Equipment Tracking Module

User Guide

An Application from the

Modular Management Series™

of

Project Administration Tools

Equipment Tracking Module User Guide

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Introduction

The *Modular Management Series™* of project administration tools are designed primarily for the field office to track costs as they occur during the course of a job. A variety of reports can then be printed on site. The applications are particularly useful for remote sites, where information from the home office may not be readily available on a timely basis.

The Equipment Tracking Module is one of several core modules designed to provide a local database of project costs. The module is designed first as a tool to be used by the personnel in the field to track equipment usage and maintenance costs. It is also designed to let you post equipment expenditures against the same set of project cost codes that are used for labor and material costs. From the database you can then print out reports such as: Internal Equipment Cost Reports, Invoice Billing Summary Sheets Equipment Work Order Maintenance Log, etc.

This guide is arranged into sections that show you step by step how to populate a new database and begin the process of tracking equipment related project costs.

Part 1 - Getting Started

Setting Up a New Database

Before you can start entering Equipment Usage, Equipment Rentals or other day to day information you first have to populate a number of tables in the database. The Company Numbers, Job Numbers and Cost Code Groups need to be entered to create the **Cost Structure**.

The Rate Codes, Category Codes and Subcatgory Codes all need to be entered to create the **Rate Structure** for Equipment Usage.

Fuel types should also be entered as they will be needed on the Equipment Information form when equipment is added to the Master List of Equipment.

Once these two structures and Fuel Types are in place you can then add equipment to the Master Equipment List.

The steps to setting up a new database are as follows:

Establish the Cost Structure:

Enter Company Numbers
Enter Job Numbers with Settings for the Cost Code Groups
Enter Cost Codes

Establish the Rate Structure:

Enter Rate Codes
Enter Equipment Categories
Enter Equipment Subcategories with rates.

Now populate the Master Equipment List with your equipment items.

You will then be ready to enter equipment usage, add maintenance workorders, rentals, etc. on a daily basis.

The following chapters in this section will describe the various file maintenance screens and the fields, controls and options for populating the required support tables.

The Multiple Document Form

When you click on the Labor Tracking Module shortcut or file icon a multiple document interface (MDI) form will appear with a plain gray background. The menu items are located on top of the form. You can select various forms that will appear inside the bounds of the main MDI form. If you have multiple forms open you can get them to arrange in a cascade formation by clicking the mouse anywhere on the plain gray background. Most of the forms inside the MDI form do not need to be expanded with the exception of forms that display the contents of reports. Most forms can be minimized but none of the browse or data entry forms will need to be maximized. They are designed to be used in their original size as displayed.
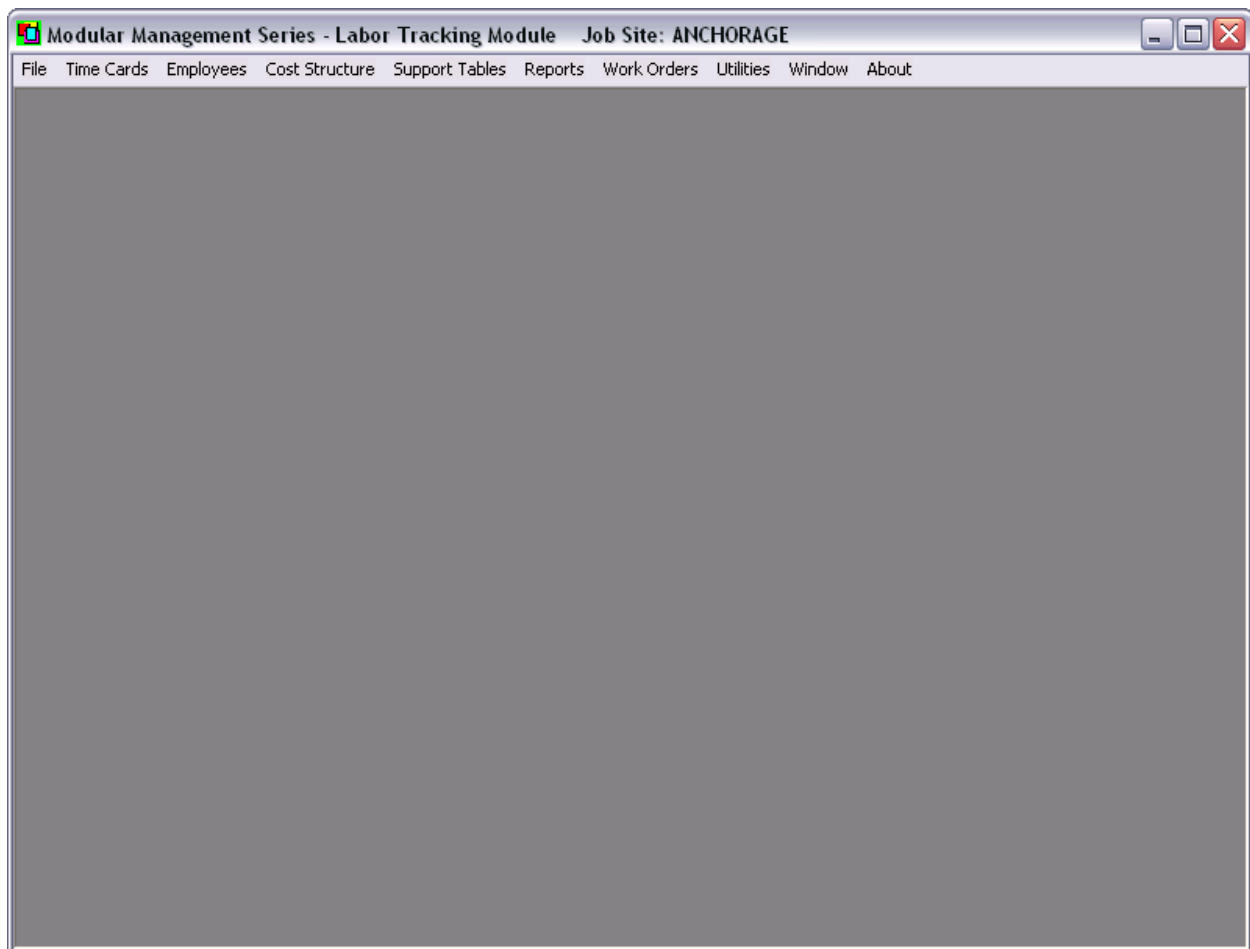

Figure 1.1 The Main MDI Form for the Labor Tracking Module

The caption of this form will display which Job Site is currently in use. The Labor Tracking Module allows you to have multiple Job Sites. For more on this refer to the section on "Multiple Job Sites" in this guide.

The Standard Table Maintenance Form

The Labor Tracking Module uses several Microsoft Access Databases. In the main database there are a group of tables that organize all of the information needed to report project costs. There are interrelationships between these tables which the Labor Tracking Module will maintain. There are a series of standard table maintenance forms that allow you to maintain the contents of these tables. These forms allow you to browse the table contents where you can add, edit and delete items. Many of the forms have options to view, search and print the contents of the table. The table maintenance forms are designed to verify your entries and to generate the appropriate error messages if an invalid item is being entered.

An example of a standard table maintenance form is displayed in Figure 1.2. This is the form for maintaining the list of company numbers:

Figure 1.2 Example of the Table Maintenance Form

The keyboard actions for the table maintenance form are:

 and – move up and down the list of items.

 – move to top of list.

 – move to bottom of list.

 and – move up and down the list one page at a time.

⌨ Enter – add a new item if at the line with this symbol ⬚─────┤ (or the words "End of List")
Otherwise, edit the line if data is present on that line.

⌨ Del – delete an item. You will always be asked to confirm a delete. In some cases you will not
be able to delete an item if that item is related to other tables and data.

Space bar – in most cases if there is a separate field entry form the space bar will allow you to
view the entire item. In the case of company numbers all of the fields will be displayed in the
lower level field entry form. Press the space bar again to return to the main browse screen. On
some forms the space bar will bring up another browse screen of items related to the item in the
main browse screen.

⌨ Esc – exit the form.

There are a series of command buttons in a row at the bottom of the form that can be clicked on
with the mouse. You can also use the alt key sequence. In fact, the modules are designed for
keyboard use with very little need for the mouse, which you may find more efficient when
working with large amounts of data.

There is a group of buttons on the right side of each display grid designed to let you use the
mouse to move up and down the list of items.

These buttons are:

▣ Home – move to the top of the list.

▣ Page Up – move up a page at a time.

▣ Cursor Up – move up one item at a time.

▢ Action Button – On a line with data, edit. On "End of List", add a new item.

▣ Cursor Down – move down one item at a time.

▣ Page Down – move down a page at a time.

▣ End – move to the end of the list.

Part 2 -The Cost Structure

Your management team probably has a good idea of what a project will cost. If the project was awarded through a formal bid process then there is an estimate submitted by your company that contains the total cost to the client. In addition, there are documents listing the expected internal costs for each phase of a project, amounts for contingency, and overall expected profit. This collection of calculations and the resulting costs is often referred to as the definitive estimate.

The scope of work of a construction project is usually broken down into phases. Each phase in turn has a list of tasks. To track project expenditures and overall progress cost codes will be assigned to each phase. Another sub set of these codes are then assigned to each task. There may also be another list of cost codes for standard expenditures such as travel, consumables, small tools, etc. Or you might be working on a maintenance contract where hours must be posted against a work order number or some other document. Cost codes are then assigned for each maintenance item as needed. This collection of cost codes is referred to as the **cost structure**.

