



Project Budgeting

Release 2015

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Introduction

Project Budgeting Overview

Project Budgeting has many capabilities aimed at addressing business issues for budget creation, revision control, approval, and approval routing. This module allows you to:

- Provide visibility into the impact of a budget change on the project's profit and loss (P&L) and margin
- Import or export a budget from or to a spreadsheet or estimating system
- Specify a budget change as part of change order control
- Route the budget change to an approver or multiple approvers for serial approval or rejection
- Provide online revision and inquiry analysis with drill-down and export capabilities to Microsoft Excel®
- Create time-phased budgets for some or all fiscal periods of the lifespan of the project

Project Budgeting Screens

Budget Revision Maintenance (BU.BRM.00) allows for budget entry and maintenance. It enables the capture of a revision ID, a description or explanation of the reason for the change, a preparer ID, an approver ID, and the starting and ending dates for the activity. It provides three types of budget changes:

- A complete replacement of the budget
- A replacement of selected budget line items
- An incremental net change (increase or decrease) to existing budgets

Each budget revision has a user-selected update type that determines if a revision updates the original budget only, EAC (estimate at completion) budget only, FAC (forecast at completion) budget only, original budget and EAC, or all three budgets (original, EAC, and FAC). You can specify whether the change is associated with a change order by keying in a change order number. The system then tracks the changes to the above types for project-level change orders.

Note: You can rename the captions for **Budget**, **EAC**, and **FAC** in *Project Controller Setup* (PA.SET.00). If your company uses different terminology for these budget types, captions will appear using your custom terms.

Use *Budget Schedule* (BU.RVP.00) for entering time-phased budget data for original and EAC budgets by clicking **Budget Schedule** in *Budget Revision Maintenance*.

The **Create From** screen provides the ability to build a new budget using an existing budget, EAC, FAC, or actual amount as the starting template with the option to apply a multiplier.

Example: During budget creation, you could select similar projects and tasks, use the amounts (and units, if applicable) from those projects or tasks as the source for the new project's budget, adjust the costs by a percentage factor, and modify this information as needed.

In addition to creating and revising budgets, you can also create new tasks using *Budget Revision Maintenance*. In fact, some functionality in Project Controller has been enhanced in Project Budgeting, including task entry, EAC maintenance, budget entry, and budgeting by period. At sites that use Project Budgeting, it is advisable to disable or password-protect Project Controller's *Budget Maintenance* (PA.BSM.00) and the **Budgets** tab of *Project Maintenance* (PA.PRJ.00) and Analyzer's *EAC Maintenance* (IQ.EAC.00), since the corresponding Project Budgeting functions provide capabilities for revision and approval controls that the other modules do not contain.

Budget Review & Approval (BU.BRA.00) allows you to review budget revisions, forward them to others, and approve them. When approved, the changes update the current budget for a project. The revision can update the original budget, EAC, FAC, or all three budgets based on the preparer's selected update type in *Budget Revision Maintenance*. While reviewing the revision, you can view the impact of the change on the current EAC or FAC, on the margin percentage, and on the net profit of the project.

You can use *Revision Inquiry and Analysis* (BU.INQ.00) as an independent function from the Project Budgeting menu. You can also access it by clicking **Inquiry** in *Budget Revision Maintenance* or **View Detail** in *Budget Review & Approval*. This inquiry allows you to select either a units or amount view of the data. The **Drill** button enables drill-down to the time-phased detail. This function also allows graphing and exporting to Microsoft Excel.

A budget revision can be imported from another source or exported to a file using *Import / Export* (GR.FIE.00). This is accomplished via the use of Project Controller's *Import/Export File Mapping* (PA.IEM.00) that defines and validates information from Microsoft Excel spreadsheets or from tab- or comma-separated files. This allows you to easily import estimating information from a foreign source, if necessary, and use it as the basis for the original budget when a contract is won. If the project is bid at a different level than it is budgeted, you can manipulate the data in the spreadsheet before importing it into Project Budgeting.

The screens in Project Budgeting are:

- *Budget Revision Maintenance* (BU.BRM.00)
- *Budget Schedule* (BU.RVP.00)
- *Budget Review & Approval* (BU.BRA.00)
- *Revision Inquiry and Analysis* (BU.INQ.00)
- *File Import / Export* (GR.FIE.00)

User's Guide Overview

This user guide provides administrators with task-oriented and reference information for the Microsoft Dynamics SL Project Budgeting module. Reviewing the user guide helps in making informed decisions regarding the implementation of the Project Budgeting module in your business.

What is Covered in the User Guide?

This user guide is organized into the following major sections:

- The "Introduction" gives an overview of the Project Budgeting module.
- The "Reference" section defines all the data provided on Project Budgeting screens.

The user guide also provides an Index for easy reference.

Who Should Use the User Guide?

The user guide is designed for users and system administrators who are new to the Microsoft Dynamics SL Project Budgeting module. The guide provides the information necessary to set up and operate a successful budgeting system.

How to Use the User Guide

To assist you in locating information, the user guide contains:

- A "Table of Contents" of logically organized activities and tasks
- A section describing how to set up the Project Budgeting module
- A "Reference" section that contains a description of each field on all Project Budgeting screens
- An alphabetized "Index" of the information provided in the user guide

Using Password Protection

Take full advantage of the security offered by Microsoft Dynamics SL. Assign passwords to initially protect entry into the Project Budgeting module itself. Then, limit the screens users are able to view, and control the functions users can perform to update, insert, and delete information in those screens. With the Project Budgeting module, you can also limit user access to individual fields on each screen.

Reference

Budget Revision Maintenance (BU.BRM.00)

Use *Budget Revision Maintenance* (BU.BRM.00) to revise existing budget information, input new budgets, and set up new tasks for existing projects. Three types of budgeted information are available:

- Original Budget
- Estimate at Completion (EAC)
- Forecast at Completion (FAC)

Each budget revision has a user-selected type of update. The update type determines whether a revision updates only the original budget, only the estimate at completion (EAC), only the forecast at completion (FAC), the original budget and the EAC, or all three budgets (original, EAC, and FAC).

