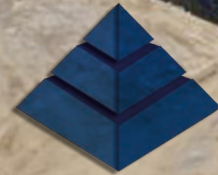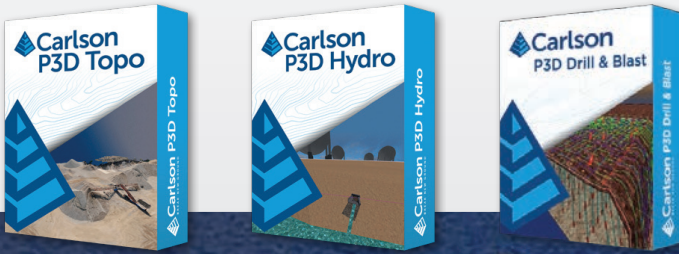# Precision 3D

Carlson
BREAK NEW GROUND

"Carlson Precision 3D is a game changing, re-al-time design tool based on open data stan-dards that can quickly augment ex¬isting user workflows," adds Crews. "Many of the ad-vanced concepts have been talked about in the industry for many years and we are proud to be bringing these concepts into reality. Consider the bar raised."

Remarkably easy-to-use 3D engineering design software

- P3D is multithreaded and performance will in-crease with core count.

- P3D is 64bit and will use all available RAM avail-able to support large models.

- P3D uses advanced 3D shaders and performance will increase with graphics cards that process these faster.
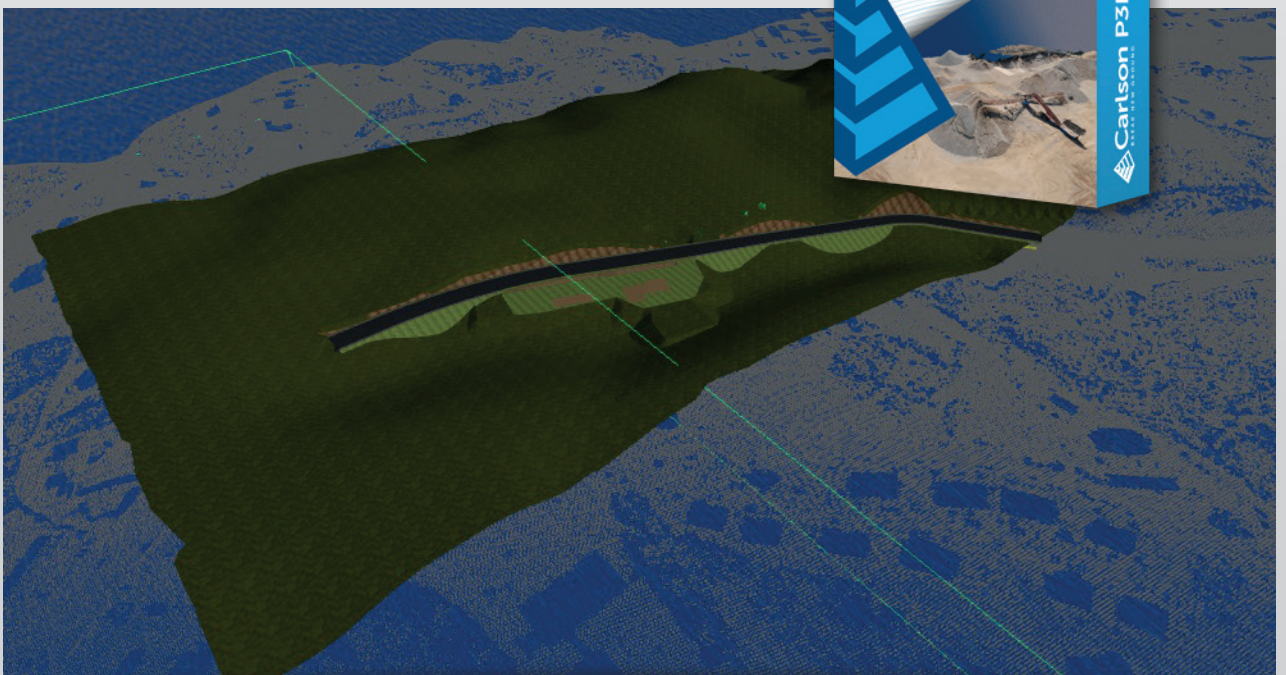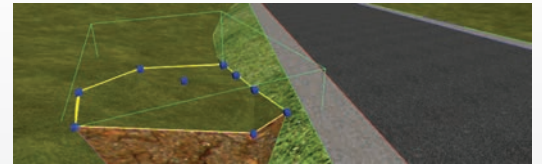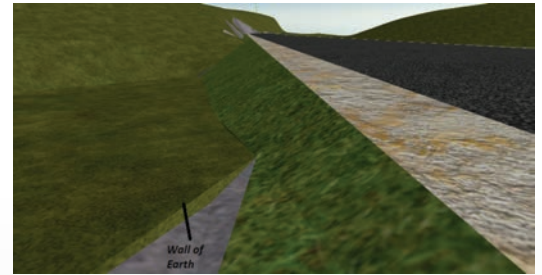

CARLSON
PRECISION **3D**

BREAK NEW GROUND

Carlson Precision 3D Topo

Bridge the gap
between drones and CAD

Designed for use by surveyors, civil engineers, and contractors, Precision 3D Topo allows users to import survey data, points, polylines, surfaces, point clouds, both traditional LIDAR and aerial drone survey data, and more from a wide variety of programs and entities to create useable 3D surfaces.

