

RESTRICTED

CHAPTER 5
DRAINAGE DESIGN
SECTION 22 – GENERAL

0501. Drainage is of vital importance in all roadwork.

0502. Surface drainage must collect and remove all water which reaches the road surface. Intercepting (catch-water) drains are also used to prevent surface water flowing onto the road from outside areas.

0503. Subsoil drainage is sometimes required to collect and remove water percolating through the subgrade. Subsoil water may reach the subgrade either by lateral percolation from the sides of the road or by upward percolation from underlying free water.

0504. Every part of the drainage system must be designed to carry and dispose of the maximum volume of water that is likely to flow into it.

0505. In mountainous country design must provide for very heavy storms and for the possibility of service flooding caused by snow melting on the surrounding hills. Protection by catchwater drains is usually called for. The flooding of vital areas can sometimes be prevented by “ponding” i.e. by forming shallow reservoirs cushion the rush of flood water. These have the effect of extending the time of concentration by discharging the bulk of storm water at a controlled rate after the storm has abated.