## U.S. Army Corps of Engineers Mississippi Valley Division **New Orleans District**

## Review Plan for

The Illinois Central Railroad Co. **Bonnet Carre' Spillway** Rail Bridge Replacement

Pursuant to 33 USC § 408

**ENDORSED** BY:

Michael A. Turner

Chief of RB-T

DATE

**APPROVED** BY:

Richard G. Kaiser

Major General, U.S. Army,

Commander

# IMPLEMENTATION REVIEW PLAN Illinois Central Railroad Co. Bonnet Carre' Spillway Bridge

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#### 1. PURPOSE AND REQUIREMENTS

a. General. This alteration-specific review plan defines the scope and level of review required by the New Orleans District to determine if the alteration requested by the Illinois Central Railroad Co. can be recommended for approval. This review plan was prepared in accordance with Engineer Circular (EC) 1165-2-216, "Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408" (reference paragraph 7.c.(4) in EC 1165-2-216) and Engineering Circular (EC) 1165-2-217, Review Policy for Civil Works, 20 February 2018. The district review will result in a Summary of Findings document that will document and support the district's review decision.

#### b. References

- OASA Delegation of Authority Pursuant to 33 USC 408, 18 Aug. 2017
- CECW-CE Interim Guidance on Section 408 Decision Level, 10 Nov. 2016
- EC 1165-2-216, Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408, 30 Sep 2015
- Engineering Circular (EC) 1165-2-217, Review Policy for Civil Works, 20 February 2018
- Engineering Regulation (ER) 1110-1-12, Quality Management, 31 Mar 2011
- ER 1110-1-1807, Drilling in Earth Embankment Dams and Levees, 31 December 2014
- EM 1110-2-1913 Design, Construction, and Evaluation of Levees, 30 April 2000
- EM 1110-2-2000, Standard Practice for Concrete for Civil Works Structures, Mar 2001
- EM 1110-2-2906, Design of Pile Foundations, Jan 1991
- EM 1110-2-2504, Design of Sheet Pile Walls, Mar 1994
- EM 1110-2-1902, Slope Stability, Oct 2003
- EM 1110-2-3400, Painting: New Construction and Maintenance, Apr 1995
- American Concrete Institute, Building Code and Commentary, ACI 318
- American Institute of Steel construction, Manual of Steel
- American Welding Society, AWS D1.1
- American Welding Society, AWS D1.5
- ASCE/SEI 7, Minimum Design Loads for Buildings and Other Structures

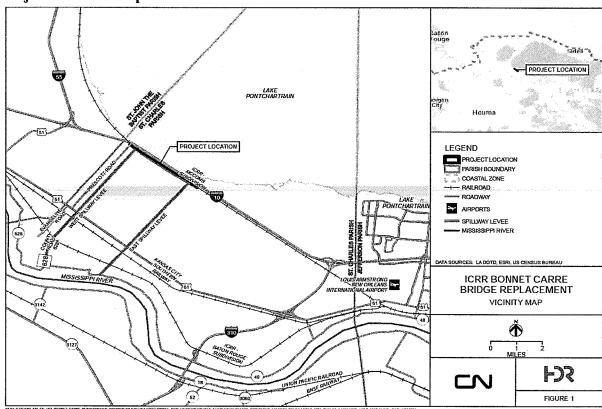
The products applicable to determination of impacts to the operation and maintenance of the flood risk reduction project will be reviewed against published guidance, including Engineering Regulations, Engineering Circulars, Engineering Manuals, Engineering Technical Letters, Engineering Construction Bulletins, Policy Guidance Letters, implementation guidance, project guidance memoranda, and other formal guidance memoranda issued by HQUSACE.

#### 2. ALTERATION DESCRIPTION

This Review Plan covers proposed alteration(s) of the Bonnet Carre' Spillway, an element of the

