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DNR COOPERATIVE AGREEMENT NO. 2503-02-15
OCR COOPERATIVE AGREEMENT NO.
AMENDMENT NO. 1

AMENDMENT TO THE
COOPERATIVE AGREEMENT
STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
(Hereinafter referred to as "Department")

AND

ST. CHARLES PARISH COUNCIL,
COASTAL ZONE MANAGEMENT SECTION
(Hereinafter referred to as "Contracting Party")

The Parties have agreed to fix the maximum fee paid Contracting Party under this contract at Thirty-Six Thousand and 00/100 Dollars (\$36,000.00), an increase of Eighteen Thousand and 00/100 Dollars (\$18,000.00) over the existing contractual fee, and to that end Article 3 entitled Project Scope and Funding is amended to read in its entirety as follows:

The Contracting Party shall utilize the funds provided by the Department under this Cooperative Agreement to complete the Project as described in the Scope of Services and Budget specified in Appendix A and Addendum to Appendix A, attached hereto and made a part hereof. The Department shall pay to the Contracting Party Thirty-Six Thousand and 00/100 Dollars (\$36,000.00). Under no circumstances shall the Department or the State of Louisiana have any obligation to the Contracting Party or to any third person, association, partnership or corporation for any additional sum or contribution. Expenditures incurred by the Contracting Party in excess of the amount specified above will be borne by the Contracting Party. The Contracting Party may be reimbursed for expenditures in excess of the original amount specified above only upon approval of the Department and after execution and approval of a formal amendment to this Cooperative Agreement.

FURTHER, by mutual consent of both parties to this agreement, Article 5 entitled Notice to Proceed is amended to read in its entirety as follows:

The Contracting Party shall proceed with the work upon receipt of a copy of the contract, executed by the parties and bearing the approval of the Louisiana Office of Contractual Review. The Contracting Party is advised that implementation of the contract's requirements shall be dependent on the availability of funds.

FURTHER, by mutual consent of both parties to this agreement, Article 13 entitled Reports and Payment is amended to read in its entirety as follows:

The following reports shall be received by the Department Project Manager prior to issuance of incremental and final payments:

1. A progress report shall be submitted by the Contracting Party with each invoice for payment on Form DNR-PR (Appendix B).
2. A final summary report shall be submitted by the Contracting Party on Form DNR-PR (Appendix B) with the final invoice for payment.

Payment to the Contracting Party shall be made according to the following:

Year 1:

Task 1	\$4,000.00	Task 3	\$4,000.00
Task 2	\$4,000.00	Task 4	\$6,000.00

Year 2 will be paid in accordance with Addendum to Appendix A.

Payments shall be made by the Department within approximately thirty days after receipt of an original and two copies of a proper invoice rendered according to the payment schedule and reports as prescribed above and which has been first approved for payment by the Department's Coastal Restoration Division.

FURTHER, by mutual consent of both parties to this agreement, Article 24 entitled Subcontractors is amended to read in its entirety as follows:

The Contracting Party agrees to obtain written Department approval prior to subcontracting any part of the services specified in Appendix A and Addendum to Appendix A. The Contracting Party shall include, in any subcontract, the provisions contained in this contract. The Contracting Party shall submit requests for approval, accompanied by copies of proposed subcontracts, to the Department Project Manager. The Contracting Party further agrees to guarantee and be liable to the State (Department) for all services performed under any such subcontract.

FURTHER, by mutual consent of both parties to this agreement, Article 25 entitled Amendments is amended to read in its entirety as follows:

No amendment shall be effective unless it is in writing, signed by the duly authorized representatives of both parties, and approved by the Division of Administration's Office of Contractual Review.

DNR COOPERATIVE AGREEMENT NO. 2503-02-15

All other terms and conditions of the agreement shall remain the same.

This amendment entered into this 9th day of October, 2002, at Baton Rouge, Louisiana.

WITNESSES:

JACK C. CALDWELL, SECRETARY
DEPARTMENT OF NATURAL RESOURCES

Karen G. Lewis

Valerie Berthelot

[Signature]

Albert D. Ray
St. Charles Parish Council,
Coastal Zone Management Section

APPROVED
Office of the Governor
Office of Contractual Review

OCT 29 2002
[Signature]
DIRECTOR

PARISH COASTAL WETLANDS RESTORATION PROGRAM
SCOPE OF SERVICES
2002-2003

INTRODUCTION

The Louisiana Department of Natural Resources/Coastal Restoration Division (DNR/CRD) is responsible for developing and implementing erosion control, restoration, and marsh creation projects to help offset the acute wetland loss problem in coastal Louisiana. Through this cooperative agreement, the DNR/CRD and each participating coastal zone parish shall develop, implement, and manage the Parish Coastal Wetlands Restoration Program (PCWRP) projects within its geographical boundary.

