

Section 4000

Record Drawings

PART 1: General

- 1.1 *Requirements* – Record Drawings are required for all facilities that ECUA is to own and maintain, to include installations as part of Capital Improvement Projects (CIP), Water/Sewer System Extensions (Extensions), and Single Service Connections (SSC).
- 1.2 *EOR Responsibilities* – For plans/projects that have an Engineer of Record (EOR), the EOR shall be responsible for signing and sealing the Final Record Drawings.
- 1.3 *Definitions* –
 - 1.3.1 *Draft Record Drawings* – record drawings prepared by the Contractor but not yet approved by both the EOR and ECUA.
 - 1.3.2 *Final Record Drawings* – record drawings prepared in digital format by the EOR and based on Contractor supplied Draft Record Drawings; must be approved by ECUA's Inspector to be considered Final Record Drawings.
- 1.4 *Record Drawings as Pay Item* – On ECUA CIP projects, final record drawings shall be listed as a pay item. Final payment and release of retainage cannot be made until Final Record Drawings meeting the requirements in this section are approved by the EOR and the ECUA Inspector.
- 1.5 *Record Drawings Submittal with Monthly Pay Requests* – ECUA's Standard General Conditions require Record Drawings to be submitted with each monthly pay request. ECUA Project Engineer may waive this requirement if the project allows.
- 1.6 *Record Drawings Need with Partially Completed Work* – Contractor shall submit and ECUA shall approve Draft Record Drawings prior to placing into service any portion of a partially completed project.

PART 2: Draft Record Drawings Technical Requirements (Contractor's Responsibility)

- 2.1 *General* – Provide material type, size, color, and manufacturer names as applicable, of all installed materials on each sheet.
- 2.2 *Water Mains and Force Mains* – Provide centerline road offset measurements every 100 feet. If main depth is more than 3 feet deep, then provide depth measurement as measured from finished grade to top of pipe.
- 2.3 *Fittings* – provide two measurements from fixed points (i.e. centerline roads, manholes, etc.). If fitting depth is more than 3 feet deep, then provide depth measurement as measured from finished grade to top of fitting.
- 2.4 *Valves* – provide two measurements from fixed points (i.e. centerline roads, manholes, etc.).

- 2.5 *Water Service Taps* – provide two measurements from fixed points (i.e. centerline roads, manholes, etc.).
- 2.6 *Water Meters* – provide two measurements from fixed points (i.e. centerline roads, manholes, etc.).
- 2.7 *Sewer Lateral Taps* – provide one measurement from downstream manhole.
- 2.8 *Sewer Lateral Stub-Outs* – provide one measurement from downstream manhole and one measurement from centerline of road.
- 2.9 *Fire Hydrants* – provide two measurements from fixed points (i.e. centerline roads, manholes, etc.).
- 2.10 *Manholes* – if located in grassed areas, provide measurement from upstream and downstream manhole.
- 2.11 *Other Features Not Listed Here* – provide measurements in similar manner to comparable features listed above.

PART 3: Submittal of Draft Record Drawings (Contractor's Responsibility)

- 3.1 *Contractor's Review* – Once the Contractor prepares a set of Draft Record Drawings, he should review them for conformance to this section, and if in compliance, submit them to the EOR's office.
- 3.2 *EOR's Initial Review* – The EOR shall not accept the Draft Record Drawings unless they conform to this section. The EOR shall require the Contractor to resubmit the Draft Record Drawings until they conform to this section.

PART 4: Final Record Drawing Technical Requirements (EOR's Responsibility)

- 4.1 *CAD Standards for Plan Sheets* – Once the EOR has determined that the Contractor's Draft Record Drawings meet the requirements of this section, the EOR shall prepare CAD drawings, to include the removal of all design notes such that only the water/force/sewer main material and sizes, valve and fitting sizes, measurements to said features, etc. are shown on the drawings. Measurements and/or as-built info in graphical clouds are not acceptable. Drawings should allow for very fast and accurate determination of installed materials.
- 4.2 *CAD Standards for Title Sheet* – The title sheet shall clearly indicate with large text the following: Final Record Drawings, Project Name and number, Contractor name, Contractor Foreman responsible for record drawings data, EOR name, ECUA Inspector name, and date of drawings. Each additional sheet shall clearly have Record Drawings indicated in the upper right corner. Each name shall have a corresponding signature and date line for acceptance.

PART 5: Final Record Drawing Review and Acceptance (Contractor, EOR, ECUA)

- 5.1 *Required Meeting* – Once Final Record Drawings are prepared, EOR shall schedule meeting at EOR's office with EOR, Contractor's foreman and ECUA Inspector.
- 5.2 *Quality Control Review* – At joint meeting, ECUA Inspector will review Final Record Drawings for completeness, accuracy, and conformance to this section. Potential deficiencies will be identified and will require editing along with a rescheduled review meeting with all parties.
- 5.3 *Certification* – While at the EOR's office, and if ECUA Inspector agrees that the Final Record Drawings are complete and correct, Inspector will sign his name on the title sheet, along with the EOR and Contractor's foreman, certifying the Final Record Drawings.
- 5.4 *Disapproval / Rejection* – ECUA/Inspector will not accept or take possession of Final Record Drawings unless the drawings are approved in whole and certified at meeting.
- 5.5 *Submittal with Final Pay Request* – EOR can then submit Final Record Drawings, along with final pay requests and other documents, as a closeout package to the ECUA Inspector for project closeout processing.