

SUBCHAPTER C: APPROVAL OF LEVEES AND OTHER IMPROVEMENTS
§§301.31 - 301.46
Effective May 5, 2005

§301.31. Application for Approval of Preliminary Plans for Levees and Other Improvements.

Any person who seeks approval of the commission under Texas Water Code, §16.236, for construction of any levee or other improvement shall file an application with the executive director, together with a set of preliminary plans for the levee or other improvement, in duplicate. The preliminary data so submitted must be in sufficient detail to permit the executive director to evaluate the project. Ordinarily, existing maps and information are adequate for the development of acceptable preliminary plans without the necessity of extensive site clearing or detailed surveys. The application and preliminary plans must comply with Subchapter D of this chapter (relating to Notice and Hearing).

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§301.32. Purpose of Preliminary Plans.

The purpose of the preliminary plans is primarily to allow the executive director to determine whether the project appears safe and is compatible with existing hydraulic conditions in the area. Preliminary plans should clearly reflect the design concept and indicate how the design was developed. Details of project construction are not required to be shown in the preliminary plans. It is the policy of the commission to evaluate the project from preliminary plans in order that the applicant may determine whether the project concept is to be approved prior to the incurring of large expenditures for a complete development of the final plans and specifications.

§301.33. Preliminary Plans: Data To Be Submitted.

(a) The applicant shall submit maps, plats, drawings, computations and narratives which shall illustrate and describe the following:

(1) the location and extent of the proposed works, including the county or counties affected by the project. When possible, the applicant should satisfy this requirement by submitting a detailed map which can be superimposed by the executive director upon a United States Geological Survey 7-1/2 minute quadrangle map, or if such is unavailable, on a suitable contour map;

(2) the name and course of the river, stream or other watercourse, with the direction of flow indicated, which is associated with or would be affected by the proposed project;

(3) the location and ownership of all existing levees, channels, canals, reservoirs, dams or other works of similar character, which may be affected by the proposed project, indicated by appropriate symbol to differentiate such works from the proposed works;

(4) the location and ownership, including current mailing address of owners, and location, shown by map, of all properties:

(A) lying within any proposed protected area; or

(B) adjacent to the proposed works or which may be affected by the project's alteration of the flood flows of the stream. The purpose of this second requirement is so that all interested property owners may be notified of the application. The applicant, the executive director and the commission shall liberally construe what areas are potentially affected by the proposed project to ensure that all landowners within the vicinity whose land could be potentially impacted by the proposed project receive notice. Failure of the applicant to adequately provide the information will delay the processing of the application. The executive director may submit an application to the commission for summary dismissal if the applicant refuses to supply this information.

(b) The following flood data is required:

(1) The project design shall be based on a statistical 100-year flood as a minimum where substantial property loss and/or risk of life may be possible. The executive director will review the plans in accordance with the degree of hazard inherent in the proposed project and he may recommend that the project design be based on other than the 100-year flood should only agricultural land (no structures) be involved and no interests other than those of the applicant be affected by the project. Flood level data available from state or federal agencies or other sources supportive of the project design on a statistical basis shall be provided by the applicant for consideration in the selection of design flood frequency and elevation.

(2) The preliminary plans shall demonstrate the effects the proposed project will impose on existing flood conditions. This shall be clearly illustrated by providing separate design floodwater surface-elevation profiles and design-flood delineations of the floodplain with and without the project in place.

(3) Additional flood water surface-elevation profiles and design-flood delineations of the floodplain should be provided for levee or landfill projects with the project in place and with a comparable levee or landfill on the opposite site of the stream if such do not exist but are plausible.

§301.34. Criteria For Approval of Preliminary Plans.

The commission shall use the following criteria and those listed in §301.33(b) of this title (relating to Preliminary Plans: Data To Be Submitted) in the review and consideration of applications for approval of plans for levees and other improvements:

(1) Structural integrity. Construction must be based upon sound engineering principles. Structural integrity must withstand any waters which the levee or other improvement is intended to restrain or carry, considering all topographic features, including existing levees.

(2) Compatibility with existing hydraulic conditions. Plans must be compatible with the existing hydraulic conditions. Consideration must be given to any possible deleterious effects, such as overtopping or undermining, on any existing system of levees, channel improvements, landfills, structures or similar improvements, or on adjacent properties. With regard to applications for approval of levees or landfills, plans will be evaluated with a consideration of comparable levee or landfill development on the opposite side of a stream if such do not exist but are plausible.

