

## 6.4.2. Intake Design

The intake structure shall be designed to supply an even distribution of flow to the pumps.

Since pump performance is dependent on conditions at the pump intake the following conditions should be avoided during design:

- Poor velocity distribution at the pump entrance
- Excessive swirling in the piping
- Air entrainment
- Inadequate NPSH<sub>A</sub>
- Unstable approach conditions during multiple as well as single pump operation
- Vortices

The pump intake shall be designed according to the latest version Hydraulic Institute standard ANSI/HI 9.8 Pump Intake Design and as per manufacturer recommendations. Example configurations are shown in Figure 6-4.

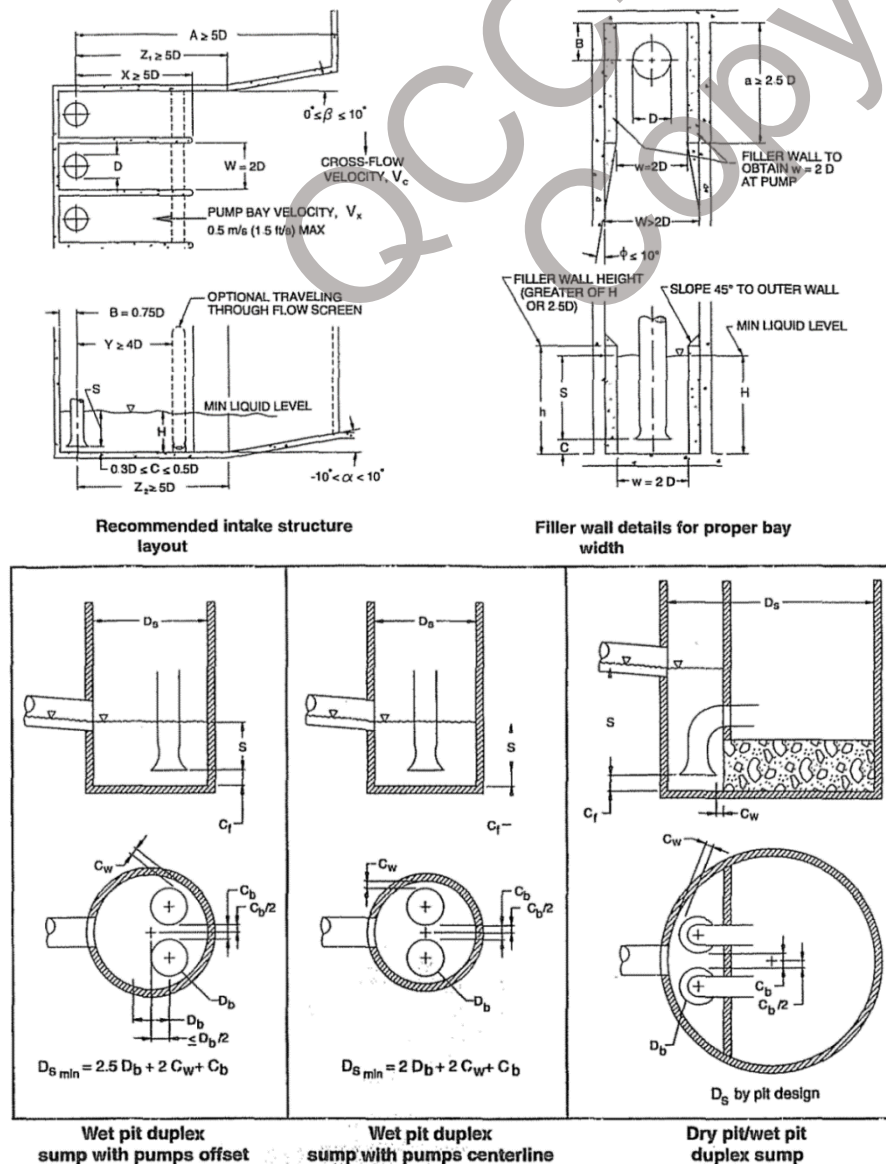


Figure 6-4 – Typical Pump station intake configurations