

BuildSystem User Manual

Welcome to BuildSystem Cost Database and ERP System

Solutions for the Construction Industry

BuildSystem

Cost Database & ERP System

Version 3.0

Integrated Project Management Group

23, Community Center, East of Kailash,
New Delhi – 110 065.

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About *BuildSystem*

BuildSystem 3.0 is a powerful Construction Cost Estimating System, developed jointly by IPMG and RS Means (USA). It has been designed for construction professionals who can use and generate precise and reliable estimates for a wide range of projects, using location specific cost data.

BuildSystem accommodates over 5000 construction related line items; all codified in 13 digits (based on *MasterFormat*) and grouped under the standard CSI **48 work divisions** format. These line items along with their cost data have been suitably accommodated and arranged, for use, in the **Unit Cost** grid screen. The Unit Cost grid is user friendly with easy navigation and access facility to select the desired line items for creating an accurate and reliable project estimate.

The *BuildSystem* database structure, containing thousands of standard industry items and assemblies with their associated cost data, is so designed that you can add your own unique Line Item(s) into the database, within the 13 digit codification and cost structure provided in the system; and select those items along with the standard items to generate your desired estimates. It also allows you to change the Rates and Coefficients of material, labor, equipment, others and taxes, forming part of the items of work, and generate your project specific estimate with improved accuracy.

Major Features of *BuildSystem*:

- Integrated, simplified and made flexible to use, update and generate reliable project estimate.
- Accommodates over 5000 line items, codified as per *MasterFormat* and grouped under 48 work divisions, with easy navigation and access to select the desired line items for use.
- Provides Material Cost, Labor Cost, Equipment Cost, Other Cost, Bill of Materials for line item, Assembly Unit Cost, and more.
- View/Modify the Item BOM underlying each line item.
- In-built flexibility to Add/Modify user defined Line Item, Material, Labour, Equipment, and their associated cost data to make it further useful.
- Can select multiple Line Items, in one quick step, to generate the estimate.
- Allows in Estimate to Add/Remove line items, View Item-BOM, Change Rates and Quantity, Add Markups and Overhead/Profit for customization.
- Allows on estimate to Change Rates of Material, Labor, Eqpt., Taxes etc. and instantaneously effect the Estimate without affecting the rates in masters. Also allows to permanently Change Rates of these components in their Masters.
- Options available to Merge, Sort, Save, Print, and/or Export the Estimate to excel sheet for further use.
- Allows to Map and Import Line-Items (from user's excel sheet) into *BuildSystem* database, for use.
- Enables various useful Reports on Estimates, including the Summary Analysis on line items.

- Above all makes day-to-day Project Cost Estimation job easier, faster and accurate.

With all these features and functionalities, coupled with a cost database on thousands of standard industry items and assemblies as-well-as with complete flexibility to add your own items into the system and change rates where needed, the ***BuildSystem 3.0*** application software brings a new standard of integration, speed and efficiency to construction project estimating. It has also been made ready to easily integrate with our future upgrades and ERP System.

NOTE:

- a) The DVD-ROM supplied is a read-only compact disk. Thus there is no means to back-up this disk. Ensure proper handling and care of your DVD-ROM disk to avoid inadvertent loss of information.
- b) *BuildSystem* Application will run only with the Hardware Lock inserted in USB Port of your system. Ensure that the Hardware Lock supplied with the DVD-ROM disk is kept properly and not damaged or lost.

Installation & Start-up

The *BuildSystem* DVD contains a resident program file named **BuildSystem 3.0 Installer.exe** that copies and initiates required programs and databases. This program leads you through the required steps to set up *BuildSystem*. The entire installation process takes a few minutes to complete.

System Requirements

General system requirements to operate *BuildSystem* DVD are:

- A Windows-compatible computer.
- Internal or external DVD-ROM.
- Windows-compatible printer (optional).
- Windows 2K, Windows NT or Windows XP Operating System.

Computer Specifications

Recommended Requirements:

Pentium III or Higher Processor, 560 MHz, 512 MB RAM, 1024x768 Monitor Resolution, 32 bits Colors, DVD-ROM

Software Requirement

Following Software must be present on the system to run the *BuildSYSTEM* :-

- MS-Office (including MS Word and MS Excel)
- Acrobat Reader

Installation

Steps for Installing the *BuildSystem* DVD Software:

1. Place the *BuildSystem* DVD in DVD-ROM Drive.
2. Double Click on **BuildSystem 3.0 Installer.exe** & follow the instructions and proceed (by pressing *Next* button).
3. An Application Installer window will open. Click on the **Next** button.
4. Click on the **Install** Button to help install the following:-
 - Setup installs the **HASP Driver** and then the **Databases**.
 - Next, Installation of *BuildSystem* starts.
 - Press *Next* button and follow the instructions that appears.
5. With this the database gets loaded from the DVD.
6. A message appears “*The database restore process is completed successfully*”.
7. Click **Finish** button (to complete the process).

If any message appears to Change the **Date Format** to dd/mm/yyyy, change it as mentioned in Note here.

NOTE:

To Change the Date Format to dd/mm/yyyy,

- a) Select option *Start, Settings and Control Panel*.
- b) Double Click on **Regional Option** & select **Date** option.
- c) Type **dd/mm/yyyy** in ‘Short date format’ & Click **Apply/OK**.

Start *BuildSystem*

To start *BuildSystem* Ver 3.0, proceed as follows:

1. Double-Click on ***BuildSystem 3.0*** icon (available on desktop) or Select option ***Start, Programs*** and then ***BuildSystem 3.0*** from system's menu, to open it.
2. The Login Page of ***BuildSystem*** appears.
3. Enter **User Name, Password** and then Click **Login** button.
4. The **Parameters** window pops-up. Select the followings (from drop-down option):-
 - i) Select **Source** (IPMG, DSR, etc.) – can make multiple selection also.
 - ii) Select **Date**
 - iii) Select **Location** (Country, State, City)

On selection of above, Click **OK** button to proceed; else **Exit**.

5. ***BuildSystem 3.0*** screen opens with **Menu Bar** showing following menu options:-

- **Admin**
- **Masters**
- **Manage Project- Estimate**
- **Reports**
- **Business Center Set-Up**
- **Live Updates**
- **Exit**

Each of the above menu option has sub-menus under it.

6. Select the desired Menu Option and Start working.

NOTE:

- a) On *BuildSystem 3.0*, the user has the option to create Project Estimate using either IPMG or SOR (schedule of rates) databases (with cost data). For line items and its components (on unit cost grid) - the IPMG source, if selected, uses IPMG Code and the SOR source uses SOR Code.

Admin

The Admin Section of *BuildSystem* is meant for Administrator, who can keep a check on unauthorized persons from accessing and tampering the valuable data.

The Admin can:

- Add, Edit and Delete User(s)
- Add, Edit and Delete UserGroup(s)
- Change User Password
- Change Login
- Change Parameters (selection of source, date, etc.)
- Database Backup

The User must belong to a UserGroup. And under **UserGroup** option, the Admin assigns the rights/permission to the UserGroup - on selected Menu(s)/Sub-menu(s), Form(s) and Attributes (add/edit/delete) of *BuildSystem*. (Refer Fig. 1.1).

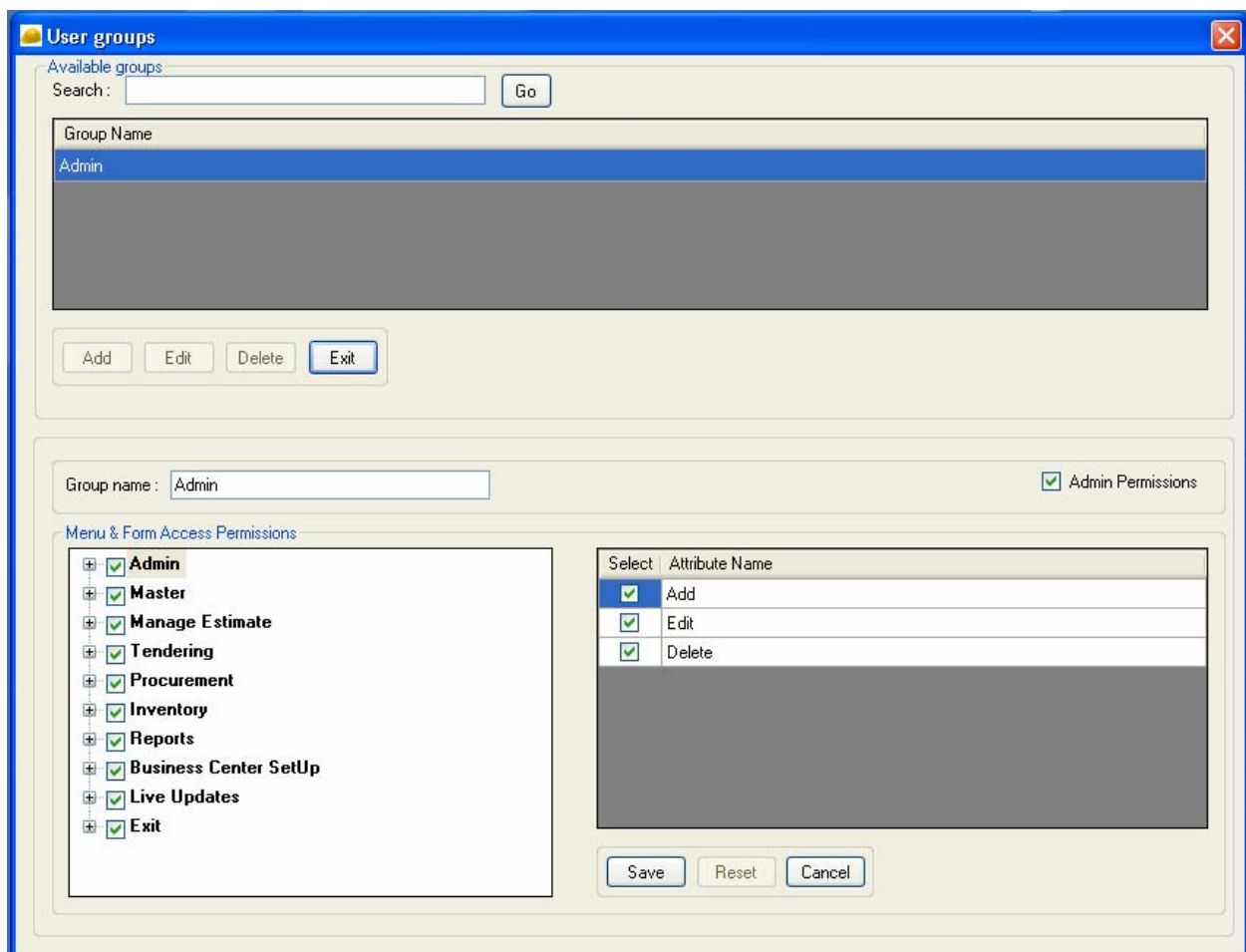


Fig. 1.1: User Group

The User can:

- Change User Password.
- Change Login
- Change Parameters (selection of source, date, etc.)

NOTE: By default, the *BuildSYSTEM* comes with a default Admin as '**IPMG**' or 'ipmg' and having Password as '**ipmg**'. This password can be changed. The Admin '**IPMG**' has been assigned all the rights on *BuildSystem*.

Add/ Edit/ Delete User

To **Add User**, proceed as follows:

1. Select/Click the menu option *Admin, New User* from menu bar.
2. On this window the Admin can *Add, Edit or Delete* User Account.
3. To add User, Press **Add** button and Fill the *User Details* including 'Group Name' (i.e. User-Group).
4. 'Active User' can only login. Click '**Yes**' option on window to make User active.
5. On completion, Click **Save** button to Add User (with user permission).

Once the User gets added to User List (in *New User window*) and Permission set, Admin can Select the User Name from 'User List' and Click the relevant **button** to:

- **View/Edit** User Name and its UserGroup.
- **Change Password** for the User
- **Delete User** from 'User List'.

The *User Permission* assigned can be modified later by Admin, under UserGroup option.

To **Change Password** of User, proceed as follows:

1. Select/Click the menu option *Admin, Change Password* from menu bar to open '**Change Password**' window.
2. Enter **old password** (of user) and the **new password** in 'New Password' and 'Retype Password' fields; and then Click **Save** button to effect the change.

Admin can **Delete** any **User Account** by selecting the user on *New User* window and using **Delete** button.

New User

User Details

User Name	Group Name	Company Name	Date Of Birth	Date Of Joining	Address-1	Address-2	Address-3
ipmg	Admin	Midland Web Net...	9/26/2008	9/26/2008	23, Community C...		

Add Edit Delete Change Password Exit

User Details

User Name : ipmg

Password :

Confirm Password :

Date of Birth : Sep 26, 2008

Date of Joining : Sep 26, 2008

Address-1 : 23, Community Center, East of Kailash

Address-2 :

Address-3 :

Zip Code : 110065

Location : India, Delhi, Delhi

Phone No : 91 11 46581562

Extension No :

Mobile No : 9891804946

Company Name : Midland Web Net Technology

Group name : Admin

Active User : ☒ Yes ☐ No

Email ID : info@ipmg.in

Save Reset Cancel

Fig. 1.2: New User

Database Back-up

BuildSystem facilitates the **Admin** to take automatic backup of entire database, using the menu option **Database Backup**.

To take **Backup** of **BuildSystem Database** on your system, proceed as follows:

1. Click on **Admin menu** of *BuildSystem*.
2. Select/Click the option **Database Backup** from Admin menu
3. A message appears "Are you sure to make Database Backup", with Yes/No option.
4. Click **Yes** button, to open **Browse for Folder** window.
5. Select the folder (to take back-up) and then Click **OK** button to initiate backup process.
6. On completion, a message appears "Backup of database has been done successfully".

It is important and desired to take regular backup of *BuildSystem* databases, depending on data volume/changes undergone, for data security purpose and to avoid any data-loss due to any unforeseen reason or system crash.

Once the backup process is complete and saved, you can then switch over/open any other menu option to work on *BuildSystem*.

Unit Cost & Project Estimate

BuildSystem generates the desired Project Estimate based on your selection of line items from unit-cost grid ((with unit cost data) and having fed the quantity for each line item. On Click of *Estimate Details* button, it computes and generates the desired estimate with cost details, for the selected items and their quantity. The estimate, once generated, can be further be modified as per your requirement.

