

# 5

## Gantt Chart Format

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### Objectives

Upon completion of this chapter, using *P3e*, you should be able to:

- Utilize layouts
- Modify columns
- Modify bars
- Show relationships
- Modify sight lines
- Modify row height
- Use activity codes
- Group and sort activities
- Summarize activities
- Filter activities

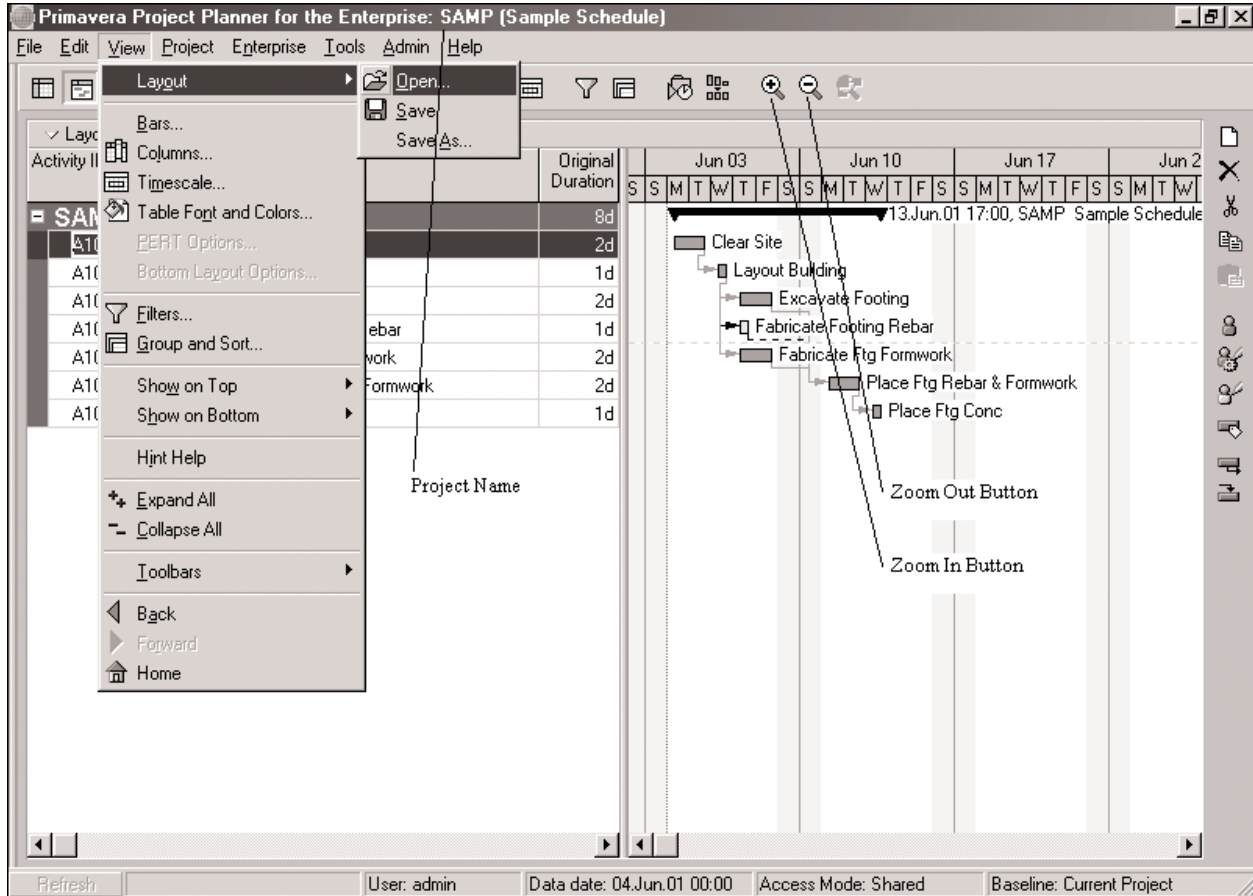
One of the major advantages of using the computer for scheduling construction project management applications is the ease of modifying on-screen and hard-copy printouts of the schedule to communicate information in the clearest way possible. This includes changing the appearance and content of columns, bars, row heights, sight lines, etc.; organizing the information using activity codes; and selecting particular activities included in the schedule using filtering. All this flexibility assures that *P3e* can produce a schedule in the format and with the information to fit the multiple scheduling needs of a complex project.

### LAYOUTS

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The appearance of the on-screen schedule depends on its layout. A *layout* is a stored format of your schedule that keeps visual elements such as the format of activity bars, row heights, site lines, columns, the organization of activities, and screen colors. To select layouts, click on the **V**iew main pull-down menu (Figure 5-1).

The options under **L**ayout are: **O**pen, **S**ave, and **S**ave **A**s. These layout options provide you with the ability to change the visual appearance of



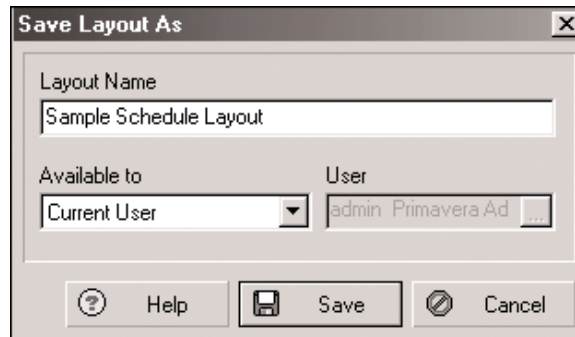
**Figure 5–1** View Main Pull-Down Menu

screens and to keep these changes intact when the program is restarted. Also, multiple screens (and therefore hard copies) of different layout formats can be saved and reused.

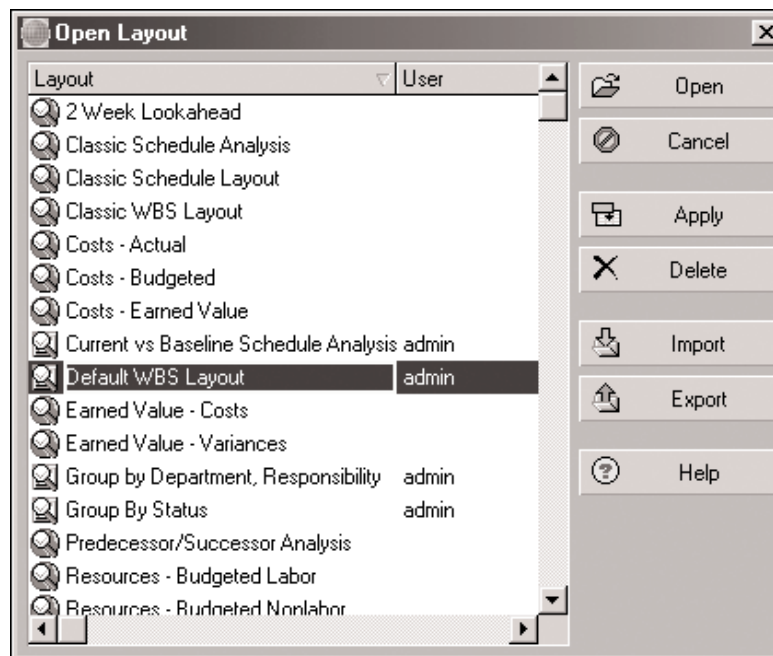
**Save.** *P3e* automatically saves changes to activity data such as adding or editing activities. To save changes to the appearance of a layout, such as changing the column data, modifying bar sizes and colors, or displaying the activity form, use this **Save** option, under **Layout**, from the **View** main pull-down menu.

**Save As.** The **Save As** selection from the **Layout** options opens the **Save Layout As** dialog box (Figure 5–2). When you first create a layout, use the **Save As** command to assign a new Layout Name (Sample Schedule Layout in Figure 5–2).

**Open.** The **Open** selection from the **Layout** options opens the **Open Layout** dialog box (Figure 5–3). Here you can open an existing layout. *P3e* opens only one layout at a time for each project. In Figure 5–3, the



**Figure 5–2** Save Layout As Dialog Box



**Figure 5–3** Open Layout Dialog Box

**Default WBS Layout** has been selected. The fields available within the **Open Layout** dialog box to help in selecting a layout are:

**Layout** The **Layout** field lists the name of each available layout.

**User** The **User** field lists the login name of the user who created the layout.

**Apply** The **Apply** button is used to preview the layout without closing the **Open Layout** dialog box.

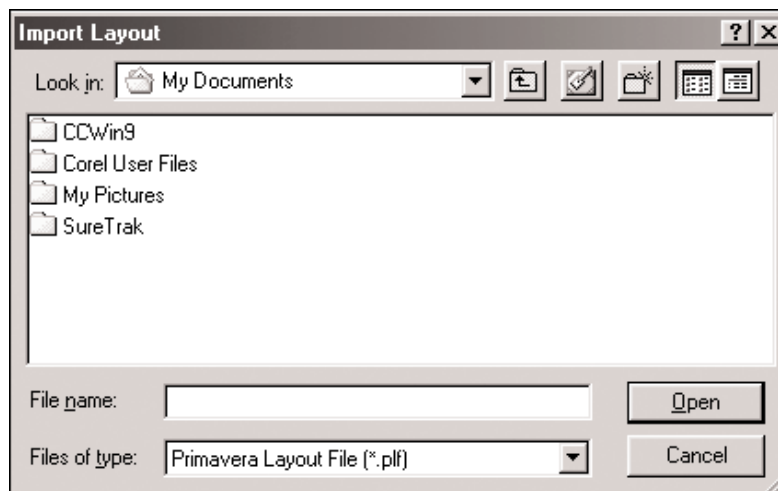
**Delete** The **Delete** button is used to delete the selected layout from the **Open Layout** dialog box.

**Import** You can import a layout from a different database or user to the current one. Layouts are not project specific. They are user and database specific. Also, **Import** can be used to quickly create a new layout or to transfer a similar one; you can then rename it and modify it. The **Import** layout command opens the **Import** dialog box (Figure 5-4). Select the file that contains the layout you want to import and then click the **Open** button. *P3e*'s layout files have a .PLF (Primavera Layout File) format. *P3e* appends a "1" to the layout name when it is imported if a duplicate layout name already exists.

**Export** The **Export** button is used to export the layout and save it as a .PLF file.

## Zoom

Another feature provided by *P3e* for modifying the on-screen Gantt chart is the **Zoom** feature. This feature allows you to modify the magnification of the information provided on the screen. Zooming in on a Gantt chart (Figure 5-1) displays a shorter range of time, or it makes the information appearing in the bar chart portion of the screen appear larger. To use the zoom-in feature, click on the **Zoom In** button (Figure 5-1) of the **Activity Toolbar**. Zooming out on a Gantt chart (Figure 5-1) displays a larger range of time, or it makes the information appearing in the bar chart portion of the screen appear smaller. To use the zoom-out feature, click on the **Zoom Out** button (Figure 5-1) of the **Activity Toolbar**.



**Figure 5-4** Import Layout Dialog Box

## COLUMNS

Look at the Columns and Column title location in Figure 5–5. To modify the on-screen columns configuration, select **Columns** from the **View** main pull-down menu. The **Columns** dialog box will appear (Figure 5–6). Before modifying a column, look at the columns as they are presently configured for the Sample Schedule. Close the **Columns** dialog box to return to the on-screen Gantt chart. Click and drag the mouse on the vertical split bar to expose the columns behind the Gantt chart (Figure 5–7). All the columns appearing in Figure 5–7 are in the **Display Columns** field in Figure 5–6. Columns can also appear without the Gantt chart. From the **View** main pull-down menu, select **Show on Top**. Then select the **Activity Table** option. The activity table screen shows only selected tabular information.