Mississippi River and Tributaries flood risk management project. Potential project impacts will be evaluated for alterations to the floodway and associated guide levees. The requestor, the Illinois Central Railroad Co. has proposed alteration(s) that consist of construction of a replacement mainline rail bridge along the McComb Subdivision Bonnet Carre' Spillway crossing to provide safe and reliable freight and passenger service and accommodate existing and future traffic in the area. The new 11,000+ foot-long concrete structure bridge will be constructed parallel to and 50 feet north of the existing rail bridge and tie back 19 feet from the existing alignment at both the north and south abutments. This will allow traffic to be maintained on the existing bridge during construction with only minor operational impacts. The new span proposed design extends across the full width of the spillway outflow, beyond the upper and lower guide levees. The proposed bridge is clear (downstream) of the upper guide levee, but extends through and beyond the lower guide levee section. The proposed bridge crosses the lower guide levee at a distance approximately 1,300 ft. from the lake. The protected side of the lower guide levee in this vicinity is unprotected from lake surge and is unpopulated. The existing timber trestle bridge is near the end of its service life and will be dismantled and removed (hauled off site by rail) upon completion of the new bridge structure. The timber piles on the existing bridge are proposed to be cut at mudline for all bents #1through #869 and at -3 feet for bents 870-875. Through plate girders (TPGs) (except for TPG No. 7) on the existing rail will remain in place. The new bridge will be constructed primarily from custom manufactured equipment (overhead gantry crane) and lakeside from an elevated movable crane platform that will use spud pilings to move along the length of the new bridge within a temporary work zone to drive pilings. Temporary access routes, and tree clearing are proposed as part of the project construction activities. The proposed Project must meet current USACE design and construction standards.

#### **Project Location Map**



#### 3. DECISION LEVEL AND REVIEW MANAGEMENT

- a. Decision Level. The New Orleans District has determined that the required decision level for the Section 408 Alteration covered by this review plan is the New Orleans District. The rationale for the review level determination is provided in Attachment 1. This determination will be reviewed and verified through the District Review Plan endorsement and approval steps outlined in 3.3. In addition, the decision level will be documented in the Summary of Findings for this review. The signed memorandum requesting approval of required decision level is included as Attachment 2.
- b. Management of Quality Control / Quality Assurance (QA/QC) Review. QA/QC for this Section 408 Alteration is being performed and managed by the Requestor. The New Orleans District has determined that the proposed Section 408 Alteration requires the development of a QA/QC review plan by the requestor. The Illinois Central Railroad Co. has submitted a plan, which describes the QA/QC review to be performed in the development of their design. The New Orleans District has approved the QA/QC review plan, and will ensure that QC/QA has been properly performed and documented. Additional details are described in Section 4.
- c. Management of District-Led Agency Technical Review (ATR). The ATR for this Section 408 Alteration will be performed and managed by the New Orleans District. ATR will be performed in accordance with this alteration-specific review plan. This review plan must be endorsed by the Mississippi Valley Division Chief of Regional Business Technical, and shall be ultimately approved by the Mississippi Valley Division Commander.
- d. Management of Type II Independent External Pier Review / Safety Assurance Review (Type II IEPR/SAR). A Type II IEPR/SAR is not required for this Section 408 Alteration (see section 6 below).

#### 4. QUALITY CONTROL AND QUALITY ASSURANCE (QA/QC)

General. The requestor is responsible for the quality control and quality assurance for the design and construction of the proposed alteration. The district is responsible for ensuring that QA/QC has been adequately performed and documented by the requestor. The requester, or its agent or consultant, shall minimally include review of the structural adequacy, geotechnical stability and concurrence with all applicable USACE design regulations, guidance and practices for this type of work. The requester has provided USACE with summary memorandums regarding the quality control/quality assurance procedures that have been performed, as well as those that will be followed in the development and completion of the project design (see Attachment 8). The summaries identify the following items, which shall be included in the ATR Report:

- Purpose and scope of the review;
- Description of the reviewer(s) and a short statement on qualifications
- Summary of the review performed during design;
- Lessons learned and major changes made during the review;
- All internal QC comments and resolutions; and,
- Supplemental studies or analyses performed during the design, e.g. geotechnical report.

