

Drawing requirements for Unicontrol 3D machine control.

- All drawings need to be properly geo-referenced, the accuracy of any surveying equipment will depend on this.
- Linework will be in DXF format, Surfaces in LandXML format for Unicontrol 3D.
- Tidy up unnecessary information, ie. text, linework etc. that is not needed in the groundwork stage.
This will speed up the system and reduce loading times of the drawing the bigger the file size the slower the system.
- Groundworks drawings should use centre lines of footings, trenches, kerb lines etc. Footings are the exception of the centre line rule (C/L), these can be prepared using the extremities of the footing if the operator prefers.
- Elevations such as Floor level/invert level should be displayed for operator to double check he is working to the right level.
- 3D linework for Pipelines and kerb lines is a must; linework should be Drawn in 3D to invert levels of Manholes or Kerbs. (Operator can offset the dig to allow for a wall of pipe/ height of kerb and bedding).
- The DXF drawing should include Foundations (C/L or Extremities), 3D Kerb lines (C/L), 3D Pipelines (C/L),
- If using 3D DXF lines for road levels use "edge of tar" for the kerb line it makes more sense. For road drawing you would have the centre line and both road edges
- I would like to have a separate drawing file for the pipelines. I find it saves time and reduces error as often pipelines can cause confusion, and an operator may not be working to the right lines.
- It should specify on roads/kerbs drawings whether levels are finished Tar for road and top of kerb for the kerb lines.

DXF drawings can be used as surface so if you have 3D linework this can be used as a surface.

The foundation lines could be drawn in 3D also which could then be used as a surface. This is entirely up to the client.

Surface drawings

Land XML drawings can be used for site surfaces which may have varying falls/cambers such as roadways/ high sloping banks (batters) etc.

These drawings should always be drawn to finished level; the operator can offset the height to formation, bottom of tar/topsoil etc.

We can create surfaces within the system such as flat surfaces and surfaces from points, but for roadways especially I would recommend getting a LandXML surface file drawn up this will reduce the margin of error dramatically.