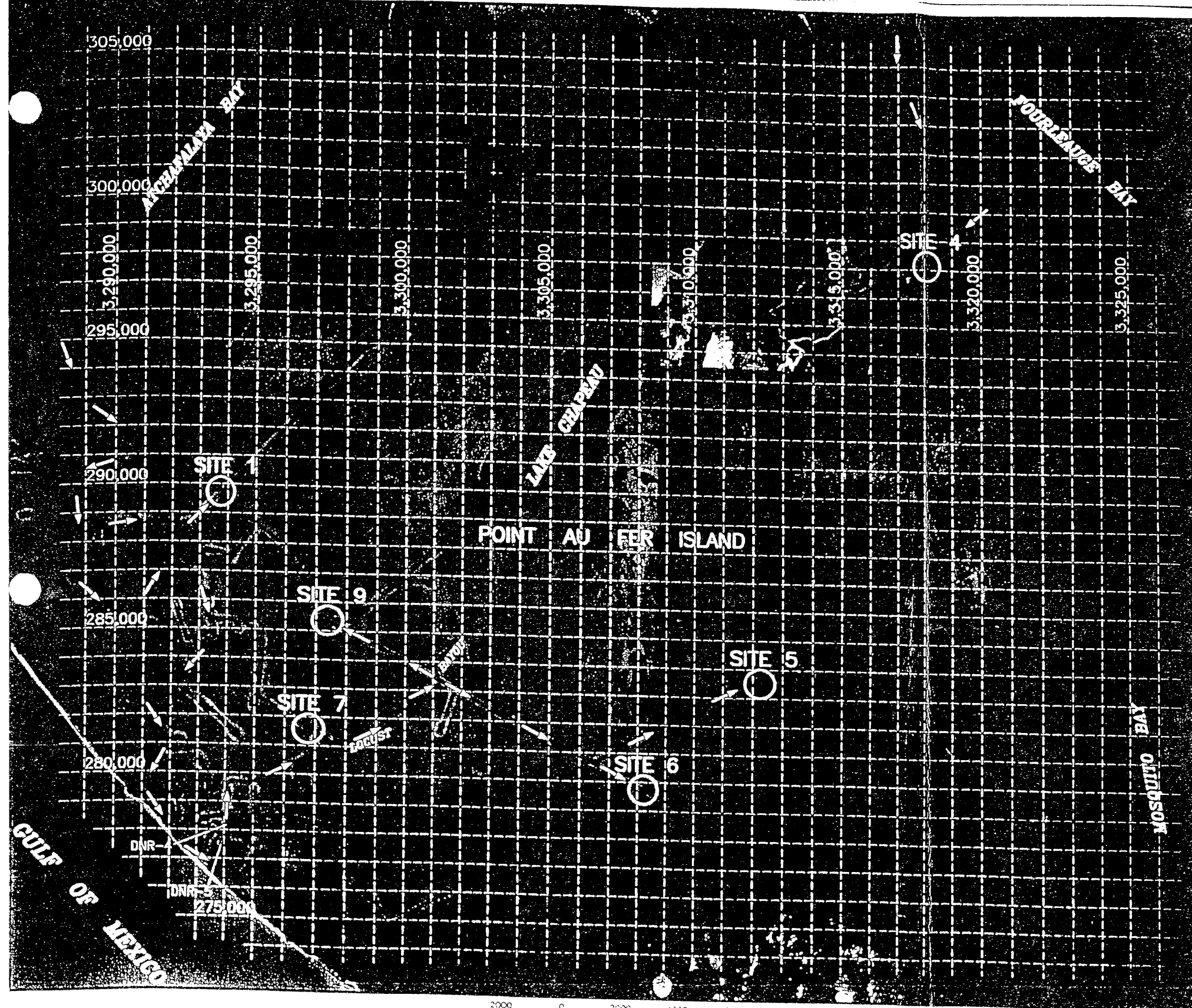


ATTACHMENT X

LAKE CHAPEAU MARSH CREATION AND HYDROLOGIC RESTORATION

AS-BUILT DRAWINGS

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DESCRIPTION OF THE BENCHMARK ON WHICH THE SURVEY IS BASED:

MON. #1 (HESTER CANAL), 4" ALUM. DISK ON TOP OF 20' STAINLESS ROD. ROD & DISK SET INSIDE OF A 8"x8" P.V.C. PIPE DRIVEN TO 15" ABOVE TOP OF SPOIL BANK. SURROUNDED BY CONCRETE STAMPED "LA DNR CRD TE-22/24 G.P.S. #1"
 INFORMATION SUPPLIED BY T. BAKER SMITH & SON, INC. (BK. #2243, PG. #5)

