

**OPERATION, MAINTENANCE, AND REHABILITATION  
PLAN FOR THE ATCHAFALAYA SEDIMENT  
DELIVERY PROJECT  
(AT-02)**



**May 5, 2004**



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**OPERATIONS, MAINTENANCE, AND REHABILITATION PLAN  
FOR THE  
ATCHAFALAYA SEDIMENT DELIVERY  
(AT-02)**

The Louisiana Department of Natural Resources (LDNR) and the United States Department of Commerce National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) agree to carry out the terms of this plan for the Operation, Maintenance, Repair and Rehabilitation Plan (hereinafter referred to as the "Plan") of the accepted completed project features in accordance with the U.S. Department of Commerce NOAA Cooperative Agreement No. NA47FZ0477 dated July 28, 1994, with amendments effective August 1, 1996 (Amendment No.1), October 1, 1997 (Amendment No.2), January 1, 1998 (Amendment No.3) and December 1, 1997 (Amendment No.4). The Memorandum of Agreement between LDNR, NOAA and the U.S. Corps of Engineers fully executed February 19, 1999 specifies the arrangement between parties to execute and fund long-term project activities, i.e. operation and maintenance, and monitoring is shown in Attachment II.

Construction of the Atchafalaya Sediment Delivery Project 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 Atchafalaya Sediment Delivery Project was approved on the second (2<sup>nd</sup>) Priority Project List.

The project features covered by this plan are inclusive of and are identified as the Atchafalaya Sediment Delivery Project (AT-02). The intention of the provisions of this Plan is to maintain this project in a condition that will generally provide the anticipated benefits that the project was based on. 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 property associated with the Atchafalaya Sediment Delivery Project is owned by the Atchafalaya Delta Game Management - La Department of Wildlife and Fisheries and Louisiana Land and Exploration.

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

The Atchafalaya Sediment Delivery Project is a distributary channel maintenance and delta-lobe creation project consisting of approximately 2,182 acres of freshwater wetlands and shallow open water. The project is located within the Louisiana Department of Wildlife and Fisheries Atchafalaya Delta Management Area and is bounded on the north by Mile Island, the west by East Pass, and to the east and south by the Atchafalaya Bay. (Attachment III)

The Atchafalaya Delta is bisected by the Lower Atchafalaya River which is maintained by

the U.S. Corps of Engineers for navigation purposes. The continued dredging and placement of spoil material along the banks of the river has caused sediment deprivation in adjacent delta environments. The Sediment Delivery Project was designed to enhance the natural delta-building process by restoring the Natal Channel and Castille Pass to a functional tertiary distributary channels and utilizing the dredge material to create delta lobe island suitable for establishment of emergent marsh.

The principle project features include:

- Natal Channel - 5,100 linear ft. dredge channel w/ 170 ft. wide bottom width and with a branch channel of 1500 linear feet oriented to the northeast from Station 71+00. Bottom width of this branch channel was 150 feet.
- Castille Channel - 2,000 linear ft. dredge channel w/ 125 ft. wide bottom.
- Marsh Creation - 668,683 cu. yds. of dredge material from Natal Channel placed at 4 sites creating approximately 257 acres of wetlands.
- Marsh Creation - 32,242 cu. yds. of dredge material from Castille Pass placed at on location creating approximately 20.5 acres of wetlands.

## 2. CONSTRUCTION COMPLETION

The Atchafalaya Sediment Delivery Project As-built Drawings and Project Completion Report was prepared by Brown Cunningham and Gannuch Engineers and is included in Attachment IV of this Plan. This report is intended to describe project construction progress, problems encountered during construction and solutions, project quantities and costs, final total volumes of material dredged from channels, total acreage at disposal areas and before and after surveys for verification of dimensions and volumes and as-built drawings.

## 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 within Attachment V.

## 4. ITEMS REQUIRING MAINTENANCE AND REHABILITATION

The following completed project features jointly accepted by LDNR and NMFS will require operation, maintenance, repair, and/or rehabilitation throughout the 20 year life of the project.

1. Natal Channel: dredged from its head at East Pass and extends approximately 5,100 linear ft. with a bottom width of 170 ft. at an elevation of -10.0' NGVD.
2. Castille Pass: dredged channel extends approximately 2,200 linear ft. from its

head at East Pass with a bottom width of 125 ft. at an elevation of -10.0' NGVD.

3. **Navigational Aids** - Where applicable, project navigation aids and warning signs shall be inspected and maintained for the twenty year (20) project life.

Maintenance Assumptions: Sediment material will fill the channel from the -10.0' bottom elevation to an elevation of -6.0 ' NGVD. Natal and Castille channels will require dredging at year 10.

Year 10 - Dredge approximately 5,000 linear ft. of channel removing 4 ft. of material.

## 5. OPERATION AND MAINTENANCE BUDGET

Cost associated with the Operation and Maintenance of project features outlined in Section 4 of this plan for the twenty year (20) project life is included and summarized in Attachment VI.

## 6. RESPONSIBILITIES-MAINTENANCE AND REHABILITATION

A. LDNR will:

1. In accordance with the U.S. Department of Commerce NOAA Cooperative Agreement No.NA47FZ0477, assume all responsibilities for maintenance and rehabilitation of the accepted completed project features identified in Section 4.
2. Conduct joint site inspections with NMFS of the project site at least annually and after major storm events if determined to be necessary by LDNR and/or NMFS. LDNR will submit to NMFS, 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 the urgency of such action.
3. Perform or have performed any corrective actions needed, if such corrective actions have been approved by LDNR or NMFS. NMFS will participate with LDNR, or its appointed representative, in the engineering and design phases of the corrective actions for the project. Oversight engineering and construction of the corrective actions for the project will

be the responsibility of LDNR or its appointed representative. At least thirty (30) calendar days prior to the date of formal request for construction bids, LDNR or its appointed representative shall provide NMFS with final copies of all project corrective action designs and specifications for review and concurrence by NMFS. 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 NMFS. Any plan and/or specification changes both before and after award of construction contracts, shall be approved by LDNR in coordination with NMFS.

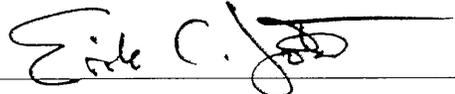
4. The DNR and NMFS representatives shall meet as necessary during the periods of construction to address any corrective actions needed and shall make such recommendations as they deem necessary.
5. Provide a total contribution equal to the amount outlined in the Memorandum of Agreement for the maintenance and rehabilitation cost needed for the twenty(20) year life of the project.

B. NMFS will:

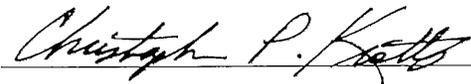
1. Conduct joint site inspections with LDNR of the project site at least annually and after major storm events if determined to be necessary by LDNR or NMFS.
2. Provide guidance for the development of plans and implementation of the project, review final copies of any maintenance and rehabilitation project 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. Facilitate the Federal contribution towards operation and maintenance activities as specified in the Memorandum of Agreement between LDNR, NMFS and the U.S. Corps of Engineers.

The undersigned parties, acting on behalf of their respective agencies, agree to operate, maintain, and rehabilitate the Atchafalaya Sediment Delivery Project (AT-02) according to this document, referenced Cooperative Agreement, plans, and all applicable permits and laws.

UNITED STATES DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL MARINE FISHERIES SERVICE

By:  Date: 4/28/04  
Title: PROGRAM OFFICER

LOUISIANA DEPARTMENT OF NATURAL RESOURCES

By:  Date: 6/14/04  
Title: DIRECTOR, CED

ATTACHMENT I

ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

**COST SHARE AGREEMENT**

GRANT  COOPERATIVE AGREEMENT

AMENDMENT TO  
 FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE

MULTI ACC CODES (see att B)

AWARD NUMBER

NA47FZ0477

RECIPIENT NAME  
 Louisiana Department of Natural Resources

AMENDMENT NUMBER  
 4

STREET ADDRESS  
 P.O. Box 94396

EFFECTIVE DATE  
 DECEMBER 1, 1997

CITY, STATE, ZIP CODE  
 BATON ROUGE, LOUISIANA 70804

EXTEND WORK COMPLETION TO  
 FEBRUARY 28, 1999

DEPARTMENT OF COMMERCE OPERATING UNIT  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COSTS ARE REVISED AS FOLLOWS:	PREVIOUS ESTIMATED COST	ADD	DEDUCT	TOTAL ESTIMATED COST
FEDERAL SHARE OF COST	\$ 6,386,901	\$ 661,402	\$ -0-	\$ 7,048,303
RECIPIENT SHARE OF COST	\$ 2,252,464	\$ -0-	\$ 879,154	\$ 1,373,310
TOTAL ESTIMATED COST	\$ 8,639,365	\$ 661,402	\$ 879,154	\$ 8,421,613

REASON(S) FOR AMENDMENT

- To provide additional funds in the amount of \$661,402, and reallocate the federal/state cost share ratio from 75/25% to 85/15%, for the project entitled, 'Coastal Wetlands Planning, Protection, and Restoration Act (PL 101-646) Big Island Mining (XAT-7) and Atchafalaya Sediment Delivery (PAT-2)', as requested in the Recipient's application dated September 16, 1998, and budget revisions dated May 4, 1999, which are incorporated into this award by reference.
- To revise the statement of work by excluding long term monitoring and to (CONTINUED ON NEXT PAGE FOR ADDITIONAL REASONS FOR AMENDMENT)

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

Special Award Conditions (ATTACHMENT B  ADMINISTRATIVE  PROGRAMMATIC)  
 Line Item Budget (ATTACHMENT A)  
 Other(s):

*02/01/99*  
*Reserve*  
*WA*

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER <i>David Little</i>	TITLE NOAA GRANTS OFFICER	DATE JUN 11 1999
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL Jack Caldwell <i>Jack Caldwell</i>	TITLE Secretary	DATE 6/30/99

PAGE 2 OF 2

AMENDMENT NO: 4

GRANT NO: NA47FZ0477

RECIPIENT NAME: Louisiana Department of Natural Resources

REASONS FOR AMENDMENT:

- approve a retroactive reprogramming of funds in the amount \$(160,450) from Task 3 to Task 2, as requested in the Recipient's letter dated May 5, 1999, which is incorporated into this award by reference.
3. To decrease the Recipient's share of funds in the amount of \$(879,154), for the project stated above, as requested in the referenced application stated above.
  4. To revise and add NOAA Administrative Special Award Conditions.

GRANT  COOPERATIVE AGREEMENT

## AMENDMENT TO FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE  
**MULTI ACC CODES (see att B)**

AWARD NUMBER  
**NA47FZ0477**

RECIPIENT NAME  
**Louisiana Department of Natural Resources**

AMENDMENT NUMBER  
**3**

STREET ADDRESS  
**P.O. Box 94396**

EFFECTIVE DATE  
**JANUARY 1, 1998**

CITY, STATE, ZIP CODE  
**BATON ROUGE, LOUISIANA 70804**

EXTEND WORK COMPLETION TO  
**N/A**

DEPARTMENT OF COMMERCE OPERATING UNIT  
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

COSTS ARE REVISED AS FOLLOWS:	PREVIOUS ESTIMATED COST	ADD	DEDUCT	TOTAL ESTIMATED COST
FEDERAL SHARE OF COST	\$ 5,186,901	\$ 1,200,000	\$ -0-	\$ 6,386,901
RECIPIENT SHARE OF COST	\$ 1,852,464	\$ 400,000	\$ -0-	\$ 2,252,464
TOTAL ESTIMATED COST	\$ 7,039,365	\$ 1,600,000	\$ -0-	\$ 8,639,365

- REASON(S) FOR AMENDMENT
- To provide supplemental funding in the amount of \$1,200,000, for the project entitled 'Coastal Wetland Planning, Protection, and Restoration Act (PL 101-646), Big Island (XAT-7) and Atchafalaya Sediment Delivery (PAT-2), as requested in the Recipient's application dated November 26, 1997, and revision by letter dated January 7, 1998, incorporated by reference.
  - To revise and add NOAA Administrative Special Award Conditions.

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

- Special Award Conditions (ATTACHMENT B  ADMINISTRATIVE  PROGRAMMATIC)
- Line Item Budget (ATTACHMENT A)
- Other(s): OMB Circular A-133, 62 Fed. Reg. 35278(June 30, 1997)

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER <i>Jean B. West</i>	TITLE <b>NOAA GRANTS OFFICER</b>	DATE <b>JAN 13 1998</b>
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL <i>Kell Edmund</i>	TITLE <b>DNR Secretary</b>	DATE <b>JAN 15 1998</b>

### BUDGET INFORMATION — Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
Administrative and legal expenses	\$ .00	\$ .00	\$ .00
Land, structures, rights-of-way, appraisals, etc.	\$ .00	\$ .00	\$ .00
Relocation expenses and payments	\$ .00	\$ .00	\$ .00
Architectural and engineering fees	\$ .00	\$ .00	\$ .00
Other architectural and engineering fees	\$ .00	\$ .00	\$ .00
Project inspection fees	\$ .00	\$ .00	\$ .00
Site work	\$ .00	\$ .00	\$ .00
Demolition and removal	\$ .00	\$ .00	\$ .00
Construction Phase II	\$ 1,200,000	\$ .00	\$ 1,200,000
Equipment	\$ .00	\$ .00	\$ .00
Miscellaneous	\$ .00	\$ .00	\$ .00
UBTOTAL	\$ .00	\$ .00	\$ .00
Contingencies (sum of lines 1-11)	\$ .00	\$ .00	\$ .00
UBTOTAL	\$ .00	\$ .00	\$ .00
Project (program) income	\$ .00	\$ .00	\$ .00
TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 1,200,000	\$ .00	\$ 1,200,000
<b>FEDERAL FUNDING</b>			
federal assistance requested, calculate as follows: Enter eligible costs from line 16c Multiply X <u>75.0</u> % Consult Federal agency for Federal percentage share. Phase I = \$0 Phase II = \$1,200,000 Phase II = \$1,200,000 NMFS Admin = \$0 Phase III = \$0 Total = \$1,200,000			
			\$ 900,000

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Standard Form 424C (4-88)

**BUDGET INFORMATION --- Conservation Action Programs**

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
Administrative and legal expenses	\$ .00	\$ .00	\$ .00
Buildings, structures, rights-of-way, appraisals, etc.	\$ .00	\$ .00	\$ .00
Relocation expenses and payments	\$ .00	\$ .00	\$ .00
Architectural and engineering fees	\$ .00	\$ .00	\$ .00
Other architectural and engineering fees	\$ .00	\$ .00	\$ .00
Project inspection fees	\$ .00	\$ .00	\$ .00
Site work	\$ .00	\$ .00	\$ .00
Demolition and removal	\$ .00	\$ .00	\$ .00
Construction Phase II	\$ 400,000	\$ .00	\$ 400,000
Equipment	\$ .00	\$ .00	\$ .00
Miscellaneous	\$ .00	\$ .00	\$ .00
GRAND TOTAL	\$ .00	\$ .00	\$ .00
Contingencies (sum of lines 1-11)	\$ .00	\$ .00	\$ .00
GRAND TOTAL	\$ .00	\$ .00	\$ .00
Project (program) income	\$ .00	\$ .00	\$ .00
TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 400,000	\$ .00	\$ 400,000

**FEDERAL FUNDING**

Federal assistance requested, calculate as follows: Consult Federal agency for Federal percentage share. Enter the resulting Federal share.	Enter eligible costs from line 16c Multiply X <u>75.0</u> % Phase I = \$0 Phase II = \$400,000 Phase III = \$0 Total = \$400,000
Phase I = \$0 Phase II = \$400,000 Phase III = \$0 Total = \$400,000	Phase II = \$400,000 NMFS Admin = \$0 Total = \$400,000
	\$ 300,000

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NOAA ADMINISTRATIVE  
SPECIAL AWARD CONDITIONS

- (Rev) 1. \*Multiple Accounting Codes:  
8FKH300/RL1A7D00/4119 - \$ 900,000  
8FKH300/RL1A7H00/4119 - \$ 300,000  
Total - \$1,200,000
- (Rev) 3. The Budget Period for this amendment is January 1, 1998, through February 28, 1999.
- (Rev) 4. Since this award requires the Recipient to provide \$2,252,464 (26%) in project-related matching costs from non-Federal sources, the Recipient must maintain in its official accounting records an accounting for \$8,639,365.
- (Rev) 27. Office of Management and Budget Circular A-133, Audits of Institutions of Higher Education and Other Non-Profit Institutions (June 30, 1997) applies to this award notwithstanding section D.01 of the Department of Commerce Financial Assistance Standard Terms and Conditions.
- (Add) 30. All financial and progress reports shall be submitted in triplicate (one original and two copies). **Financial Reports** are to be submitted to the NOAA Grants Officer and **Performance (technical) reports** to the NOAA Program Officer.

Notwithstanding Department of Commerce Financial Assistance Standard Term and Condition B.01a, the Recipient may submit performance (technical) reports on a different frequency.

All reports will be submitted for the periods shown below.

matters: estimates of reporting burden; necessity of the data collection form; data collection form duplicates other reported information; data elements in the data collection form; suggested additional data elements for inclusion in the form; who should sign the data collection form for the auditee; level of form's specificity provided in the Circular and supplemental forms; data collection form sent only to the Federal clearinghouse; applicability of Freedom of Information Act and other Federal laws; report copies; report submission and distribution; Federal clearinghouse responsibilities; requirement for the auditor to prepare and sign the data collection form; increased costs for auditors to prepare and sign form; retention of audit workpapers; schedule of expenditures of Federal awards; summary schedule of prior audit findings; summary of the auditor's results; auditor's schedule of findings and questioned costs; report due date; and effective date for the data collection form requirement.

Readers of this Notice should especially note the discussion of the requirement for the auditor to prepare and sign the data collection form due to impact on the text of the Circular. Other matters addressed in the accompanying Notice also resulted in revisions to the text of the Circular but are not repeated in this Notice.

#### B. Public Comments and Responses

##### *Overall Reaction to the Proposed Revision to Circular A-133*

###### Comment

Most commenters overwhelmingly supported the proposed revisions and believe that the revisions will greatly increase the efficiency and effectiveness of the single audit process. Several State auditors commented that the proposed revision to Circular A-133 was similar to what they expected, particularly in light of the changes included in the Single Audit Act Amendments of 1996 (1996 Amendments), which were signed into law on July 5, 1996 (Public Law 104-156). Many commenters were pleased with some of the most significant changes, such as: (a) the increased threshold that triggers an audit requirement from \$25,000 to \$300,000; (b) the risk-based approach to determining major programs; (c) the uniformity of audit requirements for States, local governments, and non-Federal organizations; and, (d) the removal of the current requirement to report virtually all audit findings and questioned costs. A few commenters requested that the audit threshold remain at \$25,000. Although most

commenters supported these significant revisions, many commenters expressed concern about other proposals included in the proposed revision, on which OMB specifically requested public comment, such as the audit coverage for the allowability of charges to cost pools, and whether the auditor should prepare and sign the data collection form.

*Response:* The most significant provisions included in the proposed revision to Circular A-133 that commenters strongly supported are included in the final revision to Circular A-133. Several proposals, such as the audit threshold of \$300,000, are based in the 1996 Amendments and, therefore, are adopted in the final Circular. Each of the proposals on which OMB requested public comment are addressed in the following sections or accompanying Notice. Some of the comments resulted in changes to the final revision.

##### *Consolidation of Circular A-128 Into Circular A-133*

###### Comment

All but one commenter strongly supported the proposal to consolidate Circular A-128 into Circular A-133, and rescind Circular A-128. Reasons cited include less confusion for auditees and auditors, uniformity of audit requirements for non-Federal entities that administer Federal awards, and consistency with concepts included in the 1996 Amendments. One Federal agency that oversees Indian tribal governments expressed concern about rescinding Circular A-128 because many Indian tribal governments have not yet submitted audit reports required by Circular A-128 for audits of fiscal years beginning on or before June 30, 1996.

*Response:* Pursuant to the 1996 Amendments, which establish uniform audit requirements for non-Federal entities that administer Federal awards, the final revision to Circular A-133 extends its coverage to include State and local governments. In response to the Federal agency's concern about Indian tribal governments, it should be noted that States, including Indian tribal governments for purposes of the Circular, and local governments are subject to the requirements of Circular A-128, issued April 12, 1985, for audits of fiscal years beginning on or before June 30, 1996. Sanctions are provided in Circular A-128 and are available for use by Federal agencies, as considered necessary, in instances of continued inability or unwillingness to comply with the requirements of Circular A-128. The rescission of Circular A-128

applies to audits of State and local governments for fiscal years beginning after June 30, 1996.

###### Comment

In light of the proposed rescission of Circular A-128, several commenters requested that the title of Circular A-133 be expanded to also include Indian tribal governments.

*Response:* No change was made as a result of these comments. For single audit purposes, Indian tribal governments are included under the definition of "State" in Circular A-133 based on the statutory definition of "State" in the Single Audit Act of 1984 and the 1996 Amendments.

###### Effective Date

###### Comment

Several Federal agencies questioned which audit requirements are effective prior to codification of the revised Circular in a Federal agency's regulations. Paragraph ten of the proposed revision states that the standards set forth in the revised Circular shall be adopted by Federal agencies in codified regulations not later than six months after publication "in the Federal Register, so that they apply to audits of fiscal years beginning after June 30, 1996 \* \* \* In the interim period, until the standards in this Circular are adopted and become applicable, the audit provisions of Circular A-128, issued April 12, 1985, and Circular A-133, issued April 22, 1996, shall continue in effect." Several Federal agencies also requested clarification about how the requirements of Circular A-133 should be codified in Federal agency regulations.

*Response:* The sentence regarding the interim period was removed from the revised Circular. The 1996 Amendments (31 U.S.C. 7505(a)) require that "each Federal agency shall promulgate such amendments to its regulations as may be necessary to conform such regulations to the requirements of this chapter and of such guidance (provided by the Director of OMB to implement the 1996 Amendments)." Federal agencies shall adopt the provisions of the revised Circular not later than 60 days after publication of the revised Circular in the Federal Register. OMB is coordinating an effort to facilitate Federal agency compliance with this adoption requirement.

Principles for State, Local and Indian Tribal Governments," issued May 4, 1995 (60 FR 26484)). The suggested language was included in the proposed revision to address the timing of when costs charged to cost pools used to support an indirect cost rate or allocated through a CAP should be audited. This area presents unique timing considerations due to the manner in which indirect cost rates and CAPs are developed. Indirect cost rates are usually based on costs incurred in a base period and applied prospectively. Costs allocated through a CAP are typically based on the actual costs incurred in the current year and also previous years.

OMB did not intend for costs charged to cost pools used to support an indirect cost rate or allocated through a CAP to be audited every year as a major program regardless of materiality. As a result of the comments received, the suggested language relating to the treatment of indirect costs and costs allocated through a CAP was removed from § 400.500, § 400.505, and § 400.510 of the final revision of Circular A-133.

Although specific mention of indirect costs and costs allocated through a CAP was removed from the Circular, this removal does not diminish the auditor's responsibility for such costs. Accordingly, when indirect costs or allocated costs have a direct and material effect on any major program, the auditor is responsible for determining the propriety of costs charged to cost pools that are used to calculate an indirect cost rate or allocated through a CAP in the year in which the charges affect a major program. Because it may not be practical to perform such tests retroactively (e.g., when there is a change in auditors), OMB encourages the auditor to perform tests of costs charged to cost pools during the period when the actual costs were incurred or during the period when the proposal or plan is finalized, rather than waiting until the period when the rate was applied or in which the costs were allocated. Further guidance relating to audit coverage of indirect costs is provided in the provisional "Circular A-133 Compliance Supplement."

To illustrate the unique timing considerations relating to indirect costs and the impact on the audit process, assume that the actual costs charged to cost pools for 1997 form the basis for the indirect cost proposal to be submitted in 1998, and the final negotiated indirect cost rate that will be applied in 1999. Also, assume that indirect costs charged to a major program in 1999 are material.

In this situation, the auditor is strongly encouraged to test actual costs charged to cost pools during 1997 as part of the 1997 audit, since 1997 is the base year, or as part of the 1998 audit, since 1998 is the year when the proposal will be finalized, submitted, and negotiated. If the auditor tests the actual costs charged to the cost pools as part of either the 1997 or 1998 audit (or can appropriately rely on the work performed by other auditors in these years), then the auditor's responsibility in 1999 will relate primarily to determining whether the appropriate rate was applied in 1999. However, if no prior audit work was done relating to the actual costs charged to cost pools used to support the rate used to charge a major program in 1999, then the auditor conducting the 1999 audit would be expected to test such costs, in addition to determining whether the appropriate rate was applied in 1999.

This area is of particular concern to OMB and Federal cost negotiators. Contrary to the views expressed by several commenters, Federal cost negotiators do not typically audit costs charged to cost pools used to support an indirect cost rate or allocated through a CAP. In the next few years, OMB and Federal agencies will monitor the coverage of indirect costs under Circular A-133 audits to determine whether additional guidance or subsequent revisions to the Circular are warranted. OMB may also consider if the coverage of indirect costs should be addressed separately from Circular A-133 audits in the future, possibly as separate engagements using the AICPA's attestation standards.

#### Audit Cognizance

##### Comment

One Federal auditor requested that OMB delay the effective date for the new method of determining the cognizant agency for audit for State and local governments because guidance relating to changing from one cognizant agency to another has not yet been provided. Another Federal auditor requested that the Circular name that agency as the cognizant agency for audit for every State based on the large amount of Federal funding provided by that Federal agency to States. Another Federal auditor opposed having one Federal agency responsible for audit cognizance for all States. Several State auditors and State agencies requested that they be permitted to retain their current cognizant agency for audit, and that they have input into future changes, if any, in audit cognizance.

*Response:* The primary reason for revising the approach to determining audit cognizance is to provide a straightforward method that can be used by the majority of auditees without the involvement of OMB. The previous policy whereby OMB was responsible for assigning audit cognizance did not work well, particularly for non-profit organizations. The proposed revision includes an approach whereby the auditee could readily determine its cognizant or oversight agency for audit based on which Federal agency provided the predominance of funding. However, several commenters noted that the proposal may have unintended consequences on some State and local governments that, under Circular A-128, were previously assigned cognizant agencies for audit by OMB in 1986 and have developed strong working relationships with their cognizant agencies.

In response to the comments received, the Circular was modified to reflect that current cognizant agency assignments shall continue in effect for States (including Indian tribal governments) and local governments that expend more than \$25 million a year in Federal awards until fiscal years beginning after June 30, 2000. Thereafter, the method prescribed in § 400(a) shall be used by State and local governments for determining audit cognizance. This delay should provide sufficient time to smoothly transition from one Federal agency to another, or to request that OMB designate a specific cognizant agency for audit assignment, as circumstances warrant. However, for State and local governments that expend more than \$25 million a year in Federal awards but do not have a currently assigned cognizant agency for audit, § 400(a) shall be used to determine audit cognizance upon the effective date of the Circular.

OMB expects to designate specific audit cognizance assignments for only a limited number of entities. However, if a change in audit cognizance is desired, then auditees are expected to first work through their Federal awarding agencies to obtain a reassignment. If the request cannot be adequately resolved among the Federal agencies, then the Federal agencies may contact OMB to resolve the matter. In response to several commenters, this process will permit auditees to be involved in future changes in audit cognizance.

The proposal indicates that, in instances in which OMB makes a specific cognizant agency for audit assignment, the assignment would be published in the Federal Register. OMB reconsidered the necessity of

definition of the term "compliance supplement" in § \_\_\_\_ .105 of the final revision was revised to reflect the compliance supplement included as Appendix B to this revised Circular.

#### Comment

Several State auditors and one CPA requested removal of the requirement for the auditor to determine the current compliance requirements when changes were made to the compliance requirements and the changes are not yet reflected in the compliance supplement.

*Response:* No change was made as a result of these comments. However, minor modifications were made to § \_\_\_\_ .500(d) to conform the language used in the Circular to the compliance supplement.

The requirement in § \_\_\_\_ .500(d)(3) for auditors to consider whether changes were made in the compliance requirements included in the compliance supplement reflects current practice, which is based on two documents: (1) the PCIE's Position Statement No. 6, titled "Questions and Answers on Circular A-133," and (2) the AICPA's Audit and Accounting Guide, entitled, "Audits of State and Local Governmental Units," dated May 1, 1995.

The PCIE document includes a statement that "If there have been changes [to the compliance requirements included in the compliance supplement], then the auditor should follow the provisions of the compliance supplements as modified by the changes" (page 14). The AICPA's Accounting and Auditing Guide (paragraph 23.37) alerts auditors to the fact that compliance requirements may change over time and that this should be considered in planning tests of compliance. The provisional "Circular A-133 Compliance Supplement" provides guidance to auditors regarding the Federal Government's expectations for auditors to perform reasonable procedures (e.g., inquiry of auditee management, review of applicable contract and grant agreements) to determine currency of the compliance requirements included in the compliance supplement.

#### *Transitional Guidance to Implementing the Risk-Based Approach to Determining Major Programs*

#### Comment

OMB received several inquiries about whether a Type A program may be considered low-risk when it was audited as a major program in accordance with the prior Circular A-

133, issued March 8, 1990, or Circular A-128, issued April 12, 1985, and otherwise met the requirements in § \_\_\_\_ .520(c) to be considered as low-risk. Similar inquiries were received regarding whether single audits performed in accordance with the prior Circular A-133 or Circular A-128 would satisfy the requirements of § \_\_\_\_ .530 for an auditee to qualify as a low-risk auditee.

*Response:* The reference in § \_\_\_\_ .520(c)(1) to the two most recent audit periods includes audit periods in which the audit was performed under either Circular A-128 or the 1990 version of Circular A-133. Therefore, a Type A program which meets the criteria for low-risk under § \_\_\_\_ .520(c)(1), based on the results of an audit performed under Circular A-128 or the 1990 version of Circular A-133, may be considered low-risk.

Similarly, the requirement in § \_\_\_\_ .530 that an auditee meet specified criteria for the preceding two years to be considered a low-risk auditee applies to audits performed under Circular A-128 or the 1990 version of Circular A-133.

Also, to provide a transition into the risk-based approach, the provision for deviation from use of risk criteria provided in § \_\_\_\_ .520(i) applies to the first year this revision is applicable and permits auditors to defer implementation of the risk-based approach for one year.

#### *Risk-Based Approach to Determining Major Programs*

#### Comment

Several State auditors and one State agency requested clarification of the requirements for performing risk assessments of Type B programs under § \_\_\_\_ .520(d) and § \_\_\_\_ .520(e)(2). Many commenters questioned if the Circular requires the auditor to perform annual risk assessments of each Type B program (above an amount specified in the Circular) and expressed concern that such a requirement would significantly increase audit costs.

*Response:* Minor modifications were made to the Circular. Reference to the percentage of coverage rule was removed from § \_\_\_\_ .520(d)(2) of the final revision because, as two commenters noted, program risk is not a consideration in selecting programs to meet the percentage of coverage rule described in § \_\_\_\_ .520(f). Also, editorial changes were made to § \_\_\_\_ .520(d)(2) to emphasize when risk assessments should be performed.

The final revision (§ \_\_\_\_ .520(d)) requires the auditor to identify Type B programs that are high-risk and

§ \_\_\_\_ .520(e)(2) provides two options for identifying high-risk Type B programs.

Under Option 1, the auditor would be expected to perform risk assessments of all Type B programs that exceed the amount specified in § \_\_\_\_ .520(d)(2), and audit at least one half of these high risk Type B programs as major, unless this number exceeds the number of low risk Type A programs identified under § \_\_\_\_ .520(c) (i.e., the "cap"). In this case, the auditor would be required to audit as major the same number of high-risk Type B programs as the cap. For example, a State has ten low-risk Type A programs, and 50 Type B programs above the amount specified in § \_\_\_\_ .520(d)(2). Under Option 1, the auditor would be required to perform risk assessments of the 50 Type B programs. Assume that the auditor determines that there are 25 high-risk Type B programs. One half of the 25 high-risk Type B programs is 12.5, or 13, programs. Under Option 1, the auditor would audit 13 of the high-risk Type B programs as major; however, the cap in this example is ten (i.e., the number of low-risk Type A programs); therefore, the auditor is only required to audit as major 10 high-risk Type B programs.

Under Option 2, the auditor is only required to audit as major one high-risk Type B program for each Type A program identified as low-risk under § \_\_\_\_ .520(c). Under this option, the auditor would not be required to perform risk assessments for any Type B programs when there are no low-risk Type A programs (i.e., the cap is zero). Continuing with the previous example, under Option 2, the auditor would perform risk assessments of Type B programs until ten high-risk Type B programs are identified. The auditor would be required to audit ten high-risk Type B programs as major in this example. Depending on the order in which risk assessments on Type B programs are performed, the auditor might only need to perform risk assessments of ten Type B programs determined to be high-risk, or the auditor may need to perform risk assessments until ten high-risk programs are identified.

The auditor may choose either Option 1 or 2. There is no requirement to justify the reasons for selecting either option. The results under Options 1 and 2 may vary significantly, depending on the number of low-risk Type A programs and high-risk Type B programs. The auditor is encouraged to use an approach which provides an opportunity for different high-risk Type B programs to be audited as major over a period of time

*Financial Statements*

## Comment

Several CPAs commented that § \_\_\_\_ .310(a) of the Circular should be modified to recognize that financial statements should reflect the results of operations or changes in net assets. Financial statements prepared in accordance with GAAP for certain types of non-Federal entities reflect changes in net assets rather than results of operations. The commenters suggested that some auditees and auditors may interpret this section as imposing a requirement that is not consistent with GAAP.

*Response:* The Circular (§ \_\_\_\_ .310(a)) was revised to state that financial statements should reflect either the results of operations or changes in net assets.

## Comment

Several CPAs commented that the requirement included in § \_\_\_\_ .310(a) of the Circular that the financial statements shall be for the same organizational unit that is chosen to meet the requirements of the Circular, considered in conjunction with § \_\_\_\_ .500(a), could be problematic for certain auditees and may have unintended consequences. The commenters interpreted the Circular as requiring a direct match between the reporting entity included in the financial statements and the reporting entity covered by the Circular A-133 audit. The commenters questioned whether an auditee, that chooses to meet the Circular's requirements through a series of audits that cover separate departments, agencies, and other organizational units which expended Federal awards, would be required to issue non-GAAP financial statements that omitted the portions of the reporting entity which were separately audited. One commenter requested guidance in a situation where a local government has its school districts separately audited. If the local government's financial statements exclude the school districts (which is what the commenters believe the Circular requires), then the auditor may need to issue a qualified or adverse opinion on the local government's financial statements, which could raise unnecessary red flags and prohibit the auditee from qualifying as a low-risk auditee (§ \_\_\_\_ .530). One State manager noted that considerably more public entities are included in that State's financial statement audit than in its state-wide single audit, and that, if the Circular requires such entities to be included in the state-wide single audit,

this would result in additional audit costs and complicate the audit process.

*Response:* § \_\_\_\_ .310(a) was revised to clarify OMB's expectations in this area. The revised Circular provides non-Federal entities an option to meet the audit requirements of the Circular through a series of audits that cover the non-Federal entity's departments, agencies, and other organizational units which expended or otherwise administered Federal awards during such fiscal year. If a non-Federal entity elects this option, then separate financial statements and a schedule of expenditures of Federal awards shall be prepared for each such department, agency, or other organizational unit. In these circumstances, a non-Federal entity's organization-wide financial statements may also include departments, agencies, or other organizational units that have separate audits and prepare separate financial statements.

In the example provided by the commenter, it would be acceptable for the local government's financial statements to include the school districts, even though the school districts were not included in the local government's Circular A-133 audit because a separate Circular A-133 audit is conducted of the school districts. However, if separate financial statements were not prepared for the school districts, it would be unacceptable for a separate Circular A-133 audit to be conducted of the school districts (i.e., the local government's organization-wide financial statements could not be used as a substitute for separate financial statements for the school districts).

*Schedule of Expenditures of Federal Awards*

## Comment

One State auditor and one State manager commented that the Circular should not prescribe requirements for the schedule of expenditures of Federal awards beyond the current guidance.

*Response:* The "current guidance" for presenting the schedule of expenditures of Federal awards information was developed and promulgated by the AICPA and was not specifically prescribed in Circulars A-128 and A-133 (1990 original issuance). OMB believes that the minimum requirements for the schedule should be specified in the Circular (§ \_\_\_\_ .310(b)). Most respondents to the April 1996 revision of Circular A-133 supported the level of detail reflected in that revision. A few modifications of the requirements were made in this final revision of Circular

A-133, in response to specific comments received, as described in the following sections.

## Comment

Several CPAs and one State auditor commented that the Circular requires the auditor to be responsible for determining major programs and the threshold used to distinguish between Type A and Type B programs. However, these items are required to be presented in the schedule of expenditures of Federal awards prepared by the auditee and this requirement may blur the distinction between information that is the responsibility of the auditor versus the auditee.

*Response:* The proposed requirements for the schedule of expenditures of Federal awards to identify major programs and identify the threshold to distinguish between Type A and Type B programs (§ \_\_\_\_ .310 (b)(3) and (b)(4) of the proposed revision) were removed. However, the requirement to report this information was added to § \_\_\_\_ .505(d) so that this information is now required to be included in the auditor's report(s). While not required, some auditees may find it useful to present this information in the schedule of expenditures of Federal awards.

## Comment

Several CPAs recommended that the value of non-cash assistance, insurance in effect, and loans and loans guarantees outstanding be required to be included in the schedule of expenditures of Federal awards. They stated that the option to present this information in a note to the schedule should be eliminated and that the consistency achieved will improve the usefulness of the schedule and facilitate OMB's data collection efforts. One college and university commenter stated that the requirement to provide this information (either in a note or in the schedule) was excessive, and that the same information could be obtained from existing Federal data banks.

*Response:* A change was made to § \_\_\_\_ .310(b)(6) as a result of these comments. The Circular permits the option of presenting this information either in the schedule of expenditures of Federal awards or in a note to the schedule; however, an additional sentence was included indicating that it is preferable to present this information in the schedule. It is important to note that, regardless of whether this information is presented in a note or in the schedule, this information must be included in the data collection form. While the requirement to provide such information is not new, the Federal

requirements and related audit objectives are included in the provisional "Circular A-133 Compliance Supplement." The auditor is expected to determine the types of compliance requirements that could have a direct and material effect on each major program, and to design and conduct tests necessary to render an opinion on compliance with respect to each major program. Clearly, auditor judgment must be used in determining the nature, timing, and extent of audit work to be performed, and in evaluating the audit results. The purpose of the requirement included in § \_\_\_\_ .510(a)(1) and (2) is to advise the auditor of the criteria against which to measure or evaluate the impact of findings for reporting purposes.

It is important to note that, under the existing requirements of Circular A-128, the auditor is required to report all instances of noncompliance and, under the 1990 version of Circular A-133, the auditor is required to report all but nonmaterial instances of noncompliance. The requirements for reporting audit findings included in the revised Circular are less burdensome than the existing requirements with respect to instances of noncompliance.

#### Comment

Several commenters requested clarification of the requirement in § \_\_\_\_ .510(a)(3) of the proposed revision to report as an audit finding known questioned costs which are greater than \$10,000 for a type of compliance requirement, particularly with respect to determining the impact of multiple instances of noncompliance relating to a type of compliance requirement.

*Response:* No change was made as a result of these comments. However, the following example is provided to illustrate the requirements of this provision. Suppose an auditor: (1) determines that eligibility (which is one of the types of compliance requirements listed in the compliance supplement) could have a direct and material effect on a major program; (2) designs and conducts tests over eligibility relative to this major program; and, (3) discovers two separate instances of noncompliance, in the amount of \$9000 each, relating to eligibility. The findings involve two different audit objectives relating to eligibility (which are listed in the compliance supplement): one finding relates to an individual participant's eligibility, and the other finding relates to the eligibility of a recipient. Since § \_\_\_\_ .510(a)(3) requires the auditor to report known questioned costs which are greater than \$10,000 for a type of compliance

requirement (which is eligibility in this case), the auditor would be expected to report these questioned costs of \$18,000 as an audit finding. The auditor would also be expected to consider the impact of these instances of noncompliance when reporting on compliance on each major program.

#### Comment

Some Federal agencies strongly object to not requiring known questioned costs of \$10,000 or less to be reported. Conversely, one State auditor commented that the requirement to report known questioned costs greater than \$10,000 could result in auditors' reporting matters that are minimal in relation to the size of a particular Federal program (e.g., a very large State program in which questioned costs of \$11,000 is considered immaterial).

*Response:* No change was made as a result of these comments. OMB believes that the \$10,000 threshold for reporting questioned costs provides an appropriate balance between reporting all questioned costs (which was previously required for State and local governments) and only reporting substantial questioned costs.

#### Comment

One Federal auditor requested that OMB require auditors to report an estimate of likely questioned costs when a known or likely questioned cost exceeds \$10,000. The commenter stated that capturing the amount of likely questioned costs should better enable Federal agencies to assess the nature and magnitude of questioned costs on particular Federal awards and assist in prioritizing the resolution of audit findings. The commenter also suggested that OMB encourage auditors to use statistical means to determine likely questioned costs.

*Response:* No change was made as a result of this comment. § \_\_\_\_ .510(a)(3) requires the auditor to report known questioned costs which are greater than \$10,000, and known questioned costs when likely questioned costs are greater than \$10,000, for a type of compliance requirement. GAAS require the auditor to project the amount of known questioned costs identified in a sample to the items in the major program and to consider the best estimate of total questioned costs (both known and likely) in determining an opinion on compliance. The auditor is required to document this consideration in the audit working papers.

The revised Circular does not require the auditor to report an exact amount or statistical projection of likely questioned costs, but rather to include

an audit finding when the auditor's extrapolation of these likely questioned costs is greater than \$10,000. In reporting likely questioned costs, it is important that the auditor follows the requirements of § \_\_\_\_ .510(b) and provides appropriate information for judging the prevalence and consequences of the finding. The use of statistical means of determining likely questioned costs may be beneficial for auditors but it is not required. During the next few years, OMB expects Federal agencies to monitor auditor compliance in this area to assist OMB in determining whether an expansion of these reporting requirements is necessary in subsequent revisions.

#### Comment

Two CPA commenters requested guidance regarding the treatment of audit findings that cannot be quantified. The commenters cited as an example a situation where an auditor discovers that a pass-through entity consistently failed to provide its subrecipients with Federal award information, including applicable compliance requirements. The commenters stated that § \_\_\_\_ .510(a)(3) could be read to indicate that such nonmonetary findings would not need to be reported.

*Response:* No change was made as a result of these comments. In the example provided by the commenters, this noncompliance would be required to be reported as an audit finding. The auditor must consider a finding in relation to the type of compliance requirement (subrecipient monitoring, in this case) or an audit objective identified in the compliance supplement. The pertinent audit objective included in the provisional "Circular A-133 Compliance Supplement" relating to this example is for the auditor to "determine whether the pass-through entity identifies Federal award information and compliance requirements to the subrecipient." Because the pass-through entity failed to provide Federal award information to its subrecipients, this noncompliance is material in relation to the audit objective and, therefore, must be reported as an audit finding. In addition, the auditor must consider whether reportable conditions (and possibly material weaknesses in internal control) exist and require reporting with respect to subrecipient monitoring.

#### Audit Follow-up

#### Comment

Several commenters requested guidance on whether the auditor is required to follow up on all prior

19134) and November 5, 1996 (61 FR 57232) Federal Register for discussion of various provisions included in the Circular. Useful information is provided in these Notices that is not necessarily repeated in this Notice. In the future, if there are significant questions concerning the revised Circular A-133, OMB will consider issuing a "questions and answers" document relating to the revised Circular.

Franklin D. Raines,  
Director.

1. OMB rescinds Circular A-128 July 30, 1997.
2. OMB revises Circular A-133 to read as follows:

[Circular No. A-133 Revised]

To the Heads of Executive Departments and Establishments

Subject: Audits of States, Local Governments, and Non-Profit Organizations.

1. *Purpose.* This Circular is issued pursuant to the Single Audit Act of 1984, P.L. 98-502, and the Single Audit Act Amendments of 1996, P.L. 104-156. It sets forth standards for obtaining consistency and uniformity among Federal agencies for the audit of States, local governments, and non-profit organizations expending Federal awards.

2. *Authority.* Circular A-133 is issued under the authority of sections 503, 1111, and 7501 *et seq.* of title 31, United States Code, and Executive Orders 8248 and 11541.

3. *Rescission and Supersession.* This Circular rescinds Circular A-128, "Audits of State and Local Governments," issued April 12, 1985, and supersedes the prior Circular A-133, "Audits of Institutions of Higher Education and Other Non-Profit Institutions," issued April 22, 1996. For effective dates, see paragraph 10.

4. *Policy.* Except as provided herein, the standards set forth in this Circular shall be applied by all Federal agencies. If any statute specifically prescribes policies or specific requirements that differ from the standards provided herein, the provisions of the subsequent statute shall govern.

Federal agencies shall apply the provisions of the sections of this Circular to non-Federal entities, whether they are recipients expending Federal awards received directly from Federal awarding agencies, or are subrecipients expending Federal awards received from a pass-through entity (a recipient or another subrecipient).

This Circular does not apply to non-U.S. based entities expending Federal

awards received either directly as a recipient or indirectly as a subrecipient.

5. *Definitions.* The definitions of key terms used in this Circular are contained in § \_\_.105 in the Attachment to this Circular.

6. *Required Action.* The specific requirements and responsibilities of Federal agencies and non-Federal entities are set forth in the Attachment to this Circular. Federal agencies making awards to non-Federal entities, either directly or indirectly, shall adopt the language in the Circular in codified regulations as provided in Section 10 (below), unless different provisions are required by Federal statute or are approved by the Office of Management and Budget (OMB).

7. *OMB Responsibilities.* OMB will review Federal agency regulations and implementation of this Circular, and will provide interpretations of policy requirements and assistance to ensure uniform, effective and efficient implementation.

8. *Information Contact.* Further information concerning Circular A-133 may be obtained by contacting the Financial Standards and Reporting Branch, Office of Federal Financial Management, Office of Management and Budget, Washington, DC 20503, telephone (202) 395-3993.

9. *Review Date.* This Circular will have a policy review three years from the date of issuance.

10. *Effective Dates.* The standards set forth in § \_\_.400 of the Attachment to this Circular, which apply directly to Federal agencies, shall be effective July 1, 1996, and shall apply to audits of fiscal years beginning after June 30, 1996, except as otherwise specified in § \_\_.400(a).

The standards set forth in this Circular that Federal agencies shall apply to non-Federal entities shall be adopted by Federal agencies in codified regulations not later than 60 days after publication of this final revision in the Federal Register, so that they will apply to audits of fiscal years beginning after June 30, 1996, with the exception that § \_\_.305(b) of the Attachment applies to audits of fiscal years beginning after June 30, 1998. The requirements of Circular A-128, although the Circular is rescinded, and the 1990 version of Circular A-133 remain in effect for audits of fiscal years beginning on or before June 30, 1996.

Franklin D Raines,  
Director  
Attachment

PART \_\_—AUDITS OF STATES, LOCAL GOVERNMENTS, AND NON-PROFIT ORGANIZATIONS

Subpart A—General

Sec.

- \_\_100 Purpose.
- \_\_105 Definitions.

Subpart B—Audits

- \_\_200 Audit requirements.
- \_\_205 Basis for determining Federal awards expended.
- \_\_210 Subrecipient and vendor determinations.
- \_\_215 Relation to other audit requirements.
- \_\_220 Frequency of audits.
- \_\_225 Sanctions.
- \_\_230 Audit costs.
- \_\_235 Program-specific audits.

Subpart C—Auditees

- \_\_300 Auditee responsibilities.
- \_\_305 Auditor selection.
- \_\_310 Financial statements.
- \_\_315 Audit findings follow-up.
- \_\_320 Report submission.

Subpart D—Federal Agencies and Pass-Through Entities

- \_\_400 Responsibilities.
- \_\_405 Management decision.

Subpart E—Auditors

- \_\_500 Scope of audit.
- \_\_505 Audit reporting.
- \_\_510 Audit findings.
- \_\_515 Audit working papers.
- \_\_520 Major program determination.
- \_\_525 Criteria for Federal program risk.
- \_\_530 Criteria for a low-risk auditee.

Appendix A to Part \_\_—Data Collection Form (Form SF-SAC)

Appendix B to Part \_\_—Circular A-133 Compliance Supplement

Subpart A—General

§ \_\_.100 Purpose.

This part sets forth standards for obtaining consistency and uniformity among Federal agencies for the audit of non-Federal entities expending Federal awards.

§ \_\_.105 Definitions.

*Auditee* means any non-Federal entity that expends Federal awards which must be audited under this part.

*Auditor* means an auditor, that is a public accountant or a Federal, State or local government audit organization, which meets the general standards specified in generally accepted government auditing standards (GAGAS). The term auditor does not include internal auditors of non-profit organizations

(i) Is operated primarily for scientific, educational, service, charitable, or similar purposes in the public interest;

(ii) Is not organized primarily for profit; and

(iii) Uses its net proceeds to maintain, improve, or expand its operations; and

(2) The term *non-profit organization* includes non-profit institutions of higher education and hospitals.

*OMB* means the Executive Office of the President, Office of Management and Budget.

*Oversight agency for audit* means the Federal awarding agency that provides the predominant amount of direct funding to a recipient not assigned a cognizant agency for audit. When there is no direct funding, the Federal agency with the predominant indirect funding shall assume the oversight responsibilities. The duties of the oversight agency for audit are described in § \_\_\_\_\_.400(b).

*Pass-through entity* means a non-Federal entity that provides a Federal award to a subrecipient to carry out a Federal program.

*Program-specific audit* means an audit of one Federal program as provided for in § \_\_\_\_\_.200(c) and § \_\_\_\_\_.235.

*Questioned cost* means a cost that is questioned by the auditor because of an audit finding:

(1) Which resulted from a violation or possible violation of a provision of a law, regulation, contract, grant, cooperative agreement, or other agreement or document governing the use of Federal funds, including funds used to match Federal funds;

(2) Where the costs, at the time of the audit, are not supported by adequate documentation; or

(3) Where the costs incurred appear unreasonable and do not reflect the actions a prudent person would take in the circumstances.

*Recipient* means a non-Federal entity that expends Federal awards received directly from a Federal awarding agency to carry out a Federal program.

*Research and development (R&D)* means all research activities, both basic and applied, and all development activities that are performed by a non-Federal entity. *Research* is defined as a systematic study directed toward fuller scientific knowledge or understanding of the subject studied. The term *research* also includes activities involving the training of individuals in research techniques where such activities utilize the same facilities as other research and development activities and where such activities are not included in the instruction function. *Development* is the systematic use of knowledge and

understanding gained from research directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes.

*Single audit* means an audit which includes both the entity's financial statements and the Federal awards as described in § \_\_\_\_\_.500.

*State* means any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Trust Territory of the Pacific Islands, any instrumentality thereof, any multi-State, regional, or interstate entity which has governmental functions, and any Indian tribe as defined in this section.

*Student Financial Aid (SFA)* includes those programs of general student assistance, such as those authorized by Title IV of the Higher Education Act of 1965, as amended, (20 U.S.C. 1070 *et seq.*) which is administered by the U.S. Department of Education, and similar programs provided by other Federal agencies. It does not include programs which provide fellowships or similar Federal awards to students on a competitive basis, or for specified studies or research.

*Subrecipient* means a non-Federal entity that expends Federal awards received from a pass-through entity to carry out a Federal program, but does not include an individual that is a beneficiary of such a program. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding agency. Guidance on distinguishing between a subrecipient and a vendor is provided in § \_\_\_\_\_.210.

*Types of compliance requirements* refers to the types of compliance requirements listed in the compliance supplement. Examples include: activities allowed or unallowed; allowable costs/cost principles; cash management; eligibility; matching, level of effort, earmarking; and, reporting.

*Vendor* means a dealer, distributor, merchant, or other seller providing goods or services that are required for the conduct of a Federal program. These goods or services may be for an organization's own use or for the use of beneficiaries of the Federal program. Additional guidance on distinguishing between a subrecipient and a vendor is provided in § \_\_\_\_\_.210.

#### Subpart B—Audits

##### § \_\_\_\_\_.200 Audit requirements.

(a) *Audit required.* Non-Federal entities that expend \$300,000 or more in a year in Federal awards shall have a

single or program-specific audit conducted for that year in accordance with the provisions of this part. Guidance on determining Federal awards expended is provided in § \_\_\_\_\_.205.

(b) *Single audit.* Non-Federal entities that expend \$300,000 or more in a year in Federal awards shall have a single audit conducted in accordance with § \_\_\_\_\_.500 except when they elect to have a program-specific audit conducted in accordance with paragraph (c) of this section.

(c) *Program-specific audit election.* When an auditee expends Federal awards under only one Federal program (excluding R&D) and the Federal program's laws, regulations, or grant agreements do not require a financial statement audit of the auditee, the auditee may elect to have a program-specific audit conducted in accordance with § \_\_\_\_\_.235. A program-specific audit may not be elected for R&D unless all of the Federal awards expended were received from the same Federal agency, or the same Federal agency and the same pass-through entity, and that Federal agency, or pass-through entity in the case of a subrecipient, approves in advance a program-specific audit.

(d) *Exemption when Federal awards expended are less than \$300,000.* Non-Federal entities that expend less than \$300,000 a year in Federal awards are exempt from Federal audit requirements for that year, except as noted in § \_\_\_\_\_.215(a), but records must be available for review or audit by appropriate officials of the Federal agency, pass-through entity, and General Accounting Office (GAO).

(e) *Federally Funded Research and Development Centers (FFRDC).* Management of an auditee that owns or operates a FFRDC may elect to treat the FFRDC as a separate entity for purposes of this part.

##### § \_\_\_\_\_.205 Basis for determining Federal awards expended.

(a) *Determining Federal awards expended.* The determination of when an award is expended should be based on when the activity related to the award occurs. Generally, the activity pertains to events that require the non-Federal entity to comply with laws, regulations, and the provisions of contracts or grant agreements, such as: expenditure/expense transactions associated with grants, cost-reimbursement contracts, cooperative agreements, and direct appropriations; the disbursement of funds passed through to subrecipients; the use of loan proceeds under loan and loan guarantee programs; the receipt of property; the

evaluations, inspections, or reviews) nor authorize any auditee to constrain Federal agencies from carrying out additional audits. Any additional audits shall be planned and performed in such a way as to build upon work performed by other auditors.

(b) *Federal agency to pay for additional audits.* A Federal agency that conducts or contracts for additional audits shall, consistent with other applicable laws and regulations, arrange for funding the full cost of such additional audits.

(c) *Request for a program to be audited as a major program.* A Federal agency may request an auditee to have a particular Federal program audited as a major program in lieu of the Federal agency conducting or arranging for the additional audits. To allow for planning, such requests should be made at least 180 days prior to the end of the fiscal year to be audited. The auditee, after consultation with its auditor, should promptly respond to such request by informing the Federal agency whether the program would otherwise be audited as a major program using the risk-based audit approach described in § \_\_\_\_ .520 and, if not, the estimated incremental cost. The Federal agency shall then promptly confirm to the auditee whether it wants the program audited as a major program. If the program is to be audited as a major program based upon this Federal agency request, and the Federal agency agrees to pay the full incremental costs, then the auditee shall have the program audited as a major program. A pass-through entity may use the provisions of this paragraph for a subrecipient.

#### § \_\_\_\_ .220 Frequency of audits.

Except for the provisions for biennial audits provided in paragraphs (a) and (b) of this section, audits required by this part shall be performed annually. Any biennial audit shall cover both years within the biennial period.

(a) A State or local government that is required by constitution or statute, in effect on January 1, 1987, to undergo its audits less frequently than annually, is permitted to undergo its audits pursuant to this part biennially. This requirement must still be in effect for the biennial period under audit.

(b) Any non-profit organization that had biennial audits for all biennial periods ending between July 1, 1992, and January 1, 1995, is permitted to undergo its audits pursuant to this part biennially.

#### § \_\_\_\_ .225 Sanctions.

No audit costs may be charged to Federal awards when audits required by

this part have not been made or have been made but not in accordance with this part. In cases of continued inability or unwillingness to have an audit conducted in accordance with this part, Federal agencies and pass-through entities shall take appropriate action using sanctions such as:

- (a) Withholding a percentage of Federal awards until the audit is completed satisfactorily;
- (b) Withholding or disallowing overhead costs;
- (c) Suspending Federal awards until the audit is conducted; or
- (d) Terminating the Federal award.

#### § \_\_\_\_ .230 Audit costs.

(a) *Allowable costs.* Unless prohibited by law, the cost of audits made in accordance with the provisions of this part are allowable charges to Federal awards. The charges may be considered a direct cost or an allocated indirect cost, as determined in accordance with the provisions of applicable OMB cost principles circulars, the Federal Acquisition Regulation (FAR) (48 CFR parts 30 and 31), or other applicable cost principles or regulations.

(b) *Unallowable costs.* A non-Federal entity shall not charge the following to a Federal award:

(1) The cost of any audit under the Single Audit Act Amendments of 1996 (31 U.S.C. 7501 *et seq.*) not conducted in accordance with this part.

(2) The cost of auditing a non-Federal entity which has Federal awards expended of less than \$300,000 per year and is thereby exempted under § \_\_\_\_ .200(d) from having an audit conducted under this part. However, this does not prohibit a pass-through entity from charging Federal awards for the cost of limited scope audits to monitor its subrecipients in accordance with § \_\_\_\_ .400(d)(3), provided the subrecipient does not have a single audit. For purposes of this part, limited scope audits only include agreed-upon procedures engagements conducted in accordance with either the AICPA's generally accepted auditing standards or attestation standards, that are paid for and arranged by a pass-through entity and address only one or more of the following types of compliance requirements: activities allowed or unallowed; allowable costs/cost principles; eligibility; matching, level of effort, earmarking; and, reporting.

#### § \_\_\_\_ .235 Program-specific audits.

(a) *Program-specific audit guide available.* In many cases, a program-specific audit guide will be available to provide specific guidance to the auditor with respect to internal control,

compliance requirements, suggested audit procedures, and audit reporting requirements. The auditor should contact the Office of Inspector General of the Federal agency to determine whether such a guide is available. When a current program-specific audit guide is available, the auditor shall follow GAGAS and the guide when performing a program-specific audit.

(b) *Program-specific audit guide not available.* (1) When a program-specific audit guide is not available, the auditee and auditor shall have basically the same responsibilities for the Federal program as they would have for an audit of a major program in a single audit.

(2) The auditee shall prepare the financial statement(s) for the Federal program that includes, at a minimum, a schedule of expenditures of Federal awards for the program and notes that describe the significant accounting policies used in preparing the schedule, a summary schedule of prior audit findings consistent with the requirements of § \_\_\_\_ .315(b), and a corrective action plan consistent with the requirements of § \_\_\_\_ .315(c).

(3) The auditor shall:

- (i) Perform an audit of the financial statement(s) for the Federal program in accordance with GAGAS;
- (ii) Obtain an understanding of internal control and perform tests of internal control over the Federal program consistent with the requirements of § \_\_\_\_ .500(c) for a major program;
- (iii) Perform procedures to determine whether the auditee has complied with laws, regulations, and the provisions of contracts or grant agreements that could have a direct and material effect on the Federal program consistent with the requirements of § \_\_\_\_ .500(d) for a major program; and

(iv) Follow up on prior audit findings, perform procedures to assess the reasonableness of the summary schedule of prior audit findings prepared by the auditee, and report, as a current year audit finding, when the auditor concludes that the summary schedule of prior audit findings materially misrepresents the status of any prior audit finding in accordance with the requirements of § \_\_\_\_ .500(e).

(4) The auditor's report(s) may be in the form of either combined or separate reports and may be organized differently from the manner presented in this section. The auditor's report(s) shall state that the audit was conducted in accordance with this part and include the following:

- (i) An opinion (or disclaimer of opinion) as to whether the financial statement(s) of the Federal program is

restriction applies to the base year used in the preparation of the indirect cost proposal or cost allocation plan and any subsequent years in which the resulting indirect cost agreement or cost allocation plan is used to recover costs. To minimize any disruption in existing contracts for audit services, this paragraph applies to audits of fiscal years beginning after June 30, 1998.

(c) *Use of Federal auditors.* Federal auditors may perform all or part of the work required under this part if they comply fully with the requirements of this part.

#### § 310 Financial statements.

(a) *Financial statements.* The auditee shall prepare financial statements that reflect its financial position, results of operations or changes in net assets, and, where appropriate, cash flows for the fiscal year audited. The financial statements shall be for the same organizational unit and fiscal year that is chosen to meet the requirements of this part. However, organization-wide financial statements may also include departments, agencies, and other organizational units that have separate audits in accordance with § 350(a) and prepare separate financial statements.

(b) *Schedule of expenditures of Federal awards.* The auditee shall also prepare a schedule of expenditures of Federal awards for the period covered by the auditee's financial statements. While not required, the auditee may choose to provide information requested by Federal awarding agencies and pass-through entities to make the schedule easier to use. For example, when a Federal program has multiple award years, the auditee may list the amount of Federal awards expended for each award year separately. At a minimum, the schedule shall:

(1) List individual Federal programs by Federal agency. For Federal programs included in a cluster of programs, list individual Federal programs within a cluster of programs. For R&D, total Federal awards expended shall be shown either by individual award or by Federal agency and major subdivision within the Federal agency. For example, the National Institutes of Health is a major subdivision in the Department of Health and Human Services.

(2) For Federal awards received as a subrecipient, the name of the pass-through entity and identifying number assigned by the pass-through entity shall be included.

(3) Provide total Federal awards expended for each individual Federal program and the CFDA number or other

identifying number when the CFDA information is not available.

(4) Include notes that describe the significant accounting policies used in preparing the schedule.

(5) To the extent practical, pass-through entities should identify in the schedule the total amount provided to subrecipients from each Federal program.

(6) Include, in either the schedule or a note to the schedule, the value of the Federal awards expended in the form of non-cash assistance, the amount of insurance in effect during the year, and loans or loan guarantees outstanding at year end. While not required, it is preferable to present this information in the schedule.

#### § 315 Audit findings follow-up.

(a) *General.* The auditee is responsible for follow-up and corrective action on all audit findings. As part of this responsibility, the auditee shall prepare a summary schedule of prior audit findings. The auditee shall also prepare a corrective action plan for current year audit findings. The summary schedule of prior audit findings and the corrective action plan shall include the reference numbers the auditor assigns to audit findings under § 350(c). Since the summary schedule may include audit findings from multiple years, it shall include the fiscal year in which the finding initially occurred.

(b) *Summary schedule of prior audit findings.* The summary schedule of prior audit findings shall report the status of all audit findings included in the prior audit's schedule of findings and questioned costs relative to Federal awards. The summary schedule shall also include audit findings reported in the prior audit's summary schedule of prior audit findings except audit findings listed as corrected in accordance with paragraph (b)(1) of this section, or no longer valid or not warranting further action in accordance with paragraph (b)(4) of this section.

(1) When audit findings were fully corrected, the summary schedule need only list the audit findings and state that corrective action was taken.

(2) When audit findings were not corrected or were only partially corrected, the summary schedule shall describe the planned corrective action as well as any partial corrective action taken.

(3) When corrective action taken is significantly different from corrective action previously reported in a corrective action plan or in the Federal agency's or pass-through entity's management decision, the summary schedule shall provide an explanation.

(4) When the auditee believes the audit findings are no longer valid or do not warrant further action, the reasons for this position shall be described in the summary schedule. A valid reason for considering an audit finding as not warranting further action is that all of the following have occurred:

(i) Two years have passed since the audit report in which the finding occurred was submitted to the Federal clearinghouse;

(ii) The Federal agency or pass-through entity is not currently following up with the auditee on the audit finding; and

(iii) A management decision was not issued.

(c) *Corrective action plan.* At the completion of the audit, the auditee shall prepare a corrective action plan to address each audit finding included in the current year auditor's reports. The corrective action plan shall provide the name(s) of the contact person(s) responsible for corrective action, the corrective action planned, and the anticipated completion date. If the auditee does not agree with the audit findings or believes corrective action is not required, then the corrective action plan shall include an explanation and specific reasons.

#### § 320 Report submission.

(a) *General.* The audit shall be completed and the data collection form described in paragraph (b) of this section and reporting package described in paragraph (c) of this section shall be submitted within the earlier of 30 days after receipt of the auditor's report(s), or nine months after the end of the audit period, unless a longer period is agreed to in advance by the cognizant or oversight agency for audit. (However, for fiscal years beginning on or before June 30, 1998, the audit shall be completed and the data collection form and reporting package shall be submitted within the earlier of 30 days after receipt of the auditor's report(s), or 13 months after the end of the audit period.) Unless restricted by law or regulation, the auditee shall make copies available for public inspection.

(b) *Data Collection.* (1) The auditee shall submit a data collection form which states whether the audit was completed in accordance with this part and provides information about the auditee, its Federal programs, and the results of the audit. The form shall be approved by OMB, available from the Federal clearinghouse designated by OMB, and include data elements similar to those presented in this paragraph. A senior level representative of the auditee (e.g., State controller, director of

keep subrecipients' submissions on file for three years from date of receipt.

(h) *Clearinghouse responsibilities.* The Federal clearinghouse designated by OMB shall distribute the reporting packages received in accordance with paragraph (d)(2) of this section and § 235(c)(3) to applicable Federal awarding agencies, maintain a data base of completed audits, provide appropriate information to Federal agencies, and follow up with known auditees which have not submitted the required data collection forms and reporting packages.

(i) *Clearinghouse address.* The address of the Federal clearinghouse currently designated by OMB is Federal Audit Clearinghouse, Bureau of the Census, 1201 E. 10th Street, Jeffersonville, IN 47132.

(j) *Electronic filing.* Nothing in this part shall preclude electronic submissions to the Federal clearinghouse in such manner as may be approved by OMB. With OMB approval, the Federal clearinghouse may pilot test methods of electronic submissions.

#### Subpart D—Federal Agencies and Pass-Through Entities

##### § 400 Responsibilities.

(a) *Cognizant agency for audit responsibilities.* Recipients expending more than \$25 million a year in Federal awards shall have a cognizant agency for audit. The designated cognizant agency for audit shall be the Federal awarding agency that provides the predominant amount of direct funding to a recipient unless OMB makes a specific cognizant agency for audit assignment. To provide for continuity of cognizance, the determination of the predominant amount of direct funding shall be based upon direct Federal awards expended in the recipient's fiscal years ending in 1995, 2000, 2005, and every fifth year thereafter. For example, audit cognizance for periods ending in 1997 through 2000 will be determined based on Federal awards expended in 1995. (However, for States and local governments that expend more than \$25 million a year in Federal awards and have previously assigned cognizant agencies for audit, the requirements of this paragraph are not effective until fiscal years beginning after June 30, 2000.) Notwithstanding the manner in which audit cognizance is determined, a Federal awarding agency with cognizance for an auditee may reassign cognizance to another Federal awarding agency which provides substantial direct funding and agrees to be the cognizant agency for audit. Within 30 days after any

reassignment, both the old and the new cognizant agency for audit shall notify the auditee, and, if known, the auditor of the reassignment. The cognizant agency for audit shall:

(1) Provide technical audit advice and liaison to auditees and auditors.

(2) Consider auditee requests for extensions to the report submission due date required by § 320(a). The cognizant agency for audit may grant extensions for good cause.

(3) Obtain or conduct quality control reviews of selected audits made by non-Federal auditors, and provide the results, when appropriate, to other interested organizations.

(4) Promptly inform other affected Federal agencies and appropriate Federal law enforcement officials of any direct reporting by the auditee or its auditor of irregularities or illegal acts as required by GAGAS or laws and regulations.

(5) Advise the auditor and, where appropriate, the auditee of any deficiencies found in the audits when the deficiencies require corrective action by the auditor. When advised of deficiencies, the auditee shall work with the auditor to take corrective action. If corrective action is not taken, the cognizant agency for audit shall notify the auditor, the auditee, and applicable Federal awarding agencies and pass-through entities of the facts and make recommendations for follow-up action. Major inadequacies or repetitive substandard performance by auditors shall be referred to appropriate State licensing agencies and professional bodies for disciplinary action.

(6) Coordinate, to the extent practical, audits or reviews made by or for Federal agencies that are in addition to the audits made pursuant to this part, so that the additional audits or reviews build upon audits performed in accordance with this part.

(7) Coordinate a management decision for audit findings that affect the Federal programs of more than one agency.

(8) Coordinate the audit work and reporting responsibilities among auditors to achieve the most cost-effective audit.

(9) For biennial audits permitted under § 220, consider auditee requests to qualify as a low-risk auditee under § 530(a).

(b) *Oversight agency for audit responsibilities.* An auditee which does not have a designated cognizant agency for audit will be under the general oversight of the Federal agency determined in accordance with § 105. The oversight agency for audit:

(1) Shall provide technical advice to auditees and auditors as requested.

(2) May assume all or some of the responsibilities normally performed by a cognizant agency for audit.

(c) *Federal awarding agency responsibilities.* The Federal awarding agency shall perform the following for the Federal awards it makes:

(1) Identify Federal awards made by informing each recipient of the CFDA title and number, award name and number, award year, and if the award is for R&D. When some of this information is not available, the Federal agency shall provide information necessary to clearly describe the Federal award.

(2) Advise recipients of requirements imposed on them by Federal laws, regulations, and the provisions of contracts or grant agreements.

(3) Ensure that audits are completed and reports are received in a timely manner and in accordance with the requirements of this part.

(4) Provide technical advice and counsel to auditees and auditors as requested.

(5) Issue a management decision on audit findings within six months after receipt of the audit report and ensure that the recipient takes appropriate and timely corrective action.

(6) Assign a person responsible for providing annual updates of the compliance supplement to OMB.

(d) *Pass-through entity responsibilities.* A pass-through entity shall perform the following for the Federal awards it makes:

(1) Identify Federal awards made by informing each subrecipient of CFDA title and number, award name and number, award year, if the award is R&D, and name of Federal agency. When some of this information is not available, the pass-through entity shall provide the best information available to describe the Federal award.

(2) Advise subrecipients of requirements imposed on them by Federal laws, regulations, and the provisions of contracts or grant agreements as well as any supplemental requirements imposed by the pass-through entity.

(3) Monitor the activities of subrecipients as necessary to ensure that Federal awards are used for authorized purposes in compliance with laws, regulations, and the provisions of contracts or grant agreements and that performance goals are achieved.

(4) Ensure that subrecipients expending \$300,000 or more in Federal awards during the subrecipient's fiscal year have met the audit requirements of this part for that fiscal year.

section. The auditor's report(s) shall state that the audit was conducted in accordance with this part and include the following:

(a) An opinion (or disclaimer of opinion) as to whether the financial statements are presented fairly in all material respects in conformity with generally accepted accounting principles and an opinion (or disclaimer of opinion) as to whether the schedule of expenditures of Federal awards is presented fairly in all material respects in relation to the financial statements taken as a whole.

(b) A report on internal control related to the financial statements and major programs. This report shall describe the scope of testing of internal control and the results of the tests, and, where applicable, refer to the separate schedule of findings and questioned costs described in paragraph (d) of this section.

(c) A report on compliance with laws, regulations, and the provisions of contracts or grant agreements, noncompliance with which could have a material effect on the financial statements. This report shall also include an opinion (or disclaimer of opinion) as to whether the auditee complied with laws, regulations, and the provisions of contracts or grant agreements which could have a direct and material effect on each major program, and, where applicable, refer to the separate schedule of findings and questioned costs described in paragraph (d) of this section.

(d) A schedule of findings and questioned costs which shall include the following three components:

(1) A summary of the auditor's results which shall include:

(i) The type of report the auditor issued on the financial statements of the auditee (i.e., unqualified opinion, qualified opinion, adverse opinion, or disclaimer of opinion);

(ii) Where applicable, a statement that reportable conditions in internal control were disclosed by the audit of the financial statements and whether any such conditions were material weaknesses;

(iii) A statement as to whether the audit disclosed any noncompliance which is material to the financial statements of the auditee;

(iv) Where applicable, a statement that reportable conditions in internal control over major programs were disclosed by the audit and whether any such conditions were material weaknesses;

(v) The type of report the auditor issued on compliance for major programs (i.e., unqualified opinion,

qualified opinion, adverse opinion, or disclaimer of opinion);

(vi) A statement as to whether the audit disclosed any audit findings which the auditor is required to report under § \_\_\_\_ . 510(a);

(vii) An identification of major programs;

(viii) The dollar threshold used to distinguish between Type A and Type B programs, as described in § \_\_\_\_ . 520(b); and

(ix) A statement as to whether the auditee qualified as a low-risk auditee under § \_\_\_\_ . 530.

(2) Findings relating to the financial statements which are required to be reported in accordance with GAGAS.

(3) Findings and questioned costs for Federal awards which shall include audit findings as defined in § \_\_\_\_ . 510(a).

(i) Audit findings (e.g., internal control findings, compliance findings, questioned costs, or fraud) which relate to the same issue should be presented as a single audit finding. Where practical, audit findings should be organized by Federal agency or pass-through entity.

(ii) Audit findings which relate to both the financial statements and Federal awards, as reported under paragraphs (d)(2) and (d)(3) of this section, respectively, should be reported in both sections of the schedule. However, the reporting in one section of the schedule may be in summary form with a reference to a detailed reporting in the other section of the schedule.

#### § \_\_\_\_ . 510 Audit findings.

(a) *Audit findings reported.* The auditor shall report the following as audit findings in a schedule of findings and questioned costs:

(1) Reportable conditions in internal control over major programs. The auditor's determination of whether a deficiency in internal control is a reportable condition for the purpose of reporting an audit finding is in relation to a type of compliance requirement for a major program or an audit objective identified in the compliance supplement. The auditor shall identify reportable conditions which are individually or cumulatively material weaknesses.

(2) Material noncompliance with the provisions of laws, regulations, contracts, or grant agreements related to a major program. The auditor's determination of whether a noncompliance with the provisions of laws, regulations, contracts, or grant agreements is material for the purpose of reporting an audit finding is in relation to a type of compliance

requirement for a major program or an audit objective identified in the compliance supplement.

(3) Known questioned costs which are greater than \$10,000 for a type of compliance requirement for a major program. Known questioned costs are those specifically identified by the auditor. In evaluating the effect of questioned costs on the opinion on compliance, the auditor considers the best estimate of total costs questioned (likely questioned costs), not just the questioned costs specifically identified (known questioned costs). The auditor shall also report known questioned costs when likely questioned costs are greater than \$10,000 for a type of compliance requirement for a major program. In reporting questioned costs, the auditor shall include information to provide proper perspective for judging the prevalence and consequences of the questioned costs.

(4) Known questioned costs which are greater than \$10,000 for a Federal program which is not audited as a major program. Except for audit follow-up, the auditor is not required under this part to perform audit procedures for such a Federal program; therefore, the auditor will normally not find questioned costs for a program which is not audited as a major program. However, if the auditor does become aware of questioned costs for a Federal program which is not audited as a major program (e.g., as part of audit follow-up or other audit procedures) and the known questioned costs are greater than \$10,000, then the auditor shall report this as an audit finding.

(5) The circumstances concerning why the auditor's report on compliance for major programs is other than an unqualified opinion, unless such circumstances are otherwise reported as audit findings in the schedule of findings and questioned costs for Federal awards.

(6) Known fraud affecting a Federal award, unless such fraud is otherwise reported as an audit finding in the schedule of findings and questioned costs for Federal awards. This paragraph does not require the auditor to make an additional reporting when the auditor confirms that the fraud was reported outside of the auditor's reports under the direct reporting requirements of GAGAS.

(7) Instances where the results of audit follow-up procedures disclosed that the summary schedule of prior audit findings prepared by the auditee in accordance with § \_\_\_\_ . 315(b) materially misrepresents the status of any prior audit finding.

(2) The auditor is not expected to perform risk assessments on relatively small Federal programs. Therefore, the auditor is only required to perform risk assessments on Type B programs that exceed the larger of:

(i) \$100,000 or three-tenths of one percent (.003) of total Federal awards expended when the auditee has less than or equal to \$100 million in total Federal awards expended.

(ii) \$300,000 or three-hundredths of one percent (.0003) of total Federal awards expended when the auditee has more than \$100 million in total Federal awards expended.

(e) *Step 4.* At a minimum, the auditor shall audit all of the following as major programs:

(1) All Type A programs, except the auditor may exclude any Type A programs identified as low-risk under Step 2 (paragraph (c)(1) of this section).

(2) (i) High-risk Type B programs as identified under either of the following two options:

(A) *Option 1.* At least one half of the Type B programs identified as high-risk under Step 3 (paragraph (d) of this section), except this paragraph (e)(2)(i)(A) does not require the auditor to audit more high-risk Type B programs than the number of low-risk Type A programs identified as low-risk under Step 2.

(B) *Option 2.* One high-risk Type B program for each Type A program identified as low-risk under Step 2.

(ii) When identifying which high-risk Type B programs to audit as major under either Option 1 or 2 in paragraph (e)(2)(i)(A) or (B) of this section, the auditor is encouraged to use an approach which provides an opportunity for different high-risk Type B programs to be audited as major over a period of time.

(3) Such additional programs as may be necessary to comply with the percentage of coverage rule discussed in paragraph (f) of this section. This paragraph (e)(3) may require the auditor to audit more programs as major than the number of Type A programs.

(f) *Percentage of coverage rule.* The auditor shall audit as major programs Federal programs with Federal awards expended that, in the aggregate, encompass at least 50 percent of total Federal awards expended. If the auditee meets the criteria in § 525.530 for a low-risk auditee, the auditor need only audit as major programs Federal programs with Federal awards expended that, in the aggregate, encompass at least 25 percent of total Federal awards expended.

(g) *Documentation of risk.* The auditor shall document in the working papers

the risk analysis process used in determining major programs.

(h) *Auditor's judgment.* When the major program determination was performed and documented in accordance with this part, the auditor's judgment in applying the risk-based approach to determine major programs shall be presumed correct. Challenges by Federal agencies and pass-through entities shall only be for clearly improper use of the guidance in this part. However, Federal agencies and pass-through entities may provide auditors guidance about the risk of a particular Federal program and the auditor shall consider this guidance in determining major programs in audits not yet completed.

(i) *Deviation from use of risk criteria.* For first-year audits, the auditor may elect to determine major programs as all Type A programs plus any Type B programs as necessary to meet the percentage of coverage rule discussed in paragraph (f) of this section. Under this option, the auditor would not be required to perform the procedures discussed in paragraphs (c), (d), and (e) of this section.

(1) A first-year audit is the first year the entity is audited under this part or the first year of a change of auditors.

(2) To ensure that a frequent change of auditors would not preclude audit of high-risk Type B programs, this election for first-year audits may not be used by an auditee more than once in every three years.

#### § 525.525 Criteria for Federal program risk.

(a) *General.* The auditor's determination should be based on an overall evaluation of the risk of noncompliance occurring which could be material to the Federal program. The auditor shall use auditor judgment and consider criteria, such as described in paragraphs (b), (c), and (d) of this section, to identify risk in Federal programs. Also, as part of the risk analysis, the auditor may wish to discuss a particular Federal program with auditee management and the Federal agency or pass-through entity.

(b) *Current and prior audit experience.* (1) Weaknesses in internal control over Federal programs would indicate higher risk. Consideration should be given to the control environment over Federal programs and such factors as the expectation of management's adherence to applicable laws and regulations and the provisions of contracts and grant agreements and the competence and experience of personnel who administer the Federal programs.

(i) A Federal program administered under multiple internal control structures may have higher risk. When assessing risk in a large single audit, the auditor shall consider whether weaknesses are isolated in a single operating unit (e.g., one college campus) or pervasive throughout the entity.

(ii) When significant parts of a Federal program are passed through to subrecipients, a weak system for monitoring subrecipients would indicate higher risk.

(iii) The extent to which computer processing is used to administer Federal programs, as well as the complexity of that processing, should be considered by the auditor in assessing risk. New and recently modified computer systems may also indicate risk.

(2) Prior audit findings would indicate higher risk, particularly when the situations identified in the audit findings could have a significant impact on a Federal program or have not been corrected.

(3) Federal programs not recently audited as major programs may be of higher risk than Federal programs recently audited as major programs without audit findings.

(c) *Oversight exercised by Federal agencies and pass-through entities.* (1) Oversight exercised by Federal agencies or pass-through entities could indicate risk. For example, recent monitoring or other reviews performed by an oversight entity which disclosed no significant problems would indicate lower risk. However, monitoring which disclosed significant problems would indicate higher risk.

(2) Federal agencies, with the concurrence of OMB, may identify Federal programs which are higher risk. OMB plans to provide this identification in the compliance supplement.

(d) *Inherent risk of the Federal program.* (1) The nature of a Federal program may indicate risk. Consideration should be given to the complexity of the program and the extent to which the Federal program contracts for goods and services. For example, Federal programs that disburse funds through third party contracts or have eligibility criteria may be of higher risk. Federal programs primarily involving staff payroll costs may have a high-risk for time and effort reporting, but otherwise be at low-risk.

(2) The phase of a Federal program in its life cycle at the Federal agency may indicate risk. For example, a new Federal program with new or interim regulations may have higher risk than an established program with time-tested regulations. Also, significant changes in Federal programs, laws, regulations, or

accountants (CPAs), non-profit organizations (including colleges and universities), professional organizations, and others. All comments were considered in preparing OMB's responses presented below and in developing the final revision to Circular A-133, which is published in a companion Notice in this Part in today's Federal Register. The comments received relating to the information collection and OMB's responses are summarized below.

#### *Estimates of Reporting Burden*

##### *Comments*

In the preamble of the proposed revision, OMB stated that the reporting burden per audit will increase from 26 hours under the existing requirements of Circulars A-128, "Audits of States and Local Governments," and A-133, "Audits of Institutions of Higher Education and Other Non-Profit Institutions," to 34 hours under the proposed revision. OMB stated that the increase in hours was due, in part, to the new requirement to prepare the data collection form, which would take four hours, if prepared by the auditee, and two hours, if prepared by the auditor. Most commenters—primarily State auditors and CPAs—stated that OMB's estimates regarding the preparation of the data collection form are too low. Several State auditors commented that, while the estimates may be appropriate for smaller States and local governments, they are grossly understated for larger governments. Some State auditors provided estimates to prepare the form for smaller entities ranging from two to four hours but no estimates were provided by State auditors to prepare the form for larger entities. One State agency stated that "For an audit the size and complexity of New York State, the preparation and review of a data collection form would take at least 15 hours and could take up to 40 hours. For smaller entities where New York State serves as the pass-through entity, the estimates range from 5 to 15 hours." One State auditor questioned how realistic any time estimates can be until someone actually prepares the form. One CPA commenter stated that "OMB's estimate that auditor preparation of the data collection form would take two hours appears to be low. Most firms, including ours, have implemented policies that require reviews of work performed and reports issued, whether involving formal reports or preparation of government forms. Depending on the size and complexity of an auditee, the preparation and review of a data

collection form could take anywhere from 5 to 15 hours."

*Response:* Based on the comments received, OMB revised the reporting burden and cost estimates, as presented in Table 1. Several modifications were made in determining the revised estimates. First, OMB estimated reporting burden hours and costs separately for large auditees (i.e., auditees most likely to administer a large number of Federal awards) and all other auditees. For estimation purposes, OMB separately estimated burden for 200 large auditees, consisting of the 50 States, 50 largest counties and cities, and 100 largest non-profit organizations (including colleges and universities). The reporting burden for both auditees and auditors increases significantly for entities that administer a large number of Federal awards because the length of time required to prepare both the schedule of Federal awards and the data collection form increase with the number of Federal awards administered by the auditee. Second, the revised estimates reflect the modified requirements included in the final revision to Circular A-133 whereby the auditor will prepare and sign sections of the data collection form that relate to the audit results and Federal awards, and the auditee will review and sign the form certifying its completeness and accuracy. And, third, the cost estimates are now based on an average rate per hour of \$25 per hour for auditees and \$70 per hour for auditors.

