STATE OF MAINE
DEPARTMENT OF HUMAN SERVICES
DIVISION OF HEALTH ENGINEERING
10 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0010

August 20, 1999

ANGUS S. KING, JR.
GOVERNOR

KEVIN W. CONCANNON
COMMISSIONER

Geoflow, Inc.
Attn.: Suzanne Dill, Regional Manager
77-32 66th Road
Middle Village, New York 11379

Subject: Approval, **WASTEFLOW** Experimental Drip Irrigation System

Dear Ms. Dill:

The Division of Health Engineering has completed its review of an application for use of the Geoflow **WASTEFLOW** subsurface drip irrigation system for onsite wastewater disposal. Because this proposal falls outside the usual provisions of the Maine State Plumbing Code, Subsurface Wastewater Disposal Rules it has been reviewed as an experimental system.

It is our understanding that the **WASTEFLOW** system consists of a proprietary ½ inch inside diameter plastic emitter line, inline pressure reducing flow emitters, a cyclonic solids filter, vacuum relief valves, and rigid plastic header lines. The interior of the emitter lines is impregnated with a root growth retardant and a bactericide. The emitter lines are available in variable pressure ("Classic") and constant pressure ("PC") models. A proprietary electronic control panel would be used to control dosing volume and frequency.

Typical installations would consist of a ladder-shaped arrangement, with a supply header with a vacuum relief valve, multiple emitter lines, and a return header with a vacuum relief valve. Effluent would be pumped from a treatment tank through a cyclonic filter to the supply header, and would return to the treatment tank if not fully disposed of during the pump cycle. The systems are designed to accommodate back-flushing for cleaning the various lines and thereby preventing solids buildup. Individual systems would be sized according to volume and loading rates in accordance with Table 1 of the design, installation and maintenance manual dated May 1, 1999.

Based upon the information and correspondence in our file, including the design, installation and maintenance manual dated May 1, 1999, this office grants approval for use of the **WASTEFLOW** subsurface drip irrigation system for onsite wastewater disposal, pursuant to Chapter 18 of the Maine State Plumbing Code, Subsurface Wastewater Disposal Rules, Section 1801.0 (copy enclosed). This approval is subject to the following conditions:

1. Individual **WASTEFLOW** systems shall require prior review and approval by the Division as experimental systems for a period of time no less than two years form the date of this approval.. This condition may be reconsidered or revised upon submission of documentation that systems, installed and operated as designed, perform as intended by the manufacturer, i.e., Geoflow, Inc.;

2. Individual first time system designs shall include a reserve design for a conventional onsite wastewater disposal system, and a minimum 12 month monitoring program to document the system's performance;

3. In the cases of replacements of existing licensed overboard discharges, where the site can not support a conventional system, the reserve design maybe waived, but only after review and approval by the Division; and

4. The minimum separation distances required by the Rules shall be maintained between the seasonal high groundwater table or other limiting factor, and the lowest elevation of all **WASTEFLOW** systems' disposal areas

Because installation and owner maintenance has a significant effect on the working order of onsite sewage disposal systems, including their components, the Division makes no representation or guarantee as to the efficiency and/or operation of this system.

If you have any questions please feel free to contact me at (207) 287-5695.

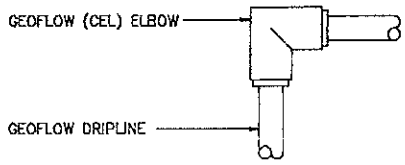
Sincerely,

James A. Jacobsen

James A. Jacobsen, Manager
Wastewater and Plumbing Control Program
Division of Health Engineering
e-mail: james.jacobsen@state.me.us

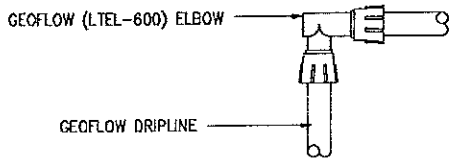
xc: File
Lewis Paine, Distributor

# Wasteflow System Details



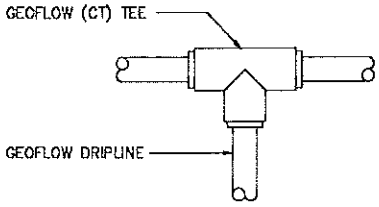

502 GEOFLOW ELBOW (CEL)

Not To Scale



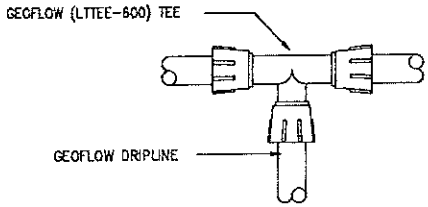

502LS GEOFLOW LOCKSLIP ELBOW (LTEL-600)