The column title as it appears in Figure 5–7 may be edited. To change a column title, select the title to be changed from the **Display Columns** field of the **Columns** dialog box (Figure 5–6). Note that the **Activity ID** title has been selected. Then click on the **Edit Title** button of the

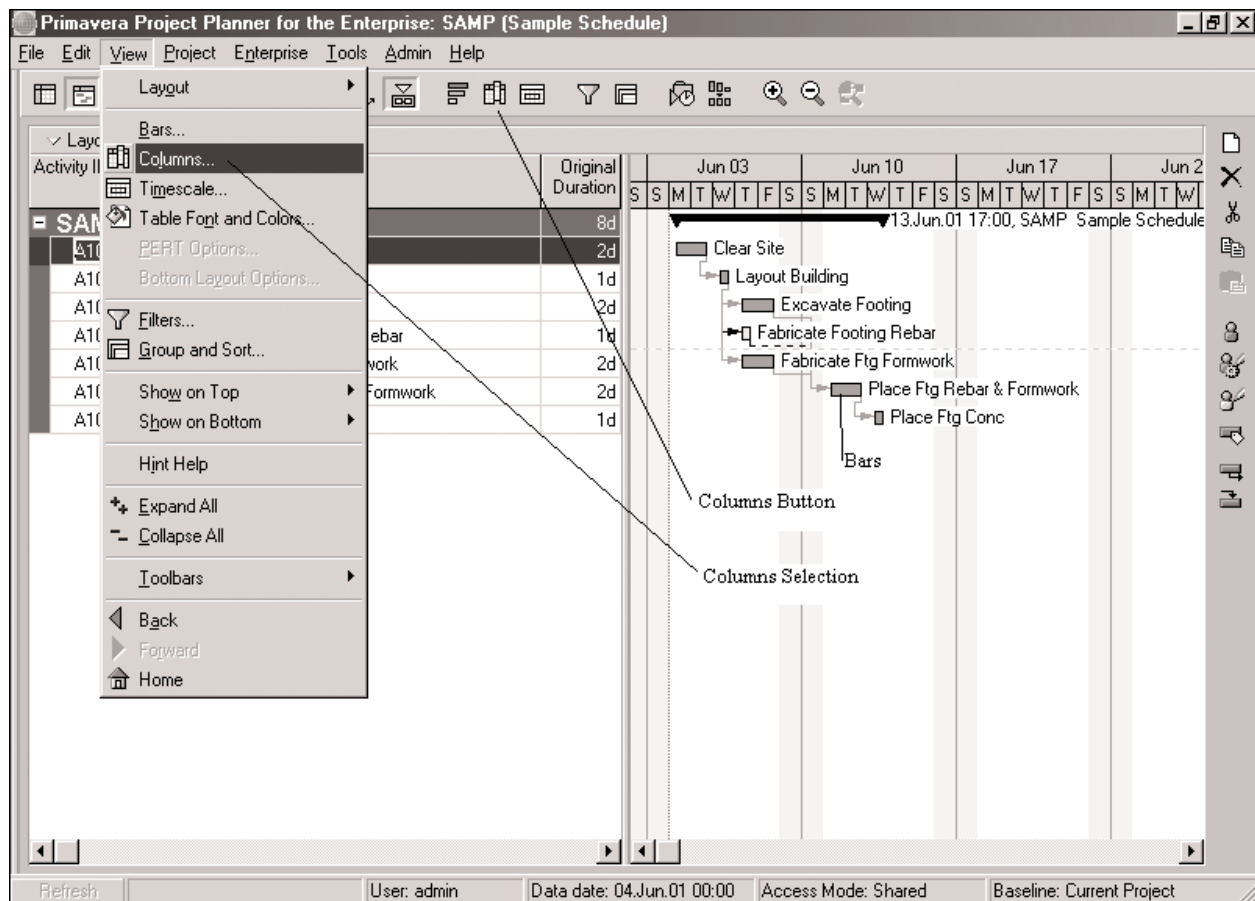


Figure 5–5 View Main Pull-Down Menu

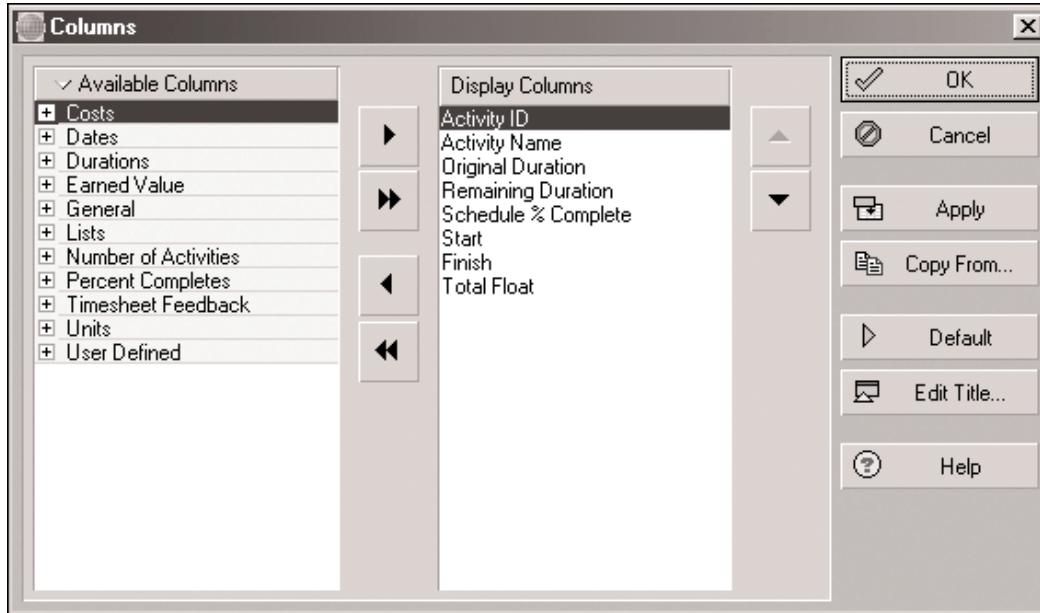


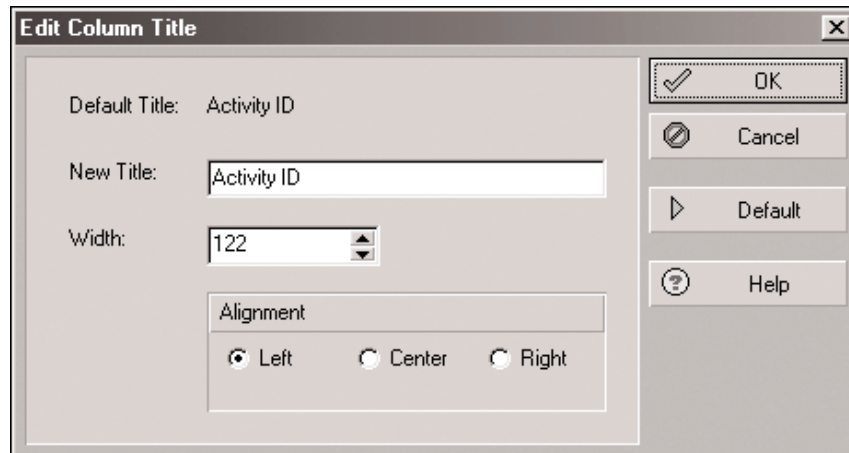
Figure 5-6 Columns Dialog Box

Activity ID	Activity Name	Original Duration	Remaining Duration	Schedule % Complete	Start	Finish	Total Float
SAMP Sample Schedule		8d	8d	0%	04.Jun.01 08:00	13.Jun.01 1...	0d
A1000	Clear Site	2d	2d	0%	04.Jun.01 08:00	05.Jun.01 1...	0d
A1010	Layout Building	1d	1d	0%	06.Jun.01 08:00	06.Jun.01 1...	0d
A1020	Excavate Footing	2d	2d	0%	07.Jun.01 08:00	08.Jun.01 1...	0d
A1030	Fabricate Footing Rebar	1d	1d	0%	07.Jun.01 08:00	07.Jun.01 1...	1d
A1040	Fabricate Ftg Formwork	2d	2d	0%	07.Jun.01 08:00	08.Jun.01 1...	0d
A1050	Place Ftg Rebar & Formwork	2d	2d	0%	11.Jun.01 08:00	12.Jun.01 1...	0d
A1060	Place Ftg Conc	1d	1d	0%	13.Jun.01 08:00	13.Jun.01 1...	0d

Figure 5-7 Sample Schedule—Columns Exposed

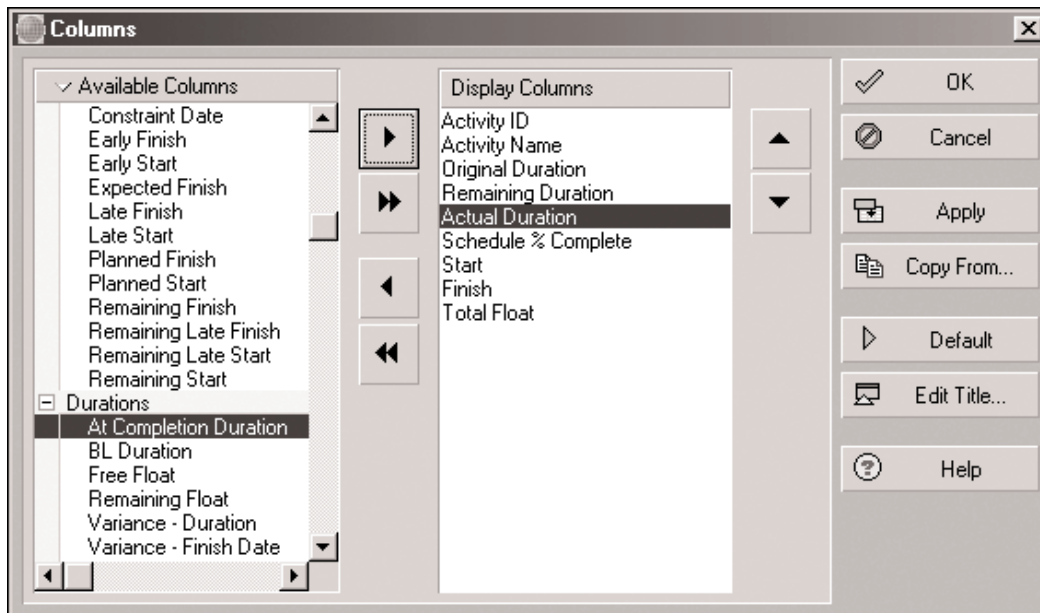
**Columns** dialog box, and the **Edit Column Title** dialog box will appear (Figure 5-8). Here the **New Title**, column **Width**, and **Alignment** of the selected column can be changed.

