

B9903091

JOB FILE: 3786-045

MAR 18

Dames & Moore

1144 10th Avenue, Suite 200
Honolulu, Hawaii 96816
(808) 735-3585
Telex: 634100 Cable address: DAMEMORE

FOR REFERENCE

not to be taken from this room

S.R. 70

TA 710.3
H3
H64
No 70

May 28, 1981

Kacor Realty, Inc.
7210 Kalanianaʻole Highway
Honolulu, Hawaii 96825

Attention: Mr. Mike Morita

Gentlemen:

Letter No. 1
Construction Inspection, Marina 10B Subdivision
Hawaii Kai, Oahu, Hawaii

This letter summarizes our geotechnical inspection activities for the construction of the Marina 10B Subdivision during the period of February 10, 1981 through May 8, 1981. Our services during this period were generally rendered on a part-time basis in accordance with our proposal dated August 14, 1980. Site preparation commenced in February.

The scope of our services was amended, upon the request of Mr. John Higham of your office, to exclude the inspection of all utility line installation. This revision was presented in our letter entitled "Revision in Proposed Scope of Service" dated April 21, 1981.

GENERAL

The initial construction activity for the Marina 10B Subdivision was started on February 10, 1981. This activity included the clearing and grubbing of the northeast portion of the site in preparation for the construction of the surcharge and mobilization of equipment by both B & C Trucking, Inc. and Oahu Construction Company. During the period February 19 through May 8, 1981, many earthwork construction activities for the proposed project were started. Due to the many activities being performed on the site, the construction progress for each of the various activities is presented separately under the following headings:

- 1) Site Preparation
- 2) Roadway Areas
- 3) Residential Lots
- 4) Surcharge Area

The locations of the various construction activities are delineated on the Plot Plan, Attachment 1.

MUNICIPAL REFERENCE & RECORDS CENTER

City & County of Honolulu
City Hall Annex, 558 S. King Street
Honolulu, Hawaii 96813

Kacor Realty, Inc.
May 28, 1981
Page Two

Throughout this period of construction, our engineer observed the clearing and grubbing, proof rolling, and construction of compacted fill on a part-time basis. Settlement monitoring was performed for the gauges installed within the surcharge area on the northern end of the site.

Field density tests were also performed within the fill areas. A tabulation of the field density tests is presented on the Summary of Field Density Tests, Attachment 2. The approximate location of each field density test is presented on Attachment 1. Compaction test data were developed to determine the maximum dry density of the on-site fill material in accordance with ASTM #D-1557-78 Test Procedure. The results of this test are presented on Attachment 3.

The on-site clayey silt material was used for fill and was generally compacted in 8-inch loose lift thicknesses. This resulted in about a 6-inch compacted lift. The material was compacted to at least 90 percent of the maximum dry density as indicated by the field density tests performed. Field density tests were performed in accordance with ASTM Tests D-1556-64, D-2922-78 and D-3017-78. Specific earthwork procedures and earthwork construction activities are presented below in the following sections.

SITE PREPARATION

During this period, the site preparation generally consisted of clearing and grubbing, and removal of stockpiled dredged spoil material and boulders from the southern portion of the site. The approximate limits of these activities are outlined on Attachment 1. The cleared and grubbed areas included the Hawaii Kai Drive extension, all the future Hawaii Kai Drive alignment, and the offsite drainage ditch alignment and settling basin located on the west side of the future Hawaii Kai Drive alignment. The majority of the subdivision site was initially cleared and grubbed during the construction of the Marina 10B Seawall. Stockpiles of dredged spoil which resulted from this construction activity were left on the project site. The southern portion of the site was cleared of the stockpiled spoil material by B & C Trucking, Inc., Oahu Construction's sub-contractor. The removal of the spoil material generally began at the southern end of the project site and has progressed northward to approximately Lot Nos. 18 and 52. Dredged spoil material was removed to approximately 2 feet below the preconstruction topographic elevations within Lot Nos. 60, 61, and 62. This area is believed to be the location of a silting basin which was excavated during Marina 10B Seawall construction. Similar basins were constructed throughout the site, generally east of the Road "A" location. The area north of Lot No. 52 still contains large stockpiles of dredged spoil material which remains to be removed.

Kacor Realty, Inc.
May 28, 1981
Page Three

During the proof rolling of Lot Nos. 60 through 64, additional soft soil was encountered within an area approximately 30 feet square at the west side of Lot Nos. 60 and 61. The contractor was informed that corrective measures should be taken. It is our understanding that the contractor will remove the soft soil prior to the construction of fill within the area. No other earthwork construction was performed within the area.

ROADWAYS

The earthwork construction for the roadway areas started on April 22, 1981 and was generally limited to Road "A" between Sta 0+00 to Sta 6+00, Road "B" and Road "C", as shown on Attachment 1. All the roadway sections were cut and/or filled to approximately 2 feet below the designed finish grades with the exception of the west half of Road "B". The finish subgrade elevations within the roadway sections are subject to change pending the approval of the final pavement design recommendations by the City and County of Honolulu. Final design recommendations for appropriate roadway sections will be submitted to both the City and County of Honolulu and Kacor Realty upon the completion of our additional field and/or laboratory soil testing. A soil sample of the subgrade material was obtained from within the Road "A" alignment by our engineer for laboratory testing to develop additional design parameters for Road "A" between Sta 0+00 and Sta 6+00, Road "B", and Road "C". This is required by the City and County to verify that the soil conditions are similar in characteristics to that used for the pavement design shown on the construction plans. If the soil characteristics should differ, appropriate pavement design recommendations would be made.

To date, the earthwork construction for Road "A" has involved the cutting of the roadway alignment from Sta 0+00 to Sta 6+00 to within 2 feet below the finish pavement grade. No fill placement was involved within this section.

The earthwork construction for the Road "B" section consisted of the construction of fill on the western half and excavation of soil on the eastern half as indicated on the Plot Plan. The subgrade within the eastern half was proof rolled prior to the placement of fill material. One lift of on-site clayey silt material was completed to at least 90 percent of the maximum dry density during this period. A second lift of fill was placed but inclement weather has hindered the completion of this lift. The fill was generally constructed to within 1 to 4 feet from the finish subgrade. The roadway section on the eastern half was cut to approximately 2 feet below the finish pavement grade. Proof rolling of the subgrade was not performed during this period.

The Road "C" section was also cut to approximately 2 feet below the finish pavement grade. Proof rolling of the subgrade remained to be performed.



Kacor Realty, Inc.
May 28, 1981
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RESIDENTIAL LOTS

Subsequent to the clearing and grubbing activities and the stripping of the spoil material, the earthwork construction activities within the residential lots was started on April 7, 1981 and consisted of construction of fills and the excavation of cut within the southern section of the site as shown on Attachment 1.

During this period, structural fill was constructed within Lot Nos. 1, 2, 5, 6, and 7. Prior to the fill placement, each lot was proof rolled with a Tempo Rp-48 sheepsfoot roller. A soft spot was encountered during the proofrolling of Lot No. 1 and the unsuitable material was removed. The unsuitable material consisted of dark gray silty clay with organics. The excavation resulting from the removal of the unsuitable material was approximately 2 feet deep, 18 feet wide, and 24 feet long. On-site clayey silt material was used to construct the replacement fill and structural fill within the excavation and lot areas. Each 6-inch compacted lift was constructed to at least 90 percent relative compaction. The fill within Lot Nos. 1, 2, and 7 was generally completed to within 2 feet below the finish subgrade. However, approximately 4 feet of fill remains to be constructed in Lot Nos. 5 and 6.

The areas encompassing Lot Nos. 3, 4, and 8 through 13 were excavated to within approximately 1 foot of the finish subgrade elevation. The excavated material was used to construct the adjacent fill areas.

