

2005 CAD/Surveying Software Survey

PROGRAM/VERSION	Autodesk Survey 2006	Autodesk Civil 3D 2006	Autodesk Civil Design Companion 2006	Autodesk Land Desktop 2006	InRoads Survey 2005	InRoads Site Suite 2006	InRoads Suite 2007
MANUFACTURER	Autodesk	Autodesk	Autodesk	Autodesk	Bentley Systems Inc.	Bentley Systems Inc.	Bentley Systems Inc.
WEB ADDRESS	www.autodesk.com	www.autodesk.com	www.autodesk.com	www.autodesk.com	www.bentley.com	www.bentley.com	www.bentley.com
Price	Call for quote	Call for quote	Call for quote	Call for quote	Call for quote	Call for quote	Call for quote
Discounts for multiple copies?	Yes	N/A	Yes	Yes	Yes	Yes	Yes
List types of documentation included with software.	Electronic & printed	Electronic & printed	Electronic & printed	Electronic & printed	[1]	[1]	[1]
Can the software installation and data be server based?	No	No	No	No	Yes	Yes	Yes
OPERATING SYSTEMS							
Windows 95/98/ME? (Specify which.)	No	No	No	No	No	No	No
Windows NT/2000/XP? (Specify which.)	2000/XP	2000/XP	2000/XP	2000/XP	Win 2000/XP	Win 2000/XP	Win 2000/XP
GDI+ and .NET support?	Yes for .NET [43]	No	No	No	.NET	.NET	.NET
Other: UNIX, Macintosh, Linux, CE, Pocket? (Specify which.)	N/A	No	No	N/A			
SYSTEM AND PROJECT SETUP							
Project setup assistance or wizard?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Can Settings be established for network computers?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Support for:							
Map projections?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Datum transformations?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Geoid models?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
USPCS?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Open access to databases?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
COGO CAPABILITIES							
Do the point objects have intelligence? (See Note A on p. 57)	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Can points be chosen with selectable snap options?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Is there an external point database?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Are user-definable point groups supported?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Are multiple, persistent groups supported?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Is point sharing between groups supported?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Can point ranges be locked to prevent access by others?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Do point data, blocks and text rescale when scale changes?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Are COGO operations and data editing supported via command line?	Yes	Yes	Yes [43]	Yes	Yes	Yes	Yes
Does the software have batch file capabilities?	Yes	No	Yes [43]	Yes	Yes	Yes	Yes
TRAVERSE ANALYSIS							
Compass (Bowditch), Transit and Crandall's Adjustment supported?	Yes	N/A	Yes [48]	Yes [48]	Yes	Yes	Yes
Least squares analysis and adjustment? (2D, 3D or No)	Yes	N/A	Yes [48]	Yes [48]	Yes	Yes	Yes
Least squares analysis and adjustment of networks?	Yes	N/A	Yes [48]	Yes [48]	Yes	Yes	Yes
Are reports available?	Yes	N/A	Yes [48]	Yes [48]	Yes	Yes	Yes
ELECTRONIC FIELD RECORDERS (DATA COLLECTORS)							
Number of data collectors/formats supported? Specify.	More than 60 [44]	N/A	Yes [48]	Yes [48]	[2]	[2]	[2]
Are GPS recorders supported? If yes, specify whether raw data is supported from the data collector, receiver memory or both.	[45]	N/A	Yes [48]	Yes [48]	No	No	No
If GPS receivers are supported, how many brands? (List if desired.)	[44]	N/A	Yes [48]	Yes [48]	Yes	Yes	Yes
Is Face1/Face2 or doubling the angle supported?	Yes	N/A	Yes [48]	Yes [48]	Yes	Yes	Yes
Automatic symbology and linework supported for upload and download? (Specify upload, download, both or neither.)	Yes	N/A	Yes [48]	Yes [48]	Yes	Yes	Yes
Is GPS construction machine control supported?	Yes	N/A	Yes [48]	Yes [48]			
DTM CAPABILITIES							
Can multiple surfaces be open and accessed simultaneously?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Support TINs that accommodate representation and calculations (such as volumes) of such features as escarpments, mines, tunnels, etc.?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Compute volume to specific elevation or other surface?	Yes [43]	Yes	Yes [43]	Yes	No	Yes	Yes
Are contour smoothing algorithms user selectable?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Are TIN editing capabilities supported?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Is there an audit trail to track TIN editing?	Yes [43]	No	Yes [43]	No	No	No	No
USGS Digital Elevation Models supported?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Soft breaklines supported?	No	No	Yes [43]	Yes	Yes	Yes	Yes
Sharing, locking and save as supported for surface management?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Earthwork take-offs supported?	Yes [43]	Yes	Yes [43]	Yes	No	Yes	Yes
Prismoidal based earthworks supported?	Yes [43]	Yes	Yes [43]	No	Yes	Yes	Yes
Gridded earthworks methods supported?	Yes [43]	No	Yes [43]	Yes	No	Yes	Yes
Section method earthworks supported?	Yes [43]	No	Yes [43]	Yes	No	Yes	Yes
Automatic watershed or drainage divide computations included?	Yes [43]	No	Yes [43]	Yes	No	Yes	Yes
Surface analysis routines supplied with the software?	Yes [43]	Yes	Yes [43]	Yes	No	Yes	Yes
3D surface viewing supported?	Yes [43]				Yes	Yes	Yes
DESIGN CAPABILITIES							
Can alignments be designed or edited?	Yes [43]	Yes	Yes [43]	Yes	No	Yes	Yes
Can alignments be drafted or annotated?	Yes [43]	Yes	Yes [43]	Yes	No	Yes	Yes
Roadway templates or string theory support?	Roadway templates	Yes	Roadway templates	Yes [49]	No	Yes	Yes
Is there an external route alignment database?	Yes [43]	Yes	Yes [43]	No	Yes	Yes	Yes
Access alignments within the same project simultaneously?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Can profiles and vertical alignments be generated?	Yes [43]	Yes	Yes [43]	Yes	Yes	Yes	Yes
Symmetrical and asymmetrical vertical curves supported?	Symmetrical curves [43]	Yes	Symmetrical only	Yes [49]	Yes	Yes	Yes
Design drafting of storm, sanitary and waterlines supported?	Yes [43]	Yes	Yes	Yes [49]	No	Yes	Yes
Parametric design supported?	No	Yes	Yes	Yes [49]	Yes	Yes	Yes
DRAWINGS (SHEETS)							
User defined templates?	Yes [43]	Yes	Yes	Yes	Yes	Yes	Yes
Are templates page size/layout independent? (Text blocks, etc. automatically reposition.)	No	Yes	Yes	Yes	Yes	Yes	Yes
Dynamic resizing of scalebars and title blocks?	No	Yes	Yes	Yes	Yes	Yes	Yes
Dynamic legend? (Automatically includes all used symbols.)	No	Yes	Yes	Yes	Yes	Yes	Yes
Dynamic line and curve tables?	Yes [43]	Yes	Yes	Yes	Yes	Yes	Yes
Reference survey data to images by picking reference points?	Yes [46]	Yes	No	No	Yes	Yes	Yes
Automatic clipping for placing annotations, labels and notes?	No	Yes	Yes	Yes	Yes	Yes	Yes
Can lines be trimmed to a symbol and/or broken and still maintain the true length in the database?	Yes [43]	Yes	Yes	Yes	Yes	Yes	Yes
Is hatching supported?	Yes [43]	Yes	Yes	Yes	Yes	Yes	Yes
— If yes, can hatch patterns contain non-linear objects such as symbols or blocks?	Yes [43]	Yes	Yes	Yes	Yes	Yes	Yes
Can points and curvilinear geometry labeling be customized?	Yes [43]	Yes	Yes	Yes	Yes	Yes	Yes
Associative/dynamic labeling for linework and points supported?	Yes [43]	Yes	Yes	Yes	No	No	No
Associative/dynamic labeling across multiple drawings?	Yes [43]	Yes	Yes	Yes	No	No	No
CUSTOMIZING ABILITIES							
Can the interface, menus or toolbars be customized?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Databases customizable?	No	No	No	No	Yes	Yes	Yes
Scripting/add-on support provided?	Yes [47]	Yes			Yes	Yes	Yes
FILE IMPORT/EXPORT ABILITY							
Are multi-version DWG/DXF import/exports supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is XML supported for the CAD graphics?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are Microstation V7 and V8 supported?	Yes [43]	Yes	Yes [43]	Yes, translation	Yes	Yes	Yes
ASCII coordinate file?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are Arcview, ArcInfo Coverage and Shape file transfers supported?	Yes [43]	Yes	No	Yes [50]	No	No	No
Image Files (BMP, JPG, etc.)? Specify.	Yes [46]	BMP, JPG, TIF	No	BMP, JPG, TIF	Yes	Yes	Yes
FUNCTIONALITY EXTENSIONS (INDICATE AVAILABILITY AND COST)							
Sewer/pipe networks?	No	No	Yes		No	Yes	Yes
Hydrology?	No	No	Yes		No	Yes	Yes
Road design/road layout?	No	No	Yes		No	Yes	Yes
Other?							