Note: You can rename the captions for **Budget**, **EAC**, and **FAC** in *Project Controller Setup* (PA.SET.00). If your company uses different terminology for these budget types, these selections will appear using your custom terms.

Budget and EAC amounts and units can be time-phased, or entered by period, by clicking **Budget Schedule**. A direct relationship between the total budget or EAC and the time-phased totals is not required; therefore, a budget or budget revision can be input for the total life of the project and then only time-phased for part of the duration of the project.

Figure 1: Budget Revision Maintenance (BU.BRM.00)

A project's task and budget data can be initially created by using the **Create From** feature, which uses data from an existing project or task as a template. The source project or project-task can have its EAC, original budget, FAC, or its actual balances used as the basis for the new budget's amounts and

units. The new budget amounts (and units, if applicable) can be increased or decreased from the source data by applying a multiplier.

A budget revision can be imported from another source or exported to a file using *File Import/Export*. This is accomplished via the use of a mapping screen that defines and validates information from Microsoft Excel spreadsheets or from tab- or comma-separated files. This allows the import of estimating information from a foreign source, if necessary, which can then be used as the basis for the original budget when a contract is won. If the project is bid at a different level than it is budgeted, the data can be manipulated in the spreadsheet before importing it into Project Budgeting. Once a budget revision has been saved, its effect on the anticipated margin of the project can be viewed before being posted by clicking **Inquiry**. This allows project managers and accountants to view the outcome of various scenarios before approving new budget amounts.

You can forward or approve and post the data entered into this screen by clicking **Approve**, which opens *Budget Review & Approval* (BU.BRA.00), provided you have sufficient access rights to do so.

When a revision is associated with a project-level change order and *Budget Revision Maintenance* (BU.BRM.00) is opened by clicking **Budgeting** in Contract Management's *Project Change Orders* (CN.COP.00), the values in certain fields are pre-selected: the change order number is furnished by *Project Change Orders* (CN.COP.00), the revision type must be Net Change, and the update type must be EAC Only. **Project** and **Prj Change Order** are also filled in and cannot be changed.

Following are the field descriptions for *Budget Revision Maintenance* (BU.BRM.00).

Project

Enter the project ID for which you are entering budget data. Project ID is the primary identifier for transaction and summary data in Project Management and Accounting, just as the account number is the primary identifier for data in General Ledger. The project's description appears in the adjacent field.

Project Company

The company associated with the **Project**, this defaults from the company entered on the **Project** tab in *Project Maintenance* (PA.PRJ.00). The company ID appears with the company name to the right.

Start Date/End Date

These fields display the start and end dates of the project, which default to the values currently on file in the Project Master table (PJPROJ) after tabbing out of **Revision No.**

Revision No.

Enter a unique user-assigned identifier for a specific budget revision for a project. When attempting to display or inquire into a budget revision, the revision ID is used for selecting the record. When entering a new task, budget, or revision, assignment of a new, unique revision ID creates a new revision.

Description (of budget or revision)

Enter an optional freeform description of the budget revision.

Post Period

This field is required and defaults to the current period. Budgets entered in *Budget Revision Maintenance* have a fiscal period attribute that determines the amount of "budget-to-date" necessary for historical budgeting.

Last Revision No.

The highest revision ID on file for this project appears for reference. This data is stored in PM_ID20 of the extended Project Master (PJPROJEX) table.

Preparer

Enter the employee ID of the person who prepared the budget data. The name of the employee appears in the adjacent field. If Communicator is installed, a system-generated message is sent to this person if the budget revision is rejected.

Approver

Enter the employee ID of the person who is authorized to approve and post the budget data. The name of the employee appears in the adjacent field. The default for this required field depends on the role (Project Manager or Business Manager) or individual specified in *Project Controller Setup* (PA.SET.00). Another setting in *Project Controller Setup* determines whether you can override the default value. When you change the status of the budget or budget revision to Completed, it goes into the approver's queue for approval and posting using *Budget Review & Approval* (BU.BRA.00).

Prj Change Order

Enter an optional project-level change order number. If Contract Management is registered, this entry is validated in the Project Change Order Master table (PJCOPROJ). The record associated with this change order must have a status of Pending or In Process. In addition, when a revision is associated with a change order and this screen is brought up by clicking **Budgeting** in Contract Management's *Project Change Orders* (CN.COP.00), the revision type must be Net Change and the update type must be EAC Only.

Rev Type

This selection determines the type of revision made to a budget. Select one of the following options from the list.

Note: When you access *Budget Revision Maintenance* from Contract Management's *Project Change Orders* (CN.COP.00), the revision type must be Net Change.

- Complete Replacement – When you approve the revision, the posting process deletes all existing data for the update type specified replaces it with the data in the current revision.

Note: The Complete Replacement revision type is not available if you use the historical budgeting feature (the **Store History of Budget Revisions Entered in Project Budgeting** check box is selected in *Project Controller Setup*).

- New Amounts – When you approve the revision, the program will replace only the items that exist in the revision with the new amounts. Any budget data for the project that is not contained within the revision remains unchanged.
- Net Change – When you approve the revision, the posting process updates only the items contained within the revision. The update changes the budget by the amounts specified in the revision. Any budget data for the project that is not contained within the revision remains unchanged.

Update Type

This selection determines the type of update that will occur when you approve the revision. Select one of the following options from the list.

Note: When you access *Budget Revision Maintenance* from Contract Management's *Project Change Orders* (CN.COP.00), the update type must be EAC Only.

- EAC Only – The approval process updates the EAC fields in the budget files (PJPTDSUM, PJPTDROL, PJBUDSUM, and PJBUDROL).
- Original Budget & EAC – The approval process updates the total budget fields and the EAC fields in the budget files (PJPTDSUM, PJPTDROL, PJBUDSUM, and PJBUDROL).