To add a new column to the existing display (Figure 5-7), the column must be added to the **Display Columns** field of the **Columns** dialog box (Figure 5-6). Click on the **Available Columns** button and then on the **Expand All** option. Now, all possible *P3e* new column titles will appear



**Figure 5-8** Edit Column Title Dialog Box

(Figure 5-9). To add a new column from the **Available Columns** (non-displayed) field to the **Displayed Columns** field, first select the column to be moved (**Actual Duration**). Then from the **Display Column** field, select the column that the moved column will appear after, in this case the **Remaining Duration** title is selected. Then click on the arrow button pointing toward the **Display Column** field. Note that in Figure 5-9, the **Actual Duration** column title now appears after the **Remaining Duration** title. Click the **OK** button of the **Columns** dialog box. Figure 5-10 shows the exposed columns of the Sample Schedule with the new column (**Actual Duration**) appearing after the **Remaining Duration** column.



**Figure 5-9** Columns Dialog Box—New Column Added

Activity ID	Activity Name	Original Duration	Remaining Duration	Actual Duration	Schedule % Complete	Start	Finish
<b>SAMP Sample Schedule</b>		8d	8d	0d	0%	04.Jun.01 08:00	13.Jun.01 1...
A1000	Clear Site	2d	2d	0d	0%	04.Jun.01 08:00	05.Jun.01 1...
A1010	Layout Building	1d	1d	0d	0%	06.Jun.01 08:00	06.Jun.01 1...
A1020	Excavate Footing	2d	2d	0d	0%	07.Jun.01 08:00	08.Jun.01 1...
A1030	Fabricate Footing Rebar	1d	1d	0d	0%	07.Jun.01 08:00	07.Jun.01 1...
A1040	Fabricate Ftg Formwork	2d	2d	0d	0%	07.Jun.01 08:00	08.Jun.01 1...
A1050	Place Ftg Rebar & Formwork	2d	2d	0d	0%	11.Jun.01 08:00	12.Jun.01 1...
A1060	Place Ftg Conc	1d	1d	0d	0%	13.Jun.01 08:00	13.Jun.01 1...

Figure 5–10 Sample Schedule—Column Added

## BARS

Look at the bars location in Figure 5–10. To modify the on-screen bars configuration, select **Bars** from the **View** main pull-down menu (see Figure 5–5). The **Bars** dialog box will appear (Figure 5–11).

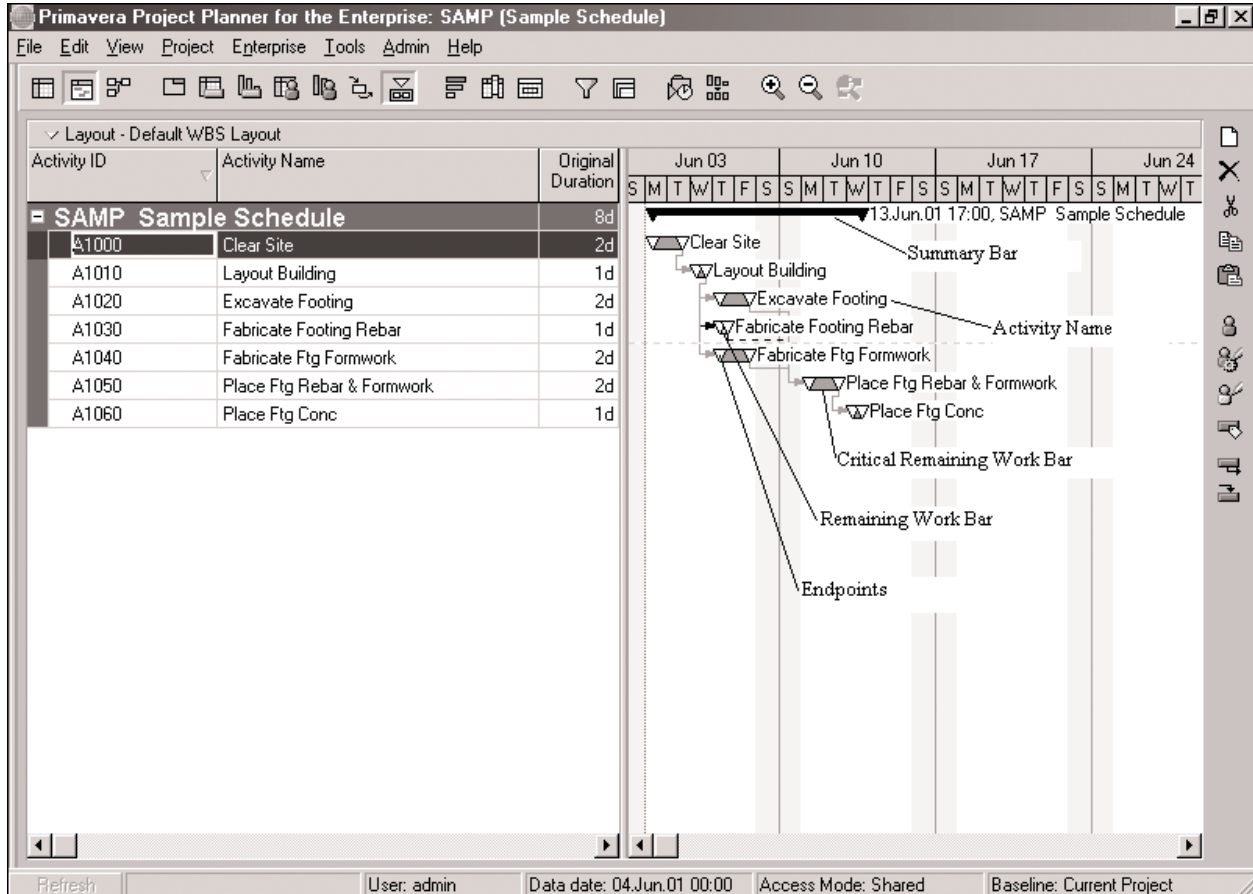
You can use the **Bars** dialog box to add or delete bars, specify which bars are visible, position of the bars, and modify the bar pattern or colors of the Gantt chart. Note, from Figure 5–11, that there are presently three bars checked as visible for display on the Sample Schedule screen. The Actual Work, Remaining Work, and Critical Remaining Work bars are checked under the **Display** column. These columns will be the visible bars on-screen. By scrolling down the available bar options in Figure 5–11, the Current Bar Labels and the Summary Bar are also checked to be visible. The **Bars** dialog box (Figure 5–11) fields are:

**Display** A mark in the checkbox indicates that the specified bar will be visible in the on-screen Gantt chart. The **Critical Remaining Work** bar (Figure 5–11) is shown in Figure 5–13 since there is a mark in its **Display** checkbox.

**Name** Click the desired bar to select it. Double click the **Name** field to change the bar name.

**Timescale** The **Timescale** field represents the timescale data that the bar represents. The **Timescale** data bar options are: Remaining Bar, Current Bar, % Complete Bar, Plan Bar, Actual Bar, Baseline Bar, Early





**Figure 5–13** Sample Schedule—Endpoints Added

Bar, Late Bar, Float Bar, and Negative Float Bar. Double click the **Timescale** to change it.

**Filter** The **Filter** field denotes the possible filter applied to the data item represented by the bar type. The pre-configured *P3e* **Filter** activity data item options are: Completed, Critical, Has Finish Constraint, Has Start Constraint, In Progress, Level of Effort, Milestone, Negative Float, New Feedback to Review, New What-If, Non-critical, Normal, Not Started, and Status to Review. New filters may be added to these pre-configured *P3e* filters.

**Preview** This shows how the bar will appear in the on-screen Gantt chart.

The **Bars** dialog box (Figure 5–11) has two tabs for modifying the display options of a selected bar in the current Gantt chart. The first tab is the **Bar Style** tab. The **Bar Style** tab options can be used to modify the bar and endpoints **Shape**, **Color**, and **Pattern**. The center three fields are for the bar, and the three fields on both sides of the center fields are for the

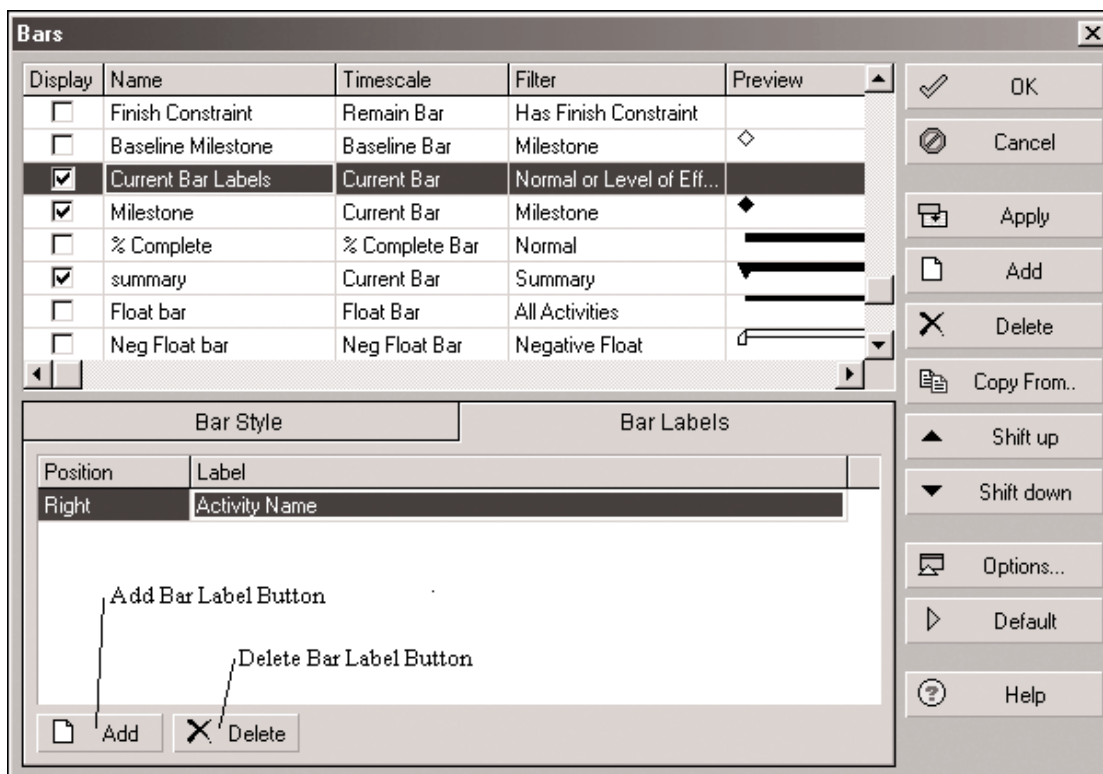
endpoints. Note that in Figure 5–12, a downward pointing triangle is selected for the endpoints for the **Critical Remaining Work** bar. Figure 5–13 shows the results on the Sample Schedule with the endpoints modified. Compare Figure 5–13, after the endpoint changes, with Figure 5–5 made before the endpoint changes.

