

clearance should be based on an analysis of engineering, operational and/or economic conditions at a specific structure location.

Federal-aid highway funds are also eligible to participate in the cost of providing vertical clearance greater than 7.1 meters where a railroad establishes to the satisfaction of a SHA and the FHWA that it has a definite formal plan for electrification of its rail system where the proposed grade separation project is located. The plan must cover a logical independent segment of the rail system and be approved by the railroad's corporate headquarters. For 25 kv line, a vertical clearance of 7.4 meters may be approved. For 50 kv line, a vertical clearance of 8.0 meters may be approved.

A railroad's justification to support its plan for electrification shall include maps and plans or drawings showing those lines to be electrified; actions taken by its corporate headquarters committing it to electrification including a proposed schedule; and actions initiated or completed to date implementing its electrification plan such as a showing of the amounts of funds and identification of structures, if any, where the railroad has expended its own funds to provide added clearance for the proposed electrification. If available, the railroad's justification should include information on its contemplated treatment of existing grade separations along the section of its rail system proposed for electrification.

The cost of reconstructing or modifying any existing railroad-highway grade separation structures solely to accommodate electrification will not be eligible for Federal-aid highway fund participation.

c. Railroad Structure Width

Two and eight tenths meters of structure width outside of the centerline of the outside tracks may be approved for a structure carrying railroad tracks. Greater structure width may be approved when in accordance with standards established and used by the affected railroad in its normal practice.

In order to maintain continuity of off-track equipment roadways at structures carrying tracks over limited access highways, consideration should be given at the preliminary design stage to the feasibility of using public road crossings for this purpose. Where not feasible, an additional structure width of 2.5 meters may be approved if designed for off-track equipment only.

[53 FR 32218, Aug. 24, 1988, as amended at 62 FR 45328, Aug. 27, 1997]

PART 650—BRIDGES, STRUCTURES, AND HYDRAULICS

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AUTHORITY: 23 U.S.C. 109(a) and (h), 144, 151, 315, and 319; 33 U.S.C. 401, 491 *et seq.*; 511 *et seq.*; sec. 4(b) of Pub. L. 97-134, 95 Stat. 1699 (1981); sec. 161 of Pub. L. 97-424, 96 Stat. 2097, at 3135 (1983); sec. 1311 of Pub. L. 105-178, as added by Pub. L. 105-206, 112 Stat. 842 (1998); 23 CFR 1.32; 49 CFR 1.48(b); E.O. 11988 (3 CFR, 1977 Comp., p. 117); Department of Transportation Order 5650.2, dated April 23, 1979 (44 FR 24678).

Subpart A—Location and Hydraulic Design of Encroachments on Flood Plains

SOURCE: 44 FR 67580, Nov. 26, 1979, unless otherwise noted.

§ 650.101 Purpose.

To prescribe Federal Highway Administration (FHWA) policies and procedures for the location and hydraulic design of highway encroachments on flood plains, including direct Federal highway projects administered by the FHWA.

§ 650.103 Policy.

It is the policy of the FHWA:

- (a) To encourage a broad and unified effort to prevent uneconomic, hazardous or incompatible use and development of the Nation's flood plains,
- (b) To avoid longitudinal encroachments, where practicable,
- (c) To avoid significant encroachments, where practicable,
- (d) To minimize impacts of highway agency actions which adversely affect base flood plains,
- (e) To restore and preserve the natural and beneficial flood-plain values that are adversely impacted by highway agency actions,
- (f) To avoid support of incompatible flood-plain development,
- (g) To be consistent with the intent of the Standards and Criteria of the National Flood Insurance Program, where appropriate, and
- (h) To incorporate "A Unified National Program for Floodplain Management" of the Water Resources Council into FHWA procedures.

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§ 650.105 Definitions.

(a) *Action* shall mean any highway construction, reconstruction, rehabilitation, repair, or improvement undertaken with Federal or Federal-aid highway funds or FHWA approval.

(b) *Base flood* shall mean the flood or tide having a 1-percent chance of being exceeded in any given year.

(c) *Base flood plain* shall mean the area subject to flooding by the base flood.

(d) *Design Flood* shall mean the peak discharge, volume if appropriate, stage or wave crest elevation of the flood associated with the probability of exceedance selected for the design of a highway encroachment. By definition, the highway will not be inundated from the stage of the design flood.

(e) *Encroachment* shall mean an action within the limits of the base flood plain.

(f) *Floodproof* shall mean to design and construct individual buildings, facilities, and their sites to protect against structural failure, to keep water out or to reduce the effects of water entry.

(g) *Freeboard* shall mean the vertical clearance of the lowest structural member of the bridge superstructure above the water surface elevation of the overtopping flood.

(h) *Minimize* shall mean to reduce to the smallest practicable amount or degree.

(i) *Natural and beneficial flood-plain values* shall include but are not limited to fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, and groundwater recharge.

(j) *Overtopping flood* shall mean the flood described by the probability of exceedance and water surface elevation at which flow occurs over the highway, over the watershed divide, or through structure(s) provided for emergency relief.

(k) *Practicable* shall mean capable of being done within reasonable natural, social, or economic constraints.

(l) *Preserve* shall mean to avoid modification to the functions of the natural flood-plain environment or to maintain