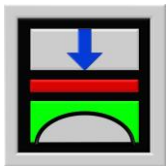


# Part F

## User's Guide for the program ELPLA-Section



Determining  
contact pressures, settlements, moments  
and shear forces of slab foundations by the  
method of finite elements

Version 9.2

Program authors:    M. El Gendy  
                              A. El Gendy

GEOTEC:    GEOTEC Software Inc.  
              PO Box 14001 Richmond Road PO  
              Calgary AB, Canada T3E 7Y7

<http://www.elpla.com>  
[geotec@elpla.com](mailto:geotec@elpla.com)

<b>Contents</b>		<b>Page</b>
1	An overview of ELPLA-Section	4
2	Describing ELPLA-Section	4
3	Starting ELPLA-Section	7
4	File Menu	8
4.1	File Menu- "Open" command	8
4.2	"Combination of many projects" command	8
4.3	"Make WMF-File" command	8
4.4	"Print" command	9
4.5	"Page setup" command	9
4.6	"Send to Excel" command	10
4.7	"Files 1, 2, 3, 4" command	10
4.8	"Exit" command	11
5	View Menu	11
5.1	View Menu- "Status bar" command	11
5.2	"Tool bars" command	11
6	Sections Menu	11
6.1	Section Menu- "Section in $x$ -direction" command	12
6.2	"Max./ Min. values in $x$ -direction" command	13
6.3	"Overlapping in $x$ -direction" command	15
6.4	"Section in $y$ -direction" command	16
6.5	"Max./ Min. values in $y$ -direction" command	18
6.6	"Overlapping in $y$ -direction" command	19
6.7	"Arbitrary section" command	21
7	Options Menu	22
7.1	Options Menu- "Plot parameters" command	22
7.2	"Scale" command	23
7.3	"Axes" command	23
7.4	"Title" command	23
7.5	"Page No." command	24
7.6	"Copy" command	24
8	Format Menu	24
8.1	Format Menu- "Line formats" command	24
8.2	"Max. ordinate" command	25
8.3	"Font" command	25
8.4	"Legend" command	26

		Page
9	Window Menu	27
9.1	Window Menu- "Zoom in" command	27
9.2	"Zoom out" command	27
9.3	"Zoom window" command	27
9.4	"Zoom %" command	27
9.5	"Original size" command	27
10	Help Menu	28
10.1	Help Menu- "Contents" command	28
10.2	"Short description" command	28
10.3	"New in ELPLA" command	28
10.4	"About ELPLA-Section" command	28
11	Tips and Tricks	29
11.1	Keyboard	29
11.2	Mouse	32
12	Samples for graphical drawing using ELPLA-Section	33
13	Index	34

## 1 An overview of ELPLA-Section

ELPLA-Section is used to display graphically the calculated results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) and input project data (additional settlements) at specified sections. The drawing of the results and data can be displayed first on the screen, and then can be sent to the printer or plotter. Also, all drawing sections can be exported to MS Excel.

The calculated results and input project data can be presented graphically as follows:

- 1 Section in x-direction
- 2 Max./ Min. values in x-direction
- 3 Overlapping in x-direction
- 4 Section in y-direction
- 5 Max./ Min. values in y-direction
- 6 Overlapping in y-direction
- 7 Arbitrary section

The drawings, if desired, can be saved as WMF-Format files, in which they can be exported to other Windows applications such as Word and AutoCAD to prepare reports, slide presentations or add further information.

## 2 Description of ELPLA-Section

ELPLA-Section is a 32-bit analysis and design software product that operates under Microsoft Windows 9x/ NT/ ME/ XP. The common "what you see is what you get" of Windows applications makes it easy to learn how to use ELPLA-Section, especially if you are already familiar with the Windows environment.

The program package ELPLA consists of 7 separate programs. The separate programs can be run independently. The name and short description of the programs are given in Table F-1.

The usage of the program is typically such that first data files are created describing a certain problem by ELPLA-Data, then the project problem is analyzed by using ELPLA-Solver. Finally, the results can be presented as graphical drawing, graphs and tables using the five separate programs ELPLA-Graphic, ELPLA-Section, ELPLA-List, ELPLA-Boring and GEOTEC-Editor.

In order to use ELPLA-Section, first the user must enter the project data by ELPLA-Data, and then must analyze the problem by ELPLA-Solver. Table F-2 gives a list of files, which are read or created by ELPLA-Section. The files can be classified in four groups.

Table F-1 Names and descriptions of the seven separate programs

Program name	Description of the program
ELPLA-Data	Editing project data
ELPLA-Solver	Analyzing the project problem
ELPLA-Graphic	Displaying data and results graphically
ELPLA-List	Listing project data and calculated results
ELPLA-Section	Displaying results graphically at specified sections
ELPLA-Boring	Editing and displaying boring logs graphically
GEOTEC-Editor	A simple text editor program

Table F-2 Names of file groups

Group	Saved from the program
A Main data files	ELPLA-Data
B Section files (*.SEC)	ELPLA-Section
C Project data files	ELPLA-Data
D Final result files	ELPLA-Solver

Further more, Table F-3 shows filenames, contents and groups of all files that may be read or created by ELPLA-Section.

Table F-3 Names and contents of files

## A Main data files

Filename	Contents
FIRMA	Firm header
STEU	Default directory for files that are saved by ELPLA
NOFORMAT	Number formats
UNITS	System of units

## B Section files

Filename	Contents
PLOTPAR.SEC	Plot parameters
LEGENDE.SEC	Legend data
ORDINATE.SEC	Max. ordinate data
LINEFORM.SEC	Line formats
FONT.SEC	Font data

## C Project data files

Filename	Contents
*. AUF	3 line texts to identify the project
*. BAU	Soil properties
*. PO1	System data (calculation method)
*. PL6	FE-Net data
*. P33	Data of supports/ boundary conditions
*. PV1	Data of additional soil settlements

## D Final result files

Filename	Contents
*. PT3	Displacements due to temperature change ( $s_t$ )
*. PP3	Settlements due to neighboring foundations ( $s_e$ )
*. QUN	Ultimate bearing capacities at nodes ( $q_{ul}$ )
*. PW1	Modulus of subgrade reaction ( $k_s$ )
*. PH1	Settlements ( $s$ )
*. PH2	Contact pressures ( $q$ )
*. PH3	Moments ( $m_x$ )
*. PH4	Moments ( $m_y$ )
*. PH5	Moments ( $m_{xy}$ )
*. PH6	Shear forces ( $Q_x$ )
*. PH7	Shear forces ( $Q_y$ )
*. PH8	Settlements due to reloading ( $s_w$ )
*. PH9	Overburden pressures ( $Q_u$ )
*. H10	Support reactions ( $V$ )
*. H11	Support reactions ( $M_y$ )
*. H12	Support reactions ( $M_x$ )
*. H13	Reinforcement of the slab ( $A_{sx1}$ )
*. H14	Reinforcement of the slab ( $A_{sx2}$ )
*. H15	Reinforcement of the slab ( $A_{sy1}$ )
*. H16	Reinforcement of the slab ( $A_{sy2}$ )

The asterisk (\*) matches any filename with the specified extension.

Next paragraphs describe the purpose and function of each ELPLA-Section command.

### 3 Starting ELPLA-Section

Start ELPLA-Section by clicking on the program icon in the Windows "Start"-Menu. The introduction screen (Figure F-1) appears.

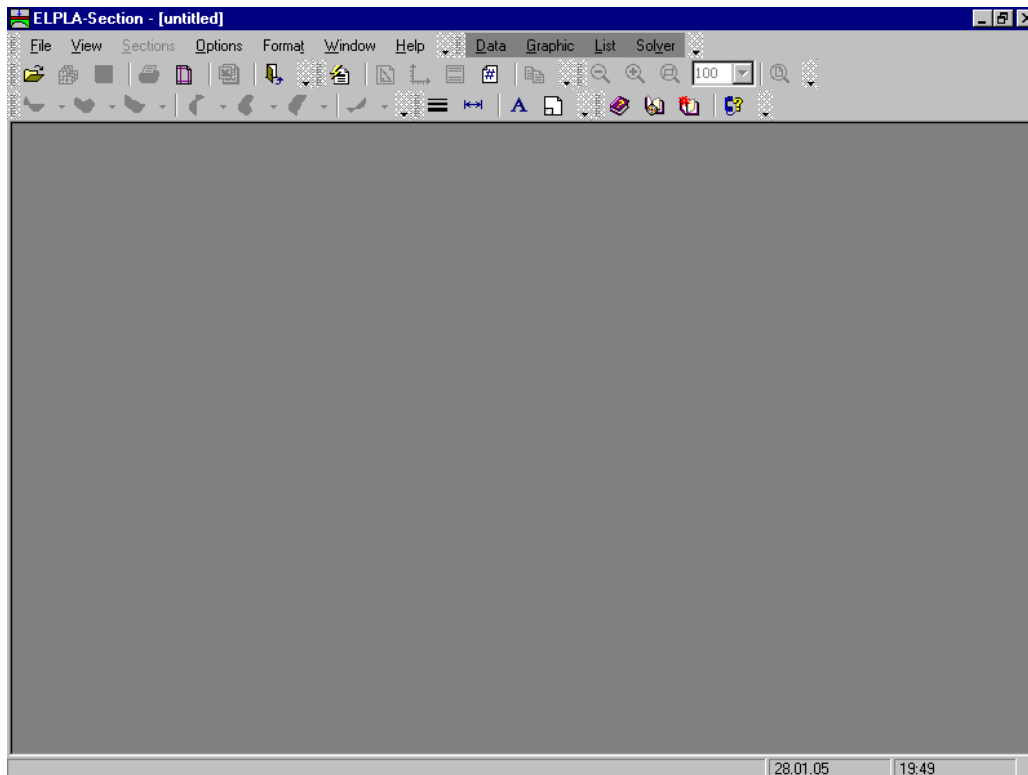


Figure F-1 Introduction screen of ELPLA-Section

The menu head of Figure F-1 contains the following seven commands:

- File
- View
- Sections
- Options
- Format
- Window
- Help

After clicking one of the seven menu commands, another sub-commands or options become available. The seven menu commands and their sub-commands are presented and described in the following paragraphs 4 to 11.

## 4 File Menu

The File Menu commands are:

- Open
- Combination of many projects
- Make WMF-File
- Print
- Page setup
- Send to Excel
- Files 1, 2, 3, 4
- Exit

### 4.1 File Menu—"Open" command

By "Open" command the current project is closed, if one is loaded, and an existing project is opened. Figure F-2 shows "Open" Dialog box used to open a specified project.