The second tab of the **Bars** dialog box is the **Bar Labels** tab appearing in Figure 5–14. The **Bar Labels** tab is used to change the bar labels in the current Gantt chart. Note that, in Figure 5–14, the bar **Current Bar Labels** is selected for evaluating the bar label for the Sample Schedule. The **Bar Labels** tab (Figure 5–14) fields/buttons are:

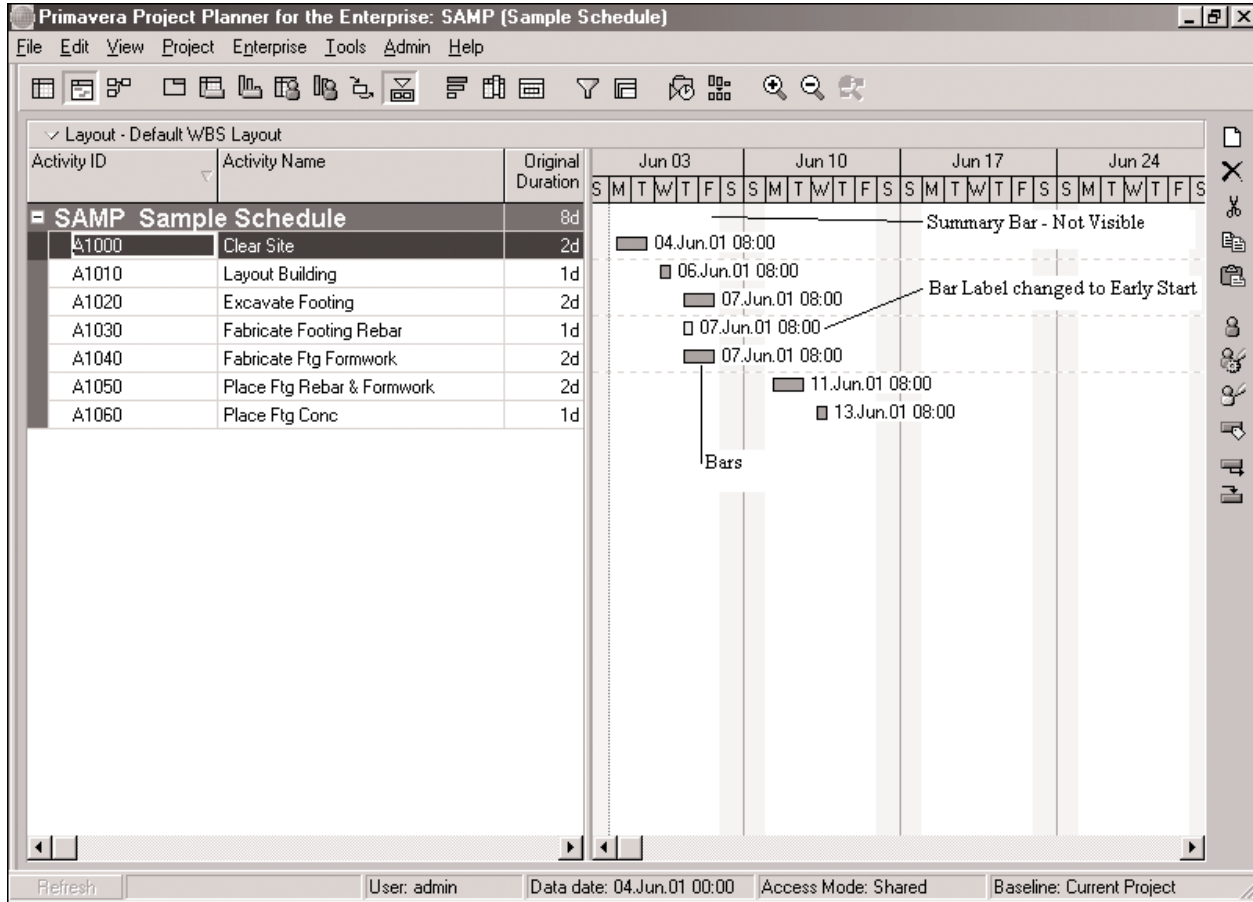
**Position** Double click this field to change the position of the bar label. The possible positions are: left, right, top, bottom, and center.

**Label** Double click this field to choose a database field for the selected bar’s label. Note that in Figure 5–15, the bar **Label** has been changed from Activity Name (Figure 5–13) to Early Start.

**Add** Click the **Add** button (Figure 5–14) to add a bar label to the selected bar. Even though the bar **Current Bar Labels** is selected for modifying the bar label for the Sample Schedule, any of the bars can have a label attached.



**Figure 5–14** Bars Dialog Box—Bar Labels Tab



**Figure 5–15** Sample Schedule—Bar Changes Made

**Delete** Click the **Delete** button (Figure 5–14) to delete a bar label from the selected bar.

The **Bars** dialog box (Figure 5–14) has a number of buttons on the right side of the dialog box for manipulating changes made to the dialog box. The **Bars** dialog box (Figure 5–14) buttons are:

**OK** Accepts changes made to the **Bars** dialog box and closes it.

**Cancel** Cancels changes made to the **Bars** dialog box and closes it.

**Apply** Click this button to preview changes made to the **Bars** dialog box without closing the dialog box.

**Add** Click this button to add a bar to the **Bars** dialog box.

**Delete** Click this button to delete the selected bar from the **Bars** dialog box. To remove the selected bar from the on-screen display

without deleting it, remove the check from the checkbox in the **Display** field for that bar.

**Copy From** To apply the Gantt settings from another layout to the current activity layout, click this button.

**Shift Up** Click this button to move the selected bar up one position in the **Bars** dialog box.

**Shift Down** Click this button to move the selected bar down one position in the **Bars** dialog box.

**Options** This button will be discussed in the upcoming sections on relationship lines and horizontal lines in this chapter.

**Default** Click this button to apply *P3e*'s default Gantt chart settings.

Compare Figure 5–15 to Figure 5–13, note the Summary Bar is no longer visible.

## RELATIONSHIP LINES

Another feature in *P3e* to modify the on-screen Gantt chart is **Relationships**. As discussed earlier, the successor and predecessor relationships assigned can be shown on-screen. This is very handy for evaluating the logic relationships. To actually see all the relationship lines on the screen rather than trying to figure them out from some table or dialog box makes the logic relationships much easier to understand. To do this, click on **View** and select **Bars**. Then, from the **Bars** dialog box, select the **Options** button and the **Bar Chart Options** dialog box will appear (Figure 5–16). Click on the **Show Relationships** checkbox to select it. Figure 5–17 is the Sample Schedule with relationships showing.

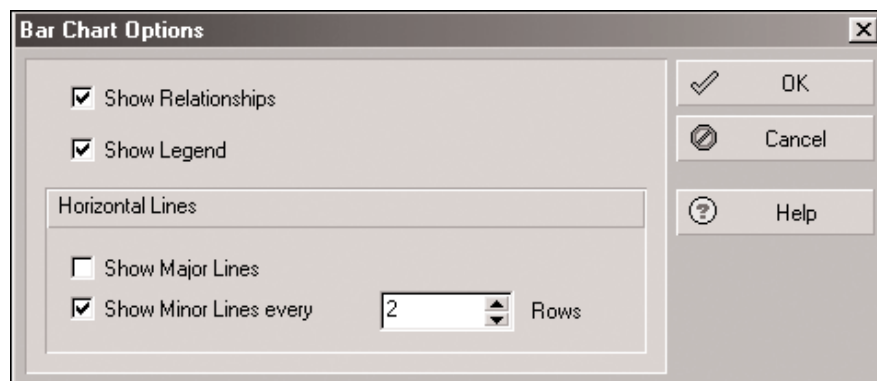


Figure 5–16 Bar Chart Options Dialog Box

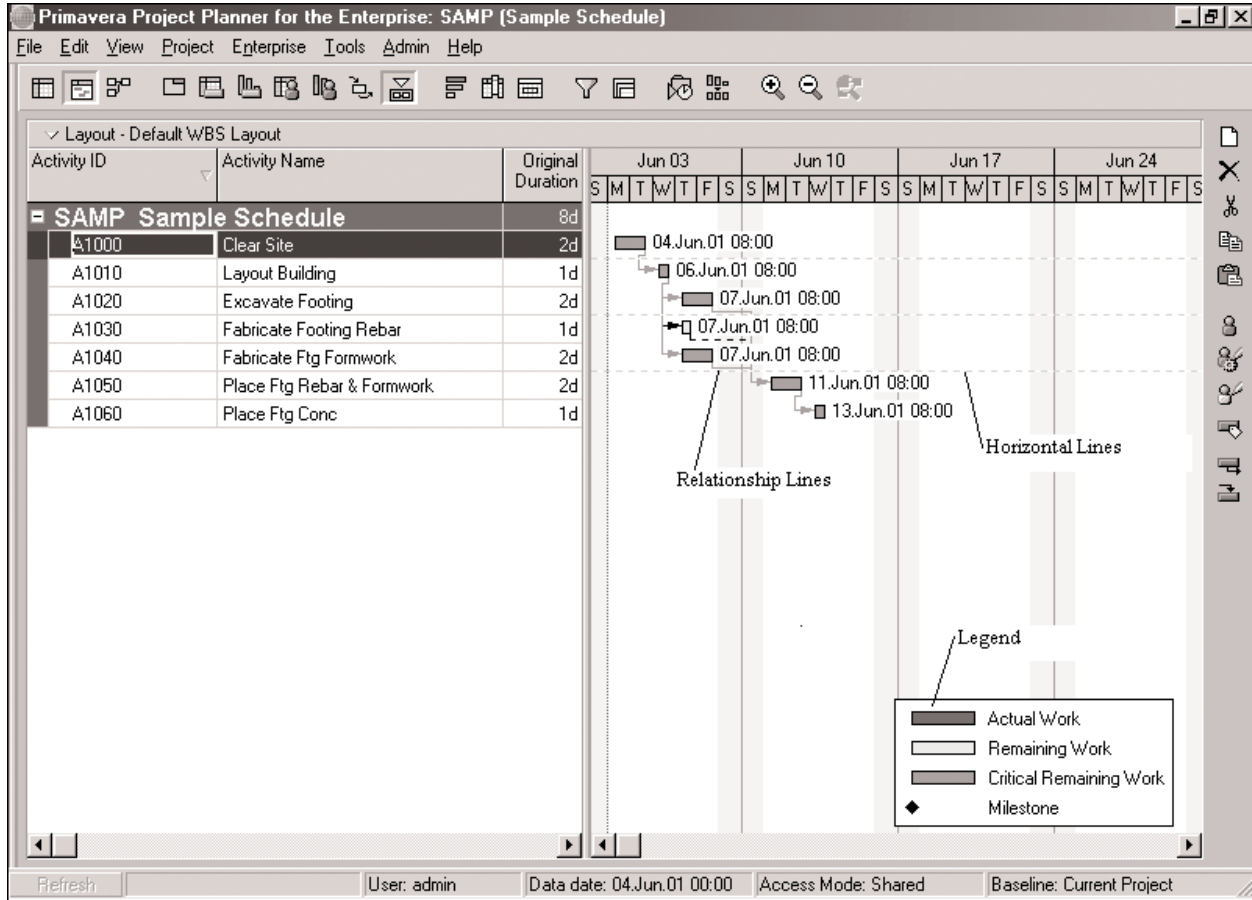


Figure 5-17 Sample Schedule

Compare Figure 5-17 with the relationships showing to Figure 5-15 without relationships.

## SIGHT LINES

A *P3e* formatting option that makes the on-screen bar chart and hard copy printouts much easier to read is sight lines. The on-screen horizontal lines are labeled in Figure 5-17. The horizontal lines make it easier to relate the bars to the activity rows of the on-screen Gantt chart. To change the horizontal on-screen lines, select **B**ars from the **V**iew main pull-down menu. Then from the **B**ars dialog box, select the **O**ptions button and the **Bar Chart Options** dialog box will appear (Figure 5-16). Under the **Horizontal Lines** portion of the dialog box, the on-screen horizontal lines can be modified. Compare Figure 5-17, with the **Show Minor Lines every** set at 2, to Figure 5-13, with this setting at 5.

Another handy feature of the **Bar Chart Options** dialog box (Figure 5-16) is the **Show Legend** option. Note that when this option is selected the bar legend will appear on-screen (Figure 5-17).

