



e-Builder Schedule Module

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Schedule

All scheduling tools include a few fundamental components and concepts, and e-Builder's Scheduling tool adheres to these fundamentals.

The level of functionality available to you is determined by the module that your company purchased. Your security permission determines the actions that you are allowed to perform with schedules.

To access the Schedule

1. On the top navigation tabs, click the **Snippet-Label** tab.
2. Click the **Project** drop-down menu and select the project name.

The **Snippet-Label** page is displayed.

To access the Schedule page in a project

- If you are in a project, on the left navigation pane under the **Project Menu**, click **Schedule**.
The **Schedule** page is displayed.

To access the Schedule page from the Schedule module

- If you are in the Schedule module, click the **Schedules** sub-menu located on the top-right corner.

Module Attributes

The Schedule module has several levels of functionality that are determined based on what your company purchased from e-Builder and what attributes have been activated on your account. Each level of functionality builds on the previous level, and they are not reversible to a lower level once activated. These attributes affect all projects within an account.

1. **Schedule:** A critical path method (CPM) scheduling tool for project tasks
2. **Multiple Calendars (MC):** Option to create multiple calendars within each project and assign tasks to different calendars.

No extra charge. The account administrator can contact Support and request to enable this for your account.
3. **Resource Management (RM):** Option to link resources to schedule tasks. Add-on feature available through Sales.
4. **Resource Management with Cost (RMC):** Option to link resources or schedule tasks to the cost module. Add-on feature available through Sales.

Permissions

Each project participant has security permissions that determine what can be seen and done inside the Schedule module. These permissions are controlled by your account administrator.

- **Manage Permissions:** On the Schedule tab of the Manage Permissions page, grant members and roles permission to view schedules, manage templates and manage baselines.

- **Manager Role:** On the Details tab of your schedule, users assigned to this role have full access to create, edit, and update the project schedule. Users without this role (without Manage Template permissions on the account level) will not be able to create a schedule but if they have the View Schedule permission, they can view it once the schedule has been created by a Schedule Manager.

Note: A user must be assigned to an administrative type role (such as a Schedule Manager role) in order to initiate a schedule in a brand new project. Users belonging to this role will have permission only to create schedules and manage schedule templates. This role can only view Cost information and will not have any other Cost permissions.

- **Task Resource Role:** (does not apply to RM or RMC accounts) This role is assigned to individual tasks. Users in the Resource Role can update the following information on that task:
 - % Complete value
 - Duration
 - Start date
 - Finish date
 - Constraint Type and Constraint Date
 - Add Comment through the Task Editor

Note: A Task Resource contact can also be assigned to a task as an indicator of the key responsible person for that task. However, that individual does not receive any notifications or have any special editing rights compared to other users in the Resource role.

- **Task Manager Role:** (does not apply to RM or RMC accounts) This role is assigned to individual tasks. Users in the Manager Role can update the Resource Role and the following information on that task:
 - Task Name
 - Description
 - Resource Role and Resource User
 - Predecessor relationships
 - Master Task associations

Note: A Task Manager contact can also be assigned to a task as an indicator of the key responsible person for that task. However, that individual does not receive any notifications or have any special editing rights compared to other users in the Manager role.

Fundamentals

Tasks

Schedules consist of a list of tasks to be completed for a particular project. Tasks can be linked together or be dependent on one another according to the specific relationships set by the Schedule Manager. For example, the Schedule Manager may specify that a 60% Design Document task can only begin after a previous 30% Design Document task is completed – these are referred to as predecessor and successor tasks. Thus, the Schedule Manager will build the Tasks and the relationships between Tasks to specify what must be done and by when to ensure a successful project outcome. Additionally, the Schedule Manager determines the duration or time available to complete each task.

Tasks are the basic building blocks of a project. Each task will have a beginning and a duration, which will establish the scheduled date for when it is expected to be complete.

Dependencies, Predecessors and Successors

For illustration purposes, let's take a look at an example project that a residential contractor might develop to construct a brand new home. In this example, we'll list some basic components required to construct a home:

1. Install underground plumbing
2. Install underground electrical lines
3. Form and place the foundation slab
4. Erect the exterior walls
5. Erect the roof framing
6. Install the roof
7. Erect the interior walls
8. Install rough electrical
9. Install rough plumbing
10. Install doors and windows

Each step in the above example is called a task. You can perform some of these tasks at the same time, and there are some tasks that need to be completed before the next task can begin. For example, installing underground plumbing and installing underground electrical lines can be accomplished simultaneously. However, you must erect the exterior walls before erecting the roof framing because the roof framing sits on top of the exterior walls. When one task depends on the other, the relationships between the tasks are called dependencies. If a task depends on another task, then the one that has to finish first is called the predecessor. The task that follows the predecessor is called the successor.

We abbreviate relationships with F = Finish and S = Start. The first letter defines the action of the "Predecessor" Task and the second letter defines the action of the Successor Task. So we use an "FS" or Finish-to-Start relationship when the Predecessor task must Finish before the Successor task Starts. Meanwhile, if two tasks can occur simultaneously, they have a "SS" Start-to-Start relationship where the Predecessor task must Start before the Successor task Starts. Sometimes there is a lag of X number of days included in the relationship. For instance, the Contractor may schedule a "SS 5" relationship between Underground Plumbing and Underground Electrical where they want to Start the Installation of Underground Plumbing 5 days prior to Starting the Installation of Underground Electrical because the plumbing lines will be installed beneath the Electrical lines.

Finish to Start (FS) - Task 2 cannot start until task 1 finishes

Finish to Finish (FF) - Task 2 cannot finish until task 1 finishes

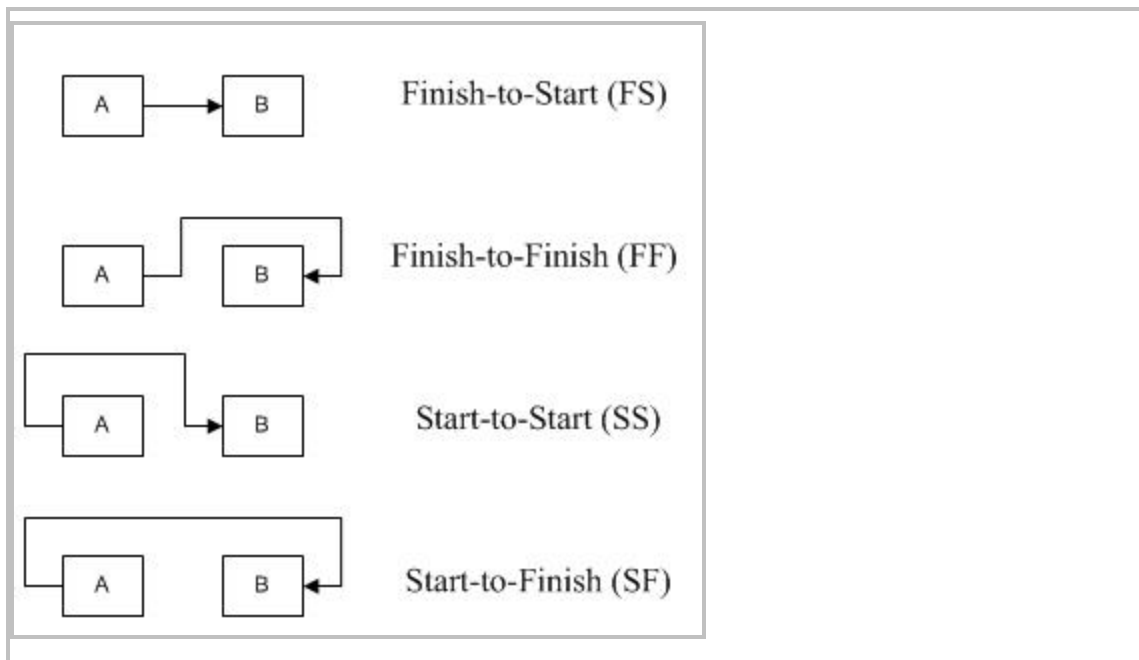
Start to Start (SS) - Task 2 cannot start until task 1 starts

Start to Finish (SF) - Task 2 cannot finish until task 1 starts

Additional Example

A STOP sign cannot be positioned until the concrete is laid down. Therefore, laying the concrete is the predecessor task. In addition to this, the concrete must not dry completely, otherwise, the STOP sign cannot be installed. In this case, we might include a Lag of 1 hour after the concrete has been poured out, because the concrete still needs to be moist, but not completely dry. In this scenario, the Link Type would be Start to Start (SS) because we cannot start the task of placing the STOP sign until the task of pouring concrete has begun.