The 1996 Amendments increased the threshold that triggers an audit requirement from \$25,000 to \$300,000, thereby reducing the number of entities subject to the Act's requirements from approximately 35,000 entities under the existing requirements to approximately 25,000 entities under the 1996 Amendments. As a result, the overall burden hours of this information collection decreased by 43,200 hours (from 910,000 burden hours under the existing requirements to 866,800 under the new requirements). However, the total annualized cost of this information collection increased by \$1.6 million (from \$38.5 million under the existing requirements to \$40.1 million under the new requirements), due to an increase in the number of hours incurred by auditors (versus auditees) under the new requirements at a higher hourly rate.

The average reporting burden per respondent increased 8.7 hours under the new requirements (from an average of 26 hours per respondent under the existing requirements of Circulars A-128 and A-133 to an average of 34.7 hours per respondent under the new

requirements) primarily due to requirements to prepare and submit to the Federal Government for the first time two new documents: (1) the auditor's summary of audit findings, and (2) the data collection form. The auditor's summary of audit findings is required by the 1996 Amendments. The data collection form is required by Circular A-133 and will be used to capture information about Federal awards in a governmentwide database that will be accessible by the Congress, Federal Government, non-Federal entities, and the public. These data are not currently available, yet they are essential for making decisions about Federal awards, including program design and delivery and audit requirements.

OMB estimates that approximately 80 percent of the annualized reporting burden cost results from statutorily-imposed requirements included in the 1996 Amendments, while the remaining 20 percent of the annualized reporting burden cost results from the new OMB-imposed requirement included in Circular A-133 to prepare a data collection form.

##### *Necessity of the Data Collection Form*

##### *Comments:*

Federal auditors and Federal agencies supported the use of the data collection form as an efficient and effective means to capture governmentwide information about Federal awards administered by non-Federal entities that expend \$300,000 or more annually in Federal awards. One Federal auditor stated that the information collection is necessary for the Federal agency to carry out its grants management responsibilities. College and university commenters had mixed reactions, including some supporting the form and some not.

Many State auditors and State managers strongly opposed the requirement to prepare a data requirement form because it is viewed as being unnecessary, duplicative of information included in other reports, and especially burdensome for large entities. One State auditor commented that "Making single audit information easy for Federal agencies to use seems to have been the primary consideration in the drafting of the requirements, with less concern for the preparation time and costs of auditees and especially auditors." Another State auditor noted that the Federal Government should be responsible for categorizing audit findings by using the reporting package as the sole source of this information. One local government manager stated that the burden of "spoon-feeding"

data and that information in the auditor's reports be cross-referenced to the schedule of expenditures of Federal awards to achieve the equivalent of the data collection form without creating another form." Another college and university commenter stated that "The recapping of Catalog of Federal Domestic Assistance (CFDA) number and name of each program is entirely unwarranted. So is the requirement to list individual awards within a cluster. If the information is needed, it should be separately gathered by the authorized Federal paying agencies. Surely, this information is available for each recipient."

One Federal auditor encouraged OMB to explore the possibility of incorporating the schedule of expenditures of Federal awards in the data collection form to reduce redundancy.

One Federal auditor, one State manager, and one CPA commenter stated that it was duplicative to include a summary of the auditor's results in the schedule of findings and questioned costs prepared by the auditor (required by § 305(d)(1) of the Circular) and to present essentially the same information in the data collection form. One commenter recommended that, if the auditor prepares the data collection form, then the auditor's summary can be included in the data collection form and the requirement to include the auditor's summary in the schedule of findings and questioned costs can be removed from the Circular. One CPA commenter stated that "Elimination of the summary of auditor results (data collection form would serve as the summary) could potentially reduce auditor time spent by one-half."

Several commenters suggested requiring the data collection form to be prepared only when there are no audit findings and submitting it in lieu of the complete reporting package.

*Response:* OMB acknowledges that there are many duplicative aspects of the proposed data collection form. OMB has already begun working with the Federal clearinghouse to implement some of the suggestions provided by commenters, such as providing for the electronic submission of the data collection form information through the Internet and the electronic submission of the entire reporting package. OMB is fully committed to reducing or eliminating duplication in the future through electronic means. However, the Federal Government needs the information provided by the data collection form currently. Therefore, in the near term, reporting required by the

Circular will be submitted initially to the Federal Government in "hard copy."

The proposed revision states that the form will use a "machine-readable format." This term was removed from the Circular to provide the Federal clearinghouse flexibility in processing the initial data collections. OMB expects iterative developments in the data submission process which will evolve from initial hard copy submissions to electronic submissions.

Section 320(j) of Circular A-133 states that "Nothing in this part shall preclude electronic submissions to the Federal clearinghouse in such manner as may be approved by OMB. With OMB approval, the Federal clearinghouse may pilot test methods of electronic submissions." The first phase of this pilot test has already begun and it is concentrating on providing auditees with the means to electronically submit the data collection form information through the Internet to the Federal clearinghouse for fiscal years beginning after June 30, 1997. In addition, the Federal clearinghouse is working with certain States to develop a mechanism whereby auditees may submit the required information to the Federal clearinghouse in a computerized format or diskette for fiscal years beginning after June 30, 1997.

The objective of the second phase will be to develop the capability to electronically submit the complete reporting package or key components of it, such as the auditee's schedule of expenditures of Federal awards and the auditor's schedule of findings and questioned costs. It is expected that, when auditees submit their reporting packages electronically, there will no longer be a need for the data collection form. However, the Federal clearinghouse will continue to process data collection forms for auditees that are unable or choose not to submit their reporting packages electronically.

Until such time as electronic submission is available, OMB's intent is to simplify the preparation of the data collection form by only requesting information in the form that is already required to be included in the reporting package. While this approach results in some duplication, it is intended to facilitate the ease of completing the form and the accuracy of the information provided.

With respect to renumbered items ix, x, and xi on the data collection form, OMB believes that it is necessary to capture Federal award information at this level of detail. The governmentwide database must contain information at the Federal program level so that future decisions about Federal awards and

related audit policies (e.g., audit thresholds, the risk-based approach to determining major programs) can be made. Some commenters appeared to misunderstand the intended level of detail. For instance, one commenter indicated that it was onerous to list individual awards within a cluster of programs. Other than Research and Development (R&D), most clusters of programs include only about two or three Federal programs (CFDA numbers). For R&D, total Federal awards expended may be shown either by individual award or by Federal agency and major subdivision within the Federal agency.

It is also important to track in the governmentwide database not only which Federal awards had audit findings but also an indication of the nature of the audit findings relative to the Federal awards. For this reason, renumbered item xii in the proposed form is retained. Item xii requires a yes or no statement as to whether there are audit findings and the total amount of any questioned costs related to each Federal award. It also requires an indication of the type of compliance requirement to which the audit findings relate. This information is critically important for monitoring Federal awards, identifying systemic problems, and developing future policy changes for Federal awards.

In response to the comments received suggesting that the information in the form be limited to only those programs with audit findings, OMB believes that it is important that the governmentwide database include information about all Federal awards administered by auditees, not just those Federal awards with findings. The form must reflect each Federal award to ensure the completeness of the database, which will be important for future decisionmaking.

OMB does not support the comments suggesting that the schedule of expenditures of Federal awards be expanded to serve in lieu of the data collection form and that the Federal Government input the data using the reporting package. Similarly, OMB does not support the suggestion that the form be submitted only when there are no audit findings and in lieu of submitting the reporting package. OMB's long term goal is to eliminate the data collection form for auditees that report electronically in the future. However, in the near term, when hard copy reports are submitted, OMB opposes expanding the minimum reporting requirements on auditees beyond those included in § 310(b) of the Circular and having the Federal Government input the data

information on the form is accurate and complete. The requirement was modified to clearly indicate that a senior official from State or local government shall sign the form, as appropriate. The intent of this requirement is to ensure that the form is signed by a senior or executive level representative of the auditee that is authorized to, and can be held accountable for, representations made to the Federal Government on behalf of the auditee. The certifying official should be knowledgeable about the Federal awards administered by the auditee, the requirements of Circular A-133, and the actual audit results. In a State-wide single audit, it is expected that a State official (e.g., State controller, State treasurer) would sign the form.

*Level of Form's Specificity Provided in the Circular and Supplemental Forms*

*Comment*

One Federal auditor stated that, while it was necessary to include specific certification language on the form to provide reviewers with sufficient detail to understand the proposal, the Circular should not contain language that is so detailed that it precludes amending the data collection form without revising the Circular. The commenter recommended removing the certification language in § \_\_\_\_ .320(b) of the Circular and including a provision authorizing OMB to add or remove data elements, as needed. A CPA commented that the final revised Circular should provide specific guidance on preparing the form and include, as an attachment, the form itself and the standard wording to be developed by OMB and the audit community to appropriately characterize the auditor's and auditee's responsibility for information included in the form. One college and university commenter recommended that OMB clearly state that the data collection form is the only form that can be used by Federal agencies and pass-through entities to gather information related to the audit and that entities may not develop their own supplemental forms.

*Response:* Circular A-133 (§ \_\_\_\_ .320(b)) identifies the data elements to be included in the data collection form and provides a general description of the auditee's certification and auditor's statement that will accompany the form. The data collection form to be used by the Federal clearinghouse will be presented as an Appendix to the final revised Circular A-133. The form, developed cooperatively by a Federal interagency task force, is the *only* form that may be used by a Federal agency for the purpose of collecting single audit data.

However, OMB expects that the standard form may be modified in the future, as circumstances warrant. Any revisions require approval from OMB's Office of Information and Regulatory Affairs and the revised form, or a notice of its revision, will be published in the Federal Register.

*Data Collection Form Sent Only to the Federal Clearinghouse*

*Comment*

The CPA community's support for the proposal requiring the auditor to prepare and sign the form was based on the understanding that the data collection form would be sent only to the Federal clearinghouse designated by OMB and not to Federal agencies and pass-through entities. Also, several college and university commenters urged OMB to permit a subrecipient to simply send a letter to a pass-through entity when there are no audit findings that relate to the Federal awards provided by the pass-through entity.

*Response:* Several modifications were necessary to reflect this understanding in the final revision of Circular A-133. First, Circular A-133 now reflects that the data collection form will no longer be a required component of the reporting package described in § \_\_\_\_ .235(c)(3) and § \_\_\_\_ .320(c) of the Circular. Also, the requirement for subrecipients to send copies of the data collection form to pass-through entities was removed from § \_\_\_\_ .235(c)(3) and § \_\_\_\_ .320(e) of the Circular.

When there are no audit findings that relate to a Federal award provided by a pass-through entity, the subrecipient is not required to send the reporting package to that pass-through entity. In this situation, without receiving the data collection form, the pass-through entity would not otherwise receive any audit result information about the Federal awards it provides to the subrecipient. Therefore, § \_\_\_\_ .235(c)(3) and § \_\_\_\_ .320(e) of Circular A-133 requires a subrecipient in this situation to inform a pass-through entity that an audit of the subrecipient was conducted in accordance with Circular A-133 and that no audit findings relative to the Federal awards provided by the pass-through entity were reported. Examples of ways in which the subrecipient may communicate this information to the pass-through entity include: (1) writing a letter to the pass-through entity indicating that an audit of the subrecipient was conducted in accordance with Circular A-133 and that no audit findings relative to the Federal awards provided by the pass-through entity were reported, (2)

submitting the complete reporting package to the pass-through entity, and (3) a combination of both (1) and (2).

*Applicability of Freedom of Information Act and Other Federal Laws*

*Comment*

One CPA commenter asked whether the data collection form is available under the Freedom of Information Act (FOIA) and whether other Federal laws apply, such as those relating to false statements.

*Response:* The data collection form is subject to FOIA. Also, representations made by auditees and auditors are subject to applicable penalties for false statements.

*Report Copies*

*Comment*

One Federal auditor suggested that a copy of the report be provided to the Federal clearinghouse by all auditees that have cognizant agencies for audit (i.e., auditees that expend more than \$25 million a year in Federal awards), so that each cognizant agency can carry out its responsibilities required by the Circular. A State agency commented that reports should be provided for every Federal agency and pass-through entity that provided Federal awards to the auditee, regardless if any audit findings are reported or not. This commenter stated that the reports are necessary for closeout and other program monitoring purposes, and that this State agency will now be required to request all reports. The commenter also stated that this proposal to streamline the report distribution process places additional pressure on auditors to issue more reports with no audit findings.

*Response:* No change was made to the number of reporting package copies to be sent to the Federal clearinghouse. In all instances, the Federal clearinghouse will retain one copy for archival purposes. If requested by the cognizant agency for audit, the Federal clearinghouse will provide a copy of the reporting package to the cognizant agency.

OMB believes that the benefits to be achieved through report distribution streamlining outweigh the possible inconveniences that may result for some Federal agencies and pass-through entities from having to request report copies, as needed. Therefore, no changes to the proposed streamlined report distribution process were made.

*Comment*

One local government manager commented that savings may result from

signs sections of the form, the auditee should also be required to sign the form certifying to the completeness and accuracy of the entire form.

Federal auditors, Federal agencies, and State governments cited the following reasons for supporting the proposal for auditors to prepare and sign the form: (1) greater assurance as to the accuracy of the form and the governmentwide database, (2) greater efficiency in preparing the form, (3) more streamlined audit reporting achieved by having the auditor sign the form rather than issuing a separate report describing the auditor's association with and responsibility for the form, (4) more timely data collection, and (5) reduced need for independent verification of data included in the governmentwide database by Federal agencies. One Federal agency supported having the auditor prepare the form but did not support requiring the auditor to sign the form. Reasons cited included that the proposal is "contrary to and inconsistent with the Government's long-established practice of requiring the institution [auditee], not the auditor, to sign existing certifications" and that the proposal raises new concerns about the auditor's litigation liability, which will take time to research and resolve.

Most CPA commenters indicated that independent auditor association with the form would enhance its usefulness. However, most CPA commenters and some Federal auditors and Federal agencies were concerned that certain report users may view the information contained in the form as a substitute for reading the full auditor's reports, which present a more complete picture of the auditor's testing and findings. These commenters also stated their belief that a form can be developed that would meet the needs of OMB and Federal agencies and also address the concerns of the CPA community. Commenters strongly encouraged OMB to work with the American Institute of Certified Public Accountants (AICPA), the Inspectors General, Federal agencies, and other interested parties to develop a useful data collection form, and many commenters offered to assist OMB in this effort.

Several CPA commenters suggested that, to provide appropriate protection to auditors, the auditor signature section of the form should possess certain elements including: (1) a statement that certain information included in the form is based on the auditor's reports and is not a substitute for such reports, (2) a statement concerning the availability of the auditor's reports, (3) a statement that the content of the form is limited to

information prescribed by OMB, and (4) a clear indication of which information is being provided by the auditor versus that which is the responsibility of the auditee. CPA commenters' support for this proposal was based on the understanding that: (1) the form would be sent only to the Federal clearinghouse and not to Federal agencies and pass-through entities, and (2) acceptable language would be added to the form to appropriately characterize the nature of the information included in the form and the auditor's and auditee's responsibility for information included in the form. One CPA commenter did not support the proposal stating that it "is beyond the scope of reporting required by professional and governmental auditing standards."

Most State auditors and one professional organization commented that they were strongly opposed to requiring the auditor to prepare and sign the data collection form. Reasons cited included: (1) the requirement for the auditee to prepare and sign the form emphasizes the auditee's responsibility for administering Federal funds in compliance with the law, ensuring the accuracy and completeness of information provided to the Federal Government, and resolving deficiencies uncovered by audits; (2) the type of information required by the form is readily available and should be clearly understood by the auditee; (3) if the auditor is required to sign the form, the auditor's legal liability exposure may increase, which will result in increased audit fees; (4) it is not justified to reduce burden on auditees by increasing the burden on auditors; (5) if the auditor is required to prepare the form, the auditor's independence may be questioned and the distinction between management and auditor responsibilities may be blurred; and, (6) it is uncertain whether the auditor or auditee can prepare the form more efficiently.

One State auditor commented that "We see it [the requirement for the auditee to prepare and sign the form] as the first step in a process that will ultimately result in auditees' providing management assertions on internal controls and compliance regarding their use of Federal funds \* \* \* We view the requirement for the auditee to prepare the data collection form as a kind of "homework assignment" by which auditee personnel will read the auditor's reports and start to understand the significance of the issues covered in those reports \* \* \* Therefore, we are quite concerned with OMB's suggestion \* \* \* [to require] the auditor to prepare and sign the data collection form."

Several State auditors suggested alternatives to the proposal for the auditor to prepare and sign the form including: (1) requiring the auditee to prepare the form and have the auditor review the form (but not as a separate engagement) for accuracy in relation to the auditee's financial statements taken as a whole, for limited distribution to the Federal Government; (2) requiring the auditee to prepare the form and have the auditor issue a separate letter of assurance on the form regarding its reasonableness; (3) removing the requirement to prepare the form and requiring the auditee to send a transmittal letter along with the audit report to the Federal Government, stating that the audit was completed in accordance with the single audit requirements; (4) presenting certain summary information on the form with no signature by either the auditee or auditor, and having the auditee sign a separate form asserting that an audit in accordance with Circular A-133 was performed; (5) adding a provision to the financial reporting section of the compliance supplement directing the auditor to verify the completeness and accuracy of the form; and, (6) requiring the auditee to prepare the form and having the auditor sign it, provided that the auditor's signature is accompanied by standard language specifically describing and limiting the assurance the auditor is providing by signing the form.

Several State auditors supported the proposal for the auditor to sign the form, provided that the form includes "liability limiting statements" similar to the wording suggested by the CPA commenters, and indicated that it would be more efficient for auditors to prepare the form.

Two college and university commenters opposed the proposal stating that many colleges and universities could readily prepare the form similar to other documents they are required to prepare (e.g., the schedule of Federal awards and corrective action plans) and that the additional cost for the auditor to prepare the form is not justified compared to the benefit received. However, one of these college and university commenters also indicated that having the auditor prepare the form would add to its accuracy and greatly assist many auditees and suggested a more flexible solution to permit either the auditor or auditee to prepare the form (at the option of the auditee) and require the auditor to sign the form as a reviewer. One college and university commenter indicated that neither the auditors nor auditees want to prepare the form

period should be coordinated through either the cognizant or oversight agency for audit.

#### *Schedule of Expenditures of Federal Awards*

##### Comment

One State auditor commented that the State's accounting system could not capture Federal award expenditure information and requested that the Circular permit alternatives methods of reporting Federal award information, such as reporting receipts.

*Response:* No change was made to the Circular based on this comment. Auditees shall report the amount of expenditures of Federal awards. This information is important to Federal agencies and pass-through entities and the amount of Federal award expenditures is critical to every monetary determination required by the Circular (e.g., the threshold that triggers a Circular A-133 audit requirement, and the dollar threshold used to distinguish Type A and Type B programs using the risk-based approach to determining major programs). Also, the requirement to report Federal award expenditures is consistent with the financial management systems requirements of § \_\_\_\_ .20 in the Grants Management Common Rule, published March 11, 1988 (53 FR 8034) and amended April 19, 1995 (60 FR 19638), whereby States' systems should permit accounting for expenditures to a level sufficient to demonstrate compliance with applicable laws and regulations.

##### Comment

Several commenters interpreted the proposal as requiring that the schedule of expenditures of Federal awards include information about the amount of Federal funds awarded (rather than Federal awards expended), and that such information be presented by award year. One commenter asked whether the information requested by Federal agencies and pass-through entities to be included on the schedule was limited to the minimum requirements or whether such requests could include additional information.

*Response:* A change was made to § \_\_\_\_ .310(b) to clarify that the schedule requires presentation of the amounts of Federal awards expended, rather than the amounts awarded. Also, § \_\_\_\_ .310(b) was modified to indicate that an auditee may choose to provide information requested by Federal agencies and pass-through entities to make the schedule easier to use. However, the auditee is not required by the Circular to provide information

beyond the minimum requirements described in § \_\_\_\_ .310(b).

##### Comment

§ \_\_\_\_ .310(b)(1) of the proposed revision requires that the schedule of expenditures of Federal awards list individual Federal programs by Federal agency and major subdivision within a Federal agency. Many respondents strongly opposed the requirement to provide the major subdivision within a Federal agency. Reasons cited include that this information is readily available to the Federal Government through the CFDA numbers and that it is particularly onerous for large entities, such as States, to provide this information for each individual Federal program.

*Response:* The requirement to list each individual Federal program by major subdivision within a Federal agency was removed from § \_\_\_\_ .310(b)(1) of the Circular, except for the R&D program cluster. This revision reduces reporting burden for many auditees that administer a large number of Federal awards. For the R&D program cluster, auditees are provided the option of reporting Federal awards expended either by individual Federal award or by Federal agency and major subdivision within the Federal agency. This option reduces burden on auditees that administer a large number of R&D awards, such as certain colleges and universities, by permitting summary reporting at the Federal agency and major subdivision level. Federal awarding agencies and pass-through entities providing R&D awards should assist auditees in identifying major subdivisions within the Federal agency responsible for such awards.

##### Comment

Several commenters opposed the proposal included in § \_\_\_\_ .310(b)(5) which requested, to the extent practical, pass-through entities to identify on the schedule of expenditures of Federal awards the total amount provided to subrecipients from each Type A program and each Type B program audited as major. This provision was perceived as burdensome. One CPA commenter was concerned that, if such information were provided for all Type A programs, including those Type A programs that were not audited as major, then the auditor would be required to report on a schedule that includes unaudited information.

*Response:* A change was made to the Circular as a result of these comments. The proposal requested auditees to provide information about amounts provided to subrecipients from each

Type A program and each Type B program audited as major. The final revision to Circular A-133 requests this information for each Federal program. This change was made to simplify the requirement but does not necessarily increase burden on auditees because the information is not mandatory. This information should be included on the schedule, to the extent practical. In response to a CPA's concern, the schedule of expenditures of Federal awards includes information about each of the Federal awards administered by the auditee, not just those audited as major. OMB does not believe that presenting information about amounts provided to subrecipients is different from other information included in the schedule relating to programs that were not audited as major.

#### *Summary Schedule of Prior Audit Findings*

##### Comment

Several State auditors and State agencies questioned the need for a separate schedule reporting the status of prior audit findings. One State auditor noted that requiring the auditor to report any material misrepresentations made by the auditee in the schedule will increase pressure on auditors and strain their relationship with the auditee. A State agency commented that the information in the new summary schedule of prior audit findings is also included in other required reports and recommended that the cognizant agency for audit be responsible for reviewing and approving follow-up actions outlined in the corrective action plan. One Federal auditor noted the importance of continuing to report deficiencies until the finding is adequately resolved and suggested that the schedule also include a description of the means used to substantiate the audit finding resolution.

*Response:* No change was made to § \_\_\_\_ .315 of the Circular as a result of these comments. It is important for the auditee to report on the status of prior audit findings in a consistent and systematic manner. It is also important that the auditor assess the fairness of management's representations included in the schedule, as required by § \_\_\_\_ .500(e) of the Circular.

#### *Summary of the Auditor's Results*

##### Comment

One Federal auditor recommended revising the Circular to require the auditor to provide a narrative summary at the beginning of the single audit reporting package. One State auditor opposed the requirement to prepare a

TABLE 1.—REPORTING BURDEN ESTIMATE

	Existing burden	New burden			Change in burden increase (decrease)
		Auditees with a large number of programs	Other auditees	Total auditees	
Number of Auditees .....	35,000	200	24,800	25,000	(10,000)
Number of Auditors .....	35,000	200	24,800	25,000	(10,000)
Auditee hours to prepare reporting package .....	16	48	16	16.3	3
Auditee hours to prepare & sign data collection form .....		6	2	2.0	2.0
Auditor hours to prepare auditor's reports .....	10	40	12	12.2	2.2
Auditor hours to prepare & sign data collection form .....		24	4	4.2	4.2
Average hour burden per respondent .....	26	118	34	34.7	8.7
Total burden hours .....	910,000	23,600	843,200	866,800	(43,200)

<sup>1</sup> Weighted average.

BILLING CODE 3110-01-P

EIN:

**PART I GENERAL INFORMATION - Continued**

8. Indicate whether the auditee has either a Federal cognizant or oversight agency for audit. (Mark (X) one box)  
 Cognizant agency       Oversight agency

9. Name of Federal cognizant or oversight agency for audit (Mark (X) one box)

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> 01 African Development Foundation                 | <input type="checkbox"/> 33 Federal Emergency Management Agency        | <input type="checkbox"/> 16 Justice                                       | <input type="checkbox"/> 08 Peace Corps                      |
| <input type="checkbox"/> 02 Agency for International Development           | <input type="checkbox"/> 34 Federal Mediation and Conciliation Service | <input type="checkbox"/> 17 Labor   | <input type="checkbox"/> 59 Small Business Administration    |
| <input type="checkbox"/> 10 Agriculture                                    | <input type="checkbox"/> 39 General Services Administration            | <input type="checkbox"/> 43 National Aeronautics and Space Administration | <input type="checkbox"/> 96 Social Security Administration   |
| <input type="checkbox"/> 11 Commerce                                       | <input type="checkbox"/> 93 Health and Human Services                  | <input type="checkbox"/> 89 National Archives and Records Administration  | <input type="checkbox"/> 19 State                            |
| <input type="checkbox"/> 94 Corporation for National and Community Service | <input type="checkbox"/> 14 Housing and Urban Development              | <input type="checkbox"/> 05 National Endowment for the Arts               | <input type="checkbox"/> 20 Transportation                   |
| <input type="checkbox"/> 12 Defense  | <input type="checkbox"/> 03 Institute for Museum Services              | <input type="checkbox"/> 06 National Endowment for the Humanities         | <input type="checkbox"/> 21 Treasury                         |
| <input type="checkbox"/> 84 Education                                      | <input type="checkbox"/> 04 Inter-American Foundation                  | <input type="checkbox"/> 47 National Science Foundation                   | <input type="checkbox"/> 82 United States Information Agency |
| <input type="checkbox"/> 81 Energy   | <input type="checkbox"/> 15 Interior                                   | <input type="checkbox"/> 07 Office of National Drug Control Policy        | <input type="checkbox"/> 64 Veterans Affairs                 |
| <input type="checkbox"/> 66 Environmental Protection Agency                |  |   |  |

**PART II FINANCIAL STATEMENTS (To be completed by auditor)**

1. Type of audit report (Mark (X) one box)  
 1 Unqualified opinion     2 Qualified opinion     3 Adverse opinion     4 Disclaimer of opinion

2. Is a reportable condition disclosed?  
 1 Yes       2 No - SKIP to Item 4

3. Is any reportable condition reported as a material weakness?  
 1 Yes       2 No

4. Is a material noncompliance disclosed?  
 1 Yes       2 No

**PART III FEDERAL PROGRAMS (To be completed by auditor)**

1. Type of audit report on major program compliance (Mark (X) one box)  
 1 Unqualified opinion     2 Qualified opinion     3 Adverse opinion     4 Disclaimer of opinion

2. What is the dollar threshold to distinguish Type A and Type B programs § \_\_\_\_, 520(b)?  
 \$ \_\_\_\_\_

3. Did the auditee qualify as a low-risk auditee (§ \_\_\_\_, 530)?  
 1 Yes       2 No

4. Are there any audit findings required to be reported under § \_\_\_\_, 510(a)?  
 1 Yes       2 No

5. Which Federal Agencies are required to receive the reporting package? (Mark (X) all that apply)

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> 01 African Development Foundation                 | <input type="checkbox"/> 33 Federal Emergency Management Agency        | <input type="checkbox"/> 16 Justice                                       | <input type="checkbox"/> 08 Peace Corps                      |
| <input type="checkbox"/> 02 Agency for International Development           | <input type="checkbox"/> 34 Federal Mediation and Conciliation Service | <input type="checkbox"/> 17 Labor   | <input type="checkbox"/> 59 Small Business Administration    |
| <input type="checkbox"/> 10 Agriculture                                    | <input type="checkbox"/> 39 General Services Administration            | <input type="checkbox"/> 43 National Aeronautics and Space Administration | <input type="checkbox"/> 96 Social Security Administration   |
| <input type="checkbox"/> 11 Commerce                                       | <input type="checkbox"/> 93 Health and Human Services                  | <input type="checkbox"/> 89 National Archives and Records Administration  | <input type="checkbox"/> 19 State                            |
| <input type="checkbox"/> 94 Corporation for National and Community Service | <input type="checkbox"/> 14 Housing and Urban Development              | <input type="checkbox"/> 05 National Endowment for the Arts               | <input type="checkbox"/> 20 Transportation                   |
| <input type="checkbox"/> 12 Defense  | <input type="checkbox"/> 03 Institute for Museum Services              | <input type="checkbox"/> 06 National Endowment for the Humanities         | <input type="checkbox"/> 21 Treasury                         |
| <input type="checkbox"/> 84 Education                                      | <input type="checkbox"/> 04 Inter-American Foundation                  | <input type="checkbox"/> 47 National Science Foundation                   | <input type="checkbox"/> 82 United States Information Agency |
| <input type="checkbox"/> 81 Energy   | <input type="checkbox"/> 15 Interior                                   | <input type="checkbox"/> 07 Office of National Drug Control Policy        | <input type="checkbox"/> 64 Veterans Affairs                 |
| <input type="checkbox"/> 66 Environmental Protection Agency                |  |   | <input type="checkbox"/> 00 None                             |

**Instructions for Completion of SF-SAC,  
Reporting on Audits of States, Local Governments, and Non-Profit Organizations**

Office of Management and Budget (OMB) Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations," requires non-Federal entities that expend \$300,000 or more in a year in Federal awards to have an audit conducted in accordance with the Circular. Circular A-133 (§ 320(b)) requires auditees to submit a data collection form, along with other specified reports, to the Federal clearinghouse designated by OMB (currently the U.S. Bureau of the Census) at the completion of each audit.

**Submission to Federal Clearinghouse**

The data collection form must be completely filled out and signed by both the auditee and auditor. **Submission of anything other than a complete data collection form and reporting package as required by Circular A-133 will be returned to the auditee.**

**Description of the Data Collection Form Items**

**PART I - GENERAL INFORMATION:** The auditee should complete this section and sign the certification statement provided in Item 6 (g).

**Item 1: Fiscal Year Ending Date:**

Enter the last day of the entity's fiscal period covered by the audit.

**Item 2: Type of Circular A-133 Audit:**

Check the appropriate box. § 200 of Circular A-133 requires non-Federal entities that expend \$300,000 or more in a year in Federal awards to have a single audit conducted in accordance with § 500, except when they elect to have a program-specific audit conducted in accordance with § 235.

**Item 3: Audit Period Covered:**

Check the appropriate box. Annual audits cover 12 months and Biennial audits cover 24 months. If the audit period covered is neither Annual or Biennial, mark "Other" and provide the number of months covered in the space provided.

**Item 4: Date Received by Federal Clearinghouse:**

Federal Government use only.

**Item 5: Employer Identification Number (EIN)**

**(a) Auditee EIN:**

Enter the auditee Employer Identification Number (EIN), which is the Taxpayer Identification Number assigned by the Internal Revenue Service (IRS). Also, using the spaces provided, enter the EIN on the top of each page.

**(b) Multiple EINs Covered in this Report:**

Check the appropriate box to indicate whether the auditee (or components of an auditee covered by the audit) was assigned more than one EIN by the IRS. (Example: A State-wide audit covers many departments, each of which may have its own separate EIN.) If yes, indicate principal EIN under 5 (a).

**Item 6: Auditee Information**

**(g)** A senior representative of the auditee (e.g., State controller, director of finance, chief executive officer, chief financial officer) shall sign a statement that the information on the form is accurate and complete as required by § 320(b) of Circular A-133. Provide the name and title of the signatory and date of signature.

**Column (c) - Amount of Federal Expenditures:**

Enter the amount of expenditures included in the Schedule of Expenditures of Federal Awards for each Federal program. It is important to note that amounts shall be provided for the value of Federal awards expended in the form of non-cash assistance, the amount of insurance in effect during the year, and loans or loan guarantees outstanding at year end, regardless of whether such amounts were presented in the Schedule of Expenditures of Federal Awards or in a note to the Schedule.

If additional pages are required, photocopy page 3 of the form and attach additional page(s) to the form. Also, instead of subtotals at the bottom of each page, only include a grand total on the final page in the "TOTAL" block.

**Item 7: Audit Findings and Questioned Costs:**

The information to complete columns (a), (b), (c), (d) and (e) shall be obtained from the Schedule of Findings and Questioned Costs prepared by the auditor. If additional space is required, photocopy page 3 and attach the additional page(s) to the form.

**Column (a) - Major Program:**

Indicate whether or not the Federal program is a major program, as defined in § 520 of Circular A-133, by marking (X) in one box.

**Column (b) - Type of Compliance Requirement:**

Using the list provided on the form, enter the letter that corresponds to the type(s) of compliance requirements applicable to the Federal program. Mark all that apply or None.

**Column (c) - Questioned Costs:**

Enter the amount of questioned costs by Federal program. If no questioned costs were reported, enter N/A for 'Not Applicable.'

**Column (d) - Internal Control Findings:**

Check the appropriate box, using the list provided on the form, that corresponds to the internal control findings that apply to the Federal program. Mark all that apply or None.

**Column (e) - Audit Finding Reference Number(s):**

Enter the audit finding reference number(s) for audit findings included in the Schedule of Findings and Questioned Costs. If no audit finding reference numbers exist, enter N/A for 'Not Applicable.'

# State of Louisiana



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

JACK C. CALDWELL  
SECRETARY

## DEPARTMENT OF NATURAL RESOURCES

August 5, 1996

Patricia A. Rauch, Team Leader  
Grants Management Division  
1325 East-West Highway  
SSMC2 - OA321 - Fifth Floor  
Silver Spring, MD 20910-3283

05 AUG 5 PM 2:31

RE: NOAA Award No. NA47FZ0477  
Amendment No. 1

Dear Ms. Rauch:

Enclosed are two (2) signed originals of the above referenced award amendment, as requested in your letter dated July 26, 1996, received in our office July 29, 1996.

We appreciate NOAA staff assistance in obtaining approval of this cooperative agreement amendment.

Sincerely,

A handwritten signature in cursive script that reads "Cheryl Y. Bennett".

Cheryl Y. Bennett  
Contracts & Grants Administrator

CYB/KYL/kf

Enclosures

c: Verlie Wims, Fiscal Officer  
Bill Good, Coastal Restoration Division Administrator ✓

AMENDMENT TO  
FINANCIAL ASSISTANCE AWARD

GRANT  COOPERATIVE AGREEMENT

ACCOUNTING CODE

N/A

AWARD NUMBER

NA47FZ0477

AMENDMENT NUMBER

1

RECIPIENT NAME

Louisiana Department of Natural Resources

STREET ADDRESS

P.O. Box 94396

EFFECTIVE DATE

AUGUST 1, 1996

CITY, STATE, ZIP CODE

BATON ROUGE, LOUISIANA 70804

EXTEND WORK COMPLETION TO

SEPTEMBER 30, 1997

DEPARTMENT OF COMMERCE OPERATING UNIT

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COSTS ARE REVISED  
AS FOLLOWS:

PREVIOUS  
ESTIMATED COST

ADD

DEDUCT

TOTAL  
ESTIMATED COST

FEDERAL SHARE OF COST

\$ 3,530,800	\$ -0-	\$ -0-	\$ 3,530,800
--------------	--------	--------	--------------

RECIPIENT SHARE OF COST

\$ 1,261,000	\$ -0-	\$ -0-	\$ 1,261,000
--------------	--------	--------	--------------

TOTAL ESTIMATED COST

\$ 4,791,800	\$ -0-	\$ -0-	\$ 4,791,800
--------------	--------	--------	--------------

REASON(S) FOR AMENDMENT

- To extend the award completion date through September 30, 1997, for the project entitled 'Coastal Wetland Planning, Protection, and Restoration Act (PL 101-646) Big Island Mining (XAT-7) and Atchafalaya Sediment Delivery (PAT-2)', as requested in the Recipient's letter dated June 3, 1996, incorporated by reference, and the Program Officer's recommendation dated June 7, 1996.
- To revise NOAA Administrative Special Award Conditions.
- To incorporate revised OMB Circular A-87, effective September 1, 1995.

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

- Special Award Conditions (ATTACHMENT B  ADMINISTRATIVE  PROGRAMMATIC)
- Line Item Budget (ATTACHMENT A)
- Other(s): Revised OMB Circular A-87, effective September 1, 1995

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER

*Patricia A. Rauch*

TITLE  
NOAA GRANTS OFFICER

DATE  
AUG 25 1996

TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL

*Robert L. ...*

TITLE  
SECRETARY

DATE  
8/5/96

BIG ISLAND MINING AND ATCHAFALAYA SEDIMENT DELIVERY  
 BUDGET FOR REMAINING FUNDS IN GRANT

ATCHAFALAYA SEDIMENT DELIVERY			
BUDGET ITEM	BUDGET	EXPENDED	REMAINING
Phase 1 Engineering and Design	\$112,800	\$84,800	\$28,000
Phase 2 Construction and Inspection	640,924	0	640,924
Phase 3 Long Term Monitoring	108,876	0	108,876
<b>TOTAL</b>	<b>\$862,600</b>	<b>\$84,800</b>	<b>\$777,800</b>
BIG ISLAND MINING			
BUDGET ITEM	BUDGET	EXPENDED	REMAINING
Phase 1 Engineering and Design	\$253,750	\$242,750	\$11,000
Phase 2 Construction and Inspection	3,566,574	0	3,566,574
Phase 3 Long Term Monitoring	108,876	0	108,876
<b>TOTAL</b>	<b>\$3,929,200</b>	<b>\$242,750</b>	<b>\$3,686,450</b>
<b>COMBINED TOTALS</b>	<b>\$4,791,800</b>	<b>\$327,550</b>	<b>\$4,464,250</b>
BUDGET	EXPENDED	REMAINING	

NOTE: The remaining budget will be expended in accordance with the original budget.

NOAA ADMINISTRATIVE  
SPECIAL AWARD CONDITIONS

- (Revise) 2. The Project Period for this award is August 1, 1994, through September 30, 1997.
- (Revise) 3. The Budget Period for this amendment is August 1, 1996, through September 30, 1997.
- (Revise) 5. The access code for this award is 21924.
- (Revise) 14. If applicable, the Recipient must request prior approval from NOAA for all proposed sole source contracts or where only one bid or proposal is received in which the aggregate expenditure is expected to exceed \$100,000.
- (Revise) 16. The recipient will be required to obtain approval before making any substantive changes in the project objectives, methods, budget, or schedule, (except provided by Expanded Authorities). Requests for changes shall be submitted in writing to the Program Officer. Final approval will be issued in writing by the Grants Officer. The Recipient is not authorized to proceed with any changes until final written approval is received from the Grants Officer.

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

FROM: Alice M. Rivlin  
Director

SUBJECT: Cost Principles for State, Local, and Indian Tribal Governments

1. Purpose. This Circular establishes principles and standards for determining costs for Federal awards carried out through grants, cost reimbursement contracts, and other agreements with State and local governments and federally-recognized Indian tribal governments (governmental units).
2. Authority. This Circular is issued under the authority of the Budget and Accounting Act of 1921, as amended; the Budget and Accounting Procedures Act of 1950, as amended; the Chief Financial Officers Act of 1990; Reorganization Plan No. 2 of 1970; and Executive Order No. 11541 ("Prescribing the Duties of the Office of Management and Budget and the Domestic Policy Council in the Executive Office of the President").
3. Background. An interagency task force was established in 1987 to review existing cost principles for Federal awards to State, local, and Indian tribal governments. The task force studied Inspector General reports and recommendations, solicited suggestions for changes to the Circular from governmental units, and compared for consistency the provisions of other OMB cost principles circulars covering non-profit organizations and universities. A proposed revised Circular reflecting the results of those efforts was issued on October 12, 1988, and August 19, 1993. Extensive comments on the proposed revisions, discussions with interest groups, and related developments were considered in developing this revision.
4. Rescissions. This Circular rescinds and supersedes Circular A-87, issued January 15, 1981.
5. Policy. This Circular establishes principles and standards to provide a uniform approach for determining costs and to promote effective program delivery, efficiency, and better relationships between governmental units and the Federal Government. The principles are for determining allowable costs only. They are not intended to identify the circumstances or to dictate the extent of Federal and governmental unit participation in the financing of a particular Federal award. Provision for profit or other increment above cost is outside the scope of this Circular.
6. Definitions. Definitions of key terms used in this Circular are contained in Attachment A, Section B.
7. Required Action. Agencies responsible for administering programs that involve cost reimbursement contracts, grants, and other agreements with governmental units shall issue codified regulations to implement the provisions of this Circular and its Attachments by September 1, 1995.
8. OMB Responsibilities. The Office of Management and Budget (OMB) will review agency regulations and implementation of this Circular, and will provide policy interpretations and assistance to insure effective and efficient implementation. Any exceptions will be subject to approval by OMB. Exceptions will only be made in particular cases where adequate justification is presented.
9. Information Contact. Further information concerning this Circular may be obtained by contacting the Office of Federal Financial Management, Financial Standards and Reporting

Branch, Office of Management and Budget, Washington, DC 20503, telephone 202-395-3993.

10. Policy Review Date. OMB Circular A-87 will have a policy review three years from the date of issuance.

11. Effective Date. This Circular is effective as follows:

- For costs charged indirectly or otherwise covered by the cost allocation plans described in Attachments C, D and E, this revision shall be applied to cost allocation plans and indirect cost proposals submitted or prepared for a governmental unit's fiscal year that begins on or after September 1, 1995.
- For other costs, this revision shall be applied to all awards or amendments, including continuation or renewal awards, made on or after September 1, 1995.

Attachments

OMB CIRCULAR NO. A-87  
Revised

## COST PRINCIPLES FOR STATE, LOCAL AND INDIAN TRIBAL GOVERNMENTS

### TABLE OF CONTENTS

- Attachment A - General Principles for Determining Allowable Costs
  - Attachment B - Selected Items of Cost
  - Attachment C - State/Local-Wide Central Service Cost Allocation Plans
  - Attachment D - Public Assistance Cost Allocation Plans
  - Attachment E - State and Local Indirect Cost Rate Proposals
- Attachment A

## GENERAL PRINCIPLES FOR DETERMINING ALLOWABLE COSTS

### TABLE OF CONTENTS

- A. Purpose and Scope
  1. Objectives
  2. Policy guides
  3. Application
- B. Definitions
  1. Approval or authorization of the awarding or cognizant Federal agency
  2. Award
  3. Awarding agency
  4. Central service cost allocation plan
  5. Claim
  6. Cognizant agency
  7. Common rule
  8. Contract
  9. Cost
  10. Cost allocation plan
  11. Cost objective
  12. Federally-recognized Indian tribal government
  13. Governmental unit
  14. Grantee department or agency
  15. Indirect cost rate proposal

allocated or billed to users.

5. "Claim" means a written demand or written assertion by the governmental unit or grantor seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of award terms, or other relief arising under or relating to the award. A voucher, invoice or other routine request for payment that is not a dispute when submitted is not a claim. Appeals, such as those filed by a governmental unit in response to questioned audit costs, are not considered claims until a final management decision is made by the Federal awarding agency.

6. "Cognizant agency" means the Federal agency responsible for reviewing, negotiating, and approving cost allocation plans or indirect cost proposals developed under this Circular on behalf of all Federal agencies. OMB publishes a listing of cognizant agencies.

7. "Common Rule" means the "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments; Final Rule" originally issued at 53 FR 8034-8103 (March 11, 1988). Other common rules will be referred to by their specific titles.

8. "Contract" means a mutually binding legal relationship obligating the seller to furnish the supplies or services (including construction) and the buyer to pay for them. It includes all types of commitments that obligate the government to an expenditure of appropriated funds and that, except as otherwise authorized, are in writing. In addition to bilateral instruments, contracts include (but are not limited to): awards and notices of awards; job orders or task orders issued under basic ordering agreements; letter contracts; orders, such as purchase orders, under which the contract becomes effective by written acceptance or performance; and, bilateral contract modifications. Contracts do not include grants and cooperative agreements covered by 31 U.S.C. 6301 et seq.

9. "Cost" means an amount as determined on a cash, accrual, or other basis acceptable to the Federal awarding or cognizant agency. It does not include transfers to a general or similar fund.

10. "Cost allocation plan" means central service cost allocation plan, public assistance cost allocation plan, and indirect cost rate proposal. Each of these terms are further defined in this section.

11. "Cost objective" means a function, organizational subdivision, contract, grant, or other activity for which cost data are needed and for which costs are incurred.

12. "Federally-recognized Indian tribal government" means the governing body or a governmental agency of any Indian tribe, band, nation, or other organized group or community (including any native village as defined in Section 3 of the Alaska Native Claims Settlement Act, 85 Stat. 688) certified by the Secretary of the Interior as eligible for the special programs and services provided through the Bureau of Indian Affairs.

13. "Governmental unit" means the entire State, local, or federally-recognized Indian tribal government, including any component thereof. Components of governmental units may function independently of the governmental unit in accordance with the term of the award.

14. "Grantee department or agency" means the component of a State, local, or federally-recognized Indian tribal government which is responsible for the performance or administration of all or some part of a Federal award.

15. "Indirect cost rate proposal" means the documentation

prepared by a governmental unit or component thereof to substantiate its request for the establishment of an indirect cost rate as described in Attachment E of this Circular.

16. "Local government" means a county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (whether or not incorporated as a non-profit corporation under State law), any other regional or interstate government entity, or any agency or instrumentality of a local government.

17. "Public assistance cost allocation plan" means a narrative description of the procedures that will be used in identifying, measuring and allocating all administrative costs to all of the programs administered or supervised by State public assistance agencies as described in Attachment D of this Circular.

18. "State" means any of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, any territory or possession of the United States, or any agency or instrumentality of a State exclusive of local governments.

### C. Basic Guidelines

1. Factors affecting allowability of costs. To be allowable under Federal awards, costs must meet the following general criteria:

- a. Be necessary and reasonable for proper and efficient performance and administration of Federal awards.
- b. Be allocable to Federal awards under the provisions of this Circular.
- c. Be authorized or not prohibited under State or local laws or regulations.
- d. Conform to any limitations or exclusions set forth in these principles, Federal laws, terms and conditions of the Federal award, or other governing regulations as to types or amounts of cost items.
- e. Be consistent with policies, regulations, and procedures that apply uniformly to both Federal awards and other activities of the governmental unit.
- f. Be accorded consistent treatment. A cost may not be assigned to a Federal award as a direct cost if any other cost incurred for the same purpose in like circumstances has been allocated to the Federal award as an indirect cost.
- g. Except as otherwise provided for in this Circular, be determined in accordance with generally accepted accounting principles.
- h. Not be included as a cost or used to meet cost sharing or matching requirements of any other Federal award in either the current or a prior period, except as specifically provided by Federal law or regulation.
- i. Be the net of all applicable credits.
- j. Be adequately documented.

2. Reasonable costs. A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost. The question of reasonableness is particularly important when governmental units or components are predominately federally-funded. In determining reasonableness of a given cost, consideration shall be given to:

- a. Whether the cost is of a type generally recognized as ordinary and necessary for the operation of the governmental unit or the performance of the Federal award.

H. Required Certifications. Each cost allocation plan or indirect cost rate proposal required by Attachments C and E must comply with the following:

1. No proposal to establish a cost allocation plan or an indirect cost rate, whether submitted to a Federal cognizant agency or maintained on file by the governmental unit, shall be acceptable unless such costs have been certified by the governmental unit using the Certificate of Cost Allocation Plan or Certificate of Indirect Costs as set forth in Attachments C and E. The certificate must be signed on behalf of the governmental unit by an individual at a level no lower than chief financial officer of the governmental unit that submits the proposal or component covered by the proposal.

2. No cost allocation plan or indirect cost rate shall be approved by the Federal Government unless the plan or rate proposal has been certified. Where it is necessary to establish a cost allocation plan or an indirect cost rate and the governmental unit has not submitted a certified proposal for establishing such a plan or rate in accordance with the requirements, the Federal Government may either disallow all indirect costs or unilaterally establish such a plan or rate. Such a plan or rate may be based upon audited historical data or such other data that have been furnished to the cognizant Federal agency and for which it can be demonstrated that all unallowable costs have been excluded. When a cost allocation plan or indirect cost rate is unilaterally established by the Federal Government because of failure of the governmental unit to submit a certified proposal, the plan or rate established will be set to ensure that potentially unallowable costs will not be reimbursed.

#### Attachment B

#### SELECTED ITEMS OF COST TABLE OF CONTENTS

1. Accounting
2. Advertising and public relations costs
3. Advisory councils
4. Alcoholic beverages
5. Audit services
6. Automatic electronic data processing
7. Bad debts
8. Bonding costs
9. Budgeting
10. Communications
11. Compensation for personnel services
  - a. General
  - b. Reasonableness
  - c. Unallowable costs
  - d. Fringe benefits
  - e. Pension plan costs
  - f. Post-retirement health benefits
  - g. Severance Pay
  - h. Support of salaries and wages
  - i. Donated services
12. Contingencies
13. Contributions and donations
14. Defense and prosecution of criminal and civil proceedings, and claims
15. Depreciation and use allowances
16. Disbursing service

17. Employee morale, health, and welfare costs
18. Entertainment
19. Equipment and other capital expenditures
20. Fines and penalties
21. Fund raising and investment management costs
22. Gains and losses on disposition of depreciable property and other capital assets and substantial relocation of Federal programs.
23. General government expenses
24. Idle facilities and idle capacity
25. Insurance and indemnification
26. Interest
27. Lobbying
28. Maintenance, operations, and repairs
29. Materials and supplies
30. Memberships, subscriptions, and professional activities
31. Motor pools
32. Pre-award costs
33. Professional service costs
34. Proposal costs
35. Publication and printing costs
36. Rearrangements and alterations
37. Reconversion costs
38. Rental costs
39. Taxes
40. Training
41. Travel costs
42. Underrecovery of costs under Federal agreements

Sections 1 through 42 provide principles to be applied in establishing the allowability or unallowability of certain items of cost. These principles apply whether a cost is treated as direct or indirect. A cost is allowable for Federal reimbursement only to the extent of benefits received by Federal awards and its conformance with the general policies and principles stated in Attachment A to this Circular. Failure to mention a particular item of cost in these sections is not intended to imply that it is either allowable or unallowable; rather, determination of allowability in each case should be based on the treatment or standards provided for similar or related items of cost.

1. Accounting. The cost of establishing and maintaining accounting and other information systems is allowable.
2. Advertising and public relations costs.
  - a. The term "advertising costs" means the costs of advertising media and corollary administrative costs. Advertising media include magazines, newspapers, radio and television programs, direct mail, exhibits, and the like.
  - b. The term "public relations" includes community relations and means those activities dedicated to maintaining the image of the governmental unit or maintaining or promoting understanding and favorable relations with the community or public at large or any segment of the public.
  - c. Advertising costs are allowable only when incurred for the recruitment of personnel, the procurement of goods and services, the disposal of surplus materials, and any other specific purposes necessary to meet the requirements of the Federal award. Advertising costs associated with the disposal of surplus materials are not allowable where all disposal costs are reimbursed based on a standard rate as specified in the grants management common rule.
  - d. Public relations costs are allowable when:

governmental unit or component.

(4) The accrual basis may be only used for those types of leave for which a liability as defined by Generally Accepted Accounting Principles (GAAP) exists when the leave is earned. When a governmental unit uses the accrual basis of accounting, in accordance with GAAP, allowable leave costs are the lesser of the amount accrued or funded.

(5) The cost of fringe benefits in the form of employer contributions or expenses for social security; employee life, health, unemployment, and worker's compensation insurance (except as indicated in section 25, Insurance and indemnification); pension plan costs (see subsection c.); and other similar benefits are allowable, provided such benefits are granted under established written policies. Such benefits, whether treated as indirect costs or as direct costs, shall be allocated to Federal awards and all other activities in a manner consistent with the pattern of benefits attributable to the individuals or group(s) of employees whose salaries and wages are chargeable to such Federal awards and other activities.

e. Pension plan costs. Pension plan costs may be computed using a pay-as-you-go method or an acceptable actuarial cost method in accordance with established written policies of the governmental unit.

(1) For pension plans financed on a pay-as-you-go method, allowable costs will be limited to those representing actual payments to retirees or their beneficiaries.

(2) Pension costs calculated using an actuarial cost-based method recognized by GAAP are allowable for a given fiscal year if they are funded for that year within six months after the end of that year. Costs funded after the six month period (or a later period agreed to by the cognizant agency) are allowable in the year funded. The cognizant agency may agree to an extension of the six month period if an appropriate adjustment is made to compensate for the timing of the charges to the Federal Government and related Federal reimbursement and the governmental unit's contribution to the pension fund. Adjustments may be made by cash refund or other equitable procedures to compensate the Federal Government for the time value of Federal reimbursements in excess of contributions to the pension fund.

(3) Amounts funded by the governmental unit in excess of the actuarially determined amount for a fiscal year may be used as the governmental unit's contribution in future periods.

(4) When a governmental unit converts to an acceptable actuarial cost method, as defined by GAAP, and funds pension costs in accordance with this method, the unfunded liability at the time of conversion shall be allowable if amortized over a period of years in accordance with GAAP.

(5) The Federal Government shall receive an equitable share of any previously allowed pension costs (including earnings thereon) which revert or inure to the governmental unit in the form of a refund, withdrawal, or other credit.

f. Post-retirement health benefits. Post-retirement health benefits (PRHB) refers to costs of health insurance or health services not included in a pension plan covered by subsection c. for retirees and their spouses, dependents, and survivors. PRHB costs may be computed using a pay-as-you-go method or an acceptable actuarial cost method in accordance with established written policies of the governmental unit.

(1) For PRHB financed on a pay as-you-go method, allowable costs will be limited to those representing actual payments to retirees or their beneficiaries.

(2) PRHB costs calculated using an actuarial cost method recognized by GAAP are allowable if they are funded for that year within six months after the end of that year. Costs funded after the six month period (or a later period agreed to by the cognizant agency) are allowable in the year funded. The cognizant agency may agree to an extension of the six month period if an appropriate adjustment is made to compensate for the timing of the charges to the Federal Government and related Federal reimbursements and the governmental unit's contributions to the PRHB fund. Adjustments may be made by cash refund, reduction in current year's PRHB costs, or other equitable procedures to compensate the Federal Government for the time value of Federal reimbursements in excess of contributions to the PRHB fund.

(3) Amounts funded in excess of the actuarially determined amount for a fiscal year may be used as the government's contribution in a future period.

(4) When a governmental unit converts to an acceptable actuarial cost method and funds PRHB costs in accordance with this method, the initial unfunded liability attributable to prior years shall be allowable if amortized over a period of years in accordance with GAAP, or, if no such GAAP period exists, over a period negotiated with the cognizant agency.

(5) To be allowable in the current year, the PRHB costs must be paid either to:

(a) An insurer or other benefit provider as current year costs or premiums, or

(b) An insurer or trustee to maintain a trust fund or reserve for the sole purpose of providing post-retirement benefits to retirees and other beneficiaries.

(6) The Federal Government shall receive an equitable share of any amounts of previously allowed post-retirement benefit costs (including earnings thereon) which revert or inure to the governmental unit in the form of a refund, withdrawal, or other credit.

g. Severance pay.

(1) Payments in addition to regular salaries and wages made to workers whose employment is being terminated are allowable to the extent that, in each case, they are required by (a) law, (b) employer-employee agreement, or (c) established written policy.

(2) Severance payments (but not accruals) associated with normal turnover are allowable. Such payments shall be allocated to all activities of the governmental unit as an indirect cost.

(3) Abnormal or mass severance pay will be considered on a case-by-case basis and is allowable only if approved by the cognizant Federal agency.

h. Support of salaries and wages. These standards regarding time distribution are in addition to the standards for payroll documentation.

(1) Charges to Federal awards for salaries and wages, whether treated as direct or indirect costs, will be based on payrolls documented in accordance with generally accepted practice of the governmental unit and approved by a responsible official(s) of the governmental unit.

(2) No further documentation is required for the salaries and wages of employees who work in a single indirect cost activity.

(3) Where employees are expected to work solely on a single Federal award or cost objective, charges for their salaries and wages will be supported by periodic certifications

b. Legal expenses required in the administration of Federal programs are allowable. Legal expenses for prosecution of claims against the Federal Government are unallowable.

#### 15. Depreciation and use allowances.

a. Depreciation and use allowances are means of allocating the cost of fixed assets to periods benefiting from asset use. Compensation for the use of fixed assets on hand may be made through depreciation or use allowances. A combination of the two methods may not be used in connection with a single class of fixed assets (e.g., buildings, office equipment, computer equipment, etc.) except as provided in subsection g. Except for enterprise funds and internal service funds that are included as part of a State/local cost allocation plan, classes of assets shall be determined on the same basis used for the government-wide financial statements.

b. The computation of depreciation or use allowances shall be based on the acquisition cost of the assets involved. Where actual cost records have not been maintained, a reasonable estimate of the original acquisition cost may be used. The value of an asset donated to the governmental unit by an unrelated third party shall be its fair market value at the time of donation. Governmental or quasi-governmental organizations located within the same State shall not be considered unrelated third parties for this purpose.

c. The computation of depreciation or use allowances will exclude:

(1) The cost of land;

(2) Any portion of the cost of buildings and equipment borne by or donated by the Federal Government irrespective of where title was originally vested or where it presently resides; and

(3) Any portion of the cost of buildings and equipment contributed by or for the governmental unit, or a related donor organization, in satisfaction of a matching requirement.

d. Where the use allowance method is followed, the use allowance for buildings and improvements (including land improvements, such as paved parking areas, fences, and sidewalks) will be computed at an annual rate not exceeding two percent of acquisition costs. The use allowance for equipment will be computed at an annual rate not exceeding 6 2/3 percent of acquisition cost. When the use allowance method is used for buildings, the entire building must be treated as a single asset; the building's components (e.g., plumbing system, heating and air conditioning, etc.) cannot be segregated from the building's shell. The two percent limitation, however, need not be applied to equipment which is merely attached or fastened to the building but not permanently fixed to it and which is used as furnishings or decorations or for specialized purposes (e.g., dentist chairs and dental treatment units, counters, laboratory benches bolted to the floor, dishwashers, modular furniture, carpeting, etc.). Such equipment will be considered as not being permanently fixed to the building if it can be removed without the destruction of, or need for costly or extensive alterations or repairs, to the building or the equipment. Equipment that meets these criteria will be subject to the 6 2/3 percent equipment use allowance limitation.

e. Where the depreciation method is followed, the period of useful service (useful life) established in each case for usable capital assets must take into consideration such factors as type of construction, nature of the equipment used, historical usage patterns, technological developments, and the renewal and replacement policies of the governmental unit followed for the

individual items or classes of assets involved. In the absence of clear evidence indicating that the expected consumption of the asset will be significantly greater in the early portions than in the later portions of its useful life, the straight line method of depreciation shall be used. Depreciation methods once used shall not be changed unless approved by the Federal cognizant or awarding agency. When the depreciation method is introduced for application to an asset previously subject to a use allowance, the annual depreciation charge thereon may not exceed the amount that would have resulted had the depreciation method been in effect from the date of acquisition of the asset. The combination of use allowances and depreciation applicable to the asset shall not exceed the total acquisition cost of the asset or fair market value at time of donation.

f. When the depreciation method is used for buildings, a building's shell may be segregated from the major component of the building (e.g., plumbing system, heating, and air conditioning system, etc.) and each major component depreciated over its estimated useful life, or the entire building (i.e., the shell and all components) may be treated as a single asset and depreciated over a single useful life.

g. A reasonable use allowance may be negotiated for any assets that are considered to be fully depreciated, after taking into consideration the amount of depreciation previously charged to the government, the estimated useful life remaining at the time of negotiation, the effect of any increased maintenance charges, decreased efficiency due to age, and any other factors pertinent to the utilization of the asset for the purpose contemplated.

h. Charges for use allowances or depreciation must be supported by adequate property records. Physical inventories must be taken at least once every two years (a statistical sampling approach is acceptable) to ensure that assets exist, and are in use. Governmental units will manage equipment in accordance with State laws and procedures. When the depreciation method is followed, depreciation records indicating the amount of depreciation taken each period must also be maintained.

16. Disbursing service. The cost of disbursing funds by the Treasurer or other designated officer is allowable.

17. Employee morale, health, and welfare costs. The costs of health or first-aid clinics and/or infirmaries, recreational facilities, employee counseling services, employee information publications, and any related expenses incurred in accordance with a governmental unit's policy are allowable. Income generated from any of these activities will be offset against expenses.

18. Entertainment. Costs of entertainment, including amusement, diversion, and social activities and any costs directly associated with such costs (such as tickets to shows or sports events, meals, lodging, rentals, transportation, and gratuities) are unallowable.

19. Equipment and other capital expenditures.

a. As used in this section the following terms have the meanings as set forth below:

(1) "Capital expenditure" means the cost of the asset including the cost to put it in place. Capital expenditure for equipment means the net invoice price of the equipment, including the cost of any modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired. Ancillary charges, such as taxes, duty, protective in transit insurance, freight, and

(1) "Facilities" means land and buildings or any portion thereof, equipment individually or collectively, or any other tangible capital asset, wherever located, and whether owned or leased by the governmental unit.

(2) "Idle facilities" means completely unused facilities that are excess to the governmental unit's current needs.

(3) "Idle capacity" means the unused capacity of partially used facilities. It is the difference between (a) that which a facility could achieve under 100 percent operating time on a one-shift basis less operating interruptions resulting from time lost for repairs, setups, unsatisfactory materials, and other normal delays and (b) the extent to which the facility was actually used to meet demands during the accounting period. A multi-shift basis should be used if it can be shown that this amount of usage would normally be expected for the type of facility involved.

(4) "Cost of idle facilities or idle capacity" means costs such as maintenance, repair, housing, rent, and other related costs, e.g., insurance, interest, and depreciation or use allowances.

b. The costs of idle facilities are unallowable except to the extent that:

(1) They are necessary to meet fluctuations in workload; or

(2) Although not necessary to meet fluctuations in workload, they were necessary when acquired and are now idle because of changes in program requirements, efforts to achieve more economical operations, reorganization, termination, or other causes which could not have been reasonably foreseen. Under the exception stated in this subsection, costs of idle facilities are allowable for a reasonable period of time, ordinarily not to exceed one year, depending on the initiative taken to use, lease, or dispose of such facilities.

c. The costs of idle capacity are normal costs of doing business and are a factor in the normal fluctuations of usage or indirect cost rates from period to period. Such costs are allowable, provided that the capacity is reasonably anticipated to be necessary or was originally reasonable and is not subject to reduction or elimination by use on other Federal awards, subletting, renting, or sale, in accordance with sound business, economic, or security practices. Widespread idle capacity throughout an entire facility or among a group of assets having substantially the same function may be considered idle facilities.

## 25. Insurance and indemnification.

a. Costs of insurance required or approved and maintained, pursuant to the Federal award, are allowable.

b. Costs of other insurance in connection with the general conduct of activities are allowable subject to the following limitations:

(1) Types and extent and cost of coverage are in accordance with the governmental unit's policy and sound business practice.

(2) Costs of insurance or of contributions to any reserve covering the risk of loss of, or damage to, Federal Government property are unallowable except to the extent that the awarding agency has specifically required or approved such costs.

c. Actual losses which could have been covered by permissible insurance (through a self-insurance program or otherwise) are unallowable, unless expressly provided for in the

Federal award or as described below. However, the Federal Government will participate in actual losses of a self insurance fund that are in excess of reserves. Costs incurred because of losses not covered under nominal deductible insurance coverage provided in keeping with sound management practice, and minor losses not covered by insurance, such as spoilage, breakage, and disappearance of small hand tools, which occur in the ordinary course of operations, are allowable.

d. Contributions to a reserve for certain self-insurance programs including workers compensation, unemployment compensation, and severance pay are allowable subject to the following provisions:

(1) The type of coverage and the extent of coverage and the rates and premiums would have been allowed had insurance (including reinsurance) been purchased to cover the risks. However, provision for known or reasonably estimated self-insured liabilities, which do not become payable for more than one year after the provision is made, shall not exceed the discounted present value of the liability. The rate used for discounting the liability must be determined by giving consideration to such factors as the governmental unit's settlement rate for those liabilities and its investment rate of return.

(2) Earnings or investment income on reserves must be credited to those reserves.

(3) Contributions to reserves must be based on sound actuarial principles using historical experience and reasonable assumptions. Reserve levels must be analyzed and updated at least biennially for each major risk being insured and take into account any reinsurance, coinsurance, etc. Reserve levels related to employee-related coverages will normally be limited to the value of claims (a) submitted and adjudicated but not paid, (b) submitted but not adjudicated, and (c) incurred but not submitted. Reserve levels in excess of the amounts based on the above must be identified and justified in the cost allocation plan or indirect cost rate proposal.

(4) Accounting records, actuarial studies, and cost allocations (or billings) must recognize any significant differences due to types of insured risk and losses generated by the various insured activities or agencies of the governmental unit. If individual departments or agencies of the governmental unit experience significantly different levels of claims for a particular risk, those differences are to be recognized by the use of separate allocations or other techniques resulting in an equitable allocation.

(5) Whenever funds are transferred from a self-insurance reserve to other accounts (e.g., general fund), refunds shall be made to the Federal Government for its share of funds transferred, including earned or imputed interest from the date of transfer.

c. Actual claims paid to or on behalf of employees or former employees for workers' compensation, unemployment compensation, severance pay, and similar employee benefits (e.g., subsection 11.f. for post retirement health benefits), are allowable in the year of payment provided (1) the governmental unit follows a consistent costing policy and (2) they are allocated as a general administrative expense to all activities of the governmental unit.

f. Insurance refunds shall be credited against insurance costs in the year the refund is received.

g. Indemnification includes securing the governmental unit against liabilities to third persons and other losses not

commencement of Federal awards, less costs related to normal wear and tear, are allowable.

### 38. Rental costs.

a. Subject to the limitations described in subsections b. through d. of this section, rental costs are allowable to the extent that the rates are reasonable in light of such factors as: rental costs of comparable property, if any; market conditions in the area; alternatives available; and, the type, life expectancy, condition, and value of the property leased.

b. Rental costs under sale and leaseback arrangements are allowable only up to the amount that would be allowed had the governmental unit continued to own the property.

c. Rental costs under less-than-arms-length leases are allowable only up to the amount that would be allowed had title to the property vested in the governmental unit. For this purpose, less-than-arms-length leases include, but are not limited to, those where:

- (1) One party to the lease is able to control or substantially influence the actions of the other;
- (2) Both parties are parts of the same governmental unit; or
- (3) The governmental unit creates an authority or similar entity to acquire and lease the facilities to the governmental unit and other parties.

d. Rental costs under leases which are required to be treated as capital leases under GAAP are allowable only up to the amount that would be allowed had the governmental unit purchased the property on the date the lease agreement was executed. This amount would include expenses such as depreciation or use allowance, maintenance, and insurance. The provisions of Financial Accounting Standards Board Statement 13 shall be used to determine whether a lease is a capital lease. Interest costs related to capital leases are allowable to the extent they meet the criteria in section 26.

### 39. Taxes.

a. Taxes that a governmental unit is legally required to pay are allowable, except for self-assessed taxes that disproportionately affect Federal programs or changes in tax policies that disproportionately affect Federal programs. This provision becomes effective for taxes paid during the governmental unit's first fiscal year that begins on or after January 1, 1998, and applies thereafter.

b. Gasoline taxes, motor vehicle fees, and other taxes that are in effect user fees for benefits provided to the Federal Government are allowable.

c. This provision does not restrict the authority of Federal agencies to identify taxes where Federal participation is inappropriate. Where the identification of the amount of unallowable taxes would require an inordinate amount of effort, the cognizant agency may accept a reasonable approximation thereof.

40. Training. The cost of training provided for employee development is allowable.

### 41. Travel costs.

a. General. Travel costs are allowable for expenses for transportation, lodging, subsistence, and related items incurred by employees traveling on official business. Such costs may be charged on an actual cost basis, on a per diem or mileage basis in lieu of actual costs incurred, or on a combination of the two, provided the method used is applied to an entire trip, and results in charges consistent with those normally allowed in like circumstances in non-federally-sponsored activities.

Notwithstanding the provisions of section 23, travel costs of officials covered by that section, when specifically related to Federal awards, are allowable with the prior approval of a grantor agency.

b. Lodging and subsistence. Costs incurred by employees and officers for travel, including costs of lodging, other subsistence, and incidental expenses, shall be considered reasonable and allowable only to the extent such costs do not exceed charges normally allowed by the governmental unit in its regular operations as a result of the governmental unit's policy. In the absence of a written governmental unit policy regarding travel costs, the rates and amounts established under subchapter I of Chapter 57 of Title 5, United States Code "Travel and Subsistence Expenses; Mileage Allowances," or by the Administrator of General Services, or the President (or his designee) pursuant to any provisions of such subchapter shall be used as guidance for travel under Federal awards (41 U.S.C. 420, "Travel Expenses of Government Contractors").

c. Commercial air travel. Airfare costs in excess of the customary standard (coach or equivalent) airfare, are unallowable except when such accommodations would: require circuitous routing, require travel during unreasonable hours, excessively prolong travel, greatly increase the duration of the flight, result in increased cost that would offset transportation savings, or offer accommodations not reasonably adequate for the medical needs of the traveler. Where a governmental unit can reasonably demonstrate to the awarding agency either the nonavailability of customary standard airfare or Federal Government contract airfare for individual trips or, on an overall basis, that it is the governmental unit's practice to make routine use of such airfare, specific determinations of nonavailability will generally not be questioned by the Federal Government, unless a pattern of avoidance is detected. However, in order for airfare costs in excess of the customary standard commercial airfare to be allowable, e.g., use of first-class airfare, the governmental unit must justify and document on a case-by-case basis the applicable condition(s) set forth above.

d. Air travel by other than commercial carrier. Cost of travel by governmental unit-owned, -leased, or -chartered aircraft, as used in this section, includes the cost of lease, charter, operation (including personnel costs), maintenance, depreciation, interest, insurance, and other related costs. Costs of travel via governmental unit-owned, -leased, or -chartered aircraft are unallowable to the extent they exceed the cost of allowable commercial air travel, as provided for in subsection c.

42. Underrecovery of costs under Federal agreements. Any excess costs over the Federal contribution under one award agreement are unallowable under other award agreements.

show operations including the central service activities of the State/local government whether or not they are shown as benefiting from central service functions; a copy of the Comprehensive Annual Financial Report (or a copy of the Executive Budget if budgeted costs are being proposed) to support the allowable costs of each central service activity included in the plan; and, a certification (see subsection 4.) that the plan was prepared in accordance with this Circular, contains only allowable costs, and was prepared in a manner that treated similar costs consistently among the various Federal awards and between Federal and non-Federal awards/activities.

2. **Allocated central services.** For each allocated central service, the plan must also include the following: a brief description of the service\*, an identification of the unit rendering the service and the operating agencies receiving the service, the items of expense included in the cost of the service, the method used to distribute the cost of the service to benefitted agencies, and a summary schedule showing the allocation of each service to the specific benefitted agencies. If any self-insurance funds or fringe benefits costs are treated as allocated (rather than billed) central services, documentation discussed in subsections 3.b. and c. shall also be included.

3. **Billed services.**

a. **General.** The information described below shall be provided for all billed central services, including internal service funds, self-insurance funds, and fringe benefit funds.

b. **Internal service funds.**

(1) For each internal service fund or similar activity with an operating budget of \$5 million or more, the plan shall include: a brief description of each service; a balance sheet for each fund based on individual accounts contained in the governmental unit's accounting system; a revenue/expenses statement, with revenues broken out by source, e.g., regular billings, interest earned, etc.; a listing of all non-operating transfers (as defined by Generally Accepted Accounting Principles (GAAP)) into and out of the fund; a description of the procedures (methodology) used to charge the costs of each service to users, including how billing rates are determined; a schedule of current rates; and, a schedule comparing total revenues (including imputed revenues) generated by the service to the allowable costs of the service, as determined under this Circular, with an explanation of how variances will be handled.

(2) Revenues shall consist of all revenues generated by the service, including unbilled and uncollected revenues. If some users were not billed for the services (or were not billed at the full rate for that class of users), a schedule showing the full imputed revenues associated with these users shall be provided. Expenses shall be broken out by object cost categories (e.g., salaries, supplies, etc.).

c. **Self-insurance funds.** For each self-insurance fund, the plan shall include: the fund balance sheet; a statement of revenue and expenses including a summary of billings and claims paid by agency; a listing of all non-operating transfers into and out of the fund; the type(s) of risk(s) covered by the fund (e.g., automobile liability, workers' compensation, etc.); an explanation of how the level of fund contributions are determined, including a copy of the current actuarial report (with the actuarial assumptions used) if the contributions are determined on an actuarial basis; and, a description of the procedures used to charge or allocate fund contributions to benefitted activities. Reserve levels in excess of claims (1) submitted and adjudicated but not paid,

(2) submitted but not adjudicated, and (3) incurred but not submitted must be identified and explained.

d. **Fringe benefits.** For fringe benefit costs, the plan shall include: a listing of fringe benefits provided to covered employees, and the overall annual cost of each type of benefit; current fringe benefit policies; and procedures used to charge or allocate the costs of the benefits to benefitted activities. In addition, for pension and post-retirement health insurance plans, the following information shall be provided: the governmental unit's funding policies, e.g., legislative bills, trust agreements, or State-mandated contribution rules, if different from actuarially determined rates; the pension plan's costs accrued for the year; the amount funded, and date(s) of funding; a copy of the current actuarial report (including the actuarial assumptions); the plan trustee's report; and, a schedule from the activity showing the value of the interest cost associated with late funding.

4. **Required certification.** Each central service cost allocation plan will be accompanied by a certification in the following form:

**CERTIFICATE OF COST ALLOCATION PLAN**

This is to certify that I have reviewed the cost allocation plan submitted herewith and to the best of my knowledge and belief:

(1) All costs included in this proposal [identify date] to establish cost allocations or billings for [identify period covered by plan] are allowable in accordance with the requirements of OMB Circular A-87, "Cost Principles for State and Local Governments," and the Federal award(s) to which they apply. Unallowable costs have been adjusted for in allocating costs as indicated in the cost allocation plan.

(2) All costs included in this proposal are properly allocable to Federal awards on the basis of a beneficial or causal relationship between the expenses incurred and the awards to which they are allocated in accordance with applicable requirements. Further, the same costs that have been treated as indirect costs have not been claimed as direct costs. Similar types of costs have been accounted for consistently.

I declare that the foregoing is true and correct.

Governmental Unit: \_\_\_\_\_

Signature: \_\_\_\_\_

Name of Official: \_\_\_\_\_

Title: \_\_\_\_\_

Date of Execution: \_\_\_\_\_

**F. Negotiation and Approval of Central Service Plans.**

1. All proposed central service cost allocation plans that are required to be submitted will be reviewed, negotiated, and approved by the Federal cognizant agency on a timely basis. The cognizant agency will review the proposal within six months of receipt of the proposal and either negotiate/approve the proposal or advise the governmental unit of the additional documentation needed to support/evaluate the proposed plan or the changes required to make the proposal acceptable. Once an agreement with the governmental unit has been reached, the

administering or supervising the administration of one or more public assistance programs operated by the State as identified in Subpart E of 45 CFR Part 95. For the purpose of this Attachment, these programs include all programs administered by the State public assistance agency.

2. "State public assistance agency costs" means all costs incurred by, or allocable to, the State public assistance agency, except expenditures for financial assistance, medical vendor payments, food stamps, and payments for services and goods provided directly to program recipients.

C. Policy. State public assistance agencies will develop, document and implement, and the Federal Government will review, negotiate, and approve, public assistance cost allocation plans in accordance with Subpart E of 45 CFR Part 95. The plan will include all programs administered by the State public assistance agency. Where a letter of approval or disapproval is transmitted to a State public assistance agency in accordance with Subpart E, the letter will apply to all Federal agencies and programs. The remaining sections of this Attachment (except for the requirement for certification) summarize the provisions of Subpart E of 45 CFR Part 95.

#### D. Submission, Documentation, and Approval of Public Assistance Cost Allocation Plans.

1. State public assistance agencies are required to promptly submit amendments to the cost allocation plan to HHS for review and approval.

2. Under the coordination process outlined in subsection E, affected Federal agencies will review all new plans and plan amendments and provide comments, as appropriate, to HHS. The effective date of the plan or plan amendment will be the first day of the quarter following the submission of the plan or amendment, unless another date is specifically approved by HHS. HHS, as the cognizant agency acting on behalf of all affected Federal agencies, will, as necessary, conduct negotiations with the State public assistance agency and will inform the State agency of the action taken on the plan or plan amendment.

#### E. Review of Implementation of Approved Plans.

1. Since public assistance cost allocation plans are of a narrative nature, the review during the plan approval process consists of evaluating the appropriateness of the proposed groupings of costs (cost centers) and the related allocation bases. As such, the Federal Government needs some assurance that the cost allocation plan has been implemented as approved. This is accomplished by reviews by the funding agencies, single audits, or audits conducted by the cognizant audit agency.

2. Where inappropriate charges affecting more than one funding agency are identified, the cognizant HHS cost negotiation office will be advised and will take the lead in resolving the issue(s) as provided for in Subpart E of 45 CFR Part 95.

3. If a dispute arises in the negotiation of a plan or from a disallowance involving two or more funding agencies, the dispute shall be resolved in accordance with the appeals procedures set out in 45 CFR Part 75. Disputes involving only one funding agency will be resolved in accordance with the funding agency's appeal process.

4. To the extent that problems are encountered among the Federal agencies and/or governmental units in connection with the negotiation and approval process, the Office of Management and Budget will lend assistance, as required, to resolve such problems in a timely manner.

F. Unallowable Costs. Claims developed under approved cost allocation plans will be based on allowable costs as identified in this Circular. Where unallowable costs have been claimed and reimbursed, they will be refunded to the program that reimbursed the unallowable cost using one of the following methods: (a) a cash refund, (b) offset to a subsequent claim, or (c) credits to the amounts charged to individual awards.

## Attachment E STATE AND LOCAL INDIRECT COST RATE PROPOSALS

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- A. General.
1. Indirect costs are those that have been incurred for common or joint purposes. These costs benefit more than one cost objective and cannot be readily identified with a particular final cost objective without effort disproportionate to the results achieved. After direct costs have been determined and assigned directly to Federal awards and other activities as appropriate, indirect costs are those remaining to be allocated to benefitted cost objectives. A cost may not be allocated to a Federal award as an indirect cost if any other cost incurred for the same purpose, in like circumstances, has been assigned to a Federal award as a direct cost.
2. Indirect costs include (a) the indirect costs originating in each department or agency of the governmental unit carrying out Federal awards and (b) the costs of central governmental services distributed through the central service

allocable.

c. The distribution base may be (1) total direct costs (excluding capital expenditures and other distorting items, such as pass-through funds, major subcontracts, etc.), (2) direct salaries and wages, or (3) another base which results in an equitable distribution.

### 3. Multiple allocation base method.

a. Where a grantee agency's indirect costs benefit its major functions in varying degrees, such costs shall be accumulated into separate cost groupings. Each grouping shall then be allocated individually to benefitted functions by means of a base which best measures the relative benefits.

b. The cost groupings should be established so as to permit the allocation of each grouping on the basis of benefits provided to the major functions. Each grouping should constitute a pool of expenses that are of like character in terms of the functions they benefit and in terms of the allocation base which best measures the relative benefits provided to each function. The number of separate groupings should be held within practical limits, taking into consideration the materiality of the amounts involved and the degree of precision needed.

c. Actual conditions must be taken into account in selecting the base to be used in allocating the expenses in each grouping to benefitted functions. When an allocation can be made by assignment of a cost grouping directly to the function benefitted, the allocation shall be made in that manner. When the expenses in a grouping are more general in nature, the allocation should be made through the use of a selected base which produces results that are equitable to both the Federal Government and the governmental unit. In general, any cost element or related factor associated with the governmental unit's activities is potentially adaptable for use as an allocation base provided that: (1) it can readily be expressed in terms of dollars or other quantitative measures (total direct costs, direct salaries and wages, staff hours applied, square feet used, hours of usage, number of documents processed, population served, and the like), and (2) it is common to the benefitted functions during the base period.

d. Except where a special indirect cost rate(s) is required in accordance with subsection 4, the separate groupings of indirect costs allocated to each major function shall be aggregated and treated as a common pool for that function. The costs in the common pool shall then be distributed to individual Federal awards included in that function by use of a single indirect cost rate.

e. The distribution base used in computing the indirect cost rate for each function may be (1) total direct costs (excluding capital expenditures and other distorting items such as pass-through funds, major subcontracts, etc.), (2) direct salaries and wages, or (3) another base which results in an equitable distribution. An indirect cost rate should be developed for each separate indirect cost pool developed. The rate in each case should be stated as the percentage relationship between the particular indirect cost pool and the distribution base identified with that pool.

### 4. Special indirect cost rates.

a. In some instances, a single indirect cost rate for all activities of a grantee department or agency or for each major function of the agency may not be appropriate. It may not take into account those different factors which may substantially affect the indirect costs applicable to a particular program or group of programs. The factors may include the

physical location of the work, the level of administrative support required, the nature of the facilities or other resources employed, the organizational arrangements used, or any combination thereof. When a particular award is carried out in an environment which appears to generate a significantly different level of indirect costs, provisions should be made for a separate indirect cost pool applicable to that award. The separate indirect cost pool should be developed during the course of the regular allocation process, and the separate indirect cost rate resulting therefrom should be used, provided that: (1) the rate differs significantly from the rate which would have been developed under subsections 2. and 3., and (2) the award to which the rate would apply is material in amount.

b. Although this Circular adopts the concept of the full allocation of indirect costs, there are some Federal statutes which restrict the reimbursement of certain indirect costs. Where such restrictions exist, it may be necessary to develop a special rate for the affected award. Where a "restricted rate" is required, the procedure for developing a non-restricted rate will be used except for the additional step of the elimination from the indirect cost pool those costs for which the law prohibits reimbursement.

### D. Submission and Documentation of Proposals.

#### 1. Submission of indirect cost rate proposals.

a. All departments or agencies of the governmental unit desiring to claim indirect costs under Federal awards must prepare an indirect cost rate proposal and related documentation to support those costs. The proposal and related documentation must be retained for audit in accordance with the records retention requirements contained in the Common Rule.

b. A governmental unit for which a cognizant agency assignment has been specifically designated must submit its indirect cost rate proposal to its cognizant agency. The Office of Management and Budget (OMB) will periodically publish lists of governmental units identifying the appropriate Federal cognizant agencies. The cognizant agency for all governmental units or agencies not identified by OMB will be determined based on the Federal agency providing the largest amount of Federal funds. In these cases, a governmental unit must develop an indirect cost proposal in accordance with the requirements of this Circular and maintain the proposal and related supporting documentation for audit. These governmental units are not required to submit their proposals unless they are specifically requested to do so by the cognizant agency. Where a local government only receives funds as a sub-recipient, the primary recipient will be responsible for negotiating and/or monitoring the sub-recipient's plan.

c. Each Indian tribal government desiring reimbursement of indirect costs must submit its indirect cost proposal to the Department of the Interior (its cognizant Federal agency).

d. Indirect cost proposals must be developed (and, when required, submitted) within six months after the close of the governmental unit's fiscal year, unless an exception is approved by the cognizant Federal agency. If the proposed central service cost allocation plan for the same period has not been approved by that time, the indirect cost proposal may be prepared including an amount for central services that is based on the latest federally-approved central service cost allocation plan. The difference between these central service amounts and the amounts ultimately approved will be compensated for by an adjustment in a subsequent period.

allocation methodology should be developed, documented, maintained for audit, or submitted, as appropriate, to the cognizant agency for review, negotiation, and approval.

