

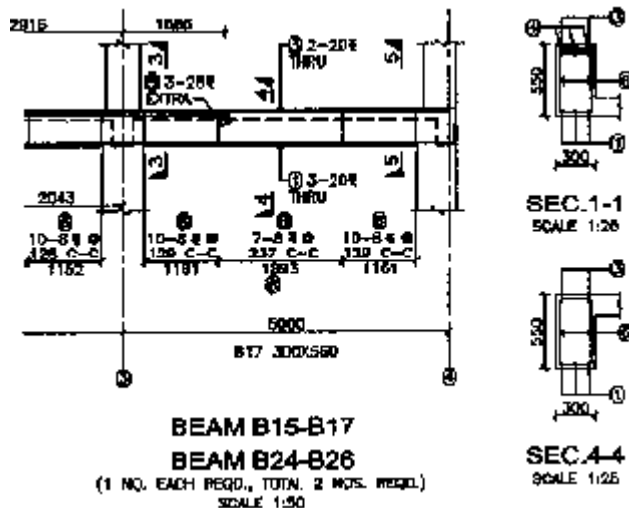
DecaPlot Blayout

D2D

Design to Drawing

**Beam Layout &
R/F Details**

User's Manual



Deca Soft Engineers

B-37, Amar Colony, Lajpat Nagar – 4, New Delhi – 110 024

Ph.: (011) 2642 9565, 2622 2389 Mobile: 98112 61580

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1. Capabilities of software

DecaPlot - Blayout software prepares Beam Layout & R/F Details Drawing from the drawing data file generated by

DecaPlot - Combo.

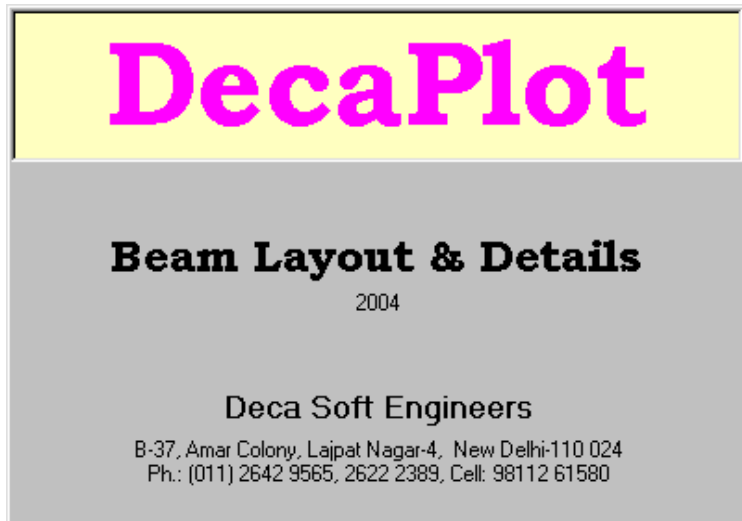
Any data item can be changed by the user to suit the requirements

The salient features of DecaPlot Blayout are:

- Beam Layout & Marking Plan with Grids, Columns, Beams & Slabs
- Longitudinal Sectional Elevation of Beams showing Slabs, Cross Beams, R/F Details in Single or Double Layer with Bar Marks, Curtailment of Support & Span R/F
- Cross-Section of Beams showing Slabs & R/F Details in Single or Double Layer with Bar Marks
- Notes
- Option for Bar Bending Schedule
- Option for Ductile Detailing as per IS:13920
- Option for Grouping of Beams
- Provision for Sunk Slabs
- Option for picking automatically Beam & Column Sizes from Staad results
- Provision for Beams Flush on a line
- Provision for Shifting/ Extension of Beams