You can identify predecessors in the import file by including the task number and the abbreviated link type, such as 2SS or 3 FS; and lag time, such as +5 days, -3days. However, these tasks can be updated after the schedule has been established. For instructions, see Predecessor Tasks.



Tasks and Subtasks

There can be a number of tasks that make up another task. When a task has many pieces to it and it is broken down, the pieces are called subtasks. The subtasks then roll-up to a summary task, which includes the total duration of all the subtasks. For example, Building Shell is a Summary Task that consists of the following sub tasks:

- Install underground plumbing
- Install underground electrical lines
- Form and place the foundation slab
- Erect the exterior walls
- Erect the roof framing
- Install the roof

You could organize these subtasks in other ways too - this is just an example.

Duration, Start and Finish Dates

Now it is time to define the timing of each task and the start and finish dates. You can start with an estimate for each task. Referring back to our example, suppose that you make the following estimates:

- Install underground plumbing – 15 days
- Install underground electrical lines – 15 days
- Form and place the foundation slab – 10 days
- Erect the exterior walls – 20 days
- Erect the roof framing – 10 days
- Install the roof – 10 days

The amount of time it will take to complete each task is referred to as the duration. The activities mentioned above are all considered tasks.

In addition, there may be certain points in your schedule that are considered important in that these items are critical for the success of the project. For example, inspections might be scheduled to get tasks approved. We will refer to these items as milestones. Milestones are tasks with zero duration, and in e-Builder, because they are zero duration, milestones have the same start and finish date.

Free Slack and Total Slack

The amount of time that a task can be delayed before it affects a dependency or the overall project completion date is known as slack. Free Slack is the amount of time a task can be delayed before its successor task is delayed. Total Slack is the amount of time a task can be delayed before the project finish date is delayed. These calculations can be useful if a resource needs more time on a task or you need to determine where you can squeeze in additional tasks that have been added in after the initial schedule was created without affecting the finish date. Often times your project team cannot alter the finish date of the project but you are required to add scope. In these circumstances, identifying your available slack can help you determine where to add these additional tasks.

Schedule Baselines

Going back to our example, you may want to take a snapshot of all the planned Tasks and original Start and finish Dates of each task to establish goals on your schedule requirements from start to finish. This is often referred to as the baseline. In e-Builder, you can choose to use a baseline as a point of reference when monitoring your project. So, for example, if the Contractor slips a bit on completing the Erect exterior walls Task, you have a way to measure the actual status against your baseline. The difference between the scheduled/actual start or scheduled/actual finish of a task and the baseline start or finish of that task is referred to as the variance. This is yet another tool to help monitor the schedule's health.

Terminology

This section defines the terminology used throughout the Schedule module. This topic is a useful resource to learn the terms and concepts used in the e-Builder Schedule module. The following terms are defined below:

Baseline

A snapshot of the aspects of a project at the beginning. A baseline is used to compare actual task durations, start and end times to what was anticipated at the beginning of the project.

Critical Path

The tasks that must be completed on time in order for the project to finish on schedule. A delay in the completion of these tasks will delay the end date of the project. Critical path tasks are indicated by the red lettering used for the task name. (Classic UI only)

	Task Name	Duration
+	Design	124d
	Publish RFP	0.67mo
	Bidder Selection Process	0.67mo
-	Design and Engineering	115.03d
	Design Building Addition	54.20d
	Assemble Technical Data for Heat Pump	7.20d
	Review Technical Data on Heat Pumps	29d
	Review and Approve Designs	24.63d
	Start Office Building Addition Project	0d

The three points summarized below define the importance of calculating the critical paths:

The duration of the critical path identifies the total duration of the project.

Since we have identified the critical path, we also know which tasks cannot be delayed without affecting the finish date of the project.

Conversely, those tasks that are not part of the critical path can in fact be delayed without affecting the finish date of the project.

Dependencies

When one task depends on another, the relationships between the tasks are called dependencies.

Duration

The amount of time allowed to finish a task.

Event

While still treated as a task in regards to duration, start and finish time, an event is classified as a meeting or an approval of item(s). Specifying events gives the System Admin or Schedule Manager the ability to better manage the schedule by identifying when work is actually being done versus a decision making or approval process that may or may not impact the schedule.

Free Slack

The amount of time that a task can be delayed before its successor task is delayed.

Master Process

Master processes are created by the account administrator to categorize and report on Master Tasks. Project schedules use these processes to filter and view activities in the schedule.

Master Task

Master tasks are a standard set of tasks used in multiple project schedules. The power of master tasks lies in cross-project reporting. Project schedules typically include a subset of these master tasks and regular tasks. The account administrator will maintain these processes and tasks.

Milestone

Certain points in the schedule that are considered important in that these items are critical for the successful completion of the project. When monitoring multiple projects in e-Builder, it is helpful if all projects have the same Milestones to be able to report consistently.

Predecessor

In a relationship where one task depends on another task, the task which has another task dependent on it is called the predecessor, and can also be referred to as the controlling task.

Schedule

Schedules consist of a list of all the tasks to be completed for a particular project.

Schedule Manager

The Schedule Manager is responsible for developing the schedule. This person will determine the order of the tasks, their duration (the time allotted for each task to be completed), allocate resources to each task, and then monitor the project while it is underway to compare the projected outcome to the actual outcome.

Slack

The amount of time that a task can be delayed before it affects a dependency or the overall completion date of the project.

Subtasks

When a task has many pieces to it and it is broken down, the pieces are called subtasks.

Successor

In a relationship where one task depends on another task, the dependent task is called the successor.

Summary Task

This is a high-level task with subtasks underneath it. For instance, Design might be a summary task the there are tasks the make up design. Summary task views gives you an overall picture of when an area of the project will be completed.

Task

Tasks are the basic building blocks of a project schedule; tasks make up the schedule. After the schedule manager builds out the schedule, they will assign resources to each of the tasks. Based on the duration assigned and the placement of the task, a start and end date is automatically applied.

Task Manager

The person responsible for managing the tasks of a particular project phase, such as Design or Construction phase tasks.

Task Resource

The person responsible for completing an individual task. This person will typically report to the task manager.

Template

A predefined pattern or makeup that you can use as the basis for setting up a future project. Templates are created by an Account Administrator and they can choose to apply this template to the project, which will automatically give you a basis to start with when building out the project schedule. If a template is not applied to the project, the Account Administrator can make schedule templates available for the schedule manager to use. Available template options display in a drop-down menu when applying a schedule template.

Total Slack

The amount of time that a task can be delayed before the project end date is affected.

Variance

The difference between the scheduled/actual start or scheduled/actual finish of a task and the baseline start or finish of that task.

(Create) Schedule Page Overview

Only one schedule is permitted per project. If you are creating a schedule for a project, you will see the Create Schedule page where you can complete the details of the schedule, which is a preliminary step before adding tasks. Setting up schedule details means defining the days that make up the work week, the start date of the project, number of hours per work day and choosing the schedule manager role and user. From here, you will also determine whether or not an external scheduler will be used conjointly with the e-Builder Schedule module.

To access the Schedule page

On the top navigation tabs, click the **Schedule** tab.

Click the **Project** drop-down menu and select the project name.

The **Schedule** page is displayed.

To create a schedule

1. Open the Schedule page.
The **Create Schedule** page is displayed if a schedule has not been created for the project.
2. On the **Create Schedule** page, complete the details of the schedule.

3. Click **Save**.

The **Schedule** page is displayed.