(3) Safety. Any proposed levee or other improvement must be designed so that it will not increase flooding or divert waters in such a way that any person's life or property will be endangered or subjected to significantly increased flooding. The commission shall not approve plans for levees or other improvements which will significantly increase flood rises on any person's land without that person's consent or which will endanger life or property or create a public hazard.

(4) Rights of third parties to be protected. The rights of third parties affected by a proposed levee or other improvement must be considered. Before approval, the commission shall accordingly give full consideration to the rights of all such parties not otherwise considered under paragraphs (1)-(3), of this subsection.

(5) The commission and the executive director shall assure that, as far as possible, levees or other improvements shall be designed with primary consideration to the topographic and hydrographic conditions, and in such a manner that each division of a project shall be a complete, united project forming a coordinate part of an ultimately finished series of projects, so constituted that the successful operation of each united project shall coordinate with the successful operation of other projects within the same hydraulic influence.

(6) In addition, a minimum freeboard of three feet above the 100-year design flood hydraulic gradient should be provided where levees furnish protection for urbanized or developing areas. A minimum freeboard of two feet above the 100-year design flood hydraulic gradient, or more frequent flood as may be determined under §301.33 of this title (relating to Preliminary Plans: Data To Be Submitted), should be provided where levees furnish protection for agricultural areas. Reaches of the levee which may be affected by wave buildup from structural features of the project shall require supplemental study to determine if greater freeboard should be provided.

§301.35. Additional Information.

The executive director may request any additional pertinent information from the applicant which he deems necessary to evaluate the effects of a proposed project before submitting the application to the commission for setting of a hearing.

§301.36. Plans To Bear Seal of Engineer.

All preliminary plans and other plans which are submitted with an application for approval of a levee or other improvement shall be prepared by or under the direction of a registered professional engineer and signed by the registered professional engineer whose seal shall appear upon or be affixed thereto.

§301.37. Referral of Application to Commission.

(a) The processing of the application shall be in accordance with Chapter 281 of this title (relating to Applications Processing). When the executive director has determined that the application is administratively complete under Chapter 281 of this title (relating to Applications Processing) and that the applicant has paid the required fees, he shall refer the application to the chief clerk of the commission for issuance of mail notice of application and commission action in accordance with §301.52 of this title (relating to Notice of the Application By Mail). For the sole purpose of issuing adequate notice, the executive director will include a recommendation to the commission of the area wherein the proposed project(s) which comprise the application would have potential impact based upon the information provided by the applicant, pursuant to §301.33 of this title (relating to Preliminary Plans: Data To Be Submitted), and the executive director's review of that information. The executive director shall also notify the applicant that he has determined that the project is within the commission's jurisdiction.

(b) If the executive director determines that the project is not one which is within the jurisdiction of the commission pursuant to the Texas Water Code, §16.236, he shall so notify the applicant, who shall withdraw the application. If the application is not withdrawn by the applicant within 90 days of the date of mailing of notification of nonjurisdiction, the executive director may forward the application to the commission and recommend that the commission enter an order dismissing the application. The chief clerk shall notify the applicant of the date set for consideration of the recommendation for dismissal.

§301.38. Procedures Subsequent to Approval of Preliminary Plans.

(a) Final approval of engineering plans and specifications for levees and other improvements for which commission approval is required; submission of final plans for exempt levees and other improvements.

(1) Following approval by the commission of a proposed levee or other improvement under Texas Water Code (TWC), §16.236, the applicant shall submit final engineering plans and specifications to the executive director for approval prior to beginning construction.

(2) For levees and other improvements which are exempt under TWC, §16.236, final engineering plans and specifications shall be submitted to the executive director prior to beginning construction for review to ensure compliance with preliminary plans submitted thereunder and to carry out the executive director's inspection duties under TWC, §57.117, but approval of these final plans by the executive director is not required.

(3) In addition to the submission of final plans, the applicant shall also provide the executive director with proof of ownership or right to construct on the project site prior to beginning construction. Upon review and approval of the final plans of the applicant, the executive director shall notify the applicant in writing that construction may proceed.

(b) Criteria for review and/or approval of final plans. Final plans of the proposed works must adequately illustrate pertinent features of the project such as planned elevations, profiles, dimensional typical cross-sections, and other features such as outlet works, drains, overflow relief structures, landfills, and roads so that an understandable project concept can be discerned. The requirements are to be considered guidelines and may be varied according to the requirements of any particular project at the discretion of the executive director. Final plans for such features as excavated channels or constructed embankments will be reviewed as to their structural integrity in accordance with the degree of hazard inherent with the project.

