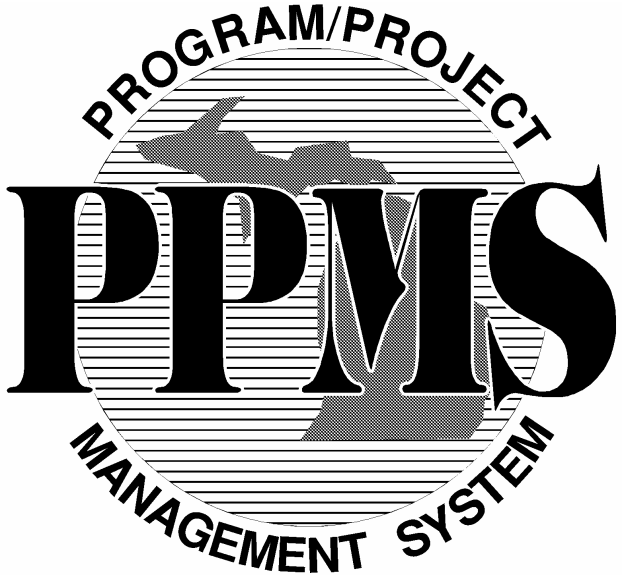
Quick Reference/Learning Guide
For
Program/System Managers

MDOT
Michigan Department of Transportation

PROGRAM/PROJECT MANAGEMENT SYSTEM



October 9 , 2000
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Michigan Dept. of Transportation
Design Division

Chapter 1 OVERVIEW

Section A - An Introduction to Job Scheduling

The Program/Project Management System (P/PMS) was designed and built to assist the Department in planning and scheduling the pre construction design process for trunk line road and bridge projects. Once a project is selected, the project manager enters the characteristics describing the project into the system. The system then creates a scheduling network using those characteristics, and using the standards provided by the Department's operational and supporting units, to determine which tasks will be included in the network and what the durations should be. At the same time, the people required to perform the task are identified and added to the schedule. Following this generation process, project managers may need to further refine the schedule since all projects are unique in some way.

When schedules have been created and refined, they can be pulled together to summarize, analyze, and report on jobs, tasks, resources, and costs throughout the Department. Project schedules are brought together in the system's Program Area where system and program managers can assess the impacts of progress, changing schedules and organizational changes. Some information from the project schedules is automatically rolled together and presented in the Executive Information System where users can quickly review and evaluate what's going on with all projects. Please refer to the EIS Users Guide for more details on that application.

This document is intended to be an informal guide that explains how to DO each of the steps described above, and more. The following chapters were pulled from the Combined Quick Reference/Learning Guide to deal specifically with how to perform some of the more common tasks in the P/PMS Job/Project Area (for Project Managers and Scheduling Specialists). This guide will sometimes assume a certain minimal level of knowledge about P/PMS and its usage and functionality. It is recommended that the user take the P/PMS Training Course before utilizing this manual, especially for the Project Manager and Program/System Manager portions. If you have more questions, please call the ***P/PMS Hotline at (517) 373-9020.***

Throughout the document, reference will be made to other familiar P/PMS manuals. Many P/PMS manuals exist to cover system functions, menu structures, task standards, job characteristics and much more. The intent of this manual is to provide answers to most questions in a concise, easy to find way. In many cases, one of the other manuals will provide detail that will not be reproduced here. Current manuals can be found on the intranet at http://interchange/computing/design/ppms.htm

Section B - Conventions

Throughout this document information will be presented using the following basic standards:

Menu options will appear in bold with initial upper case letters (e.g. **File, New, Job** where underlined letters are hot keys and menu selections are separated by commas).

Items of special note will be preceded by Note: and/or will be underlined or italicized. Figures are identified by number.

Chapter 2 PROGRAM/SYSTEM MANAGERS

Section A - How to Get Into P/PMS

Purpose: The purpose of this section is to detail the steps for getting into P/PMS to start working with jobs.

Before You Begin: If you do not have P/PMS, contact the P/PMS Support Team to get the software installed and a login password. You will be notified when your login is available. If it is desired, Support Team personnel can set up your PC to bypass the login/password screen. Please contact us with any questions regarding P/PMS!

P/PMS Support Team Personnel: **HOTLINE: (517) 373-9020**

Dennis Kelley	(517) 373**-4614**	User/Printer Administration & Technician
Norm Kieliszewski	(517) 335**-1913**	Design Expert/engineering Technician
Lenny Robinson	(517) 335**-3291**	Consultant
Scott Habetler	(517) 335**-3278**	Consultant
Melissa Tucker	(517) 335**-7298**	Consultant
Amy Gusfa	(517) 335**-2255**	Student Help

Procedure: Follow these steps to get started with P/PMS.

Step	Action
1	Double-click the P/PMS icon on your desktop.

If...	Then...
A. A login screen appears	Type in your login name, ENTER, and your password, and proceed to the next step.
B. The Main Menu appears	Proceed to the next step.

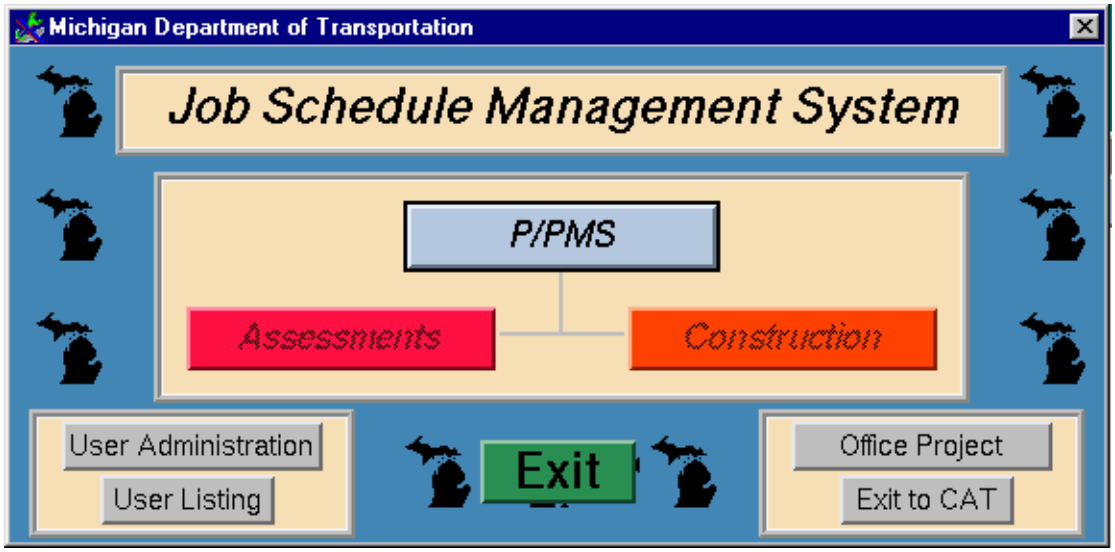

Michigan Department of Transportation
Job Schedule Management System
P/PMS
Assessments
Construction
User Administration
User Listing
Exit
Office Project
Exit to CAT