Tasks Tab

Tasks Pane:

Contains a list view of tasks by row and of fields by columns. Field availability is based on module attributes for the account, and edit capabilities are based on user roles. Changes made to the Tasks pane are saved for the user per project.

	#	Task Name	Duration	Start	Finish
	0	Seattle Hospital 	10.15 months	12.01.2018	09.12.2019
1 	1	 Contractor	4 days	12.01.2018	12.07.2018
1.1 	2	 Supply Lot Sale Ag...	1 day	12.01.2018	12.03.2018

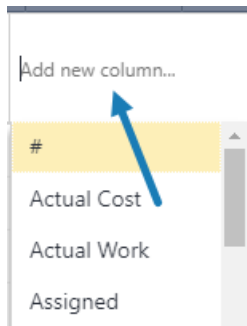
- Project summary:** Displays a total of the tasks duration. It also reflects the earliest start date and latest end date for all the tasks in the schedule.
- Task Summary:** The blue arrow indicates there are tasks grouped under this task. Click to show all the tasks under the task.
- Work Breakdown Structure (WBS) number:** Represents the task's relative place in the schedule hierarchy.
- #:** Represents the task number. This is the number referenced in the Predecessor and Successor columns. This column does not appear by default and will need to be manually added to the Tasks pane.
- Status indicator:** Each color indicates the status of the task.
 - Blue = Complete
 - Red = late
 - Yellow = early
 - Orange = no baseline
 - Green = on time

On the Tasks pane, you can:

- Resize pane:** Drag the splitter line between the Task pane and the Gantt chart left or right to change the visible space in each area.

% Complete	Rollup	
5.23	No	← →
30.77	Yes	
100	No	← →
100	No	Sup

- **Add a column:** Click **Add New Column** and select a column name from the dropdown list.



- **Remove a column:** Click on the column header down arrow and uncheck the column name.

% Complete	Rollup	Status
5.23		Columns
30.77	Yes	Duration
100	No	Start
100	No	Finish
100	No	% Complete
100	No	Rollup

- **Move a column:** Click on the column header and drag to the desired location. A green check mark appears when you are dragging the column to an acceptable location.

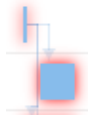
ns	Navigate	Baseline
Duration	Start	Finish
10.15 months	12.01.2018	12.07.2018
4 days	12.01.2018	12.07.2018

Gantt Chart

Contains a graphical time-scaled view of task durations and relationships.

On the Gantt chart, tasks are represented by the following graphical components:

- Summary task: Green bar 
- Task: Blue bar 
- Task Baseline: Gray bar
- Milestone (zero duration): Green diamond 
- Relationships: Blue arrows 
- Critical Path: Tasks and arrows highlighted in red



Toolbar Buttons

The gray toolbar that contains buttons for navigation and actions. Depending on your user roles, the following buttons are available:

- **Add Task:** This button is not visible to Task Resources. Only Schedule Managers and Task Managers are able to see this button. Click to add a single task.
- **Outdent:** Decreases the indentation level of the selected task in the tree. This button is only available to Schedule Managers or users with Manage Templates permission. For instructions, see Move Tasks within the Schedule.
- **Indent:** Increases the indentation level of the selected task in the tree. This button is only available to Schedule Managers or users with Manage Templates permission.
- **Undo:** Click to undo the last action. This button is only available to Schedule Managers or users with Manage Templates permission.
- **Redo:** Click to redo the last action. This button is only available to Schedule Managers or users with Manage Templates permission.
- **Import:** Click to import tasks using an .MPP file (Microsoft Project 2003, 2007, 2010, 2013). This button is only available to Schedule Managers or users with Manage Templates permission. For details or instructions, see Working with Schedule Imports.
- **Expand:** Shows all the tasks and subtasks.
- **Collapse:** Collapses the subtasks under their tasks.
- **Previous / Next:** Moves the time axis backward / forward in time in units specified by the current view.
- **Zoom In/Out/Fit:** Click to zoom in or out the timeline. Click Fit to change the timeframe of the scheduling chart to fit all the events in it.
- **Working Time:** Click to open the Manage Calendars dialog box. If your account has the Resource Management (RM) or Resource Management with Costs (RMC) option enabled, you have the ability to manage calendars.

- **Templates > Apply Template:** Select the schedule template that has been created by your e-Builder account administrator or someone with manage templates permissions. Templates give schedule managers a basis for starting the project schedule. This button is only available to Schedule Managers or users with Manage Templates permission. For instructions, see [Manage Templates](#).
- **Templates > Save as Template:** Click to save the current schedule as a personal template or as an account template to be used throughout the account. This button is only available to Schedule Managers or users with Manage Templates permission. For instructions, see [Manage Templates](#).
- **Critical Path:** Click to highlight in red the critical paths that can affect the end date of the project.
- **Export:** Click to export e-Builder schedule as a PDF or as an .XML file, which can then be uploaded to Microsoft Project. This button is only available to Schedule Managers or users with Manage Templates permission. As a Schedule Manager, if you use Microsoft Project conjointly with e-Builder as your scheduling tool, through the import and export options, you can work seamlessly with both utilities. For instructions, see Export Schedules.
- **Send:** Click to send the schedule or the selected tasks to users in the project or external users using their email address. The Send Schedule dialog also allows you to send a message to the recipients.
- **Snapshot:** Click to save a snapshot of the schedule. A snapshot can be taken at any time. Ideally, you should save a baseline before the project gets underway to give you a basis for comparing your progress. In most cases, after the baseline is saved, a snapshot is taken on a monthly basis. Saving a Schedule Snapshot will keep a "picture" in e-Builder of where a Schedule was as the time the snapshot was taken. Snapshots can then be compared to the baseline or later snapshots for progress analysis. To see all the snapshots that have been taken, click the Snapshot tab toward the bottom of this page. This button is only available to Schedule Managers or users with Manage Templates permission. For instructions, see Schedule Snapshots.
- **Set:** Click to save a baseline of your schedule. For instructions, see [Manage Schedule Baseline](#).
- **Toggle:** Click to show or hide the baseline.

Columns Available in all Schedules

- **Task Name:** Displays the name of the task
- **Duration:** Task duration in days (Note: for parent tasks, the units automatically changes to Weeks for Duration >20 days, and changes to Months, for Durations >26 Weeks)
- **Predecessors:** The tasks that precedes the task (Options are FS, SS, FF, SF)
- **Successors:** The tasks that succeeds the task (Options are FS, SS, FF, SF)
- **Start:** The planned start date for a task.
- **Finish:** The planned finish date for a task.
- **% Complete:** The manually updated progress, as a percentage of duration, on a task (may also be automatically calculated as of the current date, if the schedule setting is enabled to "Automatically calculate the % complete").
- **Early Start:** The earliest date that a task can start based on any dependencies and constraints.

- **Early Finish:** The earliest date that a task can finish based on the Early Start date plus Duration, as well as any dependencies and constraints.
- **Late Start:** The latest date that a task can start in order to meet any successor Milestones (such as a Project Finish No Later Than Constraint on a Project Finish milestone)
- **Late Finish:** The latest date that a task must finish in order to meet any successor milestones (such as a Finish No Later Than Constraint on a Project Finish milestone).
- **Baseline Duration:** The duration in days on each selected task at the moment that the baseline was last set.
- **Baseline Start Date:** The start date on each selected task at the moment that the baseline was last set.
- **Baseline Finish Date:** The finish date on each selected task at the moment that the baseline was last set.
- **Baseline % Complete:** The manually updated progress, as a percentage of duration, on each selected task at the moment that the baseline was last set.
- **Calendar:** Select from the available project calendars.
- **Constraint:** Select the type of constraint to be applied to a task (Options are: None, As late as possible, As soon as possible, Finish no earlier than, Finish no later than, Must finish on, Must start on, Start no earlier than, Start no later than)
- **Constraint Date:** Select the date that is desired to coincide with the constraint type. To remove a constraint, you must first change the Constraint Type to "None".
- **Critical:** Indicates that a task is on the critical path (longest path) for the project schedule.
- **Start Variance:** $\text{Start Variance} = \text{Start} - \text{Baseline Start Date}$
Values are either: *N* days Late, *N* d Early, or 0d (Example: 2d Early, 3d Late)
- **Finish Variance:** $\text{Finish Variance} = \text{Finish} - \text{Baseline Finish Date}$
Values are either: *N* days Late, *N* days Early, or 0d (Example: 2d Early, 3d Late)
- **Free Slack:** The number of days that a task can fall behind schedule without affecting the start date of its earliest successor task.
- **Total Slack:** The number of days that a task can fall behind schedule without affecting the start date of its earliest successor task.
- **Master Process:** When configured on the account, select the Master Process number that you wish to associate with a task.
- **Status:** The status of a task compared to its Baseline Finish Date (Statuses are: Draft, Not Baselines, On Time, Early, Late, Complete)
- **Manual mode:** When enabled, it allows users to change a task's dates manually and ignore schedule dependencies. To enable it, click on the cell and select the check box.
- **Master Task:** When configured on the account, select the Master Task that you wish to associate with a task.
- **Milestone:** Indicates whether the task is a zero duration milestone.
- **Rollup:** Indicates all parent tasks (Values are Yes, No)

