SECTION 404(b)(1) EVALUATION

The following short form 404(b)(1) evaluation follows the format designed by the Office of the Chief of Engineers. As a measure to avoid unnecessary paperwork and to streamline regulation procedures while fulfilling the spirit and intent of environmental statutes, the New Orleans District is using this format for all proposed project elements requiring 404 evaluation, but involving no significant adverse impacts.

PROJECT TITLE: IER 33: WBV/MRL Co-Located Project

PROJECT DESCRIPTION:

The U.S. Army Corps of Engineers (USACE), Mississippi Valley Division, New Orleans District (CEMVN), is evaluating the potential impacts associated with the proposed construction and maintenance of the 100-year level of hurricane damage risk reduction along the West Bank and Vicinity – Mississippi River Levee (WBV-MRL) Co-Located Project. The Co-Located Project extends from the Eastern Tie-in of the West Bank and Vicinity project with the MRL at Oakville in Plaquemines Parish to a point approximately 15 miles upriver near Algiers Lock, is not of sufficient height to provide 1% hurricane and storm damage risk reduction (see figure 1). The WBV-MRL Co-Located Project is designed to reduce risk to residents along the west bank of the MRL from hurricane-driven storm surges up the mouth of the river.

In October 2010, a 1,000-foot section of stabilized soil crown cap was constructed on top of the existing MRL near Belle Chasse Louisiana to achieve the 1% HSDRRS elevation (USACE, 2010a). This demonstration project allowed field-testing and evaluation of an engineering technique using local soils and also provided the local sponsor and CEMVN the opportunity to evaluate maintenance issues and options. The proposed action for IER #33 is to apply this same measure to the remainder of the nearly 15-mile distance of the Co-Located project. For locations where the existing levee is 2 feet or less deficient (approximately 6.75 miles of the up-river segments), the crown cap would be constructed of untreated clay; where the existing levee is greater than two feet deficient (all remaining sections), the crown cap would be constructed with stabilized soil (USACE, 2010).

The project is designed to remain within existing rights-of-way (ROW) and for the ground-disturbing actions to remain within the footprint of the existing levee. The ROW for the project area extends from the water line on the river-side to approximately the toe of the levee on the land-side. The area within which earth-moving activities would take place would be from the base of the concrete slope pavement on the river-side, to approximately the toe of the slope on the land-side. The design, construction, and maintenance of the proposed action would be similar to that described and constructed previously for the demonstration section within this alignment (USACE, 2010a). Where needed, utilities would be relocated to cross the project in accordance with existing hurricane damage reduction standards and the disruptions to existing facilities would be kept to a minimum.

Figure 2 illustrates a typical section with a variable 11- to 18-foot crown and slopes of 1:3 on the river-side slopes and 1:2 land-side slopes; however, the existing side slopes as well as the side slopes of the new material would vary as conditions dictate. The finished levee crown would be paved with either asphalt or a similar material known as chip-seal and have concrete side curbs placed at the crown edge.

In order to construct the proposed action on the existing MRL in the Co-located area, four major steps would be required:

1) Preparing the existing levee for the placement of the material. This would include removing the existing crushed limestone levee crown as well as clearing and grubbing the existing levee areas to receive the clay or stabilized soil cap within the limits of work,

2) Preparing the access roads and staging areas. These actions would take place within the existing construction ROW and include preparing the laydown areas, improving or constructing vehicular access ramps and roads,

3) Constructing the new stabilized soil or clay crown cap. This would include all activities at the material borrow site and stabilized soil mixing sites (e.g., excavation of suitable material at the material borrow site and any manipulation of that material for stabilized soil) as well as transporting material to the construction site, and placing and compacting the material, and

4) Fertilizing, seeding, and mulching the completed project and removing construction materials from the work site. Upon completion of construction, fertilizing, seeding, and mulching of disturbed areas would be completed where appropriate. There would be no fertilizing, seeding, and mulching the stabilized soil section because these areas would not support plant growth due to the material's hardness and high pH (USACE, 2010).

Site Preparation

In order to prepare the site for construction, a silt fence would be constructed approximately 70–100 feet to the land-side from the levee crown to minimize erosion and sediment runoff. The silt fence would be designed to retain sediment from

runoff during clearing and grubbing, excavation, embankment placement, and final grading (USACE, 2010a). Final removal of silt fence barriers would be after completion of the final project and approval by CEMVN.

The existing crushed limestone levee crown would be excavated from the levee surface and removed from the work site. After removal of the crown cap, site preparation would require clearing vegetation (i.e., grass) and grubbing within the footprint of all work areas including stripping the topsoil to a depth of approximately six inches. The clearing and grubbing of the vegetation and topsoil stripping would be necessary to ensure that roots and topsoil zones would not provide weak path planes where water seepage could jeopardize the integrity of the levee. None of the grubbed material would be re-used as fill for the project. The grubbed material would be deposited and stored in a fashion to ensure that material would not be eroded from the site before being hauled off site.

