



PC3107
PROJECT MANAGEMENT
USING MICROSOFT
PROJECT



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1 Getting Started with Microsoft Project 2013

1.1 Introduction

Microsoft Project is the tool used by project managers to manage project schedules—it is not the process of project management.

A **project schedule** is a model of a real project—what you want to happen or what you think will happen throughout the project.

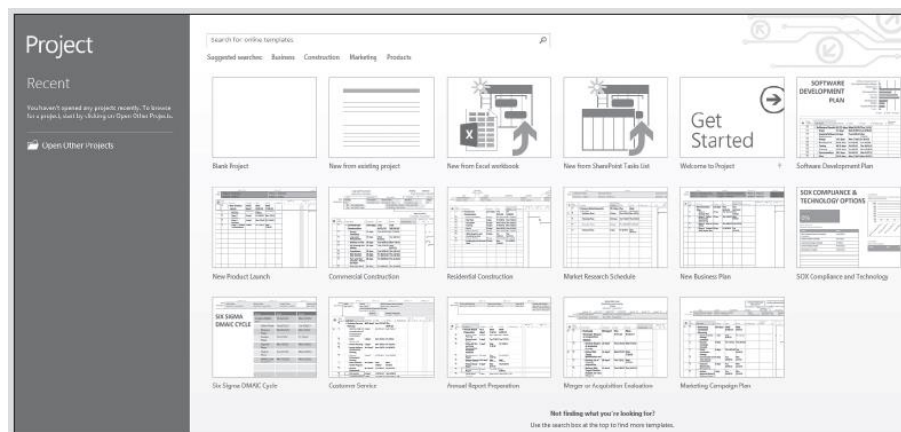
The schedule contains all of the tasks, resources, time frames, and costs that might be associated with such a project. You can modify this schedule (or any other project template) to fit your specific project needs. Later in this lesson you will learn how to create a project schedule from a blank template.

A **template** is a predefined file that can be blank with the default characteristics set, or it could already contain project task and resource information. Knowing how to navigate in Microsoft Project and how Microsoft Project handles data will increase your efficiency in locating needed information.

1.2 Start Microsoft Project

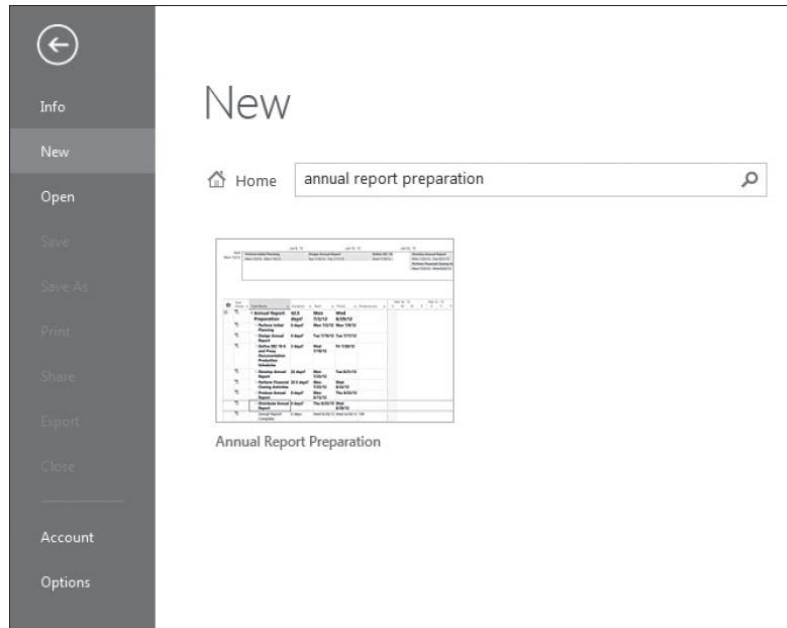
When you launch Project, the Start screen appears. In this exercise, you learn how to start Microsoft Project and open a template.

1. On the Windows taskbar, click the **Start** button. The Start screen appears.
2. On the Start menu, point to All Programs, point to **Microsoft Office 2013**, and then click **Microsoft Project 2013**. Microsoft Project opens.
3. Your screen should look similar to the following figure. This is the start screen. From this screen you can choose to open a blank project, import information from Microsoft Excel or a SharePoint task list, open an existing project file, or open a template.

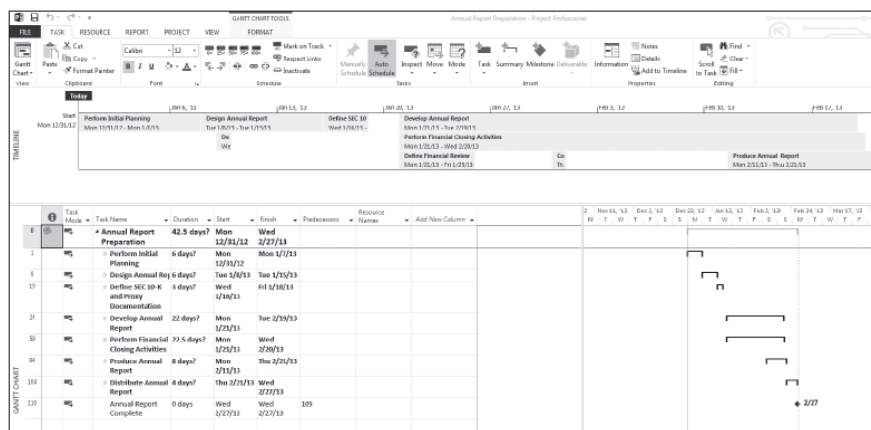


1.3 Open a Template

1. On the Start screen, click the Search for online templates box located at the top of the screen.
2. Type annual report preparation, then press Enter.
3. The template is displayed and a preview of it is on the left of the screen as in the following figure:



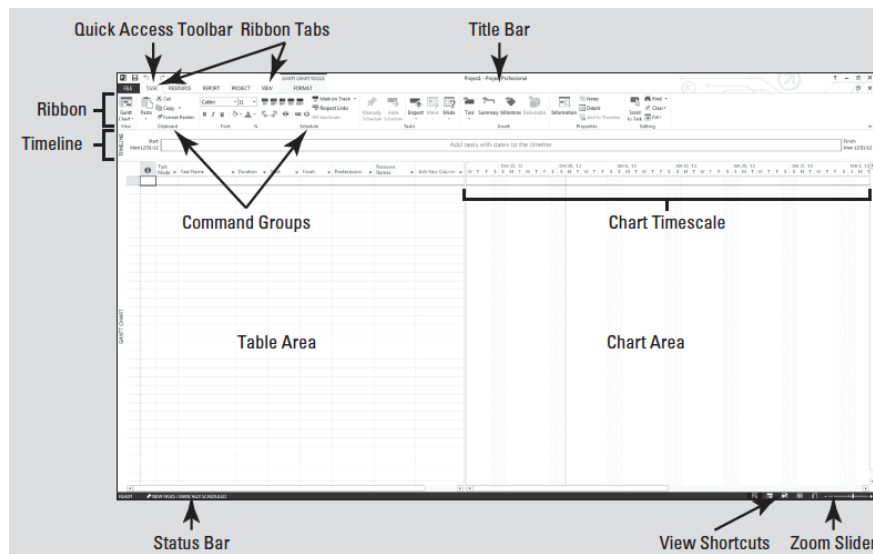
4. Double-click the **Annual Report Preparation template** graphic. The template is downloaded to your system, opens a new project based on the template in the Gantt Chart view, and closes the New Project screen. Your screen should look similar to the following figure.



1.4 Project 2013 Interface

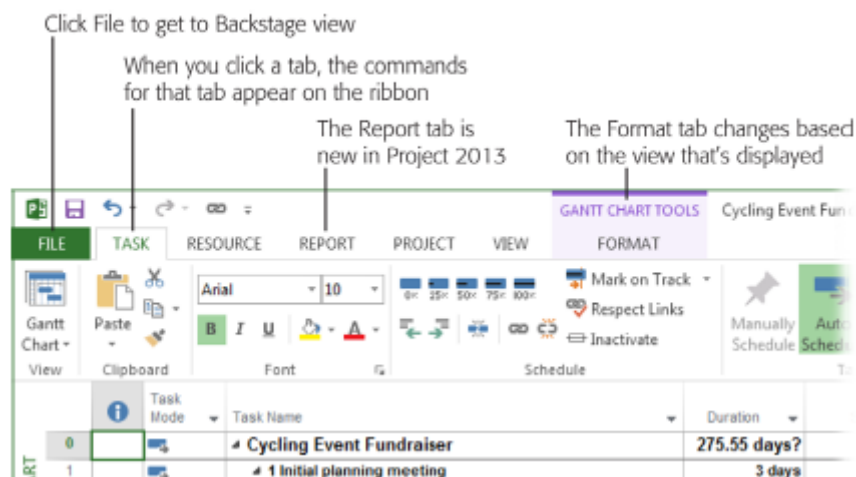
Before you begin using Microsoft Project 2013, you will need to become familiar with the user interface. The most widely used view is the Gantt Chart view as shown in the following

figure. This view displays various task data as well as a graphical display of how the project is currently scheduled.



1.5 The Ribbon

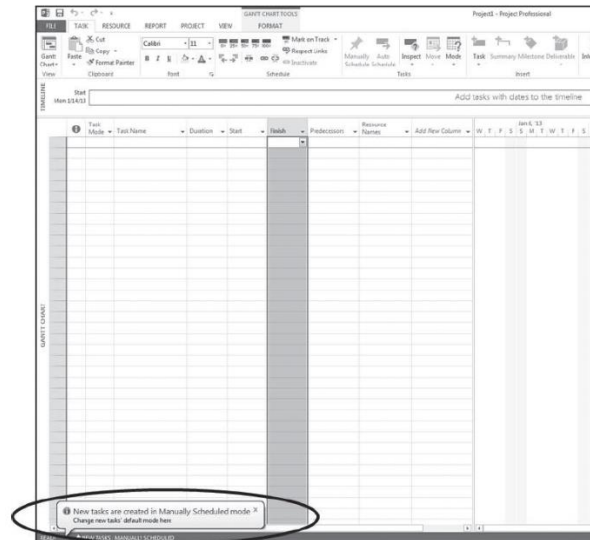
Project's ribbon herding related features onto tabs to make them easier to find. As you plan and manage a project, you shift your focus from tasks to the resources who work on them to the big picture of the entire project, so the Task tab, Resource tab, and Project tab make perfect sense. You'll also turn to a few other tabs as you work with your Project files and look at your projects in different ways. This section steps through the seven tabs that appear when you launch Project 2013 for the first time and explains how to use and customize the Quick Access toolbar.



2 Creating a New Project

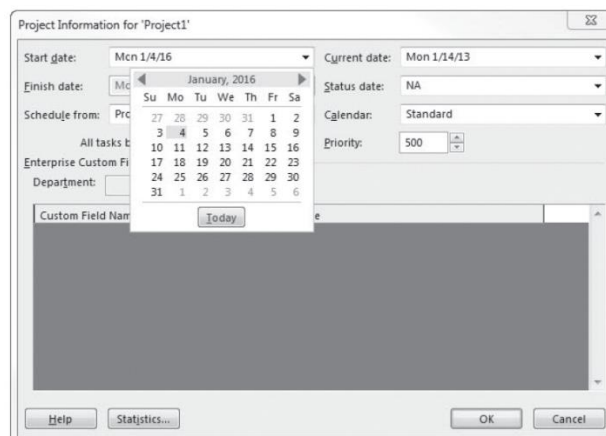
2.1 Open a New Blank Project

1. On the Start screen, click New.
2. On the screen, double-click the Blank Project option. A new blank project schedule appears and you are notified that new tasks will be created in the new Manually Scheduled Mode. Your screen will look like the following figure.



2.2 Specify a Start Date

1. Click the **Project** tab. In the Properties group click the **Project Information** button. The Project Information dialog box appears.
2. Single-click the **drop-down arrow** next to the Start Date text box once. For this exercise, you will change the project start date to January 4, 2016
3. Click the calendar's **Left** or **Right Arrow** key until January 2016 is displayed, as shown in the figure at right.
4. In the January calendar, click **January 4th**.

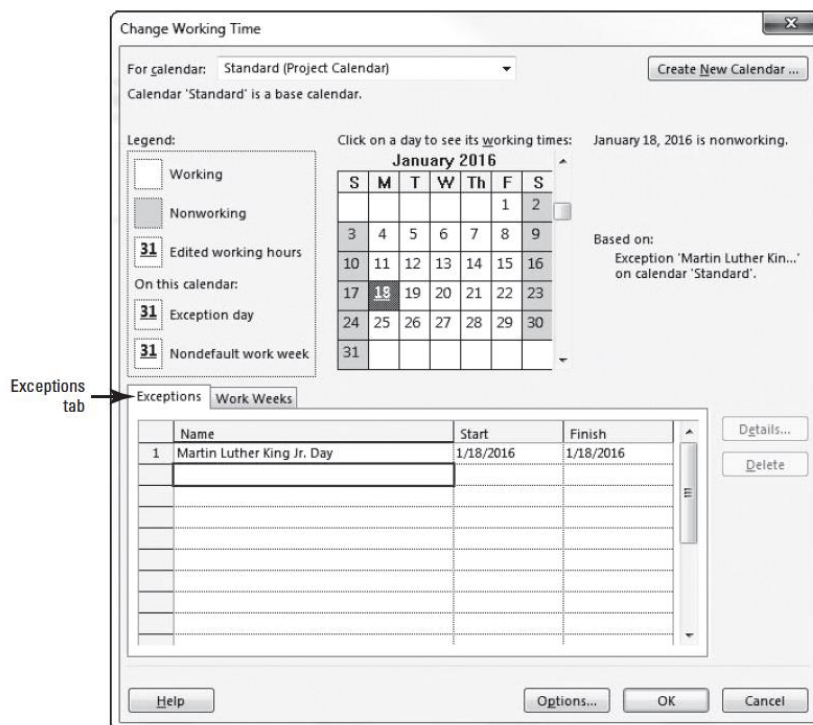


2.3 Save the Project Schedule

1. On the ribbon, click the **File** tab and then click the **Save** option. Because you have not previously saved the project schedule, the Save-As section is activated.
2. In the Save As section, click **Computer** then select **Browse**.
3. Locate and select the solutions folder for this lesson as directed by your instructor.
4. In the File Name box, type **Don Funk Music Video 1**.
5. Click **Save**. The Save As dialog box closes and the project schedule is saved as **Don Funk Music Video 1**.

2.4 Define the Project Calendar

1. On the ribbon, in the Properties command group, select the **Change Working Time** button. The Change Working Time dialog box is displayed.
2. Click the **For Calendar** drop-down arrow. In the dropdown menu, select **Standard**, if it is not already selected.
3. Using the scroll control at the right of the calendar, navigate until the calendar displays January, 2016. Click the date box for **January 18**.
4. In the Exceptions tab, click in the first **Name** field and type **Martin Luther King Jr. Day** and press **Enter**. Your screen should look similar to the following figure.

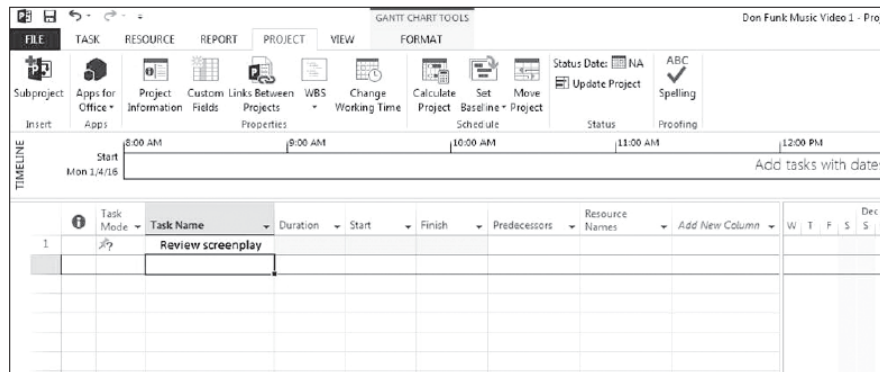


5. Single-click the name of the exception you just entered. Then click the **Details** button. The Details dialog box appears. Under Recurrence Pattern, click **Yearly**.
6. Click the **The:** button, and use the arrows next to each selection box to select **Third**, **Monday**, and **January**.

7. In the Range of Recurrence section, select the option for *End after*: then type **3**, then press **Enter**.
8. Note the new finish date of the exception is now 1/15/2018.
9. Scroll until calendar in the Change Working Time dialog box displays May, 2016. Click once on **May 30, 2016**.
10. In the next blank exception name cell, type **Memorial Day** and press **Enter**.
11. Single-click the name of the exception you just entered. Then click the **Details** button. The Details dialog box reappears. Under Recurrence Pattern, click **Yearly**.
12. Click the **The**: button, and use the arrows next to each selection box to select **Last**, **Monday**, and **May**.
13. In the Range of Recurrence section, select the option for *End after*: then type **3**.
14. Note the new finish date of the exception is now 5/28/2018.
15. Click **OK** to close the Details dialog box, and then click **OK** to close the Change Working Time dialog box.
16. **SAVE** the project schedule.

2.5 Enter Tasks

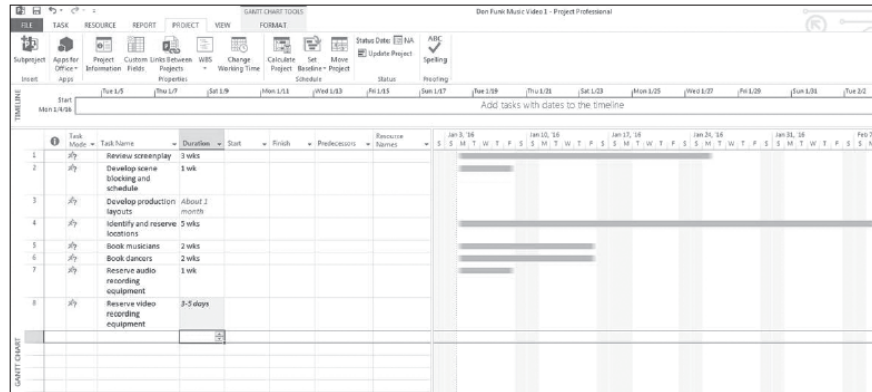
1. Click the **first blank cell** directly below the Task Name column heading.
2. Type **Review screenplay** and press **Enter**. Your screen should look similar to the following figure.



3. Enter the following task names below the Review screenplay task name. Press **Enter** after each task name.
 - Develop scene blocking and schedule
 - Develop production layouts
 - Identify and reserve locations
 - Book musicians
 - Book dancers
 - Reserve audio recording equipment
 - Reserve video recording equipment
4. As you enter new tasks, you will note that each cell automatically wraps the text.
5. **SAVE** the project schedule.

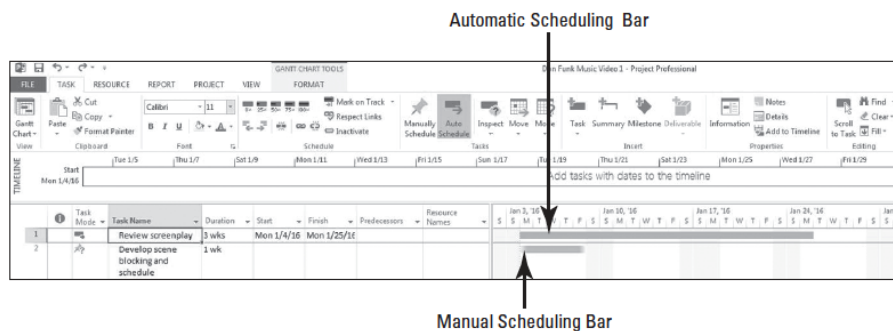
2.6 Enter Task Durations

1. Click the first **cell** in the Duration column next to the task 1, **Review screenplay**. The Duration field for task 1 is selected.
2. Type **3w** and then press **Enter**. The value 3 wks appears in the Duration field.
3. Enter the following durations for the remaining tasks.
4. **SAVE** the project schedule.

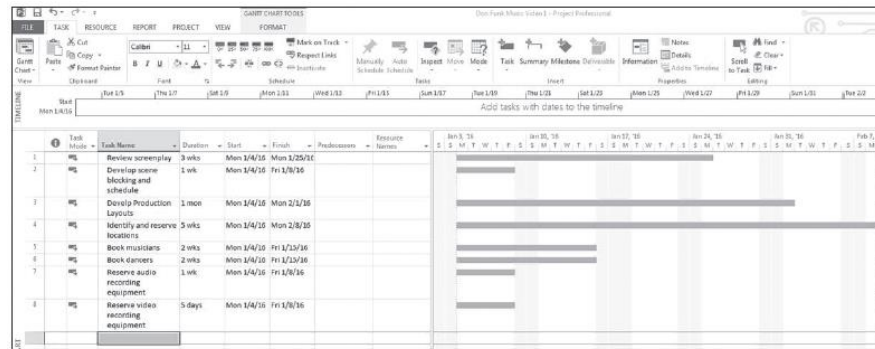


2.7 Switch from Manual to Automatic Scheduling

1. Select the **Task Name** for task 1, Review screenplay.
2. Click the **Task** tab. Then, in the Tasks command group, click the **Auto Schedule** button. Notice the change in the Gantt Chart bar for task 1. Your screen should look similar to the following figure.



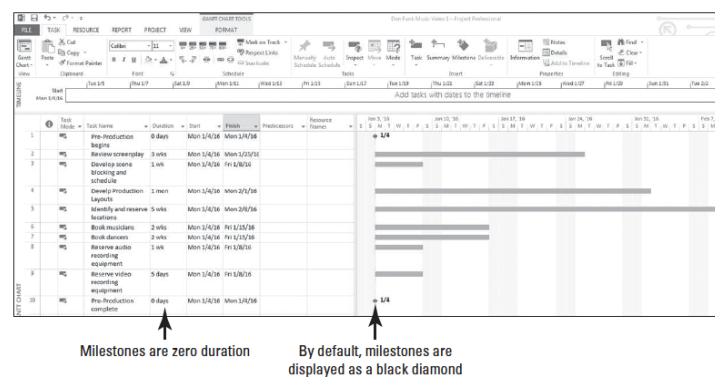
3. Select the **duration cell** of task 3, Develop production layouts. Type **1mo** and press **Enter**. This sets the duration for that task.
4. Note the duration of task 8 is currently "3-5 days". Single-click **task name column heading** to select all tasks. On the ribbon, select the **Auto Schedule** button. Note the duration of task 8 now displays 1 day with a question mark behind it.
5. Select the **duration cell** of task 8, Reserve audio recording equipment. Key **5d** and press **Enter**. Your screen should look similar to the following figure.
6. Click the **File** tab then select Options.



7. In the Project Options dialog box, in the navigation bar on the left side of the dialog box, click **Schedule**.
8. Look in the *Scheduling options for this project:* section. Change the first option, *New tasks created:* from Manually Scheduled to **Auto Scheduled**. Note that you have only changed the options for this file, not the behavior of the software.
9. Click **OK** to close the options dialog box. Notice that at the bottom of the screen, on the status bar, that all new tasks are auto scheduled.
10. **SAVE** the project schedule.

2.8 Create a Milestone

1. In the Task Name column, click the **empty cell** below the name of task 8, **Reserve Video Recording Equipment**.
2. On the Task ribbon, in the Insert command group, click the **Milestone** button. Notice that a duration of zero days has already been entered.
3. In the **Name** cell of the newly created milestone, type **Pre-Production complete** and press **Enter**.
4. In the Task Name column, click the name of task 1, **Review screenplay**.
5. On the Task ribbon, in the Insert command group, click the **Milestone** button. Microsoft Project inserts and numbers the new milestone as ID 1. Notice that the other tasks after this new task insertion point have been renumbered.
6. Type **Pre-Production begins** and press **Enter**. Your screen should look similar to the following figure.



7. **SAVE** the project schedule.

2.9 Create Summary Tasks

1. Select tasks 1 through 10.
2. On the **Task** ribbon, in the Insert command group, click the **Summary** button. A new summary task row is inserted above the selected tasks, all selected tasks are shifted down and renumbered, and they are all now part of this new summary task.
3. In the Task Name field for the new summary task, type **Pre-Production** and press **Enter**.
4. Type the following task names below task 11, Pre-Production complete. Press **Enter** after each task name.
 - Production
 - Post-Production
5. Note that each of these became part of the previous section. You want each of these to become a summary task.
6. Select tasks **12** and **13**. On the ribbon, in the Schedule command group, select the **Outdent** button.
7. Click the **name** of task 13, **Post-Production**, and press **Insert** twice. Two blank tasks are inserted above the Post-Production task.
8. Type the following task names and durations below task 12, Production.

Task Name	Duration
-----------	----------

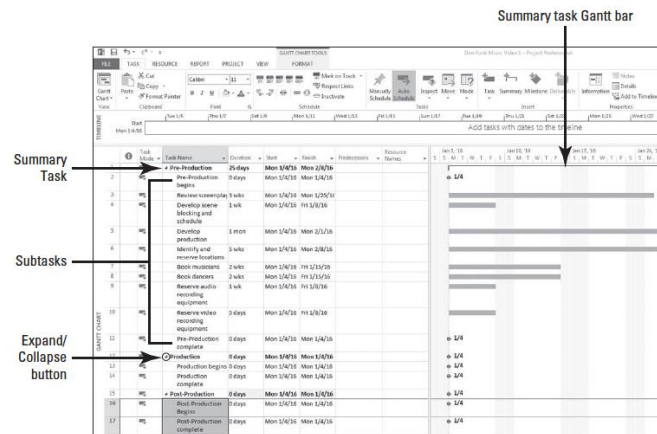
- Production begins 0d
- Production complete 0d

9. Type the following tasks names and durations below task 15, Post-Production.

Task Name	Duration
-----------	----------

- Post-Production begins 0d
- Post-Production complete 0d

10. Select tasks **13** and **14**. On the **Task** ribbon, in the Schedule group, click the **Indent** button. Tasks 13 and 14 are indented and task 12 becomes a summary task.
11. Select tasks **16** and **17**. Hold down **Alt+Shift+Right Arrow**. Tasks 16 and 17 are indented and task 15 becomes a summary task. Your screen should look similar to the following figure.



12. **SAVE** the project schedule.

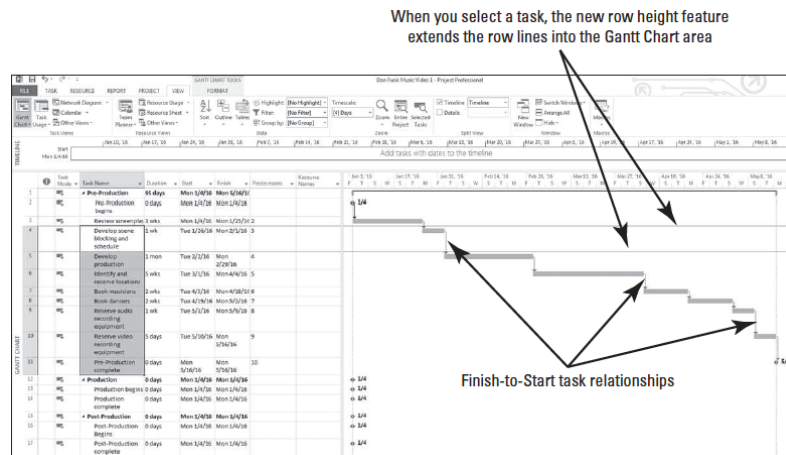
2.10 Link Two Tasks

1. Select tasks **2 and 3**.
2. On the Task ribbon, under the Schedule group, click the **Link the Selected Tasks** button.
3. Tasks 2 and 3 are now linked with a finish-to-start relationship.
4. Select the **name cells** of tasks 3 and 4.
5. Press **Ctrl+F2**. Microsoft Project changed the start date of task 4 to the next working day following the completion of task 3. Note that because January 18 was a nonworking day (the Martin Luther King holiday you set up), task 3 does not finish until January 25 and task 4 does not start until January 26. If necessary, scroll the Gantt Chart to January 24 so that the link you just created is visible.
6. **SAVE** the project schedule.

THIS TASK RELATIONSHIP	MEANS	LOOKS LIKE THIS IN THE GANTT CHART	EXAMPLE
Finish-to-start (FS)	The finish date of the predecessor task determines the start date of the successor task.		A music track must be recorded before it can be edited.
Start-to-start (SS)	The start date of the predecessor task determines the start date of the successor task.		Booking musicians and Booking dancers are related tasks and can occur simultaneously.
Finish-to-finish (FF)	The finish date of the predecessor task determines the finish date of the successor task.		Tasks that require the use of specific equipment must end when the equipment rental ends.
Start-to-finish (SF) (This relationship type is rarely used.)	The start date of the predecessor task determines the finish date of the successor task.		The time when the production sound studio becomes available determines when rehearsals must end.

2.11 Link Several Tasks at Once

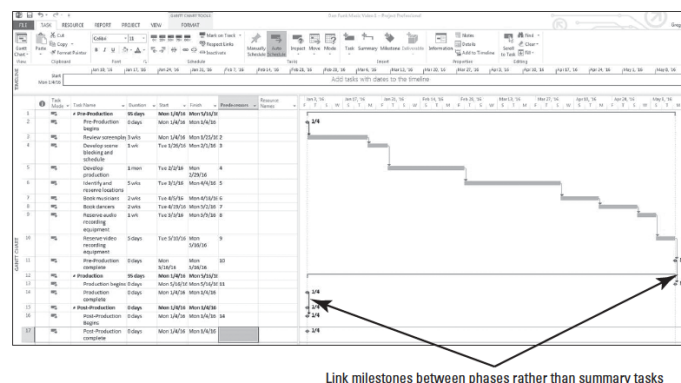
1. Select the **names** of tasks 4 through 11. Note the new feature in Project 2013 where the row height indicators extend out into the Gantt Chart area. This makes locating the task's Gantt bar much easier.
2. On the Task ribbon, under the Schedule group, click the **Link the Selected Tasks** button. Tasks 4 through 11 are now linked with a finish-to-start relationship.
3. Select the **View** tab. In the Zoom group, click the **Entire Project** button. Your screen should look similar to the following figure.



4. **SAVE** the project schedule.

2.12 Link the Milestone Tasks

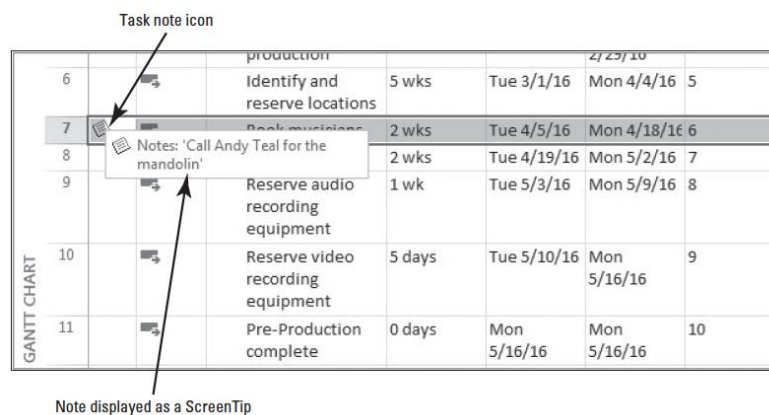
1. Select the name of task 11, **Pre-Production complete**, and, while holding down the **Ctrl** key, select the name of task 13, **Production begins**. This is how you select nonadjacent tasks in a table in Microsoft Project.
2. Click the **Task** tab. In the Schedule group click the **Link the Selected Tasks** button. Tasks 11 and 13 are linked with a finish-to-start relationship.
3. Select the **predecessor cell** of task 16, Production complete. Type **14** and press **Enter**. Tasks 14 and 16 are linked with a finish-to-start relationship. Your screen should look similar to the following figure.



6. **SAVE** the project schedule.

2.13 Enter a Task Note

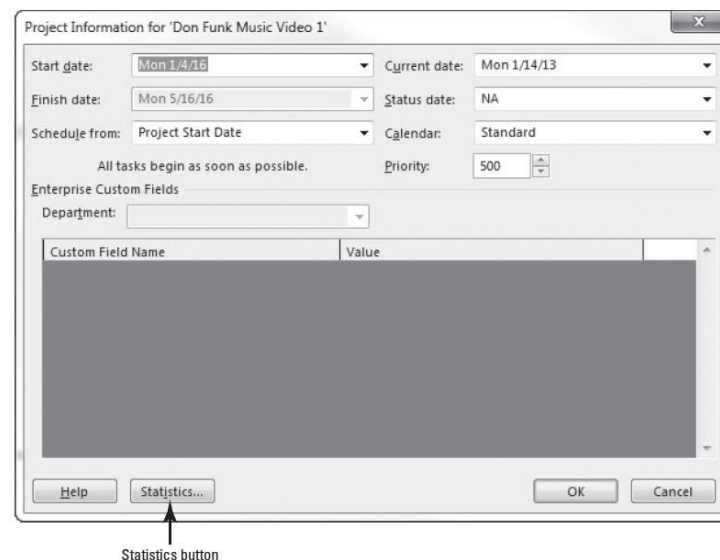
1. Select task 7, **Book musicians**, by clicking on the task number (7).
2. On the **Task** ribbon, in the Properties group, click the **Task Notes** icon. The Task Information dialog box appears with the **Notes** tab displayed.
3. In the Notes box, type **Call Andy Teal for the mandolin** and click **OK**. A note icon appears in the Indicators column for task 7. The Indicators column is the first column to the right of the task ID column.
4. Point to the note icon. The note appears in a ScreenTip. For longer notes, or to see other task information, you can double-click the **note** icon and the Task Information box will display the full text of the note. The note icon and ScreenTip shown in the following figure.