Additional Columns

Based on which schedule modules that have been enabled on your account, the following columns may be available:

- **Assigned Resources:** Select a resource from the resource pool on the account. From the Assigned Resource column, you may also select the role from the available Resource Roles on the account, and adjust the units, which is the desired % of an assigned resource's work day.
- **Mode:** The scheduling mode which dictates how e-Builder will calculate either the task's Duration, Work, or Units. For more information, see [Schedule Mode](#).
- **Calendar:** Select one of the calendars for the selected task.
- **Budget Line Item:** The Account Code selected for Resource Cost
- **Work:** The total resource hours on a task.
- **Baseline Work:** Total resource hours on a task at the moment that the last baseline was last set.
- **Planned Work:** Resource hours on a Task that are linked to Budget Line Items.
- **Actual Work:** Work x % Complete
- **Remaining Work:** Work – Actual Work
- **Cost – Total Resource Cost:** Each Assigned Resource's Work x their corresponding (Rate + Burden)
- **Baseline Cost:** Total Resource Cost on a task at the moment that the last baseline was last set.
- **Planned Cost:** Total Resource Cost on a task that are linked to budget items.
- **Actual Cost:** Cost x % Complete
- **Remaining Cost:** Cost – Actual Cost
- **Estimated Work at Completion:** Sums the greater of Planned Work or Actual Invoice Work for every assigned resource.
- **Approved Invoice Work:** Resource Hours from Approved or Paid Invoices
- **Remaining Invoice Work:** Estimated Work at Completion – Approved Invoice Work
- **Estimated Cost at Completion:** Sums the greater of Planned Cost or Actual Invoice Cost for every assigned resource.
- **Approved Invoice Cost:** Resource cost from Approved or Paid Invoices
- **Remaining Invoice Cost:** Estimated Cost at Completion – Approved Invoice Cost
- **Work Variance:** Work – Baseline Work
- **Cost Variance:** Cost – Baseline Cost +Over,-Under

Details Tab

General

- **Manager Role:** Select the role that the schedule manager belongs to from roles that have "View Cost" permissions. Doing so will enable the subsequent drop-down menu, which allows you to choose the appropriate user in this role. Users in the designated Schedule Manager role can create the schedule and tasks, edit schedule details, create and apply templates, and update tasks.

These permissions are not limited to only the individual named in the Schedule Manager User field.

- **Manager User:** This menu is enabled only after a role is selected from the preceding Manager Role drop-down menu. Click the drop-down arrow to assign the manager user. This field is intended as a reference to the primary project contact for the schedule. Any user in the project having the same role as the "Manager Role" will be able to edit the schedule and manage resources on the schedule.
- **Use External Scheduler:** Select whether or not an external scheduler will be used.

This feature should be turned on only if another scheduling software, such as Primavera 6, is your primary scheduling tool and e-Builder will only be used to make scheduling information available to internal staff, or if the schedule is being pulled into Cash Flow projections. If set to Yes, all action buttons will be disabled in the e-Builder Schedule module and you will only be able to import and export tasks in an Excel spreadsheet. This setting also makes it possible to update multiple project schedules in a single import. This can be disabled at anytime.

For information and instruction on working with another scheduling tool, see Enable External Scheduler.

- **Automatically calculate the % complete:** When selected, e-Builder calculates the % complete on a pro-rated basis for any task with a Start Date and/or Finish Date in the past (before the current date). If the Task Finish Date is in the past, the Task is updated to 100% complete.
- **Link Resource Cost to the Budget:** This option is available only when 'Resource Management with Cost' has been enabled on the account.

None: Default setting - This setting is disabled.

Tasks to Budget Line Item: Allows Schedule Manager to select a single Budget Line Item for Resource Costs on a Task.

Tip: Choose this option for projects where all the resources who are assigned to a single task charge their time to the same budget line item or account code.

Resources to Budget Line Item: Allows the schedule manager to select a single budget line item per resource assigned to any task. Can result in multiple budget line items for resource costs on a task if resources are linked to different budget line items.

Tip: Choose this option for projects where different resources working on the same task can charge time to different budget line items or account codes.

Calendar

- **Start Date:** Click the calendar icon to choose a project start date. You can also use free-text entry in mm/dd/yyyy format.
- **Hours per day:** Enter the number of hours that will make up the work day. By default, the work week is Monday - Friday, 8 hours per day, and 40 hours per week.

Tip

If Saturday and Sunday are added to the work week, increase the hours per week to 56 and days per month to 30. Otherwise, task durations will automatically adjust to the days and hours per week entered.

- **Hours per week:** Enter the number of hours that will make up the work week. By default, the work week is Monday - Friday, 8 hours per day, and 40 hours per week.

Tip

If Saturday and Sunday are added to the work week, increase the hours per week to 56 and days per month to 30. Otherwise, task durations will automatically adjust to the days and hours per week entered.

- **Days per month:** Enter the number of working days per month. By default, the work week is Monday - Friday, 8 hours per day, and 40 hours per week.
- **Calendar:** Only available to MC, RM and RMC account attributes. Select one of the calendars or click Manage Calendar to create another one.
- **Manage Calendar:** Only available to MC, RM and RMC account attributes. Use the Manage Calendars dialog box to edit or create a new calendar. From here you can set the working days and hours, as well as set the exceptions (e.g., holidays).

Custom Fields Tab

If applicable, this tab lists the schedule custom fields. Custom field values can be modified by editing schedule details.

Snapshots Tab

Lists all saved snapshots and gives you the ability to compare multiple snapshots to one another. To save and compare snapshots, see [Manage Schedule Snapshots](#)

History Tab

Provides a history of the activities and actions taken in the Schedule module. This tab is a great resource for the auditing process.

Importing Schedules

e-Builder supports multiple methods for updating schedules. Schedules may be updated manually through the e-Builder schedule interface or changes may be imported from one of two supported file types. Microsoft Excel (exported from Primavera 6) and .mpp files (exported from Microsoft Project) are both compatible with e-Builder imports, but each file type import affects the use of the project schedule differently.

To use an external scheduler, admin users must enable this feature. Admin users must first contact Support to activate this feature at their account level.

To enable a project schedule for Excel imports

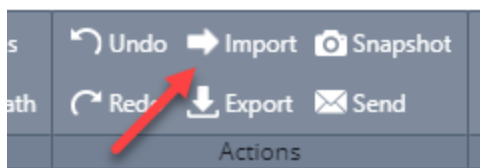
1. Open the Schedule page.
2. On the **Details** tab, in the **General** section, next to the **Use External Scheduler** drop-down, select **Yes**.
3. Click **Save**.

Import Microsoft Project Imports (.mpp)

If Microsoft Project (MS Project) is used in conjunction with the e-Builder Schedule module, you can easily keep your project schedule updated in e-Builder, which gives you the ability to work seamlessly with both tools. The .mpp file import is the standard e-Builder schedule import, therefore it can be used to override an existing schedule or reconcile changes. However, in order to do subsequent updates to the schedule, an initial import of the schedule must first be completed. Typically, importing a project schedule is standard when starting a new project schedule. This import type identifies differences between both schedules and updates the e-Builder schedule accordingly. Pertinent e-Builder data such as cash flow links and custom field values can also be maintained through this schedule import.