Figure 1

Section B – How to Find Out What Jobs are Ready for Program Addition

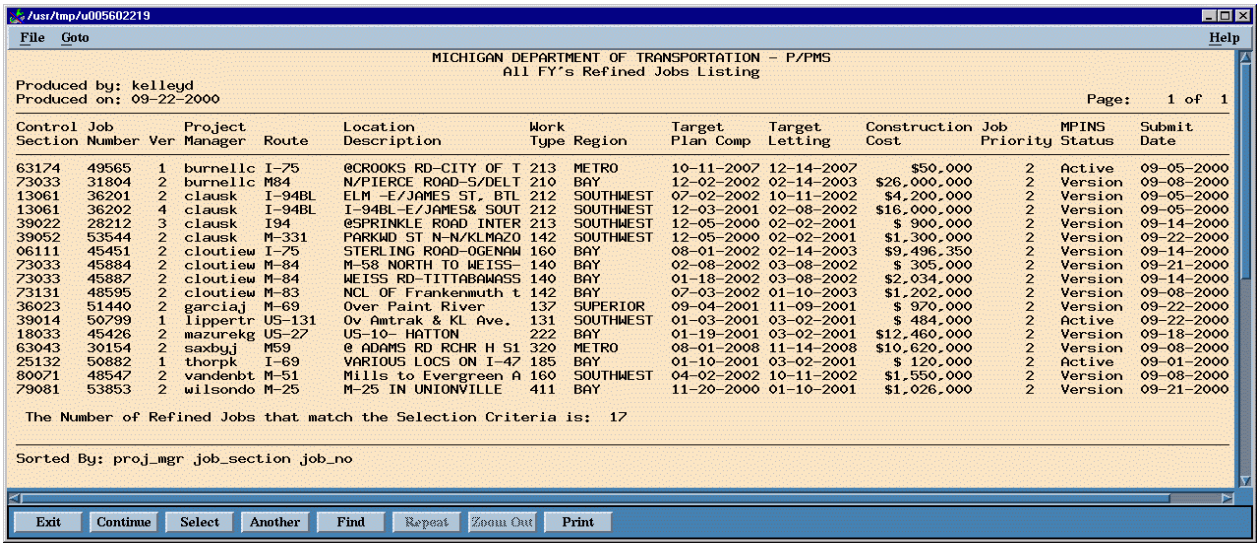
Purpose: The purpose of this section is to detail the steps for identifying jobs to be added to the P/PMS Statewide Master Program.

Before You Begin: Jobs or versions that have been submitted for programming in P/PMS are marked as refined. See also Chapter II - Project Managers, Section A (Page 3) for categories of job networks and their descriptions.

Procedure:

Step	Action
1	Read Section E through Part V to understand how to use the Selection Screen.
2	If you are not already in the Program Area of P/PMS, select **File, Go to Program Area.**
3	Select **Listings, Refined Jobs**.
4	A selection screen will appear. Fill out the fields to narrow your search, or blank out the fiscal year fields to see all refined jobs. Use the Sort button to choose your sort order.
5	The Refined Jobs Listing appears (Figure 2 below), showing information including the version submitted, target PC and Letting, and the date it was submitted.
6	Using the Refined Jobs Listing for reference, each of the submitted versions needs to be checked for: • Correct target PC and Letting (either approved in MPINS or existing 2604). • Network schedule not late (see Late Criteria - Page 4).
7	Check for the target PC and Letting to match MPINS by opening MPINS and: • Click the Job Locator button • Type in the job number and select Change Request • Click OK

Figure 2



Procedure:

Step	Action
8	You should see the MPINS Change Request Summary Screen. Click on the bottom-most change request. If it has not been a[[roved, and is In Review or Follow-Up, do not yet program the version.
9	Select Change Request – 2604 – date info
10	Check the Change Request – Date Information screen that comes up. The column of dates on the right includes the PC and Letting to be matched by the version. Note: The letting date may not match exactly, but needs to be in the same month and year. The same applies to the P.C.
11	**If…** / **Then…** A. PC and Letting do not match the latest 2604 / Contact the PM and inform them the version can not yet be programmed. B. PC and Letting match the 2604 / Check to see if the latest 2604 is approved (step 11)
12	**If…** / **Then…** A. The latest 2604 is In Review or Follow-Up (see step 7) / Wait for the 2604 to be approved before proceeding. B. The latest 2604 is approved (see step 7) / Proceed to step 12.
13	In P/PMS, click **Reports, Jobs/Projects, PC and Letting Dates**. (Check the PC and Letting Dates Report.) You will see the Scheduled vs. Approved Plan Completion and Letting Dates for your network. See Figure 11.
14	Compare the scheduled dates to the approved dates for the Plan Completion and Letting, taking note of how far in the future they are form today, and recognizing the float.
15	Apply the following criteria to determine if your network is late (late network will not be approved/programmed in P/PMS): A job is late if the approved date for the PC and/or Letting is… …within the next 2 months and the schedule is > 5 days late (float is worse than -5). …within the next 3 months and the schedule is > 10 days late. …within the next 6 months and the schedule is > 15 days late. …within the next year and the schedule is > 30 days late. …within the next 2 years and the schedule is > 50 days late. …within the next 3 years and the schedule is >70 days late. …within the next 4 years and the schedule is > 90 days late. …4 years or greater and the schedule is >110 days late.
16	Note all jobs with correct target dates, approved 2604's, and good schedules.

Section C - How to Add/Remove Schedules To/From the Program/Scenario

Purpose: The purpose of this section is to detail the steps for identifying and adding jobs to the P/PMS Statewide Master Program. Once schedules are added to a program they can then be used to perform resource scheduling, resource summarization, generate resource histograms, perform cost and hours summarizations, and organizational and work type rollups. All of this information can then be used to do analysis of the program. Program Managers can find out where their program is and where it is going, and then the Program Manager can make informed decisions about where it should go.

Before You Begin Because the P/PMS Statewide Master Program of jobs is protected, you must first create a scenario of jobs, much like creating a version of a job. You may then add or delete jobs and versions in the scenario, and then replace the P/PMS Statewide Master Program with the scenario. Scenarios may also be used to perform program what-ifs. Note: In the scenario to replace the Program with, you should delete the 'old' version 1 of jobs you want to replace with the new versions, and add the new versions (see Part II).

Part I – Creating a Scenario

Procedure:

Step	Action
1	From the Program Area menu, select **File, New, Scenario**. You will then see the window in Figure 3 (next page). Note: Scenarios are automatically identified in much the same way as versions, but use letters instead of numbers. The created scenario will have the next letter available in series, usually A for the New Program Scenario.
2	Fill in the description of the scenario for further identification.
3	Fill in the Resource Availability Profile you wish to use with the scenario. This will typically be the same one used with the Program, which is Profile 1.
4	Click on **Update**, and then **Exit**.
5	You will be asked if you wish to copy the program or a scenario (Figure 4 - next page).
6	**If…** / **Then…** You want to build the scenario from scratch Click cancel. . — Go to Part II You want to copy the program or a scenario — Click OK.
7	You will be presented with a menu of scenario choices to copy. You will want to select the Statewide Master Program if you wish to update it.
8	You will need to wait while P/PMS copies the program/scenario to the new scenario.