PROGRAM OBJECTIVES

The projects implemented through this cooperative agreement will achieve some or all of the following objectives: (1) enhance the deposition of suspended sediment and the formation of submerged aquatic plant beds and/or submergent marsh; (2) reduce marsh erosion; (3) protect existing or created shoreline and wetlands; and (4) increase primary productivity in vegetated coastal wetlands.

PROGRAM DESCRIPTION

The 2002-2003 PCWRP will involve the continued refurbishing and maintenance of all existing brush fences, and any other structures constructed under this program, to optimal structural and functional conditions. The type of project to be implemented shall be determined by the conditions of the existing brush fences.

The parish shall be responsible for the overall development, implementation, and management of the PCWRP projects. The DNR/CRD Project Manager shall be available for consultation and technical support. The parish shall be reimbursed upon completion of program tasks.

PROJECT TYPES

The PCWRP includes Christmas tree brush fences, vegetative plantings, and shoreline stabilization projects. All existing brush fences in the Parish must be in optimal structural and functional condition as inspected and evaluated by the DNR/CRD Project Manager (See revised Attachments A and B) prior to building and filling new brush fences, installing vegetative plantings, or building shoreline protection projects. Project type(s) and location(s) must be approved by the DNR/CRD Project Manager prior to project initiation.

Prior to project initiation, the parish shall submit copies of all designs, plans, and specifications for brush fence repairs, new construction, and/or vegetative plantings to the DNR/CRD Project Manager for approval (Task 1). No changes in project type, location, designs, plans, or specifications may be made without prior written approval from the DNR/CRD Project Manager.

EXISTING BRUSH FENCE EVALUATION

The DNR/CRD Project Manager, or his representative, shall accompany a parish official to all existing brush fence sites, and to any other PCWRP project areas, for evaluation of existing conditions. All existing structures must be of optimal structural and functional condition prior to any new construction or planting.

PROJECT DEVELOPMENT, IMPLEMENTATION AND MANAGEMENT

The parish shall complete the following tasks:

TASK 1

Work:

- Identify potential sites for Christmas tree brush fences, vegetation planting projects, and/or shoreline stabilization projects.
- Develop plans and specifications for approved project type and submit to the DNR/CRD Project Manager for approval.
- Obtain all necessary easements, rights-of-way for project access, and/or permits.
- Submit a copy of easements, rights-of way for project access, permits, and a map showing project location to the DNR/CRD Project Manager.

Deliverables:

- An outline of proposed scope of work;
- Site location map(s);
- Copy of plans, designs, and specifications;

and where applicable:

- Copies of signed easements, rights-of-way for project access, and/or permits.

Task 1 Due Date: November 30, 2002

TASK 2

Work:

- Advertise for bid the construction of brush fences, planting of vegetation and/or construction of shoreline protection structures and placement of Christmas trees for the project. The subcontractor awarded the work shall be responsible for obtaining all materials, supplies, labor, equipment and transportation necessary to implement the project; or
- At their discretion, the Parish shall be responsible for construction of brush fences, planting of vegetation and/or shoreline stabilization projects and the placement of Christmas trees (utilizing Parish employees); or
- Utilize volunteers to transport Christmas trees, fill brush fences with Christmas trees and/or plant vegetation, provided they are volunteering to work for the Parish.

Construction work shall be done by a subcontractor or Parish employees only and can not be performed by volunteers;

and, for Christmas tree brush fence projects,

- Collect, store and transport specified number of Christmas trees from Christmas tree collection source (i.e., parish recycling program, waste collection agency, etc.) to designated project storage site.

Deliverables:

- Provide DNR/CRD a copy of contract or agreement between the parish and subcontractor (if subcontractor is utilized);
- Provide DNR/CRD copies of documentation of any work to be performed by volunteers and/or Parish employees;

and, for Christmas tree brush fence projects,

- Delivery of specified quantity of Christmas trees from Christmas tree collection source (i.e., parish recycling program, waste collection agency, etc.) to designated project storage site.