To import .mpp project schedules

1. Open the Schedule page.
2. On the **Tasks** tab, in the schedule toolbar, click **Import**.



Note:

- If this is your first schedule import, update options are not displayed.
- For subsequent updates, choose the default update option: 'Synchronize all tasks with my e-Builder schedule'. If you choose the second option of adding tasks to the existing schedule, you will no longer be presented with options while updating and the imported tasks will automatically be appended to the existing schedule.

3. On the **Import Schedule** page, click **Choose File**.
4. Select your .mpp file and click **Open**.
5. Click **Next**.
6. If necessary, map built-in e-Builder fields with those in your .mpp file.
7. Click **Next**.
8. After reviewing the import summary, click **Import**.

Import Schedule Using Excel

This type of import is ideal for clients who are using another tool as their primary scheduler, such as Primavera 6 (P6).

Multiple projects can be updated in a single import by including a column for the Project Identifier - values would include either the project name or project number. The table below lists all required and optional fields that should or can be included in the import file.

Note: If your project schedule is enabled to use an External Scheduler, only Excel files may be imported.

List of required and optional fields for import file

e-Builder Field Name/ Import File Column Header	Description	Required/Optional
Project Identifier	Select a Project Identifier. This is a unique ID that will identify which project the schedule import is for. e.g., project name, project number. This ID must match the Project ID or Name of the e-Builder project. When importing tasks for multiple projects, this field must be mapped. To learn more about project numbers, see Create Project Number Custom Field.	Required
Task Name	Map this field with its corresponding column in the Excel spreadsheet.	Required
Task ID	The Task ID is only visible in BI reports. It must be unique, cannot end with letters, and cannot contain special characters other than a period. Max. 50 characters.	Required
Duration	Task duration refers to the amount of time it will take to complete a task. If there are no start and end dates specified, they will be automatically populated based on the duration, the project's timeframe and the sequence of the task within the schedule.	Required
Sequence Number	Sequence number refers to the number assigned to the sequence of the task. It can use the same field as Task ID or a separate custom field. Can use decimals to establish roll-up task hierarchy (e.g., 1, 1.1, 1.2, 2, 2.1). No alpha characters (A-Z) are allowed. Max. 10 integers for each level.	Required
Start Date	This column denotes the date the task will begin. If a start date is not specified, the start	Required

e-Builder Field Name/ Import File Column Header	Description	Required/Optional
	and end dates will automatically populate based on the duration, the project's timeframe and the sequence of the task within the schedule. Note: P6 does not auto-populate a Start Date on Finish Milestones)	
Finish Date	This column denotes the date the task will end. If a finish date is not specified, the start and end dates will automatically populate based on the duration, the project's timeframe and the sequence of the task within the schedule. Note: P6 does not auto-populate a Finish Date on Start Milestones)	Required
Baseline Start Date	Map this field to its corresponding column in the Excel spreadsheet. A baseline start date can be set for the overall project schedule, or particular project phases.	Optional
Baseline Finish Date	Map this field to its corresponding column in the Excel spreadsheet. A baseline finish date can be set for the overall project schedule, or particular project phases.	Optional
Baseline % Complete	Map this field to its corresponding column in the Excel spreadsheet. A baseline percentage complete can be set for the overall project schedule, or particular project phases.	Optional
Actual Duration	Map this field to its corresponding column in the Excel spreadsheet. This figure denotes the time it actually took to complete this task.	Optional
Actual Start Date	Map this field to its corresponding column in the Excel spreadsheet. This figure denotes the	Optional

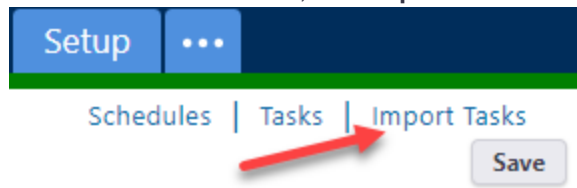
e-Builder Field Name/ Import File Column Header	Description	Required/Optional
	date that the task actually began.	
Actual Finish Date	Map this field to its corresponding column in the Excel spreadsheet. This figure denotes the date that the task was actually completed.	Optional
% Complete	Map this field to its corresponding column in the Excel spreadsheet. This figure is the task's completion percentage.	Optional
Constraint Type	Map this field to its corresponding column in the Excel spreadsheet. Constraint types set the parameters as to the timing of the task. Options include: • As Late as Possible • As Soon as Possible • Finish no Earlier Than • Finish no Later Than • Finish On • Start No Later Than • Start On	Optional
Constraint Date	Map this field to its corresponding column in the Excel spreadsheet. Constraint date is only necessary for the following constraint types: • Finish no Earlier Than • Finish no Later Than • Finish On • Start No Later Than • Start On Enter the date the appropriate dates based on the selected constraint type.	Optional
Milestone	Map this field to its corresponding column in the Excel spreadsheet.	Optional

e-Builder Field Name/ Import File Column Header	Description	Required/Optional
	Include a check mark in this column for all tasks that are considered milestones. Milestones are tasks that are considered critical for successful project completion, such as receiving the certification of occupancy, for example.	
Type	Map this field to its corresponding column in the Excel spreadsheet. Specify whether the task is an event or a task. Although an event is still treated as a task in regards to duration, start and finish time, an event is classified as a meeting or an approval of item(s). Specifying events gives the schedule manager the ability to better manage the schedule by identifying when work is actually being done versus a decision making or approval process that may or may not impact the schedule.	Optional
Master Task Name	Map this field to its corresponding column in the Excel spreadsheet. Master tasks are created by the account administrator and used to identify similar project phases that may be referred to by different names across multiple projects. Example One project might use the term, Closeout and others may use Final Completion', Project Close Out or Closeout/Occupancy. The master task is a unique identifier that unifies all of these project phases so that account administrators and Executives can report on the status of these phases across all projects. All master tasks have a numerical prefix that	Optional

e-Builder Field Name/ Import File Column Header	Description	Required/Optional
	allows you to link similar project phases to one another. A subtask will not likely be tied to a master task, only the primary project phase or Summary Task, such as Pre-Design, Design, Construction or Closeout.	
Master Task Number	Map this field to its corresponding column in the Excel spreadsheet.	Optional
Task Resource Role	Map this field to its corresponding column in the Excel spreadsheet. This column includes the name of the e-Builder role the task resource belongs to.	Optional
Task Resource	Map this field to its corresponding column in the Excel spreadsheet. This column includes the name of the task resource.	Optional
Task Manager Role	Map this field to its corresponding column in the Excel spreadsheet. This column includes the name of the e-Builder role the task resource belongs to.	Optional
Task Manager	Map this field to its corresponding column in the Excel spreadsheet. This column includes the name of the task manager.	Optional
Predecessors	Map this field to its corresponding column in the Excel spreadsheet. This column includes task number and constraint type of predecessor tasks. For example, 6FF.	Optional

To import a schedule for multiple projects

1. Open the Schedule page.
2. In the Quick Links section, click **Import Tasks**.



Note: If the Import Tasks link is not available, contact your e-Builder Technical Support to enable this option.

3. Click **Choose File** to search for and select the import file.
4. Click **Next**.
5. If necessary, map built-in e-Builder fields with those in your Excel file.
6. Click **Next**.
7. Review the Import File Summary.
8. Click **Import**.

Export Schedules

Schedules can be exported to an XML file, which can be opened in Microsoft Project. The XML export is ideal for schedule managers who track their schedules using both e-Builder and MS Project. Schedules can also be exported into a PDF, which is useful for printing.

To export the schedule as an XML file

1. Open the Schedule page.
2. In the **Actions** section of the toolbar, click  **Export**.
3. Select XML.

The schedule is exported as an XML file.