Numbers in brackets refer to notes (see page 63).

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PROGRAM/VERSION MANUFACTURER WEB ADDRESS	PowerCivl 2004 Bentley Systems Inc. www.bentley.com	PowerSurvey 2004 Bentley Systems Inc. www.bentley.com	Carlson SurvCADD 2006 Carlson Software www.carlsonsw.com	Carlson Survey 2006 Carlson Software www.carlsonsw.com	CEDRA AVcad The CEDRA Corporation www.cedra.com	CEDRA AVcogo The CEDRA Corporation www.cedra.com	Summit Evolution [52] DAT/EM Systems International www.datem.com
Price			\$1000-\$5000	\$1495	Contact vendor	Contact vendor	TBD
Discounts for multiple copies?	Yes	Yes	50% for multiple licenses	No	Yes	Yes	Yes
List types of documentation included with software.	Online	Online	[51]	PDF	Tutorial manual	Tutorial manual	[53]
Can the software installation and data be server based?	No	No	Yes	Yes	Yes	Yes	No
OPERATING SYSTEMS							
Windows 95/98/ME? (Specify which.)	N/A	N/A	Yes	No	95/98/ME	95/98/ME	
Windows NT/2000/XP? (Specify which.)	XP	XP	Yes	Yes	NT/2000/XP	NT/2000/XP	XP/2000
GDI+ and .NET support?	Yes	Yes	No	No	No	No	
Other: UNIX, Macintosh, Linux, CE, Pocket? (Specify which.)	No	No	No	No	UNIX	UNIX	
SYSTEM AND PROJECT SETUP							
Project setup assistance or wizard?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can Settings be established for network computers?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Support for:	Yes	Yes					
Map projections?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Datum transformations?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geoid models?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
USPCS?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Open access to databases?	Yes	Yes	Yes	No	Yes	Yes	Yes
COGO CAPABILITIES							
Do the point objects have intelligence? (See Note A on p. 57)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can points be chosen with selectable snap options?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is there an external point database?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are user-definable point groups supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are multiple, persistent groups supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is point sharing between groups supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can point ranges be locked to prevent access by others?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Do point data, blocks and text rescale when scale changes?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are COGO operations and data editing supported via command line?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Does the software have batch file capabilities?	Yes	Yes	Yes	No	Yes	Yes	Yes
TRAVERSE ANALYSIS							
Compass (Bowditch), Transit and Crandall's Adjustment supported?	Yes	Yes	Yes	Yes	Yes	Yes	
Least squares analysis and adjustment? (2D, 3D or No)	Yes	Yes	Yes	Yes	Yes	Yes	
Least squares analysis and adjustment of networks?	Yes	Yes	Yes	Yes	Yes	Yes	
Are reports available?	Yes	Yes	Yes	Yes	Yes	Yes	
ELECTRONIC FIELD RECORDERS (DATA COLLECTORS)							
Number of data collectors/formats supported? Specify.	[3]	[3]	All major manufacturers	All major manufacturers	All types	All types	
Are GPS recorders supported? If yes, specify whether raw data is supported from the data collector, receiver memory or both.	Yes, data collector	Yes, data collector	Yes, both	Yes, both	Yes, both	Yes, both	No
If GPS receivers are supported, how many brands? (List if desired.)			All major manufacturers	All major manufacturers	Trimble	Trimble	No
Is Face1/Face2 or doubling the angle supported?	Yes	Yes	Yes	Yes	Yes	Yes	No
Automatic symbology and linework supported for upload and download? (Specify upload, download, both or neither.)	Yes	Yes	Yes	Yes	Yes, both	Yes, both	
Is GPS construction machine control supported?	Yes	Yes	Yes	Yes	Yes	Yes	
DTM CAPABILITIES							
Can multiple surfaces be open and accessed simultaneously?	Yes	No	Yes	Yes	Yes	Yes	Yes
Support TINs that accommodate representation and calculations (such as volumes) of such features as escarpments, mines, tunnels, etc.?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Compute volume to specific elevation or other surface?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are contour smoothing algorithms user selectable?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are TIN editing capabilities supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is there an audit trail to track TIN editing?	No	No	No	No	Yes	Yes	Yes
USGS Digital Elevation Models supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Soft breaklines supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sharing, locking and save as supported for surface management?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Earthwork take-offs supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prismoidal based earthworks supported?	Yes	Yes	Yes	No	Yes	Yes	Yes
Gridded earthworks methods supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Section method earthworks supported?	Yes	No	Yes	No	Yes	Yes	Yes
Automatic watershed or drainage divide computations included?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Surface analysis routines supplied with the software?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3D surface viewing supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DESIGN CAPABILITIES							
Can alignments be designed or edited?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can alignments be drafted or annotated?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Roadway templates or string theory support?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is there an external route alignment database?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Access alignments within the same project simultaneously?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can profiles and vertical alignments be generated?	Yes	No	Yes	Yes	Yes	Yes	Yes
Symmetrical and asymmetrical vertical curves supported?	Yes	No	Yes	Yes	Yes	Yes	Yes
Design drafting of storm, sanitary and waterlines supported?	Yes	No	Yes	Yes	Yes	Yes	Yes
Parametric design supported?	Yes	No	Yes	Yes	Yes	Yes	Yes
DRAWINGS (SHEETS)							
User defined templates?	Yes		Yes	Yes	Yes	Yes	Yes
Are templates page size/layout independent? (Text blocks, etc. automatically reposition.)	Yes	N/A	Yes	Yes	Yes	Yes	Yes
Dynamic resizing of scalebars and title blocks?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dynamic legend? (Automatically includes all used symbols.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dynamic line and curve tables?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reference survey data to images by picking reference points?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Automatic clipping for placing annotations, labels and notes?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can lines be trimmed to a symbol and/or broken and still maintain the true length in the database?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is hatching supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
— If yes, can hatch patterns contain non-linear objects such as symbols or blocks?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Can points and curvilinear geometry labeling be customized?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Associative/dynamic labeling for linework and points supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Associative/dynamic labeling across multiple drawings?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CUSTOMIZING ABILITIES							
Can the interface, menus or toolbars be customized?	Yes	Yes	Yes	No	Yes	Yes	Yes
Databases customizable?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Scripting/add-on support provided?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FILE IMPORT/EXPORT ABILITY							
Are multi-version DWG/DXF import/exports supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is XML supported for the CAD graphics?	No	No	Yes	Yes	Yes	Yes	Yes
Are Microstation V7 and V8 supported?	Yes	Yes	No	No	Yes	Yes	Yes
ASCII coordinate file?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are Arcview, ArcInfo Coverage and Shape file transfers supported?	No	No	Yes	No	Yes	Yes	Yes
Image Files (BMP, JPG, etc.)? Specify.	Yes	Yes	Yes	Yes	Yes, all	Yes, all	Yes
FUNCTIONALITY EXTENSIONS (INDICATE AVAILABILITY AND COST)							
Sewer/pipe networks?	Yes [4]	No	Yes	No	Yes [5]	Yes [5]	Yes
Hydrology?	Yes [4]	No	Yes	No	Yes [6]	Yes [6]	Yes
Road design/road layout?	Yes [4]	No	Yes	No	Yes [7]	Yes [7]	Yes
Other?	Yes [4]	No					Yes