Because of the variability in conditions along the existing alignment, the new centerline of the levee could be shifted slightly to the river or land-side, but construction activities would remain within the existing right-of-way and would not destroy adjacent habitat. Within the downstream-most 29,200 feet of the project area, the existing concrete slope pavement would be removed to allow feature construction and replacement concrete slope pavement would be constructed atop the new river-side slope. Demolition and replacement of the existing concrete slope pavement would generate approximately 42,500 CY of concrete rubble that the construction contractor would remove from the construction site and could retain for reuse, sell the material, or otherwise dispose of the material after removal. Any disposal would comply with applicable federal, state, and local laws. Actions to replace the concrete slope pavement within this segment would temporarily disturb approximately 10.06 acres of wetlands. Vehicular access via the 15-foot corridor to the toe of the remaining length of the project could temporarily effect the vegetation within an additional 17.09 acres of wetlands.

The construction contractor may retain grubbed material for reuse, sell the material, or otherwise dispose of the material after removal; any disposal would comply with applicable federal, state, and local laws. Within the recent supplement to IER #12, the CEMVN has evaluated the potential environmental consequences associated with utilizing the West Bank Site N Borrow pit as an alternative disposal site for earthen material that had been removed during the construction of the West Closure Complex eastern floodwall and road realignment as well as the Hero Canal Levee (USACE, 2010c). This site may also be available for disposal of earthen materials removed from the MRL during the clearing and grubbing process.

After all site preparations were completed, the entire earth surface on or against which fill would to be placed, would then be thoroughly broken (i.e., scarified) to a depth of approximately six inches parallel to the centerline of the levee (USACE, 2010a). The area of bare soil exposed at any one time by construction operations would not exceed that necessary to perform the work (USACE, 2010a). Temporary fills or waste areas would be constructed by selective placement to eliminate silts or clays on the surface that could erode and runoff into adjacent waterbodies (USACE, 2010a).

Access Road and Staging Area Preparation

Construction equipment access ramps (to get onto the levee to conduct the work) would be constructed at a number of locations within the existing ROW. Ramps would typically have a 14-foot crown width, one vertical-on-10 horizontal crown slope, and one vertical-on-three horizontal side slopes and be constructed by adding material to the levee crown and slopes. The ramps would typically be constructed of crushed stone; however there may be instances where the ramp would be constructed of concrete or asphalt. For example, at the Belle Chasse Ferry Landing, existing concrete sections of the ramp would be replaced with concrete when disturbed.

Where necessary, temporary access roads would be constructed by the placement of fill. The pre-construction and post-construction conditions would be verified and documented by the use of surveys and/or videos to establish the pre-existing conditions for site restoration at the completion of construction (USACE, 2010a).

Provision of Acceptable Borrow

The rights-of-way and earthen materials for constructing the work have been furnished at specific locations (USACE, 2010a) from approved borrow areas; the borrow area investigations were performed using industry standard techniques and received environmental evaluation with separate IERs. All fill material used for the construction would be free from masses of organic matter, sticks, branches, roots, and other debris including hazardous and regulated solid wastes (USACE, 2010a).

Soil Stabilizer Application

All material to be placed in the levee cap would be excavated from an approved Government Owned or Contractor Furnished borrow site. For the contract reaches that require the use of stabilized soils,[1] the necessary mixing and treating of the soil would be completed within five existing borrow processing sites (Sites A, B, C, D & E) located adjacent to Walker Road in Plaquemines Parish (Figures 4, 5, 6 & 7).

In order to prepare stabilized soil, the borrow material would be excavated, hauled to the previously mentioned sites and spread in a loose thickness of approximately eight to 14 inches over an area approximately one half acre in size (USACE, 2010a). After the soil was spread, the moisture content of the soil would be measured and, if necessary, fresh water would

[1] Soils would be stabilized by the addition of quicklime or fly-ash.

be applied from a water truck to achieve the desired moisture content. Once the soil is at the appropriate moisture content, the additive (lime or fly-ash) would be spread over the soil in a single application. The fly-ash or lime would be delivered to the work sites in fully enclosed, dust-proofed, and self-unloading bulk trucks. At no time would the fly-ash or lime be dumped or stockpiled on the ground or otherwise left exposed to ambient conditions. Stabilizing the soil with quicklime or fly-ash would require different mixtures to achieve the same soil properties. As a result, if the soil were stabilized with quicklime, approximately 15,100 tons would be needed; if stabilized with fly-ash, approximately 38,650 tons would be required (USACE, 2010d).

The material would be spread in such a manner as to ensure even distribution over the width of the spreading equipment and caution would be used to reduce dust created by the spreading. End dumping, bottom dumping, tailgate spreading, or the use of aggregate type spreaders for spreading the material would be prohibited. Cyclone spreaders, multi-spout spreader bars on hopper trucks, mechanical spreaders or other types of spreaders would be required. Soil processing would not be conducted during periods of high winds and heavy rain (USACE, 2010a).

After the lime or fly-ash was applied to the treatment area, a high-speed rotary pulverizer would be driven over the treatment area several times to completely mix the material. Once thoroughly mixed, the material would be left in place to cure for 12 to 24 hours for lime or seven days for the fly-ash. At the end of the required waiting period, a trackhoe or similar heavy equipment would be used to pick up the stabilized material and load it into dump trucks for transport to the levee construction site. When removing the treated material, care would be taken to avoid including unmixed material from below. Several of these half-acre areas or "cells" could be used at a time enabling the production of approximately 200 to 500 cubic yards of treated material per day (USACE, 2010).