- Import Aerial Photogrammetry and Lidar Files: LAS, LAZ, PTS, E57, XYZ, PLY, PCD
- Load multiple files at once with automated merging, filtering
- Easy Pointcloud Editing: Merge, Crop, Delete by polyline
- Powerful Point Filters: Thinning, Bareground, Outlier, Shadow Points
- Save/Export Surface: Carlson TIN, LandXML, Trimble TTM and Topcon TN3

P3D Topo enables much faster design and analysis in the 3D environment than the many step processes of the CAD world. Its 3D visualization and design tools save lots of time and reduce the chance of errors, making it an obvious tool to improve a company's bottom line, from a surveyor creating a 3D model from drone data to a contractor trying to perfect files for use for machine control.
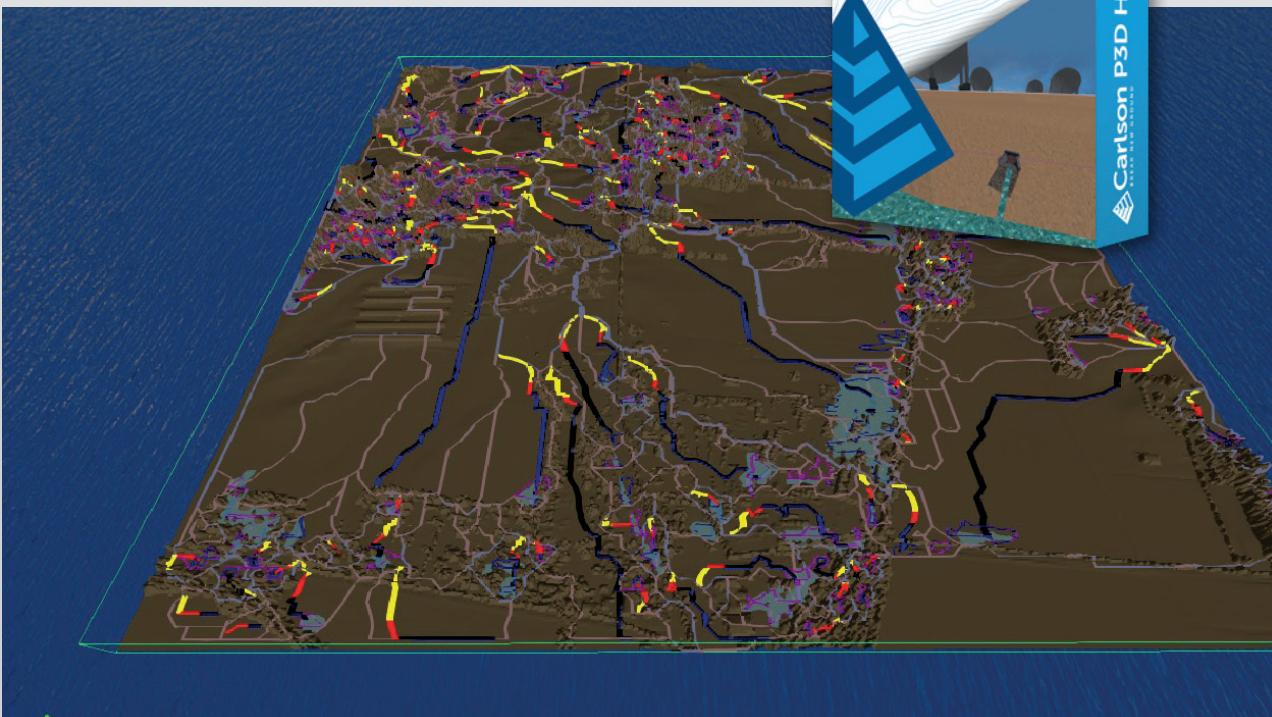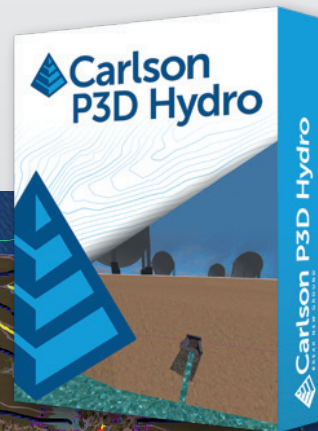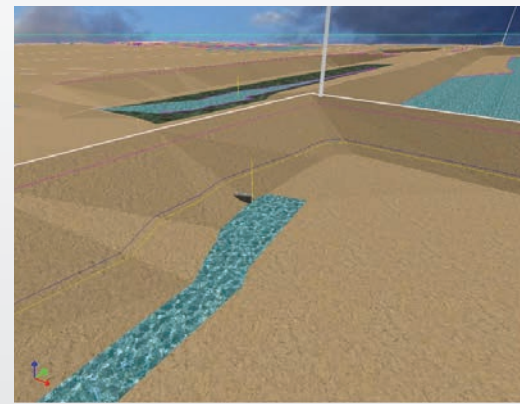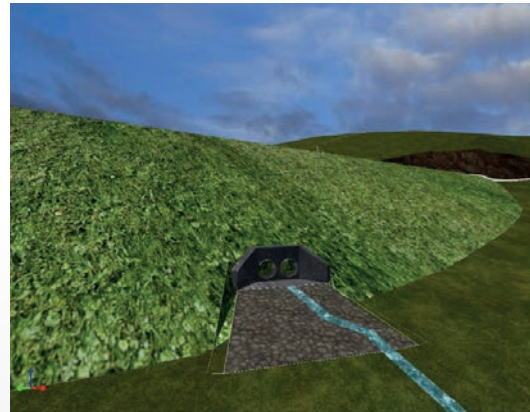
Carlson Precision 3D Hydro