On Estimate, the additional Features available are Save, Add/Delete Line Items, Search, Sort, Merge (with other estimate), OHP% Change, Rate Change and Tools.

On *BuildSystem*, the user has the option to create Project Estimate using either IPMG or SOR (schedule of rates) databases on line-items with cost data. For line items and its components (on Unit Cost grid) the IPMG source, if selected, uses IPMG Code and the SOR source uses SOR Code. The following sections describes, in detail, as to how to create/open a project and generate the desired estimate by selecting line items from Unit Cost grid.

Unit Cost

Before explaining how to utilize the **Unit Cost** information, provided on Unit Cost main grid screen (refer Fig. 1.3), let's review a few key terms:

Line Number: For IPMG source, all Line Items and its associated unit cost data have been divided into standard Forty Eight (48) work divisions. Each unit cost Line Item has been assigned a unique 13-digit code based on CSI Master Format classification, of which *BuildSystem* uses the first two digits as it's CSI Level-1, the next three as CSI Level-2. While using SOR source as database, the line items and their code, displayed on unit cost grid, are as per the source.

Description: The uppercase description, in bold face, is the common title for all items beneath them. Each line item is described in details. Sub-items and additional sizes are indented and placed beneath the appropriate line items.

Unit: This indicates the unit of measure upon which the cost data of line items are based.

Material Cost: Material rates adopted in *BuildSystem* relate to the Delhi region and includes vendor's discount (if any, on manufacturer's rate), packaging, breakage allowance, sales tax, carriage and delivery at site. Rates provided under SOR are as per the source. Material rates are for BIS certified materials, wherever possible. Material consumption is based on Indian Standard as well as on the experience of construction professionals. If you have access to current material cost for your specific location, can make necessary adjustments accordingly.

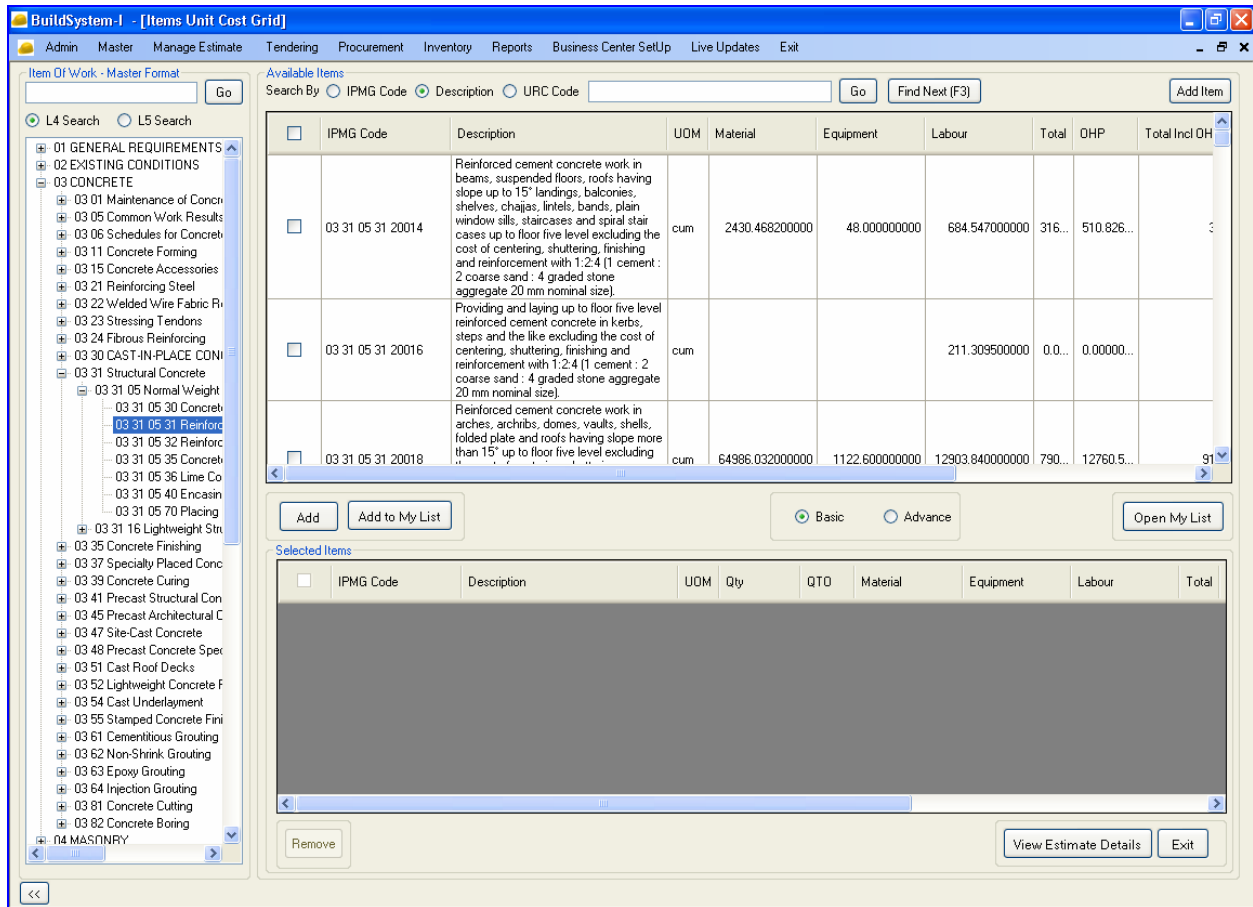


Fig. 1.3: Unit Cost Grid

Labor Cost: Labor rates are determined from the Government's minimum wages or prevailing market wages for the construction trade, whichever is higher. Labour rates adopted in *BuildSystem* relate to the Delhi region. If the wages rates in your area vary from those used in CD/Book, make necessary adjustment accordingly.

Equipment Cost: Equipment cost includes rental, operating cost for equipment under normal use, and transportation charges to the site and back to the source. Equipment rates adopted in *BuildSystem* relate to the Delhi region.

Total Cost: The bare total or Total Cost is the arithmetic total of the four previous columns: material, labor and equipment.

Total Including OHP: The figure provided is the sum of total bare cost plus 15 % (as default) for the overhead and profit. This default value of 15% as overhead and profit on total cost can be changed, while working on project estimate in *BuildSystem*.

Quantity: The total quantity of the Item used/to use in Estimate.

Note:

The OHP% can be changed on Estimate only, either for individual selected line item(s) or for all line items together.

Masters

BuildSystem 3.0 provides menu-option for *Masters* that comprises of various masters and its databases; based on which this *BuildSystem* Application Software works. These masters can be updated by users, if required, using menu/sub-menu options provided under **Master** on menu-bar.

The various masters (*sub-menus*) provided under the **Master** menu are:

- Location
- Company
- Discipline
- Sources
- Component Type (i.e. Material Type)
- Project Classification
- OHP Template
- Unit of Measurement
- Unit Conversion
- Unit Types
- Component Master
- Item Master
- Manufacturer Master
- Vendor Master
- Tax Master
- Terms & Conditions
- Mapping Sources
- Exit

Each of these *Masters* contain records that are dynamically linked to the *Items* (of *BuildSystem*) and its associated BOM (Bill of Materials) - for the purpose of displaying Line-Items (items) with cost-data on the *Unit Cost* grid screen.

User can add new *Location*, *Company*, *Source*, *Unit*, *Item*, *Component*, *Manufacturer*, *Vendor*, *Contractor* and *Tax Template*, using the respective masters provided under the **Master** menu option.

Each of the **Masters** has option to **Add**, **Edit** and **Delete**. Use **Exit** button to exit the window in use.

Location Master

Click **Master**, **Location Master** from the menu bar to open the Location Master window. The system provides option to *View* and *Add/Edit/Delete* location (Country, State & City), using options provided on Location Master window.

In *Location Master* the location data is arranged in the order: *Country*, *State* and *City*.

To **Add City** (under country and state) in **Location Master**, use the sub-menus provided.

Click **Country** sub-menu to **Select/Add** Country, next Click **State** sub-menu to **Select/Add** the State, then Click **City** sub-menu and Press **Add** button to fill the city details and **Save**. Similarly you can add/edit/delete a Country or State at the appropriate location on the Location Master.

Note: User cannot **Delete** a Location, if in use and linked to other table(s) or master(s).

Company Master

Company Master maintains Company data/details related to Project.

Click **Master**, **Company Master** from the menu bar to open the Company Master window. The system provides option to *View* and *Add/Edit/Delete* Company (under desired Location), using options provided on **Company Master** window.

To **Add Company** (under location), Click/Press **Add** button on Company Master to fill *Company Details* and *Save*. Use **Location Tab** to select the desired location from Location Master. For additional Phone No. to enter, Click on '+' node provided. Similarly can *Edit* or *Delete* an existing Company.

Discipline Master

Discipline Master maintains the data/details of various disciplines (like Electrical, Mechanical, Labour, etc.) for the Project.

Click **Master**, **Discipline Master** from the menu bar to open the Discipline Master window. The system provides option to *View* and *Add/Edit/Delete* Discipline, using options provided on **Discipline Master** window.

To **Add Discipline**, Click/Press **Add** button on Discipline Master and fill *Discipline Details* in fields provided and *Save*.

Source Master

Source Master maintains the details of various Data Sources (like IPMG, DSR, HSR, etc.) for the Project Estimate purpose.

Click **Master**, **Source Master** from the menu bar to open the Source Master window. The system provides option to *View* and *Add* data source, using options provided on **Source Master** window.

To **Add Source**, Click/Press **Add** button on Source Master and fill the cost-data *Source Details* in fields provided and *Save*.

Unit Master

Unit Master facilitates user to *Add/Edit/Delete* **Unit** (i.e. Unit of Measurement) for *Item(s)* and it's *Component(s)* in *BuildSystem*.

Click **Master**, **Unit Master** from the menu bar to open the **Unit Master** window; and then *Add/Edit* the desired Unit, using the buttons provided on it. Option provided for *Unit Conversion* (refer below section).

Note: User cannot *Delete* an Unit, if in use and linked to other table(s) or master(s).

Unit Conversion

The system provides option to relate the *Unit* to its *Sub-Units* using a '**conversion factor**'.

Click **Master**, **Unit Conversion** from menu bar to open the Unit Conversion window and *Add/Edit* the desired Unit to convert (using the buttons provided). To **Add**, Select/Enter the '*Convert From*', '*Convert To*' and then the *Conversion Factor* '*Value*' for it, and *Save*.

Unit Type

The Master facilitates user to *Add/Edit Unit Type* required for *Quantity Take-Off* (QTO) purpose in estimation process in *BuildSYSTEM*.

Click **Master, Unit Type** from the menu bar to open the **Unit Type** window and then *Add/Edit* the desired *Unit Type*, using the buttons provided on it, and **Save**. Use **Map Unit(s)** button to relate the *Unit Type* with *Unit Name* (unit of measurement).

Manufacturer Master

The master maintains all the records of *Manufacturer(s)* that are associated with *Components* (materials).

Click **Master, Manufacturer Master** from menu bar to open the **Manufacturer Master** window and then *Add/Edit* Manufacturer(s) record/details, using options/buttons provided on the window for –

(1) Manufacturer Details, (2) Contact Person, (3) Manufacturer's Location, (4) Manufacturer's Component(s), (5) Manufacturer's Vendor(s) and (6) Component's Vendor(s).

Add New button provided on **Contact Persons** (for Manufacturer) helps to add more than one Contact Person details. Use **Select Manufacturer** button/option to Search/Select Manufacturer for quick *Edit/Delete* operation (delete allowed only if manufacturer is not in use).

Adding manufacturer record in Manufacturer Master, does not add/link it to any component (say material, labor, equipment etc.) This can be done using **Manufacturer's Component(s)** option. Similarly, using **Manufacturer's Vendor(s)** option and **Component's Vendor(s)** option you can link vendor(s) to the manufacturer and component(s) to vendor respectively.

On completion of Add/Edit operation, **Save** the manufacturer record in the master, and **Exit**.

Vendor Master

Vendor Master facilitates to maintain records of Vendor(s) and its link to Manufacturer for the Component(s) (i.e. material, labor, equipment etc.).

Click **Master, Vendor Master** from menu bar to open the **Vendor Master** window, and then Press **Add** button to *Add Vendor(s)* record - (1) Vendor Details, (2) Contact Person(s) and (3) Vendor's Component(s).

Use **Add** button on **Contact Persons** (for Vendor) to add more than one Contact Person details.

Select Vendor button/option helps to Search/Select Vendor for quick *Edit/Delete* operation (can delete vendor if not in use). On completion of *Add/Edit* operation, **Save** the vendor record in the master and **Exit**.

Once the vendor is added and linked to manufacturer, it can be accessed and used at component level in 'Component Master' or 'Component Rate Breakup'.

Component Type Master

Component is the basic ingredient (like material, labor, equipment, tool, etc.) that goes into forming the Item-BOM (bill of materials). Component Type Master maintains the data/details of such components for a Project.

Click **Master, Component Type** from the menu bar to open the **Component Type Master** window. The system provides option to *View* and *Add/Edit/Delete* Component Type, using options provided on **Component Type Master** window.

To **Add Component Type**, Click/Press **Add** button on Component Type Master and fill details in the fields provided and **Save**.

Other Master(s)

Master(s) are created to maintain the data/records in respect of the Master Type, so as to fetch and use it in other tables/masters for execution. Certain Master(s) that are self explanatory are mentioned below along-with where/how it is used in Project Estimation:

- **Project Classification** - while creating a new project to allocate it under a project classification
- **OHP Template** - to create a template for repeated use, consisting of OHP Type and Expression/Values for adding the overheads.
- **Contractor Category** – to use the category defined in Contractor Master

Click **Master, Respective Master** from the menu bar to open the desired Master window. The system provides option to *View* and *Add/Edit/Delete* records into the Master, using options provided on **Master** window.

Contractor Master

The master maintains all the records of *Contractor(s)* that are associated with *Item of Works* (items).

Click **Master, Contractor Master** from menu bar to open the **Contractor Master** window, and then to *Add/Edit* Contractor(s) record/details using options/buttons provided on window for –
(1) Personal, (2) Registration Details, (3) Bank Details, (4) Discipline, (5) Group and (6) Grade.

On **Personal** section, under *Contractor Details*, side button/option provided to Add **Company Type** (for Contractor). Use **Continue** button/option to save and proceed to next section until all the sections are filled with contractor related details. Search/Select Contractor for quick *Edit/Delete* operation (delete allowed if contractor not in use).