4. Appeals. If a dispute arises in a negotiation of an indirect cost rate (or other rate) between the cognizant agency and the governmental unit, the dispute shall be resolved in accordance with the appeals procedures of the cognizant agency.

5. Collection of unallowable costs and erroneous payments. Costs specifically identified as unallowable and charged to Federal awards either directly or indirectly will be refunded (including interest chargeable in accordance with applicable Federal agency regulations).

6. OMB assistance. To the extent that problems are encountered among the Federal agencies and/or governmental units in connection with the negotiation and approval process, OMB will lend assistance, as required, to resolve such problems in a timely manner.

# State of Louisiana



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

JACK C. CALDWELL  
SECRETARY

## DEPARTMENT OF NATURAL RESOURCES

October 7, 1997

Jean B. West, Grants Officer  
U.S. Department of Commerce, NOAA  
Grants Operations Branch, ATTN: OA321  
1325 East West Highway, Room 5416 SSMC2  
Silver Spring, MD 20910-3283

RE: U.S. Department of Commerce Agreement No. NA47FZ0477  
"Big Island Mining (XAT-7) and Atchafalaya Sediment Delivery (PAT-2)"

Dear Ms. West:

Enclosed are two signed originals of Form CD-451 for the above referenced award amendment. Also enclosed is our proposed Indirect Cost Rate. The approved rate will be forwarded to you upon receipt.

Thank you for your assistance in this matter.

Sincerely,

A handwritten signature in cursive script that reads "Cheryl Y. Bennett".

Cheryl Y. Bennett

Contracts & Grants Administrator

CYB/vs

Enclosures

c: Verlie Wims, Fiscal Officer  
Van Cook  
Phyllis Darensbourg

GRANT  COOPERATIVE AGREEMENT

AMENDMENT TO  
FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE  
MULTI ACC CODES (see att B)  
AWARD NUMBER  
NA47FZ0477  
AMENDMENT NUMBER  
2  
EFFECTIVE DATE  
OCTOBER 1, 1997  
EXTEND WORK COMPLETION TO  
FEBRUARY 28, 1999

RECIPIENT NAME  
Louisiana Department of Natural Resources  
STREET ADDRESS  
P.O. Box 94396  
CITY, STATE, ZIP CODE  
BATON ROUGE, LOUISIANA 70804

DEPARTMENT OF COMMERCE OPERATING UNIT  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COSTS ARE REVISED AS FOLLOWS:	PREVIOUS ESTIMATED COST	ADD	DEDUCT	TOTAL ESTIMATED COST
FEDERAL SHARE OF COST	\$ 3,530,800	\$ 1,656,101	\$ -0-	\$ 5,186,901
RECIPIENT SHARE OF COST	\$ 1,261,000	\$ 591,464	\$ -0-	\$ 1,852,464
TOTAL ESTIMATED COST	\$ 4,791,800	\$ 2,247,565	\$ -0-	\$ 7,039,365

- REVISION(S) FOR AMENDMENT
- To provide additional funds in the amount of \$1,656,101, for the project entitled 'Coastal Wetland Planning, Protection, and Restoration Act (PL 101-646) Big Island Mining (X-AT-7) and Atchafalaya Sediment Delivery (PAT-2)', as requested in the Recipient's application dated April 28, 1997, and revision by letters dated August 11, and September 24, 1997, incorporated by reference.
  - To revise and add NOAA Administrative Special Award Conditions.

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

- Special Award Conditions (ATTACHMENT B  ADMINISTRATIVE  PROGRAMMATIC)  
 Line Item Budget (ATTACHMENT A)  
 Other(s): OMB Circular A-133 revised June 24, 1997

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER <i>John B. Hunt</i>	TITLE NOAA GRANTS OFFICER	DATE SEP 25
SIGNED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL <i>John B. Hunt</i>	TITLE <i>Secretary</i>	DATE 10/6/97

**BUDGET INFORMATION — Construction Programs**

OMB Approved No. 0348-0001

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	Grant Amendment	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
Administrative and legal expenses	\$ .00	\$ .00	\$ .00
Land, structures, rights-of-way, appraisals, etc.	\$ .00	\$ .00	\$ .00
Relocation expenses and payments	\$ .00	\$ .00	\$ .00
Architectural and engineering fees	\$ .00	\$ .00	\$ .00
Other architectural and engineering fees	\$ .00	\$ .00	\$ .00
Project Inspection fees Phase II	\$ 134,403	\$ .00	\$ 134,403
Site work	\$ .00	\$ .00	\$ .00
Demolition and removal	\$ .00	\$ .00	\$ .00
Construction Phase II	\$ 1,465,338	\$ .00	\$ 1,465,338
Equipment	\$ .00	\$ .00	\$ .00
Miscellaneous	\$ .00	\$ .00	\$ .00
UNTOTAL	\$ .00	\$ .00	\$ .00
contingencies (sum of lines 1-11)	\$ .00	\$ .00	\$ .00
UNTOTAL	\$ .00	\$ .00	\$ .00
project (program) income	\$ .00	\$ .00	\$ .00
TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 1,599,741	\$ .00	\$ 1,599,741

**FEDERAL FUNDING**

Federal assistance requested, calculate as follows: Enter eligible costs from line 16c Multiply X 73.6842 %  
 Consult Federal agency for Federal percentage share).  
 Phase I = \$0  
 Phase II = \$1,599,741  
 Phase III = \$0  
 Total = \$1,683,938

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Standard Form 424C (4-88)  
 Prescribed by OMB Circular A-102

OMB Approved No. 0348-0041

ATCHAFAALAYA SEDIMEN DELIVERY

**BUDGET INFORMATION — Construction Programs**

NOTE: Certain Federal assistance programs require additional computations to arrive at the federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	Grant Amendment	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
Administrative and legal expenses	\$ .00	\$ .00	\$ .00
and, structures, rights-of-way, appraisals, etc.	\$ .00	\$ .00	\$ .00
Allocation expenses and payments	\$ .00	\$ .00	\$ .00
Architectural and engineering fees	\$ .00	\$ .00	\$ .00
Other architectural and engineering fees	\$ .00	\$ .00	\$ .00
Object Inspection fees Phase II	\$ 72,484	\$ .00	\$ 72,484
Site work	\$ .00	\$ .00	\$ .00
Demolition and removal	\$ .00	\$ .00	\$ .00
Instruction Phase II	\$ 575,340	\$ .00	\$ 575,340
Equipment	\$ .00	\$ .00	\$ .00
Miscellaneous	\$ .00	\$ .00	\$ .00
TOTAL	\$ .00	\$ .00	\$ .00
Contingencies (sum of lines 1-11)	\$ .00	\$ .00	\$ .00
TOTAL	\$ .00	\$ .00	\$ .00
Project (program) Income	\$ .00	\$ .00	\$ .00
TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 647,824	\$ .00	\$ 647,824

**FEDERAL FUNDING**

Federal assistance requested, calculate as follows: Result Federal agency for Federal percentage share: Phase I = \$0 Phase II = \$647,824 Phase III = \$0 Total = \$681,920	Enter eligible costs from line 16c Multiply x 73.6842 % Phase I = \$ 647,824 NMFS Admin. \$34,096 Total = \$681,920
--	--

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Standard Form 424C (4-66)

NOAA ADMINISTRATIVE  
SPECIAL AWARD CONDITIONS

- (Revise) 1. Accounting Codes:
- 7FKH300/RL1A7D/4119 - \$1,178,757 (BI)  
7FKH300/RL1A7H/4119 - \$ 477,344 (AS)  
Total - \$1,656,101
- (Revise) 2. The Project Period for this award is August 1, 1994, through February 28, 1999.
- (Revise) 3. The Budget Period for this amendment is October 1, 1997, through February 28, 1999.
- (Revise) 4. Since this award requires the Recipient to provide \$1,852,464 (26.32%) in project-related matching costs from non-Federal sources, the Recipient must maintain in its official accounting records an accounting for \$7,039,365.
- (Revise) 5. The access code for this award is 40439.
- (Revise) 22. Recipients are hereby notified that they are encouraged, to the greatest extent practicable, to purchase American-made equipment and products with funding provided under this award.
- (Add) 26. When issuing statements, press releases, requests for proposals, bid solicitations and other documents describing projects or programs funded in whole or in part with Federal money, all grantees receiving Federal funds, including but not limited to State and local governments and Recipients of Federal research grants, shall clearly state (1) the percentage of the total costs of the project or program which will be financed with Federal money, (2) the dollar amount of Federal funds for the project or program, and (3) percentage and dollar amount of the total

*copy to Mr. Mary Vance*



EDWIN W. EDWARDS  
GOVERNOR

JOHN F. ALES  
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

August 31, 1994

Jean B. West, Chief  
Grants Operation Branch  
1325 East-West Highway  
SSMC2 - OA321- Room 5410  
Silver Spring, MD 20910

RE: NOAA Award No. NA47FZ0477

Dear Ms. West:

Enclosed are two (2) signed originals of the above referenced award, as requested in your letter dated August 26, 1994, received in our office August 29, 1994. Also enclosed is a copy of our current approved indirect cost rate.

We appreciate NOAA staff assistance in obtaining approval of this cooperative agreement.

Sincerely,

Cheryl Y. Bennett  
Contracts & Grants Administrator

CYB/cc

Enclosures

c: Verlie Wims, Fiscal Officer  
Bill Good, Coastal Restoration Division Administrator



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

July 28, 1994

Ms. Verlie Wims, Fiscal Officer  
State of Louisiana  
Department of Natural Resources  
P.O. Box 94396  
Baton Rouge, LA 70804-9396

OFFICE OF  
ADMINISTRATION  
AND RESOURCES  
MANAGEMENT

Dear Ms. Wims:

Enclosed is a negotiation agreement reflecting an understanding reached between you and Mr. David Buntz of my staff about the indirect cost rates to be used on grants and contracts with the Federal Government.

I have already signed the agreement. Please have the agreement countersigned by a duly authorized representative of your organization. Photocopy the agreement for your files and return the original to me. Please give this matter your immediate attention.

Return the countersigned original agreement as follows:

Mr. John J. Zabretsky, Chief  
Cost Policy and Rate Negotiation Branch (3804F)  
Environmental Protection Agency  
Fairchild Building  
Washington, D.C. 20460

If you have questions contact David Buntz on (202) 260-2005.

Sincerely yours,

John J. Zabretsky, Chief  
Cost Policy and Rate Negotiation Branch

Enclosure



Recycled/Recyclable  
Printed with Soy/Canola Ink on paper that  
contains at least 50% recycled fiber



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OMB CIRCULAR A-87 COGNIZANT AGENCY  
NEGOTIATION AGREEMENT

Page 1 of 2

State of Louisiana  
Department of Natural Resources  
Baton Rouge, Louisiana

Date: July 28, 1994

Filing Ref: August 20, 1993

The indirect cost rates contained herein are for use on grants and contracts with the Federal Government to which Office of Management and Budget Circular A-87 applies, subject to the limitations contained in the Circular and in Section II, A below.

SECTION I: RATES

Type	Effective Period		Rate	Base
	From	To		
<u>Fixed:</u>				
Energy Division	7/1/94	6/30/95	79.09%	(a)
Geological Survey	7/1/94	6/30/95	22.01%	(a)
Coastal Management	7/1/94	6/30/95	11.86%	(a)
Coastal Restoration	7/1/94	6/30/95	22.99%	(a)
Conservation Pipeline	7/1/94	6/30/95	16.19%	(a)
Conservation Injection & Mining	7/1/94	6/30/95	26.16%	(a)
Mineral Resources	7/1/94	6/30/95	30.13%	(a)

Basis for Application

(a) Direct salaries and wages, including applicable fringe benefit costs.

Treatment of Fringe Benefits: Fringe benefits applicable to direct salaries and wages are treated as direct salaries.

SECTION II: GENERAL

A. LIMITATIONS: The rates in this Agreement are subject to any statutory and administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the department/agency or allocated to the department/agency by an approved cost allocation plan were included in the indirect cost pool as finally accepted; such costs are legal obligations of the department/agency and are allowable under governing cost principles; (2) The same costs that have been treated as indirect costs have not been claimed as direct costs;



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(3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the department/agency which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. CHANGES. The fixed rate contained in this agreement is based on the organizational structure and the accounting system in effect at the time the proposal was submitted. Changes in the organizational structure or changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rate in this agreement, require the prior approval of the authorized representative of the responsible negotiation agency. Failure to obtain such approval may result in subsequent audit disallowances.

C. THE FIXED RATE contained in this agreement is based on an estimate of the cost which will be incurred during the period for which the rate applies. When the actual costs for such a period have been determined, an adjustment will be made in the negotiation following such determination to compensate for the difference between the cost used to establish the fixed rate and that which would have been used were the actual costs known at the time.

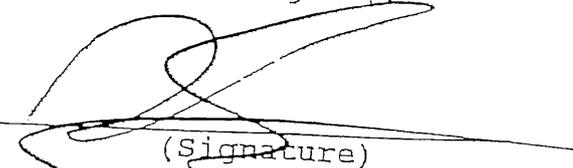
D. NOTIFICATION TO FEDERAL AGENCIES: Copies of this document may be provided to other Federal agencies as a means of notifying them of the agreement contained herein.

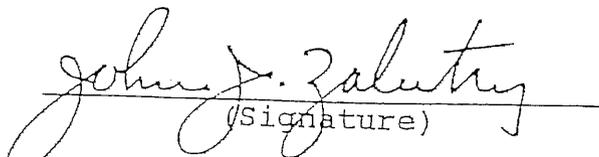
E. SPECIAL REMARKS: None

ACCEPTANCE

By the State Agency:

By the Federal Agency:

  
(Signature)

  
(Signature)

Robert D. Harper  
(Name)

John J. Zabretsky, Chief  
Cost Policy and Rate  
Negotiation Branch  
U.S. Environmental  
Protection Agency  
July 28, 1994

Undersecretary  
(Title)

LA Dept. of Natural Resources  
(Agency)

August 01, 1994  
(Date)

Negotiated by: David Buntz  
Telephone: (202) 260-2005

FORM CD-450  
(REV 10-93)  
DAO 203-26

U.S. DEPARTMENT OF COMMERCE

GRANT  COOPERATIVE AGREEMENT

**FINANCIAL ASSISTANCE AWARD**

ACCOUNTING CODE  
\*See Attached

RECIPIENT NAME

Louisiana Department of Natural Resources

AWARD NUMBER  
NA47FZ0477

STREET ADDRESS

P.O. Box 94396, East Baton Rouge Parish

FEDERAL SHARE OF COST  
\$3,530,800

CITY, STATE, ZIP CODE

Baton Rouge, Louisiana 70804

RECIPIENT'S SHARE OF COST  
\$1,261,000

AWARD PERIOD

August 1, 1994, through July 31, 1996

TOTAL ESTIMATED COST  
\$4,791,800

DEPARTMENT OF COMMERCE OPERATING UNIT

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

AUTHORITY

16 U.S.C. §§ 3952 & 3955 (11.463 - Habitat Conservation)

PROJECT TITLE

Coastal Wetland Planning, Protection, and Restoration Act (PL 101-646) Big Island Mining (XAT-7) and Atchafalaya Sediment Delivery (PAT-2)

This Award approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Award provisions checked below and attached. Upon acceptance by the Recipient, two signed Award documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Award null and void.

Department of Commerce Financial Assistance Standard Terms and Conditions (ATTACHMENT C)

Special Award Conditions (ATTACHMENT B,  Administrative  Programmatic)

Line Item Budget (ATTACHMENT A)

OMB Circular A-21, Cost Principles for Educational Institutions

OMB Circular A-87, Cost Principles for State and Local Governments

OMB Circular A-110, Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations Uniform Administrative Requirements, dated 11/29/93

OMB Circular A-122 Cost Principles for Nonprofit Organizations

15 CFR Part 24, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments

15 CFR Part 29a, Audit Requirements for State and Local Governments

15 CFR Part 29b, Audit Requirements for Institutions of Higher Education and Other Nonprofit Organizations

48 CFR Part 31, Contract Cost Principles and Procedures

Other(s): \_\_\_\_\_

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER

TITLE

DATE

*Jean B. West*

NOAA GRANTS OFFICER

AUG 26 1994

TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL

TITLE

DATE

*John F. Ales*

John F. Ales, Secretary

August 30, 1994

FORM CD-450  
(REV 10-93)  
DAO 203-26

U.S. DEPARTMENT OF COMMERCE

GRANT  COOPERATIVE AGREEMENT

FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE

\*See Attached

RECIPIENT NAME

Louisiana Department of Natural Resources

AWARD NUMBER

NA47FZ0477

STREET ADDRESS

P.O. Box 94396, East Baton Rouge Parish

FEDERAL SHARE OF COST

\$3,530,800

CITY, STATE, ZIP CODE

Baton Rouge, Louisiana 70804

RECIPIENT'S SHARE OF COST

\$1,261,000

AWARD PERIOD

August 1, 1994, through July 31, 1996

TOTAL ESTIMATED COST

\$4,791,800

DEPARTMENT OF COMMERCE OPERATING UNIT

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

AUTHORITY

16 U.S.C. §§ 3952 & 3955 (11.463 - Habitat Conservation)

PROJECT TITLE

Coastal Wetland Planning, Protection, and Restoration Act (PL 101-646) Big Island Mining (XAT-7) and Atchafalaya Sediment Delivery (PAT-2)

This Award approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Award provisions checked below and attached. Upon acceptance by the Recipient, two signed Award documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Award null and void.

Department of Commerce Financial Assistance Standard Terms and Conditions (ATTACHMENT C)

Special Award Conditions (ATTACHMENT B,  Administrative  Programmatic)

Line Item Budget (ATTACHMENT A)

OMB Circular A-21, Cost Principles for Educational Institutions

OMB Circular A-87, Cost Principles for State and Local Governments

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15 CFR Part 29a, Audit Requirements for State and Local Governments

15 CFR Part 29b, Audit Requirements for Institutions of Higher Education and Other Nonprofit Organizations

48 CFR Part 31, Contract Cost Principles and Procedures

Other(s): \_\_\_\_\_

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER  
*Sean B. West*  
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL

TITLE  
NOAA GRANTS OFFICER

DATE  
AUG 26 1994

TITLE  
John F. Ales, Secretary

DATE  
August 30, 1994

# BUDGET INFORMATION — No. Construction Programs

OMB Approval No. 03-48-0044

ATTACHMENT A  
AWARD NO. NA47FZ0477  
PAGE 1 OF 2

## SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		Total (g)
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	
1. Big Island (XAT-7)		\$	\$	\$ 186,973	\$ 66,777	\$ 253,750
2. At. Sediment Del. (PAT-2)				83,116	29,684	112,800
3. (Both under P.L. 101-646)						
4.						
5. TOTALS		\$	\$	\$ 270,089	\$ 96,461	\$ 366,550

## SECTION B - BUDGET CATEGORIES

Object Class Categories	GRANT PROGRAM FUNCTION OR ACTIVITY		Total (5)
	(1) BI	(2) AT	
a. Personnel	\$ 18,667	\$ 9,695	\$ 28,362
b. Fringe Benefits	3,173	1,648	4,821
c. Travel	4,225	2,525	6,750
d. Equipment			
e. Supplies (Field Supplies & boat rental)	3,950	3,950	7,900
f. Contractual (Engineering & Legal)	210,000	85,000	295,000
g. Construction			
h. Other (Aerial photography contract)	5,925	5,925	11,850
i. Total Direct Charges (sum of 6a-6h)	245,940	108,743	354,683
j. Indirect Charges	7,810	4,057	11,867
k. TOTALS (sum of 6l and 6j)	\$ 253,750	\$ 112,800	\$ 366,550

Program Income

= Big Island (XAT-7)  
= Atchafalaya Sed. Delivery (PAT-2)

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BUDGET INFORMATION - Construction Programs

NOTE: Certain federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION

	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
1. Administrative and legal expenses (Tot. = \$135,000)	\$ BI = 110,000 AT = 25,000	.00	.00 \$ 135,000
2. Land, structures, rights-of-way, appraisals, etc.	\$	.00	.00
3. Relocation expenses and payments	\$	.00	.00
4. Architectural and engineering fees	\$	.00	.00
5. Other architectural and engineering fees	\$	.00	.00
6. Project inspection fees (Tot. = \$129,950)	\$ BI = 100,000 AT = 29,950	.00	.00 \$ 129,950
7. Site work	\$	.00	.00
8. Demolition and removal	\$	.00	.00
9. Construction (Tot. = \$3,992,548)	\$ BI = 3,356,574 AT = 585,974	.00	.00 \$ 3,992,548
10. Equipment	\$	.00	.00
11. Miscellaneous (Monitoring Phase III = \$217,752 Total)	\$ BI = 108,876 AT = 108,876	.00	.00 \$ 217,752
12. SUBTOTAL	\$	.00	.00
13. Contingencies (sum of lines 1-11)	\$	.00	.00
14. SUBTOTAL	\$	.00	.00
15. Project (program) income	\$	.00	.00
16. TOTAL PROJECT COSTS (subtract #15 from #14) (Tot. = \$4,475,250)	\$ BI = 3,675,450 AT = 799,800	.00	.00 \$ 4,475,250

FEDERAL FUNDING

17. Federal assistance requested, calculate as follows: (Consult Federal Agency for Federal Percentage share). Enter eligible costs from line 16c Multiply X 73.6 (rounded) AT Atchafalaya Sediment \$ 708,227 Ph. I = \$ 253,750 Ph. II = 3,566,574 Ph. III = 108,876	Authorized for Local Reproduction: Total = \$3,929,200 **Total Non-Federal Funds Authorized Non-Construction \$ 96,461 Construction \$1,164,539 Total \$3,530,800	Authorized by AT Total = 3,260,711 AT = 549,853 Total = 3,255,448	(Phase II & III) BI = 2,705,595 AT = 549,853 Total = 3,255,448
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Standard Form 710-114  
Prescribed by GSA (Circular A 107)

Total Funds Authorized  
Non-Construction \$ 366,550  
Construction \$4,425,250

NOAA ADMINISTRATIVE  
SPECIAL AWARD CONDITIONS

*1. Big Island Mining:	RL1A38/FH5000/4119	179,605.00
	RL1A7D/FH5000/4119	2,635,370.00
	RL1A7E/FH5000/4119	80,225.00
Atchafalaya Sediment Study:	RL1A43/FH5000/4119	75,748.00
	RL1A7H/FH5000/4119	479,628.00
	RL1A8A/FH5000/4119	80,225.00

2. The Project Period for this award is from August 1, 1994, through July 31, 1996.

3. The Budget Period for this award is from August 1, 1994, through July 31, 1996.

4. Since this grant requires the Recipient to provide \$1,261,000 (26%) in project-related matching costs from non-Federal sources, the Recipient must maintain in its official accounting records an accounting for \$4,791,800.

5. Award payments shall be made through the NOAA Financial Assistance Disbursement System (FADS). In accordance with 31 C.F.R. 205 (Treasury Circular 1075 "1977") the recipient shall: (1) maintain procedures for fund control to ensure that drawdowns are made only when actually needed for its immediate disbursement needs; (2) comply with timely reporting of cash disbursements and balances as required. If the recipient does not adhere to these provisions, NOAA may revoke the unobligated portion of the federal award funds. Instructions for use of the FADS are attached.

FADS is an automated system that allows recipients to request funds using a touch-tone telephone. FADS will record recipients' requests and process them automatically, subject to review by NOAA officials. Once approved, funds will be directly deposited in the recipient organization's bank account.

The access code for this award is 18590.

6. This award number NA47FZ0477, to Louisiana Department of Natural Resources supports the work described in the Recipient's proposal entitled "Coastal Wetland Planning, Protection, and Restoration Act (PL 101-646) Big Island Mining (XAT-7) and Atchafalaya Sed. Delivery (PAT-2)" dated June 16, 1994, and letter dated July 11, 1994, which are

retained by the Recipient and shall be added to funds committed to the award and used for the purposes and under the conditions applicable to the use of the award funds.

13. The Recipient is prohibited from expending Federal or non-Federal grant funds, or in-kind goods or services, for purposes of providing transportation, travel, and any other expenses for any Federal employee.
14. The Recipient must request prior approval from NOAA for all proposed sole source contracts or where only one bid or proposal is received in which the aggregate expenditure is expected to exceed \$25,000.
15. The Recipient must request prior approval from NOAA to purchase equipment costing in excess of \$5,000 per unit and having a useful life of more than one year. This condition applies to equipment not specifically identified and justified in the recipient's proposal and approved budget.
16. The Recipient will be required to obtain the approval of the Grants Officer prior to making any substantive changes in project objectives or methods.
17. If applicable, cost sharing is to be calculated on the basis of the total financial award to the recipient. The Government does not recognize funds made in overmatch subsequent to making an award.
18. Two copies of all publications or reports printed with grant or cooperative agreement funds and intended for public distribution will be furnished to the Government (one to the Program Officer and one to the Grants Officer). The financial assistance award number will be acknowledged as the basis for funding the publication.

Such publications or reports shall bear the NOAA logo on the cover or first page, and the following: "A publication (or report) of the Louisiana Department of Natural Resources pursuant to National Oceanic and Atmospheric Administration Award No. NA47FZ0477."

If the recipient or its employee(s) use NOAA financial assistance to publish a paper based in whole or in part on the work funded by this grant/cooperative agreement, the author shall assure that the paper bears the following notation: "This paper is funded ('in part' if appropriate) by a grant/cooperative agreement from the National Oceanic and Atmospheric Administration. The views expressed herein are those of the author(s) and do not necessarily reflect the views of NOAA or any of its sub-agencies."

submission of an indirect cost proposal, indirect cost reimbursement will be limited to the indirect costs applicable to the period after the date the proposal is submitted. No indirect costs will be allowed for recipients who do not have an approved rate and fail to submit a proposal during the budget period.

The amount of indirect costs shown in the award document is a ceiling for indirect cost recoveries. Even if a higher rate is subsequently approved during the budget period, recipients are limited to recovery of the lesser of these two amounts: (a) indirect costs cited in the award, or (b) indirect costs computed using the approved indirect cost rate.

22. Recipients are hereby notified that they are encouraged, to the extent feasible, to purchase American-made equipment and products with funding provided under this program in accordance with Congressional intent as set forth in the resolution contained in Public Law 103-121, Sections 606 (a) and (b).
23. Pursuant to Executive Order 12889, the Department of Commerce, (DoC) is required to notify the owner of any valid patent covering technology whenever the DoC or its financial assistance Recipients, without making a patent search, knows (or has demonstrable reasonable grounds to know) that technology covered by a valid United States patent has been or will be used without a license from the owner. To ensure prior notification, if the Recipient uses or has used patented technology under this award without a license or permission from the owner, the Recipient must notify the DoC Patent Counsel at the following address, with a copy to the Grants Officer:

Department of Commerce  
Office of Chief Counsel for Technology  
Patent Counsel  
14th Street and Constitution Avenue, N.W. Room H-4610  
Washington, D.C. 20230

The notification shall include the following information:

- the award number
- the name of the DoC awarding agency
- a copy of the patent
- a description of how the patented technology was used
- the name of the Recipient contact, including an address and telephone number

U.S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
ADMINISTRATIVE SPECIAL AWARD CONDITIONS FOR CONSTRUCTION

1. The recipient shall comply, and require each of its contractors and subcontractors employed in the completion of the project to comply, with all applicable Federal, State, Territorial, and Local laws, and in particular the following Federal Public Laws, the regulations issued thereunder, and Executive Orders and Office on Management and Budget (OMB) Circulars:
  - a. The Davis-Bacon Act as amended (40 U.S.C. 276a to 276a (5); 42 U.S.C. 3222);
  - b. The Contract Work Hours Standards Act, as amended (40 U.S.C. 327-333);
  - c. The Copeland "Anti-Kickback" Act, as amended (40 U.S.C. 276 (c); 18 U.S.C. 874);
  - d. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-2000d-4); Executive Orders 11114, 11246, and 11375; 13 CFR Part 311 imposing civil rights requirements on recipients; regulations issued pursuant to the Age Discrimination Act of 1975 (42 U.S.C. 6101, et seq.); 15 CFR Part 20; Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and the implementing regulations of the Department of Commerce in 15 CFR 8b, prohibiting discrimination against and providing fair equitable treatment of the handicapped under programs or activities receiving Federal financial assistance; and such other civil rights legislation as is applicable;
  - e. The Clean Air Act, as amended (42 U.S.C. 7401, et seq.);
  - f. The Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, et seq.);
  - g. The Endangered Species Act, as amended (16 U.S.C. 1531, et seq.);
  - h. The Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451, et seq.);
  - i. The Safe Drinking Water Act of 1972, as amended (42

2. Following applies where applicable:

The Recipient agrees that, for the expected useful life of the facility assisted with this award, the project will be properly and efficiently administered, operated and maintained, for the purpose authorized by this award and in accordance with terms, conditions, requirements and provisions of the award. If the Government determines at any time during the useful life of the facility, that the project is not being properly and efficiently administered, operated and maintained, the Government will have a right to cancel the Federal Assistance portion of this award for any additional expenses related to operation and maintenance costs of the award and pursue any other remedies allowed by law.

ATTACHMENT II

ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

**MEMORANDUM OF AGREEMENT**

# State of Louisiana



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

JACK C. CALDWELL  
SECRETARY

## DEPARTMENT OF NATURAL RESOURCES

March 9, 1999

### MEMORANDUM

TO: Randy Hanchey, Assistant Secretary  
Diane Smith, Assistant Administrator  
Gerry Duszynski, Assistant Administrator  
Rachel Wilson Sweeney, Special Projects Coordinator  
Carrol Clark, Engineer Manager  
George Boddie, Engineer Manager  
Van Cook, Engineer Manager  
Greg Steyer, Program Manager  
Steve Underwood, Program Manager  
Phil Pittman, Program Manager  
Helen Hoffpauir, Real Estate Manager

FROM: Chet Fruge, Program Manager *CF*

RE: MOA Between the COE, DNR and NMFS, Long Term O,M & M CWPPRA Projects

Attached is the MOA between the COE, DNR and NMFS for long term reimbursement to DNR for expenditures related to O,M & M of CWPPRA Projects. Item III of the MOA provides that the DNR will submit invoices for expenditures to the NMFS for certification and approval. The NMFS will forward the approved invoices to the COE which will make direct payments to the DNR.

Carrol, George, and Van please forward copies to all project managers for NMFS CWPPRA projects.

CF

cc: Verlie Wims, OMF  
Karen Lewis, Contracts and Grants  
Lana Humphries, OMF

Coastal Restoration Division  
P.O. Box 94396 . Baton Rouge, Louisiana 70804-9396 . Telephone (225) 342-7308 . Fax (225) 342-9417

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DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT, CORPS OF ENGINEERS

P.O. BOX 60287

NEW ORLEANS, LOUISIANA 70160-0287

REPLY TO  
ATTENTION OF:

March 1, 1999

Planning, Programs and Project  
Management Division  
CWPPRA Branch

Mr. Tim Osborn  
National Marine Fisheries Service  
NOAA/NMFS Restoration Center (F/HP5)  
Office of Habitat Conservation  
1315 East-West Highway  
Silver Spring, Maryland 20910

Dear Mr. Osborn:

Enclosed for your records is a signed original of the Memorandum of Agreement between the National Marine Fisheries Service, the Louisiana Department of Natural Resources, and the U.S. Army Corps of Engineers.

Sincerely,

Steve Mathies  
Chief, CWPPRA Branch

Encl

A Memorandum of Agreement  
between  
National Oceanic and Atmospheric Administration,  
The National Marine Fisheries Service;  
The U.S. Army Corps of Engineers, New Orleans District;  
and  
The State of Louisiana, Department of Natural Resources;  
regarding Monitoring, Operations and Maintenance billing under  
The Coastal Wetlands Planning, Protection, and Restoration Act.

## I. Parties and Scope

This Memorandum of Agreement (MOA) between the National Marine Fisheries Service (NMFS), the U.S. Army Corps of Engineers (USACE), and the State of Louisiana Department of Natural Resources (LDNR) recognizes these three parties' cooperation and participation in the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA), (16 U.S.C. 777c, §§ 3951-3956). As members of the Task Force, established by CWPPRA, the agencies that are parties to this MOA are responsible for among other things, the long-term monitoring of certain coastal wetland restoration project areas and reference sites associated with such projects, as well as the long-term operation, maintenance, repair and rehabilitation (O&M) of authorized project features, where applicable.

This MOA describes the financial instrument and processes to be used to finance long-term monitoring and O&M activities which are outside of the scope of NMFS' Cooperative Agreement and Joint Funding Agreement mechanisms.

## II. Purpose

The types of funding instruments currently used by NMFS are not suitable for activities exceeding three to five years (e.g., Cooperative Agreements) unless the agreement is cost shared

equitably (e.g., Joint Funding Agreements). Monitoring, as well as O&M activities are generally scheduled to last for 20 year periods, except for demonstration projects. Federal/non-federal cost-shares for these activities within CWPBRA are at ratios of 85/15% or 90/10%. Therefore, neither cooperative agreements nor joint funding agreements are appropriate for monitoring or O&M activities.

### III. Alternative Funding Instrument

There is an alternative funding instrument, employed between USACE and other Federal agencies for similar activities called a "Government Purchase" Military Interdepartmental Purchase Request (MIPR). A Government Purchase MIPR can be used for long-term activities without cost-shares percentage limitation. It differs from conventional MIPRs in that the sponsoring Federal agency receives no direct reimbursable funding. A Government Purchase MIPR stipulates that invoices for monitoring or O&M activities performed by the state agency (LDNR) will be submitted by the state agency to the sponsoring Federal agency (NMFS) for certification. Approved invoices will be forwarded by NMFS to USACE. The USACE will make direct payments to the State.

### IV. Actions of the Parties

Within the CWPBRA program, NMFS, USACE and LDNR will work cooperatively in the implementation of the overall CWPBRA program.

As Chair of the CWPBRA Task Force, USACE is responsible for the administration and disposition of funding for the CWPBRA Program. USACE will continue to provide reimbursable MIPRs to NMFS for short-term activities such as Engineering and Design, or construction which can be awarded to LDNR through the current cooperative agreement process. USACE will provide "Government Purchase" MIPRs to NMFS for long-term activities when requested

by NMFS, as appropriate.

As a sponsoring Federal agency, NMFS is responsible for implementing a number of wetland restoration projects approved for funding by the Task Force. Within all projects sponsored by NMFS, it is NMFS' and LDNR's joint responsibility to administer, short-term activities such as engineering and design and construction; and long-term activities such as monitoring, and O&M of authorized project features. To carry out long-term responsibilities, NMFS will request from the Chair of the Task Force, USACE, funding in the form of a Government Purchase MIPR. Using this funding instrument NMFS will certify invoices from LDNR as approved for payment, and forward the approved invoices to USACE for payment directly to LDNR, subject to the availability of funds and satisfactory performance.

LDNR, as the non-federal partner, will conduct long-term monitoring, and O&M activities of authorized project features. LDNR will submit invoices to NMFS on a regular basis after monitoring and O&M work is conducted. Invoices will clearly specify whether the bill is for monitoring activities, or O&M activities.

Upon re-authorization of CWWPRA, or any other legislative or administrative changes to the program, this MOA may be amended, modified or terminated as mutually agreed upon by the signatory parties.

The undersigned individuals attest that they are authorized to bind their respective agencies to this MOA. On behalf of their respective agencies, they have signed this MOA on the day and year appearing with the signature of each authorized representative.

U.S. ARMY CORPS OF ENGINEERS

William L. Conner  
Colonel William Conner  
District Engineer  
U. S. Army Corps of Engineers  
Department of Defense

10 Feb 99  
Date

NATIONAL MARINE FISHERIES SERVICE

Roland A. Schmitt  
Roland A. Schmitt  
Assistant Administrator  
National Marine Fisheries Service  
National Oceanic and Atmospheric Administration  
Department of Commerce

SEP 21 1998  
Date

STATE OF LOUISIANA, DEPARTMENT OF NATURAL RESOURCES

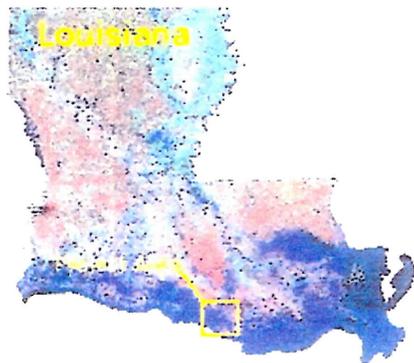
Jack C. Caldwell  
Jack C. Caldwell  
Secretary  
Department of Natural Resources  
State of Louisiana

2-3-99  
Date

ATTACHMENT III

ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

**PROJECT FEATURES**



Data Source:

Louisiana Dept. of Natural Resources  
Coastal Restoration Division  
Biological Monitoring Section  
Thibodaux Field Office

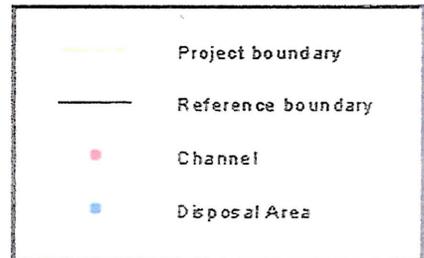
1998 DOQQ

Map ID: 2002-TFO-002  
Date: January 30, 2002

3000 0 3000 6000 Feet



1000 0 1000 2000 Meters



ATTACHMENT IV

ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

**PROJECT COMPLETION REPORT  
&  
AS-BUILT DRAWINGS**

ENGINEERING CLOSURE REPORT  
BIG ISLAND MINING (XAT-7)  
AND  
ATCHAFALAYA SEDIMENT DELIVERY (PAT-2)

AS-BUILT CONSTRUCTION PHASE



Prepared For:

STATE OF LOUISIANA  
DEPARTMENT OF NATURAL RESOURCES  
AND  
NATIONAL MARINE FISHERIES SERVICE  
DNR CONTRACT NO. 25085-95-04

DECEMBER 1998

**BCG**

**Brown Cunningham Gannuch**

ENGINEERS ARCHITECTS CONSULTANTS  
9181 Interline Ave. Suite 100 Baton Rouge, LA 70809

ENGINEERING CLOSURE REPORT  
BIG ISLAND MINING (XAT-7) AND ATCHAFALAYA  
SEDIMENT DELIVERY (PAT-2) CWPPRA PROJECTS

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Appendix E	As Built Channels and Disposal Areas

ENGINEERING CLOSURE REPORT  
BIG ISLAND MINING (XAT-7)  
AND  
ATCHAFALAYA SEDIMENT DELIVERY PROJECTS

DECEMBER 1998

BY: BROWN CUNNINGHAM & GANNUCH, INC.  
EMMETT J. MAYER, JR., P.E.

ABSTRACT:

This is the third and final engineering report submitted by BCG on the Big Island Mining (XAT-7) and Atchafalaya Sediment Delivery (PAT-2) C.W.P.P.R.A. projects. These two projects are designed to enhance the east-west sub-delta development of the emerging Lower Atchafalaya River into Atchafalaya Bay in St. Mary Parish, Louisiana. This report describes the construction and presents the as-built channel alignments, disposal area configurations, final dredged quantities and costs of the project. Also presented and discussed are the engineering field changes made during construction to better fit the in-situ field conditions encountered.

Construction commenced on January 28, 1998 and was completed on October 27, 1998. The actual construction cost of \$7,238,449.36; was \$258,351.54 below the awarded contract price of \$7,496,801.00; and, the project was completed in 273 days; 27 days ahead of the contract time. Some 51,250 linear feet of conveyance channels were dredged and 1202.57 acres of new marshlands were created by strategically placing dredged disposal to mimic a natural delta configuration. Accompanying this report and delivered to the LDNR under separate cover are hard copies and electronic diskettes of before and after dredging surveys to verify the dredged quantities and final channel sections as well as final disposal area fill elevations.

The two previous reports prepared by BCG on this project are:

Report No. 1: ENGINEERING SUMMARY REPORT:  
BIG ISLAND MINING AND ATCHAFALAYA SEDIMENT  
DELIVERY - PROJECT  
REVIEW PHASE (JANUARY 1995)

Report No. 2: ENGINEERING DESIGN REPORT:  
BIG ISLAND MINING AND ATCHAFALAYA SEDIMENT  
DELIVERY - PRELIMINARY  
DESIGN PHASE REVIEW (MARCH 1995)

**ENGINEERING CLOSURE REPORT  
BIG ISLAND MINING (XAT-7) AND ATCHAFALAYA  
SEDIMENT DELIVERY (PAT-2) CWPPRA PROJECTS**

**AUTHORIZATION:**

The Louisiana Department of Natural Resources (LDNR) approved Brown Cunningham & Gannuch, Inc. (BCG)'s plans and construction documents for both of the subject CWPPRA projects and authorized BCG to provide construction engineering management and resident project inspection during construction of the projects. LDNR awarded one construction contract for both projects to River/Road Construction, Inc. of Mandeville LA (RRCC) in the amount of \$7,496,801.00; and issued Notice to Proceed on January 28, 1998. The contract time was established as 300 days, with an ending date of November 24, 1998.

**INTRODUCTION:**

**Project Location:**

Both Subject CWPPRA projects are located in the Lower Atchafalaya River Delta, near latitude N 29° 27' 00" and longitude W 91° 17' 30", at its entrance to Atchafalaya Bay in St. Mary Parish, LA. The Big Island Mining project is located in the west delta lobe and the Atchafalaya Sediment Delivery is in the east delta lobe.

**Project Coordination:**

Both locations are within the Atchafalaya Delta Wildlife Game Management Area under the control of the LA Department of Wildlife and Fisheries (LDWF). The federal sponsor for this project is the National Marine Fisheries Service (NMFS). In addition, the U.S. Army Corps of Engineers (COE) maintains a navigation channel in the Atchafalaya River at this location.

BCG was responsible for directing and monitoring all field activities performed by RRCC to assure that the intent of the plans and specifications were achieved. BCG established the following team and activities to keep all impacted government agencies informed of the daily construction in progress.

1. Establish a Key People Team representing all of the impacted agencies as follows:
  - a. LDNR: Contract Owner
    - 1) Mr. Van Cook - Project Manager for Owner
    - 2) Mr. Herbert Juneau - Field Engineer

- b. LDWF: Atchafalaya Delta Management
    - 1) Mr. Greg Linscombe - Program Manager
    - 2) Mr. Mike Carloss - Assistant Program Manager
  - c. NMFS: Federal CWPPRA Sponsor
    - 1) Dr. Erik Zobrist - Project Manager
    - 2) Mr. Rickey Ruebsaman - Local Area Supervisor
  - d. RRCC: Construction Contractor
    - 1) Mr. Chris Rayer - Project Manager
    - 2) Mr. Tom Windes - Job Superintendent
  - e. BCG Project Consulting Engineers
    - 1) Mr. Emmett J. (Ike) Mayer, Jr. - Construction Engineer Manager
    - 2) Project Inspectors (two) - Ira Nedadire and Mark Dawsey
2. Perform Weekly Job Inspections
    - a. Review daily reports for progress and problems.
    - b. Perform site inspections and monitor contractor's methods.
    - c. Identify and resolve field contingencies with contractor.
    - d. Have owner's representative present.
    - e. Have LDWF's manager present.
  3. Prepare Periodic Progress Reports to all Owners
    - a. Completed construction progress.
    - b. Review and recommend Contractor's invoices for payment.
    - c. Review before and after dredging surveys.
  4. Prepare Field Changes for Owners review and approval prior to issuance to Contractor
  5. Prepare As-Built Plans upon project completion and a final construction closure report.

**Project Closure Report**

This report is intended to describe project construction progress, problems encountered and solutions made, present the project quantities and costs, present the final total volume of material dredged from channels, total acreage at Disposal Areas, and include the listing of before and after dredging surveys used to verify the project volumes and dimensions.

**GENERAL:**

The Atchafalaya Sediment Delivery Project included re-opening the silted in Natal Channel for some 8800 linear feet with a 1500 foot branch channel at station 74+00; and re-opening the Castille Pass from its entrance for 2000 linear feet, both are distributary channels from East Pass.

Some 668,683 cubic yards of material was dredged from Natal Channel and four disposal areas creating some 257 acres of new coastal marshland was constructed. On Castille Pass, some 32,242 cubic yards of material was dredged and 20.5 acres of new marshland was created. The ASD project volumes were approximately 17% of the Big Island Mining project volumes.

The Big Island Mining project consisted of creating a new west delta lobe behind Big Island to enhance the accretion of land beyond the west bank of the Atchafalaya River. The BIM project consisted of a main stem and five branch channels designed to mimic nature by aligning the branch channels at 45° to the main stem and developing delta lobe land masses between the bifurcations. The main stem, called Channel A, extended from the Atchafalaya River's west bank for a distance of 20,600 linear feet and required dredging 2,470,427 cubic yards of material.

The five branch channels dredging and lengths are as follows:

- Channel B @ 310,958 cubic yards and 5500 feet
- Channel C @ 89,595 cubic yards and 2400 feet
- Channel D @ 174,000 cubic yards and 4000 feet
- Channel E @ 217,462 cubic yards and 4150 feet
- Channel F @ 100,033 cubic yards and 2300 feet

Five Disposal Areas were created with the channel dredged material to form some 916 acres of new marshlands, strategically placed and configured to resemble a river delta.

The project started on January 28, 1998 with the Contractor mobilizing his plant which consisted of the 20 inch hydraulic cutterhead Dredge Katrina and the 20" North Carolina, two dredge tenders, two anchor barges, floating line and plastic land line, three marsh backhoes, a quarter barge, office barge and crewboat. The Contractor also utilized an 8 cy bucket dredge. The Contractor began working the ASD project first, starting at Castille Pass (Feb. 2, 1998) and ending with Natal Channel on March 30, 1998.

The Contractor re-mobilized his plant to the BIM project and began dredging Channel A with the North Carolina on March 29, 1998. The Contractor continued dredging Channel A, utilizing both dredges to expedite the dredging in the 450' and 400' wide bottom segments of Channel A, since the 20 inch dredge's nominal swing capacity is 170 feet wide cut without an idler barge. Disposal Area 1 was constructed first. The Contractor was able to manage construction progress efficiently by dredging the branch channels and the main stem to minimize the distance between the dredge and discharge point within the various disposal areas. Due to changed field conditions encountered, Channel D was realigned and Disposal Area No. 3 was eliminated. Disposal Area 4/5 was enlarged to partially offset the loss of DA No. 3. Areas, No. 6, and No. 9 were built as designed. DA No. 8 was enlarged to receive material from Channel F, which was not part of the original design, but was added as a field change. Channel D was the first branch channel dredged and Channels B, E, C and F followed, respectively.

The BIM/ASD project was accepted substantially completed (physical work) on October 27,

1998. The Contractor temporarily demobilized due to weather conditions only once during construction, and that was from September 1, 1998 to September 3, 1998 due to Tropical Storm Earl.

All five disposal areas in the BIM project utilized perimeter containment dikes. The project design called for substantial front dikes contiguous with the channel banks and minor diking around the rear boundaries to contain the dredged solids. The front dikes were constructed with an eight cubic yard bucket dredge, Capt. Bufford Berry, that met specification with a 140 foot boom reach.

Due to the extremely soft nature (low shear resistance) of the bottom clays the front dikes averaged 100' to 150' feet wide by 3' to 5' high (initially). The dikes quickly settled to between 75% to 80% of their initial heights. These dikes performed very well to protect the leading edges of the disposal areas which were designed to be like naturally occurring lobe islands. The rear diking was constructed to only 1' to 2' high utilizing the marsh hoe machines. The front dike construction by bucket dredge was expeditious and payable since the material came from within the channel cut. Whereas, the rear dikes were non-payable.

Long term settlement in the disposal areas is the result of a combination of shrinkage of the hydraulically placed dredged material and long term consolidation of the underlying subsoils due to the load placed by the dredged fill. In the placement of poor quality soils within a hydraulic fill, the elevation of the final discharge has the greatest impact upon how fast the material will shrink. When the final discharge is within 1 foot above the nominal water surface the soil is buoyed by the water (submerged weight) and consolidation is very slow. Only when low tide (drop in water level) occurs does the material have the opportunity to consolidate under its own weight. Conversely, when the final discharge is greater than 1 foot above the nominal water level the material will shrink quicker due to its weight. It is difficult to quantify the shrinkage of hydraulically placed material. However, based upon the soils report by Gore Engineering it is believed that settlement of the hydraulically placed material could range between 30 to 50 percent of its initial placement height.

The front dikes along the disposal areas close to the Atchafalaya River (Natal DA-1 & DA-2; BIM DA-1 and DA-5 @ Channel A & D) have settled approximately 30 percent. The final dike surveys show the elevations of Natal DA's at  $\pm 3.0$  and the BIM DA-1 and DA-5 (@ Channel D) at 4 to 5 feet. The front dike of DA-5 along Channel A at the beginning of Channel D has only settled approximately 20 percent due to the material being sandy and the subsoil foundation being sandy. As the dike construction progressed further from the river the soil became weak clays and dikes constructed showed as much as 50 percent settlement. This is primarily shrinkage. In the long term these dike fills could settle another 9 to 16 inches, based upon current heights above the nominal water level and the subsoil strengths. The front dikes on the BIM disposal areas have breaches cut through them to allow for high river flow into the disposal areas to allow for accretion to help offset the expected settlements. The shell piles have also settled due to consolidation of the subsoil since the tops of piles initially placed ranged between 4

to 7 feet. The final surveys show the shell pile elevations currently between 3 to 5 feet, with additional long term settlement expected.

The marshlands (material placed below elevation 2.5) seem to be settling only slightly, about 10 percent. These areas will continue to settle slowly in the long term. Hopefully high river flows will provide the additional accretion needed to maintain their wetland characteristics. The project target elevations were +3.0 feet for front dikes (lobe islands) and +1.5 feet for marshlands. We feel that these targets have been achieved in most of the disposal areas except at the beginning of DA-5.

An unanticipated benefit was the quick germination of the vegetation covering the newly created marshlands. Evidently, the dredged material had embedded dormant seeds of plants indigenous to this area that sprouted almost immediately once material placement was completed. Another unanticipated condition encountered was the dredging through shell reefs at four locations in the BIM project and in Natal Channel on the ASD project. Intermittent Shells were encountered dredging Channel A in the first 2000' of Channel A, again, around station 135+00. Shells were encountered at the beginning of Channel D and in the mid reach of Channel C. Due to the non-flow nature of shells the Contractor was instructed to make individual piles of shells with placement not to exceed +6.0 NGVD and even side slopes surrounding the mounds. In discussing the shell problem the "Team" decided upon the pile configuration since its vertical relief was beneficial to shore bird nesting. In fact, the shell pile placed within Disposal Area No. 3 on Natal Channel was utilized immediately by the shore birds requiring the Contractor to leave his shore dredge pipe in place until the eggs hatched and chicks matured enough to leave their nest areas. The Contractor was not able to efficiently place the shells in the low profile marshland acres. Therefore, the Contractor was instructed to place "shell piles" within the various disposal areas such that they were within the lobe island portion of the disposal area. In addition to Natal Channel DA No. 3, there are "shell piles" within BIM Disposal areas No. 1, No. 4, No. 5 and No. 9.

Two disposal areas in the ASD project did not utilize perimeter diking, Castille Pass DA and Natal Channel DA No. 4. These two areas were for enough removed from the new channel cuts that diking wasn't necessary to prevent material from returning to the channel. In addition, due to the observed discharged material flow characteristics, it was felt the material would settle out. This resulted in the material placed in these two (undiked) disposal areas being deposited over a larger area than if diking were present. The resulting material heights stayed rather low between 1.5 to 0.5 feet NGVD.

The BIM project site was in an abandoned oil field area, and two bid items were included to perform magnetometer surveys and relocate any abandoned or unknown pipelines that could interfere with the channel dredging. Fortunately, no pipelines were encountered that interfered with the channel dredging. There was also a special work area included where Channel A crossed the twin 30" active high pressure gas lines. The Contractor dredged this segment of channel by using only cables and no spuds. A representative of the gas line company was on board the dredge while working within this special work zone.

The ASD project was dredged prior to the high river period. Following this high river period monitor surveys were made on the entrance to Natal Channel and Castille Pass. A shoal developed at the entrance to Natal Channel which reduced the channel depth to only 5 feet. Based upon the survey and a computed under run of dredge quantities for the Natal Channel; the Engineer recommended that the channel be re-dredged to remove some 23,247 cubic yards of material by bucket dredge and to construct two parallel dikes on both banks of Natal Channel between station 12+00 and 21+00 to better train the incoming flows from East Pass. The construction of the training dikes would also eliminate the cross flow entering Natal Channel from the trench created in building the front dike of Disposal Area No. 1. The Owner-Team agreed to the removal of this shoal. LDNR should continue to monitor the entrance to Natal Channel since shoaling has occurred here.

#### Project Estimated vs As-Built Quantities and Costs

Table A below presents a comparison of the project quantities and costs of the original and actual values. In reviewing the values of each of the variables in Bid Item 300, BIM Channels, only Channels A and C on BIM were less than estimated. Channels B, D, E and F were more than originally estimated Bid. However, the aggregate actual over all totals were less than estimated. In Bid Items 500, ASD Channels, both Natal Channel and Castille Pass were less than estimated, including the re-dredging of the Natal shoal. Item 600 and 700 were not utilized during construction also resulting in a savings. The resulting as built project construction cost was \$7,238,449.36 and was an under run of \$258,351.65 when compared to the project award price of \$7,496,801.00.

#### Disposal Areas

Originally planned disposal areas, which were permitted, were obtained to assure that adequate permitted areas would be available for disposal of dredged material from the project. The ASD project allowed Contractor to dredge an access channel in East Pass if it became necessary in order to mobilize the dredge to Natal Channel and/or Castille Pass. Fortunately, East Pass had sufficient depth, and the access channel was not needed on the ASD project. Some of the bidding contractors expressed concerns that the dredged material would stay in an expanded, suspended state and would require more disposal areas than planned for the project. BCG disagreed with the Contractor's concerns. However, LDNR directed BCG to revise the existing Coastal Use Permit to include DA 1A and DA 5 in the ASD project; and, DA 8A and DA 10A in the BIM projects. The dredged material performed as originally predicted by BCG and the additional areas were not utilized. However, LDNR should endeavor to renew the C.U.P. every three years to maintain the availability of these permitted areas. The permitting of these added areas will benefit LDNR in that they will be available for maintenance dredging during the life of the project.

Disposal Areas Constructed

There were five disposal areas created on the ASD project and five created on the BIM project, Table B presents the acreage for each of the ten disposal areas. The disposal areas as shown in Appendix E are the as-built configurations and show the as-built contour elevations in 0.5 feet increments to N.G.V.D. Also, TABLE C shows the disposal area acreage break down per half foot of elevation. At Big Island the recorded water level varies from a low elevation of -1.26 N.G.V.D. during the low river season and a high of 3.92 N.G.V.D. during river headwater flooding. The yearly average water elevation, based upon the Amerada Hess Gage is 1.6 N.G.V.D. Assuming this to be the demarcation line between emergent marshland and subaqueous marshland; those acreages laying below the 1.5 elevation level would be considered to be subaqueous marshlands. Similarly, those acreages above the +2.5 elevation would be considered to be lobe islands, above the nominal tidal influence. According to TABLE C the acreage created on the two projects totaled:

ELEVATION	BIM	ASD
Acreage Above EL. 2.5	<u>61.53 Ac</u>	<u>20.76 Ac</u>
Acreage Between EL. 2.5 and 1.5	<u>231.08 Ac</u>	<u>48.73 Ac</u>
Acreage below EL. 1.5	<u>629.8 Ac</u>	<u>211.05 Ac</u>
TOTAL ACREAGE	922.41	280.54 Ac

A breakdown of each disposal area is listed in TABLE C.

## BEFORE AND AFTER SURVEYS

The project specification required the Contractor to take Before Dredging Surveys of channel alignments and disposal area boundaries prior to any dredging and disposal. Also, After Dredging Surveys of channels and disposal areas after all dredging was completed were required. This information was to be presented on hard copy and electronic diskettes and delivered to the Engineer. The delivered hard copies of channel and disposal areas consisted of drawings showing channel plan and cross sections at 100' intervals and disposal area plans showing the elevations to NGVD and x and y coordinates to the NAD27 datum. Channels and Disposal area base lines are referenced to Louisiana State Plane Coordinate System. The electronic back-up surveys are contained on 3 1/4 magnetic computer disks. The entire project data collected are contained in three electronic files called DWG, DXF, and TXT files. The DWG and DXF files can be opened utilizing AutoCadd program and shows layout of surveys taken. The TXT files show listings of every survey point taken which includes survey point index number, elevation and "X" and "Y" state plane coordinate. The TXT files can be opened under Word or Word Perfect Program, or Lotus Program for Windows 95/98.

The Contractor utilized GPS Real Time Kinematic Survey equipment to layout channel and disposal area alignments. The channel after dredging cross sections were taken by using a Fathometer and GPS equipment. The hard copies and electronic back up disks of the Before and After Surveys were delivered to LDNR by the Engineer under separate cover. A listing of all surveys delivered to LDNR is included in Appendix D of this report.

## AS-BUILT DRAWINGS

Utilizing the Contractor's surveys the Engineer controlled the project, implementing field changes, redirecting dredging activities and verify constructed quantities on the project. "As Built" drawings showing the actual channel and disposal area construction were prepared by the Engineer and half scales showing channel plans and disposal areas are contained in Appendix E of this report. The drawings show the as built channel center lines and disposal area boundaries showing distances as established by the Engineer. Each drawing has a varying scale in order to clearly show elevations.

TABLE A: COMPARISON OF ESTIMATED AND AS-BUILT PROJECT CONSTRUCTION COSTS

BID NO.	ITEMS DESCRIPTION	UNIT COSTS		ESTIMATED VALUES		AS-BUILT VALUES	
		UNIT	RATE	QUANTITY	COST	QUANTITY	COST
100	Mobilization	L.S.	L.S.	1	\$274,401.00	1	\$274,401.00
200	BIM Surveys	L.S.	L.S.	1	\$250,000.00	1	\$250,000.00
300	BIM Channels						
	Channel A	CY	\$1.68	2,780,000.00	\$4,670,400.00	2,470,427.00	\$4,150,317.00
	Channel B	CY	\$1.50	280,000.00	\$420,000.00	310,958.00	\$466,437.00
	Channel C	CY	\$1.50	107,000.00	\$160,500.00	89,595.00	\$134,392.50
	Channel D	CY	\$1.50	101,000.00	\$151,500.00	174,060.00	\$261,090.00
	Channel E	CY	\$1.50	145,000.00	\$217,500.00	217,462.00	\$326,193.00
	Channel F	CY	\$1.50	0.00	\$0.00	100,033.00	\$150,049.50
400	ASD Surveys	L.S.	L.S.	1.00	\$150,000.00	1.00	\$150,000.00
500	ASD Channels						
	Natal Channel	CY	\$1.50	670,000.00	\$1,005,000.00	668,683.00	\$1,003,024.50
	Castille Pass	CY	\$2.25	50,000.00	\$112,500.00	32,242.00	\$72,544.50
600	Change Locations	EA	2,500.00	2.00	\$5,000.00	0.00	\$0.00
700	Remove Pipelines	EA	40,000.00	2.00	\$80,000.00	0.00	\$0.00
TOTALS					\$7,496,801.00		\$7,238,449.36

TABLE B  
DREDGED DISPOSAL AREAS ACREAGE

BIG ISLAND MINING		
Disposal Area	Plan Design Acres	As-Built Acres
DA-1	85.1	111.08
DA-2 (Reserved for COE)	0	.0
DA-3	43.1	0
DA 4/5	352.7	323.07
DA-6	207.3	222.39
DA-7 (Deleted)	0	0
DA-8	96.4	150.36
DA-8A (Optional)	37.5	0
DA-9 (Optional)	81.8	115.15
DA-10 (Optional)	15.1	
DA-10A (Optional)	147.2	
<b>TOTAL ACRES</b>	1066.2	922.05 Ac

ATCHAFALAYA SEDIMENT DELIVERY		
Disposal Area	Plan Design Acres	As-Built Acres
Castille Pass D.A.	39.9	20.66
Natal DA-1	32.6	47.53
Natal DA-1A (optional)	54.8	0
Natal DA-2	53	70.07
Natal DA-3	36.4	47.49
Natal DA-4	81.6	94.77
Natal DA-5 (optional)	25.6	0
<b>TOTAL</b>	323.9 AC	280.52

TABLE C  
DISPOSAL AREA ACREAGE CREATED VERSES ELEVATION (NGVD)

Disposal Area	-2.0 to -1.5	-1.5 to -1.0	-1.0 to -0.5	-0.5 to 0.0	0.0 to 0.5	0.5 to 1.0	1.0 to 1.5	1.5 to 2.0	2.0 to 2.5	2.5 to 3.0	3.0 to 3.5	3.5 to 4.0	4.0 to 5.0
BIM DA-1				8.60	10.09	17.30	24.38	22.15	15.57	8.16	3.35	1.80	
BIM DA 4/5		35.12	10.67	13.58	68.25	74.93	70.35	21.78	15.84	11.40	1.01	0.17	
BIM DA-6			12.39	42.02	84.09	35.16	47.04	1.69					
BIM DA-8		0.51	18.78	32.40	45.69	26.81	16.68	9.41	0.07	0.02			
BIM DA-9	1.34	4.38	7.30	29.79	30.85	15.56	11.94	5.66	1.80	1.43	0.62	0.29	
<b>BIM TOTAL</b>	<b>1.34</b>	<b>4.38</b>	<b>49.14</b>	<b>126.39</b>	<b>238.97</b>	<b>169.76</b>	<b>170.39</b>	<b>60.69</b>	<b>33.28</b>	<b>21.01</b>	<b>4.98</b>	<b>2.26</b>	
ASD-CAST				11.65	6.10	2.91	7.66	9.94					
ASD-NDA-1				12.46	7.84	9.64	4.64	11.68	16.80	3.96			
ASD-NDA-2				16.42	7.79	8.78	13.07	1.74					
ASD-NDA-3				9.85	10.57	12.27							
ASD-NDA-4			10.78	53.96	22.13	7.90							
<b>ASD TOTAL</b>			<b>10.78</b>	<b>104.34</b>	<b>54.43</b>	<b>41.50</b>	<b>25.37</b>	<b>23.36</b>	<b>16.80</b>	<b>3.96</b>			

Table C Totals:

BIM = 922.41 Ac

ASD=280.54 Ac

Total=1202.95 Ac

Note: In comparing the total acres of Table C to Table B there is a slight variance due to the rounding off of acreage in the sub areas. Table B values should be used to represent the true actual values on the project.

## ATCHAFALAYA SEDIMENT DELIVERY CONSTRUCTION DETAILS

The Contractor commenced Before Dredging surveys by staking the planned centerline of Castille Pass and plotted cross sections at 100 foot intervals of the existing Castille Pass Channel. After reviewing the surveys and the planned centerline. The Engineer recommended Field Change No. 1 (FC-1) to the Owners that the channel centerline be shifted approximately 75' toward Ibis Island (southward) and also that the bottom width of Castille Pass be reduced from 190 as planned to 125. It was observed that Castille Pass was maintaining itself with a 120' wide bottom with only the first 2000 feet silted in with an average bottom elevation of -6.0 NGVD. Field Change No. 1 was accepted and the Contractor was issued same. The Contractor requested permission to access the disposal area by tracking the 20 inch dredge pipeline across Ibis Island vegetated area and to place an alternate disposal area adjacent to the back side of Ibis Island. The LDWF Manager stipulated that this would be acceptable provided that only one 30' wide traverse across the vegetation would be placed and Contractor's equipment stayed within this access. The Contractor was also instructed to build the alternate disposal area in FC-1. The Contractor commenced dredging the 2000 feet of Castille Pass on February 2, 1998 with the Katrina. On Feb. 4th the North Carolina replaced the Katrina which had extensive mechanical problems. Castille Pass was completed to station 21+08 on February 9, 1998, dredging 32,242 cubic yards and disposing material into the opposite disposal area creating some 20.7 acres.

Utilizing the Capt. Bufford Berry (8 cy bucket dredge) the construction of the front dike of DA No. 1 commenced on Feb. 6th and DA-1 diking (front and rear) was completed on Feb. 10th. The Katrina began dredging Natal Channel on Feb. 12th, dredging the 190 foot bottom width to E1-10.0 NGVD. Natal Channel was originally planned with a branch channel north of Teal Island. However, the LDNR directed re alignment of channel to miss adjacent private property ownership which eliminated the Teal Island Branch. After reviewing the survey data that showed there was no deeper water (-3.0 Feet) for Natal Channel to empty into the Engineer recommended to the Owner that a 45° branch channel be constructed with a 150' bottom at station 70+00 and extending in a southeasterly direction for 1500 feet into the open Vermillion Bay. This branch would give the channel two openings to increase its discharge width to 300 feet wide to double the channel outlet flow into the bay.

The field change was acceptable to the Owner and FC-2 was promulgated and delivered to Contractor on March 10, 1998. The Contractor completed dredging Natal Channel and Branch A channel on March 29, 1998, dredging some 645,436 cubic yards of material and creating four disposal areas totaling 257 acres of new marshland from previous bay bottoms. The Contractor was able to dredge continuously since the diking of the 3 disposal areas was completed in advance and dike maintenance was constantly performed during placement of material. As mentioned in the GENERAL section of this report the two unanticipated events of encountering shells and bird nesting did not significantly hinder dredging progress since two dredges were being operated during this portion of the construction. The Field Changes are listed in Appendix A at the rear of this report.

Following the high river season monitor surveys showed that Natal Channel had partially silted in at its entrance to East Pass between station 12+00 and 21+00 with the shallowest point on the bottom at -5.0 NGVD. After analyzing the shoaling pattern it was observed that an excessive amount of water from East Pass was entering Natal Channel via the trench cut in East pass to build the front dike along Disposal Area One and, as a result of the short circuiting of flow the main entrance was shoaling along the south bank of the channel. After review of survey data the Engineer recommended that the entrance be re-dredged to a -8.0 bottom and a 170 foot wide bottom and that training dikes be constructed on both banks that extend from station 12+00. On the north bank extend dike back to the dike of Disposal Area No. 1 physically closing off the trench entrance into Natal Channel. On the south place a similar dike. This would require dredging an additional 23,250 cubic yards of material, which would not extend the total yardage past the bid quantity. This work was not considered as a field change to the plans since no channel re-alignment was required. The Owner agreed to this shoal re-dredging; and, the Contractor was issued a letter with instructions on how to dredge the shoaled area on August 31, 1998. This added yardage was included in the Natal Channel Bid Item 500. The Contractor completed dredging the shoal with the Capt. Berry on September 5, 1998. At the end of the construction contract in early October a bottom probe survey was made that showed the bottom to be still at -8.0 to -10.0 NGVD. The shoal Dredging letter is included in Appendix A: Field Changes for convenience of report placement.

The three diked disposal areas created by Natal channel dredging experienced immediate luxuriant vegetation growth while the two undiked (lower elevation) disposal areas did not have quick growth. In the marshland areas the flora consisted primarily of wild millet, delta duck potato, three corner square grass, and potamogeton, all indigenous species to this area. Willows were concentrated along the top of the front dikes in the higher elevations.

## BIG ISLAND MINING CONSTRUCTION DETAILS

The Contractor began dredging Channel A on March 29, 1998 with the North Carolina dredge. Using the dike trench channel for DA-1, the North Carolina started dredging at station 41+25, dredging the left side of the cut for 160' bottom. The Channel A, being 450 feet wide had to be dredged with three cuts to obtain the full width. On March 30th the Katrina commenced dredging at station. 7+00. Field surveys verified that the existing Atchafalaya River bottom was below the flaired entrance channel of Channel A between the beginning of work station -2+89 and 7+28. This non-dredging reach of Channel A primarily resulted in an under-run of some 600,000 cubic yards to the bid quantity for Channel A. RRCC continued dredging the reach of Channel A opposite Disposal Area No. 1 (station.7+00 to station.85+00), during April 1998.

On May 21, 1998 the North Carolina Dredge left the jobsite, leaving the Katrina to dredge remaining BIM channels. Contractor completed "before" surveys on Channel D in early April and upon reviewing same it was discovered that there was a new channel which was developing between the planned Channel D and Shell Island (mainland) that had a bottom depth averaging at -5.0 NGVD.

The Engineer recommended to the Owner that Channel D be re-aligned to follow the thalweg of the developing channel which would be more hydraulically efficient. In addition, the construction of DA No. 3 in 5 feet of water was recommended to be deleted since it would be difficult to build (required 8' high dike) with the in-situ material. The Owners accepted the recommendation and Engineer prepared a drawing showing the revised alignment of Channel D to start at intersection with Channel A at station.67+20 instead of station.91+77. An advanced copy of drawing was given to Contractor who was awaiting decision to commence work on building the dike along DA 4/5. Following completion of dike along Channel D, the Katrina commenced dredging re-aligned Channel D on May 25th. The 4000 feet long by 200 foot bottom width Channel D was completed on June 3, 1998. The Katrina completed placement of dredged material into DA-1 on May 20, 1998 and began placing material into DA-5. The official FC-3 was sent to RRCC on June 24, 1998 to confirm oral instructions given on Channel D, DA-3. Contractor continued dredging Channel A and constructing DA-5 (channel A) disposal dike and reached station 86+00 of Channel A and station 108+00 of DA-5 front dike (channel A) at the end of May 1998. The Contractor on May 31, 1998 had dredged a total of 1,043,950 cubic yards including Channel D, on the BIM project since March 29th when dredging began on BIM. DA-1 was completed on May 25th.

In June the Contractor continued to work on Channel A, disposing material into DA-5 along Channel A side while constructing front dikes along Channel B opposite DA-5 and Channel A opposite DA-6. On June 30th the Contractor completed Channel A to station 111+00 having dredged a total of 1,542,000 cubic yards on Channel A.

During July, Contractor completed dredging the full width of Channel A to station 157+30. Contractor encountered heavy shell concentrations around station 138+00 and again at station

148+00 which was placed in DA-5 in piles about 300 feet from the front dike. The bucket dredge constructed the front dike of DA-8 along Channel B.

LDNR held a project dedication ceremony on July 1, 1998 at the Atchafalaya Delta Headquarters which is on Catfish Pass, about 2 miles from the end of the BIM project. Senator Breaux and officials from all the agencies involved with the CWPPRA program were present, along with the press officials were briefed on the project and visited the DA-5 site to observe the new marshland being created. Following the site visit a ceremony was held in the Morgan City Civic Center. See Appendix B for Ceremony.

On July 11, 1998 the Contractor completed initial diking of DA-6 and began discharging into DA-6. During July the Contractor completed the Before Dredging Surveys for the remainder of Channel A, Channel B, Channel E and Channel C. In reviewing the projected yardage available and comparing this to amount of yardage in the contract as bid, there was still a large predicated under-run in actual yardage to be dredged. This deficiency would have resulted in not achieving the project goals to create the projected acres of new marshlands. In discussing this finding with the Team Owners the Engineer recommended the following changes to the project to recapture the disposal acreage in DA-6, DA-8 and DA-9.

1. Channel A: Change the bottom widths as follows:
  - a. Widen bottom from 300' to 375' between station.145+00 and 180+00.
  - b. Bottom stays at 250' between station.180+00 and 200+00.
  - c. Shift 125' bottom Channel A to south side of channel baseline between station.200+00 and 206+00± (end of work).
2. Channel B: Widen bottom width from 125' to 160'.
3. Channel C: Widen bottom width from 100' to 125'.
4. Channel E: Widen bottom width from 100' to 125' and end work at station.41+50, to the +3.0NGVD contour line of Big Island.
5. Add a new Channel F with a bottom width of 160', starting at Channel A station.180+00 and extending on 45° to the north west for a distance of 2200 linear feet to tie-in with the existing pipeline canal.

The Owners orally approved changes 1 thru 4. By letter of August 10, 1998 the Owner's agreed to the proposed recommended changes for Channel F provided that the existing Coastal Use Permit be revised to show Channel F, since it is a new channel. The Contractor was given an advanced drawing by the Engineer and was orally directed to implement the above changes (except for Channel F) to maintain construction progress. A revised permit application for Channel F was subsequently submitted to the Corps and LDNR permit section by the local NMFS office, utilizing revised permit drawings prepared by BCG.

Contractor started dredging Channel B on July 31st. At the end of July the Contractor had dredged 2,123,193 cubic yards of material from Channel A. The dredging of Channel A was done with two cuts. Half of the Channel was deposited into DA-5 and half deposited into DA-6.

During August 1998 the Contractor continued dredging Channels B discharging into DA-6 then DA-5, constructing the front dike along Channel A for DA-8 and DA-9. Channel B was completed to station 55+24 on August 8, 1998. Contractor returned to dredging Channel A right half (along DA-8) then left half between stations 157+00 and 200+00 completing the full cut of Channel A at station 200+00 on August 24th. Contractor then continued dredging Channel A to 206+00 completing Channel A on August 25th. The Contractor commenced dredging Channel C on August 26th depositing into DA-9. Heavy shells were encountered between station 1+50 and 7+00. Concurrently, the bucket dredge mobilized in Natal Channel and began dredging the shoaled entrance on August 28th and completed work on September 5th.

On August 6th representatives from LDNR and LDWF established five permanent benchmarks on the project. Two were established on the ASD project and three were established on the BIM project. After installing the benchmarks RRCC established the "xyz" of each benchmark to NAD 27 Datum. BCG formalized a drawing and benchmark descriptions and delivered same to LDNR on September 4, 1998. The Benchmarks are described in Appendix C of this report.

On August 29th, the Katrina stopped dredging Channel C at station 16+15 and relocated to Channel E, discharging into DA-6 because of insufficient land discharge line. At the end of August the Contractor had dredged 2,472,279 cubic yards of material from Channel A.

Contractor demobilized from the job site on September 1, 1998 due to advancing Tropical Storm "Earl". On September 3rd Contractor returned to site and began dredging in Channel E at station 14+00 and disposing into DA-6. Also, the bucket dredge returned to complete dredging the Natal Channel shoals. However, dredging was difficult for the bucket dredge due to excessive tidal currents filling in dredged excavations. The dredge had to over dredge to -12.0 feet to achieve -8.0 net section. The Natal dredging was completed on September 5, 1998. There was no apparent damages to the completed work from Tropical Storm "Earl". The bucket dredge then moved to Channel F and dredged the front dike of DA-B.

On September 6th the Katrina began discharging into DA-9 at station 17+00 of Channel E. At station 35+00 disposal was switched back to DA-6 until completion of both the left and right thirds of the turning basin. The Katrina dredged the middle third of the turning basin while disposing into DA-9, completing Channel E on September 17th. On September 11th the Corps of Engineers approved the C.U.P. revision to dredge Channel F; and, BCG issued formal Field Change No. 4 September 14th to the Contractor. This field also officially compiled all of the previous revisions to change Channels A,B,C, and E that were issued earlier. For a description of the FC-4 refer to Appendix A. The Contractor began dredging Channel F on September 18th, disposing material into DA-8. Channel F was dredged to a bottom width of 160', and was completed to station 21+36 on September 23rd. The Contractor then moved to station 16+00 of

Channel C and began dredging. Contractor disposed material from Channel C into DA-9 and completed dredging to station 23+00 on September 25th.

During an earlier inspection of site (8-27-98) on Channel A the Engineer noticed about a 100' plug was left between where the Contractor completed Channel A @ station 206+00 and the deeper water within the existing pipeline. The Engineer directed the Contractor to return to Channel A and remove the "plug" at end of cut. In referring to plans they instruct Contractor to dredge to the centerline of the existing canal. The Contractor, following completion of Channel C, remobilized to end of Channel A and dredged out plug to station 207+13. All required channel dredging for the BIM project was completed on September 25, 1998. Contractor immediately demobilized the dredge plant due to the approaching Hurricane George.

Following the passage of George a final punch list was made, the only items of work that remained was to clean up site and remove dredge lines, and the construction of dike breaches. Also, the staking of temporary channel markers (2" pvc pipes) to identify the bank of Channel B where it intersects Channel A. The LDWF requested that the channel point be marked to keep boaters from running aground by turning too soon along DA-8. RRCC said that it would take them about two weeks to complete the dike breaches. In addition, some of the final surveys for BIM needed to be taken and delivered.

On October 13th a final inspection was made. There were still some uncut dike breaches along the front dikes of DA-5, DA-6 and DA-8. Also, the point of Channel A-B was not staked adequately. Contractor agreed with our findings and completed the dikes and channel markers by our next inspection on October 27th. All dike breaches and staking had been accomplished. The BIM Before and After Surveys of channels and disposal areas were delivered to the Engineer on November 17, 1998 thereby completing the construction contract requirements.

During the course of construction one accident occurred that resulted in an injury. The accident occurred on the job quarterboat, in the galley; at 5:30 am on the morning of April 8th. An off duty worker while exiting the galley slipped and fell on the outside deck of the quarterboat. The employee broke lower left leg and was taken to a Morgan City hospital for treatment.

## CONCLUSIONS

The BIM/ASD projects were successfully constructed (within time and under budget) and the project's expectations have, we feel, been achieved. After Survey show the channels were dredged to the depths and widths called for in the plans and specifications. Also, the disposal areas achieved the acreage requirements and configurations expected for this project. BCG presents the following conclusions and discussions of what occurred on this project that could be of benefit for future coastal freshwater diversion projects.

### Project Scoping

The CWPPRA projects define a project scope and estimates project costs and benefits. These projects are then either engineered in-house or awarded to an outside consultant. The LDNR should maintain a total scope flexibility and should have an in-house project pier review by an objective noted team of experts from the agencies impacted before awarding, to review such things as:

- a. Environmentally compatible with surrounding areas; i.e. will this project complement or detract the contiguous area.
- b. Environmental Impact upon the surrounding areas: i.e. will materials used in the project be compatible with the area.
- c. Constructability of the project within current construction equipment constraints: i.e. to reflect material, dredging, flotation, disposal height and cost limitations.

The initial LDNR scope of the BIM project was not the best solution to achieve the desired goals of diversion channels and marshland creation. For example, the location of the Big Island Channel, as originally conceived was on the island itself. Hydrologically, this would have been inefficient due to location on inside of riverbend. Also, it would have been very disruptive of LDWF's activities as well as the environment on the island

### Project Engineering

The Engineer should be allowed to value engineer the initial project scope to assure that the scope allows for the most expeditious construction methods to be utilized that will provide cost effective and environmentally sound results. Review milestones should be established, say at the 25%, 50% and 90% design progress, to assure the Owners Team that the project is being designed to their expectations.

### Project Permitting

The permit application process for the ASD/BIM project was, BCG feels, rather complicated in that the permit applications were made by NMFS and handled by the local office. This required additional coordination with other agencies and LDNR by the Engineer to keep all parties informed. Request consideration by LDNR that the Engineer be assigned the LDNR Agent for the CUP Permit and have the Engineer do the actual permit application for LDNR. Also, LDNR should consider being the permit owner since this agency is responsible for project administration. LDNR would then act as the clearing house for all project milestones and would keep all other impacted agencies informed of project progress. Engineer would then report to only LDNR on project progress.

### Construction

The Construction activities that, BCG feels, were a positive and contributed to the overall success

of the project are the following:

1. Weekly site trips to inspect progress, and discuss any problems early on to allow for early resolution.
2. Daily Inspection reporting that kept Engineer and Owner informed of work progress.
3. Active Team participation by LDNR, LDWF and NMFS, RRCC and BCG in the weekly on-site meetings. A real consensus on how to best resolve problems was achieved.
4. Plans engineered to reflect construction equipment and methods capability.
5. Contractor cooperation.
6. Construction of lobe islands (front dikes) with a bucket dredge rather than marsh hoe machines.

There were some things that occurred during construction that, BCG feels, could be improved upon on future projects.

1. The project planning period was protracted over one year due to awaiting the promulgating of a land use agreement between LDNR and LDWF. Also, the Corps delayed the approval of the initial permit application. On future projects consideration should be given to identifying the land use requirements prior to award of an engineering project. Similarly, concept project scoping should be reviewed by the CWPPRA representatives of the Corp and other agencies involved to, possibly, eliminate the delays encountered during the Permit acquisition phase planning of this project.
2. The project disposal area boundaries that BCG designed could be closer to the channels at channel intersections and channels flaired on the acute inside angle of channel intersections. This would have eliminated the broad point bank created at Channel B and A of BIM. It was considered to dredge out this flair after completing dredging on BIM. However, due to Hurricane Georges the Contractor didn't have time to dredge before evacuating the site.
3. Navigation Channel Aids were not a part of the BIM/ASD project. However, the LDWF requested some channel delinators or markers be installed to guide boaters at some channel intersections which was done by Contractor with concurrence from Owners. The question of liability for navigation aids should be considered on future projects. Whether navigation aids should be included and who should be liable for them and responsible for their maintenance, should be determined by LDNR.
4. The addition of Channel F to the project required that the existing Coastal Use Permit be revised. Although everything worked out on this project, any extended

delay in receipt of the revised permit could have prevented the work from occurring. On future projects, including optional work areas (such as Channel F) on the initial permit should be considered. This would eliminate the subsequent revisions to permit to be made, if optional work was requested during construction. This was done on disposal areas, but not on channels.

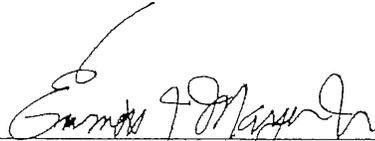
5. On future projects requiring an on site office and extensive travel time, BCG will include the requirement of a separate inspector office, and an all weather crewboat with HVAC. The sharing an office with the Contractor results in crowded conditions and does not provide private meeting space for Inspector and Engineer. Also, the crewboat during summer months needs to have an air condition cabin in Louisiana.
6. The project area had existing active gas lines that impacted the project solution. The 8 inch Cypress Gas Line prevented the full extension of BIM Channel A and branch Channels B & F to exit in deeper water. Fortunately, there was an existing abandoned pipeline canal that had 3 to 4 feet of depth which we emptied into. On the ASD side the lengths of both Natal Channel and Castille Pass was limited by the 20 inch gas line running across Atchafalaya Bay. This line prevented Natal Channel from reaching deeper water to empty into. Natal went to 100 feet of the line and empties into only about 2 feet of water which will impact the efficiency of delta development at this location. Consideration on future projects would be to relocate in-situ utilities in a project area to make them lower so new channels could be constructed across them.

### Report Summary

BCG feels the construction of Atchafalaya Sediment Delivery and Big Island Mining projects has achieved the goals and expectations of the assigned project by the Louisiana Department of Natural Resources and the National Marine Fisheries Service by creating a new west delta lobe behind Big Island that will serve as the initial vehicle to allow annual overflows from the Atchafalaya River to continue to naturally build marshlands in Atchafalaya Bay utilizing the channels and lands created under this project. The re-opening of Natal Channel and Castille Pass in the emerging east delta will convey silt laden river water to fill in the back bay areas and create new marshlands, naturally. In addition, the Louisiana Department of Wildlife and Fisheries through the singular efforts of Mr. Greg Linscombe insured that much of the newly-constructed marshlands were constructed with low elevations to allow for proper wetland vegetation to grow in the new marshlands. The success of the BIM/ASD projects was primarily due to the diligence displayed by the team members; the Owners who decided the project scope and provided the funding, the Engineer in planning and designing an environmentally sound constructable project, and providing competent, oversight for construction of said project, and the Contractor who endeavored to provide

construction dredging methods to achieve the desired goals of the project while staying within budgetary and time constraints.

The submittal of this report satisfies the requirements of our contract with LDNR for the planning design and construction management of the Atchafalaya Sediment Delivery and Big Island Mining Projects.