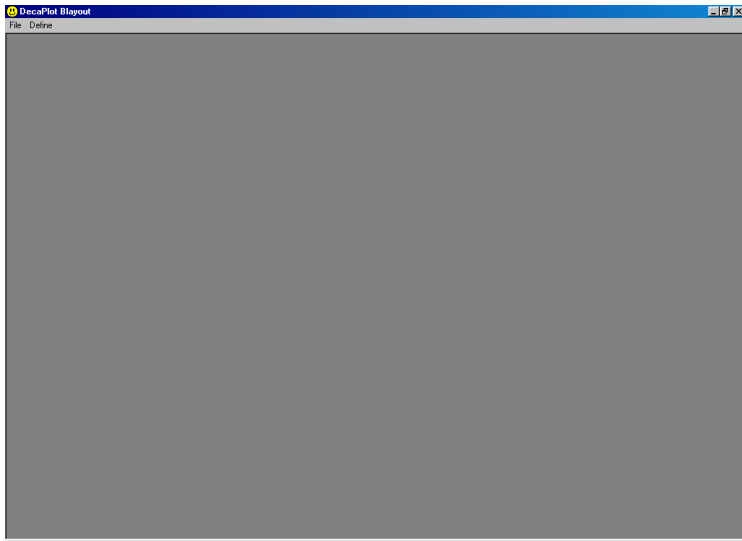
2. Running the software

1. Start windows
2. Double click on **Blayout** icon in the desktop. The following window will appear



The above window will disappear after few seconds. It will also disappear on mouse click on the message screen or any key press by user.

3. Then following main window will appear with two menu items – **File & Define**.



The two menu items – **File & Define** are explained in details in the following pages.

3. File

Click menu item **File** to open sub-menu.

Click **New** to create a new data file

Or

Click **Open** to edit existing data file

Or

Click **Continue** to continue the last data session

Click **Close** when complete data has been given

Click **Save** to save the data

Click **Save As** to save the data under different file name

Click **View** to view the data file on the screen

Click **Print** to print the data file on the printer

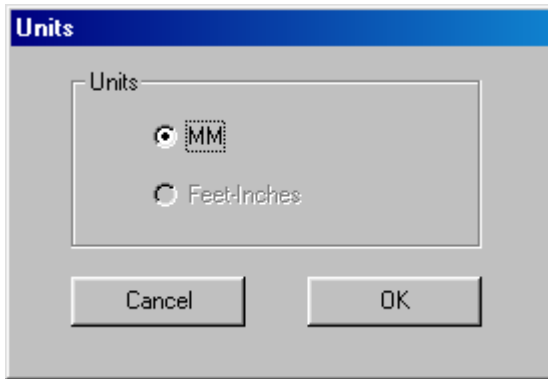
Click **Exit** to exit the program.

4. Define

4.1 Units

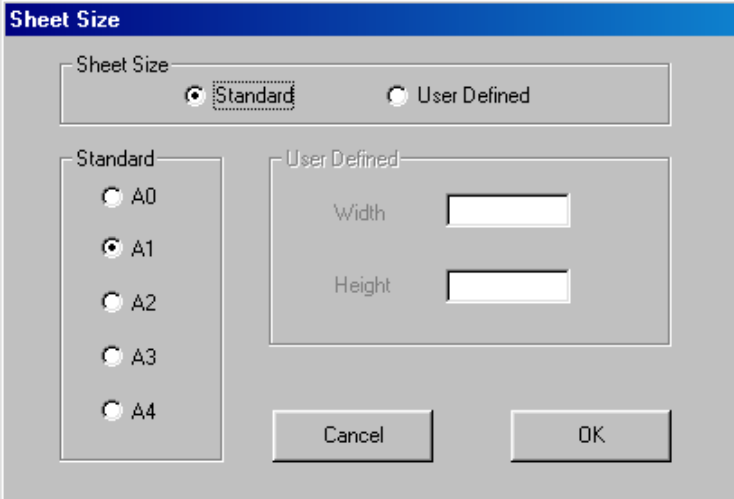
Purpose: To specify the units.

Feet-inches option is currently not available.



4.2 Sheet Size

Purpose: To specify the sheet size.
User can select either standard sheet size (A0, A1, A2, A3, A4) or non-standard sheet size with specified width & height.



The image shows a 'Sheet Size' dialog box with a blue title bar. It contains two main sections: 'Standard' and 'User Defined'. The 'Standard' section has five radio buttons for A0, A1, A2, A3, and A4, with A1 selected. The 'User Defined' section has two text input fields for 'Width' and 'Height'. At the bottom are 'Cancel' and 'OK' buttons.