- Original & EAC & FAC – The approval process updates the EAC fields, FAC fields, and the total budget fields in the budget files (PJPTDSUM, PJPTDROL, PJBUDSUM, and PJBUDROL).
Note: Since FAC budgets are projected totals and are not time-phased, no updates occur in the PJBUDSUM and PJBUDROL tables.
- Original Budget Only – The approval process updates the total budget fields in the budget files (PJPTDSUM, PJPTDROL, PJBUDSUM, and PJBUDROL).
- FAC Only – The approval process updates the amounts and units to the Data2 and Data3 fields in the PJPTDSUM and PJPTDROL tables.

Note: You can rename the captions for **Budget**, **EAC**, and **FAC** in *Project Controller Setup* (PA.SET.00). If your company uses different terminology for these budget types, these captions will appear using your custom terms.

Status

This flag indicates the status of the budget or budget revision. All of the possible status codes for a revision appear below in their logical sequence, although some cannot be selected in this screen:

- In Process (I) – The task entry, budget entry, and/or budget revision is maintainable. While it has this status, you cannot approve, forward, or post it.
- Completed (C) – The preparer has completed the task or budget entry or revision. The revision now awaits review and approval. The approver can now approve, reject, or forward the revision. With this status, the revision is no longer maintainable.
- Approved (A) – The budget revision has been reviewed and approved in Business Portal and will be posted when an approver clicks **Begin Processing** in *Budget Review & Approval* (BU.BRA.00).
- Rejected (R) – Select this status in *Budget Review & Approval* (BU.BRA.00) to reject the task, budget, or budget revision. The preparer must correct the revision using *Budget Revision Maintenance* (BU.BRM.00). After correction, the preparer must again change the status to Completed for another review.
- Posted (P) – The task, budget, or budget revision is no longer maintainable because its units and amounts have updated the project summary and rollup tables.

Revision Task

Enter an existing or new task ID for which the budget data is being input. Task represents the breakdown of activities for a project. If an existing task ID for the project is entered, it is validated in the Task Master table (PJSENT). The existing task description and start and end dates appear and are maintainable. If the task does not exist in this table, it is treated as a new task and will be added to the table when the revision is posted. You can view and select possible values for tasks that are included in the current revision by pressing F3. To view all tasks that currently exist for the project, click **Project Tasks**. Since budgets are stored at the task level in Project Management and Accounting, entry into this field is required.

Note: Clicking the **FlexKey** button  opens Project Controller's *Flexible Key Entry* (PA.FEN.00) allowing you to view the task's individual segment descriptions. If a segment is validated in the code file, possible segment values may be viewed and selected by pressing F3 at the field of the appropriate segment. Automatic incrementing of a task's segment is also accomplished in *Flexible Key Entry* (PA.FEN.00) if configured to do so in *Project Controller Setup* (PA.SET.00).

Description (of task)

If the task ID already exists in the Task Master table (PJSENT), the current description of the task appears but you can overwrite it in **Description**. The revised description is updated when the budget revision is posted. If the task ID is not currently on file for the current project, its description is assigned here. If a segment number has been input into **Default Task Desc - Segment # of Project**

Controller Setup (PA.SET.00), the specified segment's description appears in this field, although you can overwrite it.

Start/End Date

If the task already exists in the Task Master table (PJPENT), **Start Date** and **End Date** display the starting and ending dates currently on file for the task. These dates can be overwritten and are updated when the budget revision is posted. If a new task is being entered, the start and end dates initially default to the start and end dates for the project, but can be overwritten.

Project Tasks

Clicking **Project Tasks** lists all tasks for the specified project, whether budgeted or not. This differs from the lookup of possible values (F3) in **Revision Task**, which only contains budgeted tasks for the specified revision.

Acct Category

Enter the account category you are budgeting. Account categories usually represent a group of related General Ledger accounts, which categorize transactions by indicating the type of charge (or revenue) against a project-task. The account category must have **Budgeted** set to Yes in Project Controller's *Account Category Maintenance* (PA.ACC.00) in order for you to enter budget information for it. The description of the account category appears in the adjacent field. If Contract Management is installed and the revision is associated with a change order, the account category input cannot be the same as the **Contract Value Acct Category** specified in *Project Controller Setup* (PA.SET.00). Instead, enter a budget for the account category specified for revenue in *Project Controller Setup* (PA.SET.00). When the change order status is set to Approved, the revenue budget updates the contract value automatically.

Budget Units

Enter the number of budgeted units. Examples of units are hours, pieces, and miles. This number can be multiplied by the rate in order to have the system calculate the budgeted amount. Entry into this field is optional.

Rate

Enter an optional rate for calculating a budget amount from the budget units. If entered, this value serves only as an aid to data entry. When both rate and units are input, the budget amount is automatically calculated as the rate multiplied by the units. **Rate** can be bypassed and the budget units and amounts entered directly.

Budget Amount

Enter the budget amount or accept the calculated amount if **Budget Units** and **Rate** have been entered. Normally, all amounts are entered as positive numbers regardless of account category (although a negative amount can be entered). If this field contains \$0.00, the budget for the current project-task-account category is updated in the database with an amount of \$0.00.

Budget Schedule (button)

Clicking **Budget Schedule** opens *Budget Schedule* (BU.RVP.00) for entering budgets by period, or time-phased budgets. **Budget Schedule** is not available when entering FAC (Forecast at Completion) budgets.

Note: Since a relationship between the total budget entered and the time-phased budget is not required, they do not have to equal each other.

Create From (button)

Clicking **Create From** opens a screen that allows the creation of a budget or budget revision using data from an existing project and task as a template. **Create From** is available only for new tasks or budgets.

Inquiry (button)

Clicking **Inquiry** opens *Revision Inquiry and Analysis* (BU.INQ.00) to view the projected impact of the budget or budget revision on the project's margin.

Approve (button)

Clicking **Approve** opens *Budget Review & Approval* (BU.BRA.00) if you have the appropriate access rights. The program passes the currently displayed approver as a parameter.

