

LEARN SUPER RATE ANALYSIS

Rate Analysis Of 1299 Nos. Of Civil Engineering Items

By :

Y.A. Agboatwala &

Fatima.Y. Agboatwala

1802, Jamuna Amrut,

219, Patel Estate, S.V.Road,

Jogeshwari(W), Mumbai - 400102

Phone: 09820792254 , (022) 26783525

Url: www.supercivilcd.com,






<http://www.agboatwala.com>

Email : yaa@supercivilcd.com,

yaa@agboatwala.com,

supercivilcd@gmail.com

LEARN SUPER RATE ANALYSIS

-  [Creation of File](#)
-  [Changing of Existing File](#)
-  [Perform Rate Analysis](#)
-  [Copy Existing File](#)
-  [Delete Existing File](#)

► Program Limitations :

Labour productivity not only varies with the place, but also depends up on:

Application of Machinery to help labour.

Condition of Machinery.

Degree of training.

Availability of Labour.

Attitude of Unions regarding Productivity.

Attitude of management towards Labour.

Following of Local practice.

Daily Wage or Contract Labour.

Male or Female, Heavy Or Light Work & General Physique / Health of the Labour.

Considering the above variables the assumed labour productivity will be always approximate.

The machinery / Plant depreciated costs will have a major bearing on arriving unit cost for Equipments. Similarly inducting latest type of Plant or Equipment in the project will also affect rate analysis.

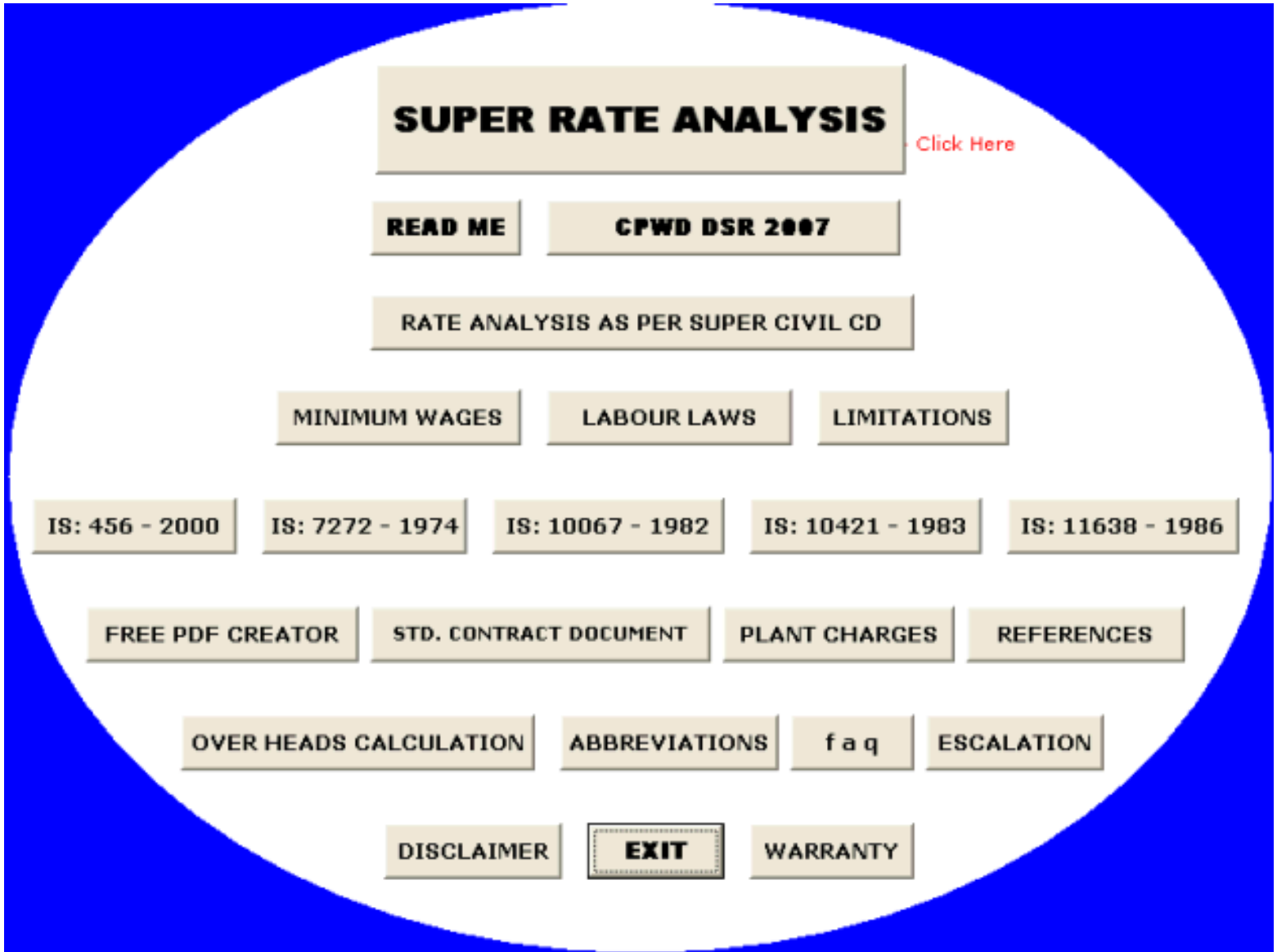
Material Coefficients are affected by on site quality & quantity control.

Overhead costs / Administrative Costs are affected by availability of trained Engineers in that area, Managerial competency & ability, including project planning, execution, labour & cost control.

The Rate Analysis performed using this software shall be judged by the contractor in light of above factors, before finalizing the Road Tender.

CREATION OF FILE

▶ When a user opens the SRA software, following screen is displayed.