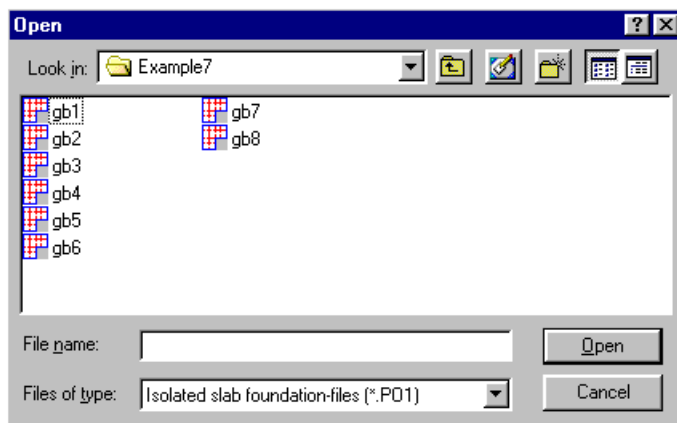


Figure F-2 "Open project" Dialog box

### 4.2 File Menu—"Combination of many projects" command

The extreme values of calculated results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) of many projects can be drawn.

For determining results as extreme values or drawing results of many projects in a diagram, project names and their comments are required.

When the command is chosen, the input Dialog box shown in Figure F-3 appears. In this input Dialog box the project name and its identification can be defined.

### 4.3 File Menu—"Make WMF-File" command

By "Make WMF-File" command the drawing can be saved in a format that can be read by other programs. This feature allows you to include your drawing in reports and presentations and to enhance the drawing using other drawing or CAD software packages. The drawing can be exported in the Windows Metafile (WMF) format.



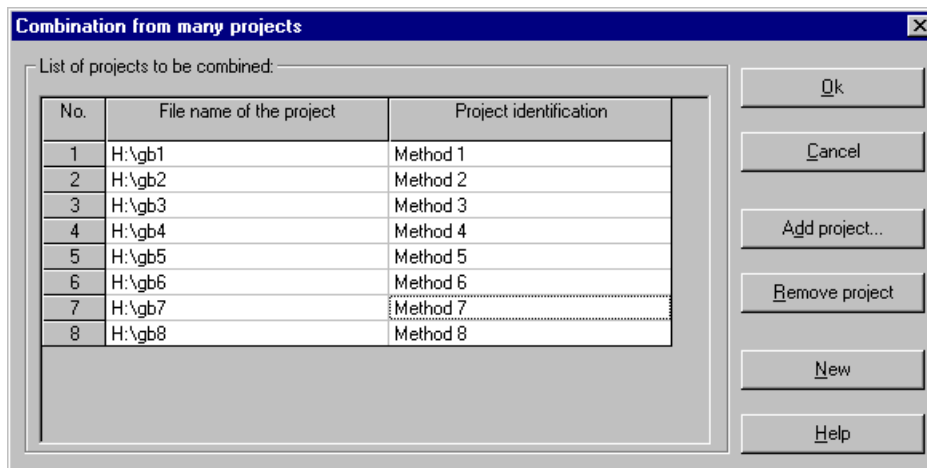


Figure F-3 "Combination of many projects" input Dialog box

#### 4.4 File Menu—"Print" command

By "Print" command data and results can be graphically plotted or printed. Only the objects currently displayed on the drawing are printed. Figure F-4 shows "Print" Dialog box. The printer group box contains controls for selecting the printer and changing its properties. Use "Name" Combo box to select the printer and use "Properties" Button to set printer settings. The number of printing copies can be defined in "Copies" Input box.

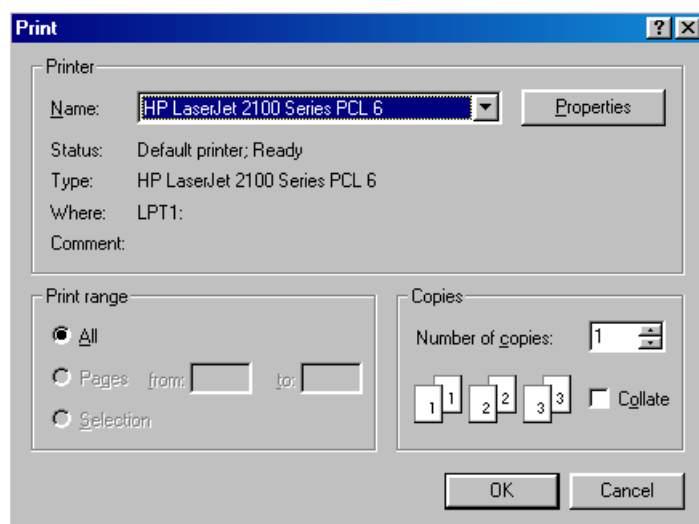


Figure F-4 "Print" Input box

#### 4.5 File Menu—"Page setup" command

By "Page setup" command the standard "Page setup" Dialog box can be displayed with options to specify the printer, page orientation, paper size and paper source, as well as other printing options. Figure F-5 shows "Page setup" Dialog box.

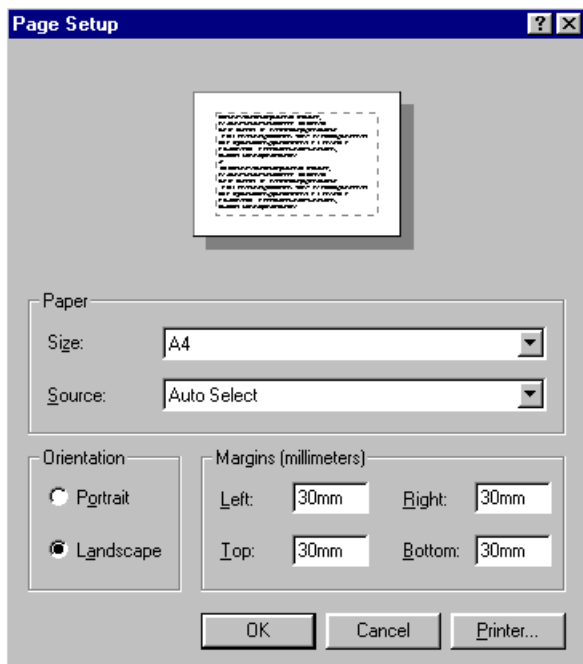


Figure F-5 "Page setup" Dialog box

#### 4.6 File Menu—"Send to Excel" command

By this command, it is possible to export results as diagrams to MS Excel.

#### 4.7 File Menu—"Files 1, 2, 3, 4" command

By "Files 1, 2, 3, 4" command the user can open one of the last four loaded projects.

#### 4.8 File Menu—"Exit" command

By "Exit" command the current project is closed and ELPLA-Section is quitted (Figure F-7).

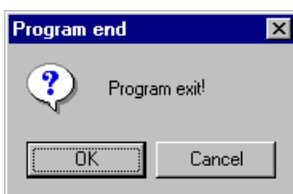


Figure F-7 "Exit" Message box

### 5 View Menu

The View Menu commands are:

- Status bar
- Tool bars

### 5.1 View Menu—"Status bar" command

"Status bar" command displays a status bar on the screen down. The status bar displays information about the progress of the current operation.

### 5.2 View Menu—"Tool bars" command

"Tool bars" command displays tool bars located just below the menu head. Tool bars contain icons of program menus.

## 6 Sections Menu

The Section menu is the main menu, which is used to display the specified drawing with the setting given by options, format and window menus.

The Sections Menu commands are:

- Section in x-direction
- Max./ Min. values in x-direction
- Overlapping in x-direction
- Section in y-direction
- Max./ Min. values in y-direction
- Overlapping in y-direction
- Arbitrary section

### 6.1 Sections Menu—"Section in x-direction" command

By "Section in x-direction" command the calculated results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) and input data (additional settlements) can be plotted at a specified section in x-direction.

When this command is chosen, the selection Dialog box shown in Figure F-8 appears. In this Dialog box select one item to draw, then click "OK" Button.

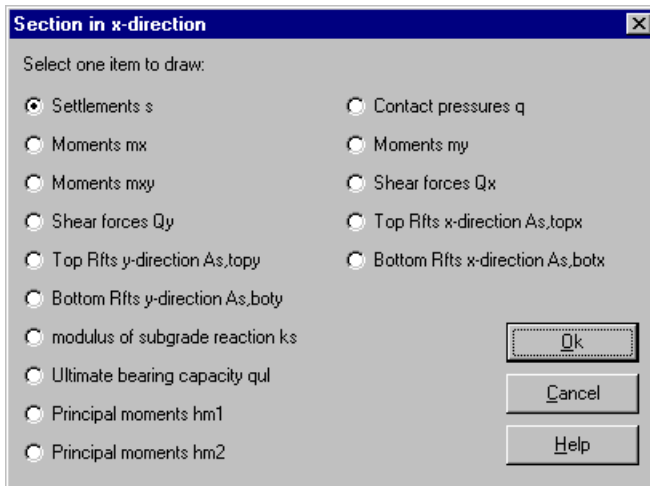


Figure F-8 "Section in x-direction" items

For drawing results at a specified section in x-direction, ranges of the section are required as shown in Figure F-9.

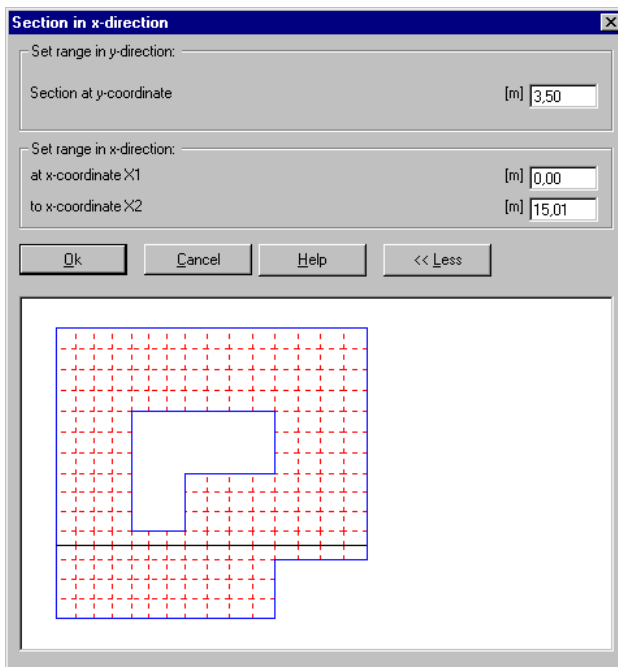


Figure F-9 "Section in x-direction" Dialog box

As an example, Figure F-10 shows a specified section of settlement in x-direction.