The Labor Tracking Module uses the following arrangement to organize the cost structure:

Company Numbers

Job Numbers

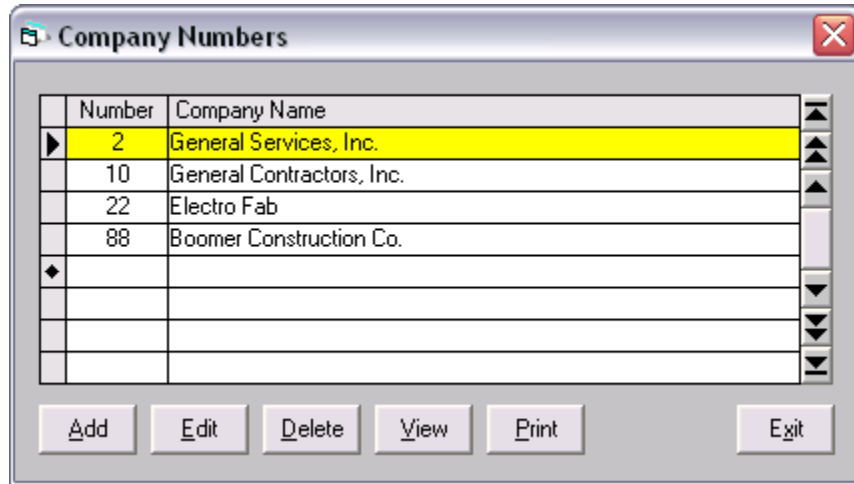| Column A Codes	Column B Codes	Column C Codes
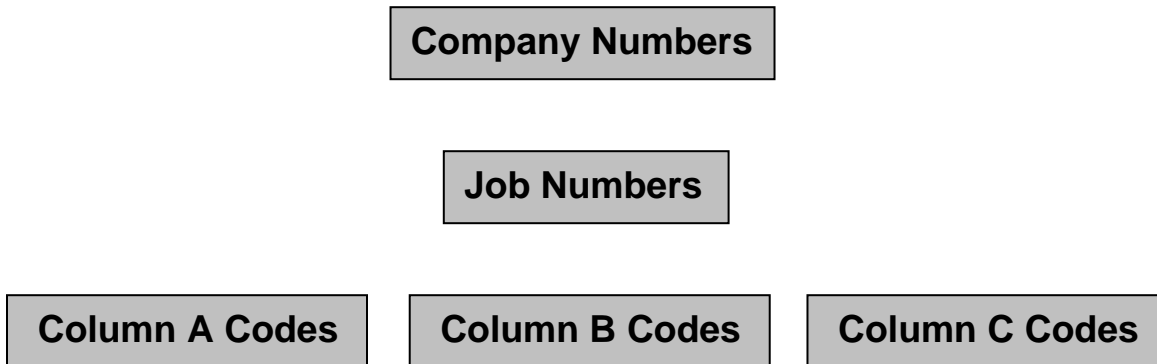
The top element of the cost structure is the company number. All of the modules are designed for multiple company numbers. Under company numbers are the job numbers. Under each job number are three groups of cost codes. The number of cost code groups you are going to use along with the name, type and size of each group must be defined for each job number. Cost reports can be printed for any combination and hierarchical arrangement of these cost code groups.

A simple example of how the independent groups of cost codes work is as follows: Lets say the project is a business park with several buildings containing suites of offices. There are four buildings; Building A, B, C and D. Each building has six office suites. Group A cost codes could be the buildings. Group B could be the office suites. Group C could be each major discipline such as Civil, Electrical, Mechanical, Structural, etc. Labor costs could be posted to Building B, Office 4, Electrical as one combination or to Building D, Office 6, Civil as another combination. Cost code groups B and C are used independent of group A to create the variety of combinations needed to track job costs.

Company Numbers

The menu selection to display the form for company numbers is found under the main menu item "Cost Structure" and then "Company Numbers". The keyboard sequence is **Alt-C1**. The Company Number form is displayed below. Refer to the section "The Standard Table Maintenance Form" for information on how to use the controls on this form.

Figure 2.1 The Company Number Browse Form

You may never need to enter more than one company number. However, the modules are designed to use multiple company numbers as part of the overall design of the cost structure. All cost related data and options for reports require a company number/job number pair to be selected.

To view the entire contents of a company number entry press the space bar. The data entry form for company numbers will appear with all of the fields displayed.

When you Add, Edit, Delete or Display a Company Number the data entry form in Figure 2.2 will appear:

Figure 2.2 The Data Entry Form for Company Numbers

Besides the standard fields for company name, address, etc. you will notice the Default Text for Crew Sheet Signature Lines. These fields allow you to enter abbreviations for the company name and client name. The fields can be changed from job number to job number but you can put the default text in these fields. There is also a text box for entering the file name of the optional company logo bit map file. This file is stored in the MMSMedia folder. This media folder must be placed in the same folder as the application (LTS.exe) file.

Besides the tab key you can move from one field to the next by pressing the enter key.
To save a new item or changes press **Alt-U** or click on the update command button. To exit the form without making any changes press the **Esc** key, **Alt-C** or click on the Cancel button. When viewing press the space bar to exit back to the browse form.

Some documents printed by the modules use the company logo. An example is the Repair
Orders in the Equipment Module. The logo should be a bit map image stored in the MMSMedia
folder. Click on the ▭ button located within the Logo File Name text box and the File Selection
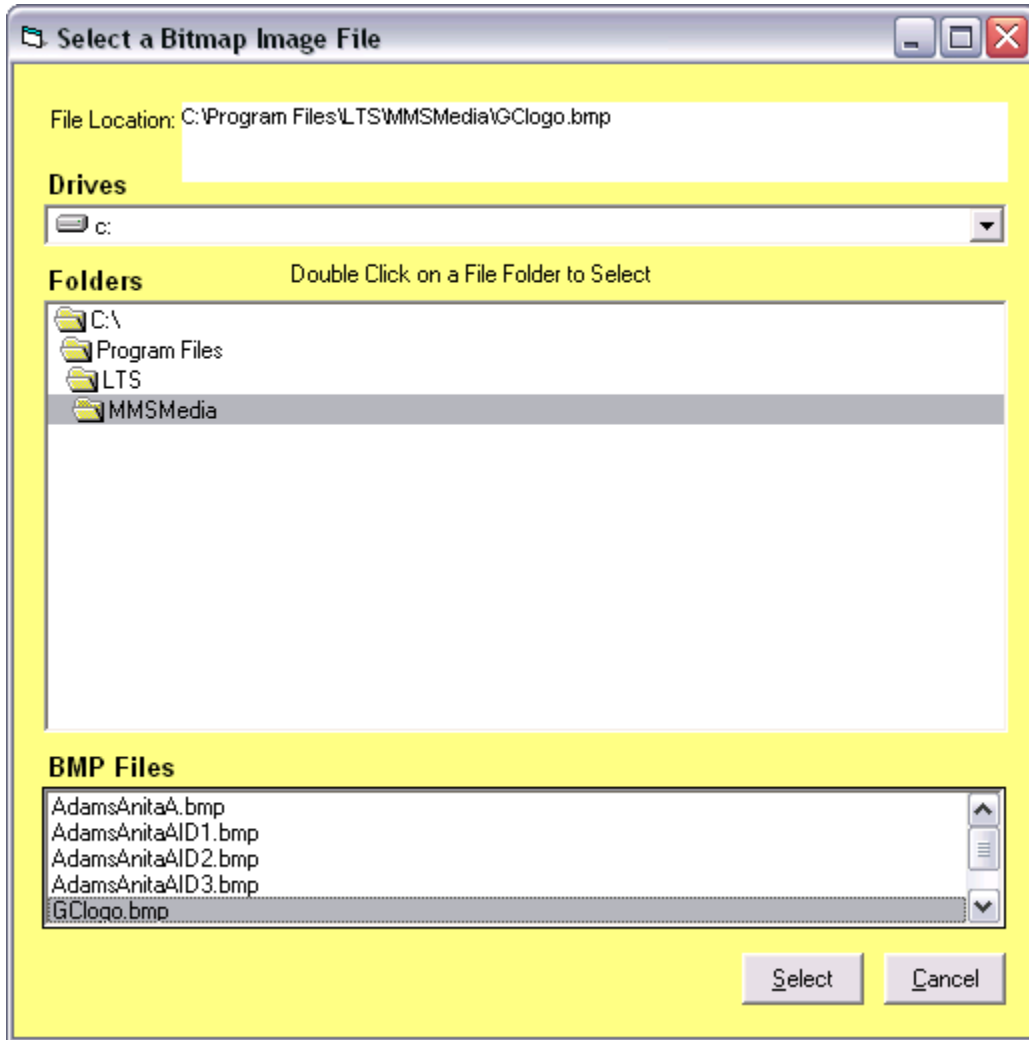Form in the figure below will appear.

Figure 2.3 Logo File Name Selection Form

The preview window should then display the logo image after you have made your selection.

When you click [Print] or **Alt-P** on the company number browse form the following report form appears:
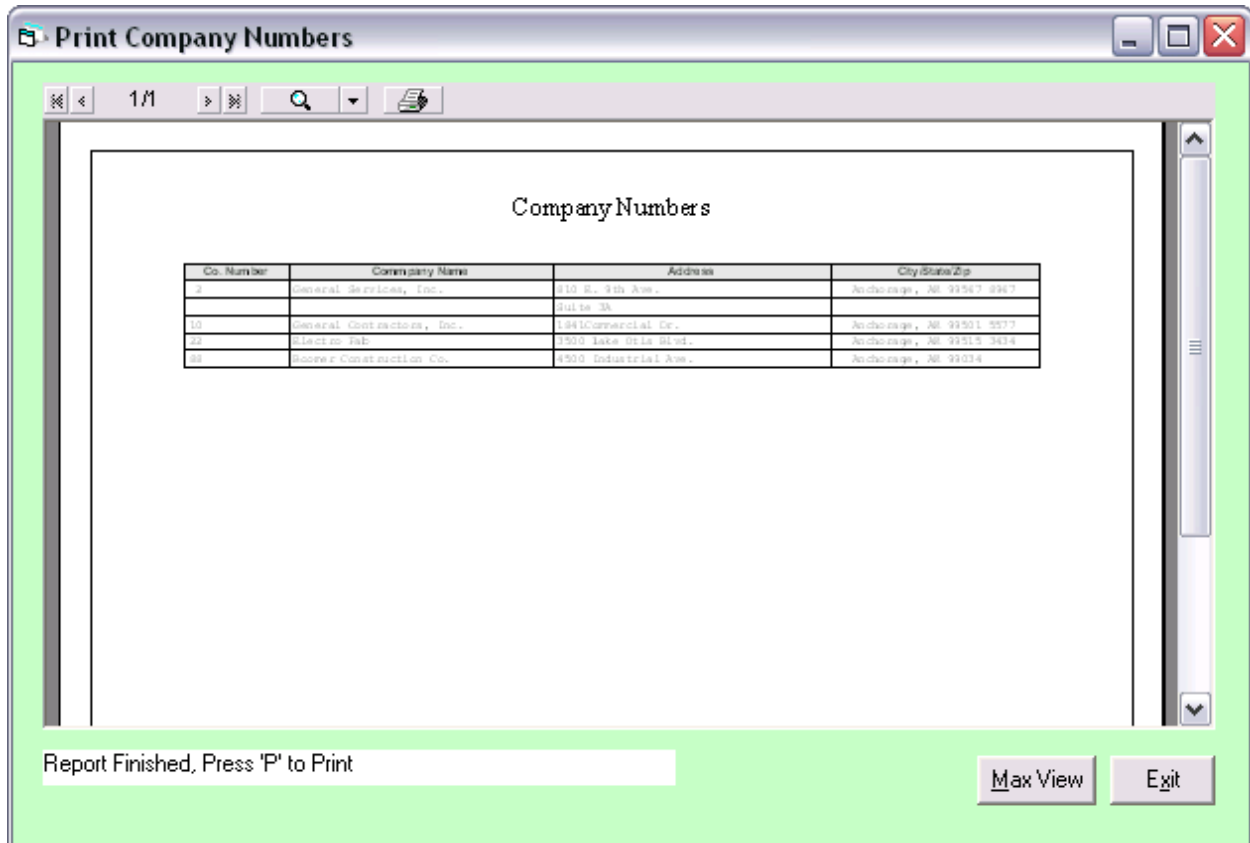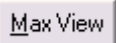
Figure 2.4 List of Company Numbers Report Form

To print the report press **<P>** or click on the printer icon: [🖶] at the top of the report window. Click [Max View] (or **Alt-M)** to fill the screen with the report viewer. Before doing this maximize the module's Main MDI Form first to fill your entire screen with the report viewer. To exit this form you can press [Esc] (or **Alt-X)** or click on [Exit].