SURCHARGE

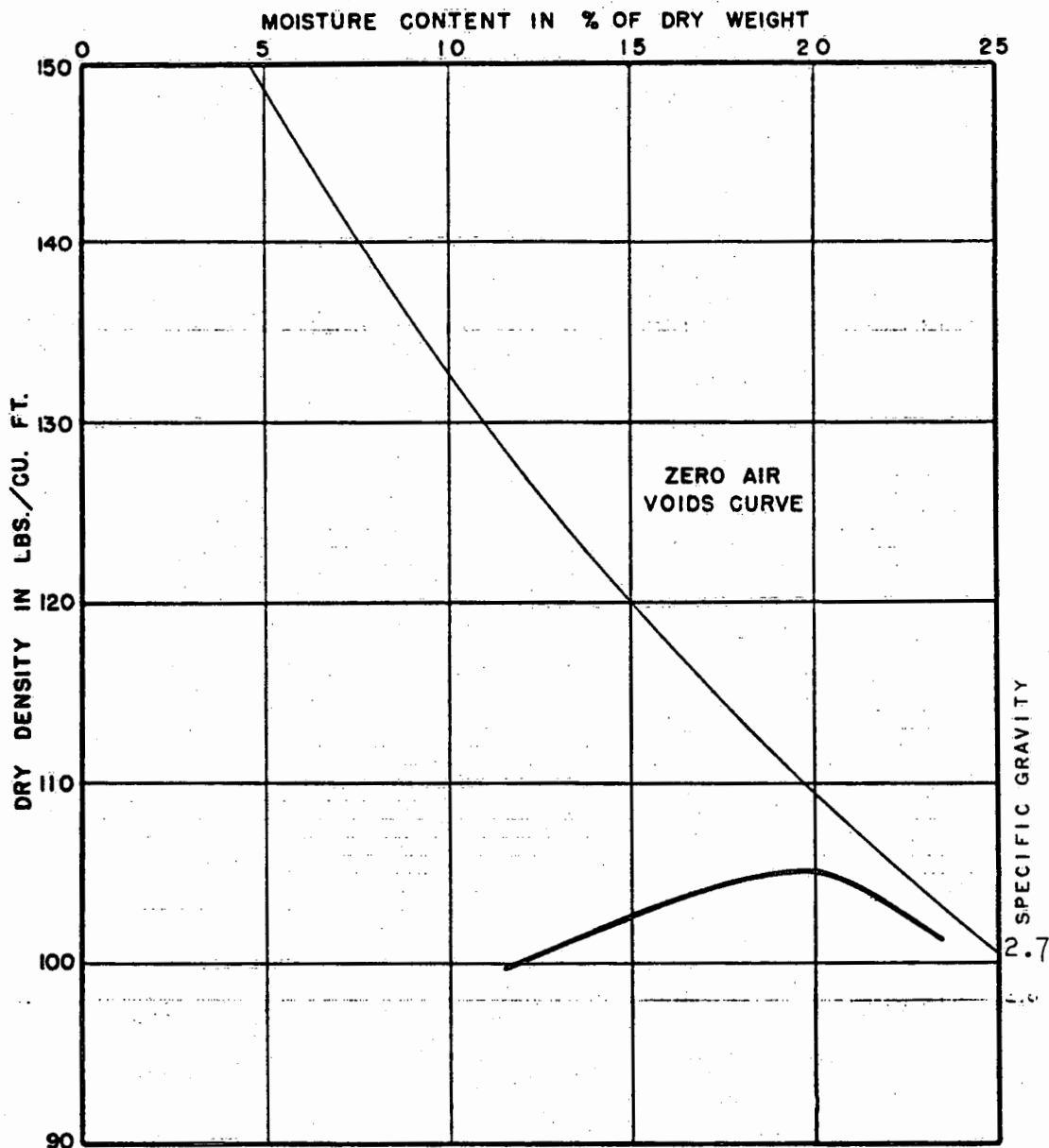
The placement of the surcharge within Lot Nos. 35, 36, 37, 38, and the extreme northern end of Road "A", was accomplished between February 10 and March 1, 1981. Two settlement gauges were placed within the surcharge area by our engineer prior to the surcharge placement. The location of each gauge is shown on Attachment 1. The gauges were monitored by personnel from our office and Settlement-Time Plots have been generated and accompany this letter, Attachments 4.1 and 4.2.

Based on the settlement gauge readings recorded as of week ending May 8, 1981, we believe that the settlement due to primary consolidation has been completed. We anticipate that removal of the surcharge now would result in a residual, long-term settlement of less than 0.5 inches in response to loading imposed by structural fill to be placed after removal of surcharge.

OWNER <u>KACOR REALTY INC.</u>	JOB. NO. <u>03126-045</u>
JOB ENGR <u>JUDY SWARTZ</u>	PAGE OF

DAMES & MOORE
ATTACHMENT 2

SAMPLE NO. -- DEPTH -- ELEVATION --
 SOIL BROWN CLAYEY SILT WITH GRAVELS
 LOCATION HAWAII KAI MARINA 10B SUBDIVISION
 OPTIMUM MOISTURE CONTENT 20 %
 MAXIMUM DRY DENSITY 105 PCF
 METHOD OF COMPACTION ASTM D-1557 - 78 METHOD A