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Emmett J. (Ike) Mayer, Jr., P.E.  
Project Manager

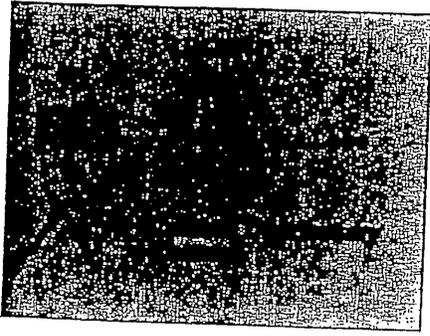
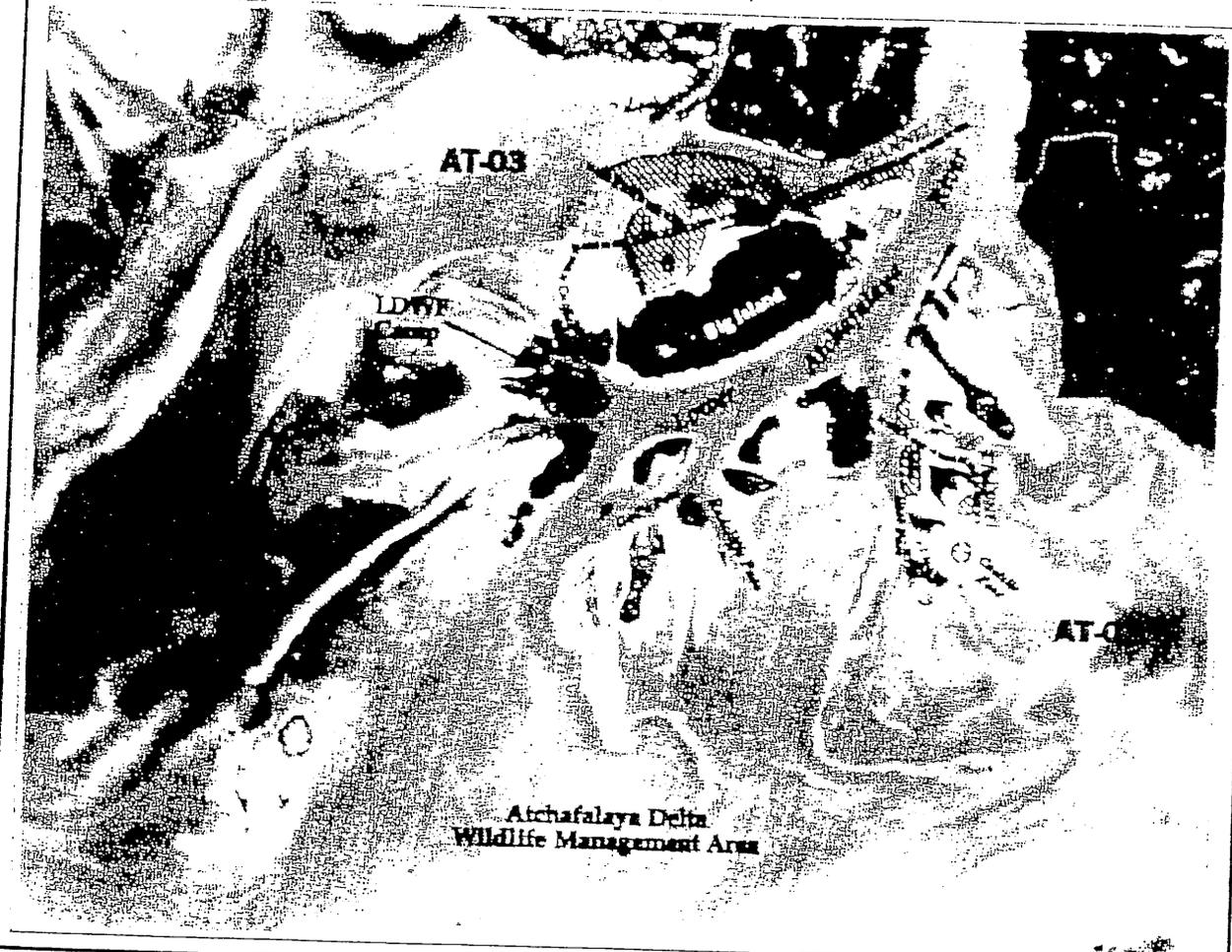
BROWN CUNNINGHAM & GANNUCH, INC.  
9181 Interline Ave.  
Baton Rouge, LA 70809

Telephone: 225-924-3116

PHOTOGRAPHS



Atchafalaya Sediment Delivery: Project AT-02  
Big Island Mining: Project AT-03



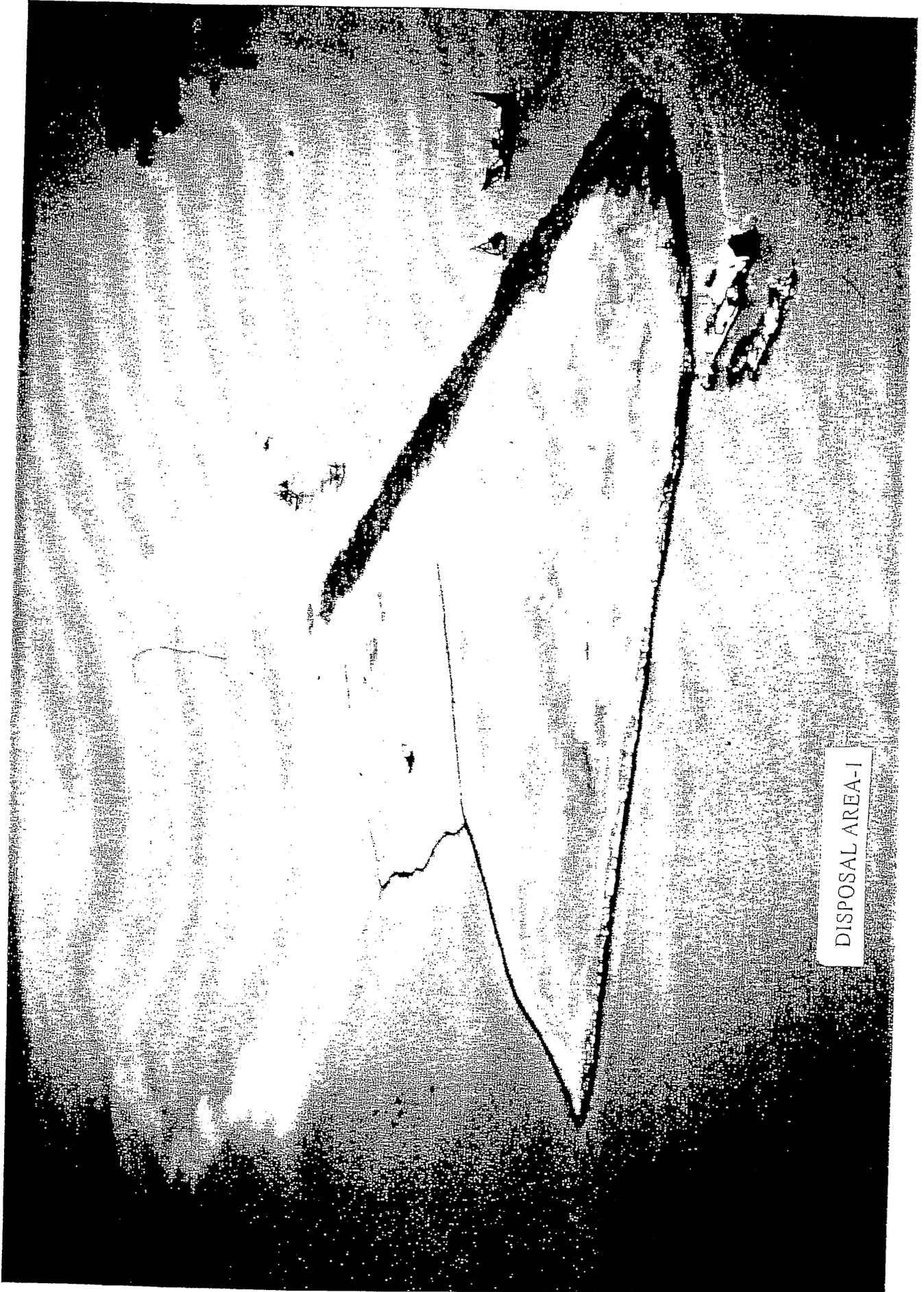
D. J. Sca...

United States Geological Survey  
Southwest Louisiana Science Center  
Bossier Parish, Louisiana

Project of National Research  
Council on Restoration Technology  
of Louisiana

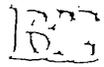
DATE: 1997  
SCALE: 1:50,000





DISPOSAL AREA-1

DISPOSAL AREA-1



DA-1

DA-6

CHANNEL A

CHANNEL D

DA-5

CHANNEL B

DA-8

BIG ISLAND



Brown Cunningham Gannuch  
ENGINEERS · ARCHITECTS · CONSULTANTS

BIM-VEGETATION ON DA-5



**APPENDIX A**

**PROJECT FIELD CHANGES**



Brown Cunningham Gannuch  
ENGINEERS · ARCHITECTS · CONSULTANTS

March 3, 1998

Mr. Chris Rayer  
River Road Construction, Inc.  
P.O. Box 1406  
Mandeville, LA 70470

RE: BIM/ASD  
Field Change No. 1

Dear Mr. Rayer:

This confirms my field instructions to you to dredge the Castille Pass channel to a reduced bottom width of 125 feet wide with 1V:3H side slopes in lieu of the planned 190 foot bottom. Based upon pre dredging survey channel readings, the existing Castille Pass is maintaining itself on average at a -5.0' NGVD and an approximate bottom of 120' to 150'. The volume of dredging required to restore the channel to a -10.0 NGVD for some 2100 feet is estimated at some 35 to 40 thousand cubic yards. Also, initial dredging is to not cross the existing 20 inch gas line. Therefore, it was recommended to perform a 125' bottom cut to -10.00 between stations 0+00 and 20+00.

If you have any questions and/or concerns, please advise.

Sincerely yours,

BROWN CUNNINGHAM GANNUCH, INC.

Emmett J. Mayer, Jr., P.E.  
Construction Engineer Manager

cc: V. Cook  
R. Gannuch



Brown Cunningham Gannuch  
ENGINEERS • ARCHITECTS • CONSULTANTS

March 10, 1998

Mr. Chris Rayer  
River Road Construction, Inc.  
P.O. Box 1406  
Mandeville, LA 70470

RE: BIM/ASD Project Field Change No. 2  
Revision to Natal Channel Alignment Between Sta. 70+00 and End.  
BCG Project 30594-1.

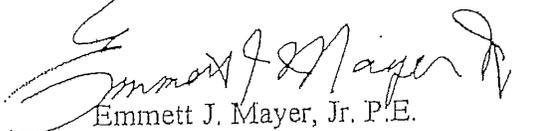
Dear Mr. Rayer:

As the Engineer of Record and in accordance with the project specifications we are forwarding Field Change No. 2 to you for implementation into the project. This change calls for extending and revising the bottom width of Natal Channel from station 74+00 to the new end station 88+00. Also, adding Branch A channel at station 70+00 with a deflection angle of 45° and extending for 1500 feet in an effort to reach deeper bay bottoms. The new channel bottom width between Sta 74+00 and end, and the Branch A channel between Sta 0+00A and end is reduced to a 150 foot bottom at a design depth of -10.00 NGVD. The channel side slopes remain at IV:3H. In addition, there is a flair end transition on both channels as shown on the enclosed Field Change No. 2 drawing dated March 10, 1998. This change in cross section and channel extension is estimated to require the total dredging in Natal Channel of approximately 657,000 cubic yards; and is to be constructed at the unit bid price of \$1.50 per cubic yard. This change results in no changes to the contract unit prices and stays within the estimated bid quantity item no. 510 of the contract.

Please implement this field change immediately. If you have any concerns or questions, please advise.

Sincerely yours,

BROWN CUNNINGHAM GANNUCH, INC.

  
Emmett J. Mayer, Jr. P.E.  
Construction Manager

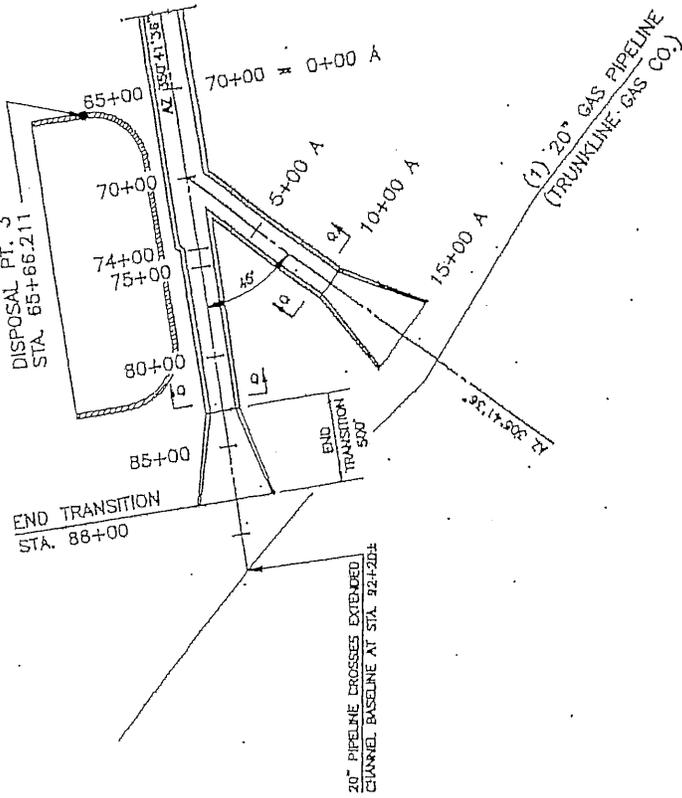
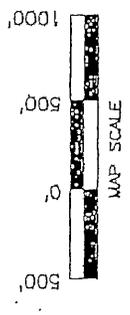
(see pg. 2 for encl. and cc)



Mr. Chris Rayer  
March 10, 1998  
Page 2

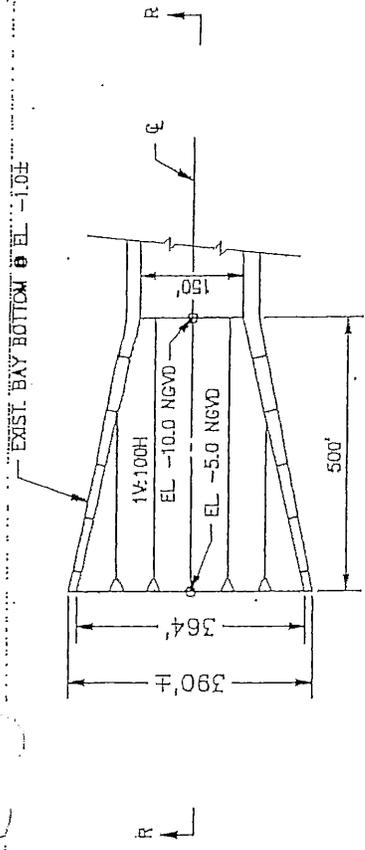
Encl: 8 1/2" x 11" Drawing

cc: V. Cook @ LDNR  
R. Rubseman @ NMFS  
E. Zobrist @ NMFS  
G. Linscombe @ LDWF  
G. Duszynski @ LDNR  
K. Vaughan @ LDNR  
H. Juneau @ DNR

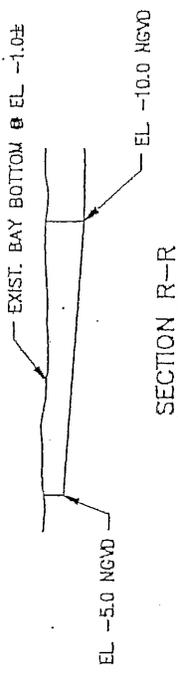


PARTIAL PLAN  
REVISION TO NATAL CHANNEL  
(FIELD CHANGE NO. 2)

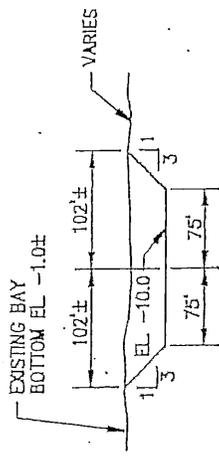
REVISION NO. 4 TO PLAN DRAWING NO. 8  
ADD BRANCH CHANNEL A



END TRANSITION  
BOTH CHANNEL BRANCHES  
(NTS)



SECTION R-R  
(NTS)



SECTION Q-Q

STATION 74+00 TO 83+00 NATAL CHANNEL  
STATION 0+00 A TO 10+00 A  
(NTS)

DATE: 3/9/98  
SHEET: 1 OF 1

ATCHAFALAYA SEDIMENT DELIVERY  
FIELD REVISION TO NATAL CHANNEL  
FROM STA. 70+00 TO END

FIELD CHANGE NO. 2  
BROWN, CUNNINGHAM AND GANNUCH



Brown Cunningham Gannuch  
ENGINEERS · ARCHITECTS · CONSULTANTS

June 24, 1998

Mr. Chris Rayer  
River/Road Construction, Inc.  
P.O. Box 1406  
Mandeville, LA 70470-1406

RE: BIM/ASD Project Field Change No. 3  
Revise Channel D Alignment,  
Delete Disposal Area No. 3  
And Revise Disposal Area No. 4/5

Dear Mr. Rayer:

This letter confirms oral instructions previously given to River Road on Field Change 3. As the Engineer of record and in accordance with the project specifications we are directing you to implement Field Change No. 3, as follows:

1. Realigning the originally configured Channel D of the construction plans, to begin work at Channel A c/l station 67+20 and construct a 200' bottom to Elev. -10.0 NGVD. The new Channel D extends along a centerline as azimuth of 97° 21' 53" for 4000 feet, ending work at Channel D (c/l station 40+00).
2. Delete Disposal Area No. 3 from the project in its entirety.
3. Modify Disposal Area 4/5 to be contiguous to the new Channel D alignment, all as shown on "Field Change Drawing No. 3", dated June 1998 (copy attached).
4. My letter dated April 19, 1998, entitled "Field Change No. 3" is to be voided since Channel D is realigned rather than extended. This present letter which describes required Field Change No. 3 superceeds my letter of April 19, 1998. The reason for realigning Channel D results from review of contractor's Before Dredging Surveys for the original D and Disposal Area No. 3. This survey shows an existing shallow natural channel that has developed having an average depth to -4.0 NGVD along the alignment of the new Channel D, described in paragraph 1 above. Following this in-situ channel affords a better hydraulic solution, since otherwise, there would be two channels side by side. Also, DA No. 3 has to be deleted since there is insufficient space between the new Channel D and the main land to construct DA No. 3.
5. Disposal Area 4/5 is revised and expanded along its perimeter to be contiguous to the new Channel D alignment, the optional back dike alignment for DA No. 4/5 has been shifted to follow the -1.0 NGVD contour elevation of the bay bottom. Some field deviation from alignment shown may be required to stay in shallow water (-1.0 NGVD).



The project estimated changes of quantities that result from Field Change No. 3 are as follows:

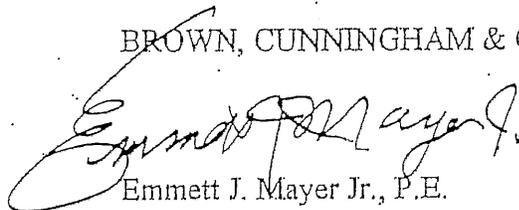
	<u>Item</u>	<u>Original</u>	<u>Revised</u>	<u>Change</u>
1.	Channel D:	101,000 cy	174,345 cy	+73,345
2.	DA No. 3:	+82.6 ac	0.0	-82.6 ac
3.	DA No. 4:	+92.68 ac	+91.1 ac	-1.6 ac
4.	DA No. 5:	260 ac	219 ac	-41.0 ac

The increase in dredge quantities for revised Channel D of 73,345 cy is less than the predicted underrun of 326,000 cy for BIM based upon contractor's Before Dredging Surveys. This Field Change No. 3 stays within contract "as bid" price and requires no contract changes to the original contract between DNR and River Road Construction Company. All other requirements of the original contract are still in force except the foregoing instructions for implementing Field Change No. 3.

If you have any questions or concerns, please contact me at 504-924-3116.

Sincerely yours,

BROWN, CUNNINGHAM & GANNUCH, INC.

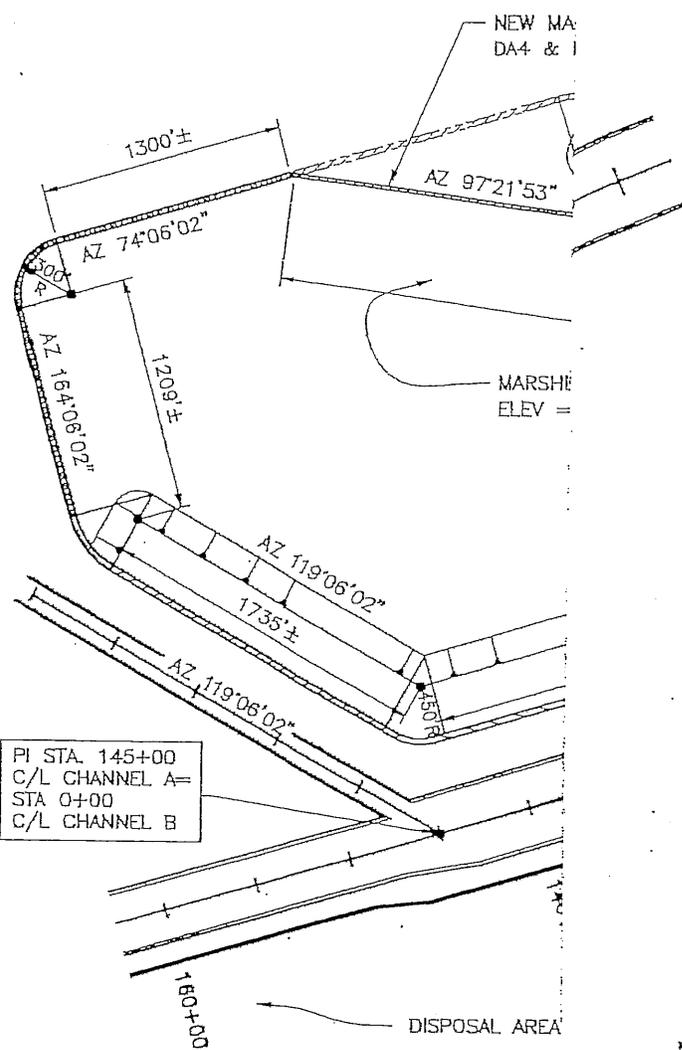


Emmett J. Mayer Jr., P.E.

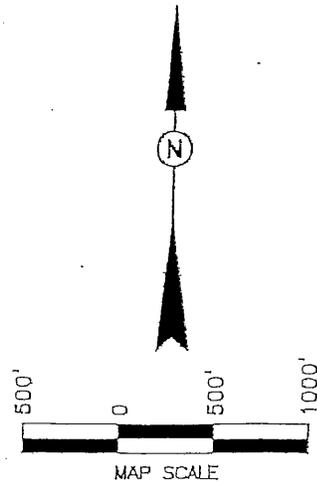
EJM/jgs

encls: DWG Field Change No. 3

cc: V. Cook  
R. Gannuch



PI STA. 145+00  
 C/L CHANNEL A =  
 STA 0+00  
 C/L CHANNEL B

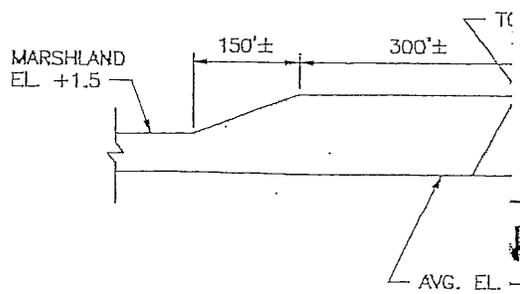


**CURVE ① DATA**

P.I. STA. 100+13.91  
 $\Delta = 714'47.6''$  RT.  
 $D = 0'04'10''$   
 $T = 5215.93'$   
 $L = 10417.95'$   
 $R = 82370.80'$   
 P.C. STA. 47+97.98  
 P.T. STA. 152+15.93

**NOTES:**

1. DELETE DISPOSAL AREA NO. 3  
 (AREA = 3,596,600 SQ. FT.)
2. REVISED DISPOSAL AREA 4 AND 5  
 AREA:  
 · LOBE ISLAND = 3,968,200 SQ. FT.  
 · MARSHLAND = 9,590,800 SQ. FT.
3. ALL ELEVATIONS IN NGVD
4. ALL INSTRUCTIONS ON ORIGINAL PLANS  
 REMAIN IN EFFECT EXCEPT WHERE  
 MODIFIED ON FIELD CHANGE NO. 3.
5. ALTERNATE CHANNEL D VOLUME  
 ESTIMATED TO BE 175,000 C.Y.



**WIGHAM AND GANNUCH**  
**CHANGE NO. 3**  
**CHANNEL D AND REVISIONS**  
**DA-4 AND DA-5**

EJM | DRAWN: CDH | SHEET: 1 OF 1



Brown Cunningham Gannuch  
ENGINEERS • ARCHITECTS • CONSULTANTS

August 31, 1998

Mr. Chris Rayer  
River/Road Construction, Inc.  
P.O. Box 1406  
Mandeville, LA 70470-1406

Re: BIM/ASD: Removing shoaling from entrance to Natal Channel

Dear Chris:

This letter confirms our oral agreement on removing the shoal at the entrance to Natal Channel. Use the bucket dredge (Capt. Berry) to dredge between c/l stations 12+00 to 21+00 to create a channel with a 170 bottom width at -8.0 NGVD with a box side cut to achieve a 1V on 3H side slope. Deposit the dredged material on both sides of the new cut. Concentrate placing dredge material to plug the existing trench in front of Disposal Area No. 1 to shut off cross flow into Natal Channel. Also, construct a short groin dike on the Disposal Area No. 2 side extending from the bank line paralleling the channel cut, and extending out not further than c/l station 12+00. Based upon Before Dredging surveys and a design template of -8.0' the estimated volume is expected to be 23250± cubic yards.

Please take After Dredging surveys as soon as possible for verification. If you have any questions regarding above instructions, please call.

Sincerely yours,

Brown, Cunningham & Gannuch, Inc.

Emmett J. (Ike) Mayer, Jr., P.E.

cc: V. Cook  
E. Zobrist  
G. Linscombe  
R. Gannuch

September 14, 1998

Van Cook  
LDNR - Coastal Restoration  
625 N. Fourth Street  
Baton Rouge, LA 70804

Re: BIM/ASD: Request for Field Change No. 4

Dear Mr. Cook:

On September 11, 1998 the Corps issued approval of our request to add Channel "F" to project. Enclosed, please find BCG's letter to River/Road conveying instructions to revise widths to Channels A, B, C, & E. Also, add a new Channel F to the project in order to maximize the creation of marshlands for the project. These changes, if implemented, will result in an approximate underrun of BIM/ASD project of some \$247,450.00. Upon reviewing actual field "Before Dredging" surveys there will be a sizable underrun of cubic yardage on the project as originally configured. Also, this will result in an underrun of marshland acreage.

We propose that the existing channels have their bottom widths slightly widened to achieve the project intent to create new marshland acreage. In addition, we recommend that a new Channel F be added to the project to enhance the potential for future sediment deposition to the western end of the project, i.e. another outlet to the northwest emptying into the open bay.

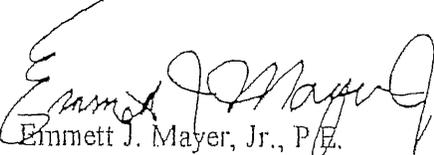
Implementing the recommended changes as outlined in the Field Change No. 4 will result in an underrun to the project of some \$247,450.00. By previous letter of August 10, 1998 both you and Mr. Zobrist (NMFS) approved the above changes as field changes provided the COE issued permit approval.

We request your concurrence to release this Field Change No. 4 to River/Road for implementation since we have Corps approval on "F".

If you have any questions, please call me.

Sincerely yours,

BROWN, CUNNINGHAM & GANNUCH, INC.

  
Emmett J. Mayer, Jr., P/E.



Brown Cunningham Cunnuch  
ENGINEERS · ARCHITECTS · CONSULTANTS

September 14, 1998

Mr. Chris Rayer  
River/Road Construction, Inc.  
P.O. Box 1406  
Mandeville, LA 70470

Re: BIM/ASD Project Field Change No. 4  
Revised Channel Widths For "A", "B", "C", and "E" and add Channel F.

Dear Mr. Rayer:

This letter shall confirm our discussions on completing the Big Island Mining project based upon the actual "Before Dredging Surveys", recently completed. In an effort to achieve the original design intent of this project and to maximize creation of marshlands acres we direct you to revise the following channels:

1. Channel A:  
Widen the bottom width from 300' to 375' between stations 145+00 and 180+00. Channel A widths stay the same between sta. 180+00 and end of job; as 250' bottom between sta. 180+00 and 200+00, and 125' bottom between sta. 200+00 and 206+00. However, between 200+00 and 206±00± Channel A is shifted to the south side of Channel A baseline.
2. Channel B:  
Widen Channel B from a 125' bottom to a 160' bottom.  
Dredge Channel per dimensions shown on cross section.
3. Channel C:  
Widen Channel C from a 100' bottom to a 125' bottom.
4. Channel E:  
Widen Channel E from 100' bottom to a 125' bottom and end channel at sta. 41+50± to the +3.0 NGVD contour along alignment shown.

In addition, add new Channel F starting at station 180+00 of Channel A and extending on an azimuth of 119° 06' 02" to station 22+00± to intersect with the existing pipeline canal. Channel F shall have a bottom width of 160 feet to -10.0 NGVD. Also, extend the Disposal Area No. 8 dike along new Channel F with the bucket dredge to station 20+00 of Channel F. Contractor shall conduct a magnetometer survey prior to doing work along Channel F to insure that no pipelines exist.

An attached set of 5 drawings describes the directed field changes for Field Change No. 4.



Mr. Mayer  
Page 2  
September 14, 1998

The estimated revised values to complete the project are estimated as shown on attached Table A. In comparing the estimated final cost to the as-bid cost an estimated underrun of \$247,450.00± could be achieved:

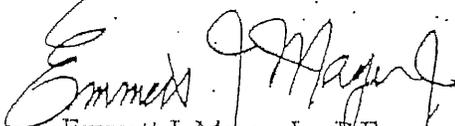
As Bid:	\$7,496,801.00
<u>Est. Final:</u>	<u>\$7,249,349.00</u>
Underrun	\$ 247,451.00

The actual final quantities will vary slightly based upon after dredging surveys. However, this Field Change No. 4 results in the total project costs to not exceed the "as bid" total project costs and requires no changes to the original contract between DNR and River/Road Construction Company. All other requirements of the original contract are still in force except the changes authorized by Field Change No. 4 as well as Field Changes 1 thru 3, previously issued.

If you have any questions or concerns, please contact me at 225-924-3116.

Sincerely yours,

BROWN, CUNNINGHAM & GANNUCH, INC.



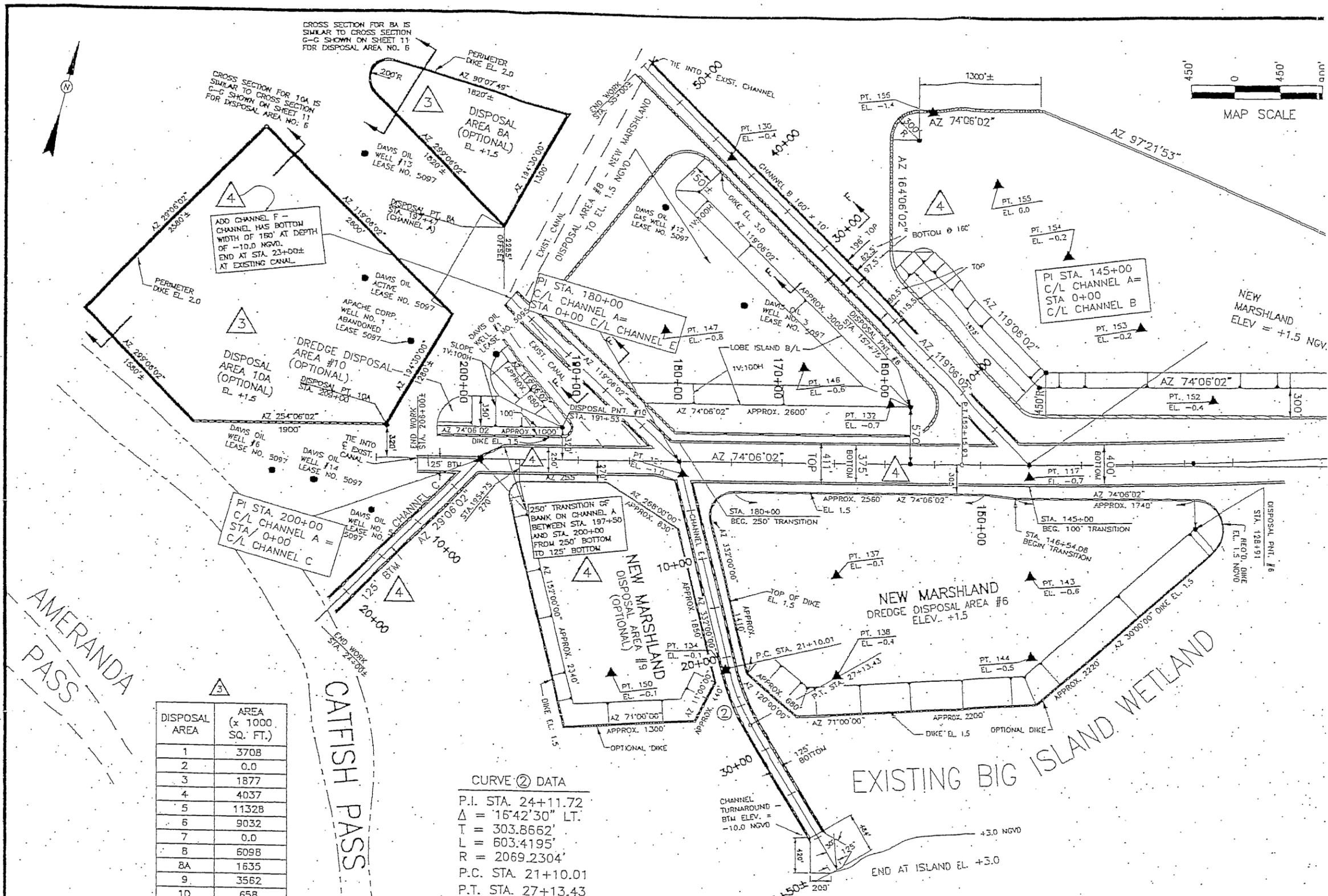
Emmett J. Mayer, Jr., P.E.

cc: V.Cook@LDNR  
E.Zobrist @ NMFS  
R. Gannuch @ BCG  
R. Ruebsamen@NMFS

encls: Drawings (five): Field Change No. 4  
Table: Field Change No. 4

TABLE A  
 BIG ISLAND MINING/ ATCHAFALAYA SEDIMENT DELIVERY  
 FIELD CHANGE NO. 4 (REVISED ESTIMATED COSTS)  
 SEPTEMBER 14, 1998

Bid Item - Description	Revised Quantity	Unit	Unit Cost	Bid Totals
100-Mobilization	1.00	ls.	274,404.00	274,404.00
200-Big Island Surveys	1.00	ls	250,000.00	250,000.00
300-Big Island Channels				
Channel A (bottom varies)	2,515,646.00	cy	1.68	4,226,285.28
Channel B (160' btm.)	313,197.00	cy	1.50	469,795.50
Channel C (125' btm.)	99,706.00	cy	1.50	149,559.00
Channel D (160' btm.)	174,343.00	cy	1.50	261,514.50
Channel E (125' btm.)	183,000.00	cy	1.50	274,500.00
Channel F (160' btm.)	110,800.00	cy	1.50	166,200.00
400 - Atchafalaya Surveys	1.00	ls	150,000.00	150,000.00
500 - Atchafalaya Dredging				
Natal Channel	636,364.00	cy	1.50	954,546.00
Castille Pass	32,242.00	cy	2.25	72,544.50
600 - Change Locations	0.00	ea	2,500.00	0.00
700 - Flowlines	0.00	ea	40,000.00	0.00
			Total	7,249,348.78



DISPOSAL AREA	AREA (x 1000 SQ. FT.)
1	3708
2	0.0
3	1877
4	4037
5	11328
6	9032
7	0.0
8	6098
8A	1635
9	3562
10	658
10A	6413

CURVE ② DATA  
 P.I. STA. 24+11.72  
 $\Delta = 16^{\circ}42'30''$  LT.  
 T = 303.8662'  
 L = 603.4195'  
 R = 2069.2304'  
 P.C. STA. 21+10.01  
 P.T. STA. 27+13.43

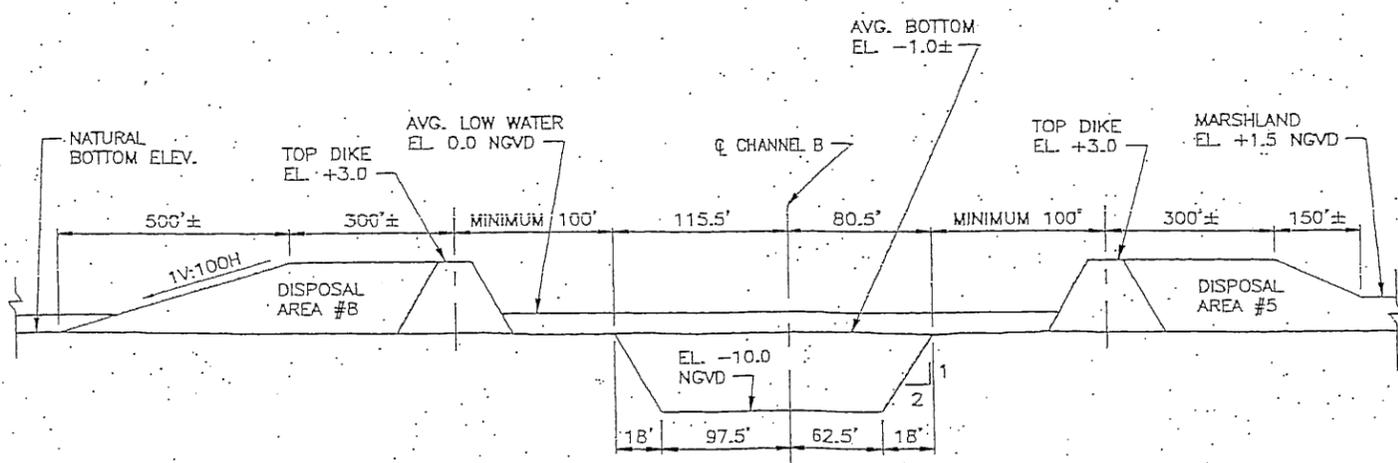
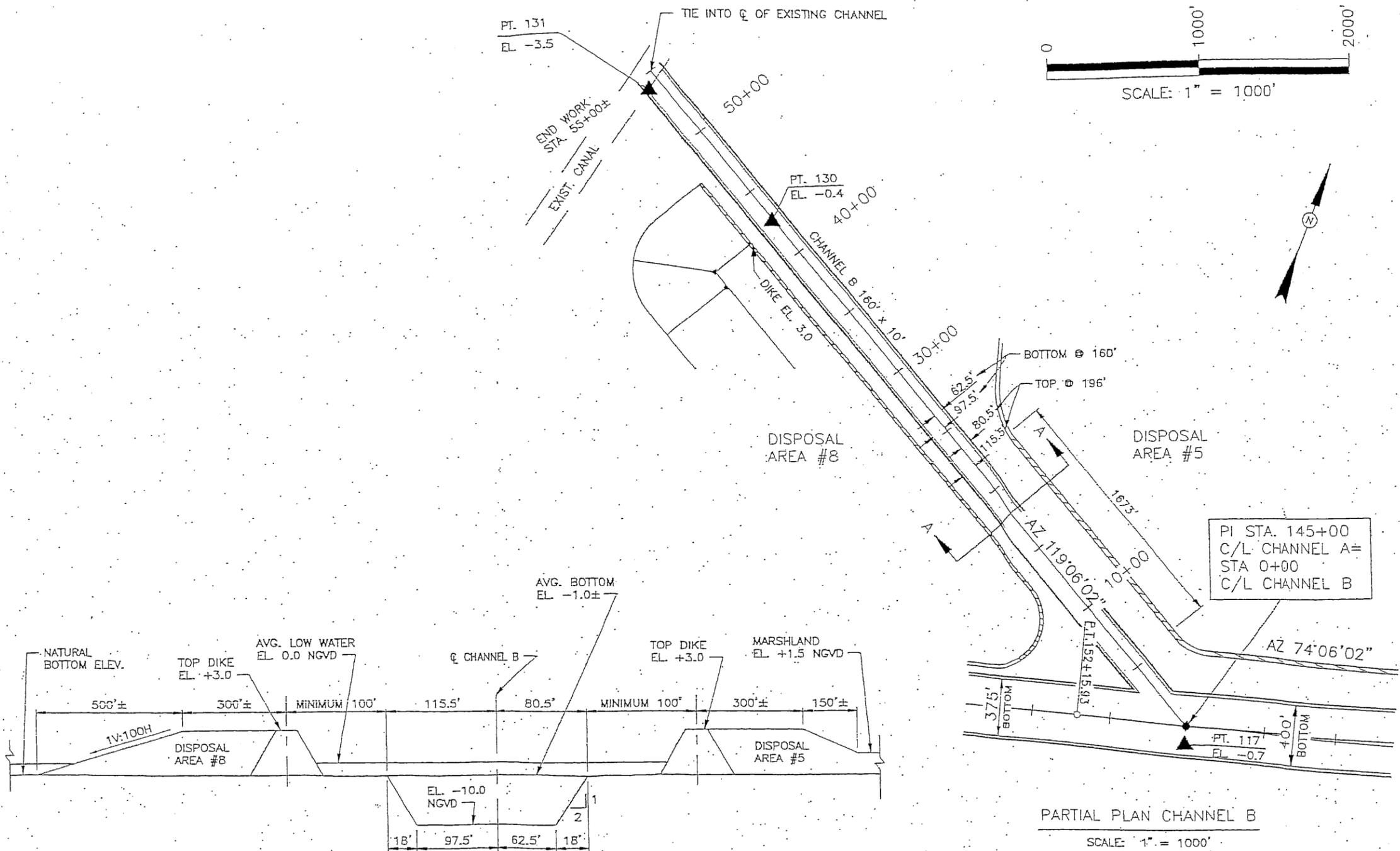
LEGEND  
 [Hatched Box] REQ'D. DIKE

REV 4: SEPTEMBER 14, 1998  
 REV 3: DECEMBER 28, 1997  
 REV 2: JANUARY 20, 1997  
 REV 1: AUGUST 11, 1995

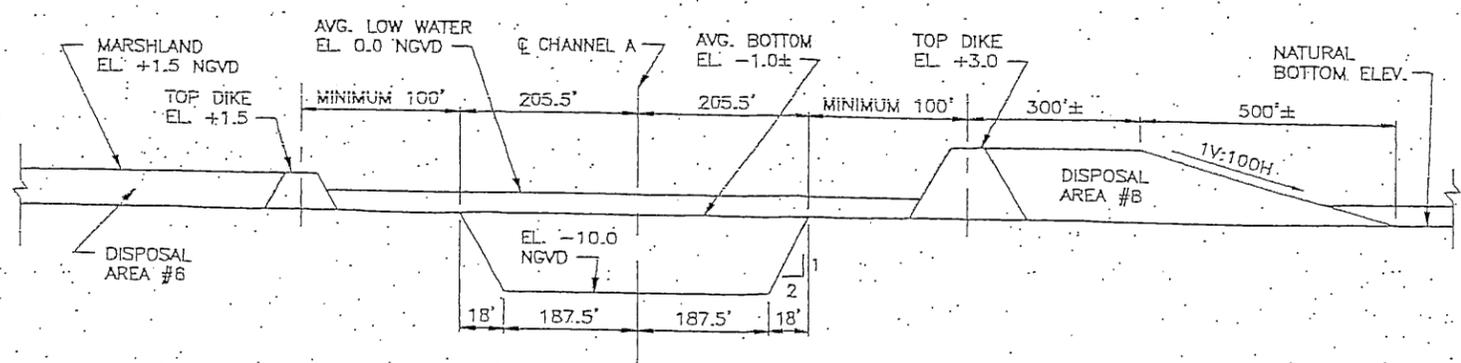
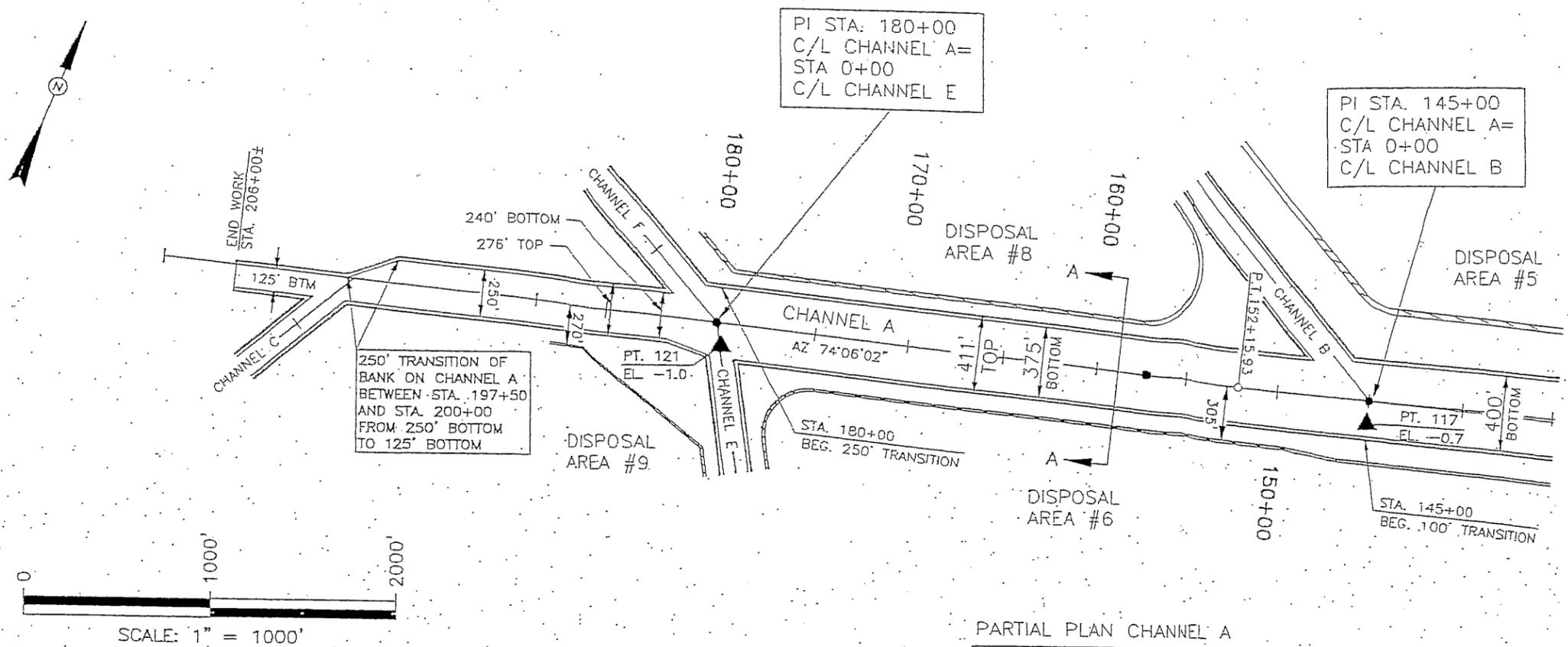
**BROWN, CUNNINGHAM AND GANNUCH**  
 FIELD CHANGE NO. 4 - DRAWING NO. 1  
 OVERALL VIEW - REVISION TO WIDTHS OF CHANNELS A, B, C, E AND NEW CHANNEL F

DATE: SEPT, 1998	DESIGNED: EJM	DRAWN: CDH/WC	SHEET: 1 OF
ACAD FILE: D:\JOBS1\30594BI&ASD\FIELDCHANGES\FLDCHG4-1.DV			

NOTE: DISPOSAL AREAS #6 AND #9, OPTIONAL DIKE CONSTRUCTION CONTIGUOUS WITH BIG ISLAND WETLAND SHALL BE DECIDED DURING CONSTRUCTION. DISPOSAL POINTS TO BE USED AS HORIZONTAL CONTROL FOR DISPOSAL AREAS LAYOUT AND ALIGNMENT. DISPOSAL POINT NUMBERS ARE NAMED THE SAME AS THE DISPOSAL AREA.



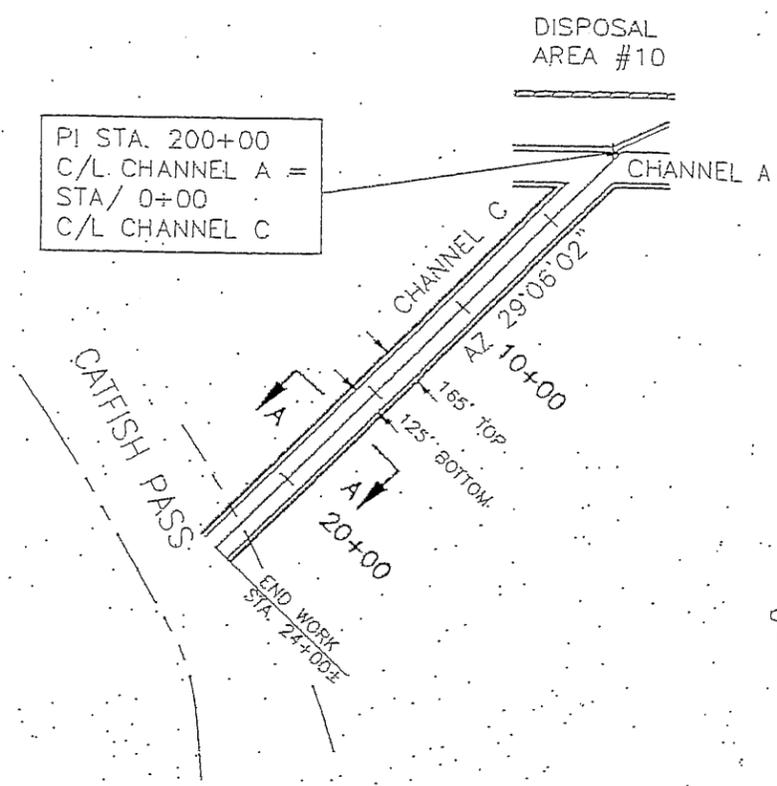
BROWN, CUNNINGHAM AND GANNUCH			
FIELD CHANGE NO. 4 - DRAWING NO. 2			
REVISION TO WIDTH OF CHANNEL B			
DATE: JUNE, 1998	DESIGNED: EJM	DRAWN: CDH/WC	SHEET: 2 OF 5
ACAD FILE: D:\JOBS1\30594BI&ASD\FIELDCHANGES\FLDCHG4-2.DWG			



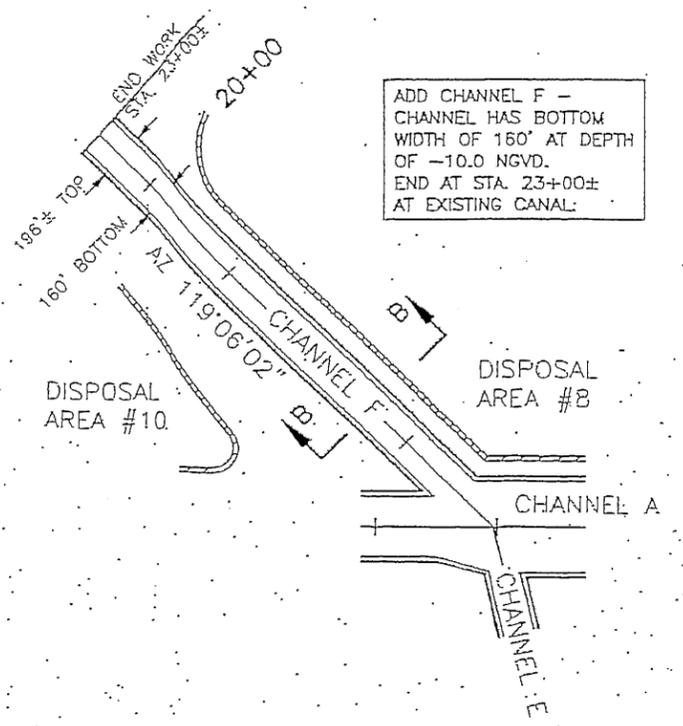
PARTIAL PLAN CHANNEL A  
SCALE: 1" = 1000'

SECTION A-A CHANNEL A  
NTS

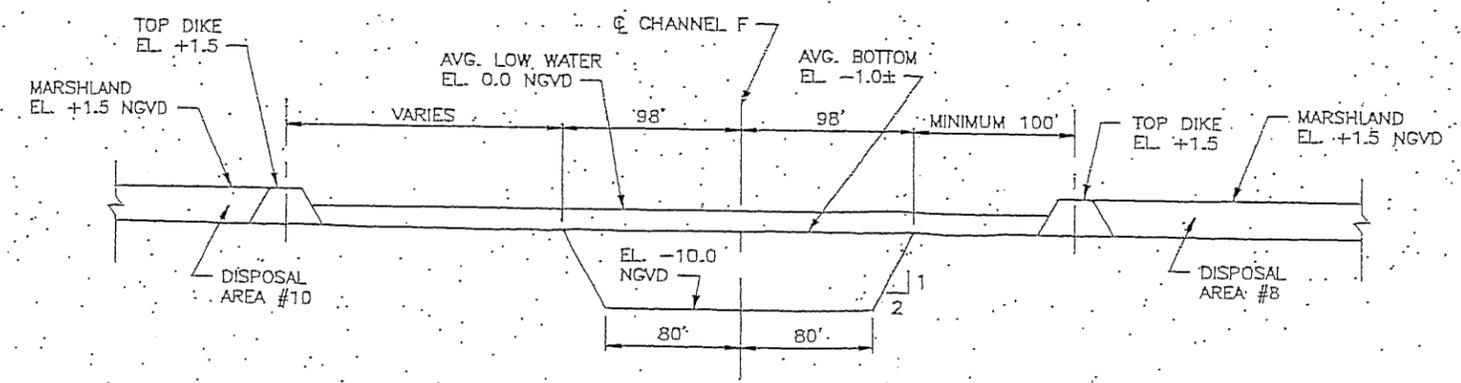
BROWN, CUNNINGHAM AND GANNUCH			
FIELD CHANGE NO. 4 - DRAWING NO. 3			
REVISION TO WIDTH OF CHANNEL A - STA. 145+00 TO STA. 206+00			
DATE: JUNE, 1998	DESIGNED: EJM	DRAWN: CDH/WC	SHEET: 3 OF 5
ACAD FILE: D:\JOBS1\30594BI&ASD\FIELDCHANGES\FDCHG4-3.DWG			



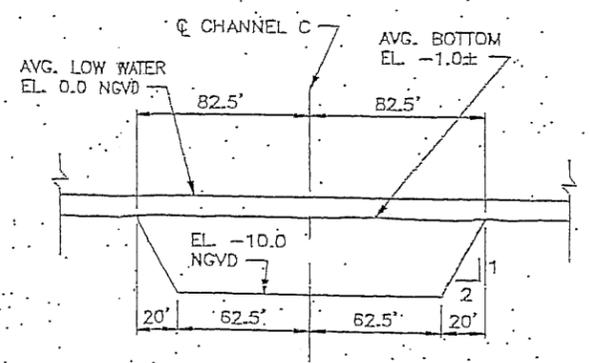
PI STA. 200+00  
 C/L CHANNEL A =  
 STA/ 0+00  
 C/L CHANNEL C



ADD CHANNEL F -  
 CHANNEL HAS BOTTOM  
 WIDTH OF 160' AT DEPTH  
 OF -10.0 NGVD.  
 END AT STA. 23+00±  
 AT EXISTING CANAL.



SECTION B-B CHANNEL F  
 NTS



SECTION A-A CHANNEL C  
 NTS

BROWN, CUNNINGHAM AND GANNUCH			
FIELD CHANGE NO. 4 - DRAWING NO. 5			
NEW CHANNEL F AND REVISION TO WIDTH OF CHANNEL C			
DATE: JUNE, 1998	DESIGNED: EJM	DRAWN: CDH/WC	SHEET: 5 OF 5
ACAD FILE: D:\JOBS1\30594BI&ASD\FIELDCHANGES\FLDCHG4-5.DWG			

**APPENDIX B**

**PROJECT DEDICATION CEREMONY**

**JULY 1, 1998**



Marsh lobe under construction at Big Island.

# Atchafalaya Sediment Delivery and Big Island Mining CWPPRA Act Restoration Project Site Visit and Over-flight

July 1, 1998

The *Katrina* cutterhead dredge on site.

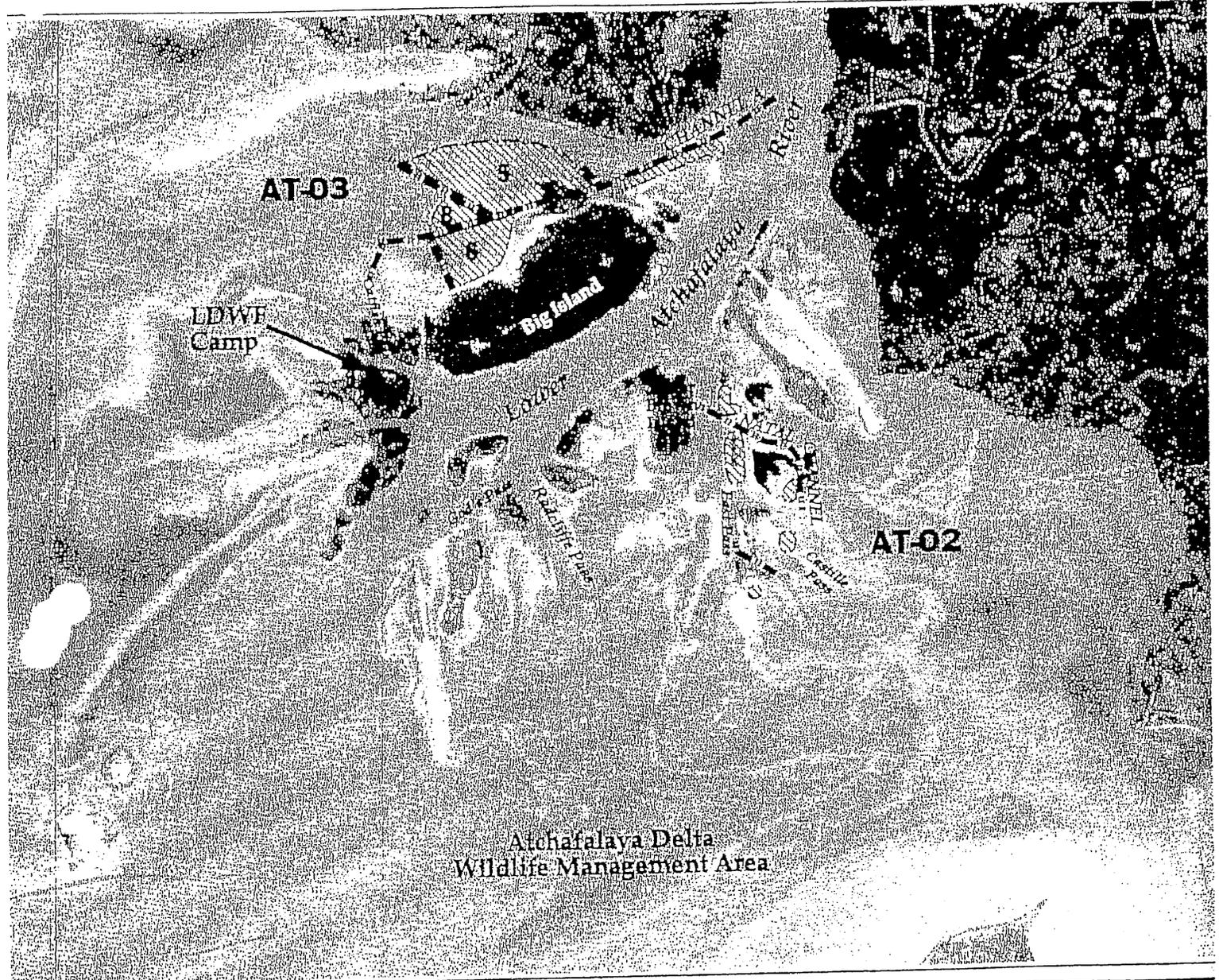


Proposed Project Tour Helicopter Schedule for July 1, 1998

- TBA BlackHawk Helicopter Departs New Orleans District of Corps of Engineers
- 7:30 a.m. Depart Morgan City Municipal Auditorium by van to helicopter landing/take-off site
- 7:40 a.m. Safety briefing by National Guard and S76 helicopter pilot  
Pre-flight briefing/overview of site tour and flight plan (by Erik Z.)
- 8:00 a.m. Depart Morgan City
- 8:40 a.m. Arrive Atchafalaya Delta Wildlife Management Area Camp  
- Welcome (by LDWF personnel) ~~GREG LINSEY~~  
- Project Overview (by Van Cook, DNR)  
- Construction Overview (by Chris Rayer)
- Load air boats
- 9:10 a.m. Project site tour by air boat  
- existing wetlands/northwest Big Island  
- Created delta lobes/Disposal areas 6, 5, & 4  
(Engineering overview by Ike Mayer)
- 9:55 a.m. Return to Camp
- 10:10 a.m. Depart Delta
- 10:30 a.m. Arrive Morgan City  
Return from helicopter landing site to Morgan City Municipal Center by vans
- 11:00 a.m. Ceremony at Morgan City Municipal Center

# Atchafalaya Sediment Delivery: Project AT-02

## Big Island Mining: Project AT-03



Atchafalaya Delta  
Wildlife Management Area

**LEGEND**

 Created Delta Lobe

 Created Distributary Channel

N

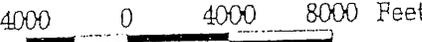



Louisiana

Project Location

1:90000

4000 0 4000 8000 Feet



Data Source:  
 United States Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Project Office

LA Dept. of Natural Resources  
 Coastal Restoration Division and  
 GIS Lab

Date: June 22, 1998  
 Map I.D.: 98-4-300



# Dedication of "Breaux Act" Wetlands Restoration Projects

## Atchafalaya Sediment Delivery & Big Island Mining

Morgan City Municipal Auditorium

Wednesday, July 1, 1998

11:00 AM

### PROGRAM

#### Welcome & Introductions

The Honorable John Breaux  
U.S. Senator  
Master of Ceremonies

Recognition of Dignitaries, U.S. & State Legislators and Local  
Officials

#### Remarks

Rolland A. Schmiten, Director  
National Marine Fisheries Service

Colonel William L. Conner, U.S. Army Corps of Engineers  
Chairman, Louisiana Coastal Wetlands Conservation and  
Restoration Task Force

Jack C. Caldwell, Secretary  
Louisiana Department of Natural Resources

James H. Jenkins Jr., Secretary  
Louisiana Department of Wildlife & Fisheries

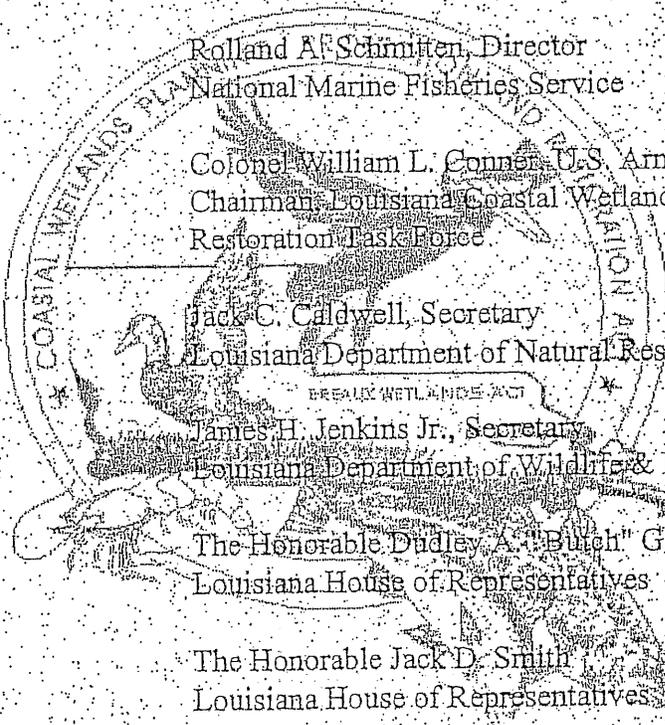
The Honorable Dudley A. "Butch" Gautreaux  
Louisiana House of Representatives

The Honorable Jack D. Smith  
Louisiana House of Representatives

Timothy Matte, Mayor  
City of Morgan City

#### Closing Remarks

Len Bahr  
Governor's Executive Assistant for Coastal Activities



**APPENDIX C**

**BENCHMARKS ON BIM AND ASD**



Brown Cunningham Cunningham  
ENGINEERS • ARCHITECTS • CONSULTANTS

September 4, 1998

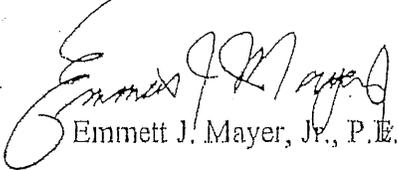
Van Cook  
LDNR - Coastal Restoration  
625 N. Fourth Street  
Baton Rouge, LA 70804

Re: Benchmarks on BIM/ASD

Van:

Enclosed here are Benchmarks as established by DNR and Wild Life and Fisheries Personnel.  
These are forwarded for your information and records.

Sincerely,



Emmett J. Mayer, Jr., P.E.

cc: E.Zobrist  
H.Juneau  
G.Linscombe

## BIM/ASD BENCHMARK DESCRIPTION (SHEET 2 OF 2)

1. The marks were established using 9/16" diameter stainless steel rods, connected together with threaded adapters, all of manufacture by Berntsen International, Inc., P.O. Box 8670, Madison, Wisconsin 53708-8670. The Louisiana Department of Wildlife and Fisheries supplied all benchmark components from their stock of an earlier purchase from the Berntsen Company. The specific nomenclature for the rods and connecting hardware is "MODEL H-I, HDR, SS ROTATING ROD MONUMENTS (U.S. Patent No. 4,087,945).

Benchmarks were physically established by manual driving using a 2 1/2" diameter post driver and tightening successive rods with a stilson wrench, while employing the driving head, furnished by Berntsen, to protect each 4' length of rod from blows of the driver. Rods were connected per supplied instructions and driven to "refusal", and the completed assembly was marked and protected by use of a 4 foot length of Schedule 40, 6" diameter PVC Pipe of white color, that was partially buried in the ground to an extent that PVC pipe, with cap, extended approximately 1 foot above the tip of each respective benchmark brass cap.

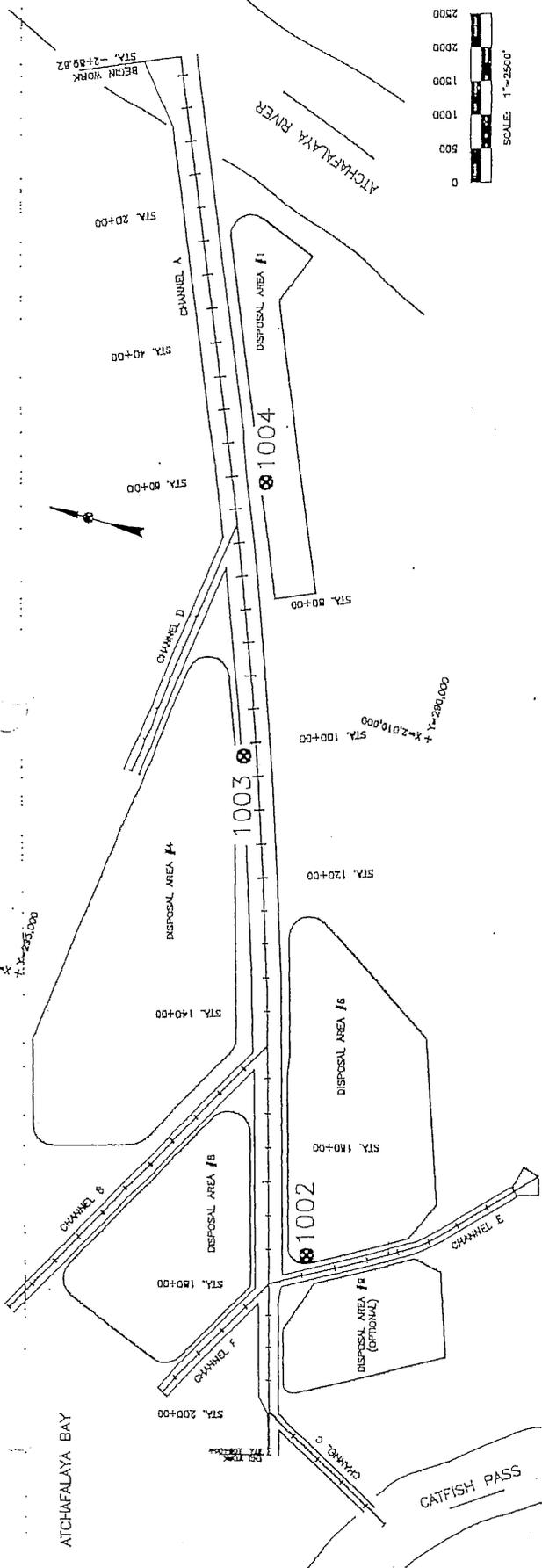
2. **Benchmark AUCOIN**, located on left descending side of the Big Island Channel, approximately 160 feet (estimated) SW of the water surface gage and piling used for the Big Island Channel construction project, approximately 38' south or "landward" from water's edge on crown of dike of Spoil Disposal Area #1, opposite Channel Station 61+43± with offset of 491'± left (estimated). Total Rod length used was 36 feet, or 9, 4' joints. Rod was left protruding above ground approximately 1 foot.

3. **Benchmark JUNEAU**, located on right or north descending bank of Big Island Channel, approximately 100 feet east of a grove of willow trees currently existing on southern edge of Spoil Disposal #4 as modified, and approximately 30 feet north or "landward" from water's edge in crown of channelward dike of Area #4, opposite Channel Station 101+86± with offset of 190'± right (estimated). Total Rod length used was 32 feet, or 8, 4' joints. Rod was left protruding above ground approximately 1 foot.

4. **Benchmark MARCANTEL**, located on left descending or south side of Big Island Channel Station 175+91± with offset of 555'± left (estimated) from Big Island Channel Centerline, where ground surface this day of installation was about 1.8' Elevation. Total Rod length is 32 feet, or 8, 4' joints. Rod was left protruding approximately 24" above existing ground surface of that day. Dike of Spoil Area in this area makes a turn to the south and is immediately east of the entrance to the new access channel that goes south to Big Island.

5. **Benchmark MOUTON**, located on eastside of Natal Channel, in crown of channelward dike of Spoil Disposal Area #2 of Natal Channel, opposite Water Surface gage and piling that was set in Natal Channel during construction period, approximately 20 feet landward of water's edge, opposite approximate Channel Station 25+97± with offset of 217'± right (estimated). Total Rod length is 20 feet, or 5, 4' joints. Rod was left protruding approximately 1 foot above existing ground of that day of installation.

6. **Benchmark COOK-LINSCOMBE**, is located in the existing natural marsh of Ibis Island on the right descending or east bank of Castille Pass Channel, approximately 35 feet landward of water's edge of that day when water surface was +1.2', opposite estimated Channel Station 10+01± with offset of 300'± right. Total Rod length of 28 feet, or 7, 4' joints, were used to establish this benchmark. Tip of top of rod was left protruding approximately 25 inches above the ground.



**BIG ISLAND MINING (XAT-7)**

**ATCHFALAYA SEDIMENT DELIVERY BENCHMARKS**

NUMBER	BENCHMARK NAME	DATE INSTALLED	COORDINATES: NAD 1927 DATUM		REMARKS
			X	Y	
1000	COOK & LINSCOMBE	8-6-98	2017353.342	274029.922	(1) (6)
1001	MOUTON	8-6-98	2017000.133	280220.500	(1) (5)

**BIG ISLAND MINING BENCHMARKS**

NUMBER	BENCHMARK NAME	DATE INSTALLED	COORDINATES: NAD 1927 DATUM		REMARKS
			X	Y	
1002	MARCATEL	8-6-98	2002133.204	289737.924	(1) (4)
1003	JUNEAU	8-6-98	2009012.660	292630.659	(1) (3)
1004	AUCCOIN	8-6-98	2013039.862	293433.249	(1) (2)

**BENCHMARKS ON BIM AND ASD**

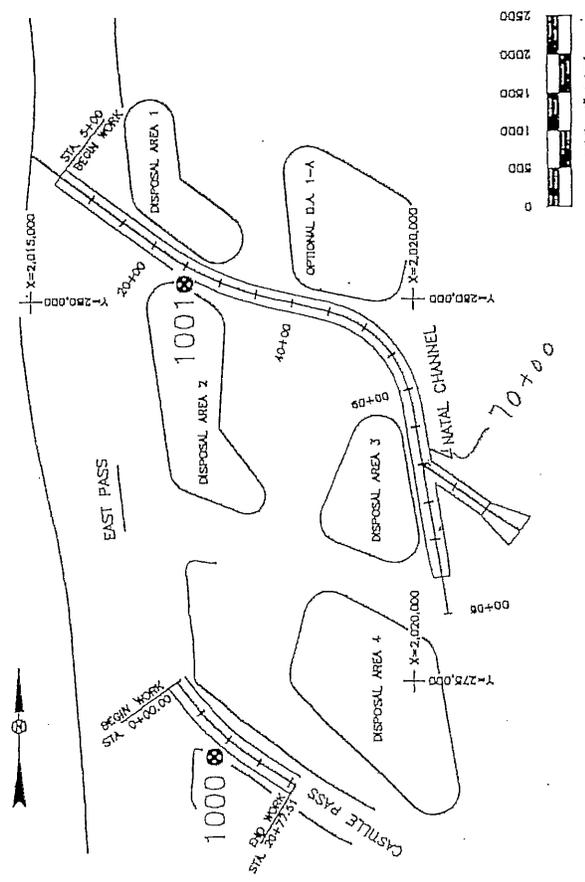
INSTALLED BY: LDNR (H. JUNEAU)

ELEVATIONS ESTABLISHED BY: RIVER ROAD CONST. CO.

**IBG Brown Cunningham Gannuch**  
ENGINEERS - ARCHITECTS - CONSULTANTS

DATE: SEPTEMBER, 1998    DESIGN: E.J.M.    DRAWN: CDH    SHEET NO. 1 OF 2

ACAD FILE: DEEPMARKER.DWG



**ATCHFALAYA SEDIMENT DELIVERY (PAT-2)**

**APPENDIX D**

**BEFORE AND AFTER SURVEYS**

**SECTION ONE - ASD**

**SECTION TWO - BIM**



Brown Cunningham Gannuch  
ENGINEERS • ARCHITECTS • CONSULTANTS

October 15, 1998

Mr. Van Cook  
LaDNR - Coastal Restoration  
625 N. Fourth Street  
Baton Rouge, LA 70804

RE: Atchafalaya Sediment Delivery (PAT-2)  
CWPPRA Project - Project Construction Surveys

Dear Mr. Cook:

We herewith transmit the following survey information as a requirement to our engineering agreement with LaDNR on the subject project:

1. Total of 6 full size drawings describing the channel and disposal areas for Castille Pass dredging project. These surveys were performed by River/Road Construction Co. and witnessed by BCG inspectors.
2. Total of 44 full size drawings describing the channel and four disposal areas for Natal Channel dredging project. These surveys were performed by River/Road Construction Co. and witnessed by BCG inspectors.

In addition we are transmitting a total of 27 electronic diskettes that contain all survey plotted information produced on this project. The diskettes are basically compiled in three formats as follows:

1. .DWG files: Actual drawings of before/after dredging surveys performed. Can be used to reprint drawings described above.
2. .DXF files: Actual scaled survey plots used to prepare the .DWG files.
3. .XYZ files: The listing of all survey points shown on the drawings. Each print shows a northing, easting and NGVD elevation.

This completes the survey requirement deliverable for the Atchafalaya Sediment Delivery Project. If you have any questions/concerns please feel free to call us @ (225) 924-3116.



Brown Cunningham Gannuch

ENGINEERS • ARCHITECTS • CONSULTANTS

Sincerely yours,

BROWN, CUNNINGHAM AND GANNUCH, INC.

A handwritten signature in black ink, appearing to read 'Emmett J. Mayer, Jr.', written in a cursive style.

Emmett J. (Ike) Mayer, Jr., P.E.

cc: R. Gannuch, BCG  
M. Fugler, DNR

EJM/cdh

CLOSING REPORT  
APPENDIX A - TABLE A  
ATCHAFALAYA SEDIMENT DELIVERY  
DREDGING OF CASTILLE PASS  
CONSTRUCTION SURVEYS

Diskette No.	Diskette Title	File Name	Date	Remarks
1	Castille Pass	caschadp.dwg	3-3-98	After dredging channel survey plan dwg. btn sta 0+00 to 21+08
1	Castille Pass	caschadp.dwg	3-3-98	Before dredging channel survey plan btn sta 0+00 and 21+08
1	Castille Pass	casxssh1.dwg	2-6-98	Channel cross sections sta 0+00 to 9+00 showing before, design and after section
1	Castille Pass	casxsshz.dwg	2-6-98	Channel cross sections sta 10+00 to 16+08 showing before, design and after section surveys
1	Castille Pass	casxssh3.dwg	2-28-98	Channel cross sections sta 17+00 to 21+08 showing before, design and after cross sections
2	Castille Pass	casdspaf.dwg	2-28-98	Castille disposal area showing before and after dredging surveys
2	Castille Pass	casdspaf.dxf	2-28-98	Survey lines supporting the dwg file
2	Castille Pass	casdspaf.txt	2-28-98	Point elevation survey point listing
3	Castille Pass	casdabd.xyz	2-23-98	Castille disposal area point x,y,z listings for before dredging
3	Castille Pass	caspsad2.xyz	2-23-98	Castille disposal area point x,y,z listings for after dredging
4	Castille Pass	casdabd.asc	2-6-98	Castille pass disposal area layout x,y,z points
4	Castille Pass	casdabd.raw	1-31-98	Castille pass disposal area control point layout
4	Castille Pass	caspasbd.asc	2-6-98	Castille pass after survey points of channel (unmodified)x,y,z and date and time
4	Castille Pass	chancl.dat	2-6-98	Castille Pass channel centerline layout shifted 75' from original drawings to better field fit channel
4	Castille Pass	survey.dat	2-6-98	Castille Pass channel after dredging survey points with bottom elevation and depth
4	Castille Pass	tide.dat	2-6-98	Tide data for Castille Pass before dredging survey
5	Castille Pass	caspasad.dat	2-23-98	Castille Pass after dredging of channel listing x,y,z depth and time and date

5	Castille Pass	caspasad.xyz	2-20-98	After dredging survey points of channel x,y,z and date
5	Castille Pass	caspadbd.dat	2-23-98	Castille Pass before dredging of channel survey point records x,y,z sounding and date
5	Castille Pass	caspsads.dat	2-23-98	Channel Data points after dredging surveys x,y,z and soundings and date

CLOSING REPORT  
 TABLE B  
 ATCHAFALAYA SEDIMENT DELIVERY  
 DREDGING OF NATAL CHANNEL  
 CONSTRUCTION SURVEYS  
 DISPOSAL AREAS 1 THUR 4

6	Natal Channel	natdspiafter.txt	3-3-98	Disposal area one point listing x,y,z and elevations after dredging
6	Natal Channel DA-1 A.D.	natdal.dwg	3-3-98	Natal disposal area 1 drawing boundaries w/before and after dredging surveys
6	Natal Channel	n.dalxsaf.dxf	3-3-98	Natal disposal area 1 after dredging cross section
7	Natal channel	naatalda1.txt	3-3-98	Text of survey points for disposal area 1 showing x,y,z and date with comments
7	Natal Channel DA-1 B.D.	natdal.dwg	3-21-98	Disposal area boundry drawing with before dredging surveys. Showing actual shifting of DA-1 in field to better fit existing contours for front diking
7	Natal Channel	natada1.dxf	3-3-98	Disposal area one showing before survey cross sections
8	Natal Channel DA-2B.D.	natda2bd.dwg	3-21-98	Disposal area two boundry drawing with revised DA-2 position in field showing before dredging survey
8	Natal Channel DA-2 B.D.	natda2bf.dxf	3-24-98	Disposal area-2 before dredging cross sections
8	Natal Channel DA-2B.D.	natda2bf.txt	3-23-98	Text listing of survey points for disposal area 2 before dredging
9	Natal Channel DA-2 A.D.			After dredging DA-2 (missing at this time)
10	Natal Channel DA-3 B.D.	natda3bf.123	3-23-98	Disposal area 3 survey point listings before dredging x,y,z
10	Natal Channel DA-3 B.D.	natda3bf.dwg	3-24-98	Disposal area 3 boundry with before dredging surveys shown. Note drawing title says DA-1 which is in error should be DA-3
10	Natal Channel DA-3 B.D.	natda3bf.dxf	3-23-98	Natal disposal area 3 before dredging cross sections

11	Natal Channel DA-3 A.D.	natdwp3after.txt	4-30-98	Survey point listing DA-3 disposal area
11		natda3af.dwg	4-30-98	A.D. drawing
11		natda3af.dxf	4-30-98	Before/After survey plot
12	Natal Channel xyz files	natda1bd.xyz	2-24-98	Disposal area 1-control point listings Boundry before dredging
12	Natal Channel xyz files	natda2bd.xyz	2-24-98	Disposal area 2-control point listings Boundry before dredging
12	Natal Channel xyz files	natda2bd.xyz	2-24-98	Disposal area 2-control point listings Baseline before dredging
13	Natal Channel DA-4 B.D.	nataldisp.area4bf	3-24-98	Disposal area 4 control point listings Before dredging survey
13	Natal Channel DA-4 B.D.	natda4bf.dwg	3-24-98	Disposal area 4 Drawing showing boundary and before dredging survey
13	Natal Channel DA-4 B.D.	natda4bf.dxf	3-24-98	Disposal area 4-Before dredging cross sections
14	Natal Channel DA-4 A.D.	natalda4af.txt	4-24-98	Listing of points for disposal area 4 showing x,y,z with date
14	Natal Channel DA-4 A.D.	natda4af.dwg	4-24-98	Disposal area 4 drawing showing after and before dredging surveys super imposed
14	Natal Channel DA-4 A.D.	natda4af.dxf	4-24-98	Final survey cross sections on disposal area 4
15	Natal Channel Before Dredging Cross Section	Bdxs1418.dwg		Natal Channel before dredging cross section drawings between station .14+00 thru 65+00.
16	Natal Channel before dredging cross sections.	Bdxsh1.dxf		Station 5+00 to 8+00 before dredging cross sections survey.
16	Natal Channel before dredging cross sections	Bdxsh.dxf		Station 6+00 to 30+00 before dredging cross sections survey.
16	Natal Channel before dredging cross sections	Bdxsh10.dxf		Station 45+00 to 49+00 before dredging cross sections survey.
16	Natal Channel before dredging cross sections	Bdxsh11.dxf		Station 50+00 to 54+00.
16	Natal Channel before dredging cross sections	Bdxsh12.dxf		Station 55+00 to 58+00.
16	Natal Channel before dredging cross sections	Bdxsh13.dxf		
16	Natal Channel before dredging	Bdxsh18.dxf		Station 81+00 to 88+00.

