

Pea Island Mitigation Site

Annual Report for 1996

I. Project Description

The site is located approximately 3.5 miles south of Pea Island Refuge maintenance facility, immediately west of NC 12 in Dare County. This site consists of approximately 37.6 acres of wetland establishment. This site consists of restoration of the following marsh grass species:

Panicum amarum
Panicum amarulum
Scirpus americanus
Scirpus robustus
Scirpus olneyi
Bidens aristosa

II. Project History

March 1996	Site planted
June 1996	Vegetation Monitoring (1 mo.)
October 1996	Vegetation Monitoring (1 yr.)

III. Success Criteria

- 50% survival rate of plants for 3 years

IV. Results

Area "A"

	Plot #	Plants(p)	Plants	% Survival	Density/acre
	1	8	5	62.5%	756
	2	8	6	75.0%	908
	9	8	8	100.0%	1210
totals/(avg)	3	8.0	6.3	79.2%	957.9

Area "B"

	Plot #	Coverage
	3	85.0%
	4	40.0%
	5	0.0%
	6	90.0%
	7	0.0%
	8	30.0%
	10	50.0%
totals/(avg)	7	42.1%

Notes from Report:

- Few areas have scarce vegetation at this time. (plots 4 and 5). Seems to be invading from vegetated areas.
- Northern end of site has been very heavily grazed by waterfowl (plots 7 and 8), but may recover. Approximately 300-400 geese present at time of visit. (10-21-96).
- Area "A", where panicum sp. was planted, was monitored by % survival, since these grasses tend to bunch. Area "B", where Scirpus sp. was planted, was monitored by area coverage, since scirpus spreads so rapidly.

V. Summary

There are 37.6 acres of marsh established on this site. There were 10 plots established throughout the site, 3 within the area "A" and 7 within area "B". The average survival of the panicum in area "A" is 79 % demonstrating a per acre density of approximately 958 plants per acre. The average coverage of the scirpus in area "B" is 42 %. Success within scirpus areas appear marginal at this time primarily due to the heavy grazing of the waterfowl. We anticipate that many of these will survive and reestablish the site. Success within area "A" is well above the 50 % survival criteria at this time.

VI. Proposed Remedial Action

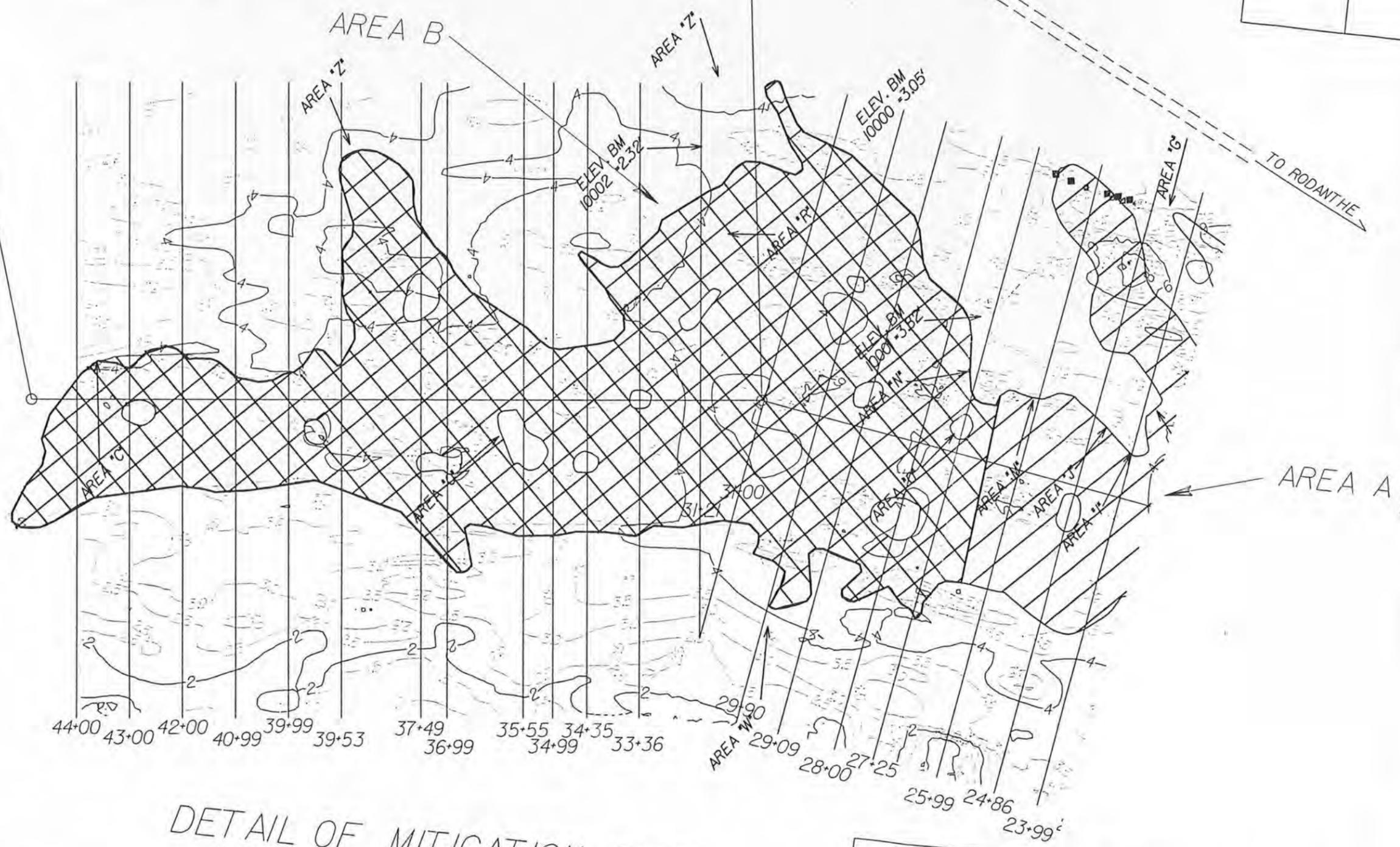
None.