DESCRIPTION OF CONTROL USED ON THIS JOB:

DNR-4 = CROSS-MARK ON CONC. PLATFORM
 DNR-5 = CROSS-MARK ON CONC. PLATFORM

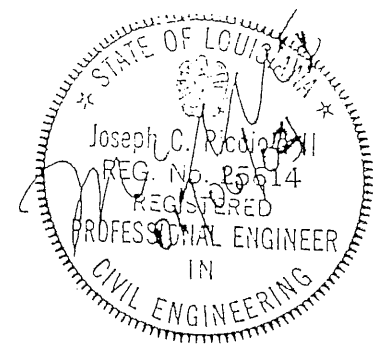
DESCRIPTION	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	X (NAD 1983)	Y (NAD 1983)	ELEVATION (N.A.V.D) (VERT. 1988)
MON. #1 HESTER CANAL	29°15'30.13080"	91°11'12.92542"	3,327,521.21921	275,827.52598	2.188'
DNR-4	29°15'53.89953"	91°17'29.28324"	3,294,184.61274	278,201.11664	8.164'
DNR-5	29°15'47.85744"	91°17'32.21430"	3,293,923.44575	277,590.68569	9.064'

GEOGRAPHIC LOCATION OF SURVEY CONTROL POINTS

NOTES: CONTROL POINTS ARE 1/2"x5" LONG RE-BARS DRIVEN VERTICALLY TO WITHIN 1/2" OF BEING FLUSH WITH SURFACE OF GROUND. DRAWING POINT NUMBER MATCHES SITE NUMBER.

COORDINATES REFER TO LOUISIANA SOUTH ZONE NAD 83 AND ELEVATIONS REFER TO NAVD 88

SITE NO.	X-COORD.	Y-COORD.	ELEV.	REMARKS
1	3,293,598.93	298,723.04	1.39	NORTH SIDE OF WATERWAY
4	3,318,220.71	297,923.68	1.34	SOUTH SIDE OF WATERWAY
5	3,312,130.68	283,531.24	2.08	WEST SIDE OF WATERWAY
6	3,308,133.92	279,687.34	1.61	SOUTH SIDE OF WATERWAY
7	3,296,770.11	281,469.97	1.39	SOUTH SIDE OF WATERWAY
9	3,297,360.45	285,240.30	2.54	SOUTH SIDE OF WATERWAY



