

Cortaro-Marana Irrigation District (CMID)
Irrigation System Construction General Notes

1. All construction shall conform to the Maricopa Association of Governments (MAG) specifications and standards details and latest revisions unless noted otherwise on plans.
2. Contact, notification, and coordination with CMID shall be made with the District's office at 520-682-3233.
3. The contractor shall provide shop drawings for all fabricated components including mechanical, electrical, and structural for CMID's review. All shop drawings will require CMID's approval before construction can begin.
4. If a conflict in notes on this design plan is identified, the CMID general notes shall supersede any other notes.
5. Typical non-irrigation season is from mid-October to mid-January. Any construction allowed during irrigation season or during the off season is at CMID's discretion.
6. Construction will require scheduling to avoid interruption of CMID irrigation water deliveries unless interruptions are approved by CMID. Contractor shall contact and coordinate with CMID for the "dry-up" of existing irrigation facilities prior to the start of construction. **It will be CMID's sole determination of the time and duration of this "dry-up" period. There is always a possibility of tailwater drainage at all times.**
7. A District construction permit and use license is required prior to any construction activity or disturbance within District properties, easements, rights-of-way, or facilities. A District construction permit does not replace or eliminate a required permit from other entities and or governmental agencies. Contractor is responsible for obtaining all necessary CMID permits, rights-of-entry, **notices to proceed**, and approvals prior to construction.
8. Replacement easements must carry all prior rights and be recorded prior to any final approval of plans. A minimum of a 25-ft easement is required over all CMID facilities.
9. Engineering and construction of project must ensure current and future access to all CMID property, easements, and infrastructure within or adjacent to the project.
10. Contractor shall notify CMID in writing at least 72 hours in advance of any construction.
11. All construction work is subject to CMID's inspection and approval. Construction work completed without inspection by CMID shall be subject to exposure at contractor's expense. Contractor is responsible for contacting and coordinating with CMID for the inspection of all construction work. **Notice must be given to CMID or CMID's agent a minimum of 48 hours prior to installation of any work requiring field observation / inspection or approvals to proceed.**
12. Contractor shall field verify existing conditions prior to the start of construction.

13. Contractor shall contact and coordinate with CMID for the removal or existing irrigation facilities prior to the start of construction.
14. Protecting of existing installations
 - a. In performing work in the vicinity of existing installations, contractor shall take all the necessary precautions to safeguard existing installations which are to remain in place. The contractor shall obtain the location of conduit, pipe, cable, ground mat, and other buried infrastructure items prior to performing any excavation nearing the existing installations and shall use proper methods for protection during excavation, installation, and backfilling operations. The contractor shall protect adjacent facilities when installing equipment and materials.
 - b. All protective measures and installations shall be arranged to permit operation of the existing equipment and facilities by the owner while work under this contract is in progress. The contractor shall remove all protective measures and installations after they have served their purpose. The materials furnished by the contractor to provide protection shall remain the property of the contractor.
 - c. Contractor shall be responsible for repair, at their own expense, of any damage to existing installations and/or facilities due to the contractor's operations or its failure to provide proper protection; any such damages incurred may be repaired by the owner, and the contractor will be back charged for the repair costs to said existing installations thereof.
15. All irrigation facilities and structures shall be monolithic cast-in-place reinforced concrete unless otherwise approved by the CMID engineer or as shown on plans and shall have a wall thickness of eight inches unless noted otherwise.
16. All compaction and backfill shall conform to CMID details.
17. Contractor is responsible for the final grade adjustments of all irrigation structures and manholes to the satisfaction of CMID.
18. Contractor shall purchase and install CMID's custom detectable underground warning tape at the specified depth for all lengths of buried CMID facilities. Detectable underground warning tape shall be presco, reef industries terra tape, or seton custom underground warning tapes, the color blue, 6" wide and read as follows; "Caution CMID irrigation facilities buried below contact CMID at (520)682-3233". Contact CMID for ordering and installation information for warning tape.
19. **Contractor shall be required to hydro test all new CMID facilities.** Each section of pipeline between two successive structures shall be tested by filling the pipe and structures with water to a point 4 feet above the top of the pipeline in the upper structure or to the top of structure. Allowable leakage will be computed by the following formula: the leakage per 100 feet of length, as determined by a 2-hour test, must not exceed 0.10 gallon per hour per inch of inner diameter of pipe.

20. Existing utilities as shown on the drawings are in accordance with the available records at the time of design. Contractor is responsible for verifying locations of utilities at least 14 days prior to construction or removals of existing facilities and notify engineer of any discrepancies or differences. Contact Arizona Blue Stake center two working days prior to construction at (800) 782-5348 to locate and flag underground facilities.
21. All proposed utilities crossing CMID properties, easements, or infrastructure will require a permit and use license and construction shall be inspected by CMID.
22. All proposed utility crossings shall be installed with a minimum of 3-ft vertical clearance to CMID infrastructure or 10-ft below existing grade, whichever is greater, or as approved by CMID. Minimum horizontal clearance from CMID structures is 10-ft. Crossings must be installed at right angles to any CMID infrastructure. Clearance elevation must be maintained across the full width of CMID's easement. No utility fittings, valves, or structures shall fall within CMID's properties or easements.
23. The preferred method of utility installation is bore and jack; where installation is performed using open cut, complete replacement of the concrete lining to District standards is required. Where new utilities cross under existing CMID irrigation pipes, and where mechanical compaction of the backfill is not achievable, one sack slurry backfill is required to the spring line of the existing CMID pipe.
24. The District requires complete electronic copies in AutoCAD of any project that changes, deletes, or adds to any District facilities, structures, canals, pipelines, easements, or rights-of way.
25. As-built plans and certifications shall be provided immediately upon completion of construction to CMID by contractor performing the installation of CMID facilities. As-built plans shall feature both horizontal and vertical as-built information for any new utilities installed within the CMID easement. **CMID does not require the as-built drawings to reflect the as-built invert of existing utilities that cross CMID's facilities, however, the minimum clearance separation between the existing utility and CMID's facility will need to be as-built.** Final as-builts are to be provided to CMID in all of the following forms: three (3) 11x17 copies on bond paper with original signatures and (1) electronic copy (pdf).
26. As-built plans of CMID's facilities shall be reflected on the corresponding as-built paving and water improvement plans where applicable.
27. All infrastructure crossing plans, and undergrounding plans will be signed and sealed by a civil engineer that is licensed in the state of Arizona.
28. Relocation and protection of District facilities shall be done at no expense to the District.
29. CMID properties, easements, or rights-of-way shall not become a component of any drainage solution for any project. Elevations of District infrastructure must be maintained at all times unless approval is received from CMID.

30. All District improvements shown on the plans shall be warranted by the contractor, property owner, or both (as may be required by the District on a case by case basis), for a period of two years from construction completion.