MITIGATION PLAN

PROJECT REFERENCE NO. 14-3115	SHEET 2
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PINC. STA. 21+04.20 -BL-
N 704,200.0000
E 3,047,175.0000

STA. 44+84.87 -BL-
N 705,225.0000
E 3,046,250.0000



- NOTE:
- AREA A: TO BE PLANTED 6 FT. ON CENTER, RANDOM MIX.
PANICUM AMARUM
PANICUM AMARULUM
 - AREA B: TO BE PLANTED 3 FT. ON CENTER, RANDOM MIX.
SCIRPUS AMERICANUM
SCIRPUS ROBUSTUS
 - AREA A + B: TO BE SEEDED OVER ENTIRE AREA:
10* BIDENS ARISTOSA
500* FERTILIZER
2000* MULCH (HYDROMULCH)

DETAIL OF MITIGATION SITE
(LOCATED APPROX. 2.6 MILES SOUTH OF STA. 192+00)



ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, NC
1990 STANDARD SPECIFICATIONS

DEPARTMENT OF TRANSPORTATION

MITIGATION PLAN

PLANT LIST

DES	SEC	QTY	UNIT	KEY	BOTANICAL NAME	COMMON NAME	SIZE	FURNISH	A.S.N.S	REMARKS
2619	894	32	EA	IG	ILEX GLABRA	INKBERRY	12-15"	#1 CONT.	4.1.3.4	6' O.C.
2643	894	289	EA	MC	MYRICA CERIFERA	WAXMYRTLE	12-15"	#1 CONT.	4.1.3.4	6' O.C.

NOTE:

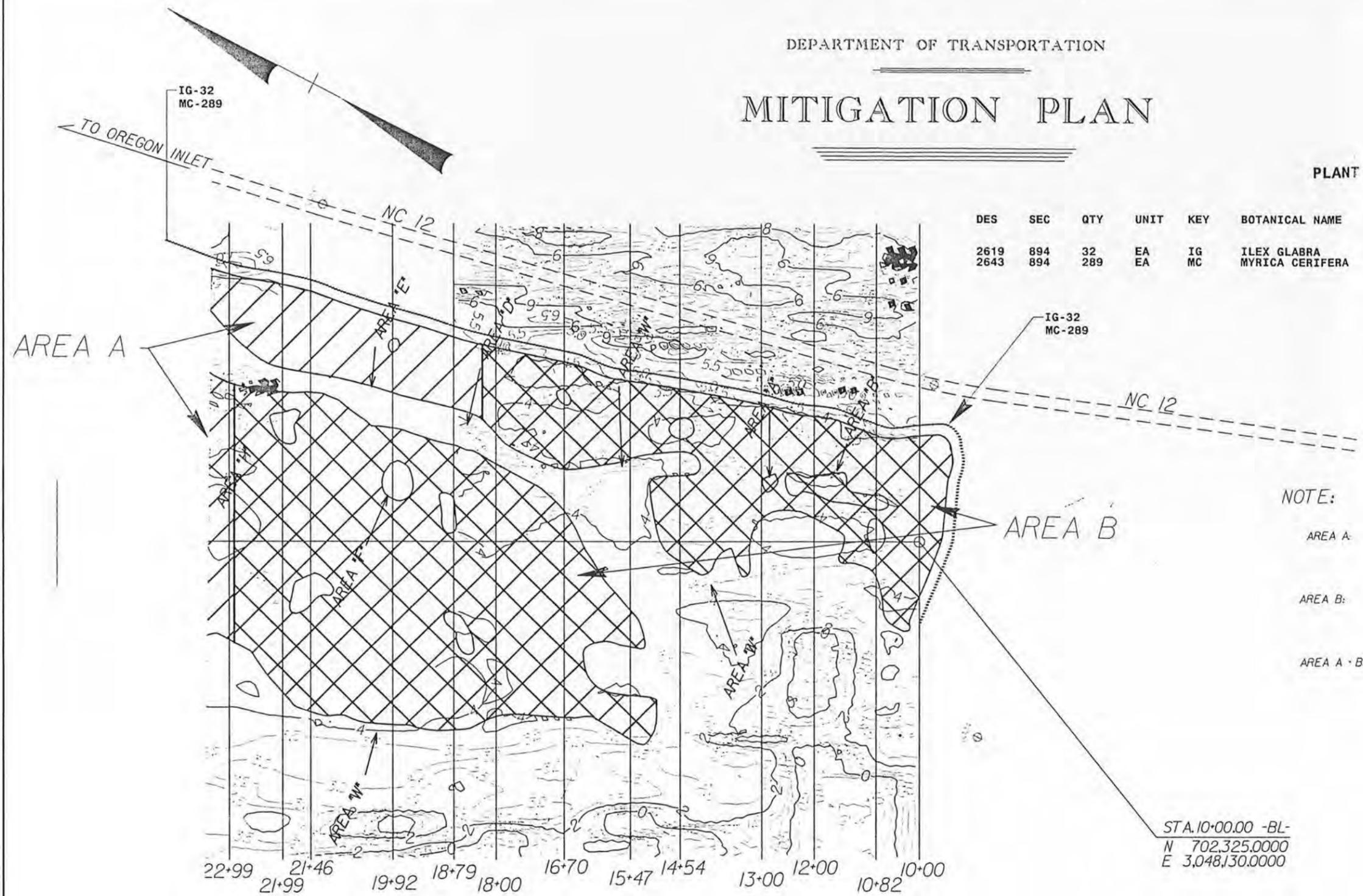
- * THE ILEX GLABRA AND MYRICA CERIFERA ARE TO BE RANDOMLY MIXED.
- * FOR PLANTING DETAILS SEE THE LANDSCAPE PLANTING DETAIL SHEET.

NOTE:

AREA A: TO BE PLANTED 6 FT. ON CENTER, RANDOM MIX.
 PANICUM AMARUM, APPROXIMATE TOTAL PLANTS = 3750
 PANICUM AMARULUM, APPROXIMATE TOTAL PLANTS = 3750

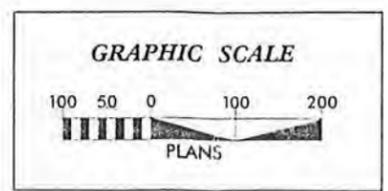
AREA B: TO BE PLANTED 3 FT. ON CENTER, RANDOM MIX:
 SCIRPUS AMERICANUM, APPROXIMATE TOTAL PLANTS = 76,000
 SCIRPUS ROBUSTUS, APPROXIMATE TOTAL PLANTS = 76,000

AREA A + B: TO BE SEEDED OVER ENTIRE AREA:
 10* BIDENS ARISTOSA
 500* FERTILIZER
 2000* MULCH (HYDROMULCH)



STA. 10+00.00 -BL-
 N 702,325.0000
 E 3,048,130.0000

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