Section C - How to Add/Remove Schedules To/From the Program/Scenario, (continued)

Figure 3

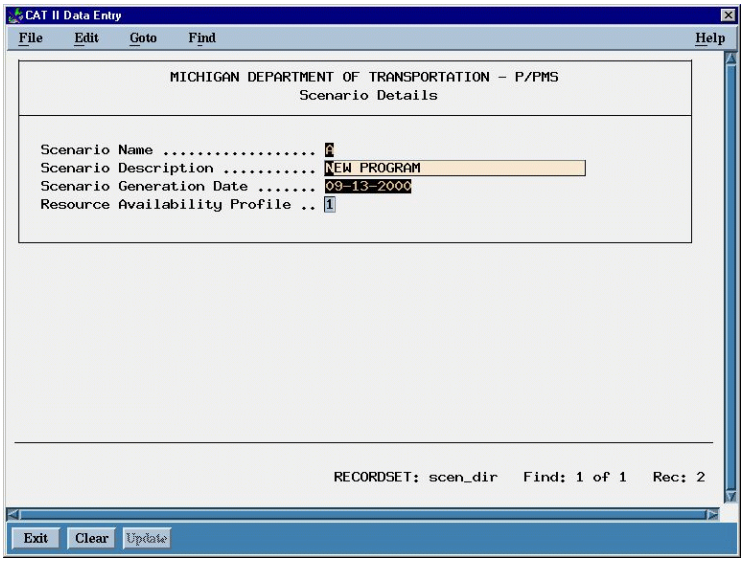
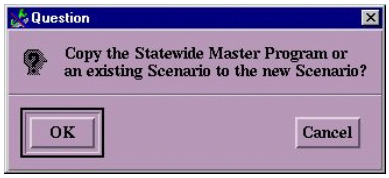


Figure 4



Part II –Adding or Deleting Jobs from a Scenario

Procedure

Step	Action	
1	From the Program Area menu, select **File, Open, Scenario**.	
2	Select the scenario you wish to work on from the pop-down menu	
3	Select **Edit, Scenario Jobs**.	
4	**If…**	**Then…**
	A. You want to delete jobs from the scenario	1. Click on Subrec. 2. Scroll or use Find to locate the job you wish to delete. 3. Click Delete. 4. Click OK for verification. 5. Repeat 2 - 4 for each job to delete
	B. You want to add jobs to the scenario	1. Click on Subrec. 2. Click on New. 3. Enter Job Number and Version Number. 4. Use up or down arrow to save. 5. Repeat 2-4 for each job to add.
5	Click Exit when finished. You will need to wait while P/PMS adds your jobs to the scenario.	

Section C - How to Add/Remove Schedules To/From the Program/Scenario, (continued)

Part III – Replacing the Program with a Scenario

Purpose

This part outlines steps to replace the Program with the Scenario you have created, which is also how a job's version replaces the original in the Program.

Before You Begin

Because replacing the Program requires extensive data manipulation, it is recommended that this process be conducted at the end of the work day, or else at the very beginning, to avoid problems with data sharing.

Procedure

Step	Action
1	From the Program Area menu, select **File, New, Statewide Master Program**.
2	You will be notified and asked if you want to continue. Click OK to verify.
3	Select the scenario you wish to replace the Program with from the pop-down menu.
4	P/PMS will check the scenario you selected for a missing availability profile, the presence of generic jobs/versions, for jobs/versions whose schedules have been modified since their inclusion in the scenario, and for jobs/versions with status exceptions in MPINS. In each of these cases, an informational message will instruct you what to do to fix the scenario before programming it.
5	If there are no exceptions, you will be asked to continue. Click OK.
6	There may be other users in P/PMS when you are attempting to replace the Program. If so, an informational message will alert you to these other users. Click OK to see the list.
7	If you believe that the number of users will not be adversely affected by any data sharing problems, click OK when asked to continue. Otherwise, click Cancel.

Section D - How to Change Resource Availabilities

Purpose

This section provides information and steps concerning how to add and update resource availabilities in the resource availability table.

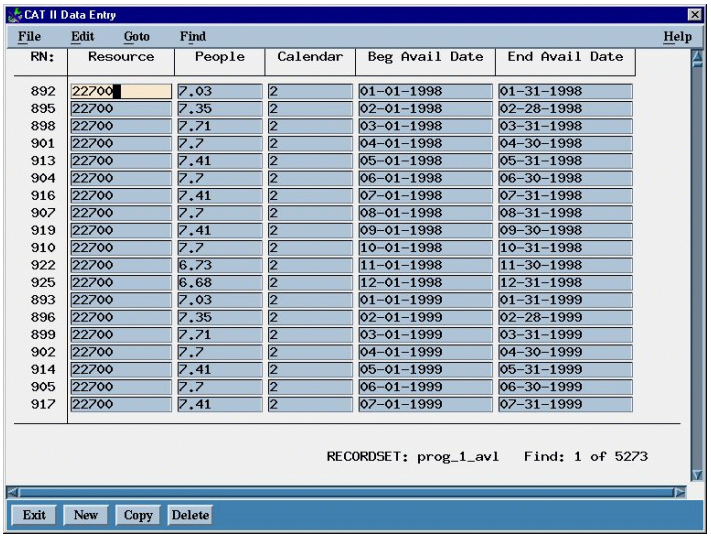
Before You Begin

A resource availability profile is used to tell the system how many people are available to do work on any given day. The profile can be used by the system to Resource Level the program, and to compare against the required resources to show the manager if there are enough people to get the work done. For this manual we will only discuss modifying an existing profile.

Procedure

Step	Action
1	From the Program Area, select **File, Open, Resource Availability Profile**. A pop-menu of profiles will appear.
2	Select an existing profile. Typically, you will work with Profile 1.
3	Select **Edit, Resource Availability Profile Table**. You will see a window like Fig. 5.
4	The first column represents the Org Code, the second column is how many people per day are available to work from the organization - originating from the availability forms provided to & received from units. The next column shows the calendar that the resource uses. The next two columns show the dates that the resource will be available.
5	Modify existing availabilities by using the Find feature or scrolling to the record you wish to change, or click New to add more. Calendar 2 is the MDOT work day calendar.
6	Use the mouse or arrow keys to move between fields and edit.
7	Click Exit when finished.

