OCE-ELLIOTT 2-72 4935/-

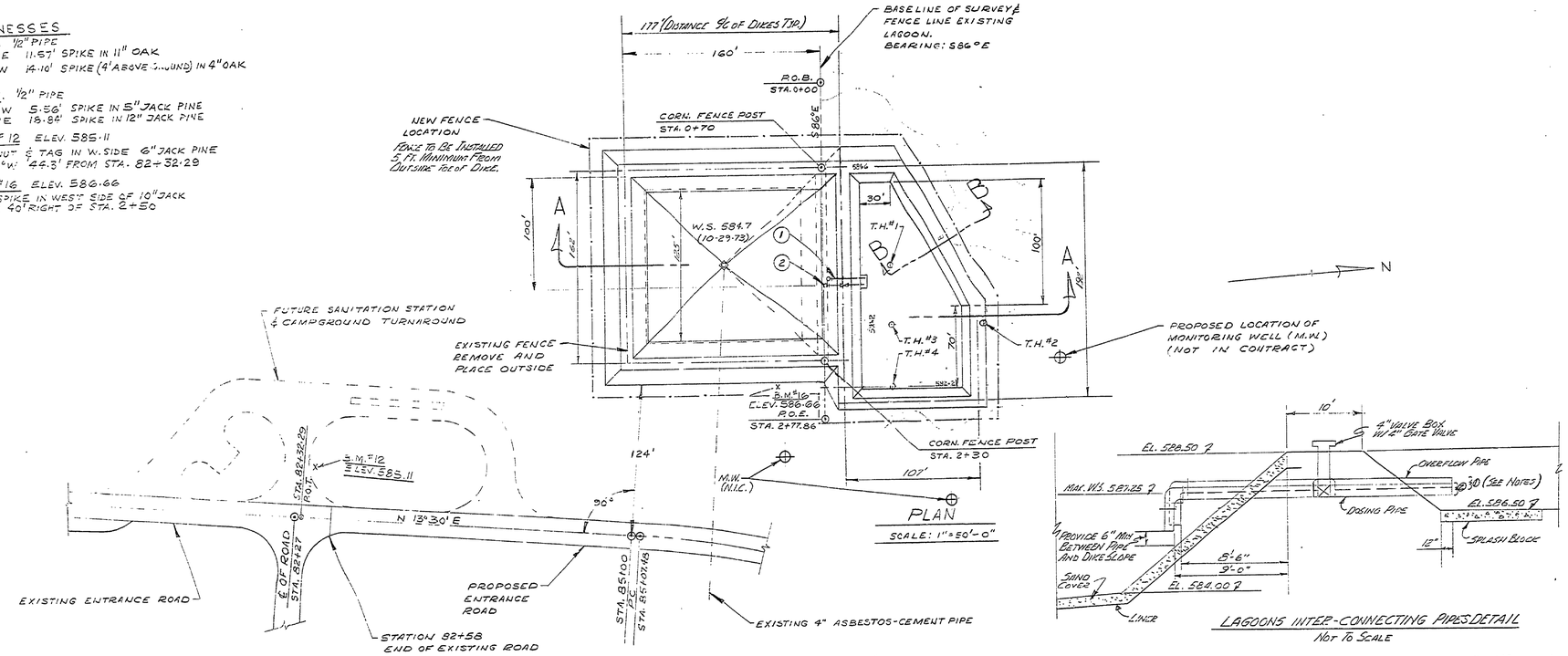
WITNESSES

P.O.B. 1/2" PIPE
N 78°E 11.57' SPIKE IN 11" OAK
S 5°W 14.10' SPIKE (4' ABOVE GROUND) IN 4" OAK

P.O.E. 1/2" PIPE
S 83°W 5.56' SPIKE IN 5" JACK PINE
S 13°E 18.84' SPIKE IN 12" JACK PINE

B.M. #12 ELEV. 585.11
PK. NUT & TAG IN W. SIDE 6" JACK PINE
N 80°W 44.3' FROM STA. 82+32.29

B.M. #16 ELEV. 586.66
RR SPIKE IN WEST SIDE OF 10" JACK PINE 40' RIGHT OF STA. 2+50



SEEPAGE LAGOON DOSING OPERATION

WHEN WATER SURFACE IN THE STORAGE LAGOON REACHES ELEV. 587.25 WHICH IS INV. ELEV. OF THE EMERGENCY OVERFLOW PIPE, AT THIS TIME IT WILL JUST START TO TRICKLE, OPEN THE GATE VALVE OF THE DOSING PIPE AND DISCHARGE 3 INCHES OF EFFLUENT INTO SEEPAGE LAGOON. CLOSE VALVE WHEN WATER SURFACE DROPS TO ELEV. 587.00 WHICH IS THE INV. ELEV. OF THE DOSING PIPE. WHEN THIS ELEV. IS REACHED FLOW WILL STOP.

SEQUENCE OF CONSTRUCTION OF LAGOON CELLS

1. FLOW TO THE LAGOON TO BE SHUT DOWN DURING CONSTRUCTION.
2. CONSTRUCT THE SEEPAGE LAGOON FIRST INCLUDING THE DIKE BETWEEN THE TWO CELLS.
3. TRANSFER THE CONTENTS OF THE STORAGE CELL INTO THE SEEPAGE CELL.
4. INSTALL NEW VINYL LINER AND SAND COVER IN STORAGE CELL AFTER REMOVING OLD LINER WHEN THE CELL HAS DRIED.