To export the schedule as a PDF

1. Open the Schedule page.
2. In the **Actions** section of the toolbar, click  **Export**.
3. Select PDF.
4. Review the print settings and click **Print**.

The schedule can now be printed or saved as a PDF.

Manage Schedule Tasks

You can perform the following actions on tasks:

Add Individual Tasks

In most cases, tasks can be imported using Microsoft Project. However, if you have permission to create tasks, you can add tasks to the schedule one at a time.

To add individual tasks

1. Open the Schedule page.
2. In the **Tasks** section of the toolbar, click **Add Task**.
The task is added to the bottom of the schedule
3. Edit the task inline.
4. Click **Save**.

Note: To edit a task's details, double-click on the task to open it in the Task Editor.

To add an individual task from the list of tasks

1. Open the Schedule page.
2. Right click on a task where you would like to add your new task.
3. Select **Add** from the drop down, and then choose where you wish to add the new task.
The task is added and ready for inline editing.
4. Click **Save**.

Activate Schedule Tasks

After tasks have been added to the schedule via an import, they are in draft status until activated. Note that project participants can still view draft tasks.

To activate tasks

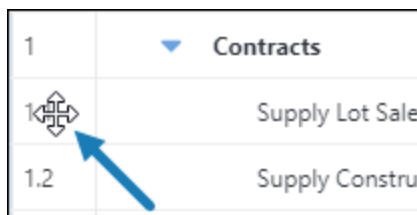
1. Open the Schedule page.
2. Right-click on the tasks you want to activate and select **Activate**.

Move Tasks

Tasks can be moved within the schedule to update either the sequence or WBS.

To move tasks within a schedule

1. Select the task you wish to move by clicking on the task's number.



2. Do any of the following:
 - Drag it up or down within the schedule.
 - To make it a subtask, move it directly below the parent task, and then click the  **Indent** in the **Tasks** section of the toolbar.

- To move a subtask out of a parent task or to make it a summary task, click the  **Outdent** in the **Tasks** section of the toolbar.

Update Tasks

Tasks can be updated by modifying details such as title, dates and duration. You can also reassign, activate or complete multiple tasks at a time.

To update a single task using inline editing

1. Open the Schedule page.
2. Click on the task you wish to edit.

The input fields become editable.

3.4	Receive Bids	10 days	06.15.2018
-----	--------------	---------	------------

3. Make all necessary changes.

Note: Task durations can also be modified by selecting the right side of the Gantt bar for the related task and moving it left or right to decrease or increase the task duration.

4. Click **Save**.

To update multiple tasks

1. Open the Schedule page.
2. Click and hold the fill handle in the bottom right corner of the cell that contains the value.
3. Drag the fill handle to select the cells that you want to contain the same value.

Supply Construction Agreement	1 day	12.01.2018
Supply Contract Plans	1 day	12.01.2018
Supply Contract Specifications	1 day	12.01.2018
Supply Contract Site Plan	3 days	12.04.2018
Secure Financing	3 days	12.04.2018

4. Click **Save**.

To update tasks using the Task Editor

1. Open the Schedule page.
2. Right-click on the task and select **Task Details**.

The Task Editor dialog is displayed.

3. Make all necessary changes.
4. Click **OK**.

If approval is required for date changes or percent complete, a message displays informing you that an approval request was sent to the Task Manager. Click **Continue**.

Note: For a description on each of the fields, see Task Editor.

Assigning Resources to a Task

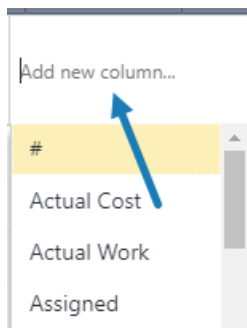
This feature is available only if you have the Resource Management feature enabled.

To assign tasks

1. Open the Schedule page.
2. Click the **Assigned Resources** column next to the task you want to assign a resource to.

Tip

If the **Assigned Resources** column is not visible, click **Add new column** and select the new column.



A dialog with a list of resources is displayed.

3. Select the check box(es) of the resources to be assigned to the task.
4. For each of the selected resources, select their role, the percentage of work that the resource's time is assigned to a task, and the total work hours.
5. Click **Close**.

Mark Tasks Complete

Users with access to the project schedule can mark tasks as complete. Marking tasks complete is equivalent to updating the percent complete to 100.

To mark tasks as complete

1. Open the Schedule page.
2. Right-click on the task and select **100% Complete**.
3. Click **Save**.

To mark tasks as using the Task Editor

When marking a task as complete, you can also provide additional details.

1. Open the Schedule page.
2. Right-click on the task and select **Task Details**.

The Task Editor dialog is displayed.

3. On the **General** tab, set **% complete** to 100.
4. Enter additional details.
5. Click **OK**.
6. Click **Save**.

Delete Tasks

If a task becomes obsolete, delete it from the schedule.

To delete tasks

1. Open the Schedule page.
2. Right-click on the task and select **Delete**.
3. Click **Delete**.

Note: Tasks that are linked to the cash flow cannot be deleted. If these associations exist, these tasks will be listed and you will only be able to cancel this action.

4. Click **Save**.

Manage Calendars

This feature is available in the New Schedule interface. Accounts with Resource Management (RM) or Resource Management with Costs (RMC) include the ability to manage calendars by default. Administrators can contact Support and request to activate the Multiple Calendars feature.

Use the Manage Calendars to set the calendars for this schedule. Three standard calendars are available: 24 hours, 7 Day week and Standard. You can edit their working time or create new calendars.

To access the Manage Calendars dialog box

1. Open the Schedule page.
2. On the **Tasks** tab, in the **Calendars** section of the toolbar, click  Working Time.

To add a new calendar

1. On the **Manage Calendars** dialog box, under the **Calendar** section, click **Add**.
2. Enter a name for the new calendar.
3. Select to either make a copy of an existing calendar or select to add a new calendar.
4. Click **Add**.
The new calendar is added.
5. Select the calendar to edit it.
6. To make it the default calendar, select the **Default Calendar** check box.
7. To edit the working time:
 - a. Click **Edit Working Time**.
 - b. Select the working days.

- c. Click on the working hours to edit them or click **Add** to add new hours.
 - d. Click **OK**.
- 8. To add non-working days as exceptions to your calendar:
 - a. In the **Exceptions** section, click **Add**.
 - b. Enter a descriptive name for the exception.
 - c. Select whether it is a working or non-working type of exception.
 - d. Edit the Start and Finish dates to define a date range.
 - e. To add a single day, select the date on the calendar and then click **Add**.
 - f. To remove an exception, select the exception row and click **Remove**.
- 9. Click **Apply** to save your changes.

To remove a calendar

- 1. On the **Manage Calendars** dialog box, under the **Calendar** section, select the calendar to remove.
- 2. Click **Remove**.

Attach Viewpoints

If BIM is enabled on your account, you will have the option to attach viewpoints. Viewpoints are visual snapshots of a BIM model. Once captured, they are stored in the Viewpoints folder as defined in your BIM Settings. To learn more, see About the BIM Module.

To attach viewpoints

- 1. Open the Schedule page.
- 2. Click the **Attached Viewpoints** tab.
- 3. Click **Attach Viewpoints**.

The Attach Viewpoints from [Project Name] window appears.

- **Browse for Files:** Click to select a viewpoint from the Documents module. Only the folder designated to store viewpoints appear.
 - **Create Viewpoints:** Click to create a viewpoint in the BIM Viewer. For more information or instructions, see Save Viewpoints.
- 4. Click **Attach Selected**.

Manage Templates

Schedule templates are created by users with Manage Template permission. Schedule templates give the schedule manager a blueprint for starting the project schedule. Typically, the schedule manager applies the template at the onset of planning out the schedule. Templates can include very little or a gamut of task information. Using templates is highly recommended to help you save time when building out the schedule and keep you in sync with your account administrator.

After the schedule has been finalized, users with Manage Templates permission can save it as an account-wide or personal template. Account templates are accessible to everyone in all projects. Your personal templates are tied to your username and are available in any project that you have access to.

Note: Constraints are not saved to schedule templates.