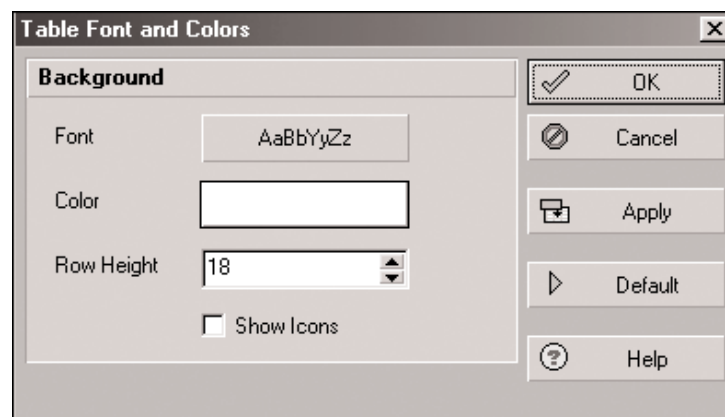
## FONT, ROW HEIGHT, AND COLOR

The ability to change the font size for on-screen text is a handy feature for graphic presentation modifications. To change the on-screen text font, select the **Table Font and Colors** option from the **View** main pull-down menu. The **Table Font and Colors** dialog box will appear (Figure 5-18). Select the **Font** button to make modifications.

Changing the row height provides more spacing between activities. Another advantage of being able to change the row height is it enables you to adjust the number of activities on a single page for getting hard-copy prints. Compare Figure 5-17, with the **Row Height** set at 18, to Figure 5-19, with the **Row Height** set at 30.

A *P3e* formatting option that gives the on-screen bar chart and hard-copy printouts a personal touch is the ability to change background colors. The ability to change the color of *P3e* components is a powerful tool in presentations and helps create a company image. To change the background screen color scheme select **Table Font and Colors** from the **View** main pull-down menu. The **Table Font and Colors** dialog box will appear (Figure 5-19).

Click on the **Color** button to reveal a color palette for selecting the on-screen background color. Figure 5-20 is an example of the *P3e* screen changed in color.



**Figure 5-18** Table Font and Colors Dialog Box

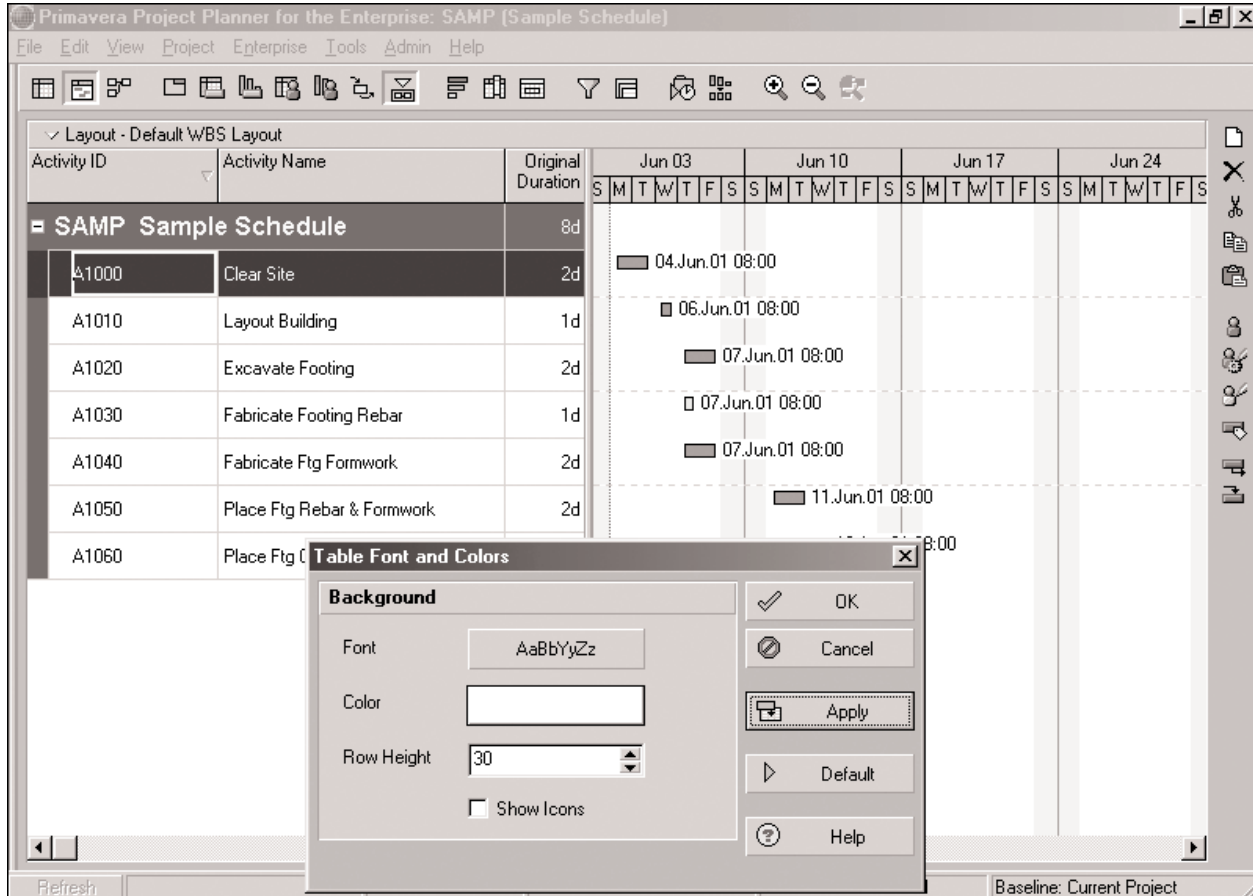
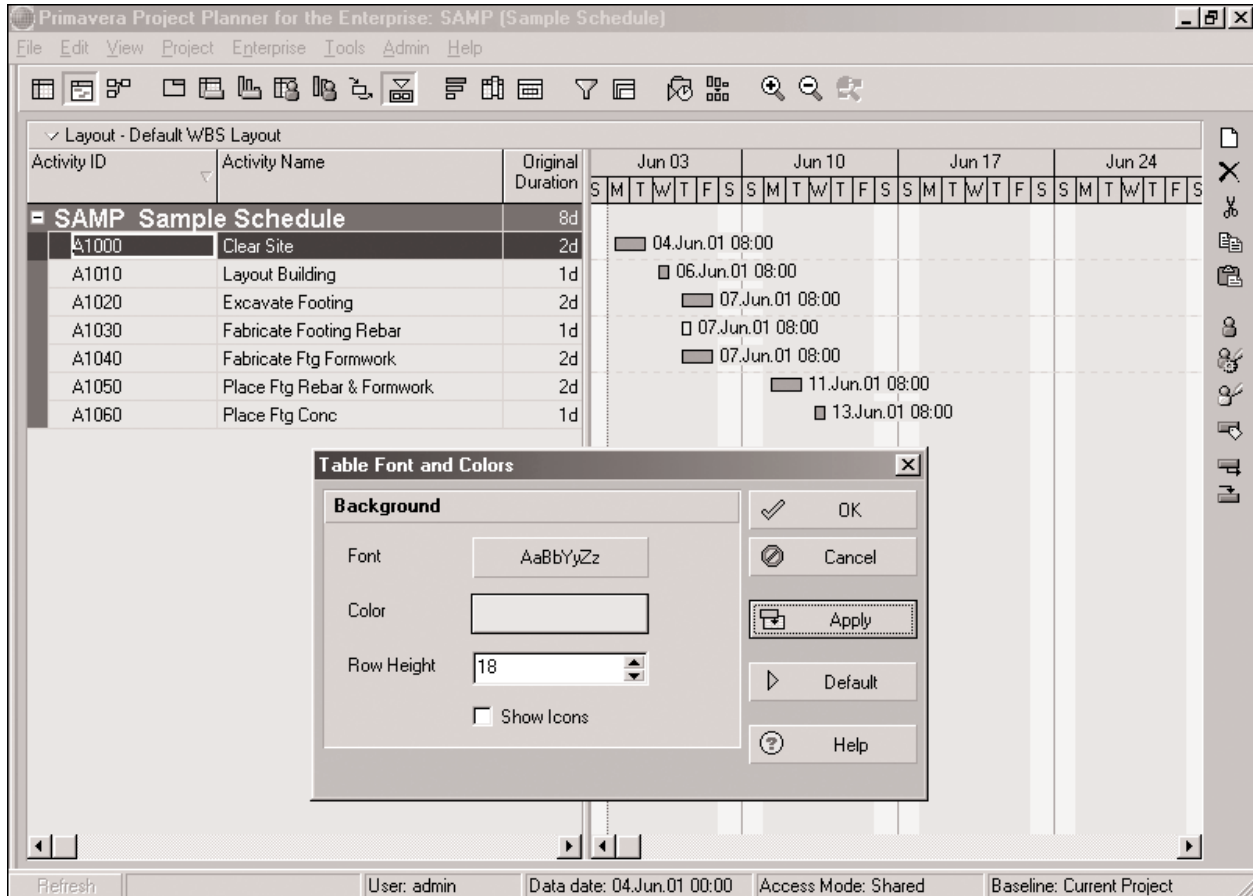


Figure 5-19 Sample Schedule—Row Height Modified

## ACTIVITY CODES

Activity codes and their values allow you to filter, group, sort, and report activity information according to your particular needs. *P3e* supports two types of activity codes, global activity codes and project activity codes. You can assign global activity codes and values to activities in all projects. You can assign project activity codes and values to activities only in the project for which the codes were created.

Sometimes it is useful to organize the project by another sort rather than by activity ID (Figure 5-20). For instance, you may want to look at the project by crew—laborer crew versus carpentry crew. Click on the **Enterprise** main pull-down menu; select **Activity Codes** and the **Activity Codes** dialog box will appear (Figure 5-21). In the **Activity Codes** dialog box (Figure 5-21), click on either the **Global** or **Project** checkboxes to



**Figure 5–20** Sample Schedule—Background Color Modified

make the new activity code either global (assigned to all projects in the database) or project-specific only.

Note that, from Figure 5–21, under the **Select Activity Code**, no sort option has been selected. By clicking the down arrow box, an activity code used for sorting can be selected. When there are no activity codes defined in the system, or you need to add a new activity code, click on the **Modify** button of the **Activity Codes** dialog box and the **Activity Code Definitions** dialog box will appear (Figure 5–22).

Under the **Activity Code Name** field of the **Activity Code Definitions** dialog box (Figure 5–22), a new activity code sort field named Responsibility is created. By clicking the Responsibility **Activity Code** field to select it and then closing the dialog box, the Responsibility code for the SAMP project appears under the **Select Activity Code** field (Figure 5–23).

