

Installation of Sand Fence on
Timbalier Island (TE-40)

PROJECT COMPLETION REPORT



Louisiana Department of Natural Resources
Office of Coastal Restoration and Management
Coastal Engineering Division
Thibodaux Field Office

June 2006

PROJECT COMPLETION REPORT

PROJECT NAME: Installation of Sand Fence on Timbalier Island (TE-40)

**CWPPRA /
STATE PROJECT NO.** TE-40

REPORT DATE: June 19, 2006

PREPARED BY: LDNR

1. Project Managers / Contracting Parties

LDNR Project Manager:	Chris Williams
EPA Project Manager:	Patty Taylor
LDNR Construction Engineer:	Daniel Dearmond
Inspection:	GSE Associates, Inc.

2. Location and description of project.

This project is located on Timbalier Island in Terrebonne Parish and involves installation of approximately 11,500 linear feet of an additional row of sand fence on the recently constructed dune of the TE-40 Timbalier Island restoration project. The TE-40 Timbalier Island restoration project was completed in December 2004 and is sponsored by the United States Environmental Protection Agency (EPA) and the Louisiana Department of Natural Resources (LDNR) under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA). This sand fence installation project was constructed utilizing remaining funds within the CWPPRA TE-40 Timbalier Island project budget.

3. Final As-built features constructed.

Below is a description of the constructed project features:

Base Bid:

11,500 linear feet of sand fence consisting of 4' wood slat sand fence stained with red iron oxide installed in 500' sections. Posts are 4" diameter by 8' long wooden fence posts (non-treated) installed 4' into the ground spaced at 10'. The fence is secured to the posts with galvanized steel wire. See As-builts for exact locations and layout of fence. It should be noted that 11,648.5' of fence was the actual length installed according to the as-built survey; although, the contractor was only compensated for the contract quantity of 11,500'.

4. Project Cost Estimates

	Work Order Estimate	Actual Cost
Construction	\$ 119,750	\$ 119,750.00
Engineering and Design*	\$ 13,800	\$ 6,089.19
Bidding*	\$ 1,650	\$ 1,500.09
Construction Administration*	\$ 7,650	\$ 4,930.35
Construction Inspection	\$ 21,464	\$ 5,602.50 ¹
As-built Survey & Drawings*	\$ 3,800	\$ 1,368.74
Post-Construction*	<u>\$ 2,550</u>	<u>\$ 711.57</u>
Project Totals:	\$ 170,664	\$ 139,952.44

* Services performed in-house by LDNR.

¹ Invoiced as of June 2006.

Note: Construction Inspection services were performed by GSE Associates, Inc.

5. Contract Quantities

Original

Item Description	Unit	Quantity	Unit Rate	Amount
1 Mobilization	Lump Sum	1	\$22,000.00	\$ 22,000.00
2 Sand Fence	Linear Fence	11,500	\$ 8.50	\$ 97,750.00
Original Contract Amount:				\$ 119,750.00

Final

Item Description	Unit	Quantity	Unit Rate	Amount
1 Mobilization	Lump Sum	1	\$22,000.00	\$ 22,000.00
2 Sand Fence	Linear Fence	11,500	\$ 8.50	\$ 97,750.00
Final Construction Cost:				\$ 119,750.00

6. Construction and Construction Oversight

Prime Contractor	Erosion Control Services of Simmesport, Inc.
Original Construction Contract	\$ 119,750.00
Change Orders	\$ 0.00
Balancing Change Order (under run)	\$ (0.00)
Final Construction Contract	\$ 119,750.00
Construction Inspection Contractor	GSE Associates, Inc.
Construction Oversight Amount	\$ 5,602.50

7. Major Equipment Used:

Equipment Barge
Tug Boat (Miss Kylee)
Barge Boat
Volvo Hoe
ATV (4-wheeler)
ATV (6-wheeler) – 2

8. Discuss construction and sequences and activities.

3/10 - Contractor hauled posts to island and unloaded.
3/14 - Contractor hauled fence to island and unloaded and began layout/drilling holes for posts from west to east.
3/15 - Continued laying out/drilling post holes and began installing posts.
3/16 - Continued laying out/drilling post holes and installing posts; began tying fence to posts.
3/22 - Engineer visited site and laid out alternate fence alignments with contractor.
3/29 - Completed tying sand fence to posts.
4/03 - Performed Final Inspection and accepted project as complete.

9. Construction Change Orders and Field Changes

One Field Change was required directing the contractor to delete the last 2,000 linear feet of sand fence at the east end of the alignment shown on the plans and instead place the 2,000 linear feet of fence in four alternate locations. This change was needed in order to maintain the contract quantity of fence. See comment below in paragraph 12. A.

