared	Empty. Must enter PO number manually.
Issued	(irrelevant)	Prefills, cannot be changed.

* The **Auto-increment purchase orders when issuing** check box is found at **BO: Edit > Options > Miscellaneous**.

4 Click the **Options** tab. Here you can change the export file name and select default settings.

5 The **Job Cost commitment file name** field prefills with the Buyout work file name, but you can change it. You may want to manually change the file name if you send out in succession the commitments for a single job. For example, once the concrete work is bought out for a job, you could create a commitment file named Lakewood Commons Concrete. When the electrical work is bought out for that same job, you could create a commitment file named Lakewood Commons Electrical.

> **Note:** If the **Select the application that commitments will be exported to** field (**Database Settings > Company Setup > [Job Cost Setup]**) is set to **PO/IV**, the name of the **Job Cost commitment file name** field is changed to **PO/IV commitment file name**.

6 The **Commitment export folder** field prefills with the information provided in the **Job Cost Setup** window (**Database > Database Settings > Company Setup > [Job Cost Setup] > Specify the default location for storing new commitment files**). You can change the prefilled information.

7 Select the **Include piece count** check box if you want the piece count to appear on purchase orders.

The piece count is the item quantity expressed in the units by which the vendor sells the item. For example, lumber is often priced by thousand board feet (mbf) but it is typically sold by piece. If you select the **Include Piece Count** check box, when you print the purchase order it includes an extra line for the order's piece count.

Buyout calculates the piece count based on the takeoff-to-order unit conversion factor set in Estimating.

If you include piece counts on the purchase order, Buyout rounds the piece count up to the nearest whole number and recalculates the order quantity for the purchase order item.

> **Note:** Buyout exports the order quantity shown on the purchase order.

8 Select the **Auto-launch Job Cost import after creating the commitment file** check box on the **Export Commitments Options** tab if you would like the export commitment process to automatically start the **Import Commitments** task in Job Cost.

> **Note:** If you set the Select the application that commitments will be exported to field **(Database > Database Settings > Company Setup > [Job Cost Setup])** to **PO/IV**, the name of the **Auto-launch Job Cost import after creating the commitment file** field is changed to **Auto-launch Purchasing import after creating the commitment file**.

9 Select the **Map workfile information to extras in Job Cost** check box in the **Job Cost Extra Setup** area if you track extras in Job Cost and want to create an association between Buyout items and Job Cost extras. If you do not use extras in Job Cost, do not select this check box.

> **Note:** In Job Cost, the **Extra ID** field is limited to 10 characters. Any sort you select here that has more than 10 characters is truncated to 10 characters when you import in Job Cost.

In Buyout, you use sort sequences to organize items into different groupings for ease of viewing. The sort you select here maps items in Buyout to extras in Job Cost.

To learn more about sort sequence set up, from the Buyout **Help** menu, select **Help Topics**. Click the **Search** tab. Type sort sequence. Select the topic titled "Learn about sort sequences" and click [**Display**].

Click [**Export**]. When the export file has been created, the **Export Complete** message appears.

10 Click [**OK**].

If Buyout is configured to send commitments to PO/IV (**Database > Database Settings > Company Setup > [Job Cost Setup]**) and you selected the **Auto-launch Purchasing import after creating the commitment file** check box in the **Export Commitments** window, the Purchasing **Import CSV Orders** window opens.

If Buyout is configured to send commitments to Job Cost (**Database > Database Settings > Company Setup > [Job Cost Setup]**) and you selected the **Auto-launch Job Cost import after creating the commitment file** check box in the **Export Commitments** window, the Job Cost **Import Commitments – Print Selection** window opens.

Proceed to the next section for information on how to bring the exported commitment file in to Purchasing.

If you do not use the Purchasing application, turn to for information on how to bring the exported commitment file into Job Cost.

Receiving a commitment transaction file Into Purchasing

> **Note:** If you do not interface with the Purchasing application, proceed to .

For detailed information about Purchasing concepts, see the online help in Purchasing.

To import the Buyout commitment .txt file into Purchasing:

1 In Purchasing, select **Tools > Import Orders**. The **Import CSV Orders** window opens.

Alternately, if you selected the **Auto-launch Purchasing import after creating the commitment file** check box when you were in the Buyout **Export Commitments** window, the **Import CSV Orders** window opens automatically after you click [**Export**] and click [**OK**] to the **Export Complete** message.