COMPACTION TEST DATA

BY km DATE 05-07-81

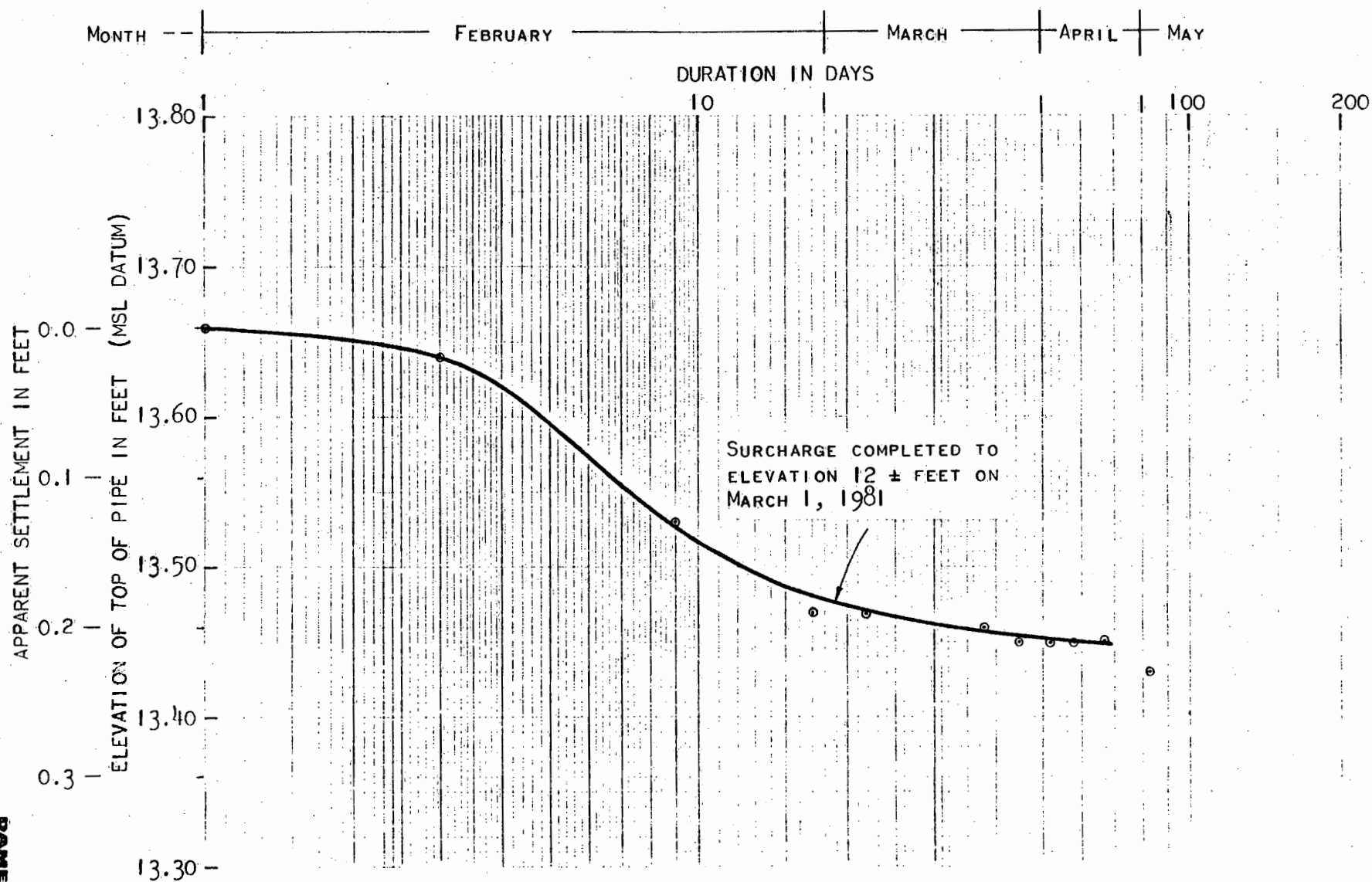
CHECKED BY _____

FILE _____

3786-045

REVISIONS

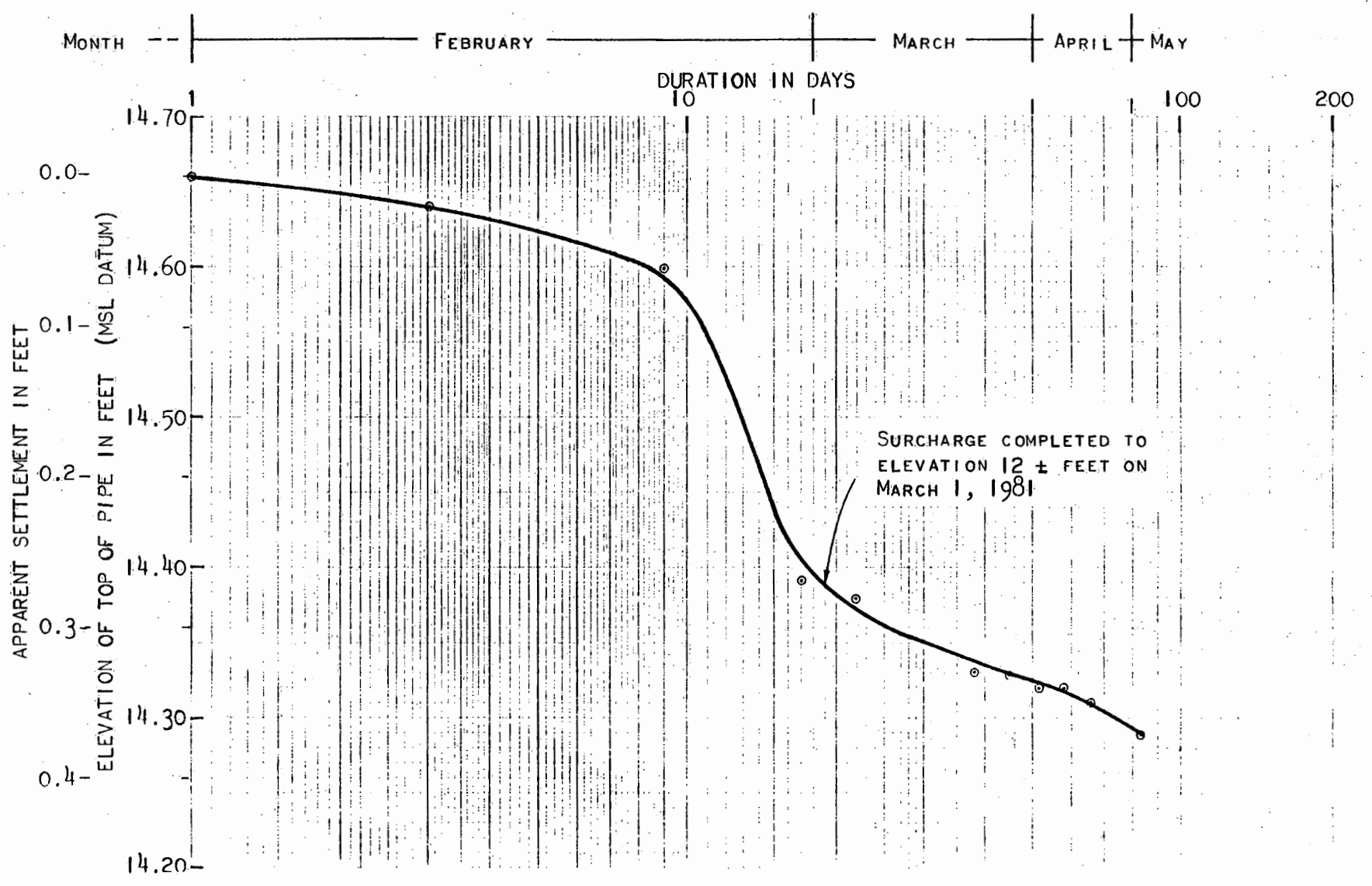
BY _____ DATE _____

SETTLEMENT - TIME PLOT
GAUGE NO. 1

BY H.M. DATE 05-07-81
 CHECKED BY _____

FILE 3786-045

REVISIONS
 BY _____ DATE _____



SETTLEMENT - TIME PLOT
 GAUGE NO. 2

Dames & Moore



1144 10th Avenue, Suite 200
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(808) 735-3585
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October 28, 1981

KACOR Realty, Inc.
7210 Kalanianaʻole Highway
Honolulu, Hawaii 96825

Attention: Mr. Mike Morita

Gentlemen:

Progress Letter 2
Construction Inspection
May 9 through September 18, 1981
Marina 10-B Subdivision
Hawaii Kai, Oahu, Hawaii

This letter summarizes our geotechnical inspection activities for the construction of the Marina 10-B subdivision during the period of May 9 through September 18, 1981. Our services during this period were generally rendered on a part-time on-call basis in accordance with our proposal dated August 14, 1980 and our letter titled "Revision in Proposed Scope of Services" dated April 21, 1981. During the period of June 2 through September 2, 1981, the contractor's earthwork construction activities were very minimal and only four site visits were performed.

GENERAL

Construction activities during this period generally consisted of the continued removal of stockpiled dredged spoil material and boulders, excavation of cut areas, construction of fill, and removal of the surcharge at the north end of the site. The locations of these construction activities are delineated on the Plot Plan, Attachment 1.

During this period, a total of 76 field density tests were performed within the backfill and fill areas shown on the Plot Plan. Tabulations of the field density tests for the period of May 9 through September 18, 1981 are presented on the Summary of Field Density Tests, Attachment 2. Each field density test is referenced as a percent of the maximum dry density established by ASTM D 1557-78. Two additional compaction curves were developed for the on-site brown-gray clayey silt and brown silty sand materials. The compaction curve for each material is shown on Attachments 3.1 and 3.2.

Surcharge monitoring was completed during this period. Results are discussed in the last section of this letter.

KACOR Realty, Inc.
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SITE PREPARATION

The site preparation generally consisted of the continued removal of the stockpiled dredged spoil material and boulders within the northern section of the site. The majority of the dredged spoil was removed from the site. However, one stockpile of dredged spoil remained to be removed from Lots 35 and 37 at the end of the period. Several stockpiles of boulders also remained to be removed from the site at the end of the period. These stockpiles were generally located within Lots 16, 17, 31, and 32.

ROADWAYS

The earthwork construction for the roadway areas generally consisted of the continued excavation for the remaining northern section of Road "A" from Sta 6+00 through Sta 18+62, and the construction of fill for Road "B" from Sta 0+00 to Sta 2+00, as shown on Attachment 1. The remaining northern section of Road "A" was excavated to approximately 2 feet below the design finish grade. However, the proofrolling of the entire Road "A" subgrade area remained to be completed.

The earthwork construction for Road "B" from Sta 0+00 through Sta 2+00 consisted of the completion of the fill construction. The remaining 1 to 4 feet of fill was generally completed to the finish subgrade elevation. Each 6-inch lift of on-site clayey silt material was inspected by one of our engineers and compacted to at least 90 percent of the maximum dry density.

Proofrolling of the roadway subgrade area for Road "B" from Sta 2+00 to Sta 3+53 and Road "C" from Sta 0+00 to Sta 1+93 remained to be completed. We recommend that the road subgrade be proofrolled and inspected just prior to the placement of the subbase layer.

Following a site meeting on September 23, 1981 with Mr. John Higham, we were informed that the inspection of the remaining roadway earthwork construction would be performed by the City and County of Honolulu, and therefore, our inspection services would not be required any further.

During this period, two Letters for Record, dated June 1, and September 18, 1981, were submitted to the City and County of Honolulu for the final pavement design. The final pavement design recommendations for Road "A" from Sta 0+00 to Sta 6+00, Road "B" and Road "C" were approved. The final pavement design section consists of 2 inches of asphalt concrete, 6 inches of base course with a minimum CBR of 85, and 12 inches of subbase with a minimum CBR of 20 meeting City and County of Honolulu select borrow requirements.