#### 5. DISTRICT-LED AGENCY TECHNICAL REVIEW (ATR)

- a. General. The District-led ATR will serve as the district's review of the alteration request. The purpose of this review is to ensure the proper application of established criteria, regulations, laws, codes, principles and professional practices. For the purposes of Section 408, the ATR team will determine whether or not the project will:
  - i) Impair the Usefulness of the Project. The objective of this determination is to ensure that the proposed alteration will not limit the ability of the federal project to function as authorized and will not compromise or change any authorized project conditions, purposes, or outputs.
  - ii) Be Injurious to the Public. The objective of this determination is to ensure public safety by identifying any alteration impacts, including cumulative impacts, that may negatively affect the public interest and to determine whether the overall benefits are commensurate with risks.
  - iii) Meet Legal and Policy Compliance. A determination will be made as to whether the proposed alteration meets all legal and policy requirements.
  - iv) Ensure that QA/QC has been adequately performed and documented by the requestor.
- **b.** Adequate Review. The district-led ATR will ensure that QA/QC has been adequately performed and documented by the requestor. In addition, the ATR team will evaluate all aspects of the application by applying the general considerations above, along with particular emphasis on engineering review of the proposed alterations':
  - i) Effect upon hydraulic and hydrologic conditions during periods of Bonnet Carre' Spillway operations.
  - ii) Effect upon structural integrity of the upper and lower guide levees.
  - iii) Structural integrity of the proposed railroad bridge, including superstructure, supports and foundation.

These reviews will be performed to ensure that the proposed alterations will not impede flows under foreseeable circumstances during Spillway operations, and to ensure no negative effect on the structural integrity of the Spillway Guide Levees.

- c. Decision Level. The ATR team will also verify that the decision level for the alteration request has been appropriately determined and documented.
- d. Required Disciplines and Expertise of ATR members. The District-led Agency Technical Review (ATR) Team is comprised of reviewers with the appropriate independence and expertise to conduct a comprehensive review of the proposed alteration described in Section 1.b of this review plan. ATR Reviewers are from the

New Orleans District. ATR team members were chosen based on each individual's qualifications and experience with similar reviews and/or Section 408 requests. The New Orleans District ATR team member list assigned for this review plan, and their qualifications are provided in Attachment 3. Each team member has the necessary experience to provide a comprehensive review that is commensurate with the risk associated with the alteration. The following provides a description of the ATR member expertise that is required for the review panel:

- i) ATR Lead: The ATR Team Lead for this Section 408 review is the Operations Manager for the Bonnet Carre' Spillway Project. The ATR Lead holds a degree in Mechanical Engineering, has the appropriate expertise in EC 1165-2-216 comprehension and possesses the ability to adequately scale a review in accordance with paragraph 7.b of EC 1165-2-216. The ATR Lead has suitable experience in reviewing Section 408 alterations and the skills necessary to lead a team through the ATR process.
- ii) Geotechnical Engineer: The Geotechnical Engineering team member should be a senior-level professionally registered engineer with experience in the field of geotechnical engineering, analysis, design, and construction of embankment levees. The team member will hold a degree in Civil Engineering, or Geotechnical Engineering. The team member should have knowledge and experience in evaluation of seepage, settlement, and slope stability problems associated with levee embankments. The team member should have experience in failure mode analysis, risk assessment of embankment levees, and evaluating risk reduction measures for levee safety assurance projects.
- iii) Hydraulic Engineer: The senior-level team member should have experience with engineering analysis related to flood risk management and levee safety projects. The team member will hold a degree in Civil Engineering, or Hydrology and Hydraulics Engineering. Reviewer should have experience in analyzing levee hydraulics along with experience in the analysis and design using hydrology models.
- iv) Civil Engineer: The Civil Engineering team member should be a senior-level professionally registered civil engineer with experience in design and construction of structural supports and embankment levees with engineering analysis related to flood risk management and levee safety projects. The team member will hold a degree in Civil Engineering. The team member should have experience in the preparation of plans and specifications for the construction of earthen embankment levees.
- v) Structural Engineer: The Structural Engineer team member should be a senior level, professionally registered civil engineer with extensive experience in design and construction of deep foundation, sub-structure and super-structure for bridges and/or similar structural features.
- vi) Levee Safety: The reviewer will ensure that the proposed project meets Corps of Engineers standards for flood risk reduction and levee safety guidelines.
- vii) Construction Engineer: The reviewer should be a senior level, professionally