Task 2 Due Date: December 31, 2003

TASK 3

Work:

- Construct brush fences and place Christmas trees, plant vegetation and/or construct shoreline stabilization projects for the specified project in accordance with specifications.
and, for Christmas tree brush fence projects,

- Transport Christmas trees from designated project storage site to refurbished and/or new project fences and place them within brush fences in accordance with brush fence specifications.
- Assess the reflectors on existing brush fences.
- Install new reflectors on new brush fences or replace missing or damaged existing reflectors in accordance with brush fence specifications

Deliverables:

- A minimum of (12) labeled 35mm slides showing the following:
 1. Filling of refurbished brush fences and/or new brush fences with Christmas trees (Christmas tree fence projects only). Slides shall be taken during filling and after completion, and/or
 2. Planting of vegetation and/or refurbishing of existing brush fences and/or construction of new brush fences. Slides shall be taken during construction and after completion.
 3. Slides shall be labeled and dated or submitted with a separate sheet with brief descriptions of each slide.

and, for Christmas tree and wave-damping fence projects, also:

- Report on the number of existing reflectors replaced.
- Delivery of Christmas trees from designated project storage site to refurbished and/or new brush fences and placing them within brush fences in accordance with brush fence specifications.

Task 3 Due Date: December 31, 2003

TASK 4

Work:

- Participate in the final inspection of the project and approval with the DNR/CRD Project Manager.

Deliverables:

- Provide DNR/CRD with total number of Christmas trees used, lengths of both new and refurbished Christmas tree brush fences, numbers of plants used, length of vegetation plantings and/or length of shoreline stabilization projects.

Task 4 Due Date: December 31, 2003

2002-2003 PCWRP

BUDGET

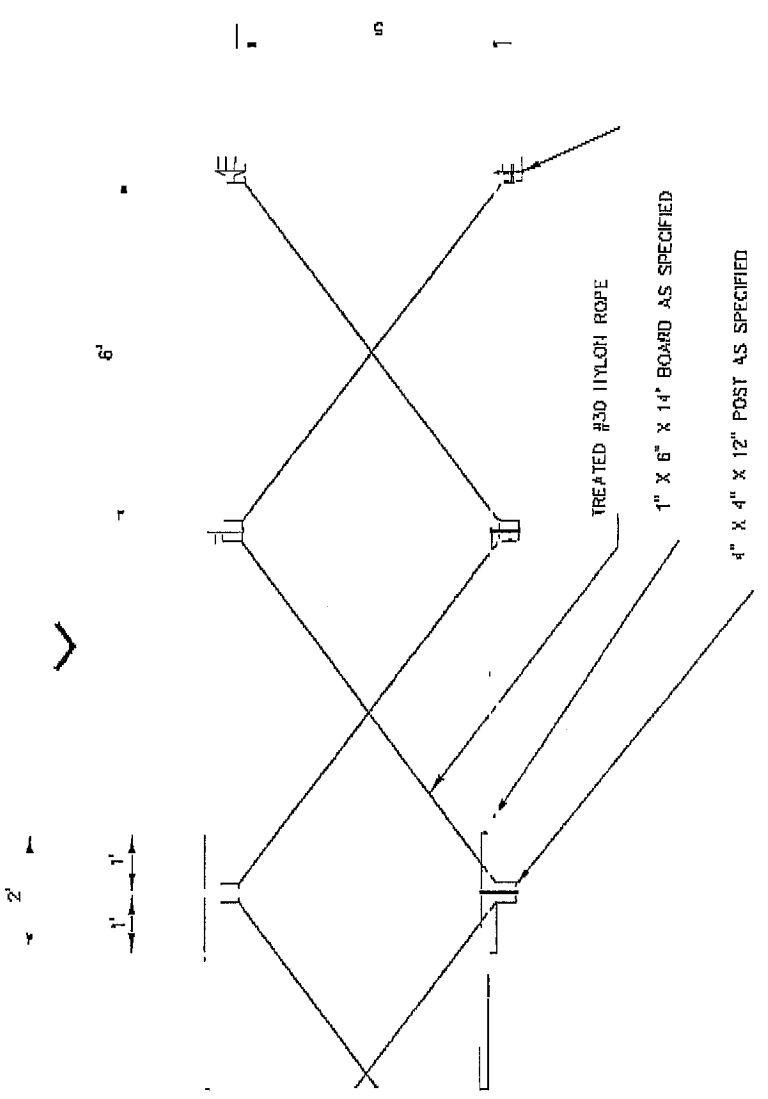
Task 1.	4,000.00
Task 2.	4,000.00
Task 3.	4,000.00
Task 4.	<u>6,000.00</u>
	18,000.00

