

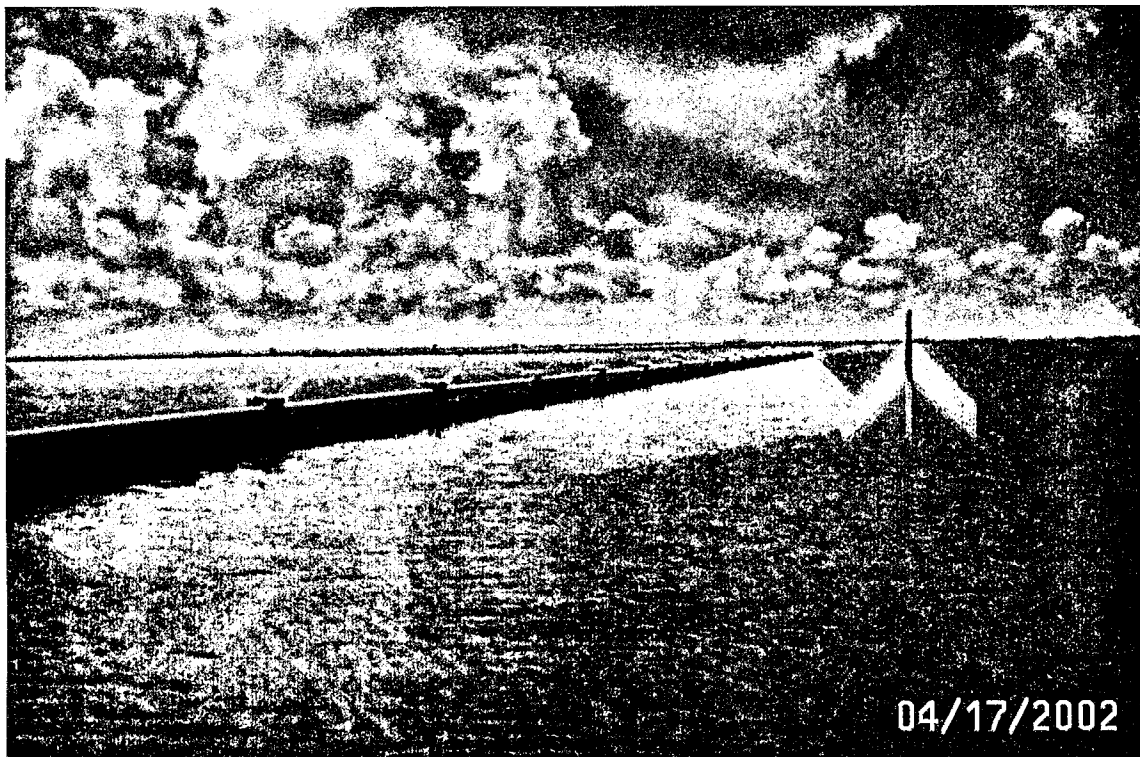
**OPERATION, MAINTENANCE, AND REHABILITATION  
PLAN FOR THE  
BA-27 - BARATARIA LAND BRIDGE SHORELINE  
PROTECTION PHASE I & 2  
(CONSTRUCTION UNIT NO.1)**



**July 31, 2002**



**OPERATION, MAINTENANCE, AND REHABILITATION  
PLAN FOR THE  
BA-27 - BARATARIA LAND BRIDGE SHORELINE  
PROTECTION PHASE I & 2  
(CONSTRUCTION UNIT NO.1)**



**July 31, 2002**



**USDA NRCS** Natural  
Resources  
Conservation  
Service

**OPERATION, MAINTENANCE, AND REHABILITATION  
PLAN FOR BA-27 BARATARIA LAND BRIDGE  
SHORELINE PROTECTION - PHASE I  
(CONSTRUCTION UNIT NO. 1)**

**July 31, 2002**

Prepared by:  
Louisiana Department of Natural Resources  
Coastal Restoration Division  
Baton Rouge, Louisiana

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## History of Revisions

06/17/2002     Submit draft O&M Plan to NRCS for review.

07/25/2002     Received NRCS O&M draft review.

07/2003        Amend O&M Plan to include the following:

Operation, Maintenance and Rehabilitation Plan for BA-27 Barataria Landbridge  
Shoreline Protection Phase 1 and 2 - Construction Unit No. 2  
Attachment II - Construction Unit No.2 Project Features Map  
Attachment III - Construction Unit No.2 Project Completion Report  
Attachment IV - Construction Unit No.2 As-built Drawings

**OPERATION, MAINTENANCE, AND REHABILITATION PLAN FOR THE  
BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT (BA-27)**

**(PHASE I - CONSTRUCTION UNIT NO. 1)**

The Louisiana Department of Natural Resources (LDNR) and the Natural Resources Conservation Service (NRCS) agree to carry out the terms of the this Operation, Maintenance, Repair, and Rehabilitation Plan (hereinafter referred to as the "Plan") of the accepted, completed project features in accordance with the Cost Sharing Cooperative Agreement 68-7217-4-48, DNR Agreement No. 25085-95-17, dated January 5, 1995 (Attachment I).

This plan includes all features of the Barataria Land Bridge Shoreline Protection Project (Construction Unit No.1 - Phase 1) LDNR intends to use this plan to maintain the project in a condition that will generally provide the anticipated benefits on which the project was based. There is no requirement that this project function to any standard beyond the 20-year economic life, except that it is not left as a hazard to navigation or a detriment to the environment. The maintenance of the test sections will ultimately be included in the maintenance of future construction units that incorporate the same area. Until such time no maintenance will be required on the test sections.

Construction of the Barataria Land Bridge Shoreline Protection Project (Phase I) was authorized by Section 303(a) of Title III Public Law 101-646, the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) enacted on November 29, 1990 as amended. The Barataria Land Bridge Shoreline Protection Project (Construction Unit No.1 - Phase 1) was approved on the seventh (7th) Priority Project List.

**1. PROJECT DESCRIPTION, PURPOSE, AND LOCATION**

The Barataria Land Bridge Shoreline Protection Project (Phase I) is located approximately 14 miles south of the town of Lafitte in both Jefferson and Lafourche Parishes, Louisiana. The project boundaries of Phase I encompass approximately 4,862 acres of intermediate marsh, brackish marsh, upland shrub, and open water habitat. The Barataria Basin Land Bridge Shoreline Protection Project (Phase I) is divided into two (2) separate construction units. Construction Unit No. 1 consists of test sections along the shoreline of the west bank of Bayou Perot and the southeast bank of Bayou Rigoletts. Construction Unit No.2 consists of 14,000 linear feet of shoreline protection along the east/south bank of the Bayou Rigoletts. **Since Construction Unit No. 2 has not yet been constructed, this Operation and Maintenance and Rehabilitation Plan will cover project features of Construction Unit No.1 only. This plan shall be amended as additional construction units and phases are completed.**

Construction Unit No.1 of the Barataria Landbridge Shoreline Protection Project consists of the installation of 1,600 linear feet of shoreline protection along the west bank of Bayou Perot and 1,600 linear feet of shoreline protection along the southeast bank of Bayou Rigoletts. The 1,600 linear feet of shoreline protection included four different features measuring 400 feet in length, spaced 50 to 75 feet apart. The following types of shoreline

protection features constructed under Construction Unit No.1 were installed at each site:

- Section A and A1 - consisted of 200 linear feet of rock dike and 200 linear feet of rock dike placed on freshly excavated spoil material.
- Section B - consisted of 400 linear feet of composite rock dike with a lightweight aggregate core encapsulated in geotextile fabric.
- Section C - consisted of 400 linear feet of composite rock dike using a furrow method to place and encapsulate the lightweight aggregate core.
- Section D - consisted of 400 linear feet of pre-stressed concrete pile and panel wall.

The purpose of the Barataria Land Bridge Shoreline Protection Project (Phase I - Construction Unit No.1) is to evaluate several methods of shoreline protection to reduce and minimize shoreline/bank line erosion along Bayou Perot and Bayou Rigolets. The performance of these test sections will be monitored and assessed to determine the appropriate construction technique and economic feasibility for constructing future projects within the Barataria Land Bridge Project area.

## **2. CONSTRUCTION COMPLETION**

The Barataria Land Bridge Shoreline Protection Project (Phase I - Construction Unit No.1) project completion report is included in Attachment III of this Plan and "As-Built" drawings are included in Attachment IV. Within the Completion Report is a summary of information and significant events including: Project personnel, final as-built project features and benefitted acres, construction cost and CWPPRA project estimates, construction oversight costs, construction activities and change orders, pipeline and utility crossing owner information, and other significant milestone dates and comments. The project as-built drawings contain construction drawings updated with all field changes and modifications that occurred during the construction of the project.

## **3. PROJECT PERMITS**

Project permit applications were completed and submitted to appropriate agencies and permits were received prior to construction. These permits and permit amendments are included in attachment V.

## **4. ITEMS REQUIRING MAINTENANCE AND REHABILITATION**

The principal project features of Barataria Land Bridge Shoreline Protection Project (Phase I - Construction Unit No.1) were designed to demonstrate the effectiveness of four (4) different methods of shoreline protection at two (2) separate locations in areas of high wave energies. The following are the structural components included in this plan:

## **Phase I – Construction Unit No. 1**

- A. Section A and A1** - 200 linear feet of rock dike and 200 linear feet of rock dike placed on freshly excavated spoil material. This method used a construction technique which tested the underlying organic substrate. The rock dike was constructed over a geotextile fabric to an elevation of +3.0' NAVD, with a 3 ft. wide crown and 4:1 side slopes.
- B. Section B** - 400 linear feet of composite rock dike utilizing a core of lightweight aggregate encapsulated in geotextile fabric. This technique required the contractor to contain the lightweight material prior to placement in the water and install a 2 ft. layer of rock over the lightweight core. The rock dike was constructed to an elevation of +3.0 ft. NAVD, with a 3 ft. wide crown and 4:1 side slopes.
- C. Section C** - 400 linear feet of composite rock dike using a furrow method to place and encapsulate the lightweight aggregate core. This method uses two small parallel sections of rock and two layers of geotextile fabric. The lightweight material is placed on the geotextile between the rock sections. The geotextile is then folded over the lightweight material and the aggregate core is capped with 2 ft. of rock. The two parallel sections of rock were constructed to an elevation of +1.0 ft. NAVD, with a 1.5 ft. wide crown, and 2:1 side slopes. The rock cap above the aggregate core was constructed to an elevation of +3.0 ft. NAVD, with a 3 ft. wide crown and 4:1 side slopes.
- D. Section D** - 400 linear feet of pre-stressed concrete pile and panel wall. The piles were 16" x 16" x 80' long and the panels were 20' x 6' x 6" thick. This design incorporated 80 ft. concrete piles, spaced 20 ft. apart. The wall sections were 6 feet high extending one foot below the mud line at -3.0 ft. NAVD to an elevation of +3.0 ft. NAVD and a rock scour pad at the base of the wall.

## **5. OPERATION AND MAINTENANCE BUDGET**

The cost associated with the Operations, Maintenance and Rehabilitation of the Barataria Land Bridge Shoreline Protection Project (Phase I) is included and summarized in Attachment VI.

## **6. STRUCTURE OPERATIONS**

No operation is necessary for this project. (Attachment VII intentionally blank)

## **7. RESPONSIBILITIES – MAINTENANCE AND REHABILITATION**

### **A. LDNR will:**

- 1. In accordance with the Cost Sharing Agreement, assume all responsibilities for maintenance and rehabilitation of the accepted and completed project features identified in Section 4.

2. Conduct joint site inspections with NRCS of the project site at least annually and after major storm events if determined to be necessary by LDNR and/or NRCS. LDNR will submit to NRCS a report detailing the condition of the project features and recommendations for any corrective action. If LDNR recommends that corrective actions are needed, the report will include the entire estimated cost for engineering and design, supervision and inspection, construction, contingencies, and an assessment of the urgency of such action. Annual inspection reports may be compiled under Attachment VIII.
3. Perform or have performed any corrective actions needed, if such corrections have been approved by LDNR and NRCS. NRCS will participate with LDNR, or its appointed representative, in the engineering and design phases of the corrective actions for the project. Oversight of engineering and construction of the corrective actions for the project will be the responsibility of LDNR or its appointed representative. At least 30 calendar days prior to the date of formal request for construction bids, LDNR or its appointed representative shall provide NRCS with final copies of all project corrective action designs and specifications for review and concurrence by NRCS. LDNR or its appointed representative shall approve the final designs and specifications prior to proceeding with bid solicitations on all project corrective action construction contracts in coordination with NRCS. Any plan and/or specification changes both before and after award of construction contracts, shall be approved by LDNR in coordination with NRCS.
4. Provide a total contribution equal to the amount outlined in the Cost Share Agreement for the operation, maintenance and rehabilitation cost needed for the life of the project.

**2. NRCS will:**

1. Conduct joint inspections with LDNR of the project site at least annually and after major storm events if determined to be necessary by LDNR or NRCS.
2. Provide guidance for the development of plans and implementation of the project, review final copies of any maintenance and rehabilitation project designs and specifications, and provide review and approval of all planning and construction details prior to formal request for construction bids or any corrective actions for the project.
3. Provide a total contribution equal to the amount outlined in the Cost Share Agreement for operation, maintenance and rehabilitation cost needed for the life of the project.

The undersigned parties, acting on behalf of their respective agencies, agree to operate, maintain, and rehabilitate the (BA-27a) Barataria Land Bridge Shoreline Protection Project (Phase 1 - Construction Unit No. 1) according to this document, referenced Cooperative Agreement, plans, and all applicable permits and laws.

NATURAL RESOURCES CONSERVATION SERVICE

By: Donald W. Gohmert

Date: 8/12/02

Title: State Conservationist

LOUISIANA DEPARTMENT OF NATURAL RESOURCES

By: Lee W. Ayres

Date: 9/16/02

Title: Deputy Assistant Secretary

Amendment No.1

**OPERATION, MAINTENANCE, AND REHABILITATION  
PLAN FOR THE  
BA-27 - BARATARIA LAND BRIDGE SHORELINE  
PROTECTION PHASE I & 2  
(CONSTRUCTION UNIT NO.2)**



**July 21, 2003**





Amendment No.1

**OPERATION, MAINTENANCE, AND REHABILITATION  
PLAN FOR BA-27 BARATARIA LAND BRIDGE  
SHORELINE PROTECTION - PHASE I &2  
(CONSTRUCTION UNIT NO. 2)**

**July 21, 2003**

Prepared by:  
Louisiana Department of Natural Resources  
Coastal Restoration Division  
Baton Rouge, Louisiana

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## History of Revisions

06/17/2002	Submit draft O&M Plan to NRCS for review.
07/25/2002	Received NRCS O&M draft review (Construction Unit No.1).
07/21/2003	O&M Plan amended to include Construction Unit No.2 - Amendment No.1

## **Amendment No.1**

### **OPERATION, MAINTENANCE, AND REHABILITATION PLAN FOR THE BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT (BA-27) (Construction Unit No.2)**

The Louisiana Department of Natural Resources (LDNR) and the Natural Resources Conservation Service (NRCS) agree to carry out the terms of the this Operation, Maintenance, Repair, and Rehabilitation Plan (hereinafter referred to as the "Plan") of the accepted, completed project features in accordance with Phases I and II - Cost Sharing Cooperative Agreement 68-7217-9-18, LDNR Agreement No. 2511-99-21, dated July 16, 1999 (Attachment I).

This plan includes all features of the Barataria Land Bridge Shoreline Protection Project (Construction Unit No.2) LDNR intends to use this plan to maintain the project in a condition that will generally provide the anticipated benefits on which the project was based. There is no requirement that this project function to any standard beyond the 20-year economic life, except that it is not left as a hazard to navigation or a detriment to the environment.

Construction of the Barataria Land Bridge Shoreline Protection Project (Construction Unit No.2) was authorized by Section 303(a) of Title III Public Law 101-646, the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) enacted on November 29, 1990 as amended. The Barataria Land Bridge Shoreline Protection Project (Construction Unit No.2) was approved on the seventh (7th) Priority Project List along with (Construction Unit No.1).

#### **1. PROJECT DESCRIPTION, PURPOSE, AND LOCATION**

The Barataria Land Bridge Shoreline Protection Project is located approximately 14 miles south of the town of Lafitte in both Jefferson and Lafourche Parishes, Louisiana. The Barataria Basin Land Bridge Shoreline Protection Project (Phase I & II) is divided into two (2) separate construction units. Construction Unit No. 1 consists of test sections along the shoreline of the west bank of Bayou Perot and the southeast bank of Bayou Rigolettes. Construction Unit No.2 consists of approximately 6,403 linear feet of shoreline protection parallel to the southeast shoreline of Bayou Rigolettes near the Harvey Cutoff Canal.

The purpose of Construction Unit No.2 is to reduce erosion and marsh loss along the shoreline located at the southern end of Bayou Rigolettes and Bayou Perot west of the Harvey Cutoff Canal. Major factors contributing to erosion and marsh loss is physical erosion due to wind, boat-wake, tidal energy, subsidence and sea level rise.

This project has a twenty-year (20 year) economic life, which began in October 2002.

The principle project features include the maintenance of approximately 6,403 linear feet of rock dike.

## 2. CONSTRUCTION COMPLETION

The Barataria Land Bridge Shoreline Protection Project (Phase I & II- Construction Unit No.2) project completion report is included in Attachment III of this Plan and "As-Built" drawings are included in Attachment IV. Within the Completion Report is a summary of information and significant events including: Project personnel, final as-built project features and benefited acres, construction cost and CWPPRA project estimates, construction oversight costs, construction activities and change orders, pipeline and utility crossing owner information, and other significant milestone dates and comments. The project as-built drawings contain construction drawings updated with all field changes and modifications that occurred during the construction of the project.

## 3. PROJECT PERMITS

Project permit applications were completed and submitted to appropriate agencies and permits were received prior to construction. These permits and permit amendments are included in attachment V.

## 4. ITEMS REQUIRING MAINTENANCE AND REHABILITATION

The following completed structural components / project features jointly accepted by LDNR and NRCS will require operation, maintenance, repair, and / or rehabilitation throughout the twenty (20) year life of the project.

**Rock Dike (Construction Unit No.2)** - Maintenance of approximately 6,403 linear feet of rock dike along the shoreline of the land mass located at the southern end of Bayou Rigolettes and Bayou Perot west of the Harvey Cutoff Canal. Construction unit No.2 shoreline protection consists of a 2,712 linear foot rock dike on the west side of an existing oil field canal opening and 3,691 linear foot rock dike from the east bank of this existing oilfield canal to the opening of the Harvey Cutoff Canal. The rock dike was constructed to an elevation of +3.5' NAVD with a 2.0 ft. wide crest and 2:1 side slopes.

A 30 ft. to 60 ft. (bottom width) access channel was excavated to an elevation of -7.0' NAVD to allow for barges and other equipment to access the site and install the rock dike. Upon completion of construction activities, the contractor restored the water bottom of the access channel to its original condition.

5. **OPERATION AND MAINTENANCE BUDGET**

The cost associated with the Operations, Maintenance and Rehabilitation of the Barataria Land Bridge Shoreline Protection Project (Phase I & II - Construction Unit No.2) is included and summarized in Attachment VI.

6. **STRUCTURE OPERATIONS**

No operation is necessary for this project. (Attachment VII intentionally blank)

7. **RESPONSIBILITIES - MAINTENANCE AND REHABILITATION**

A. **LDNR will:**

1. In accordance with the Cost Sharing Agreement, assume all responsibilities for maintenance and rehabilitation of the accepted and completed project features identified in Section 4.
2. Conduct joint site inspections with NRCS of the project site at least annually and after major storm events if determined to be necessary by LDNR and/or NRCS. LDNR will submit to NRCS a report detailing the condition of the project features and recommendations for any corrective action. If LDNR recommends that corrective actions are needed, the report will include the entire estimated cost for engineering and design, supervision and inspection, construction, contingencies, and an assessment of the urgency of such action. Annual inspection reports may be compiled under Attachment VIII.
3. Perform or have performed any corrective actions needed, if such corrections have been approved by LDNR and NRCS. NRCS will participate with LDNR, or its appointed representative, in the engineering and design phases of the corrective actions for the project. Oversight of engineering and construction of the corrective actions for the project will be the responsibility of LDNR or its appointed representative. At least 30 calendar days prior to the date of formal request for construction bids, LDNR or its appointed representative shall provide NRCS with final copies of all project corrective action designs and specifications for review and concurrence by NRCS. LDNR or its appointed representative shall approve the final designs and specifications prior to proceeding with bid solicitations on all project corrective action construction contracts in coordination with NRCS. Any plan and/or specification changes both before and after award of construction contracts, shall be approved by LDNR in coordination with NRCS.

4. Provide a total contribution equal to the amount outlined in the Cost Share Agreement for the operation, maintenance and rehabilitation cost needed for the life of the project.

**2. NRCS will:**

1. Conduct joint inspections with LDNR of the project site at least annually and after major storm events if determined to be necessary by LDNR or NRCS.
2. Provide guidance for the development of plans and implementation of the project, review final copies of any maintenance and rehabilitation project designs and specifications, and provide review and approval of all planning and construction details prior to formal request for construction bids or any corrective actions for the project.
3. Provide a total contribution equal to the amount outlined in the Cost Share Agreement for operation, maintenance and rehabilitation cost needed for the life of the project.



ATTACHMENT I

BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

**COST SHARE AGREEMENT**

62M-349819  
435-000244  
Cooperative Agreement No. 68-7217-9-18  
DNR Agreement No. 2511-99-21  
Approved Format No. 16

**COST SHARE AGREEMENT**  
**BETWEEN**  
**USDA-NATURAL RESOURCES CONSERVATION SERVICE**  
**AND**  
**THE STATE OF LOUISIANA**  
**FOR CONSTRUCTION, OPERATION, MAINTENANCE, REHABILITATION**  
**AND MONITORING OF THE**  
**BARATARIA LANDBRIDGE SHORELINE PROTECTION PROJECT PHASES 1 AND 2**  
**(XBA-63 and BA-27)**

**THIS AGREEMENT**, entered into this 16<sup>th</sup> day of July, 1999 by and between the U.S. Department of Agriculture, represented by the Natural Resources Conservation Service, (hereinafter referred to as "NRCS"), acting by and through the State Conservationist, and the State of Louisiana, acting by and through the Secretary, Department of Natural Resources, (hereinafter referred to as "DNR").

**WITNESSETH, THAT:**

**WHEREAS**, implementation of The Barataria Landbridge Shoreline Protection Project (Phases 1 and 2)(XBA-63 / BA-27) was authorized by the Coastal Wetlands Planning, Protection, and Restoration Act (hereinafter referred to as "CWPPRA") of 1990, 16 U.S.C. Section 3961 *et seq.*, (Public Law 101-646, Title III), and for local sponsorship by the Louisiana Coastal Wetlands Conservation and Restoration Plan, by the State of Louisiana in January 1998 (Phase 1) and January 1999 (Phase 2); and,

**WHEREAS**, on April 14, 1999, the PL 101-646 Task Force agreed to combine Phase 1 and Phase 2 into a single project, add together the budgets of the two phases, and allow all accounting and status reports to be performed under the auspices of Priority Project List VII; and

**WHEREAS**, the State's Coastal Wetlands Conservation Plan pursuant to Section 304 of CWPPRA, was approved on November 30, 1997, all costs incurred for this Project are to be shared at eighty-five percent (85%) federal and fifteen percent (15%) non-federal; and,

**WHEREAS**, Section 303(e) of CWPPRA states that the Secretary of the Army shall not fund the identified project unless said project is subject to such terms and conditions necessary to ensure that wetlands restored, enhanced, or managed through the project will be administered for the long-term conservation of such lands and waters and dependent fish and wildlife populations; and,

**WHEREAS**, NRCS is authorized by federal law to enter a cost-sharing agreement with DNR to provide financial cost-share assistance for the construction, operation, maintenance, rehabilitation, and monitoring of the project; and,

**WHEREAS**, La. R.S. 49:213 and La. R.S. 49:214 state that the Secretary of DNR may enter into cost-sharing agreements with the federal government in order to conserve, restore, create, and enhance vegetated wetlands in coastal Louisiana in accordance with prescribed legislative oversight; and,

**WHEREAS**, DNR has agreed to pay 5% of the total Project(s) cost in actual cash and the remaining balance of its share in the form of in-kind contributions; and,

**WHEREAS**, DNR is willing to participate in cost-sharing and financing in accordance with the terms of this Agreement;

**NOW, THEREFORE**, the parties agree as follows:

## **ARTICLE I - DEFINITIONS AND GENERAL PROVISIONS**

For the purposes of this Agreement:

- a. The term "Project" shall mean that work authorized by Congress as specified above for the construction of the Barataria Landbridge Shoreline Protection Project Phases 1 and 2(XBA-63 and BA-27). The XBA-63 / BA-27 Project is located in Lafourche and Jefferson Parishes. The Project

objectives are to reduce or eliminate shoreline erosion and to maintain or increase the extent of submerged aquatic vegetation. The Project includes 34,900 feet of shoreline protection.

- b. The term "**total Project costs**" shall mean all costs incurred by DNR and NRCS directly related to implementation of the Project. Such costs shall be those costs incurred after January 16, 1998; and which shall include, but not necessarily be limited to, the following: actual costs of applicable geotechnical investigations, detailed engineering and design; actual construction costs; construction management, supervision and inspection costs; operation costs; monitoring costs; the cost of land rights acquisition, easements, servitudes, rights-of-way; utility and facility alterations or relocations; maintenance; and rehabilitation for the Project.
- c. The term "**total first costs**" shall mean all costs incurred by DNR and NRCS directly related to completion of the construction phase of the project as identified in the official CWPPRA authorization document prepared by the CWPPRA Task Force (September 1998) and submitted to Congress.
- d. The term "**period of construction**" shall mean the time from the advertisement of the first construction contract to the time that the Contracting Officer certifies to DNR that construction of the entire project is complete. The Contracting Officer shall furnish to DNR copies of the Government's written Notice of Acceptance of Complete Work furnished to contractor(s) for all contracts for the Project.
- e. The term "**Contracting Officer**" shall mean the warranted Contracting Officer of NRCS awarding the contract.
- f. The term "**relocations**" shall mean the preparation of plans and specifications for, and the accomplishment of any alteration, modification, lowering or raising in place, and/or new construction related to, but not limited to, existing: buildings, pipelines, public utilities (such as municipal water and sewer lines, telephone lines, and storm drains), aerial utilities, cemeteries, and other facilities, structures, and improvements determined by NRCS and DNR to be necessary for the construction, operation, maintenance, monitoring, and rehabilitation of the Project.
- g. The term "**utility**" shall mean pipelines, cables, and similar facilities.
- h. The term "**fiscal year**" shall mean one fiscal year of the United States Government, unless otherwise specifically indicated. The Government fiscal year begins on October 1 and ends on September 30.

- i. The term "**construction management costs**" shall mean costs incurred by NRCS directly supervising and administering construction contracts, to include related overhead costs, as specified in applicable contracting regulations.
- j. The term "**Project Monitoring Plan**" shall mean a plan jointly developed and approved by DNR and NRCS specifically for the Project which identifies all monitoring requirements, parameters and procedures. DNR will be responsible for collection of monitoring data and assimilation as part of the local cost-share responsibilities. Monitoring will be conducted for the expected life of the Project or as agreed by NRCS and DNR.
- k. The term "**maintenance**" shall mean any action completed after the construction period that is required to maintain the Project at "as built" standards, and costing less than twenty percent (20%) of original construction cost.
- l. The term "**rehabilitation**" shall mean any action completed after the construction period that is required to maintain the Project at "as built" standards, and costing twenty percent (20%) or more of the original construction cost.
- m. The term "**Operation, Maintenance, and Rehabilitation Plan**" shall be a plan jointly developed and approved by NRCS and DNR upon completion of the Project and prior to acceptance by DNR of the completed Project or functional portion of the Project. The Operation, Maintenance, and Rehabilitation Plan will address specific items, with estimated costs, to be performed throughout the expected life-span of the Project and will be revised periodically to reflect actual needs.
- n. The term "**operations, maintenance, and rehabilitation costs**" shall mean all costs incurred by DNR and NRCS related to operating, maintaining, and rehabilitating the final accepted Project. Specific requirements and responsibilities shall be identified and mutually accepted by both parties in an "Operations, Maintenance, and Rehabilitation Plan".
- o. The term "**obligation**" refers to amount of orders placed, contracts awarded, services rendered, or other commitments made during a given period which will require outlay during the same or some future period.
- p. The term "**engineering and design costs**" shall mean all costs incurred by DNR and NRCS related to the development, approval, and acceptance of detailed engineering and design plans, specifications, and Project bid documents. This will also include all supervision and administrative costs associated with the engineering and design phase of the Project and will terminate with the award of a Project construction contract.

q. The term "**monitoring costs**" shall mean all costs by DNR and NRCS in developing and implementing the Project Monitoring Plan to evaluate the effectiveness of the Project in reaching Project objectives. This shall include, but not be limited to, such items as plan development and review, conducting pre- and post- construction monitoring procedures, collection and evaluation of data, and preparation of monitoring reports.

r. The term "**functional portion of the Project**" shall mean a completed portion of the Project as determined by the Contracting Officer and DNR in writing to be suitable for tender to DNR for operation and maintenance in advance of completion of the entire Project. To be suitable for tender, the Contracting Officer must determine that the completed portion of the Project can function independently and for a useful purpose, although the balance of the Project is not complete.

s. The term "**life of the Project**" shall mean the next twenty (20) years starting at the date of acceptance of the final Project, or functional portion of the Project, as provided in Article V.e. of this Agreement.

## ARTICLE II - OBLIGATIONS OF THE PARTIES

a. No federal funds may be used to meet the DNR share of Project costs under this Agreement unless the expenditure of such funds is expressly authorized by statute as verified in writing by the granting agency.

b. DNR shall:

1. Over the life of the Project, fund a total contribution equal to the non-federal share of the total Project costs, including a minimum cash contribution of five percent (5%) of the total Project costs. Said contribution will include cash and/or credit granted from land rights, easements, servitudes, and rights-of-way obtained through or owned by DNR, or relocations credit granted for Project features furnished by DNR, and all administrative and management costs required by DNR to fulfill the obligations specified in this Agreement including pre- and post- construction Project monitoring, permitting coordination, geotechnical investigation, some engineering services, maintenance, operation, and/or rehabilitation responsibilities accepted by DNR.

2. Prior to the advertisement of each construction contract, and as further specified in Article VI.b.2. hereof, DNR shall provide a minimum cash contribution of five percent (5%) of that portion of total first costs incurred to date and anticipated to be expended through completion of that construction contract.

3. Prior to the advertisement of each construction contract, and as further specified in Article VI.b.2. hereof, DNR shall provide a contribution equal to the non-federal share of that portion of total first costs incurred to date and anticipated to be expended through completion of that construction contract. Said contribution will include cash and/or credit granted from land rights, easements, servitudes, and rights-of-way obtained through or owned by DNR, or relocations credit granted for Project features furnished by DNR, and administrative and management costs required by DNR to fulfill the obligations specified in this Agreement.
4. Implement the Project Monitoring Plan in accordance with procedures jointly developed with NRCS and, as further specified in Article VIII., to assure the performance of the long-term monitoring requirements.
5. Provide specific engineering services associated with the Project, subject to the cost-sharing provisions, and as mutually agreeable to both DNR and NRCS, or its engineering representative. Specific engineering services to be provided by DNR may include design surveys, plan preparation, post-construction surveys, etc. All such services will be approved by and subject to the supervision and guidance of NRCS engineering representatives.
6. Acquire all land rights, servitudes, rights-of-way, easements, and material borrow and disposal areas associated with the Project which are determined to be necessary, subject to cost-sharing terms previously identified.
7. Jointly develop an Operation, Maintenance, and Rehabilitation Plan with NRCS which will identify specific long-term maintenance, operation, and rehabilitation requirements. Said plan will be developed upon completion of the Project features in accordance with Article I.m., and will be reviewed and modified as necessary after an evaluation conducted by DNR, with NRCS participation, within 12-18 months following completion of construction.
8. Provide for non-federal share of costs identified in the Operation, Maintenance, and Rehabilitation Plan, according to Article VIII.a.
9. Assume all responsibilities (including engineering, design, and construction services) for operation, maintenance, and rehabilitation of the Project upon acceptance of the completed Project, limited only by the provisions of Article XVI. NRCS will reimburse DNR for the federal share of such costs, subject to availability of funds.



c. NRCS shall:

1. Over the life of the Project, fund a total contribution equal to the federal share of the total Project costs, including any relocation costs associated with the Project.
2. Prior to the advertisement of each construction contract, NRCS shall provide a contribution equal to the federal share of that portion of total first costs incurred to date and anticipated to be expended through completion of that construction contract, including any relocation costs associated with the Project.
3. Except as limited by the provisions of Article VIII.b., and subject to the availability of appropriations, reimburse DNR for the federal share of the approved cost of pre- and post-construction monitoring of the Project upon receipt of the request for reimbursement.
4. Reimburse DNR for the federal share of the actual costs incurred by DNR for all geotechnical and engineering services provided for the Project, permitting coordination, and acquiring all land rights (easements, servitudes, and rights-of-way, including suitable borrow material and disposal areas) as determined by NRCS to be necessary for Project construction, operation, monitoring, maintenance, and rehabilitation.
5. Provide all engineering, design, land services, and construction services, except those mutually agreed as specified in Article II. b. 5. and Article II.b.9. associated with the Project, subject to the cost-sharing provisions identified.
6. Provide the federal share of costs identified in the Operation, Maintenance, and Rehabilitation Plan and actually incurred by DNR, subject to the limitations on expenditures set forth in Article XIX.
7. Comply with the Federal Acquisition Regulation (FAR), Agriculture Acquisition Regulation (AGAR), and Natural Resources Conservation Service Acquisition Regulation (NRCSAR) for all federal contracts associated with the Project.
8. Provide authorized technical services including, but not limited to, obtaining basic information; preparation of drawings, design, and specifications; and performance of layout, inspection services, and quality assurance during construction. Preliminary and final plans must be reviewed and approved by the DNR Project Manager prior to advertisement.

9. Arrange for and conduct final inspection of the completed works of improvement with DNR to determine whether all work has been performed in accordance with the contractual requirements. Based on this determination, accept work from the contractor and notify DNR of acceptance.

10. Participate, with DNR, in an evaluation within 12 -18 months following the completion of construction to assess maintenance, operation, and rehabilitation needs. NRCS will also participate with DNR in any subsequent evaluations as the parties deem necessary to address long-term maintenance, operation, and rehabilitation of the Project.

11. Ensure that all National Environmental Policy Act (NEPA) and regulatory requirements, including permits, for the Project, are met.

### **ARTICLE III - LAND RIGHTS, FACILITIES, AND PUBLIC LAW 91-646 RELOCATION ASSISTANCE**

a. On Non-Federal Lands, DNR shall acquire all land rights, easements, servitudes, rights-of-way, and material borrow and disposal areas determined to be necessary for construction of the Project and as mutually agreed to by DNR and NRCS. Prior to the advertisement of any construction contract, DNR shall provide certification to NRCS that all land rights, easements, servitudes, rights-of-way and material borrow and disposal areas required, have been acquired as part of this Agreement and shall furnish to NRCS evidence supporting actual rights-of-way acquired by DNR for Project construction, operation, monitoring, and maintenance.

b. The State shall comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR part 24, in acquiring lands, easements, and rights-of-way for construction and subsequent operation, maintenance, and rehabilitation of the Project.

c. No title to the property or minerals affected herein are transferred with any easements, servitudes, rights-of-way, and material borrow and disposal areas provided by DNR pursuant to this Agreement. No public rights of ownership shall be transferred and vested in private parties as a result of the Project. Further, any easements, servitudes, rights-of-way, and material borrow and disposal areas shall provide for reasonable access for mineral exploration and development.

#### ARTICLE IV - VALUE OF LAND RIGHTS AND FACILITIES

a. The value of the land rights, easements, servitudes, and rights-of-way to be included in total Project costs and credited towards DNR's share of total Project costs will be determined in accordance with the following procedures:

1. The costs associated with securing all land rights, easements, servitudes, and rights-of-way to be acquired by DNR (Article III.a.) shall be the actual costs including, but not limited to, expenses associated with securing legal land rights instruments from all sources (legal reviews, recording fees, etc.) associated with Project activities. An estimate of such costs will be prepared by DNR and approved by NRCS for credit allowance as part of the DNR cost-share. Credit allowance for any costs above this estimate must be approved by NRCS.

2. Any costs incurred for relocations will be included in total Project costs and will be accomplished as part of Project construction through the agreed cost-share arrangement.

#### ARTICLE V - CONSTRUCTION PHASING AND MANAGEMENT

a. To provide for consistent and effective communication between DNR and NRCS during the period of construction, DNR and NRCS shall appoint representatives to coordinate scheduling, plans, specifications, modifications, contract costs, and other matters relating to construction of the Project.

b. DNR will participate with NRCS, or its appointed representative, in the engineering and design phases of the Project. Oversight of engineering and construction of the Project will be the responsibility of NRCS or its appointed representative. At least thirty (30) calendar days prior to the date of formal request for construction bids, NRCS, or its appointed representative, shall provide DNR with final copies of all Project designs and specifications for review and concurrence by DNR. NRCS, or its appointed representative, and DNR shall approve the final designs and specifications prior to proceeding with bid solicitations on all project construction contracts. Any plan and/or specification(s) changes, both before and after award of construction contracts, shall be jointly approved by NRCS and DNR.

c. The representatives appointed above shall meet as necessary during the period of construction and shall make such recommendations as they deem warranted to the Contracting Officer.

d. The Contracting Officer shall consider the recommendations of the representatives in all matters relating to construction of the Project; but the Contracting Officer, having ultimate responsibility for construction of the Project, has complete discretion to accept, reject, or modify the recommendations.

e. Following completion of the Project, or functional portion of the Project, final acceptance of the Project, or functional portion of the Project, will be jointly made by NRCS and DNR. Should the Project, or functional portion of the Project, not meet plan specification objectives, then DNR will have the option to approve modification of the Operation, Maintenance, and Rehabilitation Plan, or to terminate this Agreement. However, both DNR and NRCS shall endeavor to modify the Project and/or its Operation, Maintenance, and Rehabilitation Plan to ensure that the original plan specification objectives are achieved.

## ARTICLE VI - METHOD OF PAYMENT

a. DNR shall provide the contributions required under Article II of this Agreement. The PL 101-646 Task Force has estimated a total Project cost of \$17,515,020.00 and authorized a maximum total Project cost of \$21,893,775.00 for this particular Project. To meet its share, DNR will contribute, through in-kind services or in cash, the non-federal share of the total Project costs. The maximum amount of DNR's contribution is \$3,284,066.00. This figure is subject to modification as provided for in Section 303(f) of CWPPRA. Any costs in excess of the maximum total Project cost of \$21,893,775.00 are subject to amendment of this Agreement and Task Force approval, as provided in Article XIX. The maximum amount of DNR's required minimum five percent (5%) cash contribution is \$1,094,689.00.

b. DNR shall provide its required cash contribution in proportion to the rate of federal expenditures in accordance with the following provisions:

1. For purposes of budget planning, NRCS shall notify DNR by October 1 of each year of the estimated funds that will be required from DNR to meet its share of total Project costs for the subsequent fiscal year.

2. No later than sixty (60) calendar days prior to the advertisement of each construction contract, NRCS shall notify DNR of DNR's share of that portion of total first costs incurred to date and anticipated to be expended through completion of that construction contract. This amount will include the non-federal share of total first costs in cash and/or credit as described in Article II.b.3., and the minimum cash contribution of five percent (5%) of total first costs as described in Article II.b.2. No later than 30 calendar days thereafter, DNR shall verify to the satisfaction of NRCS or its

representative, that it has deposited the requisite amount in an escrow account with interest accruing to DNR.

3. For the second and subsequent fiscal years of Project implementation, no later than sixty (60) calendar days prior to the beginning of the fiscal year, DNR shall make the necessary funds available to NRCS through the funding mechanism specified in Article VI.b.2. of this Agreement. As construction of the Project proceeds, NRCS shall adjust the amounts required to be provided under this paragraph to reflect actual costs.

4. If, at any time during the period of construction, NRCS determines that additional funds will be needed from DNR to meet DNR's required share, NRCS shall so notify DNR, and DNR, no later than 45 calendar days from receipt of such notice, shall make the necessary funds available through the funding mechanism specified in Article VI.b.2. of this Agreement.

c. NRCS will draw on the escrow account such sums as NRCS deems necessary to cover contractual and in-house fiscal obligations attributable to the Project on an annual basis, as well as costs incurred by NRCS prior to the initiation of construction but after December 1, 1994, according to Article I.b.

d. The escrow account will be managed for NRCS by the New Orleans District, U.S. Army Corps of Engineers. Funds will be withdrawn from the account and disbursed to NRCS as requested.

e. Upon completion of the Project, or termination of this Agreement in accordance with Article XV. of this Agreement, and resolution of all relevant contract claims and appeals, NRCS shall compute the total Project costs and tender to DNR a final accounting of DNR's share of total Project costs. In the event that the total contribution by DNR is less than its minimum required share of total Project costs, DNR shall, no later than ninety (90) calendar days after receipt of written notice, make a cash payment to NRCS of whatever sum is required to meet its minimum required non-federal share of total Project costs, subject to the availability of appropriations.

f. In the event DNR has made cash contributions in excess of five percent (5%) of total Project costs which result in DNR having provided more than its required share of total Project costs, NRCS shall, no later than ninety (90) calendar days after the final accounting is complete, subject to the availability of appropriations, return said excess to DNR; however, DNR shall not be entitled to any refund of the five percent (5%) cash contribution required pursuant to Article II.b.2. of this Agreement.

g. If DNR's total contribution under this Agreement (including land rights, easements, rights-of-way, relocations, material borrow and disposal areas, and work-in-kind provided by DNR and

approved by NRCS) exceeds DNR's required non-federal share of total Project costs, NRCS shall verify the actual exceeded costs and direct the U.S. Army Corps of Engineers, subject to the availability of appropriations for that purpose, and the minimum five percent (5%) cash requirement, refund the excess to DNR no later than 90 calendar days after the final accounting is complete.

## **ARTICLE VII - DISPUTES**

Before any party to this Agreement may bring suit in any court concerning an issue relating to this Agreement, such party must first seek in good faith to resolve the issue through negotiation or other forms of non-binding alternative dispute resolution mutually acceptable to the parties.

## **ARTICLE VIII - MONITORING, OPERATING, MAINTENANCE, AND REHABILITATION**

a. After NRCS has accepted, with the concurrence of DNR, the completed Project, or the functional portion of the Project, DNR shall assume long-term monitoring responsibilities in accordance with the Project Monitoring Plan defined in Article I.j. of this Agreement. At this same time, DNR will also assume responsibilities for operation, maintenance and rehabilitation of the completed Project, or functional portion of the Project, following the recommendations jointly developed and approved by DNR and NRCS in the Project Operation, Maintenance, and Rehabilitation Plan defined in Article I.m. of this Agreement. These responsibilities will remain in effect for the expected life of the Project which is twenty (20) years from the date of acceptance of the completed Project unless otherwise agreed to by NRCS and DNR.

b. DNR grants NRCS the right to enter, at reasonable times and in a reasonable manner, upon land which it owns or maintains access easements to the Project, for the purpose of inspection related to monitoring, operating, maintaining, replacing, or rehabilitating the Project. If an inspection shows that DNR, for any reason, is failing to fulfill its obligations under this Agreement, NRCS will send a written notice to DNR concerning a need for compliance. If DNR persists in such failure for thirty (30) calendar days after receipt of the notice, then NRCS shall have a right to cancel the federal assistance portion of this Agreement for any additional expenses related to monitoring, operation, maintenance, and rehabilitation costs of the Project.

## **ARTICLE IX - MAINTENANCE OF RECORDS**

NRCS and DNR shall keep books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to this Agreement to the extent and in such detail as will properly reflect total Project costs. NRCS and DNR shall maintain such books, records, documents and other evidence

for a minimum of three (3) years after completion of construction, operation, maintenance, repair, replacement, rehabilitation, and monitoring of the Project and resolution of all relevant claims arising therefrom, and shall make available at their offices at reasonable times, such books, records, documents, and other evidence for inspection and audit by authorized representatives of the parties to this Agreement.

#### **ARTICLE X - GOVERNMENT REVIEW OF RECORDS**

NRCS shall have the right to conduct an audit, when appropriate, of DNR's records for the Project to ascertain the reasonableness and allowability of its costs for inclusion as credit against the non-federal share of Project costs.

#### **ARTICLE XI - STATE REVIEW OF RECORDS**

DNR shall have the right to conduct an audit, when appropriate, of NRCS's records for the Project to ascertain the reasonableness and allowability of its costs for inclusion as credit against the federal share of Project costs.

#### **ARTICLE XII - RELATIONSHIP OF PARTIES**

The parties to this Agreement act in an independent capacity in the performance of their respective functions under this Agreement, and neither party is to be considered the officer, agent, or employee of the other.

#### **ARTICLE XIII - OFFICIALS NOT TO BENEFIT**

No member of, or delegate to, the Congress, or resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit that may arise therefrom.

#### **ARTICLE XIV - COVENANT AGAINST CONTINGENT FEES**

DNR warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by DNR for the purpose of securing business. For breach or violation of this warranty, NRCS shall have the right to annul this Agreement without liability, or, in its discretion, to add to the Agreement or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.



## ARTICLE XV - TERMINATION OR SUSPENSION

a. If NRCS or DNR fails to receive annual appropriations for the Project in amounts sufficient to meet Project expenditure for the then-current or upcoming fiscal year, NRCS or DNR shall so notify the other Party. After sixty (60) calendar days either party may elect, without penalty, to terminate this Agreement pursuant to this Article or to defer future performance hereunder; however, deferral of future performance under this Agreement shall not affect existing obligations or relieve the parties of liability for any obligation previously incurred. In the event that either party elects to terminate this Agreement pursuant to this Article, both parties shall conclude their activities relating to the Project and proceed to a final accounting in accordance with Article VI of this Agreement. In the event that either party elects to defer future performance under this Agreement pursuant to this Article, such deferral shall remain in effect until such time as NRCS or DNR receives sufficient appropriations or until either party elects to terminate this Agreement.

b. Except as provided in paragraph (a) above, if at any time DNR fails to make the payments required under this Agreement, NRCS shall terminate or suspend work on the Project until DNR is no longer in arrears, unless NRCS determines that continuation of work on the Project is in the best interest of the United States or is necessary in order to satisfy agreements with any other non-federal interests in connection with the Project. DNR shall not be liable for any future payments should NRCS continue work on the Project, but shall remain liable for obligations previously incurred.

## ARTICLE XVI - OBLIGATIONS OF FUTURE APPROPRIATIONS

Nothing herein shall constitute, or be deemed to constitute, an obligation of future appropriations by the legislature of the State of Louisiana when obligating future appropriations would be inconsistent with the State's constitutional or statutory limitations.

## ARTICLE XVII - NOTICES

a. All notices, requests, demands, and other communications required or permitted to be given under this Agreement shall be deemed to have been duly given if in writing and delivered personally, given by prepaid telegram, or mailed by first-class (postage pre-paid), registered, or certified mail, as follows:

If to DNR:

Secretary, Department of Natural Resources  
P.O. Box 94396  
Baton Rouge, LA 70804-9396

If to NRCS:

State Conservationist  
USDA-Natural Resources Conservation Service  
3737 Government Street  
Alexandria, LA 71302

b. A party may change the address to which such communications are to be directed by giving written notice to the other party in the manner provided in this Article.

c. Any notice, request, demand, or other communication made pursuant to this Article shall be deemed to have been received by the addressee at such time as it is personally delivered or seven (7) calendar days after it is mailed, as the case may be.

#### ARTICLE XVIII - CONFIDENTIALITY

To the extent permitted by the laws governing each party, the parties agree to maintain the confidentiality of exchanged information when requested to do so by the providing party.

#### ARTICLE XIX - PROJECT COST LIMITS

a. The PPL 101-646 Task Force estimated that the total project cost for this Project to be \$17,515,020.00. That estimated total Project cost includes the following Project phases and associated estimated costs.

- |  |                  |
|--|------------------|
| 1. Engineering and design costs (also including supervision and administration, and lands) of            | \$ 1,791,290.00  |
| 2. Total first costs (including construction and related contingency, and supervision and inspection) of | \$ 14,069,446.00 |

3. Operation, maintenance and rehabilitation costs of	\$ 1,460,288.00
4. Monitoring costs of	\$ 159,001.00
5. U.S. Army Corps of Engineers Project Management	\$ 34,995.00

b. To provide flexibility in the planning and construction of coastal restoration projects, the PL 101-646 Task Force authorized a maximum total Project cost of 125% of the estimated Project cost, or \$21,893,775.00 for this particular Project.

c. If, at any time during the performance of a particular Project phase, the actual or anticipated cost of that phase exceeds the estimated cost of that phase as set forth in Article XIX. a. of this Agreement, all work in that particular Project phase shall cease. NRCS and DNR may agree to increase the cost of completing that particular phase of the Project, but only if such increase would not result in the total Project costs exceeding the maximum total Project cost defined in Article XIX.b. of this Agreement. Such agreement regarding cost increases for the cost of a particular Project phase shall be made by letter agreement confirmed by the mutual written approval of both the NRCS State Conservationist and the DNR Secretary. Work on that particular Project phase shall thereafter resume.

d. Any costs in excess of \$21,893,775.00 will be subject to review and approval by the Task Force and shall require an amendment to this Agreement approved by NRCS and the State. All work on the Project, including the award of contracts, shall cease until amendment of this Agreement and, review and approval by the Task Force. DNR's maximum contribution under the terms of this Agreement is \$3,284,066.00; any contribution in excess of that amount shall be subject to written amendment to this Agreement, including review and approval by the Division of Administration, State of Louisiana.

## ARTICLE XX- AMENDMENTS TO BE IN WRITING

This Agreement may be modified by agreement of the parties, in accordance with the provisions of CWPPRA and applicable federal and state regulations. All such amendments, modifications, revisions, and/or changes to this Agreement must be made in writing and acknowledged by signature of the authorized representatives of all parties of this Agreement. All such amendments, modifications, revisions, and/or changes to this Agreement shall be subject to review and approval by the Division of Administration, State of Louisiana.

## **ARTICLE XXI - EQUAL OPPORTUNITY AND CIVIL RIGHTS**

a. The program or activities conducted under this Agreement will be in compliance with the nondiscrimination provision contained in the Titles VI and VII of the Civil Rights Act of 1964, as amended; the Civil Rights Restoration Act of 1987 (Public Law 100-259); and other nondiscrimination statutes: namely, Section 504 of the Rehabilitation Act of 1973, Title IX of the education Amendments of 1972, and the Age discrimination Act of 1975. They will also be in accordance with regulations of the Secretary of Agriculture (7 CFR-15, Subparts A & B), which provide that no person in the United States shall on the grounds of race, color, national origin, age, sex, religion, marital status, or handicap be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal financial assistance from the Department of Agriculture or any agency thereof.

b. The Contracting Party shall not discriminate on the basis of sexual orientation.

## **ARTICLE XXII - SURVEY**

Prior to commencement of any construction activities, NRCS or the Office of Coastal Restoration and Management of DNR, at the option of DNR, shall (1) cause to be conducted, a survey to determine the highest tide during winter season or such other time which will indicate the extent of State ownership existing prior to commencement of any restoration activities, or (2) obtain aerial photographs or satellite images of the project area taken within one year prior to commencement of the restoration activity, or (3) acquire such other information as is acceptable to DNR to indicate the extent of State ownership. Any costs associated with this Article are considered a part of total Project costs and shall be cost-shared according to the terms previously identified.

## **ARTICLE XXIII - FEDERAL AND STATE LAWS**

a. In the exercise of DNR's rights and obligations hereunder, DNR agrees to comply with all applicable federal and State laws and regulations.

b. NRCS agrees to comply with all applicable federal and State of Louisiana laws and/or regulations, unless state law and regulations are preempted by federal law.

#### **ARTICLE XXIV- FISCAL FUNDING**

The continuation of this contract is contingent upon the appropriation of funds to fulfill the requirements of the contract by the Louisiana legislature. If the Louisiana legislature fails to appropriate sufficient monies to provide for the continuation of the contract, or if such appropriation is reduced by the veto of the governor or by any means provided in the appropriations act to prevent the total appropriation for the year from exceeding revenues for that year, or for any other lawful purpose, and the effect of such reduction is to provide insufficient monies for the continuation of the contract, the contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated.