2 In the **Import File** field, type the path to the file you want to import, or click [...] (the browse button) to locate the file.

3 In the **PO Number Assignment** area, select whether to have the Purchasing application assign new purchase order numbers to incoming POs or use the purchase order numbers from the import file.

> **Note:** Purchasing does not allow duplicate purchase order numbers. If you select the **Assign new purchase order numbers** option, imported Buyout commitments are renumbered in Purchasing. This prevents import rejections caused by duplicate purchase order numbers.

4 Purchase orders are imported into Purchasing with a **Pending** status unless you select the **Automatically Commit** check box in the **Import CSV Orders** window. If you do not select this check box, imported commitments must be committed before you send them to Job Cost.

5 Click [**Import**]. A message tells you how many valid and rejected purchase orders are in the selected export file and asks you to confirm the export's completion.

6 Click [**Yes**], if you choose to continue.

7 When you see the **Finished importing records** message, click [**OK**].

8 Click [**Print**] to print the import journal.

If any records reject, you can edit the file.

To edit the rejected records file:

1 From the **Import CSV Orders** window, click [**Rejects**]. This opens the rejects.txt file where you can edit the invalid records.

2 Make any necessary changes.

3 After you complete your changes to the rejects.txt file, click [**Save**] and then [**Close**].

4 Run the import process again and select the **rejects.txt** file as the file to import.

To change the commitment's status

1 In Purchasing, select **Tasks > Process Pending Orders**. The **Document Selection** window appears.

2 For **User ID**, select the desired User ID if you are using the Extended Approval system—or leave the User ID blank.

If you are not using the Extended Approval system, leave the User ID blank.

3 Select **All Uncommitted Orders**.

4 Click [**OK**]. The **Process Pending Orders** window appears.

5 Select the **Commit?** check box next to the commitments you want to commit.

> **Note:** You can also use **PO: Tasks > Enter Orders** to commit commitments one at a time.

6 Click [**Process Selected**] when all of the commitments to commit are selected.

7 Click [**Finish**].

Preparing Purchasing to send commitments

To successfully transfer commitment information from Purchasing to Job Cost, in Purchasing you must verify that two things in **File Locations** are set appropriately for your company:

- The **Auto Import after Sending** setting.

- The location entered in the **Export file** setting.

To access Purchasing's File Locations window:

1 In Purchasing, select **File > Data Folder Settings > File Locations**.

2 Select the **Auto Import after Sending** check box to have Purchasing automatically open the Job Cost **Import Commitments – Print Selection** window after you start the **Send Orders to Job Cost** process.

If you clear this check box, the first time you send commitments the **Auto Import** window will ask you if you would like to enable the auto import function. Select [**Enable**] or [**Cancel**] as appropriate for your company.

3 The **Location of Export file** field prefills from the information you entered in **PO: File > Data Folder Settings > File Locations**. You may also type the path to the folder you want to hold exported commitment files.

4 Click [**OK**] to close the **Data Folder Settings** window.

Creating a commitment transaction file in Purchasing

To post committed purchase orders from Purchasing to Job Cost:

1 In Purchasing, select **Tasks > Post Orders to Job Cost**. The **Send Purchase Orders to Job Cost** window opens.

2 Select or clear the **Send Orders as Committed** check box as appropriate for your company.

3 The **Destination** prefills from the information you entered in **PO: File > Data Folder Settings > File Locations**. You may also type a different path or click [...] (the browse button) to locate the folder to hold the exported file.

4 Click [**Post**].

5 Click [**Yes**] in the **Confirm** window.

If you selected **Auto Import after Sending** in **File > Data Folder Settings > File Locations**, Job Cost's **Import Commitments – Print Selection** window opens.

Proceed to the next section for information on how to bring the exported commitment file into Job Cost.

Receiving the Buyout or Purchasing commitment transaction file Into Job Cost

Whether you import commitments from Buyout or Purchasing, the procedure in Job Cost is the same:

> **Note:** If Sage 300 Construction and Real Estate security is active, imported commitments are automatically released to accounting.

To import commitments:

1 In Job Cost, select **Tools > Import > Commitments**. The **Import Commitment – Print Selection** window appears.

Alternately, if you selected Buyout's **Auto-launch Job Cost import after creating the commitment file** check box (Buyout: **Interface > Export Commitments > Options**) or Purchasing's **Auto Import after Sending** check box (Purchasing: **File > Data Folder Settings > File Locations**), the **Import Commitment – Print Selection** window appears automatically.