Numbers in brackets refer to notes (see page 63).

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PROGRAM/VERSION	Capture [54]	Map Editor [55]	Eagle Point 2005	General CADD Pro 4.0	PowerCAD CE Classic 5.5	PowerCAD CE Viewer 5.5	PowerCAD SiteMaster CE
MANUFACTURER	DAT/EM Systems International	DAT/EM Systems International	Eagle Point	General CADD Products Inc.	GiveMePower Corp.	GiveMePower Corp.	GiveMePower Corp.
WEB ADDRESS	www.datem.com	www.datem.com	www.eaglepoint.com	www.generalcadd.com	www.givempower.com	www.givempower.com	www.givempower.com
Price	TBD	TBD	Call for pricing	\$599	\$249	\$99	\$995
Discounts for multiple copies?	Yes	Yes	Call for pricing	Yes	Yes	Yes	Yes
List types of documentation included with software.	[53]	[53]	Online help and PDF	[8]	Online user guide	Online user guide	Online user guide
Can the software installation and data be server based?	No	No	Yes	No	Yes	Yes	Yes
OPERATING SYSTEMS							
Windows 95/98/ME? (Specify which.)			98/ME	98/ME			
Windows NT/2000/XP? (Specify which.)	XP/2000	XP/2000	[19]	NT/2000/XP			
GDI+ and .NET support?			No	No	Yes	Yes	Yes
Other: UNIX, Macintosh, Linux, CE, Pocket? (Specify which.)			No	No	[10]	[10]	Win Mobile 2003
SYSTEM AND PROJECT SETUP							
Project setup assistance or wizard?	Yes	Yes	Yes	Yes	Yes	No	Yes
Can Settings be established for network computers?	Yes	Yes	Yes	No	No	No	No
Support for:							
Map projections?	Yes	Yes	Yes	No	No	No	No
Datum transformations?	Yes	Yes	Yes	No	No	No	No
Geoid models?	Yes	Yes	No	No	No	No	No
USPCS?			No	No	No	No	No
Open access to databases?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
COGO CAPABILITIES							
Do the point objects have intelligence? (See Note A on p. 57)	Yes	Yes	Yes	No	No	No	No
Can points be chosen with selectable snap options?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is there an external point database?	Yes	Yes	Yes	Yes	No	No	No
Are user-definable point groups supported?	Yes	Yes	Yes	Yes	No	No	Yes
Are multiple, persistent groups supported?	Yes	Yes	Yes	Yes	No	No	No
Is point sharing between groups supported?	Yes	Yes	Yes	Yes	Yes	No	Yes
Can point ranges be locked to prevent access by others?	Yes	Yes	Yes	No	No	No	No
Do point data, blocks and text rescale when scale changes?	Yes	Yes	No	Yes	Yes	Yes	Yes
Are COGO operations and data editing supported via command line?	Yes	Yes	Yes	No	Yes	Yes	Yes
Does the software have batch file capabilities?	Yes	Yes	Yes	Yes	Yes, with macro	No	Yes, with macro
TRAVERSE ANALYSIS							
Compass (Bowditch), Transit and Crandall's Adjustment supported?			Yes	No	No	No	No
Least squares analysis and adjustment? (2D, 3D or No)			3D	No	No	No	No
Least squares analysis and adjustment of networks?			No	No	No	No	No
Are reports available?			Yes		No	No	No
ELECTRONIC FIELD RECORDERS (DATA COLLECTORS)							
Number of data collectors/formats supported? Specify.			31	Any with ACS output	No	No	[11]
Are GPS recorders supported? If yes, specify whether raw data is supported from the data collector, receiver memory or both.	No	No	Yes, data collector	No	No	No	No
If GPS receivers are supported, how many brands? (List if desired.)	No	No	5	No	No	No	No
Is Face1/Face2 or doubling the angle supported?	No	No	Yes	No	No	No	No
Automatic symbology and linework supported for upload and download? (Specify upload, download, both or neither.)			Yes	Both	No	No	No
Is GPS construction machine control supported?			No	No	No	No	No
DTM CAPABILITIES							
Can multiple surfaces be open and accessed simultaneously?	Yes	Yes	Yes	No	No	No	No
Support TINs that accommodate representation and calculations (such as volumes) of such features as escarpments, mines, tunnels, etc.?	Yes	Yes	Yes	No	No	No	No
Compute volume to specific elevation or other surface?	Yes	Yes	Yes	No	No	No	No
Are contour smoothing algorithms user selectable?	Yes	Yes	Yes [20]	No	No	No	No
Are TIN editing capabilities supported?	Yes	Yes	Yes	No	No	No	No
Is there an audit trail to track TIN editing?	Yes	Yes	No	No	No	No	No
USGS Digital Elevation Models supported?	Yes	Yes	Yes	No	No	No	No
Soft breaklines supported?	Yes	Yes	Yes	No	No	No	No
Sharing, locking and save as supported for surface management?	Yes	Yes	Yes	No	No	No	No
Earthwork take-offs supported?	Yes	Yes	Yes	No	No	No	No
Prismoidal based earthworks supported?	Yes	Yes	Yes	No	No	No	No
Gridded earthworks methods supported?	Yes	Yes	No	No	No	No	No
Section method earthworks supported?	Yes	Yes	Yes	No	No	No	No
Automatic watershed or drainage divide computations included?	Yes	Yes	Yes	No	No	No	No
Surface analysis routines supplied with the software?	Yes	Yes	Yes	No	No	No	No
3D surface viewing supported?	Yes	Yes	Yes		Yes	Yes	Yes
DESIGN CAPABILITIES							
Can alignments be designed or edited?	Yes	Yes	Yes	Yes	No	No	No
Can alignments be drafted or annotated?	Yes	Yes	Yes	Yes	No	No	No
Roadway templates or string theory support?	Yes	Yes	Templates	Yes	No	No	No
Is there an external route alignment database?	Yes	Yes	Yes	No	No	No	No
Access alignments within the same project simultaneously?	Yes	Yes	Yes	No	No	No	No
Can profiles and vertical alignments be generated?	Yes	Yes	Yes	No	No	No	No
Symmetrical and asymmetrical vertical curves supported?	Yes	Yes	Yes	No	No	No	No
Design drafting of storm, sanitary and waterlines supported?	Yes	Yes	Yes	Yes	No	No	No
Parametric design supported?	Yes	Yes	No	Yes	No	No	No
DRAWINGS (SHEETS)							
User defined templates?	Yes	Yes	Yes	Yes	No	No	Yes
Are templates page size/layout independent? (Text blocks, etc. automatically reposition.)	Yes	Yes	Yes	No	No	No	No
Dynamic resizing of scalebars and title blocks?	Yes	Yes	No	Yes	No	No	No
Dynamic legend? (Automatically includes all used symbols.)	Yes	Yes	No	No	No	No	No
Dynamic line and curve tables?	Yes	Yes	Yes	No	No	No	No
Reference survey data to images by picking reference points?	Yes	Yes	Yes	Yes	No	No	No
Automatic clipping for placing annotations, labels and notes?	Yes	Yes	Yes	No	No	No	No
Can lines be trimmed to a symbol and/or broken and still maintain the true length in the database?	Yes	Yes	Yes	No	No	No	No
Is hatching supported?	Yes	Yes	Yes	Yes	Yes	No	Yes
— If yes, can hatch patterns contain non-linear objects such as symbols or blocks?	Yes	Yes	Yes	No	No	No	No
Can points and curvilinear geometry labeling be customized?	Yes	Yes	Yes	Yes	No	No	No
Associative/dynamic labeling for linework and points supported?	Yes	Yes	Yes	Yes	No	No	No
Associative/dynamic labeling across multiple drawings?	Yes	Yes	Yes	No	No	No	No
CUSTOMIZING ABILITIES							
Can the interface, menus or toolbars be customized?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Databases customizable?	Yes	Yes	Yes	No	No	No	No
Scripting/add-on support provided?	Yes	Yes	Yes	Yes	No	No	Yes
FILE IMPORT/EXPORT ABILITY							
Are multi-version DWG/DXF import/exports supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is XML supported for the CAD graphics?	Yes	Yes	Yes	No	No	No	No
Are Microstation V7 and V8 supported?	Yes	Yes	Yes	No	No	No	No
ASCII coordinate file?	Yes	Yes	Yes	Yes	No	No	Yes
Are Arcview, ArcInfo Coverage and Shape file transfers supported?	No	Yes	Yes	Yes	No	No	No
Image Files (BMP, JPG, etc.)? Specify.	Yes	Yes	Yes	[9]	Export DWF	No	[12]
FUNCTIONALITY EXTENSIONS (INDICATE AVAILABILITY AND COST)							
Sewer/pipe networks?	Yes	Yes	Yes, call for pricing	Yes	No	No	No
Hydrology?	Yes	Yes	Yes, call for pricing	Yes	No	No	No
Road design/road layout?	Yes	Yes	Yes, call for pricing	Yes	No	No	No
Other?	Yes	Yes	Landscaping		PowerSYMBOLS \$99	No	PowerSYMBOLS \$99

Numbers in brackets refer to notes (see page 63).