Import from/Export to Excel (toolbar buttons)

These buttons allow you to import  a budget from a Microsoft Office Excel spreadsheet or to export  a budget revision to an Excel spreadsheet. Clicking either of these buttons opens *Import/Export* (GR.FIE.00) for you to specify a field mapping. For more information, see "Import / Export (GR.FIE.00)" on page. The buttons appear only if Excel is installed on the computer where you are running *Budget Revision Maintenance*.

The export process does not simply export the contents of the grid, which is specific to a single task; it exports the entire revision for all tasks.

Budget Revision Maintenance – Create From (BU.BRM.01)

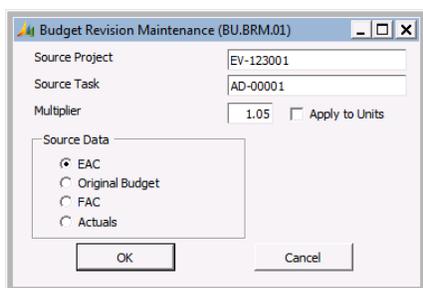


Figure 2: Budget Revision Maintenance – Create From (BU.BRM.01)

Following are the field descriptions for *Budget Revision Maintenance – Create From* (BU.BRM.01).

Source Project

Specify the project ID that you want to use as the source or template when creating a new budget from another project or task. The project from *Budget Revision Maintenance* (BU.BRM.00) is the initial default but you can overwrite it.

Source Task

Specify the task ID that you want to use as the source or template when creating a new budget from another project or task. When **Source Task** is blank and only **Source Project** is entered, all tasks and their budgets can be created using existing data from the entire source project. Entry into **Source Task** is optional.

Multiplier

Multiplier is used for increasing or decreasing the values from the source data when the new budget is created. For example, to create a budget that represents a 5% increase over the source data, input 1.05. Similarly, if the new budget will represent a 25% reduction from the source data, input 0.75 to

instruct the program to multiply the source data by 0.75 and display the resultant values as the new budget amounts. If **Apply to Units** is selected, the multiplier is applied to the units as well. The value in **Multiplier** defaults to 1.00 but can be overwritten.

Apply to Units

Selecting **Apply to Units** applies the multiplier to the budgeted units as well as to the amounts. If clear, the multiplier is only applied to budget amounts.

Source Data

Source Data determines which data in the project-to-date summary file table (PJPTDSUM) is used in the creation of the new budget. Select one of the following options from the list.

- **EAC** – The EAC amount (and units, if applicable) from the project-to-date summary file (PJPTDSUM) is used for creating the budget from the source data.
- **Original Budget** – The total budget amount (and units, if applicable) from the project-to-date summary file (PJPTDSUM) is used for creating the budget from the source data.
- **FAC** – The FAC amount (and units, if applicable) from project-to-date summary file (PJPTDSUM) (fields **Data2** and **Data3**, respectively) are used for creating the budget from the source data.
- **Actuals** – The actual amount (and units, if applicable) from the project-to-date summary file (PJPTDSUM) is used for creating the budget from the source data.

Note: You can rename the captions for **Budget**, **EAC**, and **FAC** in *Project Controller Setup* (PA.SET.00). If your company uses different terminology for these budget types, captions will appear using your custom terms.

Budget Schedule (BU.RVP.00)

Use *Budget Schedule* (BU.RVP.00) to maintain time-phased budget and estimate-at-completion (EAC) amounts and units. Amounts and units can be keyed in for any period of the selected year.

After entering data into *Budget Schedule* (BU.RVP.00), click **Save** to save your data before returning to the previous screen.

The **Change Currency** button in the application toolbar is activated with **Activate Foreign Currency Project Management** is selected on the **PC Options and Setup** tab in *Project Controller Setup* (PA.SET.00). The amounts appear by default in the project currency.

Period *	Start Date	End Date	Units	Rate	Amount
12-1999	12/1/1999	12/31/1999	0.00	0.0000	400.00
01-2000	1/1/2000	1/31/2000	0.00	0.0000	400.00

Figure 3: Budget Schedule (BU.RVP.00)

Following are the field descriptions for *Budget Schedule* (BU.RVP.00).

Project

This view-only field contains the project ID entered in *Budget Revision Maintenance* (BU.BRM.00).

Task

This view-only field contains the task ID entered in *Budget Revision Maintenance* (BU.BRM.00).

Acct Category

This view-only field contains the account category entered in *Budget Revision Maintenance* (BU.BRM.00).

Units

This view-only field contains the sum of units that have been entered in *Budget Revision Maintenance* (BU.BRM.00) entered for the project, task, and account category entered in *Budget Revision Maintenance* (BU.BRM.00). It is not necessary that the time-phased units entered in this screen equal the number of units entered in *Budget Revision Maintenance* (BU.BRM.00).

Amount

This view-only field contains the sum of amounts that you entered for the project, task, and account category entered in *Budget Revision Maintenance* (BU.BRM.00). It is not necessary that the time-phased amounts entered in this screen equal the amounts entered in *Budget Revision Maintenance* (BU.BRM.00).

Period

Enter a 6-digit fiscal period in the format MM-YYYY where MM represents the month/period number and YYYY represents the fiscal year. The period is validated in the Fiscal Period table (PJFISCAL) and maintained using Project Controller's *Fiscal Period Maintenance* (PA.FPM.00). It defaults to the period in which the starting date for the task occurs. For each subsequent row in the grid, the period increments chronologically by one period from the previous grid row.

Start Date

This field contains the starting date of the fiscal period.

End Date

This view-only field contains the ending date of the fiscal period.

Units (for period)

Enter the number of budget (or EAC) units for the selected fiscal period, if applicable. This number is stored in the Budget Revisions by Period (PJREVTIM) table.

