

3.7.3 STREAM PRESSURE

The design high water elevation and velocity for the purposes of stream pressure calculations shall be based on Q_{100} .

For structures where the pier is aligned with the stream flow the lateral stream pressure applied to the side of the pier shall be based on an angle of 5° to allow for a change in the direction of flow over the life of the structure.

The average pressure of flowing water acting in the longitudinal or lateral direction on the substructure, p , shall be calculated using equation 3.7.3.1-1 or 3.7.3.2-1 respectively. The stream flow pressure distribution shall be triangular with $2 \bullet p$ located at the top of water elevation and zero pressure located at the flow line.

The stream flow forces shall be computed by the product of the stream flow pressure, taking into account the pressure distribution and the exposed pier area. In cases where the corresponding top of water elevation is above the low beam elevation, stream flow loading on the superstructure shall be investigated. The pressure acting on the superstructure shall be a uniform distribution equal to $2 \bullet p$ along the superstructure.