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PROGRAM/VERSION MANUFACTURER WEB ADDRESS	I-SITE Studio 2.4.2 I-SITE www.isite3d.com	LISCAD 7 LISTECH www.liscad.com	MicroSurvey CAD 2006 Premium MicroSurvey Software Inc. www.microsurvey.com	MicroSurvey CAD 2005 Standard MicroSurvey Software Inc. www.microsurvey.com	MicroSurvey inCAD 2006 Premium MicroSurvey Software Inc. www.microsurvey.com	MicroSurvey inCAD 2006 Standard MicroSurvey Software Inc. www.microsurvey.com	SiteComp Survey SiteComp Inc. www.sitecomp.net	
Price	\$24000	\$495 - \$3990	\$1495	\$995	\$1295	\$895	Call for options	
Discounts for multiple copies?	Yes	Yes	Yes, call for details	Yes, call for details	Yes, call for details	Yes, call for details	Yes	
List types of documentation included with software.	Online	[72]	[15]	[15]	[15]	[15]	[19]	
Can the software installation and data be server based?	No	Yes	No	No	No	No	Yes	
OPERATING SYSTEMS								
Windows 95/98/ME? (Specify which.)	No	98/ME	98/ME	98/ME	98/ME	98/ME	Yes, all	
Windows NT/2000/XP? (Specify which.)	2000/XP	All	NT/2000/XP	NT/2000/XP	NT/2000/XP	NT/2000/XP	Yes, all	
GDI+ and .NET support?	No	N/A	No	No	No	No	No	
Other: UNIX, Macintosh, Linux, CE, Pocket? (Specify which.)	No	N/A	No	No	No	No	No	
SYSTEM AND PROJECT SETUP								
Project setup assistance or wizard?	Yes	Yes	Yes	Yes	Yes	Yes	No	
Can Settings be established for network computers?	No	Yes	No	No	No	No	Yes	
Support for:								
Map projections?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Datum transformations?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Geoid models?	Yes	[73]	Yes	Yes	Yes	Yes	Yes	
USPCS?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
Open access to databases?	No	[74]	No	No	No	No	Yes	
COGO CAPABILITIES								
Do the point objects have intelligence? (See Note A on p. 57)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Can points be chosen with selectable snap options?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Is there an external point database?	N/A	[74]	Yes	Yes	Yes	Yes	No	
Are user-definable point groups supported?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
Are multiple, persistent groups supported?	N/A	[75]	Yes	Yes	Yes	Yes	No	
Is point sharing between groups supported?	N/A	[75]	Yes	Yes	Yes	Yes	Yes	
Can point ranges be locked to prevent access by others?	N/A	[76]	Yes	Yes	Yes	Yes	Yes	
Do point data, blocks and text rescale when scale changes?	No	Yes	Yes	Yes	Yes	Yes	Yes	
Are COGO operations and data editing supported via command line?	N/A	No	Yes	Yes	Yes	Yes	Yes	
Does the software have batch file capabilities?	N/A	Yes	Yes	Yes	Yes	Yes	No	
TRAVERSE ANALYSIS								
Compass (Bowditch), Transit and Crandall's Adjustment supported?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
Least squares analysis and adjustment? (2D, 3D or No)	N/A	2D and height	Yes, 2D & 3D	Yes, 2D & 3D	Yes, 2D & 3D	Yes, 2D & 3D	Yes	
Least squares analysis and adjustment of networks?	N/A	Yes	Yes	Yes	Yes	Yes	No	
Are reports available?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
ELECTRONIC FIELD RECORDERS (DATA COLLECTORS)								
Number of data collectors/formats supported? Specify.	N/A	[13]	All major brands	All major brands	All major brands	All major brands	TDS, Sokkia	
Are GPS recorders supported? If yes, specify whether raw data is supported from the data collector, receiver memory or both.	N/A	Yes	[16]	[16]	[16]	[16]	No	
If GPS receivers are supported, how many brands? (List if desired.)	N/A	[13]	None	None	None	None	No	
Is Face1/Face2 or doubling the angle supported?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
Automatic symbology and linework supported for upload and download? (Specify upload, download, both or neither.)	N/A	Yes	Yes, both	Yes, both	Yes, both	Yes, both	Download	
Is GPS construction machine control supported?	N/A	[77]	No	No	No	No	No	
DTM CAPABILITIES								
Can multiple surfaces be open and accessed simultaneously?	Yes	In V8	Yes	No	Yes	No	Yes	
Support TINs that accommodate representation and calculations (such as volumes) of such features as escarpments, mines, tunnels, etc.?	Yes	Yes	[17]	No	[17]	No	No	