If you clicked [Max View] the report window will expand to the limits of the module MDI form as shown below.
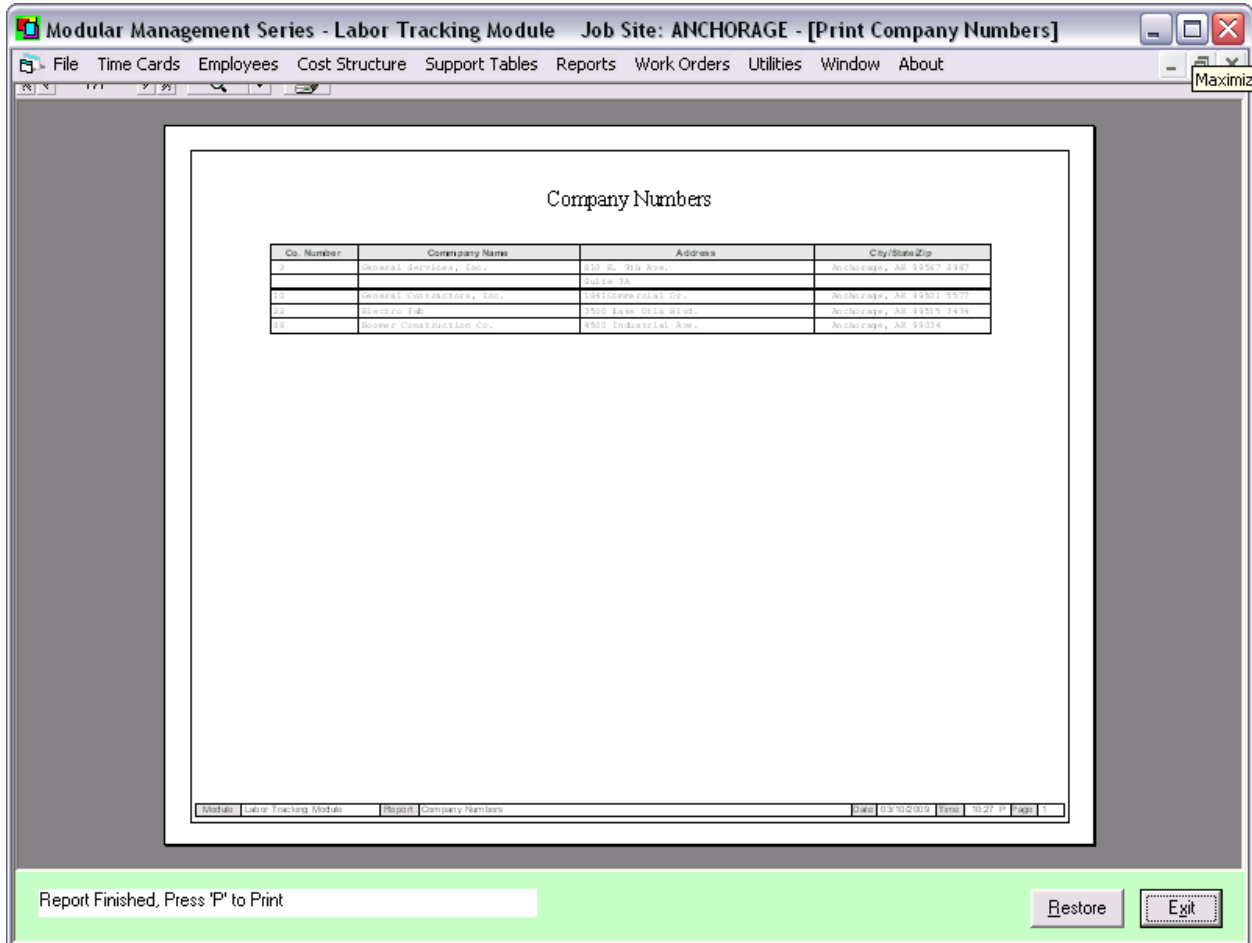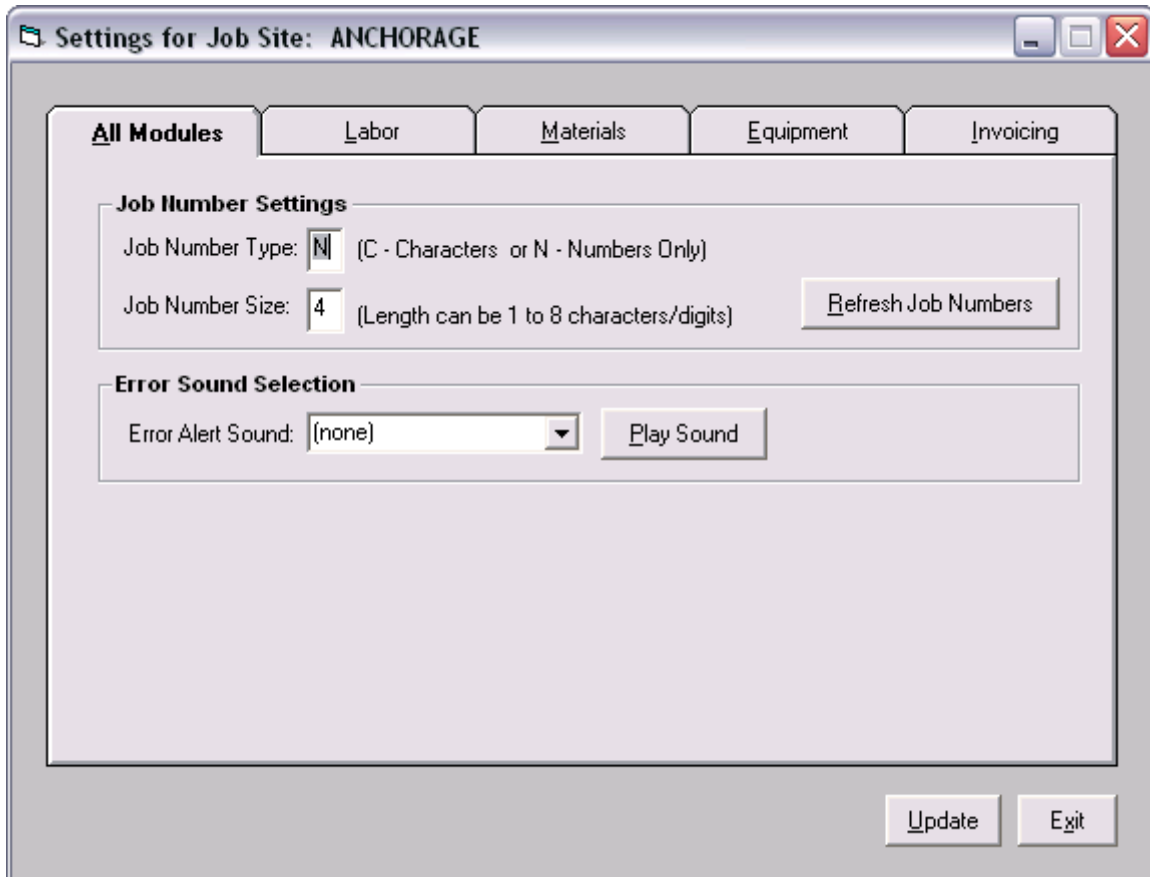
Figure 2.5 Report Viewer Window after Clicking the "Max View" Button

You can click on the left mouse button to zoom in and click on the right mouse button to zoom back out. If you zoom in enough so that the scroll bars appear you can then hold down the left mouse button and move the report around in the window.

Job Numbers

Before entering any job numbers you need to define the job number settings. To do this select Main Menu option "Utilities" and under this click on menu selection "2 – Job Site Settings". The keyboard sequence is **Alt-U2**. The System Setting Form in Figure 2.6 will appear.

Figure 2.6 Job Site Settings – All modules Tab

In the above form the user has selected numeric only job numbers with a maximum length of 4 digits. The job number settings must remain the same for an entire Job Site However, if you are using multiple Job Sites the settings can change from Job Site to Job Site. See more about using multiple Job Site in the chapter "Using Multiple Job Sites".

The menu selection to display the form for job numbers is found under the main menu item "Cost Structure" and then "Job Numbers". The keyboard sequence is **Alt-C2**. The Job Number Browse Form is displayed in Figure 2.7a. Refer to the section "The Standard Table Maintenance Form" for information on how to use the controls on this form.

Figure 2.7a The Job Number Browse Form

The company number and name to which the job numbers are related is displayed at the top of the form. The job number, job name and remarks are entered directly into this data grid.

In addition to the standard buttons for Add, Edit, etc. you will notice several others located at the bottom of the form. The buttons allow you to search the table for a specific job number, enter cost code settings, enter job number settings and clone a job number. Each of these options will be explained in the next few pages. At the top of the form is a user control to select another company number. To activate this control click anywhere on the control and the text box for company number will turn on so that you can enter a different company number as shown in Figure 2.7b.

Figure 2.7b A New Company Number has been Entered in User Control at Top of Form

To exit this user control after keying in a new company number press [Enter] and the display will change to show the job numbers related to the new company number you have entered as shown in Figure 2.7c:
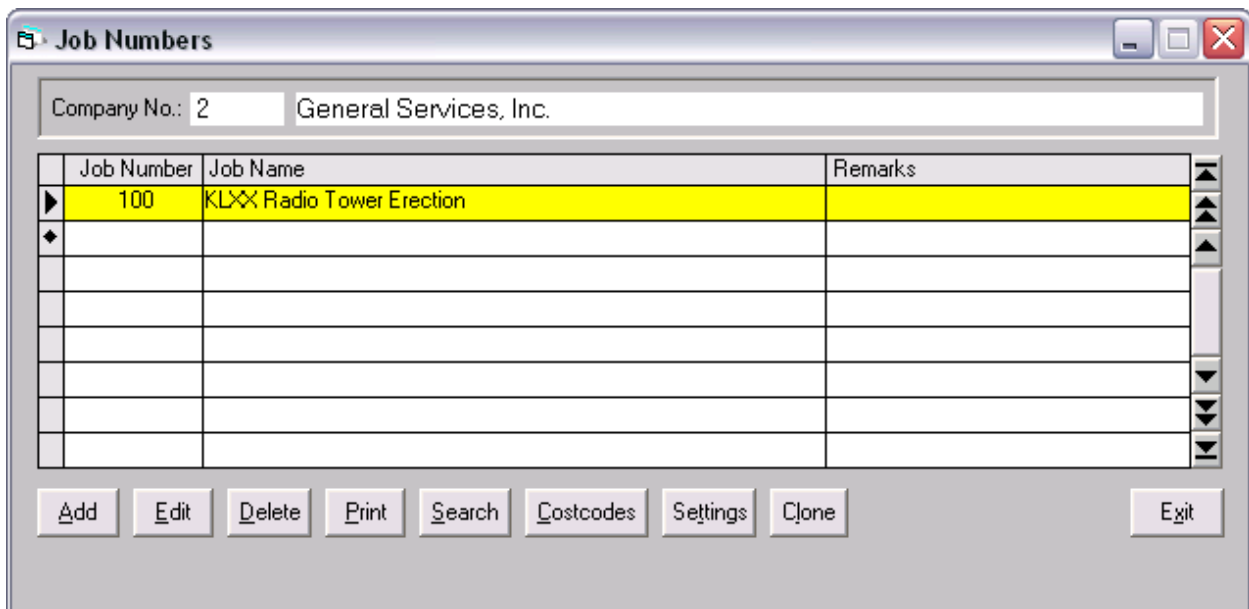

Figure 2.7c After User Control is Exited New List of Related Job Number is Displayed

When you click on the "Search" button or press **Alt-S** the following search form appears:

Figure 2.8 The Job Number Search Form

To search for a job number enter the number in the text box at the top of the form. In this example, the job numbers are set up as 4 spaces long, so if you are looking for a three digit number you must enter the leading space and then the three characters.

