














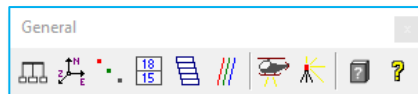












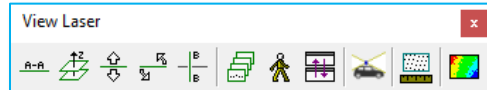
## TerraScan Main Toolbox














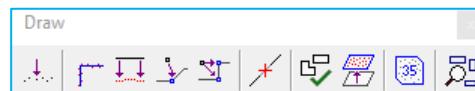
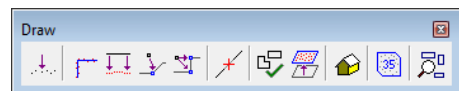
|   |                          |   |                          |
|---|--------------------------|---|--------------------------|
|  | General Toolbar          |  | View Laser Toolbar       |
|  | Draw Toolbar             |  | Model Toolbar            |
|  | Groups Toolbar           |  | Vectorize Wires Toolbar  |
|  | Vectorize Towers Toolbar |  | View Powerline Toolbar   |
|  | Road Toolbar             |  | Railroad Toolbar         |
|  | Buildings Toolbar        |  | Building Patches Toolbar |
|  | Building Edges Toolbar   |  | Waveform Toolbar         |
|  | Trees Toolbar            |   |                          |














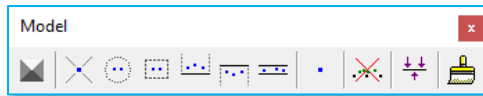
|   |                         |   |                         |  |                      |  |                   |
|---|-------------------------|---|-------------------------|--|----------------------|--|-------------------|
|    | Settings                |    | Design Block Boundaries |   | Load Airborne Points |   | About TerraScan   |
|   | Define Coordinate Setup |   | Define Project          |  | Load Ground Points   |  | Help On TerraScan |
|  | Define Classes          |  | Manage Trajectories     |  |                      |  |                   |














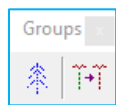
|   |                         |   |                |   |                   |   |                          |
|---|-------------------------|---|----------------|---|-------------------|---|--------------------------|
|  | Draw Vertical Section   |  | Rotate Section |  | Travel View       |  | Measure Point Density    |
|  | Draw Horizontal Section |  | Cut Section    |  | Synchronize Views |  | Update Distance Coloring |
|  | Move Section            |  | Travel Path    |  | Show Street View  |   |                          |





|   |                        |   |                                     |   |   |   |                        |
|---|------------------------|---|-------------------------------------|---|---|---|------------------------|
|  | Mouse Point Adjustment |  | Find Breakline Along Linear Element |  | Check Footprint Polygons                |  | Place Collection Shape |
|  | Fit Linear Element     |  | Find Curb along Element             |  | Set Polygon Elevation                   |  | Inspect Elements       |
|  | Drape Linear Element   |  | Cut Linear Element                  |  | Construct Planar Building (32-bit only) |   |                        |

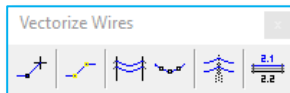








|   |                       |   |                     |   |                        |   |                        |
|---|-----------------------|---|---------------------|---|------------------------|---|------------------------|
|  | Create Editable Model |  | Classify Fence      |  | Classify Close To Line |  | Fix Elevation          |
|  | Assign Point Class    |  | Classify Above Line |  | Add Synthetic Point    |  | Rebuild Editable Model |
|  | Classify Using Brush  |  | Classify Below Line |  | Remove Vegetation      |   |                        |

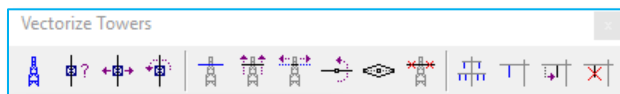
















\*CE Only

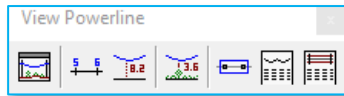
|   |                    |   |                    |
|---|--------------------|---|--------------------|
|  | Create Point Group |  | Merge Point Groups |
|---|--------------------|---|--------------------|









|   |                    |   |                       |   |                            |
|---|--------------------|---|-----------------------|---|----------------------------|
|  | Place Tower String |  | Detect Wires          |  | Check Catenary Attachments |
|  | Activate Powerline |  | Place Catenary String |  | Assign Wire Attributes     |














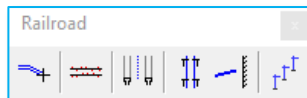
|   |                        |   |                         |   |                    |   |                   |
|---|------------------------|---|-------------------------|---|--------------------|---|-------------------|
|  | Place Tower            |  | Add Cross Arm           |  | Modify Cross Arm   |  | Move Attachment   |
|  | Edit Tower Information |  | Set Cross Arm Elevation |  | Delete Cross Arm   |  | Delete Attachment |
|  | Move Tower             |  | Extend Cross Arm        |  | Create Attachments |   |                   |
|  | Rotate Tower           |  | Rotatate Cross Arm      |  | Add Attachments    |   |                   |