Not To Scale



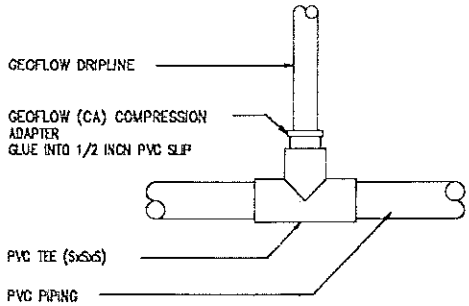

503 GEOFLOW TEE (CT)

Not To Scale



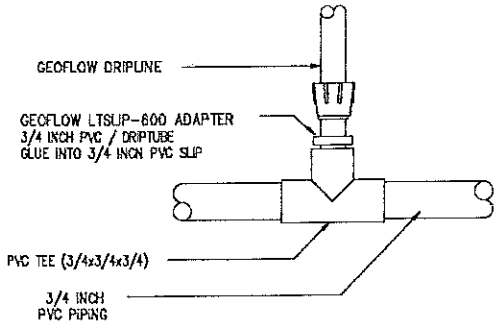

503LS GEOFLOW LOCKSLIP TEE (LTTEE-600)

Not To Scale



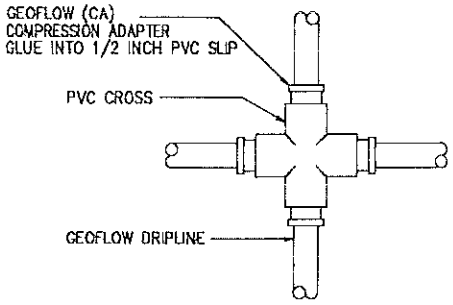

504 GEOFLOW MANIFOLD CONNECTION (PVC TO ADAPTER)

Not To Scale



