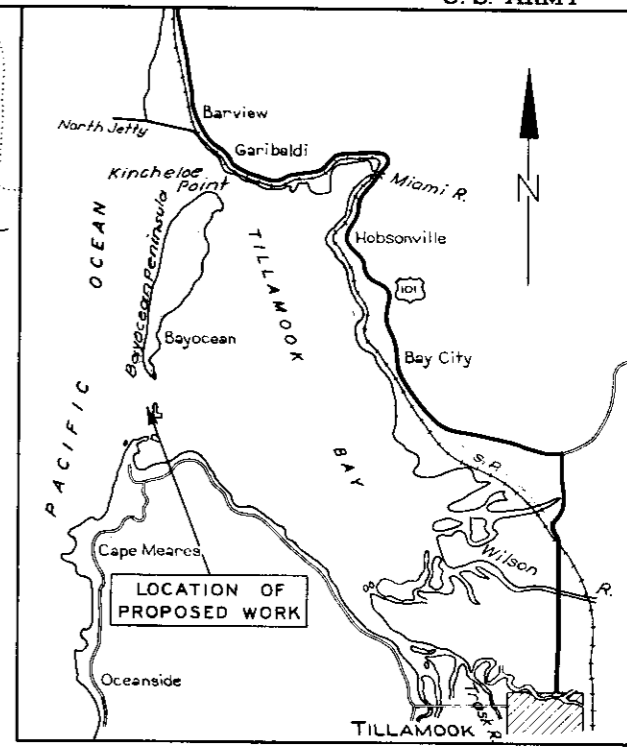
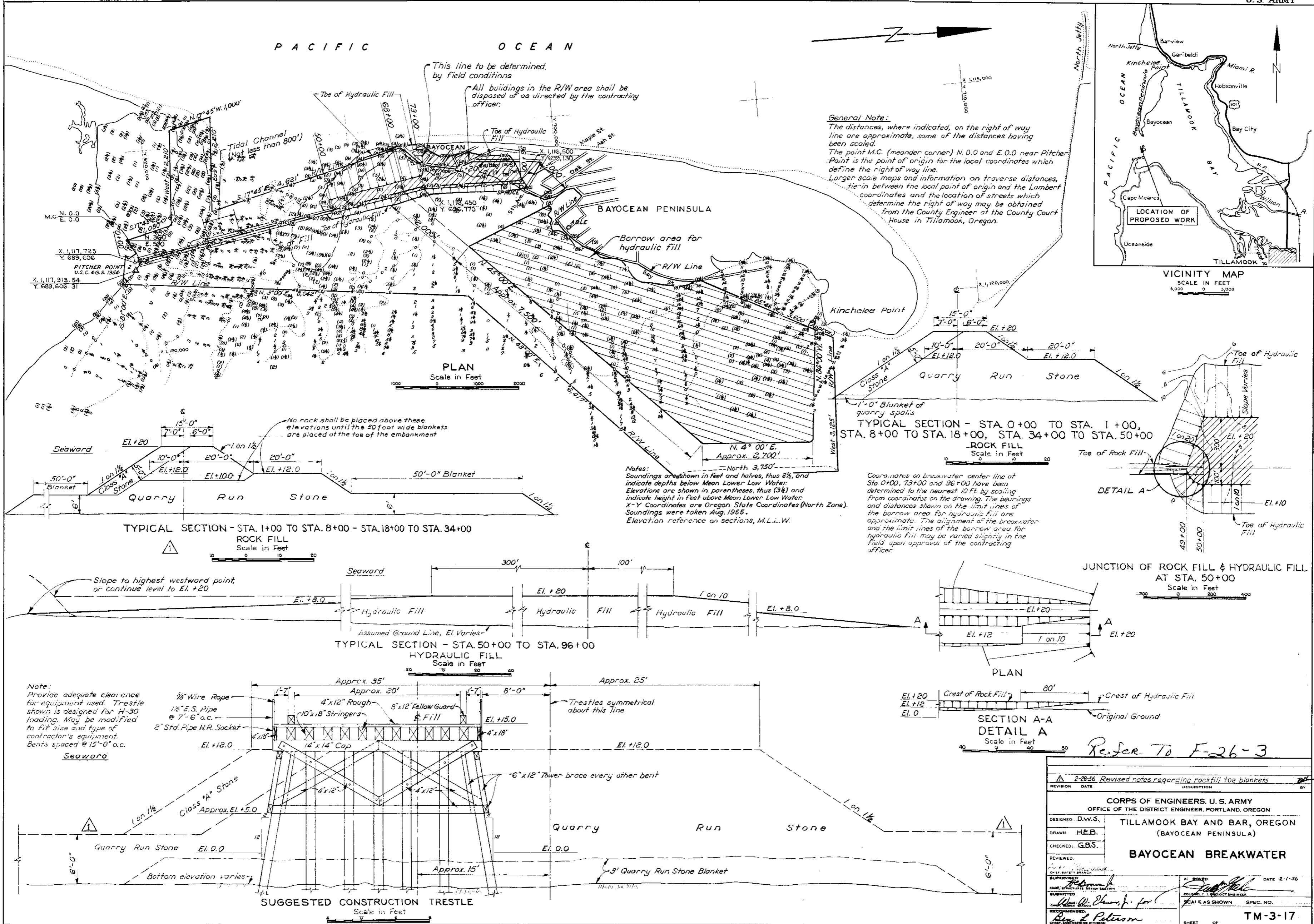
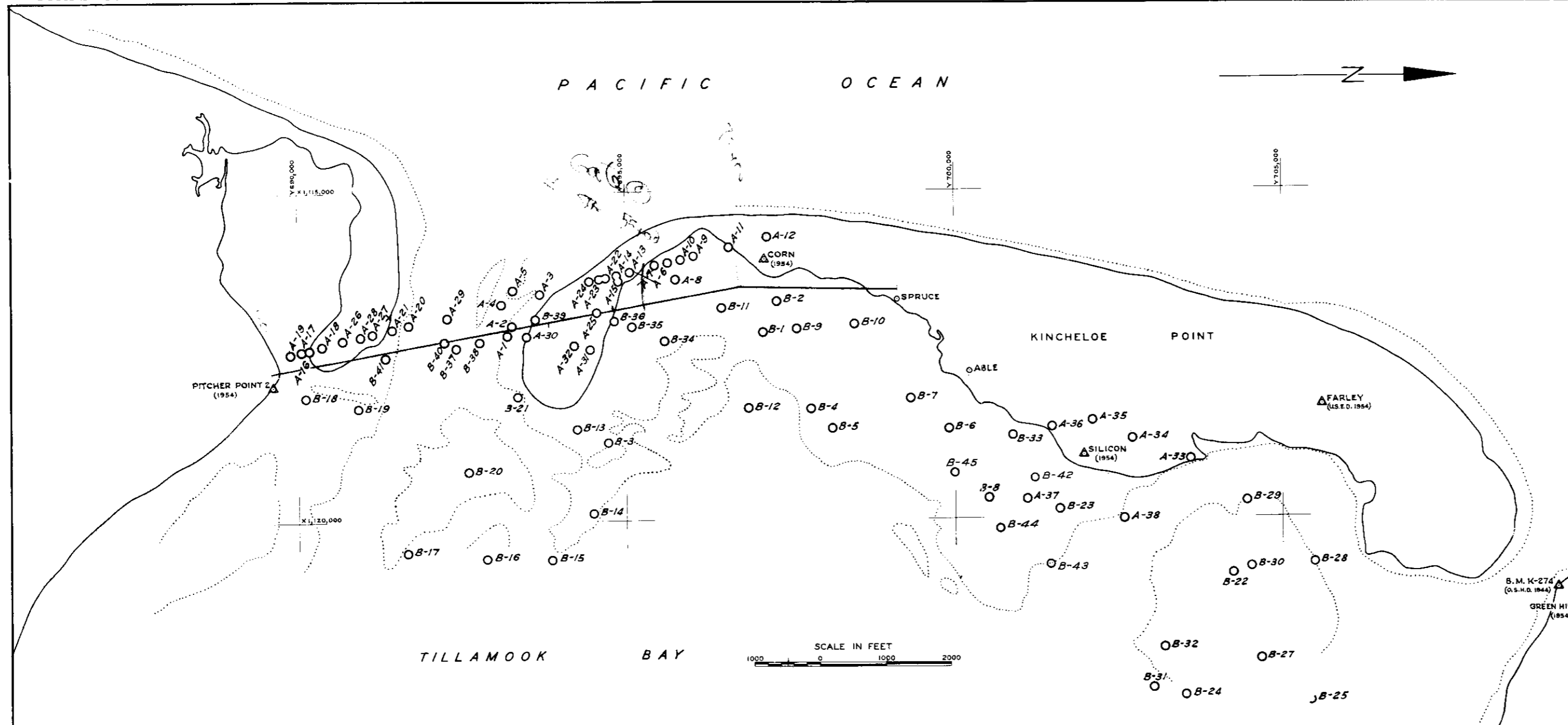


PACIFIC OCEAN



REVISION	DATE	DESCRIPTION	BY
2-28-56		Revised notes regarding rockfill toe blankets	
CORPS OF ENGINEERS, U. S. ARMY OFFICE OF THE DISTRICT ENGINEER, PORTLAND, OREGON TILLAMOOK BAY AND BAR, OREGON (BAYOCEAN PENINSULA) BAYOCEAN BREAKWATER			
DESIGNED	D.W.S.		
DRAWN	H.E.B.		
CHECKED	G.B.S.		
REVIEWED			
APPROVED			
DATE	2-1-56		
SHEET		OF	
		TM-3-17	



Hole No.	Sample No.	Depth of Sample	Classification	Mechanical Analysis				Attt. Limits		Not. W %
				Fines %	Sand %	Gravel %	D ₁₀	LL	PL	
B-1		0.0-4.5	Sand	SP						
		4.5-9.0	SI Sand	SP						
		9.0-12.0	Sand	SP						
B-2	1	12.0-17.0	Silt	OL	2	98	0	0.18		
		0.0-4.0	Sand	SP						
		4.0-8.0	SI Sand	SM						
B-3	3	8.0-11.0	Sa Silt	OL	66	32	0			
		11.0-14.0	Silt	OL						
		14.0-17.0	Sand	SP						
		0.0-7.0	Sand	SP						
		7.0-12.0	Silt	OL						
B-4		12.0-20.0	SI Sand	SM						
		20.0-21.0	Gr Sand	SP						
		0.0-4.0	SI Sand	SM						
		4.0-10.0	Silt	ML						
		10.0-20.0	Sand	SP						
B-5		0.0-2.0	SI Sand	SM						
		2.0-5.0	Sand	SP	2	91	0	0.11		