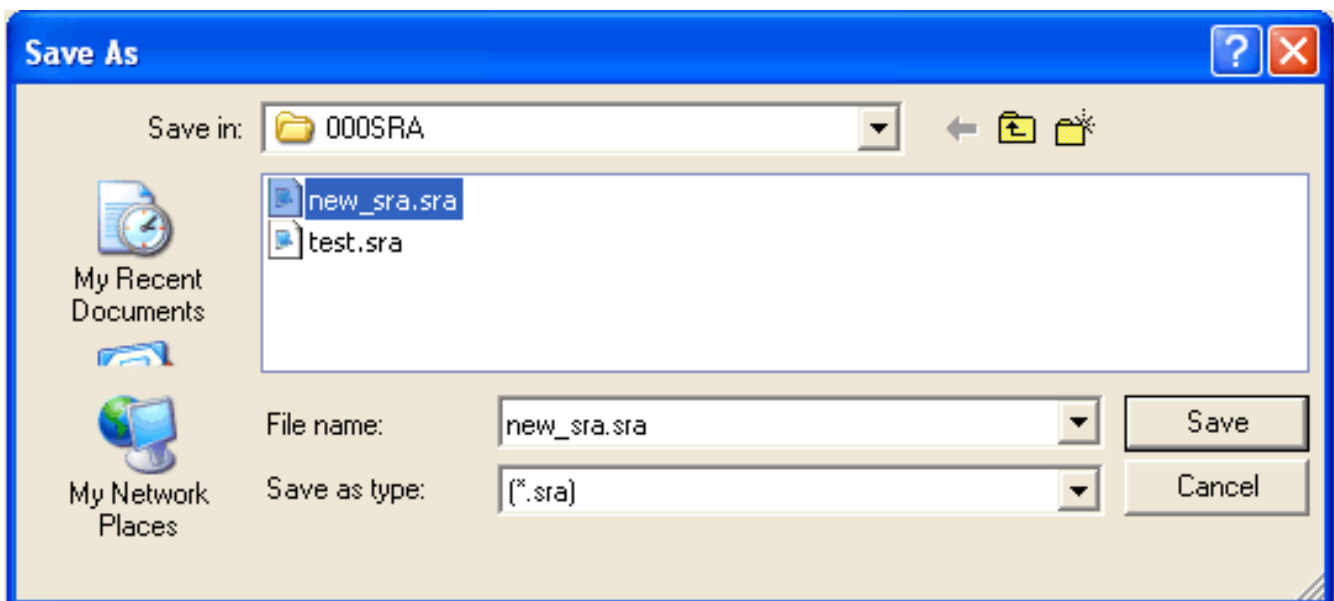
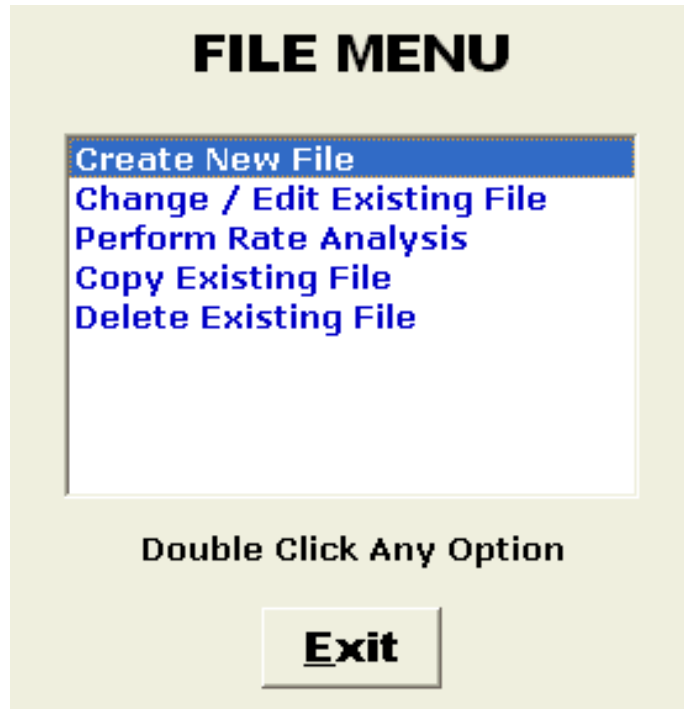


▶ Click on the top central button as shown below, which says click here.



- ▶ when the above button is clicked, following File Menu will be displayed.
- ▶ Create a new directory, in which you would like to save your rate analysis files. I have created a new directory (Folder) called as " 000SRA ".

When you Double Click the " Create New File " option, a new window will appear. Give a file name to your project & save in the desired directory. I have given the file name as " New_SRA " & have saved it in " 000SRA " folder as shown below.



- ▶ When your file is saved, a new window will appear, asking for following details. A user can fill in the required parameters. If you do not want to Enter any one parameter, just leave it blank or enter 0.0.

Note : If you change your mind later, you can always go to " Change Existing File " option and fill these parameters. I have entered the following info.

- Project O. H. = 10 %.
- Taxes = 5 %.
- Profit Margin = 10 %.
- Water Cost = 3 %.
- Electricity Cost = 10 %.

After completing entries, press " OK " button.

Project File : Add Project Details

File Name : D:\000SRA\new_sra.sra Date : 11/11/10

Project Over Head in %

Taxes in %

Profit Margin in %

Water Cost in %

Electricity Cost in %

- ▶ Now a new screen will appear, declaring " Next Screen is for Material Rates ". If you press the " OK " button, next screen will appear. If you click the " Cancel " button, program will return to its original screen.