Compute volume to specific elevation or other surface?	Yes	Yes	Yes	No	Yes	No	Yes	
Are contour smoothing algorithms user selectable?	Yes	Yes	Yes	No	Yes	No	No	
Are TIN editing capabilities supported?	Yes	Yes	Yes	No	Yes	No	Yes	
Is there an audit trail to track TIN editing?	No	No	No	No	No	No	No	
USGS Digital Elevation Models supported?	Yes	No	Yes	No	Yes	No	No	
Soft breaklines supported?	Yes	No	Yes	No	Yes	No	No	
Sharing, locking and save as supported for surface management?	Yes	No	Yes	No	Yes	No	Yes	
Earthwork take-offs supported?	Yes	Yes	Yes	No	Yes	No	Yes	
Prismoidal based earthworks supported?	Yes	Yes	Yes	No	Yes	No	Yes	
Gridded earthworks methods supported?	Yes	Yes	Yes	No	Yes	No	No	
Section method earthworks supported?	Yes	Yes	Yes	No	Yes	No	No	
Automatic watershed or drainage divide computations included?	No	No	Yes	No	Yes	No	No	
Surface analysis routines supplied with the software?	Yes	In V8	Yes	No	Yes	No	Yes	
3D surface viewing supported?	Yes	In V8	Yes	No	Yes	No	No	
DESIGN CAPABILITIES								
Can alignments be designed or edited?	N/A	Yes	Yes	No	Yes	No	Yes	
Can alignments be drafted or annotated?	N/A	Yes	Yes	No	Yes	No	Yes	
Roadway templates or string theory support?	N/A	Both	Yes	No	Yes	No	Available	
Is there an external route alignment database?	N/A	[74]	Yes	No	Yes	No	No	
Access alignments within the same project simultaneously?	N/A	Yes	Yes	No	Yes	No	No	
Can profiles and vertical alignments be generated?	Yes	Yes	Yes	No	Yes	No	Available	
Symmetrical and asymmetrical vertical curves supported?	Yes	Asymmetrical [75]	No	No	No	No	[20]	
Design drafting of storm, sanitary and waterlines supported?	No	No	Yes	No	Yes	No	Available	
Parametric design supported?	No	Yes	No	No	No	No	No	
DRAWINGS (SHEETS)								
User defined templates?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
Are templates page size/layout independent? (Text blocks, etc. automatically reposition.)	N/A	Optionally scalable	Yes	Yes	Yes	Yes	No	
Dynamic resizing of scalebars and title blocks?	N/A	Yes	No	No	No	No	No	
Dynamic legend? (Automatically includes all used symbols.)	N/A	Yes	No	No	No	No	No	
Dynamic line and curve tables?	N/A	Yes	Yes	Yes	Yes	Yes	No	
Reference survey data to images by picking reference points?	N/A	Yes	Yes	Yes	Yes	Yes	No	
Automatic clipping for placing annotations, labels and notes?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
Can lines be trimmed to a symbol and/or broken and still maintain the true length in the database?	N/A	[78]	Yes	Yes	Yes	Yes	Yes	
Is hatching supported?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
— If yes, can hatch patterns contain non-linear objects such as symbols or blocks?		Yes	No	No	No	No	No	
Can points and curvilinear geometry labeling be customized?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
Associative/dynamic labeling for linework and points supported?	N/A	Yes	Yes	Yes	Yes	Yes	Yes	
Associative/dynamic labeling across multiple drawings?	N/A	Yes	No	No	No	No	No	
CUSTOMIZING ABILITIES								
Can the interface, menus or toolbars be customized?	No	Yes	Yes	Yes	Yes	Yes	Yes	
Databases customizable?	No	No	No	No	No	No	No	
Scripting/add-on support provided?	No	Yes	Lisp and scripts	Lisp and scripts	Lisp and scripts	Lisp and scripts	No	
FILE IMPORT/EXPORT ABILITY								
Are multi-version DWG/DXF import/exports supported?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Is XML supported for the CAD graphics?	No	Yes	No	No	No	No	Yes	
Are Microstation V7 and V8 supported?	No	V7	No	No	No	No	Yes	
ASCII coordinate file?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Are Arcview, ArcInfo Coverage and Shape file transfers supported?	No	Via other formats	No	No	No	No	Available	
Image Files (BMP, JPG, etc.)? Specify.	All	Yes [14]	Yes [18]	Yes [18]	Yes [18]	Yes [18]	MrSid, BMP, JPG	
FUNCTIONALITY EXTENSIONS (INDICATE AVAILABILITY AND COST)								
Sewer/pipe networks?	No	No	No	No	No	No	Available	
Hydrology?	No	No	No	No	No	No	No	
Road design/road layout?	No	Yes	No	No	No	No	Available	
Other?							z	