Rate

Rate can be used for calculating a budget (or EAC) amount from the units. It is intended only as an aid to data entry. After entering a rate and unit amount and tabbing out of **Rate**, **Amount** is automatically calculated as the **Rate** multiplied by the **Units**. **Rate** can be bypassed and the budget (or EAC) unit and amount fields keyed in directly. When adding a line to the grid, the rate defaults to the displayed budget amount divided by the budget units.

Amount (for period)

Amount represents the budget (or EAC) amount for the period and is stored in the Budget Revisions by Period (PJREVTIM) table. The value can be input or, if units and rate were entered, the default is the **Units** multiplied by the **Rate**.

Total Units

Total Units is automatically calculated by the program during line item entry. The value represents the total of units entered for the selected project, task, and account category.

Total Amount

Total Amount is automatically calculated by the program during line item entry. The value represents the total of amounts entered for the selected project, task, and account category.

Budget Review & Approval (BU.BRA.00)

Budget Review & Approval (BU.BRA.00) displays completed budget revisions entered into *Budget Revision Maintenance* (BU.BRM.00) in Project Budgeting. Revisions can be approved, rejected, forwarded, or held for later review. Budget approval is an electronic signature that triggers posting to the Project Management and Accounting tables. A budget revision can be rejected by changing the status of the revision to Rejected. If Communicator is installed, the system then sends a Communicator message back to the preparer. A budget revision may also be forwarded to another employee for review or approval, provided the status remains Completed. A Communicator message is then sent to that employee.

The screenshot shows the 'Budget Review & Approval (BU.BRA.00) - Contoso, Ltd:Demo' window. The interface includes a toolbar with navigation icons and a 'Contoso, Ltd:Demo' button. The main form area is divided into several sections:

- Select Company:** Radio buttons for 'Specific' (selected) and 'All'. A text field for 'Company ID' contains '0060' and a dropdown for 'Contoso, Ltd:Demo'.
- Approver:** Radio buttons for 'Approver' (selected) and 'Subaccount'. Below are text fields for 'Employee' and 'Name', and an 'Approve All' button.
- Forward To:** A text field.
- Status:** A dropdown menu currently set to 'Completed'.
- Post Period:** A text field with a hyphen.
- Project:** A dropdown menu with a hyphen.
- Date Submitted:** A date field with slashes and a calendar icon.
- Company ID:** A text field with '0060' and a dropdown with 'Contoso, Ltd:Demo'.
- Rev No.:** A text field.
- Rev Type:** A dropdown menu.
- Prj Change Order:** A text field.
- Update Type:** A dropdown menu set to 'EAC Only'.
- Preparer:** A text field.

At the bottom of the form, there is a 'View Detail...' button and a 'Begin Processing' button. The status bar at the very bottom shows 'BAS | INS | 0060 | SYSADMIN | 1/28/2014 ...'.

Figure 4: Budget Review & Approval (BU.BRA.00), form view

Budget revisions can be selected for display by an employee ID or by project subaccount. Only revisions with a status of Completed (C) or Approved (A) appear on *Budget Review & Approval* (BU.BRA.00).

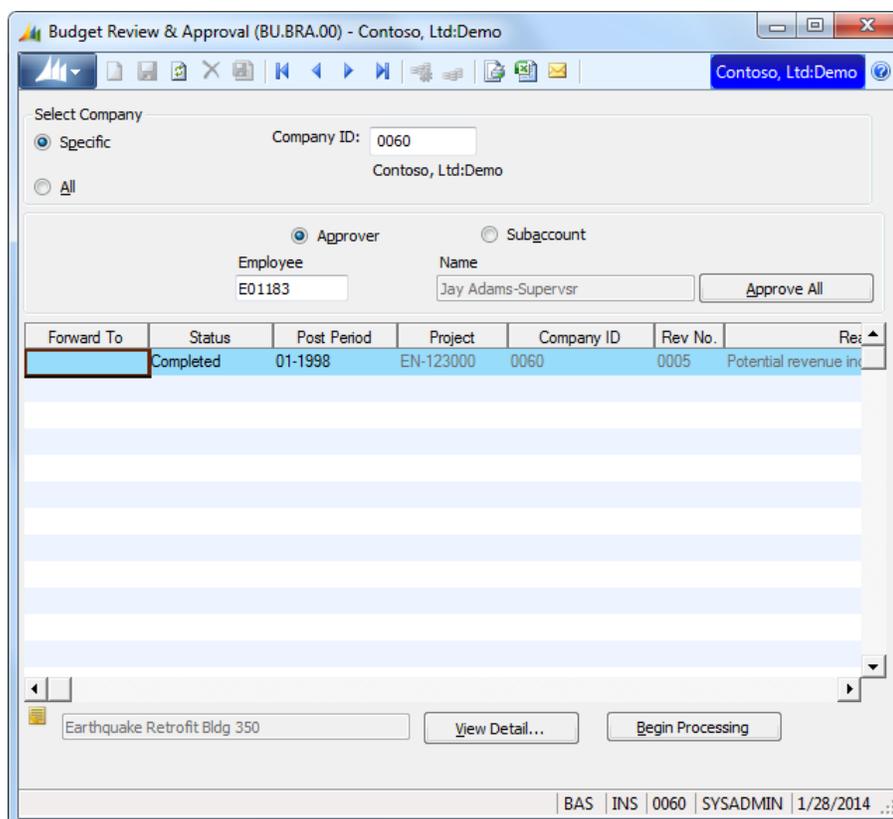


Figure 5: Budget Review & Approval (BU.BRA.00), grid view

Note: When Contract Management is installed, a revision can be generated for, and attached to, a project change order. Until a change order has a status of Pending, the budget revision cannot be approved.

- When a change order revision is approved, any revenue impact is recorded in the Project Change Order table (PJCOPROJ). When a revision contains the account category specified for revenue in the **Revenue Setup** tab of *Project Controller Setup* (PA.SET.00), the revision amount is added to **Revenue** in this table.
- A budget revision related to a project change order cannot use the account category for contract value as defined in *Project Controller Setup* (PA.SET.00). If this occurs, an error message appears and the update for the revision is cancelled.