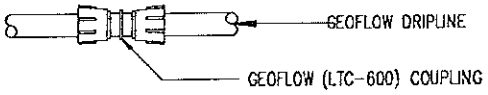

504LS GEOFLOW MANIFOLD CONNECTION (PVC TO ADAPTER)
LTSLIP-600

Not To Scale



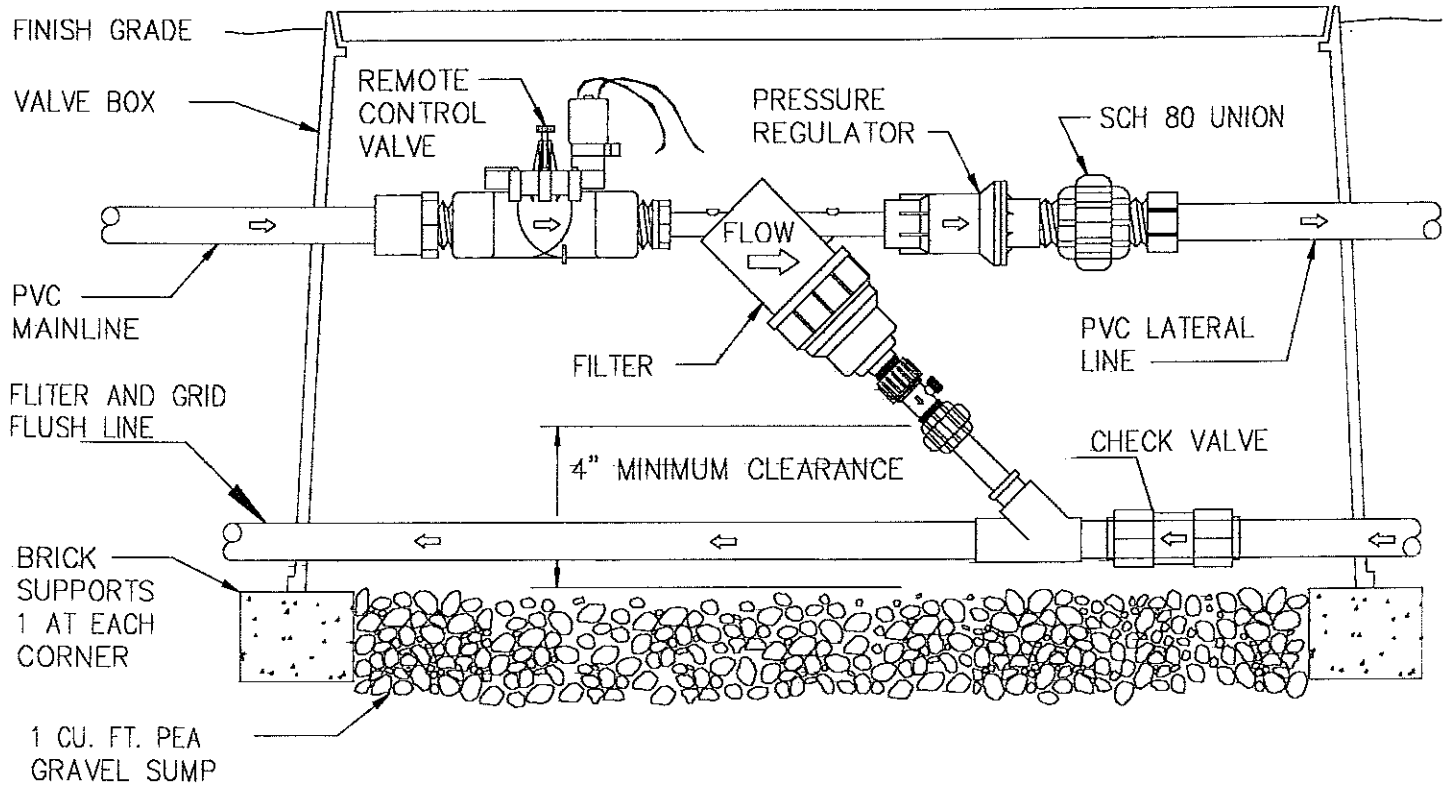

506 GEOFLOW PVC CROSS WITH COMPRESSION ADAPTORS (CA)

Not To Scale



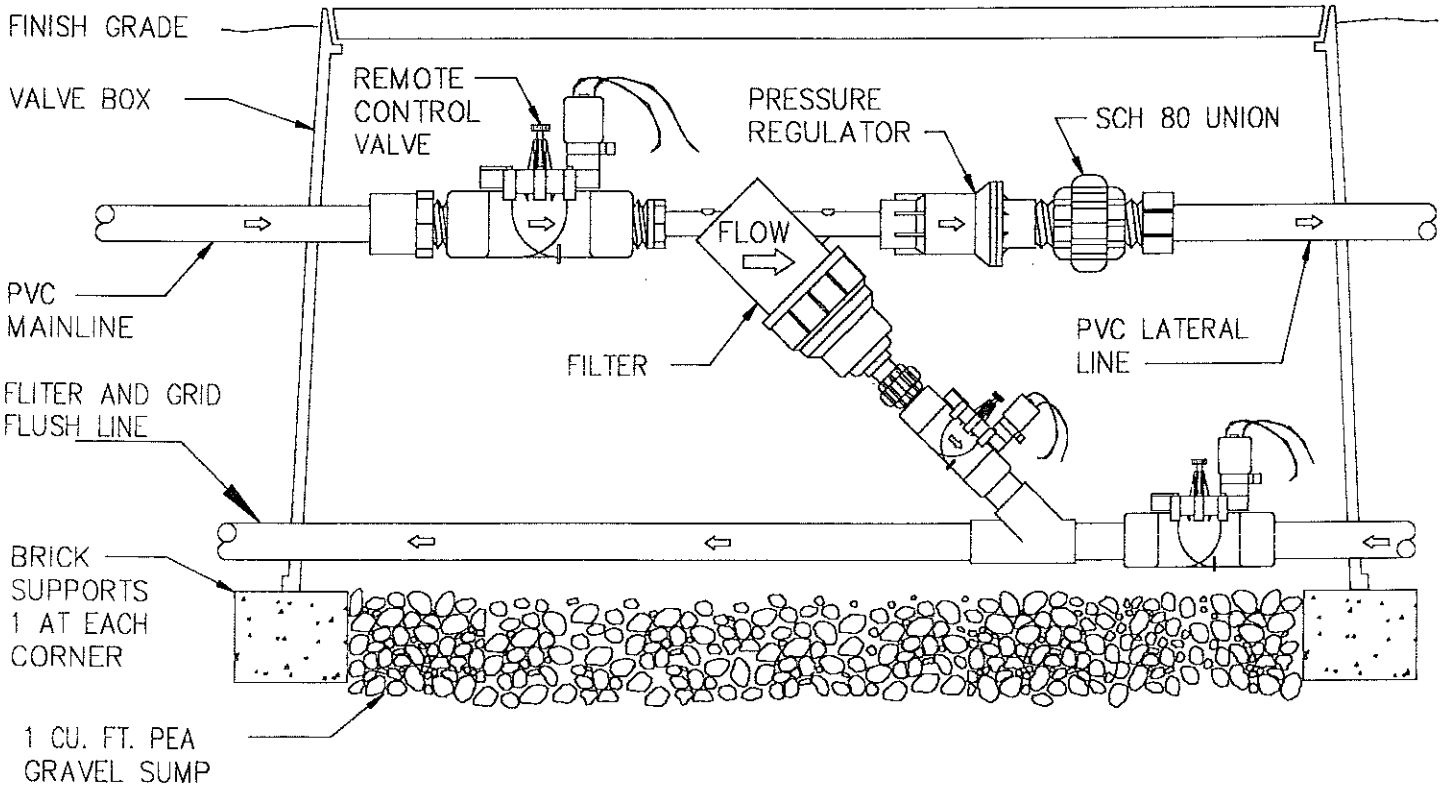

501LS GEOFLOW LOCKSLIP COUPLING (LTC-600)