DRAWING PLOTTED AT HALF-SCALE

REV.	DATE	REMARKS	BY

STATE OF LOUISIANA
 DEPARTMENT OF NATURAL RESOURCES
 COASTAL RESTORATION DIVISION

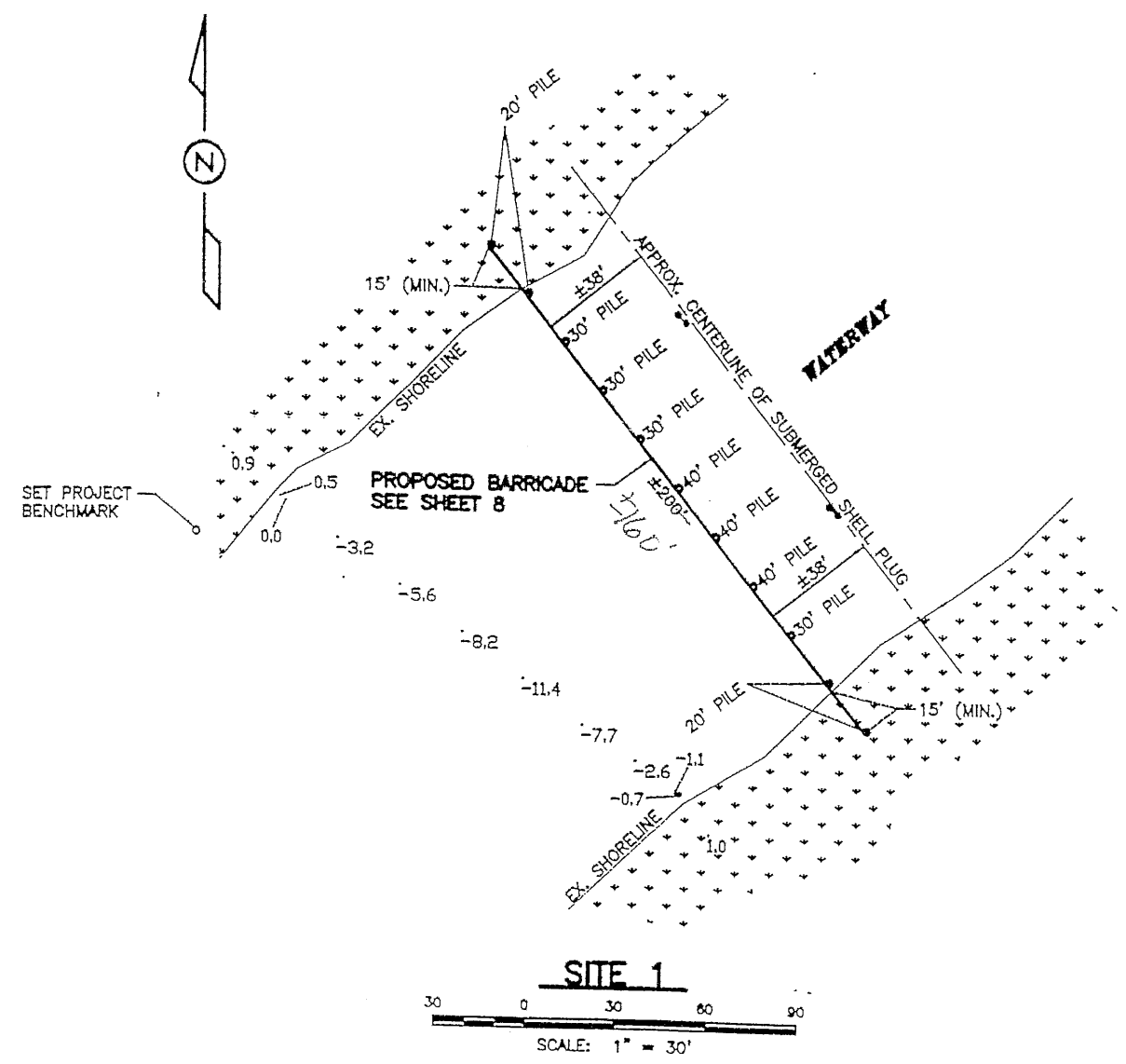
TE-28 LAKE CHAPEAU
 WARNING BUOY REPLACEMENT
 OVERALL PROJECT SITE PLAN

PICCIOLA & ASSOCIATES, INC.
 CIVIL ENG., MARL ARCHITECTS, MARINE ENGINEERS, LAND SURVEYORS
 P.O. BOX 887 CUT OFF, LA. 70346
 PHONE (848) 632-5794 FAX (848) 632-2407

DESIGNED: J.C.P.	SCALE: AS SHOWN	SHEET NO.
DETAILED: L.M.C.	DATE: APRIL 27, 2003	3 of 10

NOTE: ...

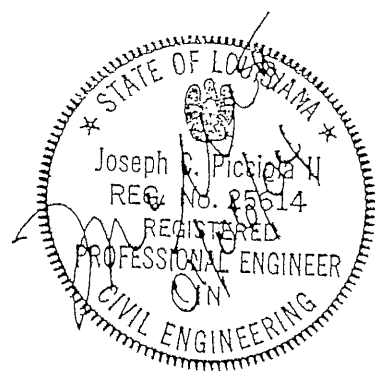
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LEGEND:
 ↔ EXISTING WARNING SIGNS (TO REMAIN)

GENERAL NOTES:

1. CONTRACTOR SHALL NOT DISTURB OR IN ANY WAY DAMAGE THE EXISTING SHELL PLUG AT EACH SITE WHILE CONSTRUCTING BARRICADES.
2. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING SHELL PLUG TOE BEFORE FINAL LOCATION OF BARRICADE IS DETERMINED.
3. CONTRACTOR SHALL NOT REMOVE OR DISTURB THE EXISTING WARNING SIGNS THAT ARE INSTALLED ON THE EXISTING SHELL PLUGS.
4. CONTRACTOR SHALL REMOVE THE EXISTING WARNING BUOY UNITS AT EACH SITE. THIS INCLUDES THE BUOYS, CABLES AND PIPES THAT WERE INSTALLED TO RETAIN THE BUOYS.
5. ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH TITLE 33, PART VII, SUB-PART 1 (SOLID WASTE) OF THE LOUISIANA ENVIRONMENTAL REGULATORY CODE, LATEST EDITION. CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF HIS METHOD AND LOCATION OF DISPOSAL.
6. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY SUB-SURFACE PIPELINES OR STRUCTURES THAT MAY BE AT OR NEAR EACH SITE. CONTRACTOR SHALL WORK CLOSELY WITH ANY COMPANY THAT MAY HAVE SUCH PIPELINES OR STRUCTURES IN THE AREA. LOUISIANA ONE CALL CAN BE CONTACTED AT 1-800-272-3020.
7. SEE SHEET 2 FOR ADDITIONAL GENERAL AND TECHNICAL NOTES.