Note: Although the **Notes** button appears at the bottom of the grid in this screen, it can only be used for viewing an existing note, not for adding a new note.

To add a new note:

1. Position the cursor on the line showing the revision for which the note is being added.
2. Click **View Detail**.
3. Once *Revision Inquiry and Analysis* (BU.INQ.00) opens, click the **Notes** button at the top of screen (next to **Project**) and enter a new note for the revision.
4. Click **Save** before returning to *Budget Review & Approval* (BU.BRA.00) to save your note.

Following are field descriptions for *Budget Review & Approval* (BU.BRA.00).

Select Company Area

The Select Company area allows entry to select a specific company or all companies.

Specific

Allows you to enter a specific company, you will be limited to companies to which you have access rights to this screen. The default is the logged in company.

Company

Company's identification number and name. You will have only access to companies to which you have access rights in this screen.

All

Will process all companies to which you have access rights in this screen. For example, if you have access rights to company 0060 for this screen, you can process only those projects that have company 0060 set as their Company ID.

Approver/Subaccount (option buttons)

This selection determines whether to list budget revisions for a specific approver or General Ledger subaccount. The option defaults to listing by approver.

Note: The approver ID is designated for each budget or budget revision in *Budget Revision Maintenance* (BU.BRM.00).

Employee / Subaccount

The **Approver/Subaccount** selection causes the program to prompt for either the employee ID of the approver, or the General Ledger subaccount of the project.

Subaccount accepts a partial value. Selection is based on the partial value, which is always assumed to read from left to right. For example, if CO is entered, all records are selected for which the subaccount of the project begins with CO. Selection cannot be based on middle or end of field values.

Forward To

At sites that require multiple review and approval processes, the person initially designated as the approver of a budget or budget revision may indicate his/her approval of the revision by forwarding it to the next level. This optional field prompts for the employee ID of the person to whom the current budget revision will be forwarded. **Status** must remain Completed in order to forward a budget revision.

After entering an employee ID in **Forward To** and clicking **Begin Processing**, the following updates take place:

- The revision's approver ID changes to the employee ID in **Forward To**.
- A Communicator message automatically notifies that employee of a budget revision requiring approval.

Each revision can carry up to three approver codes, the first, the second, and the last. Subsequent forwarding of the revision overwrites the last approver code.

Status

The approver can change the status of a budget revision to one of the following values:

- Approved (A) – The budget revision is eligible for posting.
- Rejected (R) – The budget revision contains errors and the preparer must correct it *Budget Revision Maintenance* (BU.BRM.00).

Note: The status must remain Completed in order to forward the budget revision.

Post Period

Post Period is not used at this time.

View Detail (button)

Clicking **View Detail** opens *Revision Inquiry and Analysis* (BU.INQ.00) for viewing a particular budget revision in detail. Adding notes to a budget revision is accomplished using *Revision Inquiry and Analysis* (BU.INQ.00).

Begin Processing (button)

Clicking **Begin Processing** starts a process that examines the **Forward To** and **Status** of each budget revision listed.

If the status is set to Approved, budget revision information is posted to the Project Management and Accounting tables. Both budget-by-period and project-to-date summary and rollup tables are updated with new or revised budget amounts and units. (If a forecast at completion (FAC) budget is revised, only project-to-date summary and rollup tables are updated since time-phased budgeting does not apply to FAC budgets.) If you are using the historical budgeting feature (the **Store History of Budget Revisions Entered in Project Budgeting** check box is selected in *Project Controller Setup*), the budget history tables are also updated. If the task being budgeted did not previously exist, it is added to the Project Task Master table (PJPENT). When processing is complete, the status of the budget revision is set to Posted.

Note: Budget revisions that have a revision type of Complete Replacement cannot be approved when you use the historical budgeting feature. You must approve all unposted budget revisions before activating the feature. If you have any remaining unposted revisions when you try to activate the feature, you must first deactivate the feature temporarily (clear the **Store History of Budget Revisions Entered in Project Budgeting** check box in *Project Controller Setup*), approve the revisions, and reactivate the feature.

If status is set to Rejected, a Communicator message automatically notifies the preparer of the rejection. The reviewer can attach a note to the revision explaining the reason for the rejection. Notes can be added from *Revision Inquiry and Analysis* (BU.INQ.00), which is accessed by clicking **View Detail**.

If an employee ID has been entered in **Forward To**, a Communicator message automatically notifies that employee of a budget revision requiring approval. **Status** must remain Completed in order to forward a budget revision. Each revision can carry up to three approver codes, the first, the second, and the last. Subsequent forwarding of the revision overwrites the last approver code.

After approving, rejecting, or forwarding a budget revision, it is removed from the current approver's queue.

Import / Export (GR.FIE.00)

Use *Import/Export File* to import or export a Microsoft Excel worksheet (.XLS) from/to *Budget Revision Maintenance* (BU.BRM.00) when you click the **Import**  or **Export**  button. Status messages appear in the list box during the import or export and a completion message appears when the process is done.

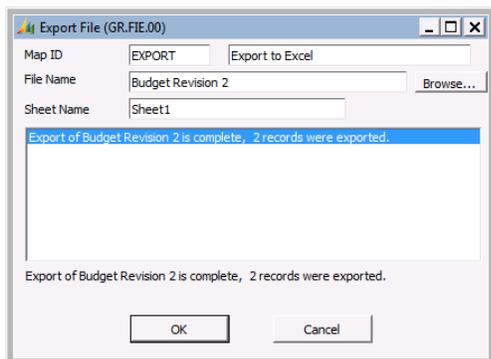


Figure 6: *Import/Export* (GR.FIE.00)

Following are the field descriptions for *Import/Export* (GR.FIE.00).

Map ID

Specify the Map ID that you want to use for defining the import or export file layout. You can create mappings in *Import/Export File Mapping* (PA.IEM.00). This entry is validated in the File Mapping table (PJIMPEXP). A Map ID defines the column in which specific fields (project, task, units, etc.) are stored.