2 Verify that the **Import file** field contains the path to the file you want to import.

◻ If you selected Buyout's **Auto-launch Job Cost import after creating the commitment file** check box or Purchasing's **Auto Import after Sending** check box, the **Import file** field prefills with the name of the exported file. If the commitment file comes from Purchasing, the file name will be **Jccommit.txt**.

◻ However, if you did not select Buyout's **Auto-launch Job Cost import after creating the commitment file** check box or Purchasing's **Auto Import after Sending** check box, the **Import file** field prefills with the name of the last imported file.

You can also type the path to the file you want to import, or click [...] (the browse button) to locate the file.

3 For the **Rejected records file**, type a path and file name to hold any records that are rejected during the import process. Examples of things that cause record rejections are when:

◻ You do not have security permissions to access the job contained in the import file.

◻ The job is not set up in Job Cost.

4 Click [**Options**] if you need to override the **Warning Response** or **Commit Method** settings (**File > Data Folder Settings > JC Settings > [Import]**) and you selected **Allow override of default options** (**File > Data Folder Settings > JC Settings > [Import]**).

5 Click [**OK**] when done. The **Import Commitment – Print Selection** window appears.

6 Click [**Printer Setup**]. The **Printer Setup – Import Commitments Journal** window appears.

7 Mark **Print to file**.

8 Click [**OK**]. The **Import Commitments – Print Selection** window appears.

9 Click [**Start**]. The **Print File Selection – Import Commitments Journal** window appears.

10 Enter a file name.

11 Click [**Save**].

12 Once the export process is underway, click the **Background Tasks** icon on the menu bar to see whether the import finishes normally. Even if the import finishes normally, that does not guarantee there were no errors.

13 Examine the journal generated by **Import Commitments**.

To locate the import commitments journal:

1 From the **File** menu, select **Printouts.**

2 Locate the file you created in the previous procedure.

3 Double-click on the file name to open the file.

The journal shows any records rejected during import and the reason for the rejection. If you find rejected records, correct the indicated errors, then import the reject file.

Caution! If you import a Buyout commitment file which contains a purchase order number Job Cost already uses, Job Cost rejects the commitment itself but the commitment items are appended to the purchase order that exists in Job Cost. This occurs because Buyout does not number commitment items. (Purchasing does number commitment items.)

Thus, purchase orders that come from Buyout into Job Cost behave as though they are blanket purchase orders.

When exporting commitments from Buyout, be very careful you do not use a purchase order number that already exists in Job Cost.

Tip:
To get additional help for how to correct errors that occur during the import:

1 In Job Cost, select **Help > Help Topics**.

2 On the **Index** tab, type **correcting errors, import commitments**.

3 Click [**Display**].

To view the new transactions in Job Cost:

1 Select **Inquiry > Entries > Cost/Estimate Entries**.

2 Select **New**.

3 Click [**Go to**] and enter the job number.

4 Click [**Transactions**]. All of the commitment information contained in the import file displays.

> **Note:** If commitments are committed during the Import Commitments process, such as when the **Commit method** (**File > Data Folder Settings > JC Settings > [Import]**) is set to **Determined by record** or **Auto commit**, the transactions always go into the New.jct file and the commitment record is created in the Master.jcm, regardless of whether Job Cost is set to post automatically. To move the transactions from the New.jct to the Current.jct, post them in Job Cost using **Tasks > Post Entries**.

Recommendations for a trouble-free interface

To help ensure a smooth data transfer between Estimating, Buyout, Purchasing, and Job Cost, follow these guidelines:

Estimating

- Reserve a bank of purchase order numbers for your project. This ensures unique purchase order numbers are sent to Purchasing and Job Cost.

Buyout

- Ensure that Buyout's quote summary names contain no more than 30 characters.

- Ensure that Buyout's vendor item descriptions contain no more than 30 characters.

- Ensure that if you select to send a Buyout **Sort** to Job Cost as an extra (**Interface > Export Commitments > [Options] > Job Cost Extra Setup**), the sort name contains no more than 10 characters. In Job Cost, the extra ID is limited to 10 characters. A sort name containing more than 10 characters is truncated to 10 characters in Job Cost.

- When Buyout interfaces with Purchasing, the price code (which comes from Estimating into Buyout) translates to the inventory item code in Purchasing. If your Estimating staff members use the price code field to track something unrelated to inventory, you must come to an agreement with them on how to use this field in the future.