If the borrow material (stabilized or un-stabilized) were too wet for placement, the material would either be stockpiled within the stabilized soil mixing sites and allowed to drain or the wet material could be processed by disking and harrowing at the site(s) until the moisture content was reduced sufficiently (USACE, 2010a). Conversely, if the borrow material is too dry, it would be wetted in the stabilized soil mixing sites before being transported to the construction site and placed within contract section (USACE, 2010a). For materials from the Bonnet Carre Spillway, a minimum of 10 feet between the stockpile toe and the top of borrow cut would be maintained and between January 1 and June 30 of each year, stockpiles of borrow material would be limited to a two week supply to assure opportunity for removal and conservation of materials in the event operation of the spillway became necessary (USACE, 2010a).

Material Transportation

All excavated material to be hauled to the site from the borrow source, or to be removed from the site, including debris, would be hauled in watertight trucks with secured binders on tailgates to the place of destination. The route for trucks carrying material to and from the job site, and to and from the borrow area and mixing sites would avoid residential streets, and would be approved by the CEMVN prior to use (USACE, 2010a). During construction, equipment (i.e., front-end loaders and street sweepers) would be used to keep public streets used for the transport of material or for access and egress from the construction site free and clean of mud and other debris resulting from its hauling operations (USACE, 2010a).

The contractor would be required to provide a hard-surfaced truck wash-down rack (e.g., steel grated structure, wooden timber crane mats, or equivalent) located at a point of egress from the construction site during hauling operations to eliminate mud and debris transported onto public roads (USACE, 2010a). All trucks utilized for hauling would be pressure washed on the wash-down rack before departing the construction site and the truck wash-down rack would be sized and located within the rights-of-way for the access road (USACE, 2010a).

Operation of truck wash down racks would not include use of detergents and rinse water generated would be intercepted before draining offsite. The sediments resulting from operation of truck wash down racks would be utilized in the job or disposed of as construction debris (USACE, 2010a).

Embankment Construction Material Placement

The existing levee slope would be scarified thoroughly to a depth of six to eight inches before placement of the new embankment material. Both the stabilized and un-stabilized soil embankment material would be placed and spread in approximately one-foot lifts (before compaction). Layers would be started full out to the slope stakes and would be carried substantially horizontal and parallel to the levee centerline with sufficient crown or slope to provide drainage during construction (USACE, 2010a).

This construction approach, i.e., benching into the slope of the existing levee embankments, would be required in order to place and compact the material in horizontal layers. Fill would not be placed upon frozen ground and the land-side side

slope of the levee would be left rough or scarified to reduce the velocity of water runoff during construction (USACE, 2010a).

The first or bottom layer and the last two layers would not be more than 6 inches in thickness and all layers between the first and the last two layers would not be more than 12 inches in thickness prior to compaction (USACE, 2010a).

Compaction

Each layer of material placed as part of the construction (i.e., lift) would be compacted to 90-percent of the maximum dry density. The equipment used for compaction would be capable of compacting a layer of soil not less than 12 inches thick and would be operated at speeds not to exceed 3.5 miles per hour (USACE, 2010a). Compaction equipment would be capable of properly compacting the soil so that no planes of weakness or laminations were formed in the fill. Compaction from the tires/treads of hauling equipment would not be allowed, nor would compaction by saturation (USACE, 2010a). Typically, levees treated with lime are covered with a layer of untreated clay and seeded and fertilized and maintained the same as normal levee. However, because the side slopes for the stabilized soil cap would be as steep as 1 vertical to 2 horizontal, the non-federal sponsor cannot safely mow with their equipment. As a result, the levee would be left bare and may be treated with herbicide to prevent vegetation (USACE, 2010a).

Detention Berm

Because stabilized soil is substantially impervious and does not support a growth of grass, rainfall flows off stabilized soil in a higher volume and at a higher velocity than a similar grassed levee section. In order to account for the additional runoff volume and reduce the discharge velocity, all areas where stabilized soil was used would include the construction of a detention berm at the toe of the levee. The detention berm would be designed based on the expected runoff during a 10-year non-tropical rainfall event; this design storm is used parish-wide within Plaquemines Parish. As illustrated in figure 3, the berm would be constructed of stabilized soil, and would vary in size based on the amount of runoff that needs to be contained at a particular location. At appropriate intervals, drainage notches would be cut into the berm allowing the accumulated water to drain from behind the berm. This drainage rate would be equivalent to the current rate and volume of runoff from the existing grassed levee sections.

Fertilizing Seeding and Mulching

The land resources within the project boundaries and outside the limits of permanent work performed under this contract would be preserved in their present condition or be restored to a condition that would appear to be natural and not detract from the appearance of the project (USACE, 2010b). The contractor would obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, and stockpiles of excess or waste materials upon completion of construction (USACE, 2010b). The contractor would be required to restore the construction area to near natural conditions that would permit the re-growth of vegetation.