Figure 5



Section E - How to View Reports on Programs

Purpose

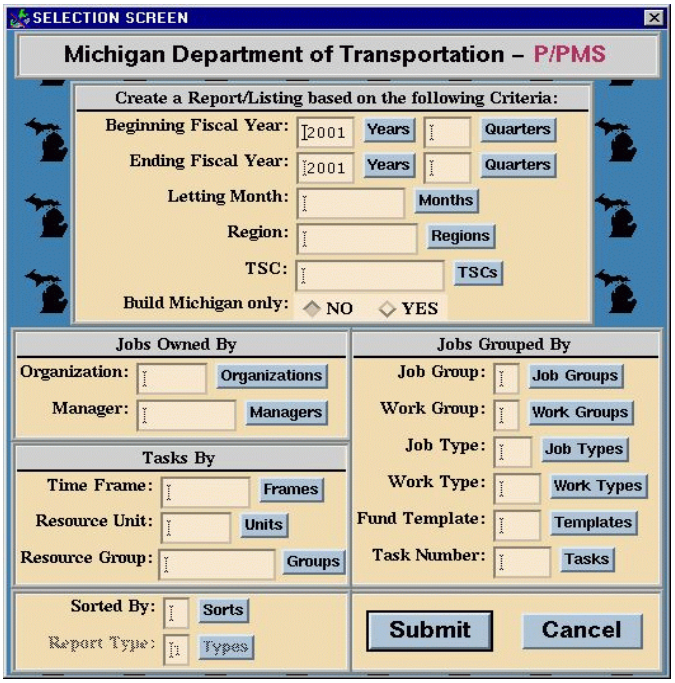
The purpose of this section is to describe how to run common reports on groups of jobs ('programs') in P/PMS that detail certain types of information, and what those reports show.

Before You Begin

Several pre defined listings, reports and graphs are available under the Listings and Reports menus that let you review the progress your program is making, find out where problems may have arisen and communicate your situation to interested parties. Many predefined reports are intended to provide information about job status and to highlight problems. See Appendix A for details on using the report viewer. Common items of interest are listed below, arranged according to the menu structure.

The Selection Screen is the heart of the majority of the Listings and Reports available.

Figure 6



The Selection Screen allows the user great power, and yet flexibility to customize lists and reports to view just the data that the user would like to see. Before you begin using the listings and reports, we will define the items on the Selection Screen for usage.

Note: Many combinations of selection criteria are available for use, but certain listings and reports may preclude the usage of certain items on the Selection Screen. These will be ghosted and unavailable to the user. Also, blue buttons next to categories will access pop-down menus of the choices available, and some combinations of selection criteria may yield no results.

Section E - How to View Reports on Programs, continued

Part I – Main Criteria

Item	Description
Fiscal Year	Allows selection of jobs by Fiscal Year of target (approved) letting; i.e. Fiscal Year 2002 covers jobs targeted for letting between 10/1/01 and 9/30/02.
Quarter	You may further refine your year selection by choosing jobs with target lettings in a certain quarter of the fiscal year.
Let Month	The user can select jobs with a target letting in a specific month of a fiscal year.
Region	The user may select jobs located in one of the seven regions of the state.
TSC	The user may select jobs within the counties and coverage area of a specific TSC.
Build Michigan	Build Michigan jobs are specifically identified in MAP, and thus P/PMS, as highest priority jobs. These jobs are typically requested by the Governor.

Part II – Jobs Owned By:

Item	Description
Organization	Allows selection of jobs by Project Managers within specific units.
Manager	Allows selection of jobs owned by specific Project Managers

Part III – Jobs Grouped By:

Item	Description
Job Group	Allows selection of 1 of 6 different Job Groups, groupings of jobs based on Funding Templates into larger categories such as Bridges.
Work Group	Selection of Work Groups picks jobs within 1 of 6 Work Group areas, such as Roadway jobs, Bridge jobs, or Landscaping jobs.
Job Type	Job Type selection further narrows choices to specific Job Types, based on Job Groups, but more defined, like Expand: New Routes or Preserve: Other.
Work Type	The user may select jobs of a specific Work Type, the 3-digit code defining the main type of work on a job. Many different options are available.
Funding Template	Users selecting a specific Funding Template may select jobs from which the majority of money for the Design Phase comes from 1 of 34 specific categories.
Task Number	Users may choose to select jobs which contain a specific task number within their critical path networks.

Section E- How to View Reports on Programs, continued

Part IV – Tasks By:

Item	Description
Time Frame	For Task Reports, the user may select tasks scheduled to start or finish within the next 1 month, 4 months, 1 year, or 2 years from today.
Resource Unit	The user may select tasks performed by various resources from a pop menu.
Resource Group	Selection of all tasks to be performed by a group of resources may be made. A pop-down menu includes Real Estate, North Region, and Grand Region Project Development/Design, among others.

Part V – Sorted By and Report Type

Item	Description
Sorted By	The user may select to have items on the listing or report sorted by Region, Project Manager, Approved Letting, or Work Type. The default sort is by Control Section and Job Number.
Report Type	Report types may vary, depending on the information the user is interested in for certain reports. Report types are keyed to Design, Real Estate, Environmental, Traffic & Safety, Capital Preventative Maintenance, and Region Design.

Part VI – Common Listings and Reports

Listings

Job Involvement by Unit - This listing allows you to select a single resource and see all jobs in the program that the resource in involved in, including their approved and scheduled plan completion and letting dates, plus the project manager.

Programmed Jobs - The user uses the selection screen to provide a specific list of jobs that are currently in the Statewide Master Program, presenting general job details that include project manager, work type, target PC and letting, and construction cost. A similar report highlights Scenario Jobs.

Refined Jobs - See Section B, through Step 4.

Unrefined Jobs - Selection criteria will provide a listing of jobs that have networks and management units, but have not yet been submitted for programming in P/PMS. Again, general job details are presented.

Network Status - Provides a listing organized into the 6 Work Groups, identifying for each, given the selection criteria: 1) total number of networks in the group, 2) number and % of networks that are new, unrefined, refined, and programmed, as well as on time and late networks.

Part VI - Common Listings and Reports, continued

Reports

Program/Project

The **Project Status Report** provides the basic information for selected jobs, plus extra info on network status, and approved and scheduled dates for the major milestones on a job to show whether it is on time or not.

Custom Report - allows usage of the selection screen to choose the data the user would like to view.

Combined Report - the user can view a report for all Major Programs in a specific fiscal year.

Historical Report - this generates a report for a selected Job Group that can view the status of a past fiscal year, at the beginning of a specific week (collection started 9/11/00).

The **Program Status Report** provides for an overview of an entire selected program for major milestones, showing number of originals, approved, and actuals to date, as well as the gap and what % are on target. It also shows projected lettings by month and costs as shown in MAP, approved in P/PMS, and scheduled in P/PMS.

Custom Report - same as above

Combined Report - same as above

Historical Report - this generates a report for all programs that can view the status of the current fiscal year, at the beginning of a specific week (collection started 9/11/00).

The **Program Performance Report** utilizes the selection screen to choose the data you wish to view. The report itself provides a view of approved letting, scheduled letting, float, and construction cost for the jobs selected.

The **PC and Letting report** here uses the selection screen to choose jobs to see on the PC and Letting date report, which shows the approved dates, scheduled dates, and float for the PC and Letting for the selected jobs.

Tasks

Use the **Late Tasks** report to determine which tasks in a particular program are unfinished and late. This report shows the Approved, Scheduled, and Actual starts and finishes for all late tasks in a particular network.

The **Milestone Status** report can be used to show the status of all of the milestones for a program. This report also shows the Approved, Scheduled and Actual dates for each milestone. This report will let the user know ahead of time which milestones are in jeopardy of slipping behind schedule and which have missed their completion dates.