On completion of Add/Edit operation **Save** the contractor record in the master, and **Exit**.

Contractor Technical Bid

The master maintains all the technical records/info related to *Contractor(s)* that are helpful for technical bid evaluation.

Click **Master, Contractor Technical Info** from menu bar to open the **Contractor History** window, and then to *Add/Edit* Contractor(s) Technical record/details using options provided on window for sections –
(1) Profit Loss & Balance Sheet, (2) Income Tax and (3) Performance History.

Search/Select *Contractor* (drop-down) for quick *Edit/Delete* operation (delete allowed only if contractor not in use). On each section, **Upload** button/option provided to attach related files, like *Profit & Loss Statement, Income Tax file, Work Completion Certificate*, etc.

On completion of Add/Edit operation **Save** the Contractor Technical record in master, and **Exit**.

Contractor Group Info

The master maintains all the records/info related to *Contractor's* Grade, Group Info, etc. that may be required for further use and technical bid evaluation.

Click **Master, Contractor Group Info** from menu bar to open the respective window for *Contractor's Grade, Group Info*, etc., and then to *Add/Edit* Contractor(s) Grade, Group details etc.

On completion of Add/Edit operation **Save** the Contractor Group record in master, and **Exit**.

Tax Master

The system provides option to *Add/Edit/View* the **Tax Template(s)** that contains various taxes to apply on the *Component Rate* and arrive at its *Rate After Tax*. These Tax-Templates are stored and arranged in tree-form structure (displayed on left side of window) in the **Tax Master**.

Click **Master, Tax Master** from the menu bar to open **Tax Master** window and *View/Add/Edit Tax Template*, as per the instructions provided on the same window. Click on '+' node, to open and view the tree-chain of tax description under each tax template.

To **Add Tax Template** (with description and expression for tax) in *Tax Master*, proceed as follows:

1. Click/Position cursor on tax-tree (displayed on left side of window) and Enter *Name* for new Tax Header/Template, and Press **Add/Save**; Next, Click the **Tax Header** to fill its details in the Tax Grid box (right side);
2. The Tax Grid box displays a single **Tax Row (R1)**; Enter/Overwrite in tax-row for its '*Description*', *Operator* '+/-' (to add/subtract from Base Rate R0) and '*Value/ Expression/ Formula*'. The Tax '*Amount*' for the row is automatically updated as per the entries made and based on Base Rate (R0);
4. On completion of Tax Template, check the **Net-Rate/Amount** value displayed (for Base Rate R0) and if satisfied, **Save** it;
5. Similarly, Add next Tax Row(s) under the same Tax Header, and Press **Add** button to create/add the *next tax row* (R2), and so on;
3. To *Edit/Change* '*Description*' or '+/-' sign operator, Click the **Tax Row** to *Edit*. The tax rows R1, R2 etc. added can be referenced for tax formula in any tax-row.
6. On addition of **Tax Template** in Tax Master, it can be accessed at component-level for application of tax, while working in '**Component Master**' or at '**Component Rate Breakup**' window using Tax button provided there.

Terms & Conditions

The Master facilitates user to *Add/Edit Terms & Conditions* (TCs) required for *Purchase Order* creation purpose in *BuildSystem*.

Click **Master, Terms & Conditions** from the menu bar to open the **Terms & Conditions** window and then *Add/Edit* the desired *TCs* (TC Name/Description and Remarks to display), using the buttons provided on window. *Delete* option allowed, if the TC is not in use.

On completion, **Save** the entered record (TC) in master and **Exit**.

Mapping of Sources

The Master facilitates user to *Map the Sources*, say IPMG Code to USR Code (user defined code), so as to relate/establish-link between them for use in *BuildSystem* Software.

Click **Master, Mapping of Sources** from the menu bar to open the **Mapping Details** window; Next, Search/Select the **L5 Component(s)** from IPMG and Other Sources for *Mapping*, using the buttons/options provided on it, and then Press/Click **Map Source** and **Save**.

On completion of Add/Edit operation **Save** the Mapped Sources record in the master, and **Exit**.

Component Master & Item Master

Component Master contains records in respect of *Material, Labor, Equipment*, etc. and their *rates*, where-as **Item Master** contains records in respect of *Item of Works* or *Line-Items* to use in Project Estimate.

New component(s) can be added in the Component Master, for using it to create new *Line Item(s)* in Item Master. These *Line Item(s)* as-well-as the *Component(s)* are then used to build the desired Project Estimate.

NOTE:

- i) User cannot *Delete* records from the existing Masters.
- ii) User can Add new records/components (starting with 80000 only) to the Masters and Edit it.
- iii) If required, Rate may be changed for existing Material/Labor/Equipment in the masters.

Component Master

A Component is the basic ingredient (like Material, Labor, Eqpt., etc.) that goes into forming the Item-BOM (bill of materials). In *BuildSystem*, each **Component** is identified with a unique 13 digit IPMG Code (with last 5 digits as Level 5); and is linked to the **Base Group** (level 1) and **Sub-Groups** (level 2,3 and 4) on component-hierarchy tree – all codified and well-arranged in a tree like structure called *Component Hierarchy* (as shown below at Fig. 1.4). Base Group being the broad heads like Material, Labor, Eqpt., etc.

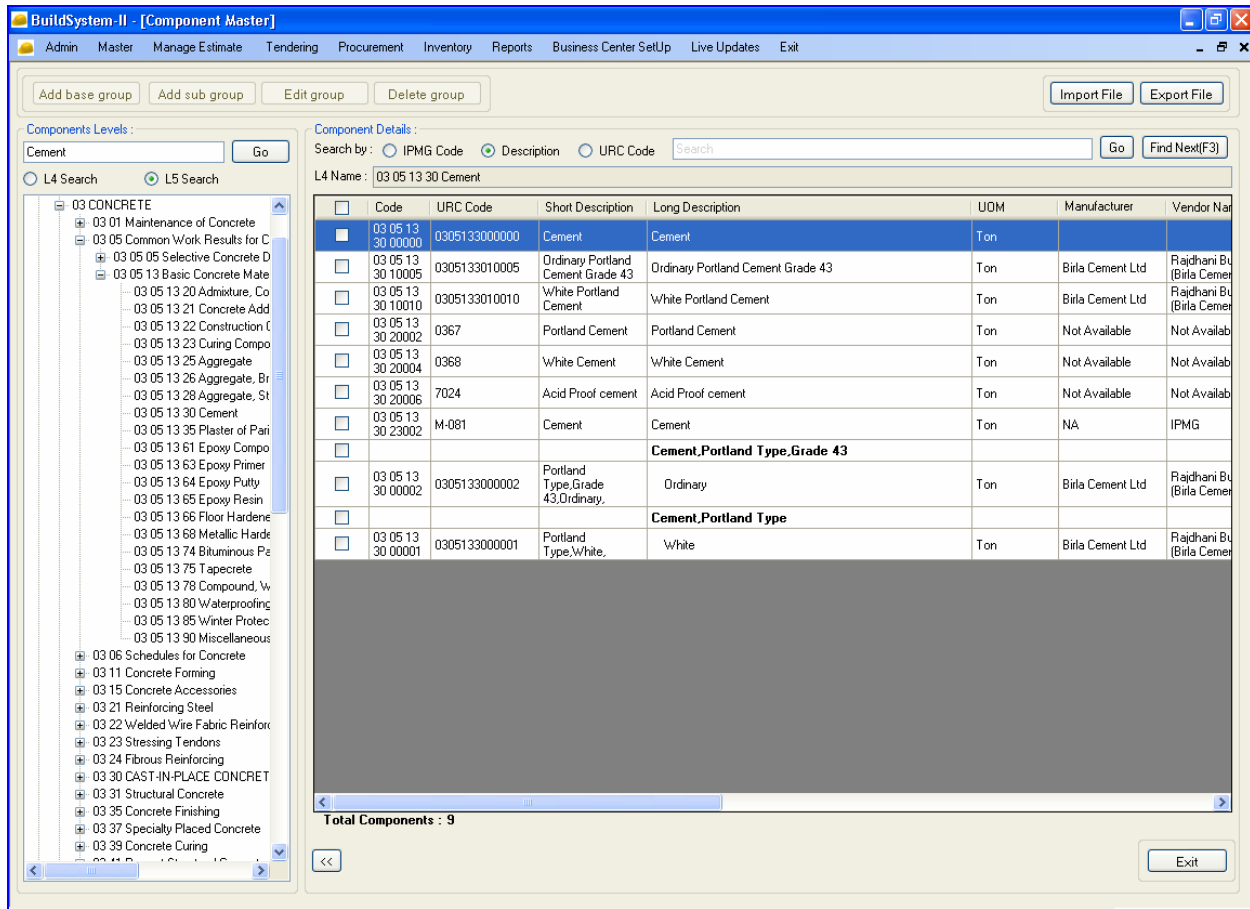


Fig. 1.4: Component Master

Click **Master, Component Master** from menu bar to open the **Component Master** window. The window has two boxes; (1) **Component Levels (Hierarchy)** and (2) **Component Details**. The **Component Hierarchy** box (on left) displays the L1 to L4 level Component(s), as per the **Source Master** selected. [L means level].

To access/select the desired component(s), the options provided on **Component Levels** box are:

- Search Component** (by inserting the component name/word and press 'Go' to display, and then use 'Select' button to select desired component with L5 code), and
- Expand Component Levels** (by clicking on '+' node to expand the hierarchy (level 1 to level 4) and then select desired component with L5 code).

Alternatively, use **Search** option provided on **Component Details** box (options - IPMG Code, Description or URC Code) to display/select the Component with L5 code.

On selecting L5 Component in **Component Details** box, the **Right-Click options** provided on the Component are:

- Component Rate Break-up (Analysis of Component);
- Add Manufacturer; and
- Add Vendor.

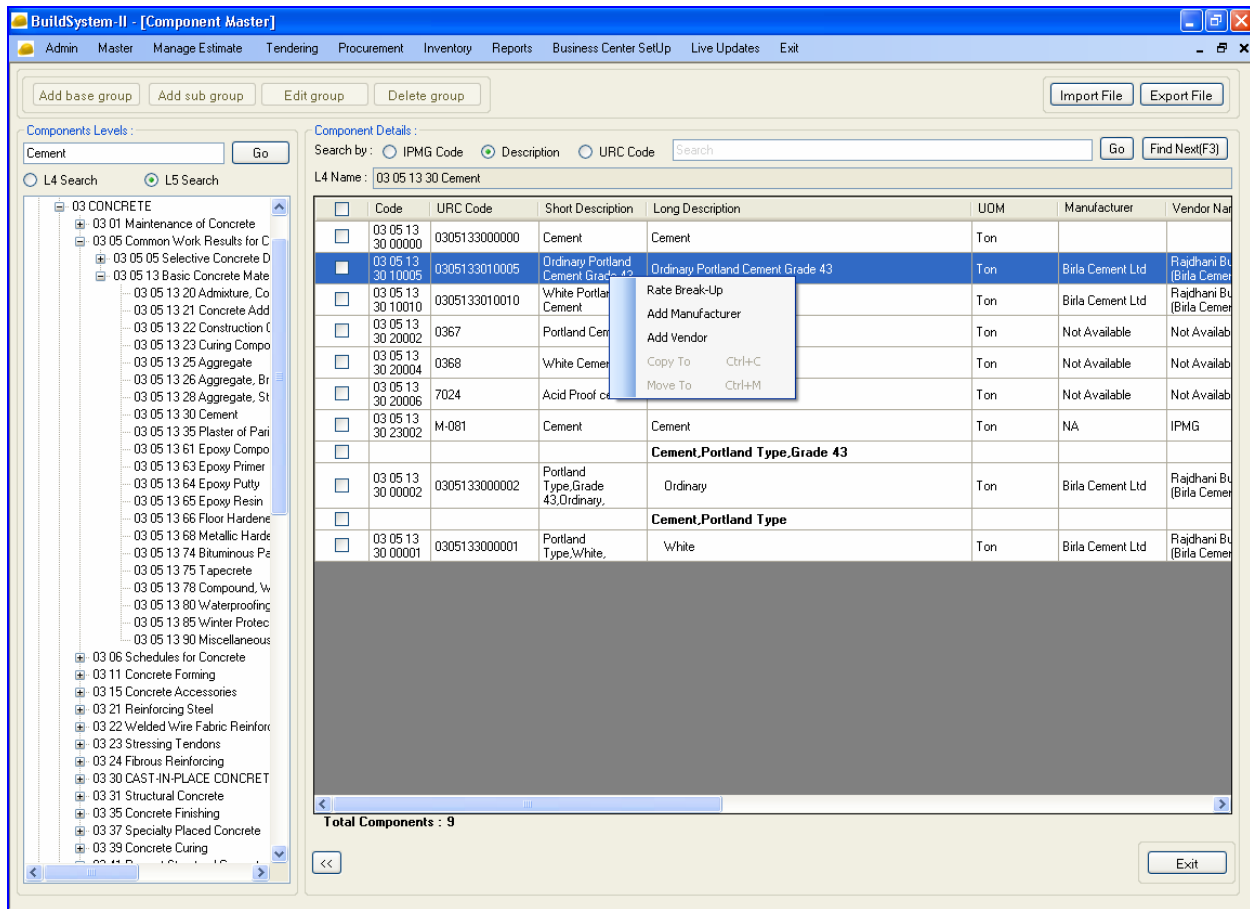


Fig. 1.5: Component Rate Breakup

- **Component Rate Break-up** window displays the Manufacture List, Vendor List, Manufacture Price, Discount%, Tax, Total Price, etc. associated with the component. With further Right-Click on Manufacture/Vendor row, it displays Manufacture/Vendor details and their attached Files, if any.
- **Add Manufacture/Vendor** window option helps user to *Add* (new to Master) or *Select* (from existing master) the desired Manufacture/Vendor for the Component.

Add Component (user defined)

BuildSystem allows user to *Add/Edit* new component(s) under its own **Source Master** (SOR selected) and **Base-Group/Sub-Group** (level L1 to L4). For this purpose, the following options/buttons provided on **Component Master** window:-

- Add Base Group (i.e. L1 - under Material Type)
- Add Sub-Group (to *Add* L2 to L4 – under Base Group/Sub-Group)
- Edit Group (for User Defined Group only)
- Delete Group (for User Defined Component only)
- Add Indent (User Defined or User Predefined Indent)

User can add indent using button given adjacent to the Long Description. Click the button to open **Indent Window**. First, create the base Group and then Sub-Group in the Indent Window. Select the Sub group and *Add* the description and Click *Save* Button.