DISPLAY/EDIT MATERIAL RATES

Item_ID	Item Description	Unit	Rate
M0810	Imported Moorum	M3	310
M0222	6 MM Non AC Corrugated Sheets	M2	205
M0236	6 MM Non AC Plain Sheets	M2	180
M0992	Galvanized Steel Plain Sheets	Kg	40
M3050	Galvanized Steel Corrugated Sheets	Kg	36.5
M1157	Stone for Masory / Pitching	M3	332
M2901	80 ~ 100 MM Stone Aggregate	M3	575
M0291	63 MM & Down Stone Aggregate	M3	625
M0293	40 MM & Down Stone Aggregate	M3	625
M0295	12.5 ~ 25 MM Stone Aggregate	M3	700
M1179	2.36 ~ 12.5 MM Stone Aggregate	M3	675
M0298	6 MM Stone Aggregate	M3	750
M1177	Stone Grit 6 MM down or Pea Gravel	M3	717
M2903	150 Microns ~ 4.75 MM Stone Chippings	M3	800
M1159	Stone Dust	M3	700
M0784	Marble Dust / Powder	M3	800
M0367	Portland Cement	Bag	300
M1980	Fly ash conforming to IS: 3812 at Plant	M3	6
M0368	White Cement	Bag	550
M0982	Coarse Sand	M3	600
M0983	Fine Sand	M3	320
M7318	Plasticizer / Super Plasticizer	Kg	30
M1213	Water Proofing Compound / Admixture	Kg	20
M1005	ReinforcingBars	Ton	40000
M1007	Structural Steel	Ton	40000

EXIT

UPDATE

PRINT

Edit Material Rates : Imported Moorum

Material Rate :

- ▶ All the materials used in the program are listed in the above window. A user can select & enter the material rate for the required item in the small window at the bottom of screen. Automatically the rate will appear above in the listing window. If you do not want to Enter any one Rate, just leave it blank.
- ▶ Only 56 most important Material Items are Included in the Database. Any change in item rate will automatically be reflected in individual rate analysis program, containing that item.
- ▶ Rest of the items shall be modified by user at individual item rate analysis window, which cannot be saved as they are not part of database.

Note : If you change your mind later, you can always go to " Change Existing File " option and fill these Rates. Once the rates are entered in this window, all the respective rate analysis items will have these rates. Moreover if you have forgotten to enter rate of any particular item, then that particular item rate will be shown as Blank in the rate analysis.

Press " Update " & then " Exit " Button to proceed further.

► Now a new screen will appear, declaring " Next Screen is for Labour Rates ". If you press the " OK " button, next screen will appear. If you click the " Cancel " button, program will return to its original screen.

DISPLAY/EDIT LABOUR RATES

Item_ID	Item Description	Unit	Rate
L100	Helper - Bandhani	Day	250
L101	Waterman	Day	250
L102	Blacksmith/Welder/Plumber/Electrician/Rigger	Day	350
L103	Plumber	Day	350
L111	Carpenter	Day	350
L113	Watchman/Security Guard	Day	250
L114	Skilled Labour	Day	350
L115	Labour - Male	Day	250
L118	Labour - Female	Day	200
L116	Fitter	Day	350
L119	Glazier	Day	350
L123	Mason	Day	350
L126	Mason - Ornamental stone work	Day	400
L127	Driver	Day	250
L128	Helper	Day	250
L130	Foreman	Day	400
L131	Painter	Day	250
L132	Rock Excavator	Day	250
L133	Rock Breaker	Day	250
L134	Rock Hole Driller	Day	250
L135	Stone Chiseller	Day	250
L138	Sprayer - bitumen, tar etc.	Day	250
L139	Skilled Labour for Rubbing	Day	250
L141	White Washer	Day	250
L157	Operator (Pile/ Special machine)	Day	350

EXIT

UPDATE

PRINT

Edit Labour Rates : Helper - Bandhani

Labour Rate :

► All possible Categories of Labour (29 Items) are used in the program are listed in the above window. A user can select & enter the labour rate for the required item in the small window at the bottom of screen. Automatically the rate will appear above in the listing window. If user do not want to Enter any one Rate, just leave it blank.

Note : If a user changes his mind later, he can always go to " Change Existing File " option and fill these Rates. Once the rates are entered in this window, all the respective rate analysis items will have these rates. Moreover if you have forgotten to enter rate of any particular Labour, then that particular Labour rate will be shown as Blank in the rate analysis.

Press " Update " & then " Exit " Button to proceed further.

- ▶ Now a new screen will appear, declaring " Next Screen is for Machinery Rates ". If you press the " OK " button, next screen will appear. If you click the " Cancel " button, program will return to its original screen.

DISPLAY/EDIT MACHINERY RATES

Item_ID	Item Description	Unit	Rate
E01	Coaltar Boiler 900 to 1400 litres	Day	595
E02	Concrete Mixer 0.14 M3 Cap.	Day	400
E03	Diesel Road Roller - 8 to 10 tonne	Day	1000
E04	Production cost of concrete by batch mix plant	M3	200
E05	Diesel Truck - 9 tonne	Day	1008
E06	Spraying machine + electric charges	Day	173
E07	Coal tar Sprayer	Day	250
E08	Asphalt Plant + accessories capacity 30/45 tonne	Day	7050
E09	Concrete Pumping including pump + piping work + accessories	M3	80
E10	Derrick monkey rope	Day	500
E11	Pump set of capacity 4000 litres/hour	Day	300
E12	Vibrator (Needle type 40mm)	Day	200
E13	Machine for rubbing of floors	Day	200
E14	Front end loader	Day	6000
E16	Mastic Cooker	Day	515
E17	Tipper	Day	1030
E18	Loader	Day	800
E19	Hand Grinder For mirror polish	Day	100
E20	Hydraulic Excavator (3D) with driver and fuel	Day	6000
E21	Pin vibrator	Day	288
E22	Surface Vibrator	Day	330
E24	Hydraulic piling rig + power unit + accessories + site shifting	Day	28000
E25	Light crane	Day	2000
E26	Backhoe loader	Day	4000

Note:- Above hire charges include cost of services of operating staff and supply of lubricating oil.