10. Pipelines and other utility Crossings

No pipelines were within the construction limits of this project.

11. Safety and Accidents

No safety issues or accidents occurred during construction of this project.

12. Additional comments pertaining to construction of the project.

A. The design of this project began prior to Hurricanes Katrina and Rita. As a result of the hurricanes approximately 2,000 linear feet of the dune platform at the east end of the project was removed. The project was bid without changing the layout on the plans in order to avoid additional delays. In order to achieve the full contract quantity of sand fence a field order was executed directing the contractor to place the 2,000 linear feet of fence in four alternate locations. See the as-built drawings and Final Inspection field trip report for exact sand fence alignments and descriptions.

13. Significant Construction Dates

	Date
Pre-Bid Conference	1/10/2006
Bid Opening	1/24/2006
Construction Contract Award	2/14/2006
Pre-construction Conference	3/02/2006
Notice to Proceed	4/12/2006
Mobilization	3/10/2006
Construction Start	3/14/2006
Final Acceptance	4/03/2006

14. Photos of completed project.

See attached Final Inspection field trip report for photos of the completed project.



**State of Louisiana
Department of Natural Resources
Coastal Engineering Division**

**Field Trip Report No. 2 (Final
Inspection)**

for

**INSTALLATION OF SAND FENCE
ON TIMBALIER ISLAND (TE-40)**

State Project Number TE-40

April 3, 2006
Terrebonne Parish

Prepared by:

Daniel Dearmond, P.E.
LDNR/Coastal Restoration and Management
Thibodaux Field Office
1440 Tiger Drive, Suite B

FIELD TRIP REPORT NO. 2 (FINAL INSPECTION)

PROJECT: Installation of Sand Fence on Timbalier Island (TE-40)

LOCATION: Timbalier Island, Terrebonne Parish

PURPOSE: Final Inspection

PARTICIPANTS: Daniel Dearmond, Shane Triche (DNR); Glen Feigler, Phil Schexnayder (GSE)

DATE: April 3, 2006

CONDITIONS: Cloudy / Winds 5-10 mph / High 70s °F / Choppy Seas

We arrived at the site on Timbalier Island at approximately 9:30 am in order to perform the Final Inspection. We walked the entire length of the project and inspected each segment of sand fence. During the inspection we also surveyed in the end points of all fence segments as well as any PI's along the alignment using the ArcPad GPS receiver. The alignments consisted of the following four areas:

- The main alignment runs parallel to and approximately 50' to the north of the existing north row of fence. It begins near the timber structure at the west end of the project and continues east approximately 9,500 linear feet to the eastern end of the dune platform. See Photos 1-4.
- East of the camp parallel to and south of the existing north row of fence. This row of sand fence is located approximately 50' to the south of the existing north row of fence and begins where the south row of existing fence had been removed by the storms and continues east for approximately 1,000 linear feet. See Photos 5-6.
- Along the eastern edge of the remaining dune platform and back berm. This row of fence begins where the main alignment terminates at the eastern end of the existing dune platform. It extends in a northeasterly direction approximately 500 linear feet across dune platform and back berm sediments to the edge of the existing vegetation. See Photos 7-8.
- At the western end of the project area. This row of fence starts at the existing vegetation line at the western edge of the project area and continues east approximately 500 linear feet along the dune platform and terminates Gulf-side of the existing south row of fence. See Photo 9.

All sand fence segments were found to be complete and installed in accordance with the plans and specifications. No punch list items were found; therefore, the project is considered complete and accepted as of the final inspection date.





Photo 1. *View of new sand fence east of camp looking west. Existing north row of fence can be seen on left.*



Photo 2. *View of new sand fence (right), existing north sand fence row and sand dune (middle), and existing south sand fence row (left) standing on north fence dune looking west near mid project.*





Photo 3. View of new fence near west end of project looking west. Wind-deposited sediments can be seen building up on the south side of the fence row.



Photo 4. View of new fence near west end of project looking west. Wind-deposited sediments can be seen building up on the north side of the fence row also.





Photo 5. *View of new fence row south of existing north fence row looking west. This alignment is located east of the camp. The existing sand dune along the north fence row can be seen on the right.*



Photo 6. *View of new fence row south of existing north fence row looking east. This alignment is located east of the camp. The existing north fence row and dune can be seen on the left.*





Photo 7. *View of new fence at east end of dune platform looking northeast.*



Photo 8. *View of new fence at east end of dune platform standing at the end point looking south towards Gulf.*





Photo 9. View of new fence alignment at west end of project standing at west end point looking east. To the left, the two existing sand fence rows/dunes and the new fence row can be seen.



Photo 10. Photo of sand dune built up along the south side of the existing north fence row near east end of dune platform looking southeast. Material can also be seen on the north (near) side of fence.