PARISH COASTAL WETLANDS RESTORATION PROGRAM
2002 - 2003

NEW BRUSH FENCE
and
BRUSH FENCE REPAIR SPECIFICATIONS

- a. All brush fence repairs shall meet the requirements as indicated in the drawings and specifications regardless of previous material used for construction.
- b. All wood shall be wolmanized, 0.40 CCA (Chromated Copper Arsenate) retention, #2 grade, new lumber. If salinities are above fifteen (15) parts per thousand, 0.80 CCA retention, #2 grade, new lumber shall be used.
- c. All posts shall be a minimum of four (4) inch x four (4) inch x ten (10) ft. Length shall be increased if site conditions warrant.
- d. One (1) inch x six (6) inch x fourteen (14) foot boards shall be used on sides of brush fences for containment. One (1) inch x six (6) inch x five (5) foot boards shall be used on ends of brush fences for containment.
- e. Three-eighths (3/8) inch x six (6) inch hot-dipped, galvanized, carriage bolts and nuts shall be used to fasten the boards to posts. Bolts shall be threaded with a minimum of two and one-half (2-1/2) inches. One (1) inch, hot-dipped, galvanized washers shall be used with the nuts and bolts; two (2) washers per nut and bolt. All bolts shall be stripped or epoxied to prevent removal.
- f. A minimum of one (1) post per fifty (50) linear ft of fence, including end post, must be marked as a safety precaution. This shall be accomplished by attaching reflective tape, light reflectors, or an equivalent to these specified posts. Additionally, on these specified posts, the top six (6) inches shall be painted on all four (4) sides with orange flourescent paint.
- g. Treated, number thirty (30), nylon rope shall be tied in a crosswise fashion from post to post and secured to each post so that the rope will not slip off, and if one section of rope does break, the adjacent rope will remain taut.
- h. Jetting equipment, marsh buggies, and pile-driving equipment are not to be used.
- i. A minimum six (6) foot gap shall be located at every 150 ft of fence.
- j. Christmas trees in brush fences are to be compacted as they are placed. This shall be accomplished by standing on the Christmas trees as they are laid into the brush fences and until they are compressed to a height six (6) inches from the top of the brush fence.
- k. **Upon written request by the Parish and written approval of the DNR/CRD project manager, new brush fence and brush fence repair specifications and drawings may be modified to meet specific site conditions.**

INCOMING WAVE ENERGY



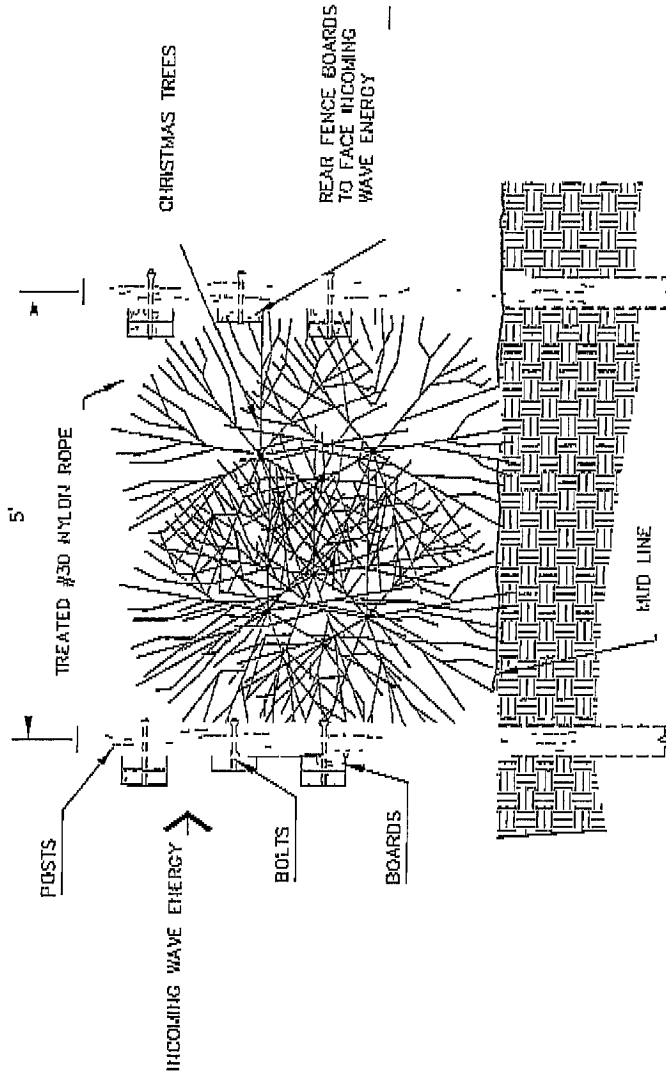
GENERAL NOTES

- 1 POPE TO BE NIED AT EACH POINT OF CONTACT WITH FENCE TO MINIMIZE LOSS OF TREES DUE TO BIRLAKADE.
- 2 REFLECTORS OR RETELECTORIZED TAPE TO BE PLACED ON GATE POST PER 50 FT. OF FENCE, INCLUDING END POST