Part VI- Common Listings and Reports, (continued)

Milestones

The **Late Milestones** report lists all late milestones. The late milestones may come from all jobs, by Project Manager, Squad, etc. The report is similar to the Late Tasks Report, but consists of Milestones only.

The **Major Milestone Gantt Chart** gives the same information as in the Network Milestone Report in graphic form. Schedule dates for each milestone are represented as diamonds placed against a time line. Schedules for each WBS task group are shown as horizontal bars. The report is grouped by job number for a multi-job project.

Resource

The **Responsibilities Work Schedule** can select tasks using the selection screen, and the report provides information on durations, budgeted and actual labor hours, and approved, scheduled, and actual start and finish dates, as well as float.

The **Resource Histogram** allows the user to select a resource (index or organization) code and a start and finish date to view a chart showing the combined work in labor hours versus the unit's availability over the chosen time period.

A **Resource Summary** report allows the user to select one or more resources to view over the user-input time frame. The resultant report shows histogram information specifics in tabular form, along with breakdowns of hours required and available per day, and average overload/under load per day.

Payroll

Payroll reports may be based on either DCDS (more detailed) or P/PMS (less detailed). You can use these reports to see what units/people have logged time and money against a given job, or you can see how many hours and dollars have been logged by your unit against all jobs, among other things.

Under **DCDS**, you may see reports by job, employee, or resource. By job, you may choose the fiscal year of info you want. By employee and resource, you can pick the FY and quarter. Output may include Job Number, Task Number, Resource, Employee Name, Actual Hours, Actual Costs, Pay Period, and Calendar Year.

Under **P/PMS**, you have the option of payroll by job, manager, task, or resource. This report covers all jobs and timeframes. The subsequent picks work similar to the DCDS. Output may include Job Number, Resource, Task Number and Description, Actual Hours, and Actual Costs.

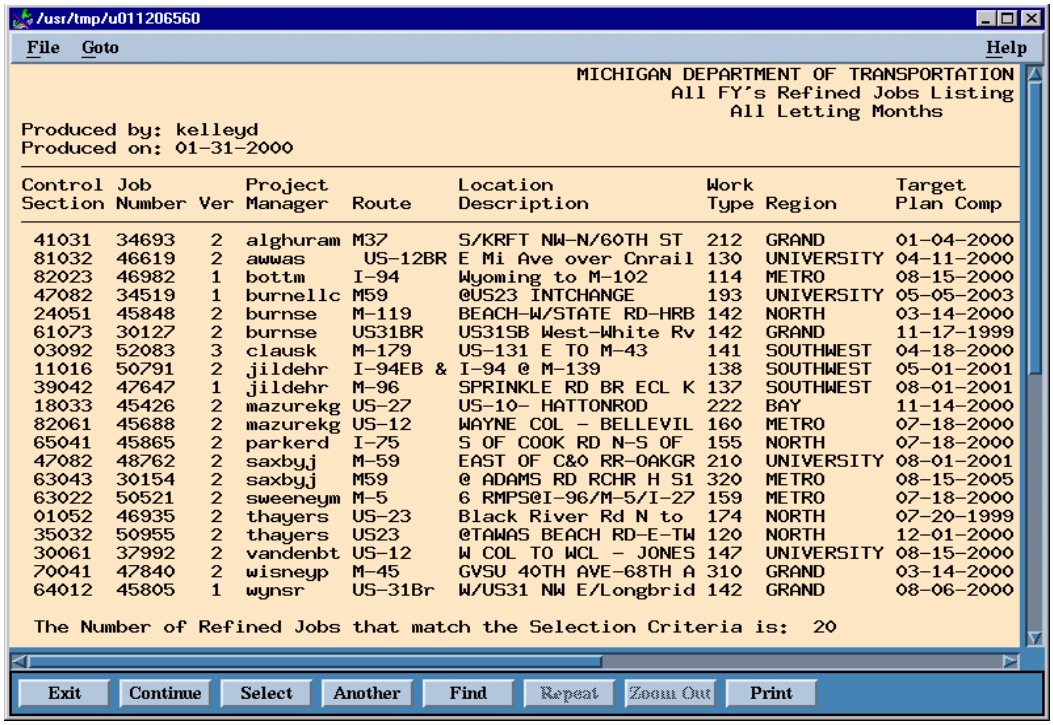
Section F - How to Quit, Close, Exit, Log Off or Out, or Otherwise Leave the System

Procedure

Step	Action
1	Choose **Exit** from the **File** Menu. • Note that it is not necessary to close your template, job, scenario, or program session before exiting. • Use of the Window Control button (the "X" sign in the upper right of the window) to close windows is **not** recommended, as this will kill your sessions abnormally, and may leave things running on the P/PMS server which may preclude you from accessing the system later, or preclude other users from accessing certain system data.

Chapter 3 APPENDICES

Appendix A - The View File Window



The window, in which listings and reports are displayed, shown below, is called the View File window.

This screen allows you to:

1. Scroll up and down the listing using the vertical scroll bar
2. Scroll right and left in the listing using the horizontal scroll bar
3. Search for a text string in the listing
4. Print the listing
5. Save the listing to a file
6. Display listing files you have saved (by clicking on **Utilities, View a File**)

You can also maximize the View File window to see a larger part of the listing.

Appendix A - the View File Window, continued

The menu bar at the top of the screen gives you access to three menus:

- File
- Goto
- Help

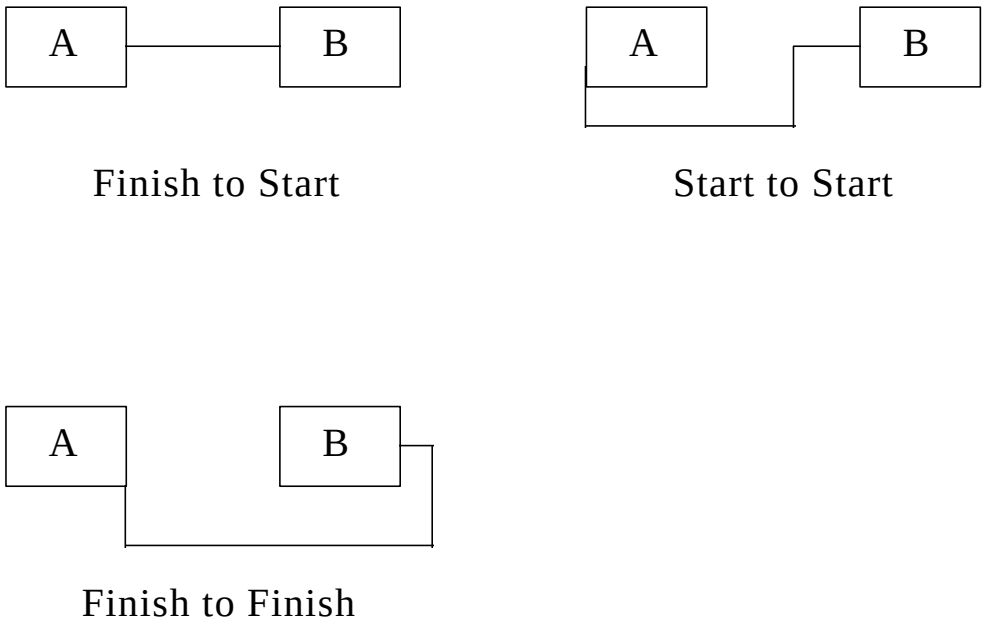
In addition, there are seven buttons at the bottom of the screen. The functions assigned to menu items and buttons are summarized below.