- registered engineer with extensive experience in the engineering construction field. The Construction reviewer should have a minimum of 15 years of experience.
- viii) Real Estate Specialist: The Real Estate team member should be a senior-level realty specialist with experience in identifying right-of-way requirements for project purposes, estates, process for obtaining approval of non-standard estate approval, validating real estate requirements for project purposes, basic requirements for management out grant and consent actions, experience in reviewing plans and specifications, and critical thinking skills.
- ix) Operations Division, 408 Coordinator: The Operations Division team member should be a senior level civil engineer with experience in the operations & maintenance and inspection of all types flood damage risk reduction features. The team member will hold a degree in Civil Engineering. The team member will have knowledge and experience in operations and maintenance and inspection of these features and be proficient in the Inspection of Completed Works (ICW) programs, policies, and procedures.
- x) Environmental Specialist: Responsible for reviewing NEPA and other environmental compliance documents prepared by the requester. Coordination with MVN Regulatory personnel will be required to evaluate potential Section 10 or 404 actions.
- xi) Counsel: The reviewer will ensure that the proposed alteration evaluation meets all of the legal and policy requirements. The Section 408 permission will not be recommended for approval until it has concurrence by the MVN Office of Counsel. The reviewer will have experience in analyzing project authority, policy, environmental, and federal decision documents.
- e. Products to Undergo ATR. The ATR team will review the following products:
  - i) Written Request
  - ii) Technical Analysis and Design. A review of the technical analysis and design will be performed on plans and specifications that are at a 60% level of detail at a minimum. Supporting analysis for the proposed alternation shall include at a minimum:
    - (1) Geotechnical Analysis and Report
    - (2) Hydrologic and Hydraulic System Performance Analysis
    - (3) Method of Construction, site access, material staging, standard for placing construction materials
    - (4) Use of consistent datum and epoch information, including datum/epoch conversions, as appropriate.
  - iii) All NEPA documentation for Environmental Compliance. A decision on a Section 408 proposed alteration request is a federal action and therefore subject to National Environmental Policy Act (NEPA) and other environmental compliance requirements. 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. It has been determined that the requestor will prepare an Environmental Assessment (EA) for the Section 408 proposed alteration.
- iv) Real Estate Requirements. The requestor should provide a list of all real property interests required to support the proposed work/alteration. This should be supported by a map which clearly depicts both the existing real estate rights and the additional real estate required (existing right-of-way and new right-of-way required, if any). This should include both permanent and temporary real property rights needed. Alternatively, if all work will be constructed within existing rights-of-way, the requestor may so state. If the project requires the acquisition of new right-of-way, USACE approved standard estates should be utilized for project purposes by the requestor. If the requestor should propose a non-standard estate, approval requirements as outlined in EC 405-1-11 and Chapter 12, ER 405-1-12 will be followed.
- v) Operations and Maintenance. Requesters must identify any operations and maintenance requirements needed throughout the life of the proposed alteration.
- vi) Public Comments.
- f. Review Procedures. Reviews will be conducted in a fashion which promotes dialogue regarding the quality and adequacy of the required documentation. Due to the nature of the specific alteration, MVN has been engaged in coordination efforts with Requestor, Illinois Central Railroad Co. to ensure the proper plans, specifications, design, and environmental documents are submitted to perform an adequate review in a timely manner. The District Section 408 Coordinator will determine if adequate information has been provided to start a review. The requestor will be notified in writing if its proposal is missing documentation. Proposed alteration submittal packages may be submitted by the requestor, its agent or consultant. Alteration proposals must be submitted via electronic format. A hard copy is recommended but not required. The proposal must address all applicable documentation as outlined in EC 1165-2-216. The ATR Team Lead will be the responsible party for tracking and coordinating the ATR.
- g. Review Documentation. The submittal will undergo a thorough New Orleans District ATR. Upon completion of the review, each reviewer will prepare an ATR memorandum with review comments and submit them to the ATR Team Lead. If the Section Chief delegates the review to a staff member, the Section Chief will be required to review the comments and sign the ATR memorandum indicating concurrence with the staff member's review. The requestor is responsible to modify submittals to resolve ATR concerns, and will resubmit them for verification until all issues are addressed and satisfied. In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist. Each review should address four key parts. The four key parts of a review comment will normally include:

- i) The review concern: identify the deficiency or incorrect application of policy, guidance, or procedures.
- ii) The basis for the concern: cite the appropriate law, policy, guidance, or procedure that has not been properly followed.
- iii) The significance of the concern: indicate the importance of the concern with regard to its potential impact on the district's ability to make a decision as to whether to approve or deny the Section 408 request.
- iv) The probable specific action needed to resolve the concern: identify the action(s) that the requester must take to resolve the concern.
- h. Review Coordination. Other agencies such as U.S. Coast Guard and the Louisiana Office of Coastal Management will perform permitting reviews on the ICRR's proposed alterations concurrently with CEMVN. The ATR Environmental Specialist and environmental support team will coordinate with the other agencies, as well as, CEMVN Regulatory personnel, as required. By mutual agreement with CEMVN, the U.S. Coast Guard has assumed the role as the lead federal agency for the purposes of National Environmental Policy Act (NEPA) and other applicable environmental laws such as the National Historic Preservation Act, Endangered Species Act and the National Invasive Species Act. This approach is supported by the location of the proposed alterations and the Coast Guard's jurisdiction over navigable waters of the United States. For the purpose of review pursuant to 33 USC 408, an Environmental Assessment for the applicant's proposed alterations has been prepared by the New Orleans District's Environmental Planning Branch. The completed Memorandum of Agreement concerning project considerations relative to Section 106 of the National Historic Preservation Act has been incorporated into the EA.

Issues of marine safety for vessels transitting beneath the proposed railroad bridge are being addressed separately under the Coast Guard's permitting process. No structural or other change requirements significant to CEMVN's Agency Technical Review pursuant to Section 408 are anticipated as a result of the Coast Guard's permit review.

- i. ATR Completion and Report. The ATR is complete when there is sufficient information for the ATR team to ascertain whether the proposed alteration will not be injurious to the public; will not impair the usefulness of the project; and it is not in conflict with any known laws and/or regulations. If the proposed alteration does not adequately address the above statements, then the ATR team will recommend the proposed alteration be denied. At the conclusion of the ATR effort, the ATR team will prepare a Review Report summarizing the review. The ATR Lead will be responsible for final preparation of the report. The report shall:
  - i) Identify the document(s) reviewed and the purpose of the review;
  - ii) Provide the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
  - iii) Include the charge to the reviewers;

- iv) Describe the nature of their review and their findings and conclusions;
- v) Identify and summarize each unresolved issue (if any); and include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.
- j. District Counsel Review. The District Counsel will be responsible for performing the legal and policy review in accordance with EC 1165-2-216. This review will be accomplished after the ATR is completed and the District Levee Program Safety Manager (LPSM) and the District Levee Safety Officer (LSO) have reviewed the alteration documents, but prior to the District Engineer's determination.
- k. Completion and Certification of the ATR. The ATR shall be considered complete when all ATR concerns are either resolved or referred to District leadership for resolution and the ATR documentation is complete. The ATR Certification document will certify that the issues raised by the ATR team have been resolved (or elevated to District leadership). Sample documentation for Certification of ATR is included as Attachment 4.
- I. Summary of Findings. Following ATR, the District Section 408 Coordinator will compile a Summary of Findings in accordance with EC 1165-2-216 to summarize the district's rationale and conclusions used in recommending approval or denial of the alteration request. The District Section 408 Coordinator will obtain the endorsement of the LPSM and the LSO, the District Counsel, and other District leadership before recommending to the District Commander that the proposed alteration be approved or denied. The ATR Review Report shall be an appendix of the Summary of Findings.
- 6. TYPE II IEPR/SAR A Type II IEPR/SAR is not required for this project. The district's Chief of Engineering has submitted the rationale not to conduct the review, and the rationale has been endorsed by the Mississippi Valley Division, Chief of Regional Business Technical. The signed memo approving the rationale not to conduct a Type II IEPR/SAR is shown in Attachment 5. The rationale not to conduct a Type II IEPR/SAR is shown in Attachment 6.

#### 7. REVIEW SCHEDULE

#### **Section 408 Evaluation and Activities Schedule:**

TASK	TIME REQUIRED*	RESPONSIBLE PARTY
Agency Technical Review of Design	330 days	USACE
Construction Means and Methods Review	90 days	USACE
Environmental Compliance Review	210 days	USACE/Applicant
Section 106, Cultural Resources component	180 days	USACE/USCG
Public Notification	15 days	USACE
Real Estate Evaluation	150 days	USACE
ATR Review Report	45 days	USACE
Summary of Findings Document Preparation and Routing	90 days	USACE
Legal Review	14 days	USACE
Issue Decision Notice	6 days	USACE
Overall 408 Evaluation Duration	430 days**	USACE

<sup>\*</sup>Time is estimated, and is in calendar days. 408 Application Date 27 March 2017. 408 Review Contributed Funds Available as of 28 August 2017. Durations per task under TIME REQUIRED overlap with other tasks and include review of submittal revisions.