		5.0-10.0	"	SP	3	97	0	0.18		
		10.0-20.0	"	SP	2	90	0	0.20		
B-6		0.0-3.0	Sand	SP						
		3.0-10.0	Silt	ML						
		10.0-20.0	"	SP	3	97	0	0.17		
B-7		20.0-26.5	"	SP	1	92	0	0.20		
		0.0-18.0	Sand	SP						
B-8	1	0.0-3.0	Sand	SP	4	96	0	0.14		
		3.0-9.0	"	SP	2	97	0	0.15		
		9.0-15.0	"	SP	4	96	0	0.16		
B-9		0.0-16.0	Sand	SP						
		16.0-29.0	Gr Sand	SM						
B-10	1	0.0-3.0	Sand	SP	3	97	0	0.17		
		3.0-10.0	"	SP	4	96	0	0.16		
B-11		10.0-15.0	Sa Gravel	OP						
		0.0-23.0	Sand	SP						
B-12		23.0-24.0	Gr Sand	SM						
B-13	1	1.0-4.0	SI Sand	SM						Nonplastic 30
		4.0-10.0	Sand	SP	3	97	0	0.19		
		10.0-23.0	"	SP						
B-14	1	0.0-6.0	Sand	SP	7	93	0	0.21		
		6.0-8.0	Silt	OL						50 13 71
		8.0-17.0	Sa Silt	OL						
		17.0-22.0	Sand	SP						
B-15	1	0.0-1.5	Silt	SP						
		1.5-11.0	Sa Silt	ML						
		11.0-14.0	SI Sand	SM						
		14.0-21.0	Sand	SP						
		21.0-25.0	"	SP	2	96	0	0.18		
B-16	1	0.0-1.0	Sand	SP	2	96	0	0.18		
		1.0-7.5	Silt	ML	3	97	0	0.15		
		7.5-13.0	SI Sand	SM	17	83	0	-		
		13.0-21.0	"	SP	17	83	0	-		
B-17	1	0.0-3.0	Sand	SP	2	96	0	0.15		
		3.0-6.5	Sa Silt	ML						66
		6.5-11.0	SI Sand	SM	12	87	0	-		
