



# ROADPAC'14

**PROGRAM RPPP**

**Existing terrain profile**

***User Guide***

**Release 25.2.2014**

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## 1. Introduction

Program “Existing terrain profile” is a part of the RoadPAC program package. The program is used for obtaining of existing terrain profile data and its storage to file .SPP for later using by the program “RP34 Drawing of complete longitudinal profile”. Existing terrain profile file contents either complementary information or complete information. In case of complementary information, the data from .SPP file are added by terrain data along the centreline from terrain cross sections file road .STR. If the file .SPP of existing terrain profile contents full information, then no input data are needed, when the drawing of complete longitudinal profile is elaborated. Further details are available in the manual “Drawing of complete longitudinal profile RP34”. Program EXISTING TERRAIN PROFILE cannot be used for adding data to the file existing terrain cross section file (.STR). For this purpose program “Terrain cross sections” is intended. (RP27).

### 1.1 Processed Data Files

#### Input files:

.VPP - input data

#### Output files:

.LPP - output listing

.SPP - longitudinal profile file

## 2. Input Data

The input data are provided by filling and editing of tables or to click on controls placed on forms appearing on the computer display. Display operation is described in the user guide. See chapter “Introduction”. Forms usually incorporate common control part, graphical part if it is useful and input data part. A Picture box, if is placed on form, serve to display immediate results.

Input data of program existing terrain profile are prepared in two blocks.

### 2.1 Block of control Data

It appears after the selection of "INPUT DATA" in the preceding menu. On the next picture is control data part of form.

Meaning of individual items is following:

**Date** is the date of input data preparation.

**Project Title** and **Road Title** is arbitrary text written in header of output listings.

**File name of existing terrain profile** is not necessary to be specified. In case that file name is not specified the program will use standard name of file 'active road' from main menu. Specified name has priority.

Note:

In further text are files named 'road .extension'. Name 'road' is either the name written in table or name of 'active road' specified in main menu.

## 2.2 Block existing terrain profile

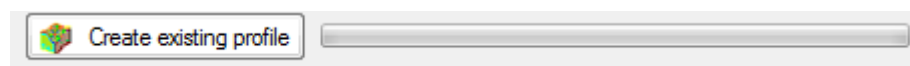
It comprises next table.

RP	Chainage(km)	Elevation(m)
	0,000000	228,440
	0,028018	227,660
	0,032286	227,550
	0,036033	227,470
	0,036608	227,460
	0,039198	227,410
	0,056162	227,060
	0,059366	226,990
	0,062738	226,920

One point of profile is specified on one row. Number of points specified in the table is not limited but the program “RP34 Drawing of complete longitudinal profile” is limited by 8000 points of existing terrain along the centreline.

Each point of existing profile is defined by the **chainage** of road in kilometres and by **elevation/level** in meters above sea level. The points in table need not to be in ascending order of chainage. The program “RP34- Drawing of complete longitudinal profile” will sort the points itself. The table content can be also loaded from independently prepared files (with fixed format F10.6, F8.2 or free format where values on the each line are separated by space).

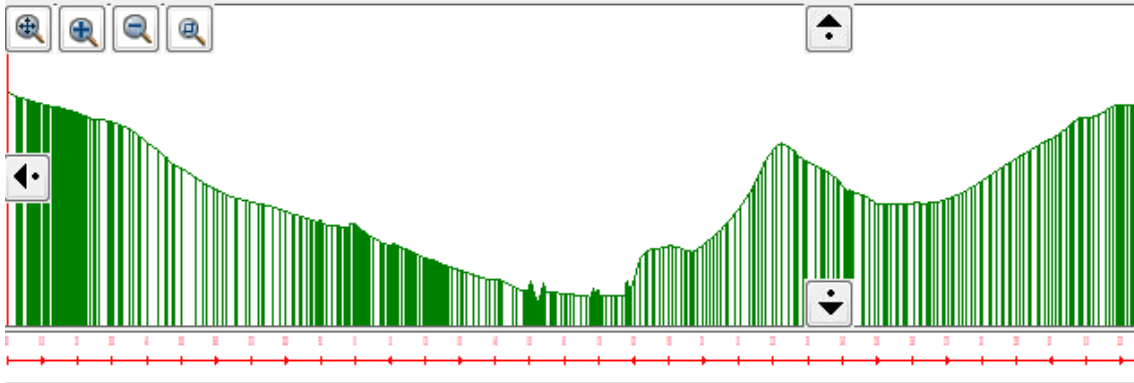
When the program works in sequence of existing terrain profile scanned above DTM surface, the tables are automatically filled from the file .VPP. This file (VPP) is created by function „Scan longitudinal section“. See program DTM. Filling of table is necessary in case that input data road .VPP is not exists yet or digital terrain model is not available. When the file road .VPP (DTM file) exists the program loads content of this file (VPP) to table.



If user clicks on this button, program will directly scan existing terrain profile over selected DTM surface in memory without any projection. It is quick and shortest way.

When the user scans a new profile from adapted DTM and an old one already exists, it is necessary to delete old file .VPP by <Delete table> button first. Then the program loads modified profile.

Current content of table is immediately displayed on picture box placed in central part of the form.



### 3. *Description of output listing*

The output printout is generated in the course of computation in the file "road" .LPP. Its printing can be controlled from the main menu of the RoadPAC.

Printing configuration includes following information:

- 1) Protocol of output file 'road' .SPP
- 2) Listing of file existing terrain profile 'road' .SPP. On one line is specified one point of longitudinal profile. First information is point chainage in kilometers the second one is level in meters above sea level.

### 4. *Warning messages*

The program differentiates between fatal errors, which usually cause program termination with unusable results and formal errors that are handled by alternate solution. Fatal errors are marked by \*\*\* in reports and formal errors are marked by \*\*. The following table contains list of warning messages and comments to alternate solution:

Text of message	Alternate solution
*** Leading line is missing * PP	
** First line ignored	
*** Between leading data read no marked line *	
*** Premature data end	