User can only *Delete* a Group or Sub-Group from the existing Masters, if not put to use.

Click/Select **Master, Component Master** from menu-bar to open the **Component Master** window. Click and expand the component hierarchy tree.

To **Add/Edit Sub-Group** or **Component** (user defined) in Component Master, proceed as follows:

1. On *Component Hierarchy Tree*, Click/Select the desired **Component Type** and **Sub-Group** (level 1 to 4), under which to *Add* the new Sub-Group / Component.
2. **Add New** box appears (below *Component Details* box) to fill the Code, Unit, Description and Add Component. Button/Option provided to indent the Long Description'.

On completion, *Save* the new Sub-Group/Component in the master and *Exit*.

BuildSystem-II - [Component Master]

Admin Master Manage Estimate Tendering Procurement Inventory Reports Business Center SetUp Live Updates Exit

Add base group Add sub group Edit group Delete group Import File Export File

Components Levels :

Cement Go

Component Details :

Search by : ☐ IPMG Code ☒ Description ☐ URC Code Search Go Find Next(F3)

L4 Name : 03 05 13 30 Cement

<input type="checkbox"/>	Code	URC Code	Short Description	Long Description	UOM	Manufacturer	Vendor Name
<input type="checkbox"/>	03 05 13 30 00000	03051330000000	Cement	Cement	Ton		
<input type="checkbox"/>	03 05 13 30 10005	0305133010005	Ordinary Portland Cement Grade 43	Ordinary Portland Cement Grade 43	Ton	Birla Cement Ltd	Rajdhani Bu (Birla Cement)
<input type="checkbox"/>	03 05 13 30 10010	0305133010010	White Portland Cement	White Portland Cement	Ton	Birla Cement Ltd	Rajdhani Bu (Birla Cement)
<input type="checkbox"/>	03 05 13 30 20002	0367	Portland Cement	Portland Cement	Ton	Not Available	Not Available
<input type="checkbox"/>	03 05 13 30 20004	0368	White Cement	White Cement	Ton	Not Available	Not Available
<input type="checkbox"/>	03 05 13 30 20006	7024	Acid Proof cement	Acid Proof cement	Ton	Not Available	Not Available
<input type="checkbox"/>	03 05 13 30 23002	M-081	Cement	Cement	Ton	NA	IPMG
<input type="checkbox"/>			Cement,Portland Type,Grade 43				
<input type="checkbox"/>	03 05 13 30 00002	0305133000002	Portland Type,Grade 43,Ordinary,	Ordinary	Ton	Birla Cement Ltd	Rajdhani Bu (Birla Cement)
<input type="checkbox"/>			Cement,Portland Type				
<input type="checkbox"/>	03 05 13 30 00001	0305133000001	Portland Type,White,	White	Ton	Birla Cement Ltd	Rajdhani Bu (Birla Cement)

Total Components : 9

Add New

SOR Code : DSR [C] UOM : m

IPMG Code : 03 05 13 30 80000 * URC : 03 05 13 30 80000

Short Description :

Long Description : Portland Cement 43 Grade *

Remarks :

<< Save Reset Delete Cancel Exit

Fig. 1.6: Add New Component

The new component (L5 level) can be added only under L4 Sub-group, which has been created or existing. The IPMG Code (L1, L2, L3, L4) for must start with '80' & above digit only and for (L5) must start with '80000' & above to identify it as User-Created.

- 3 Press **Add** or **Add Component** button to *Save/Add* the new sub-group or component into the **Component Master**, for use.
4. Once a Component is created, user can *Add Manufacture*, *Vendor*, *Price*, *Discount%*, *Tax Template*, and other details to create the *Rate Break-up* for the component.

More than one manufacturer (or vendor under manufacturer) can be added to the selected component, using the right-click option *Add Manufacturer / Add Vendor* (provided on Component L5) to *Add* (new) or *Select* (from existing) the desired Manufacture/Vendor for the Component..

Once a User Component is added, it can be used to create Line-Item(s) and for Project Estimate.

To Edit/Delete Sub-Group, select the desired sub-group and use **Edit Group** or **Delete Group** button. A sub-group cannot be deleted if it is in use or a child exists under it.

The system allows the user to **Delete Group**, if it is not in use and there is no child under it (i.e. there is no sub-groups or components under it).

To **Edit Component** (under sub-groups), Click/Select the desired **Component** (level-5) on *Component Details* box, and then edit the component's text/value field(s), all except its IPMG Code, as shown at Fig. 1.7 and Press **Save Component** button, for use. To **Delete Component**, Click/Check the *Select* box on component row, and Press *Delete* button.

BuildSystem-II - [Component Master]

Admin Master Manage Estimate Tendering Procurement Inventory Reports Business Center SetUp Live Updates Exit

Add base group Add sub group Edit group Delete group Import File Export File

Components Levels: Cement Go

L4 Search L5 Search

Component Details: Search by: IPMG Code Description URC Code Search Go Find Next(F3)

L4 Name: 03 05 13 30 Cement

Code	URC Code	Short Description	Long Description	UOM	Manufacturer	Vendor Name
03 05 13 30 0000	0305133000000	Cement	Cement	Ton		
03 05 13 30 10005	0305133010005	Ordinary Portland Cement Grade 43	Ordinary Portland Cement Grade 43	Ton	Birla Cement Ltd	Rajdhani Builders (Birla Cement)
03 05 13 30 10010	0305133010010	White Portland Cement	White Portland Cement	Ton	Birla Cement Ltd	Rajdhani Builders (Birla Cement)

Component Rate Breakup

Components Rate Breakup

IPMG Code: 03 05 13 30 10010 URC Code: 0305133010010

UOM: Ton SOR Name: IPMG1

Short Description: White Portland Cement

Long Description: White Portland Cement

Remarks:

Manufacture Price

Code	Manufacturer Name	Show Files
BIR001	Birla Cement Ltd	Show Files

Vendor Price

Vendor Code	Vendor Name	City	Manufacturer Price	Discount	Price After Discount	Tax	Total Price	Def
RAJ003	Rajdhani Builders (Birla Cement)	Delhi	11200.000000000	0%	11200.000000000	112.000000000	11312.000000000	

Exit

Fig. 1.7: Component Rate Breakup

Similar in *Add Component* process, user can **Add/Change** the 'Manufacturer' or 'Vendor' or 'Tax', using respective buttons provided on the Form, as-well-as **Change Rate** or **Discount%** to effect the 'Rate After Tax' for the component.

NOTE:

- Manufacturer, Vendor and Rate must be entered for *Add Component* in Component Master.
- 'Delete Component' is possible, if the component is not in use.
- System allows 'Delete Group', if the selected group to delete is not in use and there is no child under it.
- BuildSystem* does not allow user to *Add/Edit/Delete* any Sub-Group/Component from IPMG

On Component Master window options/buttons provided to *Import File* or *Export File* from Excel File to Component Master or vice-versa.

Item Master

An **Item** (known as *Item of Work* or *Line-Item*) is the basic work-unit containing BOM (bill of materials) with cost details that goes into building up the Estimate.

Item Master contains records of these *Items* or *Item of Works* (grouped under the 48 Work Divisions) to use in Estimate. Each Item has a unique 13 digit IPMG Code (upto level 5 or L5) for its identification. These items are categorized/arranged under the Work Divisions in the order as mentioned below:

Main Group (level 1= 2 digits), its *Sub-Groups* (level 2,3 and 4; each of 2 digits), and then the *Line-Item(s)* under it (level 5= 5 digits), as shown below at Fig. 1.8.

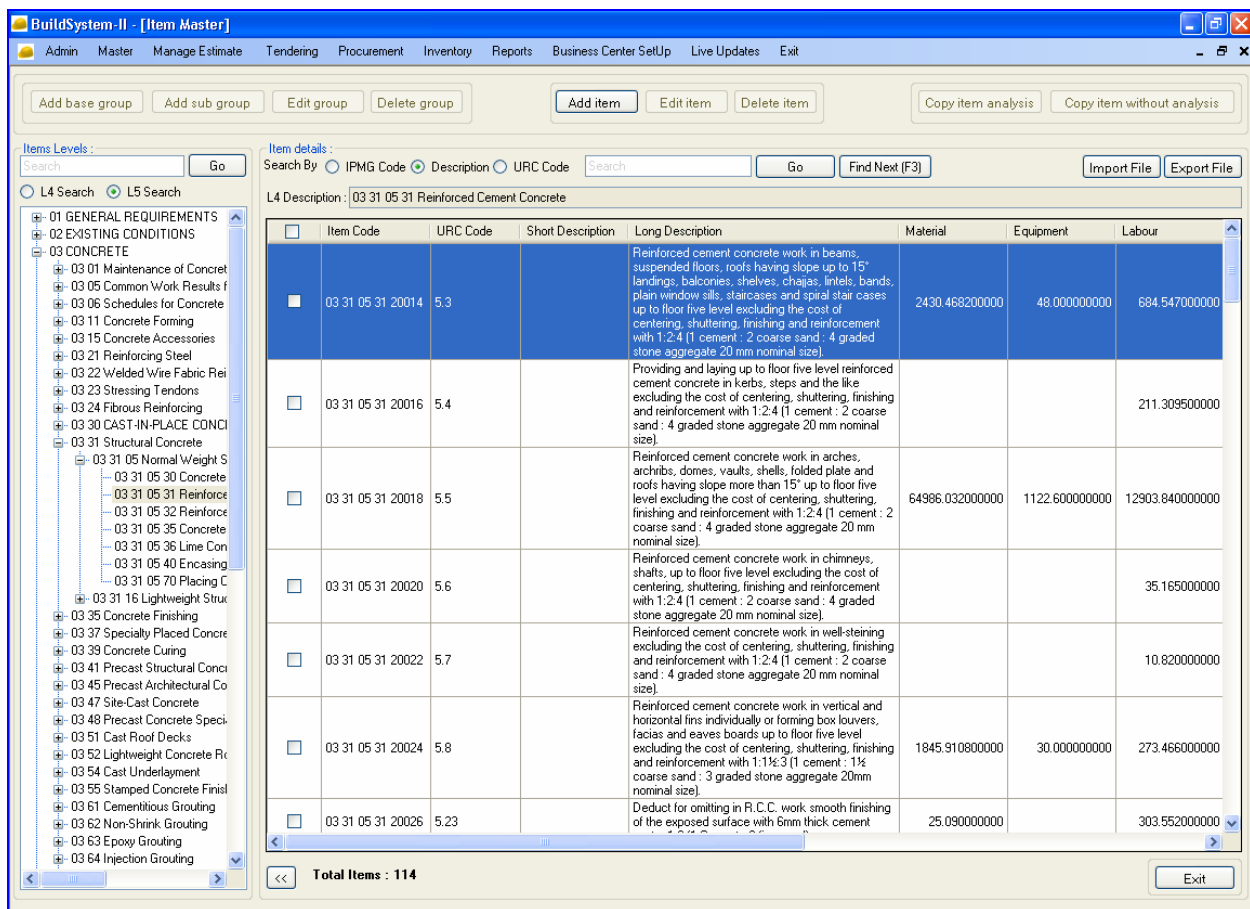


Fig. 1.8: Item Master

Click **Master, Item Master** from menu bar to open the **Item Master** window. The window has two main boxes; (1) *Item Levels* (displays L1 to L4) and (2) *Item Details* (displays L5 with item code and cost details). [L means level].

The **Item Level box** displays the *Item Hierarchy* tree with item-groups/sub-groups (L1 to L4). Double click on each group/sub-groups and expand the hierarchy to view the groups/subgroups.

Select/Click any sub-group (L4) to display its line-item(s) in *Item Details* box. Item(s) are displayed along with its IPMG Code, Description, Unit, Component Cost Details, Total Cost and Other details like 'date of creation' etc.

To access/select the desired item(s), the option provided on **Item Master** window is:

On Item Levels box

- (i) **Search** (by inserting the item name and press 'Go') to display the Item's L4 and all its Item(s) L5 on the pop-up window **Description Search Results**;
- (ii) Select the desired Item(s) and Press '**Select**' button to display it with details on the **Item Details** window.

On Item Details box

- (iii) Next level **Search** by selecting the displayed Item(s) or inserting either 'IPMG Code' (13 digit of L5 with proper spacing) or 'Description' or 'URC Code' and press 'Go' to display the Item(s). This option helps to narrow down to desired item(s) from long item-list.

On **Item Master** window, the Buttons/Options provided are –

Add base-group, Add sub-group, Edit sub-group, Add item, Edit item, Delete item, and Copy Item (with and without analysis). To perform any of these operations, position the cursor on the desired Main Group/Sub-Group or Item and then Click the desired Button.