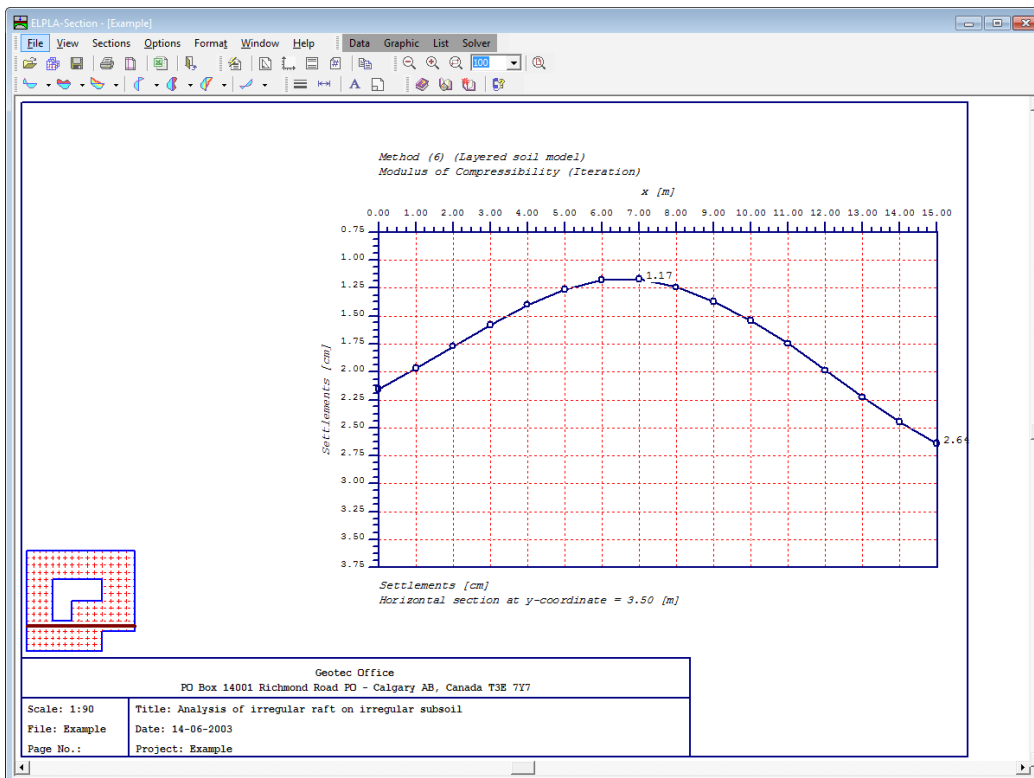


Figure F-10 Section of settlement in x-direction

## 6.2 Sections Menu—"Max./ Min. values in x-direction" command

By "Max./ Min. values in x-direction" command the extreme values of results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) and input data (additional settlements) can be plotted at a specified range in x-direction. When the command is chosen, the selection Dialog box shown in Figure F-11 appears. In this Dialog box select one item to draw and then click "OK" Button.

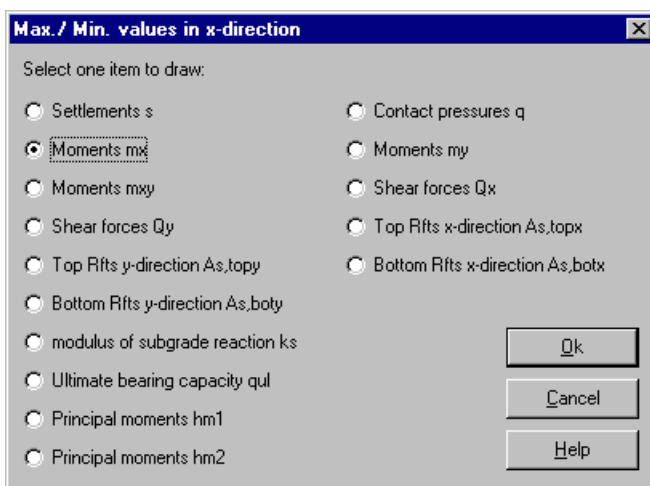


Figure F-11 "Max./ Min. values in x-direction" items

For drawing extreme values of results at a specified range in x-direction, ranges of the section are required as shown in Figure F-12.

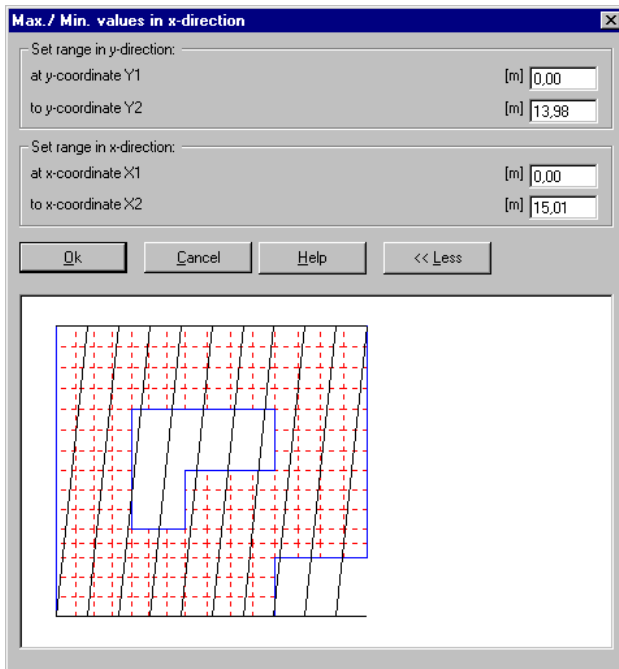


Figure F-12 "Section in x-direction" Dialog box

As an example, Figure F-13 shows extreme values of moments  $m_x$  in x-direction for the whole raft.

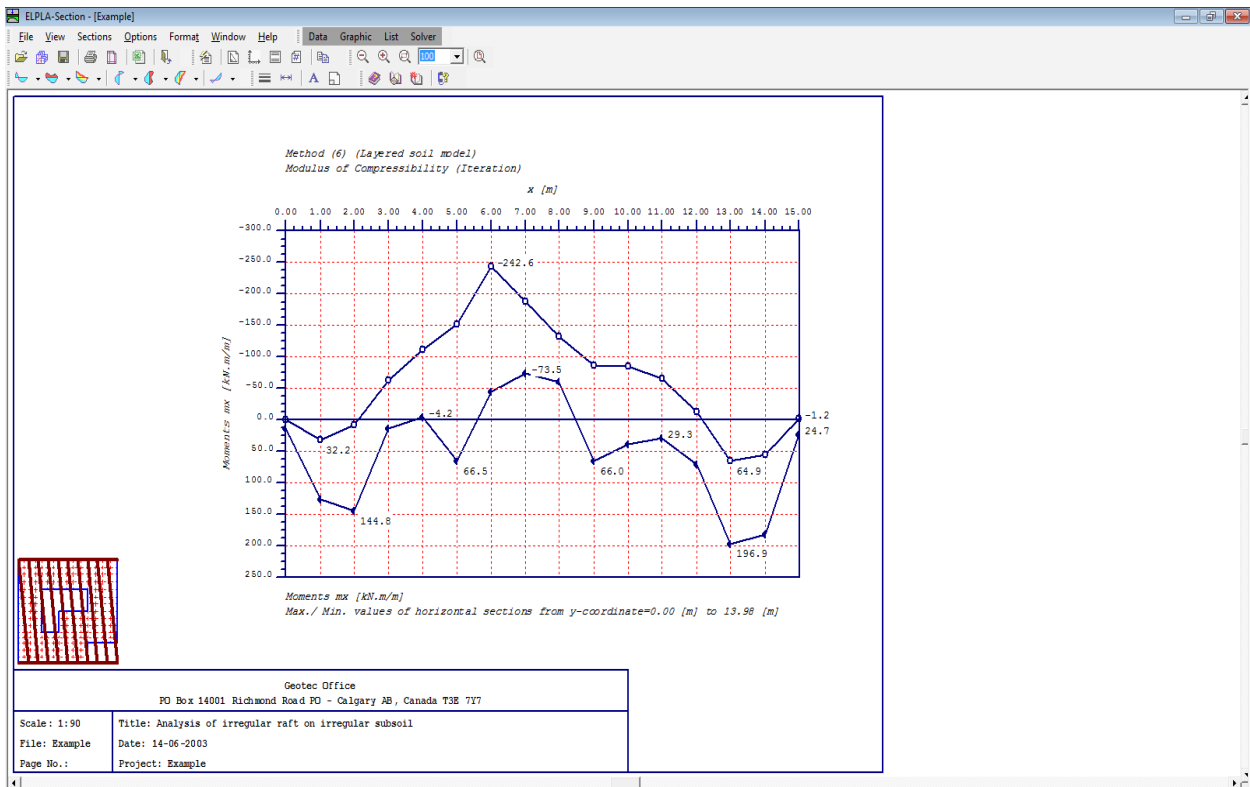


Figure F-13 Extreme values of moments  $m_x$  in x-direction for the whole raft

### 6.3 Sections Menu—"Overlapping in x-direction" command

Values of calculated results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) and input data (additional settlements) can be plotted in many sections for a specified range in x-direction in one graph.

When "Overlapping in x-direction" command is chosen, the selection Dialog box shown in Figure F-14 appears. In this Dialog box select one item to draw, then click "OK" Button.

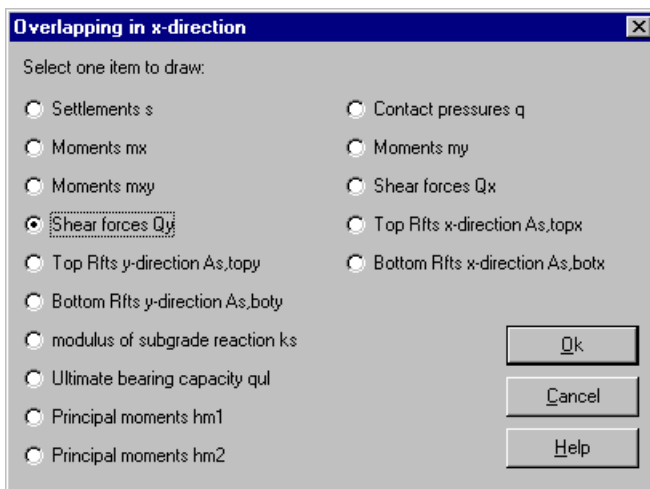


Figure F-14 "Overlapping in x-direction" items

For drawing values of calculated results at a specified range in x-direction in one graph, ranges of the section are required as shown in Figure F-15.

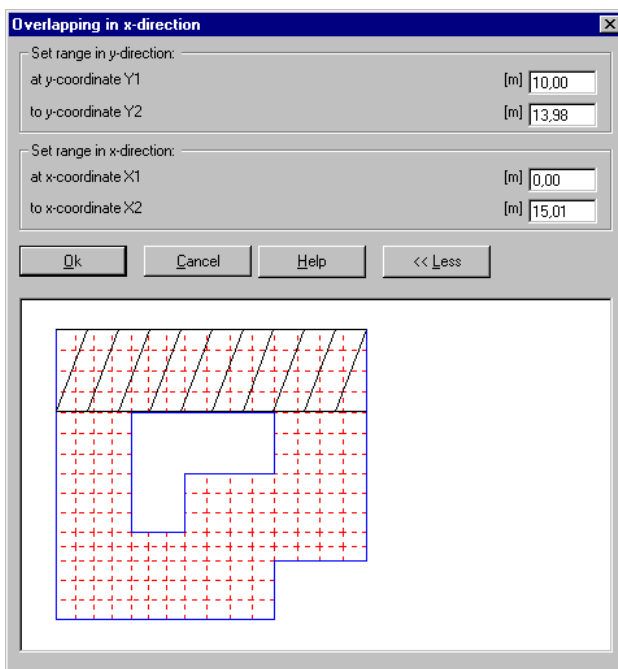


Figure F-15 "Overlapping in x-direction" Dialog box

As an example, Figure F-16 shows values of shear forces  $Q_y$  in x-direction in a specified zone of the raft.

