

CARLSON TAKEOFF 2009

Key Features

Standard Features

- Runs on AutoCAD 2009 engine.
- 2D to 3D conversion routines for linework and spot elevations.
- Digitizing routines.
- Calculates volumes and material quantities.
- Cut/Fill Color Maps and labels.
- Surfaces are modeled by triangulation
- 3D Drive Over Simulation
- Easy to use: automated routines with reduced prompting

Feature Groups

File Import/Export:

- AutoCAD DWG
- DXF
- LandXML
- Point Data (LDT, Carlson, CG, Sokkia, Leica, Geodimeter, TDS, Benchmark)
- Raw Data (CG, Fieldbook, Sokkia, Leica, Geodimeter, TDS, Caice, SDMS, Nikon, SMI)
- Centerline Data (Terramodel, Geodimeter, Geopak, Sokkia, Softdesk, Leica)
- Profile Data (Caice, Terramodel, Softdesk, Sokkia, Leica)
- Section Data (Agtek, Ceal, Geopak, Igrds, Moss, RoadCalc, SMI, Softdesk)

CAD Edit Tools:

- Layer Controls
- Unlimited Undo/Redo
- Erase, Move, Copy, Offset, Trim, Extend, Explode, Break, Rotate, Scale, Align
- Polyline Utilities

Drawing Cleanup:

- Remove empty layers
- Remove invalid linework
- Join broken linework
- Reduce Polyline vertices
- Set out of range elevations to zero
- Erase hatch entities

Boundary Polylines:

- Set boundary Polyline for site
- Set exclusion areas
- Display hatch of boundary areas



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Key Features of Carlson TakeOff 2009 – Continued

Topsoil Removal/Replacement:

- Set amounts for topsoil removal and replacement
- Set areas for topsoil removal and for replacement
- Display hatch areas for topsoil removal and replacement
- Calculate topsoil removal and replacement volumes and areas

Overexcavate Surfaces:

- Model overexcavate surfaces
- Adjust overexcavate surfaces within perimeter polyline
- View overexcavate surface
- Report overexcavate cut volume

Subgrades:

- Define subgrade areas by closed Polylines on specified layers
- Define subgrade depths by layer
- Adjust design surface by subgrade depths within subgrade areas
- Handles multiple subgrade areas nested within each other

Existing/Design Surfaces:

- One step routines to make existing and design surfaces from entities on specified layers
- Surface Manager to support multiple existing/design surfaces
- Adjust design surface vertically within perimeter Polyline

Volumes:

- Calculates cut/fill volumes for entire site or within perimeter Polyline
- Calculates volumes for a series of elevation stages
- Apply shrink/swell factors
- Volume report includes cut/fill volumes and areas, strata volumes, topsoil removal/replacement and over-excavate volumes

Material Quantities:

- Reports volume, area, length and/or count values for drawing entities grouped by entity layer name
- Option for user-defined attributes to apply by layer
- Supports export to Excel

Draw Tools:

- Points
- 2D/3D Linework
- Text
- Hatch
- Curves
- Title Block, North Arrow, Barscale
- Boundary Polyline
- Shrink-Wrap Polyline
- Building Envelope Polyline



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Key Features of TakeOff 2009 - Continued

2D To 3D Tools

- Change Elevations By Selected Entities
- Spot Elevations
- Edit-Assign Polyline Elevations
- 2D To 3D Polyline (By Points, Text or Text With Leader)
- Contour Polylines (Multiple In Series, Selected or From Labels)
- Pad Polylines By Interior Text

Inquiry Tools:

- Surface Inspector (Surface elevations, cut/fill)
- Drawing Inspector (Elevations, Layers, Polyline data)
- Areas

Drillholes:

- Import Drillhole data
- Input-Edit Drillholes
- Drillhole Data Reports
- Model Strata Surfaces
- Calculate Strata Quantities
- Visualize Strata Cut Areas

Digitize:

- Supports any digitizer supported by AutoCAD
- Spot Elevations
- Contours
- 2D/3D Linework
- Sections
- End Areas
- Points

Road Features:

- Centerlines (Create, Import, Draw)
- Profiles (Create, Import, Draw, Report)
- Sections (Create, Import, Draw, Report)
- Calculate Section Volumes
- Calculate End Areas
- Templates
- Road Design files for transitions, super elevation
- Process Road Design for final sections, final contours and volumes



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