

**Tract Plan Check Criteria**

Tract: \_\_\_\_\_

Job: \_\_\_\_\_

Date: \_\_\_\_\_

**Cover Sheet**

- Must be on 24 x 36 size paper
- Title: Victorville Water District  
Water Improvement Plans  
Tract \_\_\_\_\_
- Index map w/ lot #s, street names, tract boundary, N arrow, and sheet number references
- Vicinity map w/ N arrow, major streets and project area shaded in
- Sheet index w/ street names and stations
- Legend w/ abbreviations, symbols and lines
- Current General Notes (04-21-08)
- Fire Department Notes
- Construction notes with quantities needed for permit scope (LF pipe, valves, FH, Hot Taps, Services, etc.)
- Construction notes should reference applicable VWD std dwgs
- Construction note for blue dots at fire hydrants
- Basis of bearing, Bench mark
- Dig Alert logo and info, Owner name and contact info
- Utility agencies contact info
- Verify scale block

**In Bottom Title Block:**

- WTR - , ENG - , WP - listed if possible
- Tract number
- Sheet number and total sheets
- Design engineer contact info and PE seal
- Brian W. Gengler signature block (RCE 44730)
- VWD logo, obtain from City website
- Fire protection system approval (Fire Prevention Specialist)
- Revision block

**Plan and Profile**

- Tract number and street name on bottom corner of every sheet
- Scale H: 1"= 40' or H: 1"= 20'  
V: 1"= 4" V: 1"= 2'
- Bar scale, North arrow
- Profile grid to be scanable (not solid black)
- Plan and profile on same sheet and aligned vertically
- Street Centerlines, names, stations and Street intersection stations
- Tract boundary
- Dimension street and right-of-way
- Proposed street light locations for reference
- Existing and proposed utilities shown (water, sewer, SD, gas, phone, electric, etc.)
- Show existing waterlines and denote which zone they are in if there are different zones in the area
- All utility crossings shown on profile
- If possible, go over SD with 30" min cover and DIP; otherwise, go under SD per W-37 or W-38.
- If there is no storm drain shown on the plan, ask them to verify that there isn't one
- Check the off-site storm drain for conflicts with existing waterlines or ask them to check it
- Use heaviest line weight for proposed water facilities, others should be lighter
- Dash or fade out existing facilities (No grey)
- Check feasibility study for lines and sizes that are required to be install
- Developments greater than 100 homes require 2 points of connection to the system per FD Regulations
- Waterlines must be installed to the tract boundary and stubbed for future connection
- Stub waterlines 10' beyond pavement for known future streets
- Curb lines and dimension from curb to waterline (6' if possible)
- Bearing and distance on waterline. Label all curves in waterline w/ R, Δ, and L
- Specify material, diameter and length of pipe on profile
- Use match lines for continued lines; show stations and sheet reference
- Identical points called out with leader lines
- Show stations at bottom of profile
- Show existing and proposed finished grade on profile
- Max slope change at grade breaks is 4%, otherwise use fittings (case by case)

## Plan and Profile (Cont.)

- Minimum slope = 0.2% (0.002), Label slopes on profile
- Verify stationing for items on plan matches profile (FHs, Air Vacs, etc.)
- Call out grade breaks, Grade breaks cannot be placed at fittings
- Show property lines for lots
- Verify that services don't interfere w/ driveway approaches
- Place air vac valves at high points
- Call out all fittings
- Callout easements for water facilities ("20-foot wide easement dedicated to VWD")
- Show all or applicable construction notes

## Location and Clearance

- Verify that all existing pipelines are shown and are correct (check AutoCAD Atlas)
- 36" min cover on 8" lines from top of pipe to top of pavement
- 42" min cover on 12" and larger lines
  - within reason, keep cover not more than 2-3 feet below minimum
- If min cover can not be met, consider using ductile iron pipe w/ 30" cover (case by case)
- If it involves an existing line (PVC, DIP, AC) and cover can't be met check with Frank
- 10' horizontal separation between water and sewer mains and manholes and storm drains
- 4" vertical separation between water and sewer laterals when sewer is below
- Standard water main location = 6' from curb, Use 7' in case of Cross Gutter Interference
- Light poles require 3' clearance from meter box/valves
- Maintain 5' min between F.H. and exposed obstruction (air vac, street light, etc.)

## Material & Sizing

- Water main: 8" Min
  - 8" to 12": PVC C900, Class 305
  - 14" to 48: PVC C905, Class 305
  - All Sizes: DIP, Class 250/350 Asphalt Coated
- Minimum PVC pipe bending radius = 300 times the pipe diameter
- Gate Valve for 8" lines
- Butterfly Valve for 12" line or larger (except hot taps- always use tapping gate valves)
- Valves must be flanged directly to tee or other fitting, no in-line valves
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## Restrained Joints

- Restrained joints required, thrust blocks permitted by special permission only
- Restrain fittings and adjacent pipe as required. Restrain dead ends. 10' Min. each side of Hydrant
- Restrain all joints in curves less than 380' radius
- Restrain SD under-crossings per W-37 or W-38
- If they don't use our minimum RJ lengths, they must submit calcs to use less

## Fire Hydrants

- 300 ft spacing preferred for FH (allowable range: 250 to 350 ft)
- 600 ft spacing on streets with no houses facing them
- Place F.H. on lot lines or 4' off end of curve radius
- Blow-off hydrant required at ultimate low points only on 16" and larger lines (case by case, 4" and larger)
- Blow-off hydrants at storm drain inverts (case by case)

## Tie-Ins and Phase Breaks

- Place valves and hydrants at phase breaks where services are affected (case by case)
- NO TEMPORARY FHs
- If no services affected, use end cap w/ temporary blow-off
- Install test plates at connections to old pipes and valves (test plates must be called out)

## Standard Drawings

- Include all current & applicable VWD standard drawings on the last sheet
- Provide Engineers Cost Estimate