

XXV. SPECIAL ENCROACHMENT STANDARDS FOR RECLAMATION DISTRICT NO. 1000

These special standards have been prepared and adopted by The Reclamation Board to guide applicants and staff in considering encroachment permits for proposed projects on the left bank waterward berm and waterward levee slope of the Sacramento River between Levee Miles 0.00 and 18.60, Unit No. 1, Reclamation District No. 1000. They are quite limited in scope since they are designed to deal with residential developments that would not normally be permitted within a project floodway. Therefore, for information and requirements not covered by these special standards, you must refer to the Standards for Encroachments.

In general, Federal and State regulations pertaining to the maintenance and operation of project floodways and levees prohibit residential developments waterward of a project levee. However, the physical characteristics of this reach of the project floodway, which includes a setback levee, and the control of floodflows and stages by the operation of the Sacramento Weir, allow for the development of dwellings and appurtenances under certain conditions. Local maintenance authorities have determined that with proper restrictions and controls encroachments could be compatible with the maintenance and operation of the project works in this reach. Studies of this reach by The Reclamation Board, the Department of Water Resources, and the Corps of Engineers indicate that encroachments which satisfy the restrictions and controls presented herein would not significantly affect channel flows.

A. General Conditions

1. These standards apply only to the left bank waterward berm and waterward levee slope of the Sacramento River between Levee Miles 0.00 and 18.60, Unit No. 1, Reclamation District No. 1000; i.e., American River to Natomas Cross Canal.
2. Included as part of these standards by reference are:
 - a. Section XI of the standards entitled "Erosion Control".
 - b. Section XXIII of the standards entitled "Guide for Vegetation on Project Levees".
 - c. The criteria for the construction of buildings to be used for human habitation on the waterward side of the east levee of the Sacramento River between the American River and the Natomas Cross Canal adopted by the Board on February 3, 1960, and as later modified.

3. Any encroachment referred to in these standards shall be covered by a properly executed permit issued by The Reclamation Board prior to beginning the respective work.
4. All applications for a permit must be endorsed by Reclamation District No. 1000 before the application will be received and filed by The Reclamation Board. If such approval or endorsement is declined or is unduly delayed, the application may be submitted directly to the Board for consideration if a satisfactory explanation of the deficiency is also submitted to the Board.
5. The landowner or applicant shall maintain the waterward slope of the levee and utilized area within the floodway of the Sacramento River in the manner required by Reclamation District No. 1000 or any other agency responsible for maintenance.
6. Exception to these standards will be considered by The Reclamation Board in individual cases if, after investigation, the particular encroachment is found to be reasonably compatible with flood management, inspection, maintenance, operation, and flood fight activities.

