



NOTE: DROP STRUCTURES AND CHECK DAMS ARE DESIGNED TO CHECK CHANNEL EROSION BY CONTROLLING THE EFFECTIVE GRADIENT, AND TO PROVIDE FOR ABRUPT CHANGES IN CHANNEL GRADIENT BY MEANS OF A VERTICAL DROP. THEY ALSO PROVIDE A SATISFACTORY MEANS FOR DISCHARGING ACCUMULATED SURFACE RUNOFF OVER FILLS WITH THE HEIGHTS NOT EXCEEDING ABOUT 5 FEET AND OVER EMBANKMENTS HIGHER THAN 5 FEET PROVIDED THE ENDSILL OF THE DROP STRUCTURE EXTENDS BEYOND THE TOE OF THE EMBANKMENT. THE CHECK DAM IS A MODIFICATION OF THE DROP STRUCTURE USED FOR EROSION CONTROL IN SMALL CHANNELS WHERE A LESS ELABORATE STRUCTURE IS PERMISSIBLE. THE HYDRAULIC DESIGN OF THESE STRUCTURES CONSIST OF TWO PARTS: DESIGN OF THE NOTCH OR WEIR, AND DESIGN OF THE OVERPOUR BASIN. THE DESIGNER SHOULD REALIZE THAT FOR A DROP STRUCTURE OR CHECK DAM TO BE SUCCESSFUL, NOT ONLY MUST THE STRUCTURE BE DESIGNED SOUNDLY, BUT ALSO THE STRUCTURE OR SERIES OF STRUCTURES MUST BE SO PLACED AS TO CAUSE THE DITCHES OR CHANNELS TO BECOME STABLE. THE QUESTION OF WHAT IS A STABLE GRADE FOR THE CHANNEL MUST BE ANSWERED BEFORE THE HEIGHT & SPACING OF THE VARIOUS DROP STRUCTURES CAN BE DETERMINED. ALSO THE STRUCTURE MUST BE DESIGNED TO PRECLUDE FLANKING.

REFERENCE: TM-820-3 DRAINAGE & EROSION CONTROL
STRUCTURES FOR AIRFIELDS AND HELIPORTS

TYPICAL CHECK DAM	DATE AUG 1992	FIGURE 2-35t
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