



# Slide 7.0



## WHAT IS SLIDE?

*Slide* is a powerful, user-friendly, 2D **limit equilibrium** slope stability analysis program for **all types of soil and rock slopes**, embankments, earth dams, and retaining walls. *Slide* includes **built-in finite element groundwater seepage** analysis, probabilistic analysis, multi-scenario modeling, and support design.

## WHY CHOOSE SLIDE?

- **Easy to create and edit** complex model geometry
- Multi-scenario modeler allows the user to **run multiple models in a single *Slide* file**
- **Built-in finite element groundwater seepage** analysis
- Probabilistic analysis allows **assignment of statistical distributions** to any input parameter, as well as **advanced correlation** of parameters
- Option to **define the soil profile first** and "cut out" the slope geometry afterwards
- Option to define the **soil profile from borehole data**
- Over a dozen **material strength models** for soil and rock (e.g. Anisotropic, Generalized Hoek-Brown, SHANSEP)
- **Seismic analysis options** including Newmark method
- Advanced **search algorithms**
- Numerous **support type options** (e.g. end-anchored bolt, tieback, geotextiles, piles) including integration with the new *RSPile* module
- Extensive **results viewing and report generation** capabilities (e.g. plot slip surface data, contours)
- Ability to **import DXF, RS<sup>2</sup>, SLOPE/W, XSTABL** files

## PRICES & LICENSING

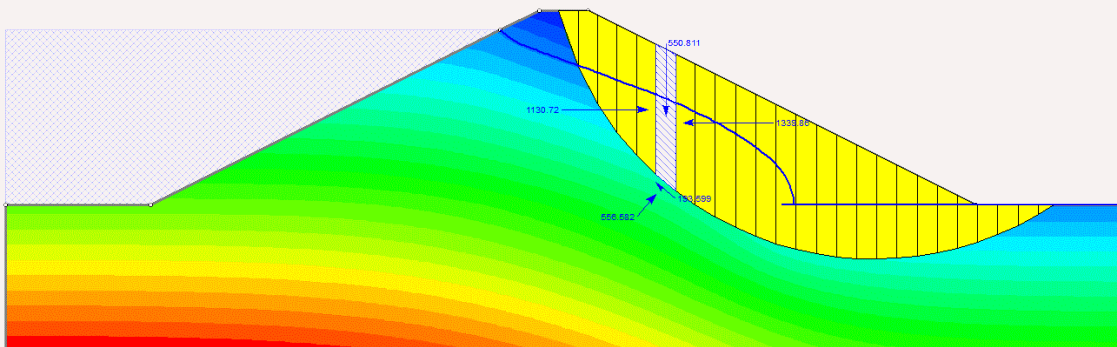
**Personal License:** Locked to one computer.

- Personal Perpetual: **USD \$2495**  
Purchased outright.
- Personal Lease: **USD \$1295/year**  
Leased annually. Includes maintenance and upgrades.

**Flexible License:** Installed on any number of machines. The license file sits on the server.

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Maintenance can be purchased annually for our Perpetual Licenses at 15% of the license cost. With Annual Maintenance you will receive free upgrades and technical support. Contact us at [software@rocscience.com](mailto:software@rocscience.com)!



# Technical Specifications

## ANALYSIS METHODS

- Bishop simplified
- Corps of Engineers #1
- Corps of Engineers #2
- Eurocode 7 design standard
- GLE/Morgenstern-Price
- Janbu corrected
- Janbu simplified
- Lowe-Karafathi
- Ordinary/Fellenius
- Sarma vertical & non-vertical slice
- Spencer

## DATA INTERPRETATION

- annotation and dimensioning tool kit
- contour groundwater results (total head, pressure head, pore pressure)
- export image files
- export to Excel
- filter slip surfaces
- interactive data tips
- plot factor of safety along slope
- plot results directly on slip surface
- plot safety factor vs. time for transient analysis
- plot slice data
- plot slip surface data
- print models at scale
- support force diagrams

## FINITE ELEMENT GROUNDWATER SEEPAGE ANALYSIS

- constant or time dependent boundary conditions
- discharge sections
- mapped meshing
- multi-stage transient groundwater seepage
- one-click automatic meshing
- saturated/unsaturated
- show mesh quality
- steady state seepage
- view groundwater and slope stability results simultaneously

## LOADING

- distributed loads
- line loads

## MODELING

- borehole entry
- CAD drawing tools
- DXF import / export
- geometry from soil profile
- multi-scenario modeling
- one-click material assignment

## PORE PRESSURE DEFINITION

- calculate excess pore pressure using B-bar method
- choose grid interpolation method
- finite element groundwater seepage analysis
- phreatic surfaces
- piezometric lines
- pore pressure grids - total head, pressure head, pore pressure
- rapid drawdown analysis
- Ru coefficients

## PROBABILISTIC ANALYSIS

- advanced correlation between input parameters
- critical probabilistic surface
- distributions - Normal, Uniform, Triangular, Beta, Exponential, Lognormal, Gamma
- equate material properties
- histogram, cumulative and scatter plots
- Monte Carlo or Latin Hypercube simulation
- probability of failure
- reliability index
- sensitivity analysis
- statistical correlation
- use any input parameters as random variables

## RAPID DRAWDOWN METHODS

- Army Corps Engineering 2 stage
- Duncan, Wright, Wong 3 stage
- Effective stress using B-bar
- Lowe and Karafiath

## SEARCH METHODS

- auto-refine search
- block search
- Cuckoo search
- grid search
- non-circular surface optimization

- path search
- simulated annealing
- slope search

## SEISMIC OPTIONS

- compute Kc critical acceleration
- Newmark displacement (rigid, coupled, de-coupled)
- pseudo-static analysis
- staged pseudo-static analysis

## SLIP SURFACE OPTIONS

- circular surfaces
- composite surfaces
- non-circular / planar surfaces
- tension cracks

## STRENGTH MODELS

- Anisotropic Function
- Anisotropic Linear
- Anisotropic Strength
- Barton-Bandis
- Discrete Function
- Drained-Undrained
- Generalized Anisotropic
- Generalized Hoek-Brown
- Hoek-Brown
- Hyperbolic
- Infinite Strength
- Mohr-Coulomb
- No Strength (i.e. water)
- Power Curve
- SHANSEP
- Shear / Normal Function
- Snowden Modified Anisotropic Linear
- Tension Cutoff for several models
- Undrained ( $\Phi = 0$ )
- Unsaturated Shear Strength
- Vertical Stress Ratio

## SUPPORT

- active vs. passive anchors
- back analysis (compute required support force for safety factor)
- easily define/edit patterns
- end-anchored bolts
- geotextiles
- grouted tiebacks
- piles and micropiles
- RSPile module
- soil nails
- user-defined support model