Fertilizing, seeding, and mulching would be performed on all disturbed areas within the construction limits that were not made of a stabilized soil. Fertilizing and seeding operations would begin immediately after the completion of embankment construction; at no time would the fertilizing, seeding and mulching activities be more than 1,000 feet behind completed portions of embankment (USACE, 2010a).

Ground Surface Preparation

After the areas required to be fertilized, seeded, and mulched have been brought to the specified grades, the soil would be tilled to a depth of at least two inches by plowing, disking, harrowing, or other approved method until the condition of the soil is acceptable. The work would be performed only during periods when beneficial results would be expected. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work would be halted until better conditions persisted. Undulations or irregularities in the surface to be fertilized, seeded, and mulched would be dressed before proceeding to fertilize, seed, etc.

Application of Fertilizer

The fertilizer would meet the requirements for commercial fertilizer and would contain, 60 pounds of available nitrogen, 60 pounds of available phosphorous, and 60 pounds of available potash per surface area to be treated (USACE, 2010b). The fertilizer would be delivered to the site in bags, containers, or in bulk. If delivered in bags or containers, the fertilizer would be fully labeled in accordance with the applicable state fertilizer laws and would bear the name, trade name or trademark, and warranty of the producer (USACE, 2010b). The material would be distributed uniformly over areas to be seeded and would be incorporated into the soil to a depth of at least two inches by disking, harrowing, or other acceptable methods (USACE, 2010b).

Seeding

After fertilizer had been applied, seed would be sown using approved mechanical power-drawn seeders, mechanical hand-seeders, broadcast-seeders, or other approved methods (USACE, 2010b). When delays in operations extend the work beyond the most favorable planting season for the species designated, or when conditions are unfavorable (e.g., drought,

high winds, excessive moisture), seeding would be halted and resumed only when conditions are favorable. If inspection during or after seeding operations indicated that areas had been left unplanted or other areas have been skipped, additional seed would be applied. If the broadcast method of seeding were used, seed would be broadcast with approved sowing equipment and distributed uniformly over designated areas. Seed would be covered to an average depth of 1/4-inch by brush harrow, spike-tooth harrow, chain harrow, cultipacker, or other approved devices; seed would not be broadcast during windy conditions. If the hydraulic method of seeding were used, seeds would be combined with fertilizer and mulch and applied uniformly (USACE, 2010b).

Applying Mulch:

Immediately after seeding areas, mulching would be performed. The mulch would be vegetative asphalt mulch consisting of grain straw (e.g., oats, wheat, or rice) or grass hay and asphalt applied uniformly on the soil surface at the rate of two tons (approximately 80 bales) per acre (USACE, 2010b). Mulch would be tacked by spraying with emulsified asphalt at the rate of 150 gallons per ton of mulch using approved equipment suitable for such work. Wood cellulose fiber or recycled wood pulp mulch, would be applied uniformly on the soil at the rate of 1,800 pounds per acre during the seeding operation (USACE, 2010b).

Totals:

Construction of the project would take place along approximately 79,000 linear feet of the Mississippi River Levee and disturb approximately 120 acres of maintained levee within the existing ROW. Clearing and grubbing would generate approximately 90,000 cubic yards of material, removing the existing crushed limestone crown would generate an additional nearly 20,000 cubic yards of material, and replacing the concrete slope pavement on the river-side would generate approximately 42,500 cubic yards of debris for disposal or re-use. Approximately 210,000 cubic yards of earthen fill or stabilized soil would be brought to the site from approved borrow areas to construct the measure.

Replacement of concrete slope pavement within the downstream-most 29,200 feet of levee would temporarily disturb wetlands within the 15-foot corridor needed for access and construction. This temporary disturbance would affect approximately 10.06 acres of wetlands during construction. Vehicular access via the 15-foot corridor to the toe of the remaining length of the project could temporarily effect the vegetation within an additional 17.09 acres of wetlands. Construction would be expected to take nearly 950 days, but multiple contracts could be issued allowing segments to be constructed at the same time. There would be no permanent direct or indirect impacts to wetlands, open water, or special aquatic habitats. Construction would not enclose any wetlands.

Typical equipment utilized to accomplish the work outlined above may include water trucks, diesel dump trucks, diesel hole cleaners/trenchers, diesel bore/drill rigs, diesel cement and mortar mixers, diesel cranes, diesel graders, diesel tractors/loaders/backhoes, diesel bull dozers, diesel front end loaders, diesel lifts, diesel pile drivers, diesel fork lifts, and diesel generators.

References

U.S. Army Corps of Engineers (USACE). 2010. Hurricane & Storm Damage Risk Reduction System/Mississippi River Levees Co-Located Areas, Engineering Alternatives Report, Engineered Alternative Measures. Orleans, St. Bernard, and Plaquemines Parishes, Louisiana. New Orleans District.

U.S. Army Corps of Engineers (USACE). 2010a. Plans and Specifications for West Bank and Vicinity (WBV) Mississippi River Levee (MRL) Hurricane Storm Damage Risk Reduction System Engineered Advanced Measures, English Turn Bend, WBV-MRL 5.1 - Demonstration Section. Plaquemines Parish, LA.