Cooperative Agreement No. 68-7217-9-18  
DNR Agreement No. 2511-99-21  
Approved Format No. 16

BARATARIA LANDBRIDGE SHORELINE PROTECTION PROJECT PHASES 1 AND 2  
(XBA-63 and BA-27)

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed on the  
16<sup>th</sup> day of July, 1999, before the undersigned witnesses.

USDA  
NATURAL RESOURCES CONSERVATION  
SERVICE

BY: Donald W. Gohmert  
Donald W. Gohmert  
State Conservationist

THE STATE OF LOUISIANA

BY: Jack C. Caldwell  
Jack C. Caldwell, Secretary  
Louisiana Department of  
Natural Resources

WITNESSES:

Cheryl C. Walker

Mitzy A. Woodrum

Wm E. H.

WITNESSES:

Rhonda Yorkbrough

Twana A. Aucion

Julia Rayford

APPROVED  
Office of the Governor  
Office of Contractual Review

AUG 10 1999  
Director  
DIRECTOR

Cooperative Agreement No. 68-7217-9-18  
DNR Agreement No. 2511-99-21  
Approved Format No. 16

CERTIFICATE OF AUTHORITY

I, Warren Fleet, do hereby certify that I am the principal legal officer of the Department of Natural Resources for the State of Louisiana, that the Department of Natural Resources for the State of Louisiana is a legally constituted public body with full authority and legal capability to perform the terms of the Agreement between the Natural Resources Conservation Service and the State of Louisiana in connection with the Barataria Landbridge Shoreline Protection Project Phases 1 and 2 (XBA-63 and BA-27), Lafourche Parish, LA, and that the persons who have executed this Agreement on behalf of the State have acted within their statutory authority.

IN WITNESS WHEREOF, I have made and executed this certification this 23<sup>rd</sup> day of June 1999.

Warren Fleet

General Counsel

### CERTIFICATION REGARDING LOBBYING

The undersigned certifies, to the best of his or her knowledge and belief that:

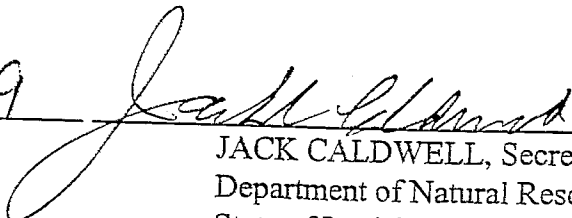
(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

DATE: 6/23/99

  
JACK CALDWELL, Secretary  
Department of Natural Resources  
State of Louisiana



STATE OF LOUISIANA

PARISH OF RAPIDES

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this 12<sup>th</sup> day of July, 19 99, personally came and appeared Donald W. Gohmert, to me known, who declared that he is the State Conservationist of the **USDA - Natural Resources Conservation Service**, that he executed the foregoing instrument on behalf of said Federal Agency and that the instrument was signed pursuant to the authority granted to him by said Federal Agency and that he acknowledged the instrument to be the free act and deed of said Federal Agency.

Wanda B. Banton  
NOTARY PUBLIC

My commission expires: Death  
(SEAL)

STATE OF LOUISIANA

PARISH OF EAST BATON ROUGE

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for said Parish and State aforesaid, on this 23<sup>rd</sup> day of June, 19 99, personally came and appeared Jack C. Caldwell, me known, who declared that he is the Secretary of the **Department of Natural Resources, State of Louisiana**, that he executed the foregoing instrument on behalf of said State Agency and that the instrument was signed pursuant to the authority granted to him by said State Agency and that he acknowledged the instrument to be the free act and deed of said State Agency.

John M. Varty  
NOTARY PUBLIC

My commission expires: at death  
(SEAL)

ATTACHMENT II

BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

**PROJECT FEATURES**



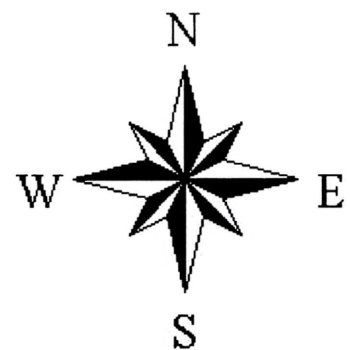
## **BA-27 BARATARIA LANDBRIDGE SHORELINE PROTECTION PROJECT PHASE I - CONSTRUCTION UNIT NO.1**

Data Source:  
Louisiana Department of Natural Resources  
Coastal Restoration Division  
Engineering Section  
Thibodaux Field Office





1998 DOQQ's

Date: July 26, 2002

Map ID: 2002-TFO-087



### **LEGEND:**

-  Section A & A1 - 200 linear ft. rock dike / 200 linear ft, rock dike above geotextile fabric.
-  Section B - 400 linear ft. composite rock dike. *Composite dike wall*
-  Section C - 400 linear ft. composite rock dike / furrow method. *Composite rock dike*
-  Section D - 400 linear ft. concrete pile and panel wall. *A1 & A*

**Amendment No.1**

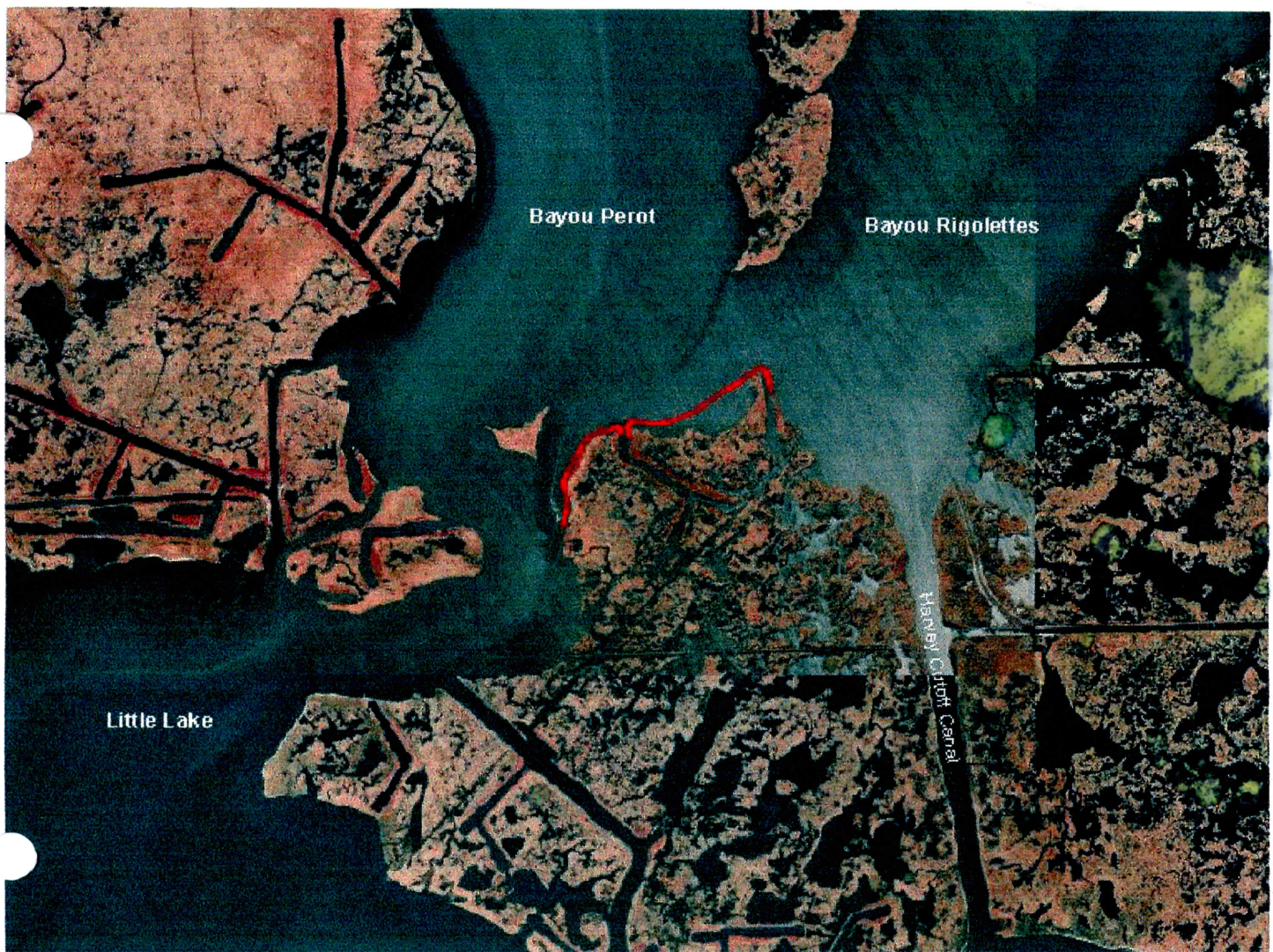
**ATTACHMENT II**

**CONSTRUCTION UNIT NO.2**

BA-27 BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

**PROJECT FEATURES**





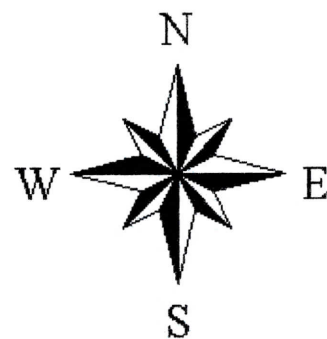
## BA-27 BARATARIA LANDBRIDGE SHORELINE PROTECTION PROJECT PHASE I & 2 - CONSTRUCTION UNIT NO.2

Data Source:  
Louisiana Department of Natural Resources  
Coastal Restoration Division  
Engineer Section  
Thibodaux Field Office

1988 DOQQ's

Date: September 4, 2002

Map ID: 2002-TFO-102



### SCALE:

3000 0 3000 6000 Feet

### LEGEND:

 Rock Dike

ATTACHMENT III

BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

**PROJECT COMPLETION REPORT**



United States  
Department of  
Agriculture

Natural Resources  
Conservation Service

3737 Government Street  
Alexandria, Louisiana  
71302

November 26, 2001

Mr. George Boddie  
Project Manager  
Coastal Restoration Division  
Department of Natural Resources  
P.O. Box 94396  
Baton Rouge, LA 70804-9396

Mr. Tom Podany  
Chief, CWPPRA Program Manager  
US Army Engineer District, New Orleans  
P.O. Box 60267  
New Orleans, Louisiana 70506

Gentlemen:

Re: PL-646 – BA-27  
Barataria Land Bridge Shoreline Protection (Test Sections) Construction Unit #1

The referenced project has been completed. Enclosed is a Project Completion Report for the project. Also included with the completion report is a "Constructability Evaluation" with associated data of the various test sections constructed. A copy of the "As Built" plans will be forwarded upon completion of the drafting.

Please direct any questions concerning this Project Completion Report to Brad Sticker at (318) 473-7791.

Sincerely,

/s/  
Ed Giering, P.E.  
State Conservation Engineer

Enclosure

cc: Bruce Lehto, ASTC/Water Resources, NRCS, Alexandria, LA (electronic distribution)  
Britt Paul, Water Resources Planning Staff Leader, NRCS, Alexandria, LA (electronic distribution)  
Dr. Bill Good, LDNR – CRD, Baton Rouge, LA (electronic distribution)  
Quin Kinler, Project Manager, NRCS, Baton Rouge, LA (electronic distribution)  
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Dale Garber, COTR, NRCS, Crowley, LA (electronic distribution)  
Melvin Rodrigue, Inspector, NRCS, Crowley, LA (electronic distribution)  
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## PROJECT COMPLETION REPORT<sup>1</sup>

PROJECT NAME

BARATARIA LANDBRIDGE SHORELINE  
PROTECTION C. U. #1 (TEST SECTIONS)

CWPPRA/STATE PROJECT NO.

BA-27

Report Date: November 30, 2001

BY: USDA - NRCS

### 1. Project Managers/Contracting Officer:

DNR Project Manager	George Boddie	Telephone	(504) 283-1771
DNR Construction Project Manager	John Hodnet	Telephone	(225) 342-7305
DNR Monitoring Manager	Melissa Hymel	Telephone	(504) 288-4684
Federal Agency Project Manager	Quin Kinler	Telephone	(225) 382-2047
Federal Agency Contracting Officer	Charles Phillips	Telephone	(318) 473-7796

### 2. Location and description of projects as approved for construction by Task Force.

The Barataria Basin Land Bridge Shoreline Protection Project Phase 1 is located in both Jefferson and Lafourche Parishes, Louisiana, central to a point approximately 14 miles south of Lafitte, along the south-east bank of Bayou Rigolettes, the west bank of Bayou Perot. The entire project area encompasses approximately 4,862 acres of intermediate marsh, brackish marsh, upland shrub, and open water habitat. This project area was identified by the CWPPRA Environmental Work Group (EnvWG) and represents the acreage that, without the project over 20 years, would be lost directly to shoreline erosion, as well as additional acreage that would be affected by increased tidal exchange, coalescence of interior ponds, and deepening of interior ponds throughout the project life. This project will be completed in multiple construction contracts. **This project completion report is representative of only that portion of the work completed in Construction Unit #1.**

The objective of the Barataria Basin Land Bridge Shoreline Protection Project is to reduce or eliminate shoreline/ bank-line erosion for portions of Bayous Perot and Rigolettes in Jefferson and Lafourche Parishes. Secondary benefits would include maintenance and, in some areas, an increased extent of submerged aquatic vegetation. Construction Unit #1 includes 1600 linear feet of shoreline protection along the west bank of Bayou Perot, and 1600 linear feet of shoreline protection along the southeast bank of Bayou Rigolettes. This construction unit will be assessed to determine the construction and economic feasibility for future work within the Landbridge project. The assessment will include monitoring of the installed measures and economic analysis, and should be completed by March 2002.

The scope of this contract (Construction Unit #1) consisted of installing shoreline restoration test sections at the two locations described above. Each site consists four sections of different types of shoreline protection features, each 400 linear feet in length and spaced 50 to 75 feet apart. Segments A and A1 consisted of 200 linear feet of rock dike and 200 linear feet of rock dike placed on freshly excavated spoil, respectively. Section B consists of 400 linear feet of composite rock dike utilizing core of lightweight aggregate encapsulated in geotextile. Section C consists of 400 linear feet of composite rock dike using a furrow method to place and encapsulate the lightweight aggregate core. A COE R-400 riprap gradation placed over a geotextile fabric to an elevation of +3.0 NAVD 88 with a 3' top width and 4:1 side slopes was used for Sections A, A1, B & C. The lightweight aggregate used in Sections B & C was expanded clay, and completely encapsulated in a geotextile fabric. Section D consisted of 400 linear feet of pre-stressed concrete pile and panel wall. The piles were 16" x 16" x 80' and the panels were 20' x 6' x 6" thick.



3. Final, as-built features, boundaries and resulting acreage (use attachments if necessary).

On both sites, Section A & A1 were constructed to the lines and grades as shown on the plans; however these sections experienced significant settlement. At the Bayou Perot site, the Section A & A1 rock dike experienced a complete foundation failure and the rock has moved vertically approximately 14'. It was decided not to continue to place additional rock riprap on this section during the initial construction. All of the remaining composite rock dikes have experienced settlement. The concrete wall sections were constructed to the lines and grades as shown on the plans. For additional information see attached "AS BUILT" plans and monitoring survey data.

Actual Benefited Acres \_\_\_\_\_

4. Key project cost elements

	CWPPRA Project Cost Estimates**	Cost Incurred as of Construction Completion
Construction	THIS INFORMATION WILL BE COMPLETED WHEN ALL PHASES OF THE CONSTRUCTION FOR THIS PROJECT IS COMPLETED	
E & D		
Landrights		
Monitoring		
O & M		
Total		

\*\* Most recent estimate from CWPPRA Project estimates Report produced by USACOE.

5. Items of Work

Item	Work	Est. Quantity	Unit	Est. Unit Price	Estimated Amount	Final Quant.	Bid Unit Price	Final Amount	% Over or Under
1	Mobilization and Demobilization	1	Job	L.S.	\$ 90,000.00	1	\$ 65,000.00	\$ 65,000.00	0%
2	Pollution Control	1	Job	L.S.	\$ 5,000.00	1	\$ 2,000.00	\$ 2,000.00	0%
3	Rnd. Timber Piling, 50 ft	12	EA	\$800	\$ 9,600.00	12	\$ 1,250.00	\$ 15,000.00	0%
4	Light Weight Aggregate, Encapsulated	3,640	CY	\$60	\$ 218,400.00	3851	\$ 60.00	\$ 231,060.00	6%
5	Surface Coarse Aggregate	875	Tons	\$40	\$ 35,000.00	904	\$ 40.00	\$ 36,160.00	3%
6	Rock Riprap, 400#	22,045	Tons	\$38	\$ 837,710.00	19082	\$ 36.00	\$ 686,952.00	-13%
7	Concrete Precast Prestressed Piles, 80 ft	40	EA	\$1,325	\$ 53,000.00	40	\$ 5,400.00	\$ 216,000.00	0%
8	Concrete Precast Prestressed Panels	38	EA	\$1,110	\$ 42,180.00	38	\$ 3,000.00	\$ 114,000.00	0%
9	Metal Fabrication, Warning Sign Supports	12	EA	\$500	\$ 6,000.00	12	\$ 750.00	\$ 9,000.00	0%
10	Metal Fabrication, Settlement Plates	12	EA	\$900	\$ 10,800.00	12	\$ 1,000.00	\$ 12,000.00	0%
11	Geotextile	15,100	S.Y.	\$4.00	\$ 60,400.00	15668	\$ 5.50	\$ 86,174.00	4%
12	Construction Surveying	1	Job	\$5,000	\$ 5,000.00	1	\$ 12,000.00	\$ 12,000.00	0%
13	Contractor Quality Control	1	Job	\$10,000	\$ 10,000.00	1	\$ 10,000.00	\$ 10,000.00	0%

Original Estimated Amount \$ 1,383,090.00

Original Bid Amount \$ 1,585,070.00

17 Days liquidated damages assessed @ \$500 per day \$ (8,500.00)

**Final Contract Amount \$ 1,486,846.00**

6. Construction and construction oversight

Prime construction contractor	Bertucci
Subcontractor	JAG
Subcontractor	-----
Original construction contract	\$ 1,585,070.00
Change orders	\$0.00
Under runs	\$ (89,724.00)
Final construction contract	\$ 1,486,846.00

Const. oversight contractor	N/A	Const. amt.	\$0.00
Cons. O.S./Admin. agency	NRCS	Est. amt.	\$

**7. Major equipment used.**

Spud barge AB-11 with Bucyrus Erie 71B  
 Spud barge AB-4 with Bucyrus Erie 88B  
 Spud barge BB-105 with 2800 Linkbelt  
 Spud barge KS-112 with 2800 Linkbelt  
 Spud barge FS-117 with 220 Komatsu Excavator  
 Spud barge KS-418 with 3400 Linkbelt  
 Spud barge RG-624 with American 7250  
 Deck barge TT Co.-486 with Komatsu 220  
 Deck barge RG-224  
 M.V. Julie Marie Tug  
 Miss Bert Tug  
 Melinda Morrison Tug  
 Various rock barges  
 963 Bobcat front end loader  
 Berming Diesel Hammer B2005

**8. Discuss construction sequences and activities, problems encountered, solutions to problems, etc.**

Contractor began by performing preconstruction surveys. Work began at Site 1 with the contractor excavating access to the site. Upon completion of the access channel for the site, the contractor began by starting work on sections A1 and A by first placing and shaping the spoil for section A1 then placing the geotextile for both sections A & A1. The contractor then began placing the rock riprap dike sections A & A1. Excavation for access was started at Site 2 during the time rock riprap was being placed at Site 1 Sections A & A1. Sections A & A1 of Site 1 began the rapid settlement (foundation failure) on 1/23/01. The contractor wanted to continue to place rock riprap on these sections; however NRCS decided it would be better to terminate the work on sections A & A1. The reason for this decision was to allow the rock to stop moving and the foundation time to consolidate prior to adding additional load. The contractor then placed the geotextile panel for Section C at Site 1 and then placed the rock on the toes to form the furrows. The contractor then placed the first (bottom) geotextile panel for Section B at Site 1 and pinned the perimeter with rock. The second geotextile panel that would encapsulate the lightweight aggregate was then placed at Section B at Site 1. The lightweight aggregate for Section B was then placed and shaped, then the geotextile fabric was folded over the aggregate and pinned with rock. Rock riprap placement over the lightweight aggregate was completed for Section B. After completing Section B, the contractor then placed the encapsulating geotextile panel at Section C (furrow) of Site 1 and then began placing the lightweight aggregate in the furrow. The geotextile was folded over the lightweight aggregate and the rock riprap was placed to complete the section.

Upon completion of Sections A, A1, B, and C at Site 1, the contractor moved to Site 2. The same sequence and processes were employed to construct Sections A, A1, B, and C at Site 2 as is described above for Site 1. It was during the placement of the rock sections at Site 2 that the contractor started the construction of the Section D (concrete wall) at Site 1. The contractor used a four-leg platform on which a three-hole pile-driving template was secured. The template was constructed of "W" section steel beams with rollers in each pile hole. Three piles were driven to grade and the template was relocated and the process repeated. Upon driving three piles, the contractor would place the panels in position. This process was repeated until Section D at Site 1 was complete, then the same process was used for Section D at Site 2. No problems driving the piles were encountered. Upon completion of the concrete sections, the contractor then came back and grouted one end of each panel to the concrete pile. This was done to prevent movement of the panels within the slots of the piles.

There were problems encountered with the concrete panels. It appears that the casting contractor's quality control was lacking because a number of the panels arrived on site with tie wires closer to the surface of the panel than allowed for in the specifications. This became obvious after the panels were in place a few days because visible rust areas appeared on the surface of the panel. The contractor choose to remove each panel, chip out the areas where the tie wire was too close to the surface, cut the wire back to meet the specified cover and grout the holes with an epoxy grout. This took a considerable amount of time to complete.

9. Construction change orders and field changes.

There were no modifications executed for this contract.

10. Pipeline and other utility crossings.

<u>Structure</u>	<u>Owner</u>	<u>Rep. To Contact</u>
NONE	-----	-----

11. Safety and Accidents.

One accident occurred during the construction of this project. The accident did not occur on the job site. It occurred at the yard of the contractor and there were no NRCS quality assurance personnel present at the time of the accident. The accident occurred during the movement of the concrete piles and panels from the contractor's yard. A deck hand's foot was crushed when the tug impacted the material barge and the loaded pilings shifted as a result of the impact.

12. Additional comments pertaining to construction, completed project, etc.

See the attached NRCS Supplements.

13. Significant Construction Dates: To be filled out by DNR Construction Project Manager or Contracting Officer for construction for Agency responsible for construction.

<b>Bid I.D. (Construction, 50-7217-1-1)</b>	<b>Date</b>
<b>Bid Opening</b>	<b>10/11/00</b>
<b>Construction Contract Award</b>	<b>10/30/00</b>
<b>Preconstruction Conference</b>	<b>11/28/00</b>
<b>Notice to Proceed</b>	<b>12/4/00</b>
<b>Mobilization</b>	<b>12/16/00</b>
<b>Construction Start</b>	<b>12/22/00</b>
<b>Construction Completion</b>	<b>7/14/01</b>
<b>Final Acceptance</b>	<b>7/19/01</b>

If different bids are taken, repeat this table to individually reflect each bid and attach tables.

Other significant Project Dates

	<u>Date</u>
Project Implementation closeout**	This item will be completed when all phases of the project are constructed
Start of Preconstruction Monitoring***	
Preconstruction Aerial Photography Acquisition***	
Monitoring Plan Completion***	

\*\* Final implementation closeout is made by either the DNR Project Manager or the Federal Agency Contracting Officer depending on which organization had lead role for construction of project.

\*\*\* To be completed by DNR Project Manager.

## NRCS SUPPLEMENT TO COMPLETION REPORT

### CONTRACT ADMINISTRATION

List any significant problems encountered in the administration of the construction contract and recommended solution for future contract of like nature.

DESCRIPTION OF PROBLEM ENCOUNTERED	RECOMMENDATIONS FOR FUTURE CONTRACTS
1. In the total rock riprap sections A and A1 at both Sites 1 and 2, excessive amounts of settlement occurred.	The work on the described sections was terminated for convenience. On long reaches of work of this type, the contract needs to include the flexibility to relocate planned "fish dips" to utilize areas of excessive settlement as described rather than terminating a portion of the work. Further discussions need to be entered into regarding this matter for future contracts.

### CONSTRUCTION PLANS

List any items pertinent to the plans which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM IN PLANS	RECOMMENDATIONS FOR FUTURE CONTRACTS
1. There was problems with the bottom corners of the concrete panels being chipped when placed into the notches of the piles.	Recommend designing a stainless steel shoe to protect both the bottom corners of the concrete panel and the notch in the pile. This would provide a bearing surface other than concrete.
2. Concrete panel attachment to piles	Require that one end of each panel be grouted to one pile to resist rocking motion in the notch
3. Concrete panels and piles	Varying lengths of panels needs to be specified in long reaches of this type of construction. This would allow for varying the location of piles in the event that an obstruction is encountered during driving.

## CONSTRUCTION SPECIFICATIONS

List any significant items in the construction specifications which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM IN SPECIFICATIONS	RECOMMENDATIONS FOR FUTURE CONTRACTS
1. Encapsulated lightweight aggregate	Recommend that the specifications require that the lightweight aggregate be totally encapsulated in the geotextile (bag, geotube, sewn geotextile tubes) prior to placement. This method observed on other jobs appears to be more efficient than encapsulating the lightweight aggregate after placement.
2. Contractor Quality Control – Requirements for daily QC reports	<p>The Items of work need to expand on Section 6 Records of the National Spec. to include the following:</p> <p style="padding-left: 40px;">In addition to any tests, the contractor shall provide to the Inspector each day at the job site a daily quality control report for the previous days activities that includes the following items:</p> <p style="padding-left: 80px;">Date Report No. Weather Conditions Quantities of Work Performed</p> <p style="padding-left: 40px;">A narrative description of the work performed with the location and the equipment and labor used to perform the work.</p> <p style="padding-left: 80px;">Materials delivered to job site Any safety items Personnel on site and hours worked (supervisory, skilled, and unskilled) Equipment on site and hours operated General comments Signed by Contractor QC representative.</p> <p style="padding-left: 40px;">These daily reports shall be inclusive of the work, equipment, personnel, etc. of the prime contractor and any and all subcontractors on the job site.</p>
3. Pre-stressed concrete members	Require the contractor to provide 2 weeks notice prior to casting any of the pre-stressed members.

## GENERAL COMMENTS

List any significant items which worked well and should be repeated or which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM	RECOMMENDATIONS FOR FUTURE CONTRACTS
1. Quality assurance of pre-stress concrete members	Recommend that an Inspector be present at the casting yard during the production of any pre-stressed concrete members. This would cost more, but would ensure a better finished product.

## **LANDBRIDGE TEST SECTIONS CONSTRUCTABILITY EVALUATION**

### **General:**

**1. What degree of dredging was needed to provide sufficient floatation?**

No additional dredging was required to facilitate any of the equipment needed to construct the various rock, composite rock, and concrete wall segments of this contract. Actually, if the concrete wall were the only method of construction, a smaller channel could be excavated for the needed equipment as compared to that required for typical rock dike construction. Smaller material barges can be used to transport the piles and panels than rock barges.

**2. Was Placement of spoil on the bayou side problematic?**

There was no problem placing the spoil on the bayou side of the excavated access channel. However when this practice is employed, there must be enough temporary signs in place to adequately identify the locations of the spoil for safety reasons.

**3. To what extent and over what time frame did the spoil migrate back into the floatation channel?**

In this particular contract, there were no problems with the spoil moving back into the access channel.

**4. To what degree was the backfilling of the access channel successful?**

Backfilling the access channel was successful. The degree of success is dependent upon the level of inspection to assure that the requirements of the specifications are adhered to.

### **Traditional Foreshore Dike (Section A)**

**1. How did the estimated quantity compare with actual rock quantity used?**

See attached sheet LANDBRIDGE COST SUMMARY. Section A was terminated for convenience at both Sites 1 and 2 due to the excessive amount of settlement that occurred during construction. The specifications required the contractor to place the rock dikes to the lines and grades as shown on the drawings with a vertical tolerance of +0.5'. During construction the contractor never quite attained the specified grade prior to the start of excessive settlement. As such the contractor wanted to continue to place rock on the sections, even though they were rapidly settling. At that point the Contracting Officer terminated for convenience all work on sections A & A1. The largest settlement occurred at Site 1 (see attached sheet LANDBRIDGE SETTLEMENT PLATE DATA). Further investigation of the foundation conditions at Site 1 Section A will take place in the future.

**2. Estimated time to construct a considerable length (5000 feet)**

See attached sheet PERFORMANCE TIME SUMMARY LANDBRIDGE PROJECT

**3. Describe any other concerns or problems encountered during construction**

This has been the most common shoreline protection method employed to date (full rock riprap dike). This method is relatively easy to construct; however the cost efficiency of this construction method is dependent upon the foundation conditions.

### Foreshore Dike Placed Over Shaped Spoil (Section A1)

**1. How did the estimated quantity compare with actual rock quantity used?**

See attached sheet LANDBRIDGE COST SUMMARY.

**2. Did spoil form adequate "core", were problems placing rock on the spoil encountered, and were rock quantities reduced?**

At Site 1 there was no appreciable difference in the settlement of Section A versus Section A1. At Site 2 there was a reduction in settlement in Section A1 as compared to Section A. (See attached LANDBRIDGE SETTLEMENT PLATE DATA) Shaping the spoil prior to the placement of the geotextile and subsequent rock placement took a considerable amount of time. This increase in time relates to an increase in cost. Placing the geotextile was slightly more difficult over the shaped spoil, but placement of the rock was the same as for any other method. The areas where the settlement was reduced appeared to be higher in clay content than the other locations. Use of this method to reduce rock quantities will be totally dependent upon the foundation soils.

*How  
relative to  
reduction of rock*

**3. Estimated time to construct a considerable length (5000 feet)**

See attached sheet PERFORMANCE TIME SUMMARY LANDBRIDGE PROJECT

**4. Describe any other concerns or problems encountered during construction**

The major concern with this type of construction method is the time required to shape the spoil prior to the geotextile placement. The material needs to be initially placed and allowed to consolidate for a number of days (30 to 60) prior to shaping. This increases the time and cost for this method. Also the volume of spoil used to form the core of the dike is insignificant compared to the typical volume excavated to provide access. With that being the case, typically spoil will need to be backfilled into the access channel after completion of the work.

*not always  
the case*

### Foreshore Dike With Encapsulated Lightweight Aggregate Core (Section B)

**1. How did the estimated quantities compare with actual rock & lightweight aggregate quantities used?**

See attached sheet LANDBRIDGE COST SUMMARY.

**2. Describe method of encapsulating used by the contractor, and its apparent efficiency**

The contractor placed two layers of geotextile. The bottom layer was placed using pipes driven into the bottom at the perimeter of the geotextile panel. This panel was secured to the pipes with ropes. The second panel was then stretched over the first panel placed and secured in the same manner. Placing the second panel was somewhat troublesome for the contractor because it tended to snag and not move freely over the bottom panel. When both geotextile panels were in place, the contractor began placing the lightweight aggregate to the lines and grades specified. When the lightweight aggregate was placed, the contractor began folding the edges of the top geotextile panel over the aggregate. This was accomplished by using hand labor and excavators. After both edges were folded over the aggregate and lapped, the contractor pinned the aggregate with rock to hold it in place. Then the final rock riprap was placed to lines and grades.



**3. Describe other methods of encapsulating the lightweight aggregate that might be more efficient**

From other construction projects where lightweight aggregate has been utilized and encapsulated prior to placement, the efficiency seems to be greater. An alternative method used is to place the aggregate in geotextile bags, sew the bags closed and place the bags as the core of the dike. This method was utilized on Barataria Bay Waterway East project and appeared highly efficient.

**4. Estimated time to construct a considerable length (5000 feet)**

See attached sheet PERFORMANCE TIME SUMMARY LANDBRIDGE PROJECT

**5. Compare cost, quantities, and efficiencies of encapsulated vs. non encapsulated lightweight aggregate**

To date no NRCS project have employed the use of lightweight aggregate core that has not been encapsulated. Because of this, comparison of encapsulated vs. non encapsulated lightweight aggregate is not possible at this time. The concern with not encapsulating the lightweight aggregate is movement of the material if any wave action is present and material floating off. An additional concern is trying to shape the lightweight aggregate placed in water. The material tends to slough and develop very flat slopes when placed in water and not encapsulated.

For comparisons of quantities, cost, efficiencies (time to construct), and short term stability's of the furrow encapsulated method vs. the encapsulated method, refer to the attached Landbridge Cost Summary, Performance Time Summary Landbridge Project and Landbridge Settlement Plate Data.

The construction of this composite section was rather labor intensive; however it took less actual time to construct than the furrow method. Multiple passes are required over the same section of dike to complete construction. One possibility of increased efficiency could be to encapsulate the lightweight aggregate prior to placement, removing the time consuming activity of trying to shape the material in the water prior to encapsulating it.

**6. Describe any other concerns or problems encountered during construction**

One problem encountered was the lightweight aggregate sloughed to flatter slopes in the water prior to being encapsulated. This did not occur in the furrow method of placement since rock riprap was in place to confine the aggregate. Without either confining the lightweight aggregate with riprap at the toes or placing the lightweight aggregate in bags or some other confinement prior to placement in the water, controlling the placed section of the lightweight aggregate is very difficult.

**Foreshore Dike with Lightweight Aggregate Core Placed in Furrow (Section C)**

**1. How did the estimated quantities compare with actual rock & lightweight aggregate quantities used?**

See attached sheet LANDBRIDGE COST SUMMARY.

**2. Describe method of placement used by the contractor, and its apparent efficiency**

The contractor placed an initial layer of geotextile fabric to cover the "foot print" of the completed section and secured it. When the geotextile panel was in place, the contractor began placing rock riprap to form the "furrow" to the lines and grades specified. Upon

completion of the furrow, another layer of geotextile fabric was placed over the furrow and in place riprap and secured. The lightweight aggregate was then placed in the furrow on top of the second geotextile fabric. When the lightweight aggregate was placed and shaped, the contractor began folding the edges of the top geotextile panel over the aggregate. This was accomplished by using hand labor and excavators. After both edges were folded over the aggregate and lapped, the contractor pinned the aggregate with rock to hold it in place. Then the final rock riprap was placed to lines and grades.

**3. Compare the efficiency of the furrow method of placement with the encapsulating method**

Placement of this method required the most actual construction time of all of the methods constructed. This is due partially because an additional pass has to be made over the same section as compared to the encapsulated method. The additional pass is required to make an initial placement of rock riprap to form the furrow into which the lightweight aggregate will be placed. This method also was labor intensive because two sections of geotextile panels had to be placed.

**4. Estimated time to construct a considerable length (5000 feet)**

See attached sheet PERFORMANCE TIME SUMMARY LANDBRIDGE PROJECT

**5. Compare cost, quantities, and efficiencies of furrow vs. other methods of placing lightweight aggregate**

See attached sheet LANDBRIDGE COST SUMMARY for comparison of two types of placement methods within this contract. On Bartaria Bay Waterway East, the lightweight aggregate was bid for \$62.22 per cubic yard compared to \$60.00 per cubic yard for this project. With the requirement of an additional layer of geotextile required for the furrow method not included in the \$60.00 per cubic yard as compared to the bagged method used on Barataria Bay Waterway, the cost is comparable. The bagged method appeared to be the more efficient of the two.

**6. Would it be feasible to use earth to form the furrows?**

Using earth to form the furrows for the lightweight aggregate does not seem feasible. The material would need to be shaped as it is being excavated placed. When excavated much of the native material does not have enough strength to allow it to be shaped until it has consolidated for a number of days. Also controlling the configuration of the earth would be extremely difficult.

**7. Describe any other concerns or problems encountered during construction**

**Concrete Wall (Section D)**

**1. What draft depth is needed for equipment to construct the wall?**

Less depth was required to construct the wall than was required to access rock barges for the other sections.

**2. What would be the max and min distances from the access channel to wall?**

The wall was constructed with top of the access channel 40 feet from the centerline of the wall.

**3. Is it feasible to drive 80 foot piles to the tolerances needed to construct such a wall?**

Eighty-foot piles were used in this project and were placed to the tolerances specified without any difficulties. A contractor will have to have a good template in order maintain the specified tolerances.

**4. Estimated time to construct a considerable length (5000 feet)**

See attached sheet PERFORMANCE TIME SUMMARY LANDBRIDGE PROJECT. The construction of the wall took less actual work time than did any of the other methods.

**5. What can be done if obstructions are encountered or to turn angles in the alignment?**

If a long alignment of this type of structure were to be considered, various lengths of panels would need to be cast. This would allow for movement laterally of a pile if an obstruction were encountered. Another option could be to utilize the section where the obstruction is to be an ingress/egress location for marine organisms.

To turn angles would only require the use of two piles adjacent to one another.

**6. Describe any other concerns or problems encountered during construction**

One major concern is the aesthetics of a wall.

## LANDBRIDGE COST DATA

Site #1								
Section	Item of Work	Est.Quan.	Act.Quan.	Unit	Unit Price	Amount	Start Date	End Date
Sections A&A1	Mobilization and Demobilization	1	1	Job	L.S.	\$8,125.00	1/6/01	2/15/01
	Surveying	1	1	Job	L.S.	\$1,500.00		
	Quality Control	1	1	Job	L.S.	\$1,250.00		
	Pollution Control	1	1	Job	L.S.	\$250.00		
	Geotextile	2810	2812.44	S.Y.	\$5.50	\$15,468.42		
	400# rock	5055	5739	Tons	\$36.00	\$206,604.00		
	Settlement Plates	2	2	EA	\$1,000.00	\$2,000.00		
	Warning Signs	1	1	Job	L.S.	\$2,000.00		
Total Cost						\$237,197.42		
Cost per Linear Foot						\$563.41		
Section B	Mobilization and Demobilization	1	1	Job	L.S.	\$8,125.00	2/1/01	2/19/01
	Surveying	1	1	Job	L.S.	\$1,500.00		
	Quality Control	1	1	Job	L.S.	\$1,250.00		
	Pollution Control	1	1	Job	L.S.	\$250.00		
	Geotextile	2840	2812.44	S.Y.	\$5.50	\$15,468.42		
	400# rock	3295	2400	Tons	\$36.00	\$86,400.00		
	Settlement Plates	2	2	EA	\$1,000.00	\$2,000.00		
	Warning Signs	1	1	Job	L.S.	\$2,000.00		
Total Cost						\$200,993.42		
Cost per Linear Foot						\$470.71		
Section C	Mobilization and Demobilization	1	1	Job	L.S.	\$8,125.00	1/24/01	3/21/01
	Surveying	1	1	Job	L.S.	\$1,500.00		
	Quality Control	1	1	Job	L.S.	\$1,250.00		
	Pollution Control	1	1	Job	L.S.	\$250.00		
	Geotextile	1970	2209.77	S.Y.	\$5.50	\$12,153.74		
	400# rock	2945	2885	Tons	\$36.00	\$103,860.00		
	Settlement Plates	2	2	EA	\$1,000.00	\$2,000.00		
	Warning Signs	1	1	Job	L.S.	\$2,000.00		
Total Cost						\$164,258.74		
Cost per Linear Foot						\$388.78		
Section D	Mobilization and Demobilization	1	1	Job	L.S.	\$8,125.00	3/19/01	4/13/01
	Surveying	1	1	Job	L.S.	\$1,500.00		
	Quality Control	1	1	Job	L.S.	\$1,250.00		
	Pollution Control	1	1	Job	L.S.	\$250.00		
	Warning Signs	1	1	Job	L.S.	\$2,000.00		
	Surface Coarse Aggregate			Tons	\$40.00			
	Concrete Precast Prestressed Piles 80 ft	20	20	EA	\$5,400.00	\$108,000.00		
	Concrete Precast Prestressed Panels	19	19	EA	\$3,000.00	\$57,000.00		
Total Cost						\$178,125.00		
Cost per Linear Foot						\$445.31		

Site #2								
Section	Item of Work	Quantity	Quantity	Unit	Unit Price	Amount	Start Date	End Date
Sections A & A1	Mobilization and Demobilization	1	1	Job	L.S.	\$8,125.00	2/15/01	3/6/01
	Surveying	1	1	Job	L.S.	\$1,500.00		
	Quality Control	1	1	Job	L.S.	\$1,250.00		
	Pollution Control	1	1	Job	L.S.	\$250.00		
	Geotextile	2615	2812.44	S.Y.	\$5.50	\$15,468.42		
	400# rock	4315	3719	Tons	\$36.00	\$133,884.00		
	Settlement Plates	2	2	EA	\$1,000.00	\$2,000.00		
	Warning Signs	1	1	Job	L.S.	\$2,000.00		
Total Cost						\$164,477.42		
Cost per Linear Foot						\$386.10		
Section B	Mobilization and Demobilization	1	1	Job	L.S.	\$8,125.00	2/22/01	3/27/01
	Surveying	1	1	Job	L.S.	\$1,500.00		
	Quality Control	1	1	Job	L.S.	\$1,250.00		
	Pollution Control	1	1	Job	L.S.	\$250.00		
	Geotextile	2840	2812.44	S.Y.	\$5.50	\$15,468.42		
	400# rock	3295	1556	Tons	\$36.00	\$56,016.00		
	Settlement Plates	2	2	EA	\$1,000.00	\$2,000.00		
	Warning Signs	1	1	Job	L.S.	\$2,000.00		
Total Cost						\$148,649.42		
Cost per Linear Foot						\$352.67		
Section C	Mobilization and Demobilization	1	1	Job	L.S.	\$8,125.00	2/20/01	3/15/01
	Surveying	1	1	Job	L.S.	\$1,500.00		
	Quality Control	1	1	Job	L.S.	\$1,250.00		
	Pollution Control	1	1	Job	L.S.	\$250.00		
	Geotextile	2025	2209.77	S.Y.	\$5.50	\$12,153.74		
	400# rock	3140	2783	Tons	\$36.00	\$100,188.00		
	Settlement Plates	2	2	EA	\$1,000.00	\$2,000.00		
	Warning Signs	1	1	Job	L.S.	\$2,000.00		
Total Cost						\$179,366.74		
Cost per Linear Foot						\$424.03		
Section D	Mobilization and Demobilization	1	1	Job	L.S.	\$8,125.00	4/18/01	4/30/01
	Surveying	1	1	Job	L.S.	\$1,500.00		
	Quality Control	1	1	Job	L.S.	\$1,250.00		
	Pollution Control	1	1	Job	L.S.	\$250.00		
	Warning Signs	1	1	Job	L.S.	\$2,000.00		
	Surface Coarse Aggregate			Tons	\$40.00			
	Concrete Precast Prestressed Piles 80 ft	20	20	EA	\$5,400.00	\$108,000.00		
	Concrete Precast Prestressed Panels	19	19	EA	\$3,000.00	\$57,000.00		
Total Cost						\$178,125.00		
Cost per Linear Foot						\$445.31		

# **LANDBRIDGE PERFORMANCE DATA**

<b>Site #1</b>		<b>Site #2</b>	
Excavation Access Channel 1200'	40 hours	Excavation Access Channel 2543'	65 hours
Excavation Floation Channel 1860'	56 hours	Excavation Floation Channel 1824'	57 hours
Backfill Channel	10 hours	Backfill Channel	64 hours
<b>Total</b>	<b>106 hours</b>	<b>Total</b>	<b>186 hours</b>
<b>Site #1 - Section A1 &amp; A</b>		<b>Site #2 - Section A&amp;A1</b>	
<b>Section A1</b>		Placement Spoil Core	12 hours
Placement spoil core 200'	10 hours	Placement geotextile panel	6 hours
Placement of geotextile base panel	5 hours	Placement Rock Riprap	69 hours
Placement of rock riprap	54.5 hours		
	Sub-69.5 hours		
<b>Section A</b>			
Placement of rock riprap	37 hours		
<b>Sections A&amp;A1 Total</b>	<b>106.5 hours</b>	<b>Section A&amp;A1 Total</b>	<b>87 hours</b>
<b>Site #1 - Section B</b>		<b>Site #2 - Section B</b>	
Placement of geotextile base panel	5 hours	Placement geotextile base panel	5 hours
Placment of encapsulation geotextile	3 hours	Placement geotextile encapsulation panel	5 hours
Placement of light weight aggregate	23 hours	Placement Light Weight Aggregate	20 hours
Placement of rock riprap	52 hours	Placement rock riprap	50 hours
<b>Section B Total</b>	<b>83 hours</b>	<b>Section B Total</b>	<b>80 hours</b>
<b>Site #1 - Section C</b>		<b>Site #2 Sec C</b>	
Placement of geotextile base panel	6 hours	Placement geotextile base panel	2.5 hours
Placement of encapsulation geotextile	3 hours	Placement geotextile encapsulation panel	4 hours
Placement of light weight aggregate	18 hours	Placement Light Weight Aggregate	14 hours
Placement of rock riprap	67 hours	Placement rock riprap	82 hours
<b>Section C Total</b>	<b>94 hours</b>	<b>Section C Total</b>	<b>102.5 hours</b>
<b>Site #1 - Section D</b>		<b>Site #2 - Section D</b>	
Placement piles and panels	71.5 hours	Placemnt concrete piles and panels	64.5 hours
Placement of surface coarse aggregate	9 hours	Placement of surface coarse aggregate	9 hours
<b>Section D Total</b>	<b>80.5</b>	<b>Section D Total</b>	<b>73.5 hours</b>

**TOTAL PROJECT HOURS 999**

## LANDBRIDGE SETTLEMENT PLATE DATA

Date Placed	Date Checked	Station	Elevation	Amount Settled (feet)
<b>Site #1 Sec. A</b>				
1/1/01		1+35	9.8	
400# rock	1/24/01	1+35	7.36	2.44
400# rock	2/14/01	1+35	6.9	2.9
		Pipe not accesible		
1/15/01		3+35	7.2	
400# rock	1/24/01	3+35	1.9	5.3
400# rock	2/24/01	3+35	1.16	6.04
400# rock	2/24/01	3+35	10	10' Extension Added
	5/17/01	3+35	5.82	11.33
<b>Site #1 Sec. B</b>				
2/6/01		6+10	8.7	
aggregate	2/8/01	6+10	8.62	0.08
400# rock	2/14/01	6+10	7.6	1.1
400# rock	2/21/01	6+10	7.48	1.22
400# rock	3/14/01	6+10	7.01	1.69
	3/30/01	6+10	6.65	2.05
	4/27/01	6+10	6.64	2.06
	5/17/01	6+10	6.47	2.23
2/6/01		8+10	7.4	
aggregate	2/8/01	8+10	6.88	0.52
400# rock	2/14/01	8+10	6.18	1.22
400# rock	2/21/01	8+10	5.57	1.83
400# rock	3/14/01	8+10	5.16	2.24
	3/30/01	8+10	4.8	2.5
	4/27/01	8+10	4.78	2.62
	5/17/01	8+10	4.58	2.82
<b>Site #1 Sec C</b>				
2/12/01		10+85	7.4	
aggregate	3/6/01	10+85	7.17	2.3
400# rock	3/9/01	10+85	6.97	0.2
400# rock	3/14/01	10+85	6.68	0.72
	3/30/01	10+85	6.2	1.2
	4/13/01	10+85	6.05	1.35
	4/27/01	10+85	6.03	1.37
	5/17/01	10+85	5.93	1.47
2/13/01		12+85	8.4	
aggregate	3/6/01	12+85	8.01	0.39
400# rock	3/14/01	12+85	7.4	1
	3/30/01	12+85	6.98	1.45
	4/13/01	12+85	6.85	1.55
	4/27/01	12+85	6.84	1.56
	5/17/01	12+85	6.78	1.62

Date Placed	Date Cheked	Station	Elevation	Amount Settled (feet)
<b>Site #2 Sec. A</b>				
2/15/01		17+24	10.75	
400# rock	3/2/01	17+24	9.96	0.79
400# rock	3/6/01	17+24	9.52	1.23
400# rock	3/9/01	17+24	9.3	1.45
	3/30/01	17+24	8.79	1.96
	4/27/01	17+24	8.6	2.15
	5/17/01	17+24	8.49	2.26
2/15/01		15+24	7.8	
400# rock	3/2/01	15+24	6.16	1.64
400# rock	3/9/01	15+24	5.6	2.2
	3/30/01	15+24	5.1	2.7
	4/27/01	15+24	4.87	2.93
	5/17/01	15+24	4.79	3.01

<b>Site #2 Sec. B</b>				
3/13/01		12+49	7.8	
aggregate	3/16/01	12+49	7.37	0.43
400# rock	3/22/01	12+49	6.8	1
	3/30/01	12+49	6.56	1.24
	4/27/01	12+49	6.32	1.48
	5/17/01	12+49	6.24	1.56
3/15/01		10+43	7.8	
aggregate	3/16/01	10+43	7.6	0.2
400# rock	3/22/01	10+43	7.08	0.72
	3/30/01	10+43	6.76	1.04
	4/27/01	10+43	6.55	1.25
	5/17/01	10+43	6.49	1.31

<b>Site #2 Sec. C</b>				
3/7/01		1+50	8.6	
aggregate	3/10/01	1+50	7.71	0.89
400# rock	3/15/01	1+50	7.33	1.27
	3/30/01	1+50	6.94	1.66
	4/27/01	1+50	6.66	1.94
	5/17/01	1+50	6.26	2.34
3/7/01		3+50	8.7	
400# rock	3/10/01	3+50	8.08	0.62
400# rock	3/15/01	3+50	7.32	1.38
	3/30/01	3+50	6.64	2.06
	4/27/01	3+50	6.33	2.37
	5/17/01	3+50	6.26	2.44

**Amendment No.1**

**ATTACHMENT III**

**CONSTRUCTION UNIT NO.2**

**BA-27 BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT**

**PROJECT COMPLETION REPORT**



# PROJECT COMPLETION REPORT<sup>1</sup>

PROJECT NAME

BARATARIA LANDBRIDGE SHORELINE  
PROTECTION C. U. #2

CWPPRA/STATE PROJECT NO.

BA-27

Report Date: January 8, 2003

BY: USDA - NRCS

## 1. Project Managers/Contracting Officer:

DNR Project Manager	Hilary Thibodeaux	Telephone	(985) 449-5105
DNR Construction Project Manager	Brian Babin	Telephone	(985) 447-0956
DNR Monitoring Manager	Melissa Hymel	Telephone	(504) 288-4684
Federal Agency Project Manager	Quin Kinler	Telephone	(225) 382-2047
Federal Agency Contracting Officer	Charles Phillips	Telephone	(318) 473-7796
Federal Agency Construction Engineer	Dale Garber	Telephone	(985) 447-6050
Federal Agency Design Engineer	Cherie LaFleur	Telephone	(318) 473-7674
Federal Agency Construction Inspector	Robert Payton	Telephone	(985) 447-6050

## 2. Location and description of projects as approved for construction by Task Force.

The Barataria Basin Land Bridge Shoreline Protection Project Phase 1 is located in both Jefferson and Lafourche Parishes, Louisiana, central to a point approximately 14 miles south of Lafitte, along the south-east bank of Bayou Rigolettes and the west bank of Bayou Perot. The entire project area encompasses intermediate marsh, brackish marsh, upland shrub, and open water habitat. This project area was identified by the CWPPRA Environmental Work Group (EnvWG) and represents the acreage that, without the project over 20 years, would be lost directly to shoreline erosion, as well as additional acreage that would be affected by increased tidal exchange, coalescence of interior ponds, and deepening of interior ponds throughout the project life. This project will be completed in multiple construction contracts. **This project completion report is representative of only that portion of the work completed in Construction Unit #2.**

The objective of the Barataria Basin Land Bridge Shoreline Protection Project is to reduce or eliminate shoreline/ bank-line erosion for portions of Bayous Perot and Rigolettes in Jefferson and Lafourche Parishes. Secondary benefits would include maintenance and, in some areas, an increased extent of submerged aquatic vegetation.

Construction Unit #2 includes 6403 linear feet of rock dike placed parallel to the southeast shoreline of Bayou Rigolettes within Jefferson Parish in Section 28 of Township 17 South, Range 23 East.