EXIT

UPDATE

PRINT

Edit Equipment Rates : Coaltar Boiler 900 to 1400 litres

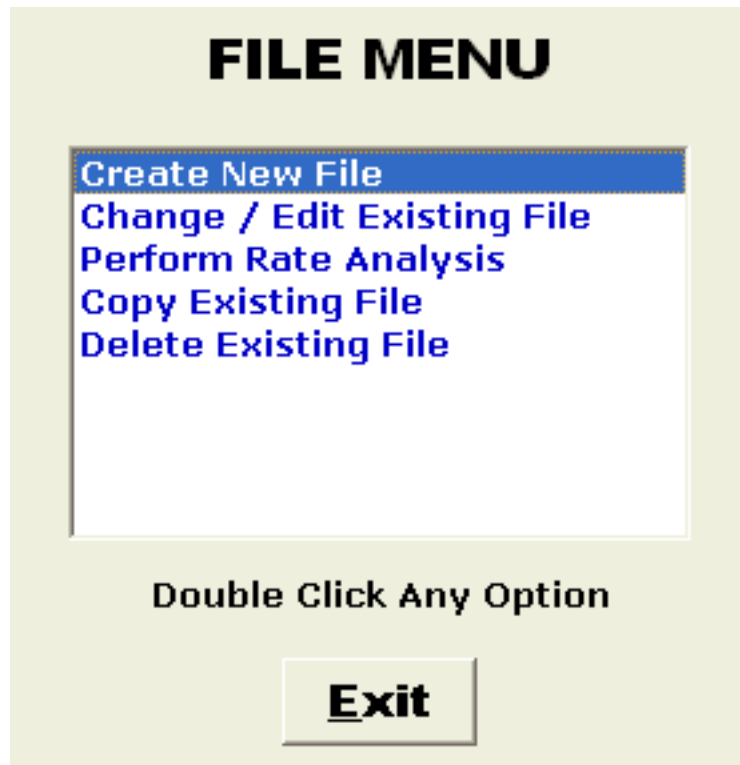
Machinery Rate :

- ▶ All the Possible Categories (48 Items) of Machinery used in the program are listed in the above window. A user can select & enter the Machinery / Equipment / Plant rate for the required item in the small window at the bottom of screen. Automatically the rate will appear above in the listing window. Any change in item rate will automatically be reflected in individual rate analysis program, containing that item. If you do not want to Enter any one Rate, just leave it blank.

Note : If you change your mind later, you can always go to " Change Existing File " option and fill these Rates. Once the rates are entered in this window, all the respective rate analysis items will have these rates. Moreover if you have forgotten to enter rate of any particular Equipment, then that particular Equipment rate will be shown as Blank in the rate analysis. Press " Update " & then " Exit " Button to proceed further.

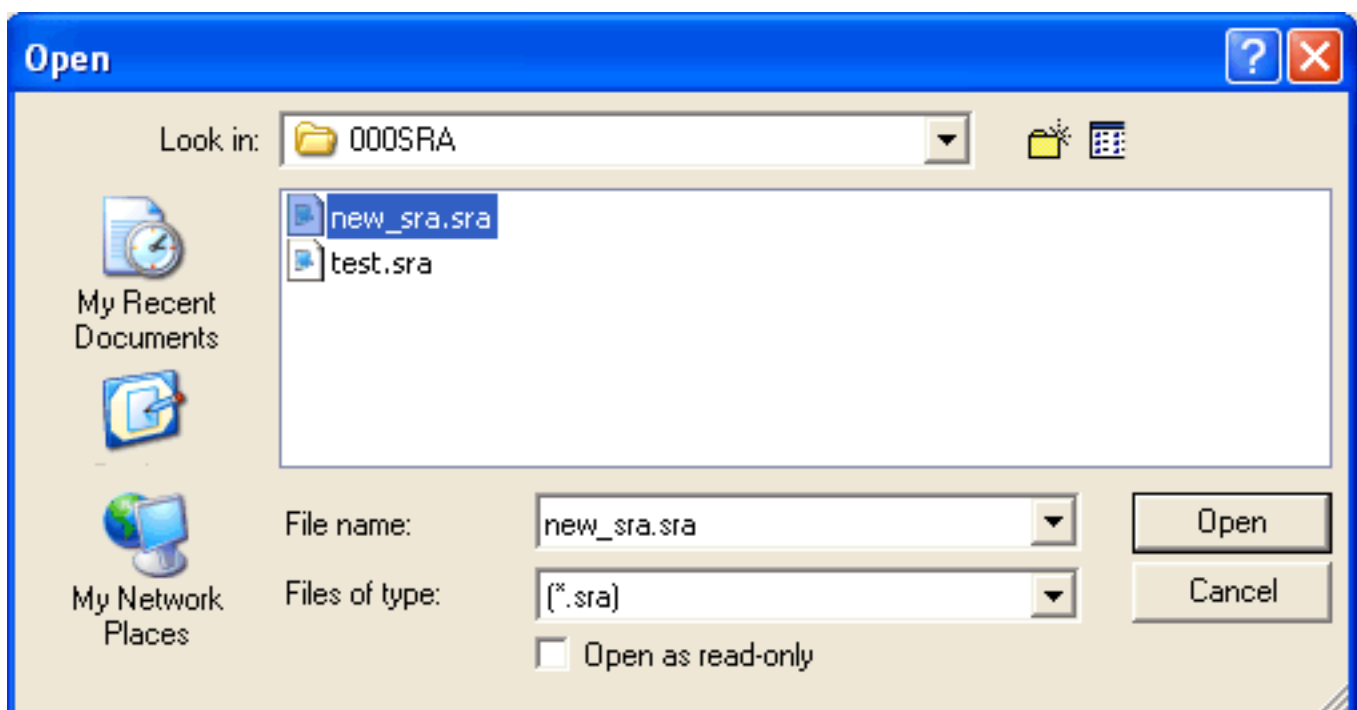
▶ Press " Update " & then " Exit " Button to return to original screen, as File Creation is over.