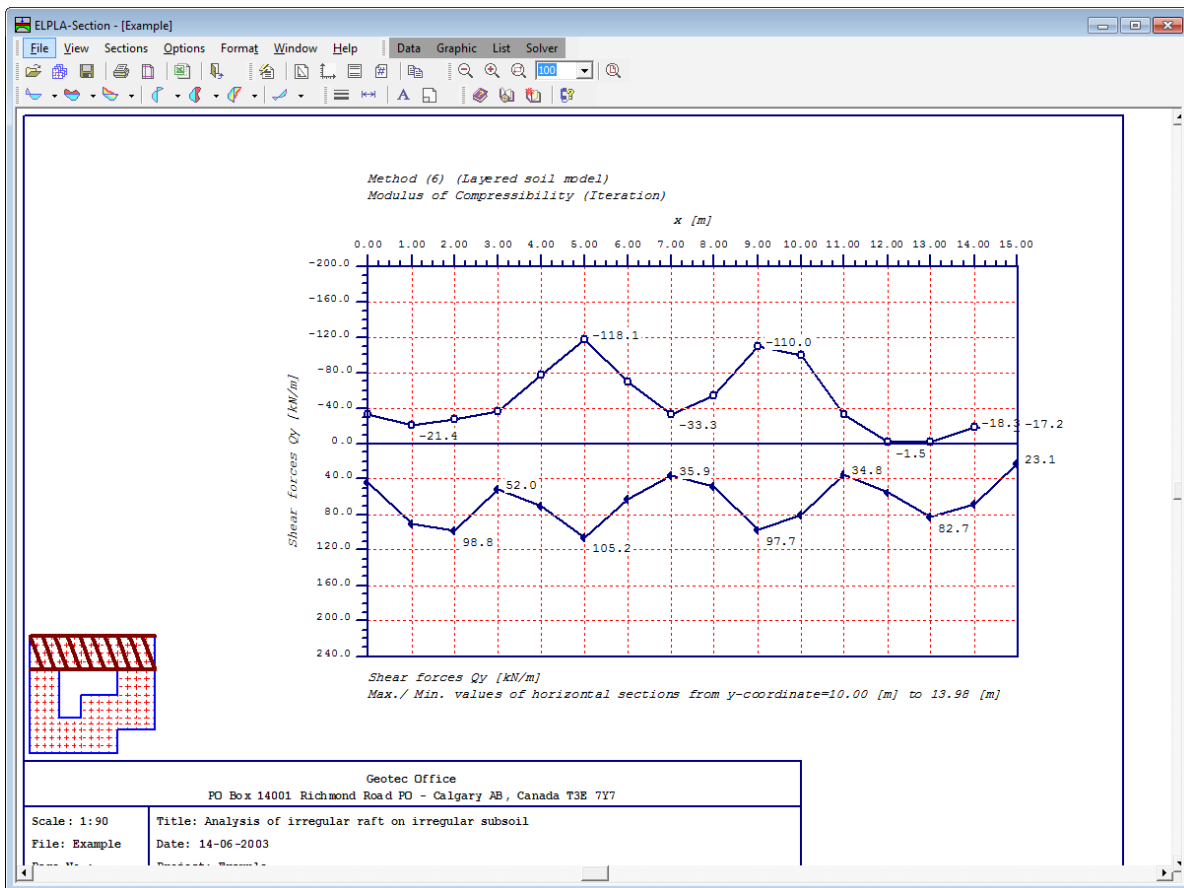


Figure F-16 Sections of shear forces  $Q_y$  in x-direction for a specified zone

### 6.4 Sections Menu—"Section in y-direction" command

By "Section in y-direction" command the calculated results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) and input data (additional settlements) can be plotted at a specified section in y-direction.

When this command is chosen, the selection Dialog box shown in Figure F-17 appears. In this Dialog box select one item to draw, then click "OK" Button.

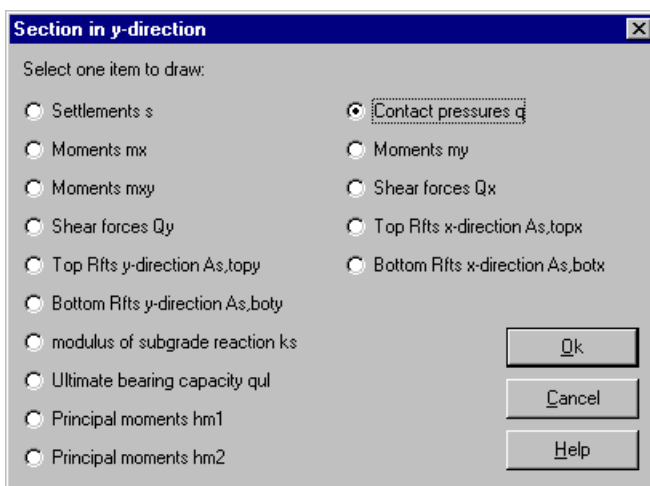


Figure F-17 "Section in y-direction" items



For drawing results at a specified section in y-direction, ranges of the section are required as shown in Figure F-18.

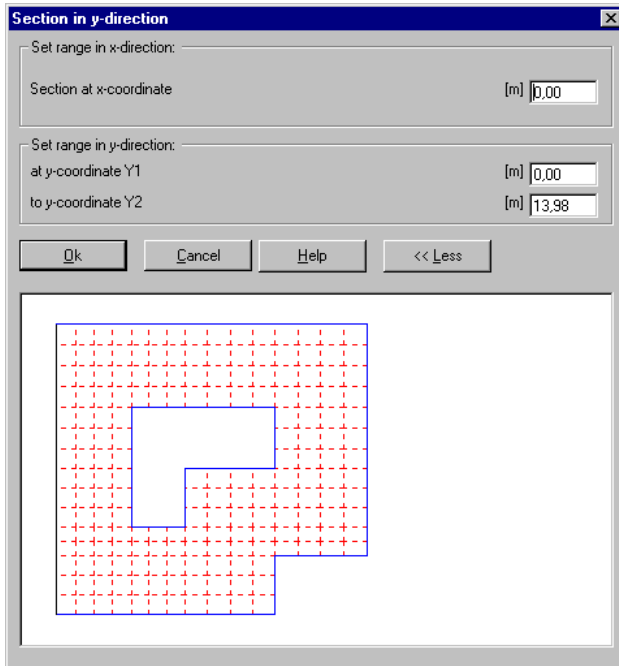


Figure F-18 "Section in y-direction" Dialog box

As an example, Figure F-19 shows a specified section of contact pressures in y-direction.

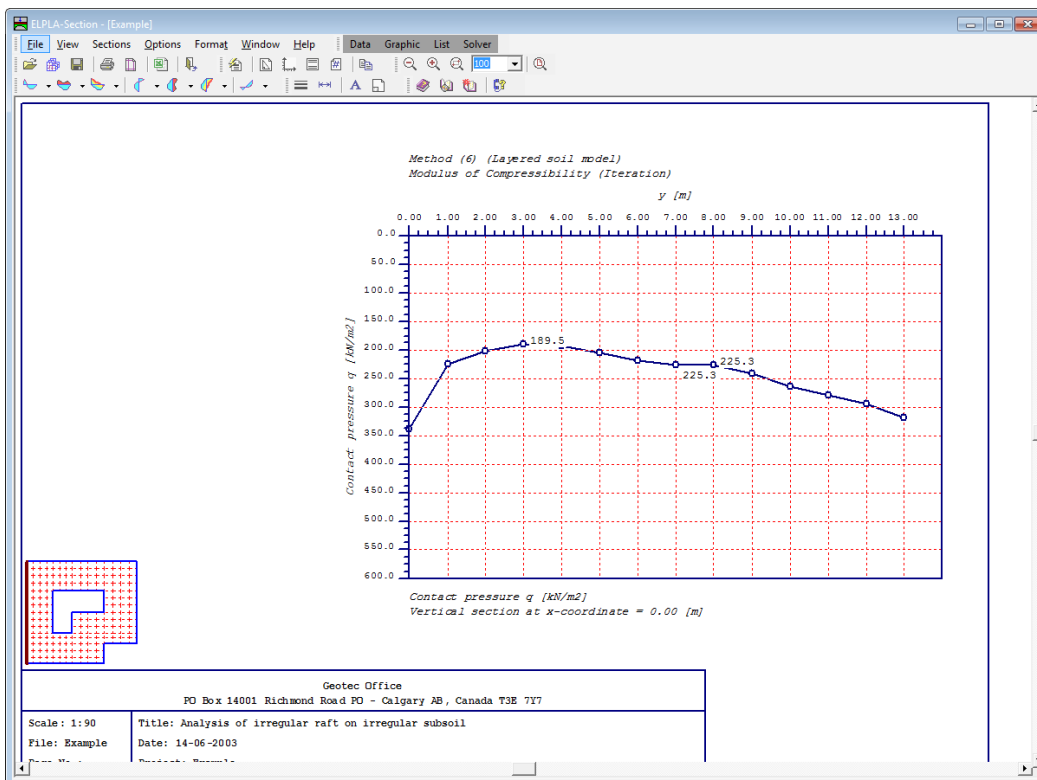


Figure F-19 Section of contact pressures in y-direction

## 6.5 Sections Menu—"Max./ Min. values in y-direction" command

By "Max./ Min. values in y-direction" command the extreme values of results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) and input data (additional settlements) can be plotted at a specified range in y-direction.

When the command is chosen, the selection Dialog box shown in Figure F-20 appears. In this Dialog box select one item to draw, then click "OK" Button.

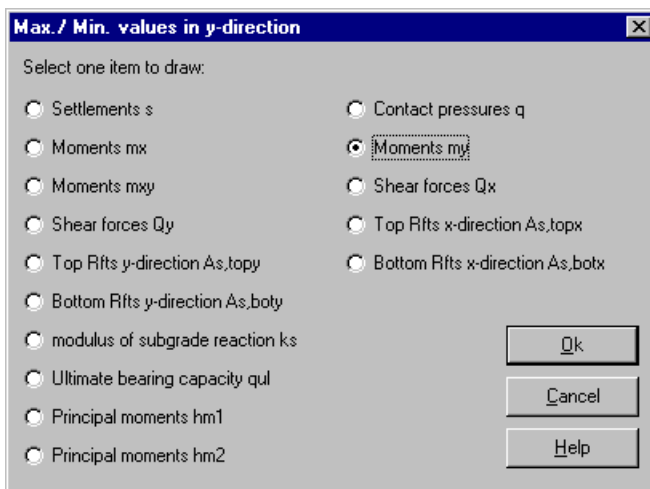


Figure F-20 "Max./ Min. values in y-direction" items

For drawing extreme values of results at a specified range in y-direction, ranges of the section are required as shown in Figure F-21.