## 3. Final, as-built features, boundaries and resulting acreage (use attachments if necessary).

This project consisted of the installation of 6403 linear feet of rock dike that parallels the existing shoreline in the area previously described. The rock dike was constructed using the COE R-400 gradation of rock riprap. The rock riprap was placed on a high strength woven geotextile for the entire length of dike. The dike was constructed with 2 horizontal to 1 vertical side slopes with a 2 foot top width at an elevation of +3.5' NAVD 88.

The dike was constructed in lifts that did not exceed 2.5' in thickness. The contractor was required to place a 2.5' thick lift for the entire length of the dike before adding additional rock. An additional requirement for the east reach was that the contractor had to construct the dike to an elevation of +1.0 and then wait a minimum of 21 days before placing another lift.

See the "As Built" plans for detailed information regarding dimensions, materials, locations, and other completed features of the project.

Actual Benefited Acres (the total project benefited acres is 1304, of which the construction unit is only a portion)

4. Key project cost elements

	CWPPRA Project Cost Estimates*	Cost Incurred as of Construction Unit #2 Completion**
Construction	\$16,974,094	\$3,143,308.76
E & D	\$2,349,120	\$348,494.70
Landrights	\$95,318	\$0.00
Monitoring	\$168,650	\$0.00
O & M	\$1,525,609	\$1,213.24
<b>Total</b>	<b>\$21,112,791</b>	<b>\$3,493,016.70</b>

\* Most recent estimate from CWPPRA Project estimates Report produced by USACOE.

\*\* Includes funds expended for Construction Units #1 and #2

5. Items of Work

Item No.	Work	Est. Quant.	Unit	Est. Unit Price	Est. Amount	Bid Unit Price	Bid Amount	Final Quant.	Final Amount	%Over /Under
1	Mobilization & Demobilization	1	Job	\$80,000.00	\$80,000.00	\$65,000.00	\$65,000.00	1	\$65,000.00	0.0%
2	Pollution Control	1	Job	\$5,000.00	\$5,000.00	\$10,000.00	\$10,000.00	1	\$10,000.00	0.0%
3	Timber Piles	8	Each	\$1,200.00	\$9,600.00	\$1,200.00	\$9,600.00	8	\$9,600.00	0.0%
4	Rock Riprap	34700	Tons	\$38.00	\$1,318,600.00	\$44.50	\$1,544,150.00	32049	\$1,426,180.50	-7.6%
5	Permanent Signs	8	Each	\$500.00	\$4,000.00	\$800.00	\$6,400.00	8	\$6,400.00	0.0%
6	Settlement Plates	9	Each	\$1,000.00	\$9,000.00	\$900.00	\$8,100.00	9	\$8,100.00	0.0%
7	Geotextile	22,000	S.Y.	\$5.00	\$110,000.00	\$5.50	\$121,000.00	24502	\$134,761.00	11.4%
8	Construction Surveys	1	Job	\$12,000.00	\$12,000.00	\$45,000.00	\$45,000.00	1	\$45,000.00	0.0%
9	Quality Control	1	Job	\$10,000.00	\$10,000.00	\$24,000.00	\$24,000.00	1	\$24,000.00	0.0%
10	Temporary Signs	22	Each	\$500.00	\$11,000.00	\$615.00	\$13,530.00	12	\$7,380.00	-45.5%

Original Est. Amount \$1,569,200.00

Original Bid Amount \$1,846,780.00

**Final Contract Amount \$1,736,421.50**

6. Construction and construction oversight

Prime construction contractor	ERCON Corporation
Subcontractor	Bertucci Contracting Corporation
Original construction contract	\$1,846,780.00
Change orders	\$ 0.00
Over runs	\$ 13,761.00
Under runs	\$ 124,119.50
Final construction contract	\$1,736,421.50

Const. oversight contractor	NA	Const. amt.	\$ 0.00
Cons. O.S./Admin. agency	NRCS	Est. amt.	\$ 0.00

**7. Major equipment used.**

AB-4 Spud Barge w/ Bucyrus Erie 88B  
AB-3 Spud Barge w/ Bucyrus Erie 88B  
BB-105 Spud Barge w/ Linkbelt 3400 Excavator  
RG-623 Spud Barge w/ Linkbelt 2800 Excavator  
Tug Boats – Captain Mack, Julie Marie, Delta Dorado  
Various Rock Barges

**8. Discuss construction sequences and activities, problems encountered, solutions to problems, etc.**

The contractor began by excavating access floatation for the east reach at Sta. 29+00 with the AB-4, then proceeding west to Sta. 13+00. Next the contractor excavated access floatation for the west reach from Sta. 24+00 to Sta. 18+00 and then from Sta. 13+00 to 5+00. All excavation for access floatation was completed for the job before proceeding with rock riprap placement. Temporary warning signs were placed along exposed spoil as the excavation proceeded.

The contractor then placed geotextile and rock riprap from Sta. 3+20 to Sta. 34+20 for the east reach in two lifts to achieve the 1.5' elevation specified prior to the 21-day waiting period before dike section could be completed. The contractor then placed geotextile from Sta. -0+08 to Sta. 3+20 of the east reach then placed the rock riprap in two lifts. Next, the contractor moved to Sta. 34+20 and placed geotextile to Sta. 36+83 of the east reach then placed the rock riprap in two lifts to final grade. There was no waiting period between lifts of rock riprap specified in the contract for the segments from Sta. -0+08 to Sta. 3+20 and Sta. 34+20 to Sta. 36+83 of the east reach.

The contractor then moved to the west reach and placed geotextile and the first 2.5' lift of rock riprap from Sta. -0+42 to Sta. 17+10. He then moved to Sta. 26+70 and placed geotextile and first lift of rock riprap back to Sta. 17+60, also at this time a second lift of rock riprap was placed from Sta. -0+42 to Sta. 17+10. There was no waiting period between lifts of rock riprap specified in the contract for the entire west reach.

After the 21 day waiting period had expired, the AB-4 began placing the final lift of rock riprap on the east reach from Sta. 3+20 proceeding to Sta. 34+20 while the AB-3 and RG-623 continued placing rock riprap on the west reach. Upon reaching Sta. 17+60 of the west reach, the RG-623 and BB-105 placed geotextile and rockfill over the Chevron Pipeline crossing. Once the rockfill over the pipeline was to the specified grade, it was overlain by a second piece of geotextile and then rock riprap was placed to the final grade. The AB-4 continued to build on the east reach and the RG-623 and AB-3 continued to build on the west reach. Concurrent with the rock riprap placement, the BB-105 placed the piles for the warning signs on the east reach by pushing them into place. Once all the piles were in place the permanent warning signs were attached to the piles. The AB-3 was used to light load barges in Bayou Perot from time to time during rock riprap placement.

On the east reach from Sta. 29+50 to Sta. 31+50, an excessive amount of settlement occurred and the contractor attempted to build the segment to final grade but could only achieve a finished elevation of approximately 2.0'. A warning sign was placed in this low area for boater safety and additional rock riprap may be placed in this area in a future contract. Upon completion of the east reach the contractor moved the AB-3 and RG-623 off site while the AB-4 and BB-105 backfilled the excavated access floatation channels.

**9. Construction change orders and field changes.**

There was only one modification to the contract that changed the physical mailing address of the Contracting Officer. This was a no cost or time change modification.

There were two field changes during the construction of the project.

1. The section of the East structure from Sta. 29+50 to Sta. 31+50 was left at about a + 2.0 elevation because of excessive settlement. It is planned to either bring the area up to planned grade or reshape area as a fish dip in a later construction unit.
2. The ends of the dike was extended by 42' at the south end and 23' at the north end of the west reach and 83' at the east end of the east reach in order to adequately tie the dike into existing shoreline.

10. Pipeline and other utility crossings.

<u>Structure</u>	<u>Owner</u>	<u>Rep. To Contact</u>
Pipeline	Chevron Pipeline	Kevin Gaudet – (504) 538-1079

11. Safety and Accidents.

Mr. Louis Bernardez, an employee of Bertucci Corporation, tripped over a rock on the BB-105 barge while placing geotextile. The employee was taken to West Jefferson Medical Center for examination and was placed on light duty for two days.

12. Additional comments pertaining to construction, completed project, etc.

See the attached NRCS Supplements.

13. Significant Construction Dates: To be filled out by DNR Construction Project Manager or Contracting Officer for construction for Agency responsible for construction.

Construction Unit #2 Contract No.	50-7217-6-2
	Date
Bid Opening	N/A (8-a Proposal Submitted)
Construction Contract Award	7/16/02
Preconstruction Conference	7/21/02
Notice to Proceed	7/22/02
Mobilization	7/27/02
Construction Start	7/29/02
Construction Completion	10/11/02
Final Acceptance	10/15/02

## NRCS SUPPLEMENT TO COMPLETION REPORT

### CONTRACT ADMINISTRATION

List any significant problems encountered in the administration of the construction contract and recommended solution for future contract of like nature.

DESCRIPTION OF PROBLEM ENCOUNTERED	RECOMMENDATIONS FOR FUTURE CONTRACTS
The question was raised about competing 8A contracts rather than having negotiated 8A contracts.	From discussions with Contracting Personnel, competition is not allowed for 8A contracts less than \$3,000,000 in value. Therefore it is recommended that all 8A contracts in excess of \$3,000,000 be competitive.

### CONSTRUCTION SPECIFICATIONS

List any significant items in the construction specifications which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM IN SPECIFICATIONS	RECOMMENDATIONS FOR FUTURE CONTRACTS
Spillage of rock during placement operation.	In future contracts require in the specifications that the contractor sweep any channel bottom for any spilled rock in areas where boat traffic is anticipated, and could possibly hit the rock (shallow channels).
Special Provisions – Notification of Pipeline Companies.	In future contracts add an additional requirement that the contractor provides the Government a written statement if a pipeline company chooses <u>not</u> to be on site during construction around their lines. This should be provided to the Government at least 48 hours prior to any work being performed near the pipeline.

## GENERAL COMMENTS

List any significant items which worked well and should be repeated or which caused problems, need clarification or changes for future contracts of this nature.

DESCRIPTION OF ITEM	RECOMMENDATIONS FOR FUTURE CONTRACTS
Spilled rock in areas where boats could hit the rocks.	In areas where boat traffic is anticipated, and could possibly hit the spilled rock, NRCS inspection personnel need to be very observant. If rock spillage is observed, the contractor shall be required to remove the spilled rocks. If no spillage is directly observed, inspection personnel should probe the areas in question prior to contract completion to determine if in fact there has been any spilled rock. If spilled rocks are found, the contractor shall remove them.
Staged Placement of Rock Rip-Rap	Whenever possible, staged placement is recommended. The results from this construction unit that employed staged construction were good. Therefore it is recommended placing the first lift of rock over the entire structure to an elevation 0.5' above the average water elevation, then wait the specified number of days and place the final lift at planned grade. This would be recommended for rock dike total heights of approximately 4.5' or less. From review of the settlement plates, very little consolidation occurred between the placement of the first lift and second lifts. The intent of this recommendation is to allow a slightly greater initial load, thus potentially reducing the amount of settlement that occurs during the placement of the final lift.

**LANDBRIDGE C.U. # 2  
SETTLEMENT PIPES  
EAST STRUCTURE**

LOCATION	Initial Placement	1st check AFTER First Lift	2nd check AFTER 21day wait	3rd check AFTER Final Lift	G.P.S. Final AS BUILT	Total Settlement (ft)
Sta.4+00	8.57	8.09	8.10	7.91	7.82	
DATE TAKEN	8/24/02	8/28/02	9/17/02	9/20/02	10/22/02	
SETTELMENT	0	0.45	0	0.19	0.09	0.75
Sta.11+00	9.24	8.89	8.82	8.61	8.43	
DATE TAKEN	8/24/02	8/28/02	9/17/02	9/20/02	10/22/02	
SETTELMENT	0	0.35	0.07	0.22	0.18	0.81
Sta.19+00	8.25	7.98	7.95	7.68	7.59	
DATE TAKEN	8/24/02	8/29/02	9/17/02	10/7/02	10/22/02	
SETTELMENT	0	0.27	0.03	0.27	0.09	0.66
Sta.27+00	8.34	8.17	8.02	7.98	7.83	
DATE TAKEN	8/27/02	9/11/02	9/17/02	10/9/02	10/22/02	
SETTELMENT	0	0.17	0.15	0.04	0.15	0.51
Sta.34+00	8.32		7.99	7.94	7.61	
DATE TAKEN	9/2/02		9/17/02	10/10/02	10/22/02	
SETTELMENT	0		0.33	0.05	0.33	0.71

**LANDBRIDGE C.U. # 2  
SETTLEMENT PIPES  
WEST STRUCTURE**

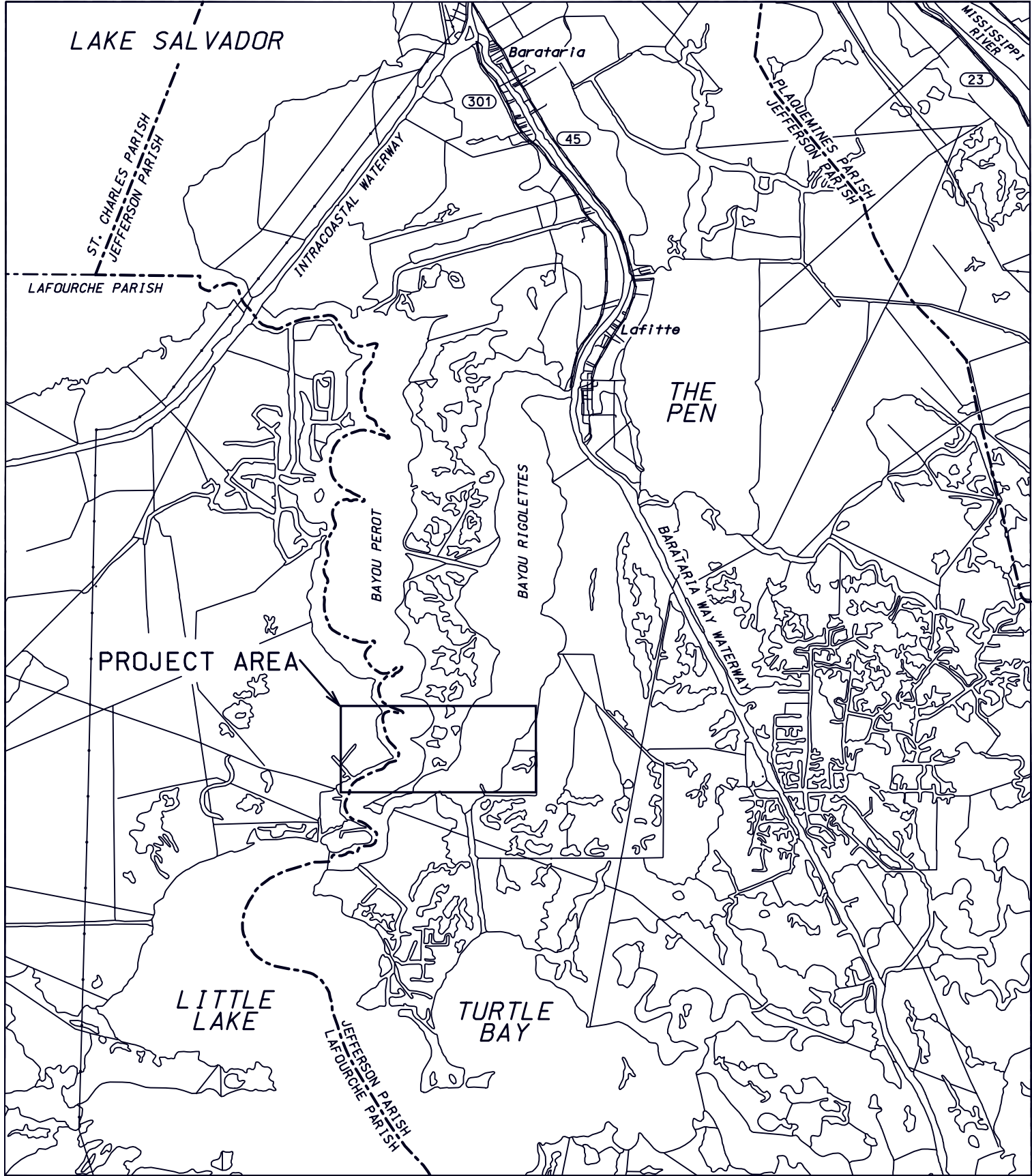
LOCATION	Initial Placement	1st check Final Lift	G.P.S. survey AS Built	Total Settlement (ft)
Sta.4+00	8.13	7.87	7.75	
DATE TAKEN	9/5/02	9/12/02	10/21/02	
SETTELMENT	0	0.26	0.12	0.38
Sta.10+00	8.09	8.09	7.86	
DATE TAKEN	9/5/02	9/12/02	11/7/02	
SETTELMENT	0	0	0.23	0.23
Sta.16+00	8.39	8.39	8.12	
DATE TAKEN	9/9/02	9/17/02	10/21/02	
SETTELMENT	0	0	0.27	0.27
Sta.23+00	8.46	8.39	8.04	
DATE TAKEN	9/9/02	9/17/02	10/21/02	
SETTELMENT	0	0.07	0.35	0.42

ATTACHMENT IV

BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

**AS-BUILT DRAWINGS**





VICINITY MAP



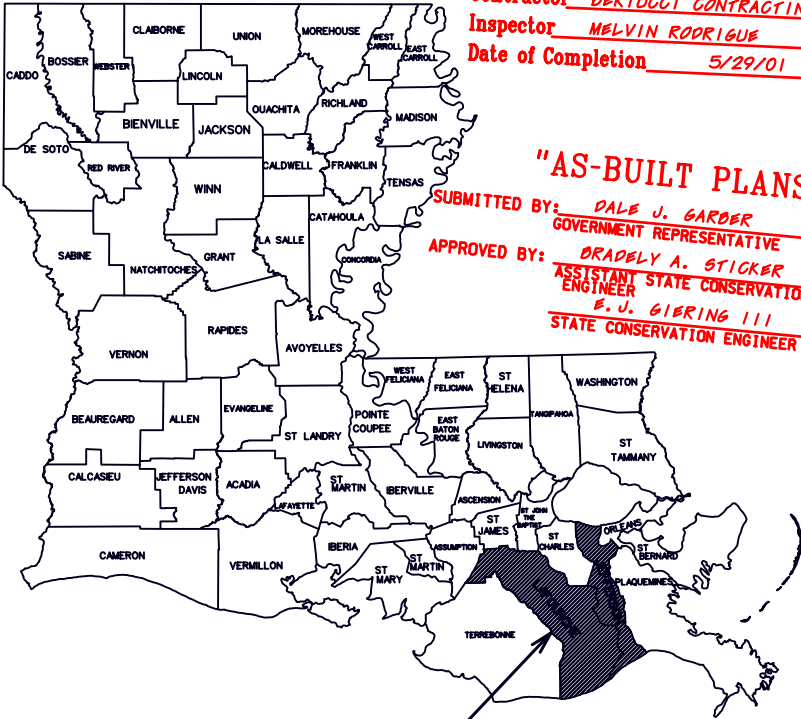
BARATARIA BASIN LANDBRIDGE PROJECT  
CONSTRUCTION UNIT 1, (BA-27)

BUILT UNDER THE  
COASTAL WETLANDS  
PLANNING, PROTECTION,  
AND  
RESTORATION ACT  
PUBLIC LAW 101-646

"AS-BUILT"

BY THE  
LOUISIANA  
DEPARTMENT OF NATURAL RESOURCES

WITH THE ASSISTANCE OF THE  
NATURAL RESOURCES CONSERVATION SERVICE  
OF THE  
UNITED STATES DEPARTMENT OF AGRICULTURE  
2000



LOCATION IN LOUISIANA  
(LAFOURCHE AND JEFFERSON PARISH)

Contract No. 50-7217-1-1 Date 9/27/01  
Contractor BERTUGGI CONTRACTING CORP.  
Inspector MELVIN RODRIGUE  
Date of Completion 5/29/01

"AS-BUILT PLANS"  
SUBMITTED BY: DALE J. GARDER 9/27/01  
GOVERNMENT REPRESENTATIVE DATE  
APPROVED BY: BRADLEY A. STICKER 9/28/01  
ASSISTANT STATE CONSERVATION ENGINEER DATE  
E. J. GIERING III 9/28/01  
STATE CONSERVATION ENGINEER DATE

- INDEX OF DRAWINGS
- 1 COVER SHEET
  - 2 PROJECT LOCATION MAP
  - 3 SOIL BORING LOGS
  - 4 SITE NO. 1 - PLAN LAYOUT
  - 5 SITE NO. 2 - PLAN LAYOUT
  - 6-6A DETAILS - TYPICAL SECTIONS A, A1, B, and C
  - 7-9 DETAILS - TYPICAL SECTION D
  - 10 WARNING SIGN DETAILS
  - 11 SETTLEMENT PLATE DETAILS
  - 12 ACCESS CHANNEL DETAILS



REVISIONS		COVER SHEET	
DATE	APPR.	TITLE	
		BARATARIA BASIN LANDBRIDGE PROJECT	
		BA-27 CONSTRUCTION UNIT 1	
		LAFOURCHE AND JEFFERSON PARISHES	
		LOUISIANA	
		U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE	
CAD FILE NO.		LA302001	
DRAWING NO.		LA-302	
SHEET NO.		01 OF 12	
Date		04/99	05/99
Designed by		L. Steve Garner	
Drawn by		A. J. Gremillion	
Traced by			
Checked by		James N. Moore	
Approved by		E. J. GIERING III	05/99
Title		STATE CONSERVATION ENGINEER	





BARATARIA BASIN LANDBRIDGE PROJECT

PLAN MAP



LEGEND

⊗ T2-38 GEOTECH BORING  
(REF. SHT. 3 OF 12)

REVISIONS		DATE	APPR.	TITLE

CAD FILE NO.

LA302002

DRAWING NO.

LA-302

Sht. 02 of 12







PLAN MAP  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 1  
LAFOURCHE AND JEFFERSON PARISHES  
LOUISIANA

DESIGNED BY L. STEVE GARNER  
DRAWN BY A.J. GREMILLION  
CHECKED BY JAMES N. MOORE  
DATE 12/97  
APPROVED BY  
STATE CONSERVATION ENGINEER  
ALEXANDER G. LOUISIANA  
DATE 12/97  
TITLE  
DATE 12/97  
TITLE

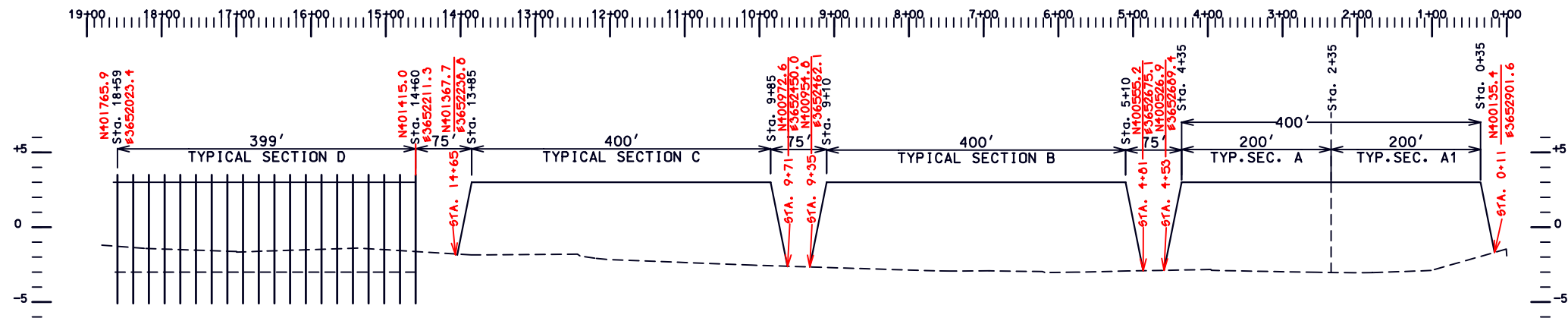
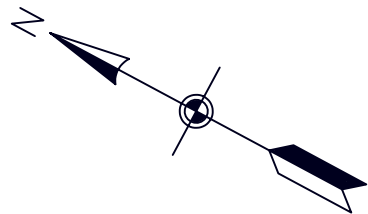
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE



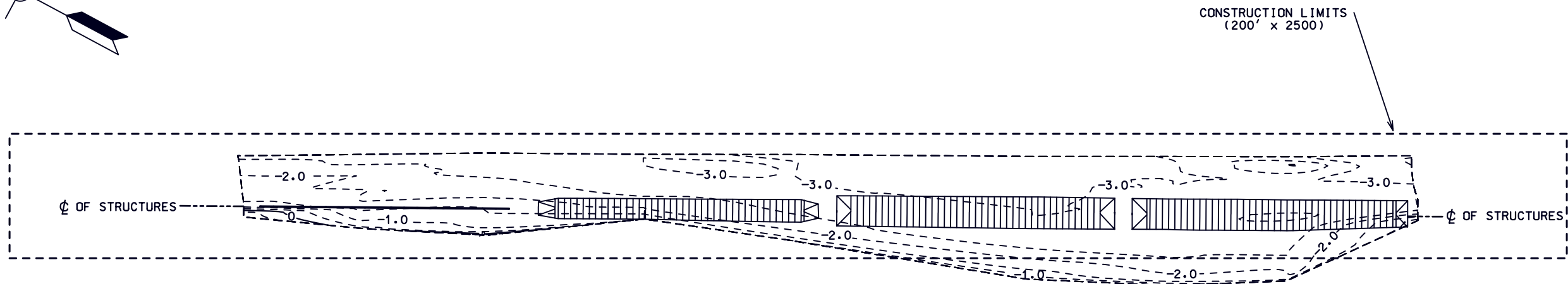


	SM	SILTY SAND, SAND-SILT MIXTURE
	ML	SILT WITH LITTLE OR NO PLASTICITY
	CL	SILTY CLAY, LOW TO MEDIUM PLASTICITY
	CH	CLAY, HIGH PLASTICITY
	OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY
	PT	PEAT, HUMUS, SWAMP SOIL

CAD FILE NO. LA302003		SOIL BORING LOGS BARATARIA BASIN LANDBRIDGE PROJECT BA-27 CONSTRUCTION UNIT 1 LAFOURCHE AND JEFFERSON PARISHES LOUISIANA		Designed L. Steve Garner Drawn A.J. Gremillion Traced Checked James N. Moore		Date 4/99 4/99 -- 5/99	Approved by Ed Giering III State Conservation Engineer Alexandria, Louisiana	Date 5/99
DRAWING NO. LA-302		U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE						
Sht. 03 of 12								



**SITE NO.1 – BAYOU PEROT**  
PROFILE ALONG CENTERLINE



**SITE NO.1 – BAYOU PEROT**  
PLAN LAYOUT

**SITE NO.1 – SECTION "A" ROCK** ACTUAL

ROCK RIPRAP	<del>5055 Tons</del>	5739 TONS
GEOTEXTILE	<del>2810 Sq. Yds.</del>	2012 SQ. YDS.

**SITE NO.1 – SECTION "B" COMPOSITE**

ROCK RIPRAP	<del>3295 Tons</del>	2400 TONS
LWA	<del>1280 Cy.</del>	1400 CY
GEOTEXTILE	<del>2840 Sq. Yds.</del>	2012 SQ. YDS.

**SITE NO.1 – SECTION "C" FURROW**

ROCK RIPRAP	<del>2945 Tons</del>	2005 TONS
LWA	<del>530 Cy.</del>	552 CY
GEOTEXTILE	<del>1970 Sq. Yds.</del>	2210 SQ. YDS.

CONTOUR LINES AT 0.5' INTERVALS



**"AS-BUILT"**

DATE	APPR.	TITLE

CAD FILE NO.  
LA302004

DRAWING NO.

LA-302

Sht. 04 of 12

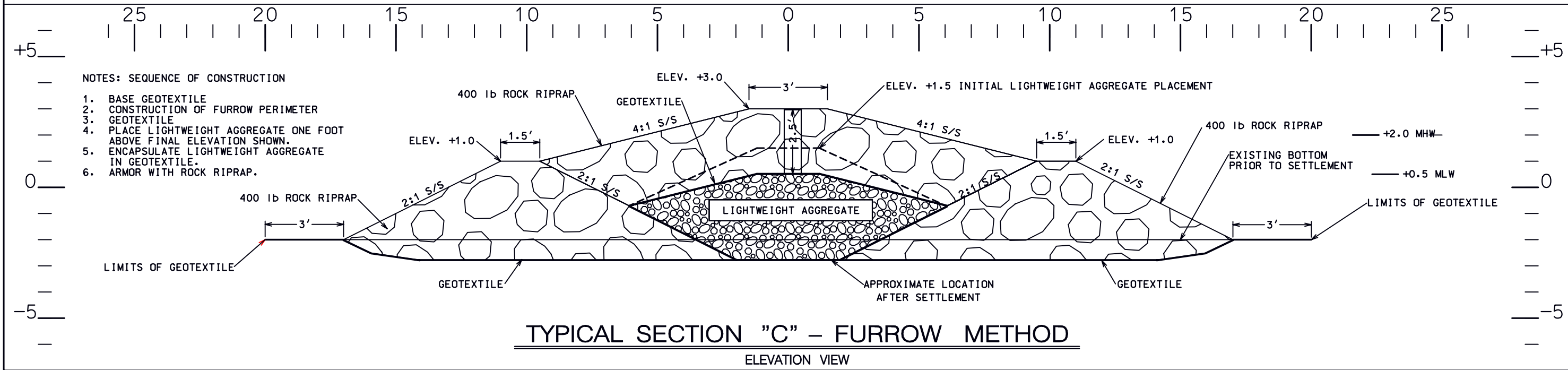
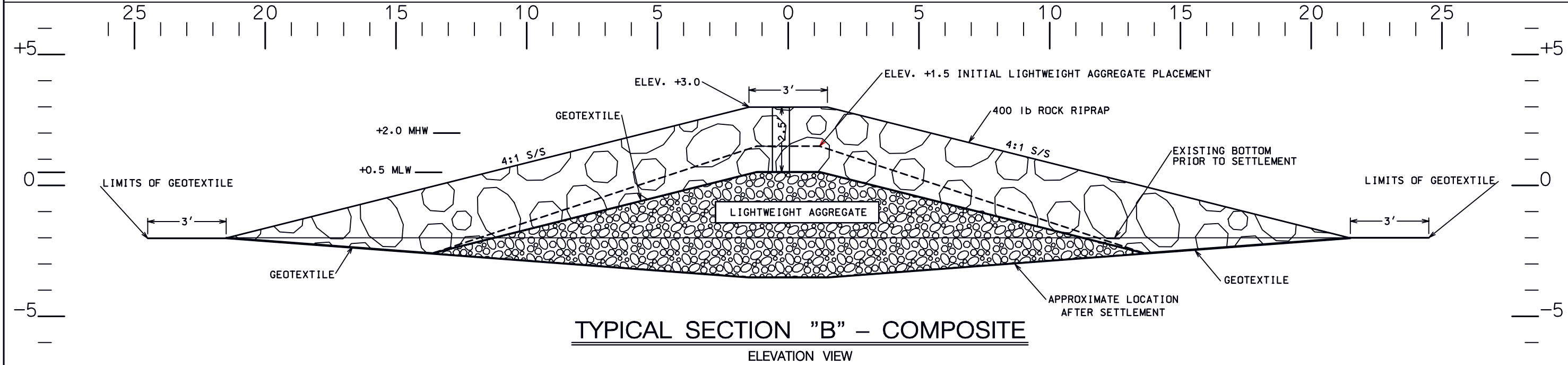
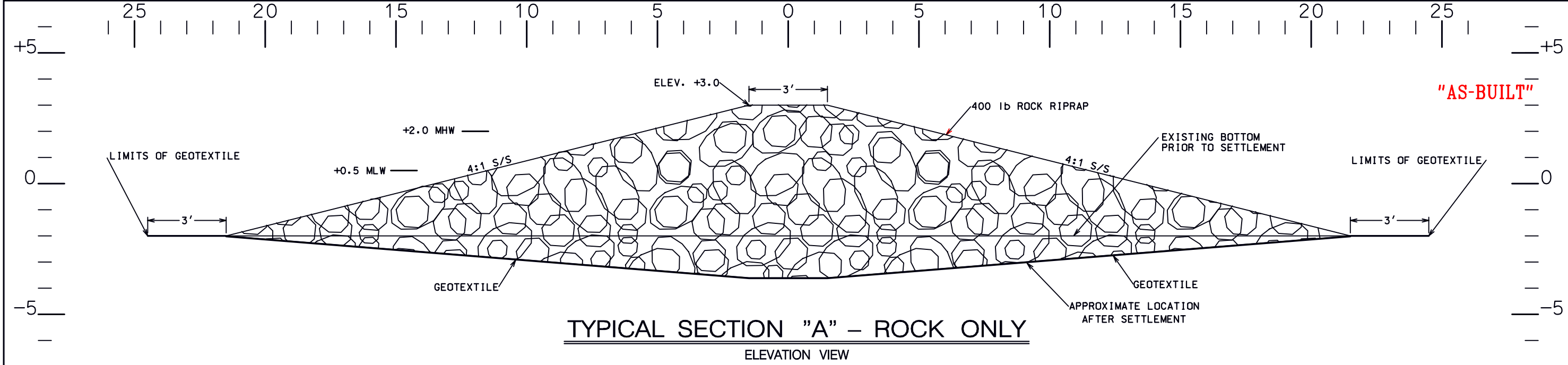
SITE NO. 1 – PLAN LAYOUT  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 1  
LAFOURCHE AND JEFFERSON PARISHES  
LOUISIANA

U.S. DEPARTMENT OF AGRICULTURE – NATURAL RESOURCES CONSERVATION SERVICE

Designed L. Steve Garner  
Drawn A.J. Gremillion  
Traced  
Checked James N. Moore

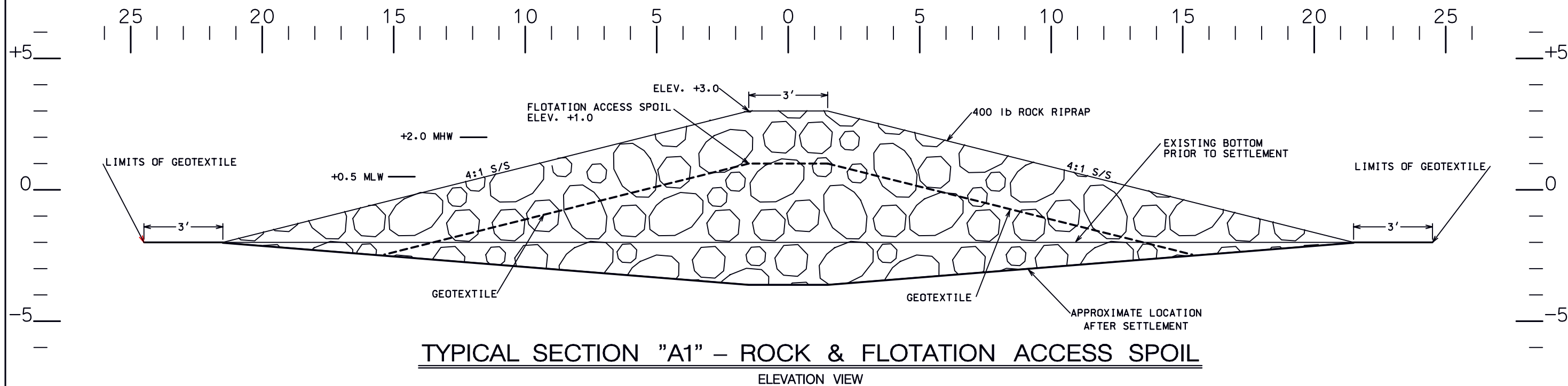
Date 12/97  
Approved by State Conservation Engineer  
Title  
Date 12/97  
Title  
Date 12/97  
Title





- NOTES: SEQUENCE OF CONSTRUCTION
1. BASE GEOTEXTILE
  2. CONSTRUCTION OF FURROW PERIMETER
  3. GEOTEXTILE
  4. PLACE LIGHTWEIGHT AGGREGATE ONE FOOT ABOVE FINAL ELEVATION SHOWN.
  5. ENCAPSULATE LIGHTWEIGHT AGGREGATE IN GEOTEXTILE.
  6. ARMOR WITH ROCK RIPRAP.

Date		Approved by Ed Gierling III 5/99	State Conservation Engineer	Title	
Designed L. Steve Garner		4/99	Drawn A.J. Gremillion	4/99	
Traced			Checked James N. Moore	5/99	
TYPICAL SECTIONS "A", "B", "C" DETAILS BARATARIA BASIN LANDBRIDGE PROJECT BA-27 CONSTRUCTION UNIT 1 LAFOURCHE AND JEFFERSON PARISHES LOUISIANA					
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE					
DATE	APPR.	REVISIONS			
CAD FILE NO. LA302006					
DRAWING NO. LA-302					
Sht. 06 of 12					



## "AS-BUILT"

[illegible]

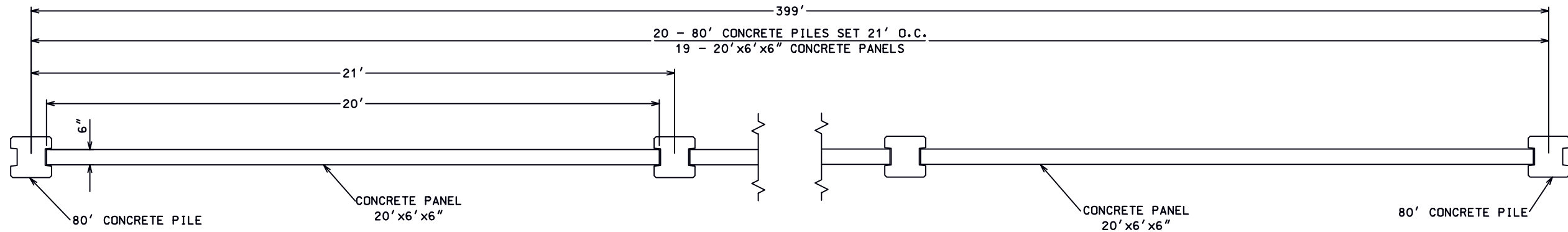
TYPICAL SECTION "A1" DETAILS  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 1  
LAFOURCHE AND JEFFERSON PARISHES  
LOUISIANA

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

	Date
Designed L. Steve Garner	4/99
Drawn A.J. Gremillion	4/99
Traced	5/99

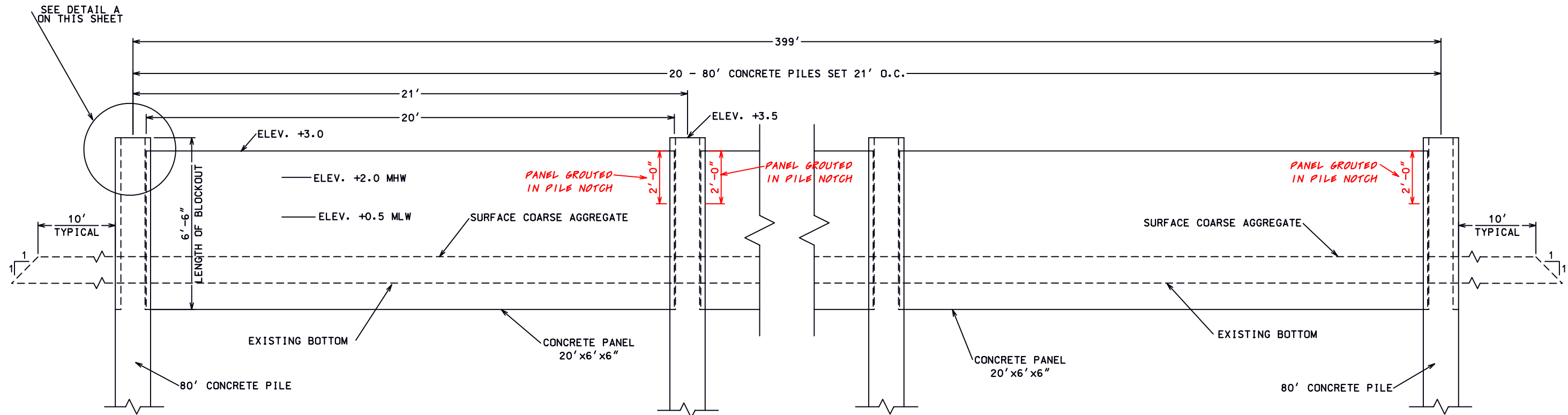
Approved by Ed Giering III State Conservation Engineer Alexandria, Louisiana	Date 5/99
Title _____	_____





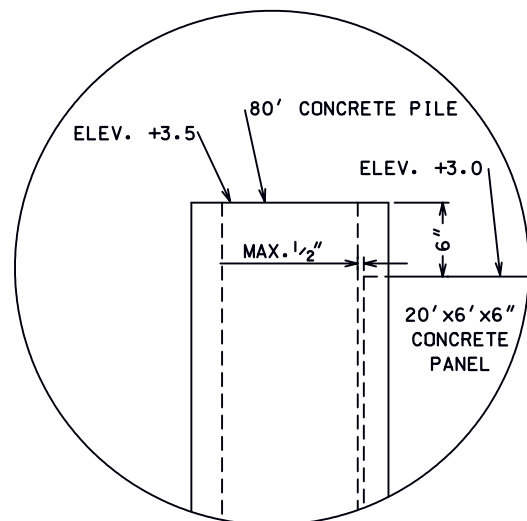
## TYPICAL SECTION "D" DETAILS

PLAN VIEW



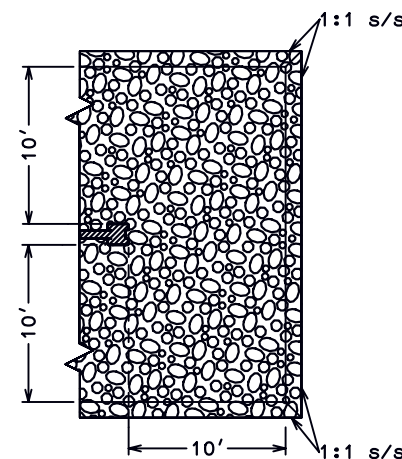
## TYPICAL SECTION "D" DETAILS

ELEVATION VIEW



## DETAIL A

NOT TO SCALE



## AGGREGATE BLANKET DETAIL - PLAN VIEW

(NOT TO SCALE)

NOTE:

ONE FOOT THICK BLANKET OF SURFACE COARSE AGGREGATE TO EXTEND FROM WALL TEN FEET AROUND FRONT, BACK, AND SIDES.

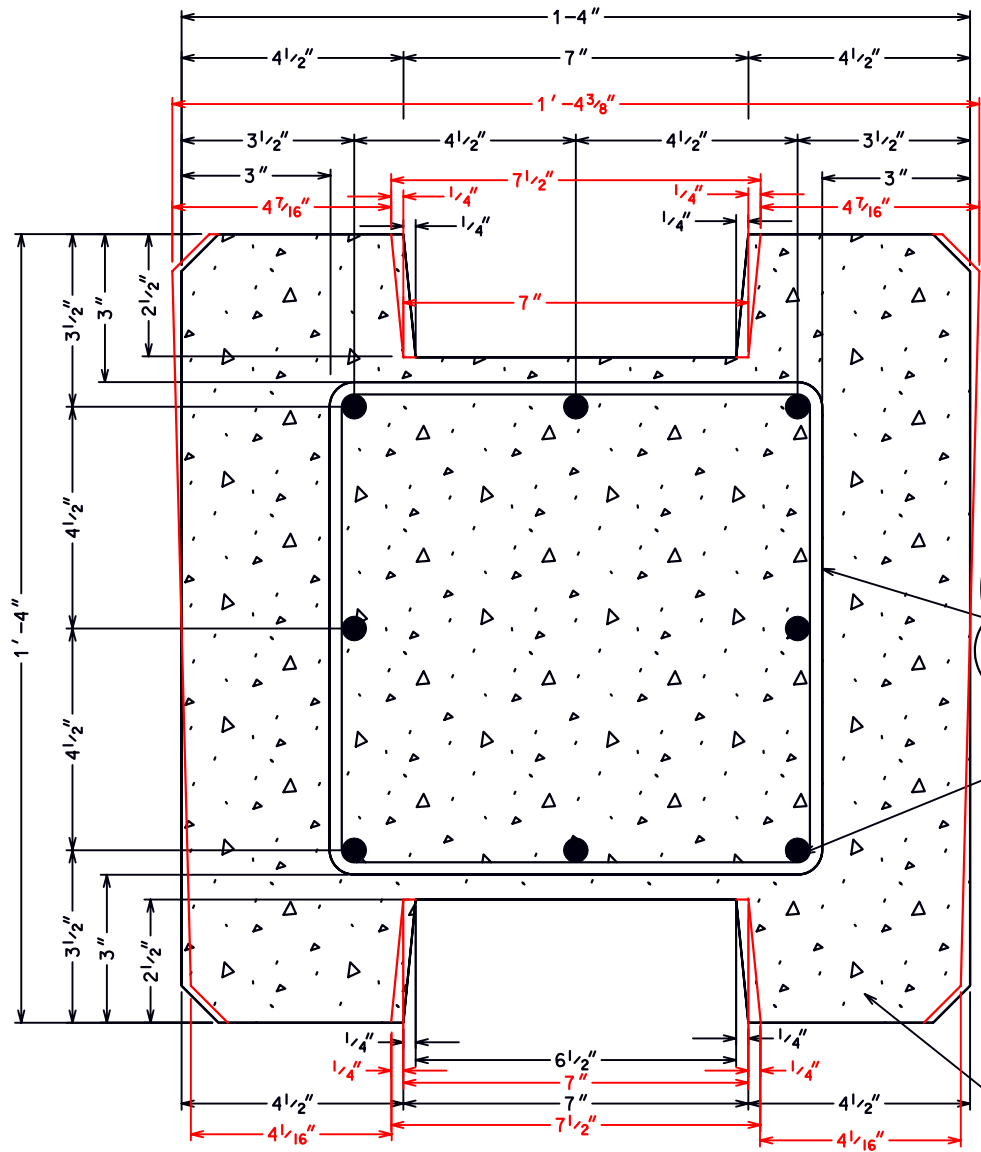
NOTE: ONE END OF EACH PANEL WAS GROUTED IN THE PILE NOTCH FROM THE TOP OF THE PANEL DOWN 2'-0". THE OPPOSITE END OF THE PANEL REMAINS UN-GROUTED. PANELS ARE GROUTED IN NOTCH ON ALTERNATE PILES. "FIVE STAR SPECIAL GROUT 120" WAS USED.

NOTE: CONCRETE REPAIR ON CHIPPED AREAS WAS MADE USING "SIKADUR 33" EPOXY.



