

# Farmers Irrigation District

## Construction Policy

### GENERAL

This section sets forth policy guidelines and quality standards for design work, engineering, and construction within the District.

### DESIGN WORK AND ENGINEERING

Construction may be commenced without formally engineered plans if the Board or the supervisory staff of the District determines that: (1) it is not cost effective to hire a professional engineer to design the project; and (2) the project can be constructed in a professional, safe, workmanlike manner without professionally engineered plans. Projects of sufficient complexity or projects demanding time or expertise beyond the resources of the District should be professionally engineered.

All construction requiring formally engineered plans shall be engineered prior to the commencement of the project. The District shall maintain a file of designed or engineered projects so that projects may be initiated on short notice. The District also maintains a prioritized list of pending projects including the design status of each project. A comprehensive District plat is maintained in the District's Auto-CAD system.

### CONSTRUCTION QUALITY STANDARDS

All construction projects will be inspected on a regular basis, and final approval will be made by a District-qualified inspector. Notice of final approval of completed work will be presented to the Board. Work performed must be in compliance with District specifications, and any deficiencies must be promptly corrected. The following is a general list of quality standards and specifications required for all District Projects.

All projects will have adequately sized and correctly designed thrust restraint, pressure relief, air relief, drain systems, and isolation valves. Ductile iron shall be used for all road crossings. Projects with mainlines attached to the Plant 2 or Plant 3 penstock or the Highline Canal pressure main shall use Class 200 pipe and fittings. Class 160 pipe or PIP may be used for low pressure District lines such as, for example, the Farmers Canal.

### SPECIFICATIONS

Construction work on the DDN will adhere to the following criteria:

**MATERIALS:** All materials shall be of approved brands and types. The District will have pre-approved lists of materials for users. The District will not accept or serve systems with unapproved materials or construction.

**DEPTH OF PIPE:** Pressurized laterals will be buried at a depth which will allow protection from freezing. In addition, pipe depth will comply with regulations which apply to rights-of-way used. Minimum cover for mains and laterals will be 30 inches.

**ISOLATION VALVE:** Shut off valves will be designed into the DDN so that portions of the network may be isolated. Isolation valves will be located to permit a portion of the mains and laterals to be charged for fire protection.

**SYSTEM DRAINS:** All portions of the DDN, including turnouts and their appurtenances, shall have drain capability which will accommodate runoff from associated lines.

**SECURITY:** All shutoff valves, pressure reduction valves, turnouts, and drain valves will be protected from vandalism, freezing, and unauthorized modification or adjustment.

**USER SYSTEM:** The District may provide model ordinances, plans and specifications for user systems. Such systems will include pressure protection, screening, pipe sizing (for multiple systems), valves, pressure control, relief valves, and connections.

## **WATER USER PARTICIPATION**

A water user or group of water users may install certain sections of the DDN in an effort to expedite projects. Approval of a water user proposal will be made on a case-by-case basis. All work performed will be to District specifications with regular inspection and approval by a District-qualified inspector. The Board will be notified of project approval and completion.

If the District determines that a water user project will advance the District's sustainability plan, and the District is capable of providing services and materials to assist in completing the project, the District may do so. Approval of a water user request to participate in the creation of the pressurized system depends upon several considerations as generally described below:

- \*Is the proposed project consistent with the District's sustainability vision
- \*Is adequate funding or financing available
- \*Is the applicant's pressurization plan thorough
- \*Has the proposed project been engineered
- \*Have agency approvals been obtained
- \*Have rights-of-ways or easements been obtained
- \*Has written approval been obtained from impacted property owners
- \*Does a cost analysis demonstrate District and user benefit
- \*Will the proposed project be consistent with existing and future systems

## **EASEMENTS**

All work shall be performed within easements or rights-of-way. All easements shall include a construction right-of-way and a permanent easement for ingress and egress for inspection and maintenance. Easements shall be recorded in the Hood River County deed records office.