Sheet Size

☒ Standard ☐ User Defined

Standard

☐ A0
☒ A1
☐ A2
☐ A3
☐ A4

User Defined

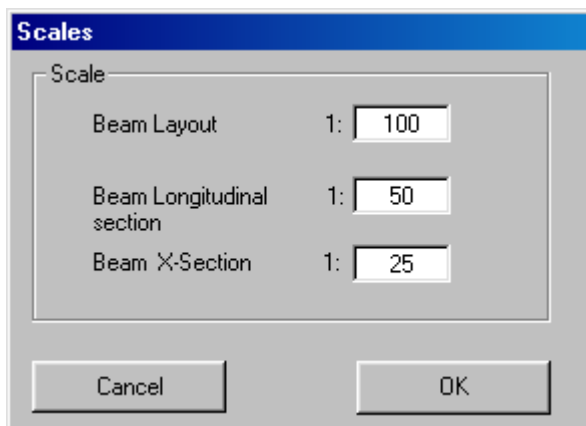
Width

Height

Cancel OK

4.3 Scales

Purpose: To specify the drawing scales for different drawing components.

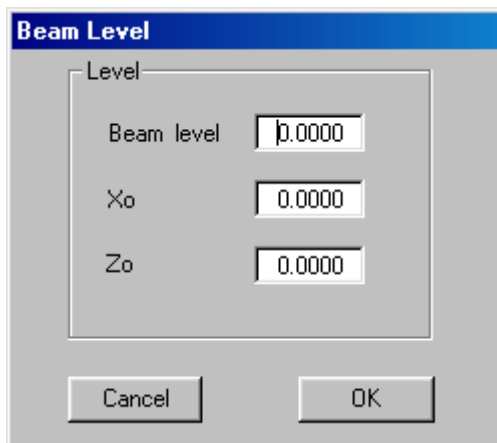


The image shows a software dialog box titled "Scales". It contains a section labeled "Scale" with three rows of settings. Each row has a label, a "1:" prefix, and a text input field. The first row is "Beam Layout" with a value of "100". The second row is "Beam Longitudinal section" with a value of "50". The third row is "Beam X-Section" with a value of "25". At the bottom of the dialog are two buttons: "Cancel" on the left and "OK" on the right.

Component	Scale
Beam Layout	1: 100
Beam Longitudinal section	1: 50
Beam X-Section	1: 25

4.4 Beam Level

Purpose: To specify the level of beam layout.

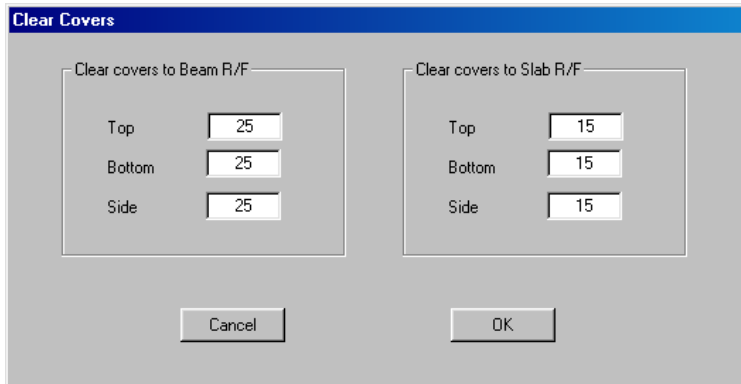


The image shows a software dialog box titled "Beam Level". It has a blue header bar with the title in white. The main area is light gray and contains a group box labeled "Level". Inside this group box, there are three labels: "Beam level", "Xo", and "Zo". Each label is followed by a text input field. The "Beam level" field contains the value "0.0000". The "Xo" field contains the value "0.0000". The "Zo" field contains the value "0.0000". At the bottom of the dialog box, there are two buttons: "Cancel" on the left and "OK" on the right.

Beam Level	
Level	
Beam level	0.0000
Xo	0.0000
Zo	0.0000
Cancel OK	

4.5 Clear Covers

Purpose: To specify the level of beam layout.

