SAVANNAH
Development Services Department

# Private Development Projects Closeout

## AS-BUILTS (RECORD DRAWINGS)

Standard size of drawings shall be 24"x36" to scale on Chronoflex mylars, or original inked drawings on mylar (minimum four (4) mils) for city review and acceptance. It is advisable to submit check prints for review prior to submitting mylars and disks for final approval. The final mylars must be stamped "Field Verified" and signed by the developer's registered professional engineer or land surveyor. (Note: The plans will be reviewed by the City's site plan reviewers. If any mistakes are found, the consultant will be notified, and corrected drawings must be resubmitted for review and approval.) As-builts (Record Drawings) shall include as-built surveys of all drainage, parking spot elevations, water and sewer structures, and storm water management facilities top and bottom, width, length and height of detention, if any.

If the consultant would like to discuss the as-builts prior to submitting the mylars, they are encouraged to attend a Site Plan Review (SPR) Meeting, which are typically held Thursday at 1:30 pm virtually at Development Services (via Microsoft Teams), and are informal meetings with City staff from all reviewing departments, including: Stormwater, Water and Sewer, Park & Tree (landscaping), Streets & Traffic Engineering, and MPC staff (zoning and historic preservation). Contact Development Services at (912)651-6510 ext. 1926 to be placed on an agenda. This is recommended if there are changes to the as-builts that are different from the plans submitted for approval.

One copy of final mylars, (3) sets CDs or thumb drives, plats and other required close-out documents shall be submitted to Development Services for distribution.

The following are the required drawings to include in each record drawing set:

For Development Services:

- Title Sheet, Index and Vicinity Map
- Staking and Demolition Sheets, if available
- Water and Sewer Sheets (plans, profiles, special details)
- Storm Water/Drainage/Paving Sheets (plans, profiles, grading, neighborhood drainage, special details)
- Landscape Sheet (Note: For projects located outside the city Limits, no storm water plans are required.)

For Water and Sewer Planning and Engineering Department:

- Title Sheet, Index and Vicinity Map
- Water and Sewer Sheets (plans, profiles, special details)
- Recorded Easement Plats
- Paving, Grading and Drainage Sheets including profiles and special details

If installing pumps for wells and lift stations - A pump curve is required for all pumps installed. The pump curve shall be certified by the pump manufacturer and indicates the actual field measured point obtained during pump draw-down tests.

For Facilities Maintenance (only those projects located inside the city limits):

- Title Sheet and Vicinity Map (unless project name and vicinity map appears on plan sheets)
- Water and Sewer Sheets (plan and profile)
- Storm Water/Drainage Sheets (plans, profiles, grading, neighborhood drainage plan, special details, such as the orifice restriction details and other specific drainage details)
- Landscape Sheet
- Recorded Easement plats (All private drainage shall be identified as a private drainage easement.)
- The flood elevation certification shall be part of Facilities Maintenance required documents and shall read as follows: "The Federal Emergency Management agency National Flood Insurance from shall be filled completely, signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information."

The following are not required to be included in the record drawing set:

- Construction Survey, Layout Sheets
- Sediment & Erosion Control Sheet Standard Water & Sewer Details Standard Storm Water Details

As-builts (Record Drawings) shall have a coordinate system based on the Georgia State Plane Coordinate System, East Zone, North American Datum of 1983 (NAD 83). Elevations shown shall be based on the North American Vertical Datum of 1988 (NAVD 88). All measurements and coordinates shown shall use the U.S. Survey Foot definition. Coordinates shall be shown on all manholes, valves, fire hydrants, and fittings. If GPS methods are used to gather information presented on the drawing, then the GPS receiver must be at a minimum a sub-meter, mapping grade instrument. If a sub-meter, mapping grade instrument is used to determine horizontal locations, then elevations shown must be obtained with conventional differential leveling methods and equipment. All sub-meter GPS receiver shall use the Hunter Army Air Base satellite base station beacon for differential corrections to insure sub-meter accuracy, and shall use the following settings:

- Positional dilution of precision (PDOP) = up to 6
- Frequency = 290.0 kilohertz (Hunter AAB beacon)
- Signal noise ratio (SNR) = up to 6
- Elevation mask = 15 degrees
- Coordinate System Settings to NAD 83, State Plane, Georgia East Zone, US Survey Feet.

As-builts (Record Drawings) shall be field-verified by the developer's land surveyor or professional engineer registered in Georgia and shall contain accurate information including length, size, slope of pipe, and type of construction material. Also required are spot elevations on force mains and waterlines as well as final elevations of manhole tops and inverts, based on NAVD 88 datum. The distance of the centerline of utilities (including force mains, waterlines and manholes) from a permanent structure (e.g. back of curb) shall be noted at each road intersection and/or when line direction changes. In addition, all valve manholes and valve boxes shall be located with respect to a permanent structure.

Layering shall be differentiated between disciplines i.e. pavement, existing water, as-built water, existing sewer, as-built sewer, existing storm drainage, as-built storm drainage, easements, right-of-way, etc.

Each individual as-built mylar will have an individual electronic file showing only what is on the mylar i.e. as-built mylar sheet U1 shall have electronic file U1.dwg.

## ELECTRONIC COPIES OF RECORD DRAWINGS

Three (3) complete sets of digital as-builts in DXF **and** PDF format on Compact Disk (CD) or thumb drive representing as-built record drawings of drainage, water and sewer infrastructure systems which are readily usable with AutoCAD 2016 are required. Any referenced files, or fonts that are not standard to AutoCAD must also be included.

## PLATS - SITE/SUBDIVISION

One (1) copy (electronic PDF acceptable), full-sized, of a recorded plat of the site, or subdivision, showing public and private drainage easements and rights-of-way, if any, are required. The plat must also note a statement in regards to maintenance issues of drainage facilities responsibilities by the property owner and/or by a homeowner's association and must be signed by the owner. Maximum size of recorded plats shall be 18"x24", full size. The recorded plat must have a Registered Land Surveyor's stamp and signature. The surveyor must be registered in the State of Georgia. Submitted plats must have the recorded book and page file record on it, as recorded for Chatham County Courthouse documentation. The plat shall clearly state any storm water management maintenance responsibility. For subdivisions, a copy of homeowners association shall be submitted to storm water management department for lot owners. All subdivision plats shall be submitted for review prior to recording.

## ENGINEER'S CERTIFICATION LETTER

Submit an Engineer's Certification Letter signed and sealed by P.E. to state: "All water, sewer and drainage facilities have been constructed according to the accepted plans and specifications."

## CONSTRUCTION COST

Submit the construction cost reflecting the actual cost of installed water and sanitary sewer facilities. The cost shall be provided for water and sanitary sewer costs separately.