Record Drawing Requirements

Private Development Requirements & Procedures

In conjunction with the Public Works Engineering Plan Review Process, post construction record drawings are required for all Private Development projects. The intent of this document is to guide the designing Engineer, the Developer and their Consultants in providing the City with acceptable record drawings and survey information.

When the improvements intended for public dedication are substantially complete, the developer shall prepare “as-built” record drawings for the City using the current set of approved construction drawings, including all revisions and contractor’s field mark-ups. This drawing shall incorporate all changes made by both the Engineer and in the field during the construction process. Changes to be noted shall include changes in material, size, grade and location of utilities.

Preliminary (paper) Record Drawing Procedures

I. A licensed surveyor will physically survey all improvements associated with the approved construction plans and create an as-built topographical representation of the data.

II. The surveyed data will be incorporated into the preliminary record drawings and the Engineer will adjust the features in the record drawings to match the surveyed data. All surveyed elevations for sewer, storm and water will be shown on the record drawings by striking a single line through the design elevations and adding the surveyed “as-built” elevations. Horizontal locations will be indicated by using centerline station and offsets. All surveyed station and offsets will be shown on the record drawings by striking a single line through the design station and offsets and adding the surveyed station and offsets. The stationing will be based on the approved construction drawings. The Engineer will update both the plan and profile layouts with the surveyed data.

III. Prior to final walk-through, the engineer will compile the data and submit two copies of the preliminary (paper) record drawings to the City. The walk-through will not be scheduled until the paper record drawings are received.

Preliminary Record Drawing Submittal Requirements

- Two (2) paper copies (22”x34”) including all field changes made
- The preliminary record drawing will have all changes from the approved construction drawings clouded.
- This copy will include the field information supplied by the surveyor.

Final Record Drawing Procedures

After receiving approval of the preliminary paper record drawing from the City, the developer / designing engineer will submit the following:

Final Record Drawing Submittals

- One (1) full size Mylar copy of the corrected record drawing. The final record drawing shall be signed and sealed by a licensed engineer and licensed surveyor. The mylar record drawing does not need to include detail sheets, erosion & sedimentation control sheets, or landscaping sheets. However, the cover sheet is required. The clouding of changes will be removed before the Mylar is submitted.
- One (1) electronic copy (AutoCAD 2014 format) which includes all of the surveyed data. The electronic record drawings shall contain the entire project in a single base drawing and include all sheet files.
- One (1) PDF copy of the final record drawing.
- One (1) paper copy (22”x34”) of the raw survey data signed and sealed from the surveyor shall be provided. One (1) Electronic CSV file in the following format: comma delimited coordinate file (CSV) of all points in the following format: Point Number, Northing, Easting, Elevation, and Descriptor. See descriptor code list below.

Requirements for Survey:

All features installed or modified with the construction shall be surveyed, including, but not limited to the following:
Water & Irrigation valves, risers & meters • Wells • Fire Hydrants & valves • PRV Vaults & Manholes • Sewer Clean-Outs • Sewer Stubs (Location & Depth) • Storm/Sewer Manholes (Lids & Inverts) • Top Back of Curb at ADA Ramps • Changes to Centerline design • Storm Drain Catch Basin Grates & Inverts • Monuments (Location & Elevations) • Storm Culverts (Location & Inverts) • Street Lights • Traffic Signal Poles & Control Boxes

Datum:

The topographic survey shall use NAD83/91 State Plane coordinates for the Horizontal Datum and NAVD 88 Vertical Datum, for control. A minimum of three (3) City of Richland approved control points shall be referenced on all construction and record drawings. The City Surveyor will delineate an acceptable list of existing monuments for collection.
Contact: Thomas Boshart, City Surveyor at (509) 942-7705 or
tboshart@ci.richland.wa.us

Submittal Requirements and Deadlines:

Final walkthrough of the project and the associated punchlist will be withheld until the preliminary paper record drawings are submitted for review as described above. Approval of the Final Plat and/or Final Acceptance of the project (certificate of occupancy) will be withheld until the Final record drawings and all other items noted above are received and accepted by the City.

Descriptor Codes:

The following descriptor codes shall be used for all as-built points collected in the field:

CBFL - (catch basin flowline) shot taken at flowline.
CO - (sewer cleanout) shot taken at top center of lid.
CONDUIT - shot taken at center of conduit at ground.
BOSW - (back of sidewalk) shot taken at top edge of back of sidewalk.
BOC - (back of curb) shot taken at top back of curb.
BLDG - (building) -shot taken at building corner at ground.
DRYWELL - shot taken at top center of lid.
ELECPAN - (electrical panel) shot taken at center of panel at ground.
ELECTRAN - (electrical transformer) shot taken at top corners of vault.
ELECVLT- (electrical vault) shot taken at top corners of vault.
FH - (fire hydrant) shot taken at center of hydrant at ground.
GASM - (gas meter) shot taken at center of meter at ground.
GUY- (guy wire) - shots taken at the point where guywire and ground converge.
IRR - (Irrigation system) shot taken at irrigation heads or valves at ground.
LPOLE - (light pole) - shot taken at center of pole at ground.
MHSD - (manhole storm drain) shot taken at top center of lid.
MHSS - (manhole sanitary sewer) shot taken at top center of lid.
MHTEL - (manhole telephone) shot taken at top center of lid.
MHW - (manhole water) - shot taken at top center of lid.
MON – (survey monument) shot taken on controlling point of monument.
PPOLE – (Power Pole) shot taken at center of pole at ground.
PROCOR - (property corner) shot taken at controlling point of corner.
QTRCOR - (quarter corner) shot taken on controlling point of monument.
RRCL - (railroad centerline) shot taken at top center of railroad tie between centers of rails.
SECOR - (section corner) shot taken on controlling point of monument.
SIGN - shot taken at center of sign at ground.
SLBOX - (street light pull box) shot taken at top center of pull box.
SEWER - shots taken at locates or stubs markers at ground. Example SEWER_STUB_6ft
TELBOX - (telephone box) shot taken at center of box at ground.
TRAFCAB - (traffic cabinet) shot taken at center of cabinet at ground.
TRAFLOOP - (traffic loop) shot taken at corners of traffic loop.
TRAFSP - (traffic signal pole) - shot taken at center of pole at ground.
VNUT - (water valve nut) shot taken on top center of nut.
WATER – (water meter) shots taken at locates or stubs markers at ground. Example WATER_STUB
WELL - shot taken at top center of lid.
WMETER - (water meter) shot taken at top center of meter box.
WVALVE - (water valve) shot taken at top center of lid.
WVAULT - (water vault) shots taken at top corners of vault.