DRAWING PLOTTED AT HALF-SCALE

REV.	DATE	REMARKS	BY

**STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION**

TE-28 LAKE CHAPEAU
WARNING BUOY REPLACEMENT

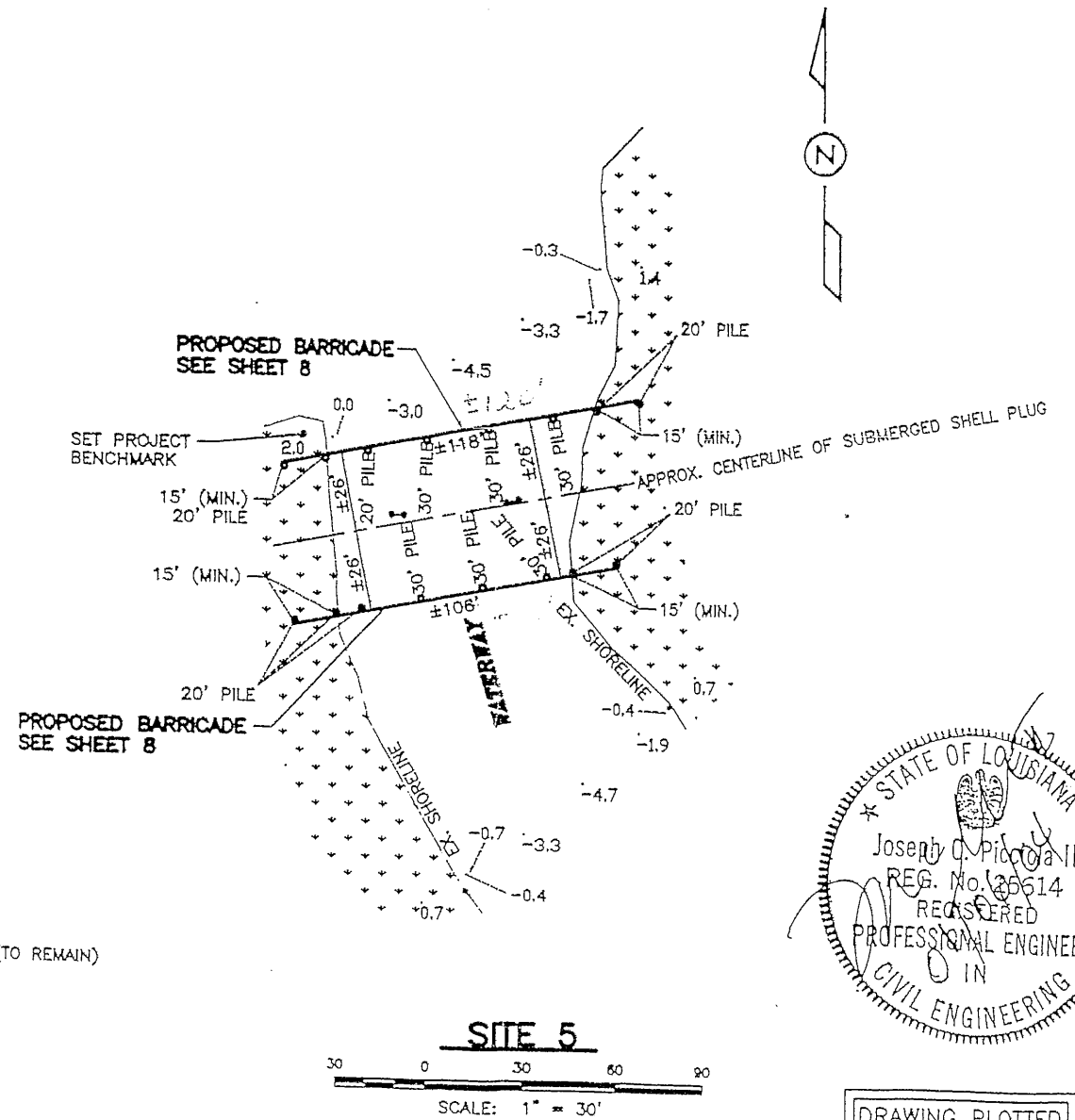
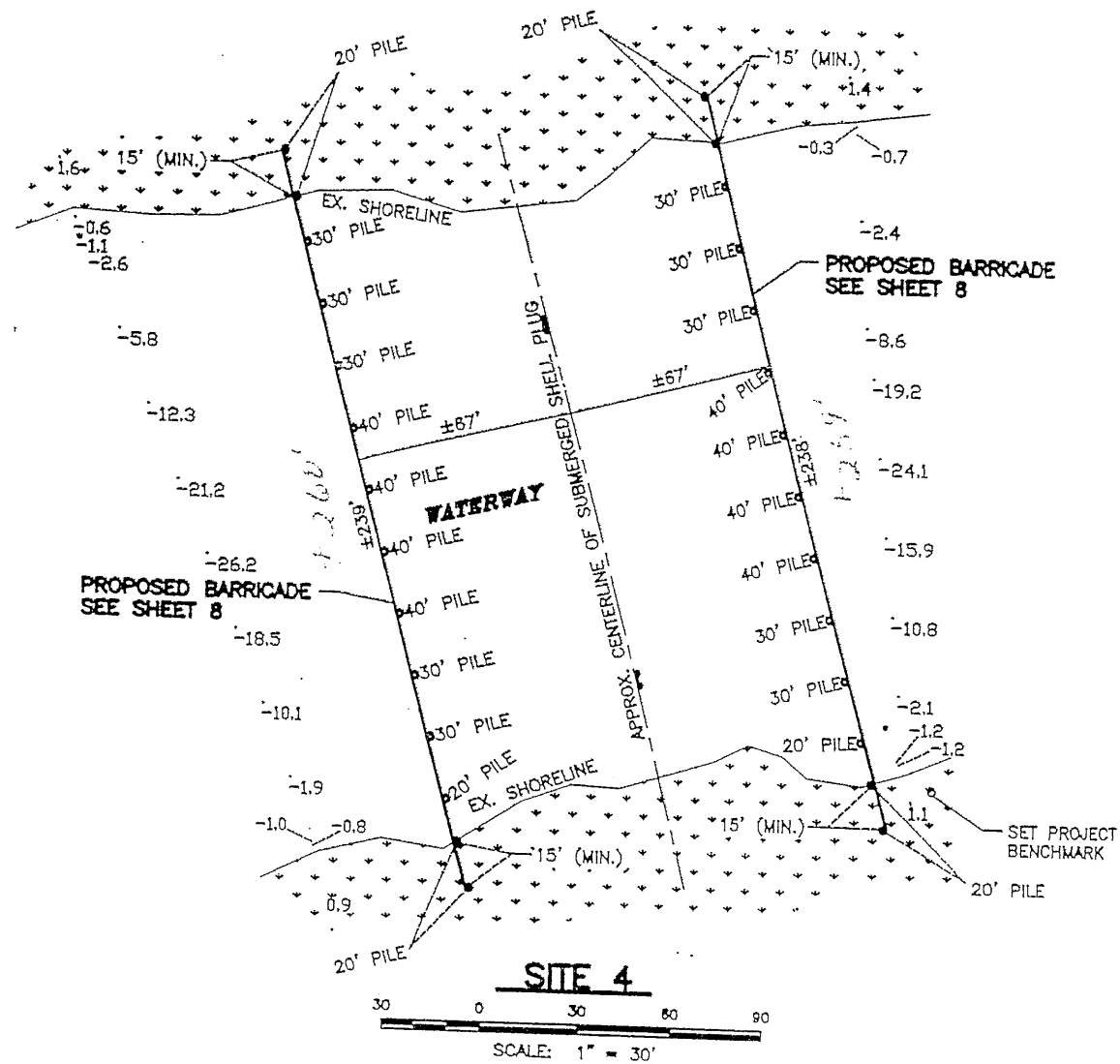
PLAN VIEW - SITE 1