MENU BAR FUNCTIONS: VIEW FILE WINDOW		
MENU	**MENU ITEM**	**FUNCTION**
File		
	Print	Prints the listing on the default printer.
	Save As	Saves the listing to the file you specify in the Prompt pop up window.
	Exit	Closes the View File window and returns you to the P/PMS area window.
Goto		
	Top	Moves the View File window to the top of the listing.
	Bottom	Moves the View File window to the bottom of the listing.
	Left	Moves the View File window to the left side of the listing.
	Right	Moves the View File window to the right side of the listing.
Help		
	About Viewfile	Displays information about the View File window.
	About Windows	Displays information about X Windows.

BUTTON BAR FUNCTIONS: VIEW FILE WINDOW	
BUTTON	**FUNCTION**
EXIT	Closes the View File window and returns you to the P/PMS area window.
CONTINUE	Allows processing to continue in the P/PMS area window.
SELECT	Displays in a View File window the file you select in the File Requestor pop-up window.
ANOTHER	Displays a selected file in another View File window.
FIND	Searches for the text string you enter in the Prompt pop-up window.
REPEAT	Searches for the next occurrence of the text string.
PRINT	Prints the listing on the printer you select from the pop-up window.

Appendix B - Constraint Types

Constraints are the means which will be used to show how the activities relate to each other. The following diagram lists the major types.



Finish to start means that activity B cannot start until activity A is finished.

Start to Start means that Activity A must start before activity B can start.

Finish to Finish means that Activity B cannot finish until activity A finishes.

Each of these types of constraints may also contain a delay inserted between the two tasks involved.

There is one other kind dependency that exists - Start to Finish - but it is rarely used, so it is not included in the above.

Appendix C - Glossary of Terms

2604 Form. A change request form in MPINS used to obtain authorization for such changes to a job as adding or deleting phases, and splitting a job, as well as changes to a job=s cost, major work type or work performed, location, financial cost divisions, and major milestone dates. This form is usually submitted before creating a version of a job. (See Version)

Actual Finish Date (AF) - The actual point in time that work is finished on a task. (Note: in some cases, the task is considered "finished" when work is "substantially complete").

Actual Start Date (AS) - The actual point in time that work started on a task.

Approved Finish Date - The target point in time that work should finish on a task in order for the job to meet its targeted plan completion date.

Approved Start Date - The target point in time that work should start on a task in order for the job to meet its targeted plan completion date.

Characteristics - Items in the scope of a job that make it unique, including work type and region, road class, FHWA involvement, subgrade work or work outside existing shoulders, and many more. Specifically, these items of scope determine what tasks are in P/PMS job networks, their durations, and more.

Constraint - A dependency between two tasks, or between a task and a milestone. The four types are:

- Finish-to-start - the "from" task must finish before the "to" task can start.
- Finish-to-finish - the "from" task must finish before the "to" task can finish.
- Start-to-start - the "from" task must start before the "to" task can start.
- Start-to-finish - the "from" task must start before the "to" task can finish.

Construction Cost - The programmed A-phase amount minus the estimated Construction Engineering (CE) amount. Both values are retrieved from the MAP database and are shown on the MPINS Job Info Screen.

Critical Path - The series of activities determining the earliest completion of the project. The critical path will generally change from time to time as activities are completed ahead of or behind schedule. Although normally calculated for the entire project, the critical path can also be determined for a *milestone*. The critical path is usually defined as those activities with float less than or equal to a specified value, often zero.

Duration - Number of work days (not including holidays/other non-working days) required to complete a task.

Float - The amount of time, in days, that a task may be delayed from its approved dates without delaying the project finish date. Float is a mathematical calculation and can change as the project progresses and changes are made to the project. Also called slack time, total float, and path float.

Generic Job - A job containing all of the tasks, milestones, and constraints necessary to constitute a network, but missing the necessary Management Units to finish assigning all resources to tasks.

Job Schedule - The planned dates for performing the tasks and for meeting the milestones.

Appendix C - Glossary of Terms (continued)

Labor Hours - The amount of actual "hands-on" time a resource (work unit) spends performing a task or group of tasks.

Letting - The date that a job is put up for bid by contractors.

Management Units - Work units (resources) involved in major portions of a job & the P/PMS network of tasks.

MAP - **M**ichigan **A**rchitectural **P**roject. The MDOT corporate database.

Milestone - A significant event in the job, usually the completion of a major deliverable.

MPINS - Michigan Project Information System. The user interface to the MAP database.

Network Analysis - The process of identifying early and late start and finish dates for the uncompleted portions of project activities.

Network Logic Diagram - A schematic display of the logical relationships of project tasks. Always drawn from left to right to reflect project chronology. Often referred to as a "PERT chart".

New Job - A valid job whose basic data has been loaded from MAP and needs a P/PMS network created. Valid jobs include:

- Concepts with job numbers not beginning with 9, with valid P/PMS work types, region codes greater than 0, and which will be let by MDOT during or after the current fiscal year.
- Approved or active trunk line jobs, with job numbers not beginning with 9, valid P/PMS work types, region codes greater than 0, and which will be let by MDOT during or after the current fiscal year (or Study jobs).

Plan Completion - The date at which all plans are complete, and the job is turned in to Specifications and Estimates for packaging to be advertised and let.

P/PMS - The Program/Project Management System.

Program - A group of related projects managed in a coordinated way. Programs usually include an element of ongoing activity.

Programmed Job - A job that has been approved and added to the P/PMS Statewide Program. These jobs require updating and monitoring for progress.

Project - A temporary endeavor undertaken to create a unique product or service.

Project Management - The application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project.

Project Manager - The main person responsible for developing schedule & plans for a job/group of jobs.

Appendix C - Glossary of Terms (continued)

Refined Job - A job that has a version waiting to be included in the P/PMS Statewide Program. The version must have satisfactory dates and/or coincide with an approved 2604 before it can be "programmed" n P/PMS.

Resource – A unit that performs at least some of the work on the task or tasks they=re involved with.

Scheduled Finish Date - The planned point in time that work will be finished on a task.

Scheduled Start Date - The planned point in time that work will be started on a task.

Scheduling Specialist - The "right-hand" of a project manager, whose duty with regards to P/PMS is to perform the ground work necessary to create and update the P/PMS network for a job.

Target Date - An imposed date which constrains or otherwise modifies the network analysis. Target dates are set approved dates from which the network schedule is calculated. These include the Target Start (Task 0000), Target Plan Completion, Target Letting, Target Finish (Task 9999), and Target Float.

Task - An element of work performed during the course of a project. A task has an expected duration, and expected cost, and expected resource requirements.

