

Kansas Administrative Regulations

Kansas Department of Agriculture—Division of Water Resources

Article 40.—Design of Earth Dams

5-40-2b. Design reports.

(a) The application for each permit to construct, repair, or modify a dam shall be accompanied by a design report prepared by the engineer who designed the new dam or the repair or modification of an existing dam. The design report shall document every major design element of the dam, the conditions that must be addressed in the construction of the project, and the manner in which those conditions will be addressed. The design report shall document the design process, including references to each design method and computer program utilized in the design, and shall include the following:

(1) The design of any slope protection for the embankment and the auxiliary or service spillway. If no slope protection is provided, the report shall provide justification for not having slope protection;

(2) documentation of the determination of the hazard class;

(3) a report of the geotechnical investigation, including the results of the testing required in K.A.R. 5-40-40 through K.A.R. 5-40-42, and all boring logs not shown on the plans;

(4) documentation of the embankment design based upon the geotechnical investigation;

(5) documentation of the hydrological evaluation, including the determination of the composite curve number and drainage area;

(6) if a proposed dam is part of a general plan, the report shall evaluate whether the proposed dam conforms to the general plan;

(7) the design of the foundations, including the proposed depth of the cutoff trench;

(8) the design of the drains, including size, material gradation, interface with soil, and outlets;

(9) the design of the pipe bedding, including documentation that the loading and deflection conditions are met;

(10) the stilling basin design;

(11) documentation of the flood routing or routings;

(12) the gradation of the material in the diaphragm and the design of the diaphragm;
and

(13) any other relevant information required by the chief engineer.

(b) In addition to those items required in subsection (a), the design report for each high-impact dam shall include the following:

(1) The auxiliary spillway or service spillway analysis required by K.A.R. 5-40-56(c), if applicable, or K.A.R. 5-40-57(a);

(2) a slope stability analysis; and

(3) an embankment settlement analysis.

(Authorized by K.S.A. 2006 Supp. 82a-303a; implementing K.S.A. 2006 Supp. 82a-302 and 82a-303a; effective May 18, 2007.)

***** Authenticated Kansas Administrative Regulation *****