



Digital Drawing Submission Guidelines for Utility Line Assignments

City of Calgary Rights-of-Way Management Service Section

January 30, 2024



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Purpose

These guidelines are intended to ensure that Utility Line Assignment (ULA) Applications will be accepted in the ULA Application process, outlined on the [Utility Alignment Permits \(calgary.ca\)](https://www.calgary.ca/utility-alignments/permits) web page.

Contact

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Basic Parameters

- All drawings submitted must be to United States National CAD Standard – V6. In particular, it is critical that all elements are on their proper levels (i.e., layers). No levels are to be frozen or turned off. If the information on the drawing does not fall under a defined level (see Level Specification table) then it is placed on level TBD. It is **not acceptable** to put information defined in the Level Specification table on level TBD.
- All drawings must be geo-referenced in 3TM format.
- All drawings (line work) must be scaled to GRID.
- The scale factor must be included in the title block.
- All dimensions/offsets must match the proposed line work and all required dimensions/offsets must be included on the drawing.
- Only one ULA drawing design file (i.e., .dgn) may be submitted per Application.

3TM Format

Drawings (line work) must be scaled to GRID. This will allow us to map your drawings into the Legal Survey Fabric (LSF). Figure 1 should reduce confusion.

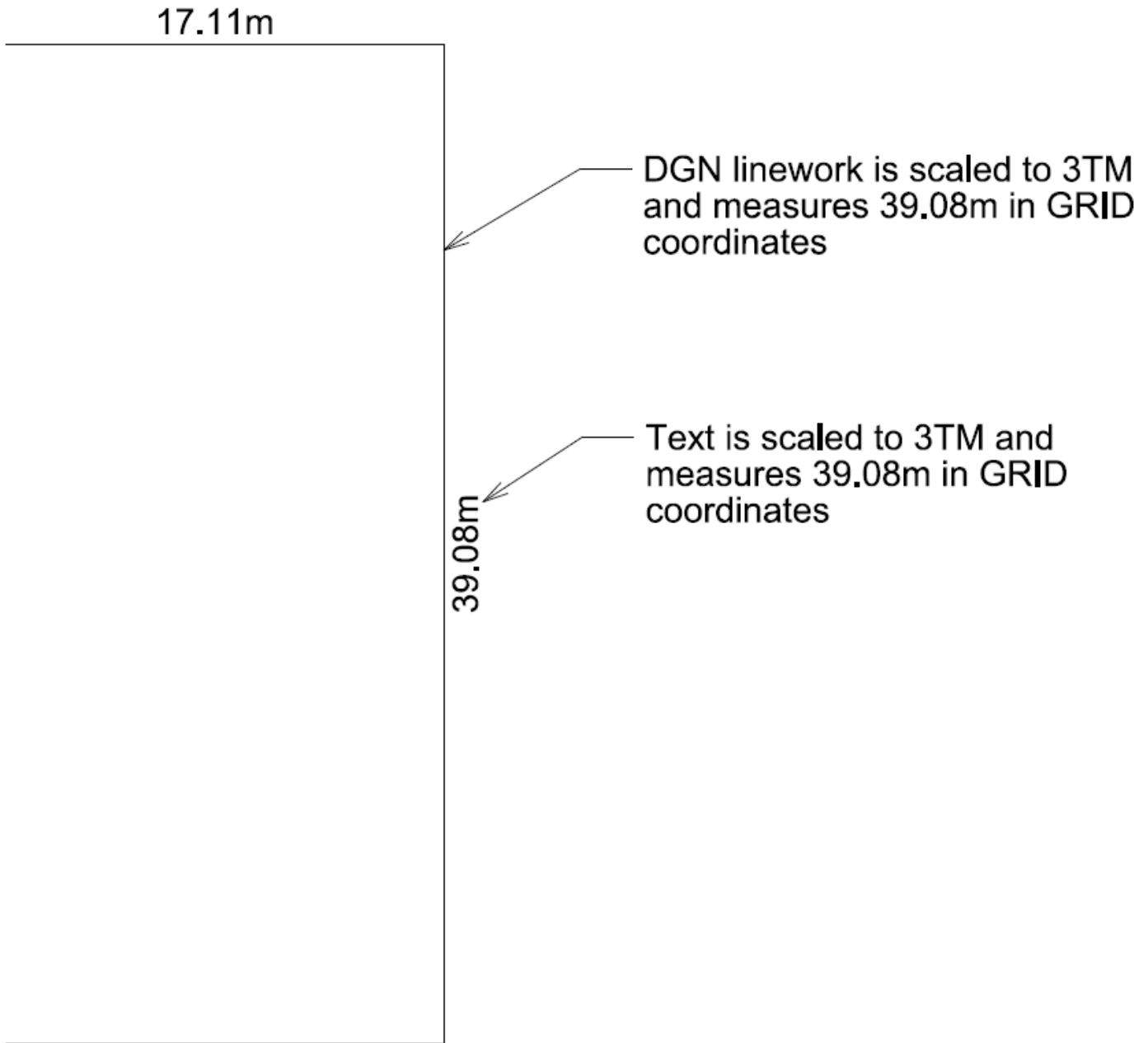


Figure 1: Scaled Drawing and Label Text

Use of Cells on the Structure Layer (C-UTIL-STRC-N) for the Drawing Checker

When using a cell (i.e., block) to define a structure, keep the shape simple to keep the structure count accurate. For example, a cell composed of a square with an X struck through the square may count as two or three structures, depending on how the line and shape elements of the cell were constructed.

NOTE: Structures MUST be drawn to scale.

Example:



In the above example, the cell was exploded into a shape plus two lines, which would result in a structure count of three (3) when a count of only one (1) was intended. To prevent this type of error, please submit your proposed structure elements in the simplest form to prevent structure count errors. Inaccurate drawing submissions may delay processing your ULA Application, and/or result in your Application being rejected.

Level Specifications

Design File Levels

Level Name	Level Description
C-UTIL-LINE-N*	Proposed Line Work – this level must display all underground conduits for which you are applying.*
C-UTIL-STRC-N	Proposed Structures – this level must display all above, and below ground pedestals, transformers, pullboxes, poles, vaults, etc.