TYPICAL SECTION "D" DETAILS		DATE	APPR.	TITLE
BARATARIA BASIN LANDBRIDGE PROJECT		4/99	Steve Garner	Approved by Ed Gierling III 5/99
BA-27 CONSTRUCTION UNIT 1		4/99	A.J. Gremillion	State Conservation Engineer
LAFOURCHE AND JEFFERSON PARISHES			Traced	Approved for Construction
LOUISIANA			Checked	
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE			James N. Moore	Title
CAD FILE NO.		LA302007		
DRAWING NO.		LA-302		
Sht. 07 of 12				





**CONCRETE PILE DETAIL**  
CROSS SECTION AT MID-POINT

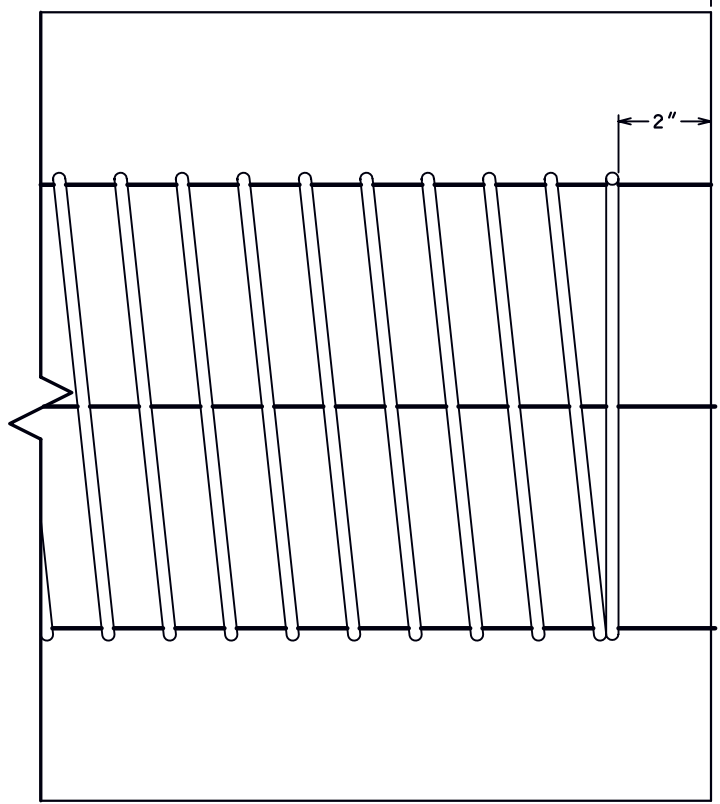
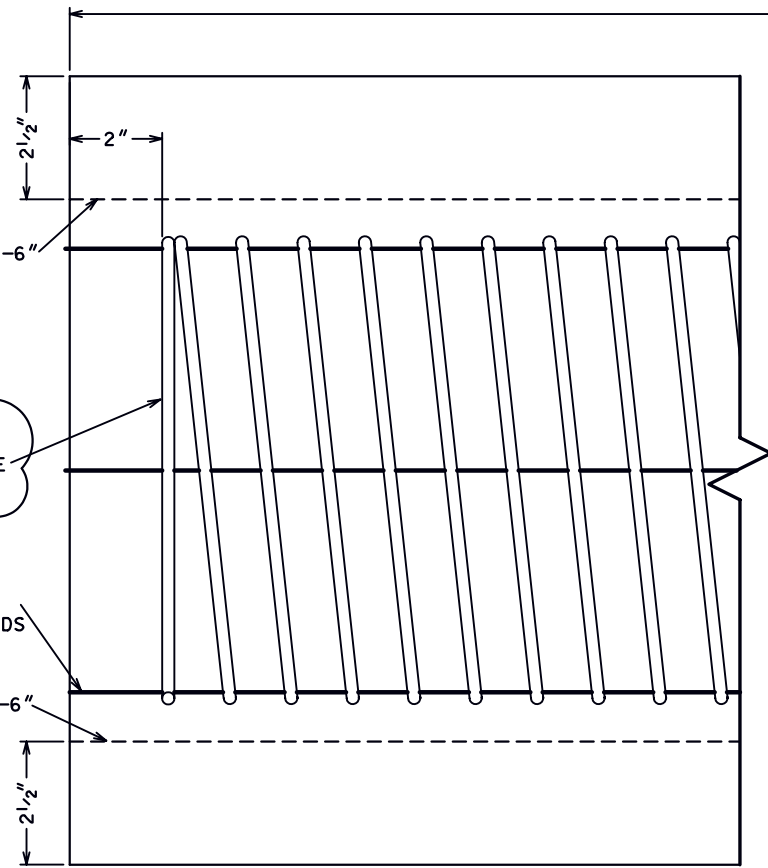
BLOCKOUT LENGTH= 6'-6"

AMENDMENT #3  
(W5) 1/4" SPIRAL WIRE  
@ 2" MAX. SPACING

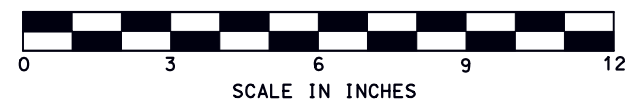
(8) 1/2" 270K L/R  
PRESTRESSED STRANDS

BLOCKOUT LENGTH= 6'-6"

6000 P.S.I. CONCRETE



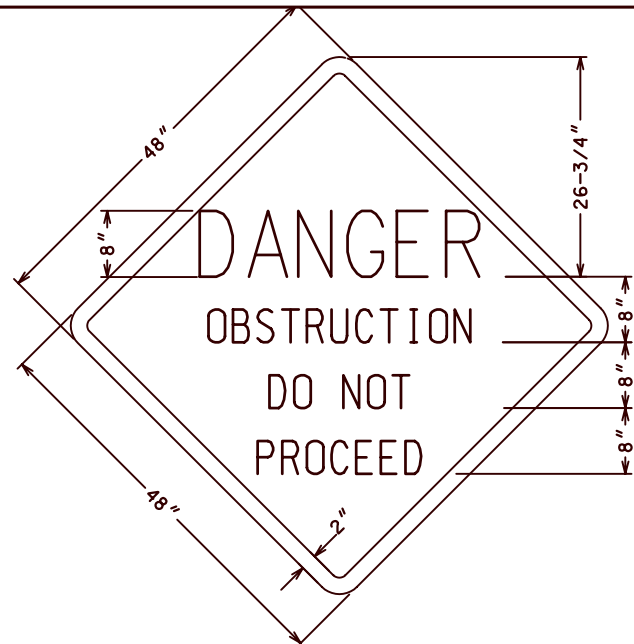
**CONCRETE PILE DETAIL**  
ELEVATION VIEW



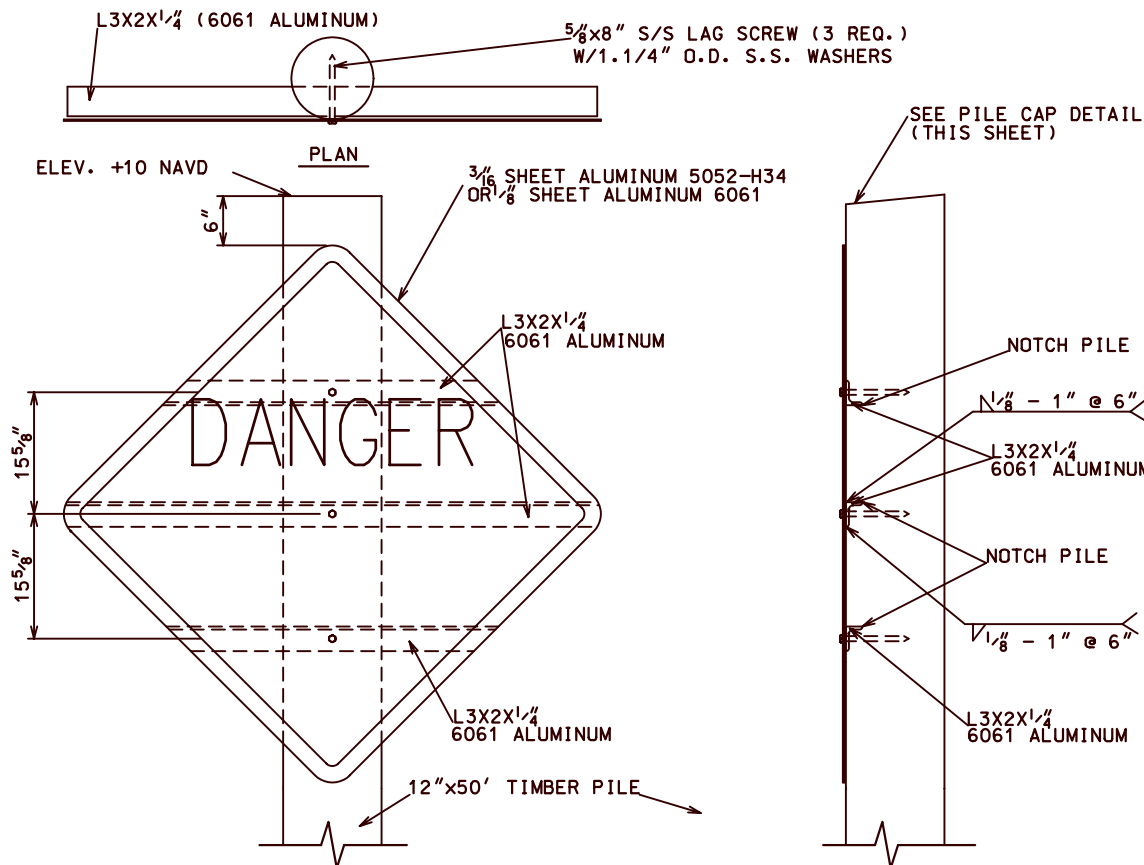
"AS-BUILT"

REVISIONS			TYPICAL SECTION "D" DETAILS			U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE	
NO.	DATE	APPR.	TITLE	DESIGNED BY	DATE	DATE	
AMEN 3	9/29/00	E.G.	ASTG/ES	L. Steve Garner	4/99	5/99	Approved by Ed Giering III 5/99
				Drawn A. J. Gremillion	4/99		Title Sheet Construction Engineer
				Traced			Title Sheet Construction Engineer
				Checked James N. Moore	5/99		Title Sheet Construction Engineer
CAD FILE NO.			BARATARIA BASIN LANDBRIDGE PROJECT				
LA302008			BA-27 CONSTRUCTION UNIT 1				
DRAWING NO.			LAFOURCHE AND JEFFERSON PARISHES				
LA-302			LOUISIANA				
Sht. 08 of 12							



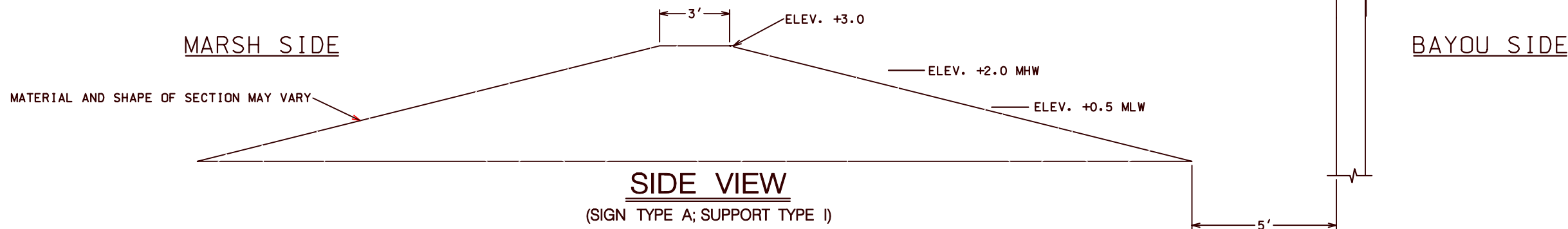


**SIGN DETAIL**  
(NOT TO SCALE)

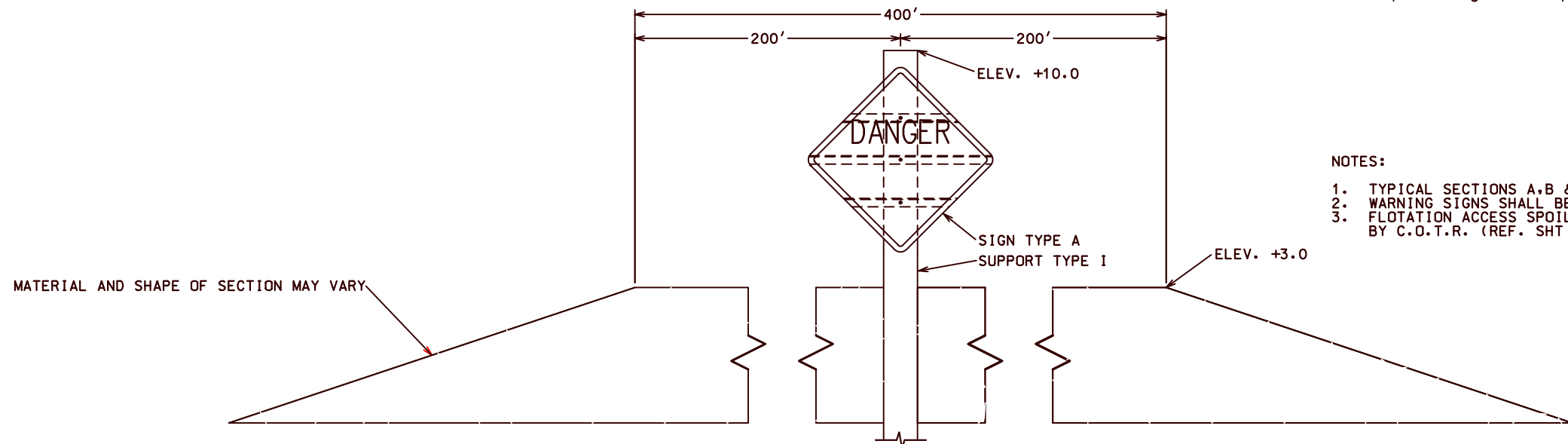


**ELEVATION VIEW**  
(SIGN TYPE A; SUPPORT TYPE I)

**SIDE VIEW**  
(SIGN TYPE A; SUPPORT TYPE I)



**SIDE VIEW**  
(SIGN TYPE A; SUPPORT TYPE I)



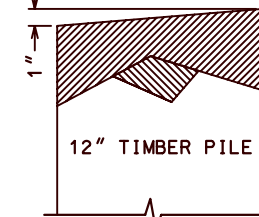
**ELEVATION VIEW**  
(SIGN TYPE A; SUPPORT TYPE I)

1. THE 2" BORDER ON THE TYPE "A" WARNING SIGN SHALL BE A REFLECTIVE MATERIAL OF ORANGE COLOR. THE LETTERING FIELD SHALL BE A RETRO-REFLECTIVE MATERIAL OF WHITE COLOR. THE LETTERING FOR THE WARNING SIGNS SHALL BE BLACK. WARNING SIGNS SHALL BE PLACED ON THE SIDE FACING THE BAYOU.

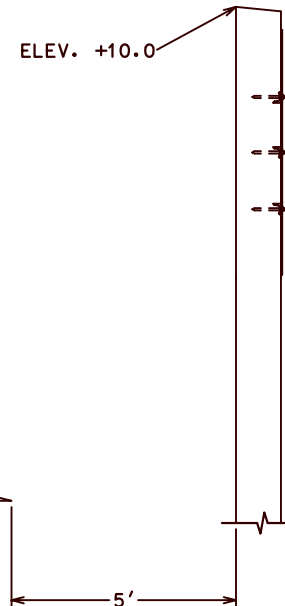
SITE NO.	SIGN TYPE	SUPPORT TYPE	NO. OF SIGNS
1	A	I	6
2	A	I	6

**"AS-BUILT"**

COAT TOP OF PILE WITH COAL TAR EPOXY PAINT  
PRIOR TO PLACING CAP  
24"x24"x.025" ALUMINUM FLASHING  
(ATTACH USING ALUMINUM OR STAINLESS STEEL NAILS)



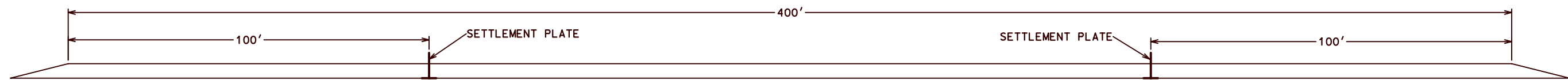
**TYPICAL TIMBER PILE CAP**  
(NOT TO SCALE)



**NOTES:**

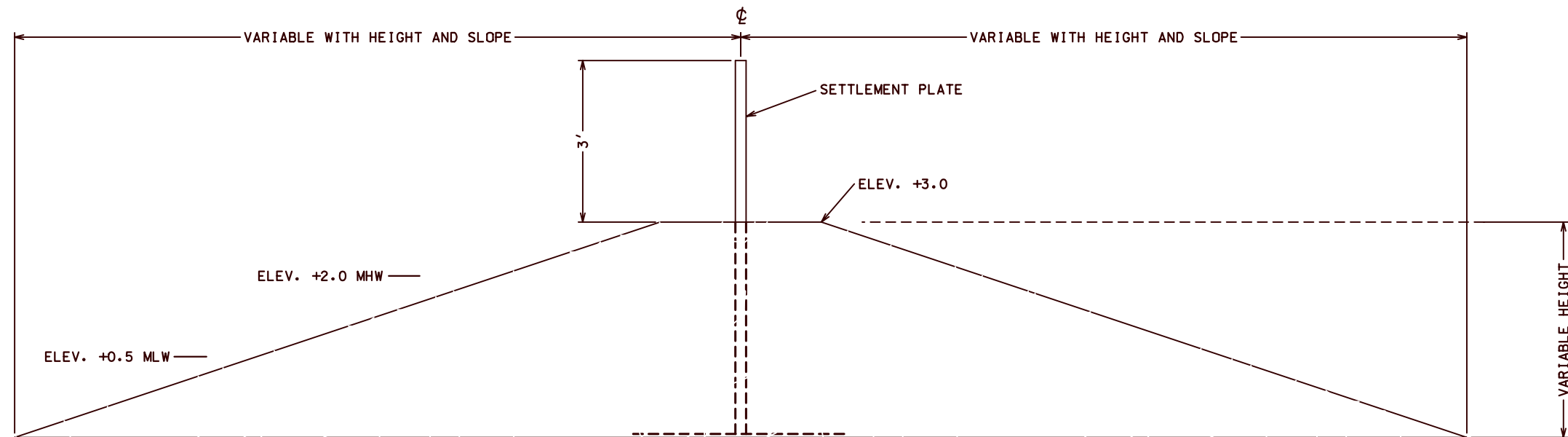
1. TYPICAL SECTIONS A,B & C WARNING SIGNS SHALL BE PLACED AS SHOWN.  
2. WARNING SIGNS SHALL BE PLACED 25' IN FRONT OF TYPICAL SECTION D.  
3. FLOTATION ACCESS SPOIL WARNING SIGNS SHALL BE PLACED AS DIRECTED BY C.O.T.R. (REF. SHT 12 OF 12)

Date	3/98	Approved by	F.J. GIERING, III	Title	STATE CONSERVATION ENGINEER	Location	ALEXANDRIA, LOUISIANA
Designed	L. Steve Garner	Drawn	A. J. Gremillion	Traced	James N. Moore	Checked	James N. Moore
<b>WARNING SIGN DETAILS</b> <b>BARATARIA BASIN LANDBRIDGE PROJECT</b> <b>BA-27 CONSTRUCTION UNIT 1</b> <b>LAFOURCHE AND JEFFERSON PARISHES</b> <b>LOUISIANA</b>							
<b>U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE</b>							
DATE	APPR.	TITLE					
CAD FILE NO.			LA302010				
DRAWING NO.			LA-302				
SHEET NO.			10 OF 12				

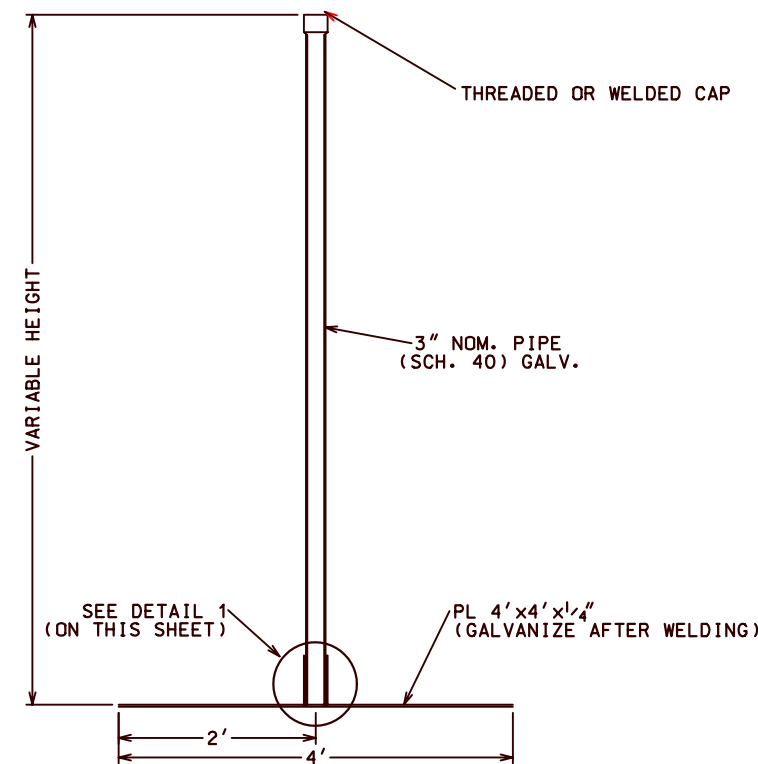


**TYPICAL LOCATION – TYPICAL SECTIONS A, B & C**  
NOT TO SCALE

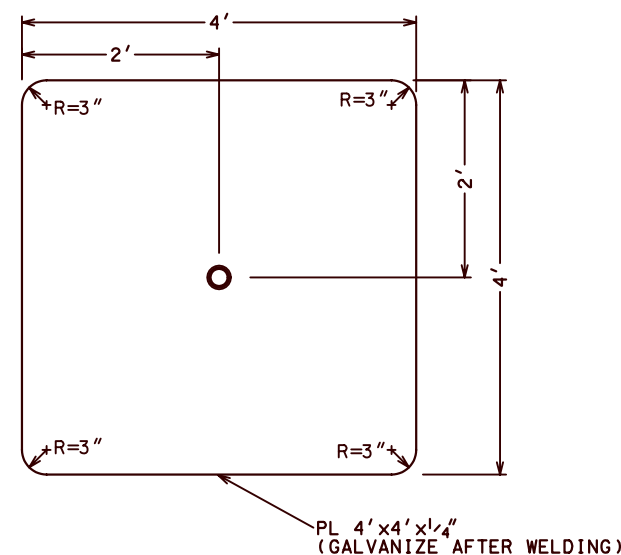
'AS-BUILT'



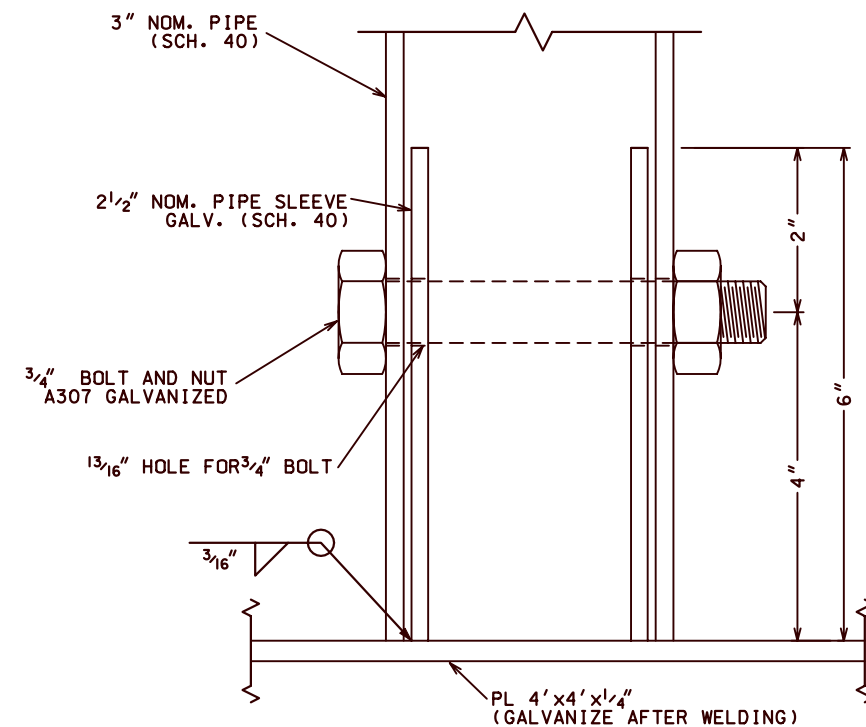
**TYPICAL ELEVATION – TYPICAL SECTION A, B & C**  
NOT TO SCALE



ELEVATION VIEW



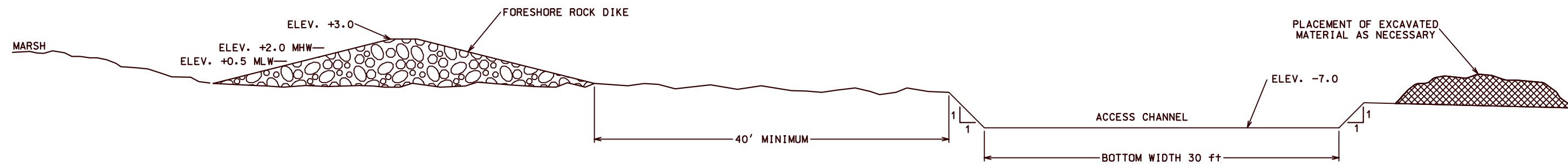
PLAN VIEW



**DETAIL 1 – 6"PIPE SLEEVE**  
(NOT TO SCALE)

**SETTLEMENT PLATE DETAILS**  
(NOT TO SCALE)

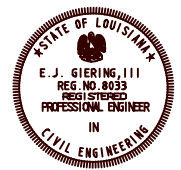
REVISIONS		SETTLEMENT PLATE DETAILS		Date	
DATE	APPR.	TITLE		Approved by	E. J. GEDING, III
				Title	STATE CONSERVATION ENGINEER
				Traced	ALEXANDRIA, LOUISIANA
				Checked	James N. Moore
				Date	3/98
				Designed by	L. Steve Garner
				Drawn by	A. J. Gremillion
				Traced	James N. Moore
				Checked	James N. Moore
				Date	4/98
CAD FILE NO.		BARATARIA BASIN LANDBRIDGE PROJECT		U.S. DEPARTMENT OF AGRICULTURE – NATURAL RESOURCES CONSERVATION SERVICE	
DRAWING NO.		BA-27 CONSTRUCTION UNIT 1			
SHEET NO. 11 OF 12		LA-302			



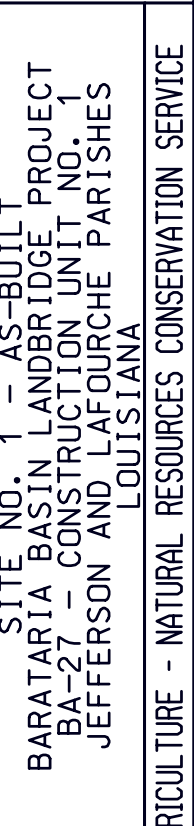
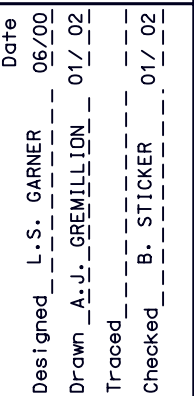
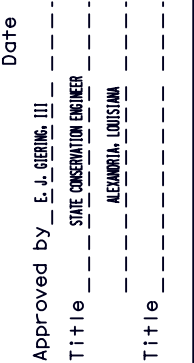
TYPICAL SECTION – ACCESS CHANNEL  
(NOT TO SCALE)

NOTES:

- 1. ALL ELEVATION SHOWN IN NAVD.
- 2. TOTAL LENGTH TO BE DETERMINED BY CONSTRUCTION LIMITS. (REF. SHT 4 & 5 OF 12)
- 3. EXCAVATED MATERIAL WILL BE PLACED IN OPEN WATER AREAS (NOT ON EXISTING EMERGENT MARSH).
- 4. FLOTATION ACCESS CHANNEL SPOIL SHALL BE PULLED BACK INTO THE ACCESS CHANNEL PRIOR TO FINAL INSPECTION.
- 5. FLOTATION ACCESS SPOIL WARNING SIGNS (REF. SHT. 10 OF 12) SHALL BE EVENLY SPACED APART AND BE PLACED AS DIRECTED BY THE COTR. UPON COMPLETION OF ALL PROJECT FEATURES THESE SIGNS SHALL BE SALVAGED IN THEIR ENTIRETY INCLUDING ROUND TIMBER PILE AND SHALL BE MOVED BY THE CONTRACTOR TO THE SALVAGE SITE AS DIRECTED BY THE COTR.



REVISIONS		ACCESS CHANNEL DETAILS		Designed L. Steve Garner		Date
DATE	APPR.	TITLE	BARATARIA BASIN LANDBRIDGE PROJECT	Drawn A. J. Gremillion	3/98	3/98
			BA-27 CONSTRUCTION UNIT 1	Traced		
			LAFOURCHE AND JEFFERSON PARISHES	Checked James N. Moore		
			LOUISIANA			
			U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE			
CAD FILE NO.		Approved by E.J. GIERING, III		Title		Date
LA302012		STATE CONSERVATION ENGINEER		ALEXANDRIA, LOUISIANA		
DRAWING NO.						
LA-302						
SHEET NO 12 OF 12						



STA. 18+59 - WARNING SIGN #6  
ELEV. TOP OF SIGN 9.52  
ELEV. TOP OF PILE 10.02

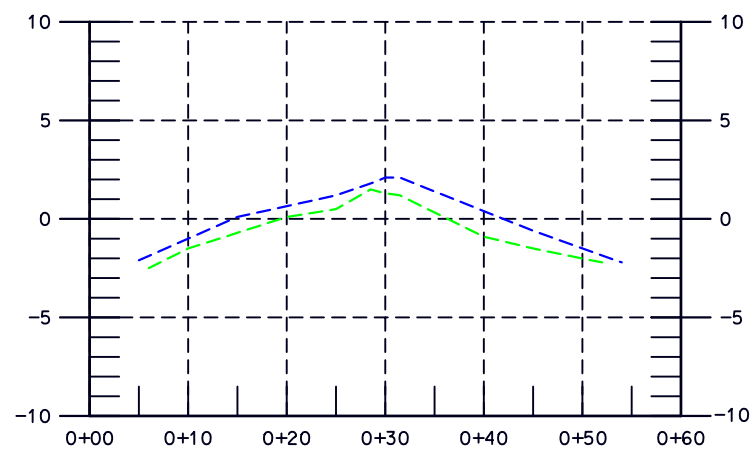
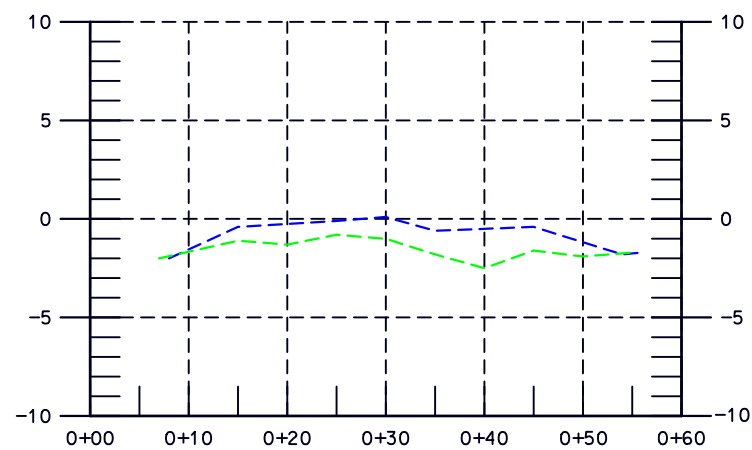
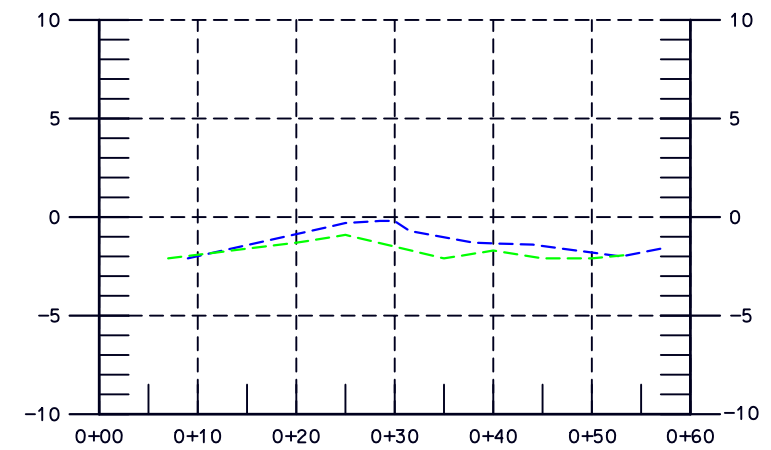
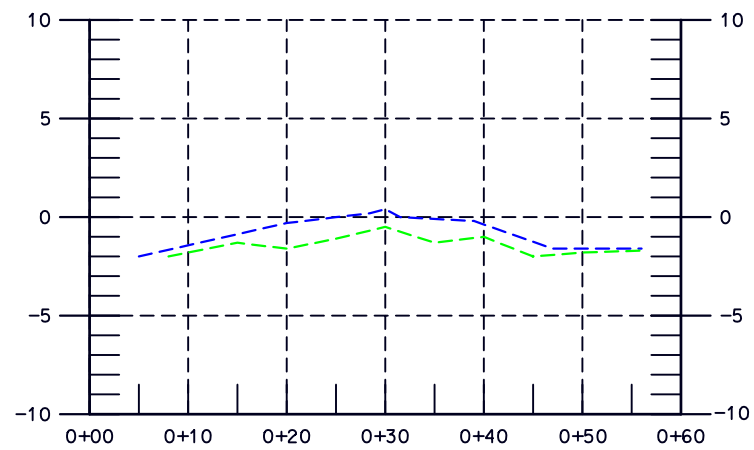
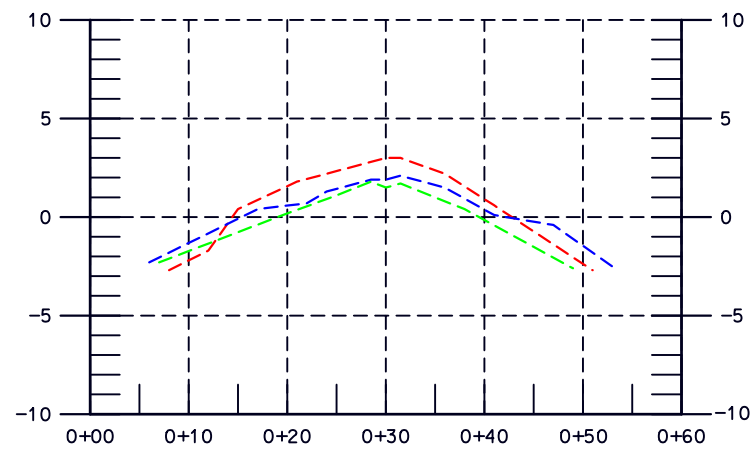
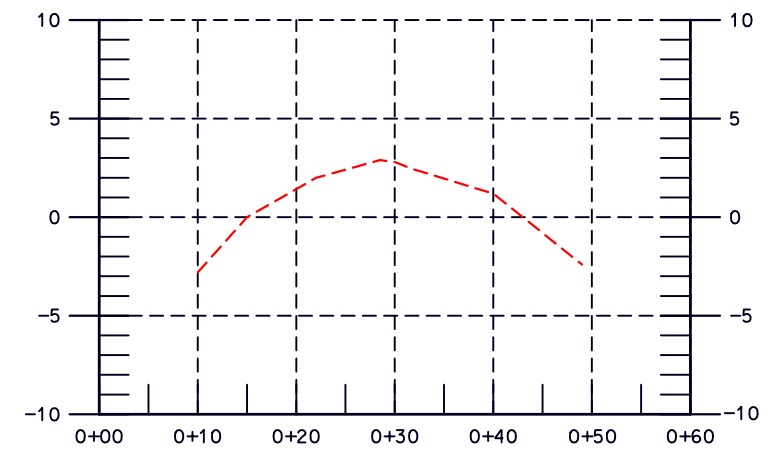
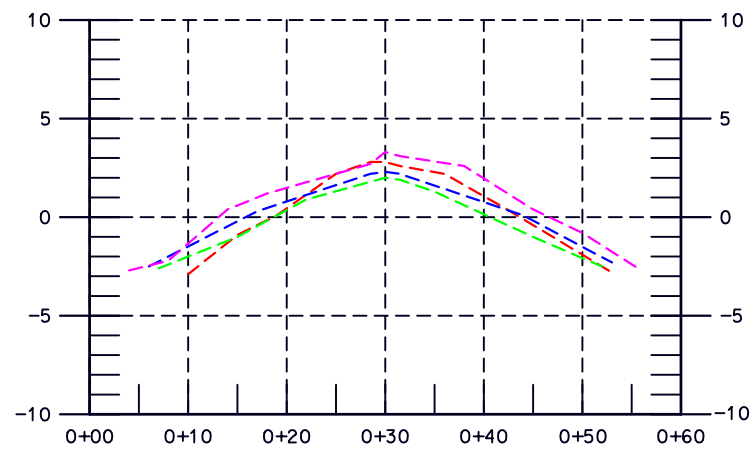
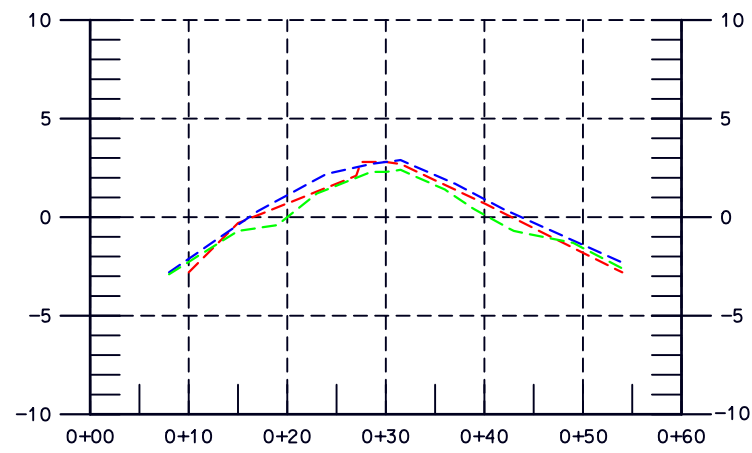
STA. 16+60 - WARNING SIGN #5  
ELEV. TOP OF SIGN 9.95  
ELEV. TOP OF PILE 10.02

STA. 14+60




PANEL #13	STA. 15+96	ELEV. @ PILE #13 = +2.97 ELEV. @ PILE #14 = +2.96
PANEL #14	STA. 15+75	ELEV. @ PILE #14 = +3.00 ELEV. @ PILE #15 = +2.89
PANEL #15	STA. 15+54	ELEV. @ PILE #15 = +2.88 ELEV. @ PILE #16 = +2.96
PANEL #16	STA. 15+33	ELEV. @ PILE #16 = +2.91 ELEV. @ PILE #17 = +2.88
PANEL #17	STA. 15+12	ELEV. @ PILE #17 = +2.90 ELEV. @ PILE #18 = +3.00
PANEL #18	STA. 14+91	ELEV. @ PILE #18 = +3.01 ELEV. @ PILE #19 = +2.99
PANEL #19	STA. 14+70	ELEV. @ PILE #19 = +3.00 ELEV. @ PILE #20 = +3.00






- - - - - CROSS SECTIONS TAKEN 1/18/2001  
 - - - - - CROSS SECTIONS TAKEN 1/24/2001 (AFTER FAILURE)  
 - - - - - CROSS SECTIONS TAKEN 2/14/2001 (AFTER FAILURE SETTLEMENT)  
 - - - - - CROSS SECTIONS TAKEN 2/15/2001 (CONSTRUCTION CHECK)



ELEV. ON TOP OF PIPE AT STA. 1+35:

+9.80	DATE: 1/11/2001 (PLATE PLACED ON GEOTEXTILE)
+8.91	DATE: 1/18/2001
+7.36	DATE: 1/24/2001
+6.90	DATE: 2/14/2001



ELEV. ON TOP OF PIPE AT STA. 3+35:  
+9.20 DATE: 1/15/2001 (PLATE PLACED ON GEOTEXTILE)  
+1.90 DATE: 1/24/2001 ???????  
+1.16 DATE: 2/14/2001 ???????

NO.	DATE	APPR.	TITLE

U.S. DEPARTMENT OF AGRICULTURE

AD FILENAME  
LA302012A2

PROJECT NO.  
LA302

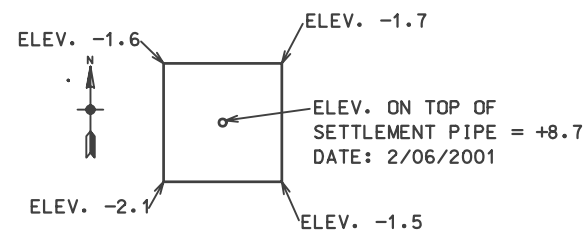
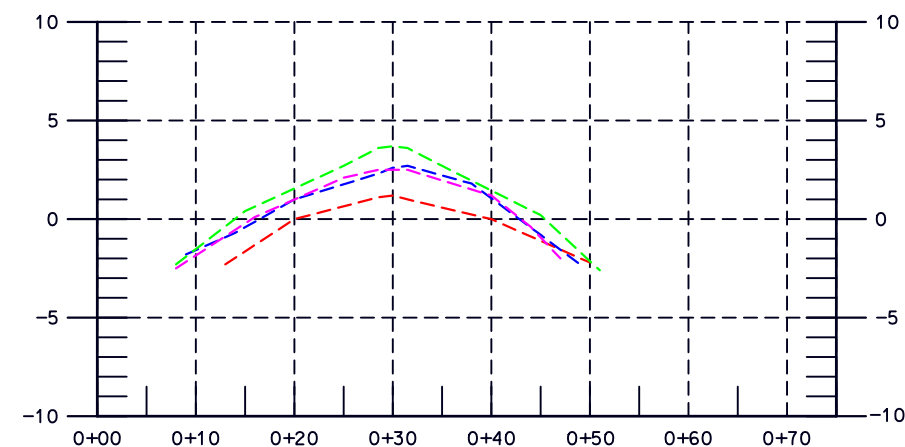
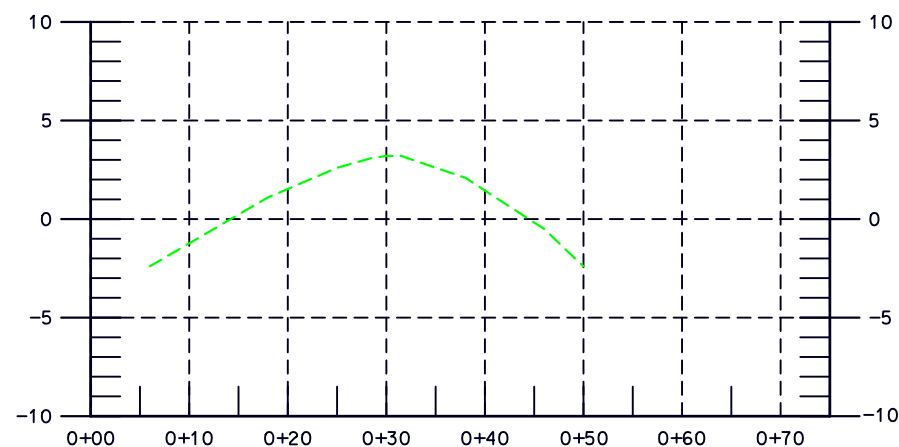
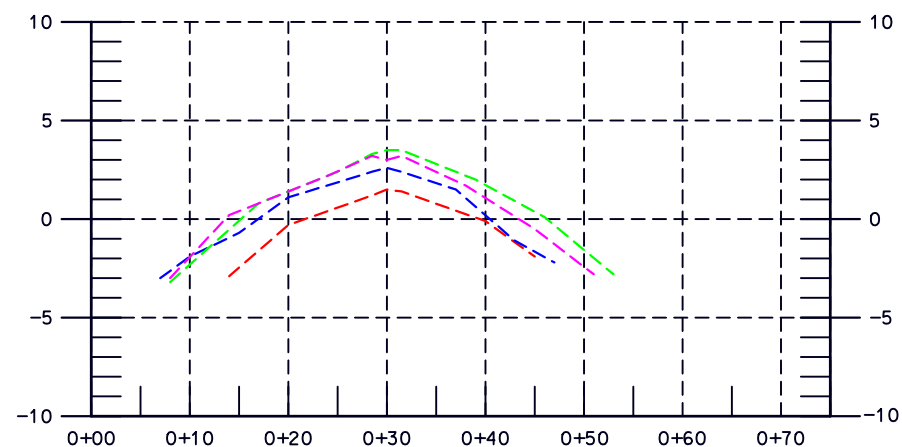
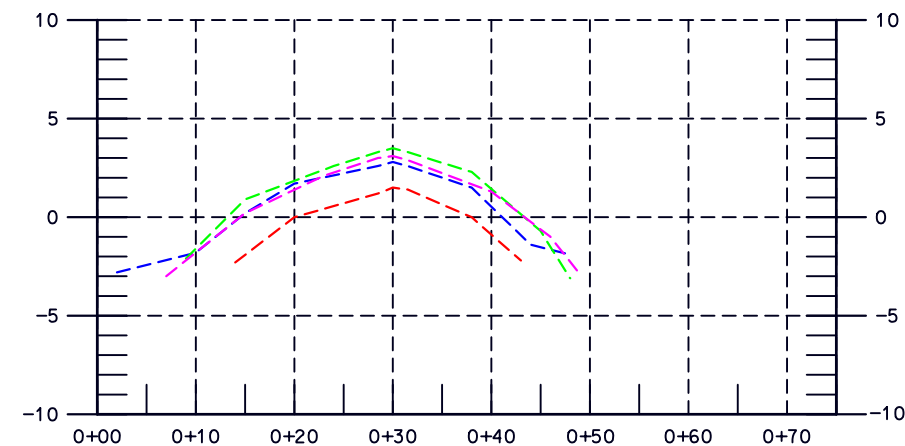
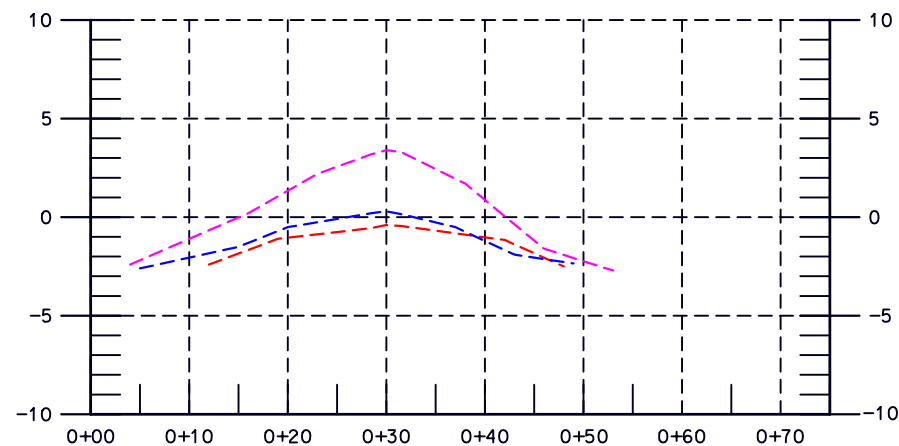
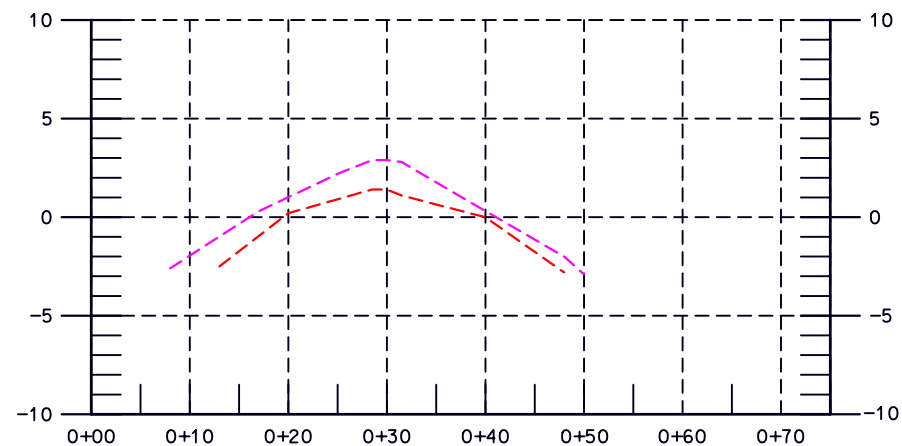
SHEET NO 12A2 OF 12

BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 - CONSTRUCTION UNIT NO. 1  
JEFFERSON AND LAFOURCHE PARISHES  
LOUISIANA

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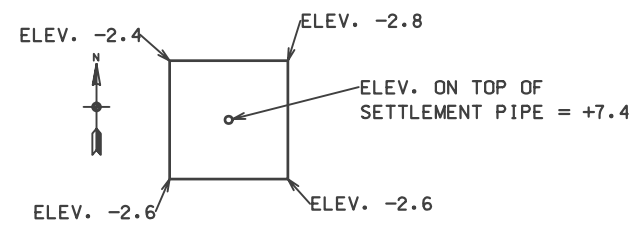
Designed L. S. GARNER 06/00  
 Drawn A. J. GREWILLION 01/02  
 Traced \_\_\_\_\_  
 Checked B. STICKER 01/02

Approved by E. J. GIERING, III  
 Title STATE CONSERVATION ENGINEER  
ALEXANDRIA, LOUISIANA  
 Title \_\_\_\_\_



NOTE: ELEVATIONS ARE PRIOR TO PLACING LIGHTWEIGHT AGGREGATE.

ELEV. ON TOP OF PIPE AT STA. 6+10:  
+1.60 DATE: 2/08/2001  
+7.60 DATE: 2/14/2001  
+7.48 DATE: 2/21/2001  
+6.68 DATE: 3/29/2001  
+6.64 DATE: 4/27/2001



NOTE: ELEVATIONS ARE PRIOR TO PLACING LIGHTWEIGHT AGGREGATE.