PICCIOLA & ASSOCIATES, INC.
 CIVIL ENGR., MARINE ARCHITECTS, MARINE ENGINEERS, LAND SURVEYORS
 P.O. BOX 987 CUT OFF, LA 70348
 PHONE (985) 832-8788 FAX (985) 832-2407

DESIGNED: J.C.P.	SCALE: AS SHOWN	SHEET NO.
DRAWN: L.M.C.	DATE: APRIL 27, 2003	4 of 10
CHECKED: J.C.P.		

STAMP:

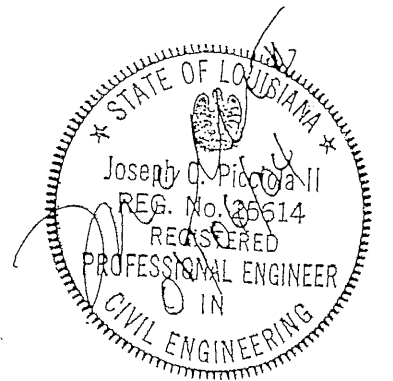
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LEGEND:
 -- EXISTING WARNING SIGNS (TO REMAIN)

GENERAL NOTES:

1. CONTRACTOR SHALL NOT DISTURB OR IN ANY WAY DAMAGE THE EXISTING SHELL PLUG AT EACH SITE WHILE CONSTRUCTING BARRICADES.
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6. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY SUB-SURFACE PIPELINES OR STRUCTURES THAT MAY BE AT OR NEAR EACH SITE. CONTRACTOR SHALL WORK CLOSELY WITH ANY COMPANY THAT MAY HAVE SUCH PIPELINES OR STRUCTURES IN THE AREA. LOUISIANA ONE CALL CAN BE CONTACTED AT 1-800-272-3020.
7. SEE SHEET 2 FOR ADDITIONAL GENERAL AND TECHNICAL NOTES.