LEARN SUPER RATE ANALYSIS



CHANGE / EDIT OF EXISTING FILE

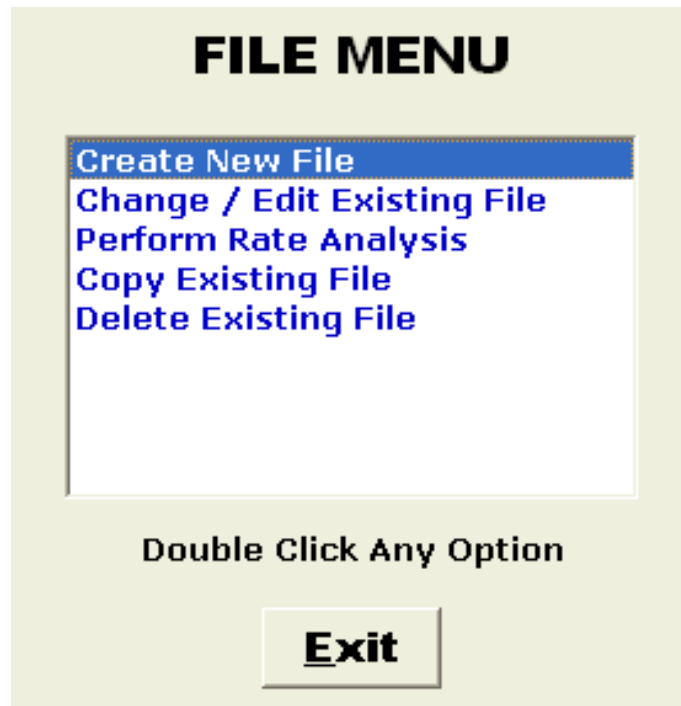
- ▶ When a user Double Clicks the Change / Edit Options, follow window opens.



- ▶ Select the file name in the desired directory which you want to change. I have selected the file name as " new_sra " which was earlier saved in " 000SRA " folder.
- ▶ When your file is opened, a new window will appear, asking for Editing of project details.

From now on the procedure is same as explained in " Create New File " option.

LEARN SUPER RATE ANALYSIS



PERFORM RATE ANALYSIS

- ▶ When you click the " Perform Rate Analysis " option, a new window will appear. Select the file name in the desired directory which you want for Rate Analysis. I have selected the file name as " sra_new " which was earlier saved in " 000SRA " folder. Follow window is displayed.

Section A: Preparatory Work

Section B: Earth Work / Anti Termite Treatment

Section C: Mortars

Section D: Plain Cement Concrete

Section E: Reinforced cement Concrete

Section F: Brick Masonry Work

Section G: Stone Work

Section H: Marble Work

Section I: Wood & PVC Work

Section J: Door & Window Hardware

Section K: Structural Steel Work

Section L: Flooring and Skirting

Section M: Roofing/Terracing/Ceiling/RW Pipe

Section N: Finishing / Plastering / Pointing

Section P: Painting and Polishing

Section Q: Building Repairs

Section R: Dismantling & Demolishing

Section S: Miscellaneous & Aluminum Works

Section T: Road Work

Section U: Horticulture & Landscaping

Section V: Sanitary Installations

Section W: Water Supply

Section X: Drainage and Sewage

Section Y: Pile Work

Section Z: Water Proofing

Section AA: Bridge Works

Double Click Any Option

Exit

- ▶ When your file is opened, a new window will appear, displaying complete Rate Analysis Menu from Section A to AA.
Select the Section / Chapter you want Perform Rate Analysis.
I have selected Section " E: Reinforced Cement Concrete ". Double Click this option.
- ▶ Following Menu is displayed, listing complete items under Section E.
Now double click on any option to display its Rate Analysis.
I have selected and double clicked on
" E5 - RCC WALLS IN SUPER STRUCTURE 1 : 1.5 : 3 " Item.