Ungenerated Job - A job that has been opened in P/PMS. The job may even have some characteristics entered, but does not yet have a network generated.

Unrefined Job - A job containing all of the tasks, milestones, constraints, and resources necessary to constitute a network, but that needs to be checked, updated, and verified to ensure the network correctly reflects all work to be done.

Version - A copy of a job network, with which a project manager or scheduling specialist is able to make changes to the network. This is sometimes utilized to perform a "what-if?" scenario.

Appendix D - Entry of Actual Start and Finish Dates

Other than in P/PMS itself, actual start and finish dates get to us through MAP from other systems, MPINS, and now from DCDS. The MPINS and DCDS methods are presented here.

How to assign an employee to a P/PMS Task in MPINS

This function can be performed by the Supervisor of the Unit for an employee assignment to be made.

1. Identify the job record for which an employee assignment is to be made as described in **How to Identify Desired Records**. From the Job List, select **Job/Phase Task Status** from the menu bar, and in the Job Locator select **Jobs** and **Phase Task Status**.

2. In the **Phase Tasks** section of the Phase Task Status window, use the vertical scroll bar to locate and select the PPMS Task Number/Unit record in which an employee assignment is to be made.

3. In the **Task Status** section of the window use the pick list associated with the **Employee** field to select the employee to be assigned to the task.

4. Save the changes by clicking on the **Save** tool bar button.

5. Repeat from step 2 as desired. When done, the user can close the window by clicking on the **Close** tool bar button.

How to record dates for P/PMS Tasks in MPINS

This function can be performed by the Unit Leader or Project Manager for a given job, and by the Supervisor of the Unit or an employee they designate as assigned to the Task.

1. Open the Job Locator by clicking on the **Job Loc**. tool bar button. The **Job Locator** window opens, as illustrated here.

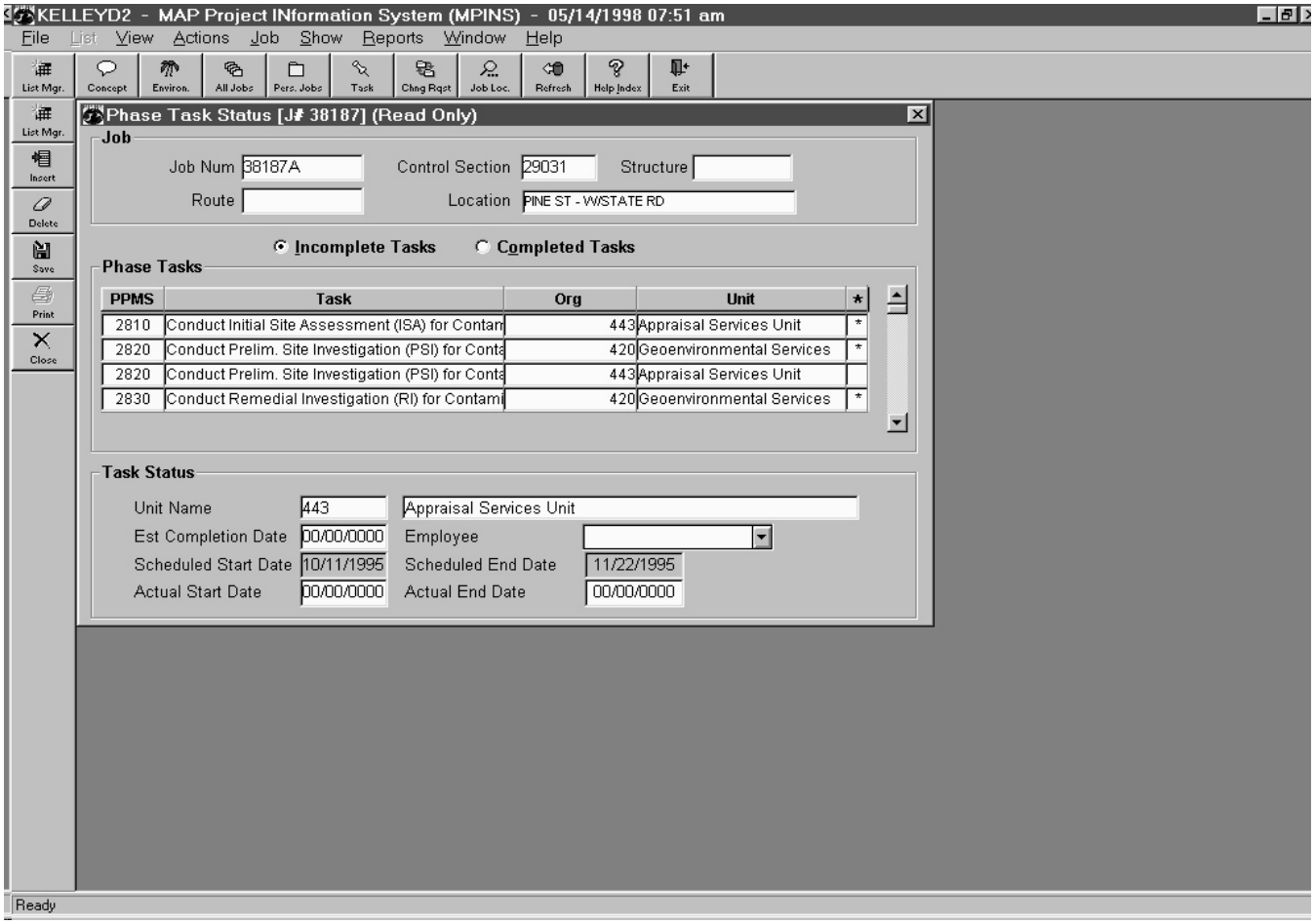
2. Select **Job** at the top of the above window.

3. Enter the desired job number in the **Job** # field.

4. Select **Phase Task Status** in the Locate section of the window.

5. Select **OK** at the bottom of the window to proceed.

Appendix D - Entry of Actual Start and Finish Dates (continued)



6. The Phase Task Status Screen opens, and defaults to select Incomplete Tasks.

7. In the **Phase Tasks** section of the Phase Task Status window, use the vertical scroll bar to locate and select the PPMS Task Number/Unit record in which dates are to be recorded.

8. In the **Task Status** section of the window enter any of the **Est. Completion Date, Actual Start Date, Actual End Date** fields as appropriate.