If you want to search for a job number by the job name then click on the gray "Description" title bar. The search window will now display the job numbers in order of the job name as illustrated below:

Figure 2.9 The Job Number Search Form – In Order of Job Name

Note that the Description Column heading is now a light grey color.

Now type in the first few characters of the job name and the active bar will move to the first
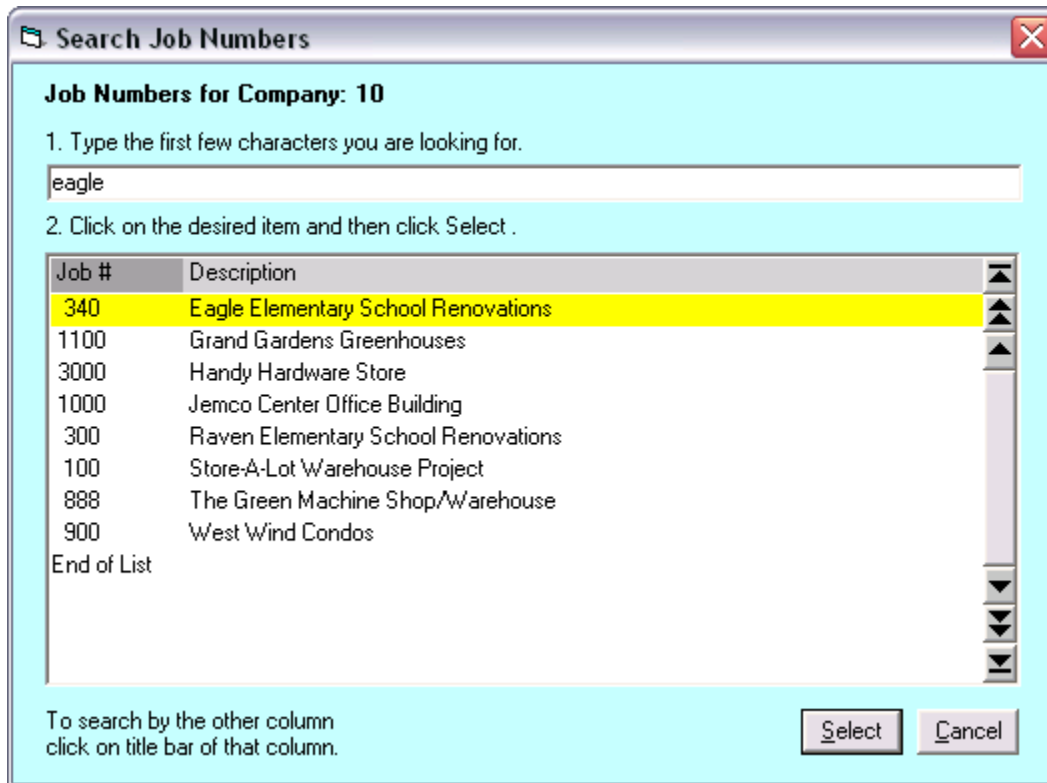occurrence of those characters. If the characters cannot be found the bar will not move.

Figure 2.10 Active Bar Has Moved to Job Name with Search String

To make you selection click on ☐Select☐ or press the **Enter** key.

To set up the cost codes for your job number click on Costcodes or press **Alt-C** to bring up the
Job Number Cost Code Settings sub form as displayed below:

Figure 2.12 The Job Number Cost Code Settings Form
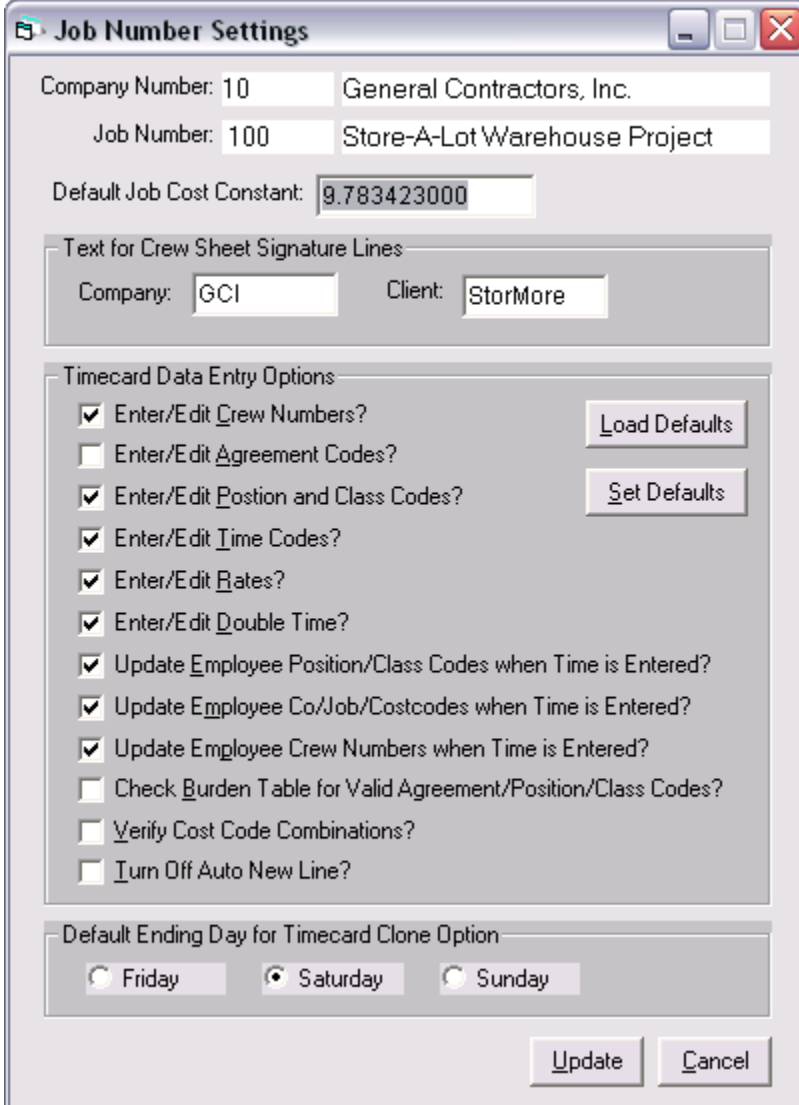
This sub form allows you to enter the name for each cost code group, the type and the size. The
maximum size for a cost code is 15 characters. This form is where you also enter the name of the
Client Code. This code is used in reports that are submitted to the client such as Invoice
Summary Sheets.

If the cost codes are going to be consistent from job number to job number you may want to
store your settings as the cost code defaults. To do this click on the Set Defaults button. Later,
when adding another job number you can click on the Load Defaults button to load the default cost

code settings for each group. You can use one, two or all three groups depending upon your needs. To save your settings click on the update button or **Alt-U**.

There are a number of job number settings available to you to configure how the Labor Tracking Module functions when entering time. To select the Job Settings form click on the [Settings] button or key in **Alt-T** to display the form below:

Figure 2.13 The Job Settings Form
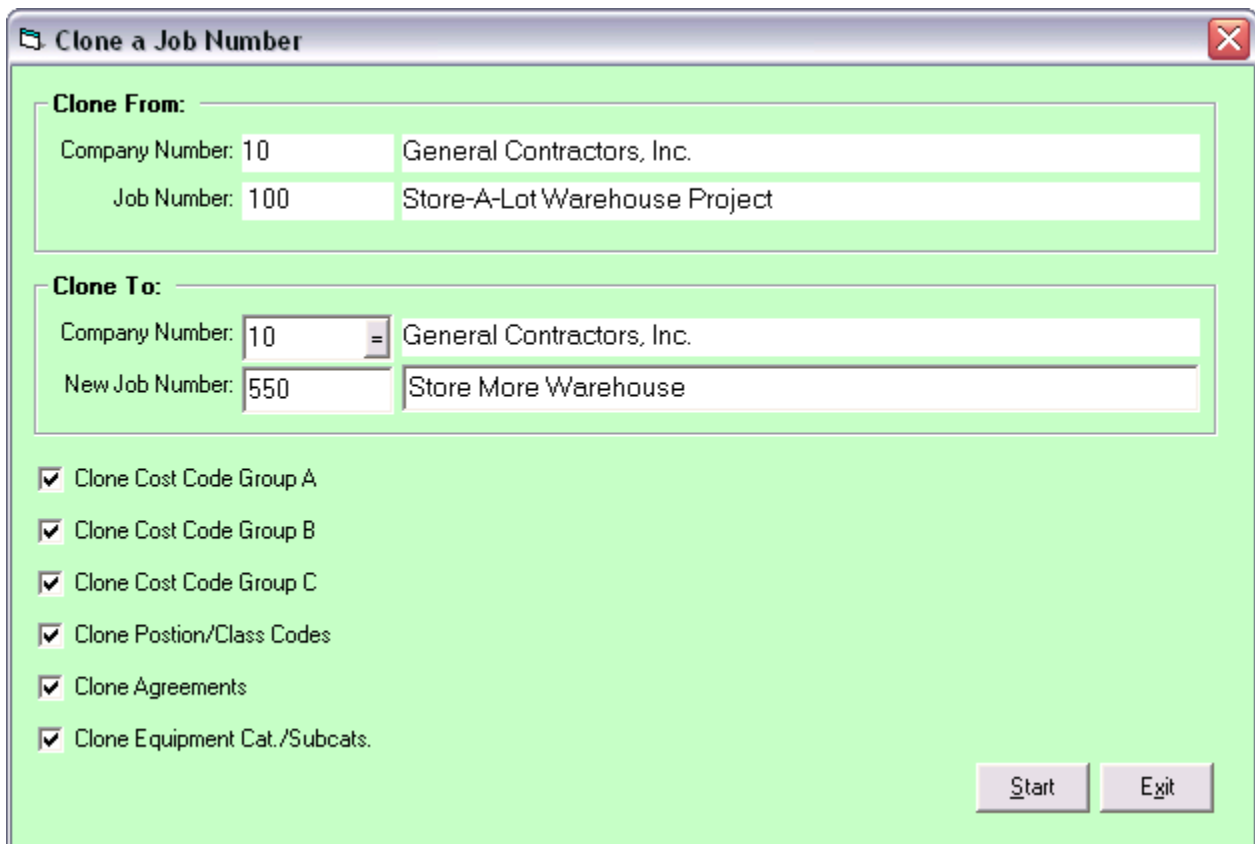
There are two text blocks to enter the abbreviations for the company and client names. There are a series of check boxes to select timecard data entry options. Some are obvious, like the Enter/Edit options which turn on or off various columns in the time data entry form. These options are followed by three options on how you want to update the master employee file with the latest time entered for an employee. If you are using agreement codes there is an option to insure there is a valid combination of agreement/position/class cods in the line of time. Also, on