17	cross sections Natal Channels Cross Sections before dredging also plan view	Bdxsh6688.dwg	2/11/98	Station 66+00 to 88+00 drawings of before dredging cross sections.
17	"	Bdxs9.13.dxf	2/11/98	Station 9+00 to 13+00.
17	"	nBd3058p.dwg	2/11/98	Plan view of Natal Channel cross sections between station 30+00 and 58+00.
17	"	nBd5-30p.dwg	2/11/98	Plan views of Natal Channels Cross Sections between Stations 5+00 and 30+00.
18	Natal Channel Survey Points before dredging	NATEL.*	4/21/98	Listing of survey paints for before dredging cross sections between stations 1+00 and 93+00.
19	Natal Channel A plan of channel	NATCHABF.dwg	3/17/98	Natal Channel A plan drawing showing before dredging cross sections between Station A0+00 and A15+00
19	"	NATCHABF.dxf	3/17/98	Cross section survey station center line and station A0+00 to A15+00.
19	"	NATALC.~1.123	3/17/98	Survey point listing of Natal Channel A before dredging.
20	Natal Channel after Dredging Cross Sections	Bdxssh7.dxf		Station 31+00 to 35+00.
20	"	Bdxssh8.dxf		Station 36+00 to 39+00.
20	"	Bdxssh9.dxf		Station 40+00 to 44+00.
20	"	Bdsssh93.dxf		Plan of after dredging cross sections Station 5+00 to 88+00.
21	Natal Channel after Dredging Cross Sections Drawings	N55 thru 54.dwg		After dredging cross section drawings showing before dredging, design template, and after dredging surveys from station 10+00 to 54+00.
22	Natal Channel after Dredging Cross Sections Drawings	N55 thru 88.dwg		After dredging cross sections drawings Station 55+00 to 88+00.
23	Natal Channel after Dredging Cross Section Survey Plots		5/19/98	After dredging cross section surveys showing plots of before dredging and after dredging readings.
23	"	Revsh1.dxf		Station 75+00 to 78+00.
23	"	Revsh2.dxf		Station 79+00 to 82+00.
23	"	Revsh3.dxf		Station 83+00 to 88+00.

23	"	Revsh5.dxf		Station 25+00 to 27+00.
23	"	Revsh6.dxf		Station 28+00 to 30+00.
23	"	Revsh7.dxf		Station 31+00 to 34+00.
23	"	Revsh8.dxf		Station 35+00 to 37+24.
23	"	Revsh9.dxf		Station 38+00 to 42+00..
24	Natal Channel after Dredging Cross Section		5/19/98	After dredging cross sections surveys showing before dredging, design template, and after dredging readings.
24	"	sh1.dxf		Station 10+00 to 13+00.
24	"	sh2.dxf		Station 14+00 to 17+00.
24	"	sh3.dxf		Station 18+00 to 21+00.
24	"	sh4.dxf		Station 22+00 to 24+00.
24	"	sh10.dxf		Station 42+00 to 45+00.
24	"	sh11.dxf		Station 46+00 to 49+00.
24	"	sh12.dxf		Station 50+00 to 54+00.
24	"	sh13.dxf		Station 55+00 to 57+00.
24	"	sh14.dxf		Station 58+00 to 60+00.
24	"	sh15.dxf		Station 60+00 to 62+00.
24	"	sh16.dxf		Station 63+00 to 65+00.
24	"	sh17.dxf		Station 66+00 to 70+00.
24	"	sh18.dxf		Station 71+00 to 74+00.
25	Natal Channel after Dredging Survey Point Listing.	NATALAD.xyz		After dredging survey point listing for surveys shown on disks 23 and 24. Point show xyz coordinate.
26	Redredging Entrance to Natal Channel Plan Drawing Station 12+00 to 21+00.	BBADPlan.dwg	9/9/98	Plan drawing of entrance to Natal Channel between Station 12+00 and 21+00 existing bottom condition on 9/1/98.
26	"	SX12-15.dwg		Resurvey cross sections of natal Channel entrance showing existing bottom and after dredging surveys, design bottom for redredging is -8.0 NGVD.
26	"	SX16-19.dwg		Same for station 16+00 to 19+00.
26	"	SX20-21.dwg		Same for Station 20+00 to 21+00.
26	Redredging Entrance to Natal Channel Cross Section Surveys		9/9/98	Cross Section Survey plots;
26	"	Bdadsh1.dxf		Station 12+00 to 15+00.
26	"	Bdadsh2.dxf		Station 16+00 to 19+00.
26	"	Bdadsh3.dxf		Station 20+00 to 21+00.

26

NAT-9-9.dxf

Plan plot after dredging surveys between Station 12+00 and 21+00.

27

Redredging  
Entrance to  
Natal Channel  
Survey Point Listing

NAT-9-9.xyz

9/11/98

Survey point listing of after dredging of redredging to Entrance to Natal Channel showing northing, easting and elevation between station 12+00 and 21+00.



# Brown Cunningham Gannuch

ENGINEERS • ARCHITECTS • CONSULTANTS

December 22, 1998

Mr. Van Cook  
Louisiana Department of Natural Resources  
Coastal Management Division  
P.O. Box 94396  
Baton Rouge, LA 70804-9396

Re: Final Surveys - Atchafalaya Sediment  
Delivery Electronic Disks

Dear Mr. Cook:

Reference is made to my letter of October 15, 1998 transmitting final surveys on the subject project. Subsequently, we spoke with Mr. Matthew Mahler who informed us that some of the diskettes transmitted were unable to be opened. We met with Ron Lawton of River/Road and we herewith transmit the following two diskettes containing the original missing information.

Information contained on Disk A & B dated 12/21/98 is as follows:

Disk A:

casdispaf.txt:	Replaces original disk 2-casdspaf.txt
natdsplafter.txt:	Replaces original disk 6-natdsplafter.txt
natda2bf.wp4.txt:	Replaces original disk 8-nata2bf.txt
natdsp3after.txt:	Replaces original disk 11-natdwp3after.txt
nataldisparca4af.txt:	Replaces original disk 14-natalda4af.txt
natalch t.o.c.txt:	Replaces original disk 17-natalcha t.o.c.txt
natalcha tmp.txt:	Replaces original disk 17-natalcha tmp.txt
natcha bf.dxf:	Replaces original disk 19- natcha bf.dxf

Disk B: DA-2-AD

natda2af.dwg:	Replaces original disk 9-da-2ad
natda2af.dxf:	Replaces original disk 9-da-2ad

This should complete the requirement on survey deliverables for the Atchafalaya Sediment Delivery project. If you experience any problems, please give us a call.

Sincerely yours,

BROWN CUNNINGHAM & GANNUCH, INC.

Emmett J. Mayer, Jr., P.E.

cc: R.Gannuch



# Brown Cunningham Gannuch

ENGINEERS • ARCHITECTS • CONSULTANTS

February 4, 1999

Mr. Van Cook  
LaDNR - Coastal Restoration  
625 N. Fourth Street  
Baton Rouge, LA 70804

RE: Big Island Mining (XAT-7) Atchafalaya Sediment Delivery  
(PAT-2) CWPPRA Project - Project Construction Surveys

Dear Mr. Cook:

We herewith transmit the following Big Island Mining survey information as a requirement to our engineering agreement with LaDNR on the subject project:

1. Total of 135 full size drawings describing the channels and disposal areas for the Big Island Mining project. These surveys were performed by River/Road Construction Co. and witnessed by BCG inspectors.
2. Also included area total of 4 full size drawings describing the re-dredging of the shoaled entrance to Natal Channel. These surveys were performed by River/Road Construction Co. and witnessed by BCG inspectors.

In addition we are transmitting a total of 133 electronic diskettes that contain all survey plotted information produced on the Big Island Mining Project.. The diskettes are basically compiled in the formats as follows:

1. .DWG files: Actual drawings of before/after dredging surveys performed. Can be used to reprint drawings described above.
2. .DXF files: Actual scaled survey plots used to prepare the .DWG files.
3. Data files: The listing of all survey points shown on the drawings, these files use the following extensions: .dat, .x y z, .prn, .bak, .wk4, .asc, .ad, and .sum.

The after dredging plan view of Channel "A" Sta. 140+00 to Sta. 180+00 is not included with this submittal. An electronic copy of this drawing is being furnished by River Road Construction Company and will be forwarded as an addendum when it is received.

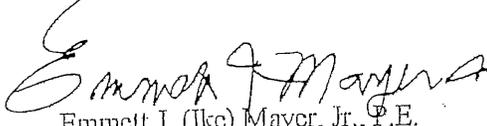
This completes the survey requirement deliverable for the Big Island Mining Project. If you have any questions/concerns, please feel free to call us @ (225) 924-3116.

Sincerely yours,

BROWN, CUNNINGHAM AND GANNUCH, INC.

EJM/jgs

cc: R. Gannuch, BCG

  
Emmett J. (Ike) Mayer, Jr., P.E.

DATA DISK INDEX

No.	Diskett Title	File Name	Date	Remarks
1	BIM Channel "A" A.D. Dwg files 7+00 to 12+00 21+00 to 43+00	BA1021AS.dwg	5-6-98	Big Island Channel A A.D. Xsection
1	BIM Channel "A" A.D. Dwg files 7+00 to 12+00 21+00 to 43+00	BA214AP.dwg	5-6-98	Big Island Channel A A.D. Plan View 21+00 to 46+00
1	BIM Channel "A" A.D. Dwg files 7+00 to 12+00 21+00 to 43+00	BA2225AS.dwg	5-6-98	Big Island Channel A A.D. Xsection 22+00 to 25+00
1	BIM Channel "A" A.D. DXF Files 7+00 to 12+00 21+00 to 43+00	BA2629AS.dwg	5-6-98	Big Island Channel A A.D. Xsection 26+00 to 29+00
1	BIM Channel "A" A.D. DXF Files 7+00 to 12+00 21+00 to 43+00	BA3033AS.dwg	5-6-98	Big Island Channel A A.D. Xsection 30+00 to 33+00
1	BIM Channel "A" A.D. DXF Files 7+00 to 12+00 21+00 to 43+00	BA7-12AP.dwg	5-6-98	Big Island Channel A Plan View A.D. 7+00 to 13+00
2	BIM Channel "A" 13+00-20+00 A.D.	BA1316AS.dwg	4-16-98	Big Island Channel A A.D. Cross section 13+00-16+00
2	BIM Channel "A" 13+00-20+00 A.D.	BA1320AP.dwg	4-16-98	Big Island Channel A Plan view 13+00-16+00
2	BIM Channel "A" 13+00-20+00 A.D.	BA1720AS.dwg	4-16-98	Big Island Channel A A.D. Cross section 17+00-20+00
3	BIM Channel "A" AD Dwg Files 7+00 to 12+00 +21+00 to 43+00	BA3437AS.dwg	5-6-98	Big Island Channel A A.D. Xsection 34+00 to 37+00
3	BIM Channel "A" AD Dwg Files 7+00 to 12+00 +21+00 to 43+00	BA3841AS.dwg	5-6-98	Big Island Channel A A.D. Xsection 38+00 to 41+00

2	BIM Channel "A" AD Dwg Files 7+00 to 12+00 +21+00 to 43+00	BA4245AS.dwg	5-6-98	Big Island Channel A A.D. Xsection 42+00 to 45+00
3	BIM Channel "A" AD Dwg Files 7+00 to 12+00 +21+00 to 43+00	BA7-9AS.dwg	5-6-98	Big Island Channel A AD Xsection 7+00 to 9+00
4	BIM Channel "A" A.D. sta 42+00-63+00	Bi4263ap.dwg	5-11-98	Big Island Channel A A.D. Plan View 42+00-63+00
4	BIM Channel "A" A.D. sta 42+00-63+00	SECDWG1.dwg	5-11-98	Big Island Channel A A.D. Cross section 42+00-45+00
4	BIM Channel "A" A.D. sta 42+00-63+00	SECDWG2.dwg	5-10-98	Big Island Channel A A.D. Cross section 46+00-48+00
4	BIM Channel "A" A.D. sta 42+00-63+00	SECDWG3.dwg	5-11-98	Big Island Channel A A.D. Cross section 49+00-52+00
4	BIM Channel "A" A.D. sta 42+00-63+00	SECDWG4.dwg	5-10-98	Big Island Channel A A.D. Cross section 52+98-55+00
4	BIM Channel "A" A.D. sta 42+00-63+00	SECDWG5.dwg	5-10-98	Big Island Channel A A.D. Cross section 56+00-58+00
4	BIM Channel "A" A.D. sta 42+00-63+00	SECDWG6.dwg	5-10-98	Big Island Channel A A.D. Cross section 58+00-61+00
4	BIM Channel "A" A.D. sta 42+00-63+00	SECDWG7.dwg	5-10-98	Big Island Channel A A.D. Cross section 62+00-63+00
5	BIM Channel "A" A.D. 64+00-87+00	Xsec1.dwg	6-10-98	Big Island Channel A A.D. Cross Section 64+00-66+00
5	BIM Channel "A" A.D. 64+00-87+00	Xsec2.dwg	6-10-98	Big Island Channel A A.D. Cross Section 67+00-69+00
5	BIM Channel "A" A.D. 64+00-87+00	Xsec3.dwg	6-10-98	Big Island Channel A A.D. Cross Section 70+00-72+00
5	BIM Channel "A" A.D. 64+00-87+00	Xsec4.dwg	6-10-98	Big Island Channel A A.D. Cross Section 73+00-75+00
5	BIM Channel "A" A.D. 64+00-87+00	Xsec5.dwg	6-10-98	Big Island Channel A A.D. Cross Section 76+00-79+00
5	BIM Channel "A" A.D. 64+00-87+00	Xsec6.dwg	6-10-98	Big Island Channel A A.D. Cross Section 80+00-83+00
5	BIM Channel "A" A.D. 64+00-87+00	Xsec7.dwg	6-10-98	Big Island Channel A A.D. Cross Section 84+00-86+00

	BIM Channel "A" A.D. 64+00-87+00	Plan.dwg	6-11-98	Big Island Channel A A.D. Plan View 64+00-87+00
6	BIM Channel "A" A.D. 64+00-87+00	Plan.dxf	6-11-98	Big Island Channel A A.D. Plan View 64+00 - 87+00
6	BIM Channel "A" A.D. 64+00-87+00	Xsec8.dwg	6-10-98	Big Island Channel A A.D. Cross Section 87+00
7	BIM Survey "A" A.D. Survey 88+00-104+00	88104p.dwg	7-7-98	Big Island Channel "A" A.D. Plan View 88+00-117+00
7	BIM Survey "A" A.D. Survey 88+00-104+00	Xsec101104.dwg	7-6-98	Big Island Channel "A" Cross- Section 102+00-104+00
7	BIM Survey "A" A.D. Survey 88+00-104+00	Xsec8891.dwg	7-6-98	Big Island Channel "A" Cross- Section 88+00-91+00
7	BIM Survey "A" A.D. Survey 88+00-104+00	Xsec9295.dwg	7-6-98	Big Island Channel "A" Cross- Section 92+00-95+00
7	BIM Survey "A" A.D. Survey 88+00-104+00	Xsec9698.dwg	7-6-98	Big Island Channel "A" Cross- Section 96+00-98+00
7	BIM Survey "A" A.D. Survey 88+00-104+00	Xsec99101.dwg	7-6-98	Big Island Channel "A" Cross- Section 99+00-101+00
8	BIM Channel "A" A.D. Survey 105+00-117+00	88117.dwg	7-7-98	Big Island Channel A A.D. Plan View 88+00-117+00
8	BIM Channel "A" A.D. Survey 105+00-117+00	Toe.dat	7-7-98	Cross-section co-ordinates and asimuth
8	BIM Channel "A" A.D. Survey 105+00-117+00	Xsec105107.dwg	7-6-98	Big Island Channel A A.D. Cross- Section 105+00-107+00
8	BIM Channel "A" A.D. Survey 105+00-117+00	Xsec108110.dwg	7-6-98	Big Island Channel A A.D. Cross- Section 108+00-110+00
8	BIM Channel "A" A.D. Survey 105+00-117+00	Xsec111113.dwg	7-6-98	Big Island Channel A A.D. Cross- Section 111+00-113+00

8	BIM Channel "A" A.D. Survey 105+00-117+00	Xsec112114.dwg	7-6-98	Big Island Channel A A.D. Cross- Section 114+00-116+00
8	BIM Channel "A" A.D. Survey 105+00-117+00	Xsec117.dwg	7-6-98	Big Island Channel A A.D. Cross- Section-117+00
9	BIM Channel "A" A.D. Survey 118+00 to 139+00	118-121.dwg	7-19-98	Big Island Channel A A.D. Cross section 118+00-121+00
9	BIM Channel "A" A.D. Survey 118+00 to 139+00	122-124.dwg	7-19-98	Big Island Channel A A.D. Cross section 122+00-124+00
9	BIM Channel "A" A.D. Survey 118+00 to 139+00	125-128.dwg	7-19-98	Big Island Channel A A.D. Cross section 125+00-128+00
9	BIM Channel "A" A.D. Survey 118+00 to 139+00	129-132.dwg	7-19-98	Big Island Channel A A.D. Cross section 129+00-132+00
9	BIM Channel "A" A.D. Survey 118+00 to 139+00	133-136.dwg	7-19-98	Big Island Channel A A.D. Cross section 133+00-136+00
9	BIM Channel "A" A.D. Survey 118+00 to 139+00	137-139.dwg	7-19-98	Big Island Channel A A.D. Cross section 137+00-139+00
9	BIM Channel "A" A.D. Survey 118+00 to 139+00	Plan.dwg	7-19-98	Big Island Channel A A.D. Cross section Plan View 118+00-139+00
10	BIM Channel "A" 140+00-180+00 A.D. Surveys	140-143.dwg	8-30-98	Big Island Channel A A.D. Cross section 140+00-143+00
10	BIM Channel "A" 140+00-180+00 A.D. Surveys	144-147.dwg	8-30-98	Big Island Channel A A.D. Cross section 144+00-147+00
10	BIM Channel "A" 140+00-180+00 A.D. Surveys	148-151.dwg	8-30-98	Big Island Channel A A.D. Cross section 148+00-151+00
10	BIM Channel "A" 140+00-180+00 A.D. Surveys	152-154.dwg	8-31-98	Big Island Channel A A.D. Cross section 152+00-154+00

7	BIM Channel "A" 140+00-180+00 A.D. Surveys	155-158.dwg	8-31-98	Big Island Channel A A.D. Cross section 155+00-158+00
10	BIM Channel "A" 140+00-180+00 A.D. Surveys	159-162.dwg	8-31-98	Big Island Channel A A.D. Cross section 159+00-162+00
11	BIM Channel "A" A.D. Surveys 140-180 dwg.	163-166.dwg	8-31-98	Big Island Channel A A.D. Cross section 163+00-166+00
11	BIM Channel "A" A.D. Surveys 140-180 dwg.	167-170.dwg	8-31-98	Big Island Channel A A.D. Cross section 167+00-170+00
11	BIM Channel "A" A.D. Surveys 140-180 dwg	171-174.dwg	8-31-98	Big Island Channel A A.D. Cross section 171+00-174+00
11	BIM Channel "A" A.D. Surveys 140-180 dwg.	175-178.dwg	8-31-98	Big Island Channel A A.D. Cross section 175+00-178+00
11	BIM Channel "A" A.D. Surveys. 140-180 dwg	179-180.dwg	8-31-98	Big Island Channel A A.D. Cross section 179+00-180+00
12	BIM Channel "A" A.D. Survey 180+00-206+00	180-183.dwg	9-18-98	Big Island Channel "A" A.D. Cross section 180+00-183+00
12	BIM Channel "A" A.D. Survey 180+00-206+00	184-187.dwg	9-18-98	Big Island Channel "A" A.D. Cross section 184+00-187+00
12	BIM Channel "A" A.D. Survey 180+00-206+00	188-191.dwg	9-18-98	Big Island Channel "A" A.D. Cross section 188+00-191+00
12	BIM Channel "A" A.D. Survey 180+00-206+00	192-195.dwg	9-18-98	Big Island Channel "A" A.D. Cross section 192+00-195+00
12	BIM Channel "A" A.D. Survey 180+00-206+00	196-199.dwg	9-18-98	Big Island Channel "A" A.D. Cross section 196+00-199+00
12	BIM Channel "A" A.D. Survey 180+00-206+00	200-203.dwg	9-18-98	Big Island Channel "A" A.D. Cross section 200+00-203+00

12	BIM Channel "A" A.D. Survey 180+00-206+00	180206cl.xyz	9-24-98	x,y,z co-ordinates no point numbers
13	BIM Channel "A" A.D. Survey 180+00-206+00	204-206.dwg	9-20-98	Big Island Channel "A" A.D. Cross section 204+00-206+00
13	BIM Channel "A" A.D. Survey 180+00-206+00	Plan.dwg	9-21-98	Big Island Channel "A" A.D. Plan view 180+00-206+00
13	BIM Channel "A" A.D. Survey 180+00-206+00	Sta.dat	9-24-98	Cross section line co-ordinates, azimuth and distance
14	BIM Channel "A" A.D. Survey	202207ad.dxf	10-6-98	A.D. cross section plan view station 206+00, 206+75, 207+00
14	BIM Channel "A" A.D. Survey	202207ad.xyz	10-6-98	A.D. x,y,z co-ordinates no point number
14	BIM Channel "A" A.D. Survey	206207.dwg	10-6-98	A.D. cross section of station 206+00, 206+75, 207+00
14	BIM Channel "A" A.D. Survey	207Plan.dwg	10-6-98	A.D. cross section plan view station 206+00, 206+75, 207+00
14	BIM Channel "A" A.D. Survey	Channel.prn	10-6-98	A.D. cross section plan view station 206+00, 206+75, 207+00
14	BIM Channel "A" A.D. Survey	Sta.dat	10-6-98	A.D. Survey Channel Toe and center line Templet co-ordinates
14	BIM Channel "A" A.D. Survey	Survey.dat	10-6-98	Survey data file
14	BIM Channel "A" A.D. Survey	Xsecsh1.dxf	10-6-98	A.D. cross section plan view station 206+00, 206+75, 207+00
15	BIM Channel "A" A.D. DXF Files 7+00 - 12+00 21+00 to 43+00	ADXSSH.1.dxf	5-6-98	Big Island Channel "A" A.D. Xsection 7+00 to 9+00
15	BIM Channel "A" A.D. DXF Files 7+00 - 12+00 21+00 to 43+00	ADXSSH.2.dxf	5-6-98	Big Island Channel "A" A.D. Xsection 10+00 to 12+00 and 21+00

	BIM Channel "A" A.D. DXF Files 7+00 - 12+00 21+00 to 43+00	BICHAAD2.dxf	5-6-98	A.D. Plan View 21+00 to 48+00
15	BIM Channel "A" A.D. Survey x,y,z file	BICHAAD2.xyz	5-6-98	Point File x,y,z no pt. numbers
16	BIM Channel "A" A.D. 13+00-20+00	13-20sh1.dxf	4-16-98	Cross Section 20+00-23+00
16	BIM Channel "A" A.D. 13+00-20+00	13-20sh2.dxf	4-16-98	Cross Section 24+00-27+00
16	BIM Channel "A" A.D. 13+00-20+00	Bichaad.dxf	4-15-98	Plan view cross sections 13+00-20+00
17	BIM Channel "A" A.D. DXF Files 7+00 to 12+00 21+00 to 43+00	ADXSSH4.dxf	5-6-98	Big Island Channel A A.D. Xsection 26+00 to 29+00
17	BIM Channel "A" A.D. DXF Files 7+00 to 12+00 21+00 to 43+00	ADXSSH5.dxf	5-6-98	Big Island Channel A A.D. Xsection 30+00 to 33+00
17	BIM Channel "A" A.D. DXF Files 7+00 to 12+00 21+00 to 43+00	ADXSSH6.dxf	5-6-98	Big Island Channel A A.D. Xsection 34+00 to 37+00
17	BIM Channel "A" A.D. DXF Files 7+00 to 12+00 21+00 to 43+00	ADXSSH7.dxf	5-6-98	Big Island Channel A A.D. Xsection 38+00 to 41+00
17	BIM Channel "A" A.D. DXF Files 7+00 to 12+00 21+00 to 43+00	ADXSSH8.dxf	5-6-98	Big Island Channel A A.D. Xsection 42+00 to 45+00
18	BIM Channel "A" A.D. 42+00-63+00	Ad0510.dxf	5-11-98	Plan view cross section 42+00-63+00
18	BIM Channel "A" A.D. 42+00-63+00	Xsecsh1.dxf	5-10-98	Cross section 42+00-45+00

18	BIM Channel "A" A.D. 42+00-63+0	Xsecsh2.dxf	5-10-98	Cross section 46+00-48+00
18	BIM Channel "A" A.D. 42+00-63+0	Xsecsh3.dxf	5-10-98	Cross section 49+00-52+00
18	BIM Channel "A" A.D. 42+00-63+0	Xsecsh4.dxf	5-10-98	Cross section 52+98-55+00
18	BIM Channel "A" A.D. 42+00-63+0	Xsecsh5.dxf	5-10-98	Cross section 56+00-58+00
19	BIM Channel "A" A.D. sta 42+00-63+00	Xsecsh6.dxf	5-10-98	Cross section 58+00-61+00
19	BIM Channel "A" A.D. sta 42+00-63+00	Xsecsh7.dxf	5-10-98	Cross section 62+00-63+00
20	BIM Channel "A" A.D. 64+00-87+00	Xsecsh1.dxf	6-10-98	A.D. Cross Section 64+00-66+00
20	BIM Channel "A" A.D. 64+00-87+00	Xsecsh2.dxf	6-10-98	A.D. Cross Section 67+00-69+00
20	BIM Channel "A" A.D. 64+00-87+00	Xsecsh3.dxf	6-10-98	A.D. Cross Section 70+00-72+00
20	BIM Channel "A" A.D. 64+00-87+00	Xsecsh4.dxf	6-10-98	A.D. Cross Section 73+00-75+00
20	BIM Channel "A" A.D. 64+00-87+00	Xsecsh5.dxf	6-10-98	A.D. Cross Section 76+00-79+00
20	BIM Channel "A" A.D. 64+00-87+00	Xsecsh6.dxf	6-10-98	A.D. Cross Section 80+00-83+00
20	BIM Channel "A" A.D. 64+00-87+00	Xsecsh7.dxf	6-10-98	A.D. Cross Section 84+00-86+00
20	BIM Channel "A" A.D. 64+00-87+00	Xsecsh8.dxf	6-10-98	A.D. Cross Section 87+00
21	BIM Channel "A" A.D. Survey 88+00-104+00	Sub88108.dxf	7-7-98	Big Island Channel "A" Plan View 88+00-104+20
21	BIM Channel "A" A.D. Survey 88+00-104+00	Sub88108.xyz	7-7-98	x,y,z co-ordinate No point numbers
21	BIM Channel "A" A.D. Survey 88+00-104+00	Toe.dat	7-7-98	Cross Section line co-ordinates distance azimuths

21	BIM Channel "A" A.D. Survey 88+00-104+00	Xsecsh1.dxf	7-6-98	Big Island Channel "A" A.D. Cross Section 88+00-91+00
21	BIM Channel "A" A.D. Survey 88+00-104+00	Xsecsh2.dxf	7-6-98	Big Island Channel "A" Cross Section 92+00-95+20
21	BIM Channel "A" A.D. Survey 88+00-104+00	Xsech3.dxf	7-6-98	Big Island Channel "A" Cross Section 96+00-98+00
21	BIM Channel "A" A.D. Survey 88+00-104+00	Xsech4.dxf	7-6-98	Big Island Channel "A" Cross Section 99+00-101+00
21	BIM Channel "A" A.D. Survey 88+00-104+00	Xsecsh5.dxf	7-6-98	Big Island Channel "A" Cross Section 102+00-104+00
22	BIM Channel "A" A.D. Survey 105+00 to 117+00	Sub105117.dxf	7-7-98	Plan View of Cross-Section 105+00 to 117+00
22	BIM Channel "A" A.D. Survey 105+00 to 117+00	Sub105117.xyz	7-7-98	x,y,z Co-ordinates no point number
22	BIM Channel "A" A.D. Survey 105+00 to 117+00	Xsecsh1.dxf	7-6-98	Big Island Channel "A" A.D. Cross- Section 105+00-107+00
22	BIM Channel "A" A.D. Survey 105+00 to 117+00	Xsecsh2.dxf	7-6-98	Big Island Channel "A" A.D. Cross- Section 108+00-110+00
22	BIM Channel "A" A.D. Survey 105+00 to 117+00	Xsecsh3.dxf	7-6-98	Big Island Channel "A" A.D. Cross- Section 111+00-113+00
22	BIM Channel "A" A.D. Survey 105+00 to 117+00	Xsecsh4.dxf	7-6-98	Big Island Channel "A" A.D. Cross- Section 114+00-116+00
22	BIM Channel "A" A.D. Survey 105+00 to 117+00	Xsecsh5.dxf	7-6-98	Big Island Channel "A" A.D. Cross- Section 117+00
23	BIM Channel "A" A.D. Survey 118+00-139+00	118139ad.dxf	7-19-98	Xsection Plan View 118+00-139+00

23	BIM Channel "A" A.D. Survey 118+00-139+00	Xsecsh1.dxf	7-19-98	Xsection 118+00-121+00
23	BIM Channel "A" A.D. Survey 118+00-139+00	Xsecsh2.dxf	7-19-98	Xsection 122+00-124+00
23	BIM Channel "A" A.D. Survey 118+00-139+00	Xsecsh3.dxf	7-19-98	Xsection 125+00-128+00
23	BIM Channel "A" A.D. Survey 118+00-139+00	Xsecsh4.dxf	7-19-98	Xsection 129+00-132+00
23	BIM Channel "A" A.D. Survey 118+00-139+00	Xsecsh5.dxf	7-19-98	Xsection 133+00-136+00
23	BIM Channel "A" A.D. Survey 118+00-139+00	Xsecsh6.dxf	7-19-98	Xsection 137+00-139+00
24	BIM Channel "A" A.D. 140+00-180+00	Subsh1.dxf	8-30-98	Cross section 140+00-143+00
24	BIM Channel "A" A.D. 140+00-180+00	Subsh2.dxf	8-30-98	Cross section 144+00-147+00
24	BIM Channel "A" A.D. 140+00-180+00	Subsh3.dxf	8-30-98	Cross section 148+00-151+00
24	BIM Channel "A" A.D. 140+00-180+00	Subsh4.dxf	8-30-98	Cross section 152+00-154+00
24	BIM Channel "A" A.D. 140+00-180+00	Subsh5.dxf	8-30-98	Cross section 155+00-158+00
24	BIM Channel "A" A.D. 140+00-180+00	Subsh10.dxf	8-30-98	Cross section 175+00-178+00
24	BIM Channel "A" A.D. 140+00-180+00	Subsh11.dxf	8-30-98	Cross section 179+00-180+00
25	BIM Channel "A" A.D. 140+00-180+00	Subsh6.dxf	8-30-98	Cross section 159+00-162+00
25	BIM Channel "A" A.D. 140+00-180+00	Subsh7.dxf	8-30-98	Cross section 163+00-164+00
25	BIM Channel "A" A.D. 140+00-180+00	Subsh8.dxf	8-30-98	Cross section 167+00-170+00

25	BIM Channel "A" A.D. 140+00-180+00	Subsh9.dxf	8-30-98	Cross section 171+00-174+00
26	BIM Channel "A" A.D. Survey	Xsecsh1.dxf	9-20-98	Cross section 180+00-183+00
26	BIM Channel "A" A.D. Survey	Xsecsh2.dxf	9-20-98	Cross section 184+00-187+00
26	BIM Channel "A" A.D. Survey	Xsecsh3.dxf	9-20-98	Cross section 188+00-191+00
26	BIM Channel "A" A.D. Survey	Xsecsh4.dxf	9-20-98	Cross section 192+00-195+00
26	BIM Channel "A" A.D. Survey	Xsecsh5.dxf	9-20-98	Cross section 196+00-199+00
26	BIM Channel "A" A.D. Survey	Xsecsh6.dxf	9-20-98	Cross section 200+00-203+00
27	BIM Channel "A" A.D. Survey	180206ad.dxf	9-20-98	Plan view cross section sta 180+00 206+00
27	BIM Channel "A" A.D. Survey	180206ad.xyz	9-24-98	x,y,z co-ordinates, no point numbers
27	BIM Channel "A" A.D. Survey	Channel.prn	9-24-98	Templet co-ordinates
27	BIM Channel "A" A.D. Survey	PLANCLAD.dxf	9-19-98	Plan view centerline 180+00-206+00
27	BIM Channel "A" A.D. Survey	Xsecsh7.dxf	9-20-98	Cross section 204+00-206+00
28	BIM Disk 1 Channel "A" B.D. Surveys	CHANA1PLAN.dwg	3-19-98	BIM Channel "A" Plan view -3+00 to 20+00
28	BIM Disk 1 Channel "A" B.D. Surveys	XSECH1.dwg	3-15-98	W Pass Channel "A" Cross Section 3+00 to 1+00
28	BIM Disk 1 Channel "A" B.D. Surveys	XSECH2.dwg	3-15-98	W Pass Channel "A" Cross Section 2+00 to 6+00
28	BIM Disk 1 Channel "A" B.D. Surveys	XSECH3.dwg	3-15-98	W Pass Channel "A" Cross Section 7+00 to 10+00

28	BIM Disk 1 Channel "A" B.D. Surveys	XSECH4.dwg	3-15-98	W Pass Channel "A" Cross Section 10+00 to 20+00
28	BIM Disk 1 Channel "A" B.D. Surveys	Bimcha.wp4.txt	11-23-98	BIM Channel "A" Template Co-ordinate
29	BIM Disk 2 Channel "A" B.D. Surveys	Tem 20-30.wp4.txt	11-23-98	Big Island Channel "A" Template Co-ordinates
29	BIM Disk 2 Channel "A" B.D. Surveys	BIM 2230p.dwg	3-19-98	Big Island Channel "A" Plan View 20+00 to 30+00
29	BIM Disk 2 Channel "A" B.D. Surveys	Bix 2230a.dwg	3-19-98	Big Island Channel "A" Cross Section 22+00 to 36+00
29	BIM Disk 2 Channel "A" B.D. Surveys	Bix 2230a.dwg	3-19-98	Big Island Channel "A" Cross Section 27+00 to 30+00
29	BIM Disk 2 Channel "A" B.D. Surveys	Chanalb.dxf	3-26-98	Big Island Channel "A" Elevation Shots sta 22+00 to 30+00
29	BIM Disk 2 Channel "A" B.D. Surveys	Xsectsh1.dxf	3-26-98	Big Island Channel "A" Cross Section 22+00 to 26+00
29	BIM Disk 2 Channel "A" B.D. Surveys	Xsectsh2.dxf	3-26-98	Big Island Channel "A" Cross Section 27+00 to 30+00
30	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	Xsbdsh1.dwg	3-30-98	BIM Channel "A" BD Cross Sections sta 35+00 to 39+00
30	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	Xsbdsh2.dwg	3-30-98	BIM Channel "A" BD Cross Sections sta 40+00 to 44+00
30	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	Xsbdsh3.dwg	3-29-98	BIM Channel "A" BD Cross Sections sta 45+00 to 49+00
30	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	Xsbdsh4.dwg	3-29-98	BIM Channel A BD Cross Sections sta 50+00 to 54+00

21	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	BA31-58p.dwg	10-23-98	Big Island Channel "A" Plan View 30+00 to 57+98
31	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	BAX31-34.dwg	3-30-98	Big Island Channel "A" BD Cross Sections sta 31+00 to 34+00
31	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	Xsbdsh5.dwg	3-29-98	BIM Channel "A" BD Cross Section sta 55+00 to 57+98
31	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	Bax31sh1.dwg	3-30-98	BIM Channel "A" BD Cross Section Sta 31+00 to 34+00
31	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	Ba31-58p.bak	3-30-98	Back Up File
31	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	BIMTEM.wk4	11-20-98	Channel Template Bottom Co-ordinates
31	BIM Channel "A" Sta 30+00 to 58+00 B.D. Surveys	BIMTEM.Coo.tt	3-31-98	Channel Template Bottom Co-ordinates
	BIM Channel "A" BD Survey 58+00 to 92+00	BA5892.52.dwg	4-15-98	Big Island Channel A B.D. Cross Sections sta 68+00 to 76+00
32	BIM Channel "A" BD Survey	BA5892.53.dwg	4-15-98	Big Island Channel A B.D. Cross Sections sta 78+00 to 87+00
32	BIM Channel "A" BD Survey	BA5892.54.dwg	4-15-98	Big Island Channel A B.D. Cross Section sta 88+00 to 92+00
32	BIM Channel "A" BD Survey	B1A5875P.dwg	4-15-98	Big Island Channel A B.D. Plan View sta 58+00 to 75+00
32	BIM Channel "A" BD Survey	B1A5892S.dwg	4-15-98	Big Island Channel A X Section sta 58+00 to 67+00
32	BIM Channel "A" BD Survey	B1A7592P.dwg	4-15-98	Big Island Channel A B.D. Plan View sta 76+00 to 92+00
33	BIM Channel "A" B.D. Surveys 93+00 to 120+00	A93120BP.dwg	5-18-98	Big Island Channel A B.D. Plan View 93+00 to 120+00
33	BIM Channel "A" B.D. Surveys 93+00 to 120+00	A9397BDX.dwg	5-18-98	Big Island Channel A B.D. Xsection 93+00 to 97+00

22	BIM Channel "A" B.D. Surveys 93+00 to 120+00	A98101BDX.dwg	5-18-98	Big Island Channel A B.D. Xsection 98+00 to 101+00
33	BIM Channel "A" B.D. Surveys 93+00 to 120+00	A102BDX.dwg	5-18-98	Big Island Channel A B.D. Xsection 102+00 to 104+00
33	BIM Channel "A" B.D. Surveys 93+00 to 120+00	A105BDX.dwg	5-18-98	Big Island Channel A B.D. Xsection 105+00 to 108+00
33	BIM Channel "A" B.D. Surveys 93+00 to 120+00	A109BDX.dwg	5-18-98	Big Island Channel A B.D. Xsection 109+00 to 112+00
33	BIM Channel "A" B.D. Surveys 93+00 to 120+00	BA113BDX.dwg	5-18-98	Big Island Channel A B.D. Xsection 113+00 to 116+00
33	BIM Channel "A" B.D. Surveys 93+00 to 120+00	BA117BDX.dwg	5-18-98	Big Island Channel A B.D. Xsection 117+00 to 120+00
34	BIM Channel "A" B.D. Xsection 120+00 to 152+16	XSEC1.dwg	5-23-98	Big Island Channel A B.D. X-section 120+00 - 123+00
34	BIM Channel "A" B.D. Xsection 120+00 to 152+16	XSEC2.dwg	5-23-98	Big Island Channel A B.D. X-section 124+00 - 128+00
34	BIM Channel "A" B.D. Xsection 120+00 to 152+16	XSEC3.dwg	5-23-98	Big Island Channel A B.D. X-section 129+00 - 133+00
34	BIM Channel "A" B.D. Xsection 120+00 to 152+16	XSEC4.dwg	5-23-98	Big Island Channel A B.D. X-section 134+00 - 138+00
34	BIM Channel "A" B.D. Xsection 120+00 to 152+16	XSEC5.dwg	5-23-98	Big Island Channel A B.D. X-section 139+00 - 143+00
34	BIM Channel "A" B.D. Xsection 120+00 to 152+16	XSEC6.dwg	5-23-98	Big Island Channel A B.D. X-section 143+18 - 147+00
34	BIM Channel "A" B.D. Xsection 120+00 to 152+16	XSEC7.dwg	5-23-98	Big Island Channel A B.D. X-section 147+18 - 151+00
34	BIM Channel "A" B.D. Xsection 120+00 to 152+16	XSEC8.dwg	5-23-98	Big Island Channel A B.D. X-section 152+00 - 152+16

35	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec1.dwg	5-20-98	Big Island Channel A B.D. X-section Cross Section 152+16 - 157+00
35	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec2.dwg	5-20-98	Big Island Channel A B.D. X-section Cross Section 158+00 - 163+00
35	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec3.dwg	5-20-98	Big Island Channel A B.D. X-section Cross Section 164+00 - 169+00
35	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec4.dwg	5-20-98	Big Island Channel A B.D. X-section Cross Section 170+00 - 175+00
35	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec5.dwg	5-20-98	Big Island Channel A B.D. X-section Cross Section 176+00 - 181+00
36	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec6.dwg	5-20-98	Big Island Channel A B.D. X-section 182+00 - 187+00
36	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec7.dwg	5-20-98	Big Island Channel A B.D. X-section 188+00 - 193+00
36	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec8.dwg	5-20-98	Big Island Channel A B.D. X-section 194+00 - 196+00
36	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec9.dwg	5-20-98	Big Island Channel A B.D. X-section 200+00 - 205+00
36	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsec10.dwg	5-20-98	Big Island Channel A B.D. X-section 206+00
37	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	143-147.dwg	7-18-98	Big Island Channel A B.D. X-sec 90+00 - 180+00 Cross-Section 143+00 - 147+00
37	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	148-152.dwg	7-18-98	Big Island Channel A B.D. X-sec 90+00 - 180+00 Cross-Section 148+00 - 152+00

37	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	152-156.dwg	7-18-98	Big Island Channel A B.D.X-sec 90+00 - 180+00 Cross-Section 152+16 - 156+00
37	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	157-161.dwg	7-18-98	Big Island Channel A B.D.X-sec 90+00 - 180+00 Cross-Section 157+00 - 161+00
37	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	162-166.dwg	7-18-98	Big Island Channel A B.D.X-sec 90+00 - 180+00 Cross-Section 162+00 - 166+00
37	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	167-171.dwg	7-18-98	Big Island Channel A B.D.X-sec 90+00 - 180+00 Cross-Section 167+00 - 171+00
38	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	172-176.dwg	7-18-98	Big Island Channel A B.D. X-sec 90+00-180+00 172+00-176+00
38	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	177-180.dwg	7-18-98	Big Island Channel A B.D. X-sec 90+00-180+00 177+00-180+00
38	BIM Channel "A" B.D. Survey 143+00 - 180+00 375' Bottom	Plan.dwg	7-19-98	Big Island Channel A Plan View 143+00 to 180+00
39	BIM Channel "A"	90180BD.xyz	7-19-98	x,y,z without point no.
40	BIM Channel "A" B.D. Survey Revised Widths, 180+00-206+00	180-184.dwg	7-17-98	Big Island Channel A B.D. X-section 180+00-184+00 (Labeled incorrectly as A.D. Surveys)
40	BIM Channel "A" B.D. Survey Revised Widths, 180+00-206+00	185-190.dwg	7-17-98	Big Island Channel A B.D. X-section 185+00-190+00 (Labeled incorrectly as A.D. Surveys)

40	BIM Channel "A" B.D. Survey Revised Widths, 180+00-206+00	191-196.dwg	7-17-98	Big Island Channel A B.D. X-section 191+00-196+00 (Labeled incorrectly as A.D. Surveys)
40	BIM Channel "A" B.D. Survey Revised Widths, 180+00-206+00	197-201.dwg	7-17-98	Big Island Channel A B.D. X-section 197+00-201+00 (Labeled incorrectly as A.D. Surveys)
40	BIM Channel A B.D. Survey Revised Widths, 180+00-206+00	202-206.dwg	7-17-98	Big Island Channel "A" B.D. X-section 202+00-206+05
40	BIM Channel A B.D. Survey Revised Widths, 180+00-206+00	Channel.prn	7-20-98	Channel Templet x,y
40	BIM Channel A B.D. Survey Revised Widths, 180+00-206+00	Plan.dwg	7-20-98	Big Island Channel A B.D. X-section Plan View 180+00-184+00
40	BIM Channel A B.D. Survey Revised Widths, 180+00-206+00	Toe.dat	7-20-98	Station Line Co-ordinater
41	BIM Channel "A" B.D. Survey 143+00 to 180+00	Xsecsh1.dxf	7-18-98	Big Island Channel A B.D. X-section 143+00 -147+00
41	BIM Channel "A" B.D. Survey 143+00 to 180+00	Xsecsh2.dxf	7-18-98	Big Island Channel A B.D. X-section 148+00 -152+00
41	BIM Channel "A" B.D. Survey 143+00 to 180+00	Xsecsh3.dxf	7-18-98	Big Island Channel A B.D. X-section 152+16 -156+00
41	BIM Channel "A" B.D. Survey 143+00 to 180+00	Xsecsh4.dxf	7-18-98	Big Island Channel A B.D. X-section 157+00 -161+00
41	BIM Channel "A" B.D. Survey 143+00 to 180+00	Xsecsh5.dxf	7-18-98	Big Island Channel A B.D. X-section 162+00 -166+00
41	BIM Channel "A" B.D. Survey 143+00 to 180+00	Xsecsh6.dxf	7-18-98	Big Island Channel A B.D. X-section 167+00 -171+00
42	BIM Channel "A" B.D. Survey 143+00-180+00	90180bd.dxf	7-19-98	Plan View of Cross Sections 90+00-180+00

42	BIM Channel "A" B.D. Survey 143+00 to 180+00	Toe375.dat	7-19-98	Toe of Channel Co-Ordinator length and azimuth
42	BIM Channel "A" B.D. Survey 143+00 to 180+00	Xsecsh7.dxf	7-19-98	Big Island Channel A B.D. X-section 172+00 -176+00
42	BIM Channel "A" B.D. Survey 143+00 to 180+00	Xsecsh8.dxf	7-19-98	Big Island Channel A B.D. X-section 177+00-180+00
43	BIM Channel "A" B.D. Survey 180+00-207+00 Various Widths	Xsecsh1.dxf	7-17-98	Big Island Channel A B.D. X-section 180+00 to 184+00
43	BIM Channel "A" B.D. Survey 180+00-207+00 Various Widths	Xsecsh2.dxf	7-17-98	Big Island Channel A B.D. X-section 185+00 to 190+00
43	BIM Channel "A" B.D. Survey 180+00-207+00 Various Widths	Xsecsh3.dxf	7-17-98	Big Island Channel A B.D. X-section 191+00 to 196+00
43	BIM Channel "A" B.D. Survey 180+00-207+00 Various Widths	Xsecsh4.dxf	7-17-98	Big Island Channel A B.D. X-section 197+00 to 201+00
43	BIM Channel "A" B.D. Survey 180+00-207+00 Various Widths	Xsecsh5.dxf	7-17-98	Big Island Channel A B.D. X-section 202+00 to 206+05
44	BIM Channel "A" B.D. Survey 180+00-207+00 Revised Widths	108206bd.dxf	7-20-98	Plan View Sta 180+00-206+00
44	BIM Channel "A" B.D. Survey 180+00-207+00 Revised Widths	108206bd.xyz	7-20-98	x,y,z Co-ordinates no point no.

45	BIM Channel "A" Before Dredge 58+00 to 92+00	58-92sh1.dxf	4-15-98	BIM Channel "A" B.D. Cross Section sta 58+00 to 67+00
45	BIM Channel "A" Before Dredge 58+00 to 92+00	58-92sh2.dxf	4-15-98	BIM Channel "A" B.D. Cross Section sta 68+00 to 77+00
45	BIM Channel "A" Before Dredge 58+00 to 92+00	58-92sh3.dxf	4-15-98	BIM Channel "A" B.D. Cross Section sta 78+00 to 87+00
45	BIM Channel "A" Before Dredge 58+00 to 92+00	58-92sh4.dxf	4-15-98	BIM Channel "A" B.D. Cross Section sta 88+00 to 92+00
45	BIM Channel "A" Before Dredge 58+00 to 92+00	CHANA2.dxf	4-15-98	BIM Channel A Plan View sta 57+98 to 75+00
46	BIM Channel "A" Sta 30+00 to 58+00 B.D. Survey	BA31-58p.dxf	3-30-98	BIM Channel A Plan View Section sta 3+00 to 58+00
46	BIM Channel "A" Sta 30+00 to 58+00 B.D. Survey	Xsbdsh1.dxf	3-29-98	BIM Channel A BD Cross Section sta 35+00 to 39+00
46	BIM Channel "A" Sta 30+00 to 58+00 B.D. Survey	Xsbdsh2.dxf	3-29-98	BIM Channel A BD Cross Section sta 40+00 to 44+00
46	BIM Channel "A" Sta 30+00 to 58+00 B.D. Survey	Xsbdh4.dxf	3-29-98	BIM Channel A BD Cross Section sta 50+00 to 54+00
46	BIM Channel "A" Sta 30+00 to 58+00 B.D. Survey	Xsbdshs.dxf	3-29-98	BIM Channel A BD Cross Section sta 55+00 to 57+98
47	BIM Channel "A" B.D. 93+00 to 120+00 dxf files	CHAGPSF.dxf	5-18-98	B.D. Plan View elevations sta 93+00 - 120+00
47	BIM Channel "A" B.D. 93+00 to 120+00 dxf files	SH1.dxf	5-18-98	B.D. Cross Section 93+00 - 97+00
47	BIM Channel "A" B.D. 93+00 to 120+00 dxf files	SH2.dxf	5-18-98	B.D. Cross Section 94+00 - 101+00

	BIM Channel "A" B.D. 93+00 to 120+00 dxf files	SH3.dxf	5-18-98	B.D. Cross Section 102+00 - 104+00
47	BIM Channel "A" B.D. 93+00 to 120+00 dxf files	SH4.dxf	5-18-98	B.D. Cross Section 105+00 - 108+00
47	BIM Channel "A" B.D. 93+00 to 120+00 dxf files	SH5.dxf	5-18-98	B.D. Cross Section 109+00 - 112+00
47	BIM Channel "A" B.D. 93+00 to 120+00 dxf files	SH6.dxf	5-18-98	B.D. Cross Section 113+00 - 116+00
47	BIM Channel "A" B.D. 93+00 to 120+00 dxf files	SH7.dxf	5-18-98	B.D. Cross Section 117+00 - 120+00
48	BIM Channel A B.D. X-sec 120+00 to 152+16	Xsecsh1.dxf	5-23-98	Big Island Channel "A" B.D. X-section 120+00 - 123+00
48	BIM Channel A B.D. X-sec 120+00 to 152+16	Xsecsh2.dxf	5-23-98	Big Island Channel "A" B.D. X-section 124+00 - 128+00
48	BIM Channel A B.D. X-sec 120+00 to 152+16	Xsecsh3.dxf	5-23-98	Big Island Channel "A" B.D. X-section 129+00 - 133+00
48	BIM Channel A B.D. X-sec 120+00 to 152+16	Xsecsh4.dxf	5-23-98	Big Island Channel "A" B.D. X-section 134+00 - 138+00
48	BIM Channel A B.D. X-sec 120+00 to 152+16	Xsecsh5.dxf	5-23-98	Big Island Channel "A" B.D. X-section 139+00 - 143+00
48	BIM Channel A B.D. X-sec 120+00 to 152+16	Xsecsh6.dxf	5-23-98	Big Island Channel "A" B.D. X-section 143+00 - 147+00
48	BIM Channel A B.D. X-sec 120+00 to 152+16	Xsecsh7.dxf	5-23-98	Big Island Channel "A" B.D. X-section 147+00 - 151+00
48	BIM Channel A B.D. X-sec 120+00 to 152+16	Xsecsh8.dxf	5-23-98	Big Island Channel "A" B.D. X-section 152+00 - 152+16

	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsecsh1.dxf	5-20-98	Big Island Channel A 152+16 - 157+00
49	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsecsh2.dxf	5-20-98	Big Island Channel A 158+16 - 163+00
49	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsecsh3.dxf	5-20-98	Big Island Channel A 164+16 - 169+00
49	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsecsh4.dxf	5-20-98	Big Island Channel A 170+00 - 175+00
49	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Xsecsh5.dxf	5-20-98	Big Island Channel A 176+16 - 181+00
50	BIM Channel "A" B.D. X-sec 152+16 to 206+00	Xsectx6.dxf	5-20-98	Big Island Channel A 182+00 - 187+00
50	BIM Channel "A" B.D. X-sec 152+16 to 206+00	Xsectx7.dxf	5-20-98	Big Island Channel A 188+00 - 193+00
	BIM Channel "A" B.D. X-sec 152+16 to 206+00	Xsectx8.dxf	5-20-98	Big Island Channel A 194+00 - 196+00
50	BIM Channel "A" B.D. X-sec 152+16 to 206+00	Xsectx9.dxf	5-20-98	Big Island Channel A 197+00-201+00
50	BIM Channel "A" B.D. X-sec 152+16 to 206+00	Xsectx10.dxf	5-20-98	Big Island Channel A 202+00-206+05
51	BIM Channel "A" B.D. Surveys	Bimch-a t.o.c.58-92.wk.4	11-20-98	Table of Contents for Survey point Tabulation Sta 52+00-92+00
51	BIM Channel "A" B.D. Surveys	Bimchatmp 58-92.wk.4	11-20-98	Big Island Channel "A" Template Tabulation Sta 58+00 to 92+00
51	BIM Channel "A" BD Surveys	CHANA2A.DXF	4-15-98	Big Island Channel A Plan View sta 76+00 to 92+00

51	BIM Channel "A" B.D. Plan View 120+00 - 152+16	Chana3.dxf	5-25-98	Plan View of Channel A Sta 120+00 to 152+16
52	BIM Channel "A" B.D. Plan View 120+00 - 152+16	Chana3.xyz	5-25-98	Point file, no point #
52	BIM Channel "A" B.D. Plan View 120+00 - 152+16	Channel.prn	5-25-98	Point file, no point #
52	BIM Channel "A" B.D. Plan View 120+00 - 152+16	Lines.dat	5-25-98	Centerline Profile
52	BIM Channel "A" B.D. Plan View 120+00 - 152+16	plan.dwg	5-25-98	Plan view of Channel A 120+00 - 152+16
53	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Chana4.dxf	5-19-98	Cross Section Plan View of Channel "A" Sta. 178+00-206+00
53	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Chana4b.dxf	5-20-98	Plan view of Channel "A"
	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Plan1.dwg	5-20-98	Plan view Channel "A" 152+00 to 177+00
53	BIM Channel "A" B.D. X-sec 152+16 - 206+00	Plan1.dwg	5-20-98	Planview Channel "A" 178+00 to 206+00
54	BIM Channel "A" B.D. X-section	Chana4.xyz	5-21-98	x,y,z no point numbers
54	BIM Channel "A" B.D. X-section	Channel.prn	5-25-98	Channel A 152+16 - 206+00 Cross Section line co-ordinate
54	BIM Channel "A" B.D. X-section	Lines.xyz	5-25-98	Station and Co-ordinate X-section lines
55	BIM Channel "A" A.D. Survey 13+00-20+00	13-20.ad	4-17-98	Point data for survey

56	BIM Channel A A.D. Survey x,y,z file	BICHAAD2.xyz	5-6-98	Point File x,y,z no pt. numbers
57	BIM Channel "A" A.D. 64+00 - 97+00	Sub64-87.xyz	6-12-98	x,y,z co-ordinates no. pt. numbers
57	BIM Channel "A" A.D. 64+00-97+00	Toe.dat	6-12-98	Cross section line co-ordinates azimuth, distance
58	BIM Channel "A" A.D. Survey 118-+00-139+00	118139ad.xyz	7-19-98	x,y,z co-ordinates no point numbers
58	BIM Channel "A" A.D. Survey 118+00-139+00	Toe.dat	7-19-98	Cross section line co-ordinates, azimuth, distances
59	Big Island-3+00-58+00 Channel A x,y,z file A.D. Survey	Bimcha.xyz	4-9-98	x,y,z co-ordinates with date and time
60	BIM Channel "A" A.D. Survey 140+00 -180+00	140180ad.xyz	9-3-98	x,y,z co-ordinates with date and time
61	Big Island A.D. A.D. Survey 42+00 to 63+00 xyz	Ad42-63.xyz	1-23-99	x,y,z co-ordinates no point numbers
62	BIM Channel "A" Pt. Tabulation File B.D. Survey 58+00 - 72+00	CH-a	4-15-98	Data collected 3-19-98 sta 58+00 to 72+00
63	BIM Channel "A" Pt. Tabulation B.D. Survey 73+00 - 92+00	CHANA.TXT	4-15-98	Data collected on 3-19-98 sta 73+00 to 92+00

64	BIM Channel "A" B.D. 93+00 to 120+00 xyz files	CHAGPSF.xyz	5-19-98	x,y,z no point numbers
65	Big Island-3+00-58+00 Channel A x,y,z file B.D. Survey	Bimcha.xyz	4-9-98	x,y,z co-ordinates with date and time
66	BIM Channel "B" B.D. Survey 160' Channel	XSEC1.dwg	6-14-98	Big Island Channel B B.D. Xsection 0+00-5+00
66	BIM Channel "B" B.D. Survey 160' Channel	XSEC2.dwg	6-14-98	Big Island Channel B B.D. Xsection 6+00-11+00
66	BIM Channel "B" B.D. Survey 160' Channel	XSEC3.dwg	6-14-98	Big Island Channel B B.D. Xsection 12+00-17+00
66	BIM Channel "B" B.D. Survey 160' Channel	XSEC4.dwg	6-14-98	Big Island Channel B B.D. Xsection 18+00-23+00
66	BIM Channel "B" B.D. Survey 160' Channel	XSEC5.dwg	6-14-98	Big Island Channel B B.D. Xsection 24+00-29+00
66	BIM Channel "B" B.D. Survey 160' Channel	XSEC6.dwg	6-14-98	Big Island Channel B B.D. Xsection 30+00-35+00
66	BIM Channel "B" B.D. Survey 160' Channel	XSEC7.dwg	6-14-98	Big Island Channel B B.D. Xsection 36+00-41+00
66	BIM Channel "B" B.D. Survey 160' Channel	XSEC10.dwg	6-14-98	Big Island Channel B B.D. Xsection 54+00-55+00
67	BIM Channel "B" B.D. Survey 160' Channel	Plan.dwg	6-15-98	Plan View of Cross section 0+00-27+00 No title on drawing
67	BIM Channel "B" B.D. Survey 160' Channel	Plan 2.dwg	6-15-98	Big Island Channel "B" B.D. Xsection Plan view 28+00-55+00
67	BIM Channel "B" B.D. Survey 160' Channel	XSEC10.dwg	6-15-98	Big Island Channel "B" B.D. Xsection Plan view 54+00-55+00
67	BIM Channel "B" B.D. Survey 160' Channel	XSEC8.dwg	6-15-98	Big Island Channel "B" B.D. Xsection Plan view 42+00-47+00
67	BIM Channel "B" B.D. Survey 160' Channel	XSEC9.dwg	6-15-98	Big Island Channel "B" B.D. Xsection Plan view 48+00-53+00
68	BIM Channel "B" B.D. Survey	Xsecsh1.dxf	6-14-98	Channel "B" Cross section 0+00-5+00

67	BIM Channel "B" B.D. Survey	Xsecsh2.dxf	6-14-98	Channel "B" Cross section 6+00-11+00
68	BIM Channel "B" B.D. Survey	Xsecsh3.dxf	6-14-98	Channel "B" Cross section 12+00-17+00
68	BIM Channel "B" B.D. Survey	Xsecsh4.dxf	6-14-98	Channel "B" Cross section 18+00-23+00
68	BIM Channel "B" B.D. Survey	Xsecsh5.dxf	6-14-98	Channel "B" Cross section 24+00-29+00
68	BIM Channel "B" B.D. Survey	Xsecsh6.dxf	6-14-98	Channel "B" Cross section 30+00-35+00
68	BIM Channel "B" B.D. Survey	Xsecsh7.dxf	6-14-98	Channel "B" Cross section 36+00-41+00
68	BIM Channel "B" B.D. Survey	Xsecsh8.dxf	6-14-98	Channel "B" Cross section 42+00-47+00
69	BIM Channel "B" B.D. Survey	Chanb160.dxf	6-15-98	Plan View Cross Section 0+00-55+00
69	BIM Channel "B" B.D. Survey	Chanb160.xyz	6-9-98	x,y,z co-ordinates no point numbers
69	BIM Channel "B" B.D. Survey	Earth.Sum	6-15-98	Summary of Volume Computation
69	BIM Channel "B" B.D. Survey	Toe.dat	6-15-98	Template co-ordinates
69	BIM Channel "B" B.D. Survey	Xsecsh10.dxf	6-14-98	Big Island Channel "B" B.D. Cross Section 54+00-55+00
69	BIM Channel "B" B.D. Survey	Xsecsh9.dxf	6-14-98	Big Island Channel "B" B.D. Cross Section 48+00-53+00
70	BIM Channel "B" A.D. Survey	Xsec0-3.dwg	8-17-98	Cross section 0+00-3+00
70	BIM Channel "B" A.D. Survey	Xsec4-7.dwg	8-17-98	Cross section 4+00-7+00
70	BIM Channel "B" A.D. Survey	Xsec8-11.dwg	8-17-98	Cross section 8+00-11+00
70	BIM Channel "B" A.D. Survey	Xsec12-15.dwg	8-17-98	Cross section 12+00-15+00
70	BIM Channel "B" A.D. Survey	Xsec16-19.dwg	8-17-98	Cross section 16+00-19+00
70	BIM Channel "B" A.D. Survey	Xsec20-23.dwg	8-17-98	Cross section 20+00-23+00
70	BIM Channel "B" A.D. Survey	Xsec24-27.dwg	8-17-98	Cross section 24+00-27+00

7	BIM Channel "B" A.D. Survey	Xsec28-31.dwg	8-17-98	Cross section 28+00-31+00
71	BIM Channel "B" A.D. Survey	Plan1.dwg	9-7-98	Cross Section Plan View Channel "B" Sta. 0+00-27+00
71	BIM Channel "B" A.D. Survey	Plan2.dwg	8-18-98	Cross Section Plan View Channel "B" Sta. 28+00-55+00
71	BIM Channel "B" A.D. Survey	Xsec32-35.dwg	8-17-98	Cross section 32+00-35+00
71	BIM Channel "B" A.D. Survey	Xsec36-38.dwg	8-17-98	Cross section 36+00-38+00
71	BIM Channel "B" A.D. Survey	Xsec39-42.dwg	8-17-98	Cross section 39+00-42+00
71	BIM Channel "B" A.D. Survey	Xsec43-46.dwg	8-17-98	Cannot open error message
71	BIM Channel "B" A.D. Survey	Xsec47-50.dwg	8-17-98	Cross section 47+00-50+00
71	BIM Channel "B" A.D. Survey	Xsec50.dwg	8-17-98	Cross section 55+00
72	BIM Channel "B" A.D. Survey	Xsecsh1.dxf	8-17-98	Cross section 0+00-3+00
72	BIM Channel "B" A.D. Survey	Xsecsh2.dxf	8-17-98	Cross section 4+00-7+00
72	BIM Channel "B" A.D. Survey	Xsecsh3.dxf	8-17-98	Cross section 8+00-11+00
72	BIM Channel "B" A.D. Survey	Xsecs4.dxf	8-17-98	Cross section 12+00-15+00
72	BIM Channel "B" A.D. Survey	Xsecsh5.dxf	8-17-98	Cross section 16+00-19+00
72	BIM Channel "B" A.D. Survey	Xsecsh6.dxf	8-17-98	Cross section 20+00-23+00
72	BIM Channel "B" A.D. Survey	Xsecsh7.dxf	8-17-98	Cross section 24+00-27+00
72	BIM Channel "B" A.D. Survey	Xsecsh8.dxf	8-17-98	Cross section 28+00-31+00
72	BIM Channel "B" A.D. Survey	Xsecsh9.dxf	8-17-98	Cross section 32+00-35+00

7	BIM Channel "B" A.D. Survey	Chanbad.dxf	8-17-98	Cross Section Plan view 0+00-55+00
73	BIM Channel "B" A.D. Survey	Xsecsh10.dxf	8-17-98	Cross section 36+00-38+00
73	BIM Channel "B" A.D. Survey	Xsecsh11.dxf	8-17-98	Cross section 39+00-42+00
73	BIM Channel "B" A.D. Survey	Xsecsh12.dxf	8-17-98	Cross section 43+00-46+00
73	BIM Channel "B" A.D. Survey	Xsecsh13.dxf	8-17-98	Cross section 47+00-50+00
73	BIM Channel "B" A.D. Survey	Xsecsh14.dxf	8-17-98	Cross section 51+00-54+00
73	BIM Channel "B" A.D. Survey	Xsecsh15.dxf	8-17-98	Cross section 55+00
74	BIM Channel "B" A.D. Survey	Chanbad.xyz	8-18-98	x,y,z co-ordinates no. pt. numbers
74	BIM Channel "B" A.D. Survey	pil.dat	8-14-98	file is just list of zeroes
74	BIM Channel "B" A.D. Survey	Toe.dat	8-18-98	Cross section line co-ordinates azimuth and distance
75	BIM Channel "B" Revised	Chanbr.dxf	5-28-98	File will not open incomplete dxf input
75	BIM Channel "B" Revised	Chb09xbf.dwg	5-28-98	Big Island Channel B B.D. Xsection 0+00-9+00
75	BIM Channel "B" Revised	Chnbpbd1.dwg	5-28-98	Big Island Channel B Plan view 0+00-27+00
75	BIM Channel "B" Revised	Chnbpbd2.dwg	5-28-98	Big Island Channel B Plan view 28+00-55+00
76	BIM Channel "B" Revised	bb1017xbd.dwg	5-28-98	Big Island Channel B B.D. Xsect 10+00-19+00
76	BIM Channel "B" Revised	bb2029xbd.dwg	5-28-98	Big Island Channel B B.D. Xsect 20+00-29+00
76	BIM Channel "B" Revised	bb3039xbd.dwg	5-28-98	Big Island Channel B B.D. Xsect 30+00-39+00
76	BIM Channel "B" Revised	bb4049xbd.dwg	5-28-98	Big Island Channel B B.D. Xsect 40+00-49+00

7	BIM Channel "B" Revised	bb5055xbd.dwg	5-28-98	Big Island Channel B B.D. Xsect 50+00-55+00
76	BIM Channel "B" Revised	Chanbpbd.dwg	5-28-98	Cross section Plan view 0+00-55+00
77	BIM Channel "B" Revised	bdsh1.dxf	5-28-98	Cross section 0+00-9+00
77	BIM Channel "B" Revised	bdsh2.dxf	5-28-98	Cross section 10+00-19+00
77	BIM Channel "B" Revised	bdsh3.dxf	5-28-98	Cross section 20+00-29+00
77	BIM Channel "B" Revised	bdsh4.dxf	5-28-98	Cross section 30+00-39+00
77	BIM Channel "B" Revised	bdsh5.dxf	5-28-98	Cross section 40+00-49+00
77	BIM Channel "B" Revised	bdsh6.dxf	5-28-98	Cross section 50+00-55+00
78	BIM Channel "B" Revised B.D. Surveys	Chanbr.xyz	5-31-98	x,y,z co-ordinates, date, time
79	BIM Channel "B" Revision B.D. Survey	Chan.dat	6-9-98	Cross section line co-ordinates, azimuth and distance
79	BIM Channel "B" Revision B.D. Survey	Xsec10.dwg	6-5-98	Big Island Channel B B.D. Cross section 45+00-49+00
79	BIM Channel "B" Revision B.D. Survey	Xsec11.dwg	6-5-98	Big Island Channel B B.D. Cross section 50+00-54+00
79	BIM Channel "B" Revision B.D. Survey	Xsec12.dwg	6-5-98	Big Island Channel B B.D. Cross section 55+00
80	BIM Channel "B" Revision B.D. Survey	Xsec1.dwg	6-5-98	Big Island Channel B Cross section 0+00-4+00
80	BIM Channel "B" Revision B.D. Survey	Xsec2.dwg	6-5-98	Big Island Channel B Cross section 5+00-9+00
80	BIM Channel "B" Revision B.D. Survey	Xsec3.dwg	6-5-98	Can not open file
80	BIM Channel "B" Revision B.D. Survey	Xsec4.dwg	6-5-98	Big Island Channel B Cross section 15+00-19+00

80	BIM Channel "B" Revision B.D. Survey	Xsec5.dwg	6-5-98	Big Island Channel B Cross section 20+00-24+00
80	BIM Channel "B" Revision B.D. Survey	Xsec6.dwg	6-5-98	Big Island Channel B Cross section 25+00-29+00
80	BIM Channel "B" Revision B.D. Survey	Xsec7.dwg	6-5-98	Big Island Channel B Cross section 30+00-34+00
80	BIM Channel "B" Revision B.D. Survey	Xsec8.dwg	6-5-98	Big Island Channel B Cross section 35+00-39+00
80	BIM Channel "B" Revision B.D. Survey	Xsec9.dwg	6-5-98	Big Island Channel B Cross section 40+00-44+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh1.dxf	6-5-98	Cross section 0+00-1+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh2.dxf	6-5-98	Cross section 5+00-9+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh3.dxf	6-5-98	Cross section 10+00-14+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh4.dxf	6-5-98	Cross section 15+00-19+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh5.dxf	6-5-98	Cross section 20+00-24+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh6.dxf	6-5-98	Cross section 25+00-29+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh7.dxf	6-5-98	Cross section 30+00-34+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh8.dxf	6-5-98	Cross section 35+00-39+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh9.dxf	6-5-98	Cross section 40+00-44+00
81	BIM Channel "B" Revision B.D. Survey	Xsecsh10.dxf	6-5-98	Cross section 45+00-49+00
82	BIM Channel "B" Revision B.D. Survey	Xsecsh11.dxf	6-5-98	Cross section 50+00-54+00
82	BIM Channel "B" Revision B.D. Survey	Xsecsh12.dxf	6-5-98	Cross section 55+00
83	BIM Channel "B" Revision B.D. Survey	Chanb.dxf	6-6-98	Cross section Plan view 0+00-55+00
83	BIM Channel "B" Revision B.D. Survey	Chanb200.xyz	6-9-98	x,y,z co-ordinates no point numbers

	BIM Channel "B" Revision B.D. Survey	Plan1.dwg	6-8-98	Big Island Channel B Plan view 0+00-27+00
83	BIM Channel "B" Revision B.D. Survey	Plan2.dwg	6-8-98	Big Island Channel B Plan view 27+00-55+00
84	BIM Channel "C" A.D. Survey	0-11.dwg	9-25-98	Big Island Channel C A.D. Cross section 0+00-11+00
84	BIM Channel "C" A.D. Survey	12-20.dwg	9-25-98	Big Island Channel C A.D. Cross section 12+00-20+00
84	BIM Channel "C" A.D. Survey	21-23.dwg	9-25-98	Big Island Channel C A.D. Cross section 21+00-23+00
84	BIM Channel "C" A.D. Survey	Chancad.xyz	9-26-98	x,y,z co-ordinates no point numbers
84	BIM Channel "C" A.D. Survey	Plan.dwg	9-25-98	Big Island Channel C A.D. Cross section Plan View 0+00-23+00
85	BIM Channel "C" A.D. Survey	Chancad.dxf	9-25-98	Big Island Channel C Cross section Plan view 0+00-23+00
85	BIM Channel "C" A.D. Survey	Channel.prn	9-25-98	x,y co-ordinates channel templet
	BIM Channel "C" A.D. Survey	Secsh1.dxf	9-25-98	Cross sections 0+00-11+00
85	BIM Channel "C" A.D. Survey	Secsh2.dxf	9-25-98	Cross sections 12+00-20+00
85	BIM Channel "C" A.D. Survey	Secsh3.dxf	9-25-98	Cross sections 21+00-23+00
85	BIM Channel "C" A.D. Survey	Sta.dat	9-26-98	Cross sections line co-ordinates azimuths and distance
86	BIM Channel "C" B.D. Survey	000-900.dwg	7-18-98	Big Island Channel "C" B.D. Cross section 0+00-9+00
86	BIM Channel "C" B.D. Survey	10-19.dwg	7-18-98	Big Island Channel "C" B.D. Cross section 10+00-19+00
86	BIM Channel "C" B.D. Survey	20-24.dwg	7-18-98	Big Island Channel "C" B.D. Cross section 20+00-24+00
86	BIM Channel "C" B.D. Survey	Chancbd.dxf	7-16-98	Plan view cross section 0+00-24+00
86	BIM Channel "C" B.D. Survey	Chancbd.xyz	7-18-98	x,y,z co-ordinates no point numbers

	BIM Channel "C" B.D. Survey	Plan.dwg	7-17-98	Big Island Channel "C" Cross section Plan view 0+00-23+00
86	BIM Channel "C" B.D. Survey	Xsecsh1.dxf	7-18-98	Cross section 0+00-9+00
86	BIM Channel "C" B.D. Survey	Xsecsh2.dxf	7-18-98	Cross section 10+00-19+00
86	BIM Channel "C" B.D. Survey	Xsecsh3.dxf	7-18-98	Cross section 20+00-24+00
87	BIM Channel "D" A.D. Survey	Xsec1.dwg	6-12-98	Big Island Channel D A.D. Xsection 0+00-2+00
87	BIM Channel "D" A.D. Survey	Xsec2.dwg	6-12-98	Big Island Channel D A.D. Xsection 3+00-6+00
87	BIM Channel "D" A.D. Survey	Xsec3.dwg	6-12-98	Big Island Channel D A.D. Xsection 7+00-10+00
87	BIM Channel "D" A.D. Survey	Xsec4.dwg	6-12-98	Big Island Channel D A.D. Xsection 11+00-14+00
87	BIM Channel "D" A.D. Survey	Xsec5.dwg	6-12-98	Big Island Channel D A.D. Xsection 15+00-18+00
87	BIM Channel "D" A.D. Survey	Xsec6.dwg	6-12-98	Big Island Channel D A.D. Xsection 19+00-22+00
87	BIM Channel "D" A.D. Survey	Xsec7.dwg	6-12-98	Big Island Channel D A.D. Xsection 23+00-26+00
87	BIM Channel "D" A.D. Survey	Xsec8.dwg	6-12-98	Big Island Channel D A.D. Xsection 27+00-30+00
88	BIM Channel "D" A.D. Survey	ChandAD.xyz	6-12-98	x,y,z co-ordinates no point number
88	BIM Channel "D" A.D. Survey	Lines.dat	6-12-98	Cross section line co-ordinates
88	BIM Channel "D" A.D. Survey	Plan.dwg	6-12-98	Error Drawing File is not valid
88	BIM Channel "D" A.D. Survey	TOE.dat	6-12-98	Cross section line co-ordinates azmuthes and distances
88	BIM Channel "D" A.D. Survey	Xsecsh10.dwg	6-12-98	Big Island Channel "D" A.D. Xsection 35+00-38+00
88	BIM Channel "D" A.D. Survey	Xsecsh11.dwg	6-12-98	Big Island Channel "D" A.D. Xsection 39+00-40+00
88	BIM Channel "D" A.D. Survey	Xsecsh9.dwg	6-12-98	Big Island Channel "D" A.D. Xsection 31+00-34+00

	BIM Channel "D" A.D. Survey	Xsecsh1.dxf	6-12-98	Cross-Section 0+00-2+00
89	BIM Channel "D" A.D. Survey	Xsecsh2.dxf	6-12-98	Cross-Section 3+00-6+00
89	BIM Channel "D" A.D. Survey	Xsecsh3.dxf	6-12-98	Cross-Section 7+00-10+00
89	BIM Channel "D" A.D. Survey	Xsecsh4.dxf	6-12-98	Cross-Section 11+00-14+00
89	BIM Channel "D" A.D. Survey	Xsecsh5.dxf	6-12-98	Cross-Section 15+00-18+00
89	BIM Channel "D" A.D. Survey	Xsecsh6.dxf	6-12-98	Cross-Section 19+00-22+00
89	BIM Channel "D" A.D. Survey	Xsecsh7.dxf	6-12-98	Cross-Section 23+00-26+00
89	BIM Channel "D" A.D. Survey	Xsecsh8.dxf	6-12-98	Cross-Section 27+00-30+00
89	BIM Channel "D" A.D. Survey	Xsecsh9.dxf	6-12-98	Cross-Section 31+00-34+00
90	BIM Channel "D" A.D. Survey	Xsecsh10.dxf	6-12-98	Cross -Section 35+00-38+00
	BIM Channel "D" A.D. Survey	Xsecsh11.dxf	6-12-98	Cross-Section 38+00-40+00
90	BIM Channel "D" A.D. Survey	Chandrr.dxf	6-12-98	Cross -Section Plan view 0+00-40+00
91	BIM Channel "D" B.D. Survey	BDSEC1.dwg	5-17-98	Big Island Channel "D" B.D. Xsection Cross Section
91	BIM Channel "D" B.D. Survey	BDSEC2.dwg	5-17-98	Big Island Channel "D" B.D. Xsection Cross Section 9+00-18+00
91	BIM Channel "D" B.D. Survey	BDSEC3.dwg	5-17-98	Big Island Channel "D" B.D. Xsection Cross Section 19+00-28+00
91	BIM Channel "D" B.D. Survey	BDSEC5.dwg	5-17-98	Big Island Channel "D" B.D. Xsection Cross Section 39+00-48+00
91	BIM Channel "D" B.D. Survey	BDSEC6.dwg	5-17-98	Big Island Channel "D" B.D. Xsection Cross Section 49+00-50+89
91 A	BIM Channel "D" B.D. Survey	Chandr.dxf	5-17-98	Plan view of cross section 0+00-50+89
91 A	BIM Channel "D" B.D. Survey	Plan1.dwg	5-18-98	Plan view of cross section 0+00-26+00

01	BIM Channel "D" B.D. Survey	Plan2.dwg	5-18-98	Plan view of cross section 27+00-50+89
92	BIM Channel "D" B.D. Survey	BDSEC4.dwg	5-17-98	Big Island Channel D B.D. Xsection 29+00-38+00
92	BIM Channel "D" B.D. Survey	Bdsecsh1.dxf	5-17-98	Big Island Channel D B.D. Xsection Cross Section 0+00-8+00
92	BIM Channel "D" B.D. Survey	Bdsecsh2.dxf	5-17-98	Big Island Channel D B.D. Xsection Cross Section 9+00-18+00
92	BIM Channel "D" B.D. Survey	Bdsecsh3.dxf	5-17-98	Big Island Channel D B.D. Xsection Cross Section 19+00-28+00
92	BIM Channel "D" B.D. Survey	Bdsecsh4.dxf	5-17-98	Big Island Channel D B.D. Xsection Cross Section 29+00-38+00
92	BIM Channel "D" B.D. Survey	Bdsecsh5.dxf	5-17-98	Big Island Channel D B.D. Xsection Cross Section 39+00-48+00
92	BIM Channel "D" B.D. Survey	Bdsecsh6.dxf	5-17-98	Big Island Channel D B.D. Xsection Cross Section 49+00-50+89
93	BIM Channel "D" B.D. Survey	Chandr.xyz	5-18-98	x,y,z co-ordinates no pt. numbers
94	BIM Channel "E" A.D. Survey Cross Section	0-3.dwg	10-6-98	Big Island Channel "E" A.D. Xsection 0+00-3+00
94	BIM Channel "E" A.D. Survey Cross Section	4-9.dwg	10-6-98	Big Island Channel "E" A.D. Xsection 4+00-9+00
94	BIM Channel "E" A.D. Survey Cross Section	10-20.dwg	10-6-98	Big Island Channel "E" A.D. Xsection 10+00-20+00
94	BIM Channel "E" A.D. Survey Cross Section	21-27+14.dwg	10-6-98	Big Island Channel "E" A.D. Xsection 21+00-27+14
94	BIM Channel "E" A.D. Survey Cross Section	28-35.dwg	10-6-98	Big Island Channel "E" A.D. Xsection 28+00-35+00
94	BIM Channel "E" A.D. Survey Cross Section	36-38.dwg	10-6-98	Big Island Channel "E" A.D. Xsection 36+00-38+00

95	BIM Channel "E" A.D. Survey	39-41.dwg	10-6-98	Big Island Channel "E" A.D. Xsection 39+00-41+00
95	BIM Channel "E" A.D. Survey	41-50.dwg	10-6-98	Big Island Channel "E" A.D. Xsection 41+00-50+00
95	BIM Channel "E" A.D. Survey	Chanead.xyz	10-6-98	Big Island Channel "E" A.D. Xsection x,y,z cor-ordinates no point numbers
95	BIM Channel "E" A.D. Survey	Channel.prn	10-7-98	Big Island Channel "E" A.D. Xsection Channel Templet co-ordinates
95	BIM Channel "E" A.D. Survey	Plan.dwg	10-6-98	Big Island Channel "E" A.D. Xsection Plan View 0+00-41+50
95	BIM Channel "E" A.D. Survey	Sta.dat	10-6-98	Big Island Channel "E" A.D. Xsection Line no. to station no. equality
96	BIM Channel "E" A.D. Survey	Xsecsh1.dxf	10-6-98	Big Island Channel "E" A.D. A.D. Xsection 0+00-3+00
96	BIM Channel "E" A.D. Survey	Xsecsh2.dxf	10-6-98	Big Island Channel "E" A.D. A.D. Xsection 4+00-9+00
96	BIM Channel "E" A.D. Survey	Xsecsh3.dxf	10-6-98	Big Island Channel "E" A.D. A.D. Xsection 10+00-20+00
96	BIM Channel "E" A.D. Survey	Xsecsh4.dxf	10-6-98	Big Island Channel "E" A.D. A.D. Xsection 21+00-27+14
96	BIM Channel "E" A.D. Survey	Xsecsh5.dxf	10-6-98	Big Island Channel "E" A.D. A.D. Xsection 28+00-35+00
96	BIM Channel "E" A.D. Survey	Xsecsh6.dxf	10-6-98	Big Island Channel "E" A.D. A.D. Xsection 36+00-38+00
97	BIM Channel "E" A.D. Survey	Chanead.dxf	10-6-98	A.D. Survey Channel "E" Cross Section Plan View
97	BIM Channel "E" A.D. Survey	Xsecsh7.dxf	10-6-98	Big Island Channel "E" A.D. Cross Section 39+00-41+00
97	BIM Channel "E" A.D. Survey	Xsecsh8.dxf	10-6-98	Big Island Channel "E" A.D. Cross Section 41+50
98	BIM Channel "E" B.D. Survey	0-11.dwg	9-5-98	Big Island Channel "E" B.D. Xsection 0+00-11+00
98	BIM Channel "E" B.D. Survey	12-23.dwg	9-5-98	Big Island Channel "E" B.D. Xsection 12+00-23+00
98	BIM Channel "E" B.D. Survey	24-34.dwg	9-5-98	Big Island Channel "E" B.D. Xsection 24+00-34+00