5. **SAVE** the project schedule.

2.14 Check the Project's Duration

1. Click the **Project** tab, and then click **Project Information** in the Properties group. The Project Information dialog box appears, as shown in the following figure.



2. Click the **Statistics** button. The Project Statistics dialog box appears and displays information such as the project start and finish dates and duration. The statistics dialog box is shown in the following figure.

Project Statistics for 'Don Funk Music Video 1'

	Start	Finish
Current	Mon 1/4/16	Mon 5/16/16
Baseline	NA	NA
Actual	NA	NA
Variance	0d	0d

	Duration	Work	Cost
Current	95d	0h	\$0.00
Baseline	0d	0h	\$0.00
Actual	0d	0h	\$0.00
Remaining	95d	0h	\$0.00

Percent complete:

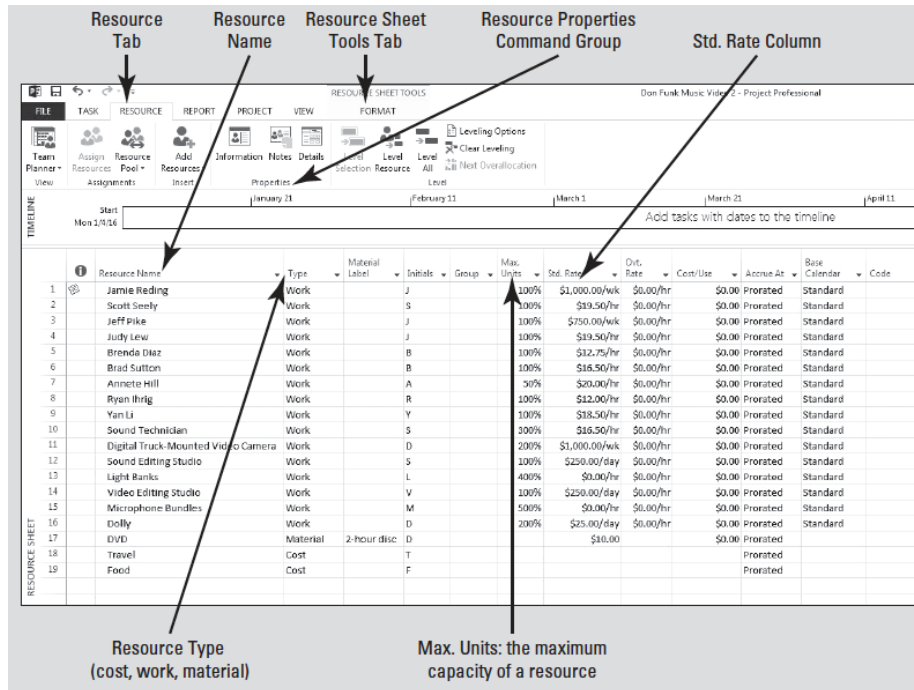
Duration: 0% Work: 0%

Close

3. Note that, as on the current information entered, this project is slated for 95 days of duration, starting on January 4 and ending on May 16, 2016. Click the **Close** button to close the Project Statistics dialog box.
4. **SAVE** and **CLOSE** the *Don Funk Music Video 1 file*.

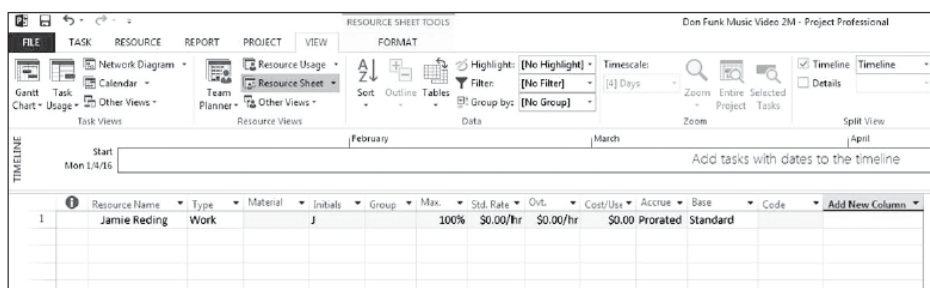
3 Establishing Resources

You have several views available when working in Microsoft Project. One view you will use in this lesson is the Resource Sheet view, as shown below.



3.1 Establish Individual People Resources

1. Open **Don Funk Music Video 2M**.
2. Click the **View** tab, then in the Resource Views group, select **Resource Sheet** to open the Resource Sheet view.
3. In the Resource Sheet view, click the **empty cell** directly below the Resource Name column heading.
4. Type **Jamie Reding** and press **Enter**. Project adds Jamie Reding as a work resource and automatically enters additional, default information. Your screen should look similar to the following figure.



5. Enter the remaining resource names into the Simple Resource Sheet. Enter the first column of names (Scott Seely, Jeff Pike, etc.), then the second column.
 - Scott Seely Brad Sutton

- Jeff Pike Annette Hill
- Judy Lew Ryan Ihrig
- Brenda Diaz Yan Li

Resource Name	Type	Material	Initials	Group	Max.	Std. Rate	Ovt. Rate	Cost/Use	Accrue	Base	Code	Add New Columns
1	Jamie Reding	Work	J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
2	Scott Seely	Work	S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
3	Jeff Pike	Work	J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
4	Judy Lew	Work	J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
5	Brenda Diaz	Work	B		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
6	Brad Sutton	Work	B		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
7	Annette Hill	Work	A		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
8	Ryan Ihrig	Work	R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
9	Yan Li	Work	Y		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		

6. **SAVE** the file as **Don Funk Music Video 2**.

3.2 Establish a Resource That Represents Multiple People

1. Click the blank **Resource Name** field below the last resource, type **Sound Technician** and then press **Tab**.
2. In the **Type** field, make sure that **Work** is selected. Press **Tab** four times to move to the **Max. Units** field.
3. In the **Max. Units** field for the sound technician, type or select **300%**, to indicate that you will have three sound technicians devoting 100% of their working time to this project, and then press **Enter**.
4. Click the **Max. Units** field for Annette Hill, type or select **50%** and then press **Enter**. This represents that she is only available part time on this project. Your screen should look similar to the following figure.

Resource Name	Type	Material	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accrue At	Base Calendar	Code	Add New Columns
1	Jamie Reding	Work	J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
2	Scott Seely	Work	S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
3	Jeff Pike	Work	J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
4	Judy Lew	Work	J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
5	Brenda Diaz	Work	B		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
6	Brad Sutton	Work	B		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
7	Annette Hill	Work	A		50%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
8	Ryan Ihrig	Work	R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
9	Yan Li	Work	Y		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		
10	Sound Technician	Work	S		300%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard		

Annette Hill Max. Units set to 50%

Group Resource set to 300%

5. **SAVE** the project schedule.

3.3 Establish Equipment Resources

1. In the Resource Sheet, click the next **empty cell** in the Resource Name column.
2. Click the **Resource** tab and then click the **Information** button in the Properties group; the Resource Information dialog box appears.
3. If it is not already displayed, click the **General** tab in the Resource Information dialog box.

4. In the Resource Name field, type **Digital Truck-Mounted Video Camera**.
5. In the Type field, select **Work** from the drop-down menu. Your screen should look similar to the figure at right. Notice that the Resource Information dialog box contains many of the same fields as the Resource Sheet.

The screenshot shows the 'Resource Information' dialog box with the following fields and values:

- Resource name:** Digital Truck-Mounted Video Camera
- Initials:** (empty)
- Group:** (empty)
- Code:** (empty)
- Booking type:** (empty)
- Type:** Work
- Material label:** (empty)
- Generic:** ☐ **Budget:** ☐ **Inactive:** ☐
- Change Working Time ...** (button)
- Resource Availability** table:

Available From	Available To	Units

6. Click **OK**. The Resource Information dialog box closes and the resource has been added. Notice that Microsoft Project has automatically wrapped the text in the Resource Name field. Note that the Max. Units field is set to the default of 100%.
7. In the Max. Units field for the Digital Truck-Mounted Video Camera, type **200** or press the arrows until the value shown is 200%, and then press **Enter**. This indicates that you will have two truck cameras available every workday.
8. Add the following additional equipment resources to the project schedule. You can use the Resource Information dialog box to enter your information, but entering it directly in Resource Sheet view is faster. Make sure that **Work** is selected in the Type field for each resource.

Resource Name	Max. Units
• Sound Editing Studio	100%
• Light Banks	400%
• Video Editing Studio	100%
• Microphone Bundles	500%
• Dolly	200%

Resource Name	Type	Max. Units	Cost	Rate	Work	Cost	Rate	Work	Cost	Rate	Work
Dolly	Work	200%									
Microphone Bundles	Work	500%									
Video Editing Studio	Work	100%									
Light Banks	Work	400%									
Sound Editing Studio	Work	100%									

9. **SAVE** the project schedule.

3.4 Establish Material Resources

1. In the Resource Sheet, click the next **empty cell** in the Resource Name column.
2. Type **DVD** and press **Tab**.
3. In the Type field, click the **arrow** and select **Material**, then press **Tab**. Notice that some of the fields (columns), such as Max. Units, Ovt. Rate and Calendar, are not available when you change to a material type resource.
4. In the Material Label field, type **2-hour disc** and press **Enter**. This means you will use 2-hour discs as the unit of measure to track consumption during the project. Your screen should look similar to the following figure.

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate
1	Jamie Reding	Work		J		100%	\$0.00/hr	\$0.00/hr
2	Scott Seely	Work		S		100%	\$0.00/hr	\$0.00/hr
3	Jeff Pike	Work		J		100%	\$0.00/hr	\$0.00/hr
4	Judy Lew	Work		J		100%	\$0.00/hr	\$0.00/hr
5	Brenda Diaz	Work		B		100%	\$0.00/hr	\$0.00/hr
6	Brad Sutton	Work		B		100%	\$0.00/hr	\$0.00/hr
7	Annete Hill	Work		A		50%	\$0.00/hr	\$0.00/hr
8	Ryan Ihrig	Work		R		100%	\$0.00/hr	\$0.00/hr
9	Yan Li	Work		Y		100%	\$0.00/hr	\$0.00/hr
10	Sound Technician	Work		S		300%	\$0.00/hr	\$0.00/hr
11	Digital Truck-Mounted Video Camera	Work		D		200%	\$0.00/hr	\$0.00/hr
12	Sound Editing Studio	Work		S		100%	\$0.00/hr	\$0.00/hr
13	Light Banks	Work		L		400%	\$0.00/hr	\$0.00/hr
14	Video Editing Studio	Work		V		100%	\$0.00/hr	\$0.00/hr
15	Microphone Bundles	Work		M		500%	\$0.00/hr	\$0.00/hr
16	Dolly	Work		D		200%	\$0.00/hr	\$0.00/hr
17	DVD	Material	2-hour disc	D			\$0.00	

5. **SAVE** the project schedule.

3.5 Establish Cost Resources

1. In the Resource Sheet, click the next **empty cell** in the Resource Name column.
2. Type **Travel** and then press **Tab**.
3. In the Type field, click the **arrow** and select **Cost**. The travel resource has now been established as a cost resource. Just as with a material resource, some fields are not available with a cost resource.
4. In the blank Resource Name field below Travel, type **Food** and press **Tab**.
5. In the Type field, select **Cost** and press **Enter**. Your screen should look like the following figure.

Cost Resources added to Resource Sheet

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use	Accru At	Base Calendar
1	Jamie Reding	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
2	Scott Seely	Work		S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
3	Jeff Pike	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
4	Judy Lew	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
5	Brenda Diaz	Work		B		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
6	Brad Sutton	Work		B		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
7	Annette Hill	Work		A		50%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
8	Ryan thrig	Work		R		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
9	Yan Li	Work		Y		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
10	Sound Technician	Work		S		300%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
11	Digital Truck-Mounted Video Camera	Work		D		200%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
12	Sound Editing Studio	Work		S		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
13	Light Banks	Work		L		400%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
14	Video Editing Studio	Work		V		100%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
15	Microphone Bundles	Work		M		500%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
16	Dolly	Work		D		200%	\$0.00/hr	\$0.00/hr	\$0.00	Prorated	Standard
17	DVD	Material	2-hour disc	D			\$0.00		\$0.00	Prorated	Standard
18	Travel	Cost		T						Prorated	
19	Food	Cost		F						Prorated	

6. **SAVE** the project schedule.

3.6 Enter Resource Cost Information

1. In the Resource Sheet, click the **Std. (Standard) Rate** field for resource 1, Jamie Reding.
2. Type **1000/w** and press **Enter**. Jamie's standard weekly rate of \$1,000 per week appears in the Std. rate column.
3. In the Std. Rate column for resource 2, Scott Seely, type **19.50/h** and press **Enter**. Scott's standard hourly rate of \$19.50 appears in the Std. Rate column.
4. Widen the **Std. Rate** column by moving the mouse pointer to the vertical divider line between the Std. Rate column and Ovt. Rate column. Double-click the **divider line**. This is called "auto-fitting." Your screen should look similar to the following figure.

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost/Use
1	Jamie Reding	Work		J		100%	\$1,000.00/wk	\$0.00/hr	\$0.00
2	Scott Seely	Work		S		100%	\$19.50/hr	\$0.00/hr	\$0.00
3	Jeff Pike	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00
4	Judy Lew	Work		J		100%	\$0.00/hr	\$0.00/hr	\$0.00
5	Brenda Diaz	Work		B		100%	\$0.00/hr	\$0.00/hr	\$0.00

5. Enter the following standard pay rates for the remaining resources:

Resource Name	Standard Rate
• Jeff Pike	750/w
• Judy Lew	19.50/h

- Brenda Diaz 12.75/h
- Brad Sutton 16.50/h
- Annette Hill 20.00/h
- Ryan Ihrig 12.00/h
- Yan Li 18.50/h
- Sound Technician 16.50/h
- Digital Truck-Mounted VidCam 1000/w
- Sound Editing Studio 250/d
- Light Banks 0/h
- Video Editing Studio 250/d
- Microphone Bundles 0/h
- Dolly 25/d
- DVD 10

6. Your screen should look similar to following figure.

	Resource Name	Type	Material Label	Initials	Group	Max. Units	Std. Rate	Ovt. Rate	Cost
1	Jamie Reding	Work		J		100%	\$1,000.00/wk	\$0.00/hr	
2	Scott Seely	Work		S		100%	\$19.50/hr	\$0.00/hr	
3	Jeff Pike	Work		J		100%	\$750.00/wk	\$0.00/hr	
4	Judy Lew	Work		J		100%	\$19.50/hr	\$0.00/hr	
5	Brenda Diaz	Work		B		100%	\$12.75/hr	\$0.00/hr	
6	Brad Sutton	Work		B		100%	\$16.50/hr	\$0.00/hr	
7	Annette Hill	Work		A		50%	\$20.00/hr	\$0.00/hr	
8	Ryan Ihrig	Work		R		100%	\$12.00/hr	\$0.00/hr	
9	Yan Li	Work		Y		100%	\$18.50/hr	\$0.00/hr	
10	Sound Technician	Work		S		300%	\$16.50/hr	\$0.00/hr	
11	Digital Truck-Mounted Video Camera	Work		D		200%	\$1,000.00/wk	\$0.00/hr	
12	Sound Editing Studio	Work		S		100%	\$250.00/day	\$0.00/hr	
13	Light Banks	Work		L		400%	\$0.00/hr	\$0.00/hr	
14	Video Editing Studio	Work		V		100%	\$250.00/day	\$0.00/hr	
15	Microphone Bundles	Work		M		500%	\$0.00/hr	\$0.00/hr	
16	Dolly	Work		D		200%	\$25.00/day	\$0.00/hr	
17	DVD	Material	2-hour disc	D			\$10.00		
18	Travel	Cost							
19	Food	Cost		F					

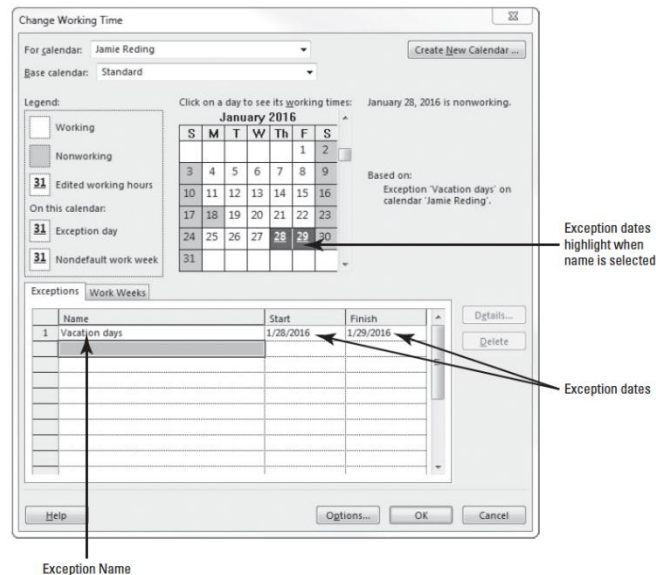
Material resource cost will be the per unit cost listed in the material label field

7. **SAVE** the project schedule.

3.7 Establish Nonworking Times for an Individual Work Resource

1. Click the **Project** tab, then click **Change Working Time**. The Change Working Time dialog box appears.
2. In the For Calendar box, select **Jamie Reding**. Jamie Reding's resource calendar appears in the Change Working Time dialog box.
3. Slide the button next to the calendar until the calendar is on January, 2016.

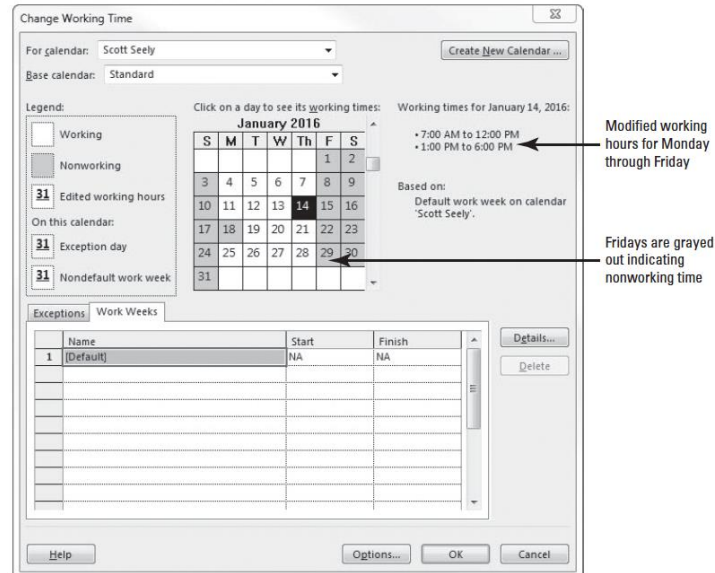
4. Select the dates January **28** and **29**.
5. In the first Name field under the Exceptions tab, type **Vacation Days**.
6. Press **Enter**. The Start field displays 1/28/2016 and the Finish field displays 1/29/2016. Microsoft Project will not schedule Jamie Reding to work on these two days. Your screen should look similar to the following figure.
7. Click **OK** to close the Change Working Time dialog box.
8. **SAVE** the project schedule.



3.8 Establish a Specific Work Schedule for a Resource

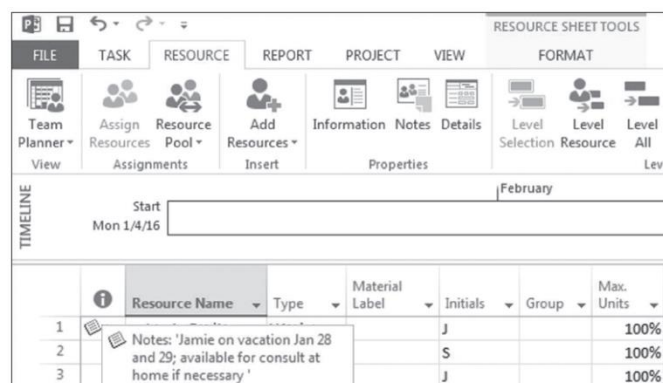
1. Click the **Project** ribbon and then click **Change Working Time** to open the Change Working Time dialog box.
2. In the For Calendar box, select **Scott Seely**. Scott works a scheduled commonly called 4-10's, which means he works 4 days a week, 10 hours per day.
3. Click the **Work Weeks** tab, and then click the **Details** button. The Details dialog box appears.
4. In the Select day(s) box, click and drag to select **Monday** through **Thursday**.
5. Select the **radio button** next to Set day(s) to these specific working times.
6. On line 1 of the Working Times box, click the **8:00 AM** box and type **7:00 AM**.
7. On line 2 of the Working Times box, click the **5:00 PM** box and type **6:00 PM**.
8. Press **Enter** to set your changes. Your screen should look similar to the figure at right.
9. In the Select day(s) box, click **Friday**.
10. Select the **radio button** next to *Select Set days to nonworking time*.
11. Click **OK** to close the Details dialog box. Microsoft Project can now schedule Scott Seely to work as early as 7:00 AM and as late as 6:00 PM on Monday through Thursday, but it will not schedule him to work on Friday.
12. Click any **Friday** in the Change Working Time dialog box. Note that these days are set to nonworking time.

13. Click any one **day of the week**, Monday–Thursday. Note the working times for these days. Your screen should look similar to the following figure.
14. Click **OK** to close the Change Working Time dialog box.
15. **SAVE** the project schedule.



3.9 Attach a Note To a Resource

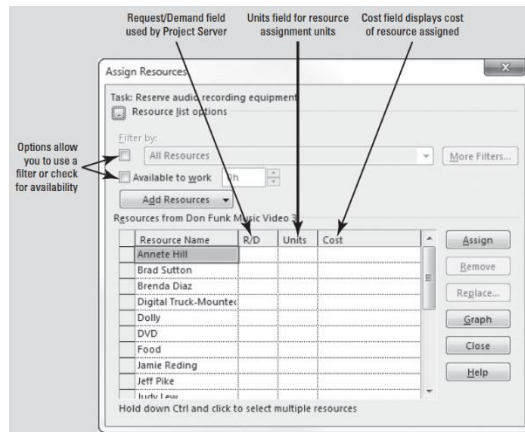
1. In the Resource Name column, select the name of the resource 1, **Jamie Reding**.
2. On the ribbon, click the **Resource** tab, then click the **Resource Notes** button in the Properties command group on the ribbon. The Resource Information dialog box is displayed with the Notes tab visible.
3. In the Notes box, type **Jamie on vacation Jan 28 and 29; available for consult at home if necessary** and click **OK**. A note icon appears in the indicator column.
4. Point to the note icon in the Resource sheet. The note appears in a ScreenTip (double-click the icon to display the full text of longer notes). Your screen should look similar to the following figure.



5. **SAVE** the project schedule.
6. **CLOSE** the Don Funk Music Video 2 file

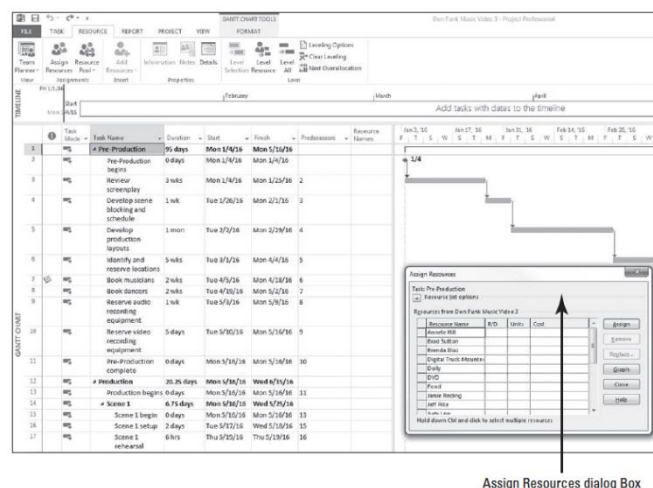
4 Resource and Task Assignments

In Microsoft Project, when you assign resources to a task, you can use the Assign Resources dialog box. You activate the Assign Resources dialog box via the Assign Resources button located in the Assignments group on the Resource ribbon. Your Assign Resources dialog box should look similar to the figures below, depending upon whether the Resource List options are collapsed or expanded.



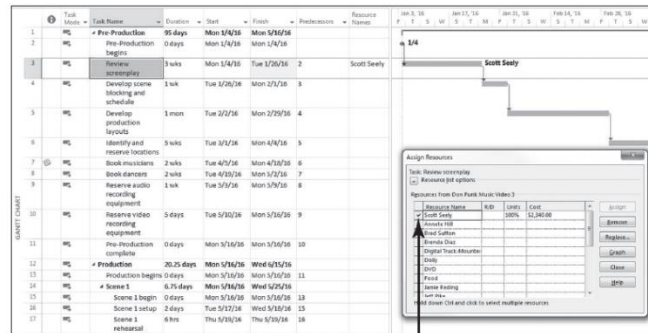
4.1 Make Individual Resource Assignments

1. Click the **Resource** tab and then click the **Assign Resources** button in the Assignments group. The Assign Resources dialog box appears.
2. If the Assign Resources dialog box is covering the task name column, drag the dialog box into the middle of the screen. Your screen should look similar to the following figure.



3. In the Task Name column of the Gantt Chart view, click the name of task 3, **Review screenplay**.
4. In the Resource Name column of the Assign Resources dialog box, scroll down and click **Scott Seely** and then click the **Assign** button. In the Assign Resource dialog box, a check

appears next to Scott Seely's name, indicating that you have assigned him to the task of reviewing the screenplay. Your screen should look similar to the following figure.

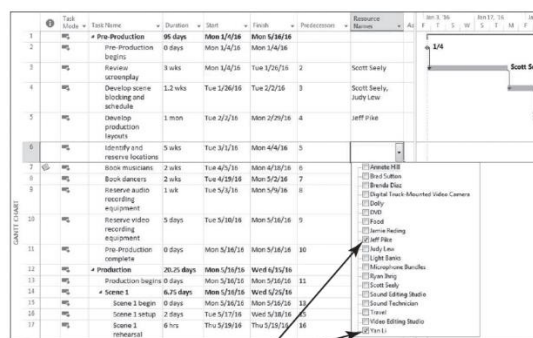


Checkmark indicates resources assigned to this task

5. In the Task Name column, click the name of task 5, **Develop production layouts**.
6. In the Assign Resources dialog box, click **Jeff Pike** and then click the **Assign** button. A check appears next to Jeff's name to show that you have assigned him to task 5.
7. **SAVE** the project schedule.

4.2 Assign Multiple Resources Simultaneously

1. In the Task Name column, click the name of task 4, **Develop scene blocking and schedule**.
2. In the Assign Resources dialog box, scroll down and click the name cell for **Scott Seely**. Scroll up or down in the list until the name Judy Lew is visible. Hold down **Ctrl**, then click the name cell for **Judy Lew**.
3. Release the **Ctrl** key and then click the **Assign** button. Check marks appear next to the names of Scott Seely and Judy Lew, indicating you have assigned them both to task 4.
4. **Close** the **Assign Resources** dialog box.
5. Move the center divider to the right to allow the Resource Names column to be visible.
6. Click once on the **Resource Name** cell for task 6, Identify and reserve locations. Then click the **sub-menu arrow** at the right of the cell.
7. In the drop-down list, select the checkboxes for **Jeff Pike** and **Yan Li**. Your screen should look similar to the following figure.

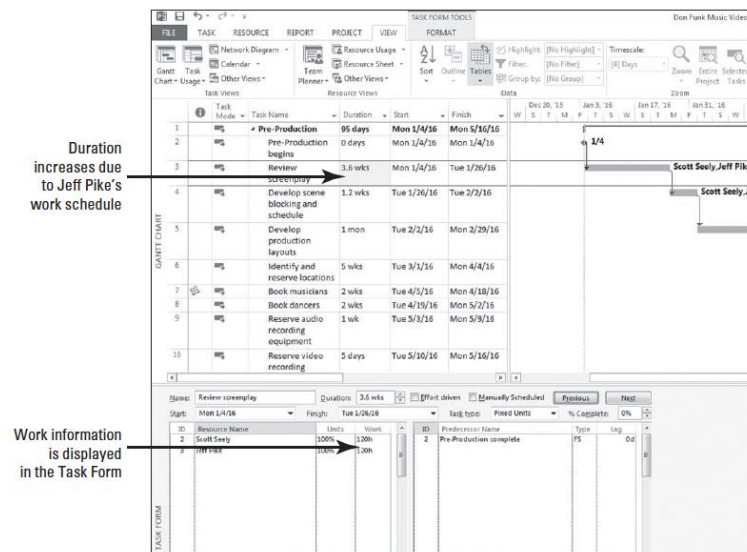


Checkmarks indicate the resources assigned to this task

8. Press **Enter**.
9. **SAVE** the project schedule.

4.3 Add Work Resources to a Task

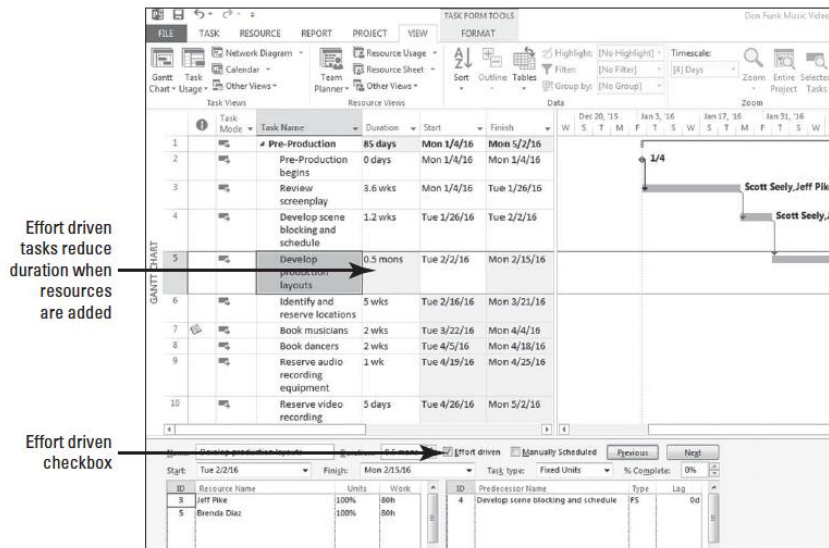
1. Click the **View** tab. In the Split View group on the ribbon, select the **Details** checkbox. The Task Form view appears in the bottom part of your screen.
2. Click the name of task 3, **Review screenplay**. In the Task Form pane at the bottom of your screen, note the Work value of this task—120 hours.
3. In the Task Form view single-click the **first cell** below Scott Seely's name. Click the sub-menu arrow at the right of this cell, then select **Jeff Pike**.
4. At the top of the Task Form portion of the screen, click the **OK** button. Microsoft Project assigns Jeff Pike to task 3. Your screen should look similar to the following figure.



5. **SAVE** the project schedule.

4.4 Add Work Resources to an Effort-Driven Task

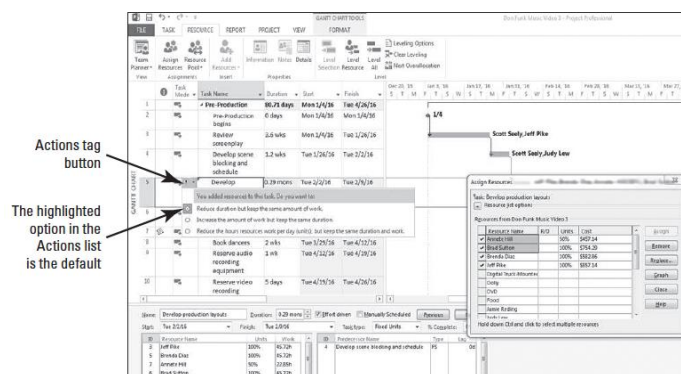
1. Click the name of task 5, **Develop production layouts**. Jeff Pike is the only resource currently assigned to this task, work is calculated at 160 hours and the duration is 1 month. You'd like to assign an additional resource and reduce the task's duration.
2. In the Task Form screen click the check box for **Effort driven**.
3. Click once in the **blank cell** below Jeff Pike. From the drop-down menu, select **Brenda Diaz**. Then click the **OK** button at the upper portion of the Task Form screen. Your screen should look similar to the following figure.



