



Digital Drawing Submission Guidelines for Utility Line Assignments

City of Calgary Rights-of-Way Management Service Section

July 29, 2026



Contents	
Purpose	3
Contact	3
Basic Parameters	3
3TM Format	4
Use of Cells on the Structure Level (C-UTIL-STRC-N)	
for the Drawing Checker	5
Level Specifications	5
Design File Levels	5
As-Built File Levels	8

Purpose

These guidelines are intended to ensure that Utility Alignment Permit (UAP) *Applications* will be accepted in the UAP *Application* process, outlined on the [Utility Alignment Permits \(calgary.ca\)](https://calgary.ca/utilityalignmentpermits) web page. The parameter and format outlined in this guideline must be adhered to, or will result in a rejection of the submitted *Application*.

Contact

Email: ULASupport@calgary.ca

Mail: Rights-of-Way Management Service Section

The City of Calgary P.O. Box 2100, Station M, Mail Code 4008 Calgary, Alberta T2P 2M5

Basic Parameters

- All drawings must be submitted as a single MicroStation V8i .dgn file, **with no 3D elements**.
- 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., levelss). No levels are to be frozen or turned off. If the information on the drawing does not fall under a defined level (see *Design File Levels* table below) then it is placed on level TBD. It is **not acceptable** to put information defined in the *Design File Levels* 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.
- Two (2) sets of dimensions/offsets from property lines or other survey control points to the proposed alignment/structure are required to facilitate real world location as accurately as possible, rather than to other features (e.g., existing utilities, sidewalks, etc.) that may not be placed as expected. All dimensions/offsets must match the proposed line work, and all required dimensions/offsets must be included on the drawing.
 - The size and offsets of any structure (e.g., pull boxes, transformers, cabinets), excluding poles must be indicated, and a detailed drawing is strongly recommended. If a detail is not provided, one may be requested.
- Only one design drawing file (i.e., .dgn) may be submitted per *Application*.
 - You must request to amend your proposed design drawing while the *Application* is *Under Review*, and you **must** submit a *Deviation Request* after the UAP is issue **before** making any changes in the field. (See the [CROWM External User Manual](#) for instructions)

3TM Format

Drawing 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.