B. Basis of Standards

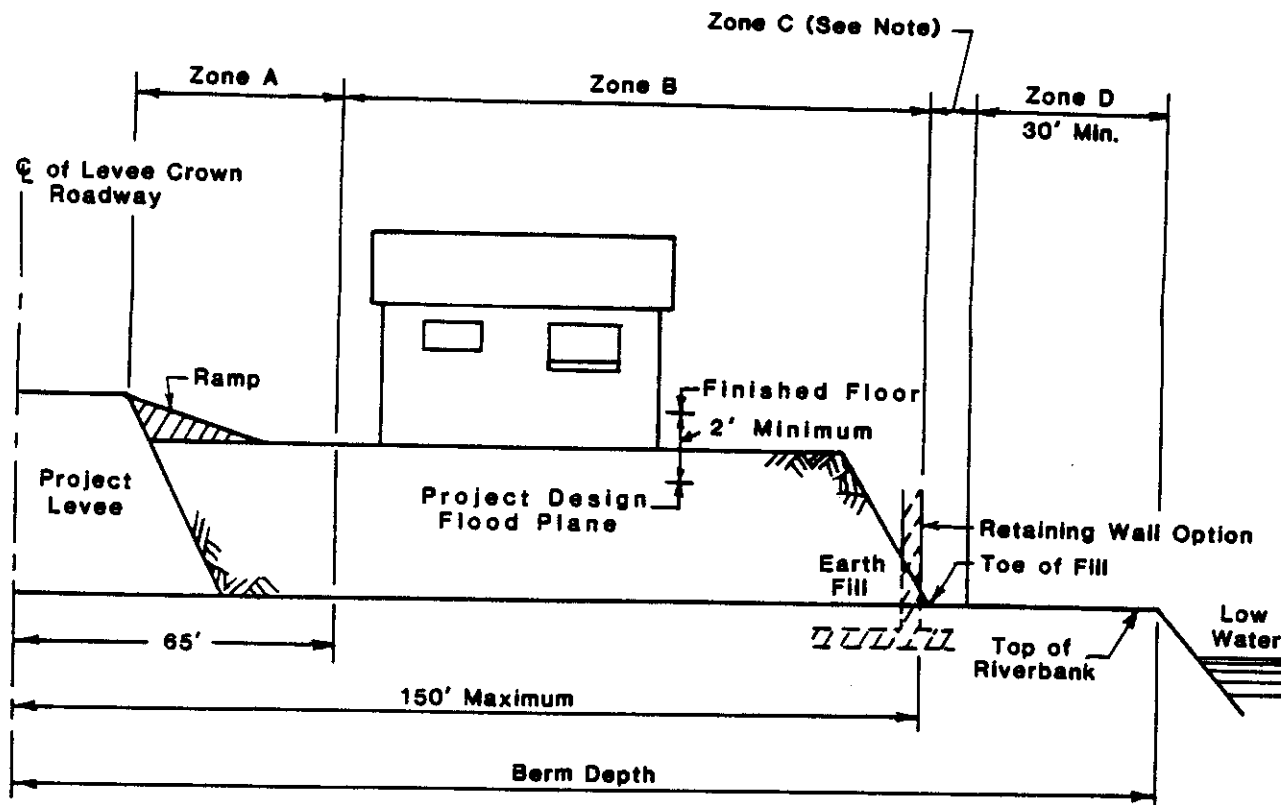
1. To provide for general safety and protection of the integrity of the project levee.
2. To provide for floodproofing of buildings for human habitation.
3. To provide for the passage of floodflows.
4. To provide a safety buffer zone between the riverbank and the structures constructed on the berm where the riverbank is not revetted to U. S. Army Corps of Engineers' standards.

C. Standards

1. Between the waterward levee shoulder and 65 feet waterward from the centerline of the roadway, no surface or subsurface improvements may be permitted other than ramps, stairways, walkways, fences, vegetation, and utility crossings installed at a right angle to the centerline of the levee. For restrictions on fences and vegetation see pages 25-3 and 25-4.
2. The area between the waterward levee shoulder and the riverbank may be filled, provided the fill does not extend more than 150 feet waterward from the centerline of the levee crown roadway. Filling beyond the top of riverbank line may be allowed if it will result in a smooth uniform bank line and will improve hydraulics.
3. Structures for human habitation, if properly floodproofed, are allowed on the berm area between 65 feet and 150 feet waterward from the centerline of the roadway. For restrictions see pages 25-3 and 25-4.
4. Fences will not be permitted beyond 150 feet waterward from the centerline of the roadway.
5. Structures not for human habitation, under certain conditions, may be allowed on the berm beyond 150 feet waterward from the centerline of the roadway. For restrictions see pages 25-3 and 25-4.
6. Structures for human habitation and other uses may be allowed within 30 feet from the top of the riverbank if berm is 150 feet or less from the centerline of the roadway. For additional restrictions see pages 25-3 and 25-4.

MINIMUM CRITERIA FOR BUILDINGS USED FOR HUMAN HABITATION

LEFT BANK SACRAMENTO RIVER
AMERICAN RIVER TO NATOMAS CROSS CANAL
FOR BERMS WITH FILL THAT IS A MINIMUM OF
ONE FOOT ABOVE PROJECT DESIGN FLOOD PLANE



ZONE A: No surface or subsurface improvements permitted other than utility crossings installed at right angles to the centerline of the levee. No restrictions on vegetation or fencing, provided top of fill extends a minimum distance of 65 feet waterward from the centerline of the levee. Levee crown shall be kept clear of any foliage.

ZONE B: Structures permitted with noted restrictions. No restrictions on vegetation or fencing.