some jobs, you may want to restrict the combination of cost codes that can be entered. This is used only if you are using an expanded cost code structure such as work orders the can have one to three related cost codes. The auto new line feature will jump down a line in the time entry screen in preparation for a new entry. The default ending day for time card clone basically says that if you are going to clone a weeks of time what day of the week does the clone option stop at. If you have staff or other employees with time posted to a regular group of cost codes the clone option allows you to enter Monday's time and clone the rest of the week.

There are buttons available for setting the defaults and loading the defaults when entering a new job number. To save your settings click on the update button or press **Alt U**.

You may need to create a new job number where the cost code groups, position codes, and class codes are the same or similar to an existing job. Since these items are always related to a company/job number pair the Labor Tracking Module allows you to clone a job number. This means you will not have to reenter cost codes, position codes or class codes again under the new company/job number pair.

To clone a job number click on `Clone` or press **Alt-L.** The Clone a Job Number form will be displayed:

Figure 2.14 Clone a Job Number Form

The form allows you to select a target company and job number pair. There are check boxes to select which of the support tables you wish to clone for the new job number. To begin the process click on the Start button or enter **Alt-S**. After starting the form will display the progress and let you know when you have successfully cloned a job number.

The print options for job numbers are on the Job Number Report form. Click on the print button or press Alt P to display this report form:
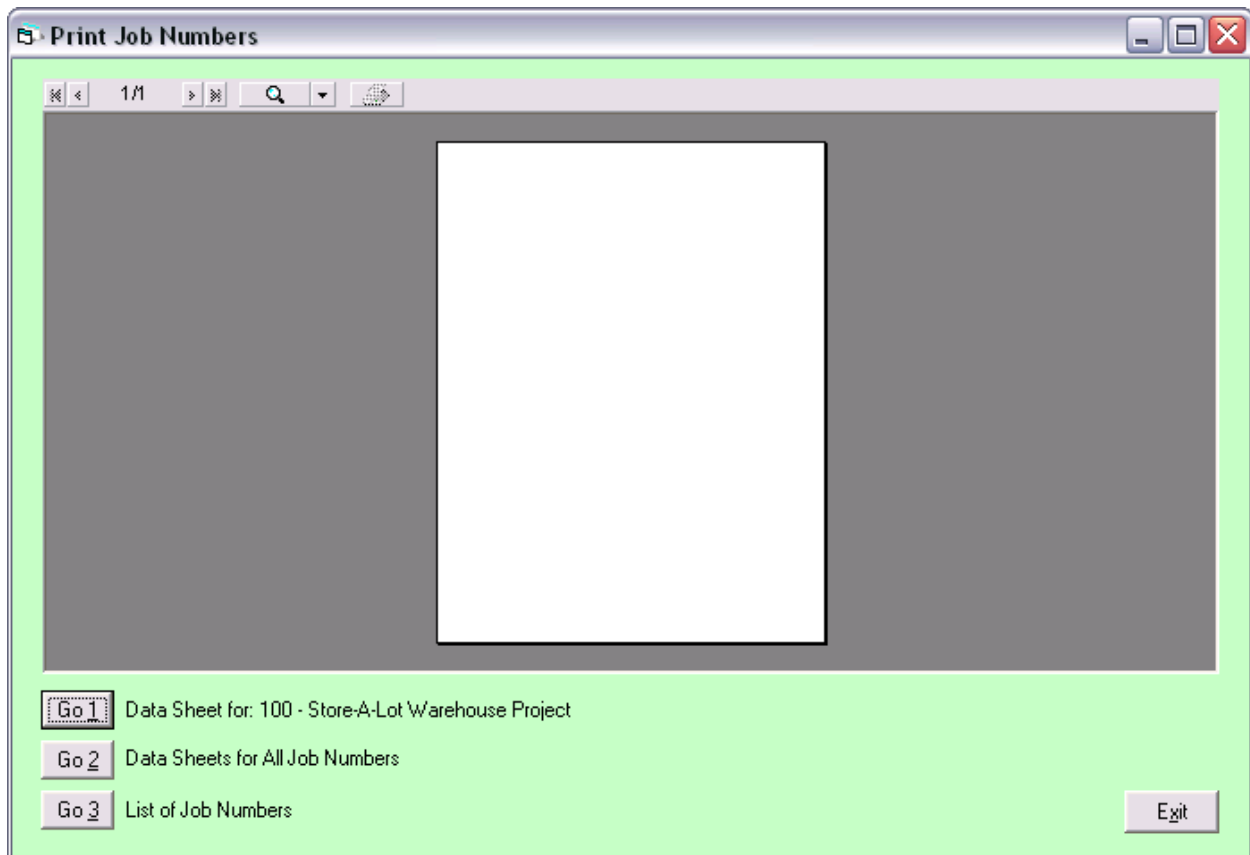
Figure 2.15 The Print Job Numbers Form

You can print a data sheet for the job number you are currently at on the browse form , data sheets for all job numbers, or a list of job numbers for the current company number selected in the browse form.

Cost Code Groups

The menu selection to display the form for Cost Code Groups A, B and C is found under the main menu item "Cost Structure" and then "Cost Code Group A", etc. The keyboard sequence is **Alt-C3, 4,** or **5**. The Cost Code Group form is displayed below. Refer to the section "The Standard Table Maintenance Form" for information on how to use the controls on this form.

Cost Code Group: Area

| Company No.: | 10 | General Contractors, Inc. |
| Job Number: | 100 | Store-A-Lot Warehouse Project |

Area	Description	N/R	Staff U/C	Craft U/C	Invoicing Code	Approver Code
1000	Site Preparation				4587984	Mwilson
1001	Foundation				4589854	JSmith
1002	Steel Erection				4589887	Mwilson
1004	Exterior				4589712	Jsmith
1005	Roof				5234712	Mwilson
2001	Interior - Shop Space				5239874	Jsmith
2002	Interior - Office Space				2354784	Jsmith
2003	Interior - Mechanical Space				2547841	Jsmith
3032	Interior - Lighting				5478698	Jsmith
4000	Interior - Floors				2545874	JSmith
5000	Surveying				6987452	MWilson
6000	Piping				6587744	Mwilson
8000	Materials Testing				4787444	Mwilson
8500	Landscaping				5569898	Mwilson

Add   Edit   Delete   Print   Find   Search   Exit

Figure 2.16 The Cost Code Table Maintenance Form

To select another Company/Job Number Pair click on the control at the top of the form. When activated the text boxes will appear as shown in the figuree below:

| Company No.: | 10 | = | General Contractors, Inc. |
| Job Number: | 100 | = | Store-A-Lot Warehouse Project |

Figure 2.17 Company/Job Number Selection Control After Activation.

Once it is activated the text boxes will appear along with the item search buttons. You will now be able to enter a different company number and job number. To exit this control press the

Enter ←

key.

Cost codes are displayed for a unique company/job number pair. The columns are:

Cost code – 1 –15 characters in length, alpha numeric or numeric only depending upon the job number cost code settings. Notice the heading for this column is the name assigned to this cost code group in the job number settings.

Description – Can be up to 50 characters in length.

N/R – Non-reimbursable designation A Yes/No field. Line items with a Cost Code that has been designated as non-reimbursable will not be included on invoice summary reports used as backup to client invoicing.

Staff ULC – Staff Upload Code – Optional code used by the Labor Tracking Module payroll upload utilities that transfer time to home office accounting systems.
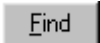
Craft ULC – Same as Staff ULC but for time with a position code designated as craft.
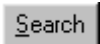
Invoicing Code – This code is used by the Electronic Invoicing Module.

Approver Code –used when creating electronic invoices in the form of text files submitted to the client.

Besides the standard Add, Edit and Delete command buttons the other command buttons on this form are:

[Print] - Print a list of Cost Codes.

[Find] - Find a Cost Code. Allows the user to enter a cost code when the complete code is known.

[Search] - Search for a Cost Code. Allows user to enter first few characters of the cost code to see if there is a match.

Part 3 – The Equipment Usage Rate Structure

The Equipment Tracking Module has a group of tables designed to allow you to establish rates for equipment usage. These tables consists of the equipment category and related subcategories along with a rate code. The category/subcategory pair of codes narrows the rate list down to a specific equipment type. The rate code then allows you to create a set of rates for that specific category/subcategory pair for several situations. Some examples of rate codes might be day shift, night shift, 12 hour day, 24 hour day and standby. There is a separate rate structure for equipment rentals. Equipment Usage Rates are entered for a specific Company/Job Number pair. The Job Number Clone procedure allows you to clone rates established for an existing job to a new job number.

Rate Codes

From the main menu select "Equipment" then "7 – Rate Codes" to display the Rate Codes Browse form as shown below. The keyboard shortcut is **Alt-E7**. Refer to the section "The Standard Table Maintenance Form" for information on how to use the controls on this form.

Figure 3.1 The Rate Codes Browse Form

The Rate Codes Browse Form allows you to perform all of the standard table maintenance functions such as add, edit, delete, and print.

The rate codes are related to a specific Company Number. To select another company number click on the ⬚Select Company button (keyboard shortcut is **Alt-C).**

Rate Codes allow you to establish several different rates for a unique Category/Subcategory pair. At least one Rate Code is needed before you can enter rates under individual Subcategories.

The columns are:

Rate Code - Text field, 1 character in length.

Description – Text field, 40 characters in length.

Invoice UOM – Invoice Unit of Measure (Used in Electronic Invoicing).

Equipment Categories

From the main menu select "Equipment" then "2 – Category/Subcategory Codes" to display the Equipment Category Codes Browse form as shown below. The keyboard shortcut is **Alt-E2**. Refer to the section "The Standard Table Maintenance Form" for information on how to use the controls on this form.