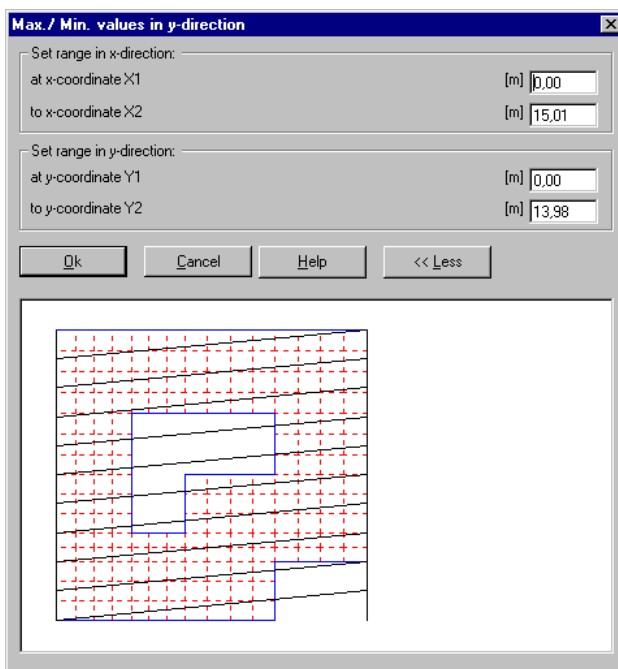


Figure F-21 "Section in y-direction" Dialog box

As an example, Figure F-22 shows the extreme values of moments  $m_y$  in y-direction for the whole raft.

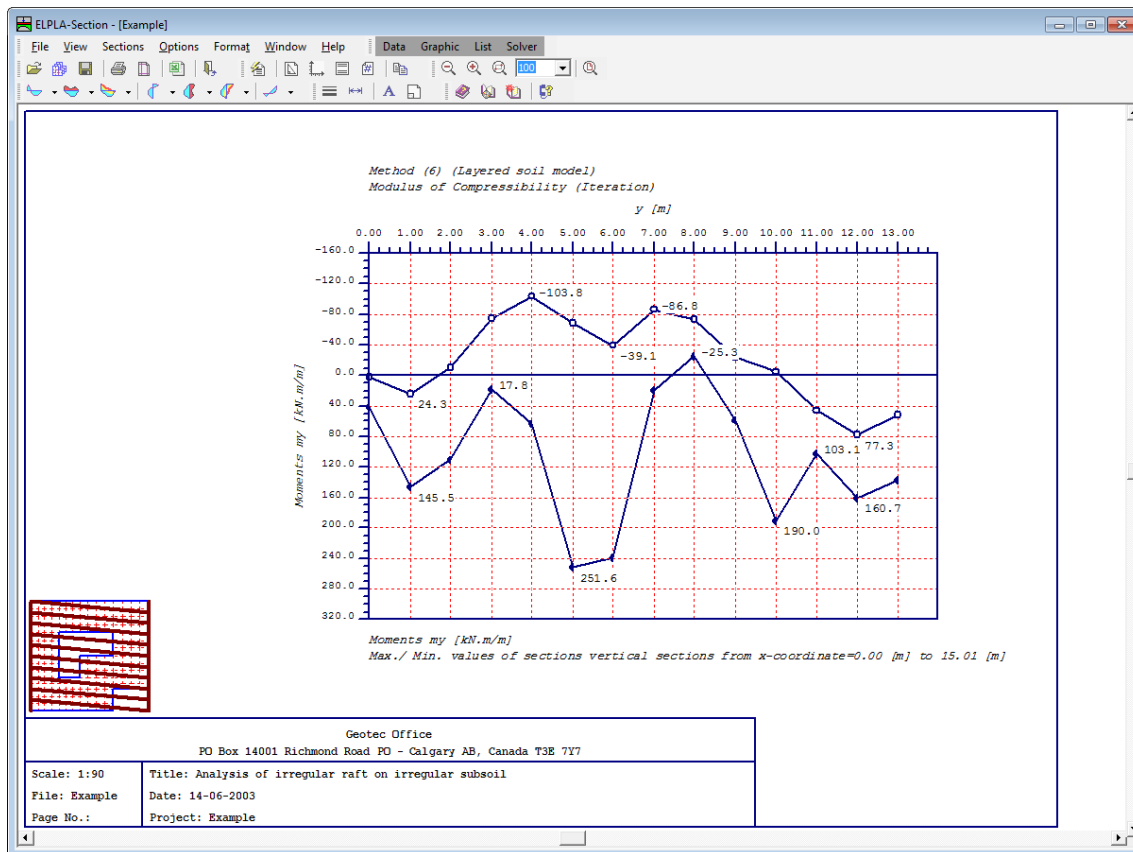


Figure F-22 The extreme values of moments  $m_y$  in y-direction for the whole slab

### 6.6 Sections Menu—"Overlapping in y-direction" command

By "Overlapping in y-direction" command the values of calculated results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) and input data (additional settlements) can be plotted at a specified range in y-direction in one graph.

When this command is chosen, the selection Dialog box shown in Figure F-23 appears. In this Dialog box select one item to draw, then click "OK" Button.

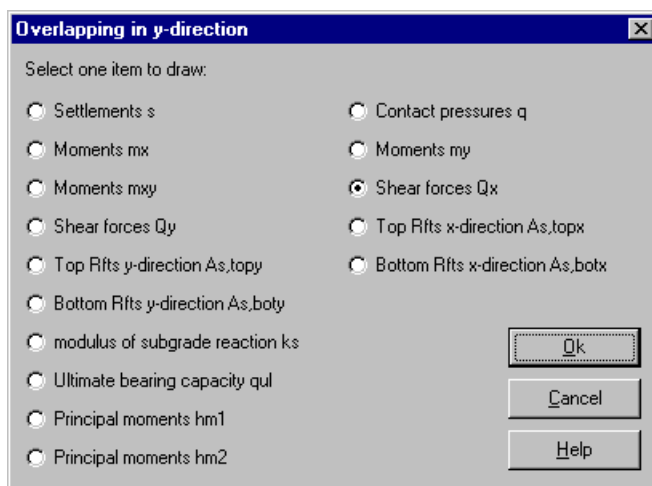


Figure F-23 "Overlapping in y-direction" items

For drawing values of calculated results at a specified range in y-direction in one graph, the ranges of the section required as shown in Figure F-24.

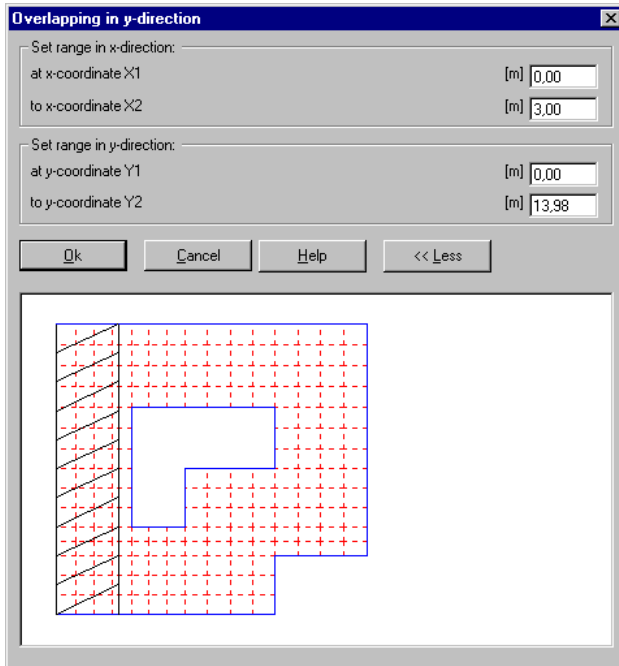


Figure F-24 "Section in y-direction" Dialog box

As an example, Figure F-25 shows values of shear forces  $Q_x$  in y-direction in a specified zone of the raft.

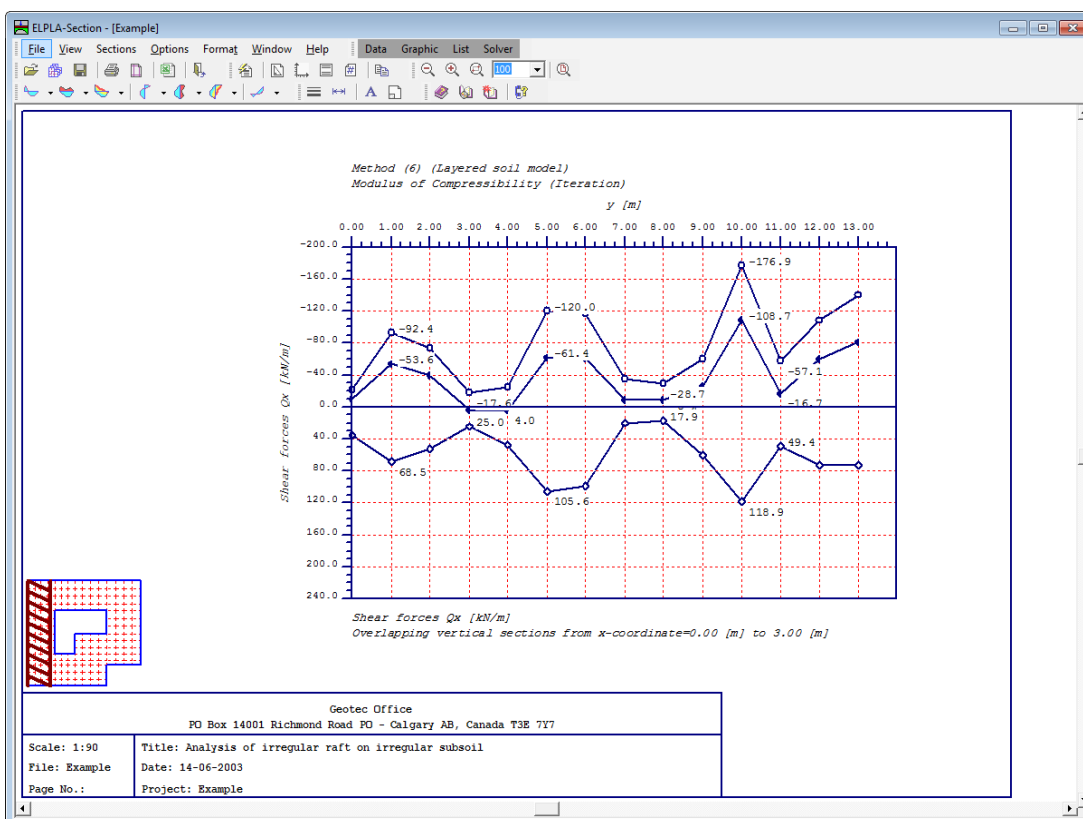


Figure F-25 Sections of shear forces  $Q_x$  in y-direction

## 6.7 Sections Menu—"Arbitrary section" command

By "Arbitrary section in x-direction" command the calculated results (settlements, contact pressures, deformation, internal forces, modulus of subgrade reaction and reinforcement) and input data (additional settlements) can be plotted at any arbitrary section.