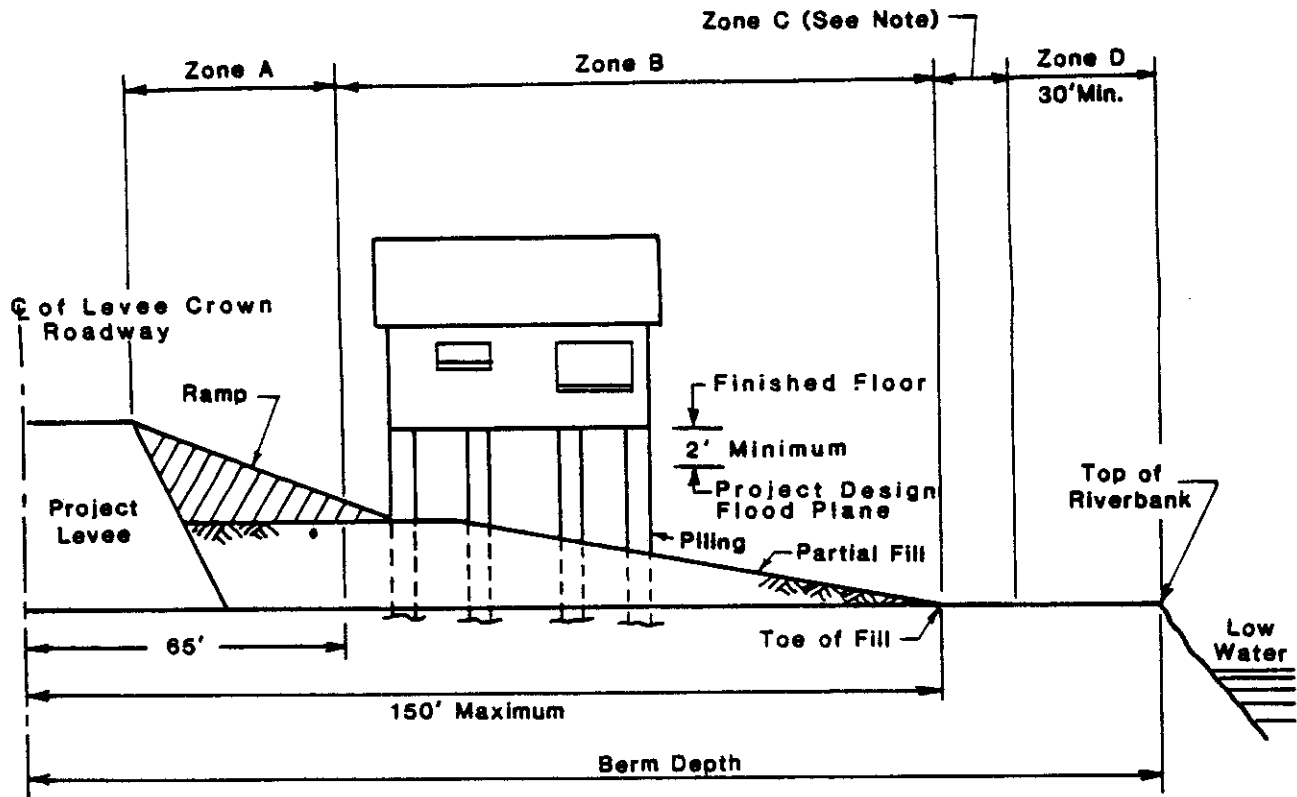
ZONE C: Fences and structures for human habitation not permitted. Structures at or below ground level may be allowed. Elevated structures that are necessary to provide access to riverfront-dependent facilities may be allowed if they are supported on piles spaced a minimum of 20 feet normal to the direction of the river current, and a minimum vertical clearance of three feet above the project design flood plane is provided.

ZONE D: Fences and shallow-rooted trees more than 50 feet high are not permitted. Elevated structures that are necessary to provide access to riverfront-dependent facilities may be allowed if they are supported on piles spaced a minimum of 20 feet normal to the direction of the river current, a minimum vertical clearance of three feet above the project design flood plane is provided, and the riverbank is protected.

Where the berm depth is 150 feet or less from the centerline of the roadway and the riverbank is revetted by a method equivalent to current U. S. Army Corps of Engineers' standards, fill and structures for human habitations are permitted subject to the same restrictions as Zone B.

NOTE: Zone C exists only where berm depth exceeds 180 feet.

**MINIMUM CRITERIA FOR BUILDINGS
USED FOR HUMAN HABITATION**
**LEFT BANK SACRAMENTO RIVER
AMERICAN RIVER TO NATOMAS CROSS CANAL**
**FOR BERMS WHERE FILL IS LESS THAN
ONE FOOT ABOVE PROJECT DESIGN FLOOD PLANE**



ZONE A: No surface or subsurface improvements permitted other than utility crossings installed at right angles to the centerline of the levee, ramps, stairways, walkways, and fences that conform to drawings on page 25-5. Vegetation shall comply with the "Guide for Vegetation on Project Levees". Levee crown shall be kept clear of any foliage.