Numbers in brackets refer to notes (see page 63).

2005 CAD/Surveying Software Survey

PROGRAM/VERSION	PC Survey v5	TPC Desktop Personal Edition	TPC Desktop Premium Edition	TPC Desktop Professional Edition	Terramodel 10.41	ForeSight
MANUFACTURER	Soft-Art	Traverse PC	Traverse PC	Traverse PC	Trimble	Tripod Data Systems
WEB ADDRESS	www.pcsurvey.com	www.traverse-pc.com	www.traverse-pc.com	www.traverse-pc.com	www.trimble.com	www.tdsway.com
Price	\$195 - \$495	\$799 [26]	\$1299 [26]	\$1799 [26][27]	Varies by module	\$999 - \$2389
Discounts for multiple copies?	Yes	Yes [28]	Yes [28]	Yes [28]		Yes
List types of documentation included with software.	[21]	[29]	[29]	[29]	[35]	Printed manuals
Can the software installation and data be server based?	Yes	Yes	Yes	Yes	Yes	No
OPERATING SYSTEMS						
Windows 95/98/ME? (Specify which.)	Yes, all	98/ME	98/ME	98/ME	95/98/ME	All
Windows NT/2000/XP? (Specify which.)	Yes, all	NT4/2000/XP	NT4/2000/XP	NT4/2000/XP	NT/2000/XP	All
GDI+ and .NET support?	No	Yes	Yes	Yes	No	Not required
Other: UNIX, Macintosh, Linux, CE, Pocket? (Specify which.)		No	No	No	No	
SYSTEM AND PROJECT SETUP						
Project setup assistance or wizard?	Not necessary	Yes	Yes	Yes	Yes	Yes
Can Settings be established for network computers?	Yes	Yes	Yes	Yes	Yes	Not required
Support for:						
Map projections?	Yes	No	Yes	Yes	Yes	No
Datum transformations?	Yes	No	Yes	Yes	Yes	No
Geoid models?	Yes	No	[30]	[30]	Yes	No
USPCS?	Yes	No	Yes	Yes	Yes	No
Open access to databases?	No	Yes	Yes	Yes	Yes	
COGO CAPABILITIES						
Do the point objects have intelligence? (See Note A on p. 57)	Yes [22]	Yes	Yes	Yes	Yes	[56]
Can points be chosen with selectable snap options?	Yes	Yes	Yes	Yes	Yes	Yes
Is there an external point database?	No	Internal [31]	Internal [31]	Internal [31]	No	No
Are user-definable point groups supported?	Yes	Yes	Yes	Yes	Yes	Yes
Are multiple, persistent groups supported?	No	Yes	Yes	Yes	Yes	[57]
Is point sharing between groups supported?	No	Yes	Yes	Yes	No	[57]
Can point ranges be locked to prevent access by others?	No	Yes	Yes	Yes	No	[58]
Do point data, blocks and text rescale when scale changes?	No [23]	No [32]	No [32]	No [32]	Yes	[59]
Are COGO operations and data editing supported via command line?	Yes	Auto [33]	Auto [33]	Auto [33]	Yes	No
Does the software have batch file capabilities?	No	Auto [33]	Auto [33]	Auto [33]	No	No
TRAVERSE ANALYSIS						
Compass (Bowditch), Transit and Crandall's Adjustment supported?	Yes	Yes	Yes	Yes	Yes	[60]
Least squares analysis and adjustment? (2D, 3D or No)	2D	No	2D or 3D	2D or 3D	3D	Yes
Least squares analysis and adjustment of networks?	Yes	No	No	Yes	Yes	[61]
Are reports available?	Yes	Yes	Yes	Yes	Yes	Yes
ELECTRONIC FIELD RECORDERS (DATA COLLECTORS)						
Number of data collectors/formats supported? Specify.	[24]	Most/8	All/25	All/25	[36]	[62]
Are GPS recorders supported? If yes, specify whether raw data is supported from the data collector, receiver memory or both.	No	No	Yes	Yes	Yes [37]	[63]
If GPS receivers are supported, how many brands? (List if desired.)	Sokkia	N/A	Garmin	Garmin	Yes, 6 [38]	[63]
Is Face1/Face2 or doubling the angle supported?	Yes	No	Yes	Yes	Yes	Yes
Automatic symbology and linework supported for upload and download? (Specify upload, download, both or neither.)	Both	Yes	Yes	Yes	Both	[64]
Is GPS construction machine control supported?	No	No	No	No	Yes	
DTM CAPABILITIES						
Can multiple surfaces be open and accessed simultaneously?	Yes	No	Yes	Yes	Yes	Yes
Support TINs that accommodate representation and calculations (such as volumes) of such features as escarpments, mines, tunnels, etc.?	No	No	No	Yes	Yes	
Compute volume to specific elevation or other surface?	Yes	No	No	Yes [42]	Yes	Yes
Are contour smoothing algorithms user selectable?	Yes	No	Yes	Yes	Yes	[65]
Are TIN editing capabilities supported?	Yes	No	Yes	Yes	Yes	[66]
Is there an audit trail to track TIN editing?	No	No	No	No	No	[66]