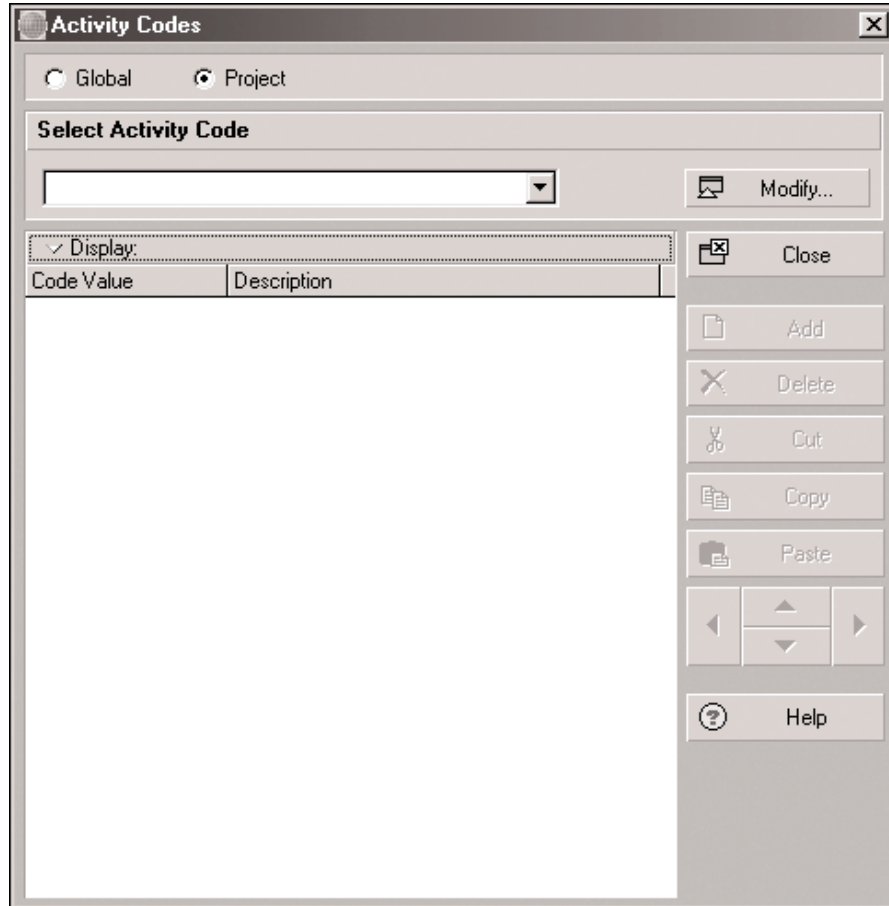


Figure 5–21 Activity Codes Dialog Box

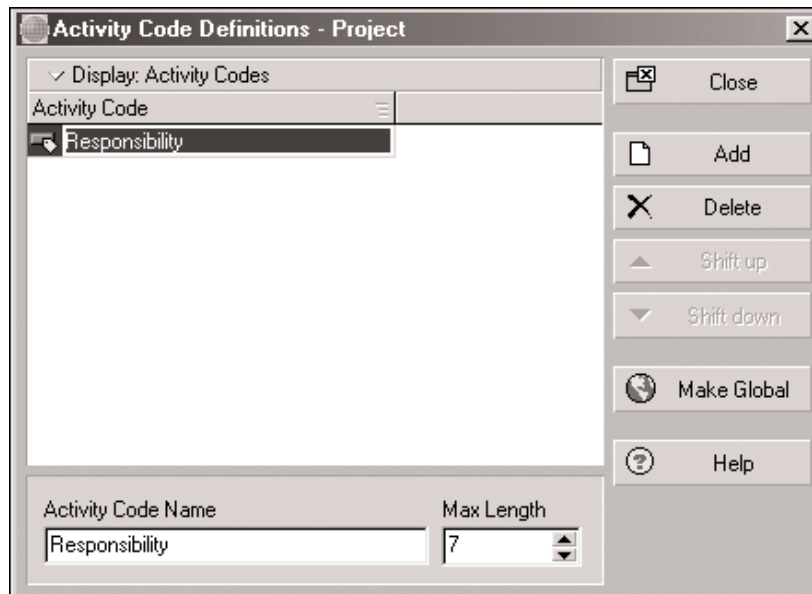
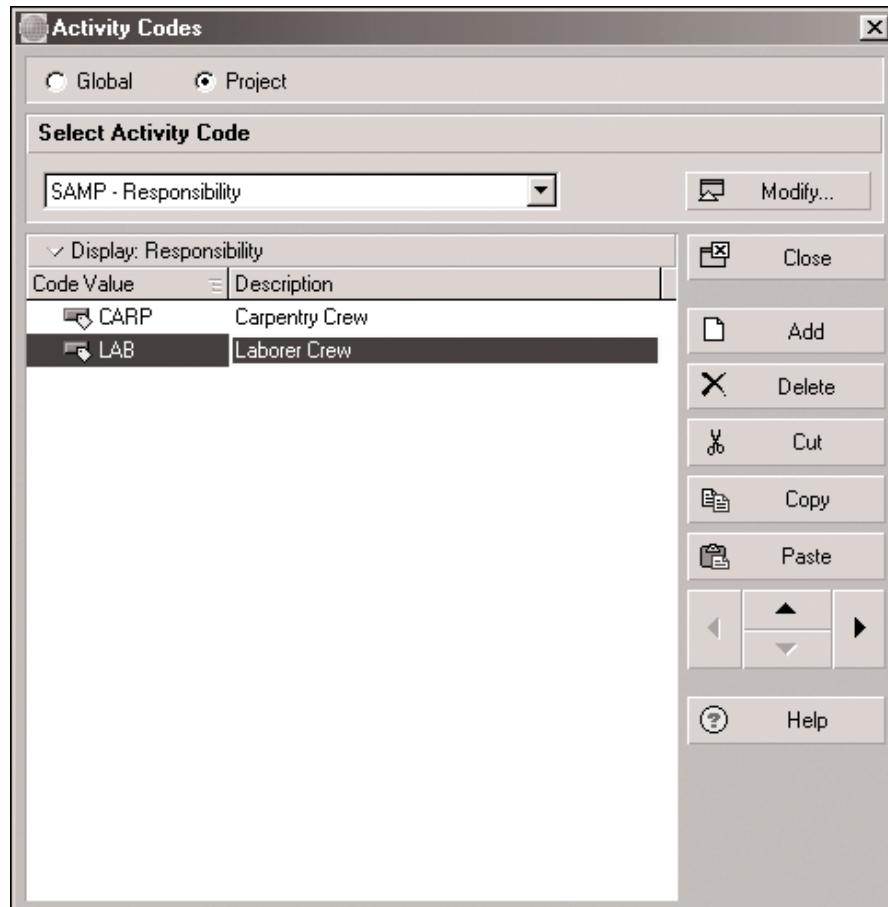


Figure 5–22 Activity Code Definitions Dialog Box



**Figure 5–23** Activity Codes Dialog Box—Code Selected

If another *P3e* schedule has been completed and you are pleased with the way the **Activity Codes** are defined, the **Copy** and **Paste** buttons can be used. Many companies use the same or a similar coding system for every project. It is much faster to transfer these codes to each new project than to re-enter them.

Under the **Code Value** field of the **Activity Codes** dialog box (Figure 5–23), select the **Add** button to create the new activity code sort fields for the Carpenter and Laborer Crews. Under the **Code Value** field type in **CARP**, and then type **Carpentry Crew** under the **Description** field. Follow the same procedure to add the new Laborer Crew activity code. Now that the new activity code sort fields have been created, select the **Close** button of the **Activity Codes** dialog box (Figure 5–23) to close the dialog box.

**Activity Details.** The next step is to identify each activity by responsibility. Click on the first activity to be identified. In Figure 5–24, Activity A1000 has been highlighted. Click on the **View** main pull-down menu

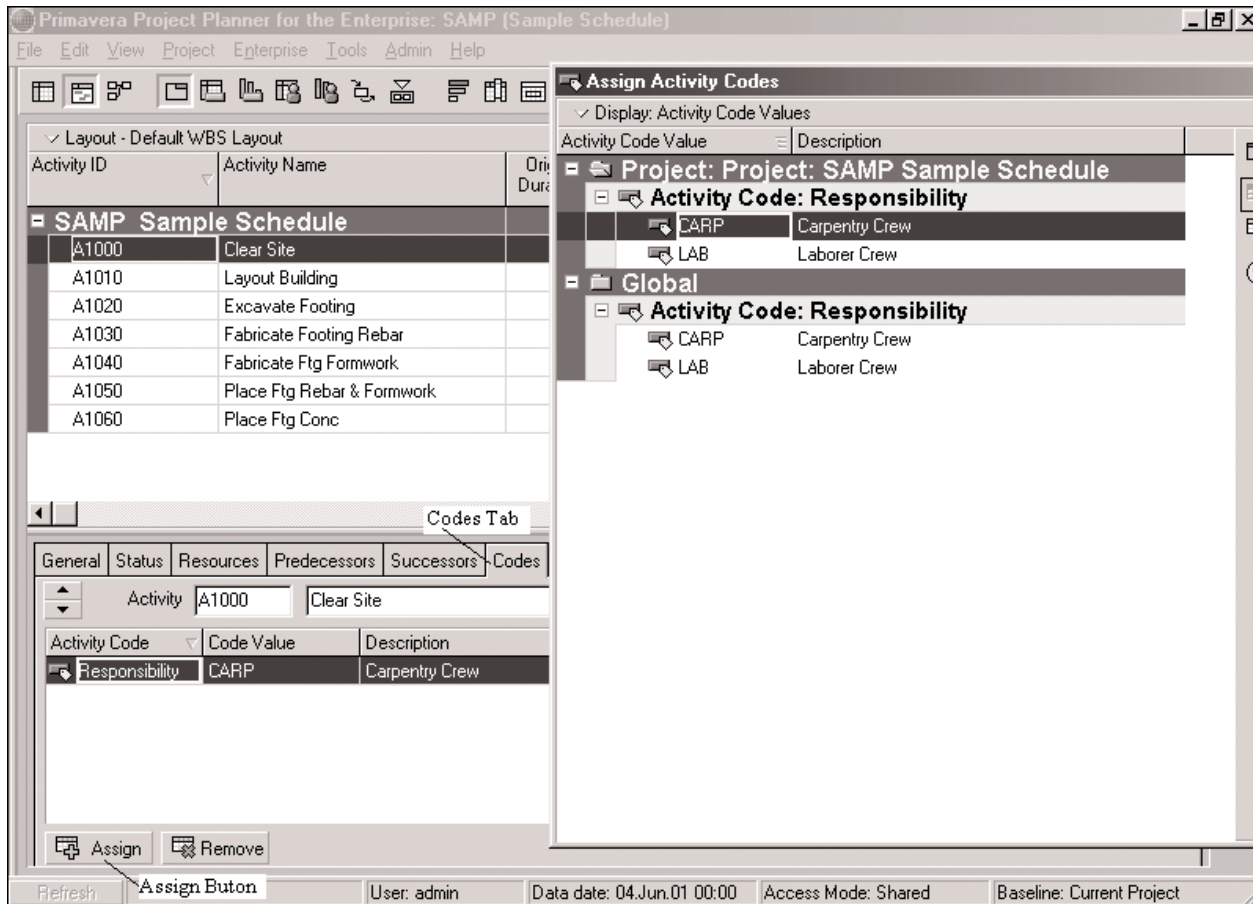


Figure 5–24 Assign Activity Codes Dialog Box

and select **Show on Bottom** and then **Activity Details**. If you access **Activity Details** and not all of the form is exposed, move your cursor to the view control line. The cursor image will change from an arrow to two short double lines. By depressing and holding down the left mouse button, you expose all the **Activity Details** information.

