

#### ADMINISTRATION | ENGINEERING

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### "Treating Your Water Seriously"

# City of Lakeland, Water Utilities As-Built/Record Drawing Checklist

In addition to the listed requirements of design plans, as-built or record drawings must be dated, signed and sealed on 24-inch by 36-inch and submitted to the City of Lakeland for approval by Water Utilities. All design and construction must be in conformance with requirements as identified in the <u>City of Lakeland</u>, <u>Water and Wastewater</u> <u>Operations Policies</u>, <u>Standards and Specifications for Subdivisions and Commercial Developments</u>.

## All As-built/Record drawings submitted must include/show/state:

- Drawings shall only depict installed/constructed facilities and shall not include notations for proposed/design information for facilities that have already been constructed. Items not yet constructed shall be labeled as such.
- Drawings shall Include plan, profile, and detail sheets that were used to depict locations and elevations in construction drawings.
- New water and wastewater facilities shall be depicted in black bold line weight and standout by using a grey/light line weights for existing structures and conditions.
- The scale used in record drawings is identical to scales used in construction drawings.
- Record information notes/labels are positioned next to corresponding item in bold print.
- Description of pipe and associated fittings/apparatuses that have been installed, including pipe material/change of material, size, length, type, class, bend, sample points, valves, fittings, tees, slopes, etc., shall be listed on the plan and profile views.
- Profile view shall be located directly below plan view showing all utility crossings with final grades.
- Horizontal and vertical separation between utilities, structures, walls, fences are called out on the plan view.
- Where providing pipeline depths, top of pipe elevation and top of final ground grade or pavement elevation shall be shown.
- Dimensions of water and sewer mains from edge of pavement (EOP) to be called out on the plan view.
- Dimensions from manhole to service laterals listed on gravity mains to be called out on the plan view.
- Dimensions of service valves/stubs to edge of pavement and property line.

- Final lift station start-up conditions, float set points, etc. on lift station sheets and engineer's startup certification.
- Dimensions of restrained joints, fittings and dead ends, to be accurately shown on the plan view. Each
  restrained joint to be clearly labeled.
- All existing and new road names, property lines, right of ways, easements, lot numbers, addresses, and building numbers to be labeled on the plan view.
- Record drawings shall clearly indicate which portions of the utility are to be owned by the City of Lakeland Water
   Utilities and which are to be owned and maintained privately.
- Includes GPS coordinates for all elements of the utility system noted by Northing, Easting and Elevation. GPS coordinates can be submitted on separate signed and sealed survey drawing(s) and must be included in the Record Drawing set.
- Asset table providing point ID number, Northing, Easting, elevation and point description. If included in the engineering drawings without the submittal of a separate as-built survey signed and sealed by a licensed surveyor and mapper (or PLS) the asset table points shown on a specific plan sheet must be listed in an asset table on that same plan sheet. GPS coordinates shall also be provided in an excel spreadsheet.
- Signed and sealed by Engineer of Record. The engineer is responsible to use any and all means necessary to certify the As-built/Record Drawings without any disclaimers, including, but not limited to, having someone under their direct responsible charge verify the information represented on the drawings. ANY NOTATION THAT RENDERS THE ENGINEER'S CERTIFICATON INEFFECTIVE WILL NOT BE ACCEPTED.

Record drawings shall include GPS coordinates for all elements of the utility system noted by northing and easting (NAD 1983 State Plane Florida West FIPS 0902 Feet). Top of pipe elevations shall be taken every 100' for water mains and force mains. Elements of the utility system are to include:

Valves (top of nut)	Hydrants
Fittings	Manhole covers
Change in pipe material locations	Manhole inverts
Restraint joints	Tapping saddles
Casing end points	Force main connection/tie-in point
Service lines	Lift station wet wells
Services (meter and clean out)	ARVs
Backflow preventer	Any other apparatus installed as part of the utility.

GPS coordinates shall be included in the record drawing set. The asset table shall include point ID number, northing, easting, elevation, and point description (size and item type). Each asset shall be easily referenced by its unique ID number which shall be called out on plan sheets. An Excel file or .csv file containing all asset table information shall be submitted with the record drawings. If GPS information is not provided by the Engineer of Record the signature and seal of a State of Florida Licensed Surveyor providing the information shall be included on the drawings on which the information is provided.

EACH LICENSED PROFESSIONAL MUST CLAIM THE WORK FOR WHICH THEY ARE RESPONSIBLE. AN ENGINEER MAY ONLY REFERENCE SURVEY INFORMATION BEING PROVIDED BY A LICENSED SURVEYOR IF THE PROFESSIONAL REFERENCED HAS SIGNED AND SEALED THE INFORMATION CLAIMING RESPONSIBILITY FOR THE SURVEY. THE FINAL RECORD DRAWING SET MUST INCLUDE THE SURVEY DRAWING SET IF NOT INCLUDED ON THE SAME SHEETS AS THE ENGINEER'S DESIGN PLAN SHEETS. IF INCLUDED ON THE ENGINEER'S DESIGN PLAN SHEETS BOTH THE SURVEYOR AND ENGINEER MUST SIGN AND SEAL THE PLAN SHEETS IF THE ENGINEER STATES THE INFORMATION IS PROVIDED BY A LICENSED SURVEYOR. ELECTRONIC OR MANUAL SEALS WILL BE ACCEPTED.

### Acceptable language which may be included in the As-built/Record Drawing set:

THE INFORMATION CONTAINED IN THESE RECORD DRAWINGS HAS BEEN REVIEWED AND IS FOUND TO BE IN SUBSTANTIAL COMPLIANCE WITH THE DESIGN AND/OR PERMITTED DRAWINGS AND CONDITIONS. THE SYSTEM WILL FUNCTION AS DESIGNED. THESE RECORD DRAWINGS INCLUDE A COMPILED REPRESENTATION OF THE CONSTRUCTED PROJECT UTILIZING THE ENGINEER'S DOCUMENTED FIELD CONDITIONS AND AS-BUILT SURVEY INFORMATION PROVIDED BY (NAME & LICENSE #), A REGISTERED FLORIDA PROFESSIONAL SURVEYOR & MAPPER (or PLS), WHOSE SIGNATURE AND SEAL FOR THIS DATA HAS BEEN PROVIDED WITH THIS SUBMITTAL. THE PROVIDED AS-BUILT SURVEY INFORMATION (I.E. ELEVATIONS AND GEOSPATIAL DATA) IS BELIEVED TO BE CORRECT TO THE BEST OF THE ENGINEER'S KNOWLEDGE, BUT THE ACCURACY OF THE INFORMATION CANNOT BE GUARANTEED.