3/8" X 6" BOLTS AS SPECIFIED

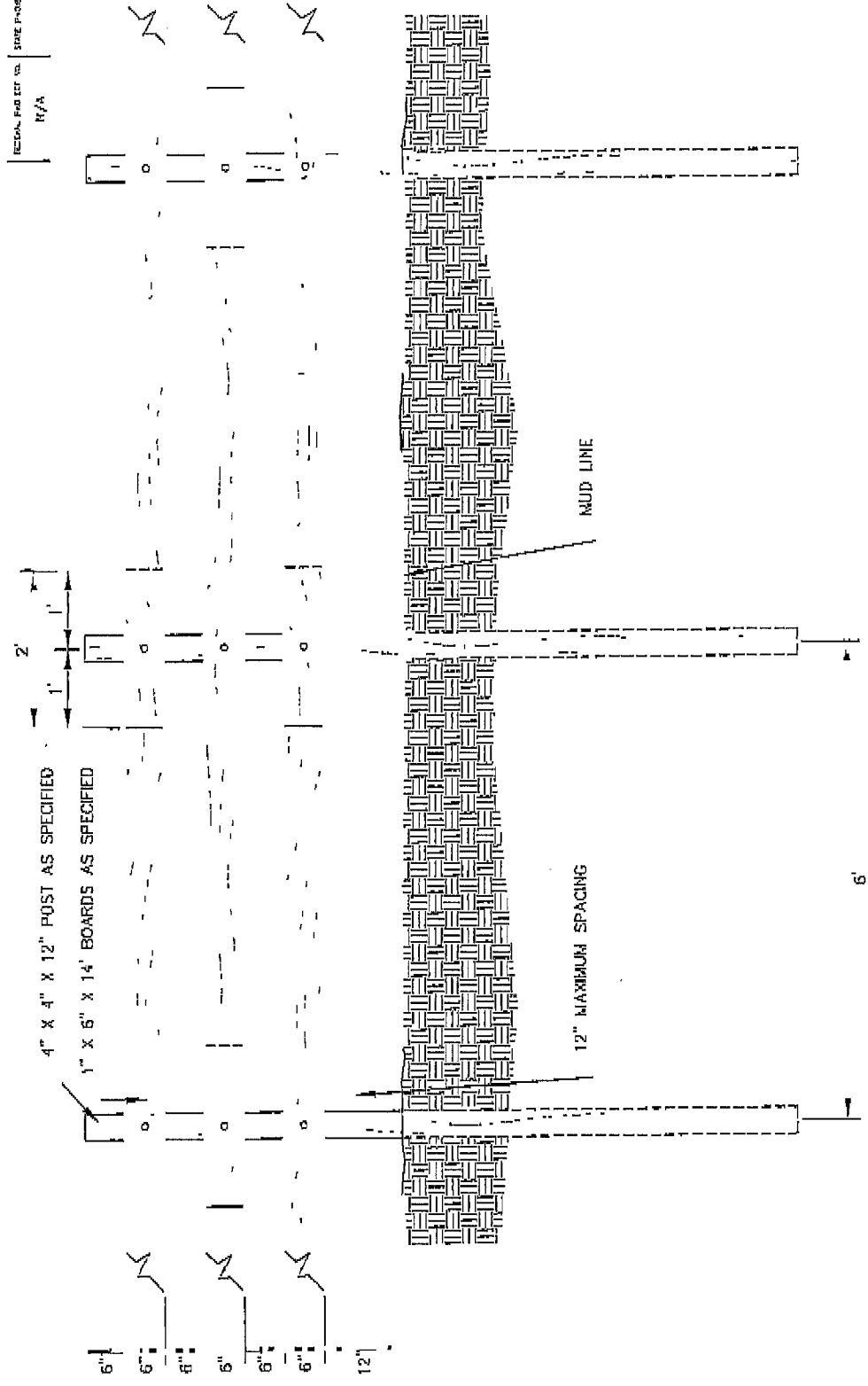
1" X 6" X 14" BOARD AS SPECIFIED

4" X 4" X 12" POST AS SPECIFIED



DATE	10/02/98
SHEET NO.	2 OF 4
SECTION	WOOD BRUSH FENCE
PROJECT DATE	
PROJECT NUMBER	
LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL RESTORATION DIVISION 825 PINE ST. - SUITE 100 MONROE, LA 70002-1001 TEL: 225-389-6100 FAX: 225-389-6101 WWW: www.dnr.state.la.us	

REGIONAL ROAD DIST. NO. | STATE PROJECT NO. | PROJECT NO.



