6. STORM WATER PUMPING STATIONS

6.1. General

Pumping stations are required for the removal of the storm water from locations where gravity drainage is impossible or for maintenance purpose. However, pumping stations are expensive to construct, operate and maintain, contain additional health and safety risks over gravity systems and have number potential problems that must be considered. They also represent a weak-link in the operation of the system compared to gravity systems.

As such, pumping stations should only be incorporated in the system where they are essential for correct hydraulic functioning.

6.2. Pumping Station Types

6.2.1. Pumping Station Components

Following major pumping station components shall be considered as minimum during the design process:

- Inlet Chamber
- Pump house
- Discharge Chamber
- Inlet chamber shall be design to accommodate following items:
  - Penstock
  - Screening
  - Sand Trap
  - Oil separator
- Pump house arrangements shall mostly depend on the pumping station type. However, each pump house shall be designed to accommodate following items:
  - Suction piping (wet well installation)
  - Pumps
  - Discharge piping including required isolation valves, check valve, associated piping, etc.
- Discharge chamber shall be design to accommodate
  - Flowmeter
  - Line Valve
  - Surge vessel (if required)
- MCC room
- Lifting Equipment
- Ventilation/ HVAC system