- Notice that the duration has been changed to .5 months and the total work (160 hours) has now been evenly distributed between Jeff Pike and Brenda Diaz. In this instance you applied effort-driven scheduling, which tells Microsoft Project to hold the work value constant and change the duration when resources are added or removed.
- SAVE** the project schedule.

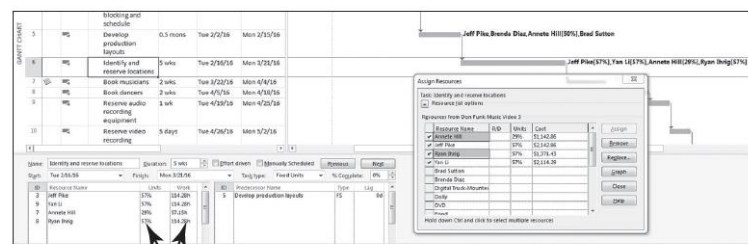
4.5 Use the Actions Tag to Change Project's Scheduling Behavior

- In the Gantt Chart portion of the view, click on the name of task 5, **Develop production layouts**. You'd like to assign an additional resource and reduce the task's duration.
- Click the **Resource** tab and then click the **Assign Resources** button in the Assignments group. The Assign Resources dialog box appears.
- In the Resource Name column of the Assign Resources dialog box, locate and click **Annete Hill**. Hold down **Ctrl** then locate and click **Brad Sutton**. Release the **Ctrl** key.
- Click the **Assign** button. These two resources are added to the task. In addition, an Actions tag appears to the left of the task name column.
- Click the **Actions tag** button. A list of options regarding how you want to handle this additional resource is displayed. Your screen should look similar to the following figure.



- Select **Increase the amount of work but keep the same duration**.

7. Click the name of task 6, **Identify and reserve locations**. Notice in the Task Form screen that the **Effort driven** check box is NOT checked for this task. Take note of the work data in the Task Form pane (400 hours total).
8. In the Resource Name column of the Assign Resources dialog box, click **Annete Hill**.
9. Scroll down until Ryan Ihrig's name is visible. Hold down **Ctrl**, click **Ryan Ihrig**. Release the **Ctrl** key then click the **Assign** button.
10. Click the Actions tag button. Select: Reduce the hours resources work per day (units), but keep the same duration and work. Your screen should look similar to the following figure. Microsoft Project calculates the work values for each resource, keeps the task's duration at 5 weeks and adjusts the units for each resource.
11. Click the **Close** button in the Assign Resources dialog box.

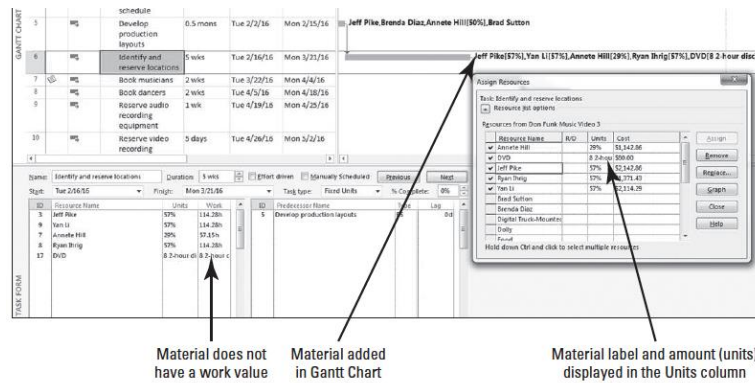


Units and Work information recalculated after selecting the Actions option to reduce hours per day

12. **SAVE** the project schedule.

4.6 Assign a Material Resource to a Task

1. In the Task Name column, click the name of task 6, **Identify and reserve locations**.
2. Click the **Resource** tab and then click the Assign Resources button in the Assignments group. The **Assign Resources** dialog box appears.
3. In the Assign Resources dialog box, click once in the **Units** field for the DVD resource. Type **8**, and then click the **Assign** button.
4. If the Assign Resources dialog box is covering the scroll bars for the Gantt bar portion of your screen, drag the dialog box into the middle of the screen.
5. Scroll the Gantt bar portion of your screen so that the right end of the bar for task 6 is visible. You will use eight DVDs while identifying locations for this video. Remember that a DVD is a material resource and cannot do work, so assigning it to a task does not affect the task's duration. Your screen should look similar to the following figure.

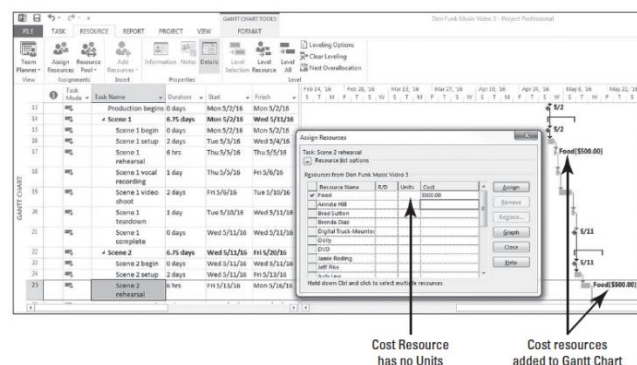


6. In the Assign Resources dialog box, click **Close**.

7. **SAVE** the project schedule.

4.7 Assign a Cost Resource to a Task

1. Click the **Assign Resources** button in the Assignments group. The Assign Resources dialog box appears.
2. Scroll up or down in the Gantt view and in the Task Name column, click the name of task 17, **Scene 1 rehearsal**.
3. In the Resource Name column of the Assign Resources dialog box, click **Food** and then click the **Assign** button.
4. In the Cost column for the Food resource, type **500** and press **Enter**. During the Scene 1 rehearsal, \$500 of food will be used to feed the crew and performers working on this task.
5. Click on the name of task 25, **Scene 2 rehearsal**.
6. In the Resource Name column of the Assign Resources dialog box, click **Food** and then click the **Assign** button.
7. In the Cost column for the Food resource, type **500** and press **Enter**. Your screen should look similar to the following figure.

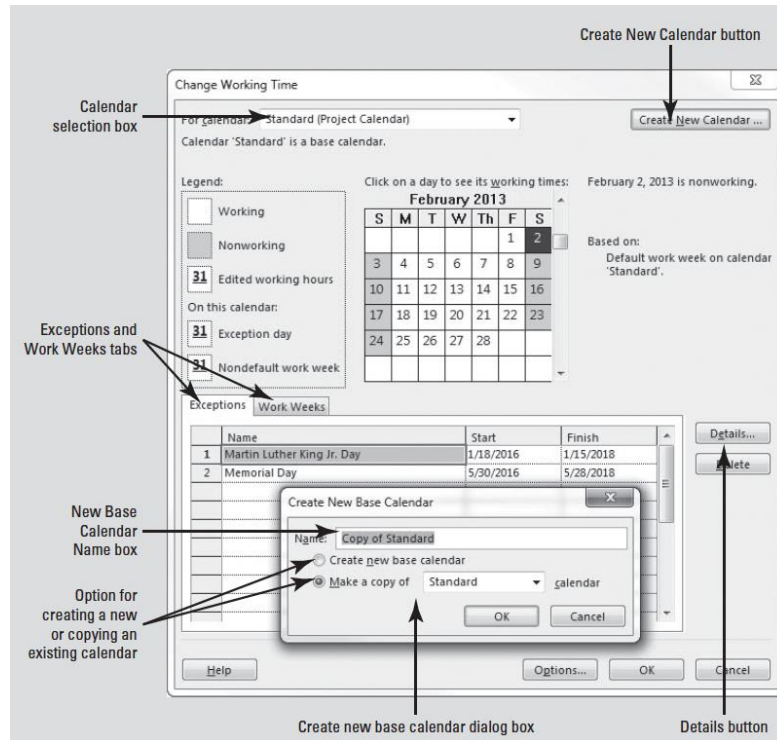


8. In the Assign Resources dialog box, click **Close**.

9. **SAVE** and then **CLOSE** the *Don Funk Music Video 3* file.

5 Refining Your Project Schedule

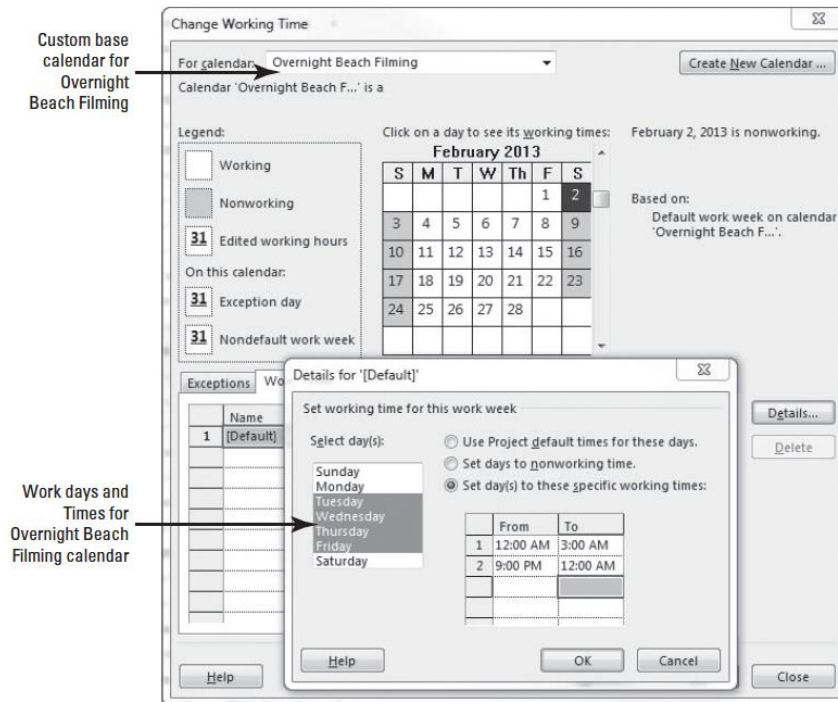
In Microsoft Project 2013, there may be times when you want specific tasks to occur at times that are outside the project calendar's working time. To do this, you need to create a new base calendar, a feature that is accessed through the **Change Working Time** dialog box.



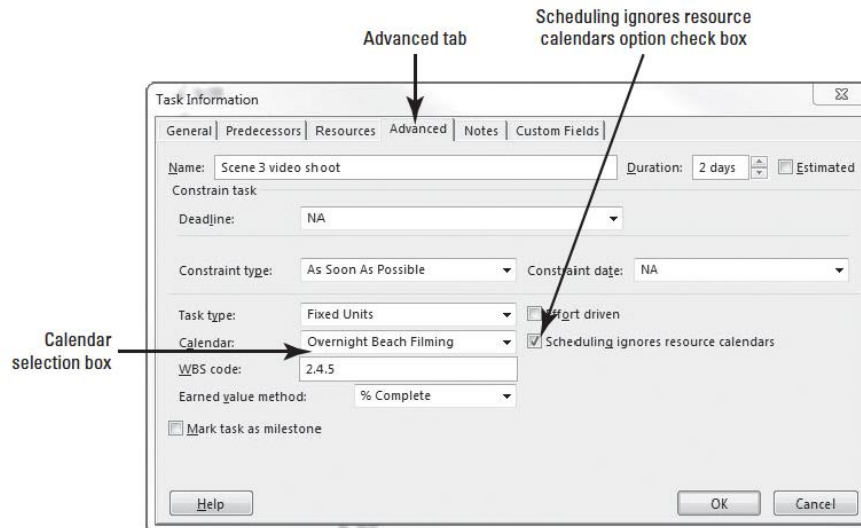
5.1 Apply a Task Calendar to an Individual Task

1. **OPEN *Don Funk Music Video 4M*. SAVE the file as *Don Funk Music Video 4*.**
2. Click the **Project** tab then click **Change Working Time**. The Change Working Time dialog box is activated.
3. In the Change Working Time dialog box, click the **Create New Calendar button**. The Create new base calendar dialog box appears as shown in figure on slide 4.
4. In the Name box, type **Overnight Beach Filming**. One of the scenes for the video will be shot during the overnight hours on a public beach.
5. If it is not already selected, click the **Make a copy of** button. In the drop-down list box, select **Standard**, and then click **OK**.
6. Click **Work Weeks** tab in the Change Working Time dialog box, and then click the **Details** button. The Details dialog box appears.
7. In the *Select days* box, drag your pointer to select **Tuesday** through **Friday**. Click the **Set day(s) to these specific working times** button.
8. Click the **cell in row 1** of the **From** column and type **12:00 AM**. Click the **cell in row 1** of the **To** column and type **3:00 AM**. Click the **cell in row 2** of the **From** column and type

9:00 PM. Click the cell in row 2 of the **To** column and type **12:00 AM**. Press **Enter**. Your screen should look similar to the following figure.



9. In the Select days box, select **Monday**. Click the **Set day(s) to these specific working times** button. Click the **cell in row 1** of the **From** column and type **9:00 PM**. Click the **cell in row 1** of the **To** column and type **12:00 AM**. Click the **cell in row 2** of the **From** column and press **Delete**.
10. Select **Saturday**. Click the **Set day(s) to these specific working times** button. Click the **cell in row 1** of the **From** column and type **12:00 AM**. Click the **cell in row 1** of the **To** column and type **3:00 AM**. Press **Enter**.
11. Click **OK** to close the **Details** dialog box, then click **OK** to close the **Change Working Time** dialog box. You have now created and set the working times for this calendar from 9:00 PM to 3:00 AM from Monday night through Friday night (Saturday morning). Now you must assign the calendar to a task.
12. Select the name of task 35, **Scene 3 video shoot**. If the Gantt bar of this task is not visible, click the **Scroll To Task** button on the Task ribbon.
13. Click the **Task** tab then click the **Information** button in the Properties group. The Task Information dialog box appears.
14. Click the **Advanced** tab of the Task Information dialog box.
15. In the Calendar box, select **Overnight Beach Filming** from the drop-down list box. Click the **Scheduling ignores resource calendars** check box. Your screen should look like the following figure.



16. Click **OK** to close the Task Information dialog box. Microsoft Project applies the Overnight Beach Filming calendar to task 35, and a calendar icon appears in the Indicators column. Because you chose to ignore resource calendars, the resources for this task will be scheduled at times that would usually be nonworking times for them.
17. **SAVE** the project schedule.

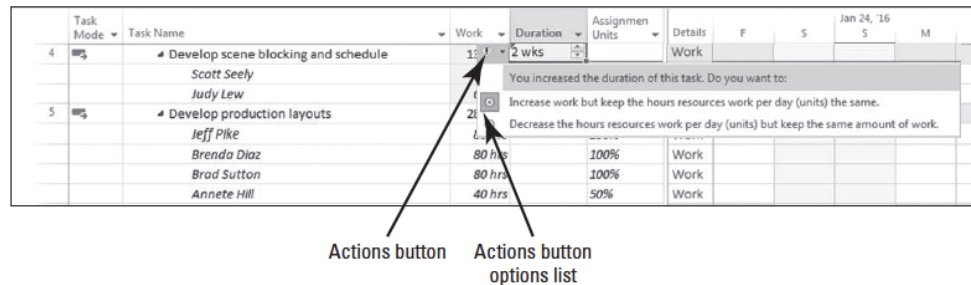
5.2 Change Values of the Work Formula

1. Click the **View** tab. Click the **Task Usage** button in the Task Views group on the ribbon. The Task Usage View replaces the Gantt Chart view.
2. Press the **F5** key. In the ID box, type **4**, and then click **OK**. Microsoft Project shifts the project schedule so that task 4, Develop scene blocking and schedule, and its assignments are visible.
3. Auto fit the Task Name column and move the center divider to the right until you can see the Start column. To auto fit a column, place the pointer on the right side dividing line of the column name and double-click. Your screen should look similar to the following figure.

Task Name	Duration	Start	End
4. Develop scene blocking and schedule	80 hrs 1.2 wks	Tue 1/26/16	Work
Scott Daily	40 hrs	Tue 1/26/16	Work
Andy Lee	40 hrs	Tue 1/26/16	Work
5. Develop production layouts	280 hrs 6.5 mos	Tue 2/2/16	Work
Jill Pike	80 hrs	Tue 2/2/16	Work
Brenda Diaz	80 hrs	Tue 2/2/16	Work
Brad Sutton	80 hrs	Tue 2/2/16	Work
Annette Hill	40 hrs	Tue 2/2/16	Work
6. Identify and reserve locations	480 hrs 5 wks	Tue 3/16/16	Work
Jill Pike	120 hrs	Tue 3/16/16	Work
Annette Hill	57.5 hrs	Tue 2/16/16	Work
Ryan Irlip	124.28 hrs	Tue 2/16/16	Work
Ton Li	124.28 hrs	Tue 2/16/16	Work
DVD	Hour off	Tue 2/16/16	Work
7. Book musicians	0 hrs 2 wks	Tue 3/22/16	Work
Book dancers	0 hrs 2 wks	Tue 4/5/16	Work
8. Reserve audio recording equipment	0 hrs 1 wk	Tue 4/19/16	Work
9. Reserve video recording equipment	0 hrs 5 days	Tue 4/26/16	Work
10. Pre-production complete	0 hrs 0 days	Mon 5/2/16	Work
11. Production begins	700 hrs 27.75 days	Mon 5/2/16	Work
12. Production begins	0 hrs 0 days	Mon 5/2/16	Work
13. Scene 1	180 hrs 6.75 days	Mon 5/2/16	Work

4. Right-click the **Start** column heading. Select **Insert** column.

- In the Duration field for task 4, select or type **2w**, and press **Enter**. Microsoft Project changes the duration of task 4 to two weeks and increases the work for each resource. You want to increase the duration but keep the work the same.
- Point to the **Duration** field for task 4, and then click on the **Actions** button. Your screen should look similar to the following figure.



- Select **Decrease the hours resources work per day (units) but keep the same amount of work** in the Actions list. The total work on the task is still 80 hours, but the assignment units value of each resource decreases. Another way to think of this is that the resources will put in the same total effort over a longer period of time. The following figure shows the adjusted scheduling formula values for task 4.

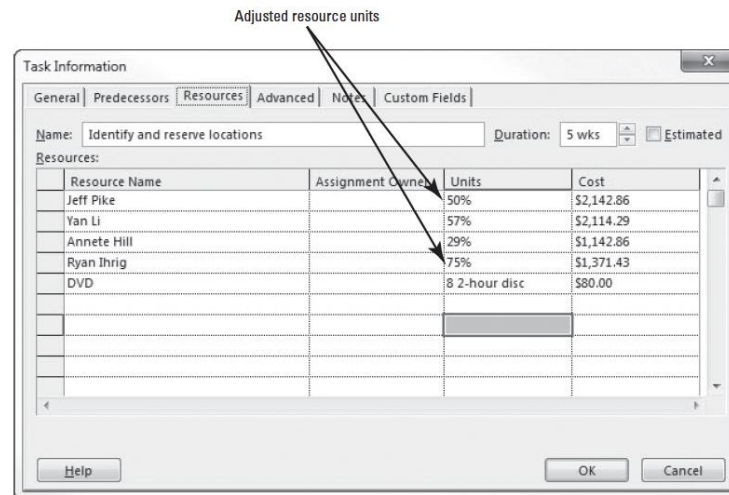
Adjusted values for assignment units

Task Mode	Task Name	Work	Duration	Assignment Units	Details	F	S	Jan 24, '16	S	M	T	W	T	F
4	Develop scene blocking and schedule	80 hrs	2 wks	58%	Work							10h	10.57h	4.78h
	Scott Seely	40 hrs		58%	Work							5.22h	5.8h	
	Judy Lew	40 hrs		60%	Work							4.78h	4.78h	4.78h
5	Develop production layouts	280 hrs	0.5 mons		Work									
	Jeff Pike	80 hrs		100%	Work									
	Brenda Diaz	80 hrs		100%	Work									
	Brad Sutton	80 hrs		100%	Work									
	Annete Hill	40 hrs		50%	Work									

- SAVE** the project schedule.

5.3 Change a Task Type Using the Task Information Dialog Box

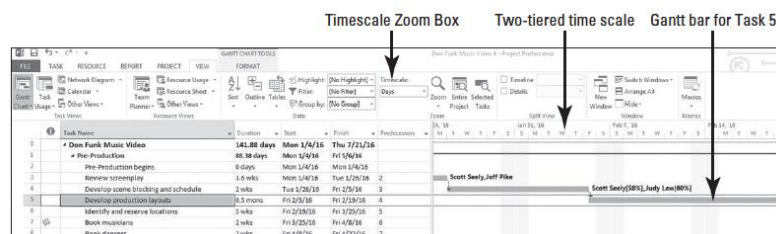
- Switch back to the Gantt Chart view by clicking on the **Gantt Chart** button in the View ribbon.
- Press the **F5** key. In the ID box, type **6**, and then click **OK**.
- Double-click **Task 6**. The Task Information dialog box appears.
- Click the **Advanced** tab if it is not already selected. Note that in the Task type box the task has a Fixed Units task type. You need to adjust this task's resources, but leave its duration fixed at 5 weeks.
- Select **Fixed Duration** from the drop-down list box in the Task type box.
- Click the **Resources** tab on the Task Information dialog box.
- In the Units column, set the units value for Jeff Pike to **50%** and for Ryan Ihrig to **75%**. Your screen should look similar to the following figure.



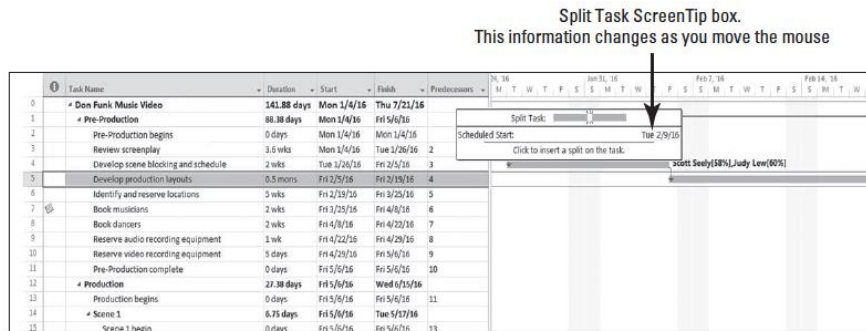
- Click **OK** to close the Task Information dialog box. Note that the duration of the task did not change.
- SAVE** the project schedule.

5.4 Split a Task

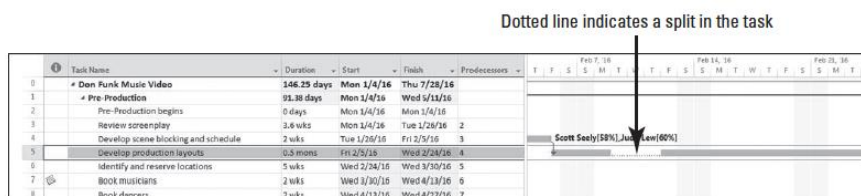
- Select the name of task 5, **Develop production layouts**.
- Press **Ctrl+Shift+F5**. Microsoft Project brings the **Gantt** bar of task 5 into view.
- Click on the **View** tab. In the Zoom command group, in the selection box below Timescale, select **Days**. Your screen should look similar to the following figure. You have just been told that work on this task will be interrupted from February 9 to February 11 (no work will occur on these days).



- Right-click the **Gantt** bar for task 5. From the shortcut menu that appears, click the **Split Task** button from the upper shortcut menu. A ScreenTip appears and the mouse pointer changes to a double vertical line with an arrow to the right.
- Move the mouse pointer over the **Gantt** bar of task 5. Watch the ScreenTip box as you move the pointer—the date changes. The ScreenTip box reflects the date on which you will begin to split the task. Your screen should look similar to the following figure.



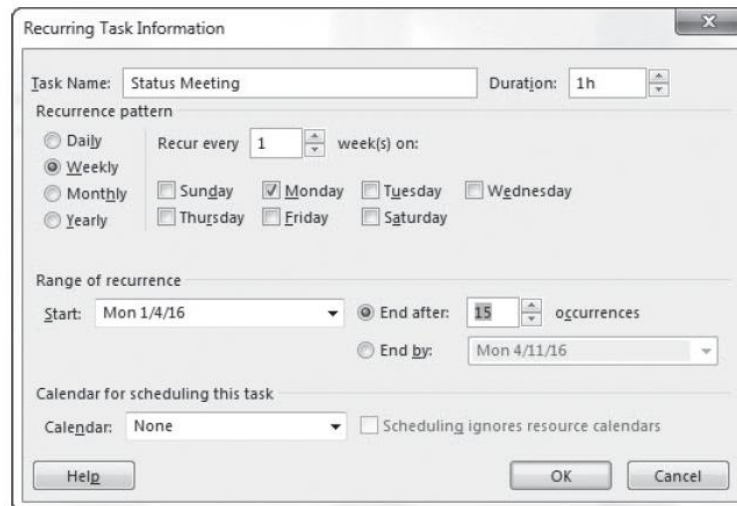
6. Move (but don't click) the mouse pointer over the **Gantt** bar until the Start date of Tuesday, 2/9/16, appears in the ScreenTip box.
7. Click and hold, then drag the mouse pointer to the right until the Start date of Friday, 2/12/16, appears in the **ScreenTip**, and then release the mouse button. Microsoft Project inserts a task split between the two parts of the task. The split, or interruption in work, is represented by a dotted line in the Gantt Chart, as shown in the following figure.



8. **SAVE** the project schedule.

5.5 Set Up a Recurring Task

1. Select the name of task 11, **Pre-Production complete**. You want to insert the recurring tasks as the last items in the Pre-Production phase.
2. On the **Task** ribbon, in the Insert group, click the **down-arrow** under the **Task** button. Select **Recurring Task**. The Recurring Task Information dialog box appears.
3. In the Task Name box, type **Status Meeting**.
4. In the Duration box, type **1h**.
5. Under Recurrence Pattern, make sure that **Weekly** is selected, and then select the **Monday** check box.
6. In the Start box, type or select **1/4/16**. The first occurrence of your weekly meeting will be on January 4, 2016.
7. Under **Range of recurrence**, click **End after**, and then type or select **15** occurrences. Your screen should look like the following figure.



The dialog box is titled "Recurring Task Information". It contains the following fields and options:

- Task Name:** Status Meeting
- Duration:** 1h
- Recurrence pattern:**
 - ☐ Daily
 - ☒ Weekly
 - ☐ Monthly
 - ☐ Yearly
- Recur every:** 1 week(s) on:
- Days:** ☐ Sunday, ☒ Monday, ☐ Tuesday, ☐ Wednesday, ☐ Thursday, ☐ Friday, ☐ Saturday
- Range of recurrence:**
 - Start:** Mon 1/4/16
 - ☒ End after: 15 occurrences
 - ☐ End by: Mon 4/11/16
- Calendar for scheduling this task:**
 - Calendar:** None
 - ☐ Scheduling ignores resource calendars
- Buttons:** Help, OK, Cancel

8. Click **OK** to create the recurring task. A Microsoft Project dialog box appears to notify you that one of the instances of the recurring task will occur during nonworking times (the holiday on January 18).
9. Review the options presented in the dialog box. You want to reschedule the status meeting for this particular week. Click **Yes** to reschedule this occurrence of the task. Microsoft Project inserts the recurring tasks within the Pre-Production phase. A recurring task icon appears in the Indicators column, as shown below.

Recurring task icon Each recurrence rolls up to the recurring task summary individually

Task ID	Task Name	Duration	Start	Finish	Indicators
11	Status Meeting	1 hr	Mon 1/11/16	Mon 1/11/16	
12	Status Meeting 1	1 hr	Mon 1/11/16	Mon 1/11/16	
13	Status Meeting 2	1 hr	Mon 1/11/16	Mon 1/11/16	
14	Status Meeting 3	1 hr	Tue 1/12/16	Tue 1/12/16	
15	Status Meeting 4	1 hr	Mon 1/12/16	Mon 1/12/16	
16	Status Meeting 5	1 hr	Mon 2/1/16	Mon 2/1/16	
17	Status Meeting 6	1 hr	Mon 2/1/16	Mon 2/1/16	
18	Status Meeting 7	1 hr	Mon 2/1/16	Mon 2/1/16	
19	Status Meeting 8	1 hr	Mon 2/22/16	Mon 2/22/16	
20	Status Meeting 9	1 hr	Mon 2/22/16	Mon 2/22/16	
21	Status Meeting 10	1 hr	Mon 3/7/16	Mon 3/7/16	
22	Status Meeting 11	1 hr	Mon 3/7/16	Mon 3/7/16	
23	Status Meeting 12	1 hr	Mon 3/21/16	Mon 3/21/16	
24	Status Meeting 13	1 hr	Mon 3/21/16	Mon 3/21/16	
25	Status Meeting 14	1 hr	Mon 4/18/16	Mon 4/18/16	
26	Status Meeting 15	1 hr	Mon 4/18/16	Mon 4/18/16	

10. Click the name of task 11, **Status Meeting**, and then click the **Scroll to Task** button in the Editing group on the Task ribbon. The Gantt Chart displays the first occurrences of the recurring meeting's Gantt bars. Notice that the Gantt bar at the recurring task level (task 11) task shows only the individual occurrences of the tasks. This is because a recurring task is not a true summary task.
11. **SAVE** the project schedule.

5.6 Assign Resources to a Recurring Task

1. If it is not already selected, click the name of task 11, **Status Meeting**.
2. Click the **Resource** tab. In the Assignments group on the ribbon, click **Assign Resources**.
3. In the Assign Resources dialog box, click **Brad Sutton**. Then hold down **Ctrl** while clicking **Chris Preston**, **Eva Corets**, **Jamie Reding**, **Jane Clayton**, and **Judy Lew**.
4. Click **Assign**, and then click **Close**. Microsoft Project assigns the selected resources to the recurring task.

5. If the recurring task is not already expanded, click the **Expand** button next to task 11's title to show the subtasks. Your screen should look similar to the following figure.

Recurring tasks are sequentially numbered

Resource assignments for each recurrence

Task ID	Task Name	Duration	Start Date	End Date	Resources
12	Status Meeting 1	1 day	Mon 1/14/16	Mon 1/14/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
13	Status Meeting 2	1 day	Mon 1/19/16	Mon 1/19/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
14	Status Meeting 3	1 day	Tue 1/19/16	Tue 1/19/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
15	Status Meeting 4	1 day	Mon 1/25/16	Mon 1/25/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
16	Status Meeting 5	1 day	Mon 2/1/16	Mon 2/1/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
17	Status Meeting 6	1 day	Mon 2/8/16	Mon 2/8/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
18	Status Meeting 7	1 day	Mon 2/15/16	Mon 2/15/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
19	Status Meeting 8	1 day	Mon 2/22/16	Mon 2/22/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
20	Status Meeting 9	1 day	Mon 2/29/16	Mon 2/29/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
21	Status Meeting 10	1 day	Mon 3/7/16	Mon 3/7/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
22	Status Meeting 11	1 day	Mon 3/14/16	Mon 3/14/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
23	Status Meeting 12	1 day	Mon 3/21/16	Mon 3/21/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
24	Status Meeting 13	1 day	Mon 3/28/16	Mon 3/28/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
25	Status Meeting 14	1 day	Mon 4/4/16	Mon 4/4/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low
26	Status Meeting 15	1 day	Mon 4/11/16	Mon 4/11/16	Brad Sutton, Chris Preston, Eva Corsetti, Jamie Redding, Jane Clayton, Judy Low

6. Click the **Collapse** button next to task 11's task title to collapse the subtasks under the recurring task.
7. **SAVE** the project schedule.

5.7 Apply a Start No Earlier Than Constraint to a Task

- Press the **F5** key. In the ID box, type **39** and press **Enter**. This scene will be shot at a location that is not available until May 25, 2016.
- Double-click on **Task 39**. The Task Information dialog box appears.
- Click on the **Advanced** tab. In the Constrain task section, next to Constraint type, select **Start No Earlier Than** from the drop-down list box.
- In the Constraint date box, type **5/25/16**. Your screen should look similar to the following figure.

Constraint type box

Constraint date box

Task Information

General | Predecessors | Resources | Advanced | Notes | Custom Fields

Name: Scene 2 begin Duration: 0 days Estimated

Constrain task

Deadline: NA

Constraint type: Start No Earlier Than Constraint date: 5/25/16

Task type: Fixed Units Effort driven

Calendar: None Scheduling ignores resource calendars

WBS code: 2.3.1

Earned value method: % Complete

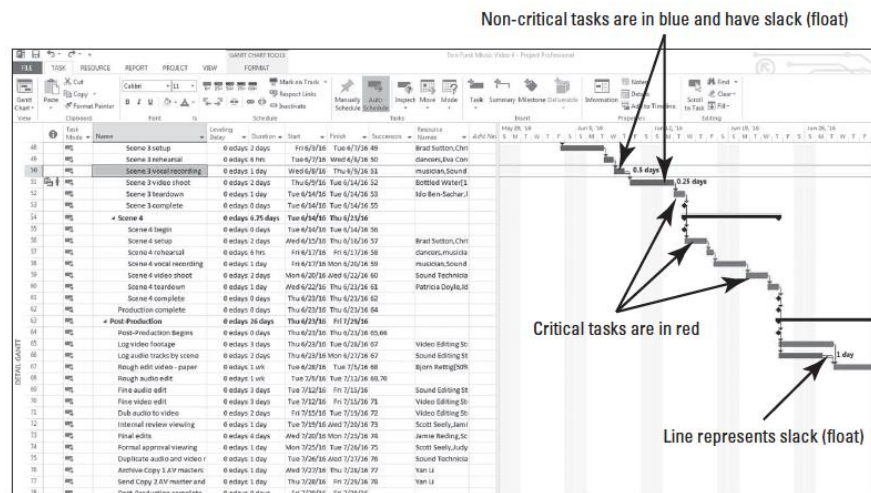
☒ Mark task as milestone

Help OK Cancel

5. Click **OK**. Note the highlighted cells showing the effect of this change. Widen the table as necessary to view additional data columns. The constraint is applied and a constraint icon appears in the Indicators column. When you point to the icon, constraint details will be shown in a ScreenTip. The task is rescheduled to start on May 25, and all other tasks that depend on task 38 are also rescheduled.
6. **SAVE** the project schedule.