Purchasing

- Ensure all purchase order numbers are unique across Buyout, Purchasing, and Job Cost.

Job Cost

- When Buyout sends commitment information to Job Cost, the amount field is blank for non-lump-sum items. Job Cost calculates the amount by multiplying the quote item quantity by the quote item price. However, for lump-sum items, the amount is included in the export file so that the amount in Buyout always matches the resulting amount in Job Cost.

Address Book

- Ensure all companies are set up as Estimating and Accounts Payable vendors in Address Book.

Troubleshooting

A common import error message is listed below, along with the resolution to correct the error's cause.

This job exists only in Project Management (not in Job Cost).

The Project Management application can create jobs that the Job Cost application cannot access.

To correct the situation, in Project Management, select the **Create JC Job** check box on the job (in PJ: **Setup > Jobs**) and reimport the estimate.

File layouts

This section contains detailed information about the file layouts for the .jce file Estimating creates, the .jcc and .txt files Buyout creates, and the .txt file format needed for Purchasing to successfully import.

Estimating transaction file layout

If you open the .jce file that Estimating's **Job Cost Transfer Wizard** creates, you see something that looks like this:

- The asterisk at the beginning of the file indicates the start of a job record.
- The next character, the comma, is used to separate each field in the record.
- The field following the comma is the job number.
- The next field is the job description, and so on.

On subsequent lines, the **P** indicates the start of a phase record, the **C** indicates the start of a category record, and the **E** indicates the start of an extra record.

Viewing a list of fields contained in the estimating transaction file

In Job Cost Help, you can see a list of fields contained in the estimate transaction file:

1 In Job Cost, select **Help > Help Topics**.

2 On the **Index** tab, type **importing, estimate file**.

3 Click [**Display**].

4 Click the button next to each record to see the exact file layout.

In Estimating Help, you can also find a list of fields contained in the transaction file:

1 In Estimating , select **Help > Help Topics**.

2 On the **Index** tab, type **transaction files for job cost**.

3 Click [**Display**].

4 Select **Transaction file for Sage 300 Construction and Real Estate**.

5 Click [**Display**].

6 Click [**job**], [**phase**], or [**category**], as needed.

Commitment transaction file layout

If you open the commitment file that Buyout creates, whether the file is a .jcc file for Job Cost or a .txt file for Purchasing, you see something that looks like this:

- The **C** at the beginning of the file indicates the start of a Commitment record.
- The next character, a comma, is used to separate each field in the record.
- The field following the comma is the purchase order number.
- On subsequent lines, the **CI** indicates the start of a commitment item record.

The only difference between the two types of export files Buyout creates is found in field 21 of the export file. Into the 21st field of the .txt file for Purchasing, the software embeds a price code for each item. The price code comes into Buyout from Estimating. Not all items have price codes, so this field does not have to contain a value in order for the file to successfully import.

> **Caution!** The Estimating price code information is used in Purchasing as the inventory number. Please check with your estimating staff to ensure they have set up the price code fields appropriately.

Also, when Purchasing takes in an export file, it appends numbers to each commitment item. So, when sending data on to Job Cost, the JC Commit.txt file contains commitment item line numbers that the .jcc file does not.

To see a list of fields contained in the commitment transaction file

1 In Buyout, select **Help > Help topics**.

2 On the **Index** tab, type **commitments, commitment file format**.

3 Select **commitment file format**.

4 Click [**Display**].

5 Click **Commitment record details** and **Commitment item record details**.

> **Note:** Be sure to note the maximum size limits for each field. The quote summary name is limited to 30 characters, as is the vendor item description. Information that exceeds the maximum size limit for a field is truncated when you import it to Job Cost. Additionally, any separators that you enter for the job number or cost code are stripped out during the export process.

In Purchasing, you can find a similar list in Help:

1 In Purchasing, select **Help > Help Topics**.

2 On the **Index** tab, type **importing orders**.

3 Click [**Display**].

4 Select either **Commitment Item** or **Commitment Record**.

5 Click [**Display**].

In Job Cost, you can also see a list of fields contained in the commitment transaction file:

1 In Job Cost, select **Help > Help Topics**.

2 On the **Index** tab, type **importing, commitments file**.

3 Click [**Display**].

4 Click the button next to each record to see the exact file layout.