SECTION E

E1 - RCC 1 : 1 : 2 UP TO PLINTH LEVEL
E2 - RCC 1 : 1.5 : 3 UP TO PLINTH LEVEL
E3 - RCC 1 : 2 : 4 UP TO PLINTH LEVEL
E4 - RCC WALLS IN SUPER STRUCTURE 1 : 1 : 2
E5 - RCC WALLS IN SUPER STRUCTURE 1 : 1.5 : 3
E6 - RCC WALLS IN SUPER STRUCTURE 1 : 2 : 4
E7 - RCC COLUMNS IN SUPER STRUCTURE 1 : 1 : 2
E8 - RCC COLUMNS IN SUPER STRUCTURE 1 : 1.5 : 3
E9 - RCC COLUMNS IN SUPER STRUCTURE 1 : 2 : 4
E10 - RCC SLABS IN SUPER STRUCTURE 1 : 2 : 4
E11 - RCC SLABS IN SUPER STRUCTURE 1 : 1.5 : 3
E12 - RCC SLABS IN SUPER STRUCTURE 1 : 1 : 2
E13 - RCC BEAMS IN SUPER STRUCTURE 1 : 2 : 4
E14 - RCC BEAMS IN SUPER STRUCTURE 1 : 1.5 : 3
E15 - RCC BEAMS IN SUPER STRUCTURE 1 : 1 : 2
E16 - RCC ARCH IN SUPER STRUCTURE 1 : 2 : 4
E17 - RCC ARCH IN SUPER STRUCTURE 1 : 1.5 : 3
E18 - RCC DOMES / FOLDED PLATES IN SUPER STRUCTURE 1 : 2 : 4
E19 - RCC DOMES / FOLDED PLATES IN SUPER STRUCTURE 1 : 1.5 : 3
E20 - RCC SHAFTS IN SUPER STRUCTURE 1 : 2 : 4 UP TO 6.0 M HEIGHT
E21 - RCC SHAFTS IN SUPER STRUCTURE 1 : 1.5 : 3 UP TO 6.0 M HEIGHT
E22 - RCC SHAFTS IN SUPER STRUCTURE 1 : 2 : 4 UP TO 15.0 M HEIGHT
E23 - RCC SHAFTS IN SUPER STRUCTURE 1 : 1.5 : 3 UP TO 15.0 M HEIGHT
E24 - RCC WORK IN WELL-STEINING 1 : 2 : 4
E25 - RCC WORK IN WELL-STEINING 1 : 1.5 : 3
E26 - RCC FASCIAS 1 : 2 : 4
E27 - TIMBER FORMWORK FOR FOUNDATIONS
E28 - STEEL FORMWORK FOR FOUNDATIONS
E29 - FORMWORK FOR CAST IN-SITU SHELVES
E30 - FORMWORK FOR WALLS USING SHUTTERING PLY
E30a - STEEL FORMWORK FOR WALLS

Double Click Any Option.

Exit

- Following Rate Analysis Screen is displayed. It gives Specs, Labour & Material default Coefficients & Rates. You can change any parameter if required. Click " Rate " Button to get Rate Analysis of this item.

E5 - RCC WALLS IN SUPER STRUCTURE 1 : 1.5 : 3

 File Name:

 Date:

DESCRIPTION	QUANTITY	UNIT	RATE	AMOUNT
Labour: (Details Per <input type="text" value="1.0"/> M3)				
Foreman	<input type="text" value="0.05"/>	No.	<input type="text" value="400"/>	<input type="text"/>
Labour (M)	<input type="text" value="3.5"/>	No.	<input type="text" value="250"/>	<input type="text"/>
Mixer Operator	<input type="text" value="0.10"/>	No.	<input type="text" value="350"/>	<input type="text"/>
Mason	<input type="text" value="0.23"/>	No.	<input type="text" value="350"/>	<input type="text"/>
Waterman	<input type="text" value="0.90"/>	No.	<input type="text" value="250"/>	<input type="text"/>
Material:				
Aggregate 20 mm & down	<input type="text" value="0.6615"/>	M3	<input type="text" value="700"/>	<input type="text"/>
Aggregate 12 mm & down	<input type="text" value="0.2205"/>	M3	<input type="text" value="675"/>	<input type="text"/>
Cement	<input type="text" value="8.0"/>	Bag	<input type="text" value="300"/>	<input type="text"/>
Coarse Sand	<input type="text" value="0.441"/>	M3	<input type="text" value="600"/>	<input type="text"/>
Carriage:				
Aggregates	<input type="text" value="0.882"/>	M3	<input type="text" value="55"/>	<input type="text"/>
Cement	<input type="text" value="0.40"/>	Ton	<input type="text" value="50"/>	<input type="text"/>
Sand	<input type="text" value="0.441"/>	M3	<input type="text" value="55"/>	<input type="text"/>
Extra for Admixture:				
Admixture	<input type="text"/>	Kg	<input type="text" value="30"/>	<input type="text"/>
Machinery:				
Concrete Mixer	<input type="text" value="0.08"/>	Day	<input type="text" value="400"/>	<input type="text"/>
Vibrator	<input type="text" value="0.08"/>	Day	<input type="text" value="200"/>	<input type="text"/>
Sub Total:				
Sundries & Contingencies ***	<input type="text" value="6"/>	%	<input type="text"/>	<input type="text"/>
Water + Electricity	<input type="text" value="6"/>	%	<input type="text"/>	<input type="text"/>
Taxes (Contract / Sales etc.)	<input type="text" value="5"/>	%	<input type="text"/>	<input type="text"/>
Over Head + Profit	<input type="text" value="20"/>	%	<input type="text"/>	<input type="text"/>
Cost Per 1.0 M3 of RCC				
<input type="button" value="Print"/> <input type="button" value="Rate: Rs / M3"/> <input type="button" value="Clear"/>				

*** Includes cost of hire & running charges of crane/winch, pump, compressor, piping etc. @ 2 % and 1 % for scaffolding, testing concrete cubes etc.