File Name

Enter the name of the file that you want to import from or export to or use the **Browse** button to select a file. When browsing for the first time to select download or upload files, the default directory is the My Documents folder for the current user. On an Export, if a file does not already exist, it will be created.

Sheet Name

Enter the name of the sheet where you want to import or export the data. The default is Sheet1. For an Export, the program will create a new sheet if one does not already exist in the workbook.

Browse (button)

Clicking this button displays all available disk drives for locating a file name.

Begin Import (button)

Clicking this button starts a process that imports data from the specified file.

Begin Export (button)

Clicking this button starts a process that exports data to the specified file.

Cancel (button)

Clicking this button closes the window without performing any action and returns to *Budget Revision Maintenance*.

OK (button)

Clicking this button closes the window, returning to *Budget Revision Maintenance*. This button only appears after an Import or Export has occurred.

Special Notes:

- When importing files, the program does not read the first row of cells in the Microsoft Excel spreadsheet (row 1), as it is assumed to contain column titles. Similarly, the export of data into the spreadsheet will begin in row 2, with row 1 being used for column titles.
- When a data is exported to a file, if the file name entered already exists in the specified directory and the sheet name already exists within the file, the Export utility overwrites whatever data was already contained in the sheet, starting at the leftmost cell in row 2 (row 1 is reserved for column titles). It will not clear or modify existing cells, however, if the new data does not reference that cell.
- Data cannot be exported to a file that is open in another application (such as Microsoft Excel). An error message appears if this is attempted. If you then attempt to exit the Excel application, you must be certain to cancel the file reservation that Excel makes automatically and then exit from Excel a second time.

Revision Inquiry and Analysis (BU.INQ.00)

Revision Inquiry and Analysis (BU.INQ.00) provides net profit and budget analyses of a budget revision. The display shows one line for each account category for each task of the project. Also available in this function is a graphical representation of the data and, if Analyzer is installed, the ability to export the contents of the grid to a Microsoft Excel spreadsheet for further analysis. For comparisons with actual and commitment information, the most current project-to-date data appears without regard to fiscal period or date.

You can access this screen directly from the Project Budgeting menu, from *Budget Revision Maintenance* (BU.BRM.00), or from *Budget Review & Approval* (BU.BRA.00).

The main *Revision Inquiry and Analysis* (BU.INQ.00) screen provides net profit and budget analyses for a single budget revision. All the tasks of the revision project appear with one line of information for each account category of each task. Only account categories with an account type of Revenue or Expense appear. The program calculates and displays a subtotal of the account categories within each task. The subtotal line is the sum of all revenue account categories minus the sum of the expense account categories. If no revenue lines appear, the subtotal appears as a positive number although the sum is an expense total. After all tasks appear, the grid includes total lines summing all revenue for the project, all expenses, and net profit.

Task	Acct Category	Current EAC	Original Budget	Current FAC	Revision Amt	Resulting EAC	Resulting FAC
00-00000-	LABOR	55	0	0	0	55	
- -	Task Subtotal	55	0	0	0	55	
AD-00001-	REVENUE	2000	2000	0	0	2000	
AD-00001-	LABOR	700	700	0	0	700	
- -	Task Subtotal	1300	1300	0	0	1300	
AD-00002-	REVENUE	2000	2000	0	0	2000	
AD-00002-	LABOR	1000	1000	0	0	1000	
- -	Task Subtotal	1000	1000	0	0	1000	
AD-00003-	REVENUE	7500	7500	0	0	7500	
AD-00003-	REV-EXP RECOVERY	25000	25000	0	0	25000	

Margin %:	Original Budget	52.93	EAC	55.60	Resulting EAC	47.62
	Actual	49.45	FAC	0.00	Resulting FAC	0.00

Figure 7: Revision Inquiry and Analysis (BU.INQ.00), grid view

The screen shows both the net change of the revision (**Revision Amount**) and the total effect of the revision (**Resulting EAC**, **Resulting Original**, and **Resulting FAC**). At the bottom of the screen, margin percentages are calculated for original budget (**Budget**), actuals (**Actual**), current EAC (**EAC**), the resulting EAC (**Resulting EAC**), current FAC (**FAC**) and the resulting FAC (**Resulting FAC**). The calculation for **Margin %** is:

$$\text{Net Profit} / \text{Total Revenue} * 100$$

Note: You can rename the captions for **Budget**, **EAC**, and **FAC** in *Project Controller Setup* (PA.SET.00). If your company uses different terminology for these budget types, these captions will appear using your custom terms.

The screenshot shows the 'Revision Inquiry and Analysis (BU.INQ.00)' form. Key fields include:

- Project:** CO-123000, Business Re-engineering
- Project Company:** 0060, Contoso, Ltd:Demo
- Revision ID:** 0001, Custom training class
- Revision Type:** Net Change, **Update Type:** EAC Only
- Posting Period:** 11-1997, **Status:** Completed
- Task:** 00-00000-, **Acct Category:** LABOR, **Account Type:** Expense
- Task Desc:** Default for system posting
- Financial Data:**

Current EAC	55	Commit	0	Actual + Commit	55
Original Budget	0				
Current FAC	0				
Revision Amount	0				
Resulting EAC	55				
Resulting Original Budget	0				
Resulting FAC	0				
Actual	55				
- Margin %:**

Original Budget	52.93	EAC	55.60	Resulting EAC	47.62
Actual	49.45	FAC	0.00	Resulting FAC	0.00

Figure 8: Revision Inquiry and Analysis (BU.INQ.00), form view

You can also view a posted revision. In this case, the effect of the revision has already taken place. Therefore, the resulting columns are set to zero, and the revision amount is set to the source input amount of the revision.

Also available in this screen is a graphical representation of the data and, if Analyzer is installed, the ability to export the contents of the grid to a Microsoft® Excel spreadsheet for further analysis.