98	BIM Channel "E" B.D. Survey	35-3750.dwg	9-5-98	Big Island Channel "E" B.D. Xsection 35+00-37+50
98	BIM Channel "E" B.D. Survey	38-4050.dwg	9-5-98	Big Island Channel "E" B.D. Xsection 38+00-40+50
98	BIM Channel "E" B.D. Survey	41-4150.dwg	9-5-98	Big Island Channel "E" B.D. Xsection 41+00-41+50
98	BIM Channel "E" B.D. Survey	Plan1.dwg	9-6-98	Big Island Channel "E" B.D. Xsection Plan View 0+00-41+50
99	BIM Channel "E" B.D. Survey	Chanebdr.dxf	9-6-98	Cross-section plan view 0+00-41+50
99	BIM Channel "E" B.D. Survey	Xsecsh1.dxf	9-5-98	Cross-section 5+00-11+00
99	BIM Channel "E" B.D. Survey	Xsecsh2.dxf	9-5-98	Cross-section 12+00-23+00
99	BIM Channel "E" B.D. Survey	Xsecsh3.dxf	9-5-98	Cross-section 24+00-34+00
99	BIM Channel "E" B.D. Survey	Xsecsh4.dxf	9-5-98	Cross-section 35+00-37+50
99	BIM Channel "E" B.D. Survey	Xsecsh5.dxf	9-5-98	Cross-section 38+00-40+51
99	BIM Channel "E" B.D. Survey	Xsecsh6.dxf	9-5-98	Cross-section 41+00-41+50
100	BIM Channel "E" B.D. Survey	Chanebdr.xyz	9-7-98	x,y,z co-ordinates no point number
100	BIM Channel "E" B.D. Survey	Channel.prn	9-7-98	Co-ordinates for Channe templet
100	BIM Channel "E" B.D. Survey	Statbn.dat	9-7-98	Cross section line co-ordinates azmuthes and distance
101	BIM Channel "F" A.D. Survey	0-3.dwg	9-24-98	Big Island Channel F A.D. Xsection 0+00-3+00
101	BIM Channel "F" A.D. Survey	4-7.dwg	9-24-98	Big Island Channel F A.D. Xsection 4+00-7+00
101	BIM Channel "F" A.D. Survey	8-11.dwg	9-24-98	Big Island Channel F A.D. Xsection 8+00-11+00
101	BIM Channel "F" A.D. Survey	12-15.dwg	9-24-98	Big Island Channel F A.D. Xsection 12+00-15+00

10	BIM Channel "F" A.D. Survey	16-19.dwg	9-24-98	Big Island Channel F A.D. Xsection 16+00-19+00
101	BIM Channel "F" A.D. Survey	20-21.dwg	9-24-98	Big Island Channel F A.D. Xsection 20+00-21+00
101	BIM Channel "F" A.D. Survey	Plan.dwg	9-24-98	Big Island Channel F A.D. Xsection Plan view 0+00-21+00
102	BIM Channel "F" A.D. Survey	Chanfad.dxf	9-24-98	Cross Section Plan View 0+00-21+00
102	BIM Channel "F" A.D. Survey	Xsecsh1.dxf	9-24-98	Cross Section 0+00-3+00
102	BIM Channel "F" A.D. Survey	Xsecsh2.dxf	9-24-98	Cross Section 4+00-7+00
102	BIM Channel "F" A.D. Survey	Xsecsh3.dxf	9-24-98	Cross Section 8+00-11+00
102	BIM Channel "F" A.D. Survey	Xsecsh4.dxf	9-24-98	Cross Section 12+00-15+00
102	BIM Channel "F" A.D. Survey	Xsecsh5.dxf	9-24-98	Cross Section 16+00-19+00
102	BIM Channel "F" A.D. Survey	Xsecsh6.dxf	9-24-98	Cross Section 20+00-21+00
103	BIM Channel "F" A.D. Survey	Chanfad.xyz	9-24-98	x,y,z co-ordinates no point number
103	BIM Channel "F" A.D. Survey	Channel.prn	9-24-98	Channel Co-ordinates for Templet
103	BIM Channel "F" A.D. Survey	STA.dat	9-24-98	Cross section line co-ordinates, azimuth distance
104	BIM Channel "F" B.D. Survey	0-4.dwg	8-7-98	Big Island Channel "F" B.D. Xsection 0+00-4+00
104	BIM Channel "F" B.D. Survey	5-9.dwg	8-7-98	Big Island Channel "F" B.D. Xsection 5+00-9+00
104	BIM Channel "F" B.D. Survey	10-14.dwg	8-7-98	Big Island Channel "F" B.D. Xsection 10+00-14+00
104	BIM Channel "F" B.D. Survey	15-19.dwg	8-7-98	Big Island Channel "F" B.D. Xsection 15+00-19+00
104	BIM Channel "F" B.D. Survey	20-24.dwg	8-7-98	Big Island Channel "F" B.D. Xsection 20+00-24+00

105	BIM Channel "F" B.D. Survey	Plan.dwg	8-7-98	Big Island Channel "F" B.D. Xsection Plan View 0+00-24+00
105	BIM Channel "F" B.D. Survey	Chafbd.dxf	8-7-98	Cross section Plan view 0+00-24+00
105	BIM Channel "F" B.D. Survey	Xsecsh1.dxf	8-7-98	Cross section 0+00-4+00
105	BIM Channel "F" B.D. Survey	Xsecsh2.dxf	8-7-98	Cross section 5+00-9+00
105	BIM Channel "F" B.D. Survey	Xsecsh3.dxf	8-7-98	Cross section 10+00-14+00
105	BIM Channel "F" B.D. Survey	Xsecsh4.dxf	8-7-98	Cross section 15+00-19+00
105	BIM Channel "F" B.D. Survey	Xsecsh5.dxf	8-7-98	Cross section 20+00-24+00
106	BIM Channel "F" B.D. Survey	Chanfbd.xyz	8-7-98	x,y,z coo-ordinates no. point numbers
106	BIM Channel "F" B.D. Survey	Survey.dat	8-7-98	Channel co-ordinates for raw data
1	BIM Channel "F" B.D. Survey	Toe.dat	8-7-98	Cross section lines co-ordinates, azimuth distance
107	BIM Disposal 1 DXF & DWG B.D. Survey	BIDA1GPS.dxf	5-31-98	B.D. Plan View D.A. #1
107	BIM Disposal 1 DXF & DWG B.D. Survey	BIMDA1A.dxf	5-30-98	B.D. Plan View D.A. #1 25+00 to 55+00
107	BIM Disposal 1 DXF & DWG B.D. Survey	BIMDA1A.dxf	5-30-98	B.D. Plan View D.A. #1 25+00 to 55+00
107	BIM Disposal 1 DXF & DWG B.D. Survey	BIMDA1BF.dwg	5-31-98	Big Island Disposal 1 Plan View 22+00 to 80+00
108	BIM Disposal 1 x,y,z Files	BIDA1GPS.xyz	5-31-98	Point File
108	BIM Disposal 1	BIDA1A.xyz	5-31-98	Point File
108	BIM Disposal 1 B.D. Survey	BIMDA1B.xyz	5-31-98	Point File

1	BIM Disposal 3	BIMCHDBF.dwg	4-29-98	B.D. Plan View D.A. #3 Field change done to move location of DA-3 and Channel D
110	BIM Disposal 5	BIMDA5.dwg	5-31-98	Big Island Disposal #5 Plan View
111	BIM Disposal 5 DXF	BIMDA3BF.dxf	6-1-98	D.A. 5 Plan View -4+00 to 5+00
111	BIM Disposal 5 DXF	BIMD5P5.dxf	6-1-98	D.A. 5 Plan View 95+00 to 160+00
112	BIM Disposal 5 x,y,z	BIMDA3BF.xyz	6-1-98	x,y,z, date, time No point numbers
112	BIM Disposal 5 x,y,z	BIMD5P5.xyz	6-1-98	x,y,z, date, time No point numbers
113	BIM Disposal 5	BIMDSP5B.xyz	6-1-98	B.D. x,y,z, date, time No point numbers
114	BIM Disposal 6 DWG & DXF	BIDA6PL2.dxf	6-23-98	Profile of Disposal Area #6
1	BIM Disposal 6 DWG & DXF	BIMDA6.dwg	6-24-98	Big Island Disposal Area #6 Plan View
114	BIM Disposal 6 DWG & DXF	CH40A6.dxf	6-23-98	Big Island Disposal Area #6 Xsection sta 155+00, 160+00, 165+00, 170+00, 175+00 and 180+00
114	BIM Disposal 6 DWG & DXF	CHANA3D.dxf	6-23-98	Big Island Disposal Area #6 Xsection 130+00, 135+00, 140+00, 145+00 and 150+00
115	BIM Disposal Area 6 x,y,z	BIDA6PL2.xyz	6-24-98	Point file x,y,z date, time no pt. numbers Word Pad
115	BIM Disposal Area 6 x,y,z	BIDA6PL2.xyz	6-24-98	Point file x,y,z date, time no pt. numbers Word Pad
115	BIM Disposal Area 6 x,y,z	CHANA30.xyz	6-24-98	Point file x,y,z date, time no pt. numbers Word Pad
116	BIM Disposal #8 B.D.	DA8BD.dxf	6-21-98	Plan View Disposal Area #8
116	BIM Disposal #8 B.D.	DA8BD.xyz	6-21-98	B.D. x,y,z no point numbers Word Pad

116	BIM Disposal #8 B.D.	DIKE.dat	6-21-98	Point file Word Pad
116	BIM Disposal #8 B.D.	D598.dwg	6-20-98	Big Island Channel A Disposal #8 B.F. Plan View
116	BIM Disposal #8 B.D.	PIL.dat	6-15-98	Station x,y, file does not make any sense.
117	DIM Disposal #8 x,y,z	DA8BD.xyz	6-21-98	B.D. x,y,z no pt. numbers Word Pad
118	BIM Disposal Area #9 Dwg,Dxf,xyz,asc	DA9BDX5.asc	7-13-98	Point File D.A.-9 pt. mo. x,y,z
118	BIM Disposal Area #9 Dwg,Dxf,xyz,asc	DA9BOND.dxf	7-13-98	misc. points D.A.9
118	BIM Disposal Area #9 Dwg,Dxf,xyz,asc	DSP9BD.dwg	7-14-98	Big Island Channel "A" Disposal No. 9
118	BIM Disposal Area #9 Dwg,Dxf,xyz,asc	DSP9BD.dxf	7-13-98	Cross Section D.A. 9
118	BIM Disposal Area #9 Dwg,Dxf,xyz,asc	DSP9BD.xyz	7-15-98	Point File D.A. 9 x,y,z no point numbers
118	BIM Disposal Area #9 Dwg,Dxf,xyz,asc	DSP9NLN.dxf	7-15-98	Misc. Points D.A.9
119	BIM Disposal Area No. 1 A.D. Survey	DSP1AD.dwg	11-18-98	As-built Survey D.A. No. 1 B.D. and A.D. Elevations
120	BIM Disposal Area No. 1 A.D. Survey	Dsplad.dxf	11-18-98	A.D. Elevations
121	BIM Disposal Area No. 1 A.D. Survey	Dsplad.asc	11-22-98	Point No., x,y,z

121	BIM Disposal Area No. 1 A.D. Survey	Dsplad.xyz	11-22-98	x,y,z no point numbers
121	BIM Disposal Area No. 1 A.D. Survey	Survey.dat	11-22-98	Survey data
122	BIM Disposal Area No. 5 A.D. Survey	DSP5AD.zip	1-19-98	This is a zip file of As-built Survey D.A. No. 5 B.D. and A.D. Elevations
123	BIM Disposal Area No. 5 A.D. Survey	Dsp5ad.dxf	11-19-98	A.D. Elevations
124	BIM Disposal Area No. 5 A.D. Survey	5adlns.asc	11-19-98	Point No., x,y,z
124	BIM Disposal Area No. 5 A.D. Survey	Dsp5ad.xyz	11-22-98	x,y,z, no point number
124	BIM Disposal Area No. 5 A.D. Survey	Survey.data	11-22-98	Survey Data
125	BIM Disposal Area No.6 A.D. Survey	DSP6AD.dwg	11-19-98	As-Built Survey D.A. No. 6 B.D. and A.D. Elevations
126	BIM Disposal Area No. 6 A.D. Survey	6adcl.dxf	11-18-98	A.D. Elevation of Center line
126	BIM Disposal Area No. 6 A.D. Survey	6adlns.dxf	11-19-98	A.D. Elevation of D.A.
127	BIM Disposal Area No. 6 A.D. Survey	6adcl.asc	11-19-98	Point number, x,y,z
127	BIM Disposal Area No. 6 A.D. Survey	6adln.asc	11-19-98	Point number, x,y,z
127	BIM Disposal Area No. 6 A.D. Survey	6adlns.xyz	11-19-98	x,y,z no point numbers
127	BIM Disposal Area No. 6 A.D. Survey	Dsp6ad.asc	11-19-98	Point name, x,y,z
127	BIM Disposal Area No. 6 A.D. Survey	Dsp6ad.xyz	11-19-98	x,y,z no point numbers
127	BIM Disposal Area No. 6 A.D. Survey	Linecl.txt	11-19-98	Center line end co-ordinates

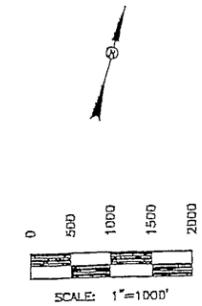
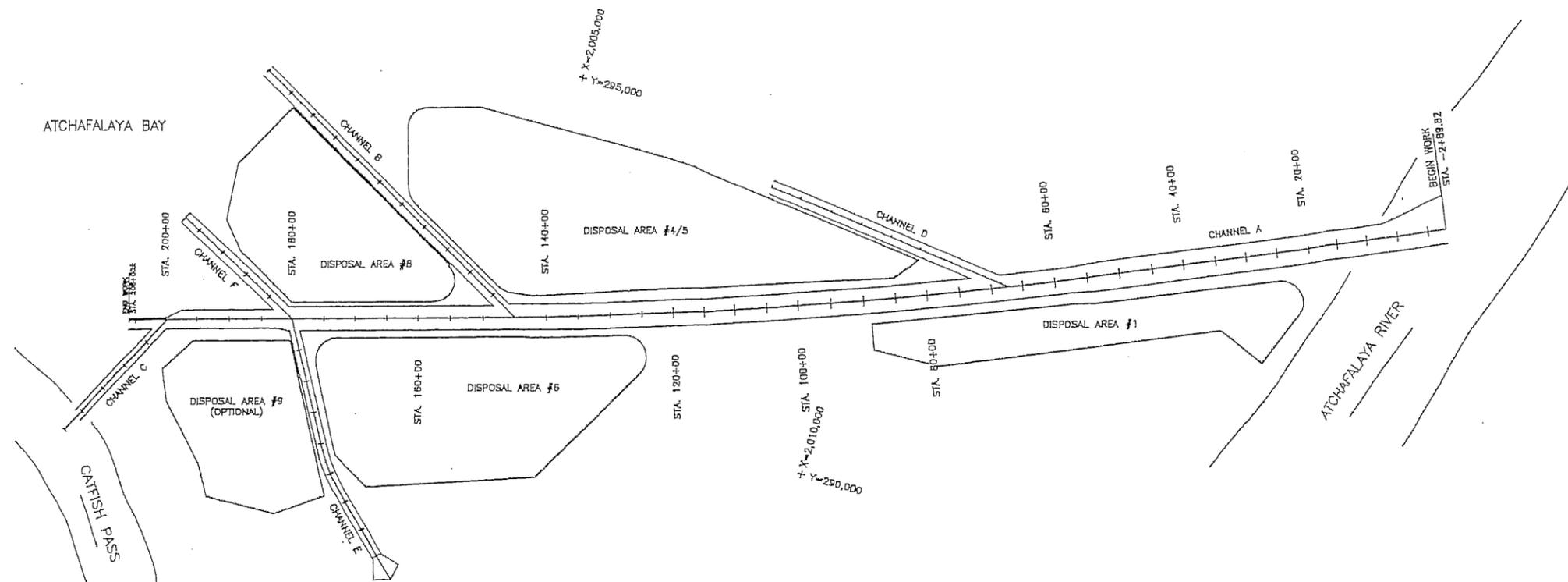
127	BIM Disposal Area No. 6 A.D. Survey	LineIns.txt	11-19-98	Cross section line end co-ordinates
127	BIM Disposal Area No. 6 A.D. Survey	Survcl.dat	11-19-98	Survey data
127	BIM Disposal Area No. 6 A.D. Survey	SurvIns.dat	11-19-98	Survey data
128	BIM Disposal Area No. 8 A.D. Survey	DA8AD.dwg	11-17-98	As-Built Survey D.A. No. 8 B.D. and A.D. Elevations
129	BIM Disposal Area No. 8 A.D. Survey	Dsp8ad.dxf	10-14-98	A.D. Elevations
130	BIM Disposal Area No. 8 A.D. Survey	Dsp8ad.asc	10-14-98	Point No. x,y,z
130	BIM Disposal Area No. 8 A.D. Survey	Dsp8ad.xyz	11-22-98	x,y,z, no point numbers
130	BIM Disposal Area No. 8 A.D. Survey	Dsp8ad2.asc	10-14-98	Point No. x,y,z
130	BIM Disposal Area No. 8 A.D. Survey	Line.txt	11-22-98	Cross section line co-ordinates
130	BIM Disposal Area No. 8 A.D. Survey	Line.txt	11-22-98	Cross section line co-ordinates
130	BIM Disposal Area No. 8 A.D. Survey	Survey.dat	11-22-98	Survey data
131	BIM Disposal Area No. 9 A.D. Survey	Dsp9ad.dwg	11-18-98	As-Built Survey D.A. No. 9 B.D. and A.D. Elevations
132	BIM Disposal Area No. 9 A.D. Survey	Dsp9ad.dxf	10-24-98	A.D. Elevations
133	BIM Disposal Area No. 9 A.D. Survey	Da9ad.asc	10-24-98	Point No. x,y,z
133	BIM Disposal Area No. 9 A.D. Survey	Dsp9ad.xyz	11-22-98	x,y,z no point numbers

100	BIM Disposal Area	Line.txt	11-22-98	cross sections line co-ordinates
	No. 9 A.D. Survey			
103	BIM Disposal Area	Survey.dat	11-22-98	Survey data
	No. 9 A.D. Survey			

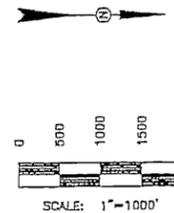
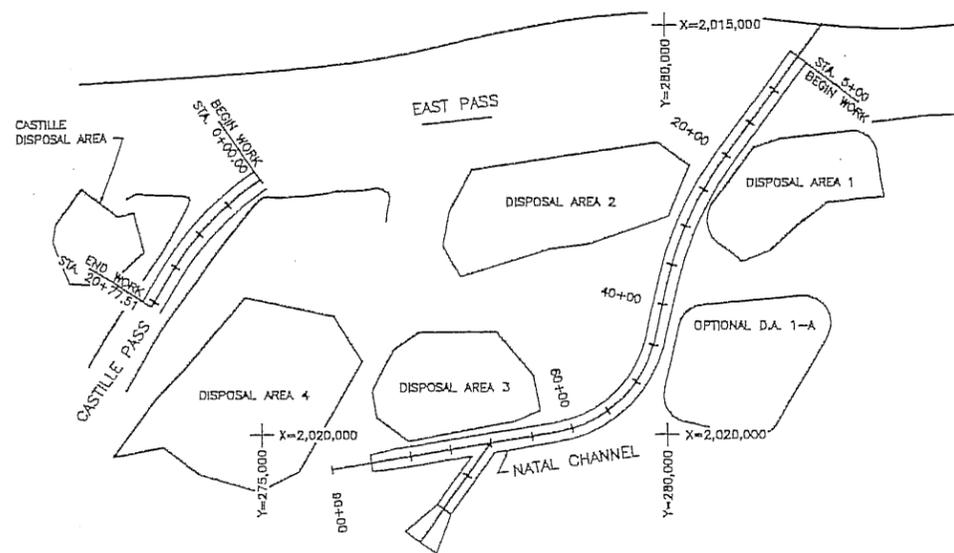
**APPENDIX E**

**AS-BUILT DRAWINGS**

**SECTION ONE - ASD**



BIG ISLAND MINING (XAT-7)



ATCHAFALAYA SEDIMENT DELIVERY (PAT-2)

INDEX PLAN BIM AND ASD PROJECTS  
AS-BUILT CONFIGURATIONS

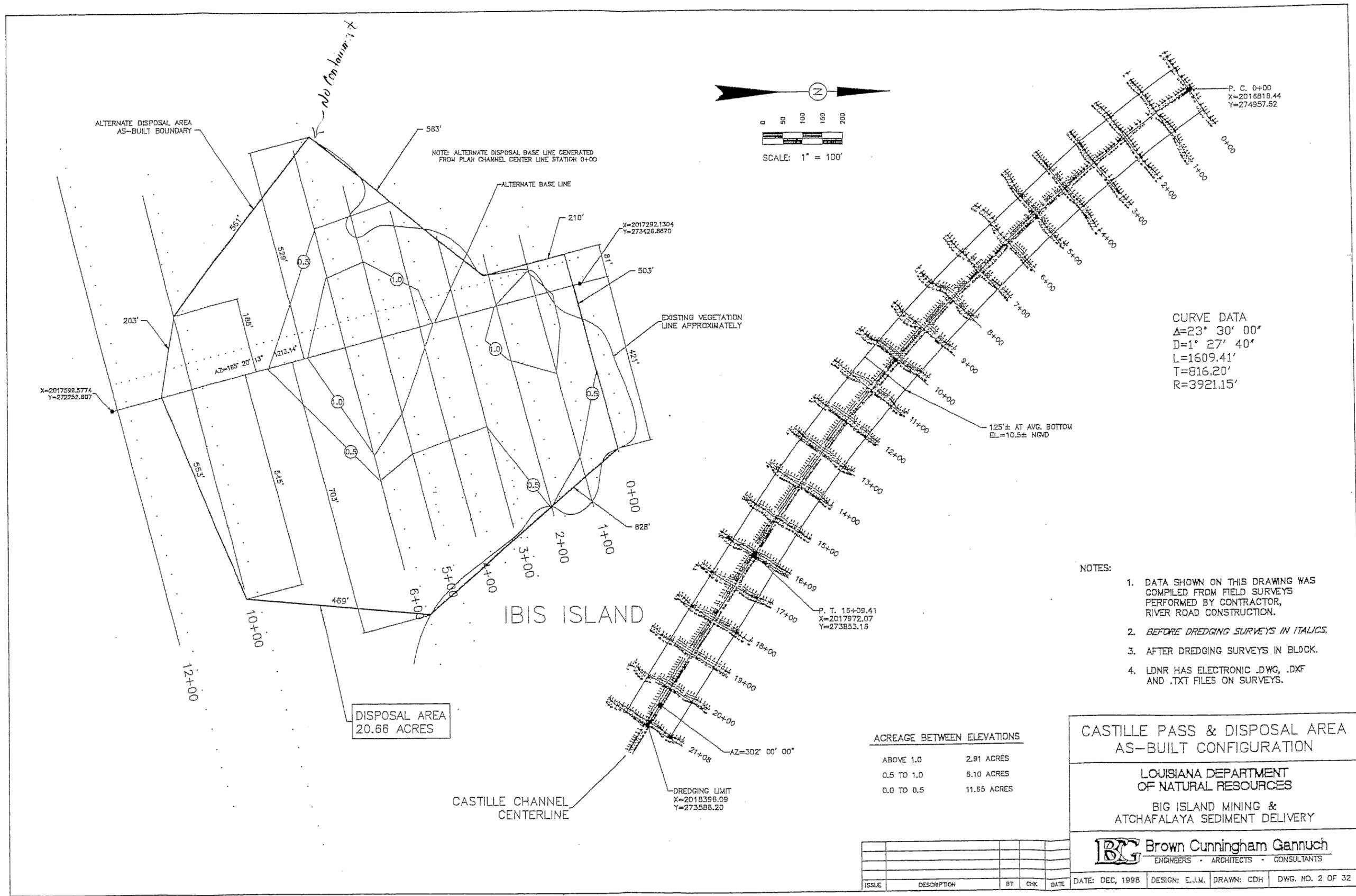
LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

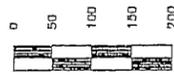
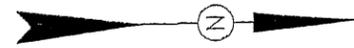
**BCG** Brown Cunningham Gannuch  
ENGINEERS • ARCHITECTS • CONSULTANTS

ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998 DESIGN: E.J.M. DRAWN: CDH DWG. NO. 1 OF 32

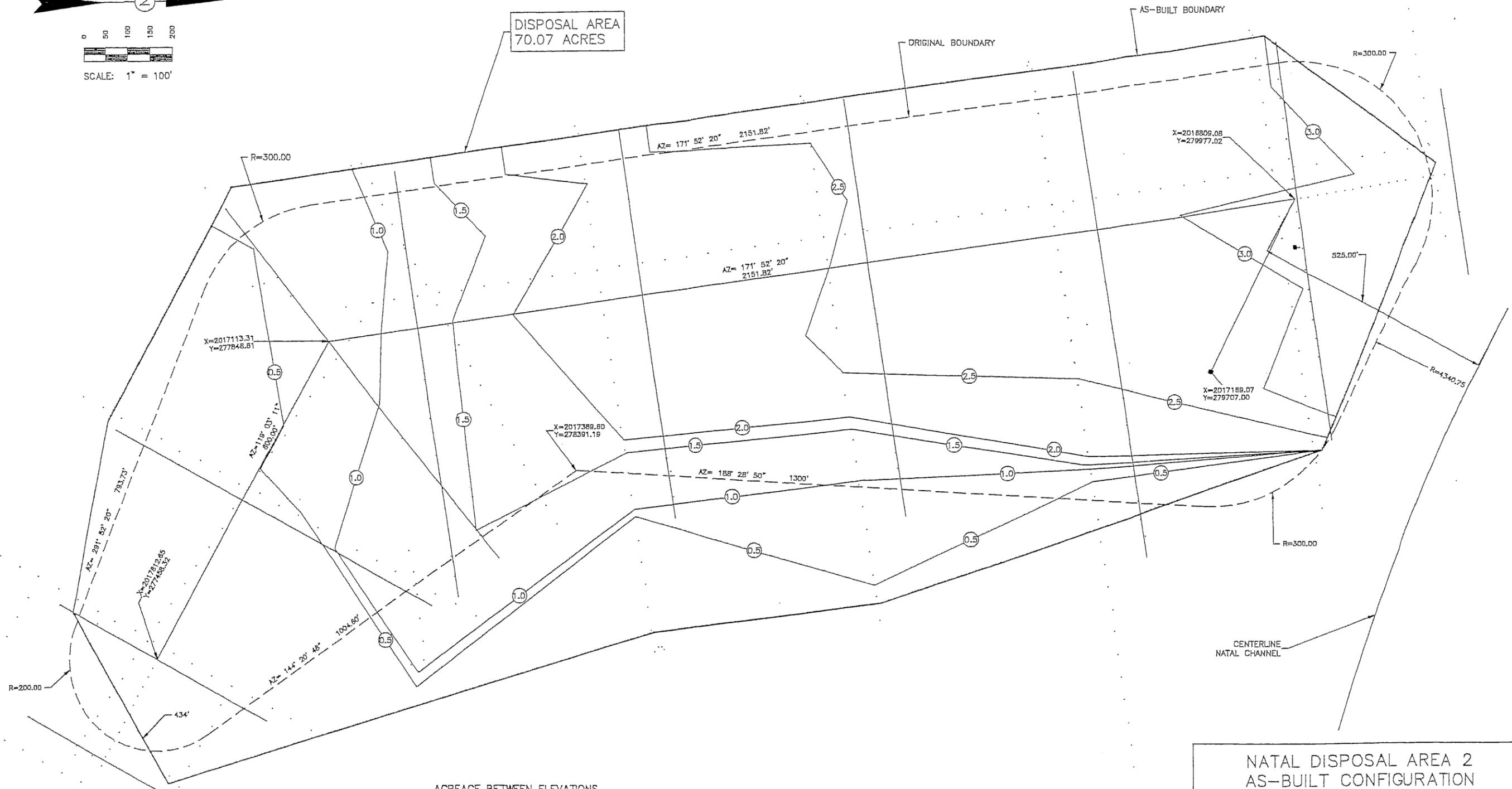






SCALE: 1" = 100'

DISPOSAL AREA  
70.07 ACRES



ACREAGE BETWEEN ELEVATIONS

ABOVE 3.0	3.96 ACRES
2.5 TO 3.0	16.80 ACRES
2.0 TO 2.5	11.68 ACRES
1.5 TO 2.0	4.64 ACRES
1.0 TO 1.5	8.78 ACRES
0.5 TO 1.0	7.79 ACRES
0.0 TO 0.5	16.42 ACRES

NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. BEFORE DREDGING SURVEYS IN ITALICS.
3. AFTER DREDGING SURVEYS IN BLOCK.
4. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.

NOTE: REVISED NATAL DISPOSAL AREA 2  
B. C. G. REVISION NO. 3  
DATED DEC. 28, 1997

ISSUE	DESCRIPTION	BY	CHK	DATE

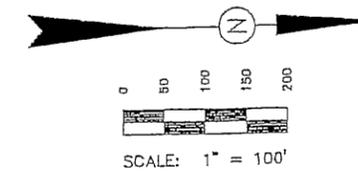
NATAL DISPOSAL AREA 2  
AS-BUILT CONFIGURATION

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

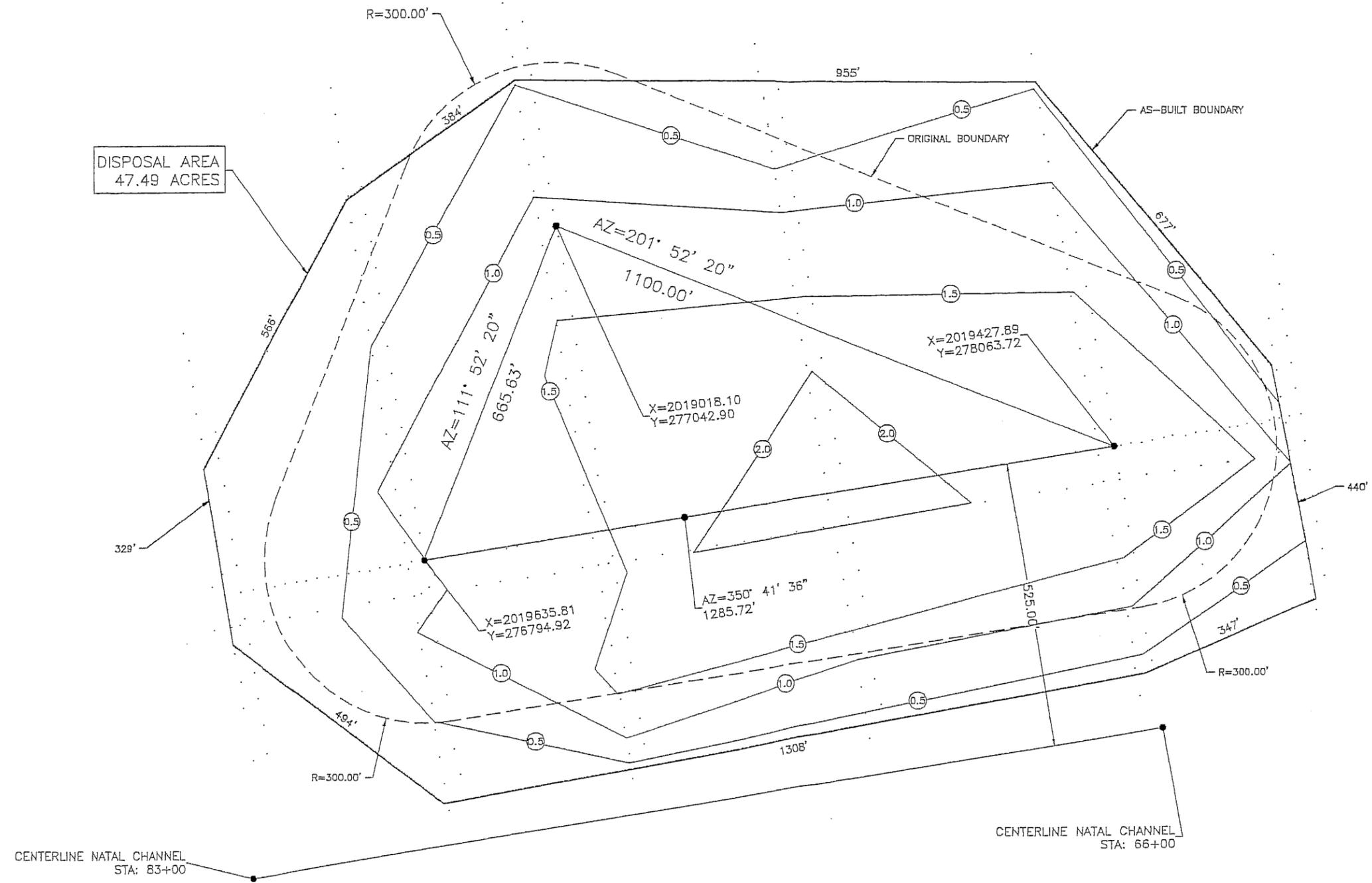
BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

**BCG** Brown Cunningham Gannuch  
ENGINEERS • ARCHITECTS • CONSULTANTS

DATE: DEC, 1998	DESIGN: E.J.M.	DRAWN: CDH	DWG. NO. 4 OF 32
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DISPOSAL AREA  
47.49 ACRES



ACREAGE BETWEEN ELEVATIONS

ABOVE 2.0	1.74 ACRES
1.5 TO 2.0	13.07 ACRES
1.0 TO 1.5	12.27 ACRES
0.5 TO 1.0	10.57 ACRES
0.0 TO 0.5	9.85 ACRES

NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. BEFORE DREDGING SURVEYS IN ITALICS.
3. AFTER DREDGING SURVEYS IN BLOCK.
4. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.

NATAL DISPOSAL AREA 3  
AS-BUILT CONFIGURATION

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

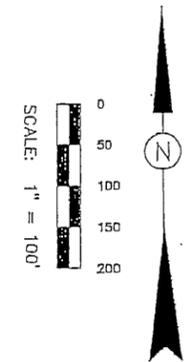
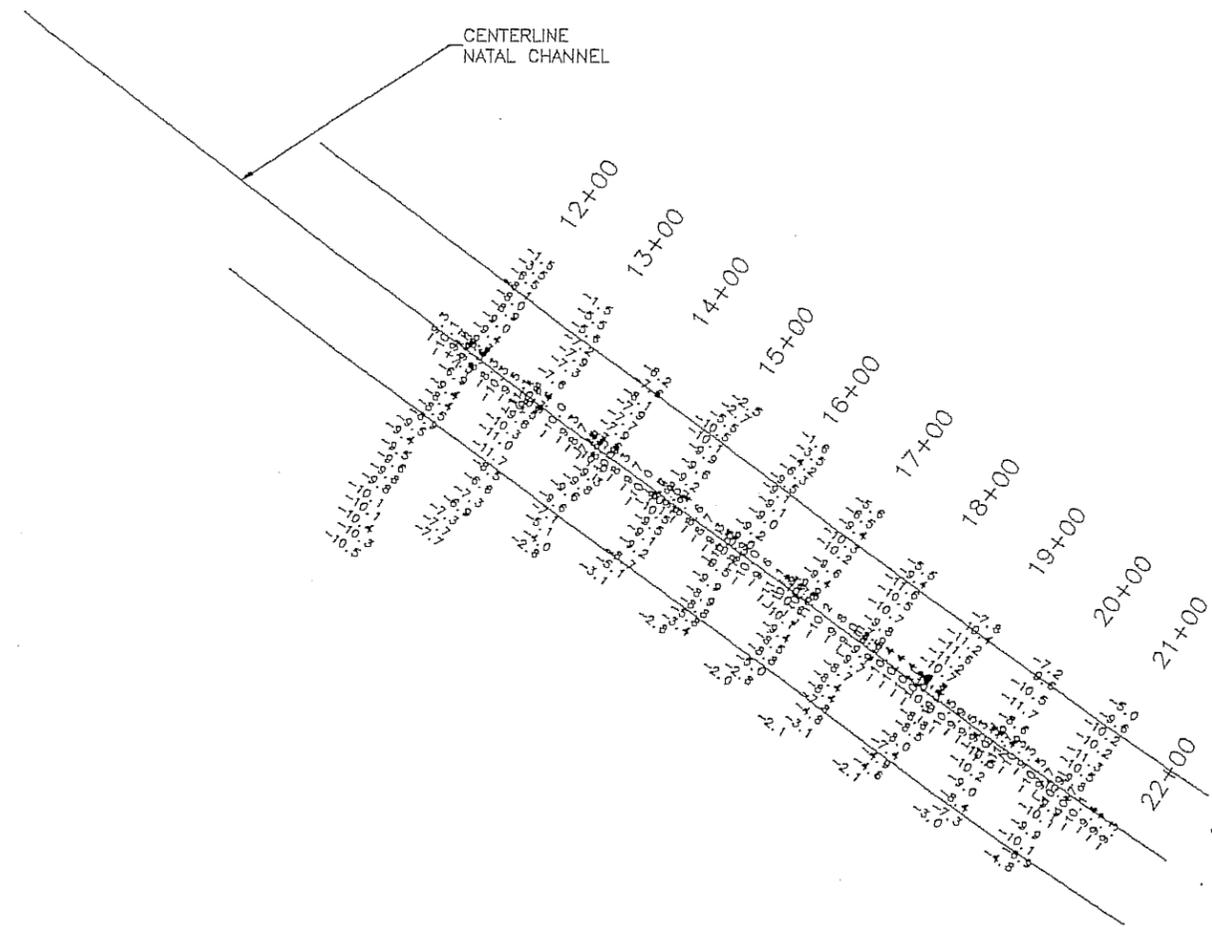
BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY



ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998 DESIGN: E.J.M. DRAWN: GDH DWG. NO. 5 OF 32





NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.
3. LDNR HAS FULL SIZE DRAWINGS SHOWING PLAN AND AFTER DREDGING CROSS SECTIONS.

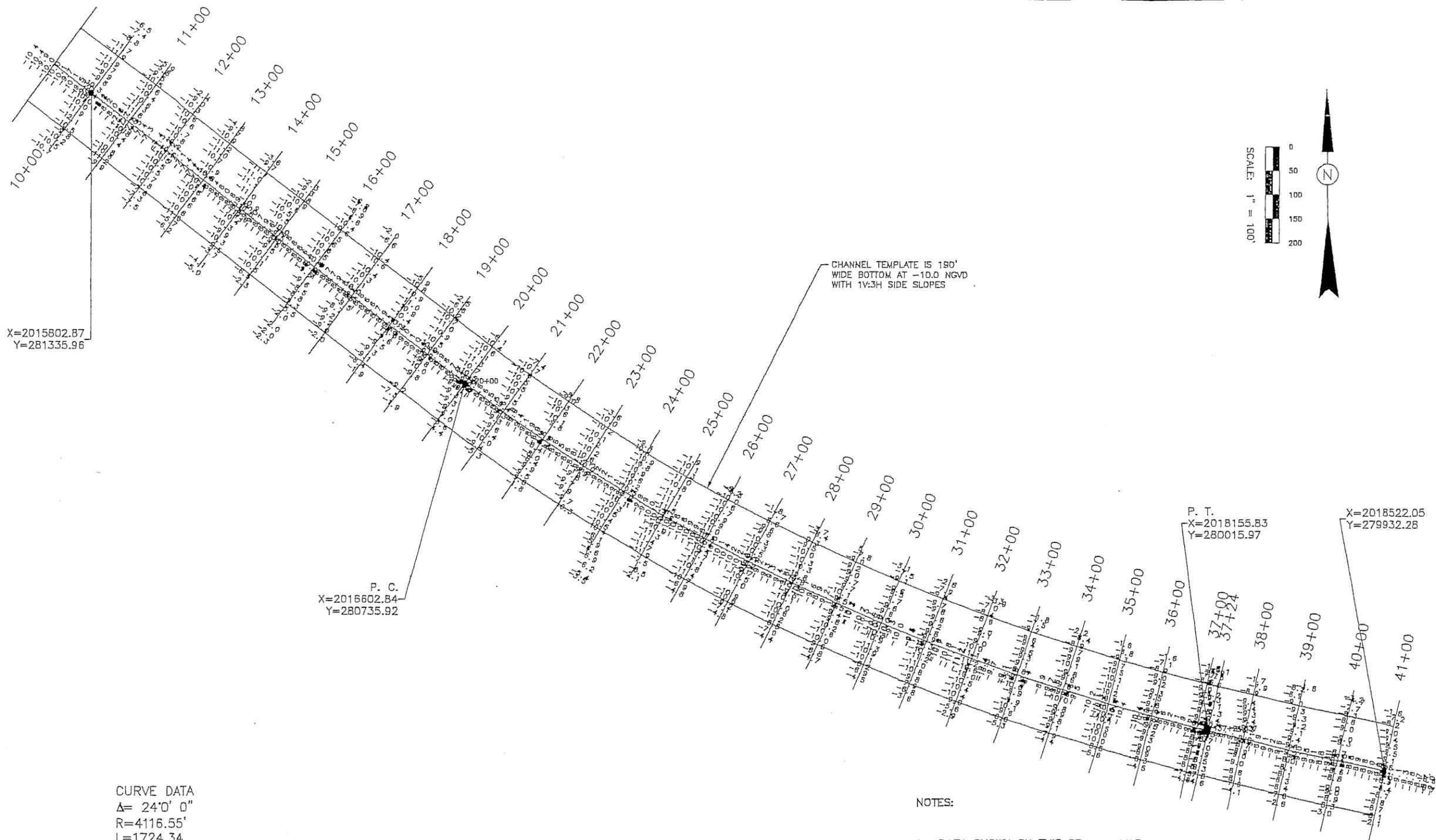
NATAL CHANNEL 12+00 TO 21+00  
REDREDGE SHOALED ENTRANCE

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES  
BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

**BG** Brown Cunningham Gannuch  
ENGINEERS • ARCHITECTS • CONSULTANTS

ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998 DESIGN: E.J.M. DRAWN: ODH DWG. NO. 7 OF 32



CURVE DATA  
 $\Delta = 24^{\circ} 0' 0''$   
 $R = 4116.55'$   
 $L = 1724.34'$

CHANNEL TEMPLATE IS 190'  
 WIDE BOTTOM AT -10.0 NGVD  
 WITH 1V:3H SIDE SLOPES

NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.
3. LDNR HAS FULL SIZE DRAWINGS SHOWING PLAN AND AFTER DREDGING CROSS SECTIONS.

NATAL CHANNEL 10+00 TO 41+00  
 AS-BUILT CONFIGURATION

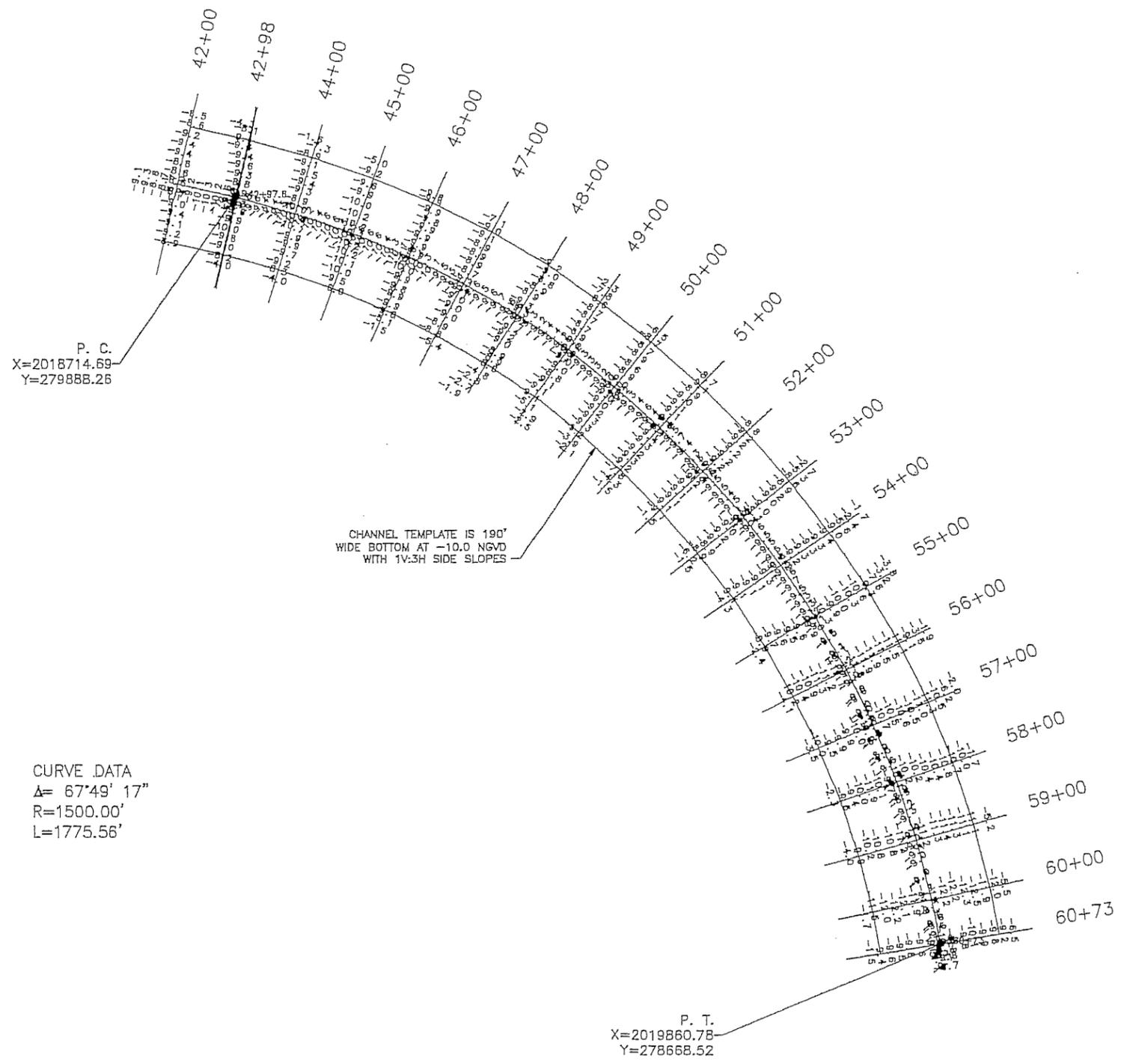
LOUISIANA DEPARTMENT  
 OF NATURAL RESOURCES

BIG ISLAND MINING &  
 ATCHAFALAYA SEDIMENT DELIVERY

**BG** Brown Cunningham Gannuch  
 ENGINEERS • ARCHITECTS • CONSULTANTS

ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998    DESIGN: E.J.M.    DRAWN: CDH    DWG. NO. 8 OF 32

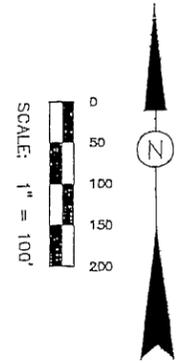


P. C.  
X=2018714.69  
Y=279888.26

CURVE DATA  
Δ= 67°49' 17"  
R=1500.00'  
L=1775.56'

CHANNEL TEMPLATE IS 190'  
WIDE BOTTOM AT -10.0 NGVD  
WITH 1V:3H SIDE SLOPES

P. T.  
X=2019860.78  
Y=278668.52



NOTES:

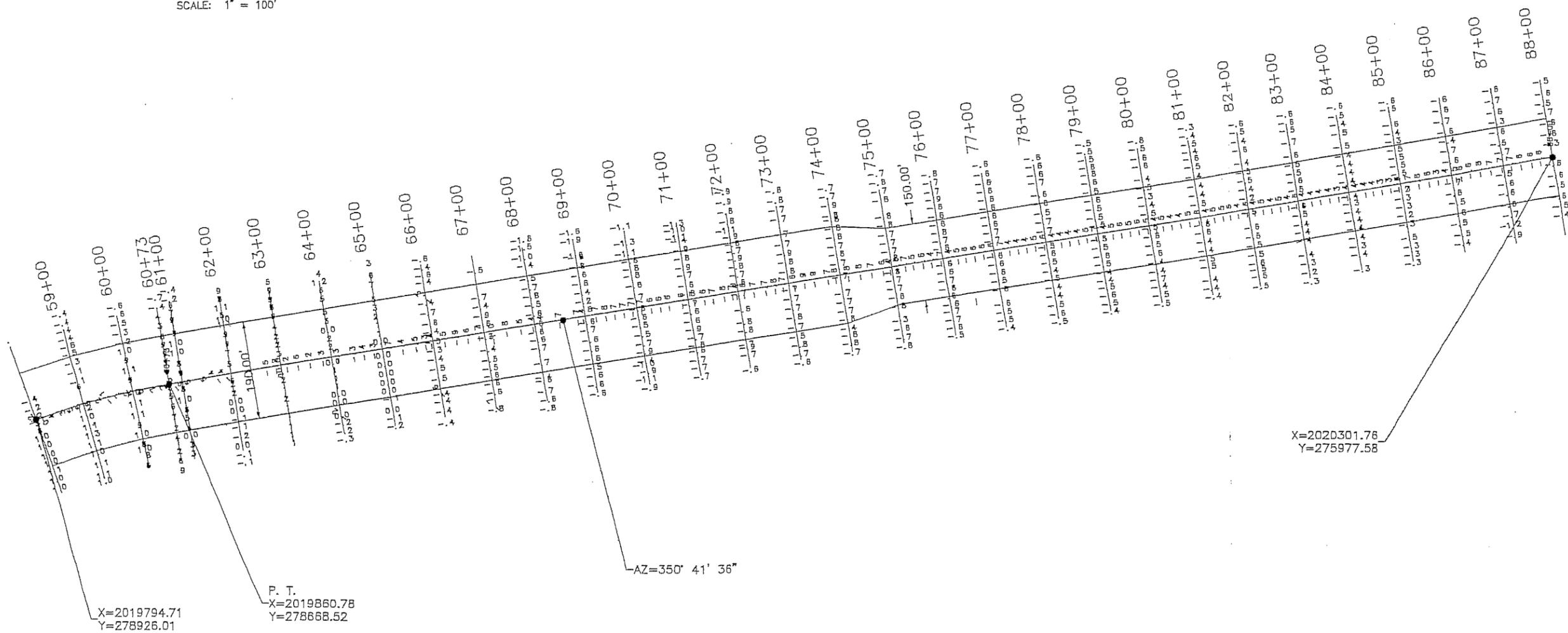
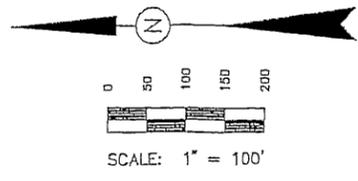
1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.
3. LDNR HAS FULL SIZE DRAWINGS SHOWING PLAN AND AFTER DREDGING CROSS SECTIONS.

NATAL CHANNEL 42+00 TO 60+73  
AS-BUILT CONFIGURATION

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES  
BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

**BCG** Brown Cunningham Gannuch  
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ISSUE	DESCRIPTION	BY	CHK	DATE



NOTES:

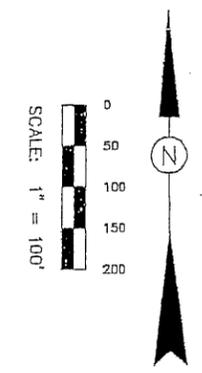
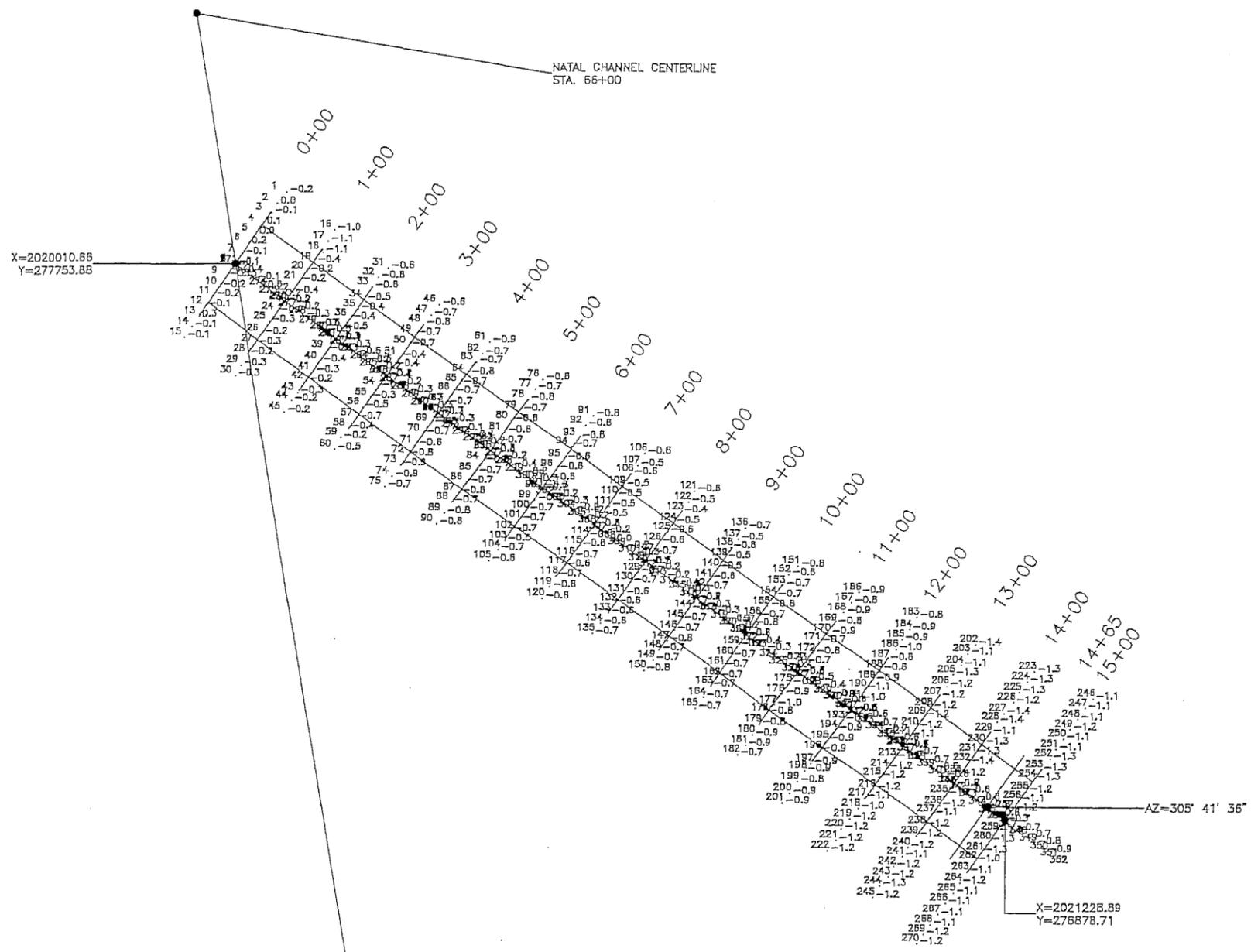
1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.
3. LDNR HAS FULL SIZE DRAWINGS SHOWING PLAN AND AFTER DREDGING CROSS SECTIONS.

NATAL CHANNEL 58+00 TO 88+00  
BEFORE DREDGING CONFIGURATION

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES  
BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY



ISSUE	DESCRIPTION	BY	CHK	DATE



NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.
3. LDNR HAS FULL SIZE DRAWINGS SHOWING PLAN AND AFTER DREDGING CROSS SECTIONS.

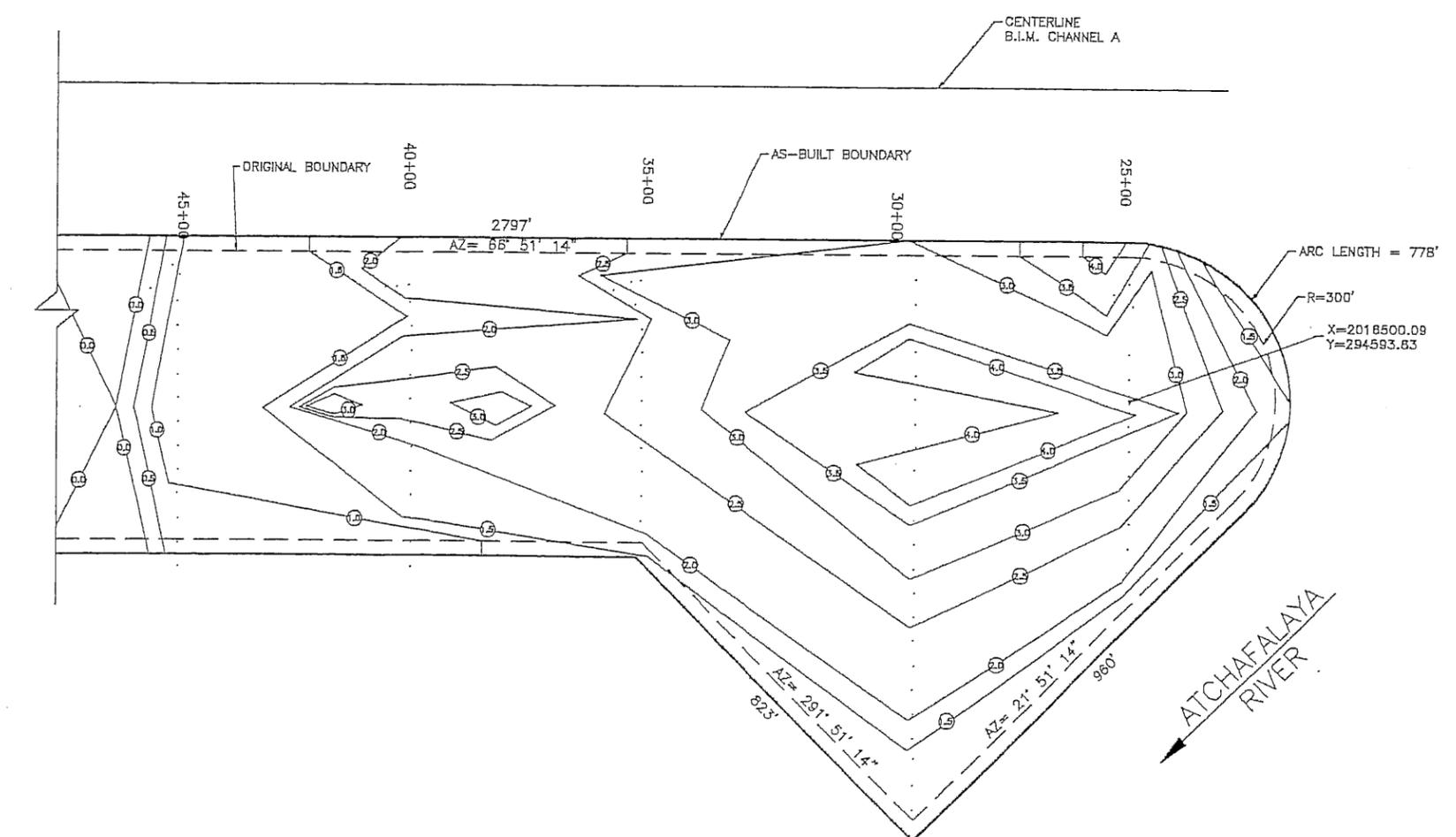
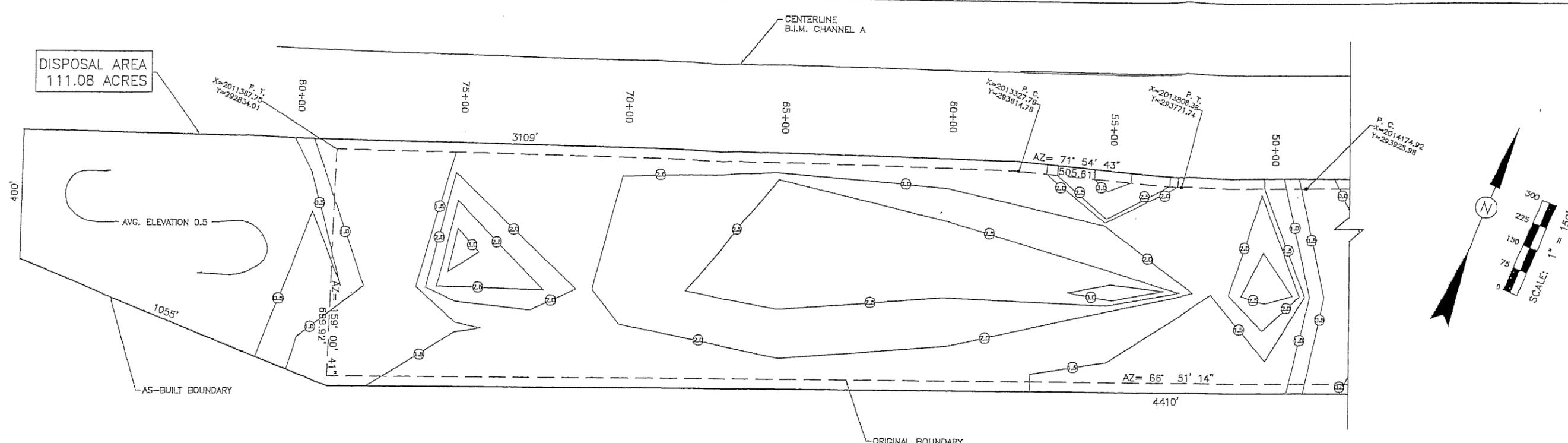
NATAL CHANNEL A BEFORE DREDGING CONFIGURATION

LOUISIANA DEPARTMENT OF NATURAL RESOURCES  
 BIG ISLAND MINING & ATCHAFALAYA SEDIMENT DELIVERY



ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998    DESIGN: E.J.M.    DRAWN: CDH    DWG. NO. 11 OF 32



CURVE DATA 1  
 $\Delta = 0^\circ 16' 28''$   
 $L = 397.67'$   
 $R = 83020.8'$

CURVE DATA 2  
 $\Delta = 1^\circ 27' 24''$   
 $L = 2109.79'$   
 $R = 82980.80'$

ACREAGE BETWEEN ELEVATIONS

ABOVE 4.0	1.80 ACRES
3.5 TO 4.0	3.35 ACRES
3.0 TO 3.5	8.16 ACRES
2.5 TO 3.0	15.57 ACRES
2.0 TO 2.5	22.15 ACRES
1.5 TO 2.0	24.38 ACRES
1.0 TO 1.5	17.30 ACRES
0.5 TO 1.0	10.09 ACRES
0.0 TO 0.5	8.60 ACRES

- NOTES:
1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
  2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.

**BIG ISLAND DISPOSAL AREA 1  
AS-BUILT CONFIGURATION**

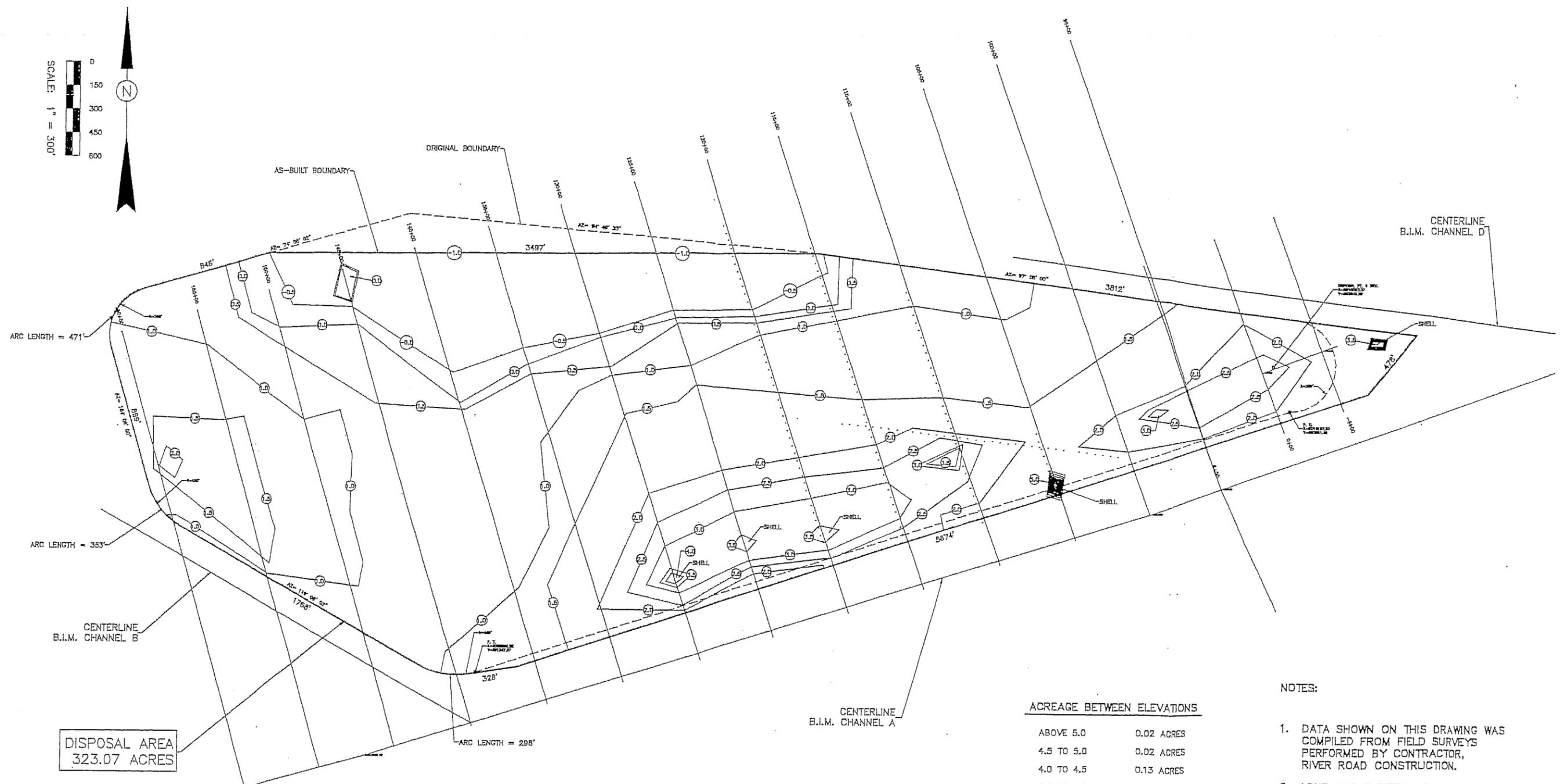
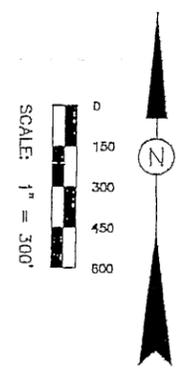
LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

**BC** Brown Cunningham Gannuch  
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ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998    DESIGN: E.J.M.    DRAWN: CDH    DWG. NO. 12 OF 32



CURVE DATA  
 $\Delta = 3^\circ 48' 36''$   
 $R = 81750.80'$   
 $L = 5436.26'$

ACREAGE BETWEEN ELEVATIONS

ABOVE 5.0	0.02 ACRES
4.5 TO 5.0	0.02 ACRES
4.0 TO 4.5	0.13 ACRES
3.5 TO 4.0	1.01 ACRES
3.0 TO 3.5	11.40 ACRES
2.5 TO 3.0	15.84 ACRES
2.0 TO 2.5	21.78 ACRES
1.5 TO 2.0	70.35 ACRES
1.0 TO 1.5	74.93 ACRES
0.5 TO 1.0	68.25 ACRES
0.0 TO 0.5	13.58 ACRES
-0.5 TO 0.0	10.67 ACRES
-1.0 TO -0.5	35.12 ACRES

NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.

BIG ISLAND DISPOSAL AREA 4/5  
 AS-BUILT CONFIGURATION

LOUISIANA DEPARTMENT  
 OF NATURAL RESOURCES

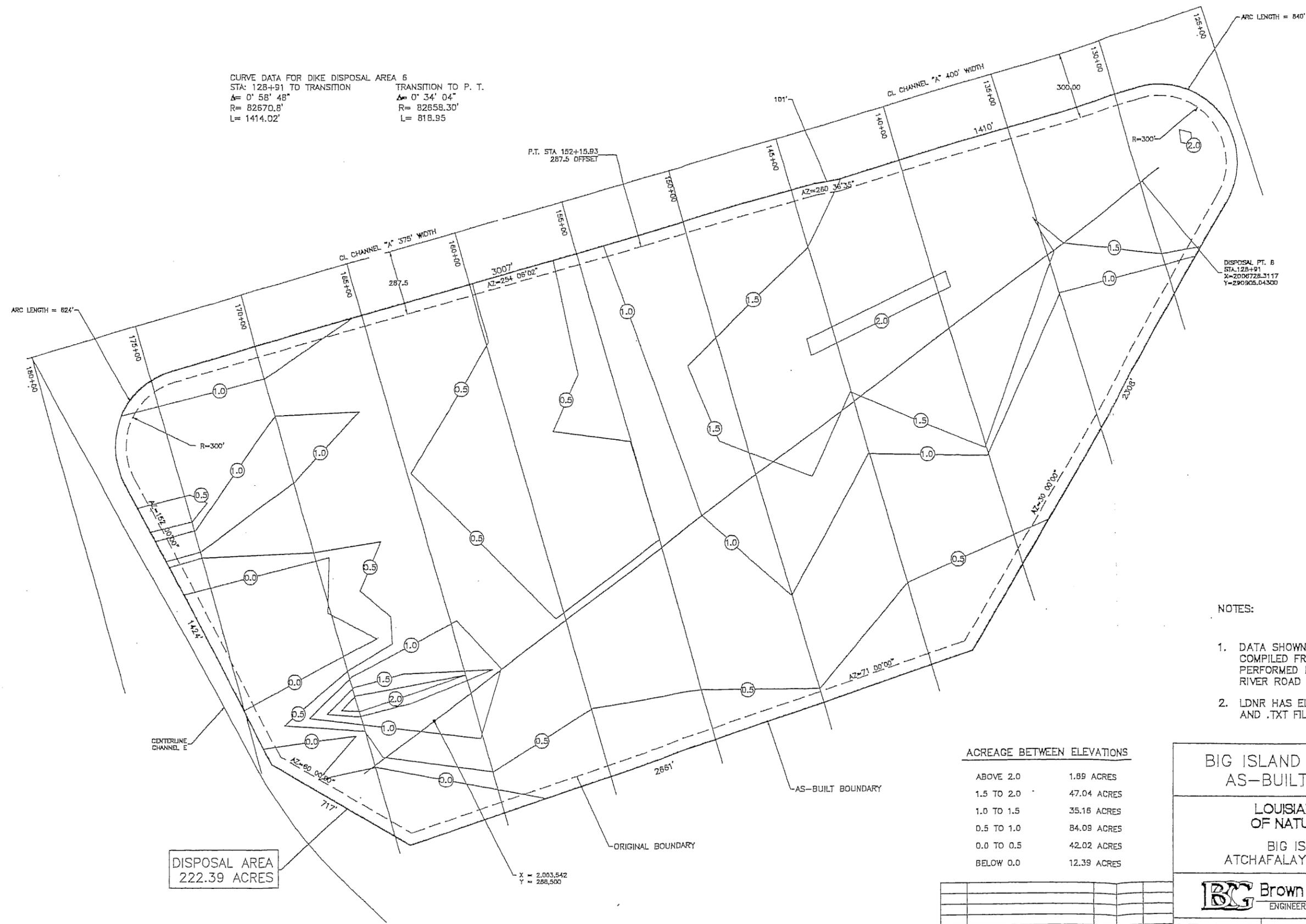
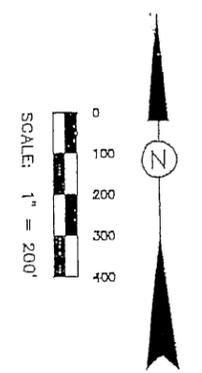
BIG ISLAND MINING &  
 ATCHAFALAYA SEDIMENT DELIVERY

**BC** Brown Cunningham Gannuch  
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ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998 DESIGN: E.J.M. DRAWN: COH DWG. NO. 13 OF 32

CURVE DATA FOR DIKE DISPOSAL AREA 6  
 STA: 128+91 TO TRANSITION      TRANSITION TO P. T.  
 $\Delta = 0^\circ 58' 48''$        $\Delta = 0^\circ 34' 04''$   
 $R = 82670.8'$        $R = 82658.30'$   
 $L = 1414.02'$        $L = 818.95'$



DISPOSAL AREA  
222.39 ACRES

X = 2,003,542  
Y = 288,500

NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.

ACREAGE BETWEEN ELEVATIONS

ABOVE 2.0	1.89 ACRES
1.5 TO 2.0	47.04 ACRES
1.0 TO 1.5	35.16 ACRES
0.5 TO 1.0	84.09 ACRES
0.0 TO 0.5	42.02 ACRES
BELOW 0.0	12.39 ACRES

BIG ISLAND DISPOSAL AREA 6  
AS-BUILT CONFIGURATION

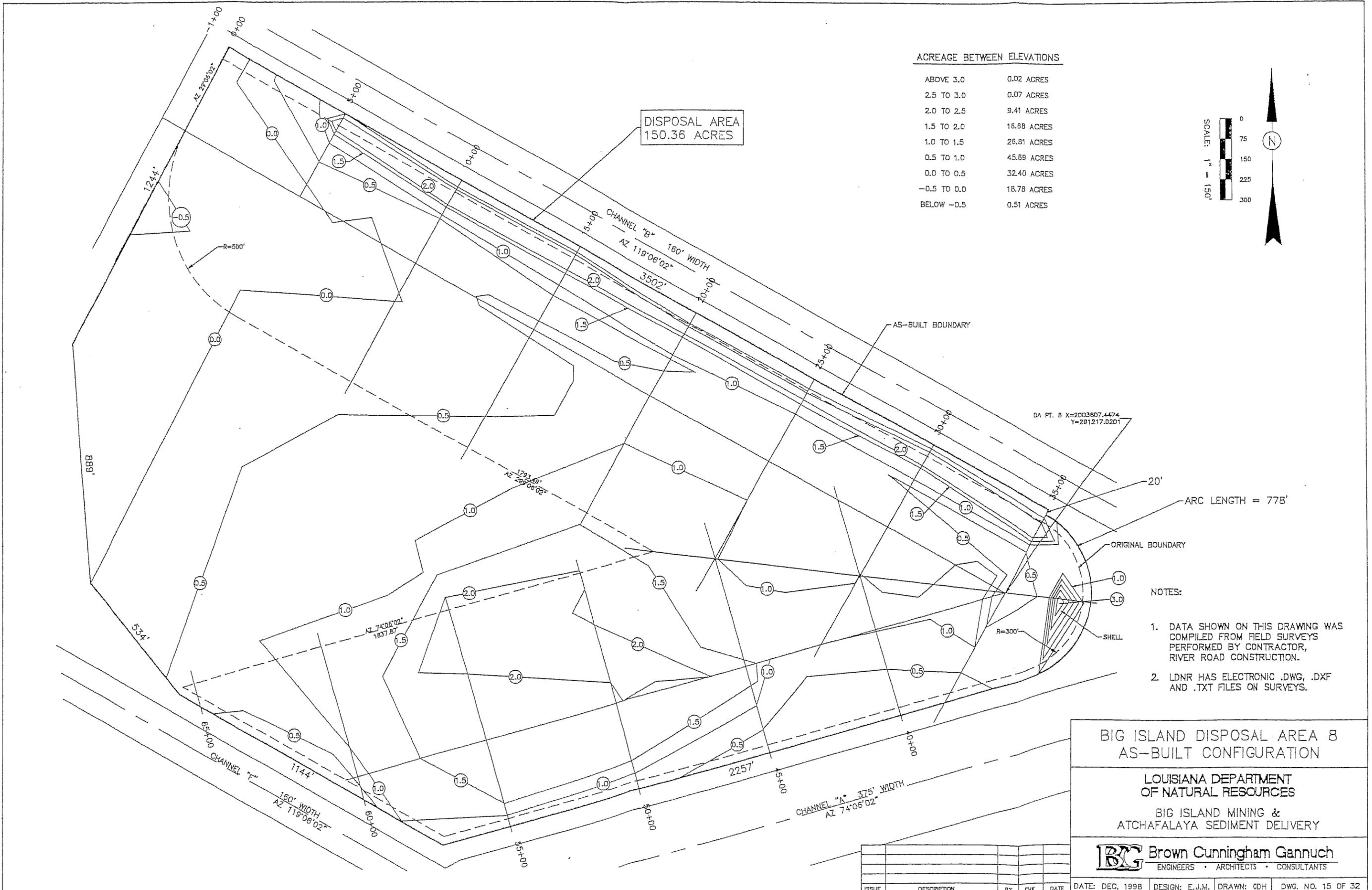
LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

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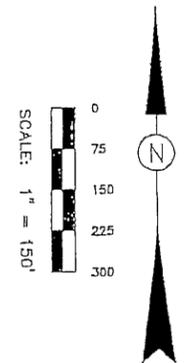
ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998    DESIGN: E.J.M.    DRAWN: CDH    DWG. NO. 14 OF 32



**ACREAGE BETWEEN ELEVATIONS**

ABOVE 3.0	0.02 ACRES
2.5 TO 3.0	0.07 ACRES
2.0 TO 2.5	9.41 ACRES
1.5 TO 2.0	16.68 ACRES
1.0 TO 1.5	26.81 ACRES
0.5 TO 1.0	45.69 ACRES
0.0 TO 0.5	32.40 ACRES
-0.5 TO 0.0	18.78 ACRES
BELOW -0.5	0.51 ACRES



**NOTES:**

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.

**BIG ISLAND DISPOSAL AREA 8  
AS-BUILT CONFIGURATION**

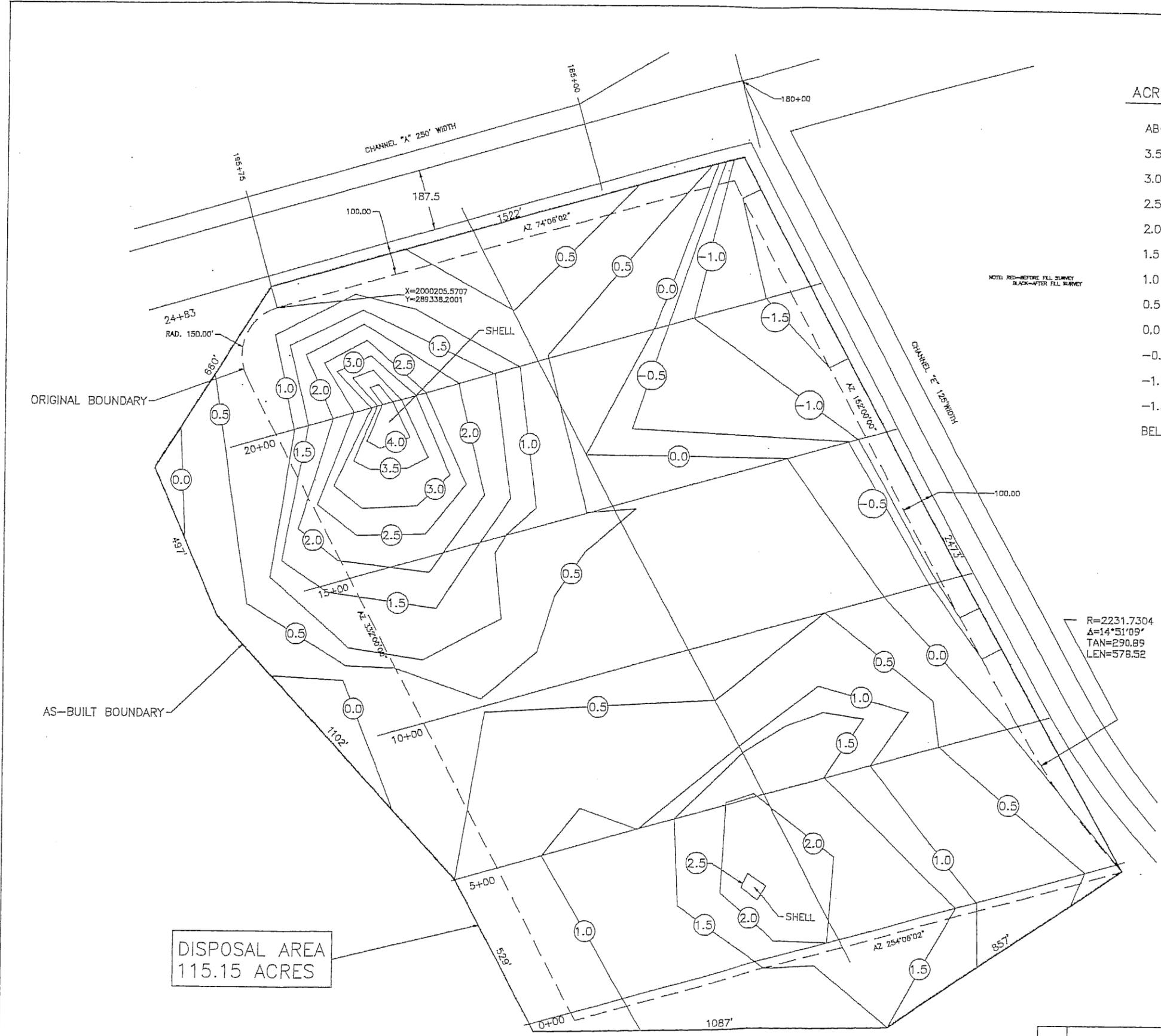
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OF NATURAL RESOURCES**

**BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY**

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ISSUE	DESCRIPTION	BY	CHK	DATE

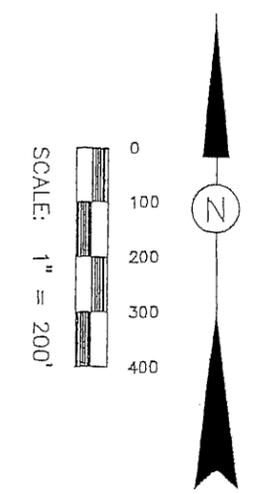
DATE: DEC, 1998 DESIGN: E.J.M. DRAWN: ODH DWG. NO. 15 OF 32



DISPOSAL AREA  
115.15 ACRES

ACREAGE BETWEEN ELEVATIONS

ABOVE 4.0	0.29 ACRES
3.5 TO 4.0	0.62 ACRES
3.0 TO 3.5	1.43 ACRES
2.5 TO 3.0	1.80 ACRES
2.0 TO 2.5	5.66 ACRES
1.5 TO 2.0	11.94 ACRES
1.0 TO 1.5	15.56 ACRES
0.5 TO 1.0	30.85 ACRES
0.0 TO 0.5	29.79 ACRES
-0.5 TO 0.0	7.30 ACRES
-1.0 TO -0.5	4.19 ACRES
-1.5 TO -1.0	4.38 ACRES
BELOW -1.5	1.34 ACRES



NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.

