

have been implemented to reduce the risk to users from a bridge failure during or immediately after a flood event.

- 6 Scour calculation/evaluation has not been made. (Use only to describe case where bridge has not yet been evaluated for scour potential.)
- 5 Bridge foundations determined to be stable for assessed or calculated scour condition. Scour is determined to be within the limits of footing or piles (Example B) by assessment (i.e., bridge foundations are on rock formations that have been determined to resist scour within the service life of the bridge), by calculations or by installation of properly designed countermeasures (see HEC 23).
- 4 Bridge foundations determined to be stable for assessed or calculated scour conditions; field review indicates action is required to protect exposed foundations (see HEC 23).
- 3 Bridge is scour critical; bridge foundations determined to be unstable for assessed or calculated scour conditions:
  - Scour within limits of footing or piles. (Example B)
  - Scour below spread-footing base or pile tips. (Example C)
- 2 Bridge is scour critical; field review indicates that extensive scour has occurred at bridge foundations, which are determined to be unstable by:
  - a comparison of calculated scour and observed scour during the bridge inspection, or
  - an engineering evaluation of the observed scour condition reported by the bridge inspector in Item 60.
- 1 Bridge is scour critical; field review indicates that failure of piers/abutments is imminent. Bridge is closed to traffic. Failure is imminent based on:
  - a comparison of calculated and observed scour during the bridge inspection, or
  - an engineering evaluation of the observed scour condition reported by the bridge inspector in Item 60.
- 0 Bridge is scour critical. Bridge has failed and is closed to traffic.

<sup>1</sup>FHWA Technical Advisory T 5140.23, Evaluating Scour at Bridges, dated October 28, 1991.

<sup>2</sup>HEC 18, Evaluating Scour at Bridges, Fourth Edition.

<sup>3</sup>HEC 23, Bridge Scour and Stream Instability Countermeasures, Second Edition.

<sup>4</sup>FHWA Memorandum "Scourability of Rock Formations," dated July 19, 1991.