5.8 Review the Project's Critical Path

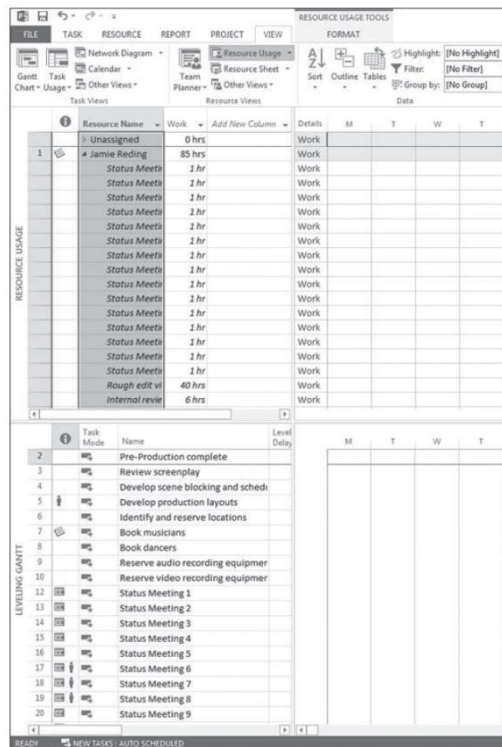
1. Click the **Task** tab, and then click the **down-arrow** under the **Gantt Chart** button; the view list appears. Select **More Views**.
2. In the More Views dialog box, select **Detail Gantt**, and then click the **Apply** button. The project schedule is displayed in the Detail Gantt view.
3. Press the **F5** key. The Go To dialog box appears. In the ID box, type **50**, and then click **OK**. The view shifts so that the Gantt bar for task 50 is visible. Scroll down so that most of the tasks after task 50 are visible, and you can see more of the critical path. Your screen should look similar to the following figure. Almost all of the tasks that fall after task 50, Scene 3 vocal recording, are on the critical path, which is shown in red. Noncritical tasks are displayed in blue and also show free slack. (Total slack is shown as the thin bar that extends to the right of the task bar.)



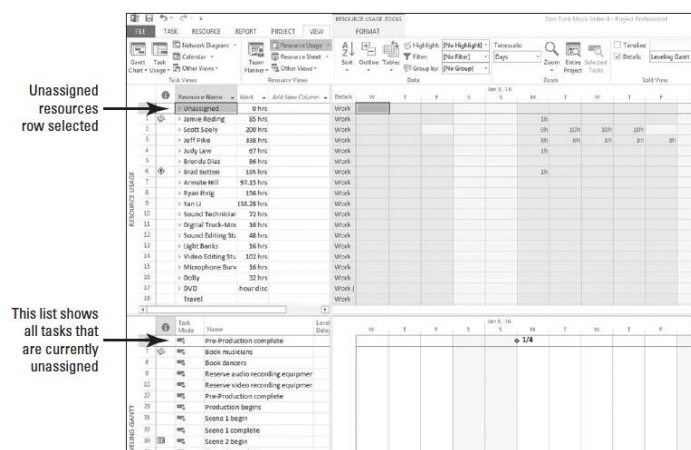
4. **SAVE** the project schedule.

5.9 Explore Resource Allocations

1. On the Task ribbon, in the View group, click the **down-arrow** under the **Gantt Chart** button. Select **More Views**.
2. In the More Views dialog box, locate and select the **Resource Allocation** view. Click **Apply**. A split view appears: the Resource Usage view is on the top and the **Leveling** Gantt Chart view is at the bottom.
3. Click the **Resource Name** column heading to highlight all cells in that field. Your screen should look similar to the following figure.

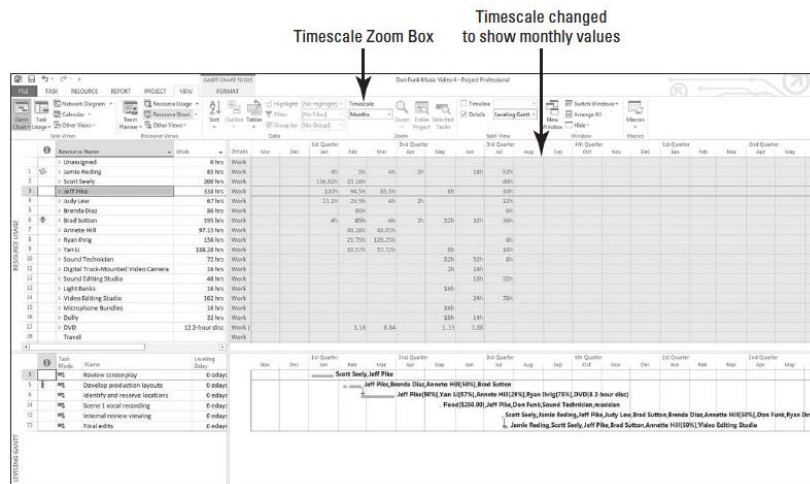


4. Click on the **View** tab. In the Data group, click the **Outline** button, and then select **Hide Subtasks**. Microsoft Project collapses the Resource Usage view.
5. Press **Ctrl+Shift+F5**. The resources' total work values over the project timescale appear in the grid on the right. In the Resource Name column, click the task name cell **Unassigned**. Your screen should look similar to the following figure. To the left of the Resource Usage view is the Usage Table, which shows the assignments grouped by resource, the total work assigned to each resource, and the work for each assignment. The outline format can be expanded and collapsed. The right side of the view contains assignment details (default setting is work) displayed on a timescale.



6. Auto fit the **Resource Name** and **Work** columns. Then, in the Resource Name column, click on the **name of resource 3, Jeff Pike**. Note at the bottom of the screen, the Leveling Gantt view shows the actual tasks to which Jeff is assigned.

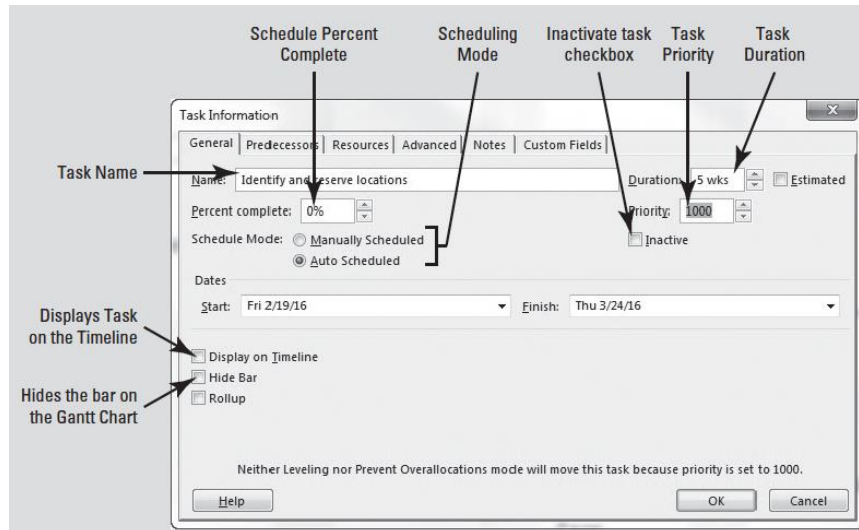
7. Click the **View** tab. In the Zoom group, click the **down-arrow** below to the **Timescale units** box and select **Months**. The time-scaled grid now shows work values per month. Your screen should look similar to the following figure.



8. **SAVE** the project schedule. **CLOSE** the project schedule.

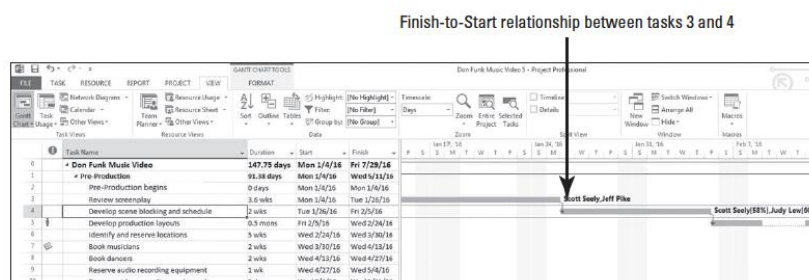
6 Fine-Tuning Tasks

The General tab of the Task Information dialog box provides general information about the selected task and allows you to make changes and updates to the task. On the General tab, you can edit the task name, update the duration and the percent complete, change the priority, and modify the start and finish dates.



6.1 Explore the Effects of Constraints and Relationships on Task Scheduling

1. **OPEN** the *Don Funk Music Video 5M* project schedule. **SAVE** the file as *Don Funk Music Video 5*.
2. In the Gantt Chart view, review the finish-to-start relationship between tasks 3 and 4. Your screen should look similar to the following figure. Assume you have just been told that task 4, Develop scene blocking and schedule, must begin no later than Wednesday, January 20, 2016.

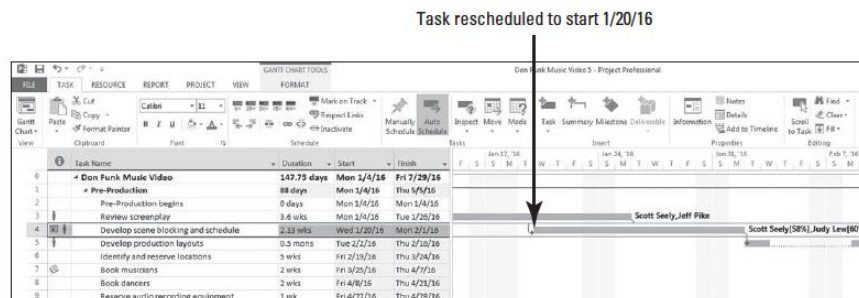


3. In the Task Name column, select the name of task 4, **Develop scene blocking and schedule**.
4. On the Task ribbon, in the Properties group, click the **Information** button. The Task Information dialog box appears.
5. Click the **Advanced** tab.

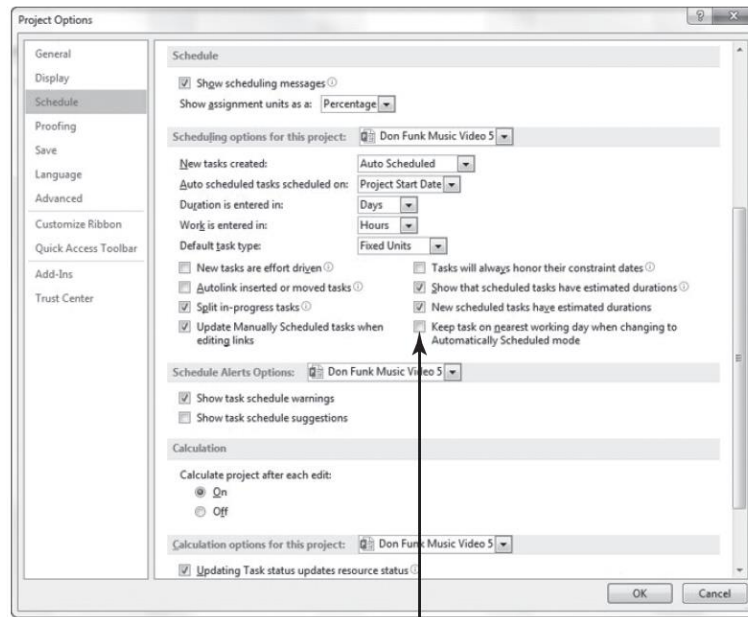
6. In the Constraint Type box, select **Start No Later Than**. In the Constraint Date box, type or select **1/20/16**.
7. Click **OK** to close the dialog box. The Planning Wizard appears, notifying you of a scheduling conflict between the constraint you just applied to task 4, and the existing task relationship between tasks 3 and 4. Your screen should look similar to the following figure.



8. In the *You Can* selection list, click Continue. A Start No Later Than constraint will be set.
9. Click **OK**.
10. A second alert appears. Click **Continue. Allow the scheduling conflict**, and then click **OK**. Microsoft Project applies the SNLT constraint to task 4 and reschedules it to start on Wednesday, as shown in the following figure. Microsoft Project would reschedule task 4 to avoid the negative slack between tasks 3 and 4, but this SNLT constraint prevents Microsoft Project from doing so.

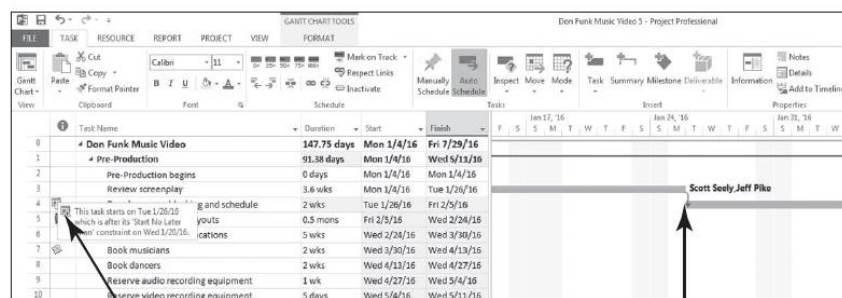


11. Click the **File** tab and then click **Options**.
12. Select the **Schedule** options then navigate to the **Scheduling options for this project:** section. Your screen should look similar to the following figure.



Clear this check box

13. Clear the **Tasks will always honor their constraint dates** check box, and then click **OK**. A calendar alert icon appears in the indicators column for task 4.
14. Rest the mouse pointer on the calendar alert icon in the indicators column. A Screen-Tip appears. Now Microsoft Project honors the task relationship over the constraint. Microsoft Project preserves the constraint information, but does not honor the constraint. If the scheduling conflict is removed (by a change in task duration, for example), Microsoft Project would then honor the constraint. Your screen should look similar to the following figure.



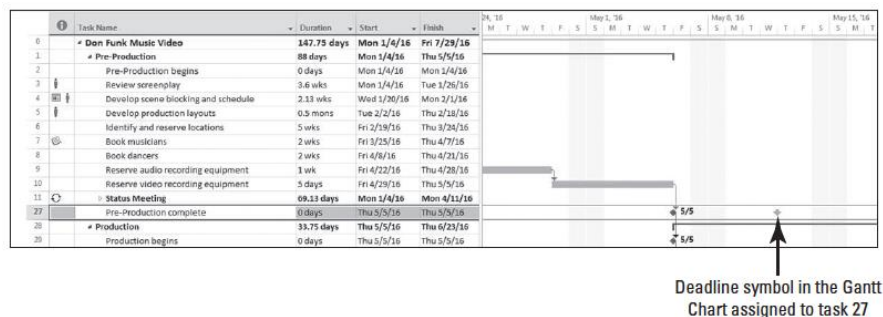
Calendar Alert icon with screen tip notifies you that Project will honor relationships over the constraint

Task is reset to its original start date

15. Click the **File** tab again and then click **Options**. Select the **Schedule** options then navigate to the **Scheduling options for this project:** section.
16. Click the **Tasks will always honor their constraint dates** check box on the Schedule tab, and then click **OK**. This restores the default behavior to Microsoft Project, and task 4 is rescheduled to honor its constraint date.
17. **SAVE** the project schedule.

6.2 Set a Deadline Date for a Task

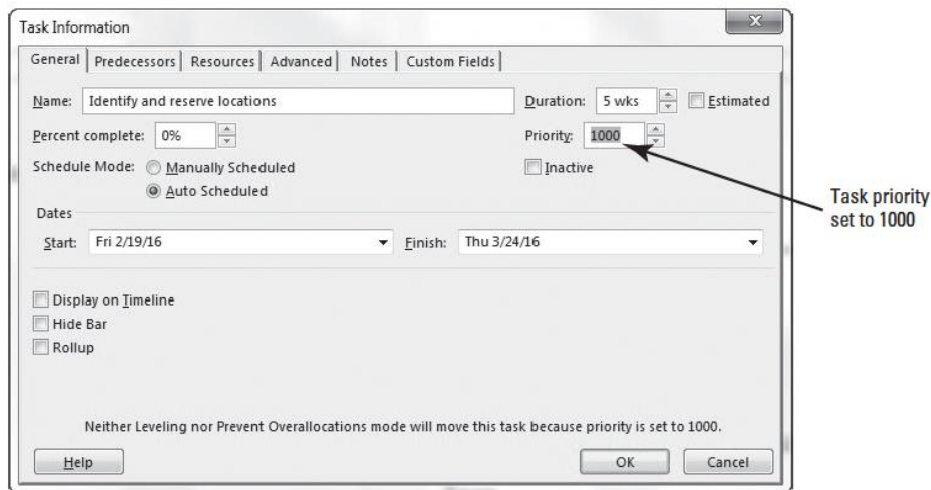
1. Press the **F5** key; the Go To dialog box appears.
2. In the ID box, type **27** and then click **OK**. Microsoft Project displays task 27. You want to make sure that the pre-production tasks conclude by May 11, 2016, so you will enter a deadline date for this milestone.
3. Double-click the task name of task 27, **Pre-Production Complete**. The Task Information dialog box appears.
4. Click the **Advanced** tab if it is not already selected.
5. In the date box next to Deadline, type or select **5/11/16**, then click **OK**. Microsoft Project inserts a deadline marker in the chart portion of the Gantt Chart view. Your screen should look similar to the following figure. To remove a deadline from a task, clear the **Deadline** field on the Advanced tab of the Task Information dialog box.



6. Double-click the name of task 28, **Production**. The Task Information dialog box appears. Click the **Advanced** tab if it is not already selected.
7. In the dropdown date box next to Deadline, type or select **6/28/16**, then click **OK**. Microsoft Project inserts a deadline date marker for the summary task. Scroll the chart portion of the Gantt Chart view to the right to view the marker.
8. **SAVE** the project schedule.

6.3 Establish Task Priorities

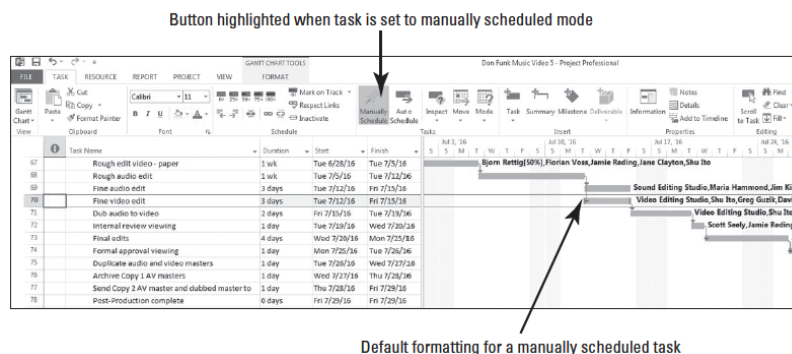
1. In the Task Name column, select the name of task 6, **Identify and reserve locations**.
2. On the Task ribbon, click the **Information** button, located in the Properties group. The Task Information dialog box appears.
3. Click the **General** tab if it is not already selected.
4. In the Priority box, type or select **1000**. Your screen should look similar to the following figure. A message at the bottom of the Task Information dialog box states the task will not be moved through either Resource Leveling or the Prevent Over allocations mode.



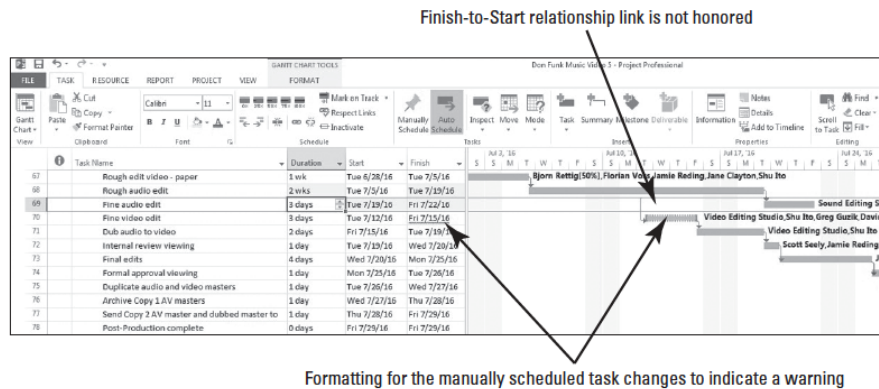
5. Click **OK** to close the dialog box. Microsoft Project adjusts the task's priority. Note that there is no visual indicator for the adjusted priority, and the effect of the new task's priority is only apparent after resource leveling.
6. **SAVE** the project schedule.

6.4 Establish a Manually Scheduled Task

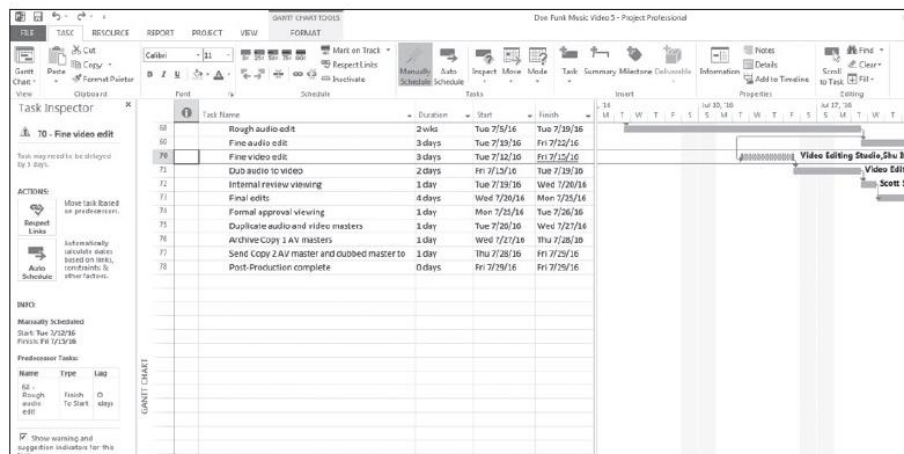
1. Press the **F5** key to produce the Go To dialog box. In the ID box, type **70** and click **OK**.
2. On the Task ribbon, in the Tasks group, click the **Manually Schedule** button. Note that the Gantt bar has changed to the default formatting of a manually scheduled task. Your screen should look similar to the following figure



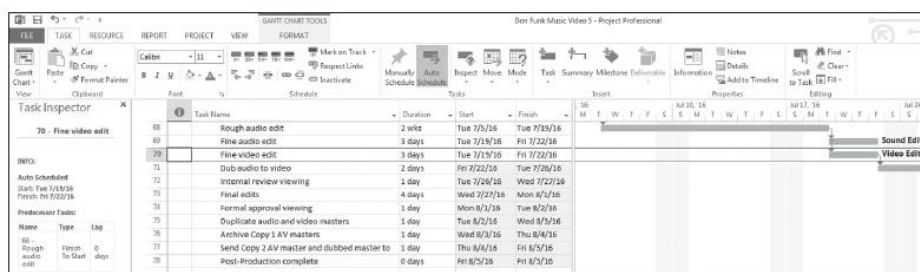
3. Click in the **duration cell** of task 68, **Rough audio edit**. You have just been informed that this task will now take 2 weeks instead of one. Type **2w** and press **Enter**. Notice that task 70 did not move from its original start date. Your screen should look like the following figure.



- Position the mouse pointer over the Gantt bar of the manually scheduled task. Notice that it displays a warning at the top of the ScreenTip. Right-click the **Gantt** bar of the manually scheduled task and select **Fix in Task Inspector**. Your screen should look like the following figure.



- Review the various options and information in the Task Inspector pane. After reviewing this information, you have decided that manually scheduling this task is not the best option. In the Task Inspector pane, under the **ACTIONS**: section, click the **Auto Schedule** button. Microsoft Project returns the task to the auto-scheduled mode. Your screen should look like the following figure.



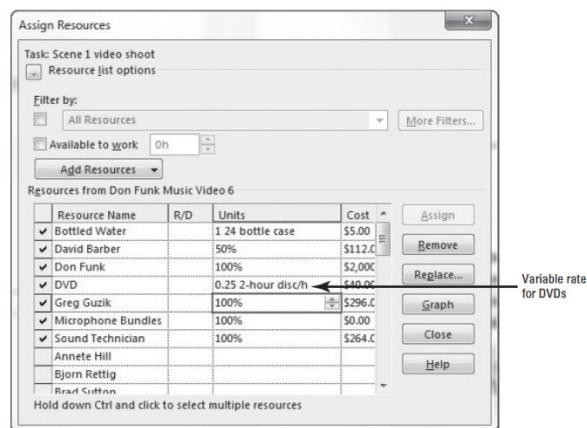
- Single-click the **duration cell** for task 68, Rough audio edit. Type **1w** and press **Enter**.
- SAVE** the project schedule, and then close the file.

7 Fine-Tuning Resources

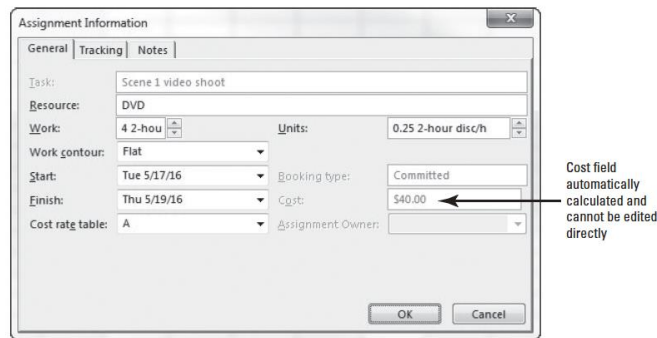
To accurately calculate the cost of a material resource, you also need to know its consumption rate, or how quickly it is used up.

7.1 Enter a Variable Consumption Rate for a Material Resource

1. **OPEN** the *Don Funk Music Video 6M* project. **SAVE** the file as *Don Funk Music Video 6*.
2. Press the **F5** key. The Go To dialog box appears. Type **35** in the ID box, and then click **OK**. Microsoft Project displays task 35, Scene 1 video shoot. This is the first of several scenes that requires DVDs to be recorded. You have determined that the initial estimates for DVD consumption were incorrect. Because for each hour of work you will only be recording for 30 minutes, you have determined that the correct consumption rate for the DVD resource is 0.25 DVD/hour (the DVDs record 2 hours of filming).
3. Click the **Resource** tab and then click the **Assign Resources** button. The Assign Resources dialog box appears.
4. In the Assign Resources dialog box, click the **Units** field for DVD. Type **0.25/h** and then press **Enter**. Microsoft Project changes the consumption rate of DVDs for this task to 0.25 per hour.
5. Double-click the **column divider** between the Units and Cost columns to expand the Units column. The Assign Resources dialog box should look similar to the following figure.



6. Click the **Close** button in the Assign Resources dialog box. You will now verify the cost and work values of the DVD assignment to task 35.
7. On the ribbon, click the **down-arrow** under the Team Planner button. Click **Task Usage**.
8. Double-click the **DVD resource assignment** under task 35, Scene 1 video shoot. The Assignment Information dialog box appears.
9. Select the **General** tab, if it is not already selected. Note the Work, Units, and Cost fields. The Assignment Information box should look similar to the following figure.



The Assignment Information dialog box is shown with the following fields:

- Task: Scene 1 video shoot
- Resource: DVD
- Work: 4 2-hou
- Units: 0.25 2-hour disc/h
- Work contour: Flat
- Start: Tue 5/17/16
- Finish: Thu 5/19/16
- Booking type: Committed
- Cost: \$40.00
- Cost rate table: A
- Assignment Owner: (empty)

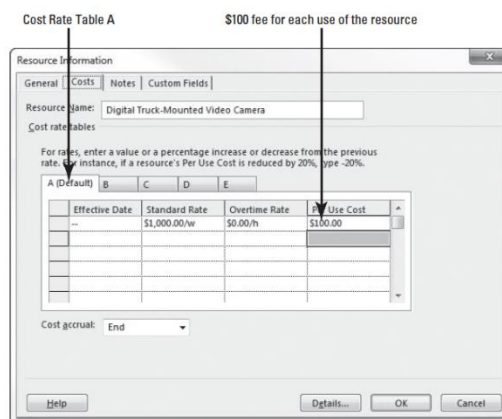
An arrow points to the Cost field (\$40.00) with the text: "Cost field automatically calculated and cannot be edited directly".

10. Click **OK** to close the Assignment Information dialog box.

11. **SAVE** the project schedule.

7.2 Enter a Cost Per Use for a Resource

1. On the Resource ribbon, click the **down-arrow** under Team Planner button, then select the **Resource Sheet**.
2. On the Resource Sheet, select resource 11, **Digital Truck-Mounted Video Camera**.
3. On the ribbon, click the **Information** button, located in the Properties group. The Resource Information dialog box appears.
4. Select the **Costs** tab.
5. Under Cost rate tables, select the **A (Default)** tab if it is not already selected. The Digital Truck-Mounted Video Camera has a \$100 maintenance fee for every time you use it.
6. In the first row under the *Per Use Cost* column, type **100**, and then press **Enter**.
7. Select **End** from the *Cost accrual* dropdown box. Your screen should look similar to the following figure.



The Resource Information dialog box is shown with the Costs tab selected. The Resource name is "Digital Truck-Mounted Video Camera".

Cost rate tables:

For rates, enter a value or a percentage increase or decrease from the previous rate. For instance, if a resource's Per Use Cost is reduced by 20%, type -20%.

Effective Date	Standard Rate	Overtime Rate	Per Use Cost
--	\$1,000.00/wk	\$0.00/h	\$100.00

Cost accrual: End

8. Click **OK** to close the Resource Information dialog box.

9. **SAVE** the project schedule.

7.3 Assign Multiple Pay Rates for a Resource

1. In the Resource Sheet view, click the name of resource 9, **Yan Li**.
2. On the ribbon, click the **Information** button. The Resource Information dialog box appears.

3. Click the **Costs** tab, if it is not already selected. Each tab of the Cost Rate table corresponds to one of the five pay rates a resource can have.
4. Under Cost rate tables, click the **B** tab.
5. Select the default entry of \$0.00/h in the field directly below the Standard Rate column heading, type **15/h**, and then press **Enter**.
6. In the Overtime Rate field, type **22.50/h**, and then press **Enter**. Your screen should look similar to the following figure.

Cost Rate Table B Overtime rate of 22.50/hr

Resource Information

General Costs Notes Custom Fields

Resource Name: Yan Li

Cost rate tables

For rates, enter a value or a percentage increase or decrease from the previous rate. For instance, if a resource's Per Use Cost is reduced by 20%, type -20%.

Effective Date	Standard Rate	Overtime Rate	Per Use Cost
--	\$15.00/h	\$22.50/h	\$0.00

Cost accrual: Prorated

Help Details... OK Cancel

7. Click **OK** to close the Resource Information dialog box. Note that on the Resource Sheet, Yan Li's standard pay rate is still \$18.50 per hour. This was the value in Rate Table A, which is the default rate table. This value will be used for all of Yan Li's task assignments unless you specify a different rate table.
8. **SAVE** the project schedule.

7.4 Apply a Different Cost Rate to an Assignment

1. On the Resource ribbon, click the **down-arrow** under the Team Planner button, and then click **Task Usage**.
2. Press the **F5** key. Type **6** in the ID box, and then click **OK**.
3. Click the **View** tab. Verify the Cost table is selected by clicking the **Tables** button, located in the Data group, and then select **Cost**.
4. Under task 6, click the row heading directly to the left of Yan Li so that Yan Li's entire assignment is selected.
5. Move the center divider in the table portion (on the left) of the Task Usage view to the right until the Total Cost column is visible. You can see that the total cost of Yan's assignment to this task is \$2114.29. Your screen should look similar to the following figure.

Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Details	S	S	M	T	W	T	F
0 Don Funk Music Video	\$0.00	Prorated	60,029.64	Work							
1 Pre-Production	\$0.00	Prorated	\$19,399.64	Work			34h	28h	21.03h	16.85h	16.85h
2 Pre-Production begins	\$0.00	Prorated	\$0.00	Work			34h	28h	21.03h	16.85h	16.85h
3 Review screenplay	\$0.00	Prorated	\$4,590.00	Work							
Scott Seely			\$2,340.00	Work							
Jeff Pike			\$2,250.00	Work							
4 Develop scene blocking and schedule	\$0.00	Prorated	\$1,560.00	Work							
Scott Seely			\$780.00	Work							
Judy Lew			\$780.00	Work							
5 Develop production layouts	\$0.00	Prorated	\$4,640.00	Work			28h	28h	10.5h		
Jeff Pike			\$1,500.00	Work			8h	8h	3h		
Brenda Diaz			\$1,020.00	Work			8h	8h	3h		
Brad Sutton			\$1,320.00	Work			8h	8h	3h		
Annette Hill			\$800.00	Work			4h	4h	1.5h		
6 Identify and reserve locations	\$0.00	Prorated	\$7,012.14	Work					10.53h	16.85h	16.85h
Jeff Pike			\$1,875.00	Work					2.5h	4h	4h
Annette Hill			\$1,142.86	Work					1.43h	2.28h	2.28h
Ryan Ithrig			\$1,800.00	Work					3.75h	6h	6h
Yan Li			\$2,114.29	Work					2.85h	4.57h	4.57h
DVD			\$80.00	Work					0.2	0.32	0.32
7 Book musicians	\$0.00	Prorated	\$0.00	Work							
8 Book dancers	\$0.00	Prorated	\$0.00	Work							
9 Reserve audio recording equipment	\$0.00	Prorated	\$0.00	Work							
10 Reserve video recording equipment	\$0.00	Prorated	\$0.00	Work							

Yan Li's cost for task 6 is \$2114.29 based on Cost Rate Table A

- Double-click **Yan Li's** name. The Assignment Information dialog box appears.
- Click the **General** tab, if it is not already selected.
- In the Cost rate table box, type or select **B**, and then click **OK**. Microsoft Project applies Yan Li's Cost Rate Table B to the assignment. The new cost of the assignment, \$1,714.29, is reflected in the total cost column. Your screen should look similar to the following figure.

Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Details	S	S	M	T	W	T	F
0 Don Funk Music Video	\$0.00	Prorated	59,629.64	Work							
1 Pre-Production	\$0.00	Prorated	\$18,999.64	Work			34h	28h	21.03h	16.85h	16.85h
2 Pre-Production begins	\$0.00	Prorated	\$0.00	Work			34h	28h	21.03h	16.85h	16.85h
3 Review screenplay	\$0.00	Prorated	\$4,590.00	Work							
Scott Seely			\$2,340.00	Work							
Jeff Pike			\$2,250.00	Work							
4 Develop scene blocking and schedule	\$0.00	Prorated	\$1,560.00	Work							
Scott Seely			\$780.00	Work							
Judy Lew			\$780.00	Work							
5 Develop production layouts	\$0.00	Prorated	\$4,640.00	Work			28h	28h	10.5h		
Jeff Pike			\$1,500.00	Work			8h	8h	3h		
Brenda Diaz			\$1,020.00	Work			8h	8h	3h		
Brad Sutton			\$1,320.00	Work			8h	8h	3h		
Annette Hill			\$800.00	Work			4h	4h	1.5h		
6 Identify and reserve locations	\$0.00	Prorated	\$6,812.14	Work					10.53h	16.85h	16.85h
Jeff Pike			\$1,875.00	Work					2.5h	4h	4h
Annette Hill			\$1,142.86	Work					1.43h	2.28h	2.28h
Ryan Ithrig			\$1,800.00	Work					3.75h	6h	6h
Yan Li			\$1,714.29	Work					2.85h	4.57h	4.57h
DVD			\$80.00	Work					0.2	0.32	0.32
7 Book musicians	\$0.00	Prorated	\$0.00	Work							
8 Book dancers	\$0.00	Prorated	\$0.00	Work							
9 Reserve audio recording equipment	\$0.00	Prorated	\$0.00	Work							
10 Reserve video recording equipment	\$0.00	Prorated	\$0.00	Work							

Yan Li's cost for task 6 is \$1714.29 based on Cost Rate Table B

- SAVE** the project schedule.

7.5 Specify a Resource's Availability Over Time

- On the ribbon, click the **Resource Sheet** button.
- In the Resource Name column, double-click the name of resource 32, **electrician**. The Resource Information dialog box appears.
- Click the **General** tab, if it is not already selected. You originally planned that there would be three electricians available for the entire video production, but you have just determined that there will only be two electricians available from May 1–May 20, 2016.
- Under Resource Availability, in the first row of the Available From column, leave **NA** (Microsoft Project's term for a null field, or a field that is blank).
- In the Available To cell in the first row, key or select **4/30/16**.
- In the Available From cell in the second row, key or select **5/1/16**.

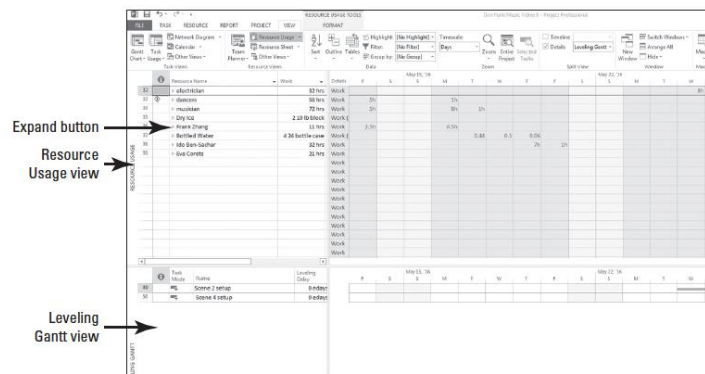
7. In the Available To cell in the second row, key or select **5/20/16**.
8. In the Units cell in the second row, key or select **200%**.
9. In the Available From cell in the third row, key or select **5/21/16**.
10. Leave the Available To cell in the third row blank. Microsoft Project will fill this with **NA**.
11. In the Units cell in the third row, type or select **300%**, and then press **Enter**. Your screen should look similar to the following figure.

Only two electricians are available between 5/1 and 5/20

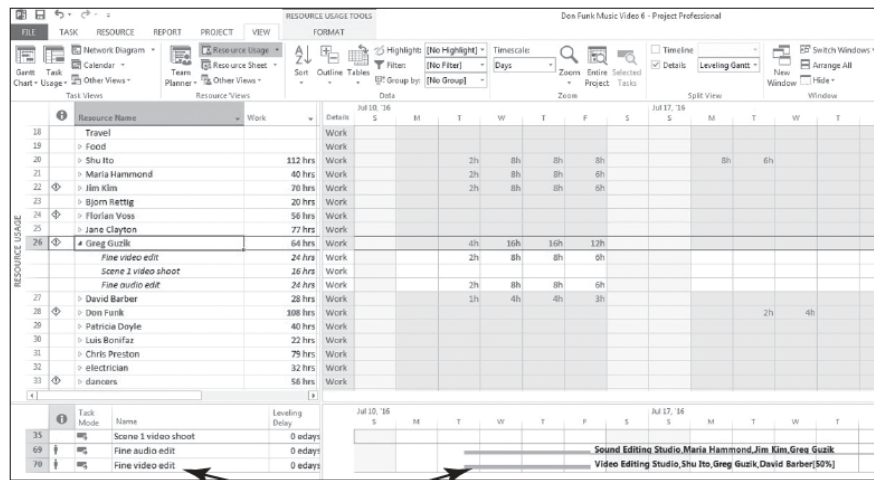
12. Click **OK** to close the Resource Information dialog box.
13. **SAVE** the project schedule.

7.6 Manually Resolve a Resource Over Allocation

1. On the View ribbon, click the **down-arrow** to the right of the Resource Sheet button, click **More Views**, select **Resource Allocation**, and then click the **Apply** button. Microsoft Project switches to the Resource Allocation view. This is a split view that displays the Resource Usage view in the top pane and the Leveling Gantt view in the bottom pane.
2. On the ribbon, in the Zoom group, click the **down-arrow** in the Timescale box and select days. Your screen should look similar to the following figure.

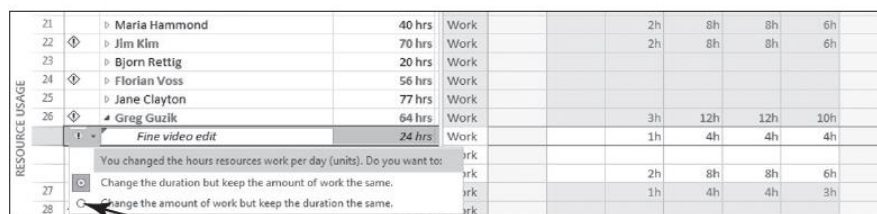


3. In the Resource Usage view, **scroll vertically** through the Resource Name column so that you can see the names. The names you see formatted in red are over allocated resources.
4. In the Resource Name column, navigate (scroll) to and select the name of resource 26, **Greg Guzik**.
5. Click the **expand button** next to Greg Guzik's name to display his assignments. Scroll down to see the assignments, if necessary.
6. Press the **F5** key. Type **7/15/16** in the Date box, and then click **OK**. The Leveling Gantt pane shows the task bars for two of Greg Guzik's assignments. Your screen should look similar to following figure.



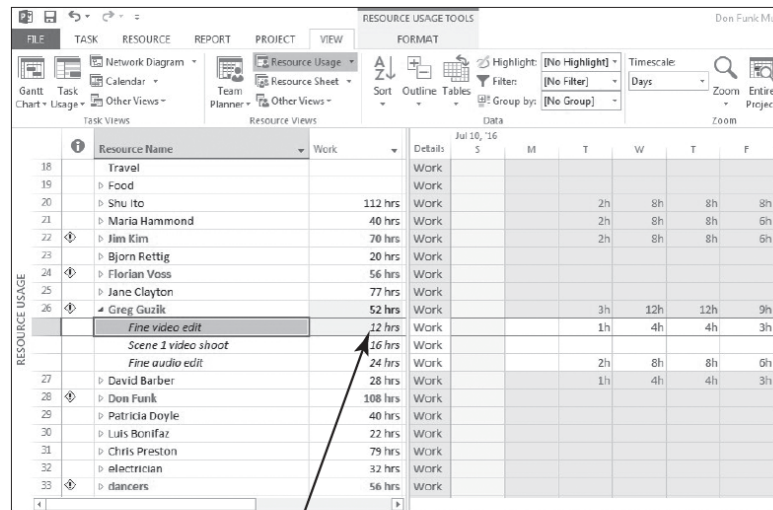
Greg Guzik's assignments and associated Gantt bars

7. In the Resource Name column, double-click Greg's first assignment, **Fine video edit**. The Assignment Information dialog box appears.
8. Click the **General** tab, if it is not already selected.
9. In the Units box, select **50%**, and then click **OK** to close the Assignment Information dialog box.
10. Click the **Actions** button. Review the options in the list that appears. Your screen should look similar to the following figure.



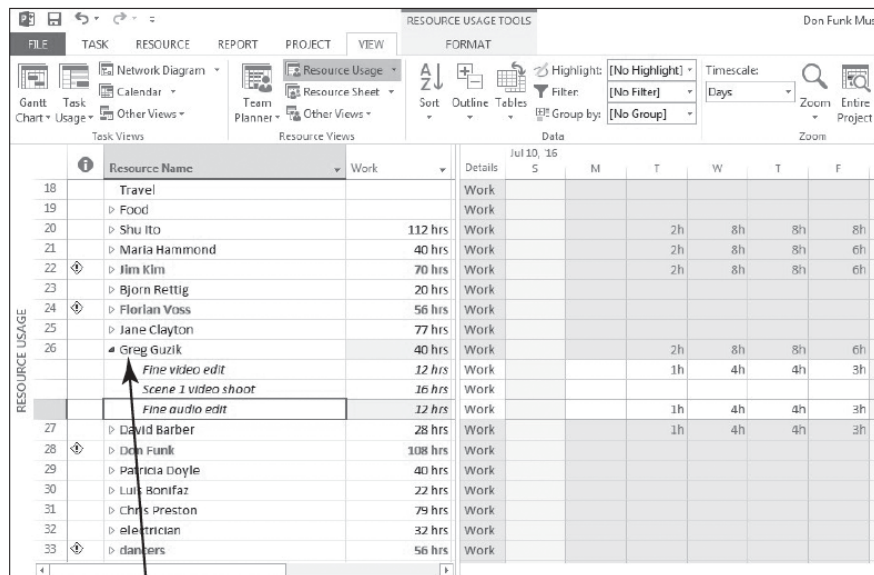
Select the second option in the Actions Tag list

11. Click **Change the amount of work but keep the duration the same** in the Actions option list. Microsoft Project reduces Greg's work assignments on the task and restores the task to its original duration. Your screen should look similar to the following figure.



Task work hours have been reduced

12. In the Resource Name column, double-click Greg's second assignment, **Fine audio edit**. The Assignment Information dialog box appears.
13. Click the **General** tab if it is not already visible.
14. In the Units box, type or select **50%**, and then click **OK** to close the Assignment Information dialog box.
15. Click the **Actions** button. Click **Change the amount of work but keep the duration the same** in the Actions option list. Greg's assignments on Wednesday and Thursday are reduced to eight hours each day. You have manually changed Greg's assignments to reduce his work and resolve his over allocation. He is now fully allocated on Wednesday through Friday. Your screen should look similar to the following figure.

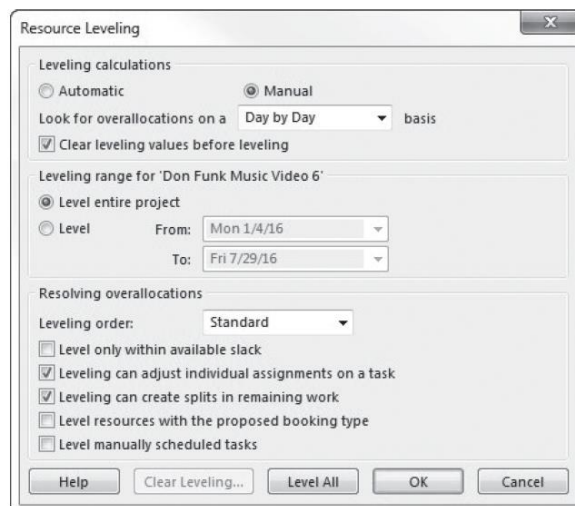


Greg Guzik is no longer over allocated

16. **SAVE** the project schedule.

7.7 Use Resource Leveling to Resolve an Over Allocation

1. On the ribbon, in the Split View group, deselect the **Details** checkbox.
2. On the ribbon, click **Resource Sheet**, located in the Resource Views group. The Resource Sheet view appears. Take note of the resource names that appear in red and have the over allocated icon in the Indicators column.
3. Click on the **Resource** tab. In the Level group, select **Leveling Options**. The Resource Leveling dialog box appears.
4. In the Resource Leveling dialog box, under Leveling calculations, select **Manual**, if it is not already selected.
5. In the Look for over allocations on a basis box, select **Day by Day**.
6. Select the **Clear leveling values before leveling** box.
7. Under Leveling range for, select **Level entire project**.
8. Under Resolving over allocations, in the Leveling order box, select **Standard**.
9. Clear the **Level only within available slack** check box.
10. Select the **Leveling can adjust individual assignments on a task** check box.
11. Select the **Leveling can create splits in remaining work** check box.
12. Clear the **Level resources with the proposed booking type** check box.
13. Clear the **Level manually scheduled tasks** check box. Your screen should look similar to the following figure.
14. Click the **Level All** button.



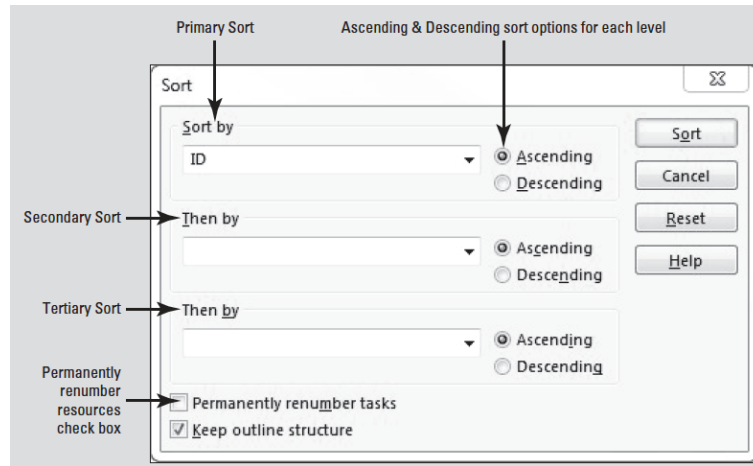
15. Microsoft Project levels over-allocated resources. Notice that resource 6, Brad Sutton and resource 22, Jim Kim no longer are over allocated. Some resources may still be formatted in red, meaning they are still over allocated, probably due to being assigned work during their normal non-working times. Your screen should look similar to the following figure.

	Resource Name	Type	Material	Initials	Group	Max.
1	Jamie Reding	Work		J		100%
2	Scott Seely	Work		S		100%
3	Jeff Pike	Work		J		100%
4	Judy Lew	Work		J		100%
5	Brenda Diaz	Work		B		100%
6	Brad Sutton	Work		B		100%
7	Annete Hill	Work		A		50%
8	Ryan Ihrig	Work		R		100%
9	Yan Li	Work		Y		100%
10	Sound Technician	Work		S		300%
11	Digital Truck-Mounted Video Camera	Work		D		200%
12	Sound Editing Studio	Work		S		100%
13	Light Banks	Work		L		400%
14	Video Editing Studio	Work		V		100%
15	Microphone Bundles	Work		M		500%
16	Dolly	Work		D		200%
17	DVD	Material	2-hour disc	D		
18	Travel	Cost		T		
19	Food	Cost		F		
20	Shu Ito	Work		S		100%
21	Maria Hammond	Work		M		100%
22	Jim Kim	Work		J		100%
23	Bjorn Rettig	Work		B		100%
24	Florian Voss	Work		F		100%
25	Jane Clayton	Work		J		100%
26	Greg Guzik	Work		G		100%
27	David Barber	Work		D		100%
28	Don Fank	Work		D		100%
29	Patricia Doyle	Work		P		100%
30	Luis Bonifaz	Work		L		100%
31	Chris Preston	Work		C		100%
32	electrician	Work		e		300%
33	dancers	Work		d		100%
34	musician	Work		m		100%
35	Dry Ice	Material	10 lb block	D		
36	Frank Zhang	Work		F		100%
37	Bottled Water	Material	24 bottle cas	B		
38	Ido Ben-Sachar	Work		I		100%
39	Eva Corets	Work		E		100%

16. On the ribbon, click the **down-arrow** under the Team Planner button. Select **More Views**, select **Leveling Gantt**, and then click **Apply**. Microsoft Project displays the Leveling Gantt view.
17. Press the **F5** key. Type **60** in the ID box. Your screen should look similar to the figure on the next slide.
18. **SAVE** the project schedule, and then **CLOSE** the file.

8 Project Information: Sorting, Grouping, and Filtering

In Microsoft Project, you can use the Sort dialog box to sort task or resource information in the current view by a specified field or fields (see following figure).



8.1 Sort Data in a Resource View

1. **OPEN *Don Funk Music Video 7M*. SAVE the file as *Don Funk Music Video 7*.**
2. Click the **View** tab, and then click **Resource Sheet**. The Resource Sheet view appears. The default table in the Resource Sheet view is the Entry table. However, you want to look at the cost per resource, which is not displayed in the Entry table.
3. On the ribbon, click the **Tables** button in the Data group and then select **Summary**. The Summary table appears in the Resource Sheet view.
4. Auto fit the columns so the data can be easily read. Your screen should look similar to the following figure.

Cost per resource in the summary table

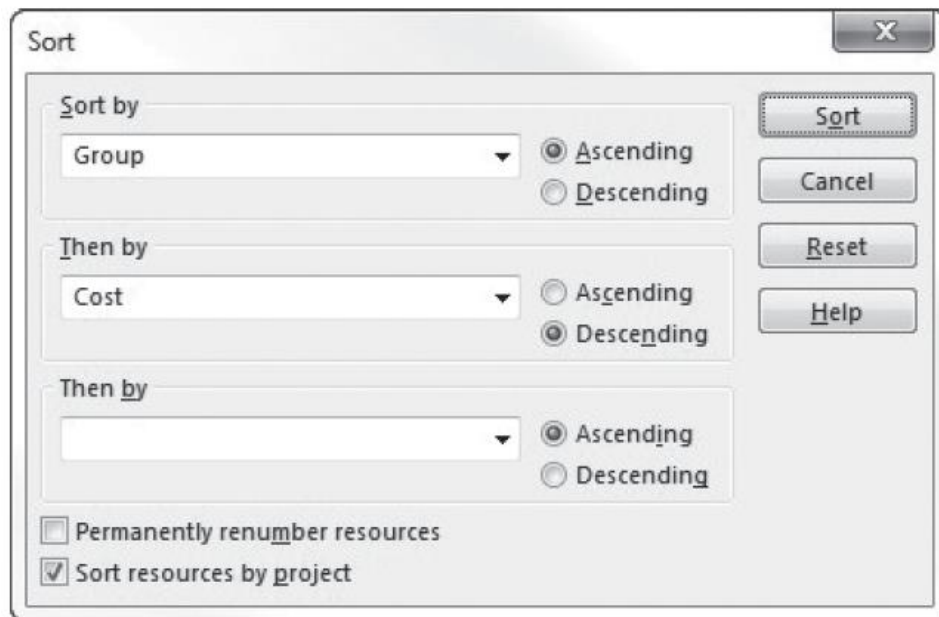
Resource Name	Group	Max Units	Peak	Est. Rate	Est. Cost	Est. Cost	Work
1 Jamie Redding		100%	100%	\$1,000.00/wk	\$0.00/hr	\$2,125.00	85 hrs
2 Scott Seely		100%	100%	\$18.50/hr	\$0.00/hr	\$4,900.00	260 hrs
3 Jeff Pike		100%	100%	\$750.00/wk	\$0.00/hr	\$6,317.50	338 hrs
4 Judy Lew		100%	180%	\$19.50/hr	\$0.00/hr	\$1,306.50	67 hrs
5 Brenda Diaz		100%	100%	\$12.75/hr	\$0.00/hr	\$1,096.50	86 hrs
6 Brad Sutton		100%	100%	\$16.50/hr	\$0.00/hr	\$3,217.50	195 hrs
7 Annette Hill		50%	50%	\$20.00/hr	\$0.00/hr	\$1,942.86	97.15 hrs
8 Ryan King		100%	100%	\$12.00/hr	\$0.00/hr	\$1,872.00	156 hrs
9 Yan Li		100%	100%	\$18.50/hr	\$0.00/hr	\$2,156.25	138.28 hrs
10 Sound Technician		300%	100%	\$16.50/hr	\$0.00/hr	\$1,188.00	72 hrs
11 Digital Truck-Mounted Video Camera		200%	100%	\$1,000.00/wk	\$0.00/hr	\$500.00	16 hrs
12 Sound Editing Studio		100%	100%	\$250.00/day	\$0.00/hr	\$1,500.00	48 hrs
13 Light Banks		400%	100%	\$0.00/hr	\$0.00/hr	\$0.00	16 hrs
14 Video Editing Studio		100%	100%	\$250.00/day	\$0.00/hr	\$3,187.50	103 hrs
15 Microphone Bundles		500%	100%	\$0.00/hr	\$0.00/hr	\$0.00	16 hrs
16 Dolly		200%	100%	\$25.00/day	\$0.00/hr	\$100.00	32 hrs
17 DVD			0 2-hour disc/hr	\$10.00		\$150.00	15 2-hour disc
18 Travel			0%			\$0.00	
19 Food			0%			\$1,250.00	
20 Shu Ho		100%	100%	\$18.00/hr	\$0.00/hr	\$1,792.00	112 hrs
21 Maria Hammond		100%	100%	\$18.00/hr	\$0.00/hr	\$720.00	40 hrs
22 Jim Kim		100%	200%	\$16.50/hr	\$0.00/hr	\$1,155.00	70 hrs
23 Bjorn Rettig		100%	50%	\$18.00/hr	\$0.00/hr	\$360.00	20 hrs
24 Florian Voss		100%	100%	\$13.00/hr	\$0.00/hr	\$728.00	56 hrs
25 Jane Clayton		100%	100%	\$15.00/hr	\$0.00/hr	\$1,155.00	77 hrs
26 Greg Guzik		100%	100%	\$18.50/hr	\$0.00/hr	\$748.00	40 hrs
27 David Barber		100%	50%	\$14.00/hr	\$0.00/hr	\$595.00	28 hrs
28 Don Funk		100%	100%	\$1,000.00/day	\$0.00/hr	\$13,500.00	368 hrs
29 Patricia Doyle		100%	100%	\$17.50/hr	\$0.00/hr	\$700.00	40 hrs
30 Luis Bonifaz		100%	100%	\$14.00/hr	\$0.00/hr	\$308.00	22 hrs
31 Chris Preston		100%	100%	\$17.00/hr	\$0.00/hr	\$1,343.00	79 hrs
32 electrician		300%	100%	\$30.00/hr	\$0.00/hr	\$960.00	32 hrs
33 dancers		100%	100%	\$30.00/hr	\$0.00/hr	\$1,130.00	56 hrs
34 musician		100%	100%	\$20.00/hr	\$0.00/hr	\$1,440.00	72 hrs
35 Dry Ice			0 10 lb block/day	\$12.00		\$24.00	2 10 lb block
36 Frank Zhang		100%	50%	\$18.50/hr	\$0.00/hr	\$181.50	11 hrs
37 Bottled Water			0 24 bottle case/day	\$0.00		\$20.00	4 24 bottle case
38 Ido Ben-Sachar		100%	100%	\$13.50/hr	\$0.00/hr	\$432.00	32 hrs
39 Eva Corets		100%	100%	\$13.50/hr	\$0.00/hr	\$283.50	23 hrs

- On the ribbon, click the **Sort** button in the Data group and then click **Sort By**. The Sort dialog box appears (as shown in the figure on slide 3).
- In the **Sort by** section, select **Cost** from the dropdown menu. Next to that, click **Descending**. Make sure that the Permanently renumber resources check box at the bottom of the Sort dialog box is NOT checked.
- Click the **Sort** button. The Summary table is sorted from the highest to lowest value in the Cost column. This sort enables you to look at resource costs across the entire project. Your screen should look similar to the following figure.

Sorted by cost in descending order

Resource Name	Group	Max. Units	Peak	Std. Rate	Ovt.	Cost	Work
Don Funk		100%	100%	\$1,000.00/day	\$0.00/hr	\$13,500.00	108 hrs
Jeff Pike		100%	100%	\$750.00/wk	\$0.00/hr	\$6,337.50	338 hrs
Scott Seely		100%	100%	\$19.50/hr	\$0.00/hr	\$3,900.00	200 hrs
Brad Sutton		100%	100%	\$16.50/hr	\$0.00/hr	\$3,217.50	195 hrs
Video Editing Studio		100%	100%	\$250.00/day	\$0.00/hr	\$3,187.50	102 hrs
Yan Li		100%	100%	\$18.50/hr	\$0.00/hr	\$2,158.29	138.28 hrs
Jamie Reding		100%	100%	\$1,000.00/wk	\$0.00/hr	\$2,125.00	85 hrs
Annete Hill		50%	50%	\$20.00/hr	\$0.00/hr	\$1,942.86	97.15 hrs
Ryan Ihrig		100%	100%	\$12.00/hr	\$0.00/hr	\$1,872.00	156 hrs
Shu Ito		100%	100%	\$16.00/hr	\$0.00/hr	\$1,792.00	112 hrs
Sound Editing Studio		100%	100%	\$250.00/day	\$0.00/hr	\$1,500.00	48 hrs
musician		100%	100%	\$20.00/hr	\$0.00/hr	\$1,440.00	72 hrs
Chris Preston		100%	100%	\$17.00/hr	\$0.00/hr	\$1,343.00	79 hrs
Judy Lew		100%	160%	\$19.50/hr	\$0.00/hr	\$1,306.50	67 hrs
Food			0%			\$1,250.00	
Sound Technician		300%	100%	\$16.50/hr	\$0.00/hr	\$1,188.00	72 hrs
Jim Kim		100%	200%	\$16.50/hr	\$0.00/hr	\$1,155.00	70 hrs
Jane Clayton		100%	100%	\$15.00/hr	\$0.00/hr	\$1,155.00	77 hrs
dancers		100%	100%	\$20.00/hr	\$0.00/hr	\$1,120.00	56 hrs
Brenda Diaz		100%	100%	\$12.75/hr	\$0.00/hr	\$1,096.50	86 hrs
electrician		300%	100%	\$30.00/hr	\$0.00/hr	\$960.00	32 hrs
Greg Guzik		100%	100%	\$18.50/hr	\$0.00/hr	\$740.00	40 hrs
Florian Voss		100%	100%	\$13.00/hr	\$0.00/hr	\$728.00	56 hrs
Maria Hammond		100%	100%	\$18.00/hr	\$0.00/hr	\$720.00	40 hrs
Patricia Doyle		100%	100%	\$17.50/hr	\$0.00/hr	\$700.00	40 hrs
Digital Truck-Mounted Video Camera		200%	100%	\$1,000.00/wk	\$0.00/hr	\$500.00	16 hrs
Ido Ben-Sachar		100%	100%	\$13.50/hr	\$0.00/hr	\$432.00	32 hrs
David Barber		100%	50%	\$14.00/hr	\$0.00/hr	\$392.00	28 hrs
Bjorn Rettig		100%	50%	\$18.00/hr	\$0.00/hr	\$360.00	20 hrs
Luis Bonifaz		100%	100%	\$14.00/hr	\$0.00/hr	\$308.00	22 hrs
Eva Corets		100%	100%	\$13.50/hr	\$0.00/hr	\$283.50	21 hrs
Frank Zhang		100%	50%	\$16.50/hr	\$0.00/hr	\$181.50	11 hrs
DVD			0 2-hour disc/hr	\$10.00		\$150.00	15 2-hour disc
Dolly		200%	100%	\$25.00/day	\$0.00/hr	\$100.00	32 hrs
Dry Ice			0 10 lb block/day	\$12.00		\$24.00	2 10 lb block
Bottled Water			0 24 bottle case/day	\$5.00		\$20.00	4 24 bottle case
Light Banks		400%	100%	\$0.00/hr	\$0.00/hr	\$0.00	16 hrs
Microphone Bundles		300%	100%	\$0.00/hr	\$0.00/hr	\$0.00	16 hrs
Travel			0%			\$0.00	

- On the ribbon, click **Sort**, and then click **Sort by**. The Sort dialog box appears.
- In the Sort by section, select **Group** from the dropdown menu. Next to that, click **Ascending**.
- In the Then by section, select **Cost** from the drop-down menu. Then click the radio button next to **Descending**. Make sure the Permanently renumber resources box is not checked. Your screen should look similar to the following figure.



11. Click the **Sort** button. The Resource Sheet view is sorted to display resources sorted first |by Group (Equipment, Talent, etc.) and then by Cost within each group. Your screen should look similar to the following figure.

