READY TO INSPECT — FIELD CHECKLIST

Site utilities rough-in inspection checklist

Site utilities rough-in is the last time the work is fully visible. Once the cover inspection passes and the walls, ceilings and slabs close, every defect left behind becomes a demolition bill. This checklist walks the rough-in in the order the work goes in, with the photo each item needs before it gets buried. Work is commonly verified against IPC / UPC plumbing codes, the project specifications. Confirm the edition your authority having jurisdiction has adopted.

Who runs it: The GC's superintendent with the utility foreman, walking the open trench before any pipe gets covered. When: With the trench open and the pipe laid, before bedding is covered and backfill goes in, since nothing below can be checked once the trench is filled.

Layout and tie-in

- [ ] Trench protection cleared by the competent person before the walk
  Shoring, trench box, sloping or benching in place and checked by the competent person that day; the walk party works from the surface and never enters an unprotected trench.
  No photo required
- [ ] Line and structure layout checked against the current utility plan
  Offset stakes or machine-control layout for pipe runs and structures match the plan revision in the trailer, with cut sheets giving the crew each invert.
  No photo required
- [ ] Existing main or stub at the tie-in exposed and its invert shot
  Size, material and invert of the existing pipe or structure confirmed from the surface before new pipe is laid from it, any mismatch with the plan sent to the engineer.
  1 photo required

Pipe and bedding

- [ ] Pipe material and class match the design
  Pipe type, size and pressure class or wall confirmed against the utility plan for storm, sanitary and water, markings read on the pipe itself.
  2 photos required
- [ ] Bedding material and depth correct
  Specified bedding placed and shaped under and around the pipe, no rock bearing on the barrel, haunches supported.
  2 photos required
- [ ] Gravity pipe laid up-grade from the outlet with bells upstream
  Storm and sanitary runs started at the downstream structure, each bell facing up-grade so the next spigot is pushed home into it, observed from the surface.
  1 photo required

Grade and joints

- [ ] Invert elevations and slope on gravity lines verified
  Inverts shot at structures and along the run against the profile, continuous fall with no belly or backfall on storm and sanitary.
  2 photos required
- [ ] Joints made up correctly
  Gaskets seated and pipe home to the mark, joints clean and gapped per the maker's instruction, no cocked or pushed-past joints.
  2 photos required
- [ ] Open pipe ends plugged at the end of every shift
  Watertight plug or cap on the last pipe laid and on open stubs, observed from the surface, so trench water, soil and animals can't get into the line overnight.
  1 photo required

Restraint and separation

- [ ] Thrust blocking or restraint at fittings on pressure mains
  Bends, tees and valves on the water main blocked against undisturbed soil or mechanically restrained per the detail before backfill.
  No photo required

- [ ] Separation between water and sewer maintained
  Horizontal and vertical separation between the water main and sewer lines checked against the requirement at parallels and crossings.
  No photo required

- [ ] Valves set plumb with boxes centered over the operating nut
  Water main valves set vertical, box sections aligned over the nut and supported so the box doesn't bear on the valve body or shift in backfill, observed from the surface.
  1 photo required

Structures and services

- [ ] Structure bases set level on compacted stone at the design elevation
  Each manhole and inlet base bedded level on the specified stone, its elevation checked against the profile before pipe is connected, observed from the surface.
  1 photo required

- [ ] Building service stubs at the location and depth the plans show
  Water, sewer and storm stubs ending where the building plumbing picks them up, at the shown depth, capped and located for the as-built, observed from the surface.
  1 photo required

- [ ] Duct bank conduits counted and spaced before encasement or backfill
  Conduit count, size and spacers match the dry-utility plan, ends plugged, with sweeps, cover and clearance from water and sewer as the serving utility requires, observed from the surface.
  No photo required