

DESIGN OF HYDRAULIC STRUCTURES  
(AS PRACTICED IN MALAYSIA)

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SYNOPSIS  
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Hydraulic structures are used in storm runoff drainage works to control water. Flowing water does not readily change direction, accelerate or slow down without help, and water will flow faster than it should if a thalweg is too steep, causing uncontrolled erosion.

Hydraulic structures increase the cost of drainage facilities, and their use should be limited by careful and through hydraulic engineering practices to those locations and functions justified by prudent planning.

On the other hand, use of hydraulic structures can reduce initial and future maintenance costs by changing the character of the flow to fit the project needs, and by reducing the size and cost of related facilities.

Hydraulic structures include energy dissipators, channel drops or checks, acceleration chutes, bends, baffle chutes, and many other specific drainage works. Their shape, size, and other features vary widely from job to job, depending upon the function to be served. Hydraulic design procedures, and sometimes model testing must govern the final design of all structures.

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