4" X 4" X 12" POST AS SPECIFIED
 1" X 6" X 14' BOARDS AS SPECIFIED

12" MAXIMUM SPACING

MUD LINE

6'

DATE 10/20/2018
 SHEET 11 OF 12
 3 OF 4

LAUISIANA DEPARTMENT OF NATURAL RESOURCES
 COASTAL RESTORATION DIVISION
 PROJECT NO. 18-001
 JUNE 2018
 PREPARED BY: RR | CHECKED BY: RB
 PROJECT NO. 18-001
 PROJECT NAME: ROAD BRUSH FENCE

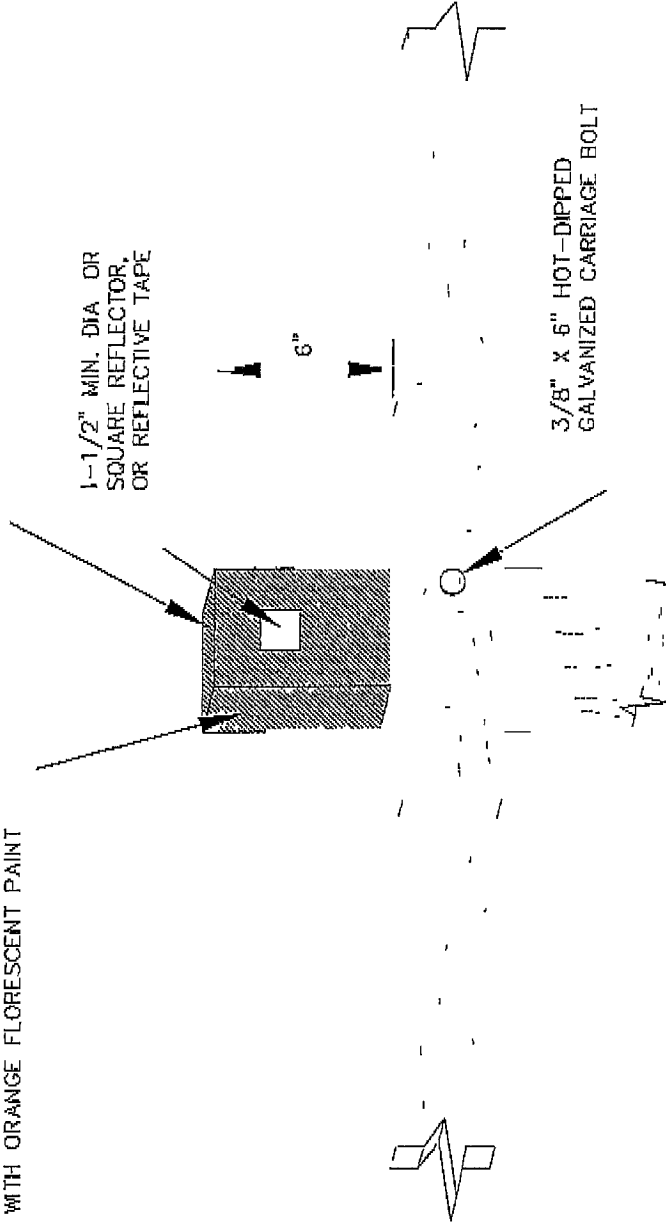
TOP 6" OF POST PAINTED WITH ORANGE FLORESCENT PAINT

TOP OF FENCE POST

1-1/2" MIN. DIA OR SQUARE REFLECTOR, OR REFLECTIVE TAPE

6"

3/8" X 6" HOT-DIPPED GALVANIZED CARRIAGE BOLT



PARISH COASTAL WETLANDS RESTORATION PROGRAM
2002 - 2003

VEGETATION PLANTINGS SPECIFICATIONS

Plant Materials Requirements

- a. All plants shall be obtained from a Louisiana licensed nursery grower. All plants shall be Louisiana-grown plant material and grown in Louisiana. The contracting nursery shall acclimate plant materials by growing plants in full sun conditions for at least thirty (30) days before planting. (i.e. not inside greenhouse, under glass, under shade cloth, etc.). The container grown plants shall be grown in the contract containers for a minimum of ninety (90) days before delivery. A legible copy of all current state nursery license(s) and/or permit(s) issued to the contracting nursery (or nurseries, or their subcontractors) to be utilized by the Contractor shall be provided to DNR/CRD.
- b. Trade gallon containers and four (4) inch containers shall be planted in a row on five (5) ft centers as specified. Vegetative plugs shall be planted in a row on two (2) ft centers as specified.
- c. Containerized plant material shall be viable and actively growing as indicated by new root development in the container. Plants shall have been grown within the container long enough to produce sufficient root development, so that a soil root ball is formed when the plant is removed from the container. No plants shall be loose in the containers.
- d. Vegetative plug transplants shall be planted in a dug hole. Depth of the planting hole shall be fixed so that the stem-root interface shall be positioned slightly below normal ground. The stem-root interface shall not protrude above, nor be more than two (2) inches below normal ground. The planting hole shall be tightly closed around the plant and plants must remain erect after planting.
- e. All containerized plants shall be planted in a dug hole. The plant shall be removed from the container immediately prior to planting and placed into the hole. Hole depth should be fixed so that the top surface of the root ball is even with or slightly below normal ground. The top surface of the plant root ball should not protrude above, or be more than one (1) inch below normal ground.
- f. The hole shall be tightly closed around the plant and plants must remain erect immediately after planting. Plant stems shall not be cut, broken, or physically damaged during planting.