U.S. Army Corps of Engineers (USACE). 2010b. National Environmental Policy Act Decision Document: Westbank and Vicinity and Mississippi River Levees Projects Co-located Levees and Demonstration Section. Signed 17 August 2010.

U.S. Army Corps of Engineers (USACE). 2010c. Draft Individual Environmental Report Supplemental, GIWW, Harvey, and Algiers Levees and Floodwalls, Jefferson, Orleans, and Plaquemines Parishes, Louisiana. IER # 12. CEMVN. September 2010. On Line at:
www.nolaenvironmental.gov/nola_public_data/projects/usace_levee/docs/original/DraftIERS12Sept2010.pdf

U.S. Army Corps of Engineers (USACE) 2010d. MS Excel Calculation Spreadsheet Titled “Lime or Ash Trucks.xls” from Marlea Haugen, CEMVN to Mark Lahare, CEMVN dated 17 September 2010.

Figure 1. IER #33 WB V/MRL Co-Located Project Area

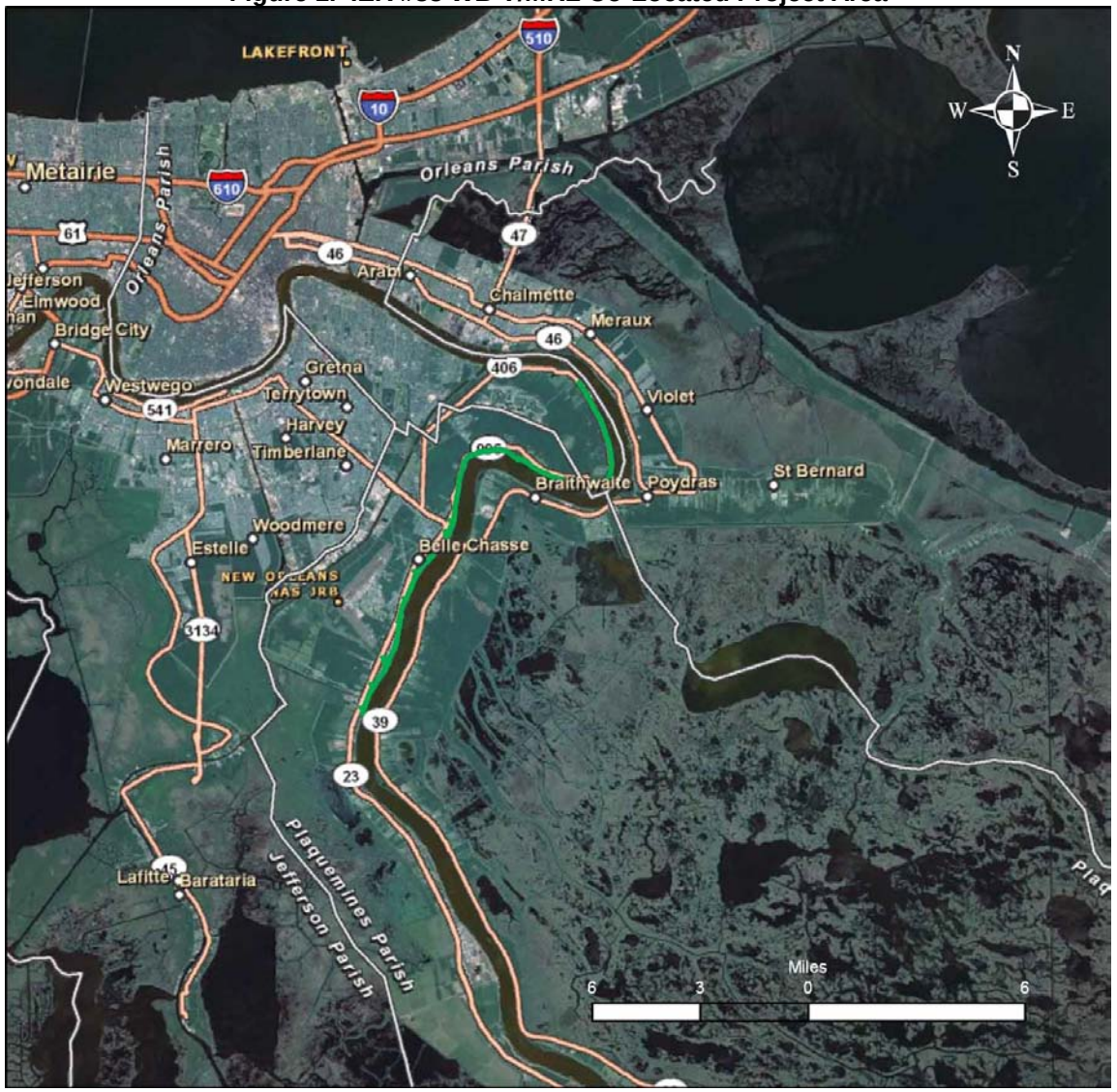
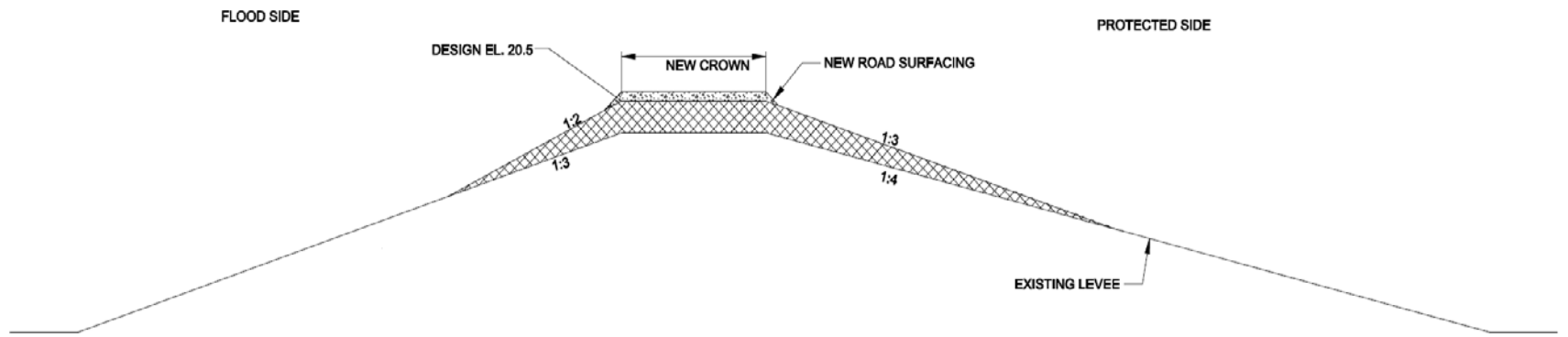