Not To Scale



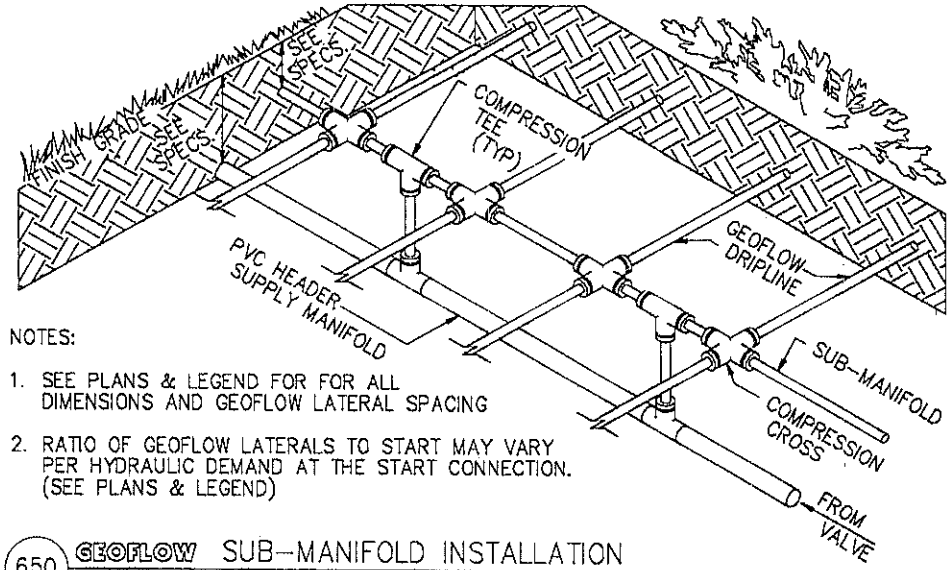

565A GEOFLOW REMOTE CONTROL UNIT WITH VALVE, FILTER & PRESSURE REGULATOR

Not To Scale




565B GEOFLOW REMOTE CONTROL UNIT WITH ZONE VALVE, FILTER PRESSURE REGULATOR & FIELD FLUSH VALVE

Not To Scale

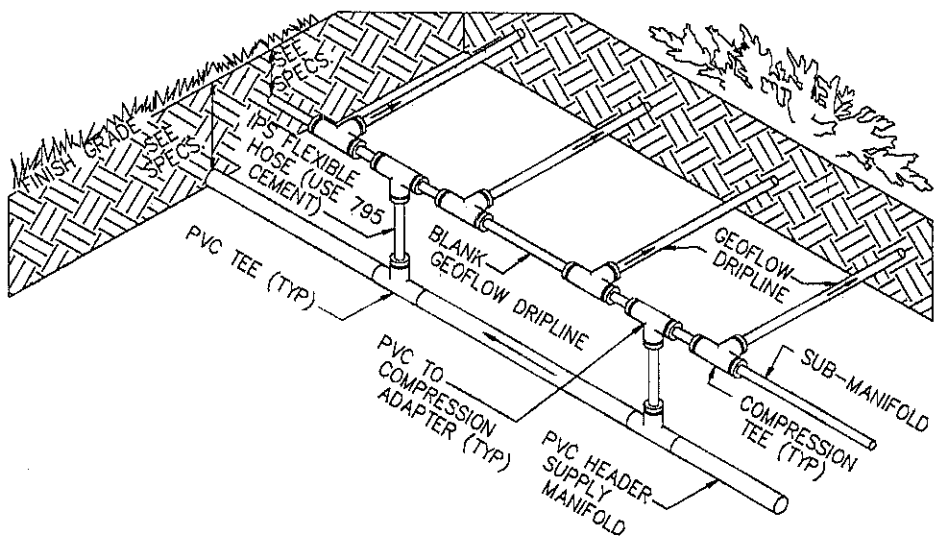



NOTES:

1. SEE PLANS & LEGEND FOR FOR ALL DIMENSIONS AND GEOFLOW LATERAL SPACING
2. RATIO OF GEOFLOW LATERALS TO START MAY VARY PER HYDRAULIC DEMAND AT THE START CONNECTION. (SEE PLANS & LEGEND)