- g. Potting medium (potting soil) shall be completely free of any foreign objects such as glass, shell, stones, pottery, or other debris not generally considered standard potting media. Standard potting media are various concentrations of silt, sand, and/or clay separates with or without the addition of organic matter.
- h. Plants shall be free of defects, disfiguring, sun scalding, diseases, insects, insect eggs, borers, or other forms of infections or infestation.
- i. Plants should be planted the same day they are obtained if possible. Otherwise, they shall be kept covered, watered, and damp to prevent desiccation until planting. Plants cannot become water stressed prior to planting. Plants shall retain their stem and leaf rigidity at all times indicating adequate container soil moisture.
- j. Planting can only occur beginning April 1 and cannot extend past September 30.
- k. Plants must be salt hardened to specific site conditions prior to planting.
- l. All plants shall be packed for delivery from the nursery to the loading dock in such a manner as to ensure adequate protection against climatic, seasonal, or other injuries during transit. Special care shall be taken for prompt delivery and careful handling in loading and unloading. During delivery from the nursery to the loading dock, plants must be transported in an enclosed truck or trailer. Stems cannot be broken, physically damaged during transportation, nor be cut prior to delivery. Damaged plants shall be rejected and removed immediately at the Contractor's expense.
- m. **Upon written request by the Parish and written approval of the DNR/CRD project manager,** vegetation specifications and drawings may be modified to meet specific site conditions.

Plant Types

- a. Bitter panicum shall be the species *Panicum amarum* var. *amarum* cv. Fourchon.
- b. Black Mangroves shall be the species *Avicennia germinans* cv. Pelican.
- c. California bulrush shall be the species *Schoenoplectus californicus*.
- d. Marshhay cordgrass shall be the species *Spartina patens*.
- e. Roseau cane shall be the species *Phragmites australis*.
- f. Smooth cordgrass shall be the species *Spartina alterniflora* cv. Vermilion.

- g. Acceptable Bitter Panicum, Black Mangrove, Seashore Paspalum, and Smooth Cordgrass for the purpose of this contract are plants produced vegetatively from first generation foundation material and/or plants produced vegetatively as accessional generations from foundation materials. Plants produced from seed, cell and tissue culture lines, DNA fragments and pollen, or other methods of biotechnology are not acceptable.
- h. The plant species *Paspalum vaginatum* cv. Brazoria, *Avicennia germinans* cv. Pelican, *Panicum amarum* var. *amarum* cv. Fourchon, and *Spartina alterniflora* cv. Vermilion are cultivated varieties released by the USDA, Natural Resources Conservation Service, Golden Meadow PMC.

Plant sizes

TRADE GALLON CONTAINERS

- a. Smooth cordgrass shall have a minimum of six (6) live stems per gallon container and have a minimum stem height of eight (8) inches from the stem-root interface to the stem (not leaf) tip.
- b. California bulrush shall have a minimum of five (5) live stems per gallon container, each stem a minimum of thirty six (36) inches in length.
- c. Roseau cane shall have a minimum of six (6) live and actively growing stems per gallon container. Stems shall have a minimum of eighteen (18) inches from the stem-root interface to the stem (not leaf) tip. In addition, each individual stem shall have a primary root system developed below the soil surface unless stems arise from and share a common rhizome system. Individual stems and/or multi-stemmed rhizomes shall have a minimum of six (6) roots per individual stem or rhizome. Roots of individual stems and/or multi-stemmed rhizomes shall have a minimum length of six (6) inches from the point of attachment to the root tip when stretched-out. Rooted above ground stem cuttings are not acceptable material.

Plant stems for roseau cane may be cut to facilitate transportation, however stems cannot be cut shorter than fortyeight (48) inches from the cut end to the stem-root interface. Stems cannot be broken nor physically damaged during transportation.