ELEV. ON TOP OF PIPE AT STA. 8+10:  
+1.50 DATE: 2/08/2001  
+6.18 DATE: 2/14/2001  
+5.57 DATE: 2/21/2001  
+4.85 DATE: 3/29/2001  
+4.78 DATE: 4/27/2001

## "AS-BUILT"

- CROSS SECTIONS TAKEN 2/08/2001 (LIGHT WEIGHT AGGREGATE PLACEMENT)  
 ---- CROSS SECTIONS TAKEN 2/14/2001 (FIRST LIFT OF 400# ROCK)  
 ---- CROSS SECTIONS TAKEN 2/16/2001 (SECOND LIFT OF 400# ROCK)  
 ---- CROSS SECTIONS TAKEN 2/21/2001 (FINAL CONSTRUCTION CHECK)

[illegible]

CAD FILENAME  
LA302012A3

PROJECT NO.  
LA302

SHEET NO 12A3 OF 12

SITE NO. 1 - AS-BUILT  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 - CONSTRUCTION UNIT NO. 1  
JEFFERSON AND LAFOURCHE PARISHES  
LOUISIANA

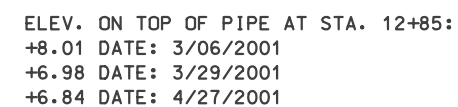
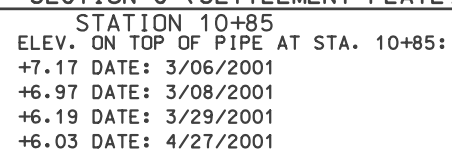
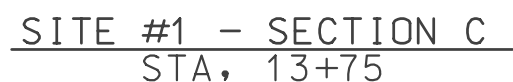
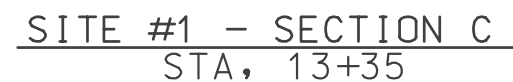
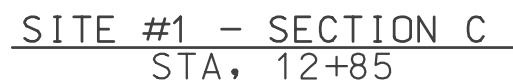
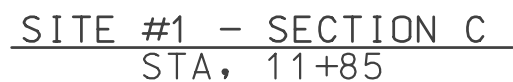
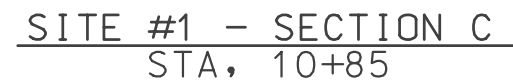
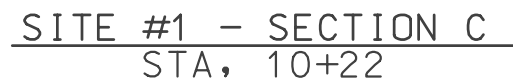
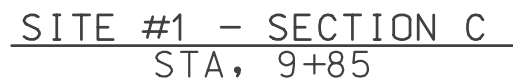
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

	Date
Designed L.S. GARNER	06/00
Drawn A.J. GREMILLION	01/02
Traced	
Checked B. STICKER	01/02

Approved by E. J. GIERING, III  
STATE CONSERVATION ENGINEER  
ALEXANDRIA, LOUISIANA

Date \_\_\_\_\_





## "AS-BUILT"

[illegible]

LA302

SHEET NO 12A4 OF 12

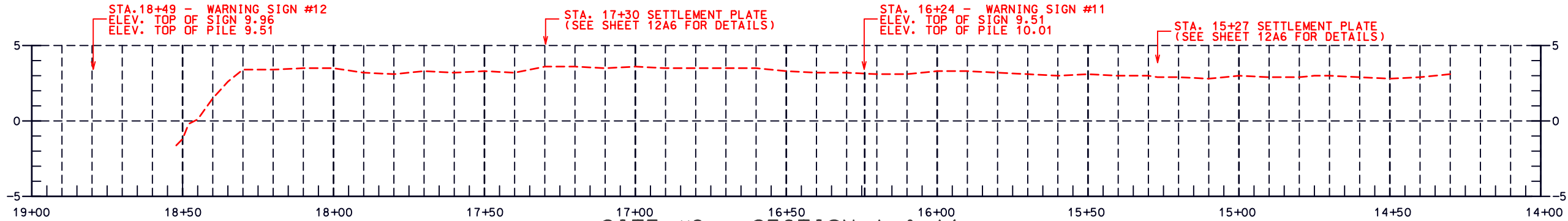
SITE NO. 1 - AS-BUILT  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 - CONSTRUCTION UNIT NO. 1  
JEFFERSON AND LAFOURCHE PARISHES  
LOUISIANA

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

	Date
Designed L.S. GARNER	06/00
Drawn A.J. GREMILLION	01/02
Traced	
Checked B. STICKER	01/02

Approved by E. J. GIERING, III  
STATE CONSERVATION ENGINEER  
ALEXANDRIA, LOUISIANA

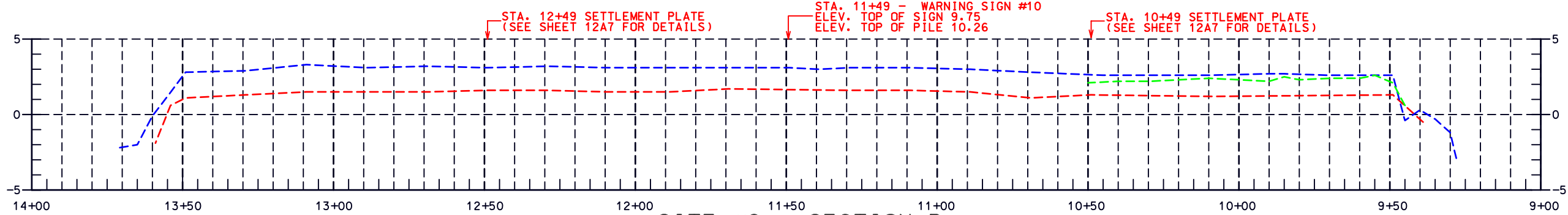
Date \_\_\_\_\_



SITE #2 - SECTION A & A1  
PROFILE ALONG CENTERLINE

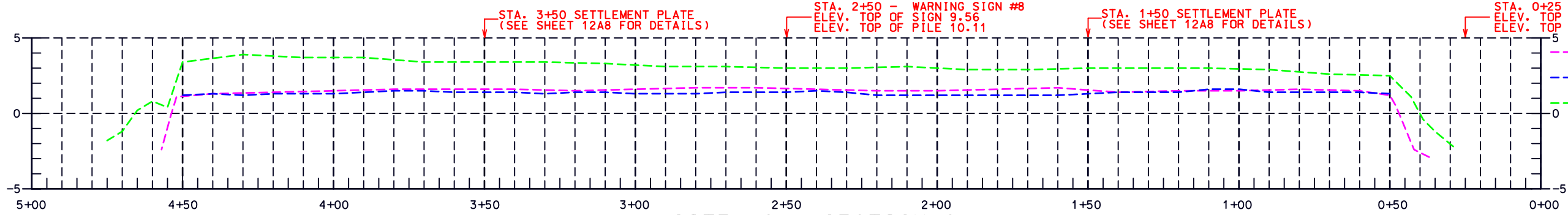
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(FINAL CHECK)

"AS-BUILT"



SITE #2 - SECTION B  
PROFILE ALONG CENTERLINE

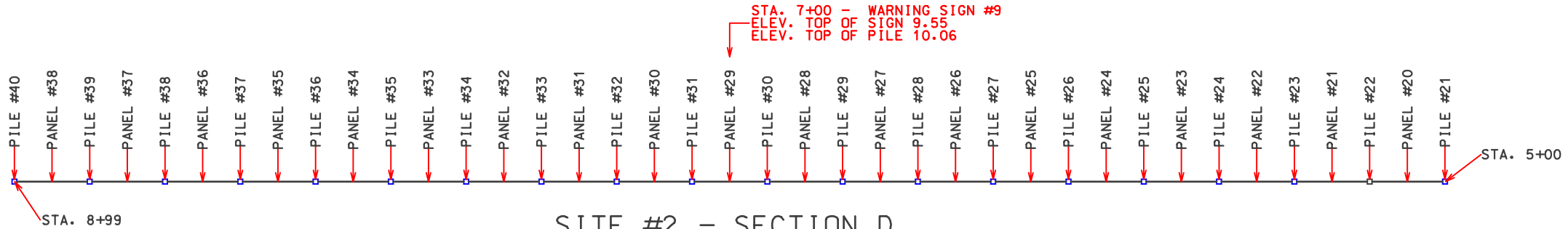
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(LIGHTWEIGHT AGGREGATE)  
--- PROFILE TAKEN 3/22/2001  
(FINAL CHECK 400# RIPRAP)  
--- PROFILE TAKEN 3/30/2001  
(FINAL CHECK 400# RIPRAP)



SITE #2 - SECTION C  
PROFILE ALONG CENTERLINE

--- PROFILE TAKEN 3/02/2001  
(RIPRAP FURROW)  
--- PROFILE TAKEN 3/09/2001  
(LIGHTWEIGHT AGGREGATE)  
--- PROFILE TAKEN 3/15/2001  
(FINAL CHECK)

PILE #21	STA. 5+00	ELEV. +3.32
PILE #22	STA. 5+21	ELEV. +3.38
PILE #23	STA. 5+42	ELEV. +3.39
PILE #24	STA. 5+63	ELEV. +3.36
PILE #25	STA. 5+84	ELEV. +3.42
PILE #26	STA. 6+05	ELEV. +3.41
PILE #27	STA. 6+26	ELEV. +3.40
PILE #28	STA. 6+47	ELEV. +3.40
PILE #29	STA. 6+68	ELEV. +3.41
PILE #30	STA. 6+89	ELEV. +3.47
PILE #31	STA. 7+10	ELEV. +3.45
PILE #32	STA. 7+31	ELEV. +3.44
PILE #33	STA. 7+52	ELEV. +3.37
PILE #34	STA. 7+73	ELEV. +3.38
PILE #35	STA. 7+94	ELEV. +3.36
PILE #36	STA. 8+15	ELEV. +3.37
PILE #37	STA. 8+36	ELEV. +3.37
PILE #38	STA. 8+57	ELEV. +3.36
PILE #39	STA. 8+78	ELEV. +3.37
PILE #40	STA. 8+99	ELEV. +3.36



SITE #2 - SECTION D  
PLAN VIEW

PANEL #20	STA. 5+11	ELEV. @ PILE #1 = +2.78 ELEV. @ PILE #2 = +2.84 ELEV. @ PILE #2 = +2.87 ELEV. @ PILE #3 = +2.88
PANEL #21	STA. 5+32	ELEV. @ PILE #3 = +2.81 ELEV. @ PILE #4 = +2.87 ELEV. @ PILE #4 = +2.86 ELEV. @ PILE #5 = +2.87
PANEL #22	STA. 5+53	ELEV. @ PILE #5 = +2.91 ELEV. @ PILE #6 = +2.87 ELEV. @ PILE #6 = +2.94 ELEV. @ PILE #7 = +2.91
PANEL #23	STA. 5+74	
PANEL #24	STA. 5+95	
PANEL #25	STA. 6+16	

PANEL #26	STA. 6+37	ELEV. @ PILE #7 = +2.81 ELEV. @ PILE #8 = +2.91 ELEV. @ PILE #8 = +2.86 ELEV. @ PILE #9 = +2.86
PANEL #27	STA. 6+58	ELEV. @ PILE #9 = +2.92 ELEV. @ PILE #10 = +3.00 ELEV. @ PILE #10 = +2.95 ELEV. @ PILE #11 = +2.94
PANEL #28	STA. 6+79	ELEV. @ PILE #11 = +2.96 ELEV. @ PILE #12 = +2.92 ELEV. @ PILE #12 = +2.96 ELEV. @ PILE #13 = +2.89
PANEL #29	STA. 7+00	
PANEL #30	STA. 7+21	
PANEL #31	STA. 7+42	

PANEL #32	STA. 7+63	ELEV. @ PILE #13 = +2.85 ELEV. @ PILE #14 = +2.87 ELEV. @ PILE #14 = +2.85 ELEV. @ PILE #15 = +2.83
PANEL #33	STA. 7+84	ELEV. @ PILE #15 = +2.84 ELEV. @ PILE #16 = +2.85 ELEV. @ PILE #16 = +2.89 ELEV. @ PILE #17 = +2.89
PANEL #34	STA. 8+05	ELEV. @ PILE #17 = +2.86 ELEV. @ PILE #18 = +2.87 ELEV. @ PILE #18 = +2.86 ELEV. @ PILE #19 = +2.81
PANEL #35	STA. 8+26	ELEV. @ PILE #19 = +2.86 ELEV. @ PILE #20 = +2.86
PANEL #36	STA. 8+47	
PANEL #37	STA. 8+68	
PANEL #38	STA. 8+89	

Date	Approved by	Title
	E. J. GIERING, III	STATE CONSERVATION ENGINEER
		ALEXANDRIA, LOUISIANA

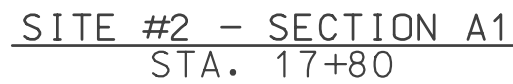
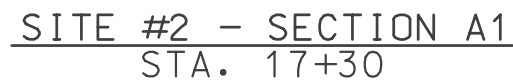
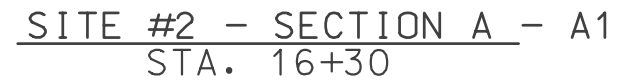
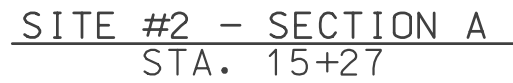
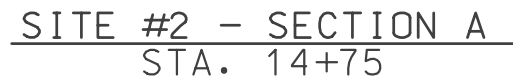
Date	Designed	Drawn	Traced	Checked
06/00	L. S. GARNER	A. J. GREMILLION	B. STICKER	01/02

SITE NO. 2 - AS-BUILT
BARATARIA BASIN LANDBRIDGE PROJECT
BA-27 - CONSTRUCTION UNIT NO. 1
JEFFERSON AND LAFOURCHE PARISHES
LOUISIANA

REVISIONS	NO.	DATE	APPR.	TITLE

CAD FILENAME	LA302012A5
PROJECT NO.	LA302
SHEET NO	12A5 OF 12

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

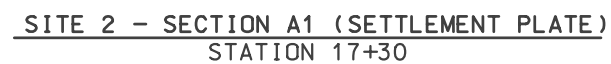


## "AS-BUILT"

----- CROSS SECTIONS TAKEN 3/02/2001 (CONSTRUCTION CHECK)



ELEV. ON TOP OF PIPE AT STA. 15+27:  
+6.16 DATE: 3/02/2001  
+5.78 DATE: 3/05/2001  
+5.60 DATE: 3/09/2001



ELEV. ON TOP OF PIPE AT STA. 17+30:  
+9.96 DATE: 3/02/2001  
+9.52 DATE: 3/05/2001  
+9.30 DATE: 3/09/2001

[illegible]

CAD FILENAME  
LA302012A6

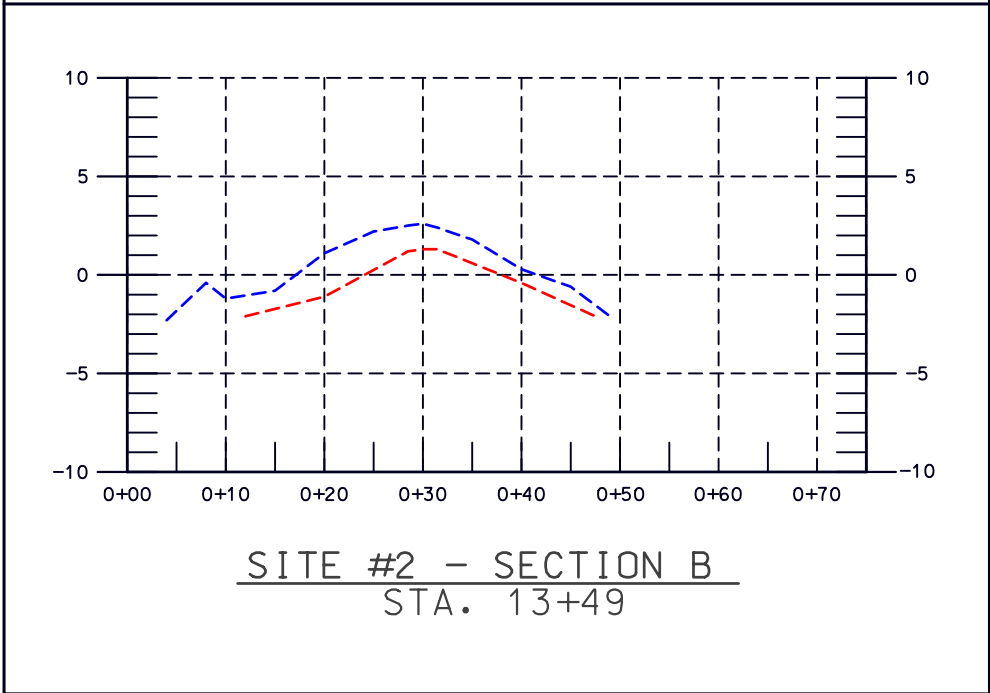
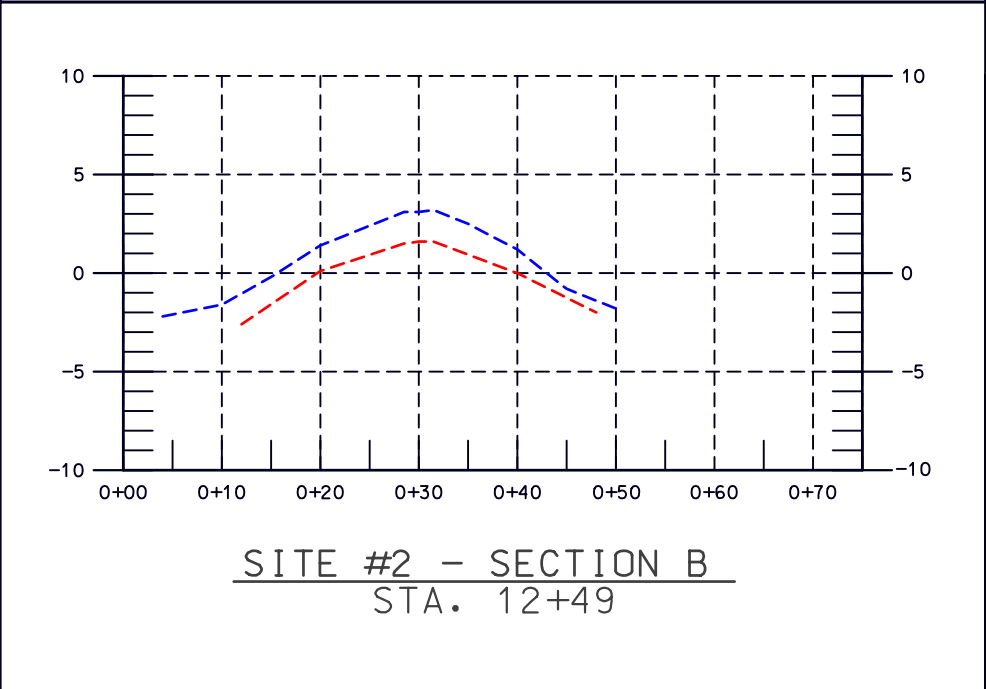
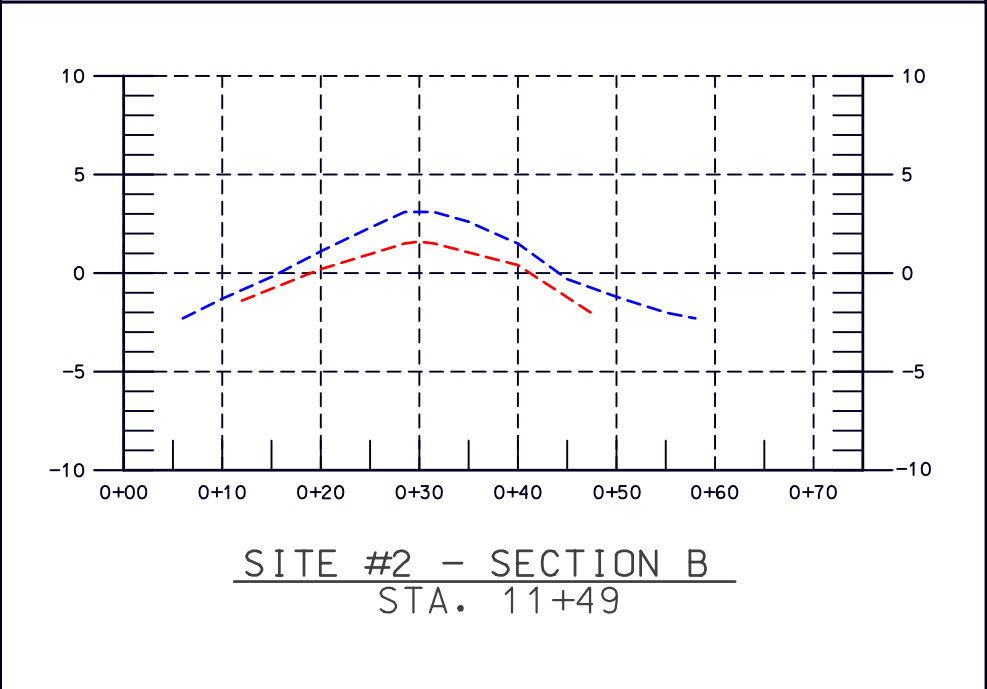
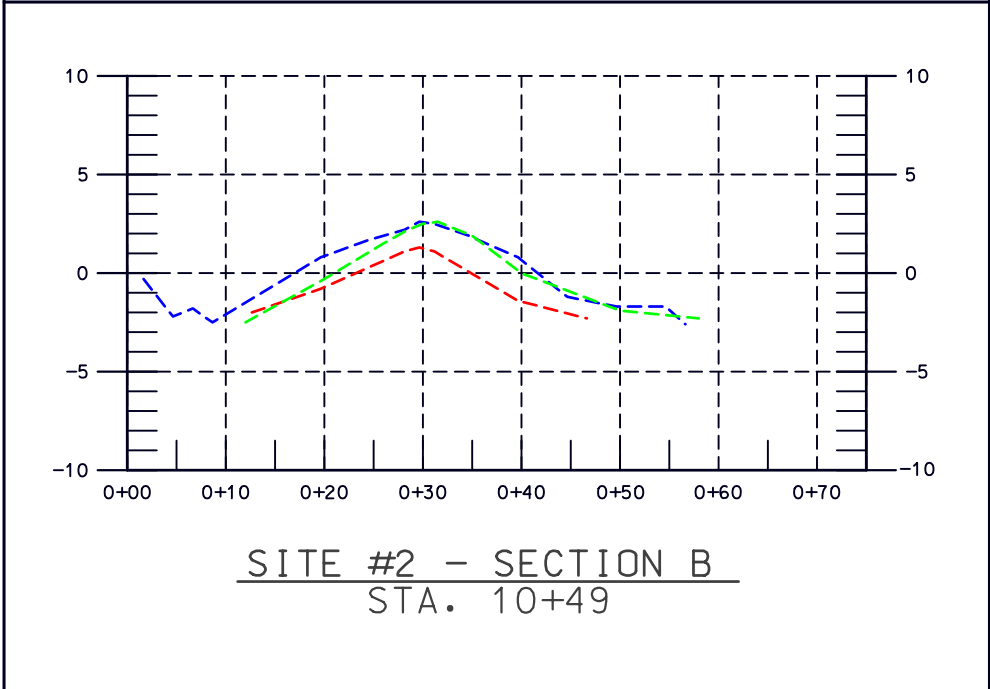
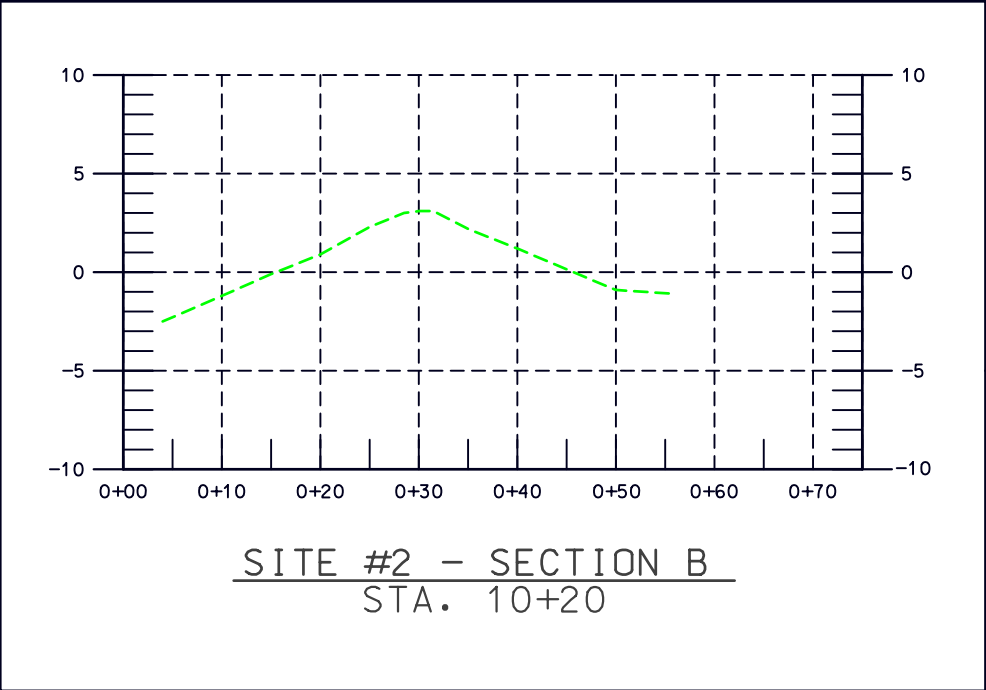
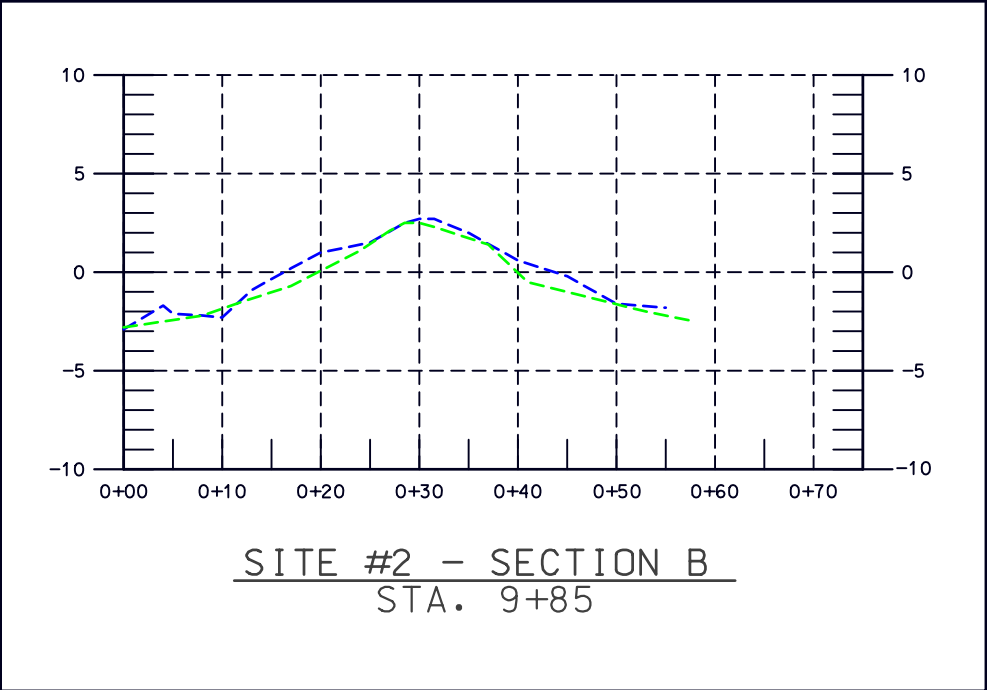
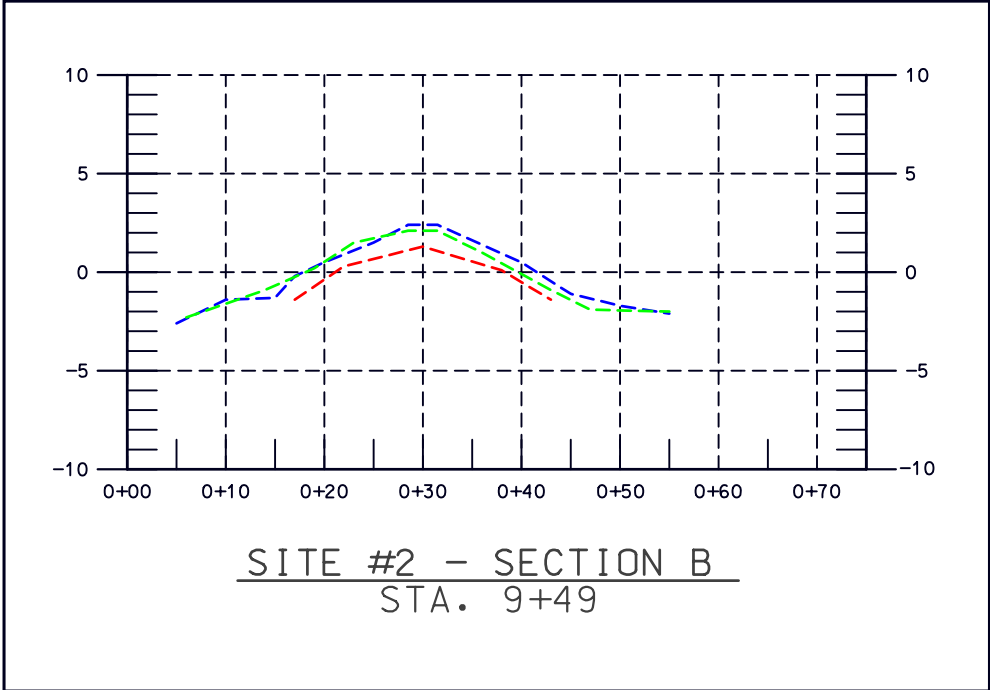
PROJECT NO.

LA302  
SHEET NO 12A6 OF 12

SITE NO. 2 - AS-BUILT  
BARATARIA BASIN LAMPBRIDGE PROJECT  
BA-27 - CONSTRUCTION UNIT NO. 1  
JEFFERSON AND LAFOURCHE PARISHES  
LOUISIANA

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

Designed	L.S. GARNER	06/00	Approved by	E. J. GIERING, III
Drawn	A.J. GREMILLION	01/02	Title	STATE CONSERVATION ENGINEER
Traced				ALEXANDRIA, LOUISIANA
Checked	B. STICKER	01/02	Title	



**"AS-BUILT"**

ELEV. ON TOP OF  
SETTLEMENT PIPE = +7.60  
DATE: 3/16/2001

**SITE 2 - SECTION B (SETTLEMENT PLATE)**  
STATION 10+49

ELEV. ON TOP OF PIPE AT STA. 10+49  
+7.08 DATE: 3/22/2001  
+6.76 DATE: 3/30/2001  
+6.55 DATE: 4/27/2001

ELEV. ON TOP OF  
SETTLEMENT PIPE = +7.37  
DATE: 3/16/2001

**SITE 2 - SECTION B (SETTLEMENT PLATE)**  
STATION 12+49

ELEV. ON TOP OF PIPE AT STA. 12+49  
+6.80 DATE: 3/22/2001  
+6.56 DATE: 3/30/2001  
+6.32 DATE: 4/27/2001

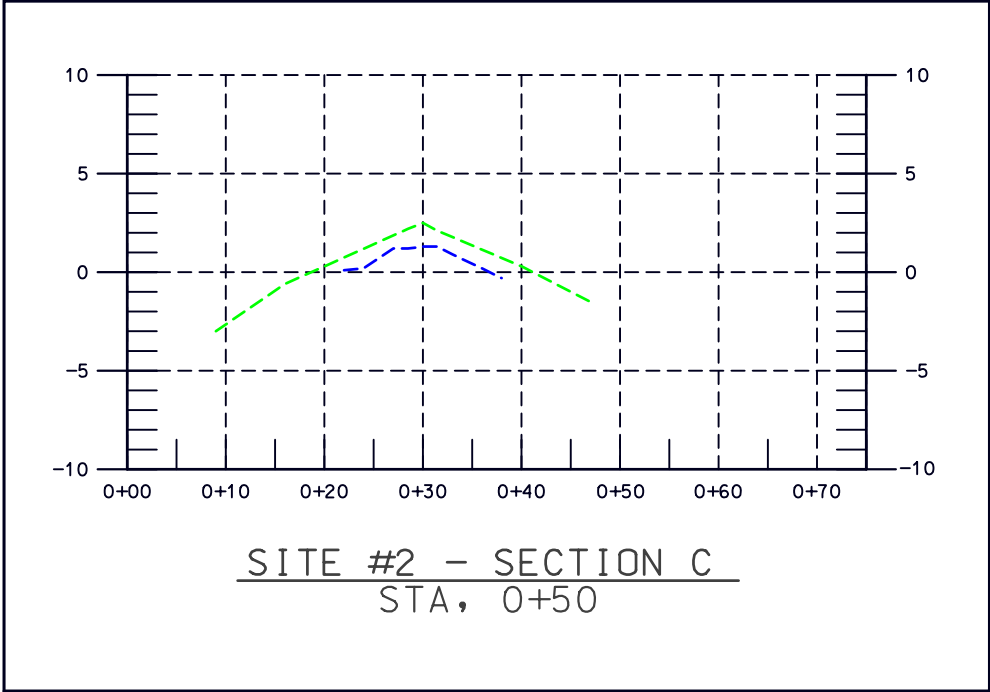
--- CROSS SECTIONS TAKEN 3/16/2001 (FINAL CHECK ON LIGHTWEIGHT AGGREGATE)

--- CROSS SECTIONS TAKEN 3/22/2001 (FINAL CHECK ON 400# ROCK)

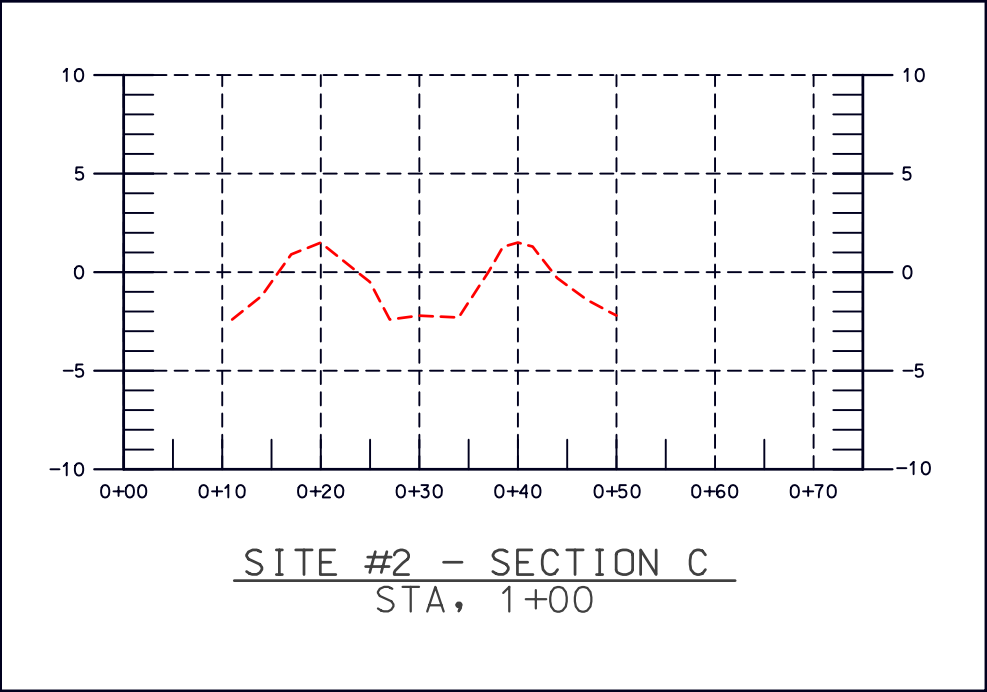
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\\AS-BUILT\LA302012A7.dgn Mar 06, 2002 16:02:10

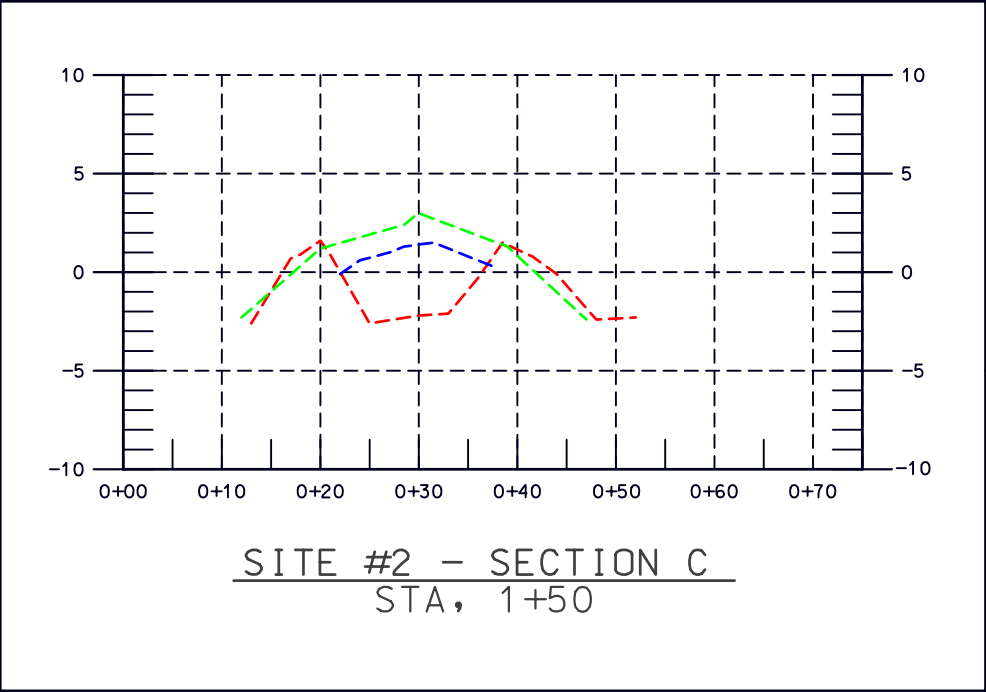
Date				Date			
Approved by				Approved by			
E. J. GIERING, III				E. J. GIERING, III			
Title				Title			
STATE CONSERVATION ENGINEER				STATE CONSERVATION ENGINEER			
ALEXANDRIA, LOUISIANA				ALEXANDRIA, LOUISIANA			
Date				Date			
06/00				06/00			
Designed				Designed			
L. S. GARNER				L. S. GARNER			
Drawn				Drawn			
A. J. GREMILLION				A. J. GREMILLION			
01/02				01/02			
Traced				Traced			
B. STICKER				B. STICKER			
01/02				01/02			
Checked				Checked			
SITE NO. 2 - AS-BUILT				SITE NO. 2 - AS-BUILT			
BARATARIA BASIN LANDBRIDGE PROJECT				BARATARIA BASIN LANDBRIDGE PROJECT			
BA-27 - CONSTRUCTION UNIT NO. 1				BA-27 - CONSTRUCTION UNIT NO. 1			
JEFFERSON AND LAFOURCHE PARISHES				JEFFERSON AND LAFOURCHE PARISHES			
LOUISIANA				LOUISIANA			
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE				U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE			
REVISIONS				REVISIONS			
NO. DATE APPR. TITLE				NO. DATE APPR. TITLE			



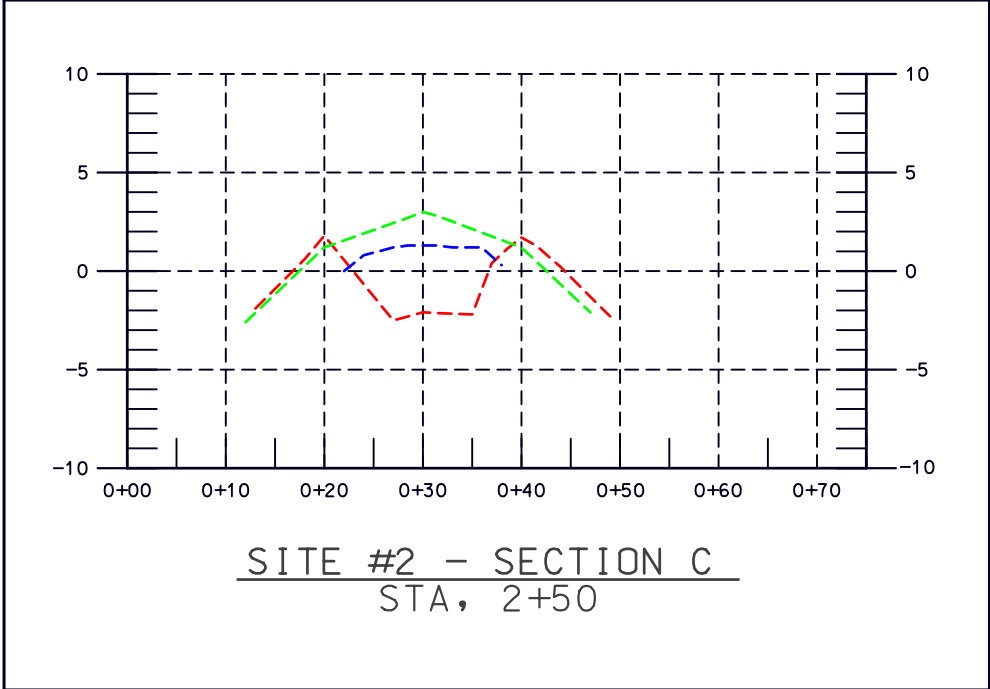
SITE #2 - SECTION C  
STA, 0+50



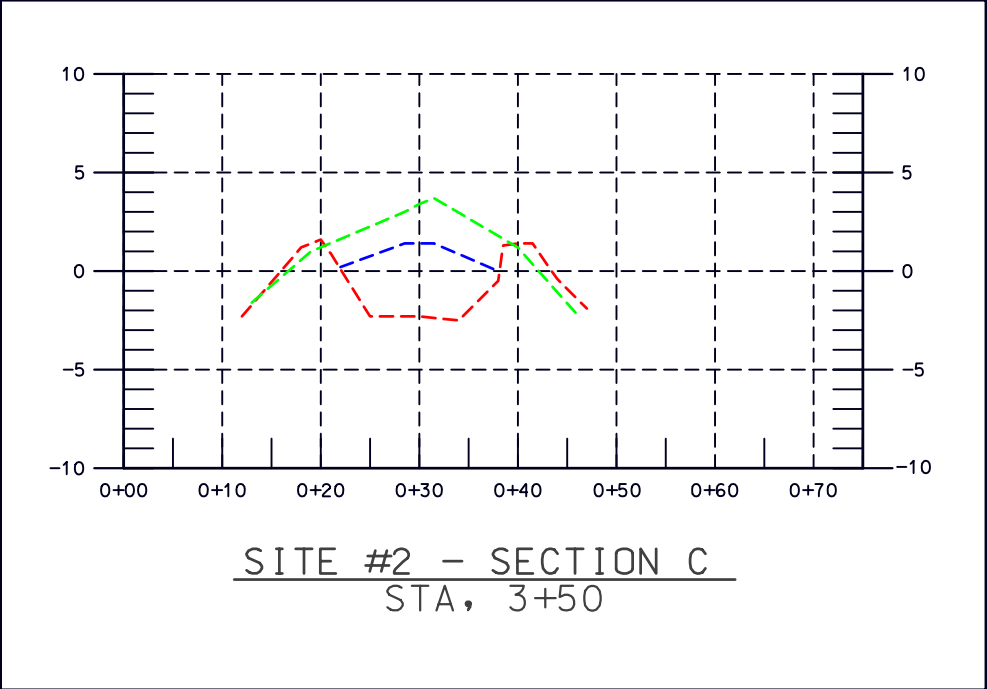
SITE #2 - SECTION C  
STA, 1+00



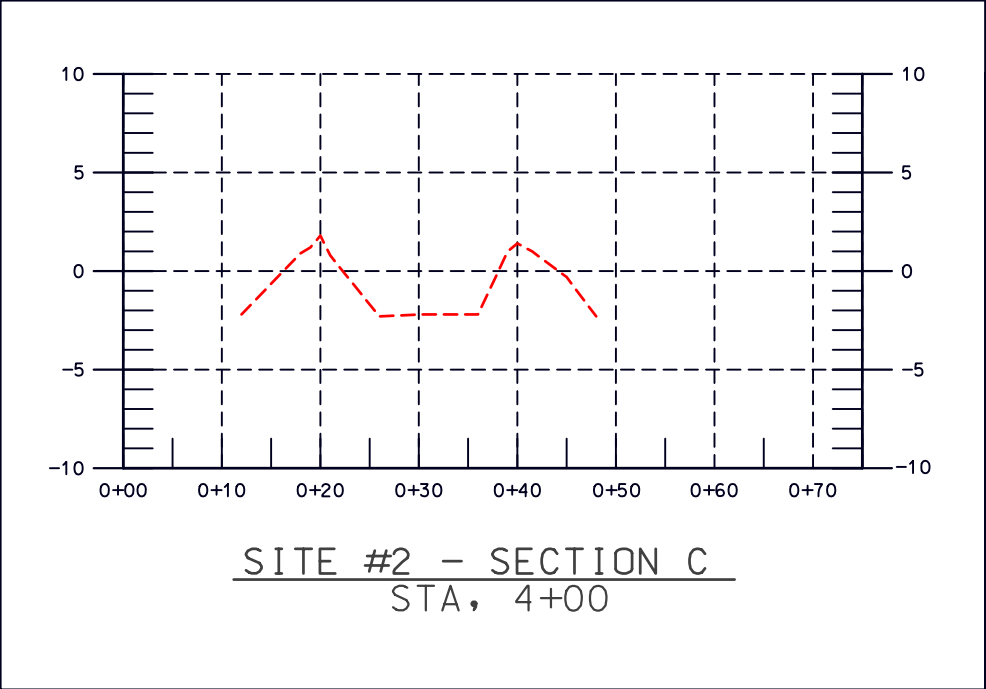
SITE #2 - SECTION C  
STA, 1+50



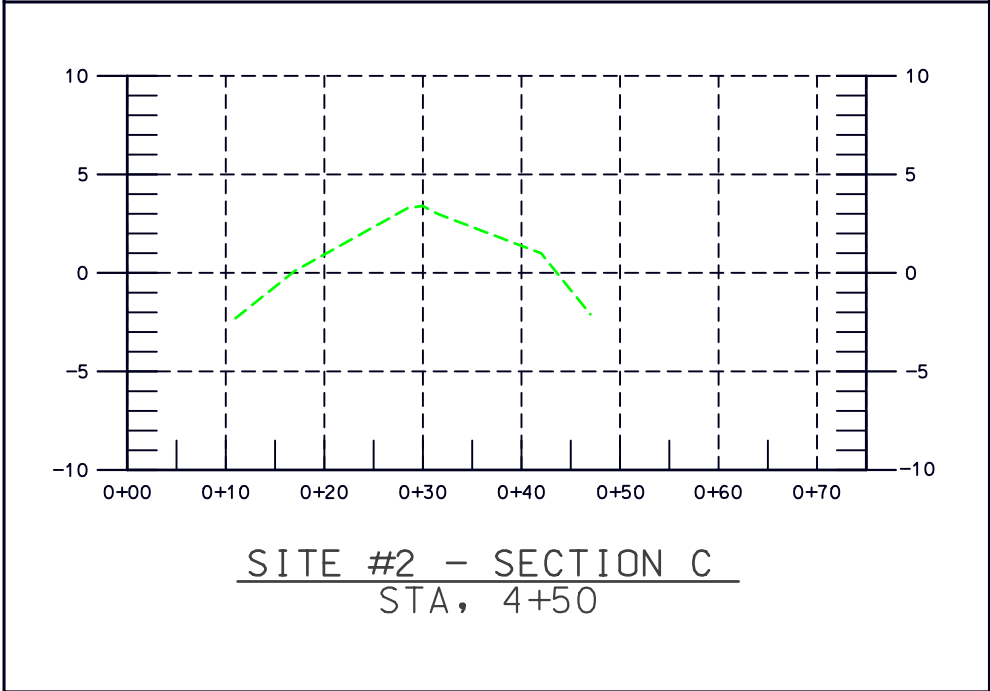
SITE #2 - SECTION C  
STA, 2+50



SITE #2 - SECTION C  
STA, 3+50



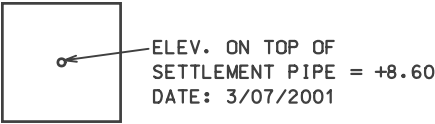
SITE #2 - SECTION C  
STA, 4+00



SITE #2 - SECTION C  
STA, 4+50

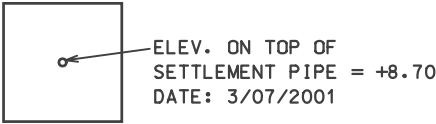
SITE 2 - SECTION C (SETTLEMENT PLATE)

STATION 1+50  
ELEV. ON TOP OF PIPE AT STA. 1+50:  
+7.71 DATE: 3/10/2001  
+7.33 DATE: 3/15/2001  
+6.94 DATE: 3/30/2001  
+6.66 DATE: 4/27/2001



SITE 2 - SECTION C (SETTLEMENT PLATE)

STATION 3+50  
ELEV. ON TOP OF PIPE AT STA. 3+50:  
+8.08 DATE: 3/10/2001  
+7.32 DATE: 3/15/2001  
+6.64 DATE: 3/30/2001  
+6.33 DATE: 4/27/2001



- CROSS SECTIONS TAKEN 3/02/2001 (ROCK SHOULDERS FORMING FURROW)
- CROSS SECTIONS TAKEN 3/09/2001 (CONSTRUCTION CHECK FIRST LIFT OF 400# ROCK)
- CROSS SECTIONS TAKEN 3/15/2001 (FINAL CHECK ON 400# ROCK FORMING CAP)

"AS-BUILT"

REVISIONS		SITE NO. 2 - AS-BUILT		BARATARIA BASIN LANDBRIDGE PROJECT		BA-27 - CONSTRUCTION UNIT NO. 1		JEFFERSON AND LAFOURCHE PARISHES		LOUISIANA		U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE	
NO.	DATE	APPR.	TITLE	DESIGNED	L.S. GARNER	DRAWN	A.J. GREMILLION	TRACED	B. STICKER	CHECKED	B. STICKER	CAD FILENAME	LA302012A8
				DATE	06/00	DATE	01/02	DATE	01/02	DATE	01/02	PROJECT NO.	LA302
				APPROVED BY		STATE CONSERVATION ENGINEER		ALEXANDRIA, LOUISIANA				SHEET NO 12A8 OF 12	

**Amendment No.1**

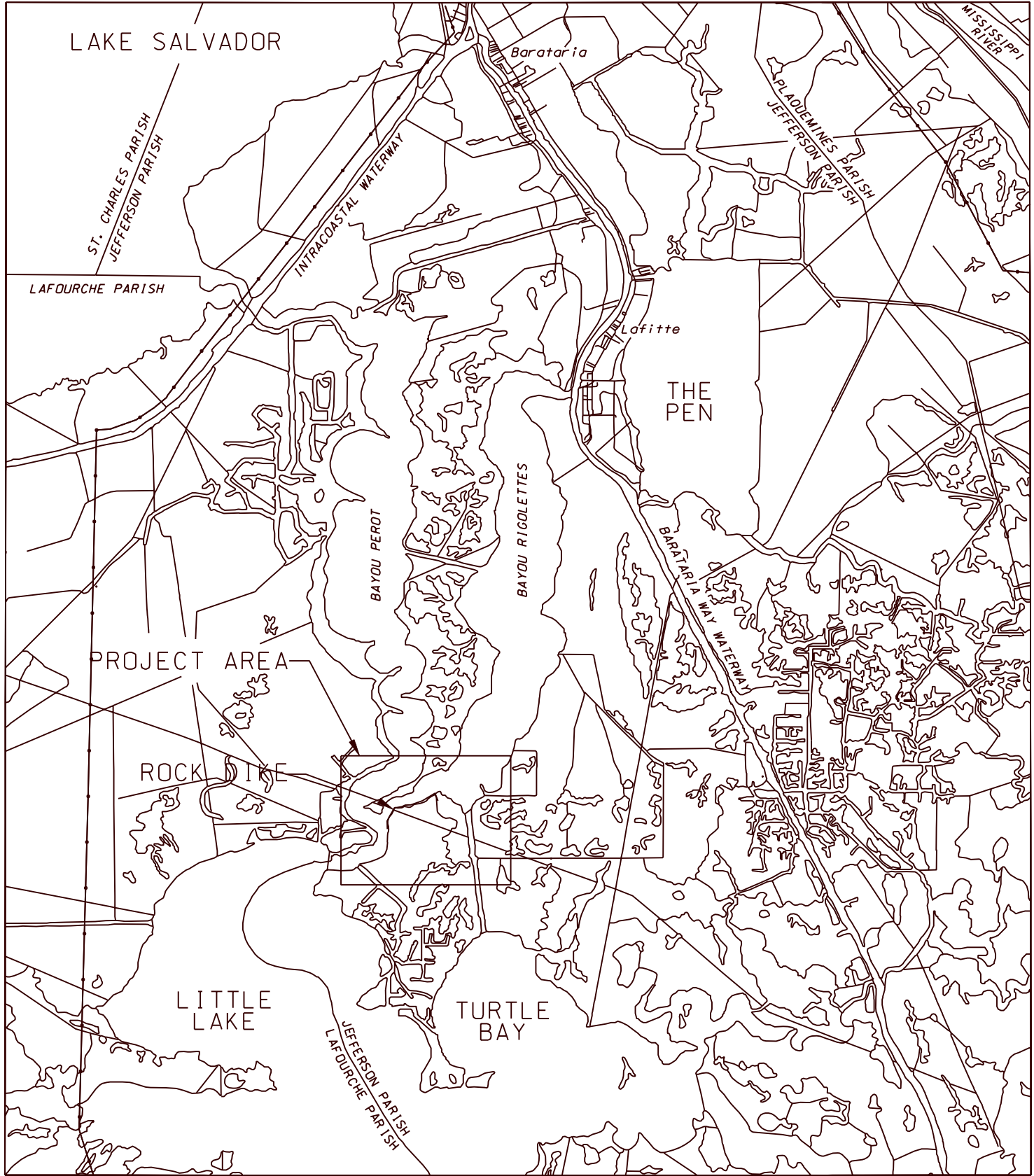
**ATTACHMENT IV**

**CONSTRUCTION UNIT NO.2**

**BA-27 BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT**

**AS-BUILT DRAWINGS**





VICINITY MAP



BARATARIA BASIN LANDBRIDGE PROJECT  
CONSTRUCTION UNIT 2, (BA-27)

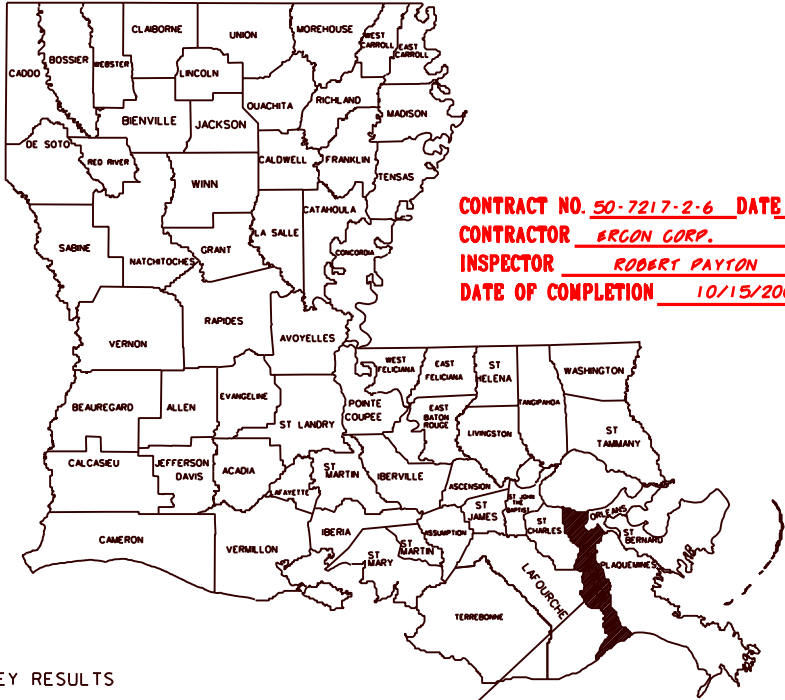
BUILT UNDER THE  
COASTAL WETLANDS  
PLANNING, PROTECTION, AND  
RESTORATION ACT  
PUBLIC LAW 101-646

"AS-BUILT"

DATE OF COMPLETION 10/15/2002

BY THE  
LOUISIANA  
DEPARTMENT OF NATURAL RESOURCES

WITH THE ASSISTANCE OF THE  
NATURAL RESOURCES CONSERVATION SERVICE  
OF THE  
UNITED STATES DEPARTMENT OF AGRICULTURE  
2001



CONTRACT NO. 50-7217-2-6 DATE 07/24/02  
CONTRACTOR ERCON CORP.  
INSPECTOR ROBERT PAYTON  
DATE OF COMPLETION 10/15/2002

INDEX OF DRAWINGS

- COVER SHEET
- LAND RIGHTS MAP
- MAGNETOMETER SURVEY RESULTS
- PLAN MAP
- WEST SITE - PLAN LAYOUT
- EAST SITE - PLAN LAYOUT
- COORDINATES OF CENTERLINE ALIGNMENT
- 7A1 AS-BUILT COORDINATES OF CENTERLINE ALIGNMENT
- TYPICAL SECTIONS
- 8A DETAILS-CHEVRON PIPELINE CROSSING
- 9-11 CROSS SECTIONS
- 12 WARNING SIGN DETAILS
- 13 SETTLEMENT PLATE DETAILS
- 14 SOIL BORING LOGS
- 14A1 SUPPLEMENTAL AS-BUILT CROSS SECTIONS-EAST SITE
- 14A2 SUPPLEMENTAL AS-BUILT CROSS SECTIONS-WEST SITE

"AS-BUILT PLANS"

SUBMITTED BY: DALE J. GARDER 12/02/02  
GOVERNMENT REPRESENTATIVE DATE  
APPROVED BY: GRADY A. STICKER 12/02/02  
ASSISTANT STATE CONSERVATION ENGINEER DATE  
S. V. GIBRING III 12/02/02  
STATE CONSERVATION ENGINEER DATE

BURK-KLEIN PETERING

ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS  
4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994  
(504) 486-5901 FAX (504) 488-1714

DATE 7/1/01

SCALE AS SHOWN  
SHEET NO. X

DESIGNED D.W.O.

CHECKED M.D.C.

DETAILED C.H.S.

BK1 JOB NO. 9875

COVER SHEET  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 2  
JEFFERSON PARISH  
LOUISIANA

NO.	DATE	APPR.	TITLE

CAD FILE NO.