Note: The Revision Amount column of *Revision Inquiry and Analysis* (BU.INQ.00) represents the amount of change due to the revision (except when viewing posted revisions), not what you entered in *Budget Revision Maintenance* (BU.BRM.00).

- The **Original Budget**, **Current EAC**, **Current FAC**, **Actual**, and **Commit** columns are retrieved from the PJPTDSUM table. They represent the total current amounts/units without regard to date or period. Current FAC is stored in data2 (amount) and data3 (units) of the PJPTDSUM table.
- **Actual + Commit** is the sum of the **Actual** column and the **Commit** column.
- The **Resulting EAC**, **Resulting Original**, **Resulting FAC**, and **Revision Amount** columns are calculated using data from the PJREVCAT table in conjunction with the update type and revision type.

For non-posted revisions, the Update Type of the revision determines which budget is affected by the change. The available options are EAC Only (E), Original Budget Only (O), Original Budget & EAC (A), Original Budget and EAC and FAC (B), and FAC Only (F).

- Revision type = Net Change (NT)
 - **Revision Amount** is the amount from the PJREVCAT table (the amount entered in *Budget Revision Maintenance*). This is zero if a PJREVCAT record is not found (i.e., no revision was made to the current account category).
 - **Resulting EAC** is calculated as **Current EAC + Revision Amount** (update types E, A, and B).

- **Resulting Original** is calculated as **Current Budget + Revision Amount** (update types O, A, and B).
- **Resulting FAC** is calculated as **Current FAC + Revision Amount** (update type F only).
- Revision type = New Amounts (NA)
 - **Resulting EAC** (update types E, A, and B), **Resulting Original** (types O, A, and B), and **Resulting FAC** (update type F and B) are set to the amount from the PJREVCAT table (that is, the amount entered in *Budget Revision Maintenance*). If a PJREVCAT record does not exist (no revision containing the current account category exists), the resulting amounts are set to the current amounts.
 - **Revision Amount** is calculated as **Resulting Amount – Current Amount**.
- Revision type = Complete Replacement (CR)
 - **Resulting EAC** (update types E, A, and B), **Resulting Original** (types O, A, and B), and **Resulting FAC** (update type F and B) are set to the amount from the PJREVCAT table (that is, the amount entered in *Budget Revision Maintenance*). If a PJREVCAT record does not exist (no revision containing the current account category exists), the resulting amounts are set to zero.
 - **Revision Amount** is calculated as **Resulting Amount – Current Amount**.
- Posted Revisions (all Update Types)
 - **Resulting EAC, Resulting FAC, and Resulting Original** are set to zero.
 - **Revision Amount** displays the amount from the PJREVCAT table (that is, the amount entered in *Budget Revision Maintenance*). This is zero if a PJREVCAT record is not found (no revision was made to the current account category).

Clicking the **Drill** button opens different screens depending on the column in the grid that is highlighted. If the focus is on the Actual column, *Transaction Detail Inquiry* (PA.TRD.00) appears. If the highlighted cell is in the Commitment column, *Commitment Detail Inquiry* (PA.CMD.00) opens. In all other columns, when you click the **Drill** button, *Budget Schedule* (BU.RVP.00) opens, showing how the budget for an account category is spread across periods, or time-phased.

The **Change Currency** button in the application toolbar is activated with **Activate Foreign Currency Project Management** is selected on the **PC Options and Setup** tab in *Project Controller Setup* (PA.SET.00). The amounts appear by default in the project currency.

Following are the field descriptions for *Revision Inquiry and Analysis* (BU.INQ.00).

Project

Enter the project ID whose budget data will be viewed. The project's description appears in the adjacent field.

Project Company

The company associated with the **Project**, this defaults from the company entered on the **Project** tab in *Project Maintenance* (PA.PRJ.00). The company ID appears with the company name to the right.

Revision ID

Enter the unique user-assigned identifier of the project's budget revision. After entering or selecting a revision number and tabbing out of **Revision ID**, the program searches the database, retrieves the information about the revision, and fills the grid.

Posting Period

This field displays in view-only mode the period to which the budget revision posted (or will post if not currently posted.)

Amount / Units (option buttons)

This selection determines whether the information in the grid appears in monetary amounts or in units (quantity). When this selection is changed, the program clears the grid and re-loads the data.

Excel Options (button)

Clicking **Excel Options** opens Project Analyzer's *Excel Options* (IQ.EXC.00) for specifying options for exporting data in the grid to a Microsoft Excel spreadsheet. For information about using this feature, see the Analyzer Help or user's guide.

Note: The Excel interface is only available if the Analyzer module is registered.

Communicator

Clicking this button opens *Send Messages* (CO.MMT.00) in Communicator for sending a custom message to another Project Management and Accounting user. Communicator must be registered in order to use this feature.

Download to Microsoft Excel

Clicking this button exports the current grid entries to a Microsoft Excel spreadsheet for viewing and analyzing the data in spreadsheet format. Analyzer must be registered in order to use this feature.

Graphical Display

Clicking this button opens *Revision Analysis Graph* (PA.GRA.00) for viewing the grid data in graph form. The data that appears in the grid varies according to the cell that you select before you click this button.

Drill Down to Supporting Detail

Clicking this button opens one of three other screens, *Transaction Detail Inquiry* (PA.TRD.00), *Commitment Detail Inquiry* (PA.CMD.00), or *Budget Schedule* (BU.RVP.00), for viewing the supporting detail for the account category of the highlighted row. If the highlighted cell is in the Actual column, *Transaction Detail Inquiry* (PA.TRD.00) displays the transactions that comprise the amount (or units) for the selected account category. If the highlighted cell is in the Commit column, *Commitment Detail Inquiry* (PA.CMD.00) displays the commitment details that comprise the amount (or units) for the selected account category. If the highlighted cell is in any other column (Current EAC, Original Budget, Revision Amt, etc.), *Budget Schedule* (BU.RVP.00) displays the time-phased budget or EAC data for the selected account category.

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