



KIVA #: _____ **Project Name:** _____
Reviewed By: _____ **Phone:** _____ **Date:** _____

The purpose of this checklist is to offer comments on record drawings for grading and drainage, grading and drainage with Offsite Improvements, and engineered fills.

This checklist serves to minimize redline comments on record drawing submittals and to maintain consistency among reviewers on record drawing submittal requirements. Plan approval and civil permit closeout depends on compliance with the comments made on the plans and this checklist.

Please return this checklist and the check prints with your next submittal. Please direct any discussions of redline comments on plans or questions about this checklist to the reviewer listed above.

The following symbols are used to identify changes needed to the plans. **REQUIRE**

General Requirements

- All as-built information shall be shown on the most current complete set of city-approved and stamped plans with the P&D Plan Reviewer initials for the specific work permitted.
- Easements and rights-of-way shown on the drawings must be shown on a recorded plat or map of dedication. Easements dedicated by separate instruments and described by metes and bounds must be recorded.
- Plans (3 sets) must be black lines on white background, having dark, clean, crisp line work, symbols, and annotation. These items must be sufficient boldness and size, and be free from background obscuring, to be legible and easy to read. No shading or tinting is acceptable.
- Minimum acceptable height for all record drawing lettering is 1/8 inch. Large lettering is preferred, especially for dimensioning, stationing, size, material, slope, and elevation callout. Standard bold block lettering is preferred.
- All items, changed or unchanged, must have a bold (**AB**) lettered next to them. Required, minor as-built changes to the approved plans must be shown clearly by boldly striking through the item changed and placing the as-built information next to or as near as possible to it. All as-built annotation changes must be larger and bolder than the original and free from background obscuring.
- On phased projects, the phase lines must be clearly shown on the key map and on the plan sheets, and their locations clearly identifiable.
- Benchmark(s) location(s) and elevation(s) must be shown on the cover sheet. Only city datum elevations are acceptable.
- The cover sheet must show the name, address, and phone number of the professional engineer or surveyor that certifies the record drawing with the following statement (indicate which phase, if applicable):
"I hereby certify this record drawing was made under my supervision or as noted and is correct to the best of my knowledge and belief."

Registered Professional Engineer (Civil) or Land Surveyor Reg. No. Date

- Each additional plan sheet must contain the signature and seal of the certifying Arizona registrant.

For more information or for a copy of this publication in an alternate format, contact Planning & Development at (602) 262-7811 voice or TTY use 7-1-1.

Engineered Fill Requirements

- Engineered fill record drawings are only for field inspections use to close-out the Engineered Fill permit. These plans are progress plans only and will be used to develop final as-built grading and drainage plans. These plans must be stamped by a registered civil engineer OR land surveyor showing the information required below for engineered fills.
- As-built engineered fill record drawings must show spot elevations on a 50-foot grid map.
- As-built engineered fill record drawings elevations shall be within a 0.2-foot tolerance.

Grading and Drainage OR Grading and Drainage with Offsite Improvements Record Drawing Requirements

- As-built Offsite Quantities on the cover sheet of Grading and Drainage Plans with Offsite Improvements.
- As-built offsite improvements, including centerline and width of driveways, ADA ramps, sidewalk elevations and widths, curb and gutter elevations, etc., on plans that are approved as Grading and Drainage Plan with Offsite Improvements.
- As-built top and bottom elevation, outfall elevation, and volume provided of all retention basins.
- As-built enough spot elevations to verify the design intentions are met (i.e. grade breaks, high/low points/scuppers, extreme storm outfall, etc.).
- As-built connector pipe inverts and grate elevations for drywells. Drywells should be numbered to correspond with drilling logs and percolation test results.

NOTE: Should the as-built drawings show that dry wells have been eliminated because of percolation test results, please add full sized sheets to the back of the as-built drawings that include copies of the percolation results and a sealed letter from the professional engineer of Record that states he concurs that the dry wells may be eliminated based on the percolation test results provided.

- Ensure that the dry well detail on the plan is by the same company installing the dry well. If a detail is shown on the plan from a company other than the company used for the service, replace the detail with one from the company installing the dry well.
- As-built flow line elevations in swales, valley gutters, curb openings, and pipe, size, length, slope of pipe, grate elevations for catch basins and underground retention storage tanks, widths of curb openings, and widths and elevations of all other drainage structures.
- As-built length, top of retaining wall, and top of footing for each section of retaining wall at each step.
- As-built top of flood walls with top of footing, if applicable, and bottom of flood wall if no footing.
- As-built top and bottom of cutoff walls.
- As-built weep holes in fence blocks. If fence blocks are called out to be turned sideways to allow flow through the fence, as-built the elevations of the fence blocks.
- As-built stations, offsets, and invert elevations for spillways and box culverts.
- As-built grades on lots, that pertain to drainage around the lot, if the drainage patterns are different from typical lot drainage shown on the plan.
- As-built all pad or finish floor elevations. Pads for residential subdivisions and finish floors for commercial projects. Elevations shall not exceed +/- 0.2' of design elevations. For buildings that are not at the perimeter of the project, they may be up to 0.5 feet above design without a plan revision.

Grading and Drainage Plan with Drainage Facilities

Drainage facility as-built information must be shown on the city-approved and stamped plans specifically approved for drainage facilities (typically shown on Grading and Drainage or Paving Plans).

- As-built stations, offsets, and invert elevations for headwalls, spillways, and box culverts.
- As-built flow line elevations, rim elevations, and/or size, length, slope, and inverts of pipe for storm drain and all other drainage structures.
- As-built invert elevation, 'V' distance, 'L' distance, flow line and/or grate elevation, station and offset for each catch basin.