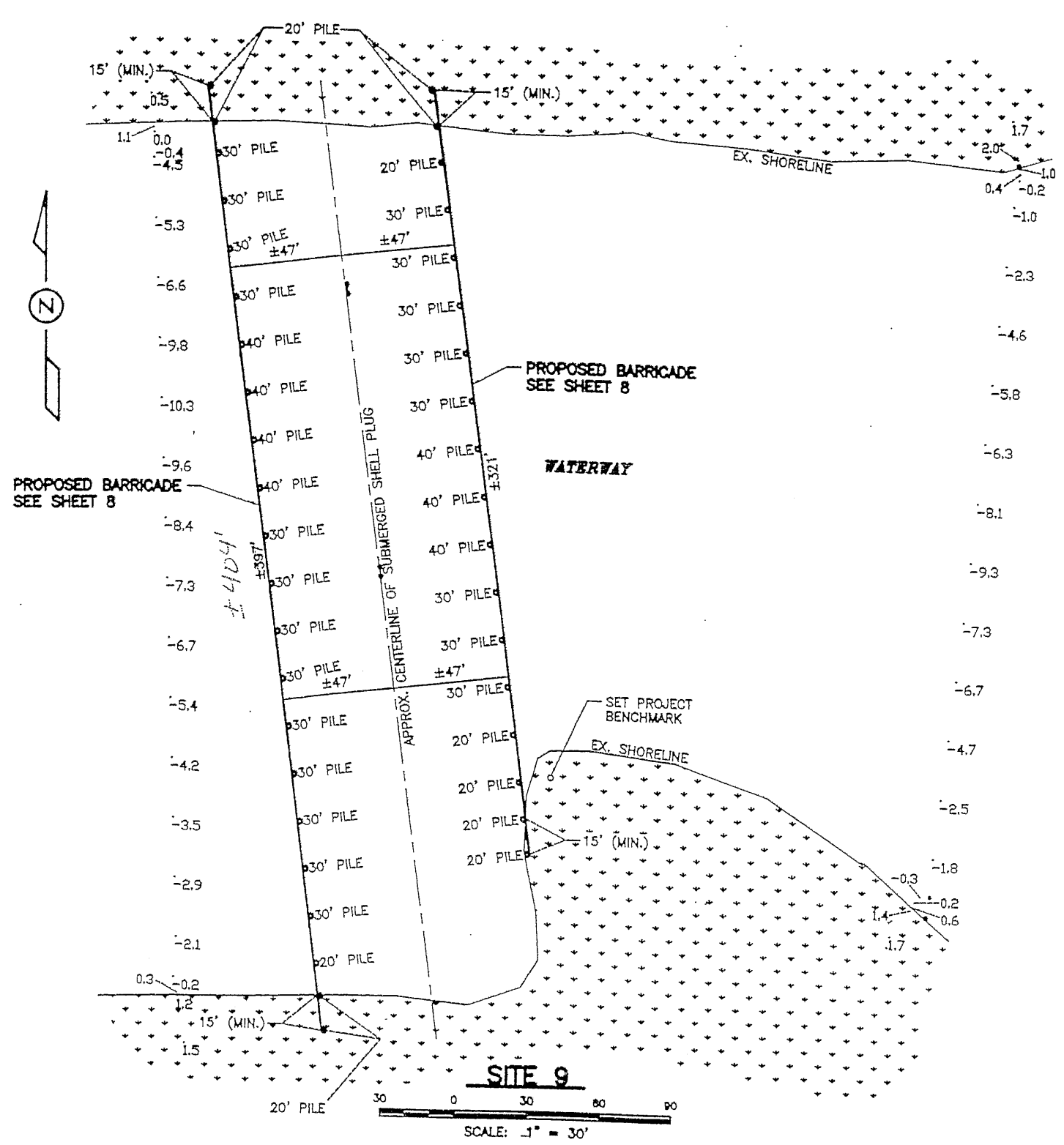


DRAWING PLOTTED AT HALF-SCALE

REV.	DATE	REVISIONS	BY
STATE OF LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL RESTORATION DIVISION			
TE-26 LAKE CHAPEAU WARNING BUOY REPLACEMENT			
PLAN VIEW - SITE 4 AND SITE 5			
PICCOLA & ASSOCIATES, INC. CIVIL ENGR., MARINE ARCHITECTS, MARINE ENGINEERS, LAND SURVEYORS P.O. BOX 887 CUT OFF, LA. 70345 PHONE (846) 832-8788 FAX (846) 832-2407			
DESIGNED:	J.C.P.	SCALE:	AS SHOWN
DATE:	APRIL 27, 2003	CHECKED:	J.C.P.
SHEET NO.			5 of 10