USGS Digital Elevation Models supported?	No	No	No	No	Yes	No
Soft breaklines supported?	Yes	No	Yes	Yes	Yes	[67]
Sharing, locking and save as supported for surface management?	No	No	Yes	Yes	Yes	
Earthwork take-offs supported?	Yes	No	No	Yes	Yes	[68]
Prismoidal based earthworks supported?	Yes	No	No	Yes	Yes	
Gridded earthworks methods supported?	Yes	No	No	No	Yes	
Section method earthworks supported?	Yes	No	No	No	Yes	Yes
Automatic watershed or drainage divide computations included?	No	No	No	No	Yes	No
Surface analysis routines supplied with the software?	No	No	Yes	Yes	Yes	[69]
3D surface viewing supported?	Yes	No	No	No	Yes	Yes
DESIGN CAPABILITIES						
Can alignments be designed or edited?	Yes	Yes	Yes	Yes	Yes	Yes
Can alignments be drafted or annotated?	Yes	Yes	Yes	Yes	Yes	Yes
Roadway templates or string theory support?	Yes	N/A	N/A	N/A	String	Templates
Is there an external route alignment database?	No	Internal [31]	Internal [31]	Internal [31]	No	No
Access alignments within the same project simultaneously?	Yes	Yes	Yes	Yes	Yes	Yes
Can profiles and vertical alignments be generated?	Yes	No	No	Yes	Yes	Yes
Symmetrical and asymmetrical vertical curves supported?	Yes	No	No	Yes	No	[70]
Design drafting of storm, sanitary and waterlines supported?	No	No	No	No	Yes	[71]
Parametric design supported?	Yes	No	No	No	Yes	
DRAWINGS (SHEETS)						
User defined templates?	Yes	Yes	Yes	Yes	Yes	Yes
Are templates page size/layout independent? (Text blocks, etc. automatically reposition.)	No	Yes	Yes	Yes	Yes	Yes
Dynamic resizing of scalebars and title blocks?	Yes	Yes	Yes	Yes	Yes	Yes
Dynamic legend? (Automatically includes all used symbols.)	Quarter 1/06	Yes	Yes	Yes	No	Yes
Dynamic line and curve tables?	Yes	No	Yes	Yes	Yes	Yes
Reference survey data to images by picking reference points?	Yes	Yes	Yes	Yes	Yes	No
Automatic clipping for placing annotations, labels and notes?	Yes	Yes	Yes	Yes	No	Yes
Can lines be trimmed to a symbol and/or broken and still maintain the true length in the database?	Yes	Yes	Yes	Yes	Yes	Yes
Is hatching supported?	Yes	Yes	Yes	Yes	Yes	Yes
— If yes, can hatch patterns contain non-linear objects such as symbols or blocks?	Yes	Yes	Yes	Yes	No	Yes
Can points and curvilinear geometry labeling be customized?	Yes	Yes	Yes	Yes	Yes	Yes
Associative/dynamic labeling for linework and points supported?	Yes	Yes	Yes	Yes	Yes	Yes
Associative/dynamic labeling across multiple drawings?	Yes	Yes	Yes	Yes	Yes	3
CUSTOMIZING ABILITIES						
Can the interface, menus or toolbars be customized?	No	Yes	Yes	Yes	Yes	No
Databases customizable?	No	Yes	Yes	Yes	Yes	No
Scripting/add-on support provided?	No	No	No	No	Yes	No
FILE IMPORT/EXPORT ABILITY						
Are multi-version DWG/DXF import/exports supported?	Yes	Yes	Yes	Yes	Yes	Yes
Is XML supported for the CAD graphics?	No	No	No	No	Yes	No
Are Microstation V7 and V8 supported?	2Q/06	No	No	No	V7	No
ASCII coordinate file?	Yes	Yes	Yes	Yes	Yes	Yes
Are Arcview, ArcInfo Coverage and Shape file transfers supported?	Yes	Yes	Yes	Yes	Yes	Yes
Image Files (BMP, JPG, etc.)? Specify.	Yes	Numerous [34]	Numerous (10)	Numerous (10)	[39]	No
FUNCTIONALITY EXTENSIONS (INDICATE AVAILABILITY AND COST)						
Sewer/pipe networks?		No	No	No	Yes [40]	No
Hydrology?		No	No	No	Yes [40]	No
Road design/road layout?		No	No	No	Yes [40]	Yes, \$499
Other?	[25]	No	No	No	[41]	Yes, varied

Numbers in brackets refer to notes (see page 63).

2005 CAD/Surveying Software Survey Notes

POB does not assume responsibility for any errors or omissions that may be contained within the survey.

Note A: Intelligence refers to enhanced point properties such as symbol attachment that places, moves, rotates or deletes symbols as points are manipulated; pixel-based point symbol sizing; pixel-based point attribute sizing; automatic lat/long attached to point coordinates; the ability to alter a lat/long and the point coordinates recompute and relocate the new point; etc.