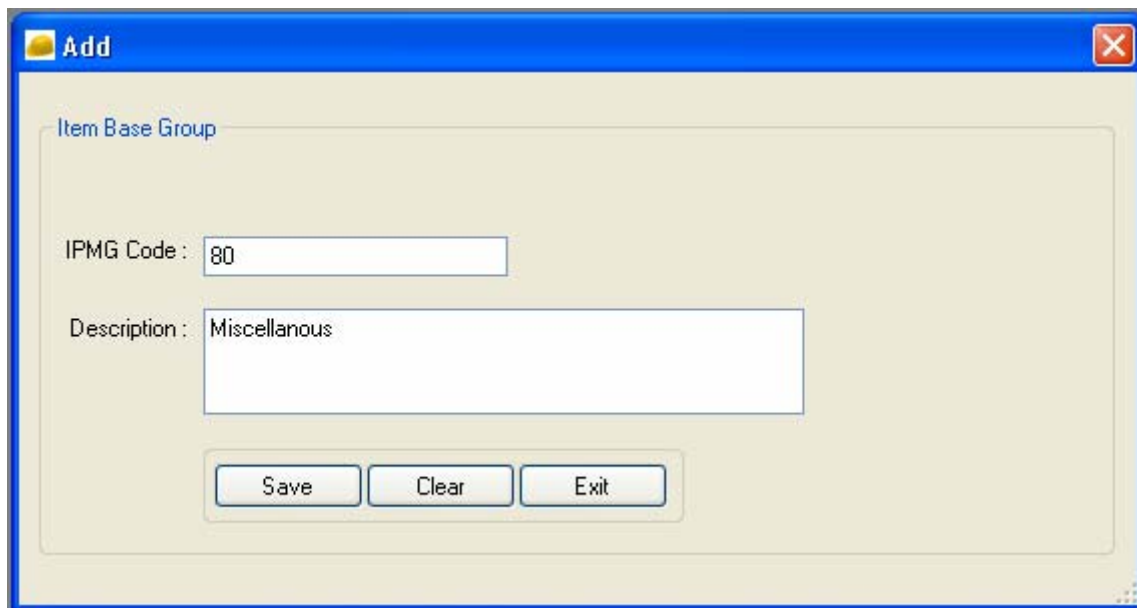


Fig. 1.9: Add Base Group

On **Item Master** window user can do the following, using the options/buttons provided:

- *Add Item, Import Item and Export Item* using the respective buttons;
- *Add Item* under IPMG L4 or User Created L4 sub-group, using Copy Item Analysis;
- *Edit Item / Delete Item* - only for User Created Item(s);
- *Copy Item with/without Analysis* (under IPMG L4 or User Created L4 Sub-group), to create new Item with desired changes, using any existing *Item* from Master;
- *Add Base Group* and/or *Add /Edit /Delete Sub-group(s)* – only for User Created Group/Sub-groups;
- *Help* to create user defined item;
- *View Analysis* on Item (L5), using right-click option on selected item.

Add Item

An Item is the basic work-unit, which is identified with a 13 digit IPMG Code and has a BOM (bill of materials) with cost details. It is generally placed under the Level-4 Sub-Group (having 8 digits IPMG Code) on *Item Hierarchy* tree (in *Item Level* box).

Item-BOM consists of all the components and/or sub-items (an item included under an item), their quantity and cost details required for forming *1Unit* of *Line-Item*.

To **Add Item-BOM** (under sub-groups) in *Item Master*, proceed as follows:

1. Click/Select *Item Master* from menu-bar to open the **Item Master window**.
2. **Item Master** window displays the *Item Hierarchy* tree with item-groups/sub-groups (in *Item Level* box) and its items (in *Item details* box).
3. Click/Select the desired **Sub-Group** (at Level-4 having 8 digits IPMG Code) on *Item Hierarchy* tree, under which to add the new item, and Press **Add Item** button.
4. **New Item window** (or form) appears to *Add Item* under selected L4 sub-group, as shown at Fig.1.10, with entry boxes to enter/add the new Item along with its BOM (i.e. its components/sub-items with their quantity and rate) as follows:-

New Item

Items Details:

SOR Name: IPMG code: URC Code:

Short description:

Long description:

UOM:

Remarks:

Map To: Material Type: Unit:

Sub Items and Components

Add: Add Component, Add SubItem, Remove: Remove

Row Code	IPMG Code	Description	UOM	Manufacture	Vendor	City	Qty	Rate	Amount	URC Code	SOR Name	Date
----------	-----------	-------------	-----	-------------	--------	------	-----	------	--------	----------	----------	------

Total cost (TC): 0.00

OHP Details

Description	+ / -	Expressions/Values	Amount
-------------	-------	--------------------	--------

OHP Amount: 0.00
Net Rate: 0.00
Cost of 1: 0.00

Save Exit

Fig. 1.10: Item Master – New Item

(a) **Enter Item Details** – its ‘IPMG Code’ (only the last 5 digits, as L4 code with 8 digits already selected), then its ‘Short and Long Description’, ‘Unit’ (select from dropdown), and Remarks (if any).

(b) **Attach Components/Sub-Items** – with its manufacturer, vendor, quantity and rate, using the buttons **Add Component** and/or **Add Sub-Item**. On **Select Component window**, select the desired *Component(s)/Sub-Item(s)* along with its ‘Manufacturer’, ‘Vendor’ and then enter/change the ‘Quantity’.

On completion, Press **Add Component** button to attach the *Component* to the **New Item** (grid-row code appears like M1, M2, L1 or E1 or any of their combination). Similarly attach sub-item(s) to the new item.

Repeat the process to add all the desired components/sub-items in to the Item-BOM. The ‘Amount’ for each component/sub-item row and ‘Total Cost’ for all the rows taken together are displayed on the **New Item Form**.

User can Change **Manufacturer** or View **Component Rate Breakup**, if required, using the Right-Click Option provided on component/sub-item grid rows. Option also provided to **Remove Component/Sub-Item** from the new item.

© **Other Component(s)** (not found in component master) can be inserted into Item-BOM, using the buttons **Map To** (to map with **Material, Labor, Eqpt. Or Others** etc.) and ‘+’ to add a other row (R1, R2, etc.) and then enter its ‘Description’, ‘Qty’ and ‘Value’ (in ‘Rate’ column).

(d) **Add ‘Overheads’** to Item-BOM (in the lower section of the *Item Master Form*), using button ‘+’ provided to open and add/select **OHP Template** – which helps to add an *OHP Row* or sub-heads (say Z1) along-with its ‘Description’ and ‘Value’/‘Formula’ (for formula use grid-row code that appears like M1, M2, L1 or E1 and/or operator or any of their combination). Option User can delete the OHP Row, if required.

(e) With above entries, system automatically computes and displays the ‘Total Cost’ and the ‘Net Rate’ (after sub-heads) for the new Item-BOM.

5. On completion, Press **Save** button to *Save/Add* the new *Item* (along with its BOM) in the *Item Master*, for use. View *Analysis of Item* using the Right-Click option provided on the Item row in *Item Master* window.

Copy Item With Analysis

Item Details:

SOR Name: DSR IC IPMG code: 03 31 05 30 80000 URC Code: 03 31 05 30 80000

Short description:

Long description: Making plinth protection, 50 mm thick, of cement concrete 1:3:6 with coarse sand on 75 mm bed of dry brick ballast 40 mm nominal size, well rammed and consolidated

UOM: 1.000000000 sgm

Remarks:

Map To: Material Type: Unit: +

Sub Items and Components:

Add: Add Component Add SubItem Remove: Remove

Row Code	IPMG Code	Description	UOM	Manufacture	Vendor	City	Qty	Rate	Amount	URC Code	SOR Name	Date
Material												
M1	03 05 13 3	Portland Type Gr	Ton	Bela Cement	Rajdh	Delhi	0	480	5280000000000	030513	IPMG	4/1/2009
M2	03 05 13 2	Stone Aggregate	cum	NA	Br Sin	New D	0	103	3634575000000	030513	IPMG1	1/1/2010
M3	03 05 13 2	Stone Aggregate	cum	NA	Br Sin	New D	0	101	1223460000000	030513	IPMG1	1/1/2010
M4	03 05 13 2	Brick Aggregate	cum	NA	Ishak	New D	0	481	3614625000000	030513	IPMG1	1/1/2010
M5	04 05 13 9	Fine Sand (Zone	cum	NA	Ishak	New D	0	445	2671200000000	040513	IPMG1	1/1/2010
M6	01 22 18 1	Sundries Lump S	1 Tr	NA	IPMG	New D	5	1.2	6000000000000	012218	IPMG1	1/1/2010

Total cost (TC): 248.462150000000000000

OHP Details:

Description	+ / -	Expressions/Values	Amount
z1 Overheads & Profits	+	tc*15/100	36.063345000

OHP Amount: 36.063345
Net Rate: 276.53
Cost of 1: 276.531495000

Save Exit

Fig. 1.11: Copy Item with Analysis

Edit Item

BuildSystem allows user to modify the Item and its BOM, using the *Edit Item-BOM* option provided in Item Master.

To **Edit Item** (under sub-groups) in *Item Master*, proceed as follows:

1. Click/Select the desired **Item** (level-5), on item-hierarchy, and then Press **Edit Item** button.
2. **Edit Item window** (or Form) appears, to edit the Item-BOM for its 'Description', 'Unit', 'Component/Sub-Item' (using add/delete options), and/or Change 'OHP', 'Manufacturer'/'Vendor' (on right-click) or 'Quantity' for component/sub-item (in grid-rows). The options here are the same as mentioned above at *Add Item*.

Right-Click option provided on grid-rows helps to view **Component Rate Breakup**, as shown at Fig. 1.12. Component 'Rate' can be changed through Component Master only (refer Component Master Section).

3. On completion, Click **Save** the edited Item-BOM, for use.

Analysis Of Item

Items Details:

SOR Name: DSR [C] IPMG code: 03 31 05 30 80000 URC Code: 03 31 05 30 80000

Short description:

Long description: Providing and laying cement concrete with fine sand and graded stone aggregate, 40 mm nominal size in foundations, footings and under floors including side forms,

UOM: 1.000000000 cum

Remarks:

Sub Items and Components

Row Code	IPMG Code	Description	UOM	Manufacture	Vendor	City	Qty	Rate	Amount	URC Code	SOR Name	Date
M1	03 05 13 3...	Portland Type, Grade 43, Ordinary,	Ton	Birla Cemen...	Rajdh...	Delhi	0.130000000	4800.000000...	624.0000000000000...	0305133000...	IPMG	4/1/2009
M10	22 11 13 4...	MS Tube heavy class										
M11	05 05 23 1...	MS Bolts and Nuts up										
M12	01 51 21 2...	Shuttering oil										
M2	03 05 13 2...	Stone Aggregate 40										
M3	03 05 13 2...	Stone Aggregate 20										

OHP Details

Description

z1 Overheads & Profits

Birla Cement Ltd

Component Rate Breakup

Components Rate Breakup

IPMG Code: 03 05 13 30 00002 URC Code: 0305133000002

UOM: Ton SOR Name: IPMG

Short Description: Portland Type, Grade 43, Ordinary,

Long Description: Portland Type, Grade 43, Ordinary,

Remarks:

Manufacture Price

Code	Manufacturer Name	Show Files
BIR001	Birla Cement Ltd	Show Files

Vendor Price

Vendor Name	City	Manufacturer Price	Discount	Price After Discount	Tax	Total Price	Default	date
Rajdhani Builders (Birla Cement)	Delhi	4800.000000000	0%	4800.000000000	0.000000000	4800.000000000		01 Apr 2009

Fig. 1.12: Item Analysis – Component Rate Breakup

Copy Item-Analysis

BuildSystem facilitates user to *Copy Item-Analysis* that already exists (under the same sub-group in item-hierarchy) and then using *Edit Item* option quickly change it, as desired, to create the new Item-BOM with a unique IPMG Code in *Item Master*. This option provided helps user to cut-short the time and effort required for creating a new Item (with minor changes) rather than using option Add Item.

To **Copy Item** (under sub-groups at level-4) in *Item Master*, proceed as follows:

1. Click/Select the desired **Item** (level-5), on item-hierarchy, and then Press **Copy Item-Analysis** button.
2. **Copy Item-Analysis window** (or Form) appears, showing copy of the Item-BOM selected, except its IPMG Code (L5 to be entered).
3. To copy and create the new Item-BOM, Enter it's 'IPMG Code' (only last 5 digits) and then similar to the *Edit Item* process Change its 'Description', 'Unit', Add/Delete 'Component/Sub-Item' (using options), Add/Delete 'OHP', Change 'Qty' and 'Manufacturer/Vendor' for component/sub-item (selected in grid-rows). The options here are the same as mentioned above at *Edit Item*.

User can view the **Component Rate Breakup** using Right-Click option provided on grid-row. The Component '**Rate**' can be changed in *Component Master* only (refer Component Master Section).

4. On completion, Click **Save** the new *Item* created, using Copy Item-Analysis option, for use.

Import Item(s) or Component(s)

BuildSystem facilitates user to *Map* and *Import Item or Component* from User's Excel File into Item Master or Component Master respectively, using **Import File** option provided on *Item Master* window, but on limited fields only.

The required Fields for Item(s) or Component(s) (along with data) that must be present in user's Excel File and can be mapped are (1) User Reference Code (URC), (2) Description for Item/Component, (3) Unit and (4) Rate (for material, labour and equipment) only. Before import, ensure that these fields are at least present in the user's excel file.

Once imported into the Master, these User's *Item(s)* or *Component(s)* can be used, along-with those supplied/existing in the Master, to create the desired Items for project estimate.

Similarly, user can *Export Item or Component* to User's Excel File using **Export File** option.

To **Import Items** from User's Excel File into Item Master, proceed as follows:

1. Press **Import File** button provided on *Item Master* window to pop-up **Import Items window**, showing fields in which to import Item(s) from User's Excel File.

User can view the *Excel File* format using **Excel Format** button provided on **Import Items** window.

2. Click/Press **Import File** button, Select Folder/File containing the Excel File, and then Click **Open** button to *Import Item(s)* from Excel File to Item Master and *Save*.
3. Refresh to View the imported *Items* (of user's) in Item Master (on *Item-Hierarchy* tree).

To **Export Items** from Item Master to User's Excel File, proceed as follows:

1. Select the desired *Item(s)* on Item Master window (in *Item Details* box) and then Press **Export File** button to export Item(s) in to Excel File, and *Save*.

Similarly, users can *Export Component* from Component Master to User's Excel File using the **Export File** option.

Project Cost Estimating

The sections below explain how to Select/Add Project and then under it how to Select/Add Estimate with numerous options to change, merge, copy including quantity-take-off (QTO) from drawings. Once an Estimate is created, it can be modified or adjusted as required by user.

The screenshot shows the 'BuildSystem-II - [Projects]' window. The 'List of Project(s)' section contains a search bar and a table with one project entry: 'Project name', 'Civil', 'Hotel', 'India,Delhi,Delhi', and '03 Sep 2010'. Below the table are buttons for 'Add', 'Edit', 'Delete', 'Estimates', and 'Exit'. The 'Project Information' section has three tabs: 'Vital Statistics', 'Details Info', and 'Man Power'. The 'Vital Statistics' tab is active, showing various input fields for project details. The 'Project Name' field is labeled 'Project name *'. The 'Remarks' field is a text area. The 'Select Discipline' dropdown is set to 'Civil'. The 'Select Classification' dropdown is set to 'Hotel'. The 'Address1', 'Address2', and 'Address3' fields are empty. The 'City' field is set to 'India,Delhi,Delhi *'. The 'PIN Code' field is empty. The 'Number of Floors' field is set to '0'. The 'Total Area' field is set to '0.00' with the unit 'Square Meter'. The 'Area of Floor' field is set to '0.00' with the unit 'Square Meter'. The 'Built Area' field is set to '0.00' with the unit 'Square Meter'. The 'Rate of Contract' field is set to '0.00'. The 'Cost of Land' field is set to '0.00'. The 'Total Cost' field is set to '0.00'. The 'Approval Number' field is empty. The 'Start Date' field is set to '03 Sep 2010'. The 'Estimated End Date' field is set to '03 Sep 2010'. The 'Project Amount' field is set to '0.00'. At the bottom are buttons for 'Continue', 'Reset', and 'Cancel'.