When "Arbitrary section" command is chosen, the selection Dialog box shown in Figure F-26 appears. In this Dialog box select one item to draw, then click "OK" Button.

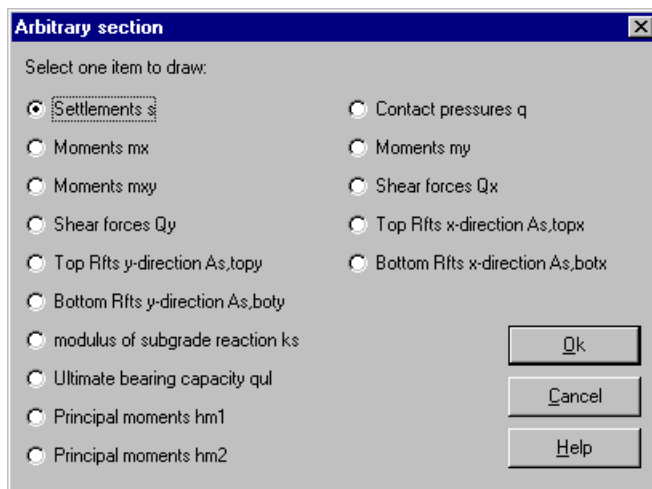


Figure F-26 "Section in x-direction" items

For drawing results at any arbitrary section, ranges of the section are required as shown in Figure F-27.

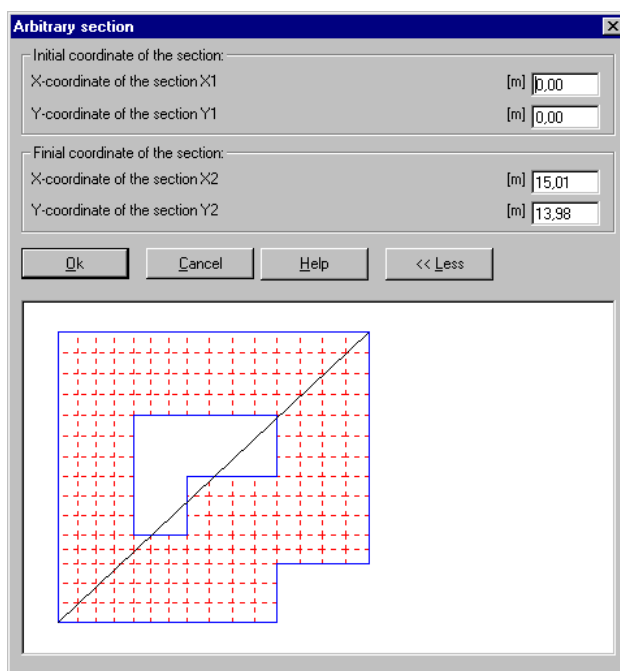


Figure F-27 "Section in x-direction" Dialog box

As an example, Figure F-28 shows an arbitrary section of settlement.

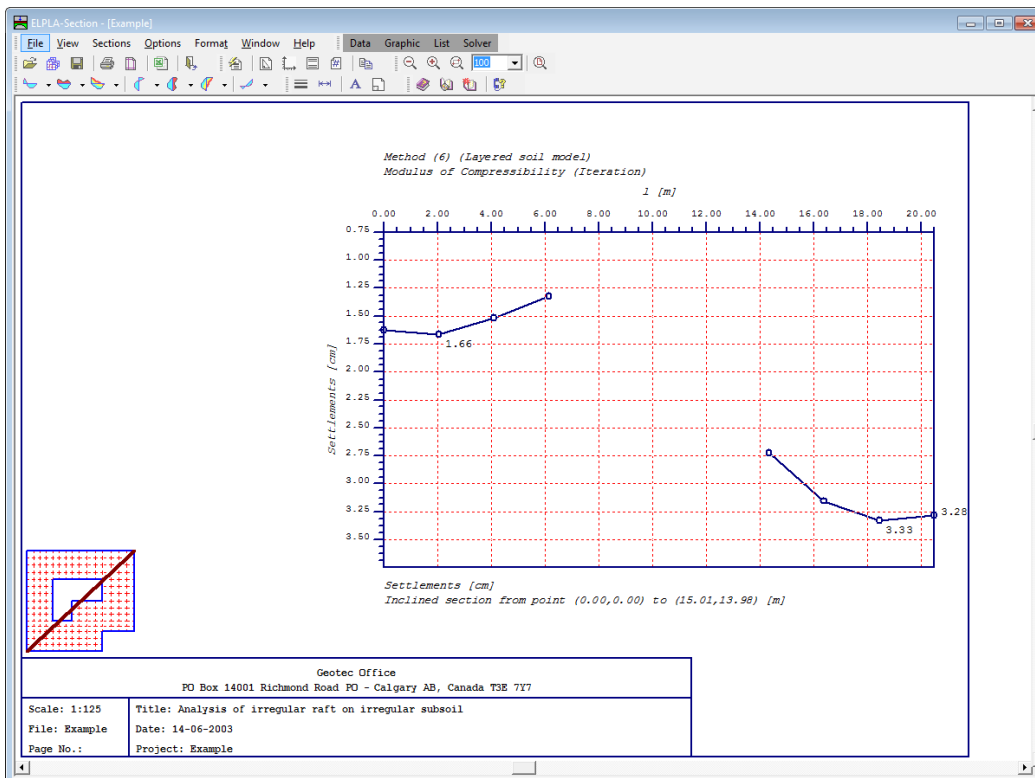


Figure F-28 Arbitrary section of settlement

## 7 Options Menu

The Options Menu has the following commands:

- Plot parameters
- Scale
- Axes
- Title
- Page No.
- Copy

### 7.1 Options Menu—"Plot parameters" command

Plot parameters may be set as default values by the program, or be fully specified by the user. The following plot parameters can be specified (Figure F-29):

- Display grid
- Page with or without frame
- Display values on lines
- Display marks on lines

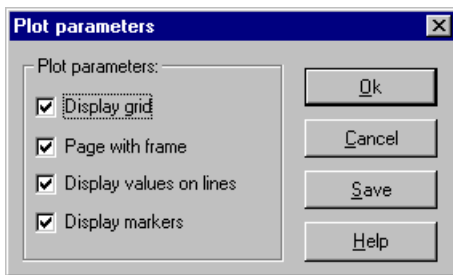


Figure F-29 "Plot parameters" Dialog box

## 7.2 Options Menu—"Scale" command

By "Scale" command the scale factor of the drawing can be defined as shown in Figure F-30. The defaulted value for the scale factor is chosen to pass the active printer-paper format.

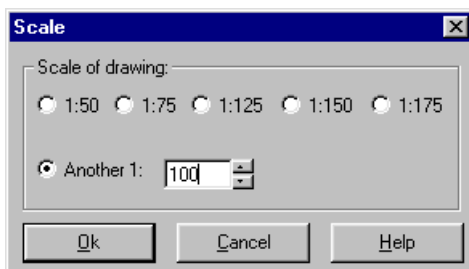


Figure F-30 "Scale" Dialog box

## 7.3 Options Menu—"Axes" command

By "Axes" command scaled axes can be defined on the drawing, Figure F-31.

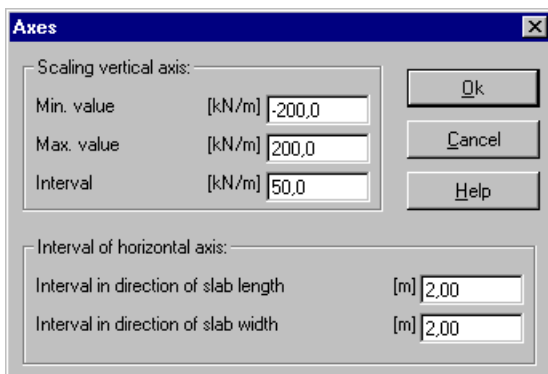


Figure F-31 "Axes" Dialog box

## 7.4 Options Menu—"Title" command

By "Title" command the text data (two line texts above the drawing and two line texts under the drawing) can be defined, Figure F-32. Default texts are:

- A-Title1: Method No.
- A-Title2: Name of method
- U-Title1: Name of drawing
- U-Title2: Ranges that define the section

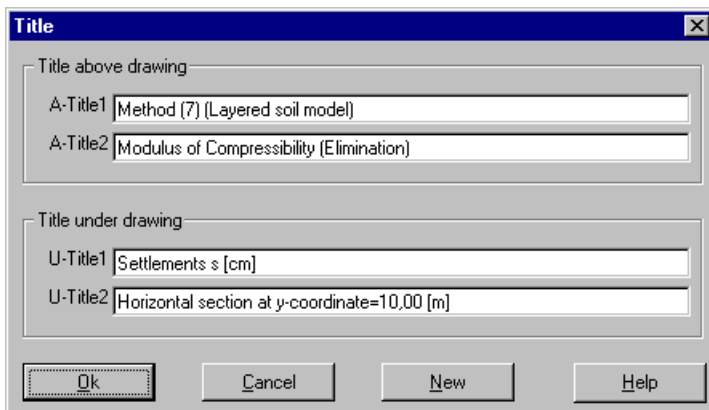


Figure F-32 "Title" Dialog box

### 7.5 Options Menu—"Page No." command

By "Page No." command the page No. can be defined, Figure F-33.

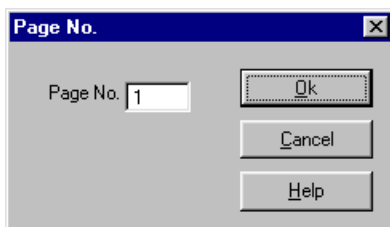


Figure F-33 "Page No." Dialog box

### 7.6 Options Menu—"Copy" command

By "Copy" command the current drawing can be copied in Metafile-Format to Clipboard. Then it can be inserted directly to another Windows programs such as Word, WordPerfect and AutoCAD.

## 8 Format Menu

The Format menu has the following commands:

- Line formats
- Max. ordinate
- Font
- Legend

### 8.1 Format Menu—"Line formats" command

Color, style and thickness of drawing lines can be defined, Figure F-34. The way a line is drawn depends on the setting of the color and style properties. There are available 15 different colors and 5 styles for line formats.



The following list shows the available lines, which can be formatted:

- Grid
- Page boundary
- Identification box
- Axes
- Location of the section
- Sections

Note: The asterisk (\*) matches drawing section number.

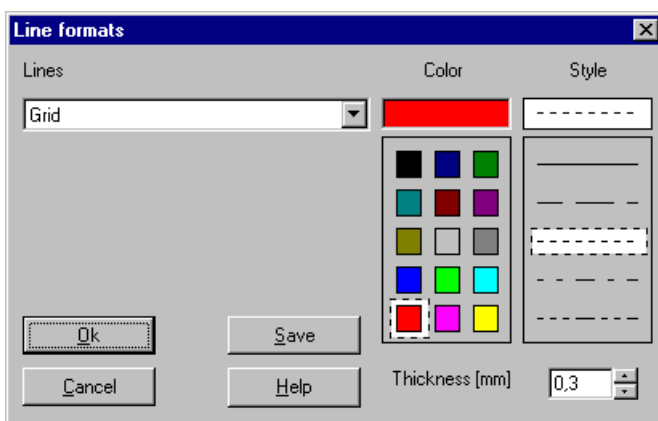


Figure F-34 "Line formats" Dialog box

## 8.2 Options Menu—"Max. ordinate" command

By "Max. ordinate" command the maximum ordinate of the vertical axis and the maximum size of markers can be defined in [mm], Figure F-35.