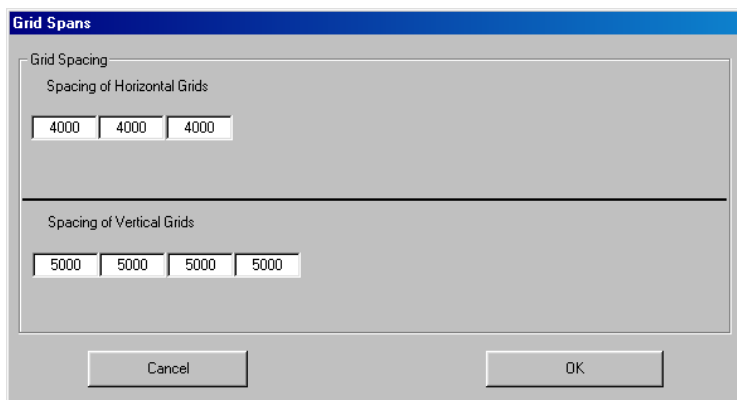


The image shows a software dialog box titled "Clear Covers". It contains two main sections for specifying clear cover values. The first section, "Clear covers to Beam R/F", has input fields for Top (25), Bottom (25), and Side (25). The second section, "Clear covers to Slab R/F", has input fields for Top (15), Bottom (15), and Side (15). At the bottom of the dialog are "Cancel" and "OK" buttons.

Category	Top	Bottom	Side
Clear covers to Beam R/F	25	25	25
Clear covers to Slab R/F	15	15	15

4.6 Grids Spans

Purpose: To specify the horizontal & vertical spacing of grids.



The image shows a software dialog box titled "Grid Spans". It has a blue title bar. Inside, there is a section labeled "Grid Spacing" with a light gray background. This section is divided into two parts by a horizontal line. The top part is labeled "Spacing of Horizontal Grids" and contains three input fields, each with the value "4000". The bottom part is labeled "Spacing of Vertical Grids" and contains four input fields, each with the value "5000". At the bottom of the dialog box, there are two buttons: "Cancel" on the left and "OK" on the right.

Grid Spacing			
Spacing of Horizontal Grids			
4000	4000	4000	
Spacing of Vertical Grids			
5000	5000	5000	5000

Cancel OK

4.7 Grids Details

Purpose: To specify the grids marks, grid types & distances.

The 'Grid Details' dialog box is divided into two sections: 'Horizontal Grids' and 'Vertical Grids'. Each section contains a table with columns for grid marks and rows for grid type, distance, and dummy grid status.

Horizontal Grids				
	1	2	3	4
Grid Mark	A	B	C	D
Grid Type	FB	CC	CC	FT
Distance	115			115
Dummy Grid	No	No	No	No

Vertical Grids					
	1	2	3	4	5
Grid Mark	1	2	3	4	5
Grid Type	FL	CC	CC	CC	FR
Distance	115				115
Dummy Grid	No	No	No	No	No

At the bottom of the dialog are 'Cancel' and 'OK' buttons.

Horizontal grid type can be defined as **FB** or **FT** or **PB** or **PT** or **CB** or **CT** or **CC** along with a distance.

FB indicates all the columns, beams & walls will be bottom flush on a line at the specified distance from the grid.

FT indicates all the columns, beams & walls will be top flush on a line at the specified distance from the grid.

CB indicates all the columns, beams & walls will be placed centrally on the line at bottom at the specified distance from the grid.

CT indicates all the columns, beams & walls will be placed centrally on the line at top at the specified distance from the grid.

CC indicates all the columns, beams & walls will be placed centrally on the grid line. The distance should be specified as zero in this case.

Vertical grid type can be defined as **FL** or **FR** or **PL** or **PR** or **CL** or **CR** or **CC** along with a distance.

FL indicates all the columns, beams & walls will be left flush on a line at the specified distance from the grid.

FR indicates all the columns, beams & walls will be right flush on a line at the specified distance from the grid.

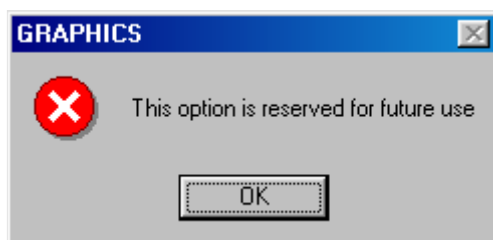
CL indicates all the columns, beams & walls will be placed centrally on the line at left at the specified distance from the grid.

CR indicates all the columns, beams & walls will be placed centrally on the line at right at the specified distance from the grid.

CC indicates all the columns, beams & walls will be placed centrally on the grid line. The distance should be specified as zero in this case.

4.8 Graphics

This is not available currently.



4.9 Column Details

Purpose: To specify the column details.