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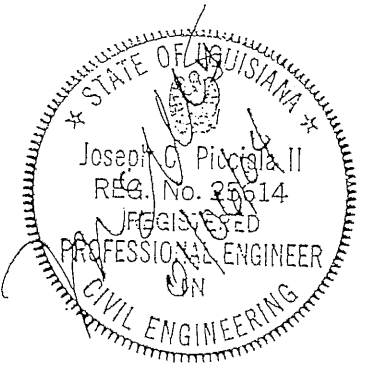
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GENERAL NOTES:

1. CONTRACTOR SHALL NOT DISTURB OR IN ANY WAY DAMAGE THE EXISTING SHELL PLUG AT EACH SITE WHILE CONSTRUCTING BARRICADES.
2. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING SHELL PLUG TOE BEFORE FINAL LOCATION OF BARRICADE IS DETERMINED.
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7. SEE SHEET 2 FOR ADDITIONAL GENERAL AND TECHNICAL NOTES.

LEGEND:
 ●● EXISTING WARNING SIGNS (TO REMAIN)



DRAWING PLOTTED AT HALF-SCALE

REV.	DATE	REMARKS	BY
STATE OF LOUISIANA DEPARTMENT OF NATURAL RESOURCES COASTAL RESTORATION DIVISION			
TE-26 LAKE CHAPEAU WARNING BUOY REPLACEMENT			
PLAN VIEW - SITE 9			
PICCOLA & ASSOCIATES, INC. CIVIL ENGR., MARINE ARCHITECTS, MARINE ENGINEERS, LAND SURVEYORS P.O. BOX 667 CUT OFF, LA 70348 PHONE (985) 832-5786 FAX (985) 832-2407			
DESIGNED:	J.C.P.	SCALE:	AS SHOWN
DATE:	L.M.C.	DATE:	APRIL 27, 2003
CHECKED:	J.C.P.	SHEET NO.	7 OF 10

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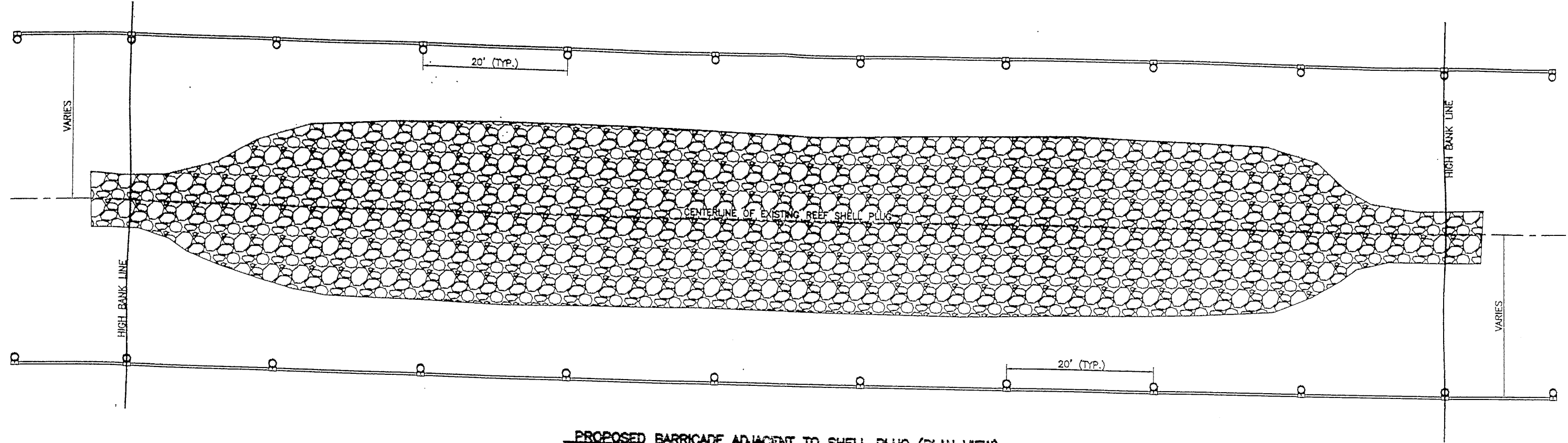
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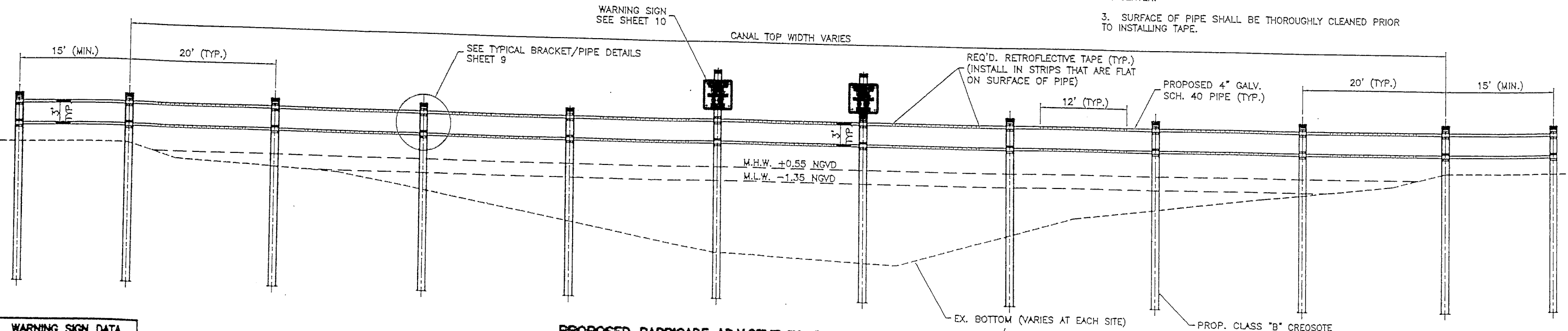
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PROPOSED BARRICADE ADJACENT TO SHELL PLUG (PLAN VIEW)
DRAWING NOT TO SCALE