BIG ISLAND DISPOSAL AREA 9  
AS-BUILT CONFIGURATION

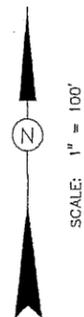
LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

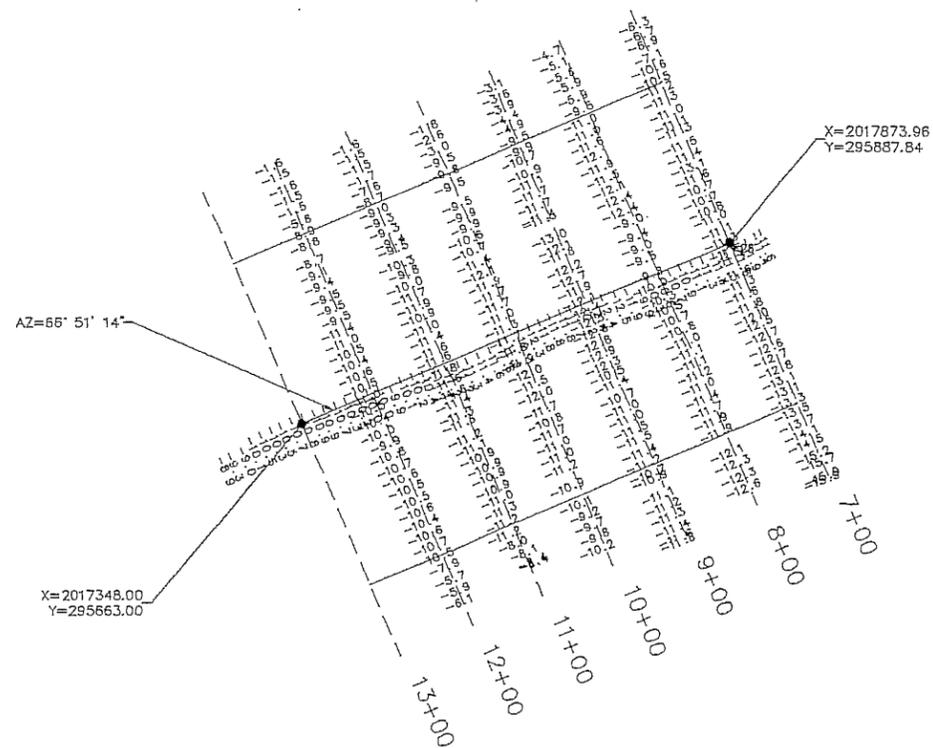
**BCG** Brown Cunningham Gannuch  
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ISSUE	DESCRIPTION	BY	CHK	DATE

DATE: DEC, 1998    DESIGN: E.J.M.    DRAWN: CDH    DWG. NO. 16 OF 32



SCALE: 1" = 100'

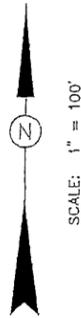


BIG ISLAND CHANNEL A  
A.D. PLAN VIEW 7+00-12+00

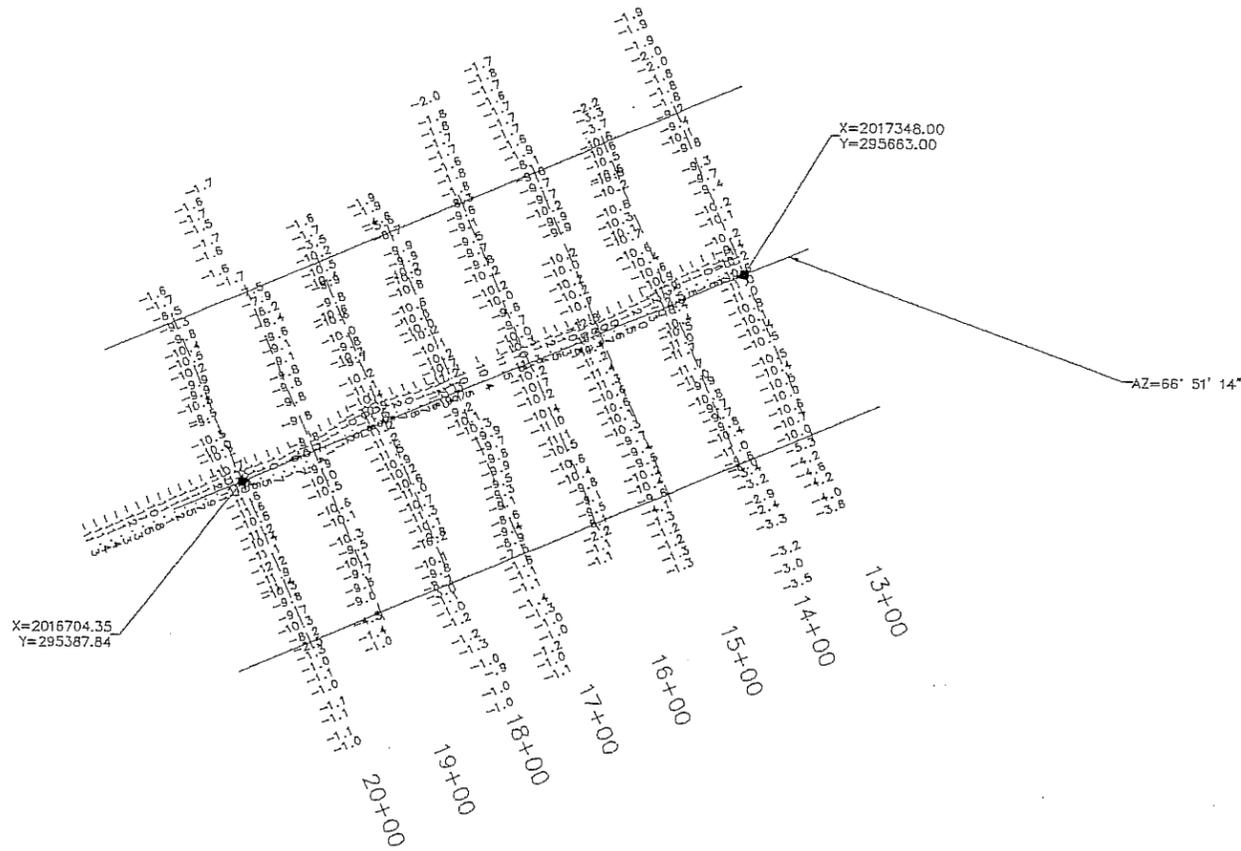
LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
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SCALE: 1" = 100'

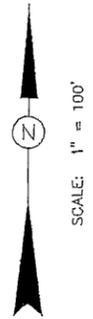


BIG ISLAND CHANNEL A  
A.D. PLAN VIEW 13+00-20+00

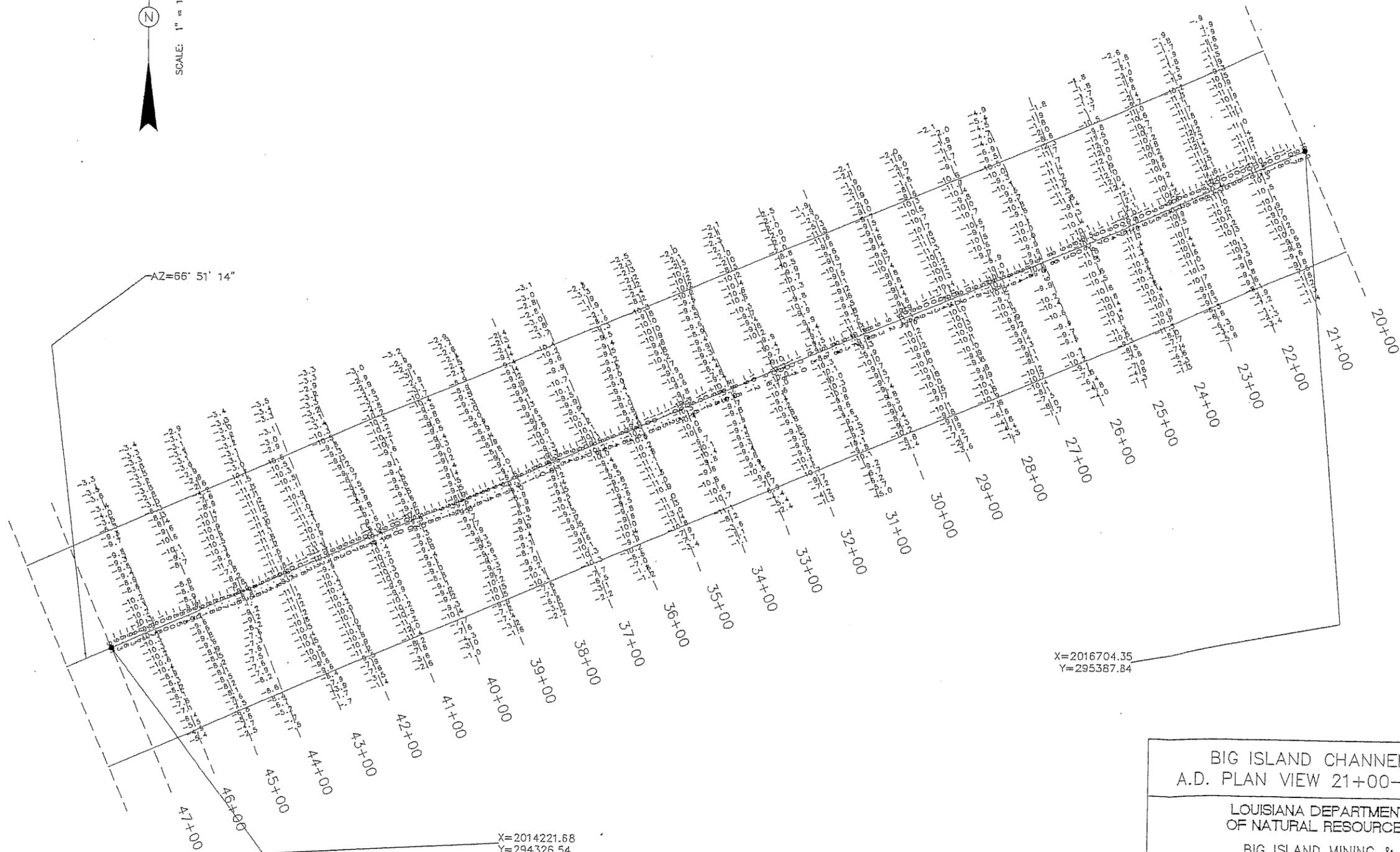
LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
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SCALE: 1" = 100'

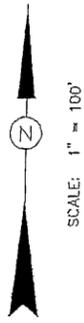


AZ=66° 51' 14"

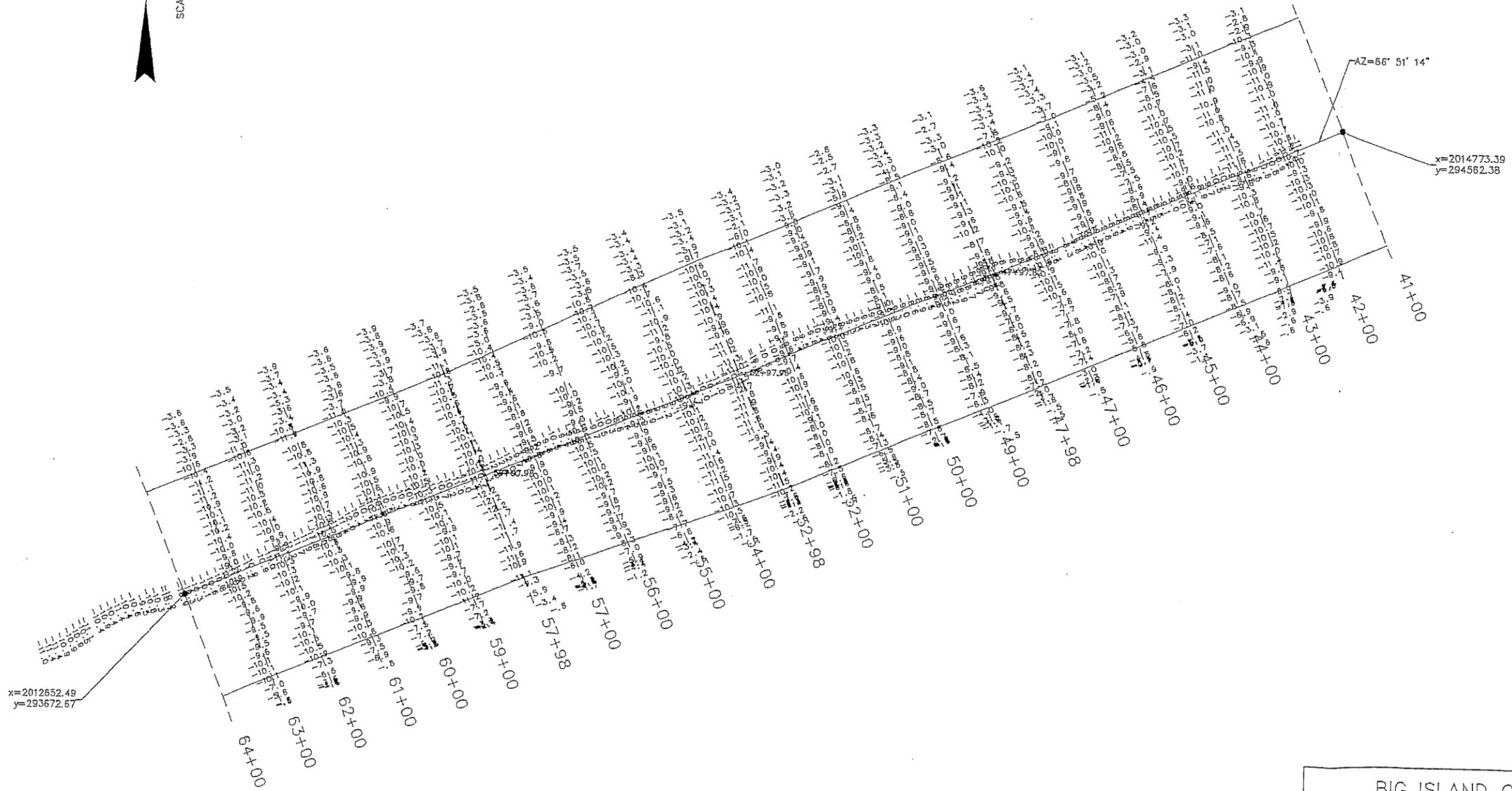
X=2016704.35  
Y=295387.84

X=2014221.68  
Y=294326.54

BIG ISLAND CHANNEL A  
A.D. PLAN VIEW 21+00-46+00  
LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES  
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SCALE: 1" = 100'



BIG ISLAND CHANNEL A  
A.D. PLAN VIEW 42+00-63+00

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY



SCALE: 1" = 100'

CURVE 1 DATA  
DELTA=7° 14' 47.6"  
T=5215.93  
L=10417.95  
R=82370.8

X=2010508.9825  
Y=292839.8942

X=2012653.0965  
Y=293672.9235

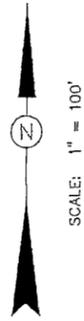


BIG ISLAND CHANNEL A  
A.D. PLAN VIEW 64+00-87+00

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

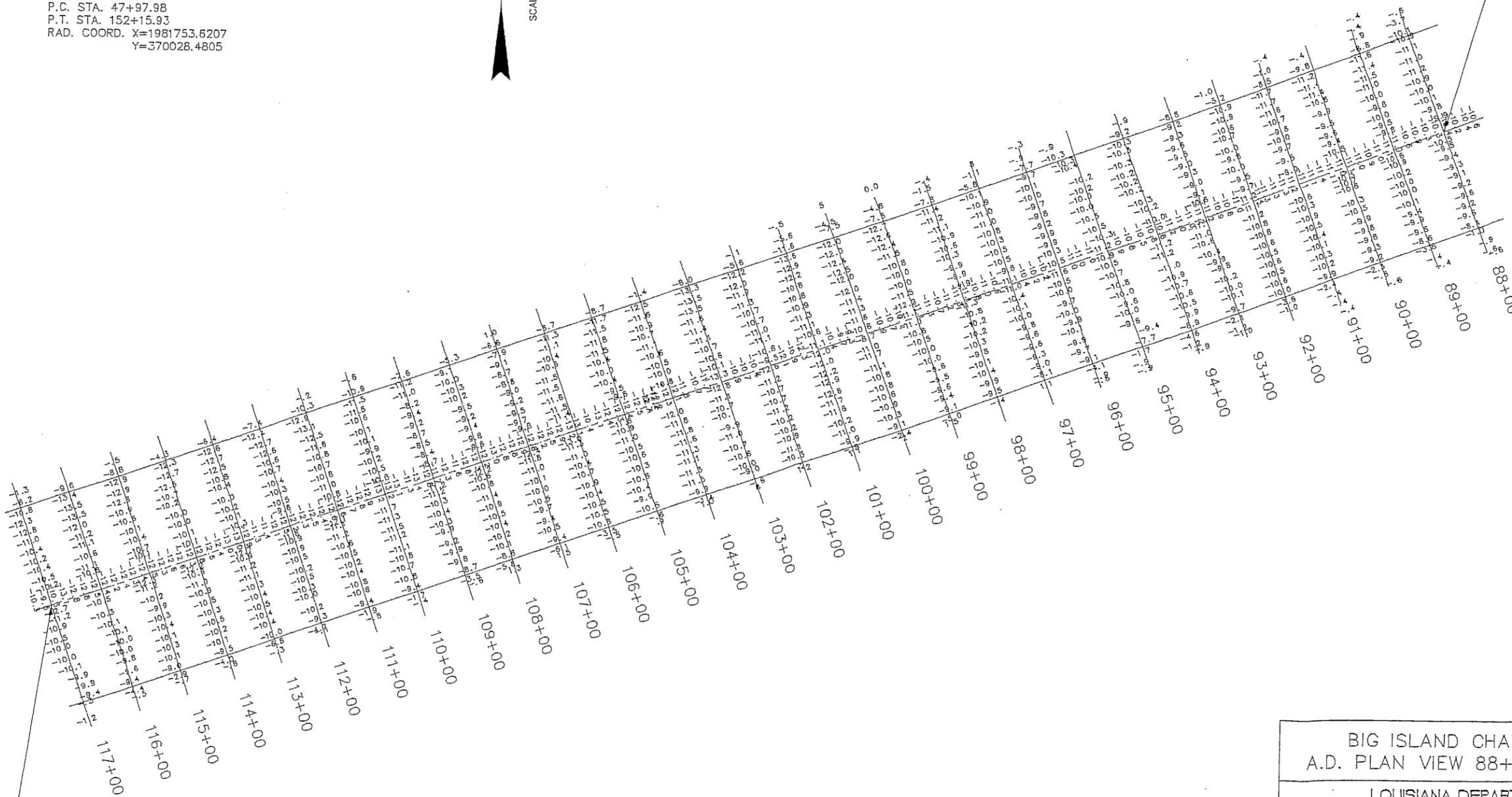
BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

DELTA=7°14'47.6"  
T=5215.93  
L=10417.95  
R=82370.8  
P.C. STA. 47+97.98  
P.T. STA. 152+15.93  
RAD. COORD. X=1981753.6207  
Y=370028.4805



SCALE: 1" = 100'

X=2010415.0318  
Y=292804.9595

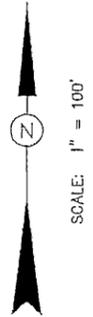


X=2007678.8952  
Y=291843.8987

BIG ISLAND CHAI  
A.D. PLAN VIEW 88+

LOUISIANA DEPAR  
OF NATURAL RESO

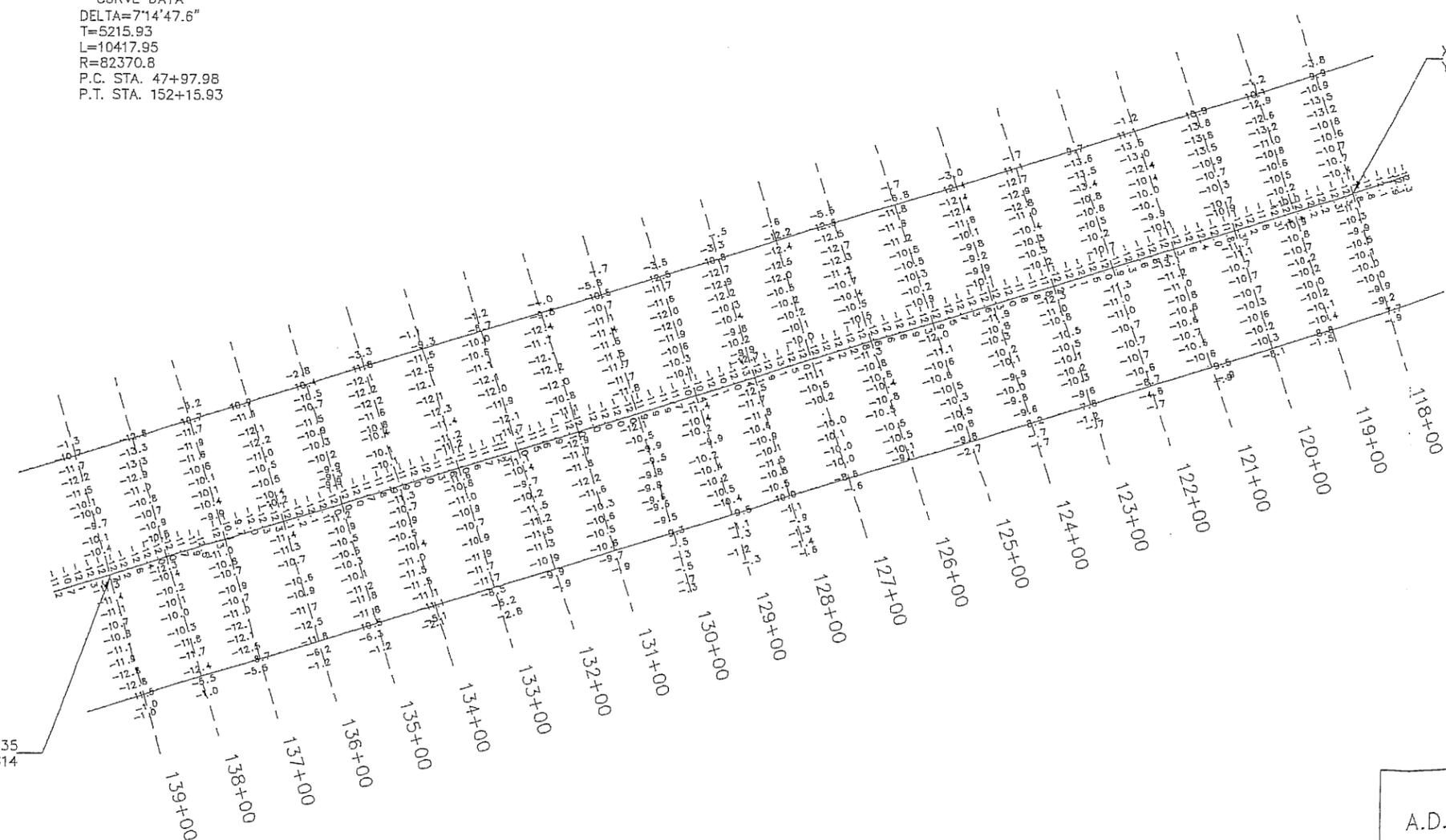
BIG ISLAND MININ  
ATCHAFALAYA SEDIMEN'



CURVE DATA  
DELTA=7°14'47.6"  
T=5215.93  
L=10417.95  
R=82370.8  
P.C. STA. 47+97.98  
P.T. STA. 152+15.93

X=2007583.9376  
Y=291812.4757

X=2005581.7735  
Y=291179.4614

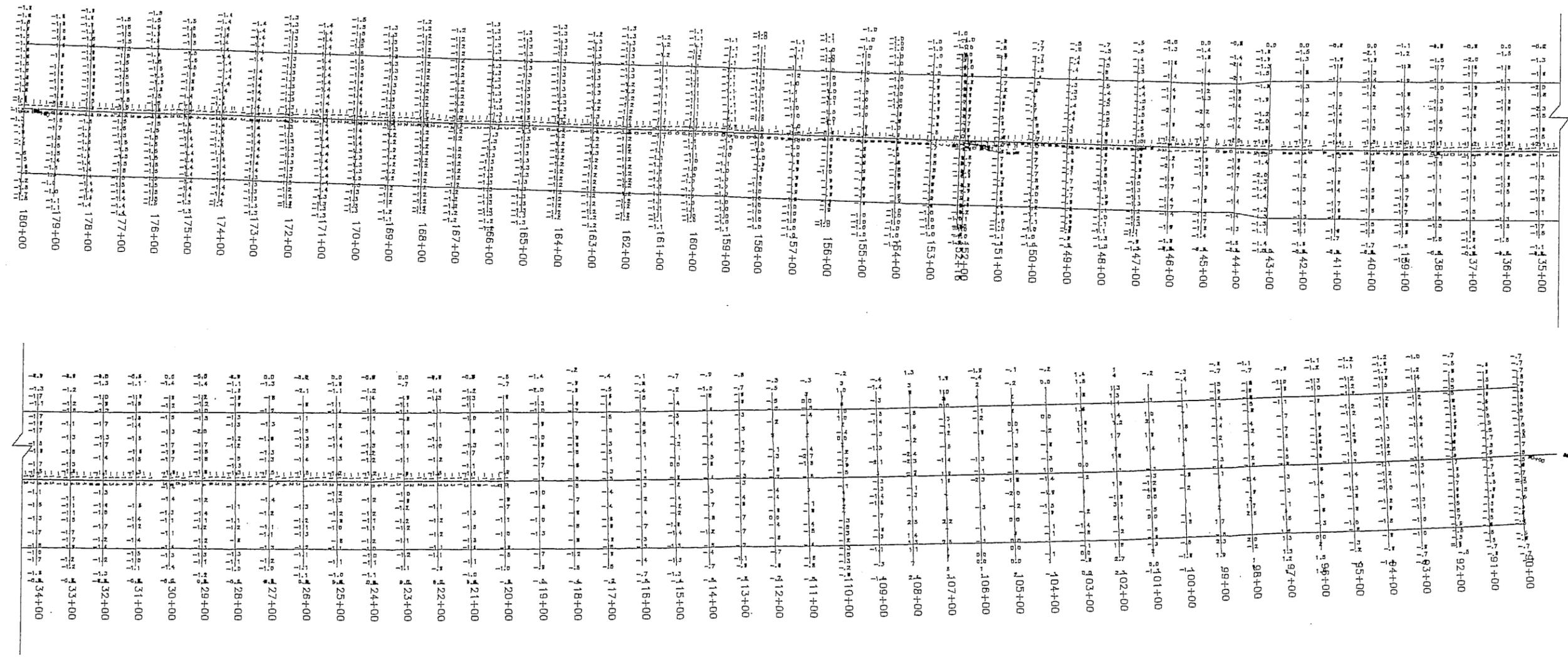
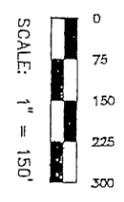


BIG ISLAND CHANNEL A  
A.D. PLAN VIEW 118+00-139+00

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

 Brown-Cunningham Gannuch



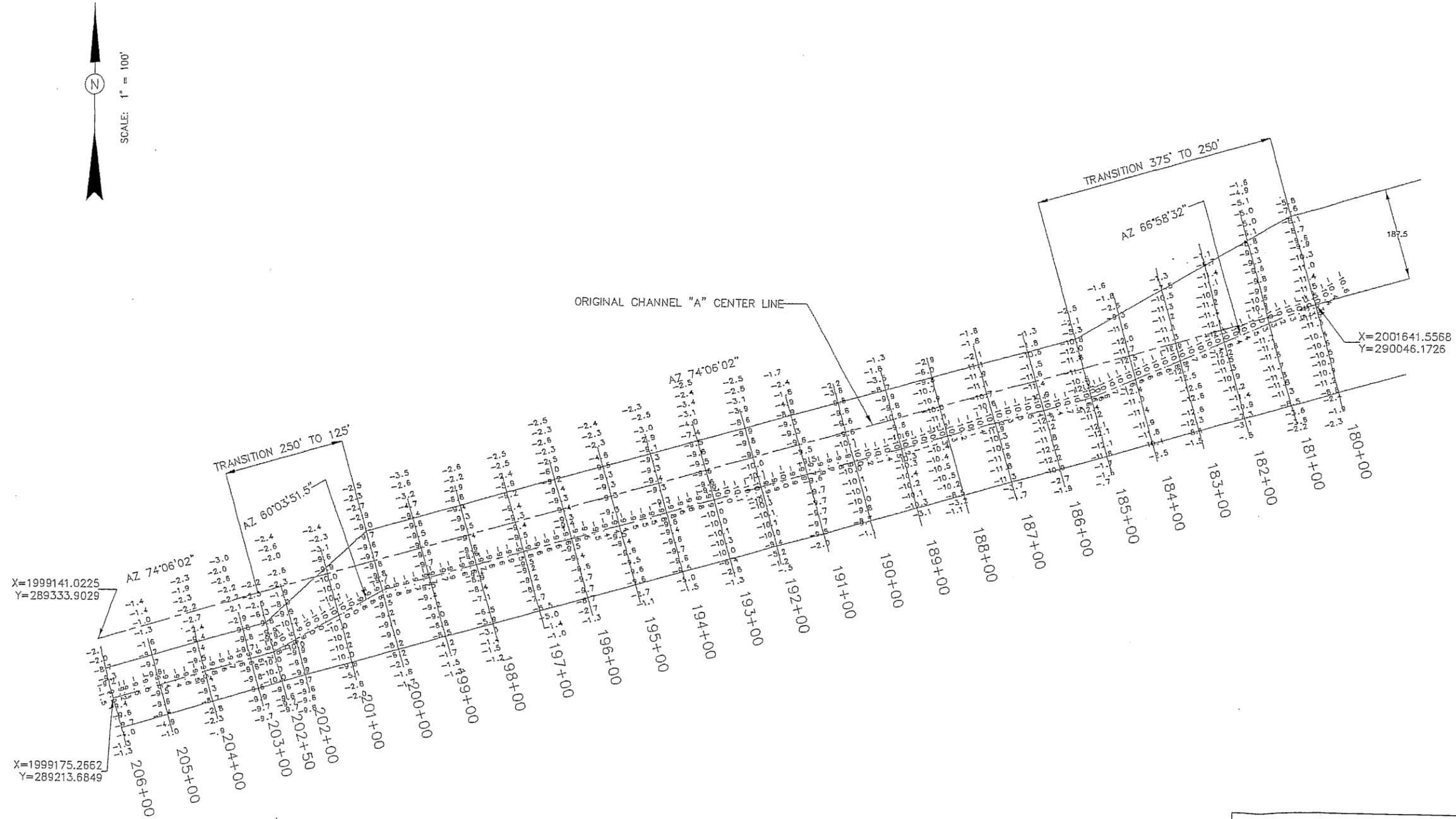
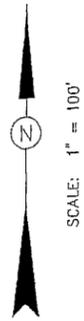
NOTES:

1. DATA SHOWN ON THIS DRAWING WAS COMPILED FROM FIELD SURVEYS PERFORMED BY CONTRACTOR, RIVER ROAD CONSTRUCTION.
2. LDNR HAS ELECTRONIC .DWG, .DXF AND .TXT FILES ON SURVEYS.

BIG ISLAND CHANNEL A  
B.D. PLAN VIEW 90+00 TO 180+00

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES  
BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

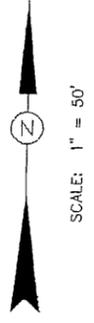
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BIG ISLAND CHANNEL A  
A.D. PLAN VIEW 180+00-206+00

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY



-1.4	-2.1
-1.01.3	-1.9
-1.01.8	-1.5
-1.12.0	-7.5
-1.2.2	-10.9
-2.0.5	-10.9
-7.8.3	-10.9
-7.4.6	-10.9
-7.0.0	-10.9
-6.8.6	-10.6
-6.6.7	-9.4
-4.5.6	-4.3
-1.0.6	-1.7
—	—

206+00

206+75

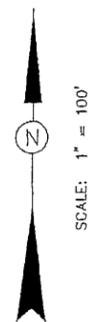
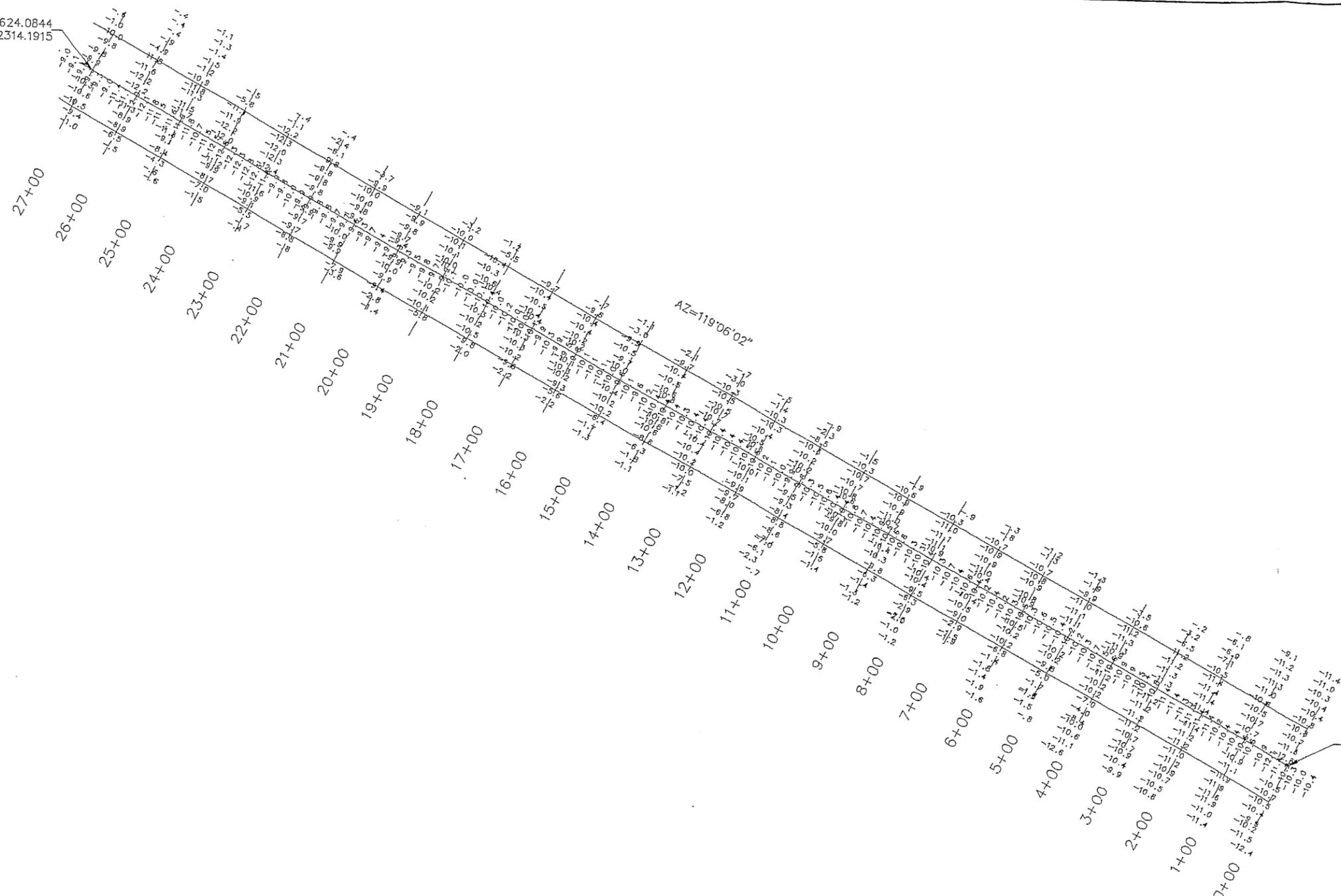
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BIG ISLAND CHANNEL A  
A.D. PLAN VIEW 206+00-207+00

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

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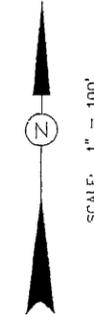
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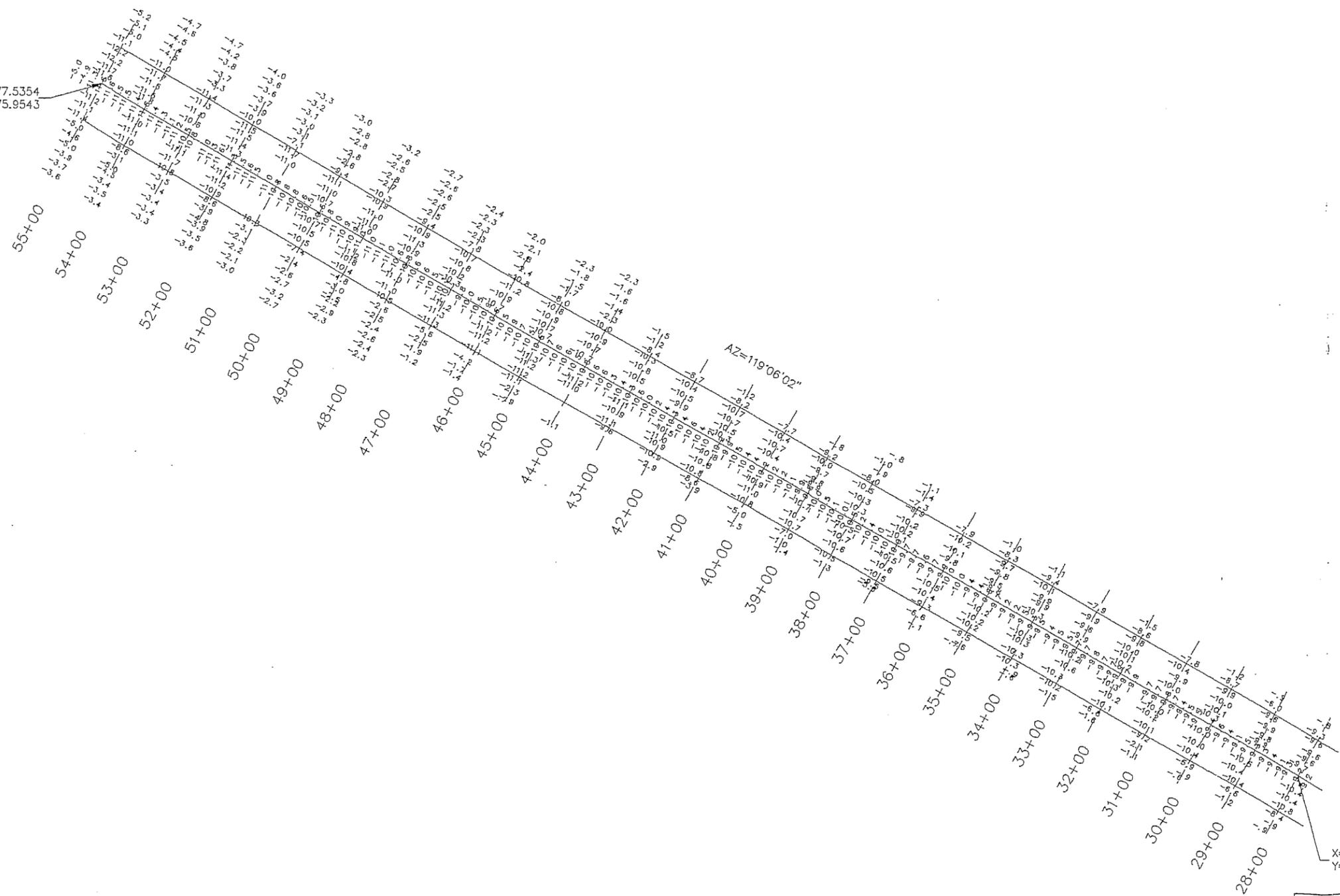
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BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

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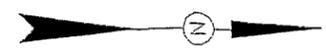
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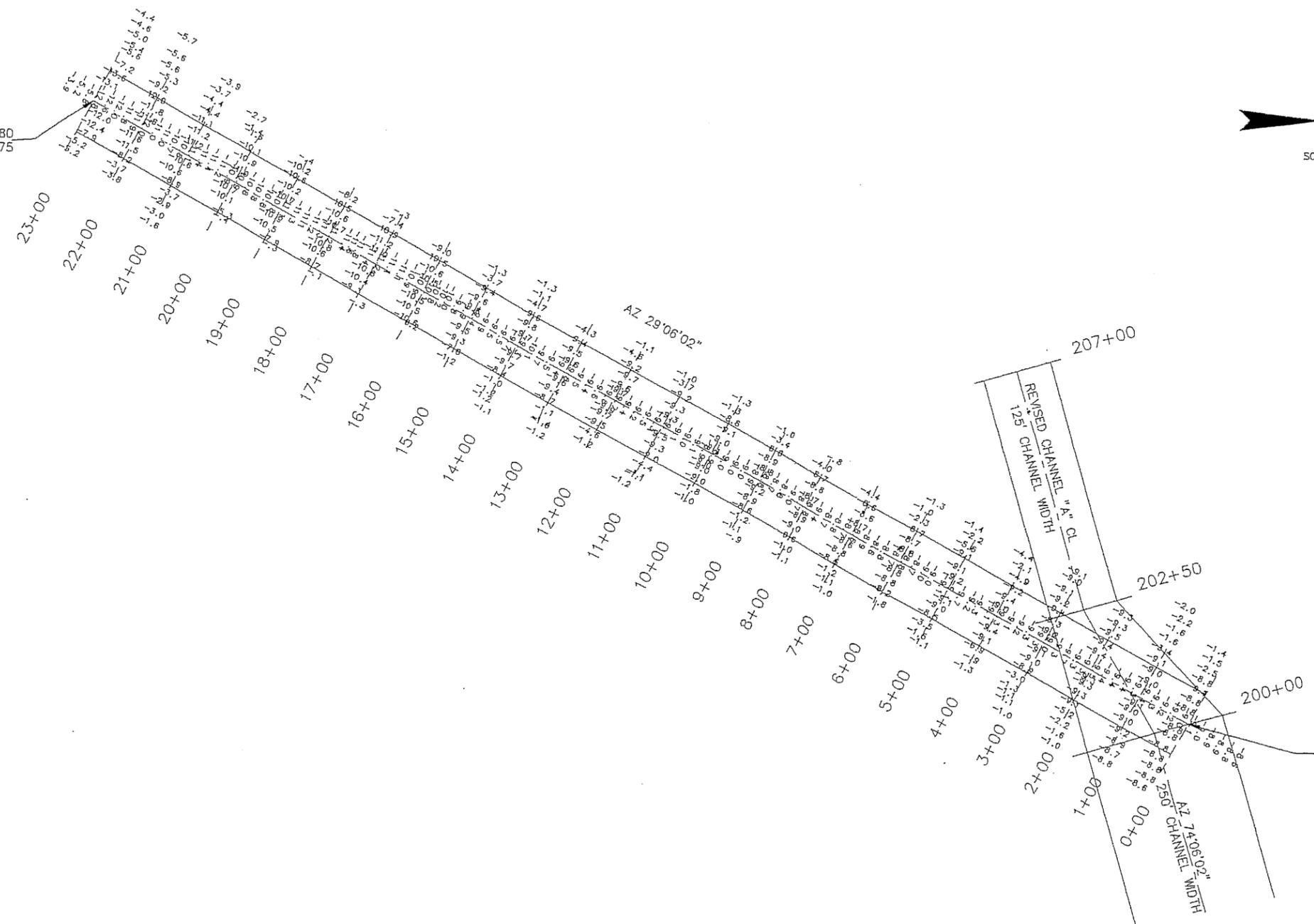
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LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES  
BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY

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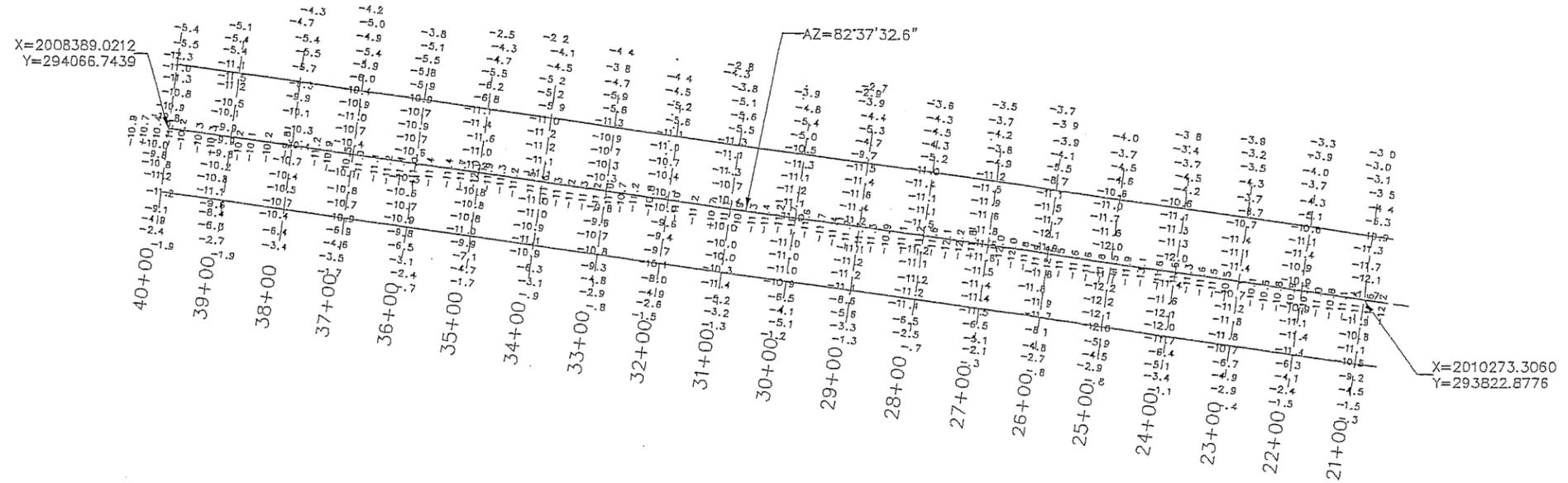
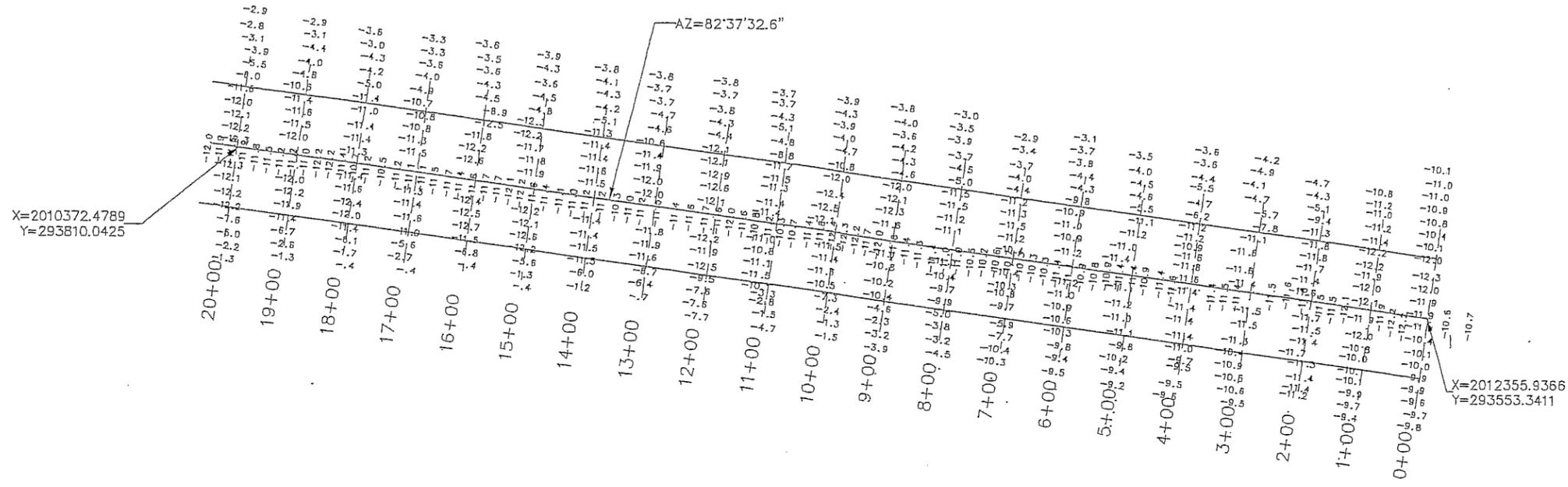
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BIG ISLAND CHANNEL C  
A.D. PLAN VIEW 0+00-23+00

LOUISIANA DEPARTMENT  
OF NATURAL RESOURCES

BIG ISLAND MINING &  
ATCHAFALAYA SEDIMENT DELIVERY



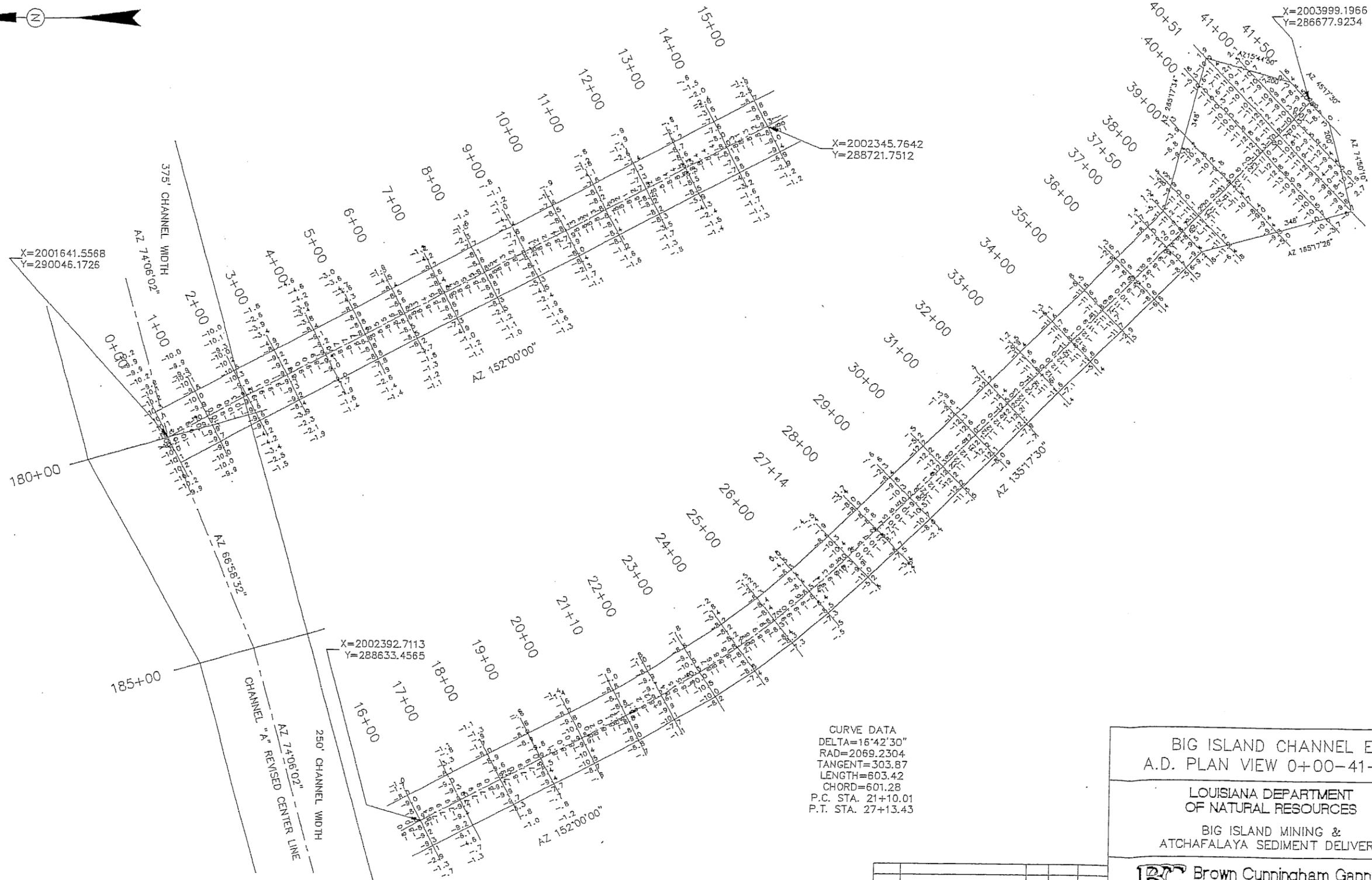
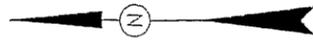
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LOUISIANA DEPARTMENT  
 OF NATURAL RESOURCES

BIG ISLAND MINING &  
 ATCHAFALAYA SEDIMENT DELIVERY

Brown-Cunningham Gannuch

SCALE: 1" = 100'



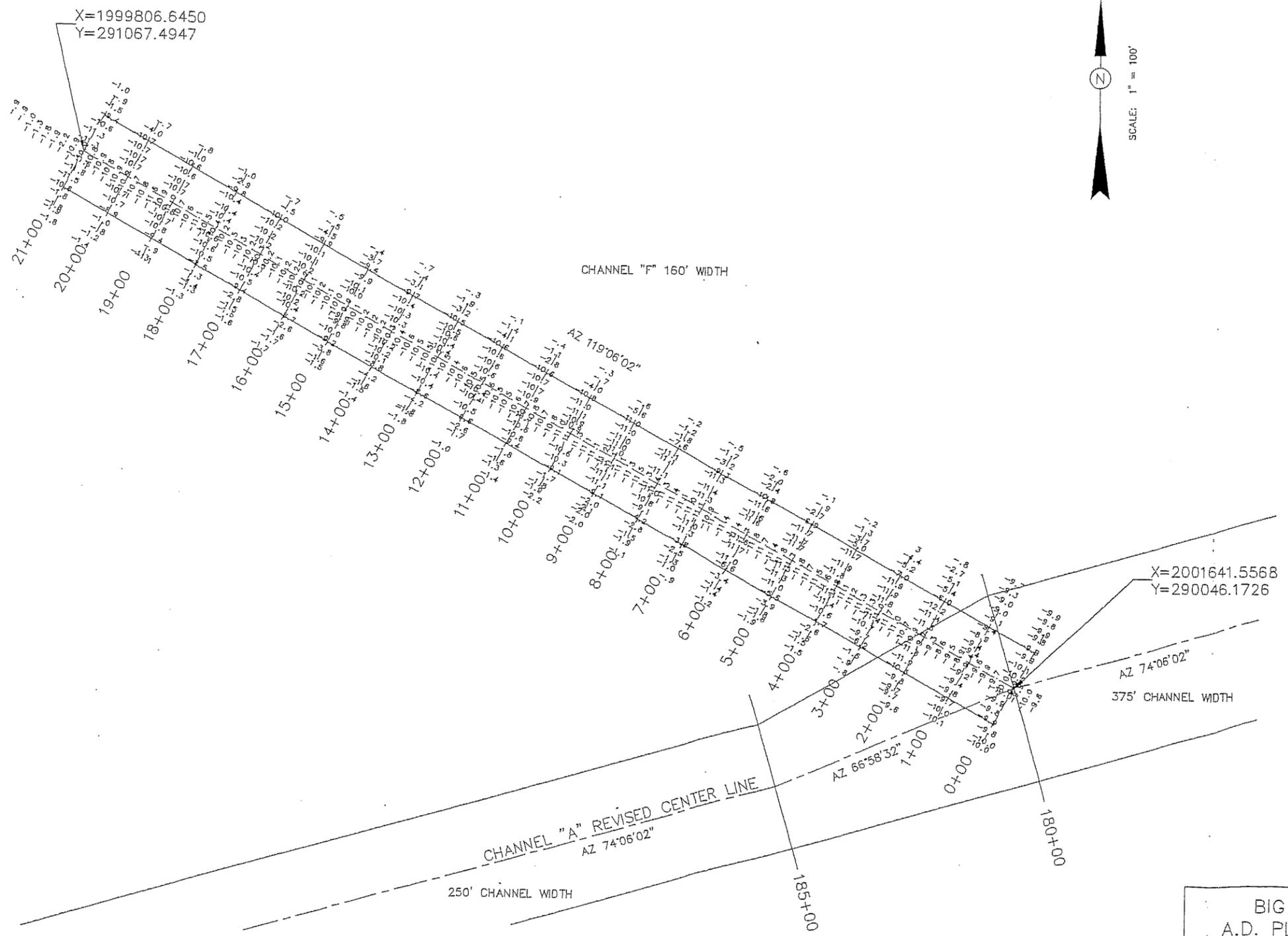
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 A.D. PLAN VIEW 0+00-41+50

LOUISIANA DEPARTMENT  
 OF NATURAL RESOURCES  
 BIG ISLAND MINING &  
 ATCHAFALAYA SEDIMENT DELIVERY

Brown Cunningham Gannuch

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SCALE: 1" = 100'



BIG ISLAND CHANNEL F  
 A.D. PLAN VIEW 0+00-21+00

LOUISIANA DEPARTMENT  
 OF NATURAL RESOURCES

BIG ISLAND MINING &  
 ATCHAFALAYA SEDIMENT DELIVERY

 Brown Cunningham Gannuch

0	10	20	30	40	50	60	70	80	90	100
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ATTACHMENT V

ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

**PROJECT PERMITS**

DEPARTMENT OF THE ARMY PERMIT

National Marine Fisheries Service  
 Habitat Conservation Division

Permittee \_\_\_\_\_

Permit No. SW (Atchafalaya Bay) 753 &  
 WH-19-970-1467

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 bay material to construct and maintain seven channels and 13 adjacent marsh creation sites to implement the Big Island Mining (CWPPRA Number XAT-7) and Atchafalaya Sediment Delivery (CWPPRA Number PAT-2) Projects, in accordance with the drawings attached in thirteen sheets, dated July 1995, and revised August 11, 1995, December 19, 1996, January 20, 1997, and January 29, 1997.

Project Location: In Atchafalaya Bay, central to a point approximately 18.0 miles southwesterly from Morgan City, Louisiana, in St. Mary Parish.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on February 28, 2002. 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 one 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:**

Special conditions are continued on page 4.

**Further Information:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
  - Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
  - 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.

*Rickey N. Ruckman*  
(PERMITTEE)

March 4, 1997  
(DATE)

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

*Albert J. Guillot*  
~~CONFIDENTIAL~~

March 7, 1997  
(DATE)

Albert J. Guillot, P.E., Chief/Operations Division  
for William L. Conner, 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.

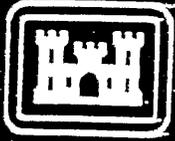
\_\_\_\_\_  
(TRANSFEREE)

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

## SPECIAL CONDITIONS:

SW(Atchafalaya Bay) 753 &  
WH-19-970-1467

7. The permittee's use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
8. The permittee must install and maintain, at his expense, any safety lights and signals prescribed by the US Coast Guard, through regulations or otherwise, on the authorized facilities.
9. The time limit for maintenance dredging activities authorized herein, unless specifically revoked or suspended by the New Orleans District, Regulatory Functions Branch (NOD), expires 20 years from the effective date of this approval.
10. Prior to initiation of onsite dredging operations, the permittee shall consult with the U.S. Fish and Wildlife Service and the Louisiana Department of Wildlife and Fisheries to assess the presence of seabird/wading bird nesting colonies, or occurrence of nesting activities by such populations, in the vicinity of the work sites. If it is determined that active nesting or brood rearing is, or may be, occurring during the planned construction period, the permittee shall notify the NOD and delay construction until an appropriate course of action to be implemented by the permittee to minimize impacts to breeding seabirds/wading birds is developed in consultation with state and federal resource agencies, and approved by the NOD.
11. The permittee shall provide written notification of work completion to the NOD immediately following installation of authorized project components.
12. The permittee shall monitor ecosystem response to project implementation in accordance with the final CWPBRA monitoring plans dated June 26, 1996. Monitoring reports shall be submitted to the NOD for review within one year of completion of data analysis.
13. The permittee is aware that any deviation from the permitted project design may require prior review and approval by the NOD.



**This notice of authorization must be conspicuously displayed at the site of work.**

United States Army Corps of Engineers

March 7, 19 97

A permit to dredge and deposit bay material to construct and maintain seven channels and 13 adjacent marsh creation sites to implement the Big Island ~~A permit to~~ Mining (CWPPRA Number XAT-7) and Atchafalaya Sediment Deliver (CWPPRA Number PAT-2) Projects, in Atchafalaya Bay, central to a point approximately 18.0 miles southwesterly from Morgan City, Louisiana, in ~~at~~ St. Mary Parish,

has been issued to National Marine Fisheries Service on March 7, 19 97

Address of Permittee Habitat Conservation Division  
c/o LSU Center for Coastal Energy and Environmental Resources

Permit Number Baton Rouge, Louisiana 70803-7535

SW(Atchafalaya Bay)753 and  
WH-19-970-1476

*Albert J. Guillot*  
Albert J. Guillot, P.E.  
District Commander

03/13/96 WED 12:44 FAX 504 389 0506

NOAA NMFS BATON ROUGE LA --- RESTORATION CTR 002



DEPARTMENT OF THE ARMY  
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS  
P.O. BOX 60267  
NEW ORLEANS, LOUISIANA 70160-0267

March 11, 1996

REPLY TO  
ATTENTION OF:

Operations Division  
Western Evaluation Section

Subject: SW(Atchafalaya Bay) 753

Mr. Rickey N. Ruebsamen  
National Marine Fisheries Service  
c/o LSU Center for Coastal Energy and  
Environmental Resources  
Baton Rouge, LA 70803-7535

Dear Mr. Ruebsamen:

This is in reference to your permit application, numbered above, to implement the Big Island Mining and Atchafalaya Sediment Delivery Projects in Atchafalaya Bay, approximately 18.0 miles southwesterly from Morgan City, Louisiana.

The supplemental information you have submitted with your letter dated January 31, 1996, has been reviewed by other elements of this District and copies of their comments are attached. Although there is some question regarding projected benefit in terms of marsh creation, concern relative to impact on maintenance of the navigation channel still remains. Therefore, Operations Division conditionally indicated no objection provided a monitoring plan to measure sediment and flow into the proposed channels is furnished. Furthermore, if dredging is determined necessary as a result of these projects, adjacent disposal areas be will be provided by the State. If such areas cannot be provided, the applicant shall bear the costs of disposing of the material in other State-designated areas.

Because the proposed action involves vital navigation missions of the U.S. Army Corps of Engineers, compliance with these provisions is essential. Please review the enclosed material and respond at your earliest convenience so that we may complete project review.

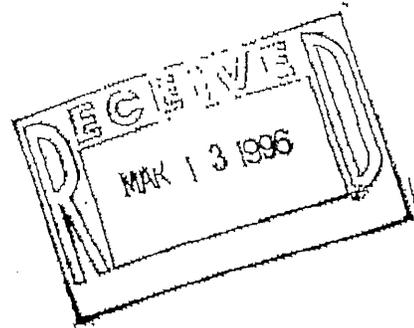
If you have any questions, please call me at (504) 862-2276.

Sincerely,

A handwritten signature in cursive script that reads "Martin S. Mayer".

Martin S. Mayer  
Environmental Resources Specialist  
Western Evaluation Section

Enc.



03/13/96 WED 12:45 FAX 504 389 0506

NOAA NMFS BATON ROUGE LA --- RESTORATION CTR 004

CELMN-ED-HH

13 Feb 96

MEMORANDUM FOR Chief, Operations Division

SUBJECT: Permit Number: SW(Atchafalaya Bay)753, Big Island Mining/Atchafalaya Sediment Delivery Projects

1. Please reference CELMN-OD-SW multiple endorsement dated 1 Feb 96, subject as above (Encl 1).
2. As designed, we have no objections to the permit for the two CWPPRA projects. However, it is apparent that the estimates of acreage of new marshland created are optimistic. The increase in maintenance dredging resulting from the construction of the Big Island cut appear realistic provided the cut conveys less than 10 percent of the flow entering the delta. We recommend that the project manager, John Flanagan, be advised that some minimal impact can be expected from implementation of this permit thus affording him the opportunity to voice his concerns.
3. The letter from Brown Cunningham and Gannuch states that the presently configured Big Island Mining Project will create some 2,270 acres of new marshland after initial construction is completed without dredging. The growth rate of the Lower Atchafalaya River delta is presently around 360 acres per year. At its present rate, approximately 6,000 acres will be created in the Lower Atchafalaya River delta over the next 20 years without the new outlet at Big Island. Even though delta growth adjacent to the new outlet will have a higher rate of growth than the existing rate for the entire delta, it is unlikely that the new outlet will account for almost 38 percent of the growth of the entire delta with the outlet only conveying an average flow of 6,000 cfs and a sediment transport of 2,800 tons/day (Engineering Summary Report dated January 1995). For 2,270 acres to be created over 20 years in a receiving area with a depth of 2 to 3 feet, approximately 94 percent of the sands, silts, and clays entering the outlet need to settle out in the receiving area. With the presence of tides, currents, and frontal passages reworking the sediments and the absence of a saltwater environment to precipitate the clays, this percentage is unlikely. In addition, the creation of marshland at the Big Island site will be offset by marsh loss at other sites as the project does not affect the amount of sediment entering the entire delta that is available for marsh creation.
4. Although not mandatory for the permit, we recommend that the monitoring plan for the two projects, required under CWPPRA, include discharge and sediment measurements in the Big Island cut and in East Pass to monitor the amount of flow and sediment being conveyed by these delta bifurcations and therefore the effect on maintenance dredging in the Chene, Boeuf, and Black navigation channel. Four sets of measurements at each site taken during various river conditions should be adequate. The monitoring should be performed initially every year for the

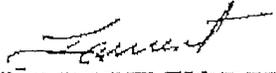
CELMN-ED-HH

**SUBJECT:** Permit Number: SW(Atchafalaya Bay)753, Big Island Mining/Atchafalaya Sediment Delivery Projects

next 5 years or so and then once every 4 to 5 years over the project life.

5. POC is Nancy Powell, x2449.

Encl  
as

  
W. EUGENE TICKNER  
Chief, Engineering Division

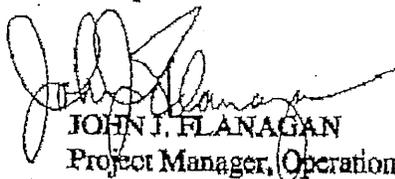
CELMN-OD-D

8 MAR 96

MEMORANDUM FOR C/Regulatory Functions Branch

SUBJECT: Permit Number: SW (Atchafalaya Bay) 753, Big Island Mining/Atchafalaya Sediment Delivery Projects

1. We have reviewed the above subject permit request and have no objections providing the following conditions are met:
  - a. The applicant must provide us with a monitoring plan that includes discharge and sediment measurements in the Big Island Cut and in East Pass to monitor the amount of flow and sediment being conveyed by these delta bifurcations.
  - b. If dredging is required as a result of these projects, the Department of Natural Resources and the Louisiana Wildlife and Fisheries will provide us with adjacent disposal areas, i.e. disposal areas that are within 1,500 ft of the areas being dredged.
  - c. If the disposal areas as mentioned in item b. cannot be provided, the applicant will pick up the incremental cost for disposing material in other areas designated by Louisiana Wildlife and Fisheries.
2. POC is the undersigned or Mr. Steve Schinetsky at ext. 2343.



JOHN J. FLANAGAN  
Project Manager, Operations Division



8	July 95	1/20/97	Rev.#1: Restrictions for DA No. 2
9	July 95	1/20/97	Rev.#1
10	July 95	1/20/97	Rev.#2
11	July 95	July 95	No. Changes
12	July 95	12/28/97	Rev.#2: Added Dike@DA-1 modified DA#3 section
13	July 95	1/29/97	Rev.#1

On the Big Island Mining project two disposal areas were added, namely DA#8A and DA#10A, as shown on drawing No. 5. On the Atchafalaya Sediment Delivery project Disposal Areas No. 5 and 1-A were added, the four original disposal areas (1,2,3 and 4) were slightly modified, and the temporary access channel in East Pass was added as shown on drawing No. 6. Drawing #7 was revised to show the Temporary Access Channel and the layout azimuth for Disposal Area No. 1 was corrected. Drawing 7a is a new drawing that shows the cross sections of DA#5 and the Access Channel.

I spoke with Mr. Martin Mayer at the Corps of Engineers regarding these changes on January 12th., and he requested that we resubmit the total revision package for their records. He thought that the changes as shown by these revised drawings were minor and within the original scope of these two CWPPRA projects.

Rick, I have incorporated your 12/18/97 submittal into this "final" version so that the Corps officially has only revision to deal with (this current one). Martin said that he would delete the 12/18/97 submittal and replace with this one upon receipt of this new package.

Please sign and forward this revised permit drawing package to the Corps.

Sincerely yours,

Emmett J. Mayer, Jr. P.E.  
Office Manager

cc: V.Cook  
R.Gannuch  
G.Linscomb

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 Department 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. SW(ATCH-BAY)-753 WH-19-970-1476	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
--	----------------------	------------------	-------------------------------

ITEMS BELOW TO BE FILLED BY APPLICANT

5. APPLICANT'S NAME National Marine Fisheries Service	8. AUTHORIZED AGENT'S NAME AND TITLE (An agent is not required)
6. APPLICANT'S ADDRESS Habitat Conservation Division LSU Center for Coastal & Env. Restoration Baton Rouge, LA 70808 7535	9. AGENT'S ADDRESS
7. APPLICANT'S PHONE NOS. W/AREA CODE Residence Business 504-389-0508	10. AGENT'S PHONE NOS. W/AREA CODE a. Residence b. Business

STATEMENT OF AUTHORIZATION

I hereby authorize, \_\_\_\_\_ 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 permit application.

APPLICANT'S SIGNATURE

DATE

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions) Big Island Mining (CWPPRA #XAT-7) "BIM" Atchafalaya Sediment Delivery (CWPPRA#PAT-2) "ASD"	
13. NAME OF WATERBODY, IF KNOWN (if applicable) Atchafalaya River, LA	14. PROJECT STREET ADDRESS (if applicable) None
15. LOCATION OF PROJECT St. Mary COUNTY LA STATE	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) East Pass of Atchafalaya River (Lat. 29° 28' 00" N - Long. 91° 18' 00" W)	

DIRECTIONS TO THE SITE

From Morgan City, LA travel south on the Atchafalaya River, site is on both descending banks of river at its entrance to Atchafalaya Bay

THIS AMENDMENT TO THE  
JOINT COASTAL USE PERMIT APPLICATION  
December 28, 1997

**ESTIMATED PROJECT QUANTITIES CHANGES**

**Big Island Mining Project:**

DREDGED QUANTITIES:

Original Channels A - E                      3,589,093.4 Cubic Yards

MAXIMUM DISPOSAL AREA ACREAGE

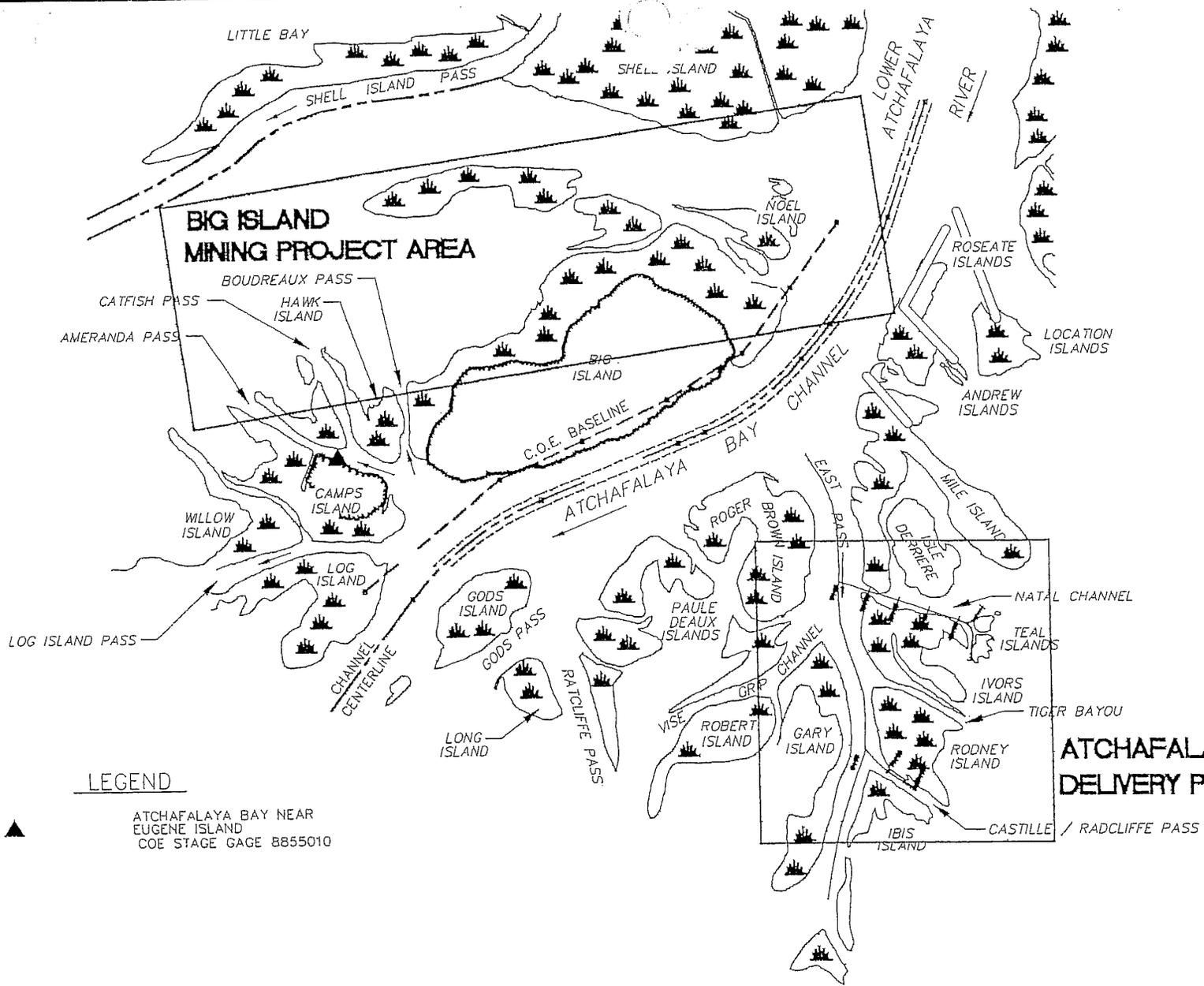
Original Disposal Areas 1 thru 10	1087.2 Acres
New Disposal Area 8A	37.5 Acres
New Disposal Area 10A	<u>147.2 Acres</u>
Amended Total BIM Disposal Acreage	1271.92 Acres

**ATCHAFALAYA SEDIMENT DELIVERY PROJECT:**

Original Dredged Quantities (Natal and Castille Pass)	801391.5 Cubic Yards
Temporary Access Channel (East Pass)	<u>156,000 Cubic Yards</u>
Amended Total ASD Disposal Volume	957,391.5 Cubic Yards

MAXIMUM DISPOSAL AREAS

Original Natal Channel Disposal Areas 1 thru 4:	187.1 Acres
Original Castille Pass Disposal Area 1:	39.9 Acres
Amended Disposal Area No 1-A (Natal Channel):	54.8 Acres
Amended Disposal Area No. 5 (Natal Channel):	<u>25.6 Acres</u>
Amended Total ASD Disposal Acreage	307.4 Acres



**LEGEND**



ATCHAFALAYA BAY NEAR  
EUGENE ISLAND  
COE STAGE GAGE 8855010

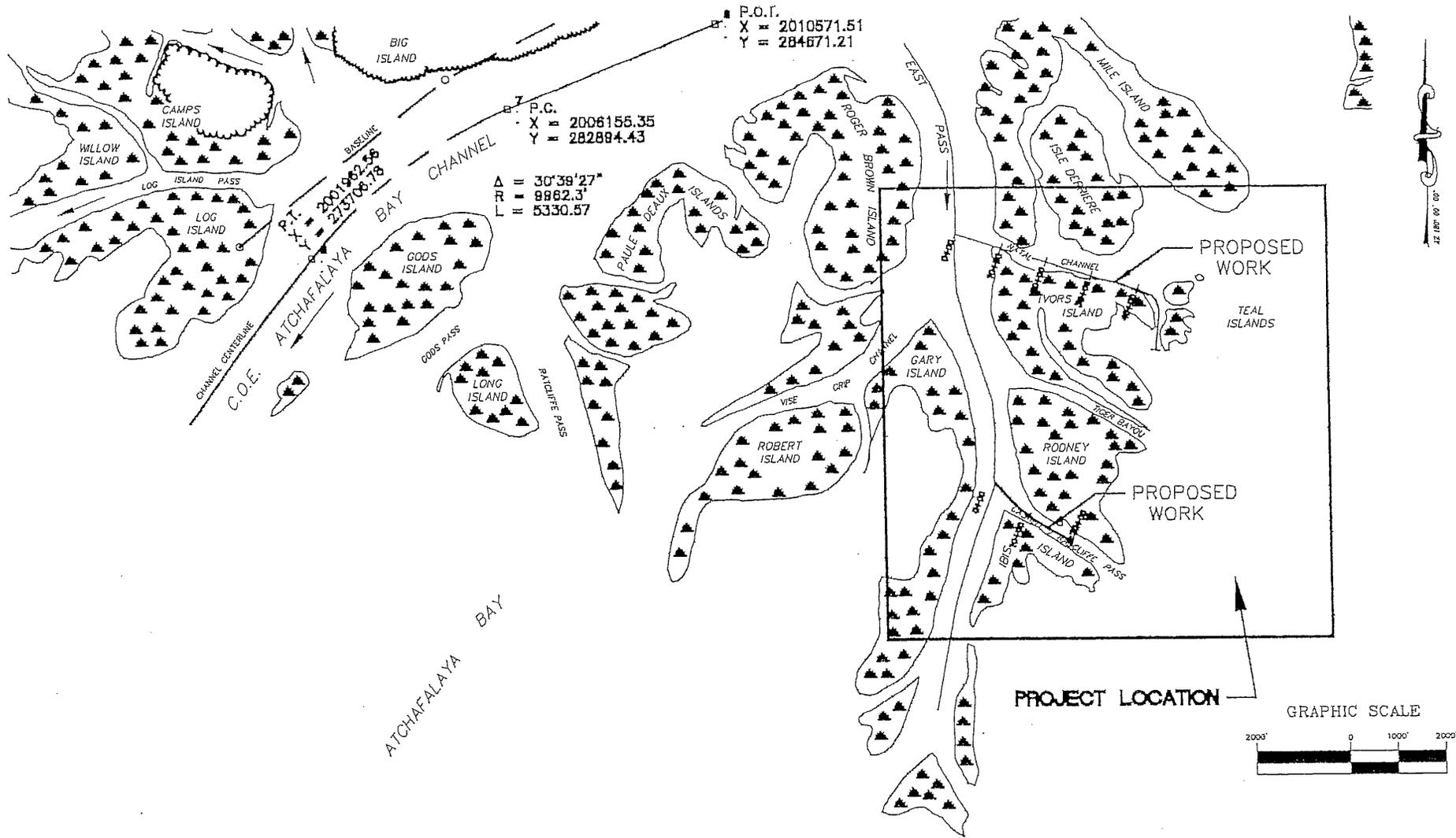
**NATIONAL MARINE FISHERIES  
HABITAT CONSERVATION DIVISION**

**BIG ISLAND MINING PROJECT AND  
ATCHAFALAYA SEDIMENT DELIVERY PROJECT  
VICINITY MAP**

PREPARED BY BROWN, CUNNINGHAM & GANNUCH, INC.

DATE:  
6/21/95  
SHEET:  
1 OF 13





NATIONAL MARINE FISHERIES  
HABITAT CONSERVATION DIVISION

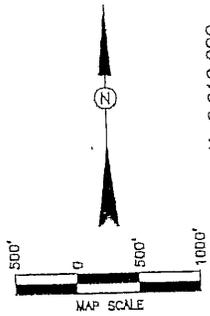
ATCHAFALAYA SEDIMENT DELIVERY PROJECT  
SITE LOCATION

PREPARED BY

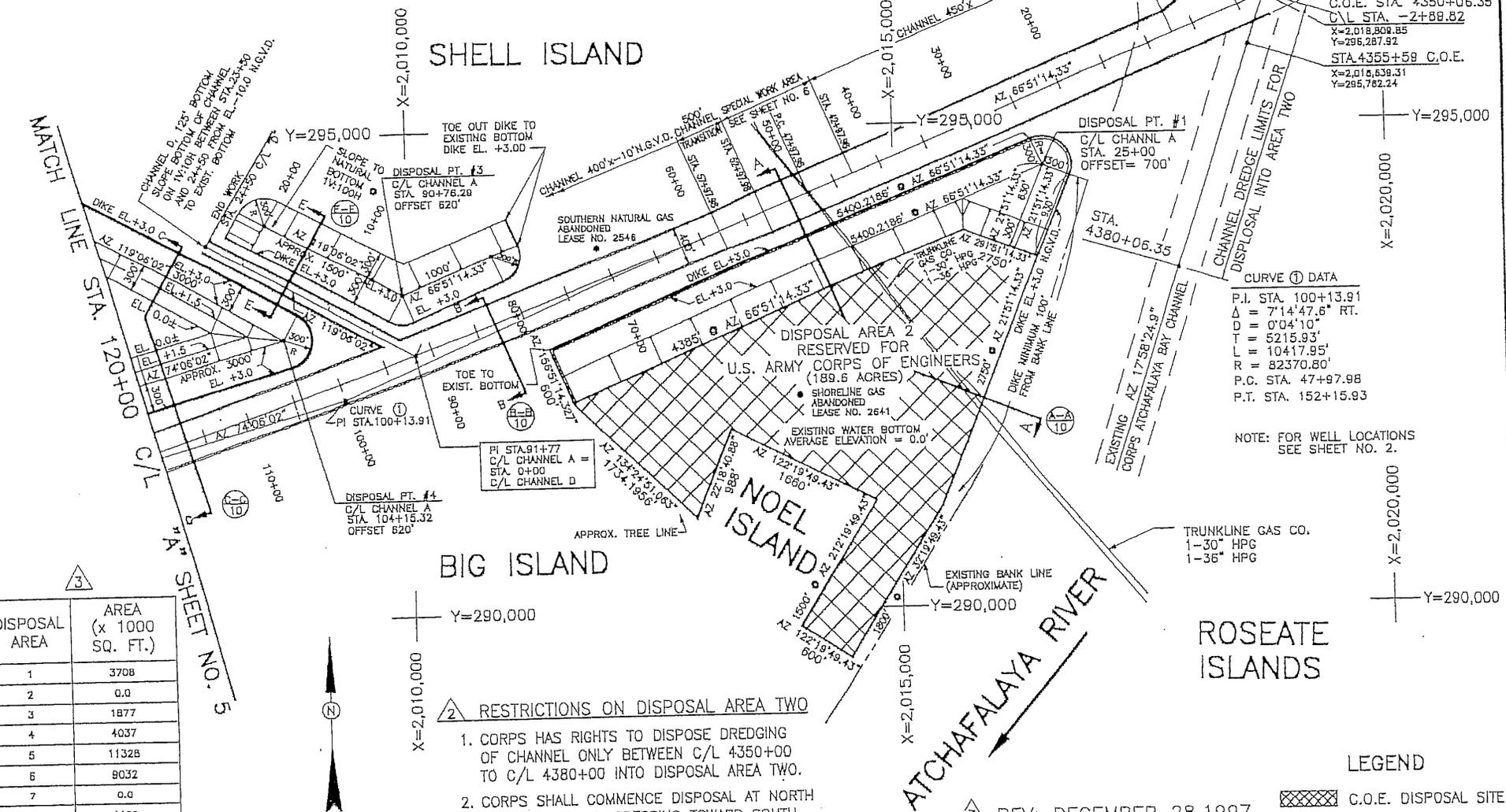
BROWN, CUNNINGHAM & GANNUCH, INC.

DATE:  
JULY, 1995  
SHEET:  
3 OF 13  
CADD FILE: (DK-163)  
PERMIT3.DWG

DISPOSAL AREA	AREA (x 1000 SQ. FT.)
1	3708
2	0.0
3	1877
4	4037
5	11325
6	9032
7	0.0
8	4199
8A	1635
9	4205
10	658
10A	6413



- RESTRICTIONS ON DISPOSAL AREA TWO**
- CORPS HAS RIGHTS TO DISPOSE DREDGING OF CHANNEL ONLY BETWEEN C/L 4350+00 TO C/L 4380+00 INTO DISPOSAL AREA TWO.
  - CORPS SHALL COMMENCE DISPOSAL AT NORTH END OF SITE, PROGRESSING TOWARD SOUTH WITH MAXIMUM LIFT TO EL. +3.0
  - AFTER YEAR 2017 CORPS SHALL LOSE RIGHTS TO DISPOSE IN AREA TWO.



BEGIN WORK  
C.O.E. STA. 4350+06.35  
C/L STA. -2+88.82  
X=2,018,809.85  
Y=296,287.92  
STA.4355+59 C.O.E.  
X=2,015,639.31  
Y=295,782.24

**CURVE ① DATA**  
P.I. STA. 100+13.91  
Δ = 71°47'6" RT.  
D = 0°04'10"  
T = 5215.93'  
L = 10417.95'  
R = 82370.80'  
P.C. STA. 47+97.98  
P.T. STA. 152+15.93

NOTE: FOR WELL LOCATIONS SEE SHEET NO. 2.