Figure 3.2 The Equipment Category Codes Browse Form

The columns are:

Category Code - A six character alphanumeric string.

Description – A 50 character string.

The Equipment Category Codes Browse Form allows you to perform all of the standard table maintenance functions such as add, edit, delete, print and search. It also has some additional buttons which are:

Select Co./Job Pair - Allows you to select a Company Number/Job Number pair. Keyboard command is **Alt-C.**

Browse Subcategories - Clicking on this button will display the Equipment Subcategory Codes Form. Keyboard command is **Alt-B or Spacebar**.

Equipment Subcategories

When you click on the Browse Subcategories button in the Equipment Category Codes form the Equipment Subcategories Form in Figure 3.2 is displayed.

Figure 3.3 The Equipment Subcategories Browse Form

The columns are:

Subcategory Code – A four character alphanumeric string.

Description – A 50 character string.

The Equipment Subcategories Browse Form allows you to perform all of the standard table maintenance functions such as add, edit, delete, print and search.

The related Company/Job Number pair and Equipment Category are displayed at the top of the form.

To enter rates under a specific Subcategory Code click on the Rates button or use one of the keyboard shortcuts **Alt-R** or **Spacebar.**

Subcategory Rates

When the [Rates] button is pressed in the Equipment Subcategories Browse Form the Subcategory Rates Browse Form in Figure 3.3 is displayed.

Figure 3.4 Subcategory Rates Table Maintenance Form

The columns in this form are:

Rate Code – A one character string selected from a table of valid Rate Codes.

Description – Displayed when a valid Rate Code is selected

Billing Rate – Numeric field with 2 decimal places.

I/H Rate – In House Rate, a numeric field with 2 decimal places.

Fuel Type – 2 character string selected from a table of valid Fuel Types.

Invoice Code – Optional 6 character string used for Equipment Usage Invoices.

If a rate changes over time you can enter the rate change with the appropriate starting date by clicking on the [Rates By Starting Date] button or using one of the keyboard shortcuts **Alt-B** or **Spacebar**.

Subcategory Rates by Starting Date

When the [Rates By Starting Date] button is pressed in the Subcategory Rates Browse Form the Subcategory Rates by Starting Date Browse Form in Figure 3.4 is displayed.

Figure 3.5 The Subcategory Rates by Starting Date Browse Form

The columns in this form are:

Date – A ten character string.

Text Date – Displayed when a valid date is entered.

Billing Rate – Numeric field with 2 decimal places.

I/H Rate – In House Rate, a numeric field with 2 decimal places.

Part 4 – Master Equipment List

The Master Equipment List contains all of the equipment items that the Equipment Usage, Equipment Fuel Usage and Equipment Rentals relate to. The Master Equipment List is an independent table, the items are not related to a specific Company Number/Job Number pair. However, the default settings for Company Number, Job Number and Cost Codes can be entered for each piece of equipment. These default settings then appear when keying in Equipment Usage information if the defaults are not blank.

Master Equipment List Browse Form

From the main menu select "Equipment" then "1 - Equipment" to display the Equipment List Browse form as shown below. The keyboard sequence is **Alt-E1**. Refer to the section "The Standard Table Maintenance Form" for information on how to use the controls on this form.

Tag #	Equipment #	Description	Year	Co. #	Job #	Crew	Category	Subcat	Rate Code	Status
1	100	CAT, 966G, LOADER	2000	10	100	3	B	10	D	
2	102	CAT, 966G, LOADER	2000	10	100	3	B	10	N	
3	103	CAT, 966D, LOADER	2000	10	100	3	B	11	D	
4	104	CAT, 966D, LOADER	2000	10	100	3	B	11	D	
5	105	CAT, 980F, LOADER	2000	10	100	1	B	10	D	
6	106	CAT, 14H, GRADER	2000	10	100	1	D	10		
7	107	CAT, 16H, GRADER	2000	10	100	1	D	10		
8	108	6" Pump Module	2000	10	100	2	W	10		
9	109	GBC, 400E, ROCK TRUCK	2000	10	100	2	H	10		
10	110	GBC, 400E, ROCK TRUCK	2000	10	100	2	H	10		
11	111	FORD, UM, MECHANIC TRUCK	2000	10	100	1	K	10		
12	112	FORD, UM, LUBE TRUCK	2000	10	100	3	K	20		
13	113	GMC, 2500, FUEL TRUCK	2000	10	100	3	K	30		
14	114	GMC, 3500, 2000 GAL FUEL TRUCK	2000	10	100	3	K	30		
15	115	FORD, F350, CREW CAB	2000	10	100	4	M	10		
16	116	FORD, F350, CREW CAB	2000	10	100	3	M	10		

Add   Edit   Delete   View   Print   Find   Search   Exit

Figure 4.1 The Master Equipment List Browse Form

The Master Equipment List Browse Form allow you to perform the standard table maintenance functions such as add, edit and delete. It also has some additional buttons which are:

View - Allows you to view the entire contents of an equipment record. Keyboard commands are **Alt-V** or **Spacebar**
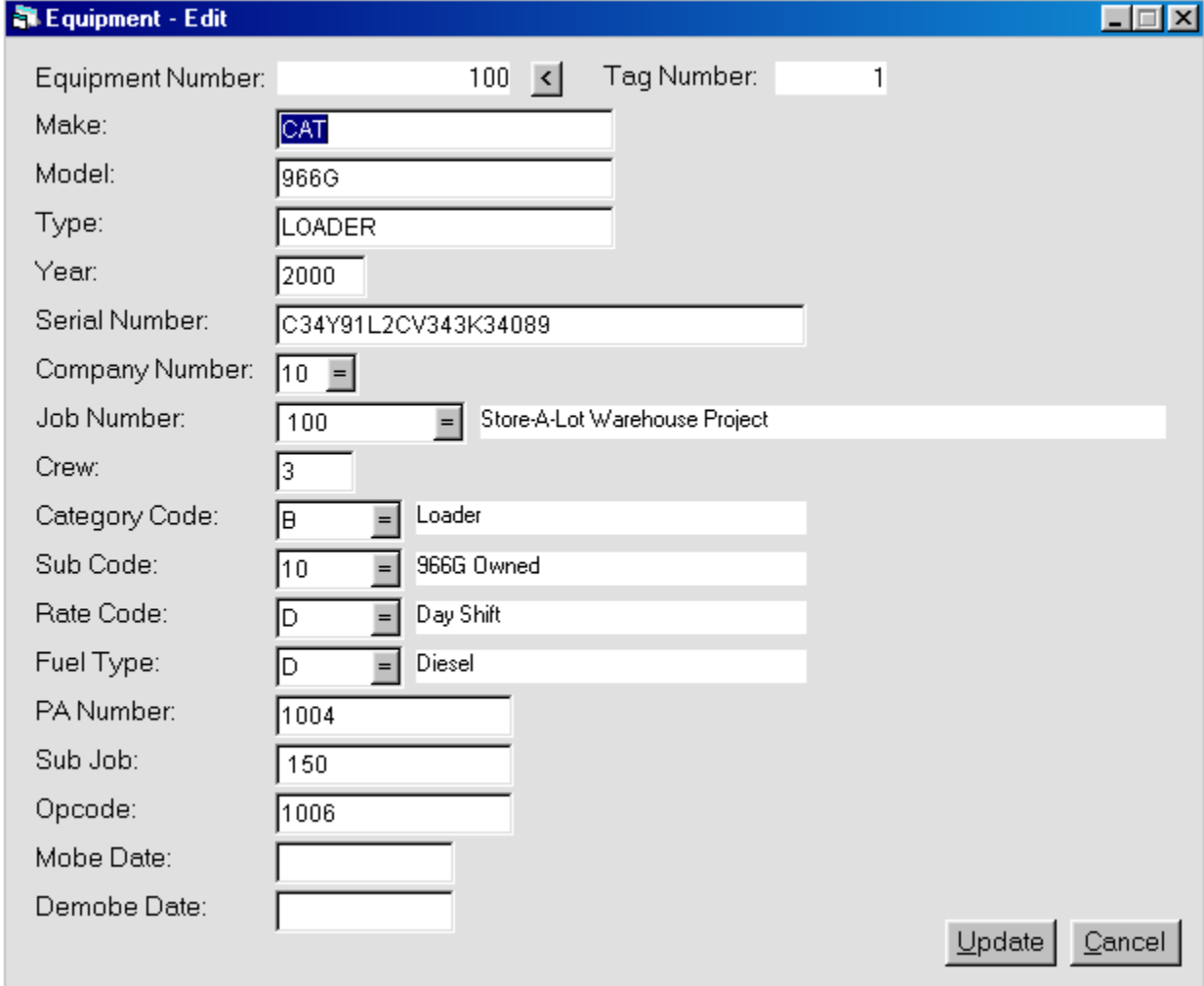
Print - Clicking on this button will display the Equipment List Report Form with options to print individual data sheets or the Master Equipment List. Keyboard command is **Alt-P**.

Find - Find an equipment item by keying in the tag number. Tag numbers are assigned by the program and are used to connect equipment usage, rentals, etc. to the equipment record. They cannot be changed by the user. They are easier to use than the longer equipment numbers when equipment usage is key punched into the equipment usage data entry form. Keyboard command is **Alt-F**.

Search - Search for an equipment item using the standard search form. Keyboard command is **Alt-S**.

Equipment Information Form

The Equipment Information Form displayed below is as it appears in edit mode.

Figure 4.2 The Equipment Information Form in Edit Mode

Notice that the top field, Equipment Number, is displayed in edit mode. The text box for the field Make is selected, as indicated by the text which is displayed in the standard reverse color scheme. If you need to change the Equipment Number in edit mode click on the [<] button. This will activate the text box and allow you to change the Equipment Number. This is to prevent the Equipment Number from being inadvertently changed during other edit operations.

The Equipment Tag Number is assigned by the Equipment Tracking Module and cannot be changed.

The text boxes on this form are:

Equipment Number – Text field, 12 characters in length.

Equipment Tag Number – Numeric field, 5 digit integer assigned by program.

Make - Text field, 20 characters in length.

Model - Text field, 20 characters in length.

Type - Text field, 20 characters in length.

Year – Text field, 4 characters in length.

Serial Number – Text field, 30 characters in length.

Company Number – Numeric field, 2 characters in length. Selected from the list of existing Company Numbers.

Job Number – Text field, 8 characters in length. Selected from a list of existing Job Numbers related to the above Company Number.

Crew – Numeric field, 3 digit integer. Used to group Equipment Items onto pre printed time sheets.

Category Code – Text field, 6 characters in length. Selected from the list of Category Codes related to the above Company/Job Number pair.

Subcategory Code – Text field, 6 characters in length. Selected from the list of Subcategory Codes related to the above Category Code.

Rate Code – Text Field, 1 character in length. Selected from the list of Rate Codes related to the above Company Number.