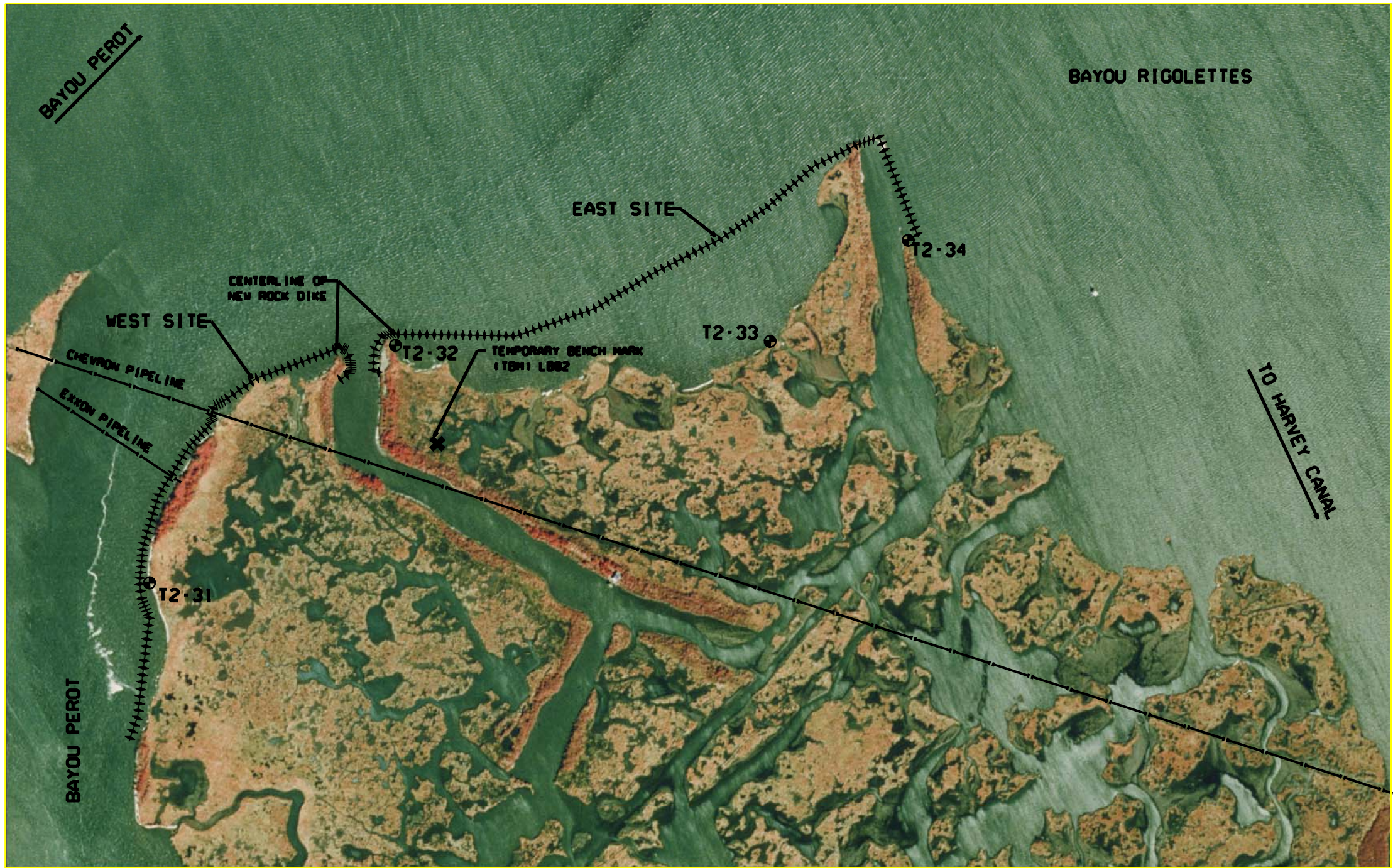
DRAWING NO.

LA-313

SHEET NO 01 OF 14

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE





**LEGEND**

⊕ SOIL BORING

**BARATARIA BASIN LANDBRIDGE PROJECT - CU-2**



**"AS-BUILT"**

DATE OF COMPLETION 10/15/2002

**T.B.M. DESCRIPTION**

✕ TBM LB02  
N 393520.972  
E 3656394.054  
EL. -2.95  
3" TREATED FENCE POST  
ORANGE FLAGGING

REVISIONS		TITLE
NO.	DATE	APPR.

LAND RIGHTS MAP  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 2  
JEFFERSON PARISH  
LOUISIANA

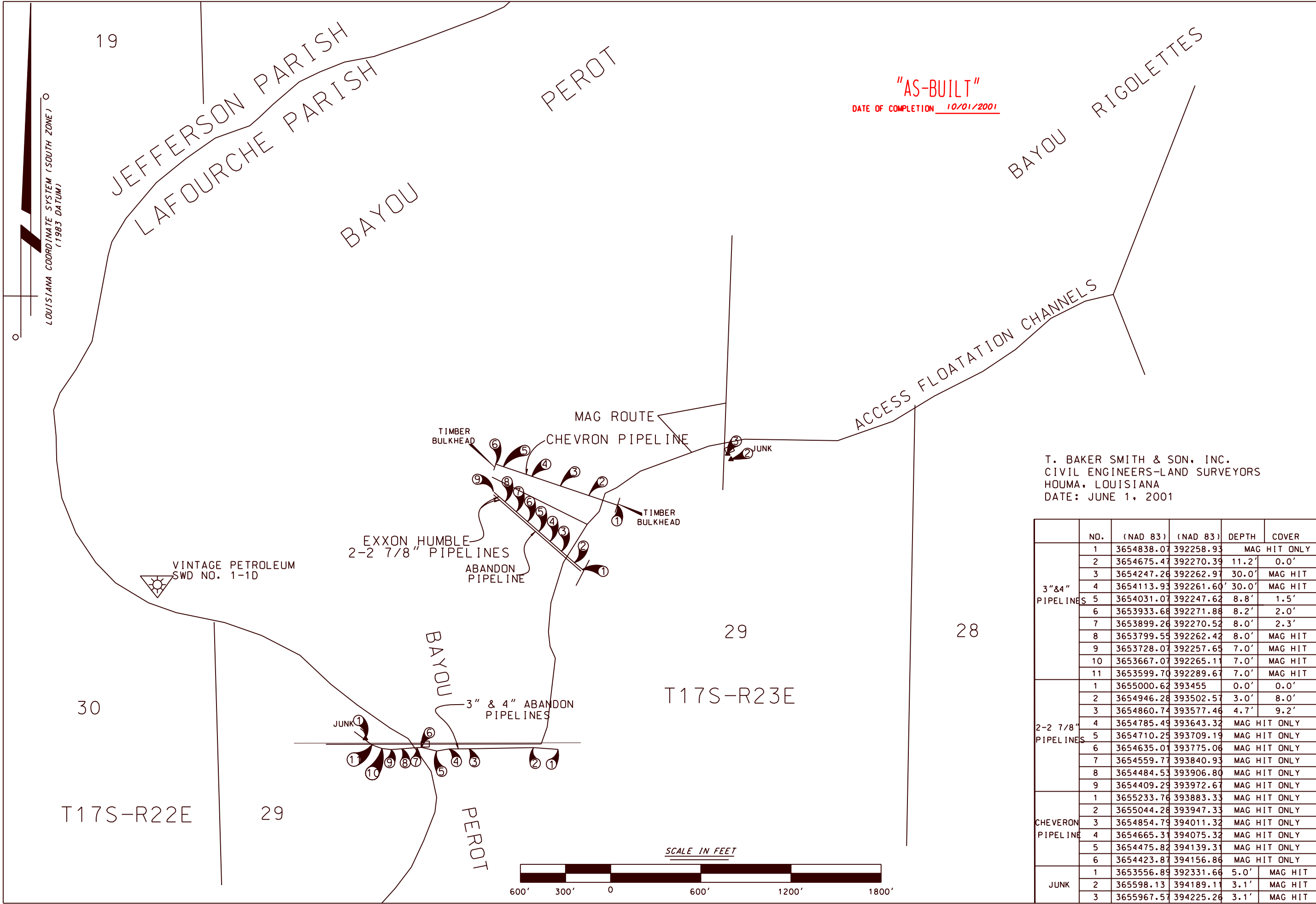
BURKLE INPETER NC  
ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS  
4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70114-5004  
(504) 486-5901 FAX (504) 486-1714

DESIGNED D.W.O.	DATE 7/1/01
CHECKED M.D.C.	SCALE AS SHOWN
	SHEET NO. X

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

CAD FILENAME  
PROJECT NO.  
LA-313  
SHEET NO 02 OF 14





T. BAKER SMITH & SON, INC.  
CIVIL ENGINEERS-LAND SURVEYORS  
HOUMA, LOUISIANA  
DATE: JUNE 1, 2001

	NO.	(NAD 83)	(NAD 83)	DEPTH	COVER
3" & 4" PIPELINES	1	3654838.07	392258.93		MAG HIT ONLY
	2	3654675.47	392270.39	11.2'	0.0'
	3	3654247.26	392262.97	30.0'	MAG HIT
	4	3654113.93	392261.60	30.0'	MAG HIT
	5	3654031.07	392247.62	8.8'	1.5'
	6	3653933.68	392271.88	8.2'	2.0'
	7	3653899.26	392270.52	8.0'	2.3'
	8	3653799.55	392262.42	8.0'	MAG HIT
	9	3653728.07	392257.65	7.0'	MAG HIT
	10	3653667.07	392265.11	7.0'	MAG HIT
	11	3653599.70	392289.67	7.0'	MAG HIT
2-2 7/8" PIPELINES	1	3655000.62	393455	0.0'	0.0'
	2	3654946.28	393502.57	3.0'	8.0'
	3	3654860.74	393577.46	4.7'	9.2'
	4	3654785.49	393643.32		MAG HIT ONLY
	5	3654710.25	393709.19		MAG HIT ONLY
	6	3654635.01	393775.06		MAG HIT ONLY
	7	3654559.77	393840.93		MAG HIT ONLY
	8	3654484.53	393906.80		MAG HIT ONLY
	9	3654409.29	393972.67		MAG HIT ONLY
CHEVRON PIPELINE	1	3655233.76	393883.33		MAG HIT ONLY
	2	3655044.28	393947.33		MAG HIT ONLY
	3	3654854.79	394011.32		MAG HIT ONLY
	4	3654665.31	394075.32		MAG HIT ONLY
	5	3654475.82	394139.31		MAG HIT ONLY
	6	3654423.87	394156.86		MAG HIT ONLY
JUNK	1	3653556.89	392331.66	5.0'	MAG HIT
	2	365598.13	394189.11	3.1'	MAG HIT
	3	3655967.57	394225.26	3.1'	MAG HIT

ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS  
4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-9994  
(504) 486-5901 FAX (504) 486-1714

BURK KLEIN PETER NG

DESIGNED D. W. D.  
CHECKED M. D. C.

DATE 7/1/01  
SCALE AS SHOWN  
SHEET NO. X

MAGNETOMETER SURVEY RESULTS  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 2  
JEFFERSON PARISHES  
LOUISIANA

REVISIONS  
NO. DATE APPR. TITLE


CAD FILE NO.

DRAWING NO.  
LA-313

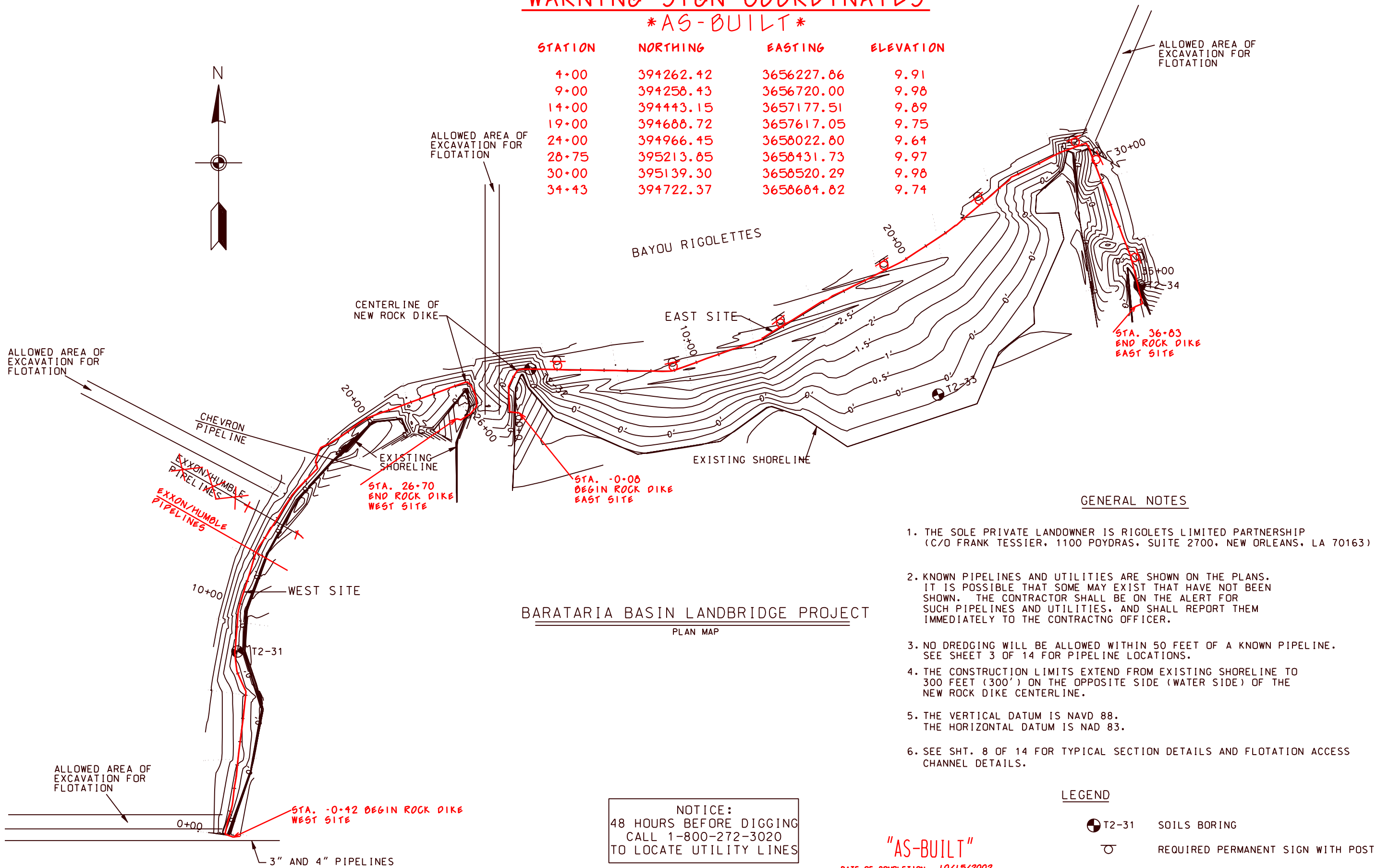
Sht. 03 of 14

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

# WARNING SIGN COORDINATES

\*AS-BUILT\*

STATION	NORTHING	EASTING	ELEVATION
4+00	394262.42	3656227.86	9.91
9+00	394258.43	3656720.00	9.98
14+00	394443.15	3657177.51	9.89
19+00	394688.72	3657617.05	9.75
24+00	394966.45	3658022.80	9.64
28+75	395213.85	3658431.73	9.97
30+00	395139.30	3658520.29	9.98
34+43	394722.37	3658684.82	9.74



BARATARIA BASIN LANDBRIDGE PROJECT  
PLAN MAP

## GENERAL NOTES

1. THE SOLE PRIVATE LANDOWNER IS RIGOLETS LIMITED PARTNERSHIP (C/O FRANK TESSIER, 1100 POYDRAS, SUITE 2700, NEW ORLEANS, LA 70163)
2. KNOWN PIPELINES AND UTILITIES ARE SHOWN ON THE PLANS. IT IS POSSIBLE THAT SOME MAY EXIST THAT HAVE NOT BEEN SHOWN. THE CONTRACTOR SHALL BE ON THE ALERT FOR SUCH PIPELINES AND UTILITIES, AND SHALL REPORT THEM IMMEDIATELY TO THE CONTRACTING OFFICER.
3. NO DREDGING WILL BE ALLOWED WITHIN 50 FEET OF A KNOWN PIPELINE. SEE SHEET 3 OF 14 FOR PIPELINE LOCATIONS.
4. THE CONSTRUCTION LIMITS EXTEND FROM EXISTING SHORELINE TO 300 FEET (300') ON THE OPPOSITE SIDE (WATER SIDE) OF THE NEW ROCK DIKE CENTERLINE.
5. THE VERTICAL DATUM IS NAVD 88. THE HORIZONTAL DATUM IS NAD 83.
6. SEE SHT. 8 OF 14 FOR TYPICAL SECTION DETAILS AND FLOTATION ACCESS CHANNEL DETAILS.

## LEGEND

- T2-31 SOILS BORING  
⊕ REQUIRED PERMANENT SIGN WITH POST



NOTICE:  
48 HOURS BEFORE DIGGING  
CALL 1-800-272-3020  
TO LOCATE UTILITY LINES

"AS-BUILT"  
DATE OF COMPLETION 10/15/2002

BURKLE INPETERNG

ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS  
4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994  
(504) 486-5901 FAX (504) 488-1714

DESIGNED D.W.O.  
CHECKED M.D.C.

DATE 7/1/01  
SCALE AS SHOWN  
SHEET NO. X

PLAN MAP  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 2  
JEFFERSON PARISH  
LOUISIANA

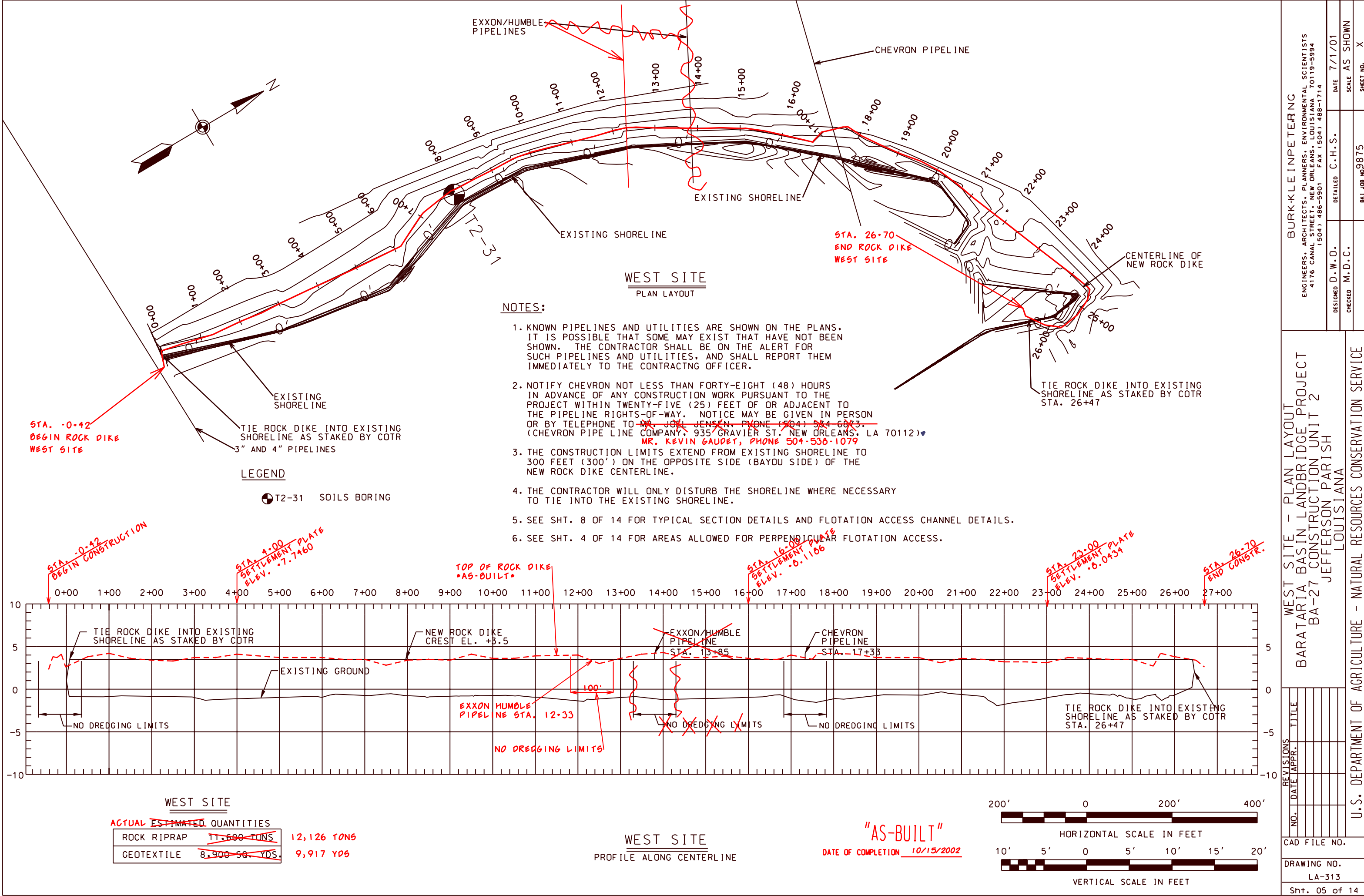
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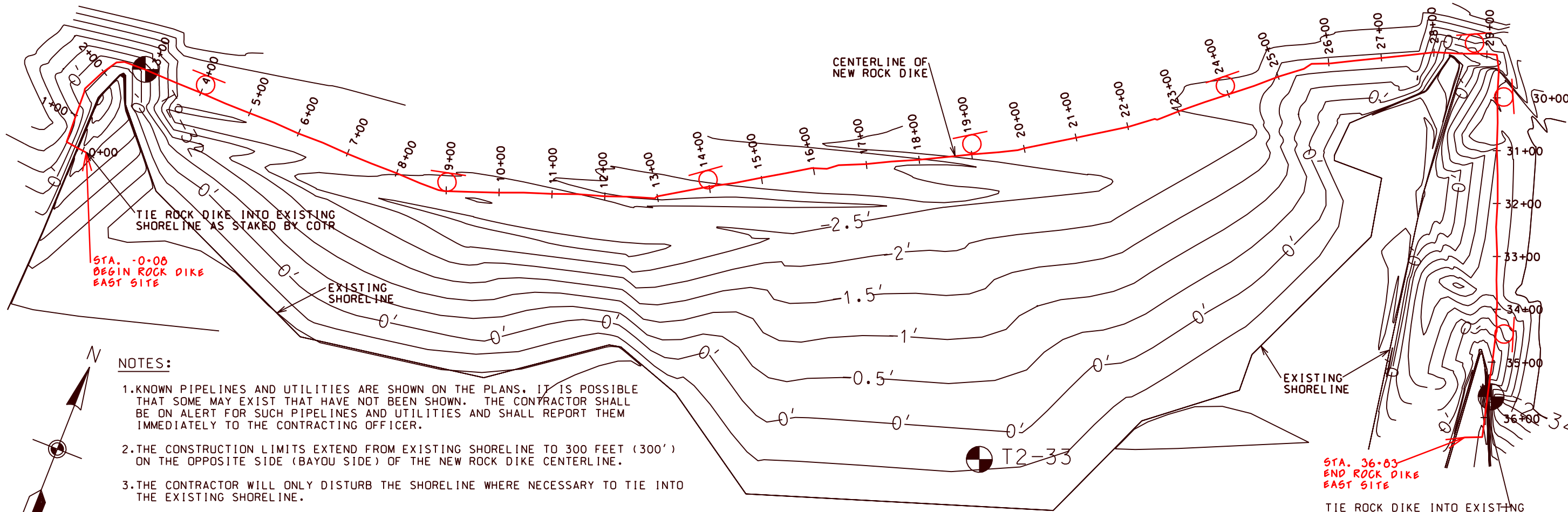
CAD FILE NO.

DRAWING NO.  
LA-313

Sht. 04 of 14

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE





NOTES:

1. KNOWN PIPELINES AND UTILITIES ARE SHOWN ON THE PLANS. IT IS POSSIBLE THAT SOME MAY EXIST THAT HAVE NOT BEEN SHOWN. THE CONTRACTOR SHALL BE ON ALERT FOR SUCH PIPELINES AND UTILITIES AND SHALL REPORT THEM IMMEDIATELY TO THE CONTRACTING OFFICER.
2. THE CONSTRUCTION LIMITS EXTEND FROM EXISTING SHORELINE TO 300 FEET (300') ON THE OPPOSITE SIDE (BAYOU SIDE) OF THE NEW ROCK DIKE CENTERLINE.
3. THE CONTRACTOR WILL ONLY DISTURB THE SHORELINE WHERE NECESSARY TO TIE INTO THE EXISTING SHORELINE.
4. SEE SHT. 8 OF 14 FOR TYPICAL SECTION DETAILS AND FLOTATION ACCESS CHANNEL DETAILS.
5. SEE SHT. 4 OF 14 FOR AREAS ALLOWED FOR PERPENDICULAR FLOTATION ACCESS.

EAST SITE  
PLAN LAYOUT

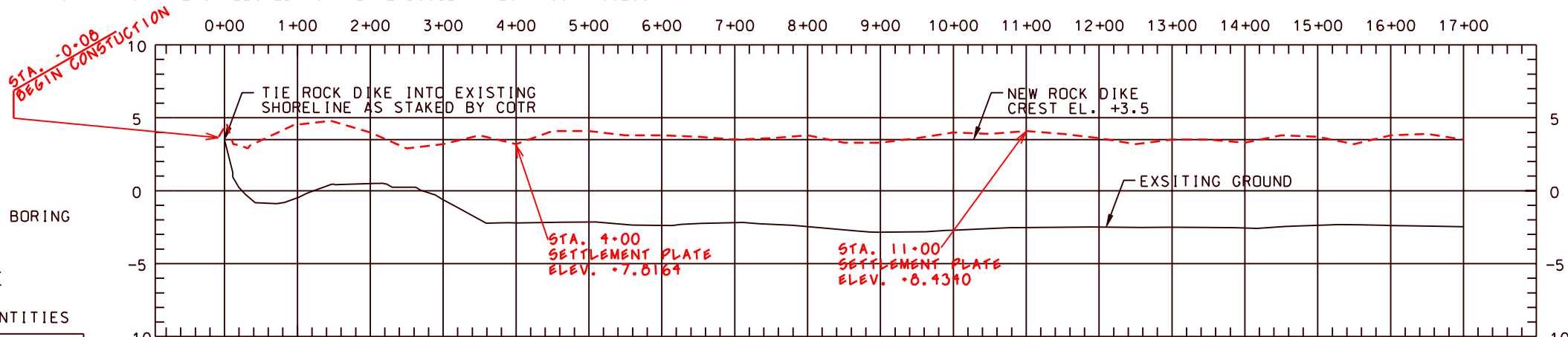
LEGEND

SOILS BORING

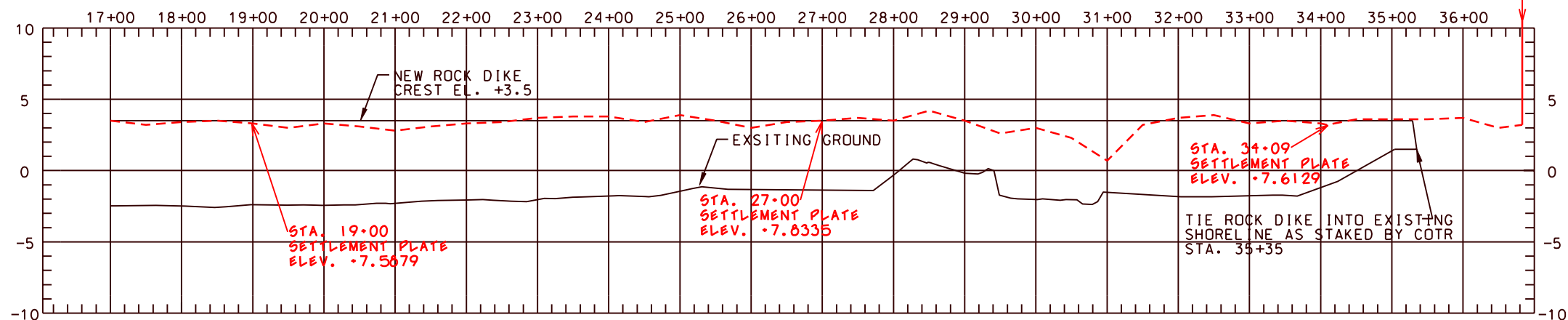
EAST SITE

ACTUAL ESTIMATED QUANTITIES

ROCK RIPRAP	<del>23,100 TONS</del>	19,958 TONS
GEOTEXTILE	<del>13,100 SQ. YDS.</del>	12,734 YDS.



EAST SITE  
PROFILE ALONG CENTERLINE



"AS-BUILT"

DATE OF COMPLETION 10/15/2002

BURKLEINPETERNG ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS 4116 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994 (504) 486-5901 FAX (504) 486-1714		DATE 7/1/01	SCALE AS SHOWN	SHEET NO. X
DESIGNED D.W.O.	DETAILED C.H.S.	CHECKED M.D.C.	BK1 JOB NO.9875	
EAST SITE - PLAN LAYOUT BARATARIA BASIN LANDBRIDGE PROJECT BA-27 CONSTRUCTION UNIT 2 JEFFERSON PARISH LOUISIANA				
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE				
CAD FILE NO.		DRAWING NO. LA-313		
Sht. 06 of 14				



WEST SITE COORDINATES

STATION	NORTHING	EASTING
STA. 0+00	392269.70	3654799.90
STA. 1+00	392364.05	3654833.05
STA. 1+29 (PI)	392391.48	3654842.39
STA. 2+00	392461.90	3654851.09
STA. 3+00	392561.20	3654862.95
STA. 4+00	392660.49	3654874.80
STA. 5+00	392759.79	3654886.65
STA. 6+00	392859.08	3654898.51
STA. 6+16 (PI)	392874.93	3654900.40
STA. 7+00	392951.64	3654866.08
STA. 7+11 (PI)	392961.73	3654861.57
STA. 7+92 (PI)	393043.86	3654852.45
STA. 8+00	393050.15	3654853.02
STA. 9+00	393149.75	3654862.02
STA. 9+71 (PI)	393220.12	3654868.37
STA. 10+00	393248.18	3654876.93
STA. 11+00	393343.83	3654906.11
STA. 12+00	393439.48	3654935.28
STA. 12+33 (PI)	393469.44	3654944.42
STA. 13+00	393527.59	3654980.94
STA. 14+00	393612.70	3655034.24
STA. 15+00	393696.81	3655087.55
STA. 15+13 (PI)	393707.52	3655094.29
STA. 16+00	393770.68	3655154.62
STA. 16+74 (PI)	393824.63	3655206.08
STA. 17+00	393849.37	3655200.26
STA. 17+09 (PI)	393858.50	3655198.12
STA. 17+58 (PI)	393905.69	3655214.64
STA. 18+00	393924.33	3655250.74
STA. 18+18 (PI)	393932.61	3655266.77
STA. 19+00	393979.18	3655334.21
STA. 20+00	394035.99	3655416.50
STA. 20+07 (PI)	394040.21	3655422.61
STA. 21+00	394071.97	3655509.57
STA. 22+00	394106.27	3655603.50
STA. 23+00	394140.57	3655697.44
STA. 24+00	394174.87	3655791.37
STA. 24+48 (PI)	394191.37	3655836.55
STA. 24+77 (PI)	394175.58	3655860.05
STA. 25+00	394154.01	3655869.61
STA. 25+21 (PI)	394134.69	3655878.17
STA. 25+69 (PI)	394086.81	3655883.28
STA. 25+96 (PI)	394061.77	3655873.29
STA. 26+00	394059.74	3655870.14
STA. 26+47	394034.16	3655830.41

EAST SITE COORDINATES

STATION	NORTHING	EASTING
STA. 0+00	394061.79	3656057.57
STA. 0+42 (PI)	394061.63	3656015.73
STA. 1+00	394119.78	3656017.08
STA. 1+53 (PI)	394172.24	3656078.29
STA. 2+00	394213.85	3656041.24
STA. 2+30 (PI)	394240.22	3656055.77
STA. 2+86 (PI)	394247.95	3656111.26
STA. 3+00	394247.73	3656125.13
STA. 4+00	394246.13	3656225.11
STA. 5+00	394244.53	3656325.10
STA. 6+00	394242.93	3656425.09
STA. 7+00	394241.34	3656525.08
STA. 8+00	394239.74	3656625.06
STA. 8+85 (PI)	394238.38	3656710.11
STA. 9+00	394243.31	3656724.22
STA. 10+00	394276.27	3656818.63
STA. 11+00	394309.24	3656913.04
STA. 12+00	394342.21	3657007.45
STA. 12+95 (PI)	394373.52	3657097.11
STA. 13+00	394376.13	3657101.41
STA. 14+00	394427.98	3657186.91
STA. 15+00	394479.83	3657272.42
STA. 16+00	394531.68	3657357.93
STA. 16+25 (PI)	394544.52	3657379.11
STA. 17+00	394578.71	3657446.12
STA. 18+00	394624.17	3657535.19
STA. 19+00	394669.62	3657624.27
STA. 19+87 (PI)	394709.39	3657702.20
STA. 20+00	394716.35	3657712.59
STA. 21+00	394772.05	3657795.64
STA. 22+00	394827.74	3657878.70
STA. 22+57 (PI)	394859.52	3657926.10
STA. 23+00	394887.88	3657958.33
STA. 24+00	394953.93	3658033.41
STA. 25+00	395019.99	3658108.49
STA. 25+67 (PI)	395064.52	3658159.11
STA. 26+00	395079.20	3658188.19
STA. 27+00	395124.28	3658277.46
STA. 27+96 (PI)	395167.52	3658363.10
STA. 28+00	395168.88	3658366.93
STA. 29+00	395202.36	3658461.15
STA. 29+19 (PI)	395208.65	3658478.87
STA. 30+00	395133.09	3658508.59
STA. 31+00	395040.03	3658545.20
STA. 32+00	394946.97	3658581.81
STA. 33+00	394853.91	3658618.41
STA. 34+00	394760.85	3658655.02
STA. 34+43 (PI)	394722.52	3658670.10

LEGEND  
PI = POINT OF INTERSECTION

PIPELINE COORDINATES

STATION	NORTHING	EASTING
STA. 13+85 (EXXON)	393599.15	3655026.02
STA. 17+33 (CHEVRON)	393880.33	3655205.77

"AS-BUILT"  
DATE OF COMPLETION 10/15/2002

SEE SHEET 7A FOR REVISED COORDINATES FOR EAST AND WEST SITES

BURKLEINPETERNG

ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS

4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994

(504) 488-5901 FAX (504) 488-1714

DESIGNED D. W. O.

CHECKED M. D. C.

DATE 7/1/01

SCALE AS SHOWN

SHEET NO. X

COORDINATES OF CENTERLINE ALIGNMENT

BARATARIA BASIN LANDBRIDGE PROJECT

BA-27 CONSTRUCTION UNIT 2

JEFFERSON PARISH

LOUISIANA

REVISIONS

NO.	DATE	TITLE

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

CAD FILE NO.

DRAWING NO.

LA-313

Sht. 07 of 14

AS-BUILT COORDINATES-WEST SITE					AS-BUILT COORDINATES-EAST SITE					AS-BUILT COORDINATES-EAST SITE*CON'T*					Date
STATION	POINT	EASTING *X*	NORTHING *Y*	ELEVATION *Z*	STATION	POINT	EASTING *X*	NORTHING *Y*	ELEVATION *Z*	STATION	POINT	EASTING *X*	NORTHING *Y*	ELEVATION *Z*	12/ 02
-0+12	P00	3654047.0100	392253.0500	2.2700	-0+08	P00	3656064.9605	394060.7300	3.7000	31+50		3650563.9305	394997.2400	3.1000	Approved by E. J. Gremillion, Inc.
-0+32		3654037.0900	392257.7000	3.0300	-0+03		3656055.2005	394061.6700	4.5600	32+00		3650500.0405	394953.4700	3.7600	Designed
-0+22		3654020.6500	392260.7500	3.7400	0+12		3656045.0005	394062.7600	3.1000	32+50		3650596.9405	394905.0000	3.0700	Drawn
0+12		3654010.9200	392264.0600	4.1500	0+22		3656036.0205	394064.1600	3.0000	33+00		3650617.5305	394050.1300	3.3200	Traced
-0+02		3654011.1200	392260.4100	2.6100	0+32		3656025.6105	394065.4300	2.9000	33+50		3650634.1405	394011.0000	3.5200	Checked
0+50		3654022.1400	392316.6900	3.7700	0+35		3656022.0105	394065.5900	3.1500	34+00		3650653.4105	394766.3400	3.3100	Sticker
1+00		3654035.9400	392366.7400	4.2100	0+95		3656020.9705	394114.0000	4.5000	34+09		3650655.1005	394757.0700	3.2200	
1+29	PI	3654042.3900	392391.4000	0.0000	1+16		3656019.4905	394165.6900	4.0300	34+13	PI	3650670.1005	394722.5200	0.0000	
1+50		3654045.2300	392416.0000	3.6100	1+53	PI	3656010.2905	394172.2400	0.0000	34+50		3650670.1005	394710.0200	3.5700	
2+00		3654050.9300	392464.9400	3.3900	2+00		3656037.1205	394211.6400	3.9000	35+00		3650602.1005	394671.5200	3.5900	
2+50		3654059.0000	392515.2000	3.3100	2+30	PI	3656055.7705	394240.2200	0.0000	35+50		3650694.0605	394620.5900	3.5900	
3+00		3654064.1100	392565.6600	3.7500	2+50		3656069.4605	394246.5600	2.0900	36+00		3650706.2905	394571.1600	3.7500	
3+50		3654069.0300	392614.0400	3.6600	2+86	PI	3656111.7616	394247.4510	0.0000	36+50		3650717.9605	394525.0000	3.0100	
4+00		3654075.3700	392660.4900	4.1300	3+00		3656121.4005	394247.2000	3.2200	36+03	P00	3650606.6505	394513.1700	3.2000	
4+50		3654082.3000	392710.5000	3.9300	3+50		3656175.6405	394245.6900	3.7700						
5+00		3654080.3300	392760.0000	3.6000	4+00		3656226.0705	394245.0700	3.1500						
5+50		3654093.6900	392810.3400	3.6000	4+50		3656275.0405	394243.3000	4.0700						
6+00		3654090.0700	392850.0900	3.7500	5+00		3656325.2105	394242.9500	4.0700						
6+16	PI	3654900.4000	392074.9300	0.0000	5+50		3656374.9205	394243.2700	3.0400						
6+50		3654004.1200	392909.6000	3.4900	6+00		3656424.3705	394241.1200	3.7000						
7+00		3654004.3300	392953.3500	3.5100	6+50		3656474.1605	394241.5700	3.6600						
7+11	PI	3654001.5700	392961.7300	0.0000	7+00		3656523.5205	394239.4400	3.5100						
7+50		3654056.7200	393002.5600	2.0300	7+50		3656573.7605	394230.7600	3.5900						
7+92	PI	3654052.4500	393043.0600	0.0000	8+00		3656624.6405	394239.0200	3.7500						
8+00		3654055.0100	393054.5300	3.3000	8+50	PI	3656673.0905	394237.6100	3.2600						
8+50		3654050.2000	393104.0000	3.5400	9+00		3656710.1105	394230.3000	0.0000						
9+00		3654063.0100	393155.7100	3.3700	9+50		3656720.0605	394240.3500	3.3300						
9+50		3654065.6100	393204.9400	4.0600	10+00		3656769.1405	394257.5600	3.6100						
9+71	PI	3654060.3700	393220.1200	0.0000	10+50		3656815.0005	394274.6600	3.9500						
10+00		3654076.1300	393253.2000	3.6500	11+00		3656862.2105	394292.0500	3.0600						
10+50		3654091.1500	393300.9000	3.6200	11+50		3656911.5305	394309.7700	4.0000						
11+00		3654906.7400	393340.1100	3.0300	12+00		3656950.6405	394327.6600	3.9000						
11+50		3654922.0700	393390.7700	3.0600	12+50	PI	3657006.7705	394342.5400	3.5600						
12+00		3654935.2200	393444.3700	4.0000	13+00		3657052.9005	394359.6000	3.1600						
12+33	PI	3654944.4200	393469.4400	0.0000	13+50		3657097.1105	394373.5200	0.0000						
12+50		3654955.9900	393490.9500	2.9000	14+00		3657099.2605	394370.5600	3.4600						
13+00		3654903.5000	393531.4700	3.5600	14+50		3657141.9705	394405.4300	3.4500						
13+50		3655009.9300	393573.5200	4.1200	15+00		3657103.7305	394431.7900	3.3300						
13+00	PI	3655026.0200	393599.1500	0.0000	15+50		3657226.7905	394455.9200	3.7700						
14+00		3655037.6300	393615.0600	4.3200	16+00		3657260.1105	394402.2900	3.6000						
14+50		3655062.6700	393659.2000	3.6600	16+25	PI	3657310.9505	394509.2000	3.2400						
15+00		3655090.7900	393700.4500	3.6900	16+50		3657351.7005	394535.1000	3.7000						
15+13	PI	3655094.2900	393707.5200	0.0000	17+00		3657379.1105	394544.5200	0.0000						
15+50		3655122.1000	393740.7900	3.0900	17+25	PI	3657397.2005	394550.9500	3.0500						
16+00		3655156.0200	393775.1400	3.6200	17+50		3657443.5505	394579.3100	3.4500						
16+50		3655191.3400	393810.3700	3.4000	18+00		3657407.6205	394601.0900	3.1600						
16+74	PI	3655206.0000	393824.5300	0.0000	18+50		3657533.0105	394623.7700	3.3600						
16+70		3655203.7200	393826.7500	3.4700	19+00		3657577.7905	394646.3500	3.4000						
17+00		3655196.7200	393855.1000	4.0300	19+50		3657625.6105	394671.1600	3.2000						
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17+50	PI	3655214.6400	393905.6900	0.0000	20+50		3657754.7705	394744.9200	3.0000						
18+00		3655254.6700	393929.4600	4.2100	21+00		3657797.5005	394772.7700	2.7900						
18+50		3655296.0100	393956.0500	4.0600	21+50		3657840.7205	394000.7900	3.0000						
19+00		3655337.5100	393904.0500	3.7300	22+00		3657801.5705	394027.9700	3.2500						
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21+00		3655516.7000	394074.4000	3.6400	23+50		3657997.7605	394923.1700	3.7700						
21+50		3655562.1000	394091.3600	3.5200	24+00		3650035.5405	394954.6700	3.0200						
22+00		3655609.7700	394109.0300	3.1000	24+50		3650073.3905	394905.9900	3.3600						
22+50		3655655.2200	394125.6300	3.1600	25+00		3650109.0105	395019.3700	3.0600						
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23+50		3655751.1000	394160.9000	3.6700	25+67	PI	3650159.1105	395064.5200	0.0000						
24+00		3655795.9900	394177.0000	3.5900	26+00		3650190.7005	395077.7400	2.9700						
24+10	PI	3655036.5500	394191.3700	0.0000	26+50		3650235.4505	395101.2100	3.3500						
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24+77	PI	3655060.0500	394175.5000	0.0000	27+50		3650323.4605	395146.0000	3.7300						
25+00		3655071.4600	394151.7900	3.4000	28+00		3650367.5105	395170.2300	3.5300						
25+21	PI	3655070.1700	394134.6900	0.0000	28+50		3650413.0505	395105.6100	4.2400						
25+50		3655002.3100	394101.6900	2.6600	29+00		3650450.5005	395202.9500	3.5300						
25+69	PI	3655003.2000	394006.0100	0.0000	29+19	PI	3650470.0705	395200.6500	0.0000						
25+67		3655000.0100	394005.2500	4.1900	29+50		3650492.0505	395103.0100	2.5500						
26+00		3655057.7200	394050.4900	3.0200	30+00		3650500.3705	395136.5300	3.0400						
26+50		3655015.7200	394031.1000	3.3000	30+50		3650527.4005	395009.9500	2.3100						
26+70	P00	3655796.9000	394035.6700	2.6100	31+00		3650544.2505	395042.6100	0.7000						

REVISIONS

NO.	DATE	APPR.	TITLE

CAD FILE NO.

DRAWING NO.

LA-313

Sht. 07A of 14

COORDINATES OF CENTERLINE ALIGNMENT  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 2  
JEFFERSON PARISH  
LOUISIANA

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

"AS-BUILT"

DATE OF COMPLETION 10/01/2001

DATE

Approved by E. J. Gremillion, Inc.

Title

DATE



1. MATERIAL DREDGED FROM THE ACCESS CHANNEL SHALL BE PLACED ON THE LAND SIDE (i.e., BETWEEN THE PROTECTION FEATURE AND EXISTING MARSH/LAND). CARE SHALL BE TAKEN NOT TO DISTURB THE EXISTING MARSH VEGETATION.
2. EXCAVATED MATERIAL MAY BE PLACED ON THE WATER SIDE ONLY IN AREAS WHERE THE ROCK DIKE IS TOO CLOSE TO THE EXISTING SHORELINE TO ALLOW PLACEMENT OF THE DREDGED MATERIAL AND ONLY AS CONCURRED IN BY THE COTR.
3. IF EXCAVATED MATERIAL PLACED ON THE WATER SIDE, TEMPORARY WARNING SIGNS SHALL BE PLACED & MAINTAINED UNTIL THE NAVIGATION HAZARD IS REMOVED. THE ACCESS CHANNEL SHALL BE BACK-FILLED WITH THE EXCAVATED MATERIAL.
4. DEPOSITED MATERIAL SHALL NOT BE PLACED AGAINST THE ROCK DIKE.

[illegible]

SHEET NO 08 OF 14

TYPICAL SECTIONS  
 BARATARIA BASIN LANDBRIDGE PROJECT  
 BA-27 CONSTRUCTION UNIT 2  
 JEFFERSON PARISH  
 LOUISIANA  
 CULTURE - NATURAL RESOURCES CONSERVATION SERVICE

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

BURK-KLEINPELTER, RESEARCHERS. ENVIRONMENTAL

4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994  
(504) 486-5901 FAX (504) 488-1714

DESIGNED D. W. O.	DETAILED C. H. S.
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CHECKED M.D.C.

DATE 7/1/01

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**SHEET NO.** X



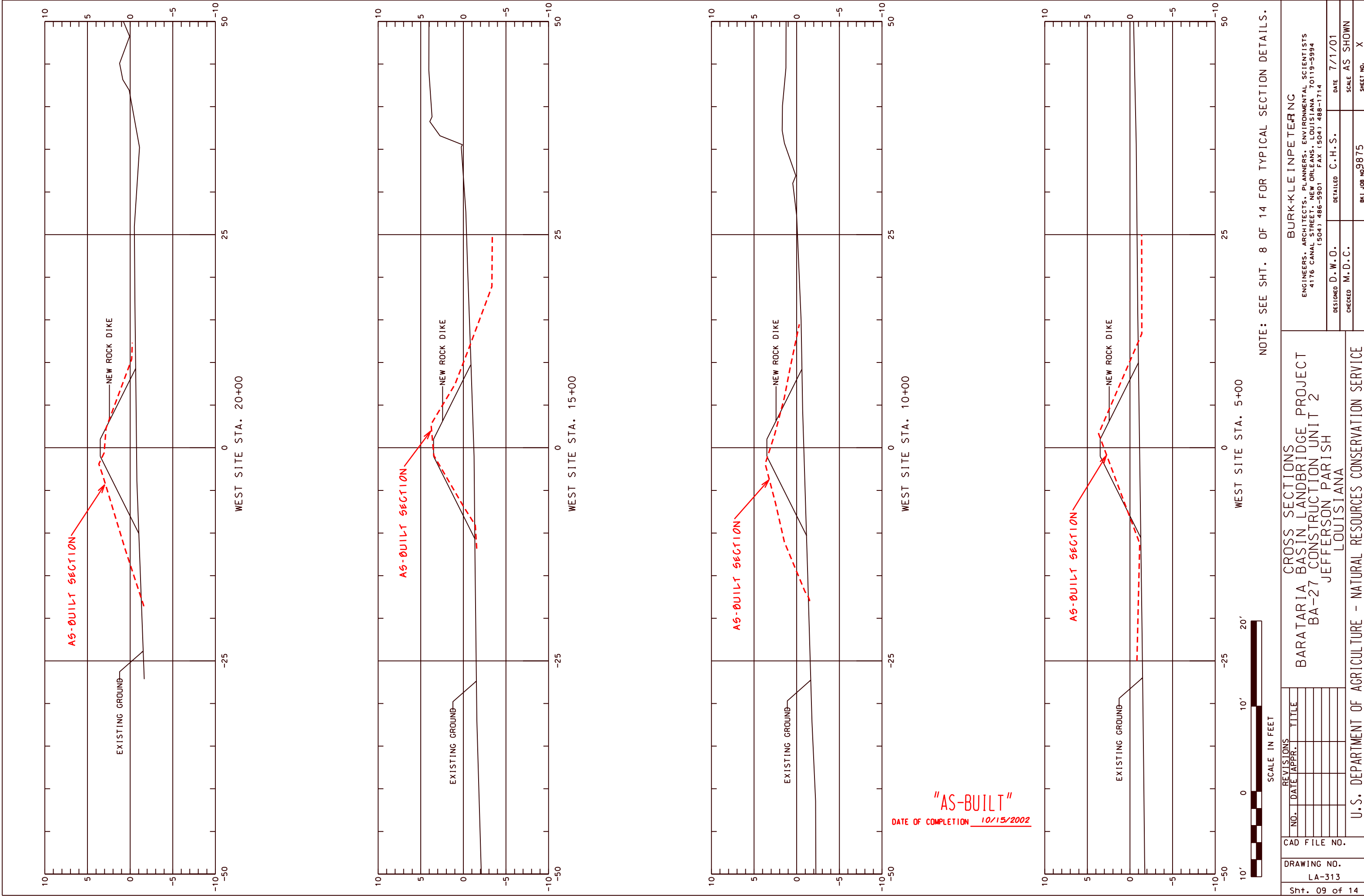


CHEVRON PIPELINE CROSSING - STA. 17+33

SECTION "A - A"

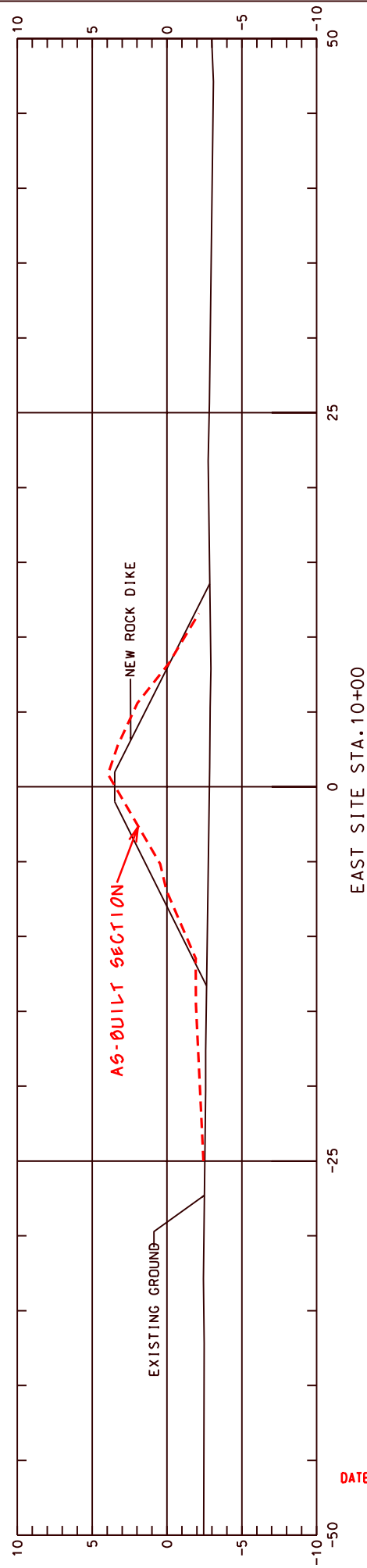
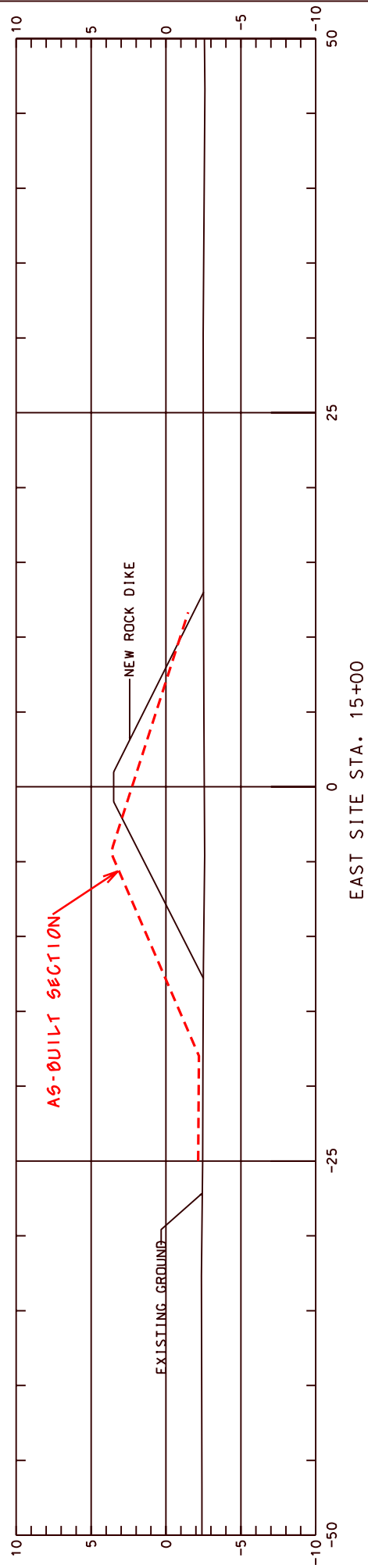
**"AS-BUILT"**  
DATE OF COMPLETION 10/15/2002





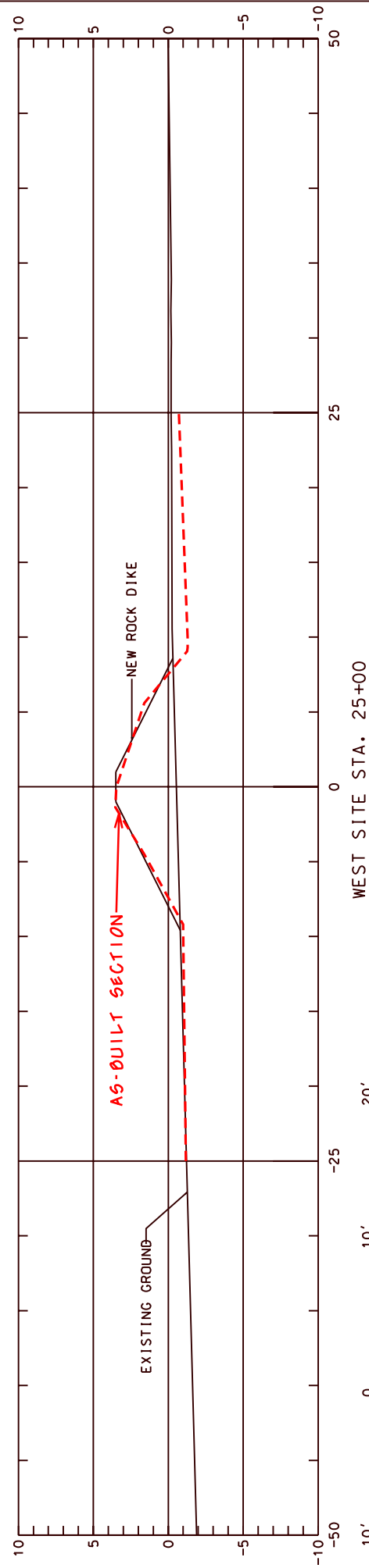
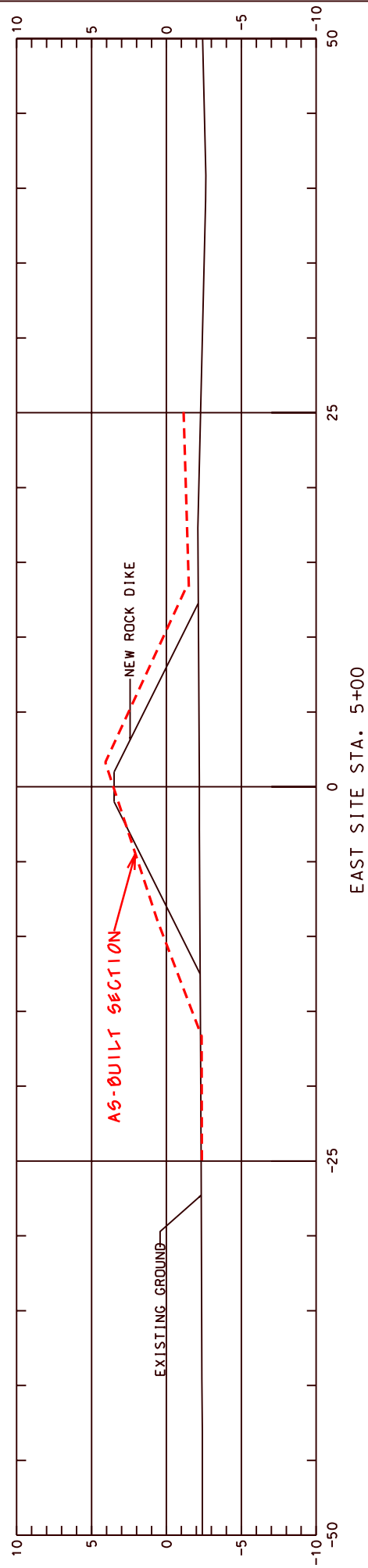
NOTE: SEE SHT. 8 OF 14 FOR TYPICAL SECTION DETAILS.

