

INTEROFFICE MEMORANDUM

DATE: April 22, 1983

TO: BRIDGE DESIGN PERSONNEL
FROM: Veral Pinkerton, Bridge Engineer
SUBJECT: Hydraulic Design - County Bridges

This memo is to document the policy for hydraulic design for county bridges.

As a general rule the bridge shall be sized on the basis of a 25-year frequency design flood with a check analysis for the 100-year flood. This information will be shown on the layout as has been done in the past.

On bridge and approach jobs where the approach embankment is not raised above the 25-year stage (including backwater) a note shall be shown on the plans stating that embankment overtops at a certain elevation. Give frequency of this overtopping stage, if possible.

For those situations where it is concluded by someone that it is not practical to size the bridge for a 25-year frequency design flood, the following procedure shall be used:

1. The grade of the bridge shall be set to clear the 25-year flood.
2. The bridge shall be sized based on the controlling features and the facts that led to the departure from the 25-year design. Show basic data for 100-year flood.
3. The hydraulic information for the selected design flood shall be shown on the layout in place of the 25-year information.
4. A note shall be placed on the layout stating that if the approach grade is raised above the design stage, additional waterway opening will be required.
5. If applicable, a note shall be placed on the plans stating that the embankment overtops at a certain elevation, as stated in the 3rd paragraph of this memo.

At the time the layout is distributed for approval, the reason for deviation from the 25-year design flood, the identity of the decision maker, and any other pertinent information shall be documented by memo and this information distributed with the layout.

This policy is not intended to change any factors relating to FEMA. Therefore, the 1.0 foot backwater control must be met or satisfied as has been our practice.