(1) Normal requirements for final channel excavation plans are as follows.

(A) Information is to be provided to indicate the type and/or classification of the soil to be excavated in the channel according to the unified soil classification system. Depth of exploratory borings shall be at least five feet below planned channel bottom grade.

(B) Plans shall provide elevations and dimensions for the channel and all structures and appurtenances integral to the project such as protective linings, wingwalls, outlet works, drop inlets, aprons and riprap.

(C) Unlined channels must be constructed to a nonerosive grade. All channels should be accessible for maintenance or repair.

(D) All concrete placement shall be reviewed for intended use.

(E) Use or disposal of excavated material shall be clearly shown on final plans.

(F) All specifications to be followed by the contractor shall be included with plans submitted.

(G) The applicant must have an acceptable operation and maintenance program and budget.

(2) Normal requirements for final levee or dike construction plans are as follows.

(A) For purposes of review, final plans of dikes and levees will be classified into one or a combination of the following:

(i) the dike that holds back water at all times:

(I) with landfill;

(II) without landfill:

(-a-) high-risk protection (dwelling or high value land);

(-b-) low-risk protection (agricultural);

(ii) the levee that holds back water only during floods:

(I) with landfill;

(II) without landfill:

value land);

(-a-) high-risk protection (dwelling or high

(-b-) low-risk protection (agricultural).

(B) Normal requirements are as follows.

(i) Foundation and borrow source information obtained from exploration will indicate the type and/or classification of the soil according to the unified soil classification system. The borings should be at least to a depth equal to the height of the embankment. In some cases, additional depth of borings may be required. The natural groundwater table elevation shall be given if water is encountered in the borings. The soils to be used shall be relatively impervious and consist of clay and clayey material. At least 15% of the material must pass the #200 sieve and the plasticity index of the material must be above 15. Fill material shall have no stones over six inches in diameter and no organic material (roots, etc.).

(ii) Elevations and dimensions of all proposed structures (levees, dikes, conduits, etc.) including those to be used for drainage shall be noted.

(iii) Lengths and distances between the various components of the system, i.e., lengths of conduits and pipes; distances between dike or levee and natural stream, and borrow area or ditches, shall be noted.

(iv) Compactive effort proposed to be used in project specifications shall be noted. The compactive effort required may vary with the type of dike or levee. The compaction of the material may be obtained by any means that is suitable. The soil shall be compacted to a minimum density of 95% using the standard proctor compaction test at approximately 3.0% optimum moisture content. Fill shall be placed in lifts of not more than 12 inches thick and properly processed, if needed, prior to compaction. Methods to be employed to obtain compaction shall be contained in specifications for the project.

(v) Sides of levees that are to remain exposed shall be adequately protected. Plans shall provide for establishing a protective grass cover or for an alternate treatment where climate will not support a vegetative cover.

(vi) All pipes and conduits passing through the dike shall have anti-seep collars to increase the percolation path by a minimum of 15%. The immediate area below drainage outfalls shall be protected by riprap or concrete.

(vii) All concrete placements shall be reviewed for intended use.

(viii) The foundation area shall be stripped. Stripping shall include removal of all grass, trees, and surface root systems for the full width of the levee.

(ix) Provision shall be made for an embankment key. Methods employed to control subsurface seepage shall be reviewed in accordance with soil conditions present and with the degree of hazard inherent in the project.

(x) Materials removed by stripping or from the key way shall be used only on the dry side of the finished levee.

(xi) All specifications to be followed by the contractor shall be included with the plans submitted.

(xii) The applicant shall formulate and carry out an acceptable operation and maintenance program and budget.

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§301.39. Time Limits for Construction.

(a) The time during which construction must begin and must be completed. The applicant must commence and complete construction of the project approved by the commission within a reasonable time which shall be established by the commission as a condition stated in the commission's approval order. The commission will evaluate the scope of the project in determining the commencement and completion requirements.

(b) Failure to begin or to complete construction. Failure to begin construction or to complete construction within the period specified in the approval order shall be considered violations of the order and shall be grounds for withdrawal of approval.

