CITY OF ORLANDO AS-BUILT CLOSEOUT CHECKLIST

Use this checklist to follow the City of Orlando's Engineering Standards Manual as required. These are the minimum requirements, there *and if additional information is needed to confirm the project was built properly it can be requested by the City.* ***Chapter 5 and 9 should be reviewed entirely!***

GENERAL REQUIREMENTS

- ☐ The as-built survey data must be overlaid on the construction plan set that was approved for your project at the time of permit issuance (electronic files of the plans are the base data). Including all plan and profile sheets.
- ☐ Construction Plan information must be shown in grayscale with the plan information depicted at the time of permit issuance untouched or unaltered.
- ☐ The as-built survey must be to scale and match the plan scale information, survey data in bold and discernable from the plans.
- ☐ The as-built survey data must be in Florida State Plane Coordinates, Florida Zone East (0901), North American Datum (NAD) of 1983 (Adjustment based on published control) referenced to control. (*CCR's, NGS, etc.*)
- ☐ The as-built survey data must be in North American Vertical Datum (NAVD) of 1988 and referenced to published control that must be referenced as to where the control came from. (*City, NGS, etc.*)
- ☐ The as-built survey must be prepared by a Florida Licensed Professional Surveyor and Mapper.
- ☐ The licensed surveyor must reference and replace any project control points, boundary corners, benchmarks, section corners and any control monuments that may be lost or destroyed.
- ☐ All CAD files containing as-built storm and sanitary improvements for both public and private construction must be drawn on a layer beginning with **V-STRM** for storm pipes, structures and hardware, and a layer beginning with **V-SSWR** for sanitary sewer pipes, structures and hardware.

COVER PAGE

- ☐ The as-built survey data must be overlaid on the construction plans approved for your project.
- ☐ The cover page must be titled As-built Survey, if the as-built survey is a progressive survey it should be labeled as such. The final will be labeled **Final As-built Survey** at project completion.
- ☐ The Surveyor's Certification must be included on the survey. Electronic seals and signatures are not accepted at this time. Reference the Permit # for the Project.
- ☐ If there is an index on the cover sheet, bold page #'s containing as-built survey data.
- ☐ Only as-built survey data shown in bold, all plan information should be shown grayscale.
- ☐ The certification must qualify the purpose of the survey, horizontal and vertical datums and the last date in the field.

REQUIRED AS-BUILT INFORMATION

- ☐ The as-built survey clearly shows the designed and constructed locations and vertical data for ease of comparison between planned and constructed improvements.
- ☐ Planned improvements required as part of the as-built survey must include:
  - *Storm and sanitary sewers and structures (including cleanouts), drainage conveyance systems and retention ponds, potable and reclaimed water mains and all cleanouts, meters, valves, force mains, gas mains and other utilities. Irrigation lines (2-inch and larger), process piping, electric and communication duct banks, traffic and pedestrian signals, pull boxes, cabinets, transformers, structures. Fences, pavement, curbs, sidewalks, driveways, appurtenances and buildings.*
  - *The specified improvements noted above are the minimum requirements and if additional information is needed to confirm the project was built properly it can be requested by the City.*
- ☐ If a structure information table is provided, the as-built information must be shown in or near table.
- ☐ Design call-outs shall have a strikethrough with as-built data provided in bold next to callout

and must be labeled (or abbreviated "AB") and be shown in a bolder text that is completely legible.

- ☐ Pavement and drainage flow line elevation shots must be shown.
- ☐ As-built survey shots shall be taken at the same locations as shown on the plans for ease of comparison. Any variations from required material sizes or types shall be noted.
- ☐ Any sheets that support the as-built survey or sheets that have as-built data shown should be included. This includes the general notes, legend, site and civil, plan and profile, structure detail and tables (not typical sections), sheets with construct calls and other sheets that identify planned improvements to a specified value (stationing, coordinate values and vertical values) and are necessary for a comparison to the planned values versus the completed construction.

DIGITAL FILES

- ☐ Digital files include CAD and PDF of the as-built survey that are submitted on CD, DVD or Thumbdrive and are complete with all associated reference files.
- ☐ All CAD files must be complete with reference files and any other documents and images associated with the CAD files. *Etransmit in Civil 3d*
- ☐ CAD files must be identically matching to the signed and sealed as-built survey.
- ☐ The submitted digital files must be in the original format of the plans. i.e. Autocad Civil 3d, Microstation, etc. The City's preferred CAD platform is Autocad Civil 3d 2014 or newer.
- ☐ The preferred CAD Standards of the City of Orlando is National CAD Standards. Other standards are acceptable as long as the layers and data is easily discernible and have reference files and other pertinent information include with the submittal.

I certify that I as signing surveyor and EOR, I have reviewed the requirements as defined in the City of Orlando's Engineering Standards Manual, 5th Edition, and that my as-built survey/Certification Letter conforms to the requirements defined therein and highlighted by this checklist.

Signature: _____ **Date:** _____

Signing Surveyor/Engineer of Record (EOR) *Today's Date*

Additional Water Reclamation Requirements (Per Chapter 9 of the ESM):

☐ CCTV Review

-City Sewers: inspection by City Crews depict no deficiencies.

-Private Sewers: review of CCTV inspection recorded on acceptable media depict no deficiencies.

☐ City Lift Station

- Successful start-up attended by Water Reclamation representative(s).
- Lift Station electrical walkthrough: verify no deficiencies.
- Verify Shop Drawings of LS Components have been reviewed by Water Reclamation Division.
- Record Drawing of as-built condition of the lift station site, wet well and valve configuration.
- Start-up Report Certified by EOR
- Copies of O&M manual including pump curve.

☐ Private Lift Station

- Start-up report, certified by EOR

☐ Reclaimed Water

- No deficiencies letter from reclaimed water inspector.
- Reclaimed water inspector to verify as-built survey.

☐ Force Mains (Private and City)

- Pressure Test, certified by EOR

☐ Letter of Project Completion

- Letter from EOR certifying installation of all sitework has been installed in accordance with all applicable City Standards including the City of Orlando Engineering Standards Manual (ESM) and City Standards Wastewater Details. The Engineer's Certification needs to be site specific and include a discussion about all sitework components designed, installed and inspected, including all wastewater facilities such as sanitary gravity sewer, manholes, lift stations, force mains and related appurtenances.