ZONE B: Structures permitted with noted restrictions. No restriction on vegetation or fencing.

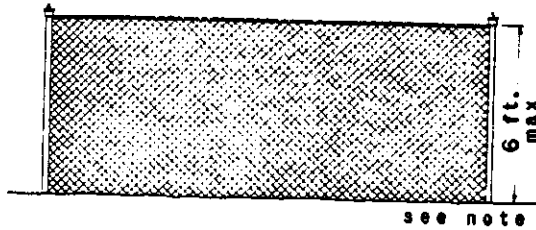
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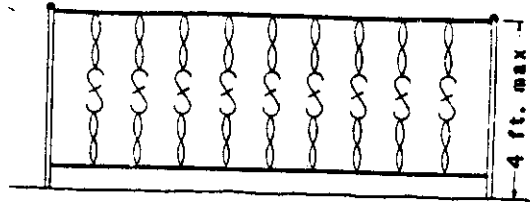
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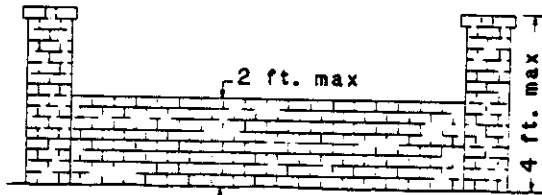
FENCES ON RIVER LEVEE
LEFT BANK SACRAMENTO RIVER
AMERICAN RIVER TO NATOMAS CROSS CANAL
FOR BERMS WHERE FILL IS LESS THAN
ONE FOOT ABOVE PROJECT DESIGN FLOOD PLANE



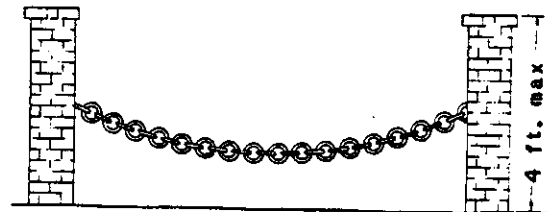
METAL POSTS AND CHAIN LINK FENCE
TOP RAIL AND POSTS MAY BE ORNAMENTAL



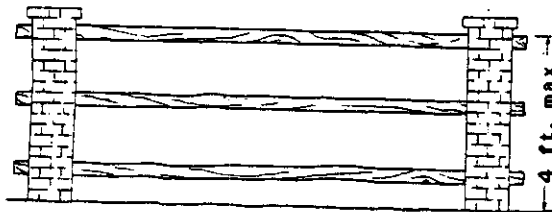
ORNAMENTAL METAL FENCE



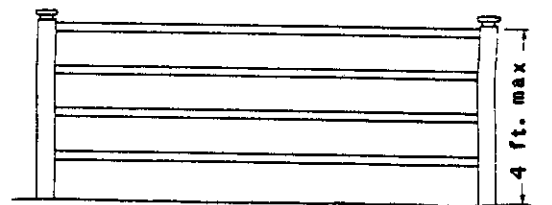
SOLID MASONRY WALL OR CURB
MATERIAL OPTIONAL—BRICK, CUT STONE,
RUBBLE OR CONCRETE. PIERS MAY BE OMITTED.
SPACING OF PIERS 8.0 FT. MINIMUM



BRICK PIERS AND CHAIN FENCE
MATERIAL FOR PIERS OPTIONAL—BRICK, CUT
STONE, RUBBLE OR CONCRETE. SPACING OF
PIERS 8.0 FT. MINIMUM.



BRICK PIERS AND WOOD RAILS
MATERIAL FOR PIERS OPTIONAL—BRICK, CUT
STONE, RUBBLE, CONCRETE, WOOD, OR METAL.
SIZE OF PIER OPTIONAL. SPACING OF
PIERS 8.0 FT. MINIMUM.



WOOD POSTS AND RAIL FENCE
SPACING OF POSTS 8.0 FT. MINIMUM.

NOTE: Where the elevation of the top of the fill on berms is less than one foot above project design flood plane, chain link fences up to six feet high may be installed on the waterward slope of the levee and within 65 feet from the centerline of the levee. For inspection purposes, no plantings, fence slats, or other materials will be placed on or adjacent to the fence that will restrict maximum visibility through the fence. For permitted vegetation, refer to "Guide for Vegetation on Project Levees".