Column Details								
Col. Mark	H-Grid	V-Grid	Bottom Col. No.	Top Col. No.	Bottom Col. Size		Top Col. Size	
					Along X	Along Y	Along X	Along Y
C1	B	2	185		400	300		
C2	B	3	189		400	300		
C3	B	4	193		400	300		
C4	B	5	197		400	300		
C5	B	6	201		400	300		
C6	C	2	165		400	300		
C7	C	3	169		400	300		
C8	C	4	173		400	300		
C9	C	5	177		400	300		
C10	C	6	181		400	300		
C11	D	2	145		400	300		
C12	D	3	149		400	300		
C13	D	4	153		400	300		
C14	D	5	157		400	300		
C15	D	6	161		400	300		
C16	E	2	125		400	300		

Cancel OK

4.10 Beam Details

Purpose: To specify the beam & r/f details.

Beam Details																
Beam Mark	Group	Span No.	Width	Depth	N1		N2		Direction	Span	Extension		Shifting		Top R/F	
					H-Grid	V-Grid	H-Grid	V-Grid			Left/Bot	Right/Top	Distance	Type	Through	
B1	B1	1	300	600	E	2	E	3	X	5000				Top	2#12 (0)	2
B2	-	2	300	600	E	3	E	4	X	5000				Top	2#12 (0)	2
B3	-	3	300	600	E	4	E	5	X	5000				Top	2#12 (0)	2
B4	-	4	300	600	E	5	E	6	X	5000				Top	2#12 (0)	2
B5	B2	1	300	600	D	2	D	3	X	5000				Top	2#12 (0)	2
B6	-	2	300	600	D	3	D	4	X	5000				Top	2#12 (0)	2
B7	-	3	300	600	D	4	D	5	X	5000				Top	2#12 (0)	2
B8	-	4	300	600	D	5	D	6	X	5000				Top	2#12 (0)	2
B9	B3	1	300	600	C	2	C	3	X	5000				Top	2#12 (0)	2
B10	-	2	300	600	C	3	C	4	X	5000				Top	2#12 (0)	2
B11	-	3	300	600	C	4	C	5	X	5000				Top	2#12 (0)	2
B12	-	4	300	600	C	5	C	6	X	5000				Top	2#12 (0)	2
B13	B4	1	300	600	B	2	B	3	X	5000				Top	2#12 (0)	2
B14	-	2	300	600	B	3	B	4	X	5000				Top	2#12 (0)	2
B15	-	3	300	600	B	4	B	5	X	5000				Top	2#12 (0)	2
B16	-	4	300	600	B	5	B	6	X	5000				Top	2#12 (0)	2

Cancel OK

Beam Details									
Beam Mark	Top R/F (Nos-Dia-L2)			Bot R/F (Nos-Dia-L2)		Shear R/F (Dia-Spacing-Distance)			Side R/F
	Through	Extra-L	Extra-R	Through	Extra Span	Left	Middle	Right	
B1	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B2	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B3	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B4	2#12 (0)	2#12 (0)	2#12 (0)	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B5	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B6	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B7	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B8	2#12 (0)	2#12 (0)	2#12 (0)	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B9	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B10	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B11	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B12	2#12 (0)	2#12 (0)	2#12 (0)	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B13	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B14	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B15	2#12 (0)	2#12 (0)	-	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0
B16	2#12 (0)	2#12 (0)	2#12 (0)	2#12 (0)	2#12 (0)	#8 @ 300 c-c upto 1200	#8 @ 300 c-c	#8 @ 300 c-c upto 1200	0#0

Cancel OK

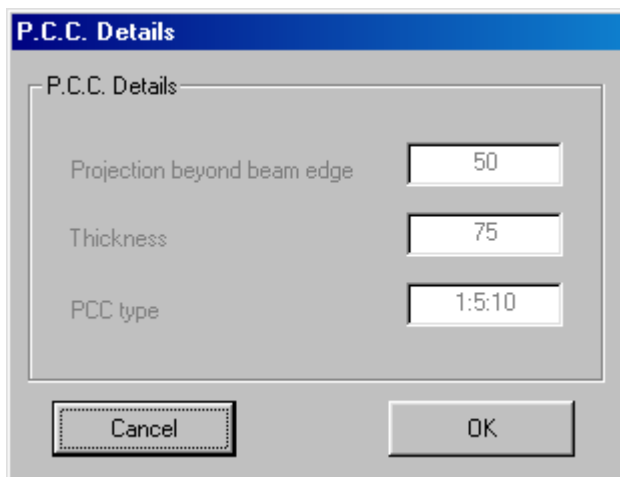
4.11 Slab Details

Purpose: To specify the slab details.

