

**RESPONSE TO COMMENTS ON
NON-TIME CRITICAL REMOVAL ACTION
BASIS OF DESIGN, 90% PHASE II
CAUSEWAY DESIGN
STRATFORD ARMY ENGINE PLANT
STRATFORD, CONNECTICUT**

**U.S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
CONCORD, MASSACHUSETTS**

by

**HARDING ESE, INC.
A MACTEC COMPANY
PORTLAND, MAINE**

August 2001

**RESPONSE TO COMMENTS ON
NON-TIME CRITICAL REMOVAL ACTION
BASIS OF DESIGN, 90% PHASES I AND II
CAUSEWAY DATED JUNE 2001
STRATFORD ARMY ENGINE PLANT
STRATFORD, CONNECTICUT**

Comment # Comment/Response

USEPA Comments Dated August 8, 2001 on the NTCRA 90% Phase II Basis of Design – Causeway

1. Comment: Page 2-19, Section 2.7.5.3, Upper Cover System Components, Non-woven Geotextile: It appears that the proposed non-woven geotextile should have an apparent opening size equal to a 70 sieve. However, the apparent opening size of the non-woven geotextile in Table 1 on Page 3 (Attachment B Phase II Technical Specifications), is #40. Please clarify this difference and correct as appropriate.

Response: The text in specification 02378 will be revised to indicate an apparent opening size equal to a 70 sieve shall be used for the non-woven geotextile under the interlocking concrete block.

2. Comment: Page 2-19, Section 2.7.5.3, Gravel, 3rd sentence: The text indicates that “The gravel will be spread over the entire surface of the upper cover system.” Spreading the gravel layer without being placed with compactness (or tightness) may cause mixing of gravel and the overlying vegetative soil layer and/or has the potential loss for the topsoil. EPA suggests using a geotextile between the topsoil and the gravel as a separator and filter.

Response: Compaction of the gravel will be completed using a non-vibratory static roller. This revision will be made to the Basis of Design text and the specifications. A filter analysis has been completed for the proposed topsoil, resulting in the recommendation of the specified gravel (see Attachment G of Appendix C). It is believed that a geotextile between the topsoil and the gravel will become clogged by the organics in the topsoil and the ultimate grass root system. Such clogging could lead to significant erosion problems in the topsoil layer. Therefore, no change to the design will be made as a result of this comment.

3. Comment: Attachment B, Phase II Technical Specifications, Section 02921, Page 5, Finished Grade and Topsoil: the placing of topsoil, smooth grading, and compaction requirements are not specified in Section 02300 Earthwork. Please provide the grading information as appropriate.

Response: The recommended revisions will be made to SECTION 02300 EARTHWORK.

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Comment # Comment/Response

**CTDEP Comments Dated August 2, 2001 on the NTCRA 90% Phases I & II Basis of Design
– Causeway**

CTDEP comments on Phases I and II were responded to in a document entitled “Phase I RCL.doc”, which was e-mailed to the CTDEP, CTDEP-OLISP, and USEPA by Harding ESE on August 13, 2001.

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Comment # Comment/Response

CTDEP OLISP Comments Dated August 10, 2001 on the NTCRA 90% Phase II Basis of Design – Causeway

REQUIRED MODIFICATIONS

1. Comment: The work is proposed to be conducted in an unconfined manner (i.e., there will be no continuous top-to-bottom barrier impervious to fine silt and sediment between the intertidal work area and the Housatonic River). However, it is proposed that the project will occur during the season when such unconfined work is allowable (i.e., between October 1st and March 31st). Although allowable during the late fall and winter months, unconfined work should proceed in such a way that minimizes the exposure of any disturbed area to wind and wave action. Accordingly, the work plan should specify, at a minimum, that those portions of the project below the upland sedimentation fencing (proposed to be installed along the 6' contour) will proceed in daily increments small enough that each area of disturbance can be completed and stabilized with the proposed final cover within a single workday. We note that there are three distinct types of final cover proposed: 1) the side slopes of the causeway will be covered with a polymeric marine mattress; 2) the upper portion will be a relatively flat area of interlocking concrete blocks with vegetative cover; and 3) the transition zone between these two surface treatments will be riprap.

From a coastal management perspective, it does not matter whether the project is split up such that the area that will be covered with the polymeric marine mattress is worked in segments that can be completed within a day and then the upper portions of the Causeway are worked in similar segments, or whether each daily segment includes a manageable portion of both the side slope and the upper part of the Causeway. In either event, the disturbed area should be limited to the extent necessary to ensure that each project segment is completed by the end of each day. Although this approach was discussed in concept during the meeting held at the Army Corps of engineers concord headquarters on March 21, 2001, it does not appear to be reflected in the Phase II documents. Unless the Army can provide compelling documentation that the water quality for the Housatonic River and its associated resources will be sufficiently protected from the potential adverse impacts of this major excavation and fill project without this plan modification, the documents must be amended to include this work methodology to render the project consistent with the water quality policies and standards of the Connecticut Coastal Management Act.