KACOR Realty, Inc.
October 28, 1981
Page Three

RESIDENTIAL LOTS

The earthwork construction for the residential lots consisted of the excavation of cut areas within the majority of the site, and the construction of fill within the southern and central section, as shown on Attachment 1.

Following the removal of the stockpiles of dredged spoil material and boulders, the cut areas for the remaining residential lots were generally excavated to the finish subgrade elevation. Each lot was then proofrolled by a sheepsfoot roller for a brief period to detect soft areas within each residential lot. During the proofrolling, soft soil was encountered within the southwestern section of Lot 15. Soft dark brown silty clay with basalt boulders was encountered within an excavation approximately 25 feet by 25 feet in plan dimension. The excavation was completed to a depth of approximately 5 feet below the finish subgrade elevation. Highly weathered tuff was encountered at the bottom of the excavation. The bottom of the excavation was proofrolled and visually inspected by one of our engineers. The excavation was then backfilled with on-site silty sand material in 6-inch compacted lifts. Each lift was compacted to at least 90 percent. The backfill was generally completed to the finish subgrade elevation.

Soft material was also encountered within Lot 35. The soft material was believed to be remnant dredged spoil as a result of the Marina 10-B wall construction. The excavation was generally completed to a depth of 3 feet below the finish subgrade elevation. Following the removal of the soft material, the bottom of the excavation was proofrolled and visually inspected by our engineer. One 6-inch compacted lift of on-site clayey silt material was constructed within the excavation section. The lift was compacted to least 90 percent of the maximum dry density. Approximately 2.5 feet of fill remained to be constructed.

The top 6 inches of the subgrade within the cut areas from Lots 3 through 30, with the exception of Lots 16 and 17 was compacted to at least 90 percent of the maximum dry density. The surface material for the cut areas in Lots 16, 17, and 31 through 64 remained to be compacted to 90 percent.

The construction of fill was generally limited to Lots 1 through 7, Lots 22 through 28, and Lots 43 through 54, as shown on Attachment 1. Approximately 1 to 4 feet of fill was constructed within Lots 1, 2, 5, 6, and 7. Approximately 1 foot of fill was constructed within the east side of Lots 22 through 28. The fill was constructed in approximately 6-inch compacted lifts of on-site material. Each 6-inch compacted lift of on-site clay silt material was compacted to at least 90 percent of the maximum dry density. The fill was generally constructed to the finish subgrade elevation.

Fill construction was also performed within Lots 43 through 54. Following the proofrolling of the lots, approximately 2 feet of remnant dredged spoil material was removed from the west half of Lots 49, 50, and 51. The excavated

KACOR Realty, Inc.
October 28, 1981
Page Four

areas were then proofrolled and visually inspected by one of our engineers. Approximately 1.5 feet of fill was constructed within Lots 43 through 54. Each 6-inch compacted lift of on-site material was compacted to at least 90 percent. The fill area was generally completed to within 6 inches of the finish subgrade elevation.

Approximately 1.5 feet of fill remained to be constructed within the west section of Lots 60, 61, and 62.

SURCHARGE

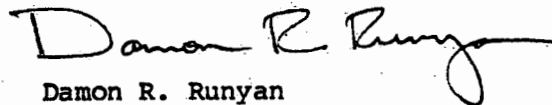
During this period, the surcharge material within Lots 35, 36, 37, 38, and the extreme north end of Road "A" was removed. The final set of settlement gauge readings, which was performed on June 4, 1981, indicated an apparent incremental settlement of 0.02 feet within the surcharge area. The total apparent settlement was on the order of 0.42 feet. In our Progress Letter No. 1, dated May 28, 1981, it was stated that we believed the settlement due to primary consolidation had been completed. Consequently, KACOR Realty advised the contractor to remove the surcharge material. The loose surcharge material was removed to approximately the finish subgrade elevation within the area. However, during the construction of the surcharge, the preconstruction grade was approximately 2 feet lower in elevation than the finish subgrade. Up to 2 feet of loose material remained to be removed from the area shown on Attachment 1.

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If you have any questions regarding the content of this letter, please contact us.

Yours very truly,

DAMES & MOORE



Damon R. Runyan
Associate

DRR:GY:ljc03786-045 (1140B)
(One copy submitted)

- Attachment:
- 1 - Plot Plan
 - 2 - Summary of Field Density Tests, May 9 through September 18, 1981
 - 3.1 - Compaction Test Data (Brown to Gray Clayey Silt)
 - 3.2 - Compaction Test Data (Brown Silty Sand)

SUMMARY OF FIELD DENSITY TESTS
MAY 9 THROUGH SEPTEMBER 18, 1981

OWNER KACOR REALTY INC

JOB NO. 03786-045

JOB ENGINEER G. YAMAGATA

PAGE 1 OF 3

TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
21	05-12-81	LOT 1	21.9	90	105	33	91	86	SEE RETEST # 26
22	"	ROAD "B", STA 0+80	22.9	90	105	34	89	85	SEE RETEST # 28
23	05-13-81	LOT 1	23.0	90	105	33	89	85	SEE RETEST # 26
24	"	ROAD "B", STA 0+85	23.6	90	105	33	88	84	SEE RETEST # 28
25	05-14-81	LOT 6	19.5	90	105	28	95	90	
26	05-18-81	LOT 1	22.7	90	105	26	94	90	RETEST OF # 23
27	"	LOT 1	21.2	90	105	20	96	92	
28	"	ROAD "B", STA 0+55	23.7	90	105	23	99	94	RETEST OF # 24
29	"	LOT 2	19.0	90	105	26	95	91	
30	"	LOT 2	18.0	90	105	25	98	93	
31	"	LOT 6	20.0	90	105	28	89	85	SEE RETEST # 32
32	"	LOT 6	20.0	90	105	26	95	90	RETEST OF # 31
33	05-19-81	LOT 1	23.3	90	105	22	97	93	
34	05-21-81	LOT 2	19.5	90	105	31	87	83	SEE RETESTS # 42 & # 43
35	"	ROAD "B", STA 0+80	24.5	90	105	29	99	94	
36	05-29-81	LOT 5	26.4	90	105	22	100	96	
37	"	LOT 5	26.1	90	105	26	97	92	
38	"	LOT 6	22.6	90	105	26	97	92	
39	"	LOT 6	20.9	90	105	23	97	92	
40	"	LOT 1	24.4	90	105	22	101	96	
41	"	LOT 1	23.5	90	105	23	99	94	
42	"	LOT 2	20.0	90	105	23	98	93	RETEST OF # 34
43	"	LOT 2	18.7	90	105	23	98	93	RETEST OF # 34
44	09-03-81	LOT 52/53	8.8	90	105	24	88	84	SEE RETEST # 48
45	"	LOT 48/49	7.7	90	99	27	78	79	SEE RETEST # 49
46	"	LOT 46/47	7.7	90	99	23	77	77	SEE RETEST # 51

SUMMARY OF FIELD DENSITY TESTS

MAY 9 THROUGH SEPTEMBER 18, 1981

OWNER KACOR REALTY INC

JOB NO. 03786-045

JOB ENGINEER G. YAMAGATA

PAGE 2 OF 3

TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
47	09-03-81	LOT 44/45	7.4	90	105	22	83	79	SEE RETEST # 53
48	09-08-81	LOT 52/53	8.0	90	105	20	101	96	RETEST OF # 44
49	"	LOT 49	7.2	90	99	27	89	90	RETEST OF # 45
50	"	LOT 48	6.7	90	105	19	99	95	
51	"	LOT 47	6.9	90	99	28	93	94	RETEST OF # 46
52	"	LOT 45	6.4	90	105	22	97	93	
53	"	LOT 44	6.9	90	105	21	97	92	RETEST OF # 47
54	"	LOT 6	23.6	90	105	14	106	100	
55	"	LOT 1	23.3	90	105	21	109	100	
56	"	LOT 2	19.6	90	105	18	95	90	
57	09-09-81	LOT 19	12.6	90	105	23	93	89	
58	"	LOT 20	13.2	90	105	23	94	90	
59	"	LOT 21	12.7	90	105	24	91	87	SEE RETEST # 70
60	"	LOT 23	12.3	90	105	23	90	85	SEE RETEST # 71
61	"	LOT 8	12.3	90	105	19	103	98	
62	"	LOT 3	14.7	90	105	18	108	100	
63	"	LOT 4	12.0	90	105	19	101	96	
64	09-10-81	LOT 7	18.3	90	105	21	102	97	
65	"	LOT 10	11.3	90	105	18	102	97	
66	"	LOT 11	11.0	90	105	18	104	99	
67	"	LOT 12	15.5	90	105	20	104	99	
68	"	LOT 13	19.2	90	105	24	98	93	
69	"	LOT 14	18.8	90	105	25	96	91	
70	"	LOT 21	13.0	90	105	21	95	90	RETEST OF # 59
71	"	LOT 22	12.5	90	105	24	94	90	RETEST OF # 60
72	"	LOT 15	16.0	90	105	25	92	87	SEE RETEST # 73

