



BCWS Construction and Record Drawing Submittal Checklist

PLAN REVIEW CHECKLIST

Water, Gravity Sewer, Pump Station, and Force Main

Checklist to be included with each submittal - initial and revised - of construction or record drawings.

Project Name:	
Professional Engineer:	
Engineering Firm:	

BCWS Review	Design Eng. QC	GENERAL
		One (1) complete set of drawings, combined in a single pdf file
		Cover sheet (to include the correct project title, site map, and revision block)
		Project title (to match all legal documents submitted, including title on border & project design information sheet)
		Site map (legible site map with hatched/highlighted phase)
		Revision block (list each date any sheet within the set was amended)
		Engineer's seal, signed and dated on each sheet
		Corporate seal on each sheet
		Overall project utility plan sheet with current phase accentuated
		Road names labeled (generic road names are acceptable)
		Width and center line of each R/W and EOP indicated
		All lots, adjacent TMS numbers, and/or buildings labeled
		Scale (not to exceed 1" = 50') and north arrow shown on each plan and profile sheet.
		All easements properly delineated & labeled as BCWS UE (min. 20' sewer on center and 15' water on center)
		Ingress/egress easements required/shown
		All other easements & R/W (existing or proposed) shown & labeled
		Easements extended to include the end of the water and sewer mains outside the phase line

BCWS Review	Design Eng. QC	GENERAL - Record Drawings Only
		Horizontal datum is NAD83 and labeled - record drawings only
		Vertical datum is NAVD88 and labeled - record drawings only
		Recorded road names provided - record drawings only
		Lot addresses provided - record drawings only
		Lot TMS number provided - record drawings only

BCWS Review	Design Eng. QC	SEWER PLAN SET
		Sewer stationing labeled on both plan and profile views (center of MH to center of MH)
		Profile includes all crossings (water main, storm drainage, road center line, etc.), label vertical clearances, MH diameters, and existing and final grades
		Include pipe labels - LF, size, material, pipe class, and slope (i.e. 200LF of 8" PVC SDR26 @ 0.40%)
		Method of road crossing indicated (jack and bore, open-cut, etc.)
		Slopes checked (use the Ten States Standard for design)
		Plan view includes manholes, manhole numbers, and other buried pipelines
		Drop manholes and doghouse manholes labeled and proper diameter
		Matching crowns for differing pipe diameters
		All lots served with a gravity sewer service of adequate depth (min. 3' cover for services)
		All services located inside R/W or easement but outside of drainage easements
		Services located at lot corners
		All manholes accessible and located at property corners wherever possible
		Steel casing labeled (length, diameter, and thickness) when drainage crossing is <2' of clearance
		IE Out for existing manholes at tie-in points labeled
		Current sewer details (Find the most current details on www.bcwsa.com , Engineering
		Current sewer notes
		Sewer tie-in note: Contractor to verify existing MH elevations and notify engineer and BCWS of any discrepancies. Contact BCWS a minimum of 72 hours prior for connection.

BCWS Review	Design Eng. QC	WATER PLAN SET
		Road stationing labeled on the plan view
		All bends, tees, reducers, valves, hydrants, and pipe material labeled (size, material, pipe class)
		Plan view includes all other buried pipelines
		Show BFP at the tie-in locations and air gap locations. Include note: At connections, contractor to provide temporary BFP and water meter. See detail. All other locations, 3' air gap to remain until PTO received.
		Terminations of the line labeled (Hydrant, blow-off, plug, etc.)
		DIP under roadways labeled
		Each lot served with a potable water service.
		All services located inside R/W or easement but outside of drainage easements
		Services located at lot corners
		Fire hydrants located at lot corners
		Label size of service lines, meters and backflow preventer on commercial projects
		Horizontal directional drill profiles (if applicable)
		Current water details (Find the most current details on www.bcwsa.com , Engineering
		Current water notes

BCWS Review	Design Eng. QC	PUMP STATION PLAN SET
		Site plan with maximum scale of 1" = 20'
		Site drainage
		Property lines and dimensions
		Location and dimensions of major components (control panel, generator, etc.)
		Pump Station Notes

BCWS Review	Design Eng. QC	PLAN VIEW OF STATION
		Wet well diameter
		Minimum allowable hatch dimensions
		Discharge main components and size
		Specify type of valves on force main discharge piping
		Control panel location
		Antenna pole location
		Generator location
		Frame and crane location (if applicable)
		Slab dimensions & elevations (Site to be a minimum 1' above existing/new FEMA flood)
		Access road labeled as Ingress/Egress/BCWS UE

BCWS Review	Design Eng. QC	PROFILE VIEW OF STATION
		Wet well diameter
		Base slab dimensions
		Required thrust restraints
		Discharge main components and size
		Specify type of valves on force main discharge piping
		Pipe supports
		Pump size, TDH, calculated pump rate, voltage
		Multitrode Probe alarm levels labeled (low level alarm through high level alarm to be in whole feet intervals - 1 or 2 or 3 feet between levels)
		Influent line invert elevation
		Minimum water level
		Slab top and corner elevations

BCWS Review	Design Eng. QC	PUMP STATION ELECTRICAL PLANS
		Entrance power sizing
		Entrance power disconnect sizing
		Generator sizing
		Pump riser diagram
		Grounding design
		One line diagram

BCWS Review	Design Eng. QC	FORCE MAIN PLAN & PROFILE VIEWS
		Force main profile views (same requirements as sewer profiles)
		Label air release valve locations
		Coating specified: line the two gravity sewer manholes downstream from FM discharge
		Current details

BCWS Review	Design Eng. QC	CALCULATIONS - Not Required for Record Drawing Submittals
		Water System Design Calculations (Use MID, Flushing Velocity, and Peak Hourly Demand) for each phase
		Sewer System Design Calculations (Verify flow through designed pipe & slope) for each
		Pump Station Calculations (Peaking factor 2.5, 6 starts per hour)

I certify the submitted construction plans and calculations or record drawings meet the above criteria. If any of the above criteria is missing or not provided, I understand that BCWS has the right to reject my submittal. I understand that BCWS reviews items that are not included on this checklist and that comments may be issued on checklist items and other items BCWS reviews.

PE Signature: _____

Date: _____