Slab Details										
Slab Mark	Thickness	Sunk Distance	N1		N2		N3		N4	
			H-Grid	V-Grid	H-Grid	V-Grid	H-Grid	V-Grid	H-Grid	V-Grid
1	110		D	2	D	3	E	3	E	2
2	110		D	3	D	4	E	4	E	3
3	110		D	4	D	5	E	5	E	4
4	110		D	5	D	6	E	6	E	5
5	110		C	2	C	3	D	3	D	2
6	110		C	3	C	4	D	4	D	3
7	110		C	4	C	5	D	5	D	4
8	110		C	5	C	6	D	6	D	5
9	110		B	2	B	3	C	3	C	2
10	110		B	3	B	4	C	4	C	3
11	110		B	4	B	5	C	5	C	4
12	110		B	5	B	6	C	6	C	5

4.12 P.C.C Details

Currently not available.



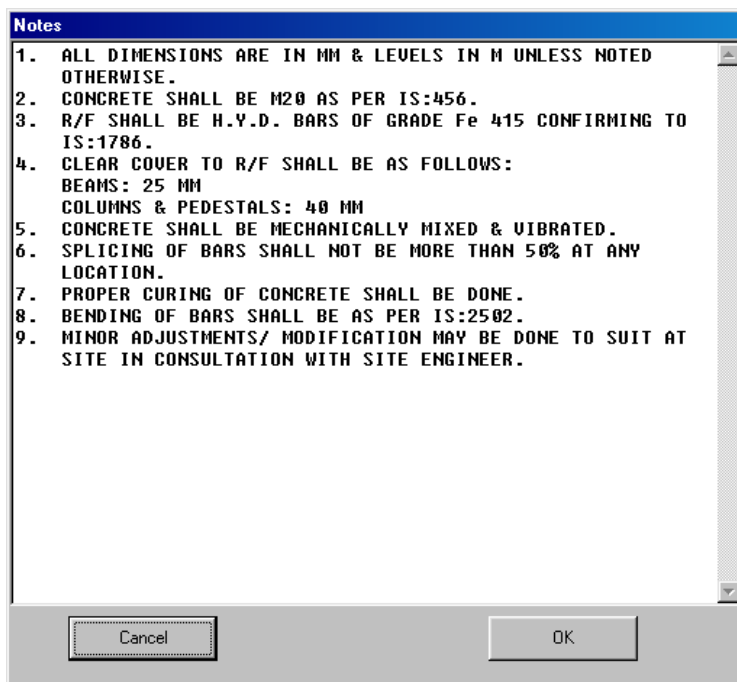
The image shows a software dialog box titled "P.C.C. Details". It has a blue header bar with the title in white. The main area is light gray and contains a sub-header "P.C.C. Details" in a smaller font. Below this, there are three rows of input fields:

Parameter	Value
Projection beyond beam edge	50
Thickness	75
PCC type	1:5:10

At the bottom of the dialog box, there are two buttons: "Cancel" on the left and "OK" on the right. The "Cancel" button has a dotted border, while the "OK" button has a solid border.

4.13 Notes

Purpose: To specify the notes.



The image shows a software dialog box titled "Notes". It contains a list of nine numbered items. The text is in all caps. At the bottom of the dialog box are two buttons: "Cancel" and "OK".