SUMMARY OF FIELD DENSITY TESTS
MAY 9 THROUGH SEPTEMBER 18, 1981

OWNER KACOR REALTY INC

JOB NO. 03786-045

JOB ENGINEER G. YAMAGATA

PAGE 3 OF 3

TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
73	09-10-81	LOT 15	16.0	90	105	24	97	92	RETEST OF # 72
74	09-11-81	LOT 15	17.0	90	105	25	92	88	RECORDED, OK
75	"	LOT 15	17.5	90	105	23	95	91	
76	"	LOT 25	12.7	90	105	24	98	93	
77	"	LOT 26	12.8	90	105	22	104	99	
78	"	LOT 27	12.7	90	105	25	98	93	
79	"	LOT 28	12.2	90	105	24	98	93	
80	"	LOT 29	11.5	90	105	26	94	89	
81	"	LOT 30	11.2	90	105	24	100	95	
82	"	LOT 15	17.9	90	105	22	96	91	
83	09-14-81	LOT 15	19.1	90	105	20	98	93	
84	"	LOT 15	19.2	90	105	24	94	89	
85	"	LOT 18	12.9	90	105	19	102	97	
86	"	LOT 19	13.1	90	99	23	91	92	
87	09-15-81	LOT 24	11.5	90	105	20	90	86	SEE RETEST # 89
88	09-17-81	LOT 24	11.5	90	105	28	85	82	
89	"	LOT 24	11.5	90	105	22	97	92	RETEST OF # 87
90	09-18-81	LOT 35	6.4	90	105	16	100	95	
91	"	LOT 53	8.1	90	105	21	105	100	
92	"	LOT 52	9.3	90	105	22	101	96	
93	"	LOT 51	7.3	90	105	19	97	92	
94	"	LOT 50	7.6	90	105	21	98	93	
95	"	LOT 48	7.4	90	105	20	101	96	
96	"	LOT 47	7.9	90	105	26	96	92	