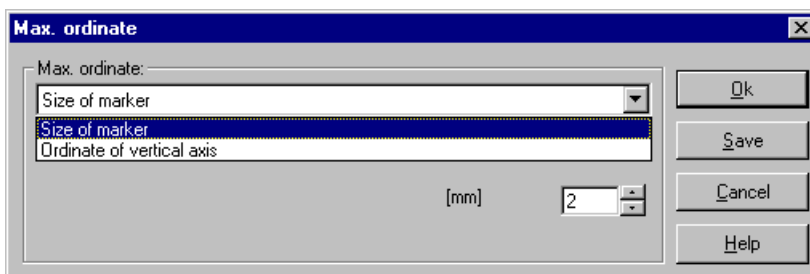


Figure F-35 "Max. ordinate" Dialog box

## 8.3 Format Menu—"Font" command

By "Font" command font size (Figure F-36) and font type (Figure F-37) for the drawing can be defined.

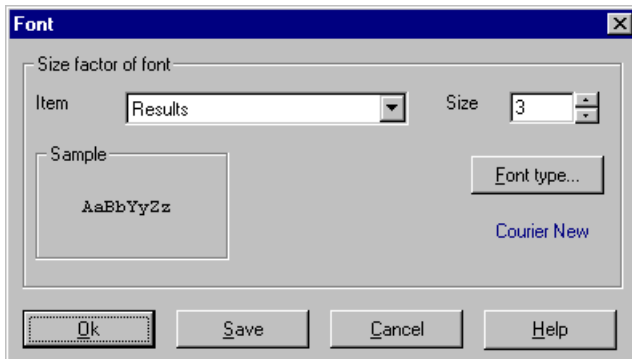


Figure F-36 "Font size" Dialog box

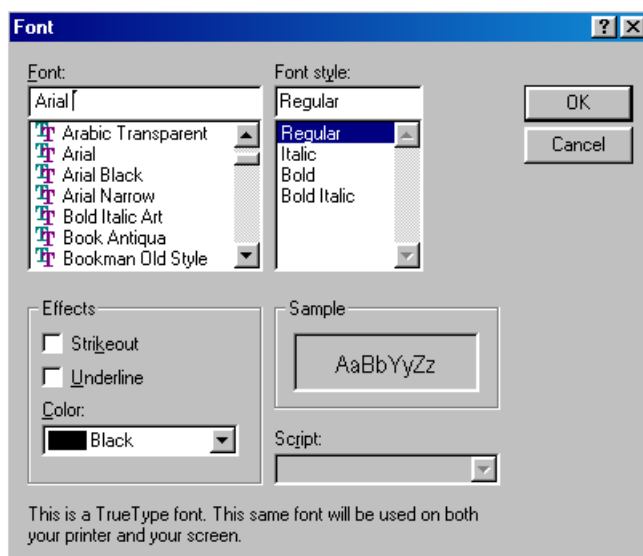


Figure F-37 "Font" Dialog box

#### 8.4 Format Menu—"Legend" command

By "Legend" command the height and width of legends (Identification box, symbol and location of the section) can be specified as shown in Figure F-38.

##### Display legend

In "Display legend" Group box check the legend that you wish to display.

##### Legend size

In "Legend size" Group box the height and width of the legend can be defined.

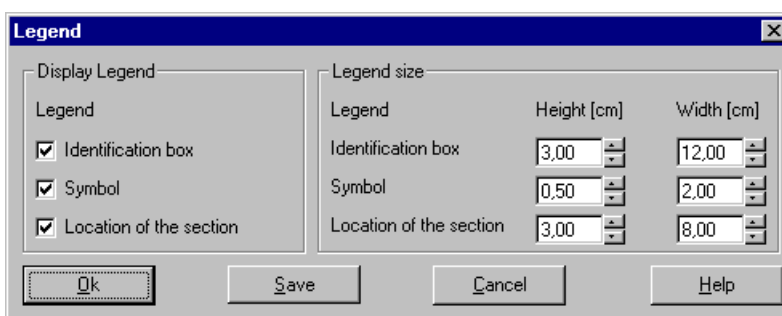


Figure F-38 "Legend" Dialog box

## 9 Window Menu

The Window menu has the following commands:

- Zoom in
- Zoom out
- Zoom window
- Zoom %
- Original size

### 9.1 Window Menu—"Zoom in" command

By "Zoom in" command the size of the drawing on the screen can be reduced.

### 9.2 Window Menu—"Zoom out" command

By "Zoom out" command the size of the drawing on the screen can be increased.

### 9.3 Window Menu—"Zoom window" command

By "Zoom window" command the size of the drawing on a specified area can be increased.

### 9.4 Window Menu—"Zoom %" command

When you choose "Zoom %" command, the following Dialog box appears, Figure F-39.

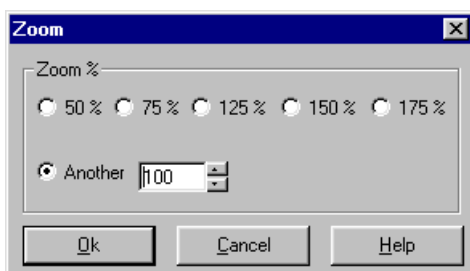


Figure F-39 "Zoom %" Dialog box

By "Zoom %" command the size of drawings on the screen can be specified. Choosing "Zoom %" allows you to increase or decrease the size at which the drawing is displayed. Choosing 100% displays the drawing at its original size. Clicking on the percentage, changes the drawing size to the specified percentage. The drawing can be displayed at any size by typing the desired percentage in the specified Edit box.

### 9.5 Window Menu—"Original size" command

The commands "Zoom in", "Zoom out" and "Zoom %" can change the size of drawing on the screen. The drawing can be displayed in its original size again using "Original size" command.

## 10 Help Menu

The Help Menu commands are:

- Contents
- Short description of ELPLA
- New in ELPLA
- About ELPLA-Section

### 10.1 Help Menu--"Contents" command

"Contents" command displays a help file in HTML-Format containing the complete ELPLA User's Guide, Figure F-40.

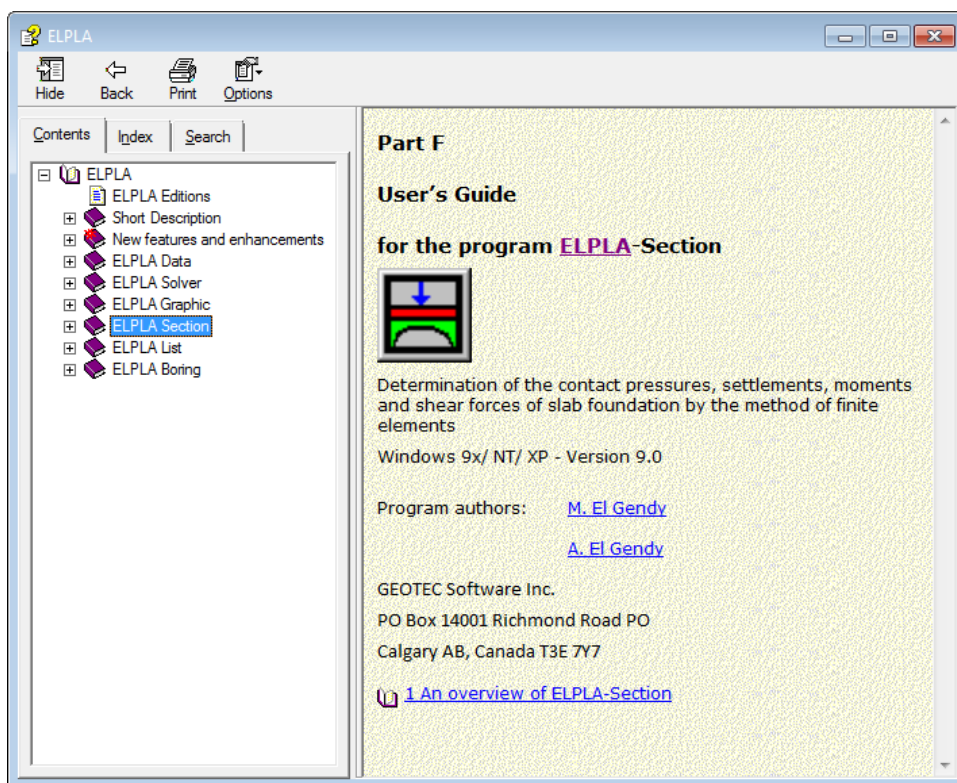


Figure F-40 Menu "Contents"

### 10.2 Help Menu--"Short description of ELPLA" command

"Short description of ELPLA" command gives a short description of ELPLA package.

### 10.3 Help Menu--"New in ELPLA" command

"New in ELPLA" command summarizes the new features and enhancements in ELPLA.

## 10.4 Help Menu–"About ELPLA-Section" command

Clicking the command "About ELPLA-Section" displays the information form of ELPLA-Section as shown in Figure F-41. This gives information about ELPLA-Section and the calculation method of the loaded project.