Sorted by Group in ascending order first... ...and then sorted by cost in descending order

Resource Name	Group	Max. Units	Peak	Std. Rate	Ovt.	Cost	Work
19 Food	Cost			0%		\$1,250.00	
18 Travel	Cost			0%		\$0.00	
32 Sound Technician	Crew	300%	100%	\$16.50/hr	\$0.00/hr	\$1,188.00	72 hrs
10 electrician	Crew	300%	100%	\$30.00/hr	\$0.00/hr	\$960.00	32 hrs
11 Digital Truck-Mounted Video Camera	Equipment	200%	100%	\$1,000.00/wk	\$0.00/hr	\$500.00	16 hrs
16 Dolly	Equipment	200%	100%	\$25.00/day	\$0.00/hr	\$100.00	32 hrs
13 Light Banks	Equipment	400%	100%	\$0.00/hr	\$0.00/hr	\$0.00	16 hrs
15 Microphone Bundles	Equipment	500%	100%	\$0.00/hr	\$0.00/hr	\$0.00	16 hrs
14 Video Editing Studio	Lab	100%	100%	\$250.00/day	\$0.00/hr	\$3,187.50	102 hrs
12 Sound Editing Studio	Lab	100%	100%	\$250.00/day	\$0.00/hr	\$1,500.00	48 hrs
17 DVD	Materials			0 2-hour disc/hr	\$10.00	\$150.00	15 2-hour disc
35 Dry Ice	Materials			0 10 lb block/day	\$12.00	\$24.00	2 10 lb block
37 Bottled Water	Materials			0 24 bottle case/day	\$5.00	\$20.00	4 24 bottle case
3 Jeff Pike	Production	100%	100%	\$750.00/wk	\$0.00/hr	\$6,337.50	338 hrs
2 Scott Seely	Production	100%	100%	\$19.50/hr	\$0.00/hr	\$3,900.00	200 hrs
6 Brad Sutton	Production	100%	100%	\$16.50/hr	\$0.00/hr	\$3,217.50	195 hrs
9 Yan Li	Production	100%	100%	\$18.50/hr	\$0.00/hr	\$2,158.29	138.28 hrs
1 Jamie Reding	Production	100%	100%	\$1,000.00/wk	\$0.00/hr	\$2,125.00	85 hrs
7 Annette Hill	Production	50%	50%	\$20.00/hr	\$0.00/hr	\$1,942.86	97.15 hrs
8 Ryan Irling	Production	100%	100%	\$12.00/hr	\$0.00/hr	\$1,872.00	156 hrs
20 Shu Ito	Production	100%	100%	\$16.00/hr	\$0.00/hr	\$1,792.00	112 hrs
21 Chris Preston	Production	100%	100%	\$17.00/hr	\$0.00/hr	\$1,343.00	79 hrs
4 Judy Lew	Production	100%	180%	\$19.50/hr	\$0.00/hr	\$1,306.50	67 hrs
22 Jim Kim	Production	100%	200%	\$16.50/hr	\$0.00/hr	\$1,155.00	70 hrs
26 Jane Clayton	Production	100%	100%	\$15.00/hr	\$0.00/hr	\$1,155.00	77 hrs
5 Brenda Diaz	Production	100%	100%	\$12.75/hr	\$0.00/hr	\$1,096.50	86 hrs
25 Greg Guzik	Production	100%	100%	\$18.50/hr	\$0.00/hr	\$740.00	40 hrs
24 Florian Voss	Production	100%	100%	\$13.00/hr	\$0.00/hr	\$728.00	56 hrs
21 Maria Hammond	Production	100%	100%	\$18.00/hr	\$0.00/hr	\$720.00	40 hrs
38 Patricia Doyle	Production	100%	100%	\$17.50/hr	\$0.00/hr	\$700.00	40 hrs
27 Ido Ben-Sachar	Production	100%	100%	\$13.50/hr	\$0.00/hr	\$432.00	32 hrs
23 David Barber	Production	100%	50%	\$18.00/hr	\$0.00/hr	\$392.00	28 hrs
39 Bjorn Retting	Production	100%	100%	\$14.00/hr	\$0.00/hr	\$360.00	20 hrs
30 Luis Bonifaz	Production	100%	100%	\$14.00/hr	\$0.00/hr	\$308.00	22 hrs
36 Eva Corets	Production	100%	50%	\$13.50/hr	\$0.00/hr	\$283.50	21 hrs
28 Frank Zhang	Production	100%	50%	\$16.50/hr	\$0.00/hr	\$181.50	11 hrs
34 Don Funk	Talent	100%	100%	\$1,000.00/day	\$0.00/hr	\$13,500.00	108 hrs
33 dancers	Talent	100%	100%	\$20.00/hr	\$0.00/hr	\$1,440.00	72 hrs
						\$1,120.00	56 hrs

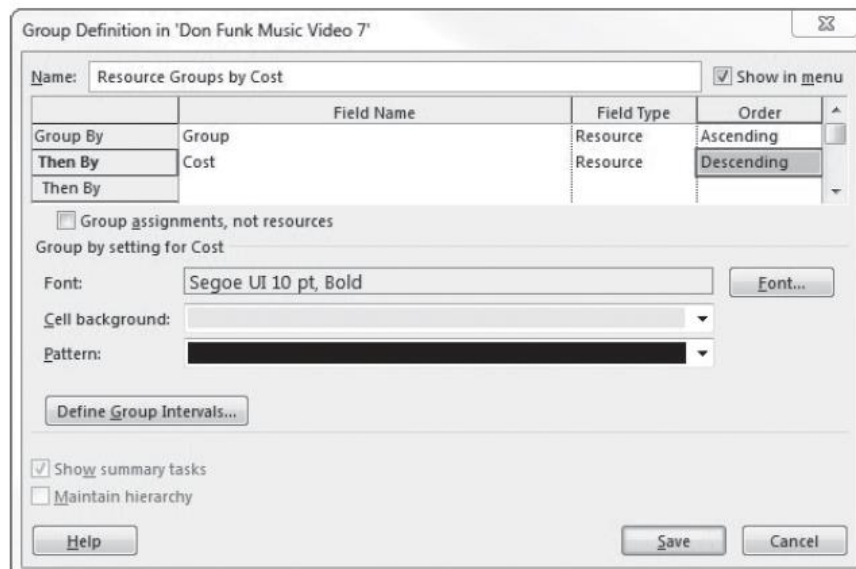
12. On the Quick Access Toolbar, click the **Undo** button one time. The Undo button reverses the last sort you performed, restoring the data to the original sort order (by Cost only).
13. Now click the **Undo** button again. The data is restored to the original order in the Summary table of the Resource Sheet view (as displayed previously on slide 7). The

Multiple Level Undo enables you to undo actions or sets of actions while you are working on your project schedule.

14. **SAVE** the project schedule.

8.2 Group Data in a Resource View

1. On the View ribbon, click the **down-arrow** in the **Group By** box, (currently is has *No Group*) and then click **Resource Group**. Microsoft Project reorganizes the data into resource groups and presents it in an expanded outline form. It also adds summary costs by group. Your screen should look similar to the figure on the next slide. The summary data rows are set off with a colored background (yellow in this case).
2. On the View ribbon, click the **down-arrow** in the Group By box, (currently it has *Resource Group*) and then click **More Groups**. The More Groups dialog box appears, displaying all of the predefined groups for tasks and resources available to you. You will create a new group that is similar to the Resource Group.
3. Select **Resource Group** (if it is not already selected), and then click the **Copy** button. The Group Definition dialog box appears.
4. In the Names box, key **Resource Groups by Cost**.
5. In the Field Name column, click the **first empty cell** below Group.
6. Type or select **Cost**.
7. In the Order column for the Cost field, click **Ascending** to select it and then select **Descending** from the dropdown menu. The resources will be sorted within their groups by descending cost. The Group Definition dialog box should look similar to the following figure.



8. In the Group Definition dialog box, click the **Define Group Intervals** button. The Define Group Intervals dialog box appears.
9. In the Group on box, select **Interval** from the dropdown menu.
10. Type **500** in the Group interval box, and then click the **OK** button.

11. Click the **Save** button in the Group Definition dialog box to close it. Resource Groups by Cost appears as a new group in the More Groups dialog box.
12. Click the **Apply** button in the More Groups dialog box. Microsoft Project applies the new group to the Resource Sheet view.
13. Right-click the **Resource Name** column heading then select **Field Settings**. The Field Settings dialog box appears. You want to widen the Resource Name column.
14. Click the **Best Fit** button in the Field Settings dialog box. The Resource Name column is widened. If needed, scroll to the top of the view. Your screen should look similar to the following figure. The resources are grouped by Resource Group (the yellow shaded cells) and within each group by cost values at \$500 increments (the blue shaded cells).

Data grouped by resource group and then by cost

Resource Name	Group	Cost	Max Units	Peak	Std. Rate	Out	Work
Group: Cost	Cost	\$1,000.00 - \$1,500.00	0%	0%	\$1,250.00		
Food	Cost	\$1,000.00 - \$1,500.00	0%	0%	\$1,250.00		
Travel	Cost	\$0.00 - \$500.00	0%	0%	\$0.00		
Group: Crew	Crew	\$1,000.00 - \$1,500.00	600%	200%	\$2,148.00		104 hrs
Sound Technician	Crew	\$1,000.00 - \$1,500.00	300%	100%	\$1,188.00		72 hrs
electrician	Crew	\$500.00 - \$1,000.00	300%	100%	\$960.00		32 hrs
Digital Truck-Mounted Video Camera	Equipment	\$500.00 - \$1,000.00	200%	100%	\$500.00		16 hrs
Light Banks	Equipment	\$0.00 - \$500.00	400%	100%	\$0.00/hr	\$0.00/hr	16 hrs
Microphone Bundles	Equipment	\$0.00 - \$500.00	200%	100%	\$0.00/hr	\$0.00/hr	16 hrs
Dolly	Equipment	\$0.00 - \$500.00	200%	100%	\$25.00/day	\$0.00/hr	32 hrs
Group: Lab	Lab	\$2,000.00 - \$2,500.00	200%	100%	\$4,687.50		150 hrs
Video Editing Studio	Lab	\$2,000.00 - \$2,500.00	100%	100%	\$3,187.50		102 hrs
Sound Editing Studio	Lab	\$1,500.00 - \$2,000.00	100%	100%	\$1,500.00		48 hrs
Group: Materials	Materials	\$0.00 - \$500.00			\$184.00		
DVD	Materials	\$0.00 - \$500.00			\$150.00		15 2-hour disc
Dry Ice	Materials	\$0.00 - \$500.00			\$24.00		2 10 lb block
Bottled Water	Materials	\$0.00 - \$500.00			\$20.00		4 24 bottle case
Group: Production	Production	\$5,000.00 - \$5,500.00	2,250%	2,250%	\$34,246.14		2,010.43 hrs
Jeff Parker	Production	\$5,000.00 - \$5,500.00	100%	100%	\$6,337.50		338 hrs
Scott Seely	Production	\$3,500.00 - \$4,000.00	100%	100%	\$1,900.00		200 hrs
Brad Sutton	Production	\$3,000.00 - \$3,500.00	100%	100%	\$3,217.50		195 hrs
Jamie Reding	Production	\$2,000.00 - \$2,500.00	100%	100%	\$4,283.29		223.29 hrs
Yan Li	Production	\$1,500.00 - \$2,000.00	100%	100%	\$2,138.29		138.29 hrs
Annalee Wells	Production	\$1,000.00 - \$1,500.00	50%	50%	\$5,406.86		385.15 hrs
Ryan Hing	Production	\$500.00 - \$1,000.00	100%	100%	\$1,842.86		97.15 hrs
Shu Hing	Production	\$500.00 - \$1,000.00	100%	100%	\$1,872.00		156 hrs
	Production	\$500.00 - \$1,000.00	100%	100%	\$1,792.00		112 hrs

15. After you have reviewed the groupings you created, click the **down-arrow** in the Group By box, (currently it has Resource Groups by Cost) in the Data group, and then click **[No Group]**. Microsoft Project removes the groupings, restoring the original data. Displaying or removing a group has no effect on the data in the project.
16. **SAVE** the project schedule.

8.3 Create and Apply a Filter in a View

1. On the View ribbon, click the **Gantt Chart** button in the Task Views group. The Gantt Chart view appears.
2. The AutoFilter is on by default in the task and resource views. You can see small, chevron-style arrows on the right side of each column heading. You can use these arrows to select the AutoFilter option you want to use. Adjust the width of the Gantt Chart so that the Task Name, Duration, and Start columns are visible. Your screen should look like the following figure.

AutoFilter arrows

Task Name	Duration	Start	T	F	S
0 Don Funk Music Video	151 days	Mon 1/4/16			
1 Pre-Production	91.75 days	Mon 1/4/16			
2 Pre-Production begins	0 days	Mon 1/4/16			
3 Review screenplay	3.6 wks	Mon 1/4/16			
4 Develop scene blocking and schedule	2 wks	Tue 1/26/16			
5 Develop production layouts	0.53 mons	Fri 2/5/16			
6 Identify and reserve locations	5 wks	Wed 2/24/16			
7 Book musicians	2 wks	Wed 3/30/16			
8 Book dancers	2 wks	Wed 4/13/16			
9 Reserve audio recording equipment	1 wk	Wed 4/27/16			
10 Reserve video recording equipment	5 days	Wed 5/4/16			
11 Status Meeting	69.13 days	Mon 1/4/16			
27 Pre-Production complete	0 days	Wed 5/11/16			
28 Production	30 days	Wed 5/11/16			
29 Production begins	0 days	Wed 5/11/16			
30 Scene 1	6.75 days	Wed 5/11/16			
31 Scene 1 begin	0 days	Wed 5/11/16			
32 Scene 1 setup	2 days	Wed 5/11/16			
33 Scene 1 rehearsal	6 hrs	Fri 5/13/16			
34 Scene 1 vocal recording	1 day	Mon 5/16/16			
35 Scene 1 video shoot	2 days	Tue 5/17/16			
36 Scene 1 teardown	1 day	Thu 5/19/16			
37 Scene 1 complete	0 days	Fri 5/20/16			

- Click the **AutoFilter** arrow in the Task Name column heading and point to **Filters**, then click **Custom...**. The Custom AutoFilter dialog box appears. You want to see just the tasks that contain the letter-string of shoot%%, so you need to set up the Custom AutoFilter this way.
- In the Name section, select **contains** from the dropdown list in the first box if it is not already visible. In the adjacent box, type **shoot**. The Custom AutoFilter dialog box should look similar to the following figure.

Custom AutoFilter

Show rows where:

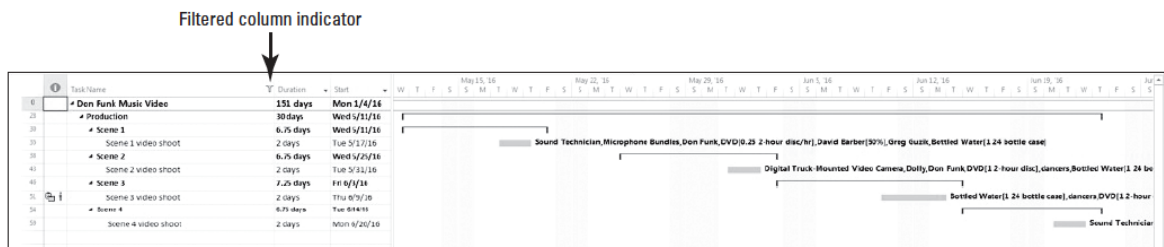
Name

contains shoot

☒ And ☐ Or

Save... OK Cancel

- Click the **OK** button to apply the filter and close the **Custom AutoFilter** dialog box. Microsoft Project filters the task list to show only the tasks that contain the word shoot, as well as their summary tasks. Your screen should look similar to the following figure. Note on the right side of the Task Name column there is a small “funnel” that appears. This is a visual indicator that an AutoFilter has been applied to this column in this view.



6. On the ribbon, click the **down-arrow** in the **Filter** box in the Data group, (currently has No Filter) and then select **Clear Filter**. The AutoFilter is cleared and all the tasks in the project schedule are displayed.
7. **SAVE** the project schedule.

8.4 Create a Custom Filter

1. On the View ribbon, click the **down-arrow** in the **Filter** box in the Data group, (currently has No Filter), then select **More Filters**. The More Filters dialog box appears. This dialog box shows you all of the predefined filters for tasks or resources that are available to you.
2. Click the **New** button. The Filter Definition dialog box appears.
3. In the Name box, type **Unfinished Shoots**.
4. In the first row of the Field Name column, type or select **Name**.
5. In the first row of the Test column, type or select **contains**.
6. In the first row of the Value(s) column, type **shoot**. You have now finished entering the first criterion for the filter. Next you will enter the second criterion.
7. In the second row of the And/Or column, select **And**.
8. In the second row of the Field Name column, type or select **Actual Finish**.
9. In the second row of the Actual finish column, type or select **equals**.
10. In the second row of the Value(s) column, type **NA**. "NA" is how Microsoft Project marks fields that do not yet have a value. In other words, any shooting task that does not yet have a value must be uncompleted. Your screen should look similar to the following figure.

The screenshot shows the 'Filter Definition in 'Don Funk Music Video'' dialog box. The 'Name' field contains 'Unfinished Shoots' and the 'Show in menu' checkbox is checked. The 'Filter' section contains a table with two rows of criteria:

And/Or	Field Name	Test	Value(s)
	Name	contains	shoot
And	Actual Finish	equals	NA

At the bottom, there is a 'Show related summary rows' checkbox (unchecked), a 'Help' button, and 'Save' and 'Cancel' buttons.

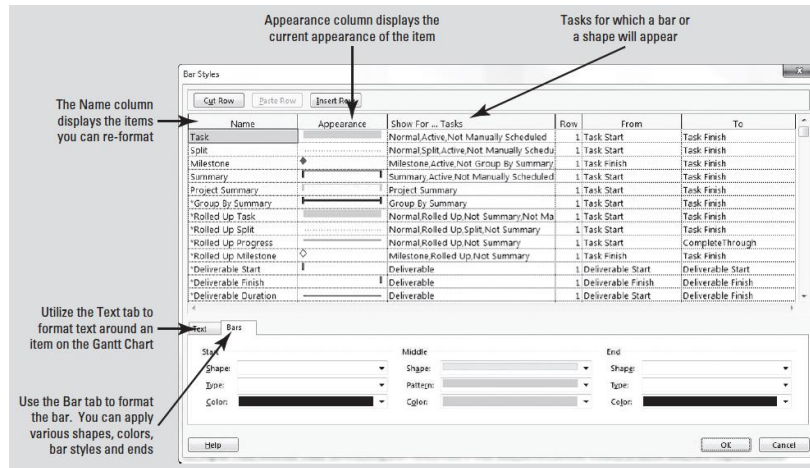
11. Click the **Save** button to close the Filter Definition dialog box.
12. Locate and select the **Unfinished Shoots** filter in the list, if necessary. Click the **Apply** button. Microsoft Project applies the new filter to your project schedule in the Gantt Chart view. Your screen should look similar to the following figure.



13. On the View ribbon, click the **down-arrow** in the Filter box in the Data group, (currently has Unfinished Shoots%) and then select **[No Filter]**. Microsoft Project removes the filter.
14. **SAVE** the project schedule. **CLOSE** the project schedule.

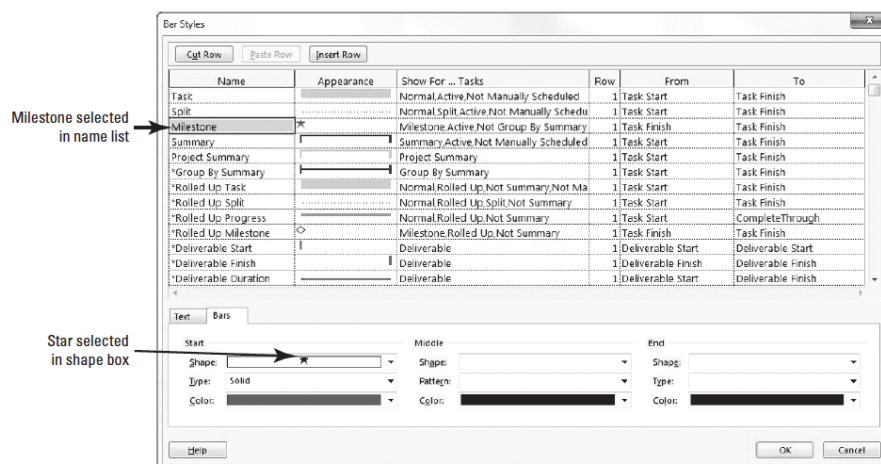
9 Project Schedule Formatting Fundamentals

In Microsoft Project, you can use the Bar Styles dialog box (see the following figure) to customize the appearance of items on the Gantt Chart.



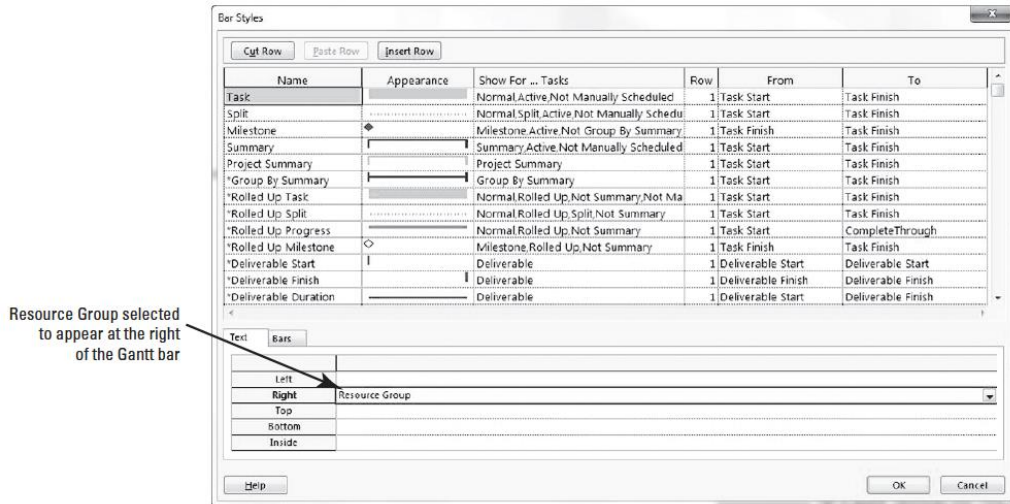
9.1 Modify the Gantt Chart Using the Bar Styles Dialog Box

1. **OPEN** the *Don Funk Music Video 8M* project schedule. **SAVE** the file as *Don Funk Music Video 8*.
2. Click the **Format** tab, then in the Bar Styles group click the **down-arrow** under the **Format** button. Select **Bar Styles** from the dropdown list. The Bar Styles dialog box appears.
3. In the Name column, select **Milestone**. You want to change the shape of the milestones on the Gantt Chart.
4. In the bottom half of the dialog box under the Start label, locate the Shape box. Select the **star** shape from the dropdown list in the Shape box. Note that the star shape now appears in the Appearance column for Milestone. Your screen should look similar to the following figure.

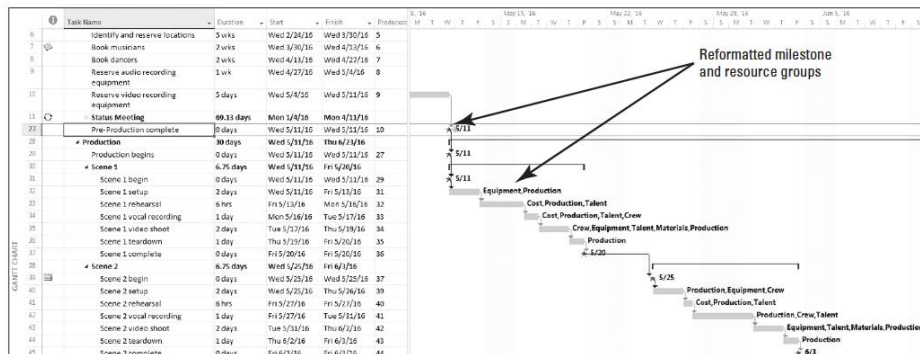


5. In the Name column at the top of the dialog box, select **Task**.

- In the bottom half of the dialog box, click the **Text** tab. You want to make a change to display the resource groups assigned rather than full names next to the task bars.
- In the **Text** tab, in the Right box, select **Resource Names**, click the **down-arrow**, and then select **Resource Group**. Your screen should look similar to the following figure.



- Click **OK** to close the Bar Styles dialog box. Microsoft Project applies the formatting changes you made to the Gantt Chart.
- Select the **name cell** of Task 27, **Pre-Production complete**. Press **Ctrl+Shift+F5**. This is the keyboard shortcut for Scroll to Task. Microsoft Project scrolls the Gantt Chart bar view to task 27, where you can see the reformatted milestones and resource groups. Your screen should look similar to the following figure.

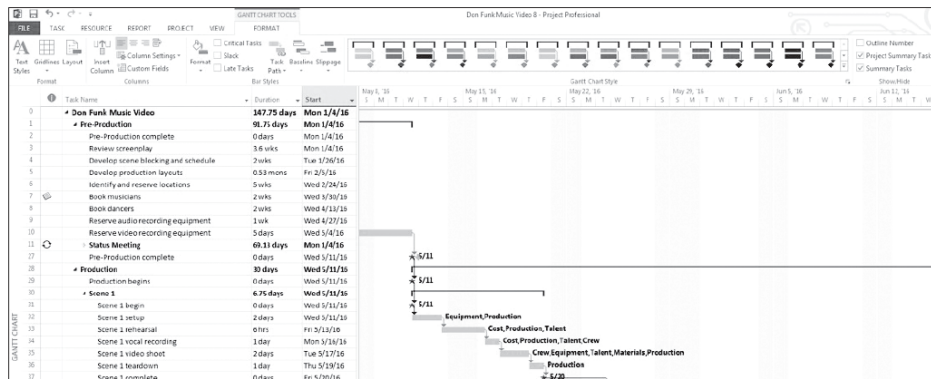


- SAVE** the project schedule.

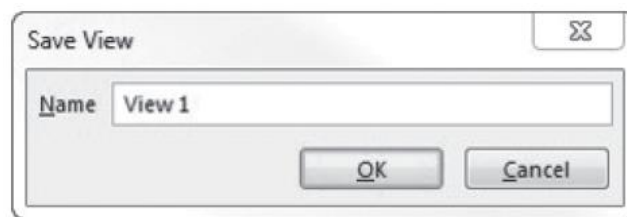
9.2 Modify the Gantt Chart Using Gantt Chart Styles

- Click the **Format** tab, under Gantt Chart Tools, if necessary.
- In the Show/Hide group, click the **Project Summary Task** box.
- Press the **F5** key. In the ID box, type **0** and click **OK**. Microsoft Project displays the project summary task (task ID 0) at the top of the Gantt Chart view. Now you will make a few adjustments to your screen so that all of the summary task information is visible.

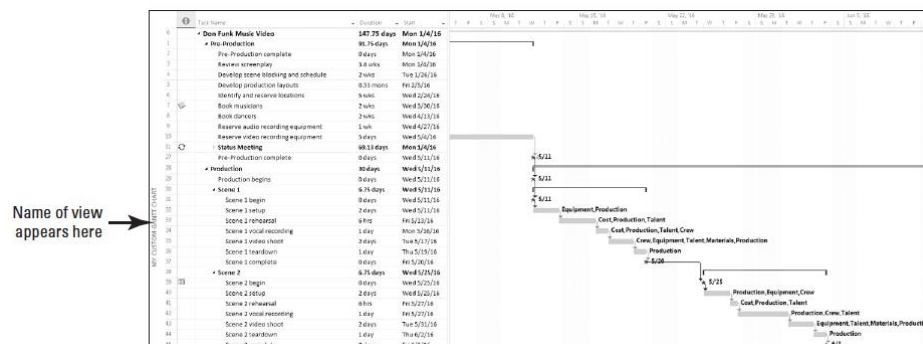
4. Drag the **vertical divider bar** between the table and chart to the right until at least the Duration and Start columns are visible, if necessary.
5. **Double-click** the right edge of the **Task Name** column, in the column heading, to expand the column so that you can see the entire value. Readjust the vertical divider bar, as necessary. Your screen should look similar to the following figure. Before you make further formatting changes, you will make a copy of the Gantt Chart view so that you will not affect the original Gantt Chart.



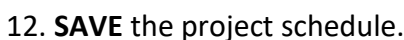
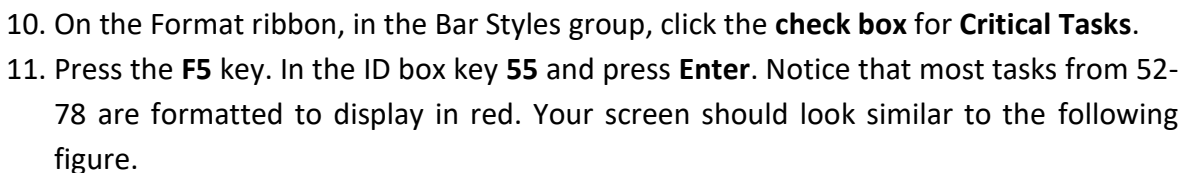
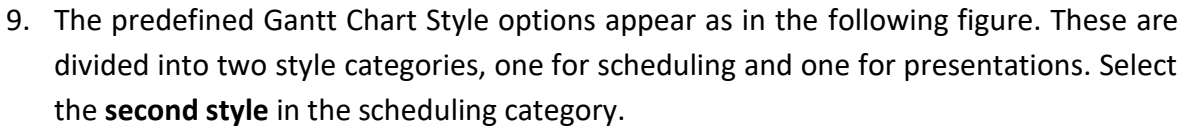
6. Click the **View** tab. In the Task Views group, click the **down-arrow** under the Gantt Chart button then select **Save View**. The Save View dialog box appears with View 1 as the default name as in the following figure.



7. In the Name Field, type **My Custom Gantt Chart**, and then click **OK**. The Save View dialog box closes. Note that the name of the new view is listed on the left edge of your screen. Your screen should look similar to the following figure.

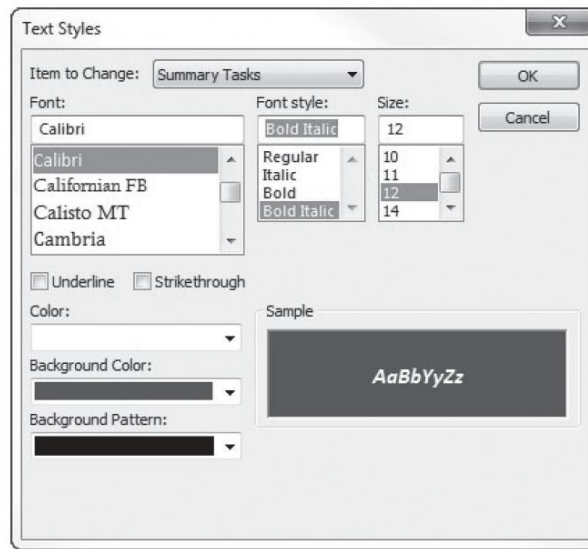


8. Click the **Format** tab. In the Gantt Chart Styles group, click the **More** button located at the lower right of the bar graphics, as shown in the following figure.



1. Click the **Task** tab, click the **down-arrow** under the Gantt Chart button and select **More Views**. The More Views dialog box appears.
2. In the More Views box, select **Task Sheet**, and then click **Apply**. The Detail Gantt view appears.
3. Press the **F5** key. In the ID box, type **0** and then press **Enter**. This brings you to the top of the Gantt Chart.
4. Click the **Format** tab under Text Sheet Tools. Then in the Format group click **Text Styles**. The Text Styles dialog box appears.

- In the Items to Change: box, click the sub-menu arrow and select **Summary Tasks** from the list
- In the Font: box, leave the default font type as it is. In the Font Style: box, select **Bold Italic**.
- In the Size: box, select **12** as the font size.
- In the Color: box, select **White**.
- In the Background Color: box select **dark blue** (ScreenTip will show as Blue, Darker 50%). Your Text Styles dialog box will look similar to the following figure.



- Click **OK**. Microsoft Project changes the formatting of all summary tasks to the attributes you specified. Your screen should look similar to the following figure.

Task Name	Duration	Start	Finish	Predecessors	Resource Names
Don Funk Music Video	147.75 days	Mon 1/4/16	Fri 7/29/16		
Pre-Production	91.75 days	Mon 1/4/16	Wed 5/11/16		
Pre-Production complete	0 days	Mon 1/4/16	Mon 1/4/16		
Review screenplay	3.6 wks	Mon 1/4/16	Tue 1/26/16	2	Scott Seely, Jeff Pike
Develop scene blocking and schedule	2 wks	Tue 1/26/16	Fri 2/5/16	3	Scott Seely(58%), Judy
Develop production layouts	0.33 mons	Fri 2/5/16	Wed 2/24/16	4	Jeff Pike, Brenda Diaz,
Identify and reserve locations	5 wks	Wed 2/24/16	Wed 3/30/16	5	Jeff Pike(50%), Yan L
Book musicians	2 wks	Wed 3/30/16	Wed 4/13/16	6	
Book dancers	2 wks	Wed 4/13/16	Wed 4/27/16	7	
Reserve audio recording equipment	1 wk	Wed 4/27/16	Wed 5/4/16	8	
Reserve video recording equipment	5 days	Wed 5/4/16	Wed 5/11/16	9	
Status Meeting	69.13 days	Mon 1/4/16	Mon 4/11/16		
Pre-Production complete	0 days	Wed 5/11/16	Wed 5/11/16	10	
Production	30 days	Wed 5/11/16	Thu 6/23/16		
Production begins	0 days	Wed 5/11/16	Wed 5/11/16	27	
Scene 1	6.25 days	Wed 5/11/16	Fri 5/20/16		
Scene 1 begin	0 days	Wed 5/11/16	Wed 5/11/16	29	
Scene 1 setup	2 days	Wed 5/11/16	Fri 5/11/16	31	Light Banks, Chris Pres
Scene 1 rehearsal	6 hrs	Fri 5/11/16	Mon 5/16/16	32	Food(500.00), Frank Z
Scene 1 vocal recording	1 day	Mon 5/16/16	Tue 5/17/16	33	Food(250.00), Jeff Pik
Scene 1 video shoot	2 days	Tue 5/17/16	Thu 5/19/16	34	Sound Technician, Mic
Scene 1 teardown	1 day	Thu 5/19/16	Fri 5/20/16	35	Ido Ben-Sachar, Patrici
Scene 1 complete	0 days	Fri 5/20/16	Fri 5/20/16	36	
Scene 2	6.78 days	Wed 5/25/16	Fri 6/2/16		
Scene 2 begin	0 days	Wed 5/25/16	Wed 5/25/16	37	
Scene 2 setup	2 days	Wed 5/25/16	Thu 5/26/16	39	Brad Sutton, Dolly, Chri
Scene 2 rehearsal	6 hrs	Fri 5/27/16	Fri 5/27/16	40	Food(500.00), Luis Boi
Scene 2 vocal recording	1 day	Fri 5/27/16	Tue 5/31/16	41	Yan U., Sound Technici
Scene 2 video shoot	2 days	Tue 5/31/16	Thu 6/2/16	42	Digital Truck-Mountec
Scene 2 teardown	1 day	Thu 6/2/16	Fri 6/3/16	43	Ido Ben-Sachar, Patrici
Scene 2 complete	0 days	Fri 6/3/16	Fri 6/3/16	44	

- SAVE** the project schedule.