Fuel Type – Text Field, 2 characters in length. Selected from the list of Fuel Types related to the above Company/Job Number pair.

Group A Cost Code - Text Field, 15 characters in length. Selected from the list of Group A Cost Codes related to the above Company/Job Number pair. In this example the name of the Group A Cost Code is PA Number.

Group B Cost Code - Text Field, 15 characters in length. Selected from the list of Group B Cost Codes related to the above Company/Job Number pair. In this example the name of the Group B Cost Code is Sub Job.

Group C Cost Code - Text Field, 15 characters in length. Selected from the list of Group C Cost Codes related to the above Company/Job Number pair. In this example the name of the Group C Cost Code is Opcode.

Mobe Date – Text field, 10 characters in length. A place to record when the piece of equipment appeared on the project.

Demobe Date – Text field, 10 characters in length. A place to record when the piece of equipment is taken off the project.

The Company Number, Job Number, Crew, Category Code, Subcategory Code, Rate Code, Cost Code A, Cost Code B and Cost Code C are used as the defaults for data entry in the Equipment Usage form.

Printing the Master Equipment List

When the [Print] command key is clicked on the Master Equipment List Browse Form the
Report Viewer - Equipment form is displayed.
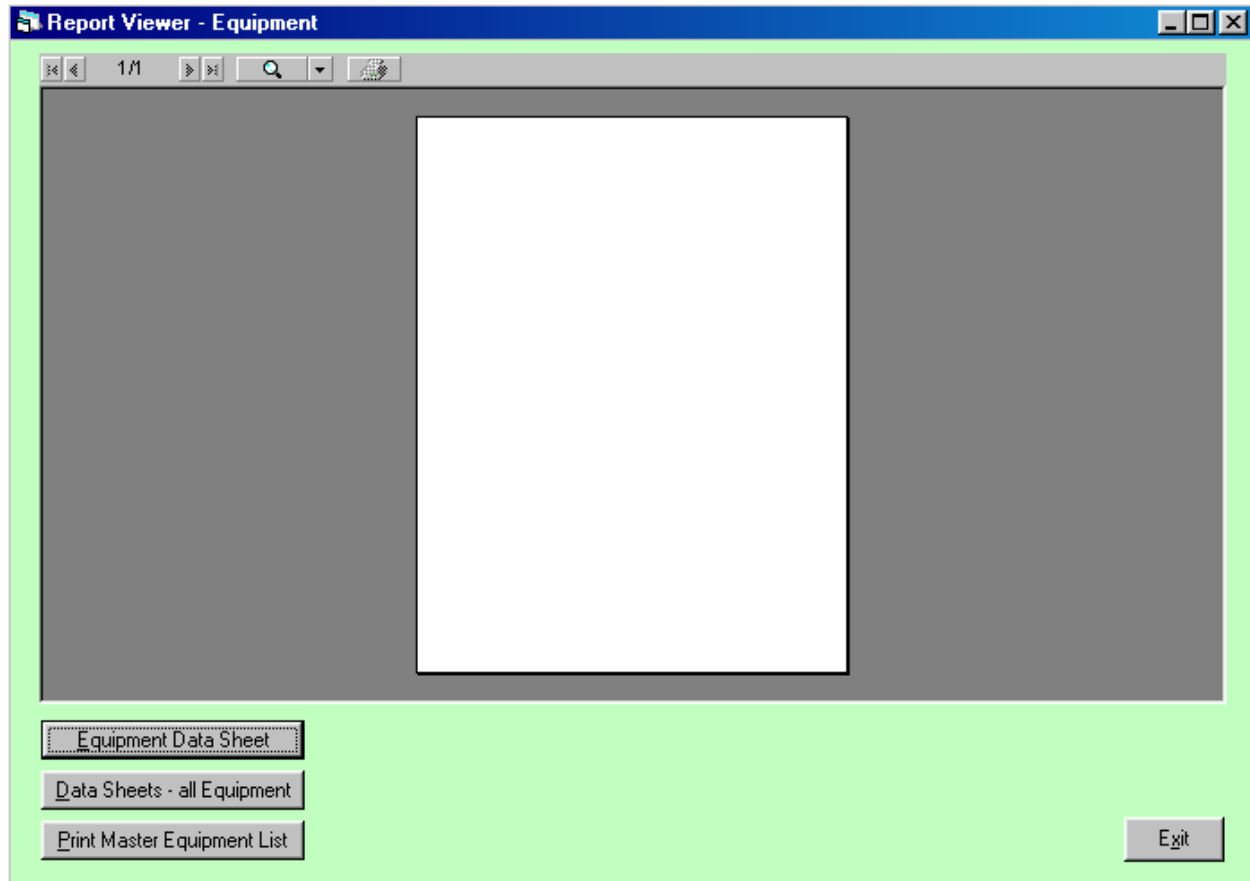
Figure 4.3 Report Viewer – Equipment Form

The Report Viewer – Equipment has three options. You can print a datasheet for the Equipment
Item currently highlighted in the browse form, print datasheets for all equipment or print the
Master Equipment List.

Part 5 – Period Ending Dates

Labor costs are often reported by a period ending date. For this reason there is a table of Period Ending Dates which gives you a convient method for selecting a specific period ending or a range of period endings when printing reports. Many of these reports seek out information by the period ending tag assigned to each entry in the table of time card items.

Many of the reports in the Equipment Tracking Module mirror the labor reports. For this reason, when a new entry is added to the table of Equipment Usage Items the date is verified against the existing list of Period Ending Dates. When the proper period ending is located, a PE Tag is assigned to the new equipment usage item.

Period Endings have a start and stop date, which may be weekly, bi-weekly or some other block of days. Before entering in any equipment usage information the Period Ending Dates table must be filled using the Auto Fill Utility as explained in the next few pages.

Period Ending Dates Browse Form

From the main menu select "Support Tables" then "A – Period Ending Dates" to display the Period Ending Dates Browse form as shown in Figure 5.1. The keyboard sequence is **Alt-SA**. Refer to the section "The Standard Table Maintenance Form" for information on how to use the controls on this form.
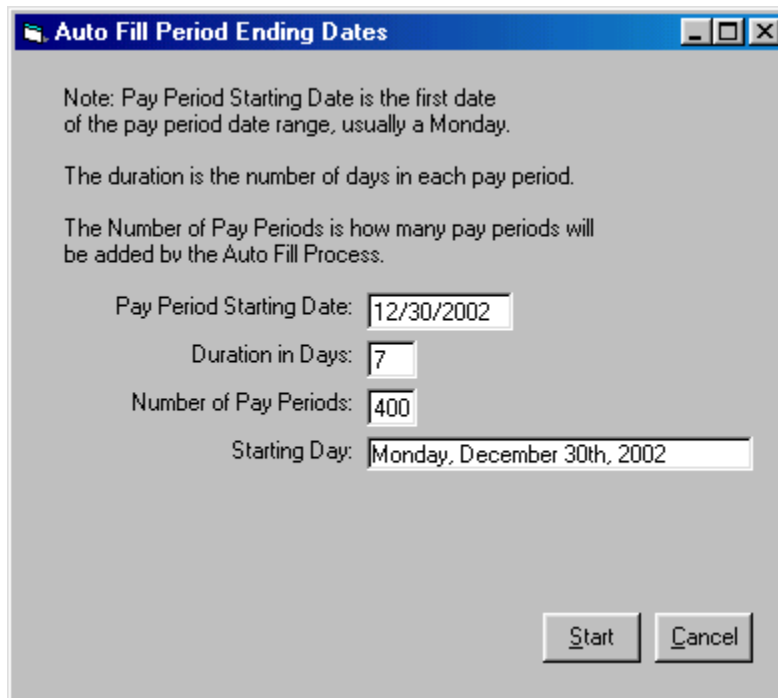
Figure 5.1 Period Ending Dates Table Maintenance Form

This form allows you to enter the beginning and ending dates of each pay period and the PE Tag will be automatically assigned. However, it is recommended you use the **AutoFill** button (**Alt-F**) so that several years of period ending dates can be entered very quickly.

Period Ending Auto Fill Form

When you click on [AutoFill] or key press **Alt-F** the Period Ending Dates Table Maintenance Form in Figure 5.2 is displayed.

Figure 5.2 Period Ending Dates Auto fill Form

The Period Ending Dates Auto fill Form has been filled out in the above figure for a pay period with a duration of one week (seven days) and the first day of the first pay period is Monday, December 30th, 2002. The Starting day is automatically filled out when you key in the Pay Period Starting Date so that you can verify the day of week.

To start the auto fill process click on [Start] or key press **Alt-S**. The Confirm Auto Fill Dialog Box in Figure 5.3 will appear so that you can clearly see what the starting date is and the last day of the last pay period to be created.
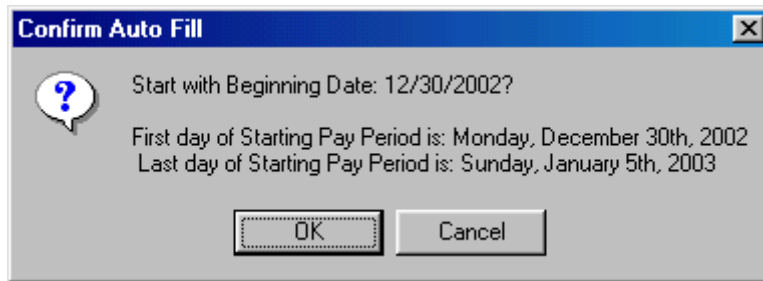
Figure 5.3 Confirm Auto Fill Dialog Box

If the dates look OK then click the OK button or click Cancel to return to the Auto Fill form.

When the process is complete the dialog box in Figure 5.4 will appear to confirm that new period ending dates have been added.
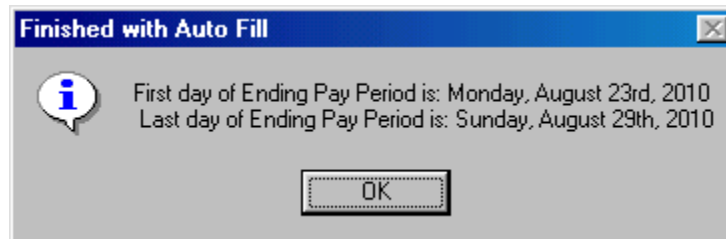
Figure 5.4 Finished with Auto Fill Dialog Box

When the Period Ending Dates table is populated you will be ready to begin entering time.

Part 6 – Tracking Equipment Usage

The Equipment Tracking Module has several methods to enter and track equuipment costs. They include equipment usage, fuel usage, equipment maintenance work orders and equipment rentals.

Equipment Usage is the method used to track equipment cost that occure when equipment is used on the project. The equipment can be working both shifts or it can be in standby mode. No matter how a piece of equipment is utilized for a given 24 hour period, if it is on the job site then it is costing money. By entering the hours and the proper rate code you can log the usage of that piece of equipment over the course of a project. The hours and related rates will then allow you to generate Equipment Cost Reports as part of the overall project costs. And if needed, the same equipment usage data can be used for backup to invoices to the client.