S U M M A R Y

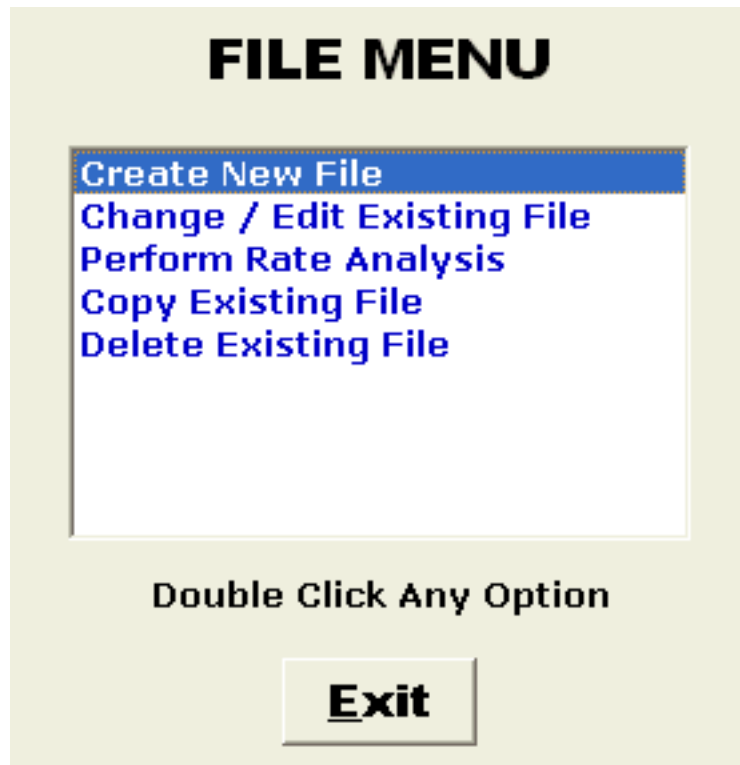
Labour Rs/unit	<input type="text"/>	Mat+Carr Rs/unit	<input type="text"/>	Balance Rs/unit	<input type="text"/>
Labour	<input type="text"/>	Material + Carr	<input type="text"/>	Balance	<input type="text"/>
Labour ÷ Material	<input type="text"/>				

- ▶ You can use " Print " button to print this sheet.
- ▶ A user can Export the above Rate Analysis to PDF format, by using " Print " button. A Free PDF Creator software is available with this software. Before exporting to PDF, user shall install this PDF Creator software. Just click Print Button & Select PDF Create option, the above Rate Analysis table will be exported to PDF.
- ▶ Alternately a user can select the complete page by right clicking of mouse, select all and then copy. Now go to an editor of your choice such as word, again right click and paste. Once you are in " WORD ", you can edit, save or print this page.
- ▶ Note that Material, Labour & Machinery Rates along with Sundries, Water + Electricity, Taxes, Overheads & Profit percentages which were earlier saved during File Creation option are Automatically displayed in the table.
- ▶ If User Clicks Clear Button, all the Automatically displayed parameters Viz; Material, Labour & Machinery Rates along with Sundries, Water + Electricity, Taxes, Overheads & Profit percentages are cleared from the respective text boxes.

Press F5 Key & all the above parameters are displayed again.

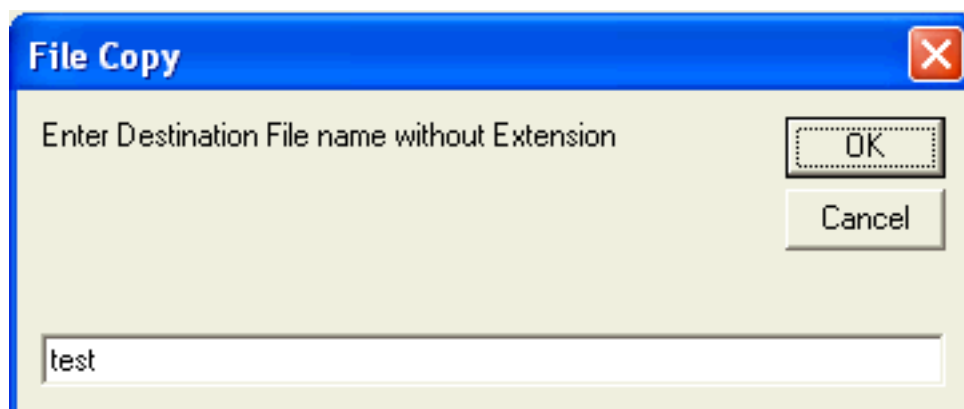
Click " Exit " button to leave this option.

LEARN SUPER RATE ANALYSIS

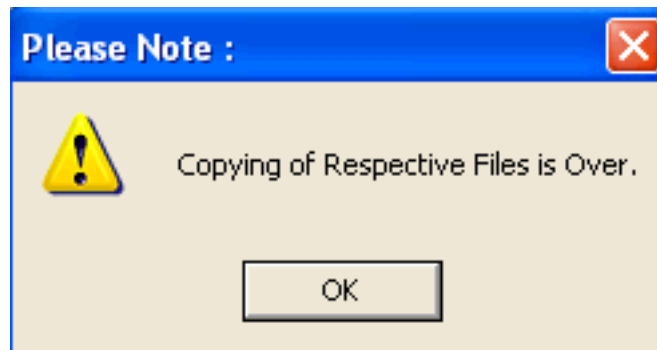


COPYING OF EXISTING FILE

- ▶ When you click the " Copy Existing File " option, a new window will appear. Select the file name in the desired directory which you want to copy. I have selected the file name as " sra_new " which was earlier saved in " 000SRA " folder. When your file is opened, a new window will appear, asking for " Destination File Name Without Extension ".