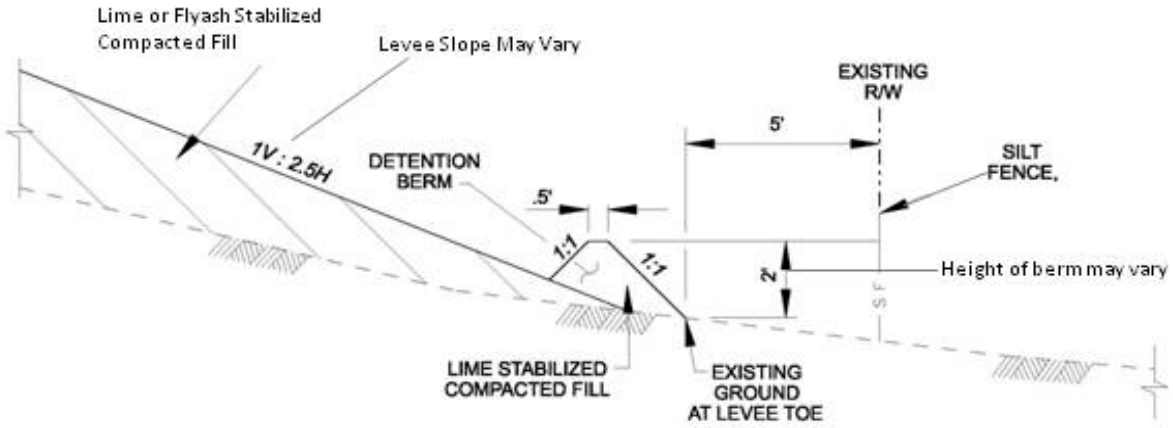
Figure 2. Typical Cross Section (Not to Scale)



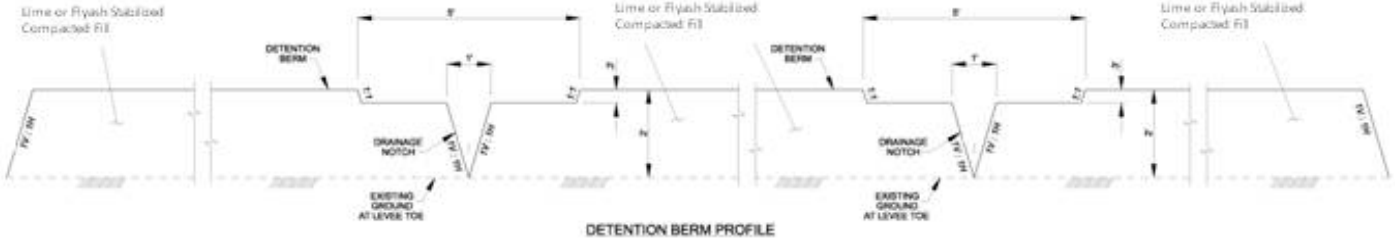
Notes:

1. Crown width varies 11'-18'
2. New centerline of levee may be shifted either side.
3. Any shift in levee will not be so great as to exceed existing right-of-way either side.
4. Existing side slopes shown are approximate.
5. Side slopes of new fill added (either lime stabilized soil, fly ash stabilized soil, or all-clay) may vary from those shown.