- LEGEND**
- C.O.E. DISPOSAL SITE
  - REQ'D. DIKE
  - OPTIONAL DIKE
  - OIL/GAS WELL

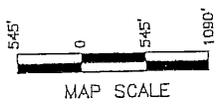
- REV: DECEMBER 28, 1997
- REV: DECEMBER 19, 1996
- REV: AUGUST 11, 1995

NATIONAL MARINE FISHERIES  
HABITAT CONSERVATION DIVISION

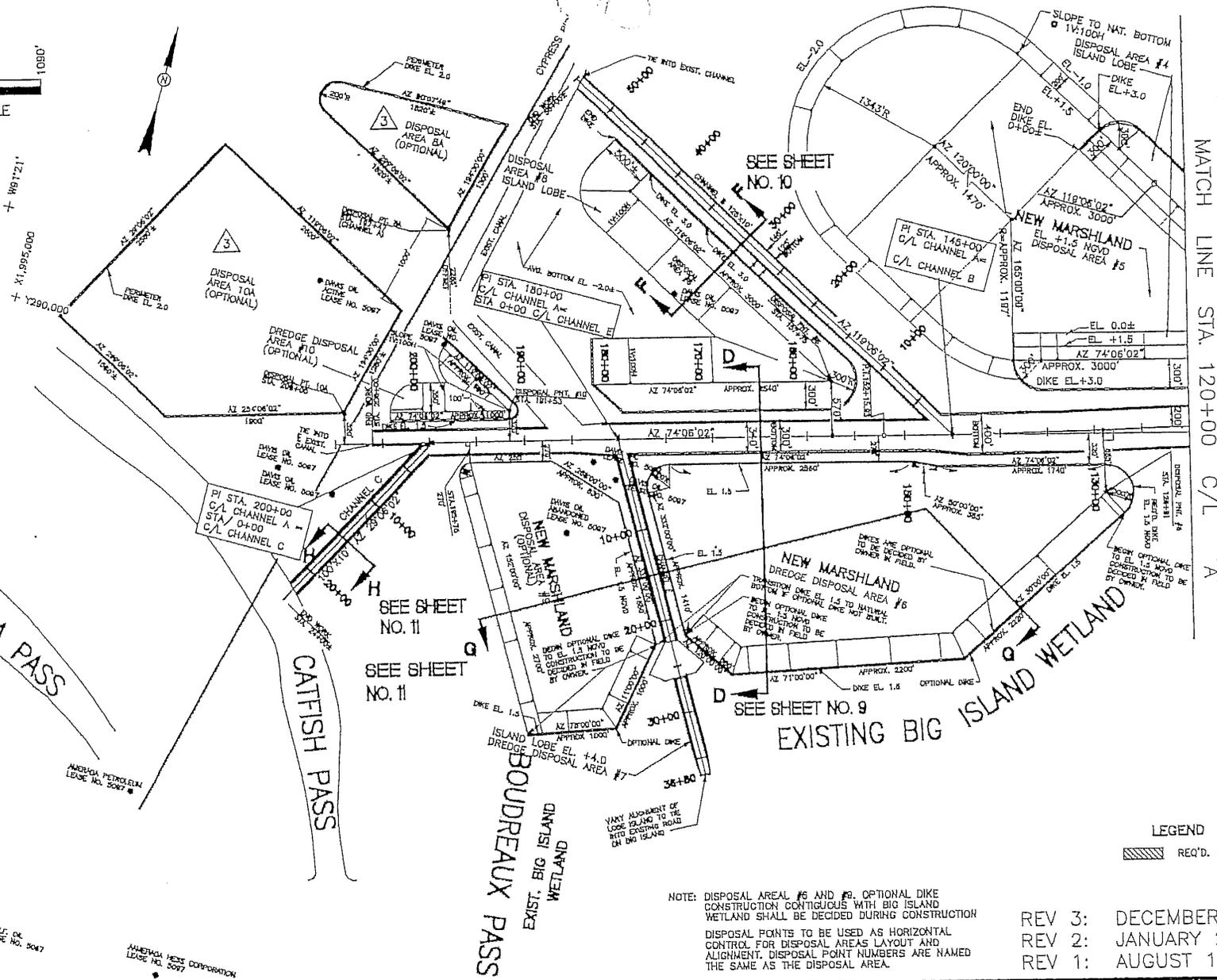
PLAN VIEW BIG ISLAND MINING  
CHANNEL AND DREDGED DISPOSAL AREAS

PREPARED BY BROWN, CUNNINGHAM & GANNUCH, INC.

DATE: JULY, 1995  
SHEET: 4 OF 13  
CADD FILE: PERMIT4.1.DWG



DISPOSAL AREA	AREA (x 1000 SQ. FT.)
1	3708
2	0.0
3	1877
4	4637
5	11328
6	9032
7	0.0
8	4199
8A	1635
9	4205
10	658
10A	8413



MATCH LINE STA. 120+00 C/L A 33

LEGEND  
 REQ'D. DIKE

NOTE: DISPOSAL AREAL #6 AND #9, OPTIONAL DIKE CONSTRUCTION CONTIGUOUS WITH BIG ISLAND WETLAND SHALL BE DECIDED DURING CONSTRUCTION  
 DISPOSAL POINTS TO BE USED AS HORIZONTAL CONTROL FOR DISPOSAL AREAS LAYOUT AND ALIGNMENT. DISPOSAL POINT NUMBERS ARE NAMED THE SAME AS THE DISPOSAL AREA.

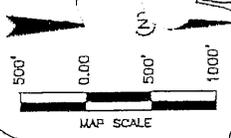
REV 3: DECEMBER 28, 1997  
 REV 2: JANUARY 20, 1997  
 REV 1: AUGUST 11, 1995

NATIONAL MARINE FISHERIES  
 HABITAT CONSERVATION DIVISION

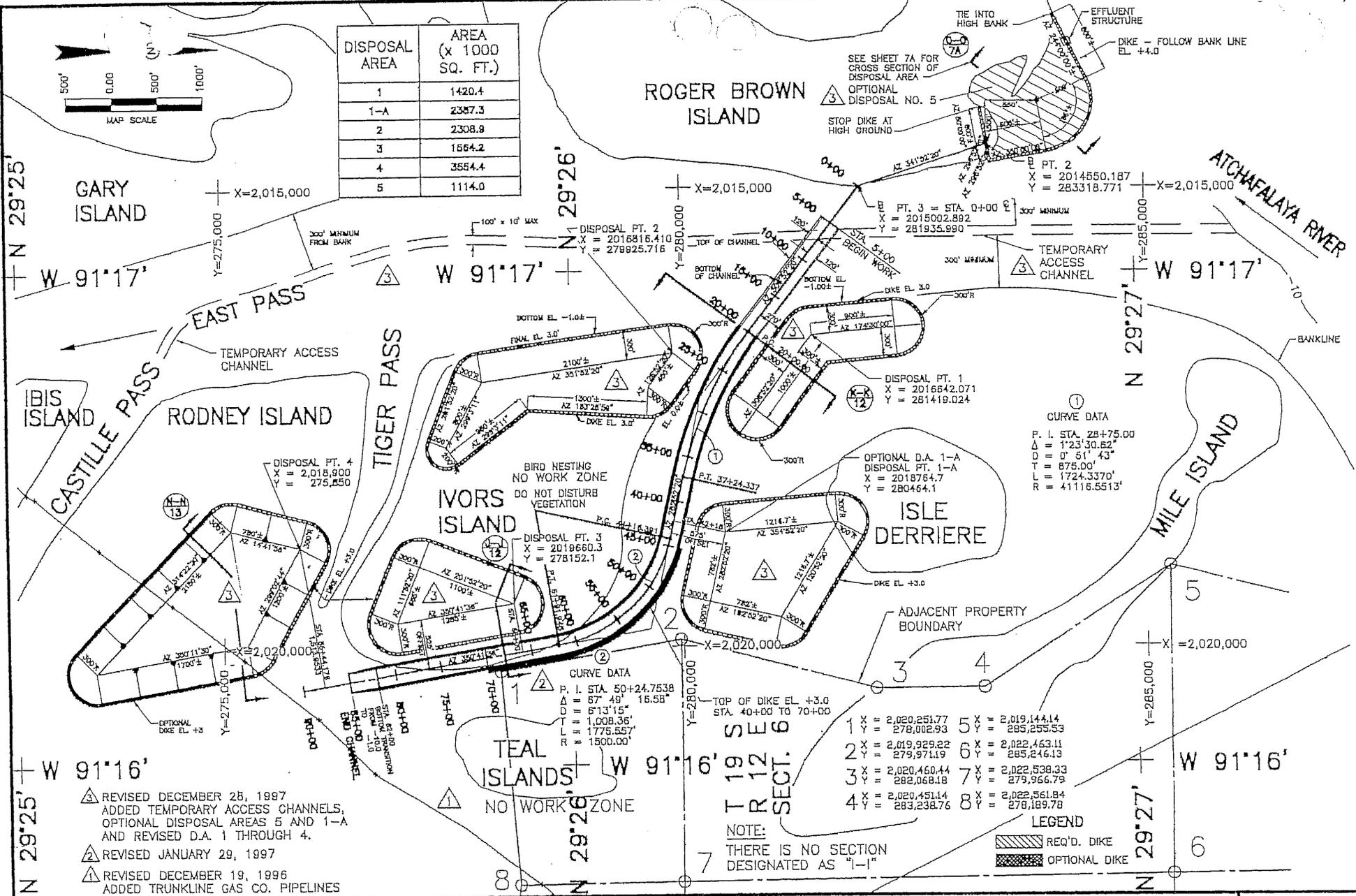
PLAN VIEW BIG ISLAND MINING  
 CHANNEL AND DREDGED DISPOSAL AREAS

PREPARED BY BROWN, CUNNINGHAM & GANNUCH, INC.

DATE:  
 JULY, 1995  
 SHEET:  
 5 OF 13



DISPOSAL AREA	AREA (x 1000 SQ. FT.)
1	1420.4
1-A	2387.3
2	2308.9
3	1664.2
4	3554.4
5	1114.0



- ③ REVISED DECEMBER 28, 1997  
ADDED TEMPORARY ACCESS CHANNELS,  
OPTIONAL DISPOSAL AREAS 5 AND 1-A  
AND REVISED D.A. 1 THROUGH 4.
- ② REVISED JANUARY 29, 1997
- ① REVISED DECEMBER 19, 1996  
ADDED TRUNKLINE GAS CO. PIPELINES

NO.	X	Y	NO.	X	Y
1	2,020,251.77	278,002.93	5	2,019,144.14	285,255.53
2	2,019,929.22	279,971.19	6	2,022,463.11	285,246.13
3	2,020,460.44	282,068.18	7	2,022,538.33	279,966.79
4	2,020,451.14	283,238.76	8	2,022,561.84	278,189.78

**LEGEND**

- REQ'D. DIKE
- OPTIONAL DIKE

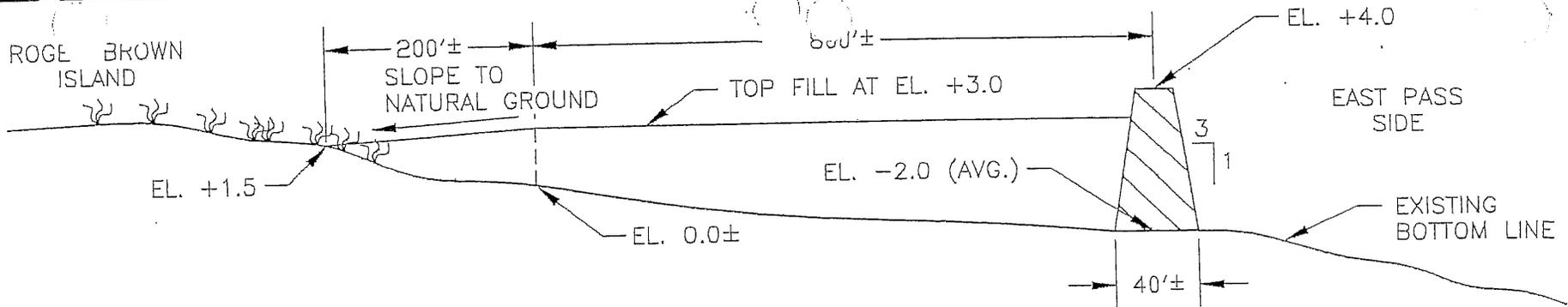
# NATIONAL MARINE FISHERIES HABITAT CONSERVATION DIVISION

## ATCHAFALAYA SEDIMENT DELIVERY PROJECT PLAN VIEW OF NATAL CHANNEL AND DREDGED DISPOSAL AREAS

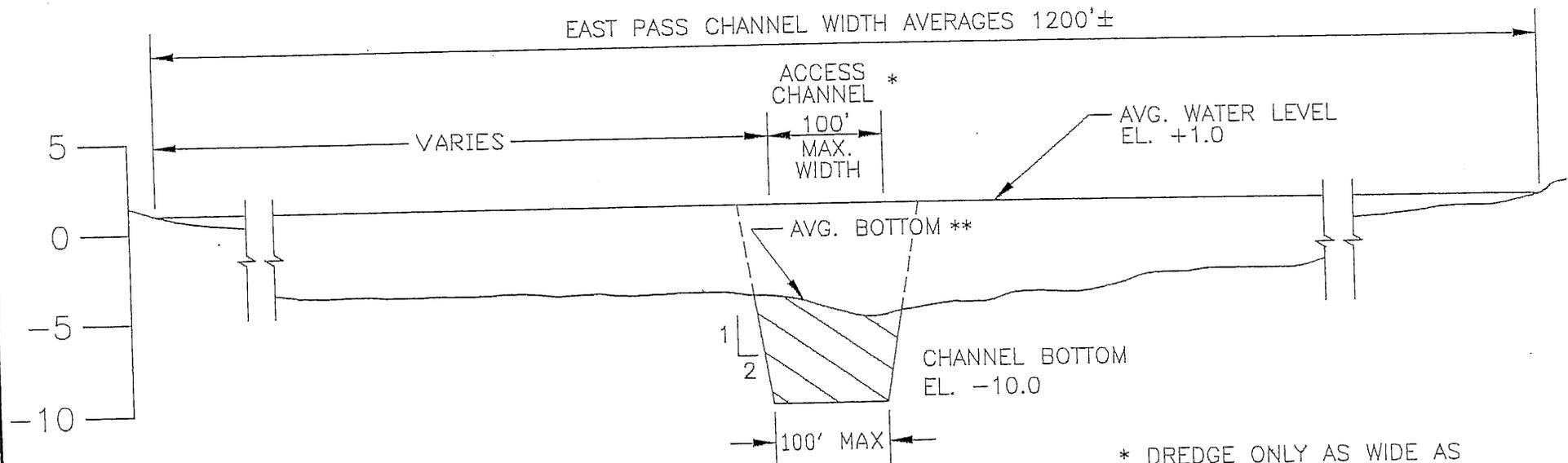
PREPARED BY BROWN CUNNINGHAM & GANNUCH, INC.

DATE: JULY, 1995  
SHEET: 6 OF 13  
CADD FILE: PERMIT6.1.DWG





SECTION 0-0  
DISPOSAL AREA NO. 5 AT EAST PASS  
(N.T.S.)



ACCESS CHANNEL CROSS SECTION  
(N.T.S.)

EAST PASS ACCESS CHANNEL  
MAX. LENGTH: APPROXIMATELY 10000 LF  
MAX. EXCAVATION = 156000 CY±  
MAX. DISPOSAL = 156000 CY±

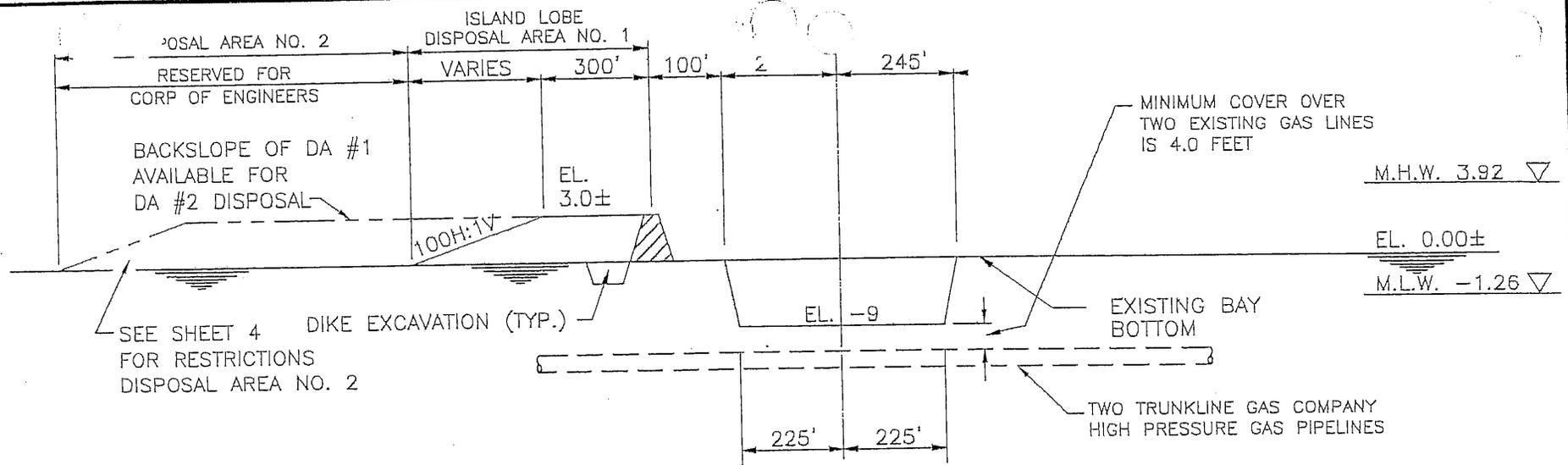
\* DREDGE ONLY AS WIDE AS NECESSARY TO PASS EQUIPMENT  
\*\* BASED ON EAST PASS CHANNEL ENTRANCE SURVEY OF 3/13/95 THE BOTTOM ELEVATION OF EAST PASS VARIES, EL. -6.0 AND -9.0 NGVD.

NATIONAL MARINE FISHERIES  
HABITAT CONSERVATION DIVISION

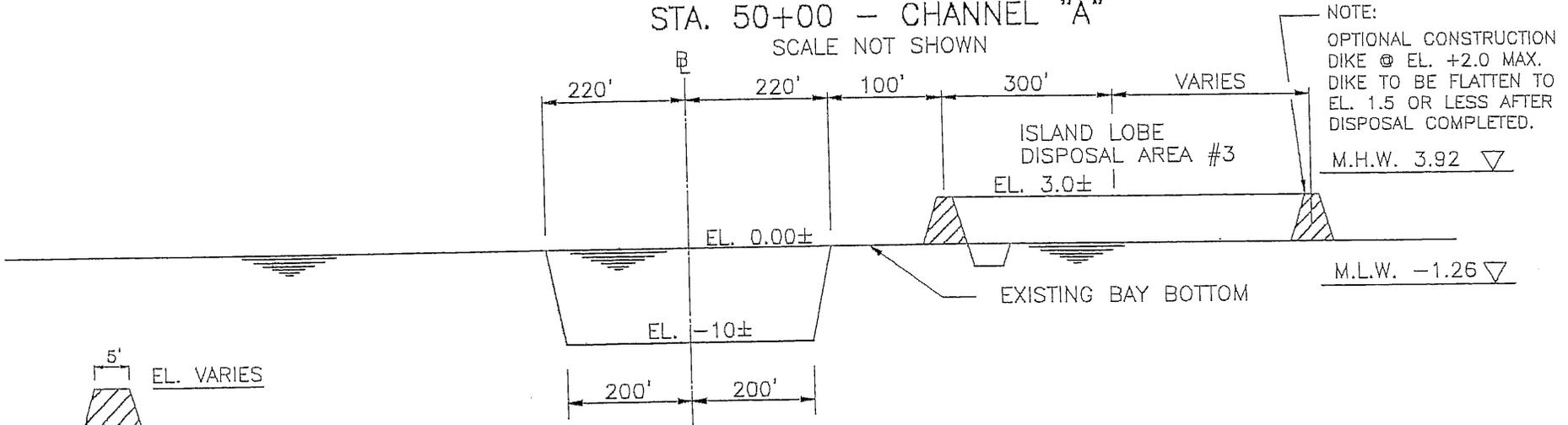
ATCHAFALAYA SEDIMENT DELIVERY PROJECT  
EAST PASS ACCESS CHANNEL FOR DREDGING  
NATAL CHANNEL AND CASTILLE PASS

PREPARED BY BROWN CUNNINGHAM & GANNUCH, INC.

DATE:  
NOV., 1997  
SHEET:  
7A OF 13  
CADD FILE:  
PERMIT7A.DWG



SECTION A-A  
STA. 50+00 - CHANNEL "A"  
SCALE NOT SHOWN



SECTION B-B  
STA. 83+00 - CHANNEL "A"  
SCALE NOT SHOWN

NOTE:  
OPTIONAL CONSTRUCTION  
DIKE @ EL. +2.0 MAX.  
DIKE TO BE FLATTENED TO  
EL. 1.5 OR LESS AFTER  
DISPOSAL COMPLETED.

NOTE:  
ALL ELEVATIONS N.G.V.D.

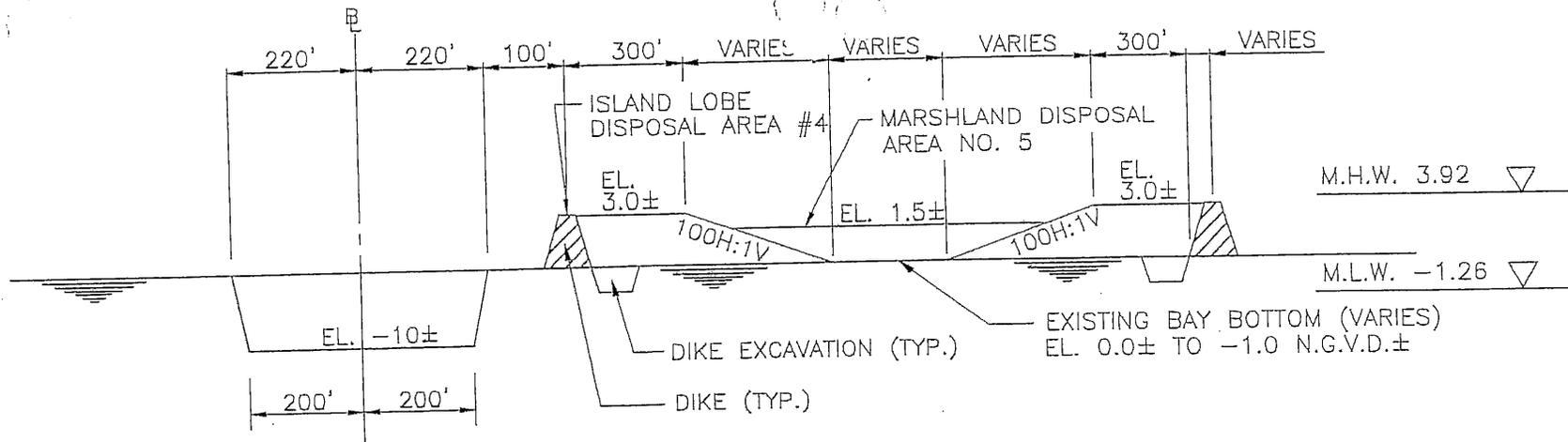
REV. 1: JANUARY 20, 1997

NATIONAL MARINE FISHERIES  
HABITAT CONSERVATION DIVISION

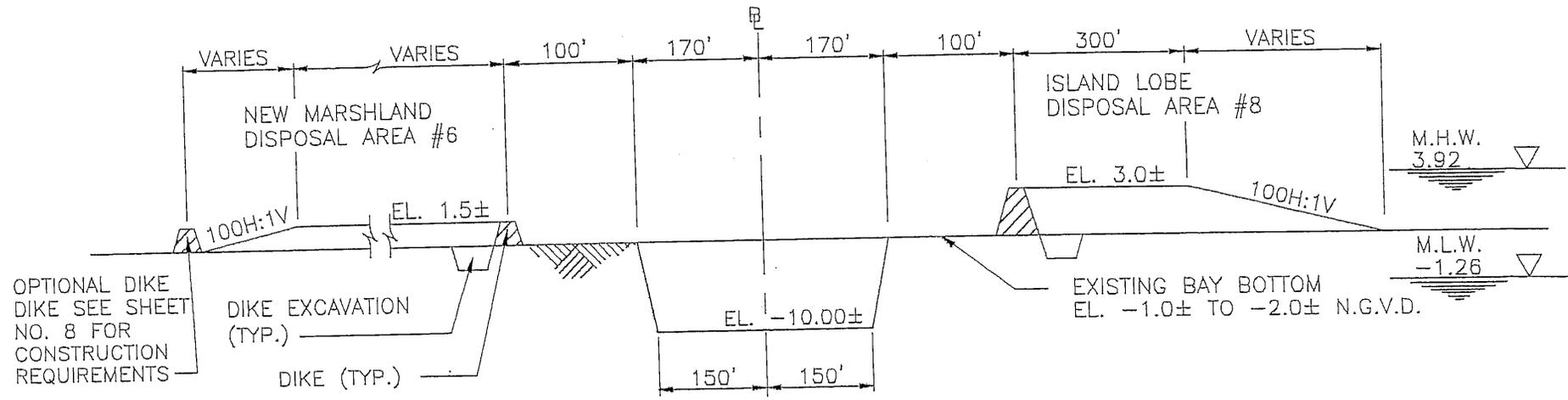
BIG ISLAND MINING PROJECT  
TYPICAL CROSS SECTIONS SHOWING  
CHANNEL AND DISPOSAL AREAS

PREPARED BY BROWN CUNNINGHAM & GANNUCH, INC.

DATE:  
JULY, 1995  
SHEET:  
8 OF 13



SECTION C-C  
 STA. 117+00 - CHANNEL "A"  
 SCALE NOT SHOWN



SECTION D-D  
 STA. 160+00 - CHANNEL "A"  
 SCALE NOT SHOWN

NOTE: ALL ELEVATIONS N.G.V.D.

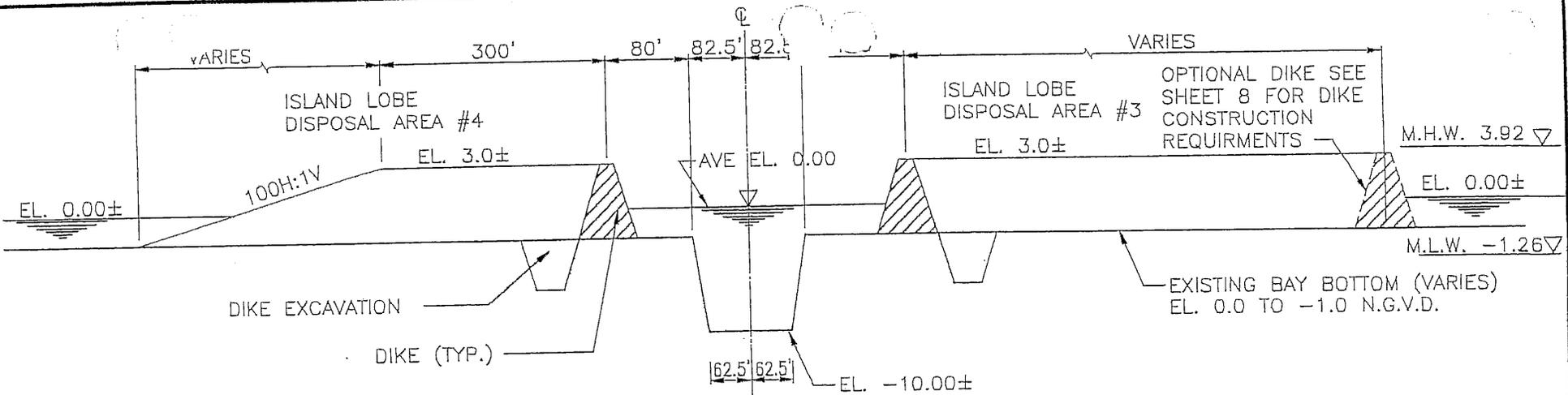
REV. 1: JANUARY 20, 1997

**NATIONAL MARINE FISHERIES  
 HABITAT CONSERVATION DIVISION**

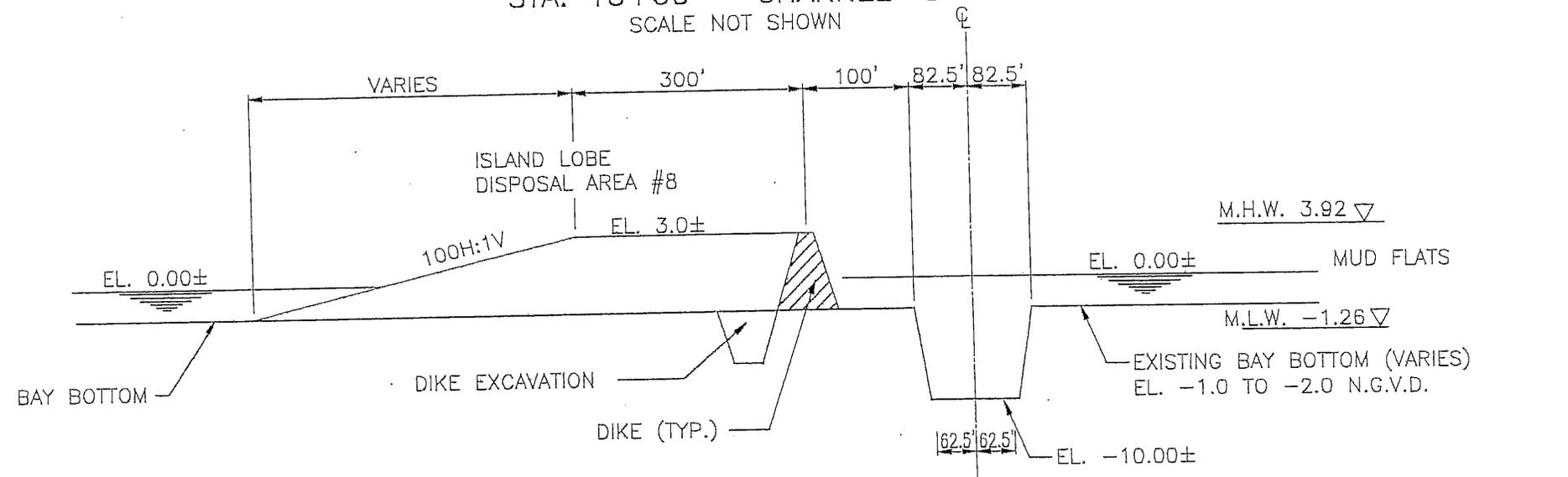
**BIG ISLAND MINING PROJECT  
 TYPICAL CROSS SECTIONS SHOWING  
 CHANNEL AND DISPOSAL AREAS**

PREPARED BY BROWN CUNNINGHAM & GANNUCH, INC.

DATE:  
 JULY, 1995  
 SHEET:  
 9 OF 13



SECTION E-E  
 STA. 15+00 - CHANNEL "D"  
 SCALE NOT SHOWN



SECTION F-F  
 STA. 30+00 - CHANNEL "B"  
 SCALE NOT SHOWN

NOTE: FOR DETAIL OF DIKE SEE SHEET 8.  
 ALL ELEVATIONS N.G.V.D.

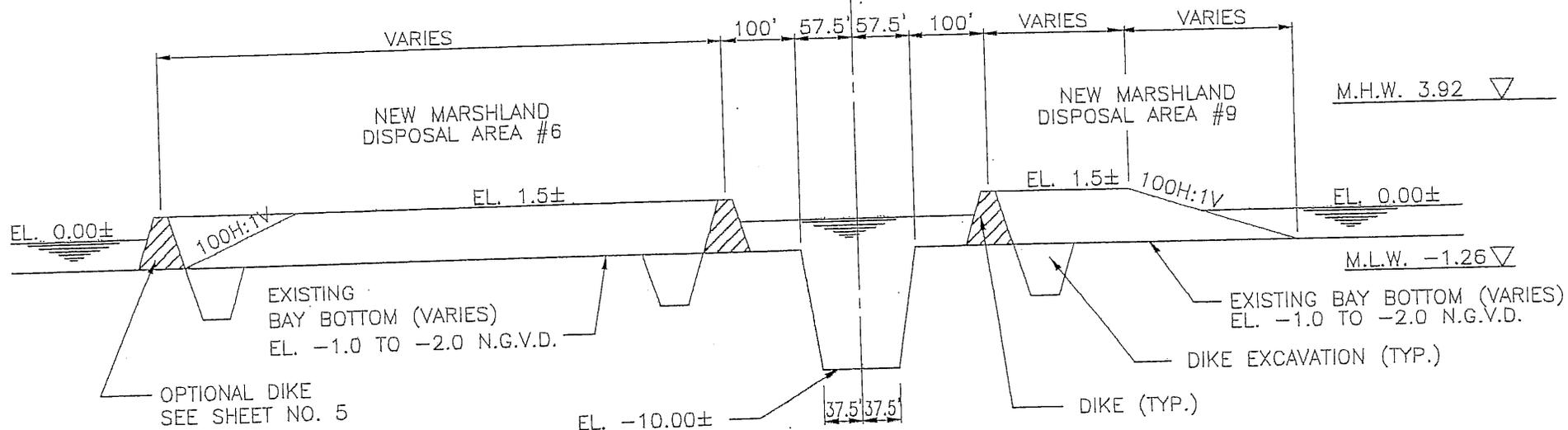
REV. 2: JANUARY 20, 1997  
 REV. 1: AUGUST 11, 1995

NATIONAL MARINE FISHERIES  
 HABITAT CONSERVATION DIVISION

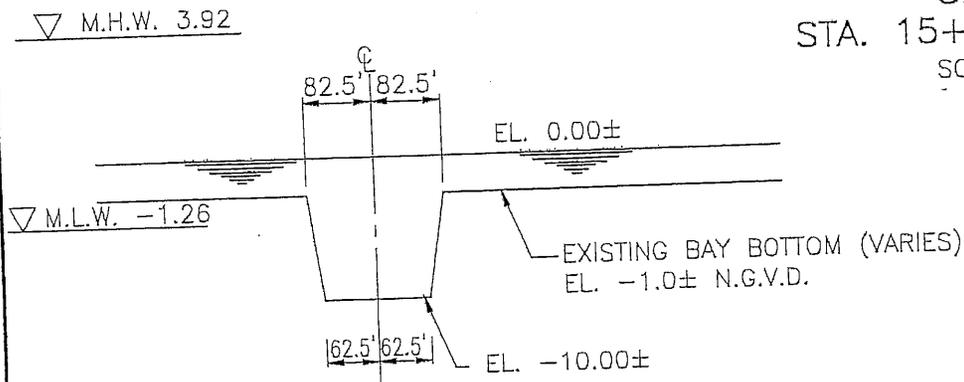
BIG ISLAND MINING PROJECT  
 TYPICAL CROSS SECTIONS SHOWING  
 CHANNEL AND DISPOSAL AREAS

PREPARED BY BROWN CUNNINGHAM & GANNUCH, INC.

DATE:  
 JULY, 1995  
 SHEET:  
 10 OF 13



SECTION G-G  
 STA. 15+00 - CHANNEL "E"  
 SCALE NOT SHOWN



SECTION H-H  
 STA. 15+00 - CHANNEL "C"  
 SCALE NOT SHOWN

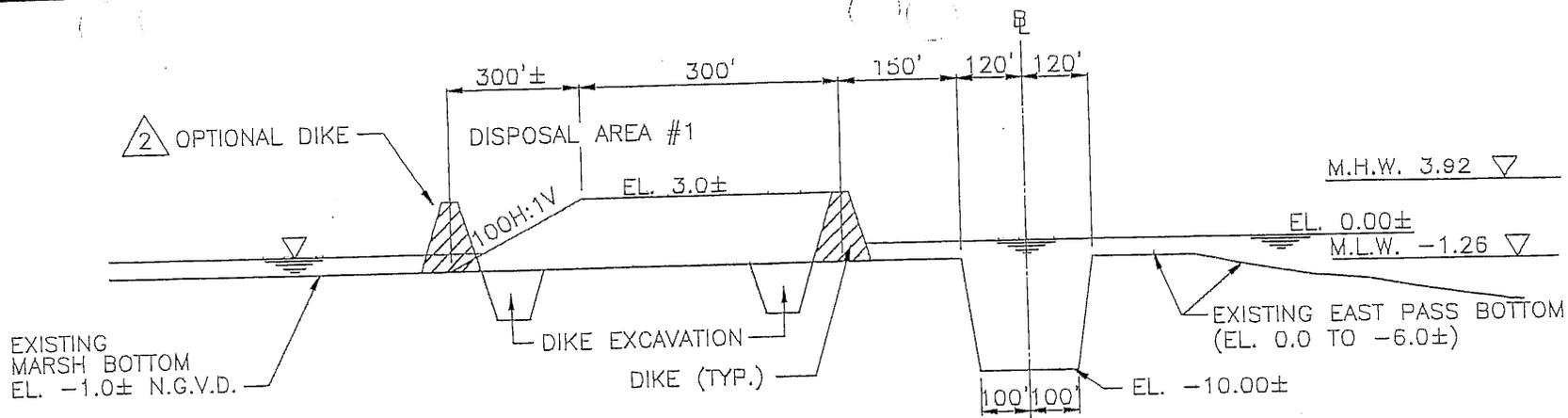
NOTE: FOR DETAIL OF DIKE  
 SEE SHEET 8  
 ALL ELEVATIONS N.G.V.D.

NATIONAL MARINE FISHERIES  
 HABITAT CONSERVATION DIVISION

BIG ISLAND MINING PROJECT  
 TYPICAL CROSS SECTIONS SHOWING  
 CHANNEL AND DISPOSAL AREAS

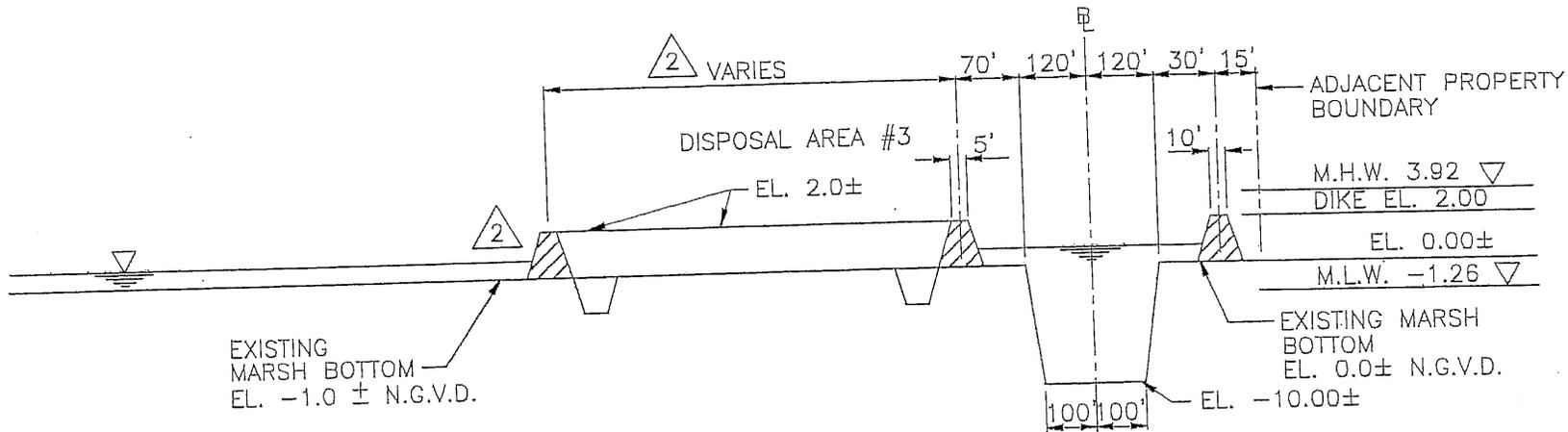
PREPARED BY BROWN CUNNINGHAM & GANNUCH, INC.

DATE:  
 JULY, 1995  
 SHEET:  
 11 OF 13



NOTE: DISPOSAL AREA #2 HAS SIMILAR CROSS SECTION

SECTION K-K  
STA. 20+00 - NATAL CHANNEL  
SCALE NOT SHOWN



NOTE: FOR DETAIL OF DIKE SEE SHEET 8.

ALL ELEVATIONS N.G.V.D.

SECTION J-J  
STA. 68+00 - NATAL CHANNEL  
SCALE NOT SHOWN

REV. 2: DECEMBER 28, 1997  
REV. 1: JANUARY 20, 1997

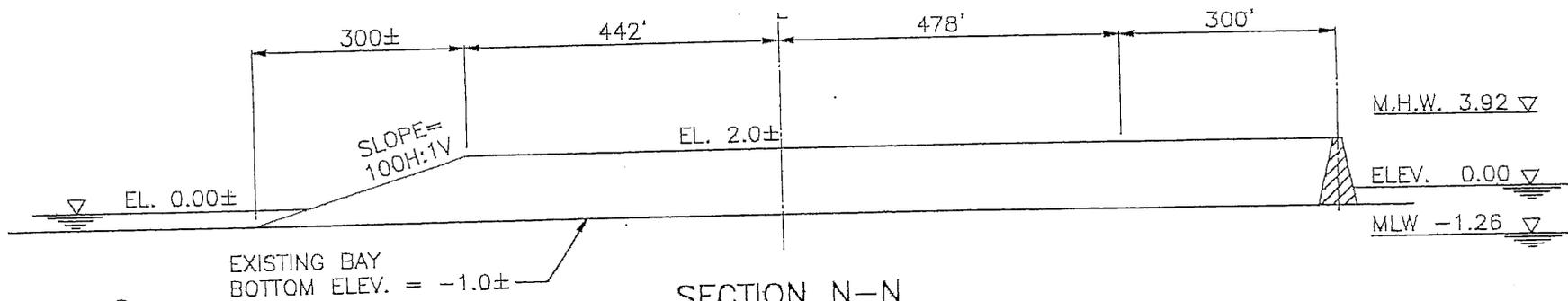
NATIONAL MARINE FISHERIES  
HABITAT CONSERVATION DIVISION

ATCHAFALAYA SEDIMENT DELIVERY PROJECT  
TYPICAL CROSS SECTIONS SHOWING  
CHANNEL AND DISPOSAL AREAS

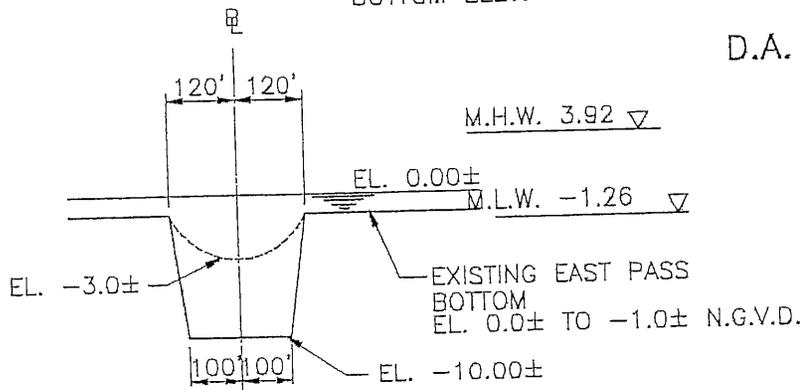
PREPARED BY BROWN CUNNINGHAM & GANNUCH, INC.

DATE:  
JULY, 1995

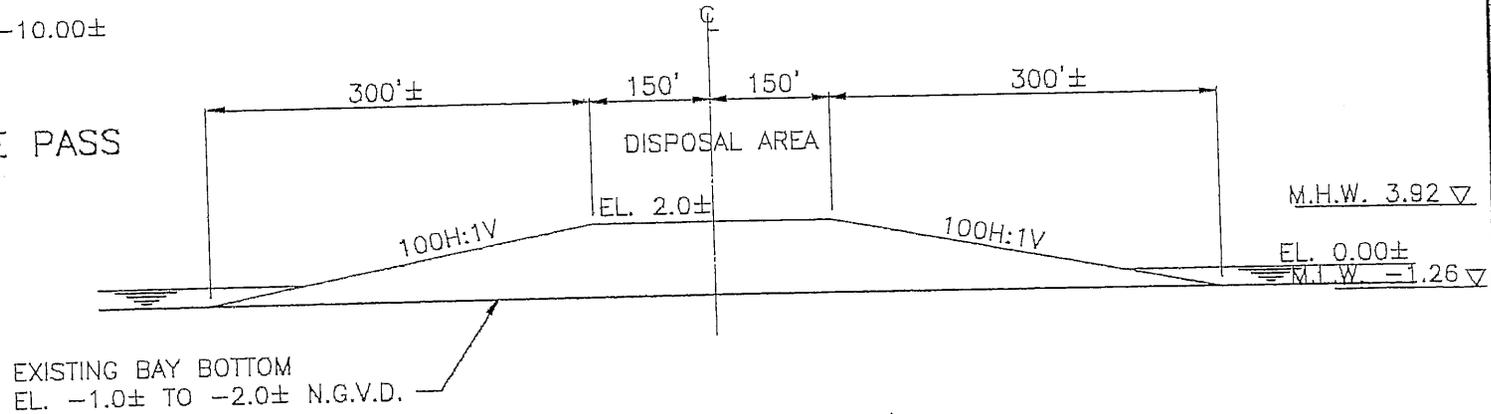
SHEET:  
12 OF 13



SECTION N-N  
D.A. #4 (NATAL'S CHANNEL)  
NOT TO SCALE



SECTION L-L  
STA. 10+00 - CASTILLE PASS  
SCALE NOT SHOWN



SECTION M-M  
DISPOSAL SITE - CASTILLE PASS  
SCALE NOT SHOWN

NOTE: ALL ELEVATIONS N.G.V.D.

REV. 1: JANUARY 29, 1997

NATIONAL MARINE FISHERIES  
HABITAT CONSERVATION DIVISION

ATCHAFALAYA SEDIMENT DELIVERY PROJECT  
TYPICAL CROSS SECTIONS SHOWING  
CHANNEL AND DISPOSAL AREAS

PREPARED BY BROWN CUNNINGHAM & GANNUCH, INC.

DATE:  
JULY, 1995  
SHEET:  
13 OF 13



DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT CORPS OF ENGINEERS

PO BOX 80267

NEW ORLEANS, LOUISIANA 70180-0267

February 23, 1998

REPLY TO  
ATTENTION OF

Operations Division  
Western Evaluation Section

SUBJECT: SW (Atchafalaya Bay) 753 and  
WH-19-970-1476

02/23/1998 09:50

15049249130

USCOE WEST EVAL SEC

NO. 499

PAGE 01  
P. 1-2

FACSIMILE TRANSMITTAL HEADER SHEET

For use of this form, see AR 25-111 for proper routing to DISKOC

COMMAND/ OFFICE	NAME/ OFFICER SYMBOL	OFFICE TELEPHONE NO. (AUTOVON/Comm.)	FAX NO. (AUTOVON/Comm.)			
FROM: US ARMY CORPS OF ENGINEERS NEW ORLEANS DISTRICT	Martin Mayer CEMVN-00-SW	504/882-2276	504/882-2574			
TO: BCG	Ike Mayer	504/924-3116	504/924-9130			
CLASSIFICATION	PRECEDENCE	NO. PAGES (including this Header)	DATE-TIME	MONTH	YEAR	RELEASER'S SIGNATURE
		2	23	02	98	Martin S. Mayer

REMARKS

Attached is the signed permit as per your previous request -  
Hand copy is 4336 to follow  
Martin

Space Below For Communications Center Use Only

COPY TO: VAN COOK 342 9417

RIC RUBSAMAN 389 8506



## DEPARTMENT OF THE ARMY

NEW ORLEANS DISTRICT CORPS OF ENGINEERS

P.O. BOX 60267

NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO  
ATTENTION OF:

September 11, 1998

Operations Division  
Western Evaluation SectionSUBJECT: WH-19-970-1476 and  
SW(Atchafalaya Bay) 753National Marine Fisheries Service  
C/O LSU Center for Wetland Resources  
Baton Rouge, Louisiana 70802-7535

Gentlemen:

Revised drawings attached in five sheets, furnished with your application dated August 19, 1998, covering the excavation of a distributary channel (Channel F) in association with CWPBRA Projects XAT-7 and PAT-2, in Atchafalaya Bay, at a location central to a point approximately 18.0 miles southwesterly from Morgan City, Louisiana, in St. Mary Parish, are approved and will be included in your plans for the work authorized by the Secretary of the Army in permit dated March 7, 1997. These drawings supersede drawings shown on sheets 2, 4, 5, 10 and 11 attached to your permit.

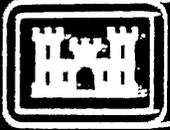
The conditions to which the work is made subject, remain in full force and effect.

The attached Notice of Authorization, ENG Form 4336, is to be conspicuously displayed at the site of work.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Ronald J. Ventola  
Chief, Regulatory Branch  
for  
William L. Conner  
Colonel, U.S. Army  
District Engineer

Attachments



**This notice of authorization must be  
conspicuously displayed at the site of work.**

United States Army Corps of Engineers

September 11, 1998

A permit to excavate a distributary channel (Channel F) in association  
with CWPRA Projects XAT-7 and PAT-2, in Atchafalaya Bay, at a location  
at central to a point approximately 18.0 miles southwesterly from Morgan  
City, LA, in St. Mary Parish,  
has been issued to National Marine Fisheries Svc on Sept. 11, 19 98

Address of Permittee C/O LSU Center for Wetland Resources  
Baton Rouge, LA 70803-7535

Permit Number

WH-19-970-1476 and  
SW(Atchafalaya Bay)753

  
District Commander

for the



# Brown Cunningham Gannuch

ENGINEERS • ARCHITECTS • CONSULTANTS

August 19, 1998

Mr. Rickey Ruebsaman  
National Marine Fisheries Service  
LSU Center For Wetlands Resource  
Baton Rouge, LA 70803-7535

Re: Revision No. 2 to Permit Drawings:  
Big Island Mining and Atchafalaya Sediment Delivery Projects  
Coastal Use Permit SW (ATCH-BAY)753 WH-19-970-1476  
BCG Project No. 30594

Dear Mr. Ruebsaman:

Based upon actual before dredging cross sections submitted by the contractor; The Big Island Mining Project is projected to have an under-run of dredged quantities based on the original designed channels A thru E. Based upon discussions with Mr. Van Cook (LA DNR), Mr. Erik Zobrist (NMFS) and Mr. Greg Linscomb (LA LDWF) we have proposed to recapture the under-run by adding a new channel called "Channel F" which has a 160-foot bottom at a depth of -10.0 NGVD and modify the widths of Channels A,B,C,D and E. In addition, we have slightly realigned Channel D to better fit insitu field conditions. Furthermore, due to the above channel changes Disposal Area No. 3 has been deleted from the project and Disposal Area No. 4/5 has been expanded to replace DA No. 3. Disposal Area 8 has been enlarged by placing a back dike.

We feel that it will be necessary to forward a revision to the permit with drawings incorporating channel F to the Corps for their approval prior to dredging the new channel. We have also revised the permit drawings to reflect the project Field Changes made thusfar on the other channels of the Big Island project in order to reflect current project conditions. We herewith transmit our revised set of drawings that cover the foregoing changes. The drawings impacted by the above changes are Drawings 2,4,5,10 and 11 to the permit drawings. All other permit drawings remain unchanged.

I am enclosing the revised permit application and revised drawings for your use in submitting the second revision permit application to the Corps of Engineers for approval to the original permit of March 7, 1997. The first revision to the permit was dated January 20, 1998 and approved by COE on February 23, 1998.

Page 2  
Mr. Ruebsaman  
August 19, 1998

The following drawings and revision descriptions for Permit Revision No. 2 to the original permit are listed for your information.

Original Permit Drawing and Date	Revision-1 2-23-98	Revision-2 8-19-98
No. 1 - July 95	No change	No change
No. 2 - July 95	No Change	Added Channel F and realignment of Channel D
No. 3 - July 95	No Change	No Change
No. 4 - July 95	Revised 12-28-97	Realigned Channel D with 200' bottom. Delete DA No. 3 Revised DA 4/5
No. 5 - July 95	Revised 12/28/97	Revised bottom widths of: Channel A: From 300' to 375' (Sta 145 to 180) From 200' to 250' (180 to 200) From 100' to 125' (200 to 206) Channel B from 125' to 160' Channel C from 100' to 125' Channel E from 100' to 125' Add Channel F with 160' bottom (Sta 0+00 to 22+00) Start "F" at c/l "A" Sta 180
No. 6 - July 95	Revised 12-28-97	No Change
No. 7 - July 95	Revised 12-28-97	No Change
No. 7a	New Dwg 11-10-97	No Change

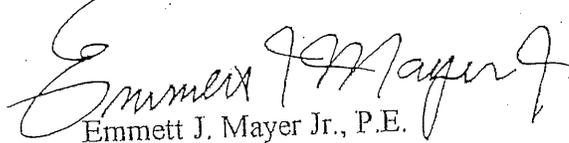


page 3  
Mr. Ruebsaman  
August 19, 1998

No. 8 - July 95	No Change	No Change
No. 9 - July 95	No Change	Change bottom from 300' to 375'
No. 10 - July 95	No Change	1. Change Section E-E show 200' bottom delete DA No. 3  2. Change Section F-F widen bottom to 160' add Channel "F" note
No. 11 - July 95	No Change	Change Section G-G show 125' bottom

Please sign and forward this second revision to the original CUP Permit to the Corps for approval.

Sincerely yours,  
BROWN, CUNNINGHAM & GANNUCH, INC.

  
Emmett J. Mayer Jr., P.E.

cc: R. Gannuch  
V. Cook  
E. Zobrist  
G. Linscomb

ATTACHMENT VI

ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

**OPERATION, MAINTENANCE AND REHABILITATION BUDGET**

CWPPRA PRIORITY LIST II

AT-02 ATCHAFALAYA SEDIMENT DELIVERY

LEAD AGENCY: NMFS

PROJECT FEATURES:

1. Dredging to open channels in Natal Channel and Castille-Radcliffe Pass. Channels are 200 ft. wide by 10 ft. deep with a total length of 10,000 ft. The project will remove approximately 800,000 cubic yards of material from these channels.

OPERATION AND MAINTENANCE / REHABILITATION ASSUMPTIONS:

1. Channel Maintenance: Assume that sediment will fill the channel from 10 feet deep to 6 feet deep and dredging will be required as follows:

Year 10 Dredge 4 feet of 5,000 LF of channel

OPERATION AND MAINTENANCE COST CONSIDERATIONS:

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

A. ANNUAL INSPECTIONS:	\$ 58,942
(1 field day with 2 team members, boat and report from Schedule A-1)	
B. ANNUAL COST FOR OPERATIONS:	\$ 0
(Not required for this project)	
C. PREVENTIVE MAINTENANCE:	\$ 0
(Not required for this project)	
D. COST FOR MAINTENANCE PROJECT AT YEAR 10:	
1. Contractor Mobilization/Demobilization	\$ 25,000
2. Dredge Channel:	\$200000
(5,000 LF x 200 feet wide x 4 feet deep x \$1.35/cy)	
Contractor Subtotal	\$225,000

Contractor Cost with Inflation (\$232407 x 1.484 inflation factor for Schedule C-2)	\$333,900
3. DNR Design Cost/Administration: (2 week project, \$7,550 x 1.484 inflation factor from Schedule C-2)	\$ 11,204
4. Engineering Consultant Design, Survey and Inspection: \$ 48,406	
Basic Services: (9% x \$366,877 construction cost)	\$ 30,051
Survey Supplemental Services: (5 days at \$1,855/day inflated for year 10 from Schedule E-2)	\$ 9,275
Resident Inspection: (8 workdays x \$1,135/day inflated for year 10 from Schedule E-3)	\$ 9,080
<b>TOTAL COST FOR MAINTENANCE YEAR 10:</b>	<b>\$452,452</b>

**TOTAL ESTIMATED OPERATION AND MAINTENANCE COST: \$452,452**

---

**OPERATION AND MAINTENANCE (O&M) COST SUMMARY:  
AT-02 ATCHAFALAYA SEDIMENT DELIVERY**

Original O&M Budget	\$ 0
Revised O&M Budget	\$452,452
Variance	\$452,452

ATTACHMENT VII  
ATCHAFALAYA SEDIMENT DELIVERY (AT-02)

**ANNUAL INSPECTIONS**



**State of Louisiana  
Department of Natural Resources  
Coastal Restoration Division**

## **2003 Bi-Annual Inspection Report**

for

### **ATCHAFALAYA SEDIMENT DELIVERY PROJECT, AT-02, & ATCHAFALAYA BIG ISLAND MINING PROJECT, AT-03**

State Project Numbers AT-02 and AT-03  
Priority Project List 2

October 28, 2003  
St. Mary Parish

Prepared by:

Herbert J. Juneau, Jr., Engineer IV  
Stan Aucoin, Engineering Tech.  
LDNR/Coastal Engineering Division  
Lafayette Field Office  
635 Cajundome Blvd.

## Table of Contents

I. Introduction.....	1
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III. Inspection Procedures.....	2
IV. Inspection Results.....	3
AT-02-Big Island Mining Project.....	3
AT-03-Sediment Delivery Project.....	3
V. Conclusions.....	5
VI. Recommendations.....	6
Immediate Repairs.....	6
Programmed Maintenance.....	6

## Appendices

- Appendix A Project Features Map
- Appendix B Photographs
- Appendix C Three Year Budget Projections
- Appendix D Field Inspection Form

## **I. Introduction**

The Atchafalaya Sediment Delivery Project is a distributary channel maintenance and delta-lobe creation project consisting of approximately 2,182 acres of freshwater wetlands and shallow open water. The project is located in the northeastern region of the Atchafalaya Delta within the Louisiana Department of Wildlife and Fisheries Atchafalaya Delta Wildlife Management Area in the southeast corner of St. Mary Parish, Louisiana. The Project is bounded on the north by Mile Island, the west by East Pass, and to the east and south by the Atchafalaya Bay. (Attachment III)

The Big Island Mining Project is a distributary channel and delta lobe creation project. The project is located in the northwestern region of the Atchafalaya Delta and is bounded by Shell Island and Shell Pass to the north and west, Amarada Pass to the south, and the Atchafalaya Bay Channel to the east and southwest. The project is located in the Atchafalaya Delta Wildlife Management Area in the southeast corner of St. Mary Parish, Louisiana. (Attachment III).

## **II. Project Description, Purpose, and History**

The Atchafalaya Delta is bisected by the Lower Atchafalaya River which is maintained by the U.S. Corps of Engineers to an Elevation of -20.0 NGVD with a 400 foot bottom width for navigation purposes. The continued dredging and placement of spoil material along the banks of the river has caused sediment deprivation in adjacent delta environments.

The Sediment Delivery Project was designed to enhance the natural delta-building process by restoring the Natal Channel and Castille Pass Channel to functional tertiary distributary channels and utilizing the dredged material to create delta lobe islands as wetlands that are suitable for establishment of emergent marsh.

The Big Island Mining Project was designed to create and/or re-establish channels for water and sediment distribution from the Atchafalaya River to the northwest portion of the Atchafalaya Delta and to create delta lobe islands with the resulting spoil material from the channel excavations.

The projects were constructed as a Coastal Wetlands, Planning, Protection, and Restoration Project (CWPPRA) with the Louisiana Department of Natural Resources as the local State Sponsor and the National Marine Fisheries Service of the Department of Commerce as the Federal Sponsor. The general contractor for the construction of the Projects, which were accomplished under one contract by the State of Louisiana Division of Administration, and administered by the Louisiana Department of Natural Resources was River Road Construction Co. of Mandeville, LA. The Projects were constructed during the period of January 28, 1998 and October 27, 1998. Final cost of the construction contract was \$7,238,449.36. The design, engineering, and construction oversight for the Projects was performed under an Engineering Services Contract with the State of Louisiana Department of Natural Resources by Brown, Cunningham, Gannuch Engineers.

The principle project features of the Sediment Delivery Project include:

- Natal Channel - 5,100 linear ft. dredge channel with a 170 ft. wide bottom width and with a branch channel of 1,500 linear ft. oriented to the northeast from Station 74+00. Bottom width of this branch channel was 150 feet.
- Castille Pass Channel - 2,000 linear ft. dredge channel with a 125 ft. wide bottom width.
- Marsh Creation – 668,683 cubic yards of dredge material from Natal Channel placed at four (4) sites creating approximately 257 acres of wetlands.
- Marsh Creation – 32,242 cubic yards of dredge material from Castille Pass placed on a location southeast of the channel and creating approximately 20.5 acres of wetlands.

The principle project features of the Big Island Mining Project include:

- Channel A, 20,600 linear ft. of dredged channel from the Atchafalaya River starting with 800 feet of bottom width at the Elevation -20.0 ft. NGVD contour of the Atchafalaya River to a 400 ft. bottom width at an elevation of -10.0 ft. NGVD, thence remainder of channel was dredged to -10.0 feet NGVD. Bottom width of the channel was 400 feet to Station 145+00, thence 375 feet between Stations 145+00 and 180+00, thence 250 feet width between Stations 180+00 and 200+00, thence with a 200 feet width between Stations 200+00 and 206+00 with exception that this latter portion of the channel created is all to the south of the channel centerline baseline.
- Channel B, 5,500 linear ft. of dredged channel with a bottom width of 160 feet.
- Channel C, 2,400 linear ft. of dredged channel with a bottom width of 125 feet.
- Channel D, 4,000 linear ft. of dredged channel with a bottom width of 160 feet.
- Channel E, 4,150 linear ft. of dredged channel with a bottom width of 125 feet. A "Cul du Sac" turning/mooring area was excavated at the end of Channel E.
- Channel F, 2,300 linear ft. of dredged channel with a bottom width of 160 feet.
- The placement of 3.36 million cubic yards of dredged material at eleven (11) separate disposal areas to create wetlands at an elevation of between Elevation 1.5 ft. to 3.0 ft. NGVD.
- All channels that were dredged were excavated to an elevation of -10.0 feet NGVD Datum, except where noted differently for the "ramp" entrance of Channel A from the Atchafalaya River.

### III. Inspection Procedures

On Tuesday, October 28, 2003, this writer and the following individuals participated in the required bi-annual inspection of the Big Island Mining, AT-3, and Atchafalaya Sediment Delivery, AT-2, Projects: Patrick Landry, Dewey Billodeau, Herbert Juneau, and Stanley

Aucoin of LDNR/CED/Lafayette Field Engineering Office, Edmond Mouton and Steve Smith of LDW&F/New Iberia Office, and John Foret of the Lafayette, LA NMFS Office. This report is to serve to document the observations made and some of the results found during the trip.

The purpose of the trip was to inspect the various channels of the two projects by observations and intermittent soundings to determine condition of the channels with respect to the depths initially excavated during construction. Though original excavated depth of all channels was to a (minus) -10.0 feet NGVD, widths of the channels during construction varied from 400 feet to 125 feet. No attempt to measure the current existing channel widths was made during the inspection. The inspection began at approximately 9:00 AM, originating from the Berwick, LA Public Boat Launch, and was completed at approximately 2:00 PM, when we returned to the landing. Transportation to and from the landing was via LDNR/Lafayette Field Engineering Office's 21' Workboat. The LDNR/Lafayette Workboat had capability of performing fathometer soundings, by use of borrowed equipment from C H Fenstermaker & Associates, Inc. of Lafayette, LA. The fathometer was operated by LDNR personnel. The inspection party was able to accomplish a cursory, but adequate, investigation for depths existing in the various primary and secondary distribution channels of the Big Island and Sediment Delivery Projects by the fathometer soundings.

#### **IV. Inspection Results**

##### **AT-02-BIG ISLAND MINING PROJECT**

The actual inspection began at the Atchafalaya River near the transition and beginning reach of the Big Island Channel, Channel A on the construction drawings. There we found "good" soundings that averaged between -8.0 to sometimes -10.0 feet, but generally soundings slightly below -8.0 feet as we journeyed slowly downstream in the channel, intermittently, as we would veer off each time we encountered a secondary distribution channel to profile them. We "took" a partial cross-section of Channel A opposite the "piling" near the start of Channel A, and verified some -8.0 foot depths across portions of the channel. At the very downstream end of Channel A, we discovered that the channel continued for some distance past the location of where we had stopped dredging under the original work. Though width was not measured and channel seemed very narrow, apparently some erosion occurred for an estimated several hundred feet to the southwest. As an aside, the sandbar in the Atchafalaya River, noted during our inspection of CY 2000, immediately upstream in the River of the entrance to Channel A, appears to have not aggraded and encroached into the cross-section of Channel A. Apparently, the flow into Channel A from the River gathers and carries any sediments trying to accumulate on the downstream of this "bar" into and downstream into Channel A. This is a very desirable condition as this puts Channel A in what's possibly a "sediment-rich" location that will contribute to and enhance maximum sediment distribution into the project area.

Comments on the various secondary distribution channels of the Big Island Project follow. Channels D, the first channel on the right down Channel A, was found to have approximately -4.0 feet of water in the initial reach of same after immediately leaving Channel A. Thereafter, approximately -5 feet of water depth was noted as we moved downstream in Channel D

towards the Shell Island Pass Channel to the northwest. Channel D remains in a condition similar to that noted during the CY 2000 inspection.

Channel B, the second channel to the right that spurs off Channel A, indicated depths of approximately -4.0 feet of water for an estimated distance of several hundred feet from Channel A. Depths then increased to -6.0 feet and then eventually to -8.0 and -9.0 feet towards the Shell Island Pass Channel to the northwest. This channel is still in good condition.

Channel F, the third channel on the right encountered down Channel A, revealed about -4.0 feet as the controlling water depth, again just off of Channel A and entering Channel E, and after a distance of several hundred feet, we found a very regular bottom that had at approximately -6 feet of water.

Channel C, the last channel on the left side of Channel A, and that leads to Catfish Pass, indicated approximately -5.0 feet of water as we left Channel A, and then thereafter was -6 to -7 feet deep until we reached Catfish Pass which had depths of approximately -8.0 feet. This channel is marked with plastic pipe used as staking and is regularly used by W&F, sportsmen, and others for access to and from Amarada Pass..

An inspection of the Channel E, the "dead end" Cul de Sac Channel that is oriented towards the south towards Big Island and is the first channel to the left off of Channel A when traveling downstream in the latter, was found to have approximately but -2.0 foot depths controlling over a hump approximately 150 feet in length, then thereafter water depths went to -5 feet, then gradually sloping down to -10.0 feet at a point approximately 1,500+ feet down the Cul de Sac Channel, then we found another hump at -6.5 feet, then we found the Cul du Sac area at the southern end of the channel irregular in depth but varying between -9 and -11 feet in depth from that day's water surface. It is apparent that immediately off Channel A, Channel E is receiving significant deposits of sediment that probably "falls out" from the effect of very minor to zero slope in the channel to the Cul du Sac from Channel A. Channel E is used frequently for navigation to Big Island by maintenance/biology crews of LDW&F. They are contending with the shallow draft problem at this time, but it is the opinion of this writer that the problem will significantly worsen over the next year and that we may have to address same by some maintenance dredging in CY 2005.

### **AT-03-SEDIMENT DELIVERY PROJECT**

We then traveled quickly to East Pass and the Natal Channel site of the Sediment Delivery Project, AT-3. In route, we found a substantial "bar" across the mouth of East Pass on the left descending bank of the Atchafalaya River Channel and the fathometer indicated depths of only approximately -3.0 to -3.5 feet of water for an estimated distance of 150-200 feet to the east in East Pass. Thereafter, East Pass had water depths of -6 to -10 feet until of the mouth of Natal Channel near the "jetties" (remnants of some bucket dredging spoil placed during the initial construction of the channel).

As we entered Natal Channel, water depths immediately sloped upwards to -5.0 feet and then stayed at -6 to -7.5, -8.0 feet until we approached and passed the "natural old outlet" that

continues to the northeast into open water near Ivor's Island, then water depths decreased dramatically to slightly less than -3.0 feet for quite a distance around a curve and down Natal Channel. (It was our observation that, perhaps the natural old outlet has re-developed and possibly captured the flow of the upstream portion of Natal Channel.) Later, as we continued down Natal Channel, we discovered a new spoil area placed by the Corps of Engineers during the 1999 maintenance dredging season. The spoil area appears to have been placed unconfined, is narrow and very lengthy in shape, and existed from 0.3 to approximately 1 foot above the water. Vegetation on the spoil was very, very sparse, though many species of birds were enjoying the area. We continued on a tangent down Natal Channel that carried us down the "right" leg of the "fork" created by the initial dredging of Natal Channel and found water depths of -6 to -6.5 feet for quite some distance. So much distance in fact, that we speculate that the channel has scoured and lengthened to the south. (This needs be explored, as if this is indeed the case, then if the natural old outlet is closed, this area can be a site for a future marsh creation area, as channel scour indicates significant flow conditions.) We then returned to the base of the "fork" and inspected the "left" leg of the Fork in an easterly direction. This channel leg runs parallel and is adjacent to the new Corp's disposal area described above. There, we were surprised to find -5 to -10 feet of water, and were baffled. Perhaps, work by the Corps wheeled-washed the area or maybe natural scouring has occurred. We stopped the inspection near the northern end of the Corps' spoil area. We continued on a tangent down Natal Channel that carried us down the "right" leg of the "fork" created by the initial dredging of Natal Channel and found water depths of -6 to -6.5 feet for quite some distance. So much distance in fact, that we speculate that the channel has scoured and lengthened to the south. (This needs be explored, as if this is indeed the case, then if the natural old outlet is closed, this area can be a site for a future marsh creation area, as channel scour indicates significant flow conditions.) We then returned to the base of the "fork" and inspected the "left" leg of the Fork in an easterly direction. This channel leg runs parallel and is adjacent to the new Corp's disposal area described above. There, we were surprised to find -5 to -10 feet of water, and were baffled. Perhaps, work by the Corps wheeled-washed the area or maybe natural scouring has occurred. We stopped the inspection near the northern end of the Corps' spoil area.

We then traveled to the Castille Pass Channel by returning up Natal Channel to East Pass, thence downstream down East Pass to the Castille Pass Channel. Immediately upon entering Castille Pass, we found -4.0 feet of water depth, then thereafter found -11.0 feet of depth to the reach of the channel in vicinity of the "pipeline (Trunkline's 20" Pipeline) and the end of the initial dredging performed on the Castille Pass Channel.

## V. Conclusions

It was again apparent that the projects are working well and are surviving after now being in place for five (5) years. We must remember however, that the projects and the delta area have not experienced a significant "high water" event from the Atchafalaya River since the initial construction work was completed in late 1998. Since late 1997, drought conditions in the upper

basins of the Mississippi and Red Rivers have limited the lower Atchafalaya River to very low flows, and thus low sediment contributions available to the project.

It was observed by several of the inspection party, that conditions found this year in some of the various channels are perhaps in as good shape as found as during the Inspection of November 2000. The sediment accumulation noted by this inspection in the dredged channels of the projects is not excessive or unexpected and does not require any maintenance dredging at this time, except as noted above for Channel E of the Big Island Mining Project. Since the constructed project features are simply excavated channels, no photographs were taken on this trip to be included in Appendix B. Also, no Field Inspection Forms are included in Appendix C.

## **VI. Recommendations**

### **Immediate Repairs**

- None immediate, however, we should begin discussing and considering some preliminary planning for some minor maintenance dredging on the most upstream end of Channel E, the "dead end" channel to the Cul du Sac on the lower end of the Big Island Channel A.

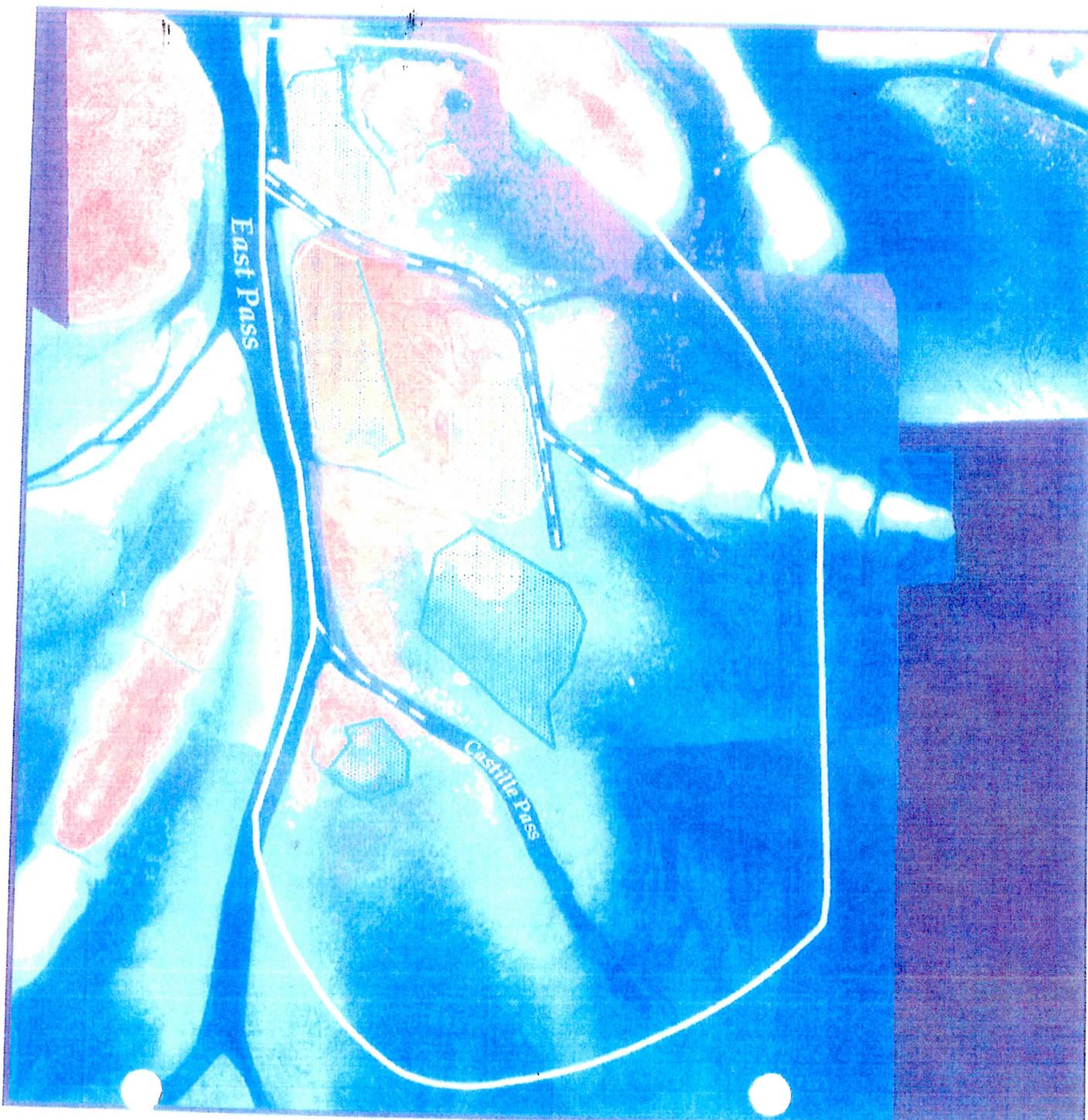
### **Programmed Maintenance**

- None

Bi-Annual Inspection Report  
ATCHAFALAYA SEDIMENT DELIVERY PROJECT & BIG ISLAND MINING PROJECT  
State Project Nos. AT-02 & AT-03

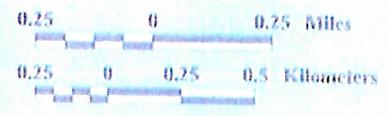
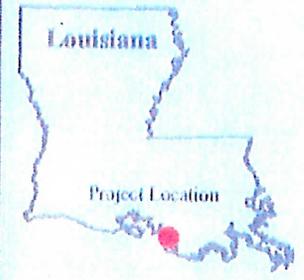
## **Appendix A**

### **Project Features Map**



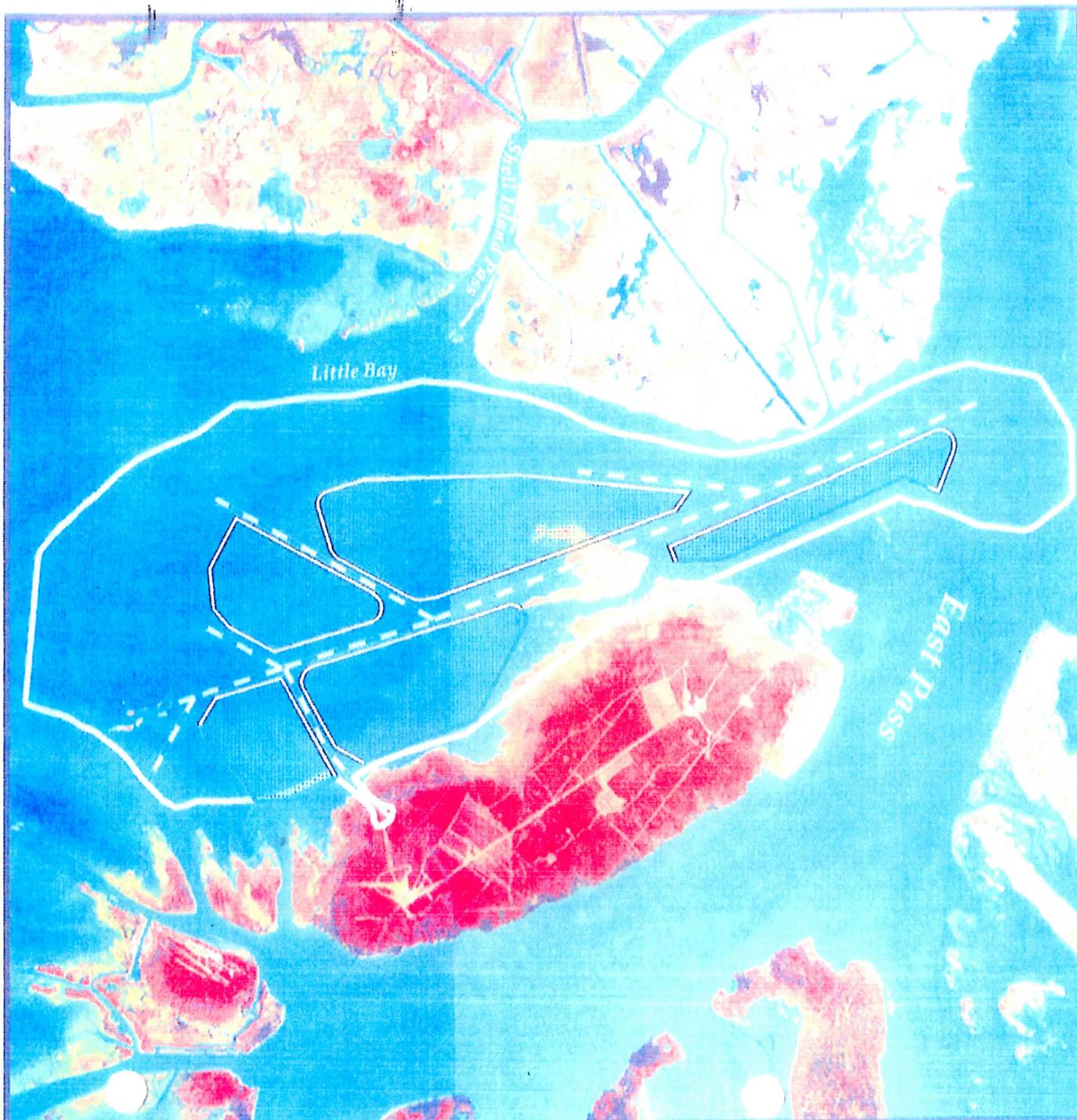
## Atchafalaya Sediment Delivery (AT-02)

-  Dredge Channel
-  Containment Dike
-  Marsh Creation Area
-  Project Boundary



Map Produced By:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Field Station

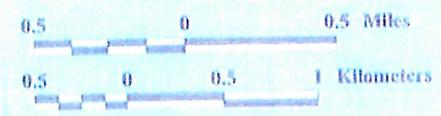
Background Imagery:  
 Color Infrared Aerial Photography 2000  
 Map Date: June 03, 2002  
 Map ID: 2002-11-439  
 \*Data accurate as of: June 03, 2002



## Big Island Mining (AT-03)

**Dredge Channel**  
**Containment Dike**  
 **Marsh Creation Area**  
**Project Boundary**

  
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Map Produced By:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 National Wetlands Research Center  
 Coastal Restoration Field Station

Background Imagery:  
 199E Digital Orthophoto Quarter Quadrangle

Map Date: June 10, 2002  
 Map ID: 2002 11 410  
 Data accurate as of: June 10, 2002

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**Appendix B**  
**Photographs**

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State Project Nos. AT-02 & AT-03

**Appendix C**  
**Three Year Budget Projection**

**ATCHAFALAYA SEDIMENT DELIVERY PROJECT (AT-02)**  
**Three-Year Operations & Maintenance Budgets 07/01/2003 - 06/30/06**

<u>Project Manager</u>	<u>O &amp; M Manager</u>	<u>Federal Sponsor</u>	<u>Prepared By</u>
Mark L. Neal	Mark L. Neal	NMFS	Stan Aubin
	2004/2005	2005/2006	2006/2007
Maintenance Inspection	\$ 4,825.00	\$ 4,955.00	\$ 5,250.00
Structure Operation	\$ -	\$ -	\$ -
Administration	\$ -	\$ -	\$ -

Maintenance Rehabilitation

03/04 Description Survey (\$20,000 @ 75% = \$15,000)

E&D	\$ -
Construction	\$ -
Construction Oversight	\$ -
<b>Sub Total - Maint. And Rehab</b>	<b>\$ -</b>

04/05 Description

E&D	\$ -
Construction	\$ -
Construction Oversight	\$ -
<b>Sub Total - Maint. And Rehab</b>	<b>\$ -</b>

05/06 Description

E&D	\$ -
Construction	\$ -
Construction Oversight	\$ -
<b>Sub Total - Maint. And Rehab</b>	<b>\$ -</b>

	2003/2004	2004/2005	2005/2006
<b>Total O&amp;M Budgets</b>	<b>\$ 4,825.00</b>	<b>\$ 4,955.00</b>	<b>\$ 5,250.00</b>

**BIG ISLAND MINING PROJECT (AT-03)**  
**Three-Year Operations & Maintenance Budgets 07/01/2003 - 06/30/06**

<u>Project Manager</u> Herb L'Hea	<u>O &amp; M Manager</u> Herb L'Hea	<u>Federal Sponsor</u> NMFS	<u>Prepared By</u> Stan Aucoin
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	2004/2005	2005/2006	2006/2007
Maintenance Inspection	\$ 4,825.00	\$ 4,955.00	\$ 5,250.00
Structure Operation	\$ -	\$ -	\$ -
Administration	\$ -	\$ -	\$ -

*Maintenance Rehabilitation*

03/04 Description: Survey (\$21,000 @ 75% = \$15,000)

E&D	\$ -
Construction	
Construction Oversight	\$ -
Sub Total - Maint. And Rehab.	\$ -

04/05 Description:

E&D	\$ -
Construction	\$ -
Construction Oversight	\$ -
Sub Total - Maint. And Rehab.	\$ -

05/06 Description:

E&D	\$ -
Construction	\$ -
Construction Oversight	\$ -
Sub Total - Maint. And Rehab.	\$ -

	2003/2004	2004/2005	2005/2006
<u>Total O&amp;M Budgets</u>	\$ 4,825.00	\$ 4,955.00	\$ 5,250.00

Bi-Annual Inspection Report  
ATCHAFALAYA SEDIMENT DELIVERY PROJECT & BIG ISLAND MINING PROJECT  
State Project Nos. AT-02 & AT-03

## **Appendix D**

### **Field Inspection Form**