		11.0-18.0	"	SP	12	81	0	-		
B-18		18.0-21.0	Sand	SP						
		0.0-6.0	Sand	SP						
B-19		6.0-17.0	Silt	ML						
		17.0-21.0	Sand	SP						
B-20		0.0-4.0	Sand	SP						
		4.0-10.0	Silt	ML						
		0.0-3.0	Sand	SP						LL 36 50
		3.0-16.0	Silt	ML						PL 32 54
B-21	2	16.0-20.0	Silt	ML						
		20.0-28.0	SI Sand	SM						

Hole No.	Sample No.	Depth of Sample	Classification	Mechanical Analysis				Attt. Limits		Not. W %
				Fines %	Sand %	Gravel %	D ₁₀	LL	PL	
B-21		0.0-16.0	Sand	SP						
		16.0-29.0	SI Sand	SM						
B-22	1	0.0-5.0	Sand	SP	1	99	0	0.21		
		5.0-15.0	"	SP						
		15.0-18.0	"	SP	1	99	0	0.21		
B-23		0.0-6.0	Sand	SP						
		6.0-15.0	SI Sand	SM						
		15.0-25.0	Silt	ML						
B-24	1	0.0-6.0	Sand	SP	2	98	0	0.16		
		6.0-19.0	"	SP						
		19.0-21.0	Sa Silt	ML						
B-25		21.0-29.0	SI Sand w/shells	SM	0	100	0	0.21		
B-26		0.0-10.0	Sand	SP						
		10.0-15.5	SI Sand	SM						
		15.5-20.0	Sand	SP						
B-27		0.0-5.0	SI Sand	SM						
		5.0-6.0	SI Sand	SM						
		6.0-12.0	Sand w/shells	SP	1	99	0	0.18		
B-28	1	0.0-12.0	Sand	SP	1	99	0	0.19		
		12.0-25.0	Sand	SP	1	99	0	0.21		
B-29		0.0-13.0	Sand	SP						
		13.0-22.0	Sand	SP	3	97	0	0.17		