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE		CROSS SECTIONS		BURKLEIN PETERING	
CAD FILE NO.		BARATARIA BASIN LANDBRIDGE PROJECT		ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS	
DRAWING NO.		BA-27 CONSTRUCTION UNIT 2		4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994	
LA-313		JEFFERSON PARISH		(504) 486-5901 FAX (504) 486-1714	
Sht. 09 of 14		LOUISIANA		DESIGNED D.W.O.	DATE 7/1/01
				CHECKED M.D.C.	SCALE AS SHOWN
				DETAILED C.H.S.	SHEET NO. X



## "AS-BUILT"

DATE OF COMPLETION 10/15/2002

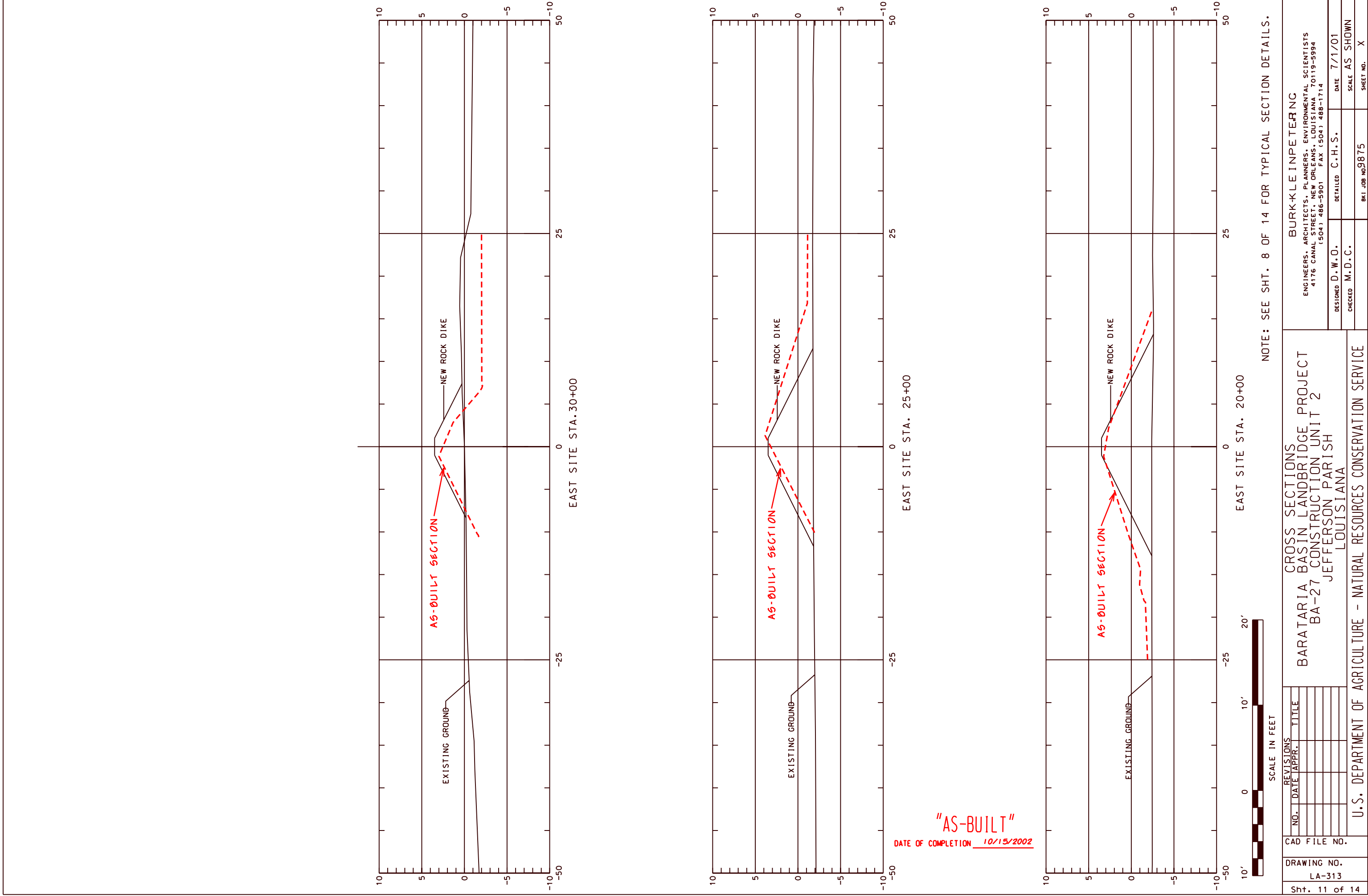


10' 20'

SCALE IN FEET

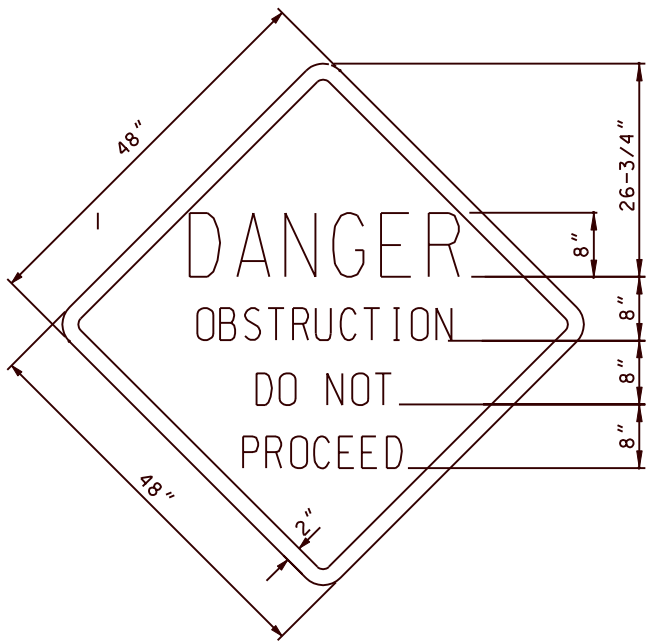
NOTE: SEE SHT. 8 OF 14 FOR TYPICAL SECTION DETAILS.

Sht. 10 of 14		DRAWING NO. LA-313		CAD FILE NO.		<table><tr><th colspan="2">REVISIONS</th></tr><tr><th>NO.</th><th>TITLE</th></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></table>		REVISIONS		NO.	TITLE															<table><tr><td colspan="2">CROSS SECTIONS</td></tr><tr><td colspan="2">BARATARIA BASIN LANDBRIDGE PROJECT</td></tr><tr><td colspan="2">BA-27 CONSTRUCTION UNIT 2</td></tr><tr><td colspan="2">JEFFERSON PARISH</td></tr><tr><td colspan="2">LOUISIANA</td></tr></table>				CROSS SECTIONS		BARATARIA BASIN LANDBRIDGE PROJECT		BA-27 CONSTRUCTION UNIT 2		JEFFERSON PARISH		LOUISIANA		<table><tr><td colspan="4">BURK-KLEIN PETER NC</td></tr><tr><td colspan="4">ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS</td></tr><tr><td colspan="4">4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994</td></tr><tr><td colspan="4">(504) 486-5901 FAX (504) 488-1714</td></tr></table>				BURK-KLEIN PETER NC				ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS				4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994				(504) 486-5901 FAX (504) 488-1714			
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DESIGNED D.W.O.		DETAILED C.H.S.		DATE 7/1/01																																																							
CHECKED M.D.C.				SCALE AS SHOWN																																																							
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE		BKI JOB NO. 9875		SHEET NO. X																																																							



"AS-BUILT"  
DATE OF COMPLETION 10/15/2002

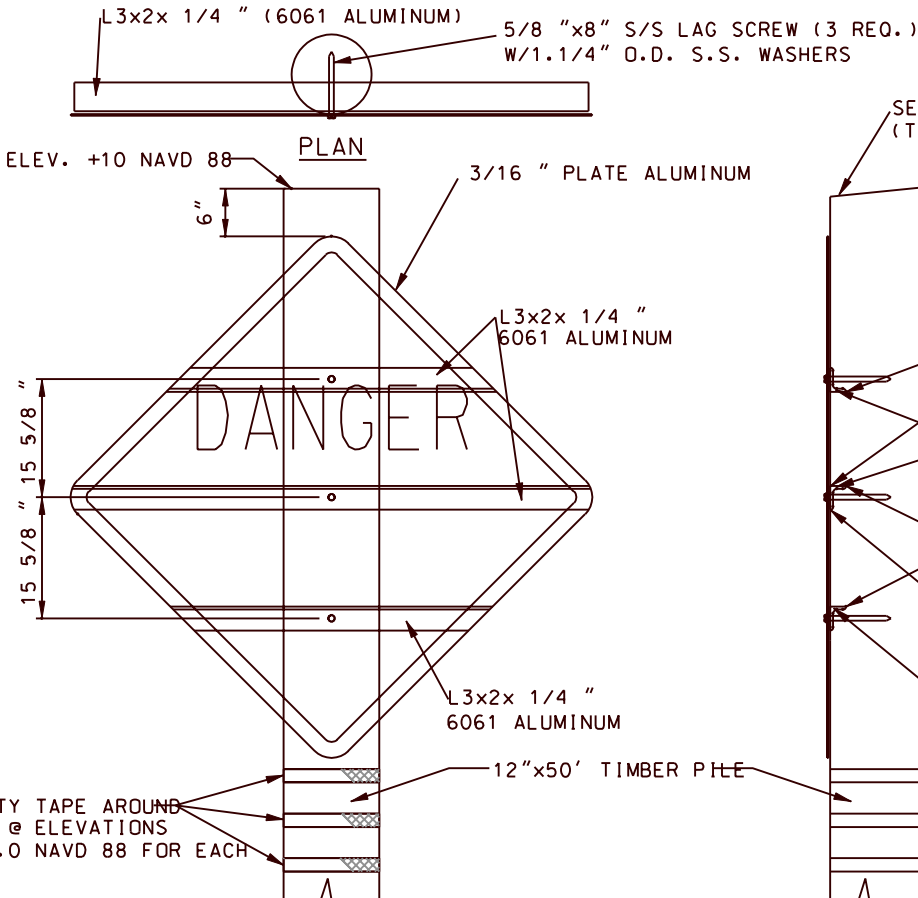
CAD FILE NO.		REVISIONS		BARATARIA BASIN LANDBRIDGE PROJECT BA-27 CONSTRUCTION UNIT 2 JEFFERSON PARISH LOUISIANA		BURK KLEIN PETER NG ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS 4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994 (504) 486-5901 FAX (504) 488-1714	
DRAWING NO. LA-313	Sh. 11 of 14	NO.	DATE	APPR.	TITLE	DESIGNED D.W.O.	CHECKED M.D.C.
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE						DATE 7/1/01	SCALE AS SHOWN
						DETAILED C.H.S.	SHEET NO. X
						BK1 JOB NO 9875	



SIGN DETAIL  
(NOT TO SCALE)

2" WIDE CONSPICUITY TAPE AROUND  
ROUND TIMBER PILE @ ELEVATIONS  
+2.0, +3.0 AND +4.0 NAVD 88 FOR EACH  
ROUND TIMBER PILE

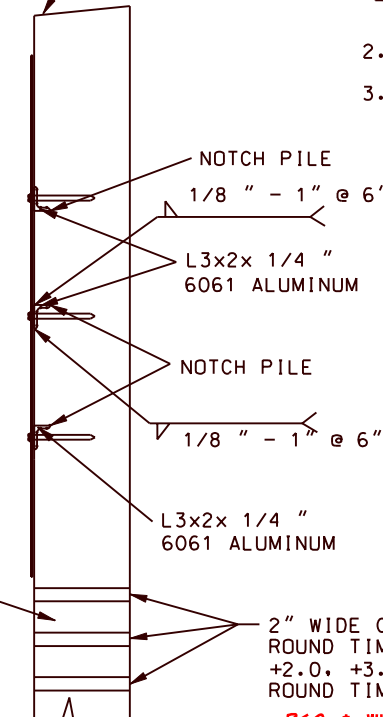
RED & WHITE TAPE



ELEVATION VIEW

(SIGN TYPE A : SUPPORT TYPE 1)  
(NOT TO SCALE)

SEE PILE CAP DETAIL  
(THIS SHEET)



SIDE VIEW

(SIGN TYPE A : SUPPORT TYPE 1)  
(NOT TO SCALE)

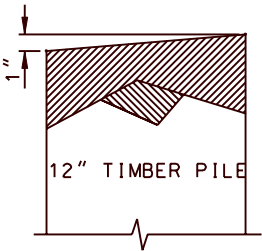
PERMANENT SIGN NOTES:

1. THE 2" BORDER ON THE TYPE "A" WARNING SIGN SHALL BE A REFLECTIVE MATERIAL OF ORANGE COLOR. THE LETTERING FIELD SHALL BE A RETRO-REFLECTIVE MATERIAL OF WHITE COLOR. THE LETTERING FOR THE WARNING SIGNS SHALL BE BLACK. WARNING SIGNS SHALL BE PLACED ON THE SIDE FACING THE BAYOU.

SITE	SIGN TYPE	SUPPORT TYPE	DESCRIPTION	NO. OF SIGNS
WEST	N/A	N/A	N/A	0
EAST	A	1	DO NOT PROCEED	8

2. SEE SHEET 4 OF 14 FOR PERMANENT SIGN LOCATIONS.  
3. ONE (1) PERMANENT SIGN PER POST SHALL BE INSTALLED.

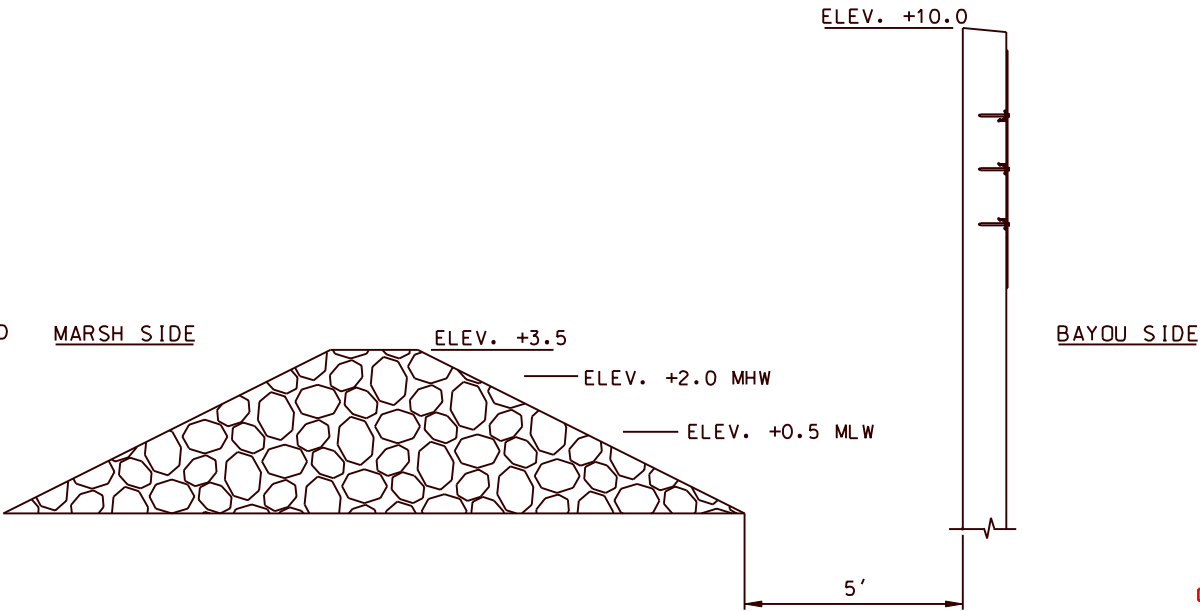
COAT TOP OF PILE WITH COAL TAR EPOXY PAINT  
PRIOR TO PLACING CAP  
24"x24"x26 GA. ALUMINUM FLASHING  
(ATTACH USING ALUMINUM OR STAINLESS STEEL NAILS)



TYPICAL TIMBER PILE CAP  
(NOT TO SCALE)

TEMPORARY SIGN NOTES:

1. TWO (2) TEMPORARY SIGNS PER POST SHALL BE INSTALLED ALONG THE FLOTATION ACCESS CHANNELS THAT ARE PERPENDICULAR TO THE ROCK DIKE ALIGNMENT.
2. ONE (1) TEMPORARY SIGN PER POST SHALL BE INSTALLED ALONG THE FLOTATION ACCESS CHANNEL THAT IS PARALLEL TO THE ROCK DIKE ALIGNMENT.
3. TEMPORARY WARNING SIGNS ON THE PERPENDICULAR FLOTATION ACCESS CHANNELS SHALL BE SPACED AT INTERVALS NOT TO EXCEED 300'.
4. TEMPORARY WARNING SIGNS ON THE PARALLEL FLOTATION ACCESS CHANNELS SHALL BE PLACED A MAXIMUM OF 200 FEET FROM POINTS OF TIE-IN AND AT INTERVALS NOT TO EXCEED 500 FEET.
5. TEMPORARY SIGNS SHALL BE CUT FROM 1/2 INCH MARINE, B/C GRADE VENEER PLYWOOD TO THE SAME DIMENSIONS AS THE PERMANENT SIGNS.
6. TEMPORARY SIGNS SHALL BE FIRST PRIMED ON THE B SIDE OF THE PLYWOOD WITH TWO (2) COATS OF A LIGHT PIGMENT, PERMANENT OIL-BASED PRIMER. THE TOP COAT SHALL BE AN OIL-BASED BRILLIANT WHITE. THE LETTERING ON THESE SIGNS SHALL ALSO BE BLACK. THE LETTERING FOR THE WARNING SIGN WILL BE BLACK.
7. STEEL PIPE SIGN POSTS SHALL BE A MINIMUM SCHEDULE 40 AND 4 INCHES IN DIAMETER. ROUND TIMBER PILE SIGN POSTS SHALL BE A MINIMUM OF 8 INCHES IN DIAMETER. ALL SIGN POSTS SHALL BE LONG ENOUGH TO MAINTAIN THE SIGNS AT THE SPECIFIED ELEVATIONS DURING WEATHER PATTERNS AND MARINE TRAFFIC CONSIDERED TYPICAL FOR THE PROJECT AREA.



SIDE VIEW

(SIGN TYPE A : SUPPORT TYPE 1)  
(NOT TO SCALE)

"AS-BUILT"

DATE OF COMPLETION 10/15/2002

BURKLEINPETERING

ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS  
4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994  
(504) 486-5901 FAX (504) 488-1714

DESIGNED D.W.D.

CHECKED M.D.C.

DATE 7/1/01

SCALE AS SHOWN

SHEET NO. X

WARNING SIGN DETAILS  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 2  
JEFFERSON PARISH  
LOUISIANA

NO.	DATE	APPR.	TITLE

CAD FILE NO.

DRAWING NO.

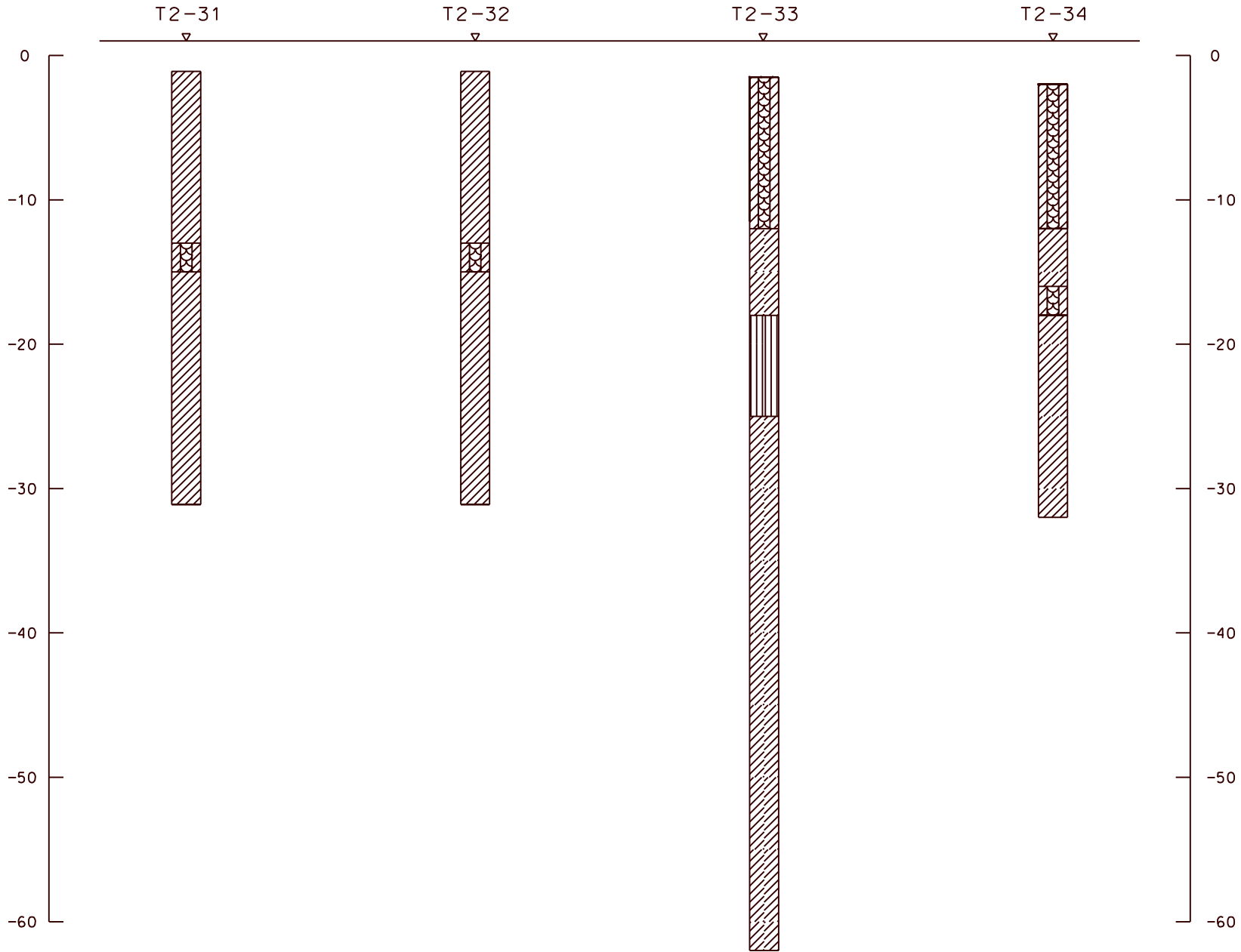
LA-313

SHEET NO 12 OF 14

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

SHEET NO 13 OF 14	DRAWING NO. LA-313	CAD FILE NO.	REVISIONS <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>APPR.</th> <th>TITLE</th> </tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table>		NO.	DATE	APPR.	TITLE																									SETTLEMENT PLATE DETAILS BARATARIA BASIN LANDBRIDGE PROJECT BA-27 CONSTRUCTION UNIT 2 JEFFERSON PARISH LOUISIANA	BURK-KLEIN PETERING ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS 4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994 (504) 486-5901 FAX (504) 488-1714
			NO.	DATE	APPR.	TITLE																												
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE	DESIGNED D. W. D. CHECKED M. D. C.	DETAILED C. H. S. SCALE AS SHOWN	DATE 7/1/01 RKL JOB NO. 9875 SHEET NO. X																															

ELEVATIONS (NAVD 88)



- ML

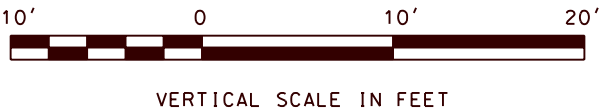
SILT WITH LITTLE OR NO PLASTICITY
- CL

SILTY CLAY, LOW TO MEDIUM PLASTICITY
- CH

CLAY, HIGH PLASTICITY
- OH

ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY

BORING NO.	LATITUDE	LONGITUDE
T2-31	29° 34' 31.83"	90° 09' 24.01"
T2-32	29° 34' 43.61"	90° 09' 09.74"
T2-33	29° 34' 42.35"	90° 08' 50.08"
T2-34	29° 34' 46.86"	90° 08' 40.32"



"AS-BUILT"  
DATE OF COMPLETION 10/15/2002

REVISIONS

NO.	DATE	APPR.	TITLE

CAD FILE NO.

DRAWING NO.  
LA-313

Sht. 14 of 14

SOIL BORING LOGS  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 2  
.JEFFERSON PARISH  
LOUISIANA

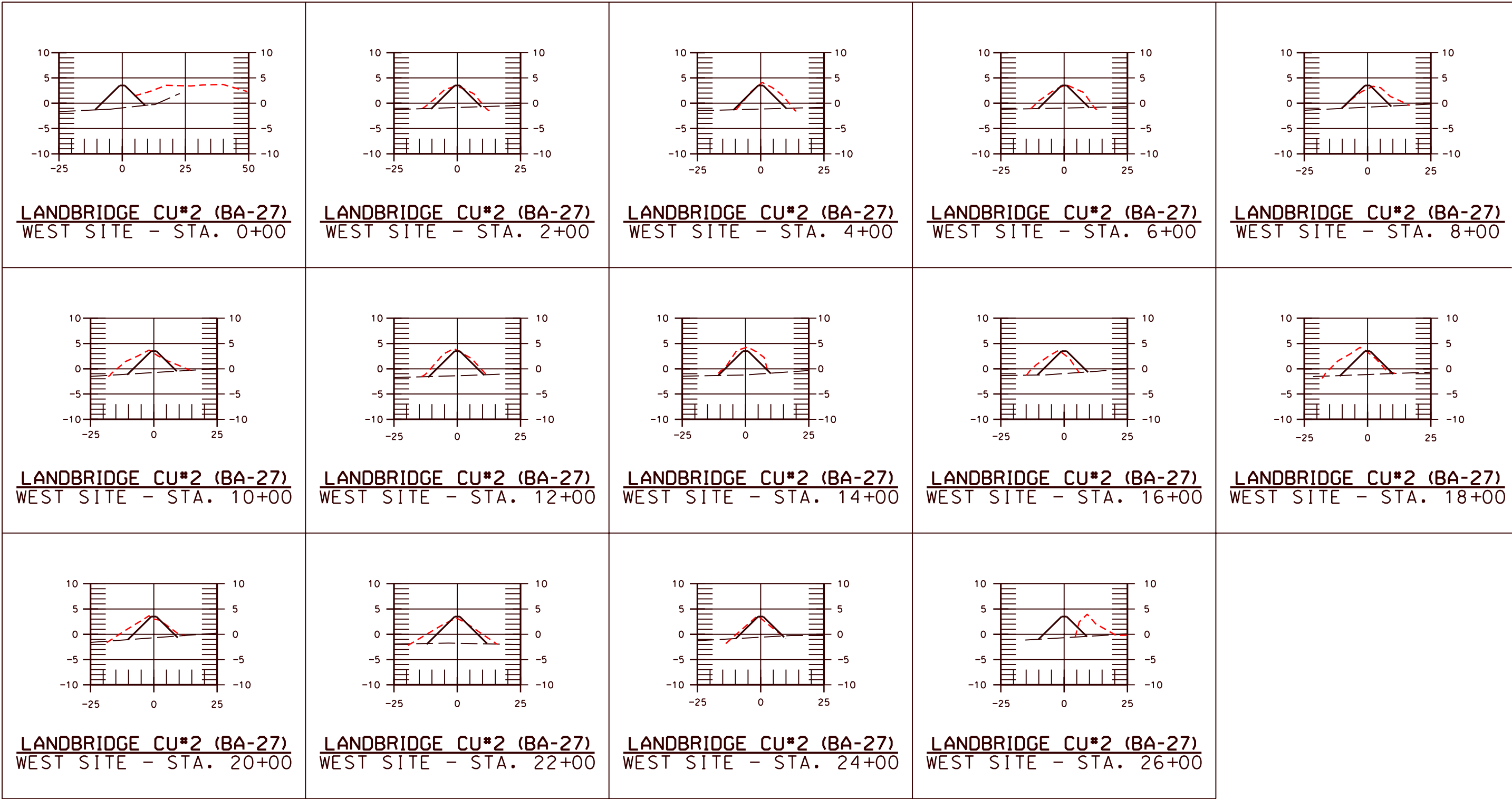
BURK KLEIN PETERSON  
ENGINEERS, ARCHITECTS, PLANNERS, ENVIRONMENTAL SCIENTISTS  
4176 CANAL STREET, NEW ORLEANS, LOUISIANA 70119-5994  
(504) 486-5901 FAX (504) 486-1714

DESIGNED D. W. O.  
CHECKED M. D. C.

DATE 7/1/01  
SCALE AS SHOWN  
SHEET NO. X

DETAILED C. H. S.  
BK1 JOB NO 9875

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE



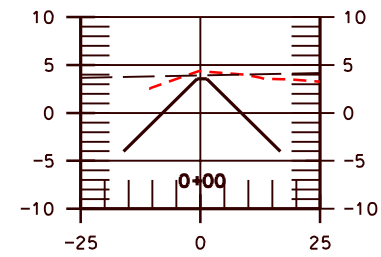
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DATE OF COMPLETION 10/15/2002

REVISIONS		TITLE	
NO.	DATE	APPR.	
CAD FILE NO.			
DRAWING NO.			
LA-313			
Sht. 14A1 of 14			

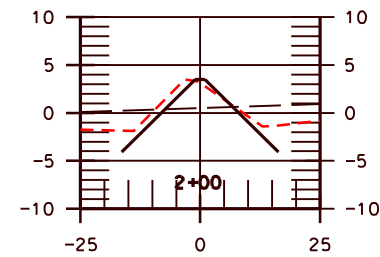
U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE	
SUPPLEMENTAL AS-BUILT SECTIONS-WEST ST.	
BARATARIA BASIN LANDBRIDGE PROJECT	
BA-27 CONSTRUCTION UNIT 2	
JEFFERSON PARISH	
LOUISIANA	

Burk-Kleinpeter Inc.	Date
Designed	07/012
Drawn	A. J. Gremillion
Traced	12/02
Checked	Brad Sticker
	12/02

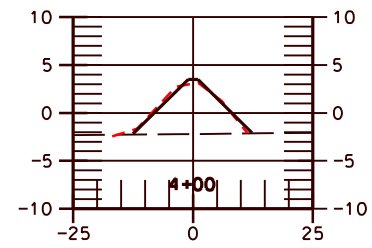
Approved by	E. L. Gremillion, III	Date	12/02
Title	STATE CONSERVATION ENGINEER	Title	
	ALABAMA		
	LOUISIANA		



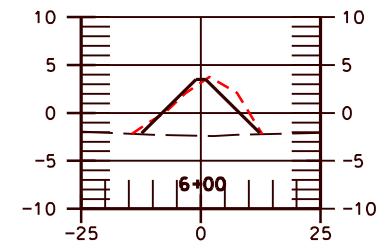
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EAST SITE - STA. 0+00



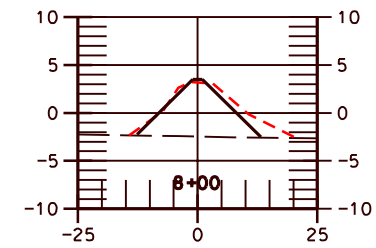
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EAST SITE - STA. 2+00



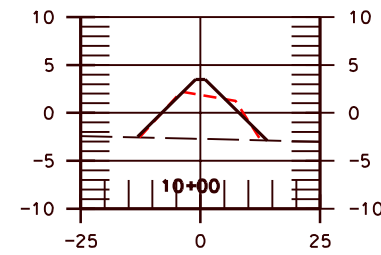
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EAST SITE - STA. 4+00



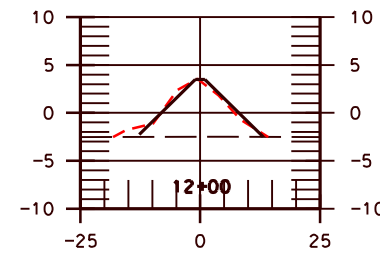
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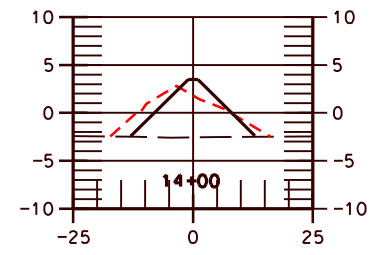
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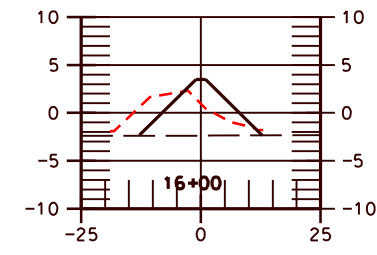
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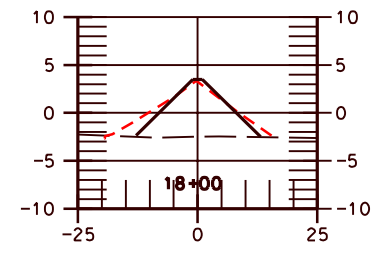
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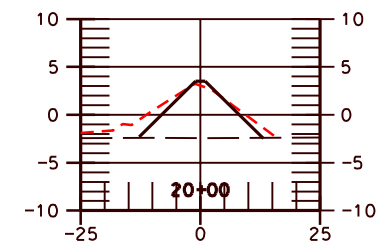
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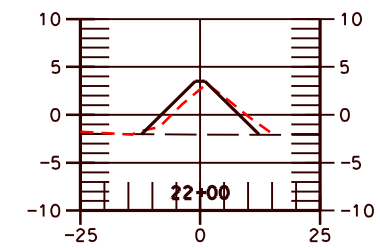
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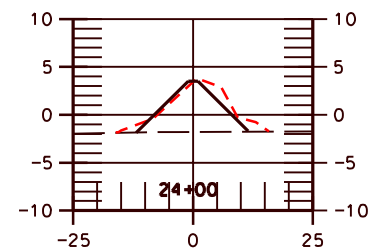
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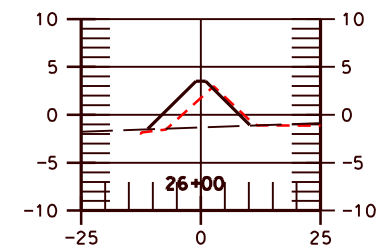
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EAST SITE - STA. 20+00



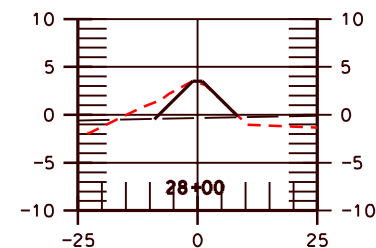
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EAST SITE - STA. 22+00



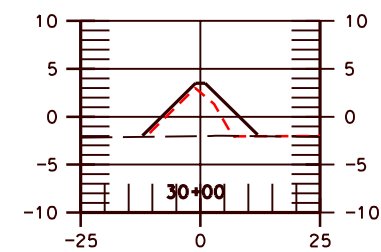
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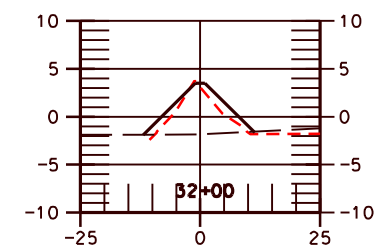
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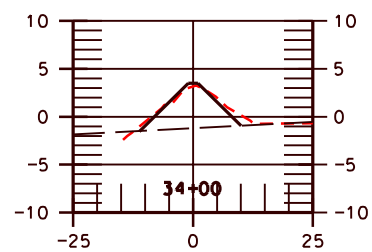
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EAST SITE - STA. 28+00



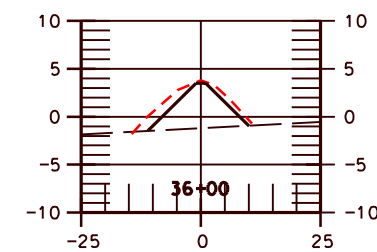
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EAST SITE - STA. 30+00



LANDBRIDGE CU#2 (BA-27)  
EAST SITE - STA. 32+00



LANDBRIDGE CU#2 (BA-27)  
EAST SITE - STA. 34+00



LANDBRIDGE CU#2 (BA-27)  
EAST SITE - STA. 36+00

"AS-BUILT"  
DATE OF COMPLETION 10/15/2002

[illegible]

CAD FILE NO.
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DRAWING NO.  
LA-313

Sht. 14A2 of 14

SUPPLEMENTAL AS-BUILT SECTIONS-EAST ST.  
BARATARIA BASIN LANDBRIDGE PROJECT  
BA-27 CONSTRUCTION UNIT 2  
. JEFFERSON PARISH  
LOUISIANA

CRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

U.S. DEPARTMENT OF AGRICULTURE - NATURAL RESOURCES CONSERVATION SERVICE

Burk Klempeter Inc.		Date
Designed	---	07/01
Drawn	A. J. Gremillion	12/02
Traced	---	---
Checked	Brad Sticker	12/02

Approved by <u>E. J. CLEGG, III</u>	Date <u>12/02</u>
Title <u>STATE CONSERVATION ENGINEER</u>	
<u>ALEXANDRIA, LOUISIANA</u>	
Title _____	

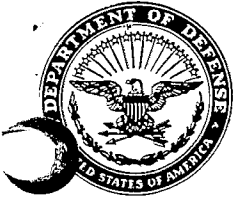


ATTACHMENT V

BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

**PROJECT PERMITS  
&  
PERMIT AMENDMENTS**

Received 7/19/00



# DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO  
ATTENTION OF:

JUL 8 2000

Operations Division  
Eastern Evaluation Section

SUBJECT: EB-20-000-2657

Lafourche Parish Coastal Zone Management  
101 West 112<sup>th</sup> Street  
Cut Off, Louisiana 70345

Gentlemen:

Enclosed is a permit dated this date, subject as above, authorizing work under the Department of the Army permit program.

You are again reminded that any work not in accordance with the approved plans is subject to removal regardless of the expense and the inconvenience that such removal may involve and regardless of the date when the discrepancy is discovered.

Your attention is directed to all the terms and conditions of the approval. In order to have the work approved in accordance with the issued permit, all terms and conditions of the permit and plans shown on the drawings attached thereto must be rigidly adhered to.

It is necessary that you notify the District Engineer, Attention: Eastern Evaluation Section, in writing, prior to commencement of work and also upon its completion. The notification must include the permittee's name, as shown on the permit, and the permit number. Please note the expiration date on the permit. Should the project not be completed by that date, you may request a permit time extension. Such requests must be received before, but no sooner than six months before, the permit expiration date and must show the work completed and the reason the project was not finished within the time period granted by the permit.

A copy of Page 1 of the permit (ENG Form 1721) must be conspicuously displayed at the project site. Also, you must keep a copy of the signed permit at the project site until the work is completed.

Sincerely,

A handwritten signature in cursive script, reading "Ronald J. Ventola", is written over the typed name.

Ronald J. Ventola  
Chief, Regulatory Branch

Enclosure

## DEPARTMENT OF THE ARMY PERMIT

Permittee: Lafourche Parish Coastal Zone Management

Permit No.: EB-20-000-2657

Issuing Office: New Orleans District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.


Project Description: Dredge and deposit dredged material for access and install and maintain structures and/or material for shoreline protection, in accordance with drawings attached in eight sheets, undated.

Project Location: Along the shoreline of Bayou Perot and Bayou Rigolettes, central to a point about 6.5 miles southwesterly from Lafitte, Louisiana in Jefferson and Lafourche parishes.

### Permit Conditions:

#### General Conditions:


1. The time limit for completing the work authorized ends on May 31, 2005. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

- 
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
  5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
  6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

**Special Conditions: See Page 4.**

**Further Information:**


1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- 
- ☒ (X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
  - ☒ (X) Section 404 of the Clean Water Act (33 U.S.C. 1344).
  - ☐ ( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

- a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.
- b. This permit does not grant any property rights or exclusive privileges.
- c. This permit does not authorize any injury to the property or rights of others.
- d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
  - d. Design or construction deficiencies associated with the permitted work.
- 

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

X *Andy Giffie*  
(PERMITTEE)

X 5-30-2000  
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

*Ronald J. Ventola*

Ronald J. Ventola Chief, Regulatory Branch

8 July 00  
(DATE)

for Thomas F. Julich, District Engineer

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

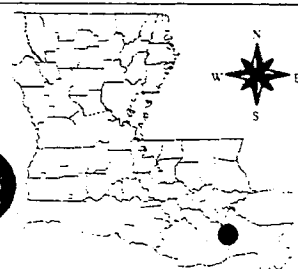
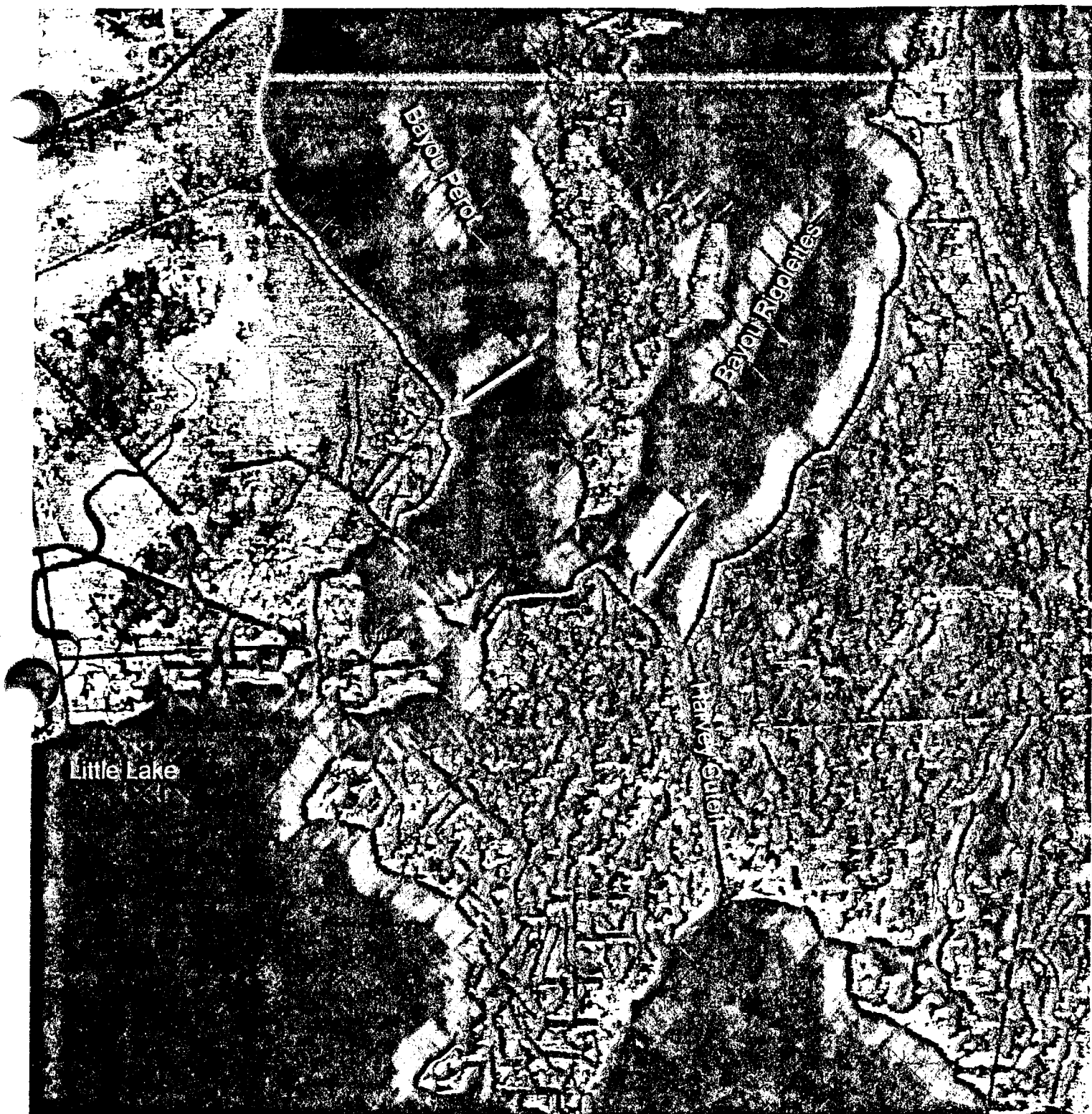
\_\_\_\_\_  
(TRANSFeree)

\_\_\_\_\_  
(DATE)

SPECIAL CONDITIONS:

Permittee: Lafourche Parish Coastal Zone Management  
Permit Number: EB-20-000-2657

7. Maintenance dredging for flotation to access structures for maintenance purposes is authorized under this permit for a period of ten (10) years from the date of permit issuance. Maintenance operations shall not exceed specifications as shown on permit drawings without prior authorization from the regulatory agencies. Dredged material shall be deposited in open water sites not supporting submergent vegetation.
8. Barriers and structures will be visible to the boating public both day and night so as to reduce the possibility of boat collision with the barriers.
9. The permittee shall be aware that under 33 CFR 330.4(a)(1), signs may be placed as aids to navigation warning boaters of upcoming barriers in the waterways provided they are approved and installed with the requirements of the US Coast Guard.
10. You must install and maintain, at your expense, any safety lights, signs and signals prescribed by the US Coast Guard, through regulations or otherwise, on your authorized facilities.
11. The permittee is required to coordinate with BP Oil Company prior to the commencement of work to avoid possible damage to their pipelines that may result from the project construction and operation. The attached letter provides a point of contact.
12. The permittee is aware that this authorization covers only that portion of the work in Lafourche Parish.