- d. Giant Cutgrass shall have a minimum of three (3) live stems per gallon container, each stem a minimum of thirty-six (36) inches in length.

FOUR INCH CONTAINERS

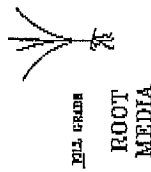
- e. Bitter panicum shall have a minimum of three (3) stems per four (4) inch container and have a minimum stem height of eighteen (18) inches from the stem-root interface to the stem (not leaf) tip.

- f. Marshhay cordgrass shall have a minimum of fifteen (15) live stems per four (4) inch container, each stem a minimum of eighteen (18) inches in length.
- g. Black Mangroves shall have at least one (1) primary stem that is at least twenty-five hundredths (0.25) of an inch in diameter at the stem-root interface and have a minimum stem height of twelve (12) inches from the stem-root interface to the stem tip per four (4) inch container. Plants should be foliated with primary stem or secondary branch leaves that are well developed, dark green, and firmly attached. Plants must be viable and actively growing within the container.
- h. Seashore Paspalum shall have a minimum of six (6) live and actively growing **primary** stems per individual cell and have a minimum stem height of six (6) inches from the stem-root interface to the stem (not leaf) tip per four (4) inch container.

VEGETATIVE PLUGS

- i. Smooth cordgrass vegetative plugs shall consist of multi-stemmed, bare-rooted material. Vegetative plugs shall have a minimum of three (3) live stems attached at the root crown and a minimum of fifteen (15) inches in height. In addition, each plug shall have a root mass of not less than two (2) inches in diameter at the root crown with not less than four (4) roots per plug. Plug roots shall not be less than six (6) inches in length.
- j. Vegetative plug transplants shall not be dug earlier than 48 hours prior to the time of delivery to the planting site.
- k. All portions of the vegetative plug transplants, i.e., stems, roots and leaves, shall be specifically protected in such a manner as to ensure adequate protection against climatic, seasonal, mechanical, or other injury during transit, loading and unloading, holding, and planting. Plugs can be protected by a number of acceptable methods such as wrapping with: 1) burlap, 2) sphagnum (or other water-holding mosses), 3) paper, 4) packing in water absorbing gels, or 5) a combination of materials. The contractor shall contact the Parish to confirm the suitability of packing materials prior to transporting or delivering any plants.

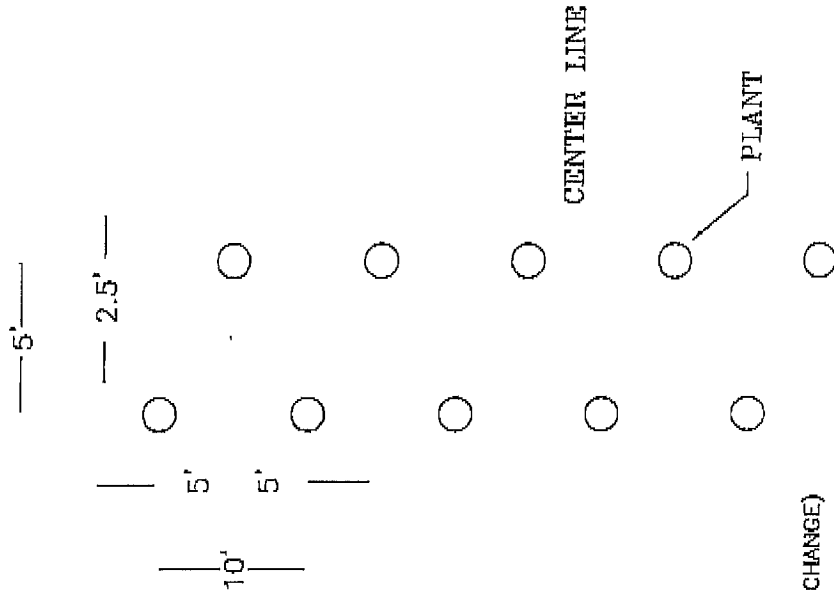
VEGETATION PLANTING DETAILS AND PLANTING LAYOUT



TYPICAL PLANTING
SMOOTH CORDGRASS (PLUG)



TYPICAL PLANTING
TRADE GALLON CONTAINER



(DIMENSIONS SUBJECT TO CHANGE)

DRAWINGS NOT TO SCALE

PLANT DETAILS/
PLANT SPACING
DATE: 09/01
SHEET 1 OF 1

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
STATE PROJECT NO. 1
FEDERAL PROJECT NO. 1

FOR MORE INFORMATION
CONTACT THE DIVISION
AT (504) 762-1000

SCALE: AS SHOWN
DATE: 09/01