B-30		22.0-30.0	Sand w/shells	SP						
		0.0-6.0	Sand	SP						
		6.0-8.0	SI Sand	SM						
		8.0-14.0	Sand	SP						
B-31		14.0-20.0	Sand w/shells	SP						
		0.0-22.0	Sand w/shells	SP						
B-32		22.0-28.0	Sand w/shells	SP						
B-33		0.0-20.0	Sand	SP						
		20.0-30.0	Sand w/shells	SP						
B-34		0.0-9.0	Sand	SP						
		9.0-13.5	Silt	OL						
		13.5-20.0	Sa Silt	ML						
B-35		20.0-26.0	SI Sand	SM						
		0.0-4.0	Sand	SP						
		4.0-5.0	Sa Silt	ML						
		5.0-13.0	SI Sand	SM						
B-36	1	7.0-13.0	SI Sand	SM	10	81	0	0.007	29	24 34
		13.0-16.0	Sand	SP						
B-37	3	16.0-29.0	Sand	SP	2	96	0	0.18		
B-38		10.0-18.0	Sa Silt	ML						
		18.0-21.0	Sand	SP						
B-39		0.0-6.0	Sand	SP						
		6.0-7.0	Silt	ML						
B-40	1	7.0-13.0	SI Sand	SM						
		13.0-17.0	SI Sand	SM-Organic	28	72	0	0.006	60	37 75
B-41	4	17.0-22.0	SI Sand	SM-Organic	32	68	0	0.005		
B-42		0.0-7.0	Sand	SP						
		7.0-13.0	SI Sand	SM						
B-43		0.0-3.0	Sand	SP						
		3.0-16.4	Sa Silt	ML						
B-44		16.4-25.5	SI Sand	SM						
B-45		0.0-25.5	Sand	SP						

LEGEND
 MEAN LOWER LOW WATER
 O EXPLORATION BORINGS
 X-Y COORDINATES-OREGON STATE COORDINATES (NORTH ZONE)

