

COACHELLA VALLEY WATER DISTRICT AG DRAINAGE PLAN CHECKLIST

Tract/Parcel No.: _____ Date: _____

Project Common Name: _____

Developer: _____ Phone: _____

Engineer: _____ Phone: _____

Engineer Signature: _____ Print Name: _____

This is only a general checklist; please refer to the CVWD Development Design Manual (DDM) for all requirements and regulations.

<http://www.cvwd.org/208/Development-Design-Manual>

Return signed and completed checklist with your first submittal

Legend: X = Data appears to meet standards

N/A = Not applicable or not on plans

? = Not shown but maybe required

O = Data is not to standards, leave comment explaining why

PRIOR TO PLAN CHECK

___1. Easements to be dedicated to CVWD by which of the following? Please check one:

Tract Map Grant of Easement (Instrument number)

Legals and Plats depicting easement(s) must be reviewed by CVWD Right-of-Way division and approved by CVWD's licensed Land Surveyor prior to Mylar approval.

___2. Project hydraulic modeling report must be completed and approved. Review reports summary for minimum pipe size and special condition requirements.

___3. Submit hydraulic calculations to verify that different size mainlines will continue to supply adequate flow downstream based upon current requirements.

___4. Provide calculations and soils report to support trench detail that will be shown on design plans. Follow the guidelines in Appendix N of the DDM for trench detail.

___5. Provide pothole report with map identifying existing pipeline easement and existing pipeline horizontal location and vertical elevations.

GENERAL TO ALL SHEETS

___1. Drawings are 24 inches by 36 inches.

___2. Space for District drawing approval block with revisions in bottom right corner kept clear for District drawing approval block. (3"x6")

___3. Space shall be provided (3.5" x 2.5") for as-built signature block.

___4. Benchmark elevation of monument and location.



- ___5. In lower right corner of title block, include type of plans, geographic data (quarter section, section, township and range), project city, county, state, tract/parcel number and project name. Information in title block shall match the project title that is centered on the top of the cover sheet.
- ___6. Engineer's/Consultant's data to include name, address, phone number, FAX number and email address.
- ___7. Include engineer's current/valid stamp. Stamp signature is required on mylars.
- ___8. Include page number (i.e. sheet 1 of 5) in large font in lower right corner.
- ___9. Include Underground Service Alert (USA) with phone number 811.
- ___10. Include benchmark elevation of monument and location.
- ___11. Include basis of bearing.
- ___12. Show elevation conversion note (if applicable) – "TO CONVERT TO NATIONAL GEODETIC VERTICAL DATUM OF 1929, SUBTRACT 500 FROM ALL ELEVATIONS SHOWN ON THESE PLANS."
- ___13. Include a note on drawings stating: "No permanent structures or trees within CVWD and/or USBR easements. CVWD will not be responsible for damage or replacement of any surface improvements, including but not limited to, decorative concrete, landscaping, curb, gutter, sidewalks, planters, gates and related improvements installed within CVWD and/or USBR easements."
- ___14. Include north arrow on all plan views. North arrow should point up or to the right.
- ___15. Include bar scale to match plan scale.
- ___16. Submit hydraulic calculations to verify that different size mainlines will continue to supply adequate flow downstream based upon current requirements.
- ___17. Call out all streets in project as public or private. On private streets, call out CVWD easements. Ex. "33' CVWD Easement".
- ___18. Agricultural drain easements shall be a minimum of 20 feet wide up to 10 feet in depth. With depths greater than 10 feet the easement shall be the equivalent of two times the depth of the pipe. If walls are on both sides of agricultural drain pipeline, the width of the easement shall be triple the depth of the pipe for a larger easement.
- ___19. All appurtenances must be within CVWD easement.
- ___20. Include the instrument number for any existing CVWD/USBR easements, or easements that the developer has to acquire for CVWD. Call out in plans and on cover sheet with reference index. If the easements are going to be dedicated to CVWD on the tract map, then call out in plans next to easement. See example easement table and callout.

a) Table and callout:

| EASEMENT REFERENCE TABLE | | | |
|---------------------------------|----------------|-------------------|---------------|
| EASEMENT | PER | INSTRUMENT NO. | FACILITY TYPE |
| 1 CVWD | TRACT 12345 | BOOK XXX/PAGE XXX | SEWER/WATER |
| 2 USBR | INSTRUMENT NO. | XXXX-XXXXX | IRRIGATION |

1 SEE EASEMENT TABLE

b) For public streets call out easement in favor of CVWD and city or county. Ex. "33' wide (city or county) PUE and CVWD Easement."



***NOTE: Engineer please initial by all areas on checklist that are not to standard, indicating corrections have been made to plans.**