Project Name	Discipline	Classification	City	Created Date
Project name	Civil	Hotel	India,Delhi,Delhi	03 Sep 2010

Project Information

Vital Statistics Details Info Man Power

Project Name : Project name *

Remarks :

Select Discipline : Civil

Select Classification : Hotel

Address1 :

Address2 :

Address3 :

City : India,Delhi,Delhi *

PIN Code :

Number of Floors : 0

Total Area : 0.00 Square Meter

Area of Floor : 0.00 Square Meter

Built Area : 0.00 Square Meter

Rate of Contract : 0.00

Cost of Land : 0.00

Total Cost : 0.00

Approval Number :

Start Date : 03 Sep 2010

Estimated End Date : 03 Sep 2010

Project Amount : 0.00

Continue Reset Cancel

Fig. 2.1: Project Details

To open a project with location, and work on estimate, proceed as follows:

Add/Open Project

1. Select/Click option **Manage Estimate, New/Open** from menu bar.
2. **List of Projects** window opens, showing existing project(s) with their details
 - Project Name, Classification, Location (city), and Created Date.
3. **Options** available on **Project - Add , Edit , Delete , Estimates , and Exit**.
 - (a) To **Open Project** (existing) and view/edit its details, proceed as follows:
 - Select/Click the **Project** from 'Project List';
 - Click **Edit** or **Double Click** on selected Project;
 - Opens **Project Information** window with Tabs - 'Vital Statistics', 'Details Info', and 'Manpower';

- Options provided to add/edit/delete project details using the Tabs. Use **Continue** button to proceed and then **Save & Close**.

(b) To **Add Project** proceed as follows:

- On **List of Projects window**, use **Add** to open **Project Information** window;
- Fill the required details in 'Vital Statistics', 'Details Info', and 'Manpower' section for the project;
- Use **Continue** button to proceed; and then **Save & Close**;
- Project Name is displayed in 'List of Project(s)'; **Double Click** on the Project to view/edit its **Project Information**.

Add/Open Estimate

1. Select/Click option **Manage Estimate, New/Open** from menu bar.
2. **List of Projects window** opens showing existing project(s).
3. **Add/Open Project**, under which to **Add Estimate** (Refer steps mentioned under the head “Add/Open Project”).

(a) To **Add Estimate** proceed as follows:

- Click/Select the **Project** from 'Project List';
- Next, Click **Estimates** button to open **List of Estimate(s)**;
- Options provided to **Add/Edit/Delete** Estimate, or view existing **Estimate Details** ;
- Click **Add** button to open **Estimate Form**, and **Fill** Details for new estimate;
- Select **Option** for New Estimate - 'With Items' or 'With Components'; and
- Click **Save** to **Add Estimate** in **List of Estimate(s)**. Else, use **Cancel** button to close the Estimate Form.

Create Estimate 'With Items'

To Create Estimate 'With Items' proceed as follows:

Requirements:

- (1) *Item(s)*, and its (ii) *Quantity, Manufacturer/Vendor* (with *Price & Discount*), (iii) *Tax & OHP* (on item or overall), and (iv) *Adjustment/Mark-up*.

Steps:

- 1) Click/Select **Estimate** Name from Estimate List, and Press **Estimate Details** button;
- 2) **Select window** pop-ups to Perform Action – (1) *Add Items* and (2) *View Estimate Details*;
- 3) Click/Select **Add Items** button for new Estimate;
- 4) Click/Select **Master Format** and Press **Go** button - to open **Items-Unit Cost Grid** Window;

Items-Unit Cost Grid window has following 3 Sections/Boxes:

- i) **Items-of-Work** (IOW- Master Format) - to *Search/Select L4 Item*, using option
 - Search (by description or L4 level code), or
 - Expand/Select (from *Item Hierarchy* box) - L1 to L4 level Items;
- ii) **Available Items** - to *Display/Select L5 Item(s)* (once L4 Item selected in IOW box);
- iii) **Selected Items** – to *Display/Add L5 Item(s) into Estimate*, using button *Add to Estimate*.

These windows help user to select systematically the desired L5 Item(s), as detailed below, for taking in to Estimate.

- 5) Search/Select desired **L4 Item** (using IOW box and Options);
- 6) Click/Select desired **L5 Item(s)** (using options Search, Find-Next and Check-box) and Press **Add** button to show in **Selected Items box**;
- 7) Repeat Steps (6) and (7) to **Add L5 Items** in *Selected Items box* for Estimate;
- 8) Use **Remove** button to Delete L5 Item(s) checked in *Selected Items box*;
- 9) **Change/Take-off Quantity** of Estimate L5 Item(s) in *Selected Items box* –
 - (i) by **Typing Value** in '**Qty**' Column, and/or
 - (ii) using **QTO** button (Qty Take-Off) [Item Qty. created manually from drawing], or
- 10) Press **Add to Estimate** button to Add *Selected L5 Item(s)* into Estimate. If any **Duplicate Item** is selected, then **Query Box** appears asking '*Add Duplicate Item*' (with qty.) or '*Update Qty*' for it (instead of duplicate item) - Click the desired option to fix it;
- 11) **Estimate Details** window opens up showing the Estimate with Items, Qty and Cost Details, OHP, Net Amount, etc.
- 12) Options provided on *Estimate Window* to view and edit the Estimate. Options also provided to view limited/full fields for Estimate Items as - (a) *Basic* (to view limited fields) and (b) *Advance* (to view all fields).
- 13) **Options available** on *Estimate* are:-
 - (i) **Right-Click Options** (on any Item Line)
 - Show Item Analysis
 - Item Break-up
 - Estimate Break-up (can also use Estimate Break-up button)
 - Delete Selected Item (can also use Delete button)
 - Insert Header Row (Ctrl+H)
 - Insert Blank Row (Ctrl+B)
 - (ii) **Other Options** (to apply on Item Line)
 - Change Qty. (directly by clicking and re-typing value in Item Qty.)
 - Update OHP (on selected item(s) and using OHP button provided) – use/add template
 - Estimate Overheads (on estimate using Overheads button provided) – use/add template
 - Delete Selected Item (can also use Delete button)
 - Insert Header Row (Ctrl+H)
 - (iii) **Sub-Menu Options** (for general use)
 - **File:** *Save-As* (new name), *Merge* (current one with other estimate), *Compare Estimates* (current one with other estimate) – refer section below.
 - **Edit:** Find Next (F3), Sort (by Sr. No. or by URC) [or alternately change/type Sr. No. and *Click* below row to select option box to change Sr.No.], Remove Selected Item (can also use *Delete* button for same)
 - **View:** Click *Check-box* to Show/Hide Fields (on Items-Estimate)
 - **Tools:** Simple tools like – Calculator, Note Pad and MS Excel provided for use

Similarly, user can create an Estimate 'With Components' for the selected project.

Estimate Break-up:

- 1) Use **Estimate Break-up** button to open/view Component-wise *Estimate Break-up* (showing for each component) - its unit, qty, rate (basic, justified), amount, city, updated date, etc.
- 2) Options provided here on Component(s) are –
 - **Rate Increment/Decrement by Percentage** (+/-) on selected component(s)
 - **Rate Selection from History** (using *Select Date* option)
 - **Change Justified Rate** (directly by typing value in 'Change Rate' field and Press *Apply* button to change Justified Rate, and Save)
 - **Add Tax** using *Tax* button and Template.
 - **Component Rate Break-up** (on Right-Click on component); opens window to
 - (i) View/Add/Delete **Manufacturer** and/or **Vendor**,
 - (ii) *Change Mfg. Rate* and *Vendor Discount%* to effect 'Rate After Discount'
 - (iii) *Apply Tax* to effect 'Rate after Tax/Charges'.

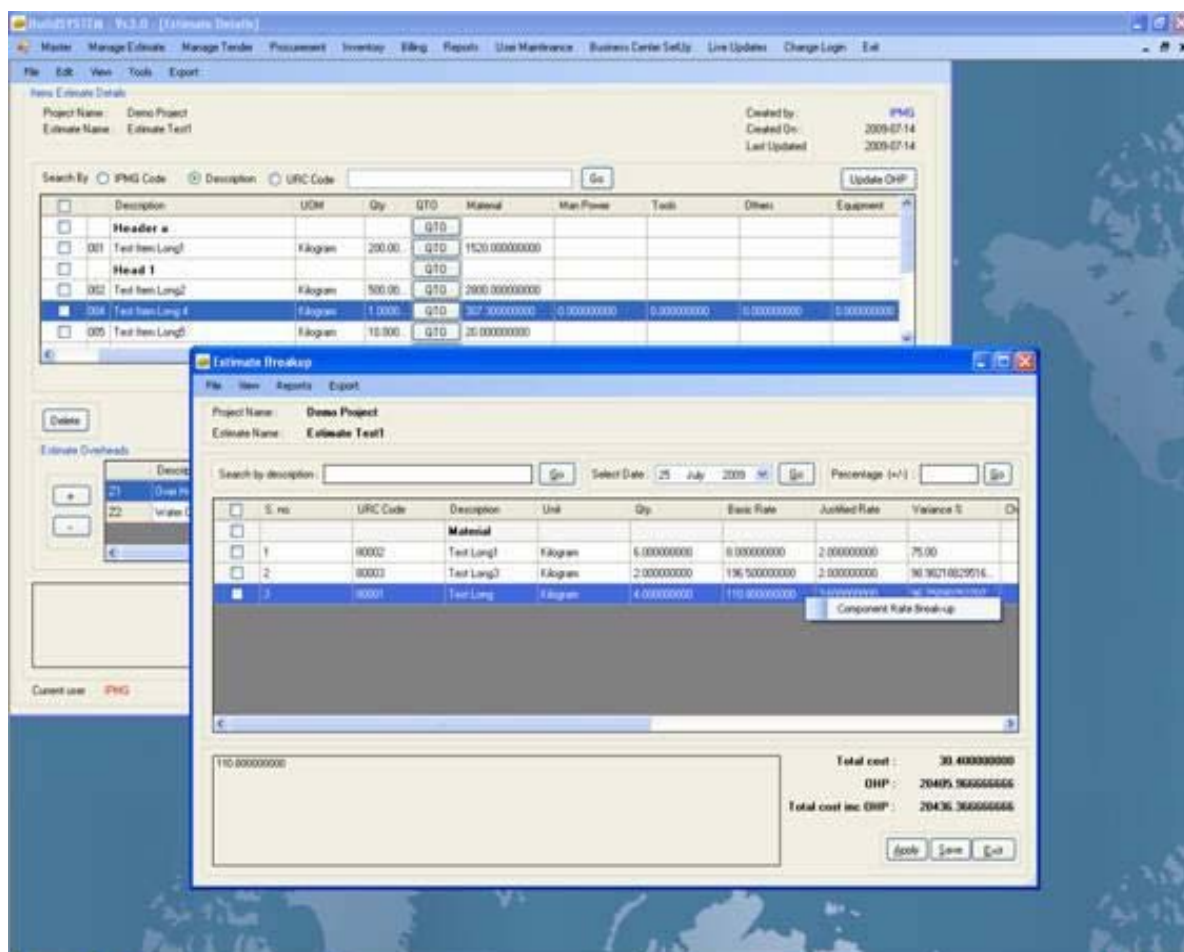


Fig: 2.2: Item - Estimate Break-up & Component Rate Break-up

Merge Estimate:

User can merge the Current Estimate (open) with other Selected Estimate, as follows:-

- 1) Click/Select option ***File, Merge Estimates*** from menu bar;
- 2) **Merge Estimate** window pops-up showing *Select Project(s)*, *Select Estimate(s)* and *Select Item(s)* boxes;
- 3) Click/Select the Project, Estimate and Item(s) to merge with the current estimate;
- 4) Press ***Merge*** button.

Compare Estimate:

User can select estimates (at-least two) to compare cost only for matching Items, as follows:-

- 1) Click/Select option ***File, Compare Estimate*** from menu bar;
- 2) ***Comparison of Estimate*** window pops-up showing *Select Project(s)* and *Select Estimate(s)*;
- 3) Click/Select the Project and Estimates (both) to compare, and Press ***Compare*** button;
- 4) ***Comparison of Estimate*** window appears showing matching items with costs, under each Selected Estimates;
- 5) Press ***Show Report*** button to get the comparison report.

Tendering

BuildSystem provides menu-option for Tendering, which facilitates the following activities:-

- 1) **Add/Edit/View Tender(s)** under Project (Estimate);
- 2) **Tender Creation** (bid requirements, eligibility condition, and selection of Items/Components for bidding);
- 3) **Tender Management** (financial bids comparison and contractor approval);
- 4) **Work Order Creation** (including Terms & Conditions)

Pre-Requisite: Project Estimate with *Items/Components* and cost details.

The following sections describes, in detail, as to how to create/open the above mentioned four activities.

(1) Add/Edit/View Tender(s) - under Project

To add or create a tender for the Project-Estimate, proceed as follows:

1. Click/Select option ***Tendering, New/Open*** from menu bar.
2. **List of Tenders** window opens. Select Project and Estimate for tendering action.

To Open/Create Tender and view/edit its details, proceed as follows:

- i) **Select Project** (from drop-down) on 'List of Tenders' window,
- ii) **Select Estimate** (from drop-down) on 'List of Tenders' window,
- iii) **Select/Click Option** for Tender - '*Estimate with Items*' or '*Estimate with Components*';
- iv) Click **Show Tender** to open 'Tender Details' - showing *Tender Name(s)* and its *Status*, else **Exit**.