NOTES
 1. MATERIAL CLASSIFICATION IS BASED ON FIELD IDENTIFICATION UNLESS M.A. DATA IS GIVEN.
 2. MATERIALS CLASSIFIED ACCORDING TO CORPS OF ENGINEERS UNIFORM SOILS CLASSIFICATION.

Hole No.	Sample No.	Depth of Sample	Classification	Mechanical Analysis		Attt. Limits	Not. W %
				Fines %	Sand %		
A-1		0.0-9.0	Sand w/coo.gr	SP			
A-2		0.0-6.0	Sand w/coo.gr	SP			
A-3		0.0-1.0	Sand	SP			
		1.0-8.0	Sa Sand	SM	33	67	0
		8.0-12.0	"	SP			
		12.0-15.0	Sa Silt	ML			
		15.0-20.0	Sand	SM	8	92	0
A-4		0.0-1.0	Sand	SP			
		1.0-6.0	SI Sand	SM			
		6.0-12.0	Sa Silt	ML			
		12.0-21.0	SI Sand	SM	19	76	5
A-5		0.0-1.0	Sand	SP			
		1.0-6.0	SI Sand	SM			
		6.0-14.0	Silt	ML			
		14.0-22.0	Sand	SP			
A-6	1	0.0-1.0	Sand	SP	2	98	0
		1.0-9.0	"	SP			
		9.0-9.5	"	SP	5	95	0
		9.5-17.5	"	SP			
		17.5-18.0	"	SP	4	96	0
		18.0-25.0	"	SP			
		25.0-26.0	Sa Gravel	OP			
A-7		0.0-27.0	Sand	SP			
		27.0-28.0	Sa Gravel	OP			
A-8		0.0-28.0	Sand	SP			
A-9	1	0.0-7.0	Sand	SP	3	97	0
		7.0-15.0	"	SP			
		15.0-20.5	"	SP	3	97	0
		20.5-21.0	"	SP	6	94	0
A-11		0.0-9.0	Sand	SP			
A-12		0.0-9.5	Sand	SP			
A-13	1	0.0-6.0	SI Sand	SM	1	99	0
		6.0-9.0	"	SM	6	92	0
		9.0-14.0	"	SM	7	93	0
		14.0-18.0	SI Sand	SM			
A-14		0.0-10.0	Sand w/coo.gr	SP			
A-15		0.0-11.0	Sand	SP			
		11.0-13.0	Silt	ML			
		13.0-20.0	SI Sand	SM			
		20.0-31.0	Sand	SP			
A-16		0.0-8.0	Sand	SP			
		8.0-16.0	Silt	ML			
		16.0-20.0	Sa Silt	ML			
		20.0-21.0	Sand w/coo.gr	SP			
		21.0-22.0	Gr Sand	SM			
A-17	2	0.0-6.0	Sand	SP			
		6.0-10.0	Silt	ML			
		10.0-15.0	Sa Silt	ML			
A-18	1	0.0-3.0	Sand	SP	1	99	0
		3.0-10.0	"	SP	2	96	0
		10.0-15.0	Silt	ML			
		15.0-19.0	Sa Silt	ML			
		19.0-24.0	SI Sand	SM			
A-19		0.0-5.0	SI Sand	SM			
A-20		0.0-6.0	Sand	SP			
		6.0-9.0	Silt	ML			
		9.0-14.0	SI Sand	SM	21	76	0
		14.0-16.0	SI Sand	SM	21	76	0
A-21		0.0-10.0	Sand w/coo.gr	SP			
		10.0-14.0	Sa Silt	ML			
		14.0-16.0	Silt	ML			
		16.0-20.0	SI Sand	SM			
A-22		0.0-4.0	Sa Gravel	OP			