Content of the macro files provided here:

1.) Macro_templates_for_AutoCAD.zip

Contains four templates for VS AutoCAD macros which the user can adapt to his particular needs.

- Insert block: Template for inserting blocks in AutoCAD (replace the MYBLOCK placeholder by the name of your own block definition)
- Block@CircleCenter: Template for inserting a block at the center of a circle defined by 3 points on its circumference (replace the MYBLOCK placeholder by the name of your own block definition)(To use just select the Block@CircleCenter macro then pick three points in the planar view image and the block will be placed at the center of the circle that would be created with the three point selection)
- Line on layer: Template for drawing a line on a certain layer in AutoCAD (replace the MYLAYER placeholder by the name of the layer you want to draw on)
- 3DPolyline on layer: Template for drawing a 3D polyline on a certain layer in AutoCAD (replace the MYLAYER placeholder by the name of the layer you want to draw on)

2.) Macros_for_drawing_2D_plans_or_elevations_in_AutoCAD.zip

Contains VS AutoCAD macros, which are meant to draw 2D (define UCS and then draw on the XY plane of the current UCS). Useful for drawing floor plans and elevations etc

- 2D line: Draw a line in AutoCAD in XY of current UCS
- 2D poly: Draw a polyline in AutoCAD in XY of current UCS
- Segment: Draw a line segment (2 points) in AutoCAD in XY of current UCS
- Arc: Draw an arc (3 points) in AutoCAD in XY of current UCS
- Circle: Draw a circle (3 points) in AutoCAD in XY of current UCS
- Rectangle: Draw a rectangle in AutoCAD in XY of current UCS
- rotated Rectangle: Draw a rotated rectangle (1st point=1st corner; 2nd=direction of rotation; 3rd=point diagonal to the 1st one)
- 2D poly+offset: Draw a polyline in AutoCAD (UCS) and offset it through a point (finish the polyline by right click, then click the through point in the scan)

3.) Macros_for_working_with_As-Built.zip

Contains VS AutoCAD/As-Built macros, which are useful when working with As-Built

- PC Density 100: AutoCAD point cloud display density to 100%
- Slice XY: Create single slice parallel to current XY (As-Built)
- Slice ZY: Create single slice parallel to current ZY (As-Built)
- Slice ZX: Create single slice parallel to current ZX (As-Built)
- Draw outline: Draw outline plan by clicking two points on each wall (As-Built command)
- Extrude last: Extrude the last objected created or added in the drawing (AutoCAD command)
- Zoom window: Click two points to define AutoCAD zoom window

4.) Macros_for_working_with_As-Built_02.zip highly recommended

Contains VS AutoCAD/As-Built macros, which are useful when working with As-Built and a video explaining their use!

- EXT L: This will begin an EXTRUDE command in AutoCAD on the last object created
- ROT RECT: Performs a Rotated Rectangle command that allows a user to click 3 edge points to draw a rectangle in space
- COPY BASE: Takes the last-drawn object and array it by using a basepoint of displacement
- Z O L: ZOOM OBJECT LAST macro that zooms to the last object created in a drawing

- CDS / LCDS: These macros are used together to create a 3D circular, symmetrical object (i.e. vessels, cone, etc.)
- 2PTLINE: The user can click 2 points (one on face, one on elevation) to construct a perfect edge line of an object
- CURVE L: Splines (curves) the last line added to the drawing
- SETSIZE / TRANSFORM: Used together to create tubing objects (i.e. conduit, hydraulic lines, electrical lines, hoses, etc.)