1. Help, reference material.
2. Sokkia, TDS, SMI, SDMS, Wild GRE, LISCAD, Geodimeter, Topcon, Nikon, Trimble DC, ASCII import wizard.
3. 43: CG-Field, CG-Field Plus, EFB Cadastral, EFB Florida, Geodat 122 126 400 500 600, Leica Datapro GSJ, Leica digital levels, Leica RTA GSI, SDMS, SMI 5 6 7, Sokkia (Lietz) SDR2 series, Sokkia (Lietz) SDR3 series 4 digit Point ID, Sokkia (Lietz) SDR3 series 14 Char. Point ID, South Africa Tachi-Book, TDS 48 95 FS/2, TDS 48, 95, FS/2 Australian, TDS Ranger, Topcon FC-1 FC-2 FC-4 FC-5 FC-48 FC-95 CR2 PROPAC, Trimble, Wild GIF-2 GIF-10 GIF-10 Soft GIF-10 Soft 2, Caice (KPB), Caice (SRV), Caltrans, Custom OBS converter
4. Included with software.
5. Contact vendor: CEDRA AVsand.
6. Contact vendor: CEDRA AVwater.
7. Contact vendor: CEDRA AVland.
8. Illustrated on screen manual context sensitive help .CHM file.
9. BMP, JPG, TIF, PNG.
10. Windows Mobile including: CE, CE .NET, PPC and HPC.
11. Direct laser measurement and ASCII import.
12. Import JPG, BMP, PNG, RLC, TIFF and GeoTIFF Export WMF BMP and DWF.
13. All major manufacturers.
14. All popular formats.
15. Print manuals, movies, help.
16. No raw data processing, only coordinates.
17. Escarpments and mines.
18. BMP, JPG, TIFF.
19. Context sensitive help; tutorials.
20. Symmetrical, available.
21. Tutorial, reference manuals.
22. Bearing, distance, acreage, square area, elevations all automatically generated and derived from point positions. Changes in point values result in automatic changing of all of the above associated annotations.
23. Text size remains constant, but text automatically repositions.
24. TDS, SDR, SMI, CES.
25. Image georeferencing \$150.
26. Prices subject to change without notice. Special pricing is available through web specials and monthly promotions.
27. Budget plan pricing available with our Private Surveyor Plan (PSP).
28. Network and site licenses are also available.
29. Getting started, learning guide, advanced learning guide, online help.
30. Standard and user-defined ellipses.
31. Survey data is the most important thing to a land surveyor and an integral part of any survey. All point data is available all the time in the Traverse PC "Visible Data" environment and no external database is necessary. This is a key feature to the land surveyor who needs to have all the data available all the time rather than being forced to look through a tunnel at one point at a time.
32. With Traverse PC, users can change the scale at any time during the drawing process without affecting text sizes.
33. Dynamic drawing elements automatically reflect changes in the data, automating and replacing the command line and the batch file process.
34. BMP, GIF, TIF, JPG, ICO, PNG, EMF, WMF.
35. User's guide; all other reference material on CD.
36. A wide range of data formats are supported to leading data collection platforms including: Trimble Job, DC, TDS, ASCII, TXT, SDR, Zeiss, Geodimeter, Nikon, SMI.
37. RTK data is supported from the data collectors but no raw GPS data processing is available in the Office Software.
38. Trimble, Thales (Ashtech), Topcon (TPS, GP) NovAtel, Sokkia, Leica.
39. BMP, DCX, DIB, GIF, JPEG, PCX, PICT, PSD, TIFF, TGA, WMF and WPG.
40. Contact dealer for pricing.
41. Automated sheet assembly and production. Terramodel Visualizer. Contact dealer for pricing.
42. Cut/fill volumes and areas to grade or surface.
43. Through Land Desktop 2006, which is required to operate Autodesk Civil Design and Autodesk Survey.
44. Carlson, Leica, Trimble, TDS, Sokkia, and many others.
45. Yes, raw data from the data collector.
46. Through the use of Autodesk Raster Design.
47. Survey has a Survey Command Language that is scriptable, called batch files. AutoCAD portion of Land Desktop is scriptable for creating AutoCAD primitives. VBA automation is also supported.
48. Through Survey, which is an add-on to Land Desktop 2006.
49. Through Civil Design 2006, which is an add-on to Land Desktop 2006.
50. Shape and coverages.
51. Hard copy manual and PDF.
52. Summit Evolution takes 3D digital mapping and photogrammetry to a new level with its powerful combination of digital stereoplotter CAD/GIS interface, video superimposition and automated feature editing. Image features from a Summit Evolution project are digitized directly into AutoCAD, MicroStation or ArcGIS files. DAT/EM Super/Imposition system is integrated into every Summit Evolution system, as well as orientation procedures, coordinate transformation, automated mapping-related tools and Map/Editor software. Summit Evolution projects may be created from a wide range of imagery, including scanned film and digital aerial, close range, digital sensor, orthophoto, synthetic aperture radar and satellite sources. It can also import projects from 3rd-party systems, and bring them into immediate production as Summit Evolution projects. Projects that are not already 3D can use the Follow Terrain tool to automate and produce 3D results.
53. Hardcopy manual and CD-ROM.
54. DAT/EM Capture for AutoCAD or for MicroStation collects 3D image features directly from a stereoplotter into an AutoCAD or MicroStation drawing file. DAT/EM Capture includes many mapping-specific tools and Map/Editor, which is a collection of useful automated editing tools. Capture for AutoCAD or for MicroStation can be run with Super/Imposition, which is included with the Summit Evolution stereoplotter, and is sold separately for other compatible stereoplotter types. Features from the AutoCAD or MicroStation file are optically superimposed over the stereoplotters imagery for immediate feature verification.
55. DAT/EM Map/Editor for AutoCAD or for MicroStation is a full 3D editing package for AutoCAD DWG files. It has many time saving tools such as global block changes, clipping inside closed polylines and file size reduction. Map/Editor contains both interactive and batch mode commands to accommodate every editing need, from running a single command on a single element to running many commands across multiple files. Map/Editor for AutoCAD is an ADS application that works completely within AutoCAD release 2000+/XP. Map/Editor for MicroStation is an MDL application that works completely within MicroStation V8 and J with Widows 2000+/XP.
56. Points are an integral part of the program and are handled as a surveyor would expect points to be handled.
57. ForeSight supports layering and multiple selection methods. Points that share specific attributes can be sorted on layers or easily selected via the points description. Points are also grouped via sets.
58. ForeSight is a single user environment. Points are protected from accidental modification or deletion.
59. ForeSight supports dynamic scaling for sheet layout. Objects can be scaled appropriately and independently.
60. Traverse rule (Bowditch) and angle balancing.
61. ForeSight supports networks of redundant measurements to all points using total stations.
62. TDS, SDR, Nikon, all others via ASCII. ForeSight supports other raw data and data file conversions.
63. ForeSight supports GPS data collected by TDS data collectors.
64. ForeSights supports the TDS Job file format, which allows native support for lines, points and alignments.
65. ForeSight supports smoothing of contour lines. The option can be turned on or off.
66. TIN is modified via the use of breaklines.
67. ForeSight supports breaklines, boundaries and exclusion areas.
68. ForeSight supports digitizers.
69. ForeSight supports editing, viewing and 3D views of DTM surfaces.
70. Vertical curves are supported.
71. ForeSight supports grading design of lines. It does not design pipe networks.
72. Context sensitive help, tutorials, manual.
73. Supports geoidal separation.
74. Database accessible through XML.
75. Achieved via layer and region definition.
76. Points can be enabled or disabled.
77. Creates files used by machine guidance systems.
78. Lines can be trimmed but length changes.