C-UTIL-OFFS-N*	Offsets – this level must display all proposed offsets. NOTE: All offsets must tie to legal survey points.*
C-UTIL-DIMS-N	Dimensions – this level must include information about the dimensions of proposed structures, drawn to scale.
C-UTIL-MATL-N	Material List – this level must display or note all proposed structures, conduits, valves, etc., including dimensions.
C-UTIL-DTLS-N	Details – this level must display details about the proposed structures, and cross-sections.
C-UTIL-LINE-E	Existing Line Work – this level must display all existing line work, and underground conduits.
C-UTIL-STRC-E	Existing Structures – this level must display all existing structures.
G-ANNO-TBLK-N*	Title Block – this level must include the following information: designer, company name, scale, other general information, etc.*
G-ANNO-N*	Text – this level must include any notes and/or explanations, including leader lines, and call-outs, that will help describe the proposed work.*

*Mandatory levels required. Other levels may be required depending on complexity of the ULA Application.

As-Built File Levels

Level Name	Level Description
G-ANNO-N*	Text – this level must include any notes, and/or explanations, including leader lines and call-outs, that will help describe the completed work.*
V-UTIL-DTLS-N	Details – this level must display details about the installed structures, and cross-sections.
V-UTIL-DIMS-N	Dimensions – this level must include information about the dimensions of installed structures, drawn to scale.
V-UTIL-LINE-N	New Line Work – this level must display all line work, and underground conduits for approved equipment installed.
V-UTIL-MATL-N	Material List – this level must display or note all installed structures, conduits, valves, etc., including dimensions.
V-UTIL-OFFS-N*	Offsets – this level must display all offsets to installed equipment. NOTE: All offsets must tie to legal survey points.*
V-UTIL-STRC-N	Proposed Structures – this level must display all above, and below ground pedestals, transformers, pullboxes, poles, vaults, etc. installed.
G-ANNO-TBLK-N*	Title Block – this level must include the following information: designer, company name, scale, other general information, etc.*
V-UTIL-ELEV-N	Elevations – this level must include elevations, above sea level, at several points shown along the length of the installed equipment (i.e., for less than 20 m at the start, end and mid point; for over 20 m at the start, end, and every 10 m along the length; ensuring to include any inflection/deflection points {either vertical or horizontal}), and at four corners of each installed structure. Elevations must be annotated with a 45 degree label/note or otherwise made to be distinct from other text/annotations.

*Mandatory levels required. Other levels may be required depending on complexity of the ULA Application.