Click the **Codes** tab of the **Activity Details** form to expose the activity code information about the selected activity. Then click on the **Assign** button and the **Assign Activity Codes** dialog box will appear (Figure 5–24). The **CARP Activity Code: Responsibility** is selected for Activity A1000 of the SAMP project. Note that, by selecting it, the **CARP Responsibility** now appears on **Activity Details** for Activity A1000 (Figure 5–24). Simply click on the next activity and assign its activity code for **Responsibility**. Continue the process until all activities have been assigned an activity code.

## GROUP AND SORT

To view the on-screen Gantt chart by responsibility, click on the **View** main pull-down menu. Select **Group and Sort** and the **Group and Sort** dialog box will appear (Figure 5–25). Click on the level 1 field under the **Group By** column, and a menu will appear for selecting the group and sort possibilities. In Figure 5–25, Responsibility has been selected for the level 1 sort. Note the levels of sort can go nine levels deep. So, if Activity ID were chosen as the level 2 sort, *P3e* would sort all activities by Responsibility and then by Activity ID. Notice that the groups can be customized by **Font & Colors**. Here, the **Apply** button is clicked to preview the change. Click on the **OK** button to accept the sort change.

Compare Figure 5–26, sorted by responsibility, to Figure 5–17, sorted by activity ID. Activities A1000, A1010, A1040, and A1050 were defined as Carpentry Crew responsibilities. Activities A1020, 1A030, and A1060 were defined as Laborer Crew responsibilities. The communications advantages are obvious. The sort capabilities of *P3e* make it a great communications tool. Once the information is input, with minor changes, it can be resorted to provide different members of the project team with the scheduling data sorted for their particular needs.

## SUMMARIZE

Sometimes it is useful to summarize the project by sorted information. In this way, instead of looking at hundreds of detail activities, project

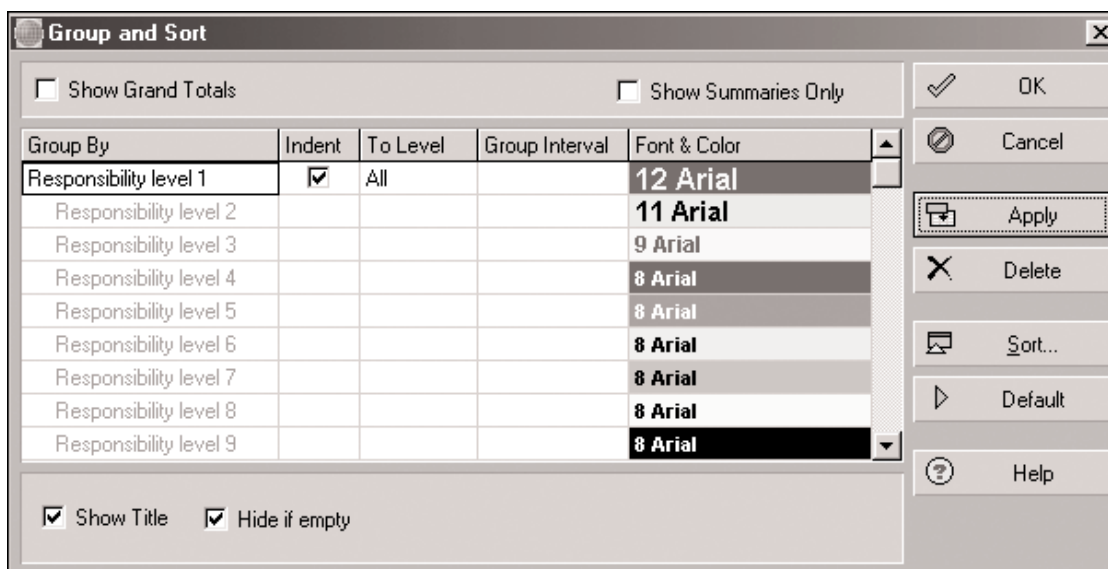
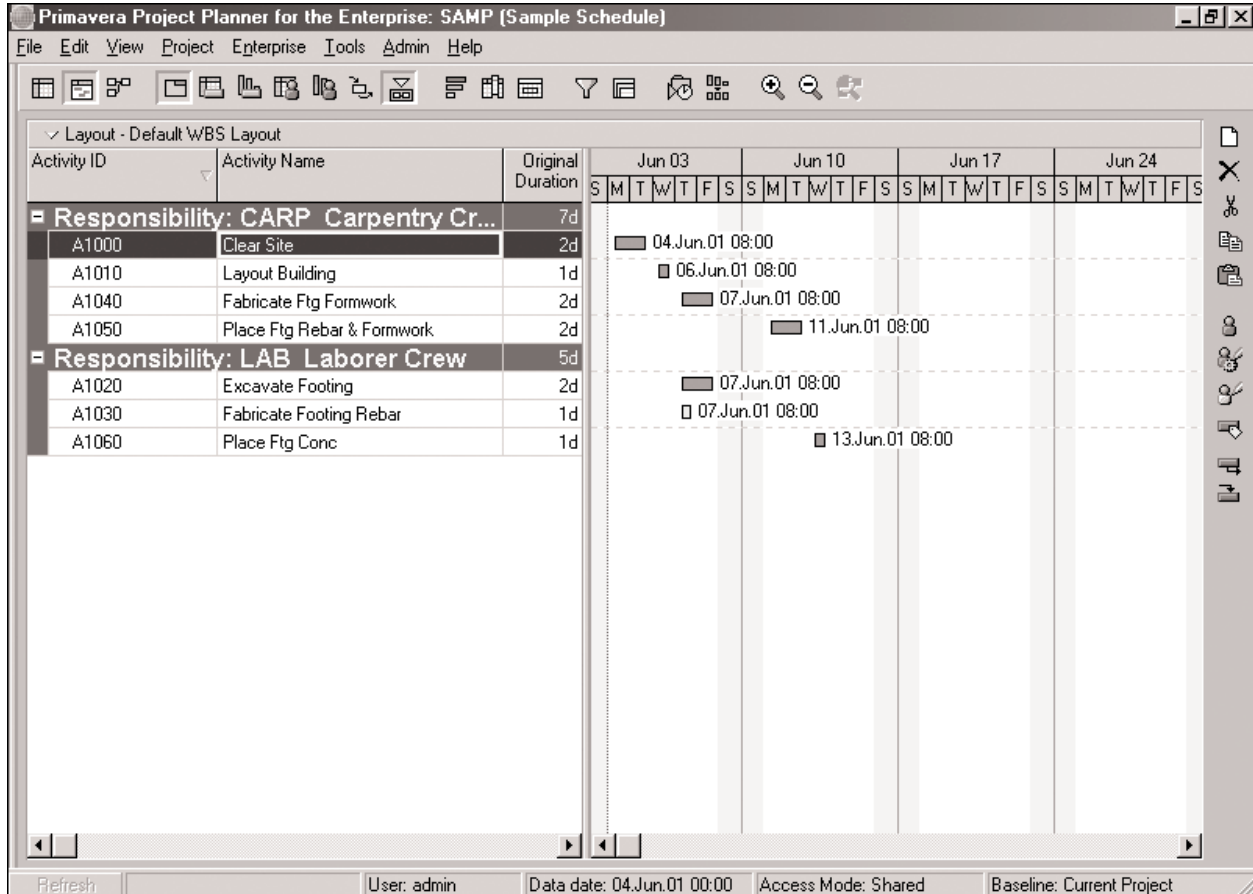


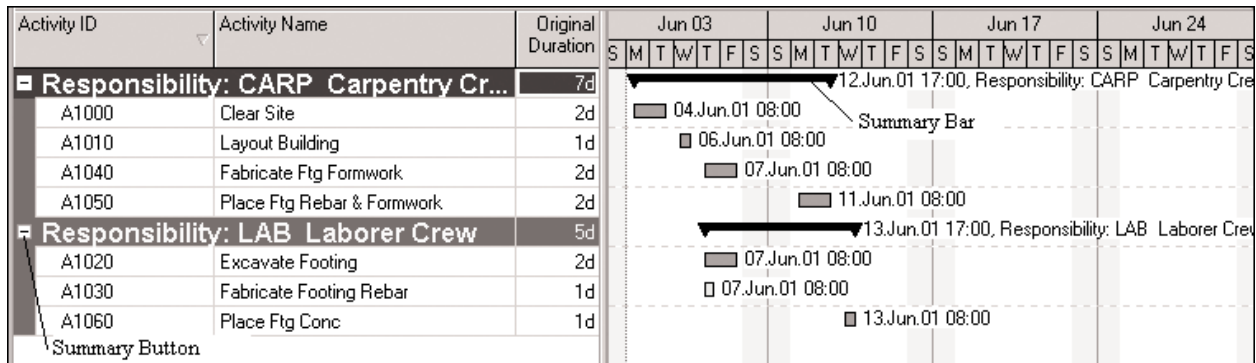
Figure 5–25 Group and Sort Dialog Box



**Figure 5–26** Sample Schedule—Grouped by Responsibility

management personnel can look at a few summary activities that are the result of all the detail activities. Note from Figure 5–27 that the Summary bars for Responsibility already appear on the on-screen bar chart. The summary bar can be made visible through the **Bar** options available from the **View** main pull-down menu.

In Figure 5–27 the Sample Schedule is sorted by two groups; Carpentry Crew and Laborer Crew. By clicking the – checkbox beside a group, the group’s activities are summarized into a single activity. Compare Figure 5–28, where the group Laborer Crew is summarized, to Figure 5–27, with no summary. *P3e*’s summary feature is a very handy feature for providing only the needed information to different users of the schedule information. To make the hidden activities visible again, click the + checkbox beside the group that was summarized. Another convenient way to control summary bars within *P3e* is to use the **Expand All** and **Collapse All** options available for the **View** main pull-down menu.



**Figure 5–27** Sample Schedule—Summary Bars

## FILTER

The **Filters** option can be useful for filtering the project activities and for showing on-screen and hard-copy printouts of only a portion of the activities sorted by some identifier. In this way, instead of looking at hundreds of detailed activities, project management personnel can look at only the activities meeting the sort criteria. For example, you may want to look at only Carpentry responsibility of the Sample Schedule. Click on the **View** main pull-down menu and select **Filter** (see Figure 5–1). The **Filters** dialog box will appear (Figure 5–29).

As can be seen from the **Filters** dialog box (Figure 5–29), *P3e* has a number of predefined filter options. Also, this dialog box can be used to define a new filter criterion. To create a new filter, click on the **New** button of the **Filters** dialog box (Figure 5–29) and the **Filter** dialog box will appear (Figure 5–30). Note that the new filter, **Responsibility**, is defined under **Filter Name**. Three fields must be used to define the filter criteria. They are:

- **Parameter** By clicking the down arrow in the open field under the **Parameter** column, a menu window will open for selection of the filter criteria. The **Responsibility** activity code, as defined earlier in this chapter, will appear as one of the options available from the menu. Click on **Responsibility** to select it.
- **Is** **Is** establishes the relationship between criteria defined in the **Parameter** field and the **Value** field. The options available for the **Is** field depend upon the **Parameter** selected.
- **Value** The **Value** field is used to define which option or options of the **Parameter** to make visible on the screen. When the activity code of **Responsibility** was created earlier in the chapter, two values for **Responsibility** were created. The values were **Carpentry Crew (CARP)** and **Laborer Crew (LAB)**. Under the **Value** field (Figure 5–30) the **CARP** value was selected.