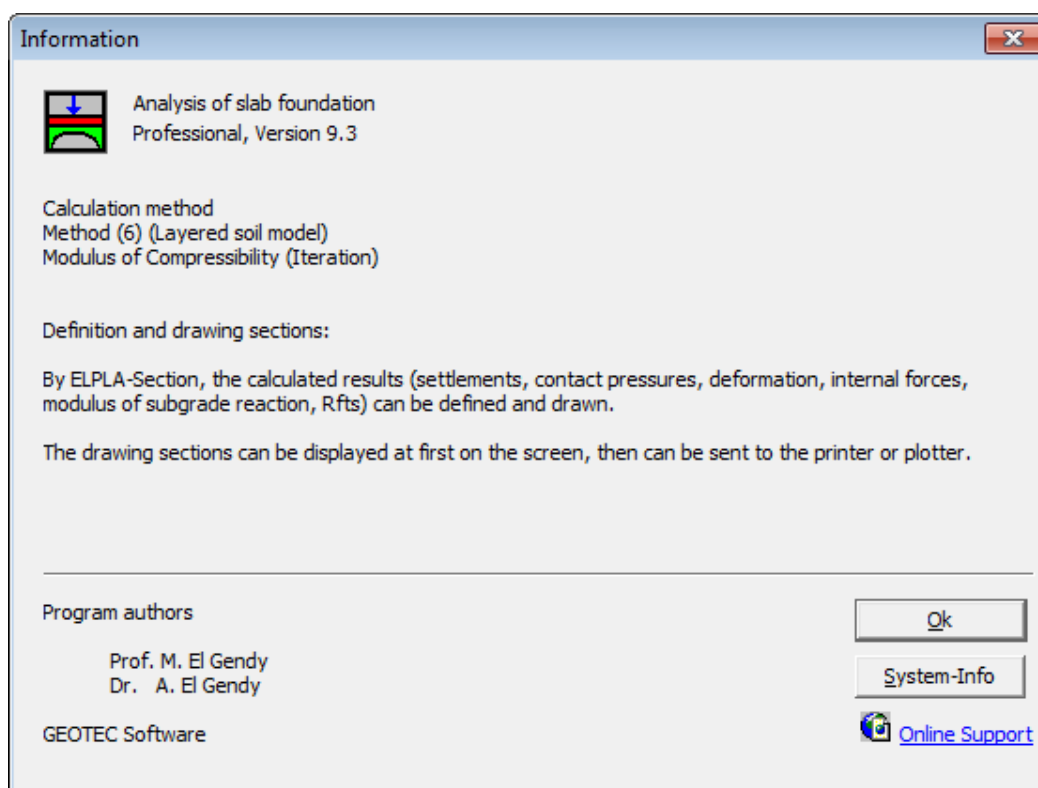


Figure F-41 Information form of ELPLA-Section

## 11 Tips and Tricks

### 11.1 Keyboard

The user can obtain all menu titles and commands also through Shortcut keys. The action of the Shortcut keys is listed in Table F-4 to Table F-11:

Table F-4 Shortcut keys of menu head

Shortcut keys	Action
[Alt+f]	Calling menu head "File"
[Alt+v]	"View"
[Alt+s]	"Sections"
[Alt+o]	"Options"
[Alt+t]	"Format"
[Alt+w]	"Window"
[Alt+h]	"Help"

Table F-5 Shortcut keys of File-Command

Shortcut keys	Action
[Ctrl +o] or [Alt+f] then [o]	Calling command "Open"
[Alt+f] then [c]	"Combination of many projects"
[Alt+f] then [w]	"Make WMF-File"
[Ctrl +p] or [Alt+f] then [p]	"Print"
[Alt+f] then [u]	"Page setup"
[Alt+f] then [s]	"Send to Excel"
[Alt+f] then [1]	Calling the first project from the last four loaded projects
[Alt+f] then [2]	Calling the second project from the last four loaded projects
[Alt+f] then [3]	Calling the third project from the last four loaded projects
[Alt+f] then [4]	Calling the fourth project from the last four loaded projects
[Ctrl+q] or [Alt+f] then [x]	Calling command "Exit"

Table F-6 Shortcut keys of View-Command

Shortcut keys	Action
[Alt+v] then [b]	Calling command "Status bar"
[Alt+v] then [t]	"Tool bars"
[Alt+v] then [t], then [f]	"Tool bars-File"
[Alt+v] then [t], then [s]	"Tool bars-Sections"
[Alt+v] then [t], then [o]	"Tool bars-Options"
[Alt+v] then [t], then [t]	"Tool bars-Format"
[Alt+v] then [t], then [w]	"Tool bars-Window"
[Alt+v] then [t], then [h]	"Tool bars-Help"
[Alt+v] then [t], then [r]	"Reset Toolbar"

Table F-7 Shortcut keys of Sections-Command

Shortcut keys	Action
[Alt+s] then [x]	Calling command "Section in x-direction"
[Alt+s] then [m]	"Max./ Min. values in x-direction"
[Alt+s] then [o]	"Overlapping in x-direction"
[Alt+s] then [y]	"Section in y-direction"
[Alt+s] then [a]	"Max./ Min. values in y-direction"
[Alt+s] then [r]	"Overlapping in y-direction"
[Alt+s] then [a]	"Arbitrary section"

Table F-8 Shortcut keys of Options-Command

Shortcut keys	Action
[Alt+o] then [l]	Calling command "Plot parameters"
[Alt+o] then [s]	"Scale"
[Alt+o] then [a]	"Axes"
[Alt+o] then [t]	"Title"
[Alt+o] then [p]	"Page No."
[Alt+o] then [c]	"Copy"

Table F-9 Shortcut keys of Format-Command

Shortcut keys	Action
[Alt+t] then [l]	Calling command "Line formats"
[Alt+o] then [x]	"Max. ordinate"
[Alt+t] then [f]	"Font"
[Alt+t] then [d]	"Legend"

Table F-10 Shortcut keys of Window-Command

Shortcut keys	Action
[Alt+w] then [i]	Calling command "Zoom in"
[Alt+w] then [o]	"Zoom out"
[Alt+w] then [w]	"Zoom window"
[Alt+w] then [z]	"Zoom %"
[Alt+w] then [r]	"Original size"

Table F-11 Shortcut keys of Help-Command

Shortcut keys	Action
[Alt+h] then [c]	Calling command "Contents"
[Alt+h] then [s]	"Short description of ELPLA"
[Alt+h] then [n]	"New in ELPLA"
[Alt+h] then [a]	"About ELPLA-Section"

## 11.2 Mouse

By double-clicking the left mouse Button on a specified screen position, the user can obtain almost menus of the program.

- By double-clicking on *Legend*, *Firm header*, *Title* or *Project identification*, the corresponding menu appears
- By double-clicking on *Scale* in the identification box, "Scale"-Menu appears
- By double-clicking on *File name* in the identification box, "Open"-Menu appears
- By double-clicking on *Page No.* in the identification box, "Page No."-Menu appears
- By clicking the right mouse Button at any position on the screen, the user can also obtain the Popup- Options-Menu, Figure F-42

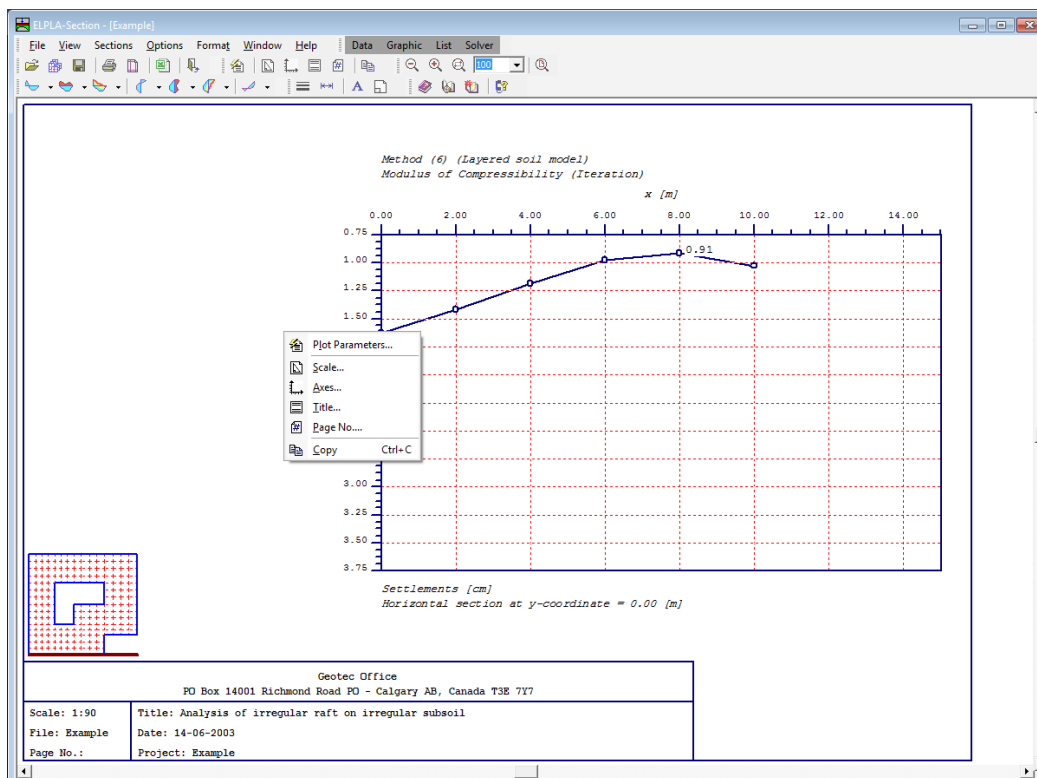


Figure F-42 Menu "Popup- Options"



## 12 Samples for graphical drawings using ELPLA-Section

ELPLA-Section gives the ability to present many different graphical drawings for results. In this paragraph the graphical drawings for results of example problem gb7, an irregular raft on irregular subsoil, is presented.

The pages P1 to P3 show some graphical presentations of example gb7 in different possibilities according to Table F-12. There is also a great number of presentation possibilities that are not consider in this paragraph. Color presentation is also possible by ELPLA-Section.

Table F-12 Graphical drawings for results

Presentation	Page
Contact pressure $q$	P1
Max./ Min. values of moments $m_x$	P2
Overlapping of 3 Sections of shear forces $Q_y$	P3

**13 Index****A**


---

 Axes ..... 22, 24
 

---

**C**
 Combination of many projects ..... 8, 9  
 Copy ..... 22, 23, 31
 

---

**D**
 Display grid ..... 22  
 Display marks ..... 22  
 Display values ..... 22
 

---

**E**
 Exit ..... 8, 11, 30
 

---

**F**
 File ..... 7, 8  
 File groups ..... 5  
 Final result files ..... 6  
 Font ..... 24, 25  
 Format ..... 7  
 Format menu ..... 24
 

---

**G**
 Grid ..... 25
 

---

**H**
 Help ..... 7  
 Help Menu ..... 28
 

---

**I**
 Identification box ..... 25, 32
 

---

**L**
 Legend ..... 24, 26  
 Line formats ..... 24
 

---

**M**
 Main data files ..... 5  
 Make WMF-File ..... 8, 30  
 Max. ordinate ..... 24, 25  
 Max./ Min. values in x-direction ..... 11, 13  
 Max./ Min. values in y-direction ..... 11, 18  
 Mouse ..... 32
 

---

**N**


---

 New in ELPLA ..... 28
 

---

**O**
 Open ..... 8  
 Options ..... 7, 22  
 Original size ..... 27  
 Overlapping in x-direction ..... 11, 15  
 Overlapping in y-direction ..... 11, 19
 

---

**P**
 Page boundary ..... 25  
 Page No. .... 22, 24  
 Page setup ..... 8, 9  
 Plot parameters ..... 22  
 Print ..... 8, 9  
 Project data files ..... 5
 

---

**S**
 Scale ..... 22, 23  
 Section files ..... 5  
 Section in x-direction ..... 11, 12  
 Section in y-direction ..... 11, 16  
 Send to Excel ..... 10  
 Short description ..... 28, 32  
 Shortcut keys ..... 29  
 Size of markers ..... 25  
 Status bar ..... 11
 

---

**T**
 Tips and Tricks ..... 29  
 Title ..... 22, 23  
 Tool bars ..... 11
 

---

**V**
 View ..... 7, 11
 

---

**W**
 Window ..... 7, 27
 

---

**Z**
 Zoom % ..... 27  
 Zoom in ..... 27  
 Zoom out ..... 27  
 Zoom window ..... 27
 

---