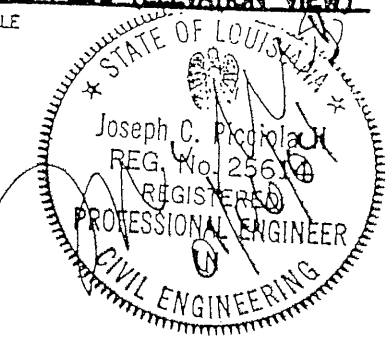
- RETROFLECTIVE TAPE NOTES:**
1. CONTRACTOR SHALL INSTALL RED 2"x5 MIL (MIN.) VINYL RETROFLECTIVE TAPE MEETING FEDERAL SPEC L-S-300, CLASS I AND FP-79 TYPE II REQUIREMENTS AND HAVING A MIN. REFLECTIVITY OF 50 CANDLE POWER.
 2. TWO INCH STRIPS SHALL BE INSTALLED IN STRIPS THAT ARE FLAT ON SURFACE OF PIPE AND SHALL BE PLACED AT 6" ON CENTER.
 3. SURFACE OF PIPE SHALL BE THOROUGHLY CLEANED PRIOR TO INSTALLING TAPE.



PROPOSED BARRICADE ADJACENT TO SHELL PLUG (ELEVATION VIEW)
DRAWING NOT TO SCALE

WARNING SIGN DATA	
SITE	SIGNS REQUIRED
1	2
4	4
5	2
6	2
7	4
9	4

- WARNING SIGN NOTES:**
1. SIGNS SHALL BE INSTALLED SO THAT MAXIMUM VIEWING EFFECT WILL BE ACHIEVED BY ANY APPROACHING VESSEL.
 2. FINAL PLACEMENT AS WELL AS NUMBER OF WARNING SIGNS AT EACH SITE SHALL BE APPROVED BY DNR REPRESENTATIVE AND PROJECT ENGINEER.
 3. EXISTING WARNING SIGNS SHALL REMAIN IN PLACE.
 4. ADDITIONAL FOOTAGE WILL BE REQUIRED FOR PILING THAT SIGNS WILL BE ATTACHED TO SO THAT MINIMUM PENETRATION CAN STILL BE ACHIEVED.



DRAWING PLOTTED
AT HALF-SCALE

REV.	DATE	REVISION	BY

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

TE-26 LAKE CHAPEAU
WARNING BUOY REPLACEMENT

TYPICAL BARRICADE - PLAN & ELEVATION VIEWS

PICCIOLO & ASSOCIATES, INC.
CIVIL ENGR., MARINE ARCHITECTS, MARINE ENGINEERS, LAND SURVEYORS
P.O. BOX 987, COU. OFF. LA. 70344
PHONE (865) 632-6788 FAX (865) 632-9407

DESIGNED: J.C.P. SCALE: AS SHOWN SHEET NO.
DETAILED: L.M.C. DATE: APRIL 27, 2003 8 of 10
CHECKED: J.C.P.