#### 8. REVIEW PLAN APPROVAL AND UPDATES

a. Approval. This review plan will be approved by the Commander of the Mississippi Valley Division. It will have the endorsement of the District and the Mississippi Valley Division Chief of Regional Business Technical Division prior to being submitted to the Commander.

<sup>\*\*</sup>Duration from application date.

b. Updates. This review plan is a living document and will be revised as necessary throughout the design and construction phases. Minor revisions will not require reapproval and will be documented using the table in Attachment 7. If major revisions, such as a change in scope of the project or change in the review levels, are necessary, the review plan will be submitted for reapproval.

#### 9. PUBLIC PARTICIPATION

As required by EC 1165-2-217, the approved Review Plan will be posted on the District public website:

http://www.mvn.usace.army.mil/Missions/Section-408/

The public will have 14 days to provide comments on the documents; after all comments have been submitted, the comments will be provided to the technical reviewers. This is not a formal comment period and there is no set timeframe for the opportunity for public comment. If and when comments are received, the district will consider them and decide if revisions to the review plan are necessary. This engagement will ensure that the peer review approach is responsive to the wide array of stakeholders and customers, both within and outside the federal government.

#### 10. REVIEW PLAN POINTS-OF-CONTACT

The following are the points-of-contact for this review plan:

- **a.** District POC: Raymond C. Newman, ATR Team Lead, Operations Manager Southeast Waterways, CEMVN-OD-G, (504)862-2050
- b. District Section 408 Coordinator: Amy Powell, CEMVN-OD-W, (504)862-2241
- c. MVD New Orleans District Support Team, Mississippi Valley Division, (601)634-5922

#### ATTACHMENT 1: RATIONALE FOR REVIEW LEVEL DETERMINATION

Per EC 1165-2-216, Policy and Procedural Guidance for Processing Request to Alter US Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408, and the CECW-CE Interim Guidance on Section 408 Decision Level dated 10 Nov. 2016, seven questions must be addressed to determine required review and decision level. If the answer to any of the following questions is "yes", and the District and Division recommend approval of the alterations, then the Section 408 request requires HQUSACE or Division level review and decision. The questions, and MVN's responses, are provided below:

FACTOR	RELEVANCY TO THIS PROJECT
Does the proposed alteration	("Yes" or "No". Provide additional
change how the USACE project will	information for "yes" answers in
meet its authorized purpose?	paragraph below.) NO. The proposed
	project is replacement of an existing timber
	railroad trestle across the Bonnet Carre
	Spillway at Lake Pontchartrain, LA. The
	proposed railroad trestle will be approx. 50-
	ft north, or lake-side of the current trestle and will be constructed using reinforced
	concrete. The proposed design extends
	across the full width of the spillway outflow,
	beyond the upper and lower guide levees.
	The proposed bridge is clear (downstream)
	of the upper guide levee, but extends
	through and beyond the lower guide levee
	section. The proposed design does not
	compromise guide levee structural integrity
	in any way. The design will increase
	spacing between piers or pile bents from
	13-ft to 39-ft. and will not affect the
	operation of the Bonnet Carre Spillway and
	it's ability to divert excessive Mississippi
	River flows to Lake Pontchartrain.
2) Does the proposed alteration	("Yes" or "No". Provide additional
preclude or negatively impact	information for "yes" answers in paragraph
alternatives for a current General	below.) NO. The proposed project is in
Investigation or other study?	the vicinity of the West Shore Lake
	Pontchartrain Project but will not affect
	that project.