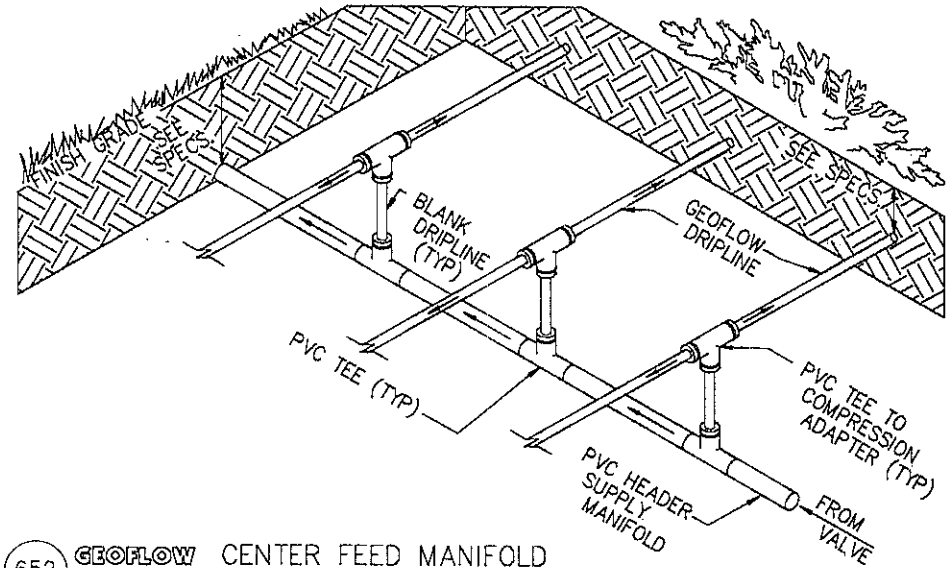
650 GEOFLOW SUB-MANIFOLD INSTALLATION

Not To Scale



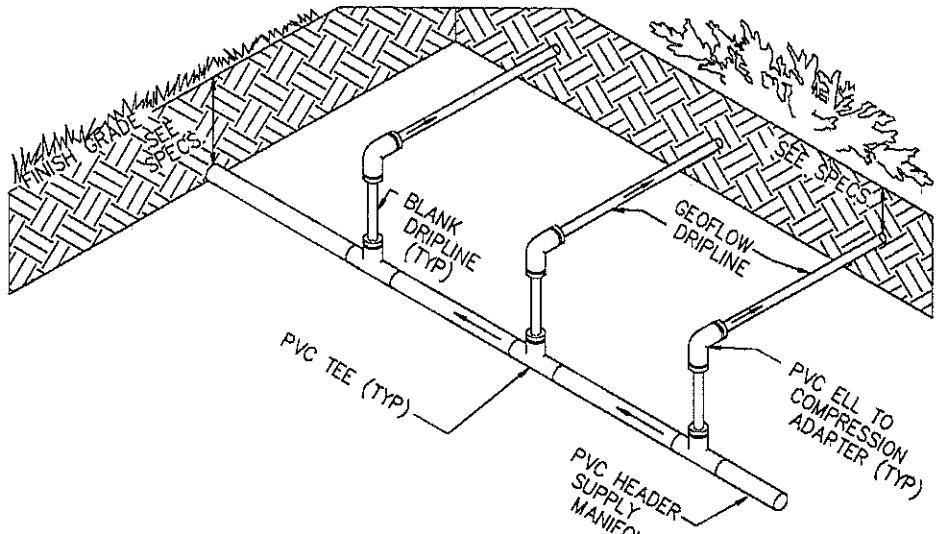

651 GEOFLOW END FEED / FLUSH SUB-MANIFOLD

Not To Scale