To Edit/View Tender Details proceed as follows:

Open 'List of Tenders' window (as per steps in 'Open/Create Tender') and then -

- i) Select/Click **Tender Name** (existing) to View/Edit Tender;
- ii) Click Option **Edit/View** to open **Tender Creation (Edit)** window, showing Tender details (i.e. Bid Requirements, Eligibility Condition, and Selected Items/Components under Tender);
- iii) User can **Edit** the Tender Details (if status not locked) and **Add/Remove** Items; and **Save**;
- iv) Select/Click **Tender Eligibility Condition** button to open 'Tender Technical Bid' window showing bid requirements/eligibility under the tender;
- v) Click **Attachments for NIT** button - to attach word file/doc, if any created earlier;
- vi) Click **Save** for any edit done, else **Exit** , or Click **Manage Contractor** for Tender Management.

(2) Tender Creation

To Add/Create Tender 'With Items' proceed as follows:

Requirements: (i) *Item(s)* with *Code*, and its (ii) *Quantity*, (iii) *Unit*, and (iv) *Rate*.

Open **List of Tenders** window, showing ‘Tender Details’ (as per steps in Open/Create Tender) and proceed as follows:

Steps:

- i) Click Option **New** to add/create Tender;
- ii) **Tender Creation (New)** window opens, showing ‘Tender Creation’ and ‘Items’ boxes with fields (to fill for tender creation);
- iii) Fill Fields - *Name* (tender name), *Client Name & Address*, *Description* and *Tender Type* (drop-down) at-least, and **Save** to Add **Tender Name** in ‘List of Tenders’ window. Once saved user can then work on it;
- iv) From ‘List of Tenders’, Click/Select **Tender Name** (saved), and Press **Edit/View** button to work. Complete other details/fields in *Tender Form*, like Application Amount, EMD, Submission Address, Date(s) etc.;
- v) Next Press **Tender Eligibility Condition** button to open **Tender Technical Bid** and Fill each section/heads (EMD, Perf.. History, Income Tax, PL & Balance Sheet, Co. Info, etc.) and **Save**;
- vi) On completion of Edit/Eligibility, Press **Add** button to **Add Items** from the Estimate;
- vii) Check/Select the desired **Items** (to add/select for Tender) and then Press **Add to List** button;
- viii) **Tender Creation (Edit)** window opens, showing *Tender Details* with *Items* selected (i.e. Bid Requirements, Eligibility Condition, and Selected Items/Components under Tender);
- ix) Click **Attachments for NIT** button - to attach word file/doc, if any, created earlier;
- x) User can **Edit** Tender Details (if status not locked) and **Add/Remove** Items, Change **Status** (of Tender) and finally **Save**;
- xi) Click **Exit**, else Click **Manage Contractor** button for *Tender Management* (refer the section below).

User can use this **Tender** for *Advertisement* or *Invite Quotations* against it. On receipt of *Quotations* for tender Items/Components, the next step is to enter those quotes, compare and approve the supplier/vendor who fits best. To manage all these activities refer ‘Tender Management’ section below.

(3) Tender Management

- i) On **Tender Creation (Edit)** form, Check/Select the desired **Items** and then Press Click **Manage Contractor** button (for Tender Management);
- ii) **Tender Management** window opens (see figure... below) , showing boxes – *Project/Estimate Info* (with Tender Name), *Contractor Information* (with selected Items & Components, Quantity and Rate), and *Lowest Bid Details*;

BuildSystem-II - [Tender Management]

Admin Master Manage Estimate Tendering Procurement Inventory Reports Business Center SetUp Live Updates Exit

Project/Estimate Information:
 Project Name: **Project name** Tender Name: **S** Start Date: **Friday, September 03, 2010**
 Estimate Name: **Change Room** Location: **India,Delhi,Delhi**

Contractor Information:
 Add Remove Show Justify Import From XLS Export To XLS Transfer Quantity Exit Status: Locked

IPMG Code	Description	Quantity	Estimate Rate	Estimate Amount	SDR Code	Unit	f Rate	f N. Rate	f Amount	f Varian	f Remarks
09 63 13 10 20002	Brick on edge flooring with bricks of class designation 75 including cement slurry etc. complete in cement mortar with F.P.S. bricks:1:4 (1 cement : 4 coarse sand)	1.000000000	2746.783505494	2746.783505494	DSR (C)	sqm	2500.000000	2500.00000000	2500.00000000	-8.984454181	

	Estimate Total	f
Total :	2746.783505494	2500.000000000
Rounding off :		0
Net.Total :		2500.000000000
Rank :		1

Bidding:
 Remarks: Select Contractor Approve

Lowest Bid Details:
 SDR Name: **DSR (C)** Description: **Brick on edge flooring with bricks of class designation 75 including cement slurry etc. complete in cement mortar with F.P.S. bricks:1:4 (1 cement : 4 coarse sand)** Contractor Name: . Total: .
 URC Code: **11.1.1** Address: . Rounding Off: .
 IPMG Code: **09 63 13 10 20002** Status: . Contractor Work Order

Fig. 3.1: Tender Comparison Details

- iii) Press/Click **Add** (Contractor) button - to open **Add Contractor** window, and (1) **Select Contractor** (drop-down) and (2) **EMD Type** (drop-down), and then Click **Save EMD**; [If New Contractor – Add first its details in Contractor Master and then fetch it here]
- iv) On **Tender Management** window, to fill contractor/supplier's quoted rate against displayed Item(s), Press/Click **Export to XLS** button; Excel Sheet opens - Enter the quoted *Rate* and *Remarks* of Contractor for each Item (similarly open separate excel file and enter Rate/Remarks for other Contractor(s)), and then **Close/Save** these files;
- v) Press/Click **Import from XLS** button, and select/import the Excel File(s) (for each Contractor) where Rate & Remarks saved;
- vi) Against Item line(s) - For each Contractor(s) 5 New Columns get displayed in sequence [i.e. for first contractor its Quoted Rate, Negotiable Rate (N Rate), Negotiable Amount, Variation (from Estimated Rate), and Remarks appears, next set of values for next contractor and so on];
- vii) Initially the Negotiable Rate is filled with Q.Rate; User can **Change the N.Rate**, if any;
- viii) Check/Select the desired *Items* and View the *Comparison of Contractor's Rate/Amount*; The best fit Contractor Rate/Amount is highlighted in Green Colour for each Item (based on selection criteria fixed);
- ix) The **Lowest Bid Details** box, displays for each Item (on clicking the Item line in *Item Box*) the best-fit Contractor Name and its Rate/Amount; Click **Status** box to view Contractor Info;

- x) In **Bidding box**, Fill the **Remarks** and Select the **Contractor** (drop-down), and finally Click **Approve**;
- xi) Next Press/Click **Contractor Work Order** button for creating 'Work-Order', else Click **Exit**.

(4) Work Order Creation

Finally to create the Work Order, proceed as follows:

- i) From Tender Management, Press/Click **Contractor Work Order** button to open *Contractor Work-Order* (for Items) window - showing Project-Estimate information;
- ii) Select Contractor (drop-down); On selection displays *Contractor Name, Work-Order No., Date, its Status* and *List of Item(s) – with Qty., Rate, Amount and Total Amount*;
User Can Change Work-Order No. only, but not Others like, *Status, Items* and its *Qty.*;
- iii) Click **Terms & Conditions** (TC) to open **TC Form**; Select/Add TCs and Press **Select** button, else **Exit** ;
- iv) On completion, Press/Click **Save** button to generate the *Work-Order*; and **Exit**.

User can Print the Work-Order from 'Reports' section.

Reports

The Reports available on **BuildSystem** may be broadly categorized as:

- **Reports on Masters**, which can be accessed using Reports Section (14 Reports)
- **Reports on Estimate**, which are available on individual Estimate (12 Reports)

Each of these Reports in above sections is self-explanatory, and can be accessed easily.

- 1) Click/Select **Reports, Masters or Estimate** from menu and then select the desired **Report Type** to View/Print it.
- 2) **Report Screen** opens up. Select/Enter the desired **Parameters** and **Inputs** provided on the Report Screen (for the Report).
- 3) **Options/Buttons** available on Report Screen are – *Search, Preview, With/Without Code, Date, Footer* and *Show Report*.
- 4) On completion, Press **Show Report** to get the Report in desired format.

Sample Reports from each of the above Sections are shown below.

Master Reports

Component Rate BreakUp

printed on 06 September 2010

L4 Code03 05 13 30

L4 DescriptionCement

L5 Code03 05 13 30 00002

UnitTon

L5 DescriptionPortland Type, Grade 43, Ordinary,

Manufacturer

SNo	Manufacturer Code	Manufacturer Name	Location	Rate
1	BIR001	Birla Cement Ltd	New Delhi	4,800.00

Vendor

SNo	Manufacturer Code	Vendor Code	Vendor Name	Location	Discount	Rate
1	BIR001	RAJ003	Rajdhani Builders (Birla Cement)	Delhi	0%	4,800.00

Rate Before Tax4,800.00

Tax :

Tax	Description	+/-	Value / % / Formula	Amount
R4	Vat	+	(R0 * 0 %)	0.00

Rate After tax:4,800.00

Fig. 4.1: Component Rate Breakup

Components used in IOWs

printed on 06 September 2010

L4 Code : 03 05 13 30
L4 Description : Cement
L5 Code : 03 05 13 30 00002
Unit : Ton
L5 Description : Portland Type, Grade 43, Ordinary,
Manufacturer name : Birla Cement Ltd
Vendor name : Rajdhani Builders (Birla Cement)
Vendor rate : 4,800.0000

Remarks :

City : Delhi
Date : 4/1/2009 12:00:00 AM

S.No.	Item Code	Description	Unit	Quantity	Amount
1	08 12 19 13 10005	Providing and fixing MS frames for doors, windows and ventilators with Tee/angle/fabricated-sections, joints mitred and welded with 15 x 3 mm lugs 100 mm long embedded in cement concrete blocks 150 x 100 x 100 mm 1:3:6 with coarse sand or with wooden plugs and screws or rawls plugs and screws/with fixing clips/with bolts and nuts as required including fixing of butt hinges and screws and applying three coats of synthetic enamel paint over a primer coat of zinc chromate on duly prepared surfaces, complete.	kg	0.0001	0.4800
2	08 12 19 13 10010	Providing and fixing pressed steel door frames, manufactured from commercial mild steel sheet of 1.25 mm thickness, including hinges jamb, lock jamb, bead, and required threshold of mild steel flat of section 30 x 3 mm/8 mm round or square bar welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 25 mm thick with mortar guards, lock strike - plate and shock absorbers and applying three coats of synthetic enamel paint over a primer coat of zinc chromate on duly prepared surfaces i/c filling hollows of the frame with CC 1:3:6, complete i, Profile A	m	0.0012	5.7600
3	08 12 19 13 10015	Providing and fixing pressed steel door frames, manufactured from commercial mild steel sheet of 1.25 mm thickness, including hinges jamb, lock jamb, bead, and required threshold of mild steel flat of section 30 x 3 mm/8 mm round or square bar welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 25 mm thick with mortar guards, lock strike - plate and shock absorbers and applying three coats of synthetic enamel paint over a primer coat of zinc chromate on duly prepared surfaces i/c filling hollows of the frame with CC 1:3:6, complete i, Profile B	m	0.0015	7.2000
4	08 12 19 13 10020	Providing and fixing pressed steel door frames, manufactured from commercial mild steel sheet of 1.25 mm thickness, including hinges jamb, lock jamb, bead, and required threshold of mild steel flat of section 30 x 3 mm/8 mm round or square bar welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 25 mm thick with mortar guards, lock strike - plate and shock absorbers and applying three coats of synthetic enamel paint over a primer coat of zinc chromate on duly prepared surfaces i/c filling hollows of the frame with CC 1:3:6, complete i, Profile C	m	0.0019	9.1200
5	08 09 21 10 10025	Providing and fixing MS glazed doors, windows and ventilators of standard heavy rolled steel sections, conforming to IS 7452-1990, joints mitred and welded with 15 x 3 mm lugs, 100 mm long, embedded in cement concrete blocks 150 x 100 x 100 mm	sqm	0.0013	6.2400

Fig.4.2: Component Used in IOWs

Item BreakUp

printed on 07 September 2010

L4 Code 03 31 05 30
L4 Description Concrete, Field Mix
Item Code 03 31 05 30 10005
Unit 1.00 cum
Item Providing and laying cement concrete with coarse sand and graded stone aggregate, 40 mm nominal size in foundations, footings and under floors including side forms curing etc., complete, of nominal mix : 1:1.5:10

Row Code	Component Code	Description	Unit	Qty	Rate	Amount	Updated Date	URC Code	Source
1	M5	03 15 05 42 10005	Material 100 mm channel shoulder-2500 mm long	Each	0.01	1,269.19	14.34	05/31/2010	0315054210005 IFM31
2	M12	04 05 13 95 10010	Coarse Sand (Zone III)	cum	0.47	1,038.45	488.07	05/30/2010	0405139510010 IFM31
3	M5	03 15 05 41 10005	Corner Angle 45 x 45 x 5 mm - 1500 mm long	Each	0.01	302.24	1.72	05/31/2010	0315054110005 IFM31
4	M7	22 05 29 45 10025	Double Clip (bridge clip)	Each	0.02	81.81	1.85	05/30/2010	2205294510025 IFM31
5	M10	05 05 23 10 10030	M6 Bolts and Nuts upto 300 mm in length	Quintal	0.00	4,135.95	0.83	05/29/2010	0505231010030 IFM31
6	M9	22 11 13 42 10005	MS Tube heavy class 40 mm dia	m	0.02	252.25	3.86	05/30/2010	2211134210005 IFM31
7	M1	03 05 13 30 00002	Portland Type,Grade 43,Ordinary,	Ton	0.13	4,800.00	624.00	04/01/2009	0305133000002 IFM3
8	M11	01 51 21 20 10005	Shuttering oil	L	0.44	42.42	18.83	05/30/2010	0151212010005 IFM31
9	M8	22 05 29 45 10030	Single Clip	Each	0.01	48.86	0.35	05/30/2010	2205294510030 IFM31
10	M4	07 42 13 35 10020	Steel Form Panel 1250 x 500 mm	Each	0.02	1,374.86	31.07	05/30/2010	0742133510020 IFM31
11	M8	03 05 13 28 10020	Stone Aggregate 20 mm nominal size	cum	0.24	1,038.45	249.23	05/29/2010	0305132810020 IFM31
12	M2	03 05 13 28 10030	Stone Aggregate 40 mm nominal size	cum	0.65	1,019.55	662.71	05/29/2010	0305132810030 IFM31
Total Amount : Equipment						2,097.07			
13	E1	01 59 60 10 10005	Concrete Mixer 0.14	Day	0.07	1,000.00	69.70	06/01/2010	0168601010005 IFM31
Total Amount : Labour						69.70			
14	L1	01 36 61 01 10005	Common Labour	Day	1.91	160.00	294.82	06/01/2010	0136610110005 IFM31
15	L3	01 36 61 28 10005	Fitter Grade - I	Day	0.10	230.00	19.92	01/01/2009	0136611910015 IFM31
16	L2	01 36 61 05 10010	Mason Grade - II	Day	0.10	190.00	18.92	06/01/2010	0136610510010 IFM31
17	L4	01 36 61 03 10005	Semi - Skilled Labour	Day	0.70	180.00	125.50	06/04/2010	0136610310005 IFM31
Total Amount :						459.16			
Total Cost(TC) :						2,625.92			