5.) Macros_for_working_with_As-Built_03_Paneling.zip

Contains specific VS for AutoCAD macros for the paneling industry and a short video for creating elevations (also useful for floor plans)

- XLV: creates an AutoCAD construction line in the XY plane of the current UCS that is vertical (parallel with Y axis)
- XLH: creates an AutoCAD construction line in the XY plane of the current UCS that is horizontal (parallel with X axis)
- XL Angle creates and AutoCAD construction line in the XY plane of the current UCS through two clicked points
- ZOL: ZOOM OBJECT LAST macro that zooms to the last object created in a drawing
- 2PTLINE: The user can click 2 points (one on face, one on elevation) to construct a perfect edge line of an object. Creates a 3d polyline by projecting a point picked on a vertical service down to the elevation of the second point selected and repeating that sequence until the object length has been achieved
- CURVE L: Splines (curves) the last line added to the drawing. Changes the fit of a line from None to Cubic so that the line appears smooth rather than with vertices
- Zoom Window: zooms to the window of points available inside of a two point selection
- Slice XY: slices the point cloud parallel to the XY plane of the current UCS between two clicked points of differing Z values (As-Built)
- Slice YZ: slices the point cloud parallel to the YZ plane of the current UCS between two clicked points of differing X values (As-Built)
- Slice XZ: slices the point cloud parallel to the XZ plane of the current UCS between two clicked points of differing Y values (As-Built)

6.) Macros_for_Civil3D.zip

Contains specific VS for AutoCAD macros for users who work with Civil3D.

Note: The display settings of the COGO points in the drawing are based on Civil 3D point creation settings. The package also contains a document on how to setup the Civil 3D Point Creation Tools to work with the COGO macros below - TRN_CivilPointCreationTools_R00.pdf

- Block @ Center: inserts a block at the center of a 3pt circle to customize the definition of the macro to insert a block in your AutoCAD drawing just replace the text BLOCKNAME with the name of the block you'd like to insert. To use just select the BAC macro then pick three points in the planar view image and the block will be placed at the center of the circle that would be created with the three point selection.
- Block @ Point: inserts a block at a point that is selected in the planar view image to customize the definition of the macro to insert a block in your AutoCAD drawing just replace the text BLOCKNAME with the name of the block you'd like to insert.
- COGO @ Cent: create a COGO point at the center of a circle that is selected by 3 points in the planar view image of VirtuSurv
- COGO point: creates a COGO point in the CAD drawing by selecting a point in the planar view image of VirtuSurv
- Current Lyr 0: makes the 0 Layer current in your CAD Drawing suggested to use this after the COGO Point and COGO @ Cent tools (see note below for more details)

• Zoom Last: zooms to last object inserted or drawn in CAD

Note: when using the COGO macros there will be a point on the Defpoints layer where the first point selection of the macro was made. They have been placed on the Defpoints layer so that you can easily cleanup your drawing.

7.) Macros_for_Allplan.zip

Contains VirtuSurv for Windows macros, which are useful when working with ALLPLAN software. In addition to the macros and their icons this ZIP package contains a video and a ReadMe.txt explaining their use.

8.) Macros_for_Rhino.zip

Contains VirtuSurv for Windows macros, which are useful when working with Rhinoceros 3D software. In addition to the macros and their icons this ZIP package contains PDF files in German and English with a tutorial on how to use VirtuSurv to create Rhino drawings and models from laserscan data. (Note that these Macros have only be tested with Rhino 5.3)

9.) Macros_for_otherCAD.zip

Contains VirtuSurv for Windows macros, which are useful when working with GStarCAD or other IntelliCAD clones.

The workflow is a little bit different than working with AutoCAD. You mainly need two macros. We call these XYZ CAD and XY CAD. For some commands, you need a 3D coordinate (3d poly) and for others you need a 2D coordinate (polyline). Still, some require a combination (ex: your first point on a circle can be in 3D to set the elevation, while your second point has to be in 2D since a circle is a 2D object.). So sometimes you will be switching from XYZ CAD for your first point of a command to XY CAD for your second point.

You can write any command to start from VirtuSurv by selecting the desired macro and clicking anywhere in the VirtuSurv image. You will see the command begin in CAD. Now you have to switch over to either the XYZ CAD or XY CAD button and continue clicking.