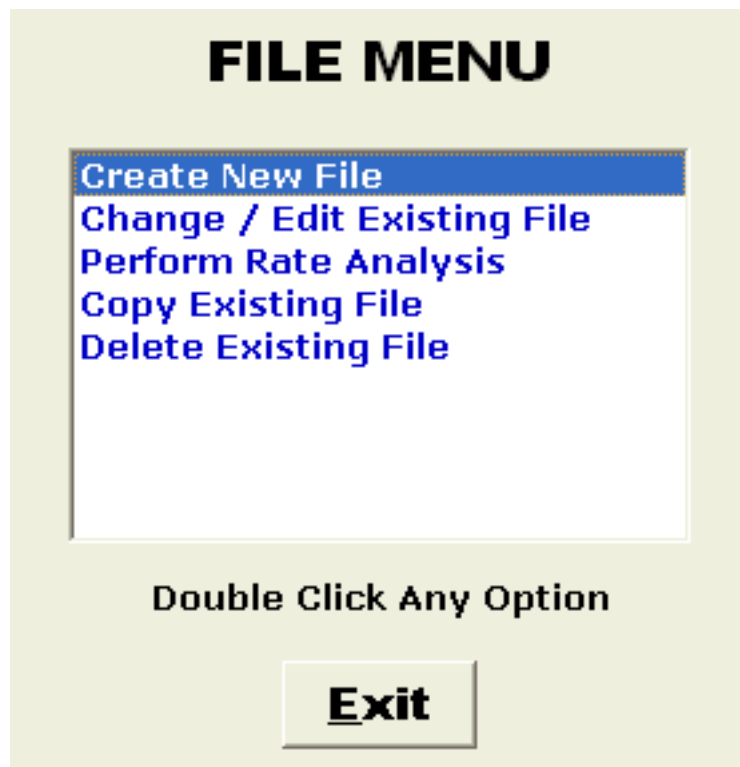
▶ I want to copy " test " file into file name " test ". Hence new file name is given as " test . Click " OK " button. Note that copying is taking place in default folder.



▶ A new message is displayed informing user that file copying is over.

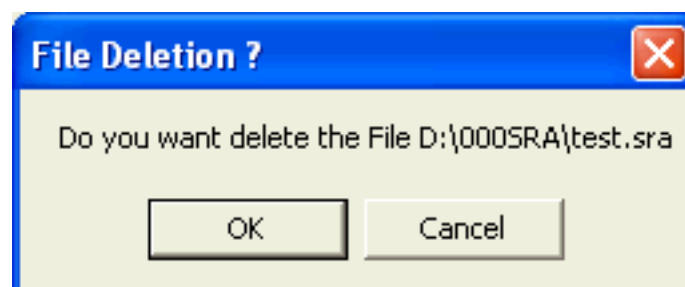
Click " OK " button to exit this option.

LEARN SUPER RATE ANALYSIS

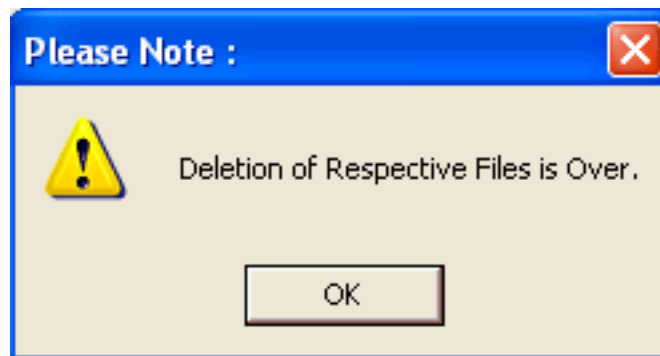


DELETE EXISTING FILE

- ▶ When you click the " Delete Existing File " option, a new window will appear. Select the file name in the desired directory which you want to delete. I have selected the file name as " test " which was earlier saved in " 000SRA " folder.



- ▶ When your file is opened, a new window will appear, asking for " Confirmation " .
- ▶ If you are sure than you can click " OK " button else click " Cancel " to abort deletion.
- ▶ A new message is displayed as under informing user that file deletion is over, if you have clicked " OK " button in confirmation window.



Click " OK " button to exit this option.

OTHER SOFTWARES:

SUPER CIVIL CD - Single Point Solution To Your Civil Engineering Needs

2D FRAME ANALYSIS - Discover The Beauty Of Structural Analysis

R C F - A Software for Analysis, Design, Estimation & Costing of RCC Floors

S S F - Analysis, Design, Estimation & Costing of Steel Buildings, revised as per IS 800 : 2007

Q T Y - Quantity Estimation & Cost, Project Control

SUPER REAL VALUATION - A Software For Immovable Properties

ROADS - Pavement Design & Rate Analysis Of Road Items

ROAD ESTIMATE - Quantity Estimation & Cost, Project Control For Road

ELECTRIC COST - Costing, Project Control & MDS For Electrical Projects

HVAC COST - Costing, Project Control & Design For HVAC Engineers

BILLING JI - A Database Management Software For General Billing

RA BILL - A Database Management Software For Item Rate Contract Billing

BUILDERS BILL - A Database Management Software for Billing of Lump sum Contracts

BID ANALYSIS - A Software For Technical & Commercial Tender Analysis

RAFT FOUNDATION - Analysis, Design, Estimation, Costing & Drawing of RCC Raft Foundation

STEEL_2007 - Limit State design of Steel as per IS 800 : 2007

SITE CONTROL - A Management Software for Resource Control At Site.

DESIGN & DRAWING CONTROL - A DBM Software for Control of Design & Drawing Manhours.

COMPOSITE - A Software for Analysis, Design, Costing & Drawing of Composite Floor Buildings

INSTA COST - A Software for Estimating Project Cost & Tender SOQ Instantly

FLAT SLAB - A Software for Analysis, Design, Estimation, Costing & Drawings of Flat Slabs

FLAT RAFT - A Software for Analysis, Design, Estimation, Costing & Drawings of Rigid RCC Flat Rafts

OPTIMIZE BAR - A Software for Optimization of Reinforcements from Existing Bar Bending Schedule

OPTIMIZE STEEL - A Software for Optimization of Steel Sections from Existing Fabrication Drawing

AutoQty - A Software for Automatic Quantity & Cost Estimation from AutoCAD Drawings