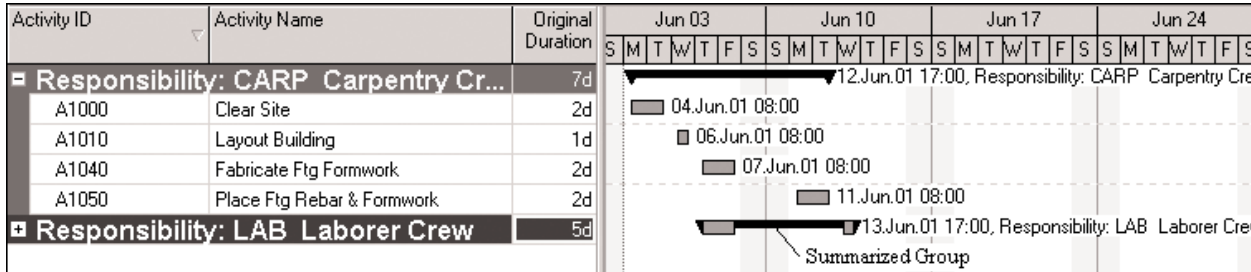


Figure 5–28 Sample Schedule—Summarized

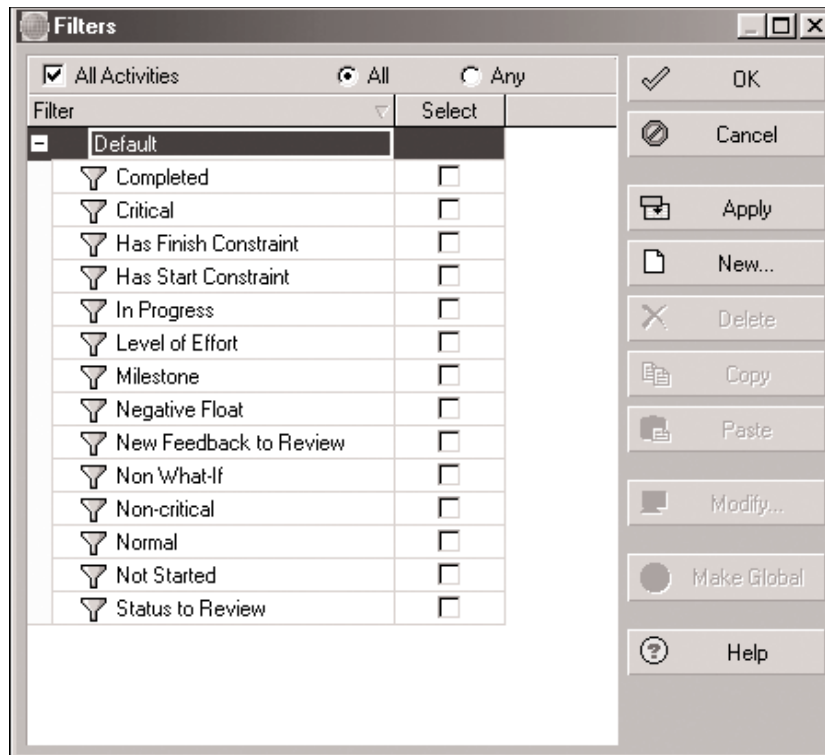


Figure 5–29 Filters Dialog Box

The new filter, Responsibility, has been created that will limit activities appearing on the screen to only the activities where responsibility is limited to the carpentry crew. Click the **OK** button of the **Filter** dialog box (Figure 5–30) to save the new filter. Note that when the new filter is saved, you will be returned to the **Filters** dialog box (Figure 5–31). Now the new user-defined filter Responsibility appears at the bottom of the possible filter options. By clicking in the **Select** checkbox by Responsibility, and then clicking the **OK** button, you are returned to the Gantt chart with the new filter criteria in effect. Compare Figure 5–32, which is filtered to limit visible activities only to Carpentry Crew activities, to Figure 5–27, which has no filter limit upon visible activities.

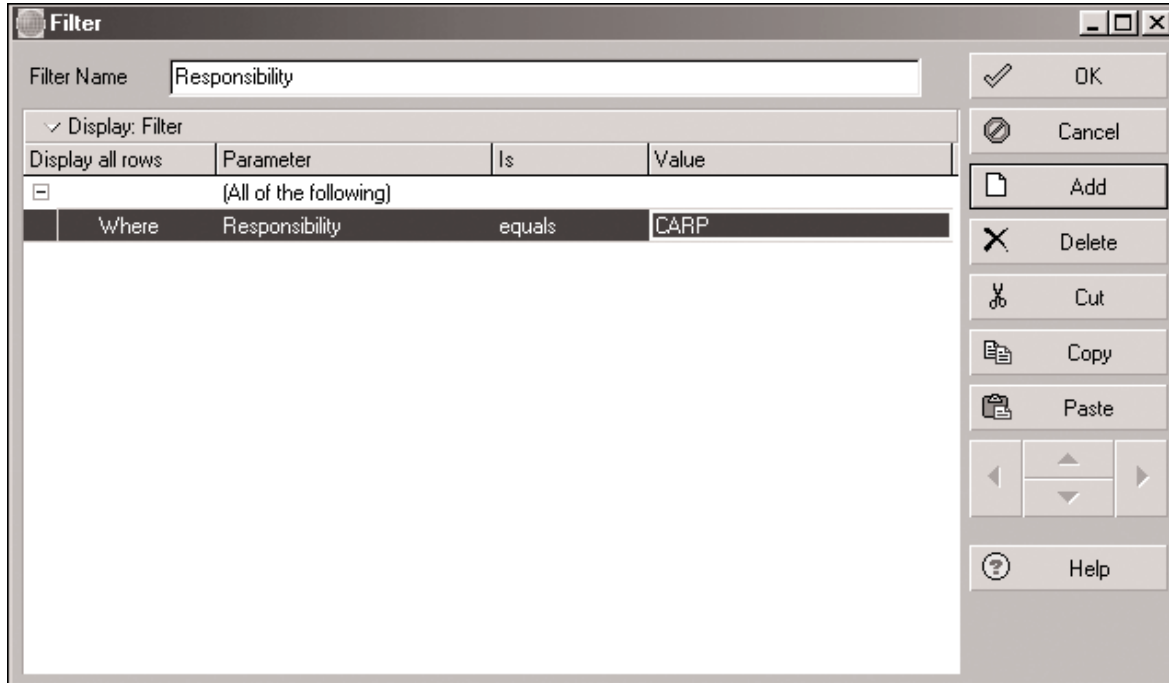


Figure 5–30 Filter Dialog Box—Filter Added

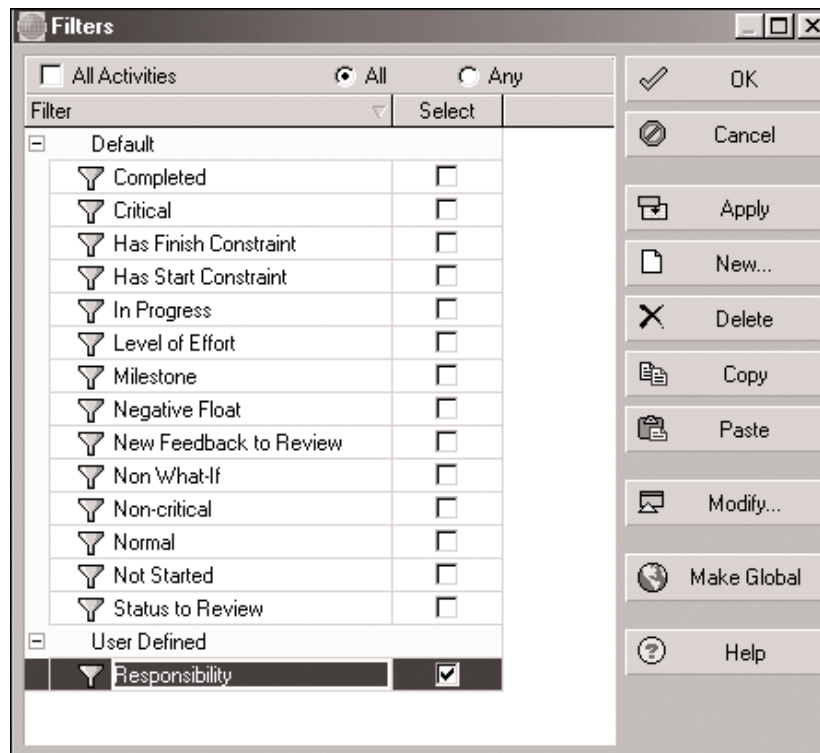


Figure 5–31 Filters Dialog Box

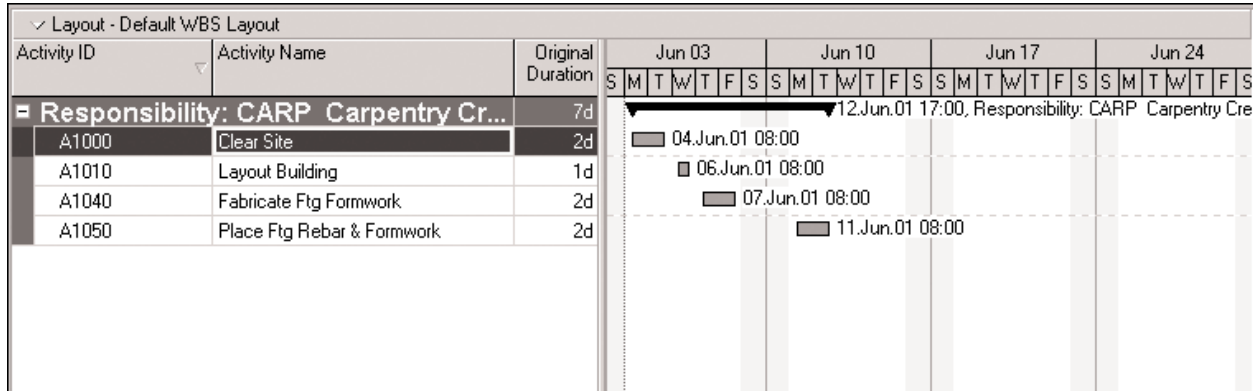


Figure 5–32 Sample Schedule—Filtered

## EXERCISES

1. Modify the Zoom feature of the on-screen *P3e* Gantt chart created in Exercise 1 of Chapter 4.
2. Modify the Columns feature of the on-screen *P3e* Gantt chart created in Exercise 2 of Chapter 4.
3. Modify the Bars feature of the on-screen *P3e* Gantt chart created in Exercise 3 of Chapter 4.
4. Modify the Sight Lines feature of the on-screen *P3e* Gantt chart created in Exercise 4 of Chapter 4.
5. Create an Activity Codes feature for the on-screen *P3e* Gantt chart created in Exercise 5 of Chapter 4.
6. Use the Organize feature for the on-screen *P3e* Gantt chart created in Exercise 6 of Chapter 4.
7. Use the Summarize feature for the on-screen *P3e* Gantt chart created in Exercise 7 of Chapter 4.
8. **Small Commercial Concrete Block Building—On-Screen Gantt Chart**

Using the on-screen Gantt chart for the small commercial concrete block building created in Exercise 9 of Chapter 4, use the following *P3e* features to modify its appearance:

- A. Zoom
- B. Columns
- C. Bars
- D. Sight lines
- E. Row height

**9. Large Commercial Building—On-Screen Gantt Chart**

Using the on-screen Gantt chart for the large commercial building created in Exercise 9 of Chapter 4, use the following *P3e* features to modify its appearance:

- A.** Screen colors
  - B.** Activity codes
  - C.** Organize
  - D.** Summarize
  - E.** Filter
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