To save a schedule as a template

1. Open the Schedule page.
2. In the **Tasks** section of the toolbar, click  **Templates**.
3. Click **Save as Template**.
4. Enter a name for the template in the **Name** field.
5. Next to **Template Type**, choose whether to save the template as an account or personal template.

Note: Schedule Managers or users with Manage Template permissions are able to make this template available throughout the account and anyone with access is able to save it as a personal template. Account templates will be available in all projects for all users to access. Personal templates are tied to your username and will be available in any project that you have access to by going to Setup > My Settings > Schedule > My Schedule Templates.

Tip: The Duration indicates the amount of time it will take to complete all tasks on the template schedule.

6. Click **Save**.

To apply a template

1. Open the Schedule page.
2. On the **Tasks** tab, in the schedule toolbar, click  **Templates**.
3. Click the drop-down arrow to choose the template you want to apply.
4. On the **Apply Template** page, do the following:
 - a. Choose a place in the current schedule to add the tasks in the template. Template tasks can be added to the end of the schedule, or in between other tasks by choosing one of the placement options.
 - b. Choose what to do with duplicate calendars.
 - c. If you chose to copy and rename the existing calendar, you can preview the duplicate calendar in the Manage Calendars dialog box.
5. Click **Apply**.

Manage Schedule Baseline

The baseline is the planned, ideal roadmap for the project schedule. In order to give you a point of reference for measuring deviations to the baseline, a baseline should be saved after the schedule has been finalized but before the project gets underway. You can baseline the entire schedule at one time or subsets of the schedule as they are completed, such as the design tasks, construction tasks, or close-out tasks. Baselines can only be saved after the task(s) has been activated. A snapshot is automatically created upon saving the baseline.

To save a schedule baseline

1. Open the Schedule page.
2. To save a baseline of the entire schedule, select the header of the number column.

	Task Name
	Project
1	Contract
1.1	Sup

—Or—

To save the baseline of just a few tasks, press CTRL and click the number column of the tasks you wish to include.

	Jung Project
1	Contracts
1.1	Supply Lot Sale Agi
1.2	Supply Contract Pla
1.3	Supply Contract Sp
1.4	Supply Contract Sp

3. In the **Baseline** section of the toolbar, click **Set**.
The Set Baseline dialog is displayed.
4. Select either to set a baseline for the entire project or only the selected tasks.
5. Click **OK**.

To reset a baseline

1. After a baseline has already been set, in the **Baseline** section of the toolbar, click **Reset**.
—Or—
Right-click on the tasks you wish to reset and select **Reset Baseline**.
2. In the **Reset Baseline** dialog, choose to either set the baseline for the entire project or the selected tasks.
3. When prompted to confirm, click **OK**.

Manage Schedule Snapshots

Taking a snapshot of your schedule allows you to track progress.

Save snapshot

Snapshots should be saved periodically. In most cases, schedule managers save a snapshot of the schedule at least once a month but they can be taken at any point in the project and used to review the progress of the schedule at different points in time.

To save a snapshot of the schedule

1. Open the Schedule page.
2. In the **Actions** section of the toolbar, click **Snapshot**.
3. On the **Save Snapshot** dialog, enter a name for the snapshot, such as the date or project phase.
4. Click **Save**.

View snapshot

After taking a snapshot of your schedule, you can view a list of all snapshots on the Snapshots tab.

To view saved snapshots

1. Open the Schedule page.
2. Click on the **Snapshots** tab.
3. Click to view a saved snapshots.

A snapshot of the schedule opens on a separate tab.

Compare snapshots

The Compare Snapshots page gives Schedule Managers a way to see the difference in task duration, start and finish dates or percent complete in one or more snapshots. This page lists all tasks in a collapsible view, with each selected snapshot nested underneath the task so you can see if there have been any changes over time. The current schedule is also listed in the list of snapshots to support real-time analysis. Changes appear in red text. If a snapshot entry is missing from any of the tasks, it's because the task was not included in the schedule at the time the snapshot was taken.

To compare snapshots

1. Open the Schedule page.
2. Click the **Snapshots** tab.
3. Select the check box next to the snapshots you want to compare.

Note: If only a single snapshot is selected, it will be compared to the current schedule.

4. Click **Compare**.

The Compare Snapshot dialog displays a comparison of the two snapshots.

Note: Changes in snapshots are displayed in red.

Field Description

A description of the fields are described below:

Compare snapshots

- **Snapshot Name:** Lists the name of the task first as a collapsible header. The names of the snapshots are listed beneath the task name.

- **Duration:** The task durations, which is the amount of time allotted for the completion of the task.
- **Start:** The actual start date of the task
- **Finish:** The actual finish date of the task.
- **% Complete:** The percentage complete of the task.

Deleted Tasks

- **Snapshot Name:** The name of the most recent snapshot the deleted item was last saved in.
- **#:** Task number
- **Task name:** The name of the task
- **Duration:** The amount of time allocated for the task's completion.
- **Start:** The date the task was started or schedule to begin, if it had not yet began.
- **Finish:** The date the task was finished or schedule to finish, if it had not yet been completed.
- **% Complete:** The task's percentage complete before it was deleted.

Predecessor and Successor Tasks

Tasks can be either linked together or dependent on one another. The tasks involved in these interdependent relationships are either predecessor or successor tasks. Predecessor tasks come first and successor tasks follow. Predecessor tasks refer to tasks that must be completed or at least begin before another task can start. Successor tasks are those that follow the predecessor. Schedule managers have the ability to specify what must be done and by when to ensure a successful project outcome. For example, the Schedule Manager can designate that one task can only begin 20 days after a previous task is completed.

Link types are used to establish the relationship between these dependencies and they are as follows:

Finish to Start (FS) - Task 2 cannot start until task 1 finishes

Finish to Finish (FF) - Task 2 cannot finish until task 1 finishes

Start to Start (SS) - Task 2 cannot start until task 1 starts

Start to Finish (SF) - Task 2 cannot finish until task 1 starts

If predecessors are not defined in the import file or they need to be updated on the fly, schedule managers can do so by editing the individual task. You are able to define up to five predecessor tasks for an individual task record.

To define predecessor tasks

1. Open the Schedule page.
2. Right-click on the task that you want to define predecessors for and select **Task Details**.
The Task Editor dialog is displayed.
3. Click the **Predecessors** tab.
4. To add a predecessor task, click **Add New**.
5. In the new row, select the task that you want to add as a predecessor.

6. In the **Lag** column, enter the amount of time in days, weeks or months that this task must endure before the subsequent task, or the task you've selected can begin or end.
7. In the **Type** column, select one of the following options:
 - Finish to Start (FS) - Select this option if task 2 cannot start until task 1 finishes
 - Start to Start (SS) - Select this option if task 2 cannot start until task 1 starts
 - Finish to Finish (FF) - Select this option if task 2 cannot finish until task 1 finishes
 - Start to Finish (SF) - Select this option if task 2 cannot start until task 1 finishes
8. Click **OK** to save your changes.

To add new predecessor tasks

1. Open the Schedule page.
2. Right-click on the task that you want to add a new predecessor for.
3. Select **Add > Predecessor**.
4. Enter additional task information inline.
5. Click **Save**.

Schedule Mode

The Scheduling Mode choice will dictate how e-Builder will calculate either the task's Duration or Work, or a resource's Units.

When you see the following words, interpret them as:

- **Fixed:** Set by a User
- **Duration:** Days
- **Work:** Hours
- **Units:** % of a Resource's Work Day that are assigned to a task

Fixed Duration mode (default)

The work of the task will change when a user assigns or removes resources

User Changes	Duration	Task Work	Units
Start	user changed	recalculate	unchanged
Finish	user changed	recalculate	unchanged
Duration	user changed	recalculate	unchanged
Task Calendar	unchanged	unchanged	unchanged
Add/Remove Assignment	unchanged	recalculate	user changed
Assignment %	unchanged	recalculate	user changed

Fixed Work mode

The duration of the task will change when a user assigns or removes resources. Also known as “Effort Driven” mode in some scheduling software.