Utilize the Newest Technology for Dynamic Design

A smart, new software, with game-like ease of use, providing users tools for rigorous, precise engineering in 3D.

- Speed design with revolutionary drag and drop options for selecting headwalls and endwalls
- Delineate drainage and ponding areas
- Calculate runoff from surface models
- Size culverts and place at low points
- Fit headwalls from Headwall Library using solid modeling
- Grade surfaces for both upstream and downstream designs
- Move culverts and headwalls to new locations with full dtm restoration
- Choose from multiple barrel options
- Integrate easily into Carlson Civil Suite, AutoCAD and Microstation

As it is multithreaded, P3D performance will increase with core count. In addition, because P3D is 64 bit, it will use all available RAM to support large models. The use of advanced 3D shaders will also increase performance when used with graphic cards that process these faster.

Carlson Precision 3D Drill & Blast

A Dynamic Software with Real-Time 3D Editing and Instant Feedback

- Import surface files from sources such as XYZ, XML, Carlson's TIN or point cloud scans to begin the design;

- Create blasthole patterns with many options such as square or staggered for both mine benching or construction design;

- Real-time feedback showing distances from end walls or highwall face;

- Edit single holes, entire rows or columns for azimuth, dip angle, depth;

- Set a tolerance for highwall face distance to ensure a safe distance. Color coded warnings show if part of the hole is too close, or too far from the face;

- Simulate blasthole loading with different materials and densities. Report and calculate the volumes for the entire design, including presplitting holes;

- Color and hatch the blastholes based on highwall proximity or loading decks to compare to the surfaces;

- Export final blasthole pattern to Excel or CSV and Carlson Machine Control DRL for GNSS guided drilling;

- Import an "As-Drilled" pattern from CSV or DRL file and compare with the design to make sure all blastholes are drilled within a specified tolerance of the design blastholes, and;

- Create reports showing pattern layout, graphic PDF maps of the design with labels and transparent textures in 3D.
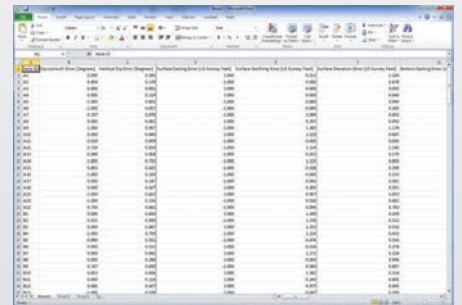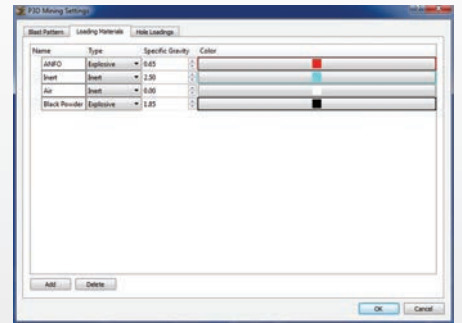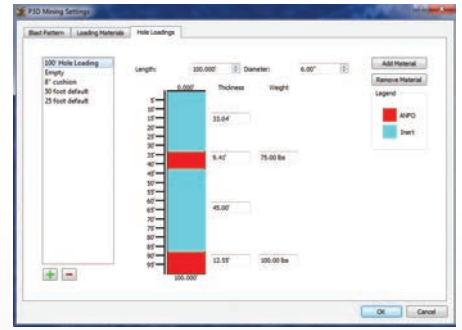
System Requirements for Carlson P3D
- OS: Windows 7 64-Bit or later.
- CPU: Intel® Core™ i7 or equivalent.
- 16GB ram min, recommend 32GB if processing large point clouds
- Nvidia GTX 870, AMD comparable or better

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