3) Is the proposed alteration for installation of hydropower facilities?	("Yes" or "No". Provide additional information for "yes" answers in paragraph below.) NO. The propose project is replacement of an existing timber railroad trestle across the Bonnet Carre Spillway at Lake Pontchartrain, LA with a new reinforced concrete railroad trestle.
4) Is there a desire for USACE to assume operations and maintenance responsibilities of proposed navigation alterations pursuant to Section 204 (f) of WRDA 1986?	("Yes" or "No". Provide additional information for "yes" answers in paragraph below.) NO. USACE will not be responsible for the operation and maintenance of proposed railroad trestle owned and operated by the Illinois Central Railroad.
5) Does the proposed alteration require a Type II IEPR, reference EC 1165-2-217?	Complete the "Rationale for Type II IEPR a Type II IEPR, reference EC 1165-2-217 (SAR) Recommendation". Respond "yes" or "no" based on outcome. NO. The proposed project is replacing an existing timber railroad trestle with a reinforced concrete trestle crossing the Bonnet Carre' Spillway at its confluence with Lake Pontchartrain. Rationale detailed in Attachment 6.
6) Is the non-Federal sponsor for a USACE project proposing to undertake the alteration as in-kind contributions eligible for credit under Sect. 221 of the Flood Control Act 1970, as amended?	("Yes" or "No". Provide additional information for "yes" answers in paragraph below.) NO. The proposed project is not a federal flood control project, therefore there is no non-federal sponsor.
7) Are the proposed alterations, such that they could be approved by the District Commander, but the Div. Commander (CG) established a regional process that requires certain district 408 decisions to be made by the CG.	("Yes" or "No". Provide additional information for "yes" answers in paragraph below.) NO. The proposed project can be approved by the District Commander.

Based on the responses to questions 1 through 7 above, New Orleans District level review and approval will be sufficient.

## ATTACHMENT 2: SIGNED RATIONALE FOR REQUIRED LEVEL OF REVIEW.

## ATTACHMENT 3: REQUIRED ATR MEMBERS AND EXPERTISE





## ATTACHMENT 4: CERTIFICATION OF AGENCY TECHNICAL REVIEW

## ATTACHMENT 5: SIGNED RATIONALE NOT TO CONDUCT A TYPE II IEPR/SAR, Page 1 of 2

## ATTACHMENT 5: SIGNED RATIONALE NOT TO CONDUCT A TYPE II IEPR/SAR, Page 2 of 2

#### ATTACHMENT 6: RATIONALE FOR TYPE II IEPR RECOMMENDATION

Per EC 1165-2-217, Civil Works Review, two factors mandate a Type II IEPR and three additional factors should be considered in determination whether or not a Type II IEPR should be conducted. These factors and their relevancy to this project are discussed below.

Factor		Relevancy to this Project
1) Is the project justified by life safety?	Mandate	("Yes" or "No". State the justification for building this project.) NO — The proposed project is replacement of an existing timber railroad trestle across the Bonnet Carre' Spillway at Lake Pontchartrain, LA. The proposed railroad trestle will be approx. 50-ft north, or lake-side of the current trestle and will be constructed using reinforced concrete. The proposed design extends across the full width of the spillway outflow, beyond the upper and lower guide levees. The proposed bridge is clear (downstream) of the upper guide levee, but extends through and beyond the lower guide levee section. The proposed design does not compromise guide levee structural integrity in any way, and will increase spacing between piers or pile bents from 13-ft to 39-ft. The proposed bridge crosses the lower guide levee at a distance approximately 1,300 ft. from the lake and approximately 3.4 miles from the nearest community of Norco, LA. Failure of the railroad bridge would not impact the the ability of the Bonnet Carre Spillway to divert excess flows from the Mississippi River during high water events.
2) Would the project's failure pose a significant threat to human life?	Mandate	("Yes"or"No". Explain) NO, If the proposed project failed, a portion of the concrete train trestle would most likely fall into Lake Pontchartrain, leaving the trestle impassible. The Bonnet Carre' Spillway would still function, diverting excess flows from the Mississippi River into Lake Pontchartrain and protecting New Orleans from excessive river stages. In actuality the proposed trestle is a more robust steel and concrete design intended to replace the outdated existing wooden trestle.

ATTACHMENT 6: RATIONALE FOR TYPE II IEPR RECOMMENDATION (Continued)		
3) Does the project involve the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices?	Consider	("Yes" or "No". Explain.) NO – The proposed railroad trestle will be constructed using reinforced concrete, which is a proven and widely used construction material with proven construction techniques.
4) Does the project design require redundancy, resiliency, or robustness?	Consider	("Yes" or "No". Explain.) NO — Standard railroad industry safety factors will be used for the design of the proposed railroad trestle.
5) Does the project have unique construction sequencing or a reduction or overlapping design construction schedule?	Consider	("Yes" or "No". Explain.) NO – The proposed construction is typical for this type of project.

### **ATTACHMENT 7: REVIEW PLAN REVISIONS**

Revision Date	Description of Change	Page / Section Number

### ATTACHMENT 8 - Design Quality Control Submittal, Page 1 of 14