Figure 3. Detention Berm Typical Section and Profile



DETENTION BERM TYPICAL SECTION



DETENTION BERM PROFILE

Figure 4. Stabilized Soil Mixing Sites

Figure 5. Existing Conditions for Stabilized Soil Mixing Sites A and B (October 2010)

Figure 6. Existing Conditions for Stabilized Soil Site C (October 2010)

Figure 7. Existing Conditions for Stabilized Soil Mixing Sites D and E (October 2010)

1. Review of Compliance (§230.10 (a)-(d)).

	Preliminary[1]		Final[2]	
A review of this project indicates that:				
a. The discharge represents the least environmentally damaging practicable alternative and if in a special aquatic site, the activity associated with the discharge must have direct access or proximity to, or be located in the aquatic ecosystem to fulfill its basic purpose (if no, see section 2 and information gathered for environmental assessment alternative);	YES	NO*	YES	NO
b. The activity does not appear to: (1) violate applicable state water quality standards or effluent standards prohibited under Section 307 of the Clean Water Act; (2) jeopardize the existence of Federally listed endangered or threatened species or their habitat; and (3) violate requirements of any Federally designated marine sanctuary (if no, see section 2b and check responses from resource and water quality certifying agencies);	YES	NO*	YES	NO
c. The activity will not cause or contribute to significant degradation of waters of the United States including adverse effects on human health, life stages of organisms dependent on the aquatic ecosystem, ecosystem diversity, productivity and stability, and recreational, esthetic, and economic values (if no, see section 2);	YES	NO*	YES	NO
d. Appropriate and practicable steps have been taken to minimize potential adverse impacts of the discharge on the aquatic ecosystem (if no, see section 5).	YES	NO*	YES	NO

2. Technical Evaluation Factors (Subparts C-F).	N/A	Not Significant	Significant*
a. Physical and Chemical Characteristics of the Aquatic Ecosystem (Subpart C).			
(1) Substrate impacts.		X	
(2) Suspended particulates/turbidity impacts.		X	
(3) Water column impacts.		X	
(4) Alteration of current patterns and water circulation.	X		
(5) Alteration of normal water fluctuations/ hydroperiod.	X		
(6) Alteration of salinity gradients.	X		
b. Biological Characteristics of the Aquatic Ecosystem (Subpart D).			
(1) Effect on threatened/endangered species and their habitat.	X		
(2) Effect on the aquatic food web.		X	
(3) Effect on other wildlife (mammals, birds, reptiles, and amphibians).		X	
c. Special Aquatic Sites (Subpart E).			
(1) Sanctuaries and refuges.	X		
(2) Wetlands.		X	
(3) Mud flats.	X		
(4) Vegetated shallows.		X	
(5) Coral reefs.	X		
(6) Riffle and pool complexes.	X		
d. Human Use Characteristics (Subpart F).			
(1) Effects on municipal and private water supplies.		X	
(2) Recreational and commercial fisheries impacts.	X		
(3) Effects on water-related recreation.	X		
(4) Esthetic impacts.	X		
(5) Effects on parks, national and historical monuments, national seashores, wilderness areas, research sites, and similar preserves.	X		

Remarks. Where a check is placed under the significant category, the preparer has attached explanation.

3. Evaluation of Dredged or Fill Material (Subpart G).[3]

a. The following information has been considered in evaluating the biological availability of possible contaminants in dredged or fill material.

(1) Physical characteristics	X
(2) Hydrography in relation to known or anticipated sources of contaminants	X
(3) Results from previous testing of the material or similar material in the vicinity of the project	X
(4) Known, significant sources of persistent pesticides from land runoff or percolation	
(5) Spill records for petroleum products or designated (Section 311 of CWA) hazardous substances	
(6) Other public records of significant introduction of contaminants from industries, municipalities, or other sources	X
(7) Known existence of substantial material deposits of substances which could be released in harmful quantities to the aquatic environment by man-induced discharge activities	
(8) Other sources: See references below	X

*All material utilized for construction activities will be free of contaminants before being used for levee rebuilding projects. The material will come from different areas, either government furnished or contractor furnished. Separate IERs are being or have been prepared to evaluate borrow areas and fill.

1. Phase I Environmental Site Assessment (ESA) English Turn, Mississippi River and Levees, Jefferson and Plaquemines Parishes, Louisiana, U.S. Army Corps of Engineers-New Orleans District, March 2009.
2. Environmental Regulatory Code, Part IX. Water Quality Regulation, Louisiana Department of Environmental Quality, 1994, 3rrd Edition.
3. State of Louisiana Water Quality Management Plan, Volume 5, Part B – Water Quality Inventory, Louisiana Department of Environmental Quality, Office of Water Resources, 1994.

b. An evaluation of the appropriate information in 3a above indicates that there is reason to believe the proposed dredge or fill material is not a carrier of contaminants, or the material meets the testing exclusion criteria.

YES	NO*

4. Disposal Site Delineation (§230.11(f)).

a. The following factors, as appropriate, have been considered in evaluating the disposal site.

(1) Depth of water at disposal site	X
(2) Current velocity, direction, and variability at disposal site	X
(3) Degree of turbulence	X
(4) Water column stratification	
(5) Discharge vessel speed and direction	
(6) Rate of discharge	
(7) Dredged material characteristics (constituents, amount, and type of material, settling velocities)	X
(8) Number of discharges per unit of time	
(9) Other factors affecting rates and patterns of mixing (specify)	

Appropriate references: Same as 3(a)

b. An evaluation of the appropriate factors in 4a above indicates that the disposal site and/or size of mixing zone are acceptable.