DRAWN BY llw DATE 10-22-81

CHECKED BY _____

FILE 3786-045

REVISIONS

BY _____ DATE _____

TEST PIT NOT AVAILABLE

SAMPLE NO. 2

DEPTH NOT AVAILABLE

ELEVATION 7 ± FEET

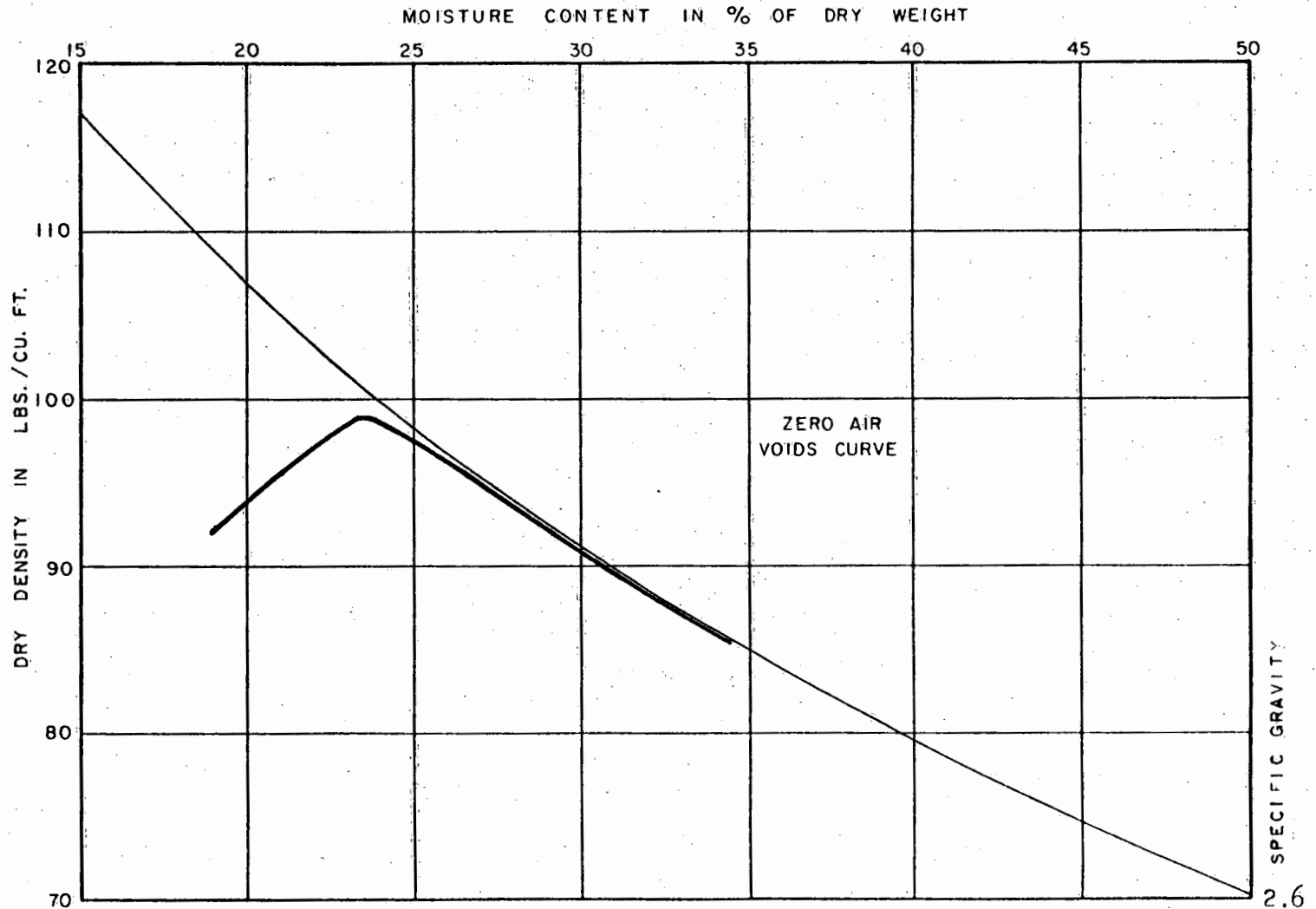
SOIL TYPE
BROWN TO GRAY CLAYEY SILT

LOCATION
ROAD "A" STA. 1+00
MARINA 10-B SUBDIVISION
HAWAII KAI, OAHU, HAWAII

OPTIMUM MOISTURE CONTENT
23.5 %

MAXIMUM DRY DENSITY
99 PCF

METHOD OF COMPACTION
ASTM D 1557 - 78 METHOD C



COMPACTION TEST DATA

DRAWN BY Sh... DATE 11-22-81

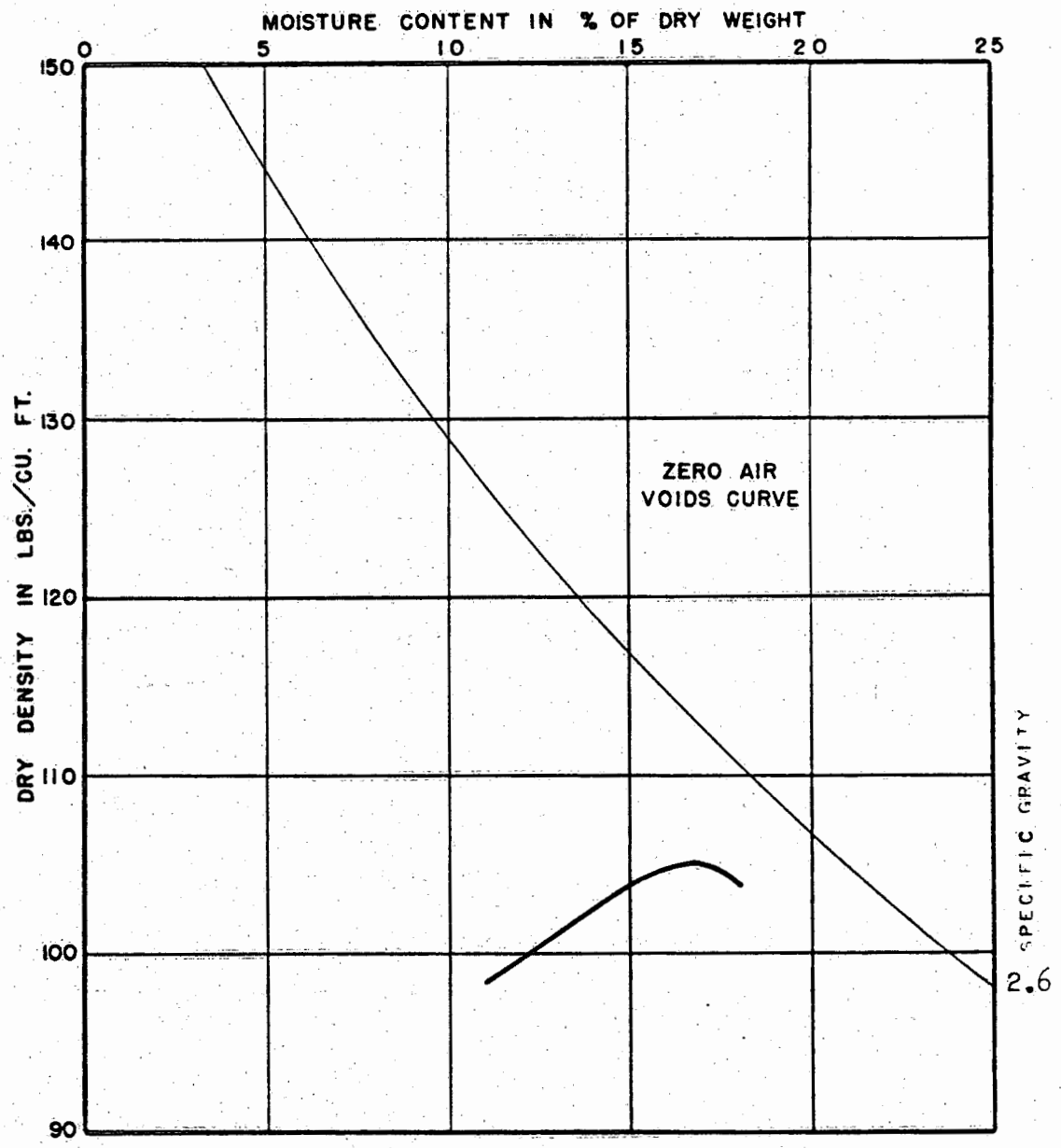
REVISION 2
BY
DATE

REVISION 1
BY
DATE

FILE 2186-045

CHECKED BY DATE

SAMPLE NO. 3 DEPTH - ELEVATION -
SOIL BROWN SILTY SAND
LOCATION LOT 19 MARINA 10-B SUBDIVISION, HAWAII KAI, OAHU, HAWAII
OPTIMUM MOISTURE CONTENT 17.0 %
MAXIMUM DRY DENSITY 105 PCF
METHOD OF COMPACTION ASTM D 1557 - 78 METHOD C



COMPACTION TEST DATA

Dames & Moore

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March 9, 1982

KACOR Realty, Inc.
7120 Kalaniana'ole Highway
Honolulu, Hawaii 96825

Attention: Mr. Mike Morita

Gentlemen:

Progress Letter 3: Final Letter
Construction Inspection
September 19, 1981 through March 2, 1982
Marina 10-B Subdivision
Hawaii Kai, Oahu, Hawaii

This letter summarizes our final geotechnical inspection activities for the construction of the Marina 10-B subdivision during the period of September 19, 1981 through March 2, 1982. Our services during this period were generally rendered on a part-time on-call basis in accordance with our proposal dated August 14, 1980 and our letters dated April 21, 1981 and October 8, 1981 which outlined our revised scope of services. During the periods of November 14, 1981 through December 1, 1981 and December 10, 1981 through February 1, 1982, no significant earthwork construction activity to be inspected by us was performed at the site. Our services during the period of December 2, 1981 through March 2, 1982 were limited to eight site visits to complete our inspection services.

GENERAL

The construction activities during this period generally consisted of the removal of the remaining stockpiled dredged spoil material and boulders, construction of areal fill, excavation of the housepad areas, and the construction of replacement fill within the housepad excavations. The locations of these construction activities are delineated on Plot Plan A and Plot Plan B, Attachments 1.1 and 1.2.

During this period, a total of 244 field density tests were performed within the backfill and fill areas as shown on the Plot Plans. Tabulations of the field density tests for the period of September 19, 1981 through March 2, 1982 are presented on the Summary of Field Density Tests, Attachment 2. Each field density test is referenced as a percentage of the maximum dry density established by ASTM D 1557-78.

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SITE PREPARATION

The site preparation generally consisted of the removal of the stockpiled dredged spoil material and 2-foot layer of loose fill material within the old surcharge area of Lots 35 through 37. The remaining stockpiled boulders within Lots 16, 17, 31, and 32 were also removed from the project site.

ROADWAYS

During this period our letter for record dated December 16, 1981 was submitted to the City and County of Honolulu for the final pavement design for the Hawaii Kai Drive Extension from Sta 25+50 to Sta 27+50. The final pavement design recommendations were approved by City and County letter dated December 30, 1981. Pavement design consisted of 2 inches of asphalt concrete and 6 inches of base course with a minimum CBR of 85. A 12-inch layer of subbase with minimum CBR of 20 and meeting City and County of Honolulu's select borrow requirements was recommended for the 18-inch drainline backfill area within the roadway section.

As explained in our Progress Letter 2, we performed no further inspection of earthwork for the project's roadways.

RESIDENTIAL LOTS

The earthwork construction for the residential lots consisted of the continued construction of fill within the lots located along the edge of the Marina, plus excavation of the housepads and construction of replacement fill for each housepad, as shown on Attachments 1.1 and 1.2.

Following the removal of the remaining stockpile of dredged spoil and boulders, the finished subgrade surface within the cut areas of Lots 16, 17, and 31 through 64 were compacted to at least 90 percent.

The remaining 2.5 feet of on-site clayey silt fill was constructed to the finish subgrade elevation within the excavation at Lot 35. The fill was generally constructed in 6-inch compacted lifts and inspected by our personnel.

The fill construction within Lots 43 through 54 was also completed to the finish subgrade elevation with the placement of a final 6-inch compacted lift of on-site clayey silt material. The lift was compacted to at least 90 percent.

Following the completion of the majority of the rough grading to the finish subgrade elevation, the proposed housepad area for each lot was excavated to a depth of approximately 2 feet below the finish subgrade

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elevation to remove the expansive on-site material. Imported non-expansive brown cinder sand material was used for replacement fill. The driveway areas for Lots 1 through 35 were also excavated for replacement fill. Following the completion of the housepad excavation, the bottom of the excavation was proofrolled with a sheepsfoot roller to detect soft spots and visually inspected by one of our engineers. Approximately 8-inch compacted lifts of brown cinder sand material were placed and compacted to at least 90 percent. The replacement fill for each lot was generally completed to the finish subgrade elevation.

During the excavation of the housepad area at Lot 33, tan cemented coralline sand was encountered at the southwest corner. Approximately 360 square feet of area was found to be underlain by cemented coralline sand at a depth of approximately 0.7 feet below the finished subgrade elevation. We recommended that the coralline material not be removed within this area. The remaining housepad area was excavated to 2 feet below the finish subgrade elevation within the clayey silt material.