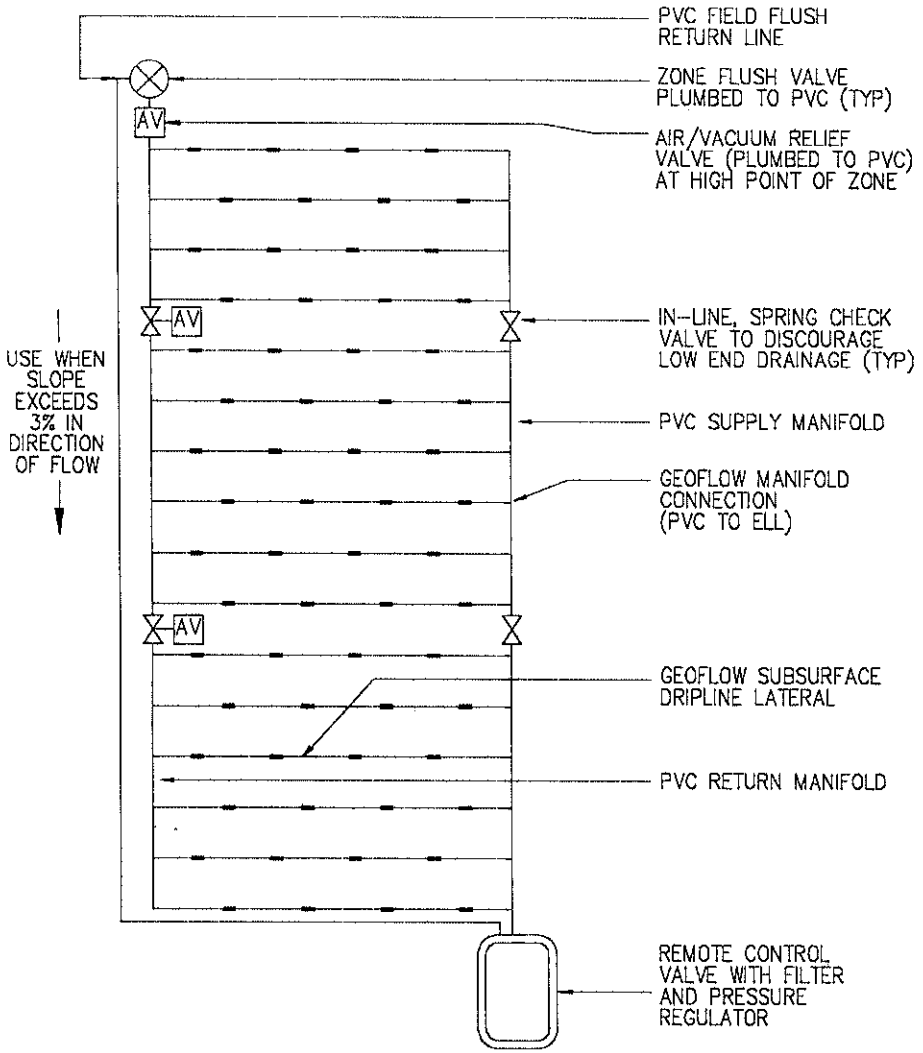

652 GEOFLOW CENTER FEED MANIFOLD

Not To Scale



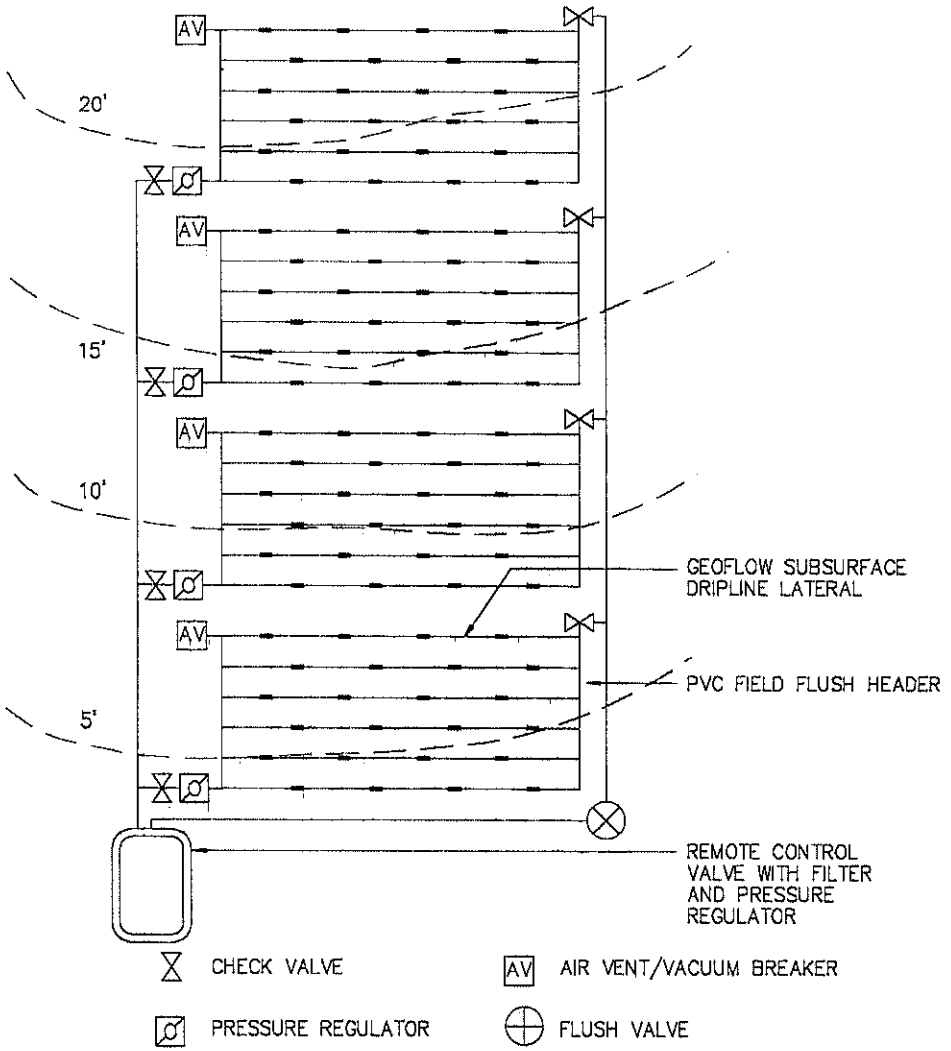

653 GEOFLOW END FEED / FLUSH MANIFOLD

Not To Scale