YES NO*

5. Actions to Minimize Adverse Effects (Subpart H).

All appropriate and practicable steps have been taken, through application of the recommendations of §230.70-230.77 to ensure minimal adverse effects of the proposed discharge.

YES NO*

Actions taken: A number of actions will be taken to minimize the adverse effects of the proposed action:

- In order to prepare the site for construction, a silt fence would be constructed approximately 70–100 feet to the land-side from the levee crown to minimize erosion and sediment runoff. The silt fence would be designed to retain sediment from runoff during clearing and grubbing, excavation, embankment placement, and final grading.
- The grubbed material removed from the levee surface before construction would be deposited and stored in a fashion to ensure that material would not be eroded from the site before being hauled off site.
- Fill material used for the construction would be free from masses of organic matter, sticks, branches, roots, and other debris including hazardous and regulated solid wastes.
- End dumping, bottom dumping, tailgate spreading, or the use of aggregate type spreaders for spreading the fly-ash or quicklime material would be prohibited. Cyclone spreaders, multi-spout spreader bars on hopper trucks, mechanical spreaders, or other types of spreaders would be required. In addition, soil processing would not be conducted during periods of high winds and heavy rain.
- Operation of truck wash down racks would not include use of detergents and rinse water generated would be intercepted before draining offsite. The sediments resulting from operation of truck wash down racks would be utilized in the job or disposed of as construction debris.
- In order to account for the additional runoff volume and reduce the discharge velocity from the stabilized soil sections, all areas where stabilized soil was used would include the construction of a detention berm at the toe of the levee.
- Fertilizing, seeding, and mulching would be performed on all disturbed areas within the construction limits that were not made of a stabilized soil. Fertilizing and seeding would begin immediately after the completion of embankment construction and at no time would the fertilizing, seeding, and mulching activities be more than 1,000 feet behind completed portions of embankment.
- Wood cellulose fiber or recycled wood pulp mulch, would be applied uniformly on the soil at the rate of 1,800 pounds per acre during the seeding operation.

6. Factual Determination (§230.11).

A review of appropriate information as identified in items 2-5 above indicates that there is minimal potential for short- or long-term environmental effects of the proposed discharge as related to:

a. Physical substrate at the disposal site (review sections 2a, 3, 4, and 5 above). YES NO*

b. Water circulation, fluctuation and salinity (review sections 2a, 3, 4, and 5). YES NO*

c. Suspended particulates/turbidity (review sections 2a, 3, 4, and 5) YES NO*

d. Contaminant availability (review sections 2a, 3, and 4). YES NO*

e. Aquatic ecosystem structure and function (review sections 2b and c, 3, YES NO*

and 5).		
f. Disposal site (review sections 2, 4, and 5).	YES	NO*
g. Cumulative impact on the aquatic ecosystem.	YES	NO*
h. Secondary impacts on the aquatic ecosystem.	YES	NO*

*A negative, significant, or unknown response indicates that the project may not be in compliance with the Section 404(b)(1) Guidelines.

[1]Negative responses to three or more of the compliance criteria at this stage indicates that the proposed projects may not be evaluated using this "short form procedure". Care should be used in assessing pertinent portions of the technical information of items 2a-d, before completing the final review of compliance.

[2]Negative responses to one of the compliance criteria at this stage indicates that the proposed project does not comply with the guidelines. If the economics of navigation and anchorage of Section 404(b)(2) are to be evaluated in the decision-making process, the "short form" evaluation process is inappropriate.
[3]If the dredged or fill material cannot be excluded from individual testing, the "short form" evaluation process is inappropriate.

7. Evaluation Responsibility.

a. This evaluation was prepared by:

Name: Mark Lahare
Position: Environmental Protection Specialist
Organization: U.S. Army Corps of Engineers, New Orleans District
Date: 14 October 2010

Name: N/A
Position: Civil Engineer - Hydraulics
Organization: U.S. Army Corps of Engineers, New Orleans District
Date:

b. This evaluation was reviewed by:

Name: Rodney Mach
Position: Supervisory Civil Engineer
Organization: U.S. Army Corps of Engineers, New Orleans District
Date: 11 November 2010

Name: Richard E. Boe
Position: Chief, Environmental Analysis and Support Section
Organization: U.S. Army Corps of Engineers, New Orleans District
Date: 30 December 2010

8. Findings.

a. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines X

b. The proposed disposal site for discharge of dredged or fill material complies with the Section 404(b)(1) guidelines with the inclusion of the following conditions ..... _____

c. The proposed disposal site for discharge of dredged or fill material does not comply with the Section 404(b)(1) guidelines for the following reason(s):

(1) There is a less damaging practicable alternative ..... _____
(2) The proposed discharge will result in significant degradation of the aquatic ecosystem ..... _____
(3) The proposed discharge does not include all practicable and appropriate measures to minimize potential harm to the aquatic ecosystem ..... _____

Date: 12-30-10

Chief, Environmental Planning and Compliance Branch