9. Save the changes by clicking on the **Save** tool bar button.

10. Repeat from step 2 as desired. When done, the user can close the window by clicking on the Close tool bar button.

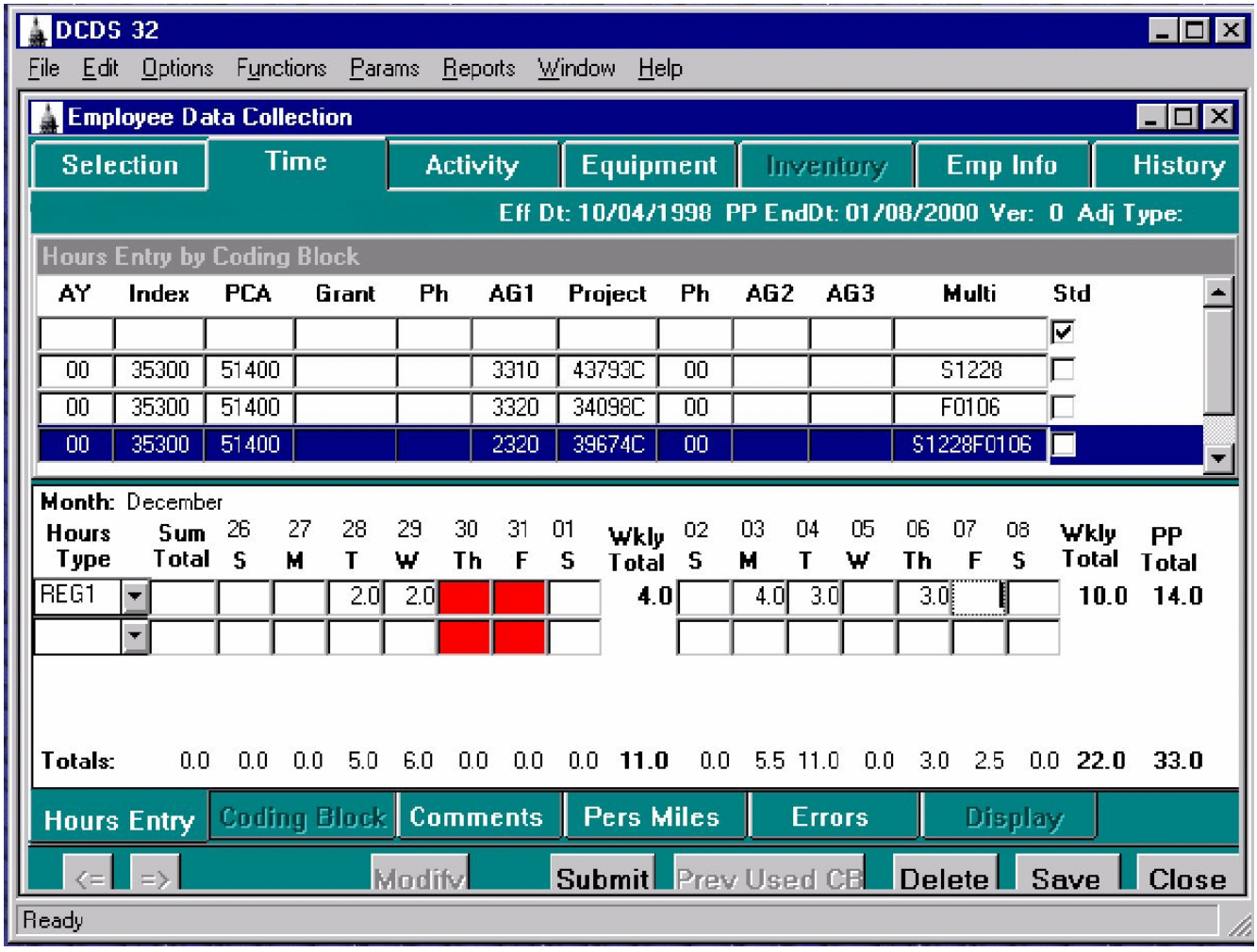
Start and Finish Dates in DCDS

The P/PMS Team has developed a way for users to input P/PMS task start and finish dates through DCDS (current methods of entering actuals in MPINs and P/PMS are still supported). Task actuals can now be entered through the Multi field in DCDS. This is accomplished by entering a 5 digit code SMMDD or FMMDD where **S** indicates a start, **F** indicates finish, **MM** represents the month and **DD** represents the day. In the case that a task was started and finished during the same pay period the two codes can be combined resulting in SMMDDFMMDD. For the example below:

S0612 - would be an actual start date of June 12, 2000 (year from pay period) for task 3310.
F0622 - would be actual finish date of June 22, 2000 for task 3310.
S0612F0616 - would be a Start and Finish in the same pay period for task 2320.

AG1 (task code), Project (Job Number) and Index (old Org. Code) fields must be present for the actuals to be valid. The Index (old Org. Code) will be checked to insure that the unit listed is the Responsible Unit for the task.

Note: A delay of up to 3 weeks is possible for P/PMS to receive the DCDS information.



Appendix E - Network Logic Editor (NLE)

The Network Logic Editor (NLE) is an X Windows interface enabling you to use a mouse to interactively create and modify a job network on the computer screen. You can use the Network Logic Editor to:

- Create or delete activity boxes and constraint lines with the mouse.
- Modify activity or constraint information through a data entry screen
- Analyze and route a network

Using the Network Logic Editor to modify your network

To activate the Network Logic Editor after you have created or copied a network:

1. Click on **EDIT** from the CSS main menu bar
2. Select **Network Logic Editor**

If you are creating a network Task by Task, the Network Logic Editor screen will appear as a blank sheet.

If you have created a network by Job Type or Characteristics, the Network Logic Editor Screen will have the tasks that represent your network.

The following will describe the operations that you can perform within the Network Logic Editor.

To Add an Activity to your network

1. **Rest** your mouse cursor on a blank area of the NLE screen
2. **Press and hold** the left mouse button
3. **Drag** the cursor to the right or left (about an inch) and release

An activity box will be inserted into your network. Please be aware that information will need to be added to this activity. This will be explained throughout this section.

To Add an Activity Constraint

1. **Click one time** on the activity that you wish to impose a constraint. The activity should be highlighted with a bolded outer edge
2. **Place** your mouse cursor just inside the activity box
3. When the cursor turns into an plus sign (+) , **Click and hold** the left mouse button.
4. **Drag** the cursor to the activity with which you wish to constrain your activity

Where you place and release your cursor within an activity will determine your constraint type. The following describes activity constraints within the NLE.

Start to Start (SS) - Place the cursor on the left side of your task and draw a line to the left side of the task with which you wish to constrain.

Finish to Start (FS) - Place your cursor on the right side of the preceding task and draw a line to the left side of the succeeding task.

Finish to Finish (FF) - Place your cursor on the right side of the task box and draw a line to the right side of the task with which you wish to constrain your selected task.

To view or Edit a constraint record

1. Double click on the constraint line

To Edit an Activity

1. Double click in the center of the activity box
2. Click at the bottom of the active window
3. Make modifications (See section on modifying activity data)

To Delete an Activity

1. **Select** the activity
2. Click on **EDIT** form the NLE menu bar
3. Click on **Cut** to remove the activity

The following chart describes the basic functions within the NLE:

To:	Action
Create an activity box	Press and drag in empty space in Edit window
Create a constraint line	Press within a box: drag to another box
Select an activity or constraint	Click on desired activity or constraint
Edit an activity or constraint	Double Click on selected activity or constraint or Select activity or constraint: select Forms option from Data menu
Delete	Select Item: use Cut option from Edit menu
Move an activity	When the hand icon is in an activity box, press and drag
Paste	Select item: use Cut or Copy: place cursor, press right mouse button, use Paste from Edit Utilities pop-down menu
Route	Select Route option from Tools menu
Analyze	Select Analyze option from Tools menu
Exit	Select Exit option from Tools menu