OHP Details

SNo	Row Code	Description	Formula	Operator	Amount
1	z1	Overheads & Profits	tc*15/100	+	393.89
OHP Amount :					393.89
Net Rate :					3,019.81
Cost Of 1 cum					3,019.81

Fig. 4.3: Item Breakup

Manufacturer's Vendor-wise Component

Manufacturer Name Jaquar & Company Ltd.
Address 1 D-28, SMA Co-operative Indl Estate, G.T. Karnal Road
Phone No. 29213617
E-Mail Id mlsharma.ipmg@gmail.com

Vendor Details :

S.No.	Vendor Name	Address	Phone	Mobile No.	Email ID
1	M. L. Sharma & Co.	M-48, Greater Kailash Part - II	29213617		mlsharma.ipmg@gmail.com

Component Details :

S.No.	LS Code	URC Code	Long Description	Short Description
1	22 41 39 54 00037	2241395400037	2 Way,Chrome Plated,15 mm,	2 Way,Chrome Plated,15 mm,
2	22 41 39 54 00060	2241395400060	2 Way,with Wall Flange,Antique Bronze,15 mm,	2 Way,with Wall Flange,Antique Bronze,15 mm,
3	22 41 39 54 00061	2241395400061	2 Way,with Wall Flange,Antique Copper,15 mm,	2 Way,with Wall Flange,Antique Copper,15 mm,
4	22 41 39 54 00038	2241395400038	2 Way,with Wall Flange,Antique Ivory, 15 mm,	2 Way,with Wall Flange,Antique Ivory, 15 mm,
5	22 41 39 54 00039	2241395400039	2 Way,with Wall Flange,Antique Nickel Gold,15 mm,	2 Way,with Wall Flange,Antique Nickel Gold,15 mm,
6	22 41 39 54 00052	2241395400052	2 Way,with Wall Flange,Black Chrome, 15 mm,	2 Way,with Wall Flange,Black Chrome,15 mm,
7	22 41 39 54 00053	2241395400053	2 Way,with Wall Flange,Black Gold,15 mm,	2 Way,with Wall Flange,Black Gold,15 mm,
8	22 41 39 54 00054	2241395400054	2 Way,with Wall Flange,Cherry Gold,15 mm,	2 Way,with Wall Flange,Cherry Gold,15 mm,
9	22 41 39 54 00055	2241395400055	2 Way,with Wall Flange,Chrome Gold,15 mm,	2 Way,with Wall Flange,Chrome Gold,15 mm,
10	22 41 39 54 00042	2241395400042	2 Way,with Wall Flange,Chrome Matt Chrome, 15 mm,	2 Way,with Wall Flange,Chrome Matt Chrome,15 mm,
11	22 41 39 54 00041	2241395400041	2 Way,with Wall Flange,Chrome Plated,15 mm,	2 Way,with Wall Flange,Chrome Plated,15 mm,
12	22 41 39 54 00043	2241395400043	2 Way,with Wall Flange,Full Antique Nickel,15 mm,	2 Way,with Wall Flange,Full Antique Nickel,15 mm,
13	22 41 39 54 00056	2241395400056	2 Way,with Wall Flange,Full Antique,15 mm,	2 Way,with Wall Flange,Full Antique,15 mm,
14	22 41 39 54 00044	2241395400044	2 Way,with Wall Flange,Full Cherry,15 mm,	2 Way,with Wall Flange,Full Cherry,15 mm,
15	22 41 39 54 00045	2241395400045	2 Way,with Wall Flange,Full Gold,15 mm,	2 Way,with Wall Flange,Full Gold,15 mm,
16	22 41 39 54 00046	2241395400046	2 Way,with Wall Flange,Full Silk Appeal,15 mm,	2 Way,with Wall Flange,Full Silk Appeal,15

Fig. 4.4: Manufacturer's Vendor-wise Component

ESTIMATE REPORTS

Estimate Cost For Item

Project Name Sample
Estimate Name Change Room

Sno	Code	Description	Unit	Quantity	Rate	Amount	Remarks
Brick Work							
1	0421134610005	Providing brick work with bricks of class 7.5, joints finished flush/raked to 12 mm depth, cured including necessary scaffolding complete in cement mortar 1:6 with coarse sand, in ; Foundations and plinths (1.5 m below and upto 1.2 m above GL)	cum	1.0000	2,638.67	2,638.67	
SubTotal :						2,638.67	
Electrical Work							
2	11.1.1	Brick on edge flooring with bricks of class designation 7.5 including cement slurry etc. complete in cement mortar with F.P.S. bricks: 1:4 (1 cement : 4 coarse sand)	sqm	1.0000	326.02	326.02	
3	2605901310005	Point wiring for light point / fan point / exhaust fan point / call bell point with 1.5 sqmm, PVC insulated, aluminium conductor cable, conforming to IS:694, in surface / recessed conduit, conforming to IS:9537 ; Medium duty PVC conduit, Upto 3 m	Point	1.0000	173.65	173.65	
SubTotal :						499.67	
Centering Shuttering							
4	5.9.1	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete.	sqm	1.0000	119.26	119.26	
5	13.69.1	Polishing on wood work with ready mixed wax polish of approved brand and manufacture ; New work	sqm	1.0000	35.80	35.80	
SubTotal :						155.06	
Total :						3,293.40	

Fig. 4.5: Estimate Cost

Summary Estimate Cost

Project Name Sample
Estimate Name Change Room

Sno	Description	Amount
1	Brick Work	2,638.67
2	Electrical Work	499.67
3	Centering Shuttering	155.06
Total:		3,293.40

Fig. 4.6: Summary Estimate Cost

Estimate Breakup for Component Types With Tax

Project Name Sample

Estimate Name Change Room

Sno	Material	Description	Unit	Quantity	Rate at Shop	Tax	Rate at Site	Amount
1	Carriage of Bricks		1000 Nos.	0.0565	141.88	0.00	141.88	8.02
2	Carriage of Coarse Sand		cum	0.0464	53.21	0.00	53.21	2.47
3	Carriage of Cement		Ton	0.0185	47.29	0.00	47.29	0.87
4	Portland Type, Grade 43, Ordinary,		Ton	0.0630	4,800.00	0.00	4,800.00	302.40
5	Portland Cement		Ton	0.0185	4,500.00	0.00	4,500.00	83.21
6	Corner angle 45x45x5 mm 1.50 m long		Each	0.0079	280.00	0.00	280.00	2.20
7	100 mm channel shoulder 2.5 m long		Each	0.0157	1,000.00	0.00	1,000.00	15.74
8	Coarse Sand (Zone III)		cum	0.2680	989.00	0.00	1,038.45	278.30
9	Coarse sand (zone III)		cum	0.0464	600.00	0.00	600.00	27.86
10	FPS Bricks class 75		1000 Nos.	0.4940	2,300.00	0.00	2,587.50	1,278.23
11	F.P.S. Bricks class designation 75		1000 Nos.	0.0565	1,900.00	0.00	1,900.00	107.35
12	Wall form panel 1250x500 mm		Each	0.0315	980.00	0.00	980.00	30.85
13	Wax Polish (ready made)		kg	0.0500	150.00	0.00	150.00	7.50
14	Double dip (bridge dip)		Each	0.0315	75.00	0.00	75.00	2.36
15	Single dip		Each	0.0157	60.00	0.00	60.00	0.94
16	M.S. tube 40 mm dia		Each	0.0213	225.00	0.00	225.00	4.78
17	PVC Bend, Medium Duty, 20 mm dia		Each	1.0000	4.79	0.00	5.63	5.63
18	PVC Couplers, 20 mm dia		Each	0.0000	1.72	0.00	1.82	0.00
19	PVC Insulated Aluminium Conductor, Single Core Cable (IS:694) 1.5 sq mm		m	5.5000	1.60	0.00	1.97	10.82
20	Galvanised steel Stapples/Saddles/Screws for Conduit, of dia 20 mm		Each	4.0000	1.50	0.00	1.72	6.89
21	PVC Conduit, Medium Duty (IS:9537-Part 3), 20 mm dia		m	1.5000	9.25	0.00	10.87	16.30
22	PVC Junction box, one way, 20 mm dia		Each	1.0000	8.73	0.00	9.26	9.26
23	5/6 amp 2 way Bakelite Connector		Each	1.0000	20.00	0.00	22.73	22.73
	Total:							2,224.72
	Equipment							
1	Concrete Mixer 0.14		Day	0.0125	1,000.00	0.00	1,000.00	12.50
	Total:							12.50
	Labour							
1	Common Labour		Day	1.8997	160.00	0.00	160.00	303.95
2	Bhishti		Day	0.0300	138.45	0.00	138.45	4.16
3	Beldar		Day	0.1964	135.25	0.00	135.25	26.57
4	Coolie		Day	0.2420	135.25	0.00	135.25	32.73
5	Semi - Skilled Labour		Day	0.1563	180.00	0.00	180.00	28.13
6	Mason Grade - II		Day	0.7741	190.00	0.00	190.00	147.08
7	Mason (brick layer) 2nd class		Day	0.1080	141.60	0.00	141.60	15.29
8	Wireman		Day	0.1100	200.00	0.00	200.00	22.00
9	Painter		Day	0.0800	141.60	0.00	141.60	11.33
10	Fitter (grade 1)		Day	0.0694	151.50	0.00	151.50	10.52
	Total:							601.76
	Grand Total:							2,838.98
	OHP							433.72
	Total Incl OHP							3,272.70

Fig. 4.7: Estimate Breakup

Estimate Justification Statement

Project Name Sample
Estimate Name Change Room

Sno	Description	Unit	Qty	Basic		Justified	
				Rate	Amount	Rate	Amount
Brick Work							
1	Providing brick work with bricks of class 75, joints finished flush/raked to 12 mm depth, cured including necessary scaffolding complete in cement mortar 1:6 with coarse sand, in ; Foundations and plinths (1.5 m below and upto 1.2 m above G.L)	cum	1.0000	2,638.67	2,638.67	2,638.67	2,638.67
Sub Total					2,638.67	2,638.67	
Electrical Work							
2	Brick on edge flooring with bricks of class designation 75 including cement slurry etc. complete in cement mortar with F.P.S. bricks: 1:4 (1 cement : 4 coarse sand)	sqm	1.0000	326.00	326.00	371.83	371.83
3	Point wiring for light point / fan point / exhaust fan point / call bell point with 1.5 sqmm, PVC insulated, aluminium conductor cable, conforming to IS: 694, in surface / recessed conduit, conforming to IS: 9537 ;, Medium duty PVC conduit, Upto 3m	Point	1.0000	173.65	173.65	173.65	173.65
Sub Total					499.65	545.48	
Centering Shuttering							
4	Centering and shuttering including strutting, propping etc. and removal of form for : Foundations, footings, bases of columns, etc. for mass concrete.	sqm	1.0000	119.26	119.26	138.83	138.83
5	Polishing on wood work with ready mixed wax polish of approved brand and manufacture ;, New work	sqm	1.0000	35.80	35.80	41.50	41.50
Sub Total					155.06	180.32	
Total					3,293.38	3,364.47	

Fig. 4.8: Estimate justified Statement

Summary for Justified Estimate

Project Name Sample

Estimate Name Change Room

Sno	Description	Basic Amount	Justified Amount
1	Brick Work	2,638.67	2,638.67
2	Electrical Work	499.67	545.48
3	Centering Shuttering	155.06	180.32
Total:		3,293.40	3,364.47

Fig. 4.9: Summary Justified Statement

Options available on Report menu bar (as icons) are – **Print, Print Setup, Refresh, and Export.**

Business Center Setup

Business Center is a Cost-Center for Project(s). *BuildSystem* has provision to assign group of projects in the *Business Center setup*. To create Business Center proceed as follows:

- 1) Click/Select option ***Business Center Setup, Project & Estimate Center*** from menu bar.
- 2) **Business Center Setup** window opens, showing existing *Business Center(s)* with projects assigned to it and *Date of Creation*.
- 3) **Options** available on *Business Center Setup* - **Add, Edit, Delete, Assign Projects**, and **Exit**.
- 4) Create a *Business Center (Name)* and then *Assign Projects* to it.

User can monitor the Projects and Estimates under each *Business Center Setup*.

Live Update on Database

BuildSystem has provision to update its databases live from IPMG Website, using the menu option **Live Updates**. To update databases from IPMG website, proceed as follows:

- 1) Click/Select option **Live Updates, Manage Wish List** from menu bar.
- 2) **Manage Wish List** window opens.
- 3) **Connect** to the website, and then Create *Wish List* specifying the required databases for *Items/Components* (L4 and L5). **Save** the Attachment.
- 4) Click/Press **Download** to download the databases from IPMG Website on user's system.

User can use the updated database for all the applications on **BuildSystem**. For any assistance on this the user can contact IPMG.

Support

IPMG provides phone assistance to registered users. Support specialists are available to answer questions relating to ***BuildSystem*** and how it performs with certified compatible hardware and software.

Before calling Technical Support, try reviewing the applicable Help Files provided on DVD-ROM and also the User Manual. If any error messages have occurred, write them down exactly.

To help, provide quick and accurate assistance. Please position yourself at a phone near your computer. This makes your hardware and software information immediately available. In addition, you need to provide your computer's make and model, the amount of RAM, and your copy of ***BuildSystem*** Serial Number.

IPMG Technical Support Phone Number: 011-46581560-63

CAUTION: - The DVD-ROM is a read-only compact disk. Thus, there is no means to back up this disk. Ensure proper care of your DVD-ROM disk to avoid inadvertent loss of information.

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