9.4 Modify the Appearance of a Single Piece of Text

- On the ribbon, click the **View** tab. In the Data group click the **Tables** button and then select **Cost**.

2. Auto fit all the columns to see all the data. Select the **Total Cost** cell for task 38, Scene 2.
3. Select the **Task** tab and then, in the Font group, click the **expand** button at the lower-right corner of that group. The Font dialog box appears.
4. Change the font color to **Automatic** and the background color to **yellow**. Your screen should look similar to the following figure.

Task Name	Fixed Cost	Fixed Cost Actual	Total Cost	Baseline	Variance	Actual	Remaining
0 Don Funk Music Video	\$0.00	Prorated	\$59,651.64	\$0.00	\$59,651.64	\$0.00	\$59,651.64
1 Pre-Production	\$0.00	Prorated	\$18,999.64	\$0.00	\$18,999.64	\$0.00	\$18,999.64
2 Pre-Production complete	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3 Review screenplay	\$0.00	Prorated	\$4,590.00	\$0.00	\$4,590.00	\$0.00	\$4,590.00
4 Develop scene blocking and schedule	\$0.00	Prorated	\$1,560.00	\$0.00	\$1,560.00	\$0.00	\$1,560.00
5 Develop production layouts	\$0.00	Prorated	\$4,840.00	\$0.00	\$4,840.00	\$0.00	\$4,840.00
6 Identify and reserve locations	\$0.00	Prorated	\$6,612.14	\$0.00	\$6,612.14	\$0.00	\$6,612.14
7 Book musicians	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
8 Book dancers	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
9 Reserve audio recording equipment	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
10 Reserve video recording equipment	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
11 Status Meeting	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
27 Pre-Production complete	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
28 Production	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
29 Production begins	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
30 Scene 1	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
31 Scene 1 begin	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
32 Scene 1 setup	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
33 Scene 1 rehearsal	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
34 Scene 1 vocal recording	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
35 Scene 1 video shoot	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
36 Scene 1 teardown	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
37 Scene 1 complete	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
38 Scene 2	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
39 Scene 2 begin	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
40 Scene 2 setup	\$0.00	Prorated	\$1,066.00	\$0.00	\$1,066.00	\$0.00	\$1,066.00
41 Scene 2 rehearsal	\$0.00	Prorated	\$824.00	\$0.00	\$824.00	\$0.00	\$824.00
42 Scene 2 vocal recording	\$0.00	Prorated	\$1,440.00	\$0.00	\$1,440.00	\$0.00	\$1,440.00
43 Scene 2 video shoot	\$0.00	Prorated	\$3,445.00	\$0.00	\$3,445.00	\$0.00	\$3,445.00
44 Scene 2 teardown	\$0.00	Prorated	\$248.00	\$0.00	\$248.00	\$0.00	\$248.00
45 Scene 2 complete	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

5. Click **OK**. Notice that only that cell has change font color and back-ground color.
6. **SAVE** the project schedule.

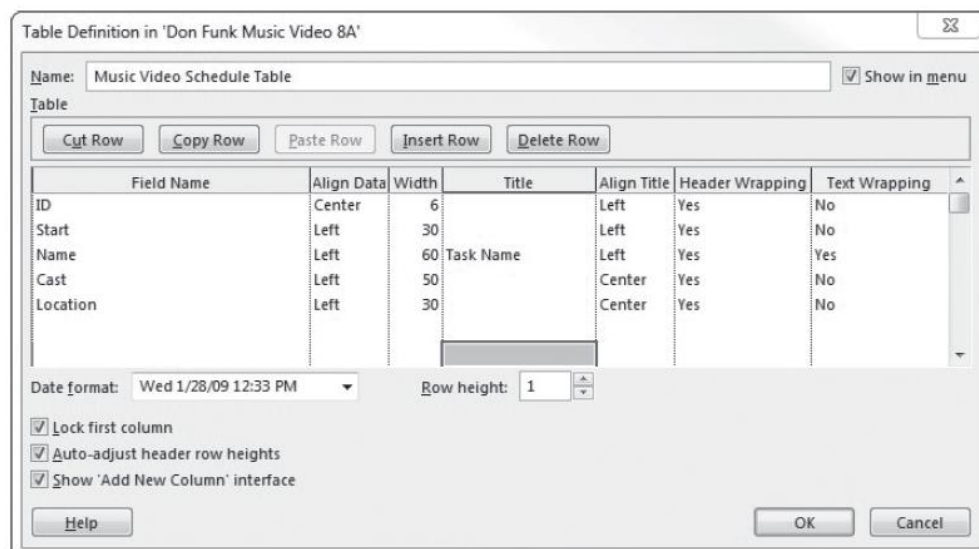
9.5 Create a Custom Text Field

1. Click the **Format** tab. Then click on **Custom Fields**.
2. Click once on the **Text1** field and then click the **Rename** button.
3. In the Rename Field dialog box, type **Cast** and then press **OK**.
4. Click once on the **Text2** field and then click the **Rename** button.
5. In the Rename Field dialog box, type **Location** and then press **OK**.
6. Click **OK** to close the Custom Fields dialog box.
7. **SAVE** and close the project schedule.

9.6 Create a Custom Table

1. **OPEN** the **Don Funk Music Video 8MA** project schedule. **SAVE** the file as **Don Funk Music Video 8A**.
2. Click the **View** tab. Then click **Tables** and then click **More Tables**. The More Tables dialog box appears and displays all of the predefined tables available to you, depending on the type of view currently displayed (task or resource).
3. Confirm that the **Task** button is selected as the Tables option. Select **Entry**, and then click the **Copy** button. The Table Definition dialog box appears.
4. In the Name box, key **Music Video Schedule Table**. Check the **check box** to the right of the Name box labeled Show in menu. Now you will customize the table.

5. In the Field Name column, select the following field names and then click **Delete Row** after selecting each field name.
6. In the Field Name column, click the down-arrow in the next empty cell below Start, and then type or select **Cast (Text1)** from the dropdown list.
7. In the Align Data column in the same row, select **Left**. In the Width column, type or select **50**.
8. In the Field Name column in the next empty row below Cast, select **Location(Text 2)** from the dropdown list.
9. In the Align Data column in the same row, select **Left**. In the Width column, type or select **30**.
10. In the Field Name column, select **Start**, and then click the **Cut Row** button.
11. In the Field Name column, select **Name**, and then click the **Paste Row** button.
12. In the Align Data column in the Start row, select **Left**. In the Width column, type or select **30**.
13. In the Align Data column in the Name row, select **Left**. In the Width column, type or select **60**.
14. In the Date Format box, select **Wed 1/28/09 12:33 pm**. Your screen should look similar to the following figure.



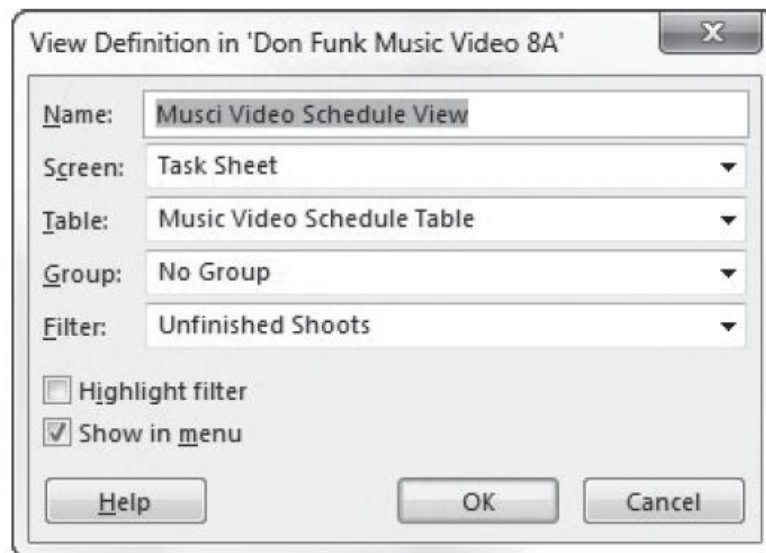
15. Click **OK** to close the Table Definition dialog box. The new table is highlighted in the More Tables dialog box.
16. Click **Apply**. Microsoft Project applies the new table to the Task Sheet view. Your screen should look similar to the following figure.

Start	Task Name	Cost	Location
0	Mon 1/4/16 8:00 AM	4 Don Funk Music Video	
1	Mon 1/4/16 8:00 AM	Pre-Production	
2	Mon 1/4/16 8:00 AM	Pre-Production complete	
3	Mon 1/4/16 8:00 AM	Review screenplay	
4	Tue 1/26/16 8:00 AM	Develop scene blocking and schedule	
5	Fri 2/5/16 11:00 AM	Develop production layouts	
6	Wed 2/24/16 3:00 PM	Identify and reserve locations	
7	Wed 3/30/16 3:00 PM	Book musicians	
8	Wed 4/13/16 3:00 PM	Book dancers	
9	Wed 4/27/16 3:00 PM	Reserve audio recording equipment	
10	Wed 5/4/16 3:00 PM	Reserve video recording equipment	
11	Mon 1/4/16 8:00 AM	Status Meeting	
27	Wed 5/11/16 3:00 PM	Pre-Production complete	
28	Wed 5/11/16 3:00 PM	Production	
29	Wed 5/11/16 3:00 PM	Production begins	
30	Wed 5/11/16 3:00 PM	Scene 1	
31	Wed 5/11/16 3:00 PM	Scene 1 begin	
32	Wed 5/11/16 3:00 PM	Scene 1 setup	
33	Fri 5/13/16 3:00 PM	Scene 1 rehearsal	
34	Mon 5/16/16 1:00 PM	Scene 1 vocal recording	
35	Tue 5/17/16 1:00 PM	Scene 1 video shoot	Don Funk, ski extras, Kim, Mike
36	Thu 5/19/16 1:00 PM	Scene 1 teardown	Alpine Ski House
37	Fri 5/20/16 12:00 PM	Scene 1 complete	
38	Wed 5/25/16 8:00 AM	Scene 2	
39	Wed 5/25/16 8:00 AM	Scene 2 begin	
40	Wed 5/25/16 8:00 AM	Scene 2 setup	
41	Fri 5/27/16 8:00 AM	Scene 2 rehearsal	
42	Fri 5/27/16 3:00 PM	Scene 2 vocal recording	
43	Tue 5/31/16 3:00 PM	Scene 2 video shoot	Don Funk, party crowd, Kim, Lisa, Oscar
44	Thu 6/2/16 3:00 PM	Scene 2 teardown	Don Funk's Mansion
45	Fri 6/3/16 3:00 PM	Scene 2 complete	
46	Fri 6/3/16 3:00 PM	Scene 3	
47	Fri 6/3/16 3:00 PM	Scene 3 begin	
48	Fri 6/3/16 3:00 PM	Scene 3 setup	
49	Tue 6/7/16 3:00 PM	Scene 3 rehearsal	
50	Wed 6/8/16 1:00 PM	Scene 3 vocal recording	
51	Thu 6/9/16 9:00 AM	Scene 3 video shoot	Don Funk, women on beach, Kim, Matthew
52	Tue 6/14/16 8:00 AM	Scene 3 teardown	Southside Beach
53	Tue 6/14/16 5:00 PM	Scene 3 complete	
54	Tue 6/14/16 5:00 PM	Scene 4	
55	Tue 6/14/16 5:00 PM	Scene 4 begin	

17. **SAVE** the project schedule.

9.7 Create a Custom View

- On the View ribbon, click the **down-arrow** under the Gantt Chart button in the Task Views group, then click **More Views**. The More Views dialog box appears, displaying all of the predefined views available to you.
- Click the **New** button. The Define New View dialog box appears. Most views use only a single pane, but a view can consist of two separate panes.
- Make sure **Single View** is selected, and then click **OK**. The View Definition dialog box appears.
- In the Name box, key **Music Video Schedule View**.
- In the Screen box, select **Task Sheet** from the dropdown list.
- In the Table box, select **Music Video Schedule Table** from the dropdown list. The specific groups in the dropdown list depend on the type of view you selected in step 5 (task or resource).
- In the Group box, select **No Group** from the dropdown list. The specific groups in the dropdown list again depend on the type of view you selected in step 5.
- In the Filter box, select **Unfinished Shoots** from the dropdown list. The specific groups in the dropdown list depend on the type of view you selected in step 5. The View Definition dialog box shows all the elements that can make up a view. Your screen should look similar to the following figure.



9. Select the **Show in Menu** check box, and then click **OK** to close the View Definition dialog box. The new view appears and should be selected in the More Views dialog box.
10. Click **Apply**. Microsoft Project applies the new view. Your screen should look similar to the following figure.

Start	Task Name	Cast	Location
35 Tue 5/17/16 1:00 PM	Scene 1 video shoot	Don Funk, ski extras, Kim, Mike	Alpine Ski House
43 Tue 5/31/16 3:00 PM	Scene 2 video shoot	Don Funk, party crowd, Kim, Lisa, Oscar	Don Funk's Mansion
51 Thu 6/9/16 3:00 PM	Scene 3 video shoot	Don Funk, women on beach, Kim, Matthew	Southside Beach
59 Mon 6/20/16 3:00 PM	Scene 4 video shoot	Don Funk, Kim, bartender, man on street	downtown

11. **SAVE** the project schedule. **CLOSE** the project schedule.

10 Project Schedule Tracking Fundamentals

The Variance Table can be used to review baseline information in table format.

Columns for entering actual information

Task Name	Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish Var.
0 Don Funk Music Video	Mon 1/4/16	Fri 7/29/16	Mon 1/4/16	Fri 7/29/16	0 days	0 days
1 Pre-Production	Mon 1/4/16	Wed 5/11/16	Mon 1/4/16	Wed 5/11/16	0 days	0 days
2 Pre-Production complete	Mon 1/4/16	Mon 1/4/16	Mon 1/4/16	Mon 1/4/16	0 days	0 days
3 Review screenplay	Mon 1/4/16	Tue 1/26/16	Mon 1/4/16	Tue 1/26/16	0 days	0 days
4 Develop scene blocking and schedule	Tue 1/26/16	Fri 2/5/16	Tue 1/26/16	Fri 2/5/16	0 days	0 days
5 Develop production layouts	Fri 2/5/16	Wed 2/24/16	Fri 2/5/16	Wed 2/24/16	0 days	0 days
6 Identify and reserve locations	Wed 2/24/16	Wed 3/30/16	Wed 2/24/16	Wed 3/30/16	0 days	0 days
7 Book musicians	Wed 3/30/16	Wed 4/13/16	Wed 3/30/16	Wed 4/13/16	0 days	0 days
8 Book dancers	Wed 4/13/16	Wed 4/27/16	Wed 4/13/16	Wed 4/27/16	0 days	0 days
9 Reserve audio recording equipment	Wed 4/27/16	Wed 5/4/16	Wed 4/27/16	Wed 5/4/16	0 days	0 days
10 Reserve video recording equipment	Wed 5/4/16	Wed 5/11/16	Wed 5/4/16	Wed 5/11/16	0 days	0 days
11 Status Meeting	Mon 1/4/16	Mon 4/11/16	Mon 1/4/16	Mon 4/11/16	0 days	0 days
12 Pre-Production complete	Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	0 days	0 days
13 Production	Wed 5/11/16	Thu 6/23/16	Wed 5/11/16	Thu 6/23/16	0 days	0 days
14 Production begins	Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	0 days	0 days
15 Scene 1	Wed 5/11/16	Fri 5/20/16	Wed 5/11/16	Fri 5/20/16	0 days	0 days
16 Scene 1 begin	Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	0 days	0 days
17 Scene 1 setup	Wed 5/11/16	Fri 5/13/16	Wed 5/11/16	Fri 5/13/16	0 days	0 days
18 Scene 1 rehearsal	Fri 5/13/16	Mon 5/16/16	Fri 5/13/16	Mon 5/16/16	0 days	0 days
19 Scene 1 vocal recording	Mon 5/16/16	Tue 5/17/16	Mon 5/16/16	Tue 5/17/16	0 days	0 days
20 Scene 1 video shoot	Tue 5/17/16	Thu 5/19/16	Tue 5/17/16	Thu 5/19/16	0 days	0 days
21 Scene 1 teardown	Thu 5/19/16	Fri 5/20/16	Thu 5/19/16	Fri 5/20/16	0 days	0 days
22 Scene 1 complete	Fri 5/20/16	Fri 5/20/16	Fri 5/20/16	Fri 5/20/16	0 days	0 days

Summary Tasks & Schedule Activities

10.1 Establish a Project Baseline

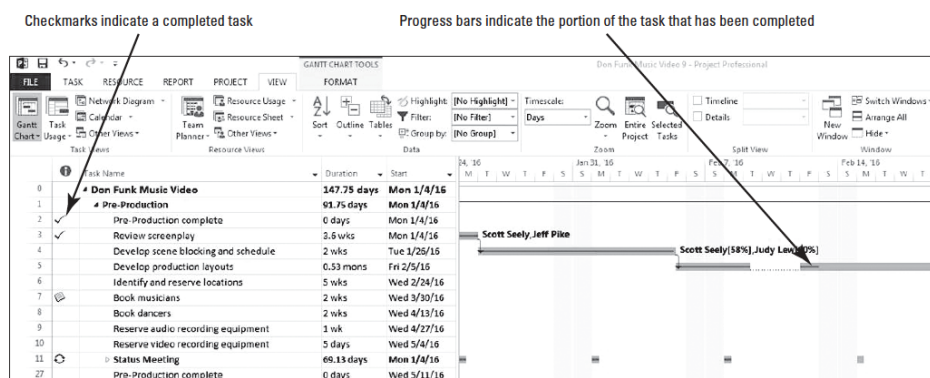
1. **OPEN** the *Don Funk Music Video 9M* project schedule from the data files for this lesson.
2. **SAVE** the file as *Don Funk Music Video 9* in the solutions folder for this lesson as directed by your instructor.
3. Click the **Project** tab. In the Schedule group, click the **Set Baseline** button and then select **Set Baseline**.
4. The Set Baseline dialog box appears. You will accept all of the default settings in this dialog box by clicking **OK**. Microsoft Project saves the baseline, although there is no indication in the Gantt Chart view that anything has changed. In the next few steps, you will explore some of the changes caused by saving the baseline.
5. On the ribbon, click the **View** tab and then click the **down-arrow** under Gantt Chart. Select **More Views**, and the More Views dialog box appears.
6. In the More Views box, select **Task Sheet** and click **Apply**. Using this view, there is more room to see the fields in the table because the Gantt Chart is not shown. Now you will switch to a different table in the Task Sheet view.
7. On the ribbon, click **Tables**, and then click **Variance**. The Variance table appears. This table includes both the Scheduled and Baseline columns so that you can compare them easily. Your screen should look similar to the following figure.

		Scheduled Start/Finish		Baseline Start/Finish		Start/Finish Variance	
Task Name		Start	Finish	Baseline Start	Baseline Finish	Start Var.	Finish Var.
0 Don Funk Music Video		Mon 1/4/16	Fri 7/29/16	Mon 1/4/16	Fri 7/29/16	0 days	0 days
1 Pre-Production		Mon 1/4/16	Wed 5/11/16	Mon 1/4/16	Wed 5/11/16	0 days	0 days
2 Pre-Production complete		Mon 1/4/16	Mon 1/4/16	Mon 1/4/16	Mon 1/4/16	0 days	0 days
3 Review screenplay		Mon 1/4/16	Tue 1/26/16	Mon 1/4/16	Tue 1/26/16	0 days	0 days
4 Develop scene blocking and schedule		Tue 1/26/16	Fri 2/5/16	Tue 1/26/16	Fri 2/5/16	0 days	0 days
5 Develop production layouts		Fri 2/5/16	Wed 2/24/16	Fri 2/5/16	Wed 2/24/16	0 days	0 days
6 Identify and reserve locations		Wed 2/24/16	Wed 3/30/16	Wed 2/24/16	Wed 3/30/16	0 days	0 days
7 Book musicians		Wed 3/30/16	Wed 4/13/16	Wed 3/30/16	Wed 4/13/16	0 days	0 days
8 Book dancers		Wed 4/13/16	Wed 4/27/16	Wed 4/13/16	Wed 4/27/16	0 days	0 days
9 Reserve audio recording equipment		Wed 4/27/16	Wed 5/4/16	Wed 4/27/16	Wed 5/4/16	0 days	0 days
10 Reserve video recording equipment		Wed 5/4/16	Wed 5/11/16	Wed 5/4/16	Wed 5/11/16	0 days	0 days
11 Status Meeting		Mon 1/4/16	Mon 4/11/16	Mon 1/4/16	Mon 4/11/16	0 days	0 days
27 Pre-Production complete		Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	0 days	0 days
28 Production		Wed 5/11/16	Thu 6/23/16	Wed 5/11/16	Thu 6/23/16	0 days	0 days
29 Production begins		Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	Wed 5/11/16	0 days	0 days

8. **SAVE** the project schedule.

10.2 Track a Project as Scheduled

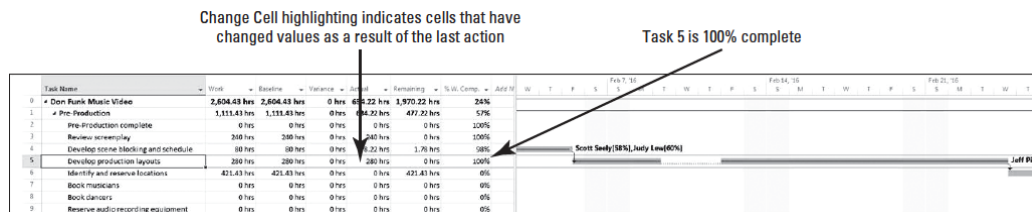
1. On the ribbon, click **Gantt Chart**. The Gantt Chart view appears.
2. Move the vertical divider bar to a point just to the right of the Start column.
3. Click on the **Project** tab, and then click **Update Project** in the Status group. The Update Project dialog box appears.
4. Make sure the **Update work as complete through** option is selected. In the adjacent date box, type or select **February 12, 2016**, and then click **OK**. Microsoft Project records the actual work for the projects that were scheduled to start before February 12. It also draws progress bars in the Gantt bars for those tasks to show this progress visually.
5. Select the name of task 5, **Develop production layouts**. Click the **Task** tab, and then click **Scroll to Task** in the Editing group. Your screen should look similar to the following figure.
6. **SAVE** the project schedule.



10.3 Enter the Completion Percentage for a Task

1. Click the **View** tab, click the **Tables** button, and then select the **Work** table from the list.
2. Slide the vertical divider bar between the table and the Gantt bar chart so that more of the table columns are visible. You may need to auto fit the columns to see all the data. Notice the **Work** and **% Work Complete** columns. You will enter task completion percentages in the **% Work Complete** column.

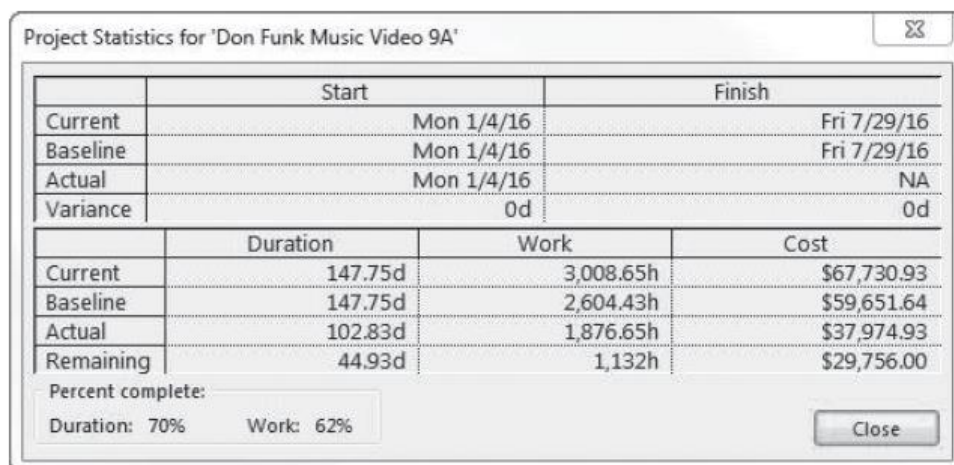
- In the % Work Complete column for Task 5, type or select **100**, and then [press **Enter**]. Microsoft Project extends the progress bar through the length of the Gantt bar for task 5 and records the actual work for the task as scheduled.
- Select **Task 5** again. On the ribbon, click **Selected Tasks** in the Zoom group. Your screen should look similar to the following figure.



- In the % Work Complete field for Task 6, type or select **50**, and then [press **Enter**]. Microsoft Project records the actual work for the task as scheduled, calculates the remaining work, and then updates the progress line through 50% of the Gantt bar.
- Scroll the Gantt Chart to see the Gantt bar for Task 6.
- SAVE** the project schedule.
- CLOSE** the project schedule.

10.4 Identify Over Budget Tasks and Resources

- OPEN** the *Don Funk Music Video 9MA* project schedule.
- SAVE** the file as *Don Funk Music Video 9A*.
- On the ribbon, click the **Project** tab, and then click **Project Information** in the Properties group. The Project Information Dialog box appears.
- Click the **Statistics** button. The Project Statistics dialog box appears. Your screen should look similar to the following figure.



- Click the **Close** button. The Project Statistics dialog box closes.
- On the ribbon, click **View**. Click the **Tables** button and then click **Cost**. The Cost table appears in the Task Sheet view. Move the vertical divider so you can see all the available columns. Take a moment to review the columns in the Cost table. Note that although

costs are not scheduled in the same sense that work is scheduled, costs (except fixed costs) are derived from the scheduled work.

- Click the **Task Name** column heading. Click the **Outline** button in the Data group, and then select **Level 1**. Microsoft Project collapses the task list to display only the first level of summary tasks (which in this case correspond to the major phases of the project). Your screen should look similar to the following figure.

Production has the greatest variance

Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining	Actual Cost
0 Don Funk Music Video	\$0.00	Prorated	\$67,730.93	\$59,651.64	\$8,079.28	\$7,974.93	\$29,756.00	\$37,974.93
1 Pre-Production	\$0.00	Prorated	\$22,223.48	\$18,999.04	\$3,223.84	\$21,264.98	\$958.50	\$21,264.98
28 Production	\$0.00	Prorated	\$28,354.94	\$23,499.50	\$4,855.44	\$16,709.94	\$11,645.00	\$16,709.94
63 Post-Production	\$0.00	Prorated	\$17,152.50	\$17,152.50	\$0.00	\$0.00	\$17,152.50	\$0.00

- Click the **expand button** next to Task 28, Production. Using the **collapse button**, hide the subtasks for scenes 1 through 4. Your screen should look similar to the following figure. Although Scenes 1 and 2 both had some variance, Scene 2 had the greater variance, so you will focus on that scene.

Scene 2 has the greatest variance

Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining	Actual Cost
0 Don Funk Music Video	\$0.00	Prorated	\$67,730.93	\$59,651.64	\$8,079.28	\$7,974.93	\$29,756.00	\$37,974.93
1 Pre-Production	\$0.00	Prorated	\$22,223.48	\$18,999.04	\$3,223.84	\$21,264.98	\$958.50	\$21,264.98
28 Production	\$0.00	Prorated	\$28,354.94	\$23,499.50	\$4,855.44	\$16,709.94	\$11,645.00	\$16,709.94
29 Production begins	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
30 Scene 1	\$0.00	Prorated	\$7,624.94	\$6,081.50	\$1,543.44	\$6,874.94	\$750.00	\$6,874.94
38 Scene 2	\$0.00	Prorated	\$10,335.00	\$7,023.00	\$3,312.00	\$9,835.00	\$500.00	\$9,835.00
46 Scene 3	\$0.00	Prorated	\$4,952.00	\$4,952.00	\$0.00	\$0.00	\$4,952.00	\$0.00
54 Scene 4	\$0.00	Prorated	\$5,443.00	\$5,443.00	\$0.00	\$0.00	\$5,443.00	\$0.00
62 Production complete	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
63 Post-Production	\$0.00	Prorated	\$17,152.50	\$17,152.50	\$0.00	\$0.00	\$17,152.50	\$0.00

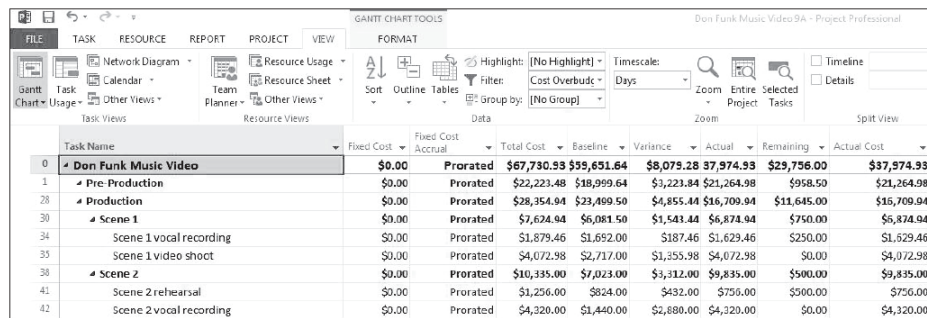
- Click the **expand button** next to summary Task 38, Scene 2. Microsoft Project expands the Scene 2 summary task to show all of the subtasks. Your screen should look similar to the following figure.
- Click the **Task Name** column heading.

Scene 2 expanded to reveal all individual subtasks

Task 42 has the greatest variance

Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining	Actual Cost
0 Don Funk Music Video	\$0.00	Prorated	\$67,730.93	\$59,651.64	\$8,079.28	\$7,974.93	\$29,756.00	\$37,974.93
1 Pre-Production	\$0.00	Prorated	\$22,223.48	\$18,999.04	\$3,223.84	\$21,264.98	\$958.50	\$21,264.98
28 Production	\$0.00	Prorated	\$28,354.94	\$23,499.50	\$4,855.44	\$16,709.94	\$11,645.00	\$16,709.94
29 Production begins	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
30 Scene 1	\$0.00	Prorated	\$7,624.94	\$6,081.50	\$1,543.44	\$6,874.94	\$750.00	\$6,874.94
38 Scene 2	\$0.00	Prorated	\$10,335.00	\$7,023.00	\$3,312.00	\$9,835.00	\$500.00	\$9,835.00
39 Scene 2 begin	\$0.00	Prorated	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
40 Scene 2 setup	\$0.00	Prorated	\$1,066.00	\$1,066.00	\$0.00	\$1,066.00	\$0.00	\$1,066.00
41 Scene 2 rehearsal	\$0.00	Prorated	\$1,256.00	\$824.00	\$432.00	\$756.00	\$500.00	\$756.00
42 Scene 2 vocal recording	\$0.00	Prorated	\$4,320.00	\$1,440.00	\$2,880.00	\$4,320.00	\$0.00	\$4,320.00
43 Scene 2 video shoot	\$0.00	Prorated	\$3,443.00	\$3,443.00	\$0.00	\$3,443.00	\$0.00	\$3,443.00
44 Scene 2 teardown	\$0.00	Prorated	\$248.00	\$248.00	\$0.00	\$248.00	\$0.00	\$248.00

11. Click the **Outline** button and then select **Show Subtasks** button on the Formatting toolbar. Microsoft Project expands all of the summary tasks to show all of the tasks in the project.
12. On the View ribbon, in the Data group, click the down-arrow next to the **Filter:** selection box. Select **More Filters** from the list. The More Filters dialog box appears.
13. Select the **Cost Overbudget** filter and click **Apply**. Microsoft Project applies the filter to the task list to show only those tasks that had actual and scheduled costs greater than their baseline costs. Your screen should look similar to the following figure.

