Technical Analysis and Design. The minimum level of detail will be 60% complete P&S and supporting technical analysis. However, depending on existing conditions and the type of flood control feature involved, a 90 – 100% complete package may be needed before a permit decision can be made.

Civil. Each request should clearly identify the existing condition of the portion of the levee, floodwall, or channel project being altered and include plan, profile and design details of the proposed alteration in relation to the existing USACE project.

(a) Alteration location (Vicinity map and specific alteration location in station or river mile and/or decimal degrees)
(b) Applicable datum
(c) Real estate interests, existing and to be acquired, needed for the proposed alteration
(d) Grading plans
(e) Layout plan, profiles, and cross-sections of proposed alteration
(f) Previous inspection reports to assist in identifying existing deficiencies and their proximity to the proposed alteration
(g) Temporary measures required during construction (bypasses, cofferdams, etc.)

Geotechnical. The following is a list of analyses or information that may be necessary to consider for geotechnical considerations and assessing their impacts if proposed alterations alter the levee, floodwall or channel bank cross-section or penetrate the natural blanket or foundation.

(a) Erosion control (changes in erosive forces on a slope)
(b) Material usage/borrow/waste/transport/hauling
(c) Placement of stockpiles, heavy equipment, or other surcharges etc.
(d) Results of subsurface investigation – boring logs, test pit logs, laboratory test results
(e) Seepage analysis
(f) Settlement analysis
(g) Stability analysis
(h) Vegetation

Structural. The following is a list of analyses or information that may be necessary to evaluate the impacts of proposed alterations to concrete, sheetpiling, or drainage structures:

(a) Design analysis for retaining walls and excavation support system
(b) Design of shallow or deep foundations, including bearing capacity and settlement analysis if the construction is located within the line of protection or right-of-way and creates potential seepage problems
(c) Stability analysis including sliding, overturning, bearing, flotation, uplift and any seismic load effects for any alteration to the channel walls and/or flood walls
(d) Structural drainage control methods

(e) Water stops and contraction/expansion joints

Hydrologic and Hydraulics System Performance Analysis. The purpose of a hydrologic and hydraulics system performance analysis is to determine the potential hydrologic and hydraulics impacts of proposed alterations. Districts will determine if such an analysis is needed and, if so, the appropriate scope of analysis based on the complexity of the proposed alteration.

The requester will be responsible for the analysis. Hydrologic and hydraulic system performance analyses will be applied to alterations that alter the hydrologic and/or hydraulic conditions (e.g., reservoir operations, bridge constrictions, hydropower installation, etc.)

(a) Changes in velocity
(b) Changes in water surface profiles and flow distribution
(c) Scour analysis
(d) Sediment transport analysis
(e) Upstream and downstream impacts of the proposed alterations

Environmental Compliance. A decision on a Section 408 request is a federal action, and therefore subject to the National Environmental Policy Act (NEPA) and other environmental compliance requirements.

While ensuring compliance is the responsibility of USACE, the requester is responsible for providing all information that the district identifies as necessary to satisfy all applicable federal laws, executive orders, regulations, policies, and ordinances

Real Estate Requirements. A list of all real property interests required to support the proposed alteration must be provided, including those in federally managed lands and those owned by the requester.

Maps clearly depicting both existing real estate rights and the additional real estate required must also be provided.

Discussion of Executive Order 11988 Considerations. The district may require the requester to submit sufficient data in order that the district may conduct its analysis in accordance with ER 1165-2-26 to ensure that the proposed alteration is compliant with EO 11988. The request should be assessed as to whether there would be induced development in the floodplain as a result of the proposed alteration and address the positive and negative impacts to the natural floodplain functions.

Requester Review Plan Requirement. If the district determines a Type II IEPR is required, then at minimum the requester is required to submit a Type II IEPR review plan.

Operations and Maintenance. Requesters must identify any operations and maintenance requirements needed throughout the life of the proposed alteration and the responsible entity for the operations and maintenance into the future.

Any alteration to a project operated and maintained by a non-federal sponsor and for which an update to the operations and maintenance manual is required, the non-federal sponsor will provide USACE with sufficient information to update the O&M manual.

The non-federal sponsor will acknowledge in writing their continued responsibility to operate, maintain, repair, rehabilitate and replace the USACE project at no cost to the government and will hold and save the government free from all damages arising from construction, operation, maintenance, repair, rehabilitation, and replacement of the project.

Other Information. Based on the alteration request, the district may require the requester to provide additional information to complete its evaluation.