Upon the request of KACOR Realty, a supplementary investigation was performed to determine the degree of expansiveness of the soil between Lots 18 through 33. During the excavation of the cut slope along the western boundary of the lots, tan coralline sand and gray-brown cinder sand were encountered along the cutslope. The results of our supplementary investigation as documented in our letter dated November 3, 1981 indicated that the soils encountered within the housepad areas generally possessed the expansive characteristics of those samples previously tested during the geotechnical investigation and on-going construction. The on-site non-expansive sand materials encountered along the cut slope were generally found to be limited to within 20 feet from the toe of the slope and not within the housepad areas.

The surcharge area within Lots 35, 36, and 37 was constructed to the finished subgrade elevation with the imported sand material. Approximately 2 feet of loose on-site material, below the finish subgrade elevation, was removed from the area and the bottom of the excavation proofrolled with a sheepsfoot roller prior to the construction of the replacement fill. To expedite construction, the contractor used the imported sand material for fill within the limits of the excavation.

During the construction of the housepad replacement fill of Lots 60, 61, and 62, the remaining 1.5 feet of fill along the west section was completed to the finished subgrade elevation with the placement of the imported brown cinder sand material.

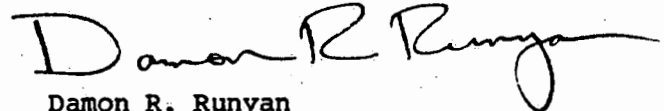
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Page Four

Based on our observations and results of our field density tests, it is our opinion that the earthwork construction for the areas documented by our correspondence to you for the Marina 10-B subdivision was performed in general accordance with the project specifications and our recommendations.

This concludes our geotechnical inspection and consultation services for this project. We appreciate the opportunity to perform this assignment for you. Should you have any questions regarding the content of this letter, please contact us.

Yours very truly,

DAMES & MOORE



Damon R. Runyan
Associate

DRR:GY:ljc03786-045(2727A)

Attachments: 1.1 - Plot Plan A, Mass Excavation and Fill, KACOR Marina 10-B
1.2 - Plot Plan B, Housepad Replacement Fill, KACOR Marina 10-B
2 - Summary of Field Density Tests, September 19, 1981 through
March 2, 1982 (10 Pages)

SUMMARY OF FIELD DENSITY TESTS

OWNER **KAYR REALTY INC.**JOB NO. **03786-045**JOB ENGINEER **JON SKYTTA**PAGE **2** OF **10**

TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
123	9/28/81	LOT 62	7.1	90	105	14	97	93	
124	"	LOT 48	7.3	90	105	11	105	100	
125	"	LOT 46	8.6	90	105	15	96	91	
126	"	LOT 31	10.5	90	105	16	98	93	
127	"	LOT 32	10.6	90	105	16	100	95	
128	"	LOT 33	11.0	90	105	16	95	90	
129	"	LOT 34	8.7	90	105	14	95	91	
130	9/29/81	LOT 60	6.4	90	105	26	83	79	FAILED
131	"	LOT 58	5.8	90	105	26	81	77	FAILED
132	"	LOT 56	7.2	90	105	22	91	87	REROLLED-OK
133	"	LOT 54	8.1	90	105	19	91	86	REROLLED-OK
134	"	LOT 52	8.7	90	105	15	96	92	
135	"	LOT 50	8.0	90	105	16	100	95	
136	"	LOT 48	7.8	90	105	16	91	87	REROLLED-OK
137	"	LOT 46	8.0	90	105	16	95	90	
138	"	LOT 60	6.4	90	105	15	93	88	RETEST OF 130-OK
139	"	LOT 58	5.8	90	105	15	99	94	RETEST OF 131-OK
140	"	LOT 44	6.1	90	105	15	95	91	
141	9/30/81	LOT 42	5.9	90	105	18	92	88	REROLLED-OK
142	"	LOT 40	5.3	90	105	16	92	88	REROLLED-OK
143	"	LOT 38	6.1	90	105	17	96	92	
144	"	LOT 16	12.2	90	105	17	100	96	
145	"	LOT 17	12.9	90	105	15	93	89	
146	"	LOT 64	7.9	90	105	16	96	91	
147	"	LOT 62	8.1	90	105	17	94	89	
148	10/02/81	LOT 44	6.7	90	105	16	93	89	

SUMMARY OF FIELD DENSITY TESTS

OWNER KADOR REALTY INC.

JOB NO. 03786-045

JOB ENGINEER JON SKYTТА

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TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
149	10/02/81	LOT 42	6.6	90	105	17	98	94	
150	"	LOT 40	6.1	90	105	19	87	83	FAILED
151	"	LOT 38	6.7	90	105	14	103	98	
152	"	LOT 63	7.2	90	105	16	96	91	
153	"	LOT 61	6.4	90	105	18	98	93	
154	"	LOT 40	6.1	90	105	17	92	88	RETEST OF 150-REROLLED OK
155	"	LOT 60	7.3	90	105	17	98	93	
156	"	LOT 59	6.4	90	105	14	94	90	
157	"	LOT 58	6.6	90	105	17	91	91	
158	10/05/81	LOT 57	5.7	90	105	15	99	94	
159	"	LOT 37	6.3	90	105	19	91	86	FAILED
160	"	LOT 36	5.9	90	105	15	97	92	
161	"	LOT 56	7.0	90	105	17	93	88	REROLLED-OK
162	"	LOT 54	8.0	90	105	18	89	84	FAILED
163	"	LOT 52	8.9	90	105	15	98	94	
164	"	LOT 37	6.8	90	105	13	102	98	RETEST OF 159-OK
165	10/06/81	LOT 50	8.3	90	105	13	100	96	
166	"	LOT 48	7.9	90	105	14	93	88	REROLLED-OK
167	"	LOT 46	8.3	90	105	15	98	93	
168	"	LOT 44	7.6	90	105	15	95	90	
169	"	LOT 42	6.8	90	105	17	93	89	
170	"	LOT 40	6.6	90	105	17	96	91	
171	"	LOT 38	7.7	90	105	16	90	86	FAILED
172	"	LOT 63	6.9	90	105	14	98	93	
173	"	LOT 61	6.9	90	105	13	97	92	
174	"	LOT 54	8.0	90	105	14	101	96	RETEST OF 162-OK

SUMMARY OF FIELD DENSITY TESTS

OWNER KACOR REALTY INC.

JOB NO. 03786-045

JOB ENGINEER JON SKITTA

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TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
175	10/06/81	LOT 55	6.2	90	105	15	95	91	
176	"	LOT 53	7.1	90	105	15	99	94	
177	"	LOT 51	7.6	90	105	14	91	87	FAILED
178	10/07/81	LOT 48	8.0	90	105	17	93	89	RETEST OF 166-OK
179	"	LOT 51	7.9	90	105	14	99	95	RETEST OF 177-OK
180	"	LOT 59	6.1	90	105	15	97	93	
181	"	LOT 57	6.5	90	105	16	88	84	FAILED
182	"	LOT 55	7.4	90	105	17	91	87	FAILED
183	"	LOT 53	8.4	90	105	17	93	89	
184	"	LOT 49	6.6	90	105	15	96	92	
185	"	LOT 47	7.3	90	105	16	94	90	
186	"	LOT 45	6.7	90	105	16	96	92	
187	10/08/81	LOT 43	6.1	90	105	15	97	92	
188	"	LOT 41	5.6	90	105	15	95	90	
189	"	LOT 42	7.3	90	105	14	101	96	
190	"	LOT 38	7.7	90	105	15	101	97	RETEST OF 171-OK
191	"	LOT 39	6.5	90	105	15	99	94	
192	"	LOT 49	7.5	90	105	15	95	90	
193	"	LOT 57	6.5	90	105	14	100	95	RETEST OF 181-OK
194	"	LOT 55	7.4	90	105	17	93	89	RETEST OF 182-OK
195	10/09/81	LOT 63	8.3	90	105	15	97	92	
196	"	LOT 61	7.8	90	105	14	100	95	
197	"	LOT 59	6.9	90	105	15	97	93	
198	"	LOT 57	6.5	90	105	15	96	91	
199	"	LOT 55	7.5	90	105	17	92	87	FAILED
200	"	LOT 51	8.1	90	105	18	90	86	FAILED

SUMMARY OF FIELD DENSITY TESTS

OWNER KAGOR REALTY INC.