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Response: Text in the Basis of Design and the Phase II specifications will be revised to indicate the following:

- Areas on top of the Causeway, including the rip rap transition area and the upper cover system area will be covered with erosion control matting if there is no scheduled activity on these area for 2 weeks or more.
 - On the sideslopes of the Causeway, the area to be excavated in any given day shall be no larger than that which can be covered with the lower cover system on the same day.
2. Comment: As previously discussed, this Office is concerned that the proposed floating silt curtain with be both ineffective in the control of siltation as it is not designed to fully contain or capture silt coming off the site and it has the potential to harm the intertidal flat in the vicinity of its installation. Although the intent behind the use of this item is appreciated, it appears that it will actually do more harm than good. Moreover, it does not appear that any siltation control beyond the “upland” erosion control measures will be necessary as all land disturbance planned outside of that area will occur during the “open” window for dredging, when no in-water siltation control is required. Accordingly, the proposed floating silt curtain must be eliminated from the project. To this end, the narrative should be updated to delete all references to the silt curtain and it should also be eliminated from the plans including removal of Notes 3-8 on Sheet C-103 and Note #3 on Sheets C-104 and C-105.

Response: Details regarding the proposed floating silt curtain will be qualified with an N.I.T.C. (Not In This Contract) designation in the Design.

CLARIFICATIONS NEEDED

3. Comment: The plans state that “no excavation or backfilling [is] to be performed under tidal waters, unless approved by the Contracting Officer.” [Sheets C-104, C-105, Note #3]. What criteria will the Contracting Officer use to determine when such activities will be allowable? These criteria should be submitted for review by this Office either independently or as part of the federal consistency concurrence request discussed below.

Response: The words “...,unless approved by the Contracting Officer” will be removed from the text and specified drawings. Excavation will not occur under tidal waters, as the Construction Contractor will be working around the tide to ensure that excavation is

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conducted only above the tidal level. As indicated in the response to Comment 1, on the side-slopes of the Causeway, the area to be excavated in any given day shall be no larger than that which can be covered with the lower cover system on the same day.

4. Comment: Loose hay mulch is proposed as erosion control for disturbed areas above elevation 6' (Phase I Technical Specifications Part 3.1.1.h. and 3.1.4 and Phase II Technical Specifications Part 3.1.1.h and 3.4). We are concerned that this treatment may not be effective in the control of erosion at this location and may, in fact, add to the floating vegetative debris in the adjacent river. As background, the actual high tide elevation varies from day to day, in general, with the higher high tides usually occurring during the autumn season, when the Phase II work is proposed. Additionally, the high tide line, as defined by the Connecticut General Statutes, may be as high as 7' NGVD at this site. Thus, it appears that there is the potential for at least a portion of the mulched area to be subject to tidal action. Please identify what method(s) will be used to keep the mulch in place in the event of a high tide that exceeds elevation 6' NGVD.

Response: Due to the proposed schedule, it is anticipated that there will not likely be areas of the Causeway where activity will not be conducted over a two week period; however, stapled or staked jute erosion control matting will be used to limit erosion if the situation arises. The text in the Basis of Design and in the referenced specifications will be revised to indicate that disturbed areas shall be covered with jute erosion control matting above elevation 6 in areas where work is not to be performed for two weeks or longer, or in the event of a major storm. Subsection 3.1.4 in the referenced specifications will be removed; mulch material will not be used during cover system construction.

FEDERAL CONSISTENCY

5. Comment: Please be aware that, as noted in our previous comments, the Phase II portion of this project will require a formal federal consistency determination and submission of such for review. I have brought this to John Burleson's attention and anticipate the submission of a formal federal consistency concurrence request in the near future. Phase II construction cannot proceed without our concurrence on that determination in accordance with the Federal Coastal Zone Management Act and associated regulations found in 15 CFR Part 930. The regulations require, in part, that the federal coastal consistency concurrence be received by this Office at least 90 days before the final approval by the Army of the activity.

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As part of the federal consistency review process, we are required to publish notice of the Army's federal coastal consistency determination and request for concurrence along with a description of the project sufficient to notify the general public of the project's location and scope. To facilitate that process, please either provide an abbreviated summary of the proposed work along with copies of the plans in 8" x 11" format for distribution with the notice or identify where within the Town of Stratford interested citizens can review the plans and supporting documents. Please also be reminded that, in accordance with our letter of July 26, 2001, these review and timing requirements do not apply to the Phase I activities provided they are to proceed as previously described since it has been determined that they do not require federal coastal consistency review.

Response: The U.S. Army submitted the formal federal consistency determination concurrence request to CTDEP-OLISP the week of August 20, 2001.

6. Comment: Finally, we understand that Phase II of the project may be modified to include placement of appropriate infrastructure (electrical wiring conduits, waterlines, etc.) to allow for the Town's anticipated reuse of the causeway area. While it appears unlikely that these items will prove to be a coastal management concern, the specific details of such infrastructure should be included in the formal federal consistency request as they are considered part and parcel of the overall work at the site.

Response: The Town of Stratford and their design engineering consultant are currently in the process of preparing the infrastructure plans for the Causeway. The design for the infrastructure will be submitted under separate cover, as an addendum to the Causeway Cover System Design.