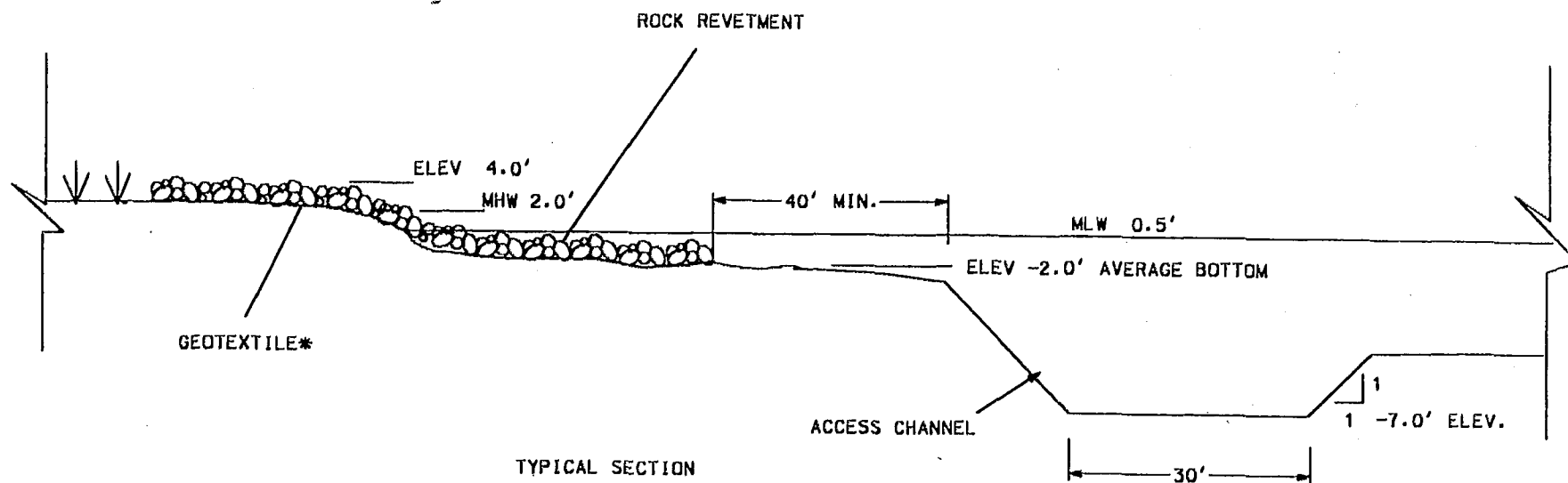


..... Proposed Shoreline Protection (approximately 35,200 ft.)  
 — Site-specific 75' of opening for organism access  
 (sills set at 2' below average water level)

0.4 0 0.4 0.8 Miles

Barataria Basin Landbridge (BA-27)  
 Shoreline Protection  
 Lafourche-Jefferson Parishes, Louisiana





TYPICAL SECTION

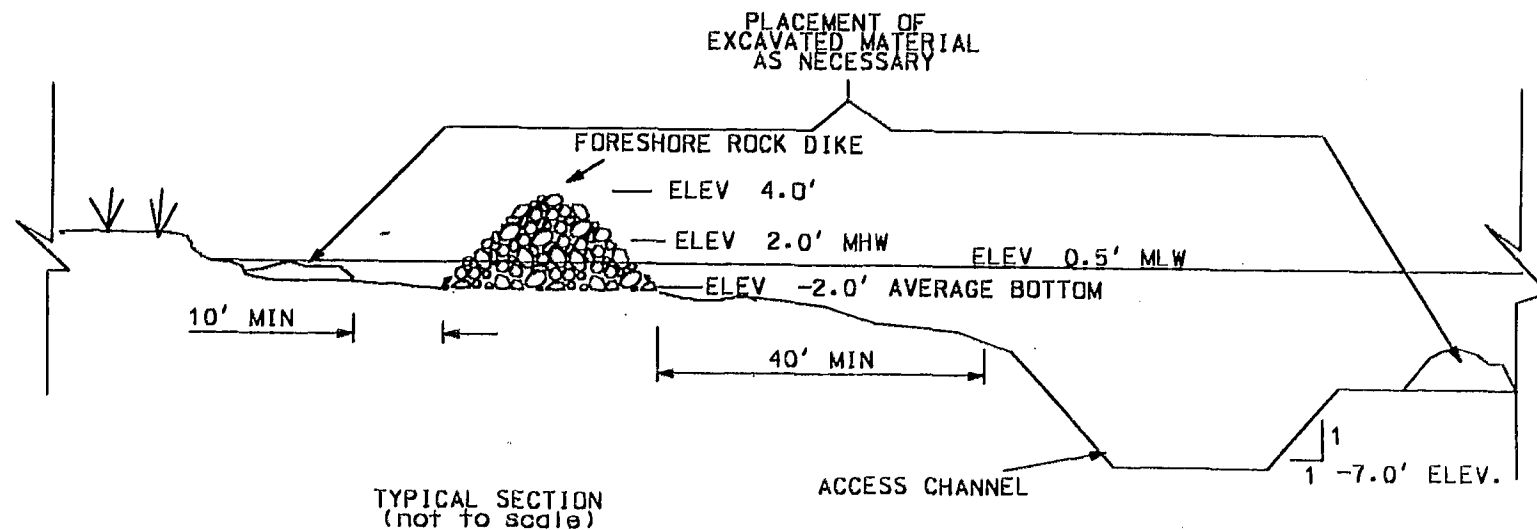
(Not to Scale)

\* AS NEEDED

- NOTES:
1. All elevations shown in NGVD.
  2. Total length to be determined.
  3. Excavated material will be placed in open water areas (not on existing emergent marsh).
  4. Historic channels will be lined with rock material but left open for water and organism exchange.
  5. Currently identified, site-specific, 75' of opening, with a sill set at 2' below average water or lower, are shown on project map.

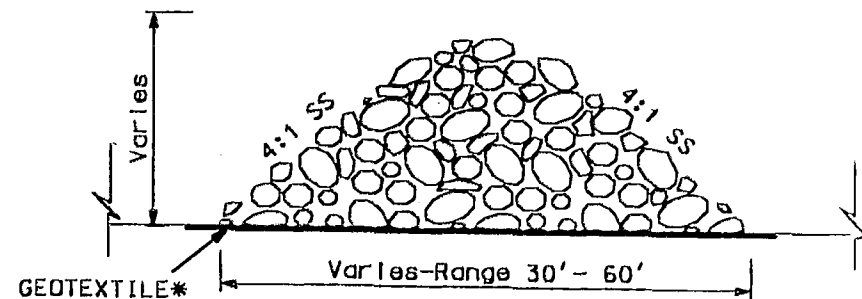
USDA-NRCS-WRS  
Alexandria, Louisiana

Typical Rock Revetment  
Barataria Land Bridge BA-27  
Jefferson-Lafourche Parishes, Louisiana



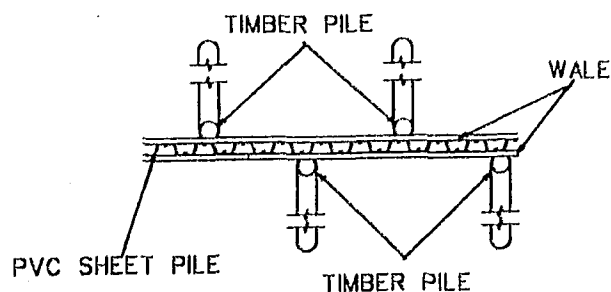
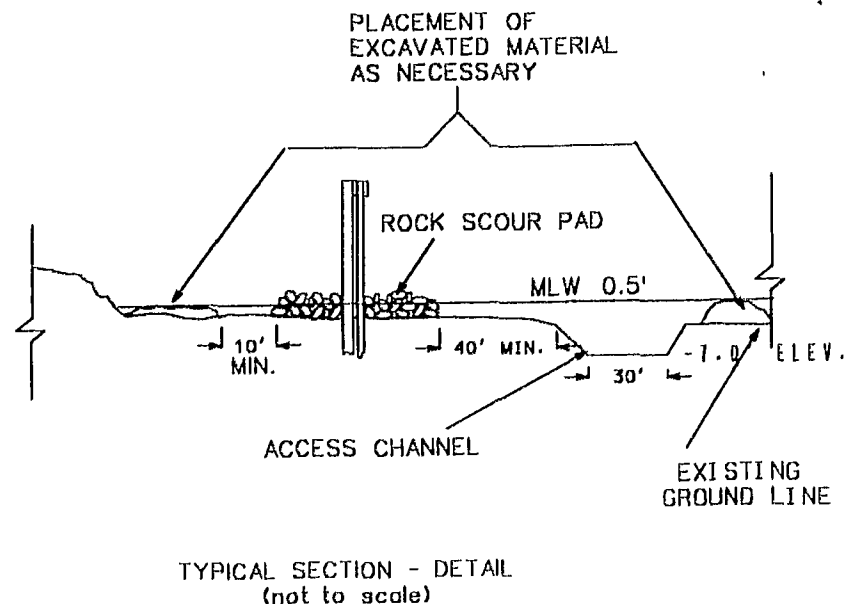
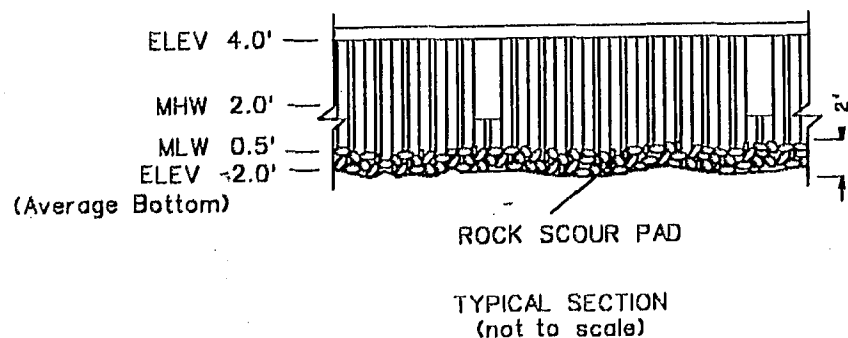
#### NOTES:

1. All elevations shown in NGVD.
2. Total length to be determined.
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6. Additional openings may be incorporated if needed for adequate drainage.



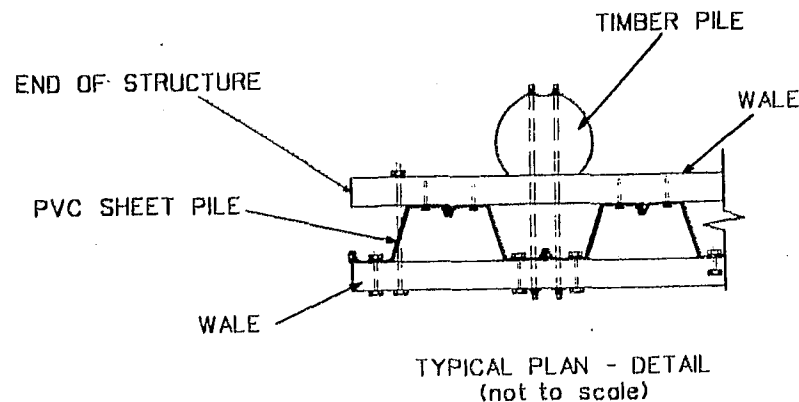
\* As Needed

Typical Foreshore Rock Dike  
Barataria Land Bridge BA-27  
Jefferson-Lafourche Parishes, Louisiana

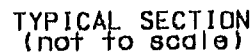


#### NOTES:

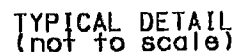
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Typical PVC Sheet Pile Structure  
Barataria Land Bridge BA-27  
Jefferson-Lafourche Parishes, Louisiana



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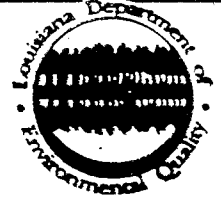


\* As Needed

Typical Furrow Rock Dike  
w/Lightweight Core Material  
Barataria Land Bridge BA-27  
Jefferson-Lafourche Parishes, Louisiana



MAY - 8 - 2000



# State of Louisiana

## Department of Environmental Quality

M.J. "MIKE" FOSTER, JR.  
GOVERNOR

J. DALE GIVENS  
SECRETARY

WQC 000228-03

AP-

Natural Resources Conservation Service  
3737 Government St.  
Alexandria, LA 71302

Attention: Donald W. Gohmert, Agent for Jefferson Parish Council/Lafourche Parish Coastal Zone Management

RE: Proposal to install and maintain shoreline protection along the west bank of Bayou Perot and along the east/south bank of Bayou Rigolettes, including the north of Harvey Cutoff, Jefferson and Lafourche Parishes, Louisiana.

Gentlemen:

This is to acknowledge that you have completed the requirements for Water Quality Certification for the above referenced proposal. It is our opinion that the proposed project will not violate water quality standards of the State of Louisiana. Therefore, we offer no objection to this project provided that the fill material used is free of contaminants.

In accordance with statutory authority contained in the Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the Clean Water Act (P.L. 95-217), the Office of Environmental Services certifies that it is reasonable to expect that water quality standards of Louisiana provided for under Section 303 of P. L. 95-217 will not be violated.

Sincerely,

Bliss M. Higgins  
Assistant Secretary

mvrh

c: Corps of Engineers, New Orleans - EB-20-000-1595  
Coastal Management Division



recycled paper

OFFICE OF ENVIRONMENTAL SERVICES • P.O. BOX 82135 • BATON ROUGE, LOUISIANA 70884-2135

AN EQUAL OPPORTUNITY EMPLOYER







M.J. "MIKE" FOSTER, JR.  
GOVERNOR

JACK C. CALDWELL  
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

MEMORANDUM

December 20, 2000

To: Chris Knotts,  
Engineering Section, CRD

Through: Bill Good  
Administrator, CRD

Through: Terry Howey, *TH*  
Administrator, DNR-CMD *GD*

Through: Greg DuCote,  
Program Manager, Interagency Affairs Branch

Through: Jeff Harris, *JH*  
Consistency Coordinator

From: Brian Marcks, *BM*  
Consistency Analyst (ext. 7939)

Subject: C000656, Coastal Zone Consistency  
Natural Resources Conservation Service  
Construction of Phase 3 of the Barataria Basin Landbridge  
Shoreline Protection CWPPRA Project (BA-27), **Lafourche**  
**and Jefferson Parishes, Louisiana**

Coastal Management Division is presently reviewing the referenced project for consistency with Louisiana Coastal Resources Program. We would appreciate comments from Coastal Restoration as to whether the proposed activity as described in the enclosed application, conforms with the project as approved by the CWPPRA Task Force.

Please contact me at 342-7939 if there are any questions or if you require additional information.

Attachment



RECEIVED

2000 DEC 27 AM 11 48

COASTAL RESTORATION  
DIVISION

CHRIS,

SORRY THIS IS SO LATE GETTING  
TO YOU. IT'S DATED 12/20 BUT  
WAS REC'D 12/27 WHEN I WAS OUT  
OF OFFICE (12/22 - 1/1).

Pat  
1-2-01



M.J. "MIKE" FOSTER, JR.  
GOVERNOR

JACK C. CALDWELL  
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

MEMORANDUM

March 21, 2000

**To:** Chris Knotts  
Federal Assistance Section, CRD

**Through:** Diane Smith *D.H. Good*  
Assistant Administrator, CRD *Administrator, (R)*

**Through:** Terry Howey *TH*  
Administrator, DNR-GMD

**Through:** Greg DuCote *GD*  
Program Manager, Interagency Affairs Branch

**Through:** Jeff Harris *JH*  
Consistency Coordinator

**From:** Chris Seifert *CS*  
Consistency Analyst (ext. 7943)

**Subject:** C000039, Coastal Zone Consistency  
Natural Resources Conservation Service  
Barataria Basin shoreline protection, Phase 1 and 2, CWPPRA Project BA-27  
Jefferson and Lafourche Parishes, Louisiana

Coastal Management Division is presently reviewing the referenced project for consistency with the Louisiana Coastal Resources Program. We would appreciate comments from Coastal Restoration Division on this shoreline protection project.

Please contact me at 342-7943 if there are any questions or if you require additional information.

Attachment



United States  
Department of  
Agriculture

Natural Resources  
Conservation Service

3737 Government Street  
Alexandria, Louisiana  
71302

February 4, 2000

Mr. Ronald J. Ventola  
Chief, Regulatory Functions Branch  
U.S. Army Corps of Engineers  
New Orleans Division  
Post Office Box 60267  
New Orleans, Louisiana 70160-0267

Mr. Terry W. Howey  
Director  
Louisiana Department of Natural Resources  
Coastal Management Division  
Post Office Box 44487  
Baton Rouge, Louisiana 70802-4487

Mr. Larry Wiesepape  
Certification Coordinator  
Department of Environmental Quality  
Office of Water Resources  
Post Office Box 82215  
Baton Rouge, Louisiana 70884-2215

Gentlemen:

RE: Permit Application  
Barataria Basin Landbridge Shoreline Protection Project Phase 1 & 2  
Jefferson and Lafourche Parishes

Please find attached the permit application for the above referenced project. This project was approved for funding under Public Law-646 Coastal Wetlands Planning, Protection, and Restoration Act. The permit applicants are Jefferson Parish and Lafourche Parish. The USDA-Natural Resources Conservation Service is the federal sponsor for this project and will act as the applicant's agent in the permitting process. The Louisiana Department of Natural Resources-Coastal Restoration Division is the local sponsor for this restoration project. Any questions or requests for additional information concerning the permit application should be directed to Quin Kinler at (225) 382-2047. Thank you for your help in this permitting process.

Sincerely,

Donald W. Gohmert **Acting For**  
State Conservationist

Cc: Bruce Lehto, ASTC/WR/RD, Alexandria, LA  
Britt Paul, WRS Staff Leader, Alexandria, LA  
Randolph Joseph, Area Conservationist, Lafayette, LA  
Allen Bolotte, District Conservationist, New Orleans, LA  
Quin Kinler, Resource Conservationist, Baton Rouge, LA  
Faye Talbot, FOPSS Staff Leader, Lafayette, LA  
Tim Landreneau, District Conservationist, Thibodaux, LA

APPLICATION FOR DISTRICT OF THE ARMY PERMIT  
(CFR 325)OMB Approval No. 0710-003  
Expires October 1998

Public reporting burden for this collection of information is estimated to average 5 hours per response. Including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Departments of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

**PRIVACY ACT STATEMENT** Authority 33 USC 401, Section 10: 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine Uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)


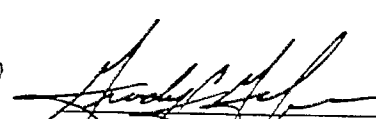
1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
--------------------	----------------------	------------------	-------------------------------

(ITEMS BELOW TO BE FILLED BY THE APPLICANT)

5. APPLICANT'S NAME Jefferson Parish Council, Mr. Aaron Broussard, Council Chairman	Lafourche Parish Coastal Zone Mgt., Mr. Grady Galliano, Administrator	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) Donald W. Gohmert, State Conservationist U.S.D.A. Natural Resources Conservation Service
6. APPLICANT'S ADDRESS 1221 Elmwood Park Blvd. 10 <sup>th</sup> Floor Harahan, Louisiana 70123	101 West 112 <sup>th</sup> Street Cut Off, Louisiana 703045	9. AGENT'S ADDRESS 3737 Government Street Alexandria, Louisiana 71302
7. APPLICANT'S PHONE NOS. W/A A. Residence B. Business (504) 736-6440	REA CODE A. Residence B. Business (504) 632-4666	10. AGENT'S PHONE NOS. W/AREA CODE A. Residence B. Business (318) 473-7751

## 11. STATEMENT OF AUTHORIZATION

I hereby authorize, Donald W. Gohmert, U.S.D.A. - N.R.C.S. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

 APPLICANT'S SIGNATURE	<u>1-26-00</u> DATE	 APPLICANT'S SIGNATURE	<u>11-16-99</u> DATE
NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY			

## 12. PROJECT NAME OR TITLE (see instructions)

Barataria Basin Landbridge Shoreline Protection Project Phases 1 and 2 (BA-27)

## 13. NAME OF WATERBODY, IF KNOWN (if applicable)

Bayou Perot  
Bayou Rigolettes  
Harvey Cutoff

## 14. PROJECT STREET ADDRESS (if applicable)

N/A

## 15. LOCATION OF PROJECT

Jefferson and Lafourche  
COUNTYLA  
STATE

## 16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

Activity is proposed for the southern portion of the east/south bank of Bayou Rigolettes, including the northern end of Harvey Cutoff (Sections 11, 14, 15, 21, 22, 23, 26, 27, 28, and 29, T17S-R23E, in Jefferson Parish) and for the central portion of the west bank of Bayou Perot (Sections 7, 17, 18, 19, and 20, T17S-R23E, in Lafourche Parish)

## 17. DIRECTIONS TO THE SITE

From Lafitte, LA, travel in Barataria Bay Waterway to its intersection with B. Rigolettes, then travel down B. Rigolettes (east then south) approx. 4.5 miles to the NE corner of activity; from that point, activity extends approx. 4 miles S and W along and the E and S bank of B. Rigolettes; then travel approx. 0.8 miles NW across B. Perot to SW corner of activity; from that point, activity extends approx. 2.7 miles N along the west bank of B. Perot.

From Clovelly Boat Landing near Cut Off, LA, travel east in Clovelly Canal to Little Lake, then travel approx. 2.5 miles NE to mouth of B. Perot, then travel approx. 2 miles along west bank of B. Perot to SW corner of activity; from that point, activity extends approx. 2.7 miles N along the west bank of B. Perot; then travel approx. 1.5 miles ENE across B. Perot to Bernstein's Cut, east through Bernstein's Cut to B. Rigolettes, then approx 1.8 miles ESE across B. Rigolettes to the NE corner of activity; from that point activity extends approx. 4 miles S and W along and the E and S bank of B. Rigolettes.

18. Nature of Activity (Description of project, or *uses*)

The proposed activity consists of approximately 10 feet of shoreline protection along the west bank of Bayou Perot and approximately 21,200 feet along the east/south bank of Bayou Rigolettes, including the north end of Harvey Cutoff. Potential shoreline design concepts include a combination of the following techniques: a) foreshore rock dike, b) foreshore rock dike with a lightweight aggregate core, c) rock revetment, d) steel sheetpile, e) concrete sheetpile, and/or f) PVC sheetpile. Selection of a final project design will be based on the results of on-site field surveys, geotechnical investigations, review of alternative designs, and preliminary design analyses, including evaluation of "test sections". The final project design will incorporate low-sill sections ("fish dips") and openings at active oil and gas canals and historical natural channels to allow exchange of water and organisms. Approximately 35,200 feet of access channels will be excavated. For areas where the protection feature would be located away from the shoreline, excavated material will be placed between the protection feature and the existing shoreline. For areas where the protection feature would be located along the shoreline (e.g. rock revetment), excavated material will be deposited in the open water of Bayous Perot or Rigolettes. No excavated material will be placed on vegetated marsh.

## 19. Project Purpose (Describe the reason or purpose of the project, see instructions)

Reduce or eliminate shoreline/bankline erosion along portions of Bayou Perot, Bayou Rigolettes, and the north end of Harvey Cutoff.

## USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

## 20. Reason(s) for Discharge

1. Establish shoreline protection feature.
2. To utilize and/or dispose of material excavated from access channel.

## 21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

1. Rock - range from 40,000 cu. yds. to 900,000 cu. yds., depending on final design.
2. Excavated water bottom - 335,000 cu. yds.

## 22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Between protection feature and existing shoreline: Approximately 29 acres.  
Outside of protection feature, material will be spread so as to not raise the waterbottom by more than 1 foot.

23. Is Any Portion of the Work Already Complete? Yes ☐ No ☒ IF YES, DESCRIBE THE COMPLETED WORK

## 24. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more can't be entered here, please attach a supplemental list).

See Attached

## 25. List of Other Certificates or Approvals/Denials Received from other Federal, State or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
--------	----------------	-----------------------	--------------	---------------	-------------

To the best of my knowledge the proposed activity described in my permit application complies with and will be conducted in a manner that is consistent with the LA Coastal Management Program.

\*Would include but is not restricted to zoning, building and flood plain permits

## 26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT

DATE

SIGNATURE OF AGENT

DATE

SIGNATURE OF APPLICANT

DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

24. Addresses of Adjoining

ty Owners, Lessees, Etc., Whose l

ly Adjoins the Waterbody:

Delta Farms Owners  
c/o Mr. Ethan A. Miller, Esq.  
P.O. Box 1285  
Charlottesville, Virginia 22902

Thomson, Thompson and Wright  
c/o Mr. Frank Tessier  
1100 Poydras Street  
New Orleans, LA 70115

Rocmill, Inc.  
c/o John C. Christian, Jr.  
P.O. Box 1317  
Mandeville, LA 70470-1317

Terrma, Co.  
c/o W. Brooke Fox  
220 Camp Street  
4<sup>th</sup> Floor  
New Orleans, LA 70130

Marietta Smith Green  
Madison Land Company  
5918 Coliseum Street  
New Orleans, LA 70115

Henry Haller, Jr.  
1611 24th Avenue  
Gulfport, MS 39501

Theresa M. Jones, et al  
1240 Kabel Dr.  
New Orleans, LA 70131

Little Lake Hunting Club Inc.  
353 Carondelet St.  
New Orleans, LA 70130

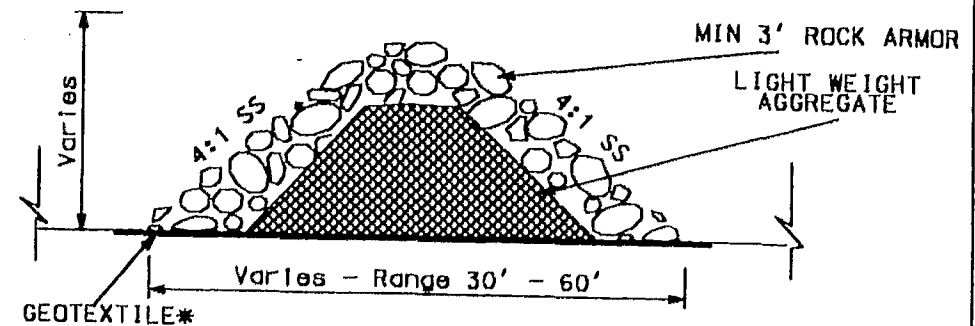
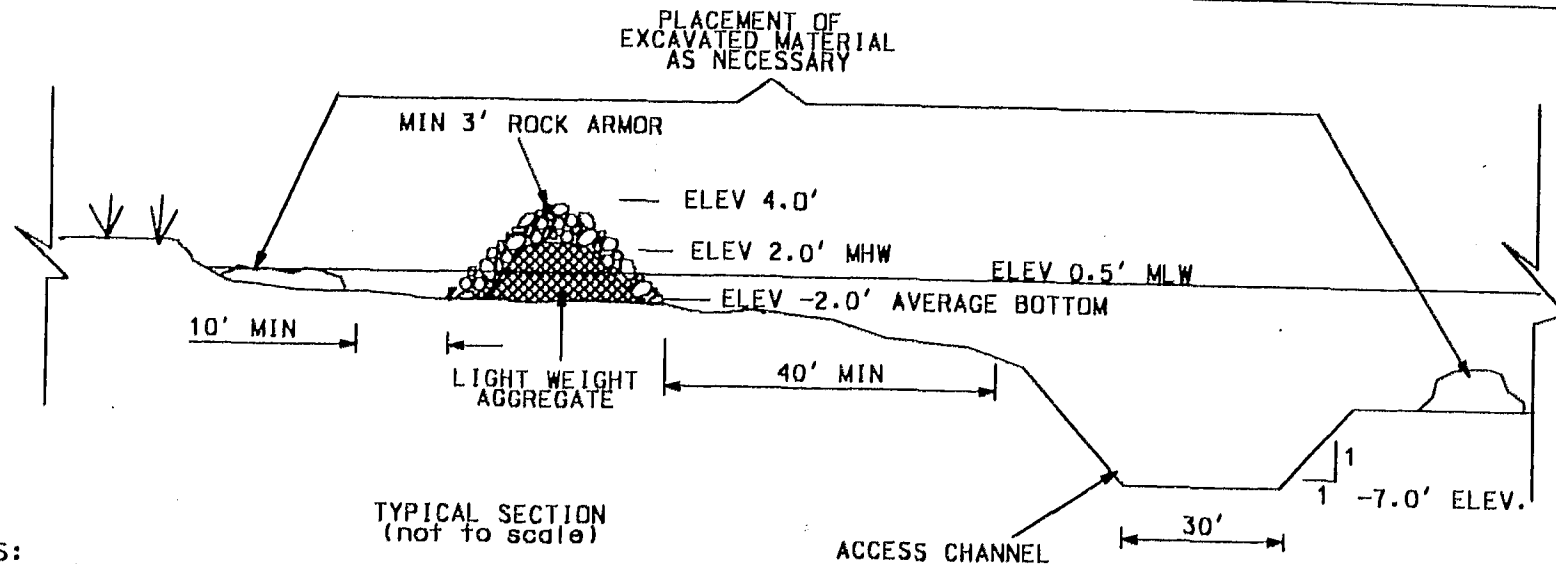
Edward Perrin  
Box 535D  
Lafitte, LA 70067

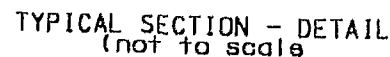
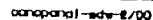
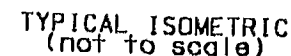
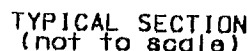




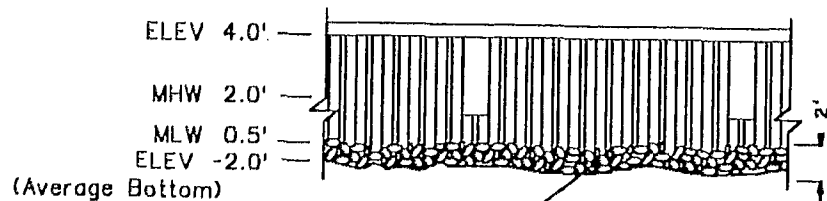
..... Proposed Shoreline Protection (approximately 35,200 ft.)  
 .... Site-specific 75' of opening for organism access  
 (sills set at 2' below average water level)

Barataria Basin Landbridge (BA-27)  
 Shoreline Protection  
 Lafourche-Jefferson Parishes, Louisiana



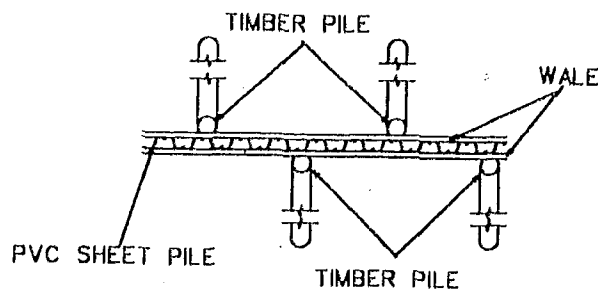


Typical Concrete Pile Structure  
Barataria Land Bridge BA-27  
Jefferson Parish, Louisiana

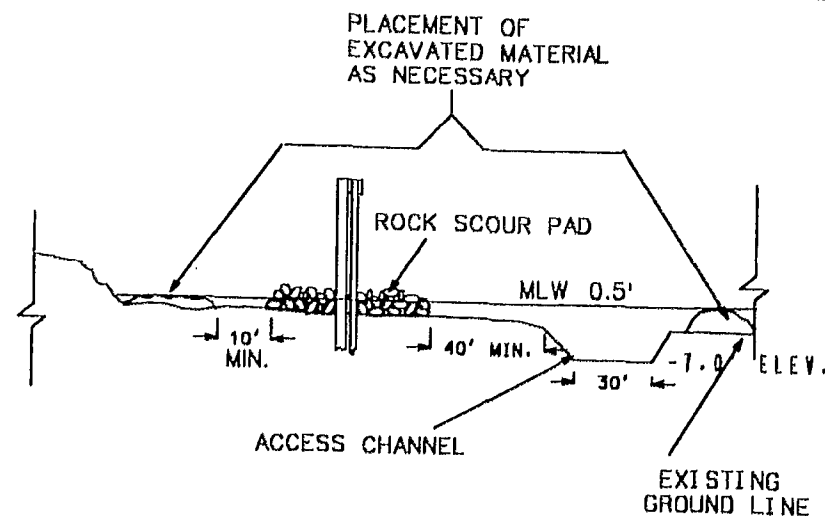


ROCK SCOUR PAD

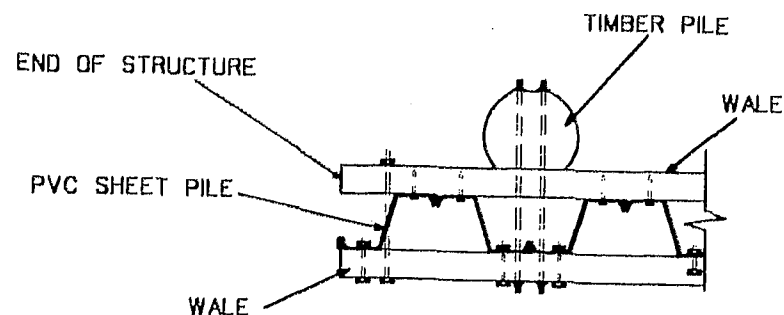
TYPICAL SECTION  
(not to scale)



TYPICAL PLAN  
(not to scale)



TYPICAL SECTION - DETAIL  
(not to scale)

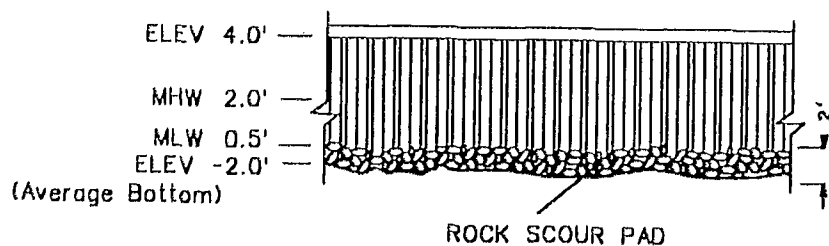


TYPICAL PLAN - DETAIL  
(not to scale)

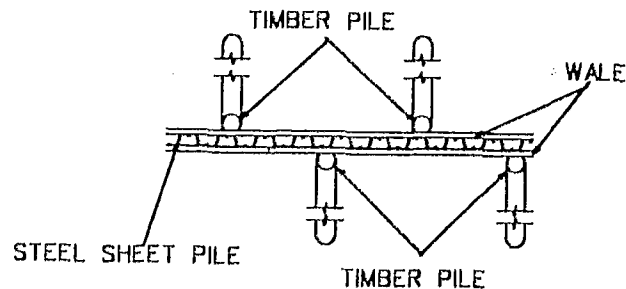
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6. Additional openings may be incorporated if needed for adequate drainage.

Typical PVC Sheet Pile Structure  
 Barataria Land Bridge BA-27  
 Jefferson-Lafourche Parishes, Louisiana



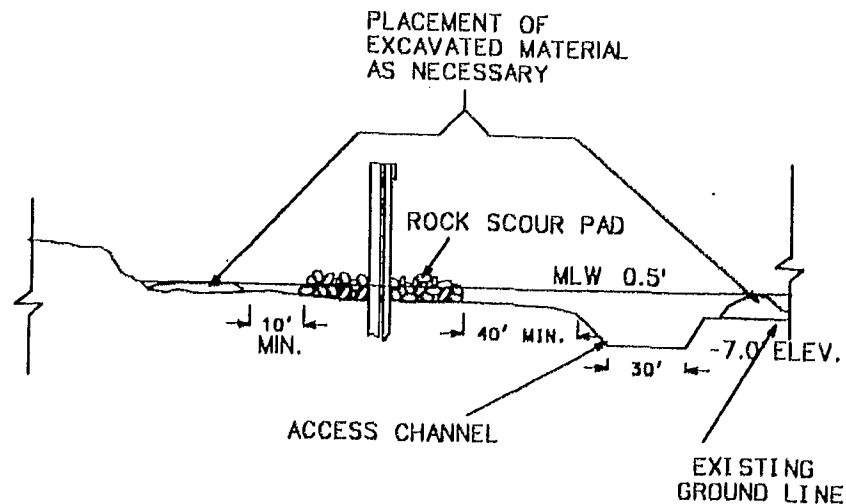
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(not to scale)



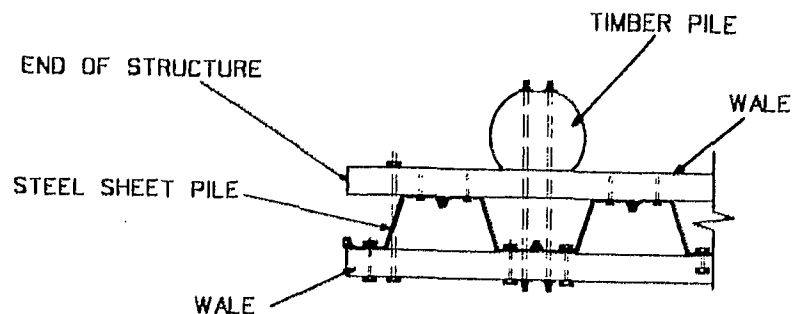
TYPICAL PLAN  
(not to scale)

#### NOTES:

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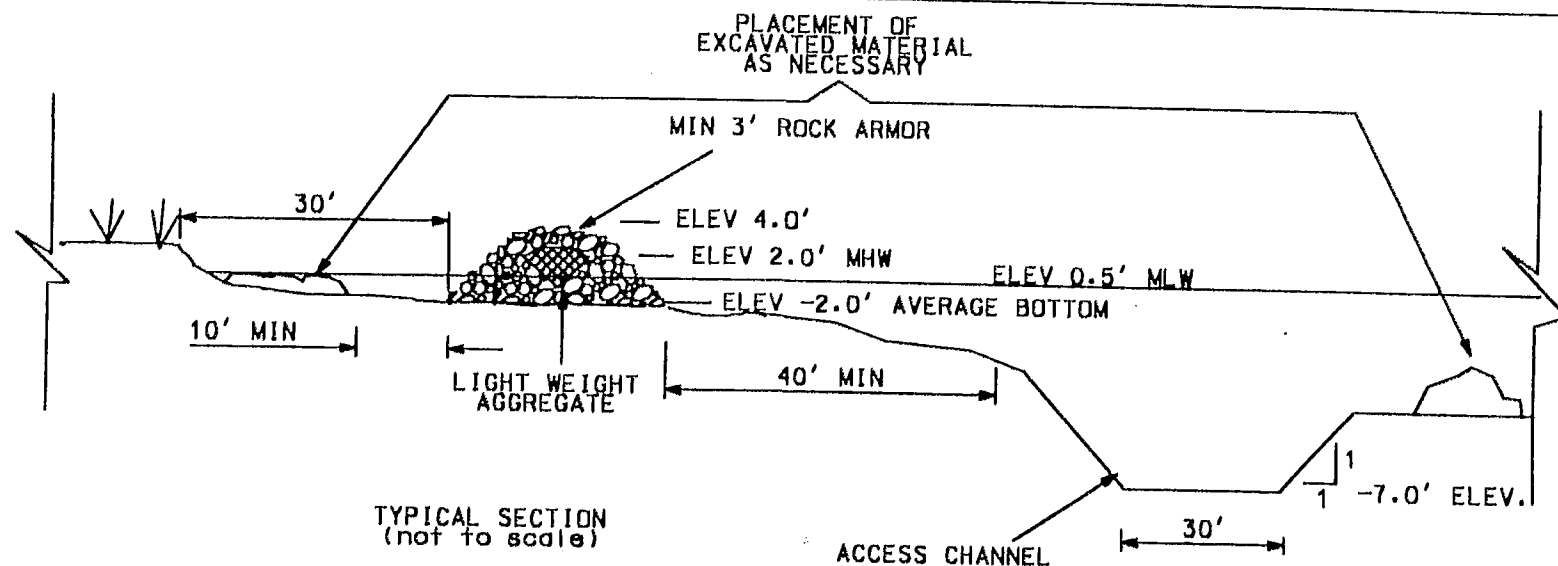


TYPICAL SECTION - DETAIL  
(not to scale)



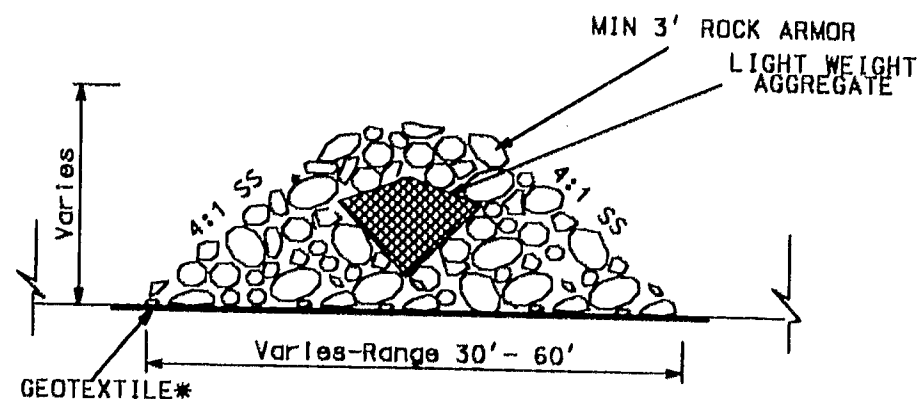
TYPICAL PLAN - DETAIL  
(not to scale)

Typical Steel Sheet Pile Structure  
Barataria Land Bridge BA-27  
Jefferson-Lafourche Parishes, Louisiana



#### NOTES:

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\* As Needed

Typical Furrow Rock Dike  
w/Lightweight Core Material  
Barataria Land Bridge BA-27  
Jefferson-Lafourche Parishes, Louisiana

Per  
XBA-63  
BA-27B



M.J. "MIKE" FOSTER, JR.  
GOVERNOR

JACK C. CALDWELL  
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

February 25, 1998

MEMORANDUM

TO: Terry Howey, Administrator  
Coastal Management Division

THROUGH: Bill Good, Administrator *Bill Good*  
Coastal Restoration Division

FROM: David Burkholder, Engineer Supervisor *DB*  
Joe Saxton, Engineer Advanced *JS*  
Coastal Restoration Division

SUBJECT: P971928, Coastal Use Permit Application  
Jefferson Parish Port District

The Coastal Restoration Division of the Department of Natural Resources has reviewed the referenced permit application. We have found that the project proposed in the application will not adversely impact the Jonathon Davis Wetlands (BA-20) and Barataria Basin Landbridge Shoreline Protection (XBA-63) projects. We have spoken with the National Resource Conservation Service (NRCS) who is the federal sponsor of both projects. They have confirmed that the permit applicant has coordinated the requested coastal use with the features of these projects.

c: Diane D. Smith, Assistant Administrator, DNR/CRD *DD*  
Carrol Clark, Engineer Manager, DNR/CRD  
George Boddie, Engineer Manager, DNR/CRD  
Project Files BA-20 & XBA-63



May 31, 2000

Ms. Marnie Winter  
Environmental & Developmental Control Department  
Yenni Bldg., Suite 703  
1221 Elmwood Park Blvd, 10<sup>th</sup> Floor  
Harahan, Louisiana 70123

Dear Ms. Winter:

Re: Department of the Army Permit No. EB - 20-000-1595  
Barataria Basin Landbridge Shoreline Protection Project (BA-27)  
Jefferson Parish, Louisiana

As you are aware, the Jefferson Parish Council has applied for the necessary Department of the Army Permit (permit) and has been provided a draft of the permit. The permit requires that certain actions be taken prior to, during, and after construction. By this letter, the Natural Resources Conservation Service (NRCS) confirms the following:

1. Through the enclosed Project Cost Share Agreement (NRCS No. 68-7217-9-18 and DNR No. 2511-99-21) dated July 16, 1999, NRCS and the State of Louisiana, acting by and through the Secretary, Department of Natural Resources (DNR) have agreed to implement the project.
2. The life of the project is twenty (20) years starting at the date when NRCS and DNR agree in writing that the Project, or a portion of Project which is capable of functioning independently, is completed and suitable to tender to DNR for operation, maintenance, rehabilitation, and monitoring.
3. NRCS shall:
  - a. Construct the Project in accordance with Permit No. EB 20-000-1595 and Water Quality Certification No. WQC000228-03.
  - b. Immediately notify the New Orleans District, Corps of Engineers, if any previously unknown historic or archaeological remains are discovered during construction.
  - c. Allow inspection, by New Orleans District, Regulatory Functions Branch, of construction activities at any time deemed necessary to ensure that activities are being or have been accomplished in accordance with the terms and conditions of the permit.
  - d. Maintenance operations shall not exceed specifications as shown on permit drawings. Dredged material shall be deposited in open water sites not supporting submerged vegetation.

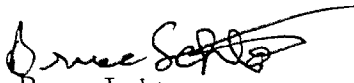


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COASTAL RESTORATION  
DIVISION
- e. Render barriers visible to the boating public both day and night so as to reduce the possibility of boat collision with the barriers.
  - f. Install with the requirements of the U.S. Coast Guard, any approved signs, which are placed as aids to navigation, warning boaters of upcoming barriers in the waterways.
  - g. Install safety lights, signs, and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on any facilities it constructs.
4. Articles I.m. and VIII of the enclosed Project Cost Share Agreement address operation, maintenance, and rehabilitation of the Project.
5. Articles I.j. and VIII of the enclosed Project Cost Share Agreement address monitoring of the Project.

I hope that this information addresses all of your concerns regarding Department of the Army Permit No. EB 20-000-1595. If you have any additional questions or concerns, please contact Mr. Britt Paul of my staff at (318) 473-7816 or by e-mail at [britt.paul@la.usda.gov](mailto:britt.paul@la.usda.gov).

Sincerely,

  
Bruce Lehto  
ASTC/WR/RD

Enclosure

Cc: Allen Bolotte, District Conservationist, NRCS, New Orleans, LA  
Richard Abshire, Resource Conservationist, FOPSS, Lafayette, LA  
Britt Paul, WRSPSL, NRCS, Alexandria, LA  
Quin Kinler, Resource Conservationist, Baton Rouge, LA  
George Boddie, Project Manager, LDNR, Baton Rouge, LA  
Bill Good, Administrator- CRD, LDNR, Baton Rouge, LA

ATTACHMENT VI

BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

**OPERATION, MAINTENANCE AND REHABILITATION BUDGET**

## **OPERATION AND MAINTENANCE BUDGET (APPROVED BY CWPPRA)**

### **BA-27 BARATARIA LANDBRIDGE SHORELINE PROTECTION - PHASE I & II**

LEAD AGENCY: Natural Resources Conservation Service

#### PROJECT FEATURES:

##### Phase I - (Construction Unit No.1):

- Section A and A1 - 200 linear ft. of rock dike and 200 linear ft. of rock dike on freshly excavated spoil material.
- Section B - 400 linear ft. of composite rock dike with lightweight aggregate core encapsulated in geotextile fabric.
- Section C - 400 linear ft. of composite dike using a furrow method to place and encapsulate the lightweight aggregate core.
- Section D - 400 linear ft. of pre-stressed concrete pile and panel wall.

##### Phase I - (Subsequent Construction Units)

- 12,900 linear ft of shoreline protection along the south and southeast bank of the Bayou Rigolettes near the Harvey Cutoff Canal.
- 14,000 linear ft of shoreline protection along the west bank of Bayou Perot.

##### Phase II - (Construction Units)

- 8,000 linear ft of shoreline protection along the east bank of Bayou Rigolettes north of Phase I (Construction Unit No.1).
- 8,000 linear ft. of shoreline protection along the west bank of Bayou Perot south of Phase I.

#### OPERATION AND MAINTENANCE / REHABILITATION ASSUMPTIONS

##### 1. Phase I - Barataria Land bridge (BA-27a)

Year 7                      approximately 5,900 tons. Rock Dike Replenishment

Year 14                     approximately 5,900 tons. Rock Dike Replenishment

##### 2. Phase II - Barataria Land bridge (BA-27a)

Year 7 & 14      Structure Repairs and replacement of signs.

**PHASE I - OPERATION AND MAINTENANCE COST CONSIDERATIONS:**

(Based on a 20 year project life; cost include inflation)

A.	ANNUAL INSPECTIONS: ( 1 Field day with 3 team members including federal participant, boat and report form Schedule A-1)	\$ 99,887
B.	ANNUAL COST OF OPERATIONS: (Annual operation cost for 20 years)	\$ 0
C.	PREVENTATIVE MAINTENANCE (Not required for this project)	\$ 0
D.	COST FOR MAINTENANCE PROJECT AT YEAR 7 (2007) (Includes a ten percent construction contingency (cc) and inflation factor of 1.2599.)	
1.	Contractor Mobilization/Demobilization (\$25,000 x 1.1 cc)	\$ 27,500
2.	Rock Replenishment (5,972 tons x \$35/ton x 1.1cc)	\$229,944
	Contractor Subtotal	\$257,444
	Contractor Cost with Inflation (\$257,444 x 1.2599)	\$324,354
3	Design Cost/ Administration (1 week project \$4,063 x 1.2599 from Schedule D-1)	\$ 5,119
4	Engineering Consultant Design, Survey and Inspection	\$ 61,206
	Basic Services: (10.5% x 257,444 from Schedule E-1 x 1.2599)	\$34,056
	Survey Supplemental Services: (5 days at \$1,250/day x 1.2599 from Schedule E-2)	\$7,874
	Resident Inspection: (20 workday x \$765/day x 1.2599 from Schedule E-3)	\$19,276

**PHASE I - TOTAL FOR MAINTENANCE YEAR 7:                      \$390,679**

**E.      COST FOR MAINTENANCE PROJECT AT YEAR 14 (2014)**  
(Includes a ten percent construction contingency (cc) and inflation factor of 1.5078.)

1.	Contractor Mobilization/Demobilization (\$25,000 x 1.1 cc)	\$ 27,500
2.	Rock Replenishment (5,972 tons x \$35/ton x 1.1cc)	\$229,944
	Contractor Subtotal	\$257,444
	Contractor Cost with Inflation (\$257,444 x 1.5078)	\$388,174
3	Design Cost/ Administration (1 week project \$4,063 x 1.5078 from Schedule D-1)	\$ 6,126
4	Engineering Consultant Design, Survey and Inspection	\$ 73,254
	Basic Services: (10.5% x 257,444 from Schedule E-1 x 1.5078)	\$40,760
	Survey Supplemental Services: (5 days at \$1,250/day x 1.5078 from Schedule E-2)	\$9,424
	Resident Inspection: (20 workday x \$765/day x 1.5078 from Schedule E-3)	\$23,070

**PHASE I - TOTAL FOR MAINTENANCE YEAR 14:                      \$467,554**

**BA-27a - BARATARIA LAND BRIDGE (PHASE I)**

**TOTAL ESTIMATED OPERATION AND MAINTENANCE COST      \$958,120**

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**PHASE II - OPERATION AND MAINTENANCE COST CONSIDERATIONS:**

(Based on a 20 year project life; cost include inflation)

A.	ANNUAL INSPECTIONS: ( 1 Field day with 3 team members including federal participant, boat and report form Schedule A-1)	\$105,144
B.	ANNUAL COST OF OPERATIONS: (Annual operation cost for 20 years)	\$ 0
C.	PREVENTATIVE MAINTENANCE (Not required for this project)	\$ 0
D.	COST FOR MAINTENANCE PROJECT AT YEAR 7 (2009) (Includes a ten percent construction contingency (cc) and inflation factor of 1.3262.)	
1.	Contractor Mobilization/Demobilization (\$25,000 x 1.1 cc)	\$ 27,500
2.	Structure Repair (80,000 lump sum x 1.1 cc)	\$ 88,000
3.	Sign Replacement (9,000 lump sum x 1.1 cc)	\$ 9,900
	Contractor Subtotal	\$125,400
	Contractor Cost with Inflation (\$125,400 x 1.3262)	\$166,306
3	Design Cost/ Administration (1 week project \$4,066 x 1.3262 from Schedule D-1)	\$ 5,392
4	Engineering Consultant Design, Survey and Inspection	\$ 38,758
	Basic Services: (11% x 125,400 from Schedule E-1 x 1.3262)	\$18,294
	Survey Supplemental Services: (5 days at \$1,250/day x 1.3262 from Schedule E-2)	\$8,289

Resident Inspection: \$12,175  
(12 workday x \$765/day x 1.3262 from  
Schedule E-3)

**PHASE II - TOTAL FOR MAINTENANCE YEAR 7: \$210,456**

E. COST FOR MAINTENANCE PROJECT AT YEAR 14 (2016)  
(Includes a ten percent construction contingency (cc) and inflation  
factor of 1.5873.)

1.	Contractor Mobilization/Demobilization (\$25,000 x 1.1 cc)	\$ 27,500
2.	Structure Repair (80,000 lump sum x 1.1 cc)	\$ 88,000
3.	Sign Replacement (9,000 lump sum x 1.1 cc)	\$ 9,900
	Contractor Subtotal	\$125,400
	Contractor Cost with Inflation (\$125,400 x 1.5873)	\$199,048
3	Design Cost/ Administration (1 week project \$4,066 x 1.5873 from Schedule D-1)	\$ 6,454
4	Engineering Consultant Design, Survey and Inspection	\$ 46,386
	Basic Services: (11% x 125,400 from Schedule E-1 x 1.5873)	\$21,895
	Survey Supplemental Services: (5 days at \$1,250/day x 1.5873 from Schedule E-2)	\$9,920
	Resident Inspection: (12 workday x \$765/day x 1.5873 from Schedule E-3)	\$14,571

**PHASE II - TOTAL FOR MAINTENANCE YEAR 14: \$251,888**

**BA-27 - BARATARIA LAND BRIDGE (PHASE II)**

**TOTAL ESTIMATED OPERATION AND MAINTENANCE COST     \$567,489**

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**PHASE I & II -TOTAL ESTIMATED OPERATION, MAINTENANCE  
AND REHABILITATION BUDGET**

**BA-27 - BARATARIA LAND BRIDGE SHORELINE PROTECTION**

**\$1,525,609**



ATTACHMENT VII

BARATARIA LAND BRIDGE SHORELINE PROTECTION PROJECT

**STRUCTURE OPERATIONS**