Equipment can be grouped into "crews" much the same way that the labor force is on a large project. Daily Equipment Timesheets can be printed for the recording of hours and rate codes for later data entry into the equipment usage table. And of course, equipment usage is posted against the same set of cost codes as is labor and materials so that project costs can be tracked in detail.

Equipment Usage Data Entry Form

From the main menu select "Time (Usage)/Work Orders" then "1 – Equipment Usage" to display the Equipment Usage Data Entry form as shown in Figure 6.1. The keyboard sequence is **Alt-T1**. Refer to the section "The Standard Table Maintenance Form" for information on how to use the controls on this form.

Figure 6.1 The Equipment Usage Data Entry Form

Notice that this form has a grid in the upper right hand corner. This grid is filled with the total hours for a week for the piece of equipment on the active line whenever a line of time is added or edited. You can also click on the [View] button to fill this grid (keyboard shortcuts are **Alt V** or **Spacebar**).

There are also labels at the top of the form to show you the equipment number and description, company name, job name, category description, subcategory description and period ending of the active line.

Rates are not displayed on this form as they are often proprietary and do not need to be viewed when time is entered.

The columns on this form are:

Equipment Tag Number - numeric - 5 digit integer.

Company Number - numeric - 2 digit integer.

Job Number- text – up to 8 characters.

Crew Number - numeric - 3 digit integer.

Group A Cost Code – text – up to 15 characters. In this example cost code name is PA Number.

Group B Cost Code – text – up to 15 characters. In this example cost code name is Sub Job.

Group C Cost Code – text – up to 15 characters. In this example cost code name is Opcode.

Category – text – up to 6 characters. First part of rate structure.

Subcategory – text – up to 6 characters. Second part of rate structure.

Rate Code – text – up to 6 characters. Third part of rate structure.

Rate Code Description – Displayed after valid rate code is entered.

Equipment Time – numeric –whole number with two decimal spaces.

Date – text – 10 characters in length.

Besides the standard command buttons for Add, Edit, and Delete there are a number of other command buttons on the Equipment Usage Table Maintenance Form. The underlined character is the keyboard equivalent. The command buttons are:

 - Find time for a piece of equipment by entering in tag number first, then select from a search window filled with the equipment items time.

 - Clone usage. This command allows you to duplicate or "clone" a line of usage for the rest of the week. Useful for redundant usage items where the cost codes and time do not change throughout the pay period.
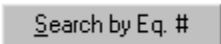
 - Filter time. First click displays only usage for the equipment item/pay period. The second click switches to show all the usage entered for the equipment item. The third click returns to the normal display.
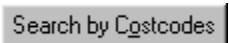
View - View a weeks worth of usage in the Weekly Usage Totals Grid for the active line (keyboard shortcuts are **Alt V** or **Spacebar**).

Mode - For multi-user environments there is the option to enter usage into a temporary table and then later upload that data into the main equipment usage table. This command button toggles between "Main" (the default) and "Temp" modes.

Search by Eq. # - This button allow you to search the equipment list by description. Once a piece of equipment is selected a search window with the usage for that unit of equipment appears. From this window you can find and select the desired equipment usage item.

Search by Costcodes - Allows you to search for all equipment usage items that have a unique combination of cost codes.

Jump - Click on this button to jump to a desired equipment usage item. A window will appear asking you to enter the time card number.

Crew - To display the totals for the crew of the active line click on this button. Useful for cross checking a daily time sheet that has been filled out for a crew. As mentioned earlier, pieces of equipment can be grouped together into a "crew".

Searching the Equipment Usage Table

There are two ways to search for an equipment usage item for a particular piece of equipment. If you know the tag number of the unit of equipment you want to search the usage for then click on the [Find] button (**Alt-F**). A dialog box asking for the tag number will appear:
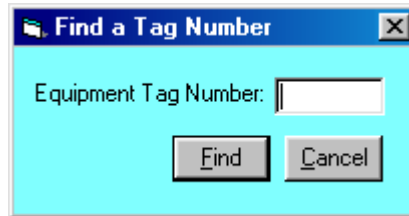
Figure 6.2 Dialog Box Asking for Tag Number

The second way is to click on the [Search by Eq. #] button (**Alt-S**) and then search the equipment table by equipment number. In both cases, once a unit of equipment has been selected, the following window with the usage for the selected piece of equipment appears:
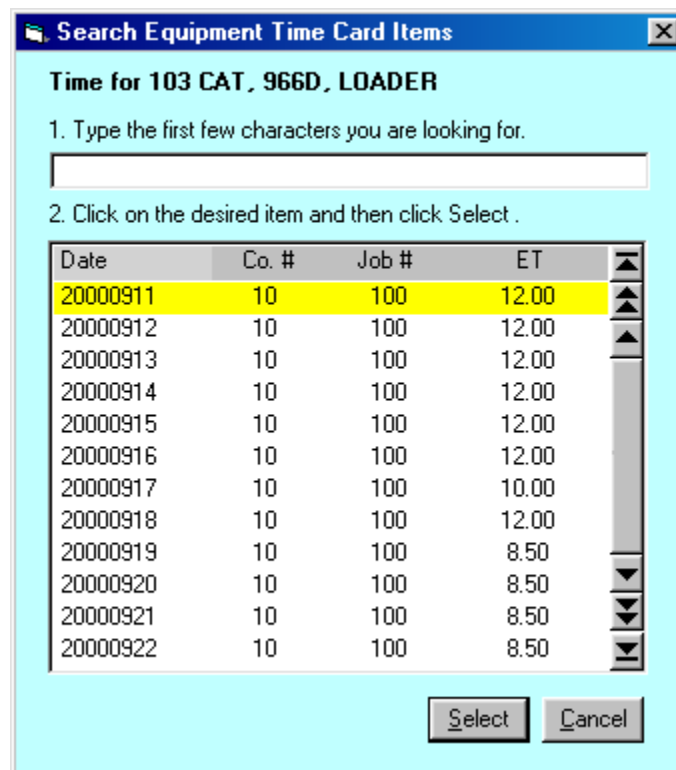
Figure 6.3 Search Window With Equipment Usage

If you want to go to the end of the list (which may be long after months of usage has been entered) just press the end key and you will go to the bottom of the list. Click on Select to choose a line of equipment usage and the Equipment Usage Table Maintenance Form will adjust the display to make your selection the active line.

To search for a specific date enter the date using the "YYYYMMDD" format.

Searching for Usage by Cost Codes

Sometimes you may find that you need to find all of the time sheet items with a unique combination of cost codes. Perhaps one of the cost codes needs to be changed for all or part of the items. Or the Cost Scheduler has changed the cost codes to be used on part of the project. Never the less, this feature has been added to make the chore of chasing down all the items with specific cost codes easier.

First, click on Search by Costcodes or key press **Alt-O**. The form in Figure 6.4 will appear:

Figure 6.4 The Search by Cost Codes Form

This form has text boxes for you to specify the Company Number, Job Number, Period Ending Date, Group A Cost Code, Group A Cost Code and Group A Cost Code.

In the above form three cost codes have been entered for a company/job pair and a period ending. Click on Begin Search or key press **Alt-B** to start the search.

Once time sheet items have been located the form will display the results as shown in Figure 6.5 below:


Figure 6.5 Results from Search Displayed in the Search by Cost Codes Form

Once the search is complete you can print out the results or start a new search.   Click on Select to choose a line of time and the Table Maintenance Form will adjust the display to make your selection the active line.

Notice how the Time Card Item Number is displayed in the first column. You can use the Jump command button to jump to any item on the list. However, once you have completed a search and you are back in the table maintenance form you can press the F3 function key to jump to each item in sequence. This sequence of items will remain in place until you perform another search.

Cloning Equipment Usage

When entering equipment usage you may find some items that are redundant, that is, they have the same cost codes and hours through out the week. This often occurs for items like light plants, office trailers, etc. that are in contant use on a project.

To begin the cloning process move to the line you wish to clone and then click on the [Clone] button (keyboard shortcut is **Alt-C**). Figure 6.6 shows a line of equipment usage that is ready to be cloned:

3	10	100	3	1004	150	1006	B	11	D	Day Shift	8.50	09/20/2000
3	10	100	3	1004	150	1006	B	11	D	Day Shift	8.50	09/21/2000
3	10	100	3	1004	150	1006	B	11	D	Day Shift	8.50	09/22/2000
3	10	100	3	1004	150	1006	B	11	D	Day Shift	8.50	09/23/2000
2	10	100	3	1005	180	5500	B	10	N	Night Shift	12.00	09/25/2000
				End of List.								

Figure 6.6 An Equipment Usage Item Ready to be Cloned

After clicking the clone command button the following Clone Form is displayed:

Figure 6.7 The Clone Equipment Usage Item Form

The form shows the equipment tag number and description, date of item to be cloned and the date range of the items to be added to the Equipment Usage Items Table. Two text boxes allow you to modify the dates if needed. The ending date is determined in the Job Number Settings Form where you can specify the last working day of the pay period. To execute the clone process click on the [Clone] button (keyboard shortcut is **Alt-C**).
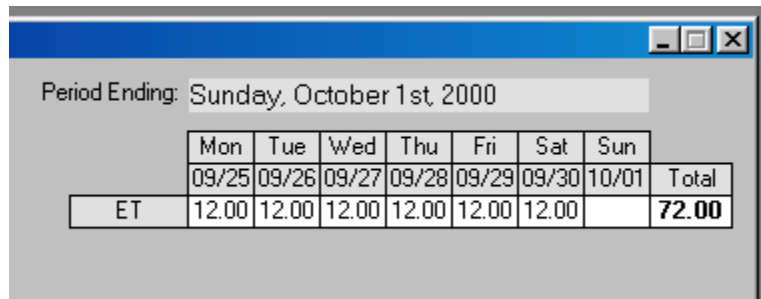
Figure 6.8 Newly Cloned Eq. Usage Items Have Been Added to the Table

Figure 6.8 shows the newly added equipment usage items. Usage has been automatically added up to the end of the working week, in this example a Sunday. All fields except the date have been duplicated by the cloning process.

Checking Equipment Usage Data Entry

The Equipment Tracking Module has several reports that you can use to verify the Equipment Usage you have entered for the week. A quick way to check total hours for a week while adding or editing equipment usage is to observe the grid at the top to the equiupment usage data entry form as shown in the figure below:

Figure 6.9 Time Totals Grid for the Week

You can also display the weeks time for any item by cursoring to the desired line and then clicking on the ⌷View⌷ button (keyboard shortcut **Alt-V** or **Spacebar**). The grid will then display the total time for the period ending for the unit of equipment on the target line.

The Input Edit Reports will list the total time for a pay period either by crew number or equipment number. The Equipment Usage Summary Sheets will print out the daily totals for a target date.