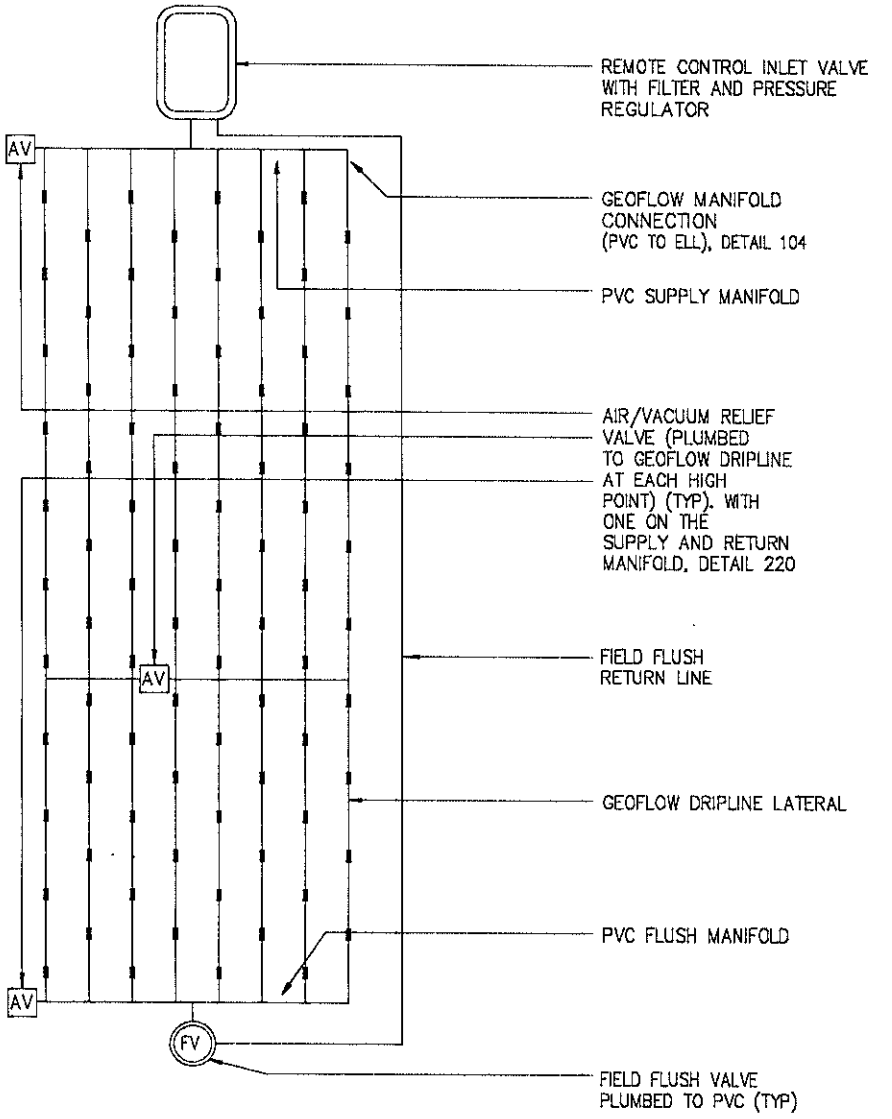

607A GEOFLOW SLOPE LAYOUT FOR PRESSURE COMPENSATING DRIPLINE

Not To Scale



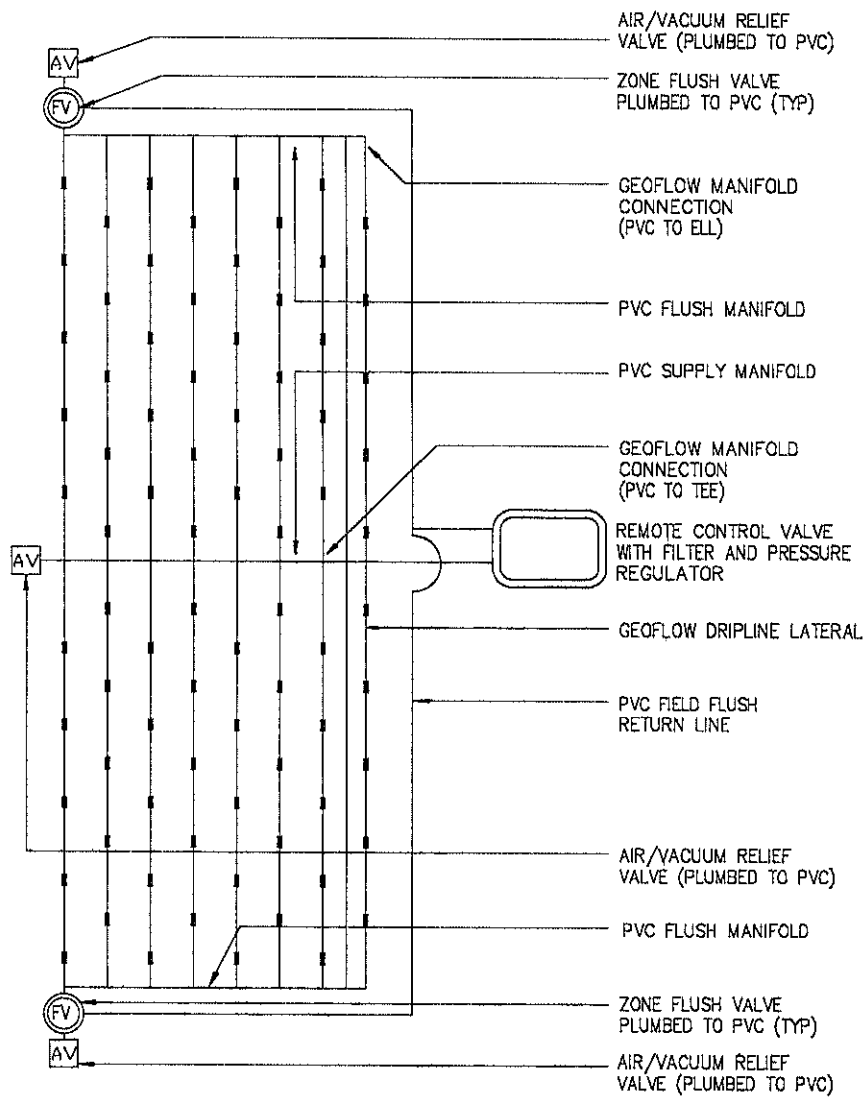

607B GEOFLOW SLOPE LAYOUT FOR SINGLE ZONE WASTEFLOW CLASSIC DRIPLINE