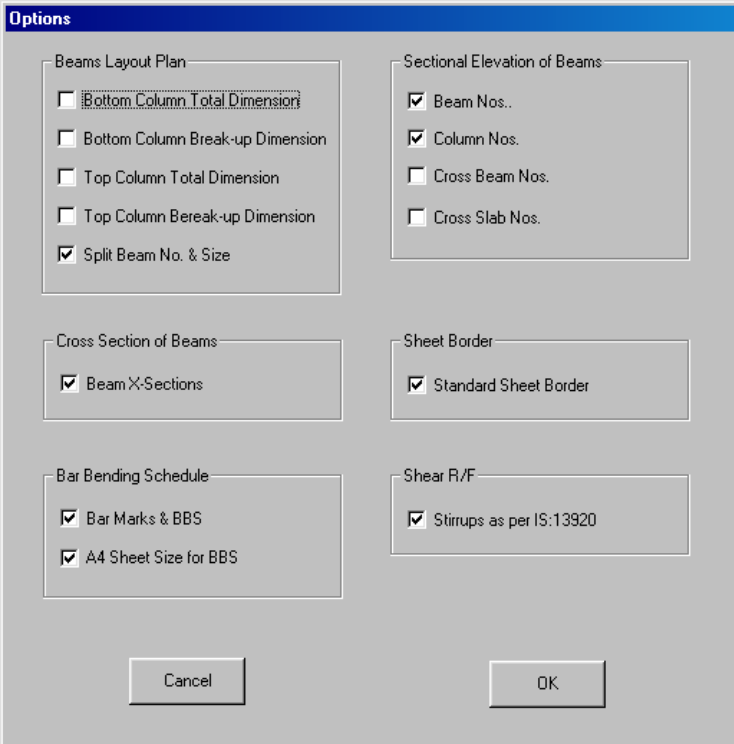
Notes

1. ALL DIMENSIONS ARE IN MM & LEVELS IN M UNLESS NOTED OTHERWISE.
2. CONCRETE SHALL BE M20 AS PER IS:456.
3. R/F SHALL BE H.Y.D. BARS OF GRADE Fe 415 CONFIRMING TO IS:1786.
4. CLEAR COVER TO R/F SHALL BE AS FOLLOWS:
BEAMS: 25 MM
COLUMNS & PEDESTALS: 40 MM
5. CONCRETE SHALL BE MECHANICALLY MIXED & VIBRATED.
6. SPLICING OF BARS SHALL NOT BE MORE THAN 50% AT ANY LOCATION.
7. PROPER CURING OF CONCRETE SHALL BE DONE.
8. BENDING OF BARS SHALL BE AS PER IS:2502.
9. MINOR ADJUSTMENTS/ MODIFICATION MAY BE DONE TO SUIT AT SITE IN CONSULTATION WITH SITE ENGINEER.

Cancel OK

4.16 Options

Purpose: To specify the options for drawing.



The image shows a software dialog box titled "Options" with a blue header bar. The dialog is divided into several sections, each with a title and a list of options with checkboxes. The sections are: "Beams Layout Plan" (containing five options, with "Split Beam No. & Size" checked), "Sectional Elevation of Beams" (containing four options, with "Beam Nos." and "Column Nos." checked), "Cross Section of Beams" (containing one option, "Beam X-Sections", which is checked), "Sheet Border" (containing one option, "Standard Sheet Border", which is checked), "Bar Bending Schedule" (containing two options, both checked: "Bar Marks & BBS" and "A4 Sheet Size for BBS"), and "Shear R/F" (containing one option, "Stirrups as per IS:13920", which is checked). At the bottom of the dialog are two buttons: "Cancel" and "OK".

Options

Beams Layout Plan

- ☐ Bottom Column Total Dimension
- ☐ Bottom Column Break-up Dimension
- ☐ Top Column Total Dimension
- ☐ Top Column Break-up Dimension
- ☒ Split Beam No. & Size

Sectional Elevation of Beams

- ☒ Beam Nos.
- ☒ Column Nos.
- ☐ Cross Beam Nos.
- ☐ Cross Slab Nos.

Cross Section of Beams

- ☒ Beam X-Sections

Sheet Border

- ☒ Standard Sheet Border

Bar Bending Schedule

- ☒ Bar Marks & BBS
- ☒ A4 Sheet Size for BBS

Shear R/F

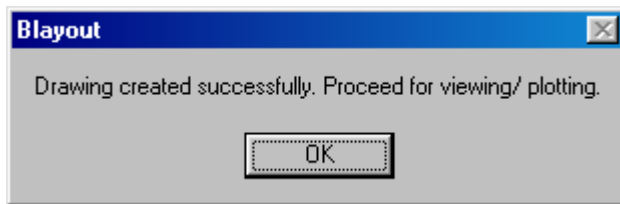
- ☒ Stirrups as per IS:13920

Cancel OK

5. Preparing Drawing

When **Exit** is clicked under menu item **File**, drawing preparation program automatically starts & intermediate status indicator message appears.

When the drawing preparation is over, a message indicating the same appears.



Click **OK** to end the program.

6. Viewing, Editing & Plotting Drawing

Double click on **DecaPlot Drawing** icon in desktop.

The drawing automatically appears on the screen which can be editing, plotted & saved.