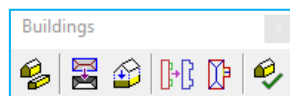
|   |                  |   |                       |   |                   |   |                  |
|---|------------------|---|-----------------------|---|-------------------|---|------------------|
|  | View Tower Spans |  | Label Catenary Height |  | Create Span Tiles |  | Export Powerline |
|  | Label Towers     |  | Find Danger Objects   |  | Output Catenary   |   |                  |









|   |                           |   |                      |   |                            |   |                         |
|---|---------------------------|---|----------------------|---|----------------------------|---|-------------------------|
|  | Find Automatic Breaklines |  | Draw Slope Arrows    |  | Label Clearance            |  | Build Paint Line Chains |
|  | Find Road Breaklines      |  | Draw Sight Distances |  | Label Alignment Curvature  |  | Fit Geometry Components |
|  | Import Road Breaklines    |  | Draw Sign Visibility |  | Write Alignment Elevations |   |                         |











|   |                       |   |            |   |                 |
|---|-----------------------|---|------------|---|-----------------|
|  | Place Railroad String |  | Find Rails |  | Check Wire Ends |
|  | Fit Railroad String   |  | Find Wires |  | Find Poles      |














|   |                         |   |                                |   |                       |
|---|-------------------------|---|--------------------------------|---|-----------------------|
|  | Vectorize Buildings     |  | Create Buildings From Polygons |  | Draw Roof Lines       |
|  | Construct Roof Polygons |  | Merge Footprint Polygons       |  | Check Building Models |



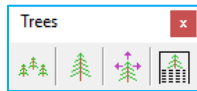
|   |                |   |                       |   |                |   |                       |
|---|----------------|---|-----------------------|---|----------------|---|-----------------------|
|  | Spilt Building |  | Merge Patches         |  | Remove Patch   |  | Draw Building Section |
|  | Split Patch    |  | Assign Plane Symmetry |  | Remove Details |  | Extrude Building      |



|   |                         |   |                    |   |                   |   |                    |
|---|-------------------------|---|--------------------|---|-------------------|---|--------------------|
|  | Set All Edges           |  | Modify Edge        |  | Build Step Corner |  | Delete Edge Vertex |
|  | Apply Straight Line     |  | Move Edge Vertex   |  | Cut Edge Corner   |  | Insert Edge Vertex |
|  | Apply Intersection Line |  | Align Edge Segment |  | Cut Edge Segment  |   |                    |



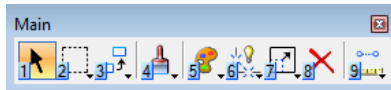
|   |               |   |                |
|---|---------------|---|----------------|
|  | View Waveform |  | Extract Echoes |
|---|---------------|---|----------------|












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











|   |                   |   |                 |   |                   |   |                   |
|---|-------------------|---|-----------------|---|-------------------|---|-------------------|
|  | Create Tree Cells |  | Place Tree Cell |  | Modify Tree Cells |  | Output Tree Cells |
|---|-------------------|---|-----------------|---|-------------------|---|-------------------|

## Common MicroStation v8i™ Tools












|   |                    |   |  |   |                           |
|---|--------------------|---|--|---|---------------------------|
|  | Element Selection  |  | View Control: Update View                    |  | Modify: Modify Element    |
|  | Fence: Place Fence |  | Change Attributes: Change Element Attributes |  | Delete Element            |
|  | Manipulate: Copy   |  | Groups: Drop Element                         |  | Measure: Measure Distance |



|   |                             |   |                            |   |                         |   |                   |
|---|-----------------------------|---|----------------------------|---|-------------------------|---|-------------------|
|    | View Attributes             |    | Zoom Out                   |    | Navigate Camera         |    | Set Display Depth |
|   | Open Display Style Dialogue |   | Window Area                |   | View Previous           |   | Set Active Depth  |
|  | Adjust View Brightness      |  | Fit View                   |  | View Next               |  | Clip Volume       |
|  | Update View                 |  | View Rotation: Rotate View |  | Copy View Parameters    |  | Clip Mask         |
|  | Zoom In                     |  | Pan View                   |  | Change View Perspective |   |                   |



|   |                |   |                   |   |                           |
|---|----------------|---|-------------------|---|---------------------------|
|  | Modify Element |  | Trim Intersection |  | Insert Vertex             |
|  | Break Element  |  | Trim To Element   |  | Delete Vertex             |
|  | Extend Line    |  | Trim Multiple     |  | Construct Circular Fillet |