Not To Scale



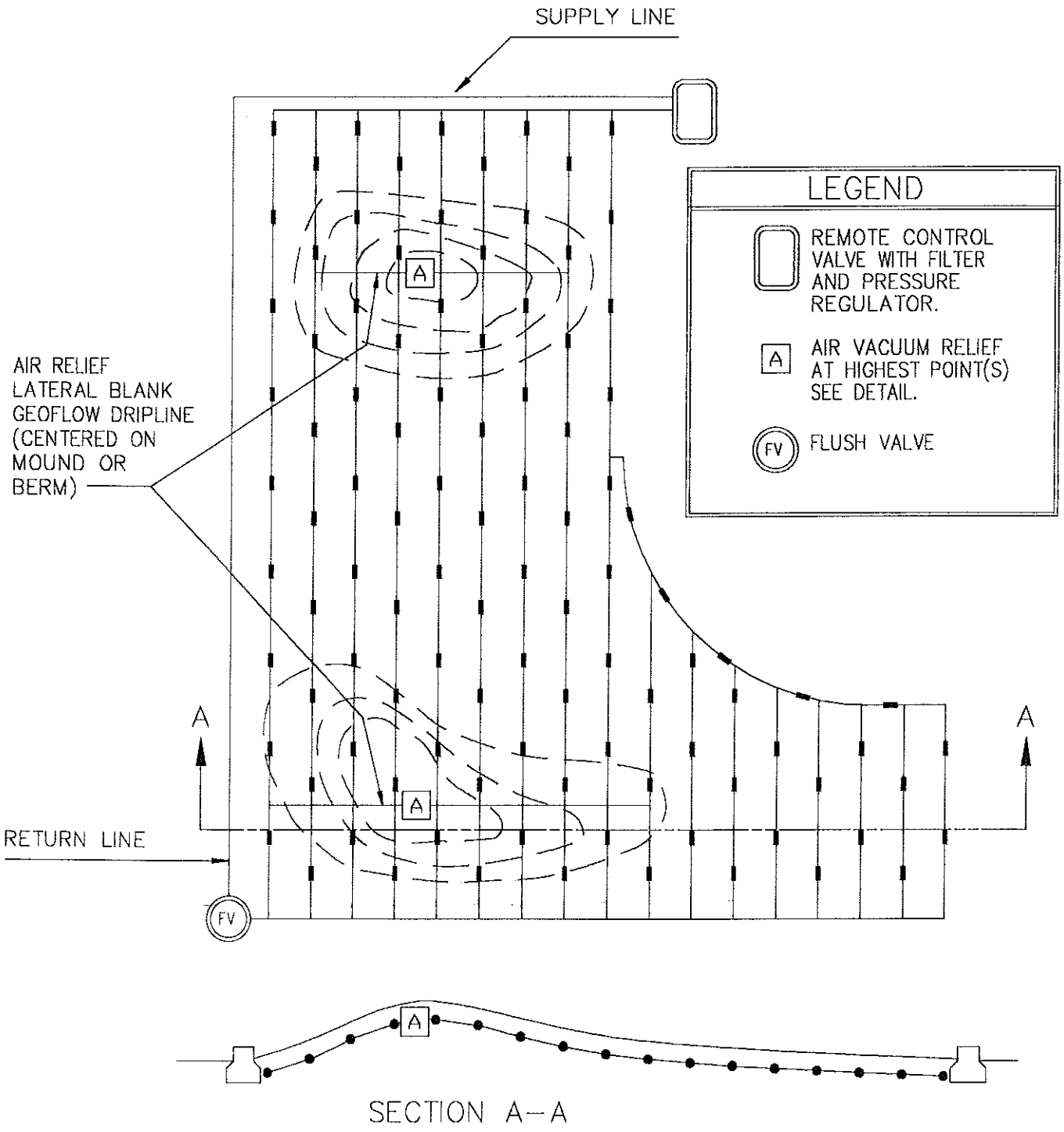

603 GEOFLOW "END FEED"

Not To Scale




604 GEOFLOW "CENTER FEED"

Not To Scale




602 GEOFLOW MOUND LAYOUT

Not To Scale

3-08-99 GF602