User Changes	Duration	Task Work	Units
Start	unchanged	unchanged	unchanged
Task Calendar	unchanged	unchanged	unchanged
Add/Remove Assignment	recalculate	unchanged	unchanged
Assignment %	recalculate	unchanged	user changed
Task Work	recalculate	user changed	unchanged

Fixed Duration and Task Work mode

The Units (Resource allocation %) will change when a user assigns or removes resources.

User Changes	Duration	Task Work	Units	Assignment Work
Start	user changed	unchanged	recalculate	unchanged
Finish	user changed	unchanged	recalculate	unchanged
Duration	user changed	unchanged	recalculate	unchanged
Task Calendar	user changed	unchanged	recalculate	unchanged
Add/Remove Assignment	unchanged	recalculate	recalculate	user changed
Resource Work	unchanged	recalculate	recalculate	user changed

Resource and Manager Roles

For accounts that do not have Resource Management (RM) or Resource Management with Cost (RMC), a Resource Role is automatically created on project schedules.

Resource Roles

Note: The Resource Role has no relationship to e-Builder's Account-level roles or e-Builder Project-level roles. It only applies to the Schedule module.

The resource user and any other user on the project who is in the same role as the "Resource Role" can perform the following actions:

Task Edits

The resource user and any other user on the project who is in the same role as the Resource Role can perform the following actions on tasks where their role is the Resource Role:

- Edits on the General tab of the Task Editor:
 - Change the task's **% Complete** value (between 0% and 100% complete)
 - Change the task's **Duration** (which will automatically update the task's **Finish** date from the task's **Start** date).
 - Change the task's **Start** date (which will automatically update the task's **Finish** date using the task **Duration**).
- Edits on the Advanced tab of the Task Editor:
 - Change the **Constraint Type** and the **Constraint Date** (which will automatically update the task's start and finish date to align with the constraint selected).
 - Mark the Task as a Milestone (which will automatically change the task's **Duration** to 0 days and adjust the task's start and finish dates to equal each other).
- Add comments on the Comments tab of the Task Editor.

For more information, see the Task Editor Page Overview.

Schedule UI Toolbar Actions

The resource user can perform the following actions from the toolbar:

- Export the Schedule in XML or PDF format (for printing)
- Send the Schedule via e-mail to other users or external users
- Toggle the Critical Path on and off on the Gantt chart
- Toggle the Baseline bars on and off on the Gantt chart
- View the Calendar from the Working Time icon.

For more information, see the Toolbar Buttons section on the Schedule Details Page.

Project Schedule View Edits

- The resource user can add new columns and hide existing columns from their View of the Project Schedule.

Snapshots and Schedule History

- The resource user can view Snapshots from the Snapshots tab.
- The resource user can view the Schedule History from the History tab.

Manager Roles

In addition to the tasks granted to Resource Roles, users in the Manager Roles can change the following fields on a task:

- Change the Resource Role and Resource User assigned to tasks
- Change the Task Name on their tasks
- Change the Predecessor relationships for their tasks
- Change the Master Task association for their tasks

Task Editor

Use this page to include every task detail, such as notes, documents, forms and processes.

To update tasks using the Task Editor

1. Open the Schedule page.
2. Right-click on the task and select **Task Details**.
The Task Editor dialog is displayed.
3. Make all necessary changes.
4. Click **OK**.

If approval is required for date changes or percent complete, a message displays informing you that an approval request was sent to the Task Manager. Click **Continue**.

A description of each of the fields are listed below:

General

- **Name:** Task name
- **Description:** A brief description of the task
- **% Complete:** The completion percentage of the task.
- **Duration:** The duration of the task.

Note: If the Schedule Mode (under Advanced tab) is set to 'Fixed Work', the duration automatically adjusts the number of days based on the resource's units (i.e., % Allocation)
- **Dates Start:** The task start date.
- **Dates Finish:** The task finish date.
- **Baseline Start:** If baseline was saved, this field displays the start date of this task as it was saved in the baseline.
- **Baseline Finish:** If baseline was saved, this field displays the finish date of this task as it was saved in the baseline.
- **Baseline % Complete:** If baseline was saved, this field displays the finish date of this task as it was saved in the baseline.
- **Baseline Status:** The status of the baseline.

Predecessors

- **Add New:** Click to add a new predecessor.
- **Task Name:** Select the task to add as a predecessor.
- **Type:** Select the type of relationship.
- **Lag:** Select the time frame for when this new task or additional predecessor tasks can begin or end.

Resources (with RM or RMC)

The following options are available if your account has Resource Management (RM) or Resource Management and Cost (RMC) enabled.

- **Add New:** Click to add a new resource.
- **Resource Name:** Name of the resource.
- **Role:** The role assigned to the current resource for the specific task. For a list of actions available to the resource role, see [Resource and Manager Roles](#).
- **Units:** The percentage of how much of the resource's availability that is dedicated to this task.
- **Work:** The number of hours the resource is dedicated to this task. This value auto-adjusts after you change the units.

Note: If the Scheduling Mode (under the Advanced tab) is set to 'Fixed Work', the resource's work is not editable.

Resources (without RM or RMC)

The following fields are available if your account does NOT have Resource Management (RM) or Resource Management and Cost (RMC) enabled.

- **Resource Role:** Select the role that will have permission to update the task. All members of this role will inherit the permission.
- **Resource - Responsible Resource:** Select the user who will be the main point of contact. This user has to be a member of the selected resource role. For a list of actions available to all users of the selected resource role, see [Resource and Manager Roles](#).
- **Manager Role:** Select the role that will have permission to update the task. All members of this role will inherit the permission.
- **Manager - Responsible Resource:** Select the manager who will be the main point of contact. This user has to be a member of the selected resource role. For a list of actions available to all users of the selected manager role, see [Resource and Manager Roles](#).

Advanced

- **Calendar:** Select from the available project calendars.
- **Constraint Type:** Select the type of constraint to be applied to a task.
- **Constraint Date:** Select the date that is desired to coincide with the constraint type. To remove a constraint, you must first change the Constraint Type to "None".
- **WBS Code:** The WBS code of the task
- **Rollup:** When selected, indicates the task will rollup to the parent tasks
- **Manually Scheduled:** When enabled, it allows users to change a task's dates manually and ignore schedule dependencies. To enable it, click on the cell and select the check box.
- **Critical:** Indicates that a task is on the critical path (longest path) for the project schedule
- **Milestone:** Indicates whether the task is a zero duration milestone.
- **Auto-adjust uncompleted:** When selected, it moves a milestone to its next available calendar date if the start date for the milestone is in the past and the milestone is 0% complete.

Example:

A Committee Meeting is set to re-occur on the first Monday of the month. This meeting did not take place on the 1st Monday of February and was at 0% complete. When the schedule is loaded the next day, it automatically adjusts the meeting date to the 1st Monday of March.

- **Master Task:** Select the master task.
- **Master Process:** Select the master process.
- **Scheduling Mode:** Select the schedule mode.

Comments

- **Add Comment:** Type task-related comments and click **Add**.
- **Check Spelling:** Checks the spelling of the comment and provides suggestions.
- **Request Comment:** Select the user who you wish to receive a comment on the selected task.

Custom Fields

Displays any configured custom field for the selected task.

Tasks Page Overview

The Tasks page starts off as a blank canvas. You can pick the items you would like to see on this page by creating custom views. If you have access to multiple projects, the Tasks page gives you a program-wide view of task details.

ExampleSchedule and task managers can create a view of all the tasks they manage whose percent complete is greater than 50 %. This would allow managers to focus in on just those items that are near completion or most critical to them.

The following tabs are available:

- **Task list:** Lists all the tasks in the projects that you have access to. Click each task to view it in the Task Editor.
- **Week:** Lists the tasks that are scheduled for the selected week.
- **Month:** Lists the tasks that are scheduled for the selected month.

To access the schedule Tasks page

- On the top navigation tabs, click the **Schedule** tab. The Tasks page is displayed.

To open a project's schedule

- From the Tasks page, select the project from the 'All Project's drop-down list on the top-right. The (Create) Schedule page is displayed.