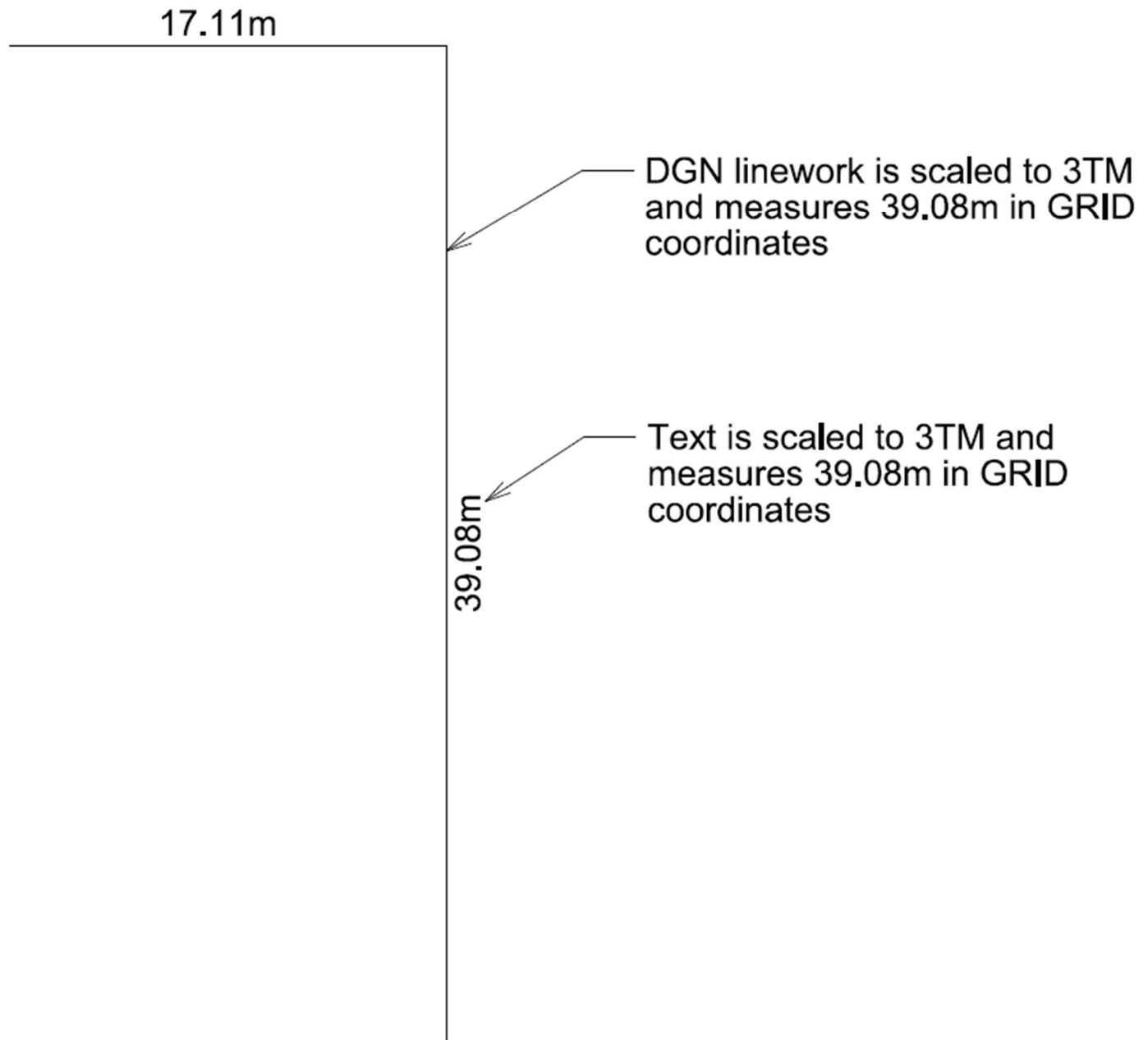


Figure 1: Scaled Drawing and Label Text

Use of Cells on the Structure Level (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 *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. Two offsets are required to all proposed structures. 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-ELEV-N	This level must specify all z-coordinate information at regular intervals for all conduit segments.

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.

Multi-Party Applications

For *Multi-Party Applications*, a single design file must be submitted per *Application* with contributing level sets for *Primary Utility Provider* and each *Additional Utility Provider*. A level set is defined as all required levels for the proposed *Work* for each *Utility Provider*.

Given only one design file is submitted, it is necessary to distinguish between the level sets as shown in the *Multi-Party Design Levels* table below. The naming convention provided is to be used by all *Utility Providers* attached to one *Multi-Party Application*. It is the responsibility of the *Primary Utility Provider* to ensure all levels sets in the submitted design file are complete for all *Utility Providers* attached to the *Application*.

Multi-Party Design Levels

Level Name Example	Level Description
C-UTIL-LINE-N-TELUS*	<i>Additional Utility Provider</i> – all submitted levels for each <i>Additional Utility Provider</i> attached to the <i>Multi-Party Application</i> must be suffixed with a single word participant name (e.g., TELUS, Rogers etc.). <i>Additional Utility Provider</i> designations for City utilities attached to the <i>Multi-Party Application</i> should appear as: ▪ COCIT – Information Technology (i.e., City Fibre); ▪ COCTS – Traffic Signals; and/or ▪ COCSL – Street Lighting.*
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. Two offsets are required to all proposed structures. 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-ELEV-N	This level must specify all z-coordinate information at regular intervals for all conduit segments.
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.

NOTE: Only the *Primary Utility Provider* may use the default level designations as outlined in the *Design File Levels* table. This will permit the submitted design file to pass the *Drawing Checker*. All submitted levels for the *Additional Utility Providers* will be validated manually by the reviewing Utility Planning Specialist before the *Multi-Party Application* approval. A “pass” on the *Drawing Checker Report* does not guarantee approval of the *Application*. Please verify the quality of ALL submitted levels to ensure a timely review and approval of the *Multi-Party Application*, and reduce the need for *Information Requests*.

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.