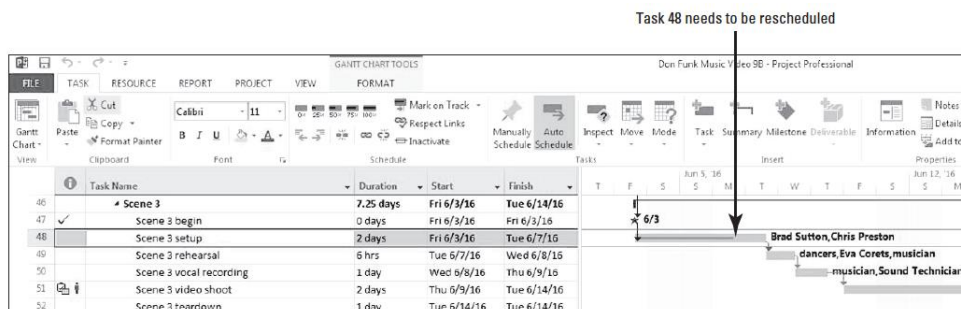


Task Name	Fixed Cost	Fixed Cost Accrual	Total Cost	Baseline	Variance	Actual	Remaining	Actual Cost
0 Don Funk Music Video	\$0.00	Prorated	\$67,730.93	\$59,651.64	\$8,079.28	\$7,974.93	\$29,756.00	\$37,974.93
1 Pre-Production	\$0.00	Prorated	\$22,223.48	\$18,999.64	\$3,223.84	\$21,264.98	\$958.50	\$21,264.98
28 Production	\$0.00	Prorated	\$28,354.94	\$23,499.50	\$4,855.44	\$16,709.94	\$11,645.00	\$16,709.94
30 Scene 1	\$0.00	Prorated	\$7,624.94	\$6,081.50	\$1,543.44	\$6,874.94	\$750.00	\$6,874.94
34 Scene 1 vocal recording	\$0.00	Prorated	\$1,879.46	\$1,652.00	\$187.46	\$1,629.46	\$250.00	\$1,629.46
35 Scene 1 video shoot	\$0.00	Prorated	\$4,072.98	\$2,717.00	\$1,355.98	\$4,072.98	\$0.00	\$4,072.98
38 Scene 2	\$0.00	Prorated	\$10,335.00	\$7,023.00	\$3,312.00	\$9,835.00	\$500.00	\$9,835.00
41 Scene 2 rehearsal	\$0.00	Prorated	\$1,256.00	\$824.00	\$432.00	\$756.00	\$500.00	\$756.00
42 Scene 2 vocal recording	\$0.00	Prorated	\$4,328.00	\$1,440.00	\$2,888.00	\$4,328.00	\$0.00	\$4,328.00

14. **SAVE** and **CLOSE** the project schedule.

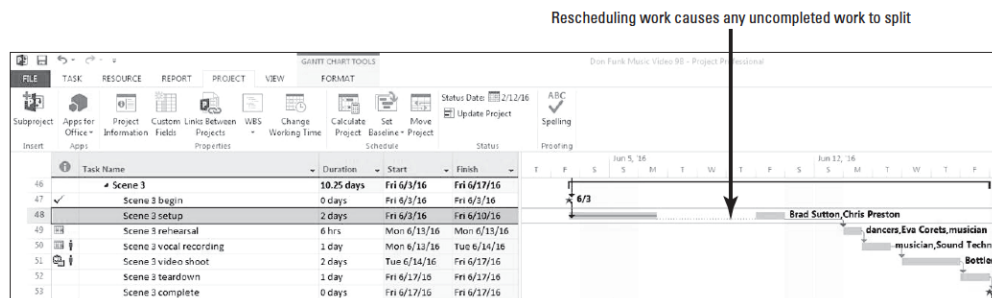
10.5 Reschedule Uncompleted Work

1. **OPEN** the **Don Funk Music Video 9MB** project schedule from the data files for this lesson.
2. **SAVE** the file as **Don Funk Music Video 9B** in the solutions folder for this lesson as directed by your instructor.
3. [Press the **F5** key]. Type **46** in the ID box, and then click **OK**. The Gantt Chart view scrolls to display the Gantt bar for Task 46, Scene 3. At this point in the project, the first two scheduled scenes have been completed. This task has one day of actual work completed and one day of scheduled work remaining. Your screen should look similar to the following figure.



4. On the ribbon, click the **Project** tab, and then click **Update Project**. The Update Project dialog box appears.
5. Select the **Reschedule uncompleted work to start after:** option, and in the date box type or select **06/09/16**.

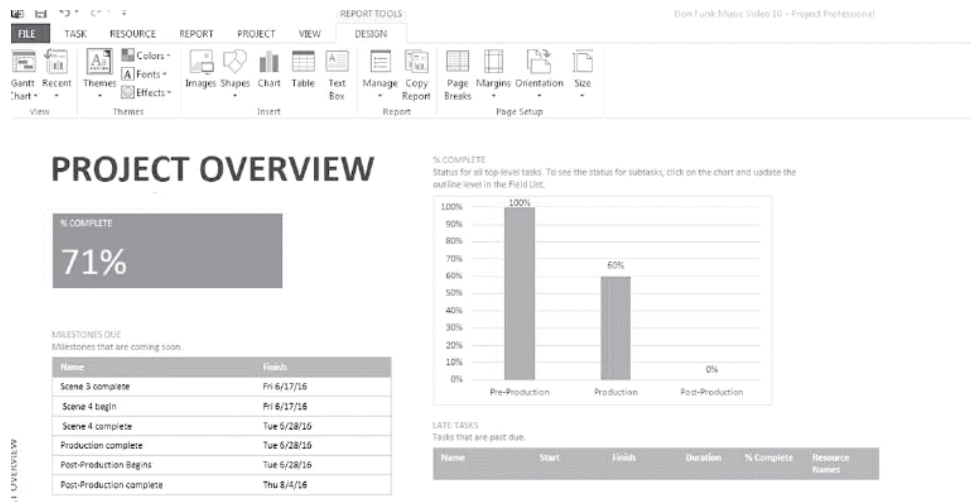
6. Click **OK** to close the Update Project dialog box. Microsoft Project splits Task 48 so that the incomplete portion is delayed until Friday, June 10. Your screen should look similar to the following figure. Note that although the duration of Task 48 remains at two days, its finish and subsequent start dates for successor tasks have been pushed out. Remember that duration is the number of **work periods** required to complete a task, not elapsed time.



7. **SAVE** the project schedule. **CLOSE** the project schedule.

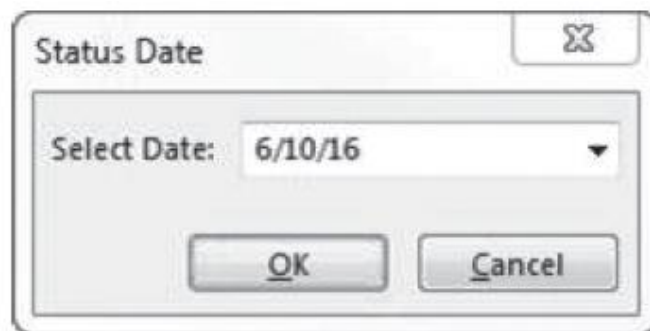
11 Project Reporting

The new Report Ribbon makes locating and selecting a report easier than ever before. With predefined dashboard reports, the user can show an overview of the project, project burn-down, cost overview, work overview and many more.

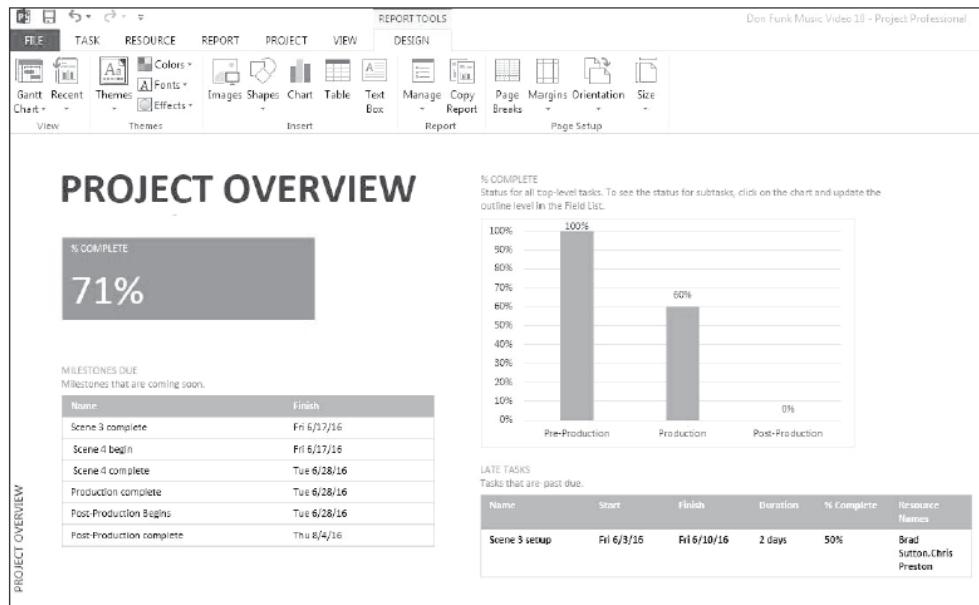


11.1 Select and Print a Dashboard Report

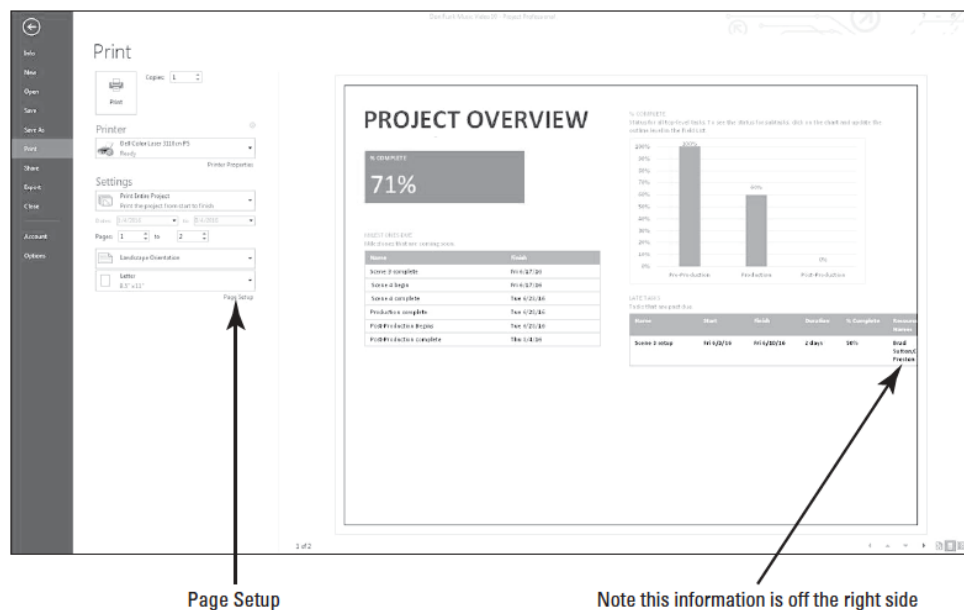
1. **OPEN** the *Don Funk Music Video 10M* project schedule.
2. **SAVE** the file as *Don Funk Music Video 10*.
3. On the ribbon, click the **Project** tab. In the Status group click the **calendar icon** in the Status Date field. Microsoft Project displays the Status Date dialog box.
4. In the Select Date: field type or select **6/10/16**. Your screen should look like the following figure.



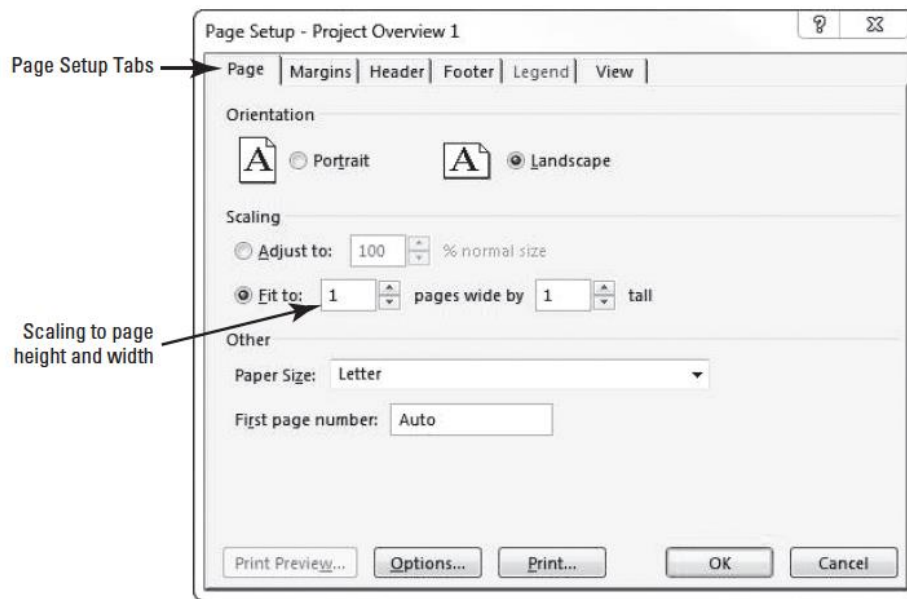
5. Click **OK** or press **Enter** to close the Status Date dialog box. You set the Status Date to tell Microsoft Project you want information as of this date.
6. On the ribbon, click the **Report** tab and then select the **Dashboards** button. From the dropdown menu that appears, select **Project Overview**. Your screen should look similar to the following figure.



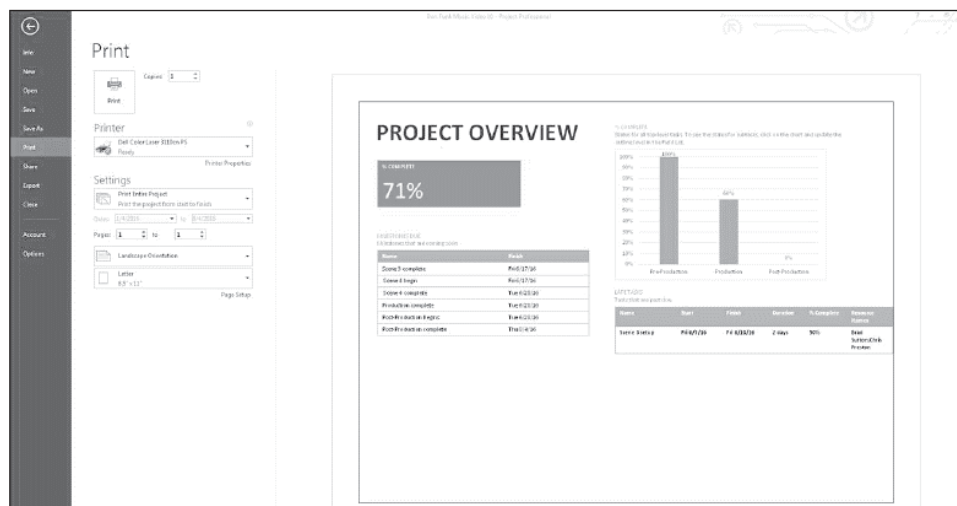
7. On the ribbon, click the **File** tab and then select **Print** from the navigation bar on the left side of the screen. Your screen should look similar to the figure at right. You may notice that some of the report is cut | off at the right side of the print pre-view area.



8. At the lower right of the Settings section, click the **Page Setup** hyperlink. Microsoft Project displays the Page Setup dialog box.
9. On the Page tab, in the Scaling section, click **Fit to:** and choose **1** against the **pages wide** by and **tall** boxes. Your dialog box should look like the following figure.



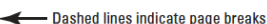
10. Now select the **Margins** tab. Set all margins to **0.5** inches. Click the **OK** to close the dialog box. Your screen should now look like the following figure.



11. **SAVE** the project schedule.

11.2 Create, Customize and Print a Report

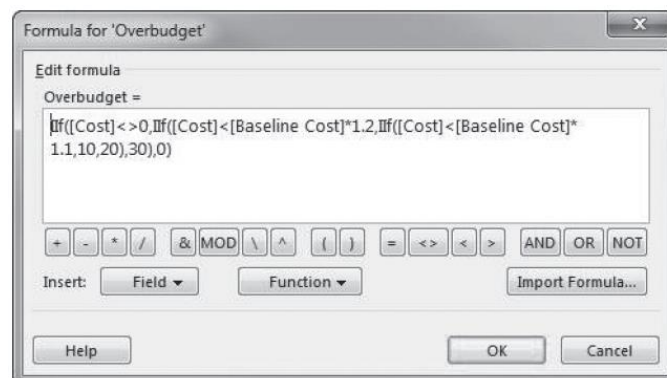
1. Click the **Report** tab. On the ribbon, click the **New Report** button.
2. On the drop-down menu that appears, click **Table**.
3. In the Report Name box that appears, name the new report **Remaining Work Report** and then click **OK**. Your screen should look like the following figure.



14. Click the **File** tab and then select **Print**. You will note that the report is now centered on the page.
15. **SAVE** the project schedule.

11.3 Report Project Variance with a “Stoplight” View

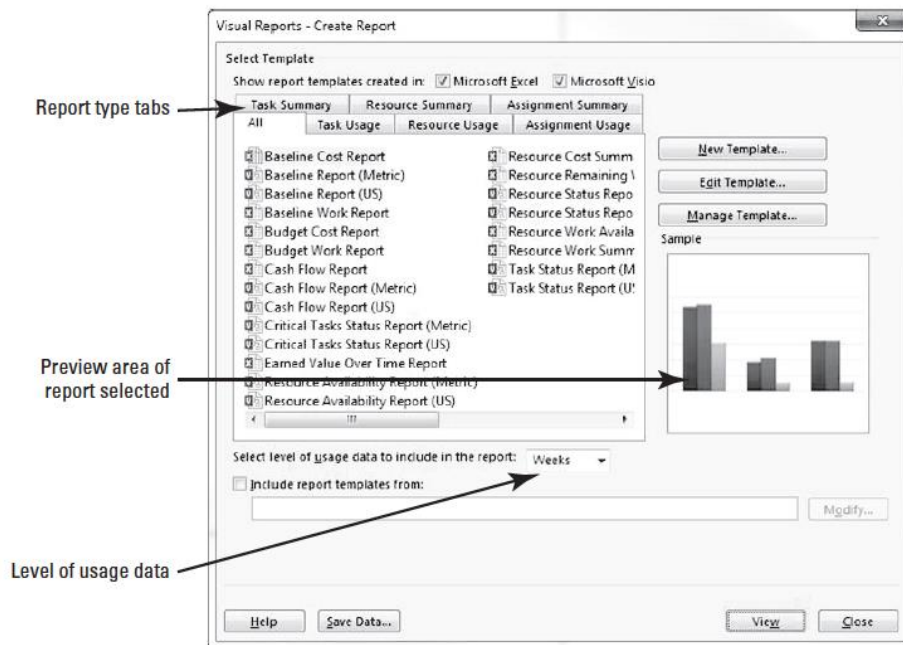
1. Click the **View** tab, then in the Task views group, select **Other Views** then select **More Views**. In the list select **Task Sheet** and then click **Apply**. Microsoft Project displays the Task Sheet view.
2. Select the **Tables** button and then click **Cost**.
3. Click on the **Project** tab, and then click the **Custom Fields** button. The Custom Fields dialog box appears.
4. Under the Field label at the top of the dialog box, make sure that **Task** is selected. In the Type box, select **Number** from the dropdown list.
5. In the Field list, select Overbudget (Number3).
6. Under the Custom attributes label, click the **Formula** button. The Formula dialog box is displayed. The formula shown in this dialog box has been pre-entered for accuracy and to save time. Your screen should look similar to the following figure.



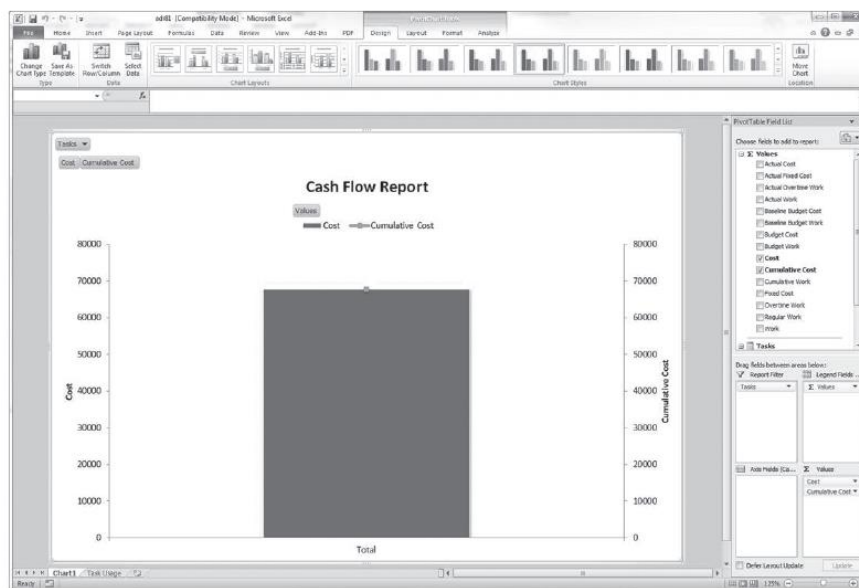
7. Click **Cancel** to close the Formula dialog box.
8. In the Custom Fields dialog box, under the Values to display label, click the **Graphical Indicators** button. The Graphical Indicators dialog box appears.
9. Click the **first cell** under the Image column heading, and then click the **downarrow**. Here you can see the many graphical indicators you can associate with the values of fields.
10. Click **Cancel** twice to close the Graphical Indicators dialog box, and then click **Cancel** again to close the Custom Fields dialog box.
11. Right-click the **Fixed Cost** column heading. Select **Insert Column** from the list.
12. From the keyboard, start typing the word “**Over**”.
13. **SAVE** the project schedule.

11.4 Create a Visual Report

1. On the ribbon, click the **Report** tab, and then select the **Visual Reports** button. The Visual Reports–Create Report dialog box appears. Your screen should look like the following figure.
2. Click the **Task Usage** tab, and then click **Cash Flow Report**.

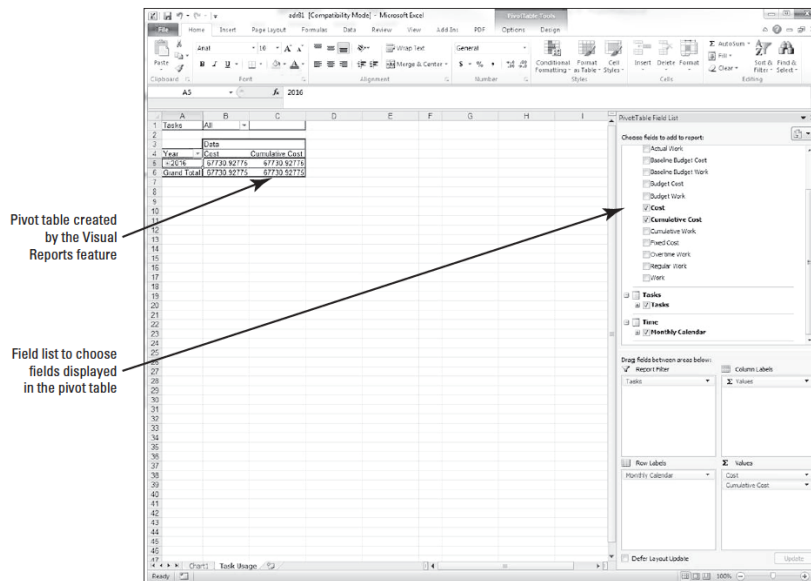


3. In the Select level of usage data to include in the report: box, select **Months**.
4. Click the **View** button. The Visual Report engine gathers data from your project file and builds an Online Analytical Processing (OLAP) cube. The application Microsoft Excel opens and the report is presented in Chart form from a preformatted report template. Your screen should look similar to the following figure.



5. At the bottom of the Excel window, select the **Task Usage** sheet tab.

6. In the PivotTable Field List box, navigate to the **Time** field. Place your cursor on **Monthly Calendar** and drag it to the **Rows** box. Your screen should look similar to the following figure.

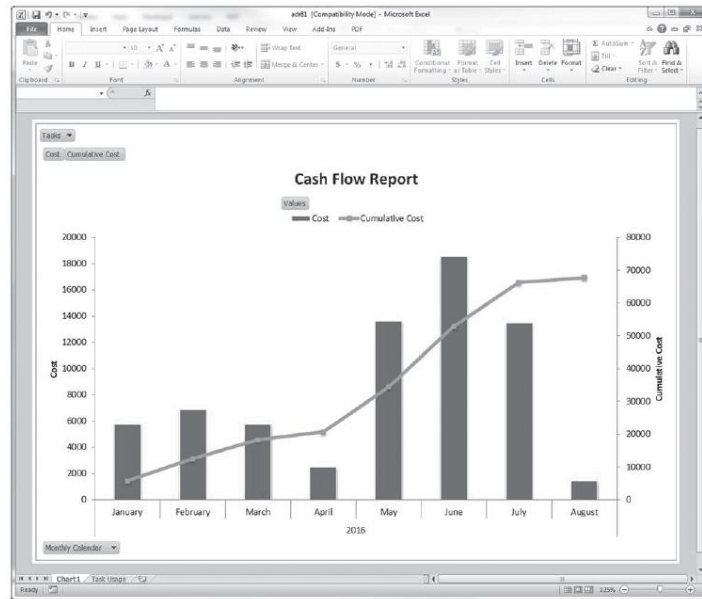


7. In the PivotTable area, click the expand button next to the year 2016, to reveal all the available time data. Your screen should look similar to the following figure.

Collapse/Expand button used to display more or less data

Year	Month	Cost	Cumulative Cost
2016	January	5716.3634	5716.3634
	February	6856.770957	12573.13436
	March	5727.35	18300.48436
	April	2453	20753.48436
	May	13585.06839	34338.55275
	June	18525.875	52864.42775
	July	13441.5	66305.92775
	August	1425	67730.92775
2016 Total		67730.92775	67730.92775
Grand Total		67730.92775	67730.92775

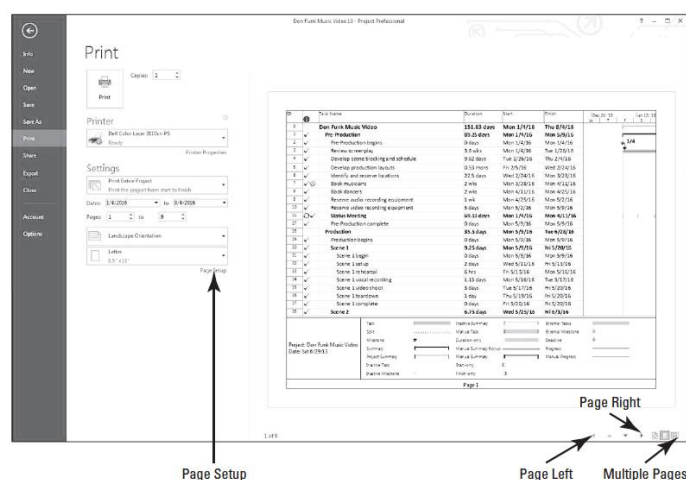
8. Click the **Chart1** sheet tab at the bottom of the screen. Your screen should look similar to the following figure.



9. Save the Excel visual report as **Don Funk Cash Flow** in your My Documents folder.
10. **CLOSE** Microsoft Excel.
11. **CLOSE** the Visual Reports Dialog box.
12. **SAVE** the project schedule.

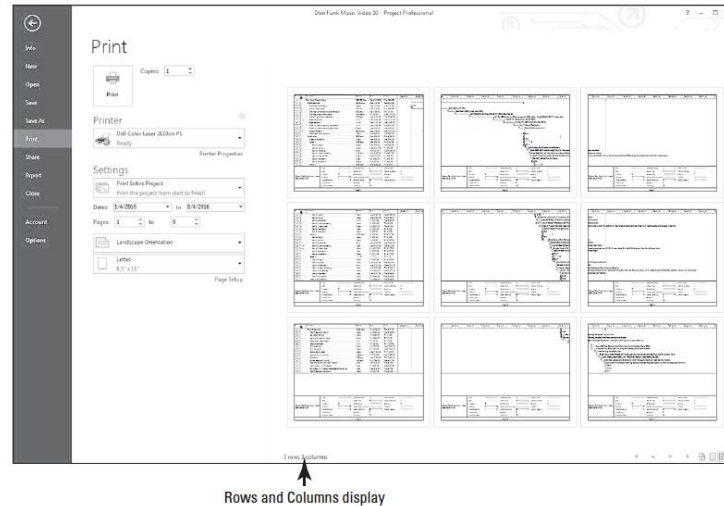
11.5 Customize and Print a Gantt Chart View

1. Click the **View** tab, then select the **Gantt Chart** button.
2. Click the **File** tab and then click **Print**. Microsoft Project displays print options on the left side and the Gantt Chart view in the right side, which is the Print Preview window. Your screen should look like the following figure.



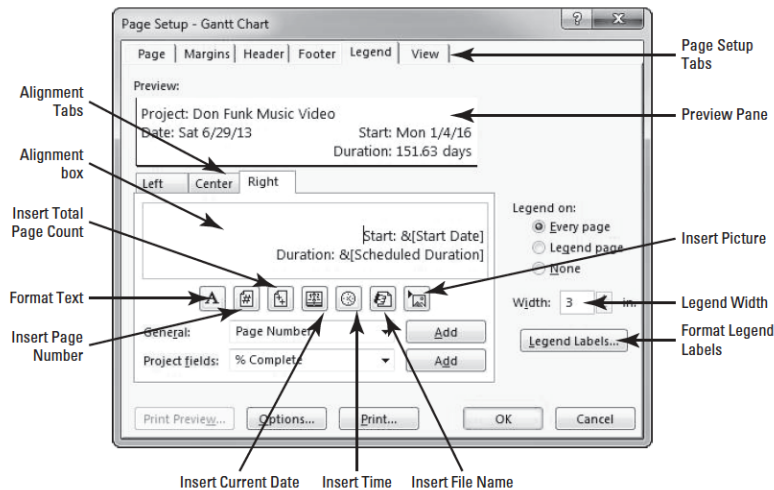
3. On the Print Preview toolbar, click the **Page Right** and/or **Page Down** button to display different pages.
4. On the Print Preview toolbar, click the **Multiple Pages** button. Most of the pages of the Gantt Chart appears in the Print Preview window. When the multiple pages Print

Preview is active the printed output is displayed on separate sheets. You navigate using the scroll control at the bottom of the Print Preview pane. The Page Right, Page Left, Page Up, and Page Down buttons are inactive. The paper size displayed is determined by your printer settings. Your screen should look similar to the following figure.

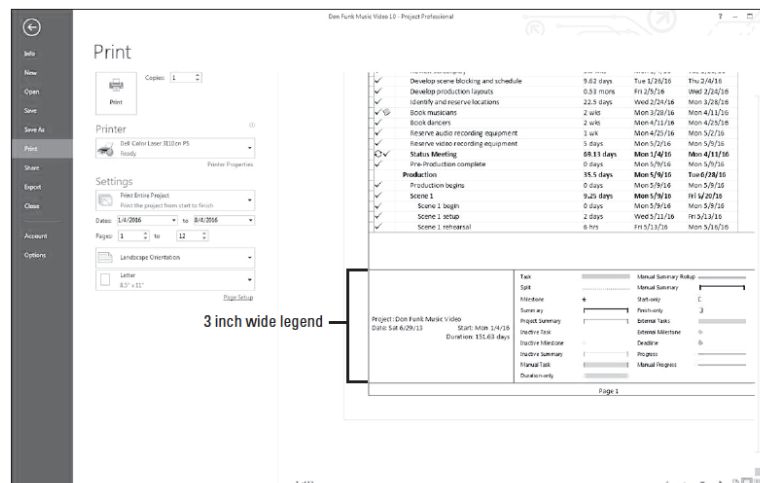


5. On the Print Preview toolbar, click the **One Page** button. The first page of the Gantt Chart is displayed.
6. Click the **Page Setup** hyperlink. The Page Setup dialog box appears. This is the same dialog box that would appear if you selected the Page Setup option on the File tab.
7. Click the **Header** tab. You want to add the company name to the header that prints on each page.
8. There are three Alignment tabs in the center section of the Header tab box. Select **Center** if it is not already selected. In the General box, click **Company Name** and then click the **Add** button next to the General box. Microsoft Project places the following code into the header: **&[Company]**. The software also displays a preview in the Preview window of the Page Setup dialog box.
9. Click the **Legend** tab. You want to change some of the content of the Gantt Chart view's legend.
10. There are three Alignment tabs in the center of the Legend tab box. Click the **Left** tab. Currently, Microsoft Project is formatted to print the project title and current date on the left side of the legend. You also want to print the start date and duration on the right side of the legend.
11. Click the **Right** Alignment tab. Click the **Right Alignment** box, press **Enter**, and then type **Start:** followed by a space.
12. In the General box, select **Project Start Date** from the dropdown list. Click the **Add** button next to the General box. Microsoft Project adds the label and code for the project start date to the legend.
13. Press **Enter** to add a second line to the legend and then type **Duration:** followed by a space.

14. In the Project Fields box, select **Scheduled Duration** from the dropdown list. Click the **Add** button next to the Project Fields box. Microsoft Project adds the label and code for project duration to the legend.
15. In the Width box, type or use the scroll buttons to enter **3**. This increases the width of the box that appears on the left side of the legend. Your screen should look similar to the following figure.



16. Click **OK** to close the Page Setup dialog box. Microsoft Project applies the custom changes to the legend.
17. Move your mouse cursor to the lower left corner of the page preview (your cursor appears as a magnifying glass). Click the **lower left corner** of the page. Microsoft Project zooms in to show the legend. Your screen should look similar to the following figure.



18. Click the **Task** tab to return to the Gantt Chart view. Take note that although you did not print, your changes to the header and the legend will be saved when you save the project file.
19. **SAVE** the project schedule.