(c) Re-submission of plans. If construction is not begun within the period specified in the approval order or is not completed within the period specified in the order, the applicant must re-submit his plans to the executive director for review and consideration whether the lapse of time has resulted in changed circumstances which require significant additional requirements or modifications to the order, giving due consideration to the rights of third parties. Such a resubmission is considered an application for extension of time for which fees are payable pursuant to §§301.71-301.74 of this title (relating to Fees). Specifically, the executive director shall consider whether physical changes have occurred or are imminent or planned in the area of potential impact which may have an adverse effect on landowners which is different from that present in the initial approval process and/or which may require significant alterations of the approved plans or significant additional requirements or modifications to the order.

(d) Referral when changed circumstances exist. If the executive director determines that such changed circumstances exist, he shall refer the application to the commission for action in accordance with §301.37 of this title (relating to Referral of Application to Commission).

(e) Recommendation for extension of time. If the executive director determines that such changed circumstances do not exist, he may recommend to the commission an extension of time to begin or to complete construction. Notice shall not again be required in this case. The commission may, for good cause, extend the period to commence or to complete construction.

§301.40. Notification of Date Work Began; Monthly Reports.

Within 10 days after beginning actual construction of a project, the executive director shall be notified in writing of the date work began. Thereafter, monthly reports of progress shall be forwarded to the executive director by the 10th day of each month during construction. The report shall show the work accomplished during the month, the percentage of time used and the percentage of completion of the project as of the close-out date of the report. In addition, the report shall show the inclusive dates of the reporting period.

§301.41. Maintenance of Records.

The owner shall continuously maintain records to ensure compliance with the approved plans and specifications during construction. Copies of these records shall be furnished to the executive director at monthly intervals during the construction period, and must include but not necessarily be limited to such items as soil moisture-density test results, and concrete trial batch designs test and compression test results.

§301.42. Inspection.

Inspection of construction work shall be conducted by a registered professional engineer experienced in the construction of levees and channel modifications and responsible directly to the owner. Continuous daily inspections shall be made and may be delegated to a qualified technician (inspector) provided he or she is under the supervision of the owner's engineer. The executive director may make periodic inspections for the purpose of ascertaining compliance with approved plans and specifications. Such inspections shall be at the expense of the commission. The executive director shall require the owner, at his or her expense, to perform necessary work or tests and to disclose information sufficient to enable the executive director to determine that conformity with approved plans and specifications is accomplished.

§301.43. Certification by Executive Director.

After approval for the construction of a project has been obtained by a levee improvement district from the commission, the executive director shall inspect the construction of the project at least once every 60 days after the construction work has commenced, and if the executive director finds that the work has been done in compliance with the construction contract, the executive director shall certify this fact. The certificate shall give a full description of the work done up to the date of inspection. If

the executive director finds that the work has not been done in compliance with the construction contract, the executive director shall officially certify this fact to the district and to the commission. The certificate shall specify how the contractor has failed to comply with the construction contract.

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§301.44. Alterations of Final Plans and Specifications.

If after inspection, investigation or examination, or at any time as the work progresses, the executive director finds that changes or amendments are necessary to ensure safety, he may request the owner to revise his or her plans and/or specifications. Alterations of the plans and specifications must be approved by the executive director before work commences under the changes, except in emergencies requiring immediate action in which instance the executive director shall be immediately notified. If the proposed alterations would result in deviation from the approved plans, amendment of the approved plans must be obtained from the commission. An application must be submitted for approval of the amendment. If, in the opinion of the executive director, the amendment would have a potential adverse affect on property owners' rights which is materially different from that in the initial approval process, he shall inform the applicant, and notice must again issue in compliance with §§301.51-301.57 of this title (relating to Notice and Hearing).

§301.45. Failure To Comply with Approved Plans and Specifications.

If at any time during construction, enlargement, repair, or alteration of any levee or channel modification, the executive director finds that the work is not being done in accordance with approved plans and specifications, the executive director shall give written notice and direct compliance by certified mail to the owner. If the owner fails to comply with the directive, the executive director may take appropriate action to assure compliance. Failure to comply with approved plans and specifications is ground for revocation of the order approving the plan and/or civil penalty as provided by law. The commission may order that the structure be removed to eliminate any safety hazard to life and property.

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§301.46. As-Built Plans.

Upon submission of as-built construction plans, the applicant shall be provided a notice of final approval in writing if in the executive director's opinion no significant variance from the approved plans occurs during the course of construction. Thereafter, any enlargement or other modification of the project, including any subsequent rehabilitation or reconstruction of the project in a manner differing in any way from the approved project plans must be submitted to the commission for approval as a new levee or other improvement pursuant to this chapter.

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