VEGETATION COVER FOR DIKES

AFTER THE LAGOONS ARE GRADED TO FINAL SHAPE ALL DIKE SLOPES AND TOP PORTIONS SHALL BE SEEDED, FERTILIZED AND MULCHED FROM THE OUTSIDE TOE TO ONE FOOT ABOVE THE HIGH WATER LINE ON THE DIKES MEASURED ON THE SLOPE.

NOTE:
SHADED AREAS SHOW NEW DIKE CONSTRUCTION.

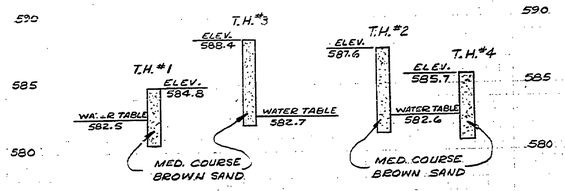
LAGOONS INTER-CONNECTING PIPES DETAIL
NOT TO SCALE

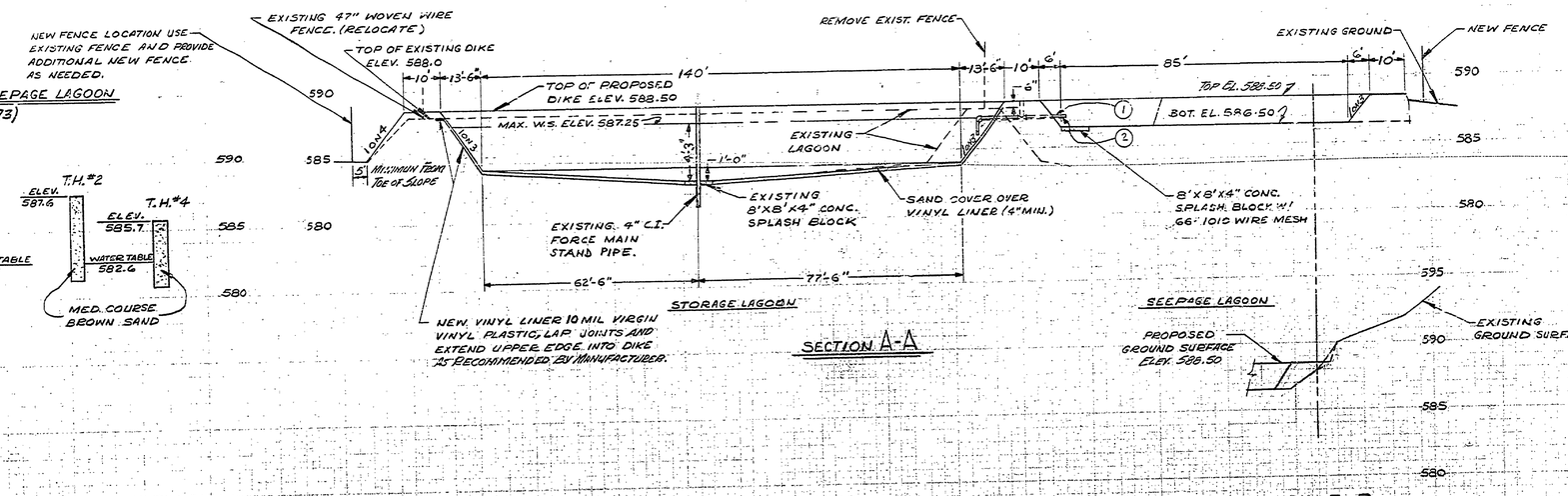
PROFILE

SCALE: HORZ. 1" = 20'-0"
VERT. 1" = 5'-0"

TEST BORINGS FOR SEEPAGE LAGOON

(10-29-73)





PIPE (1)
4" C.I. EMERGENCY OVERFLOW PIPE I.E. 587.25
PIPE (2) PIPE INTAKE ELEV. 586.25
4" C.I. PIPE W/ 4" GATE VALVE & VALVE BOX DOSING PIPE I.E. 587.00 PIPE INTAKE ELEV. 586.00

NOTE: PROVIDE PIPES (1) AND (2) 2'-0" APART.

NOTE:
REMOVE TOPSOIL FROM THE AREA UPON WHICH DIKES WILL BE BUILT, DIKES SHALL BE CONSTRUCTED OF RELATIVELY IMPERVIOUS SOIL AND COMPACTED SUFFICIENTLY TO FORM A STABLE STRUCTURE.

I.E. - INVERT ELEVATION.

SURVEYED BY L. THOMPSON	10-73	DRAWN BY MITCH K.	3-74	NO.	DATE	BY	REVISIONS	NO.	DATE	BY	REVISIONS	MICHIGAN DEPARTMENT OF NATURAL RESOURCES	SEWAGE LAGOON ALTERATION & ADDITION
DESIGNED BY A. QURAISHI	3-74	CHECKED BY		1.	5-74	A.Q.	ADDED NOTES & CHANGED M. WELLS LOCATION	3.					
	DATE		DATE	2.	6-74	A.Q.	ADDED INTER-CONN. PIPES DET.	4.					

SHEET NO. ___ OF ___
FOR PROJECT NO. 24-1456

MUSKEGON STATE PARK
SHEET 6 OF 9 PLAN NO. E-119