Comments: _____

COVER/TITLE SHEET

- ___1. Show project title centered on top of page in large font listing: type of plans, (quarter section, section, township and range), project city, county, state, tract number and project name. NOTE: **REPLACEMENT** projects are within an existing easement while a **RELOCATION** projects are outside of existing easements.
- ___2. Include a vicinity map showing the general area with cross streets labeled. Scale between 1 inch = 1,000 feet and 1 inch = 5,000 feet. Not to Scale (NTS) is also acceptable as long as it is listed. Map needs to show section lines and section numbers on all sides and adjacent tract numbers.
- ___3. Include an index map showing the overall project including all existing and proposed domestic water, sewer, irrigation and drainage systems with materials and sizes including above ground appurtenances. Show all 1/4 & 1/16 section lines, section numbers, manhole numbers and APNs. Bar scale shall be between 1 inch = 200 feet and 1 inch = 500 feet. No TOPO elevation lines are allowed on drawings.
- ___4. Include a typical street cross section showing all existing and proposed domestic water mains, sewer mains, irrigation mains and drainage systems for each street with depths and separation. Show curbs, sidewalks, walls, catch basins, all dry utilities and right-of-ways. Must be to scale!
- ___5. List quantities of materials with construction notes for the entire project. List items as "Furnish and install".
- ___6. Show symbol legend showing all baffles, valves, meters, irrigation lateral mainlines, and all wet and dry utilities with appurtenances and 1/4 & 1/16 section lines.
- ___7. Show abbreviations used on drawing listed in tabular form.
- ___8. Space for General Ag Drain Notes and CVWD signature block. 8 1/2" clear down the right side.
- ___9. Space for Special Construction Notes to contractor is permissible. Plans need to be exclusive to CVWD approval only for signatures.
- ___10. Show owner's/developer's name, address, phone number, FAX number, email address and contact person.
- ___11. Show USBR and CVWD Reference drawing and easement documents listed out in table format.
- ___12. Show Recorded Tract or Parcel Map information: Instrument No., Recording Date, Map Book No., and Page No.
- ___13. Include the trench detail(s). Follow guidelines in Appendix N of Development Design Manual for trench detail requirements. Provide calculations and soils report to support trench design
- ___14. List sheet index in tabular form.
- ___15. List utility contacts in tabular form with name, address and phone number.



___16. Manhole index showing manhole number, manhole size, sheet number, street name and station number.

Comments: _____

PLANS – PLAN VIEW

- ___1. Call out separate details view show how the proposed connection will be made to the existing agricultural drain. **Must show existing stationing, elevation and drawing number to verify connection depth.** Stationing can continue with prior drawing stationing or can start at with STA 10+00.
- ___2. Scale 1 inch = 20 feet or 1 inch = 40 feet (Preferred). The preference is that the plans are legible. If the smaller scale facilitates improved legibility, then please use. CVWD reserves the right to require a scale that complies.
- ___3. Include pipeline tangent data to include bearing, length and sheets.
- ___4. New stationing shall start at 10+00. Call out 100 foot stationing along new mainline with 50-foot ticks. All pipeline appurtenances shall be stationed and labeled with size and material in both plan and profile.
- ___5. Call out centerline of road versus section line. Show dimensions off the centerline to all wet and dry utilities, curbs and easements.
- ___6. Call out existing and proposed edge of pavement, curb and gutter, sidewalks and walls.
- ___7. Call out all existing and proposed sewer laterals, sewer/drainage manholes, water services, valves, fire hydrants, air/vac units, storm drain/catch basins and pipelines, irrigation baffles, irrigation standpipes, division boxes and irrigation meters and their respective sizes with drawing number reference. Call out all proposed and existing wet and dry utilities in general area, especially IID/SCE. Also, any dry utilities that will encroach on a CVWD/USBR easement.
- ___8. Call out location of existing and proposed structures, trees, retention basins, curbs and gutters, walls, islands, guardhouses and decorative concrete, etc., in the general area.
- ___9. Call out right-of-way from center line of road or section line.
- ___10. Call out lot lines and lot numbers. Show driveways or entrance ways if known.
- ___11. Call out street names or line reference.
- ___12. If pipeline continues on the next sheet call out match line with stationing on both sheets list corresponding sheet number. Make sure the match line is clearly identified on plan view.
- ___13. Call out a separate detail for special construction (i.e. siphons, pipeline crossings) not shown on profile view showing depths and separation.
- ___14. All standard HDPE agricultural drainage shall be 12, 18, 24, 30 & 36 inches in diameter.
- ___15. Minimum horizontal distance between agricultural drainage and sewer pipelines 10 feet. Outside to outside.
- ___16. Minimum horizontal distance between agricultural drainage and domestic water mainlines is 10 feet. Outside to outside.



- ___17. Minimum horizontal separation between agricultural drainage and sewer recycled water pipelines is 10 feet. Outside to outside.
- ___18. Maximum horizontal distance between manholes is 400 feet. See Section 7, table 7.7 Manhole Minimum Diameter for manhole depth and size.

Comments: _____

PLANS – PROFILE

- ___1. Per the project hydraulic analysis and calculations, show the proposed hydraulic grade line (HGL) and flow (Q) in the profile.
- ___2. Slope of pipeline depicted.
- ___3. The vertical scale shall be either 1-inch = 4 feet or 1-inch = 2 feet.
- ___4. Depth of all existing and proposed wet and dry utility and storm drain crossings.
- ___5. Type and size of pipeline.
- ___6. Minimum depth of agricultural drainage is 7 feet.
- ___7. Total pipeline distances depicted.
- ___8. Show all fitting locations with stationing listed.
- ___9. Special construction or pipeline crossings of other utilities.
- ___10. Show wall crossing and describe future access to pipeline.
- ___11. Storm drain/catch basins (if applicable).
- ___12. Match line with station and invert elevation and corresponding sheet number on both sheets.
- ___13. Elevations with existing drawing numbers and existing station number at connection points.
- ___14. Manhole location showing station number, elevations for inverts in and out, manhole depth and top of manhole.
- ___15. All pipeline and appurtenances including but not limited to tees and bends are to be stationed and labeled with size and material in both plan and profile.

Comments: _____