JOB NO. 03786-045

JOB ENGINEER JON SKYTTA

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TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
201	10/09/81	LOT 53	8.6	90	105	16	93	88	REROLLED-OK
202	"	LOT 51	8.1	90	105	15	96	91	RETEST OF 200-OK
203	10/13/81	LOT 45	7.5	90	105	9	101	96	
204	"	LOT 43	6.7	90	105	13	99	94	
205	"	LOT 41	6.3	90	105	14	99	94	
206	"	LOT 39	6.3	90	105	15	97	92	
207	"	LOT 36	6.9	90	105	13	95	91	
208	"	LOT 34	8.8	90	105	14	99	94	
209	"	LOT 55	7.3	90	105	14	91	87	RETEST OF 199-FAILED
210	10/14/81	LOT 55	7.6	90	105	16	97	93	RETEST OF 209-OK
211	"	LOT 53	8.7	90	105	16	95	91	CHECK OF TEST 202
212	"	LOT 33	9.2	90	105	14	101	96	
213	"	LOT 32	9.1	90	105	16	94	90	
214	"	LOT 34	9.8	90	105	14	99	94	
215	"	LOT 37	7.0	90	105	21	95	91	
216	"	LOT 31	8.8	90	105	15	95	90	
217	10/15/81	LOT 51	8.7	90	105	15	96	92	
218	"	LOT 45	8.2	90	105	15	97	93	
219	"	LOT 43	7.3	90	105	19	95	90	
220	"	LOT 41	6.8	90	105	17	100	96	
221	"	LOT 39	6.9	90	105	17	95	90	
222	"	LOT 34	9.5	90	105	14	95	90	
223	"	LOT 33	10.0	90	105	19	99	95	
224	"	LOT 32	9.9	90	105	18	99	94	
225	"	LOT 31	10.0	90	105	17	102	97	
226	"	LOT 30	9.9	90	105	18	92	88	REROLLED-OK

SUMMARY OF FIELD DENSITY TESTS

OWNER KACOR REALTY INC.

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TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
227	10/15/81	LOT 29	10.4	90	105	18	99	94	
228	"	LOT 28	10.4	90	105	18	98	93	
229	10/16/81	LOT 47	7.9	90	105	14	99	94	
230	"	LOT 47	8.1	90	105	14	99	94	
231	"	LOT 37	7.4	90	105	16	93	89	
232	"	LOT 36	7.6	90	105	15	104	99	
233	"	LOT 34	9.9	90	105	11	105	100	
234	"	LOT 33	10.0	90	105	17	94	90	
235	10/19/81	LOT 32	10.1	90	105	16	84	80	FAILED
236	"	LOT 31	10.6	90	105	16	95	91	
237	"	LOT 30	11.0	90	105	14	105	100	
238	"	LOT 32	10.1	90	105	17	85	81	RETEST OF 235 - FAILED
239	"	LOT 29	11.4	90	105	15	102	97	
240	"	LOT 28	10.3	90	105	15	97	93	
241	10/20/81	LOT 32	10.5	90	105	15	102	97	RETEST OF 238 - OK
242	"	LOT 28	11.3	90	105	14	97	93	
243	"	LOT 27	10.5	90	105	14	105	100	
244	10/22/81	LOT 26	11.5	90	105	15	98	94	
245	"	LOT 25	11.6	90	105	17	95	90	
246	"	LOT 24	10.7	90	105	16	96	91	
247	"	LOT 23	11.7	90	105	16	104	99	
248	10/26/81	LOT 27	12.3	90	105	15	96	91	
249	"	LOT 26	12.1	90	105	17	95	90	
250	"	LOT 25	12.2	90	105	18	101	96	
251	"	LOT 22	11.7	90	105	17	91	87	FAILED
252	10/30/81	LOT 22	11.7	90	105	17	98	94	RETEST OF 251 - OK

SUMMARY OF FIELD DENSITY TESTS

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TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
253	10/30/81	LOT 24	12.2	90	105	18	96	91	
254	"	LOT 25	12.6	90	105	18	100	95	
255	"	LOT 26	12.5	90	105	19	96	91	
256	11/06/81	LOT 34	11.0	90	105	16	109	100	
257	"	LOT 33	11.3	90	105	16	99	94	
258	"	LOT 32	11.2	90	105	14	97	93	
259	11/09/81	LOT 31	11.0	90	105	17	98	93	
260	"	LOT 30	11.2	90	105	17	90	86	FAILED
261	"	LOT 29	11.6	90	105	16	100	95	
262	"	LOT 28	11.8	90	105	15	100	95	
263	"	LOT 27	12.6	90	105	15	99	95	
264	"	LOT 26	12.4	90	105	17	99	94	
265	11/10/81	LOT 23	13.4	90	105	18	93	89	
266	"	LOT 22	12.4	90	105	17	96	91	
267	"	LOT 24	13.2	90	105	22	86	82	FAILED
268	"	LOT 21	11.8	90	105	18	95	91	
269	"	LOT 20	11.6	90	105	16	96	91	
270	"	LOT 30	11.2	90	105	19	95	90	RETEST OF 260 - OK
271	"	LOT 19	12.8	90	105	20	97	93	
272	"	LOT 18	12.3	90	105	19	95	90	
273	11/13/81	LOT 17	11.9	90	105	14	96	92	
274	"	LOT 20	12.9	90	105	16	99	94	
275	"	LOT 21	11.8	90	105	18	99	95	
276	"	LOT 13	17.5	90	105	11	85	81	FAILED
277	"	LOT 19	13.0	90	105	15	97	93	
278	"	LOT 18	13.2	90	105	18	99	94	

SUMMARY OF FIELD DENSITY TESTS

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TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
279	12/02/81	LOT 8	11.0	90	105	10	104	99	
280	"	LOT 9	10.5	90	105	10	101	96	
281	"	LOT 10	10.6	90	105	12	106	100	
282	"	LOT 10	11.0	90	105	9	104	99	
283	"	LOT 11	10.6	90	105	12	102	97	
284	"	LOT 11	10.1	90	105	12	102	97	
285	"	LOT 14	17.5	90	105	16	108	100	
286	"	LOT 13	17.8	90	105	19	105	99	RETEST OF 276-OK
287	"	LOT 2	18.8	90	105	11	111	100	
288	"	LOT 5	26.2	90	105	11	104	99	
289	"	LOT 6	22.7	90	105	11	106	100	
290	"	LOT 16	11.1	90	105	12	98	93	
291	12/03/81	LOT 16	12.1	90	105	10	107	100	
292	"	LOT 15	18.0	90	105	12	99	94	
293	"	LOT 14	19.3	90	105	12	104	99	
294	"	LOT 14	18.8	90	105	12	105	100	
295	"	LOT 17	12.9	90	105	15	94	89	
296	"	LOT 17	12.5	90	105	22	95	90	
297	"	LOT 18	12.8	90	105	17	103	98	
298	"	LOT 19	12.9	90	105	16	100	95	
299	"	LOT 20	12.7	90	105	16	109	100	
300	"	LOT 21	12.7	90	105	18	102	97	
301	12/07/81	LOT 7	16.9	90	105	11	99	94	
302	"	LOT 15	16.6	90	105	12	101	97	
303	"	LOT 12	14.4	90	105	12	102	97	
304	"	LOT 13	18.8	90	105	13	103	98	

SUMMARY OF FIELD DENSITY TESTS

OWNER KACOR REALTY INC.

JOB NO. 03786-045

JOB ENGINEER W. SAKAGUCHI

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TEST NO.	DATE	TEST LOCATION	ELEV. FT.	% COMP. REQ'D	MAX. DRY DENSITY P.C.F.	FILL MOISTURE %	TEST DRY DENSITY P.C.F.	% MAX. DRY DENSITY	REMARKS
305	12/07/81	LOT 8	11.5	90	105	13	104	99	
306	"	LOT 9	11.6	90	105	13	106	100	
307	"	LOT 10	11.6	90	105	12	107	100	
308	"	LOT 11	11.2	90	105	11	105	100	
309	12/09/81	LOT 15	19.6	90	105	13	101	96	
310	"	LOT 13	19.3	90	105	14	106	100	
311	"	LOT 12	15.9	90	105	12	105	100	
312	"	LOT 12	15.4	90	105	14	104	99	
313	"	LOT 9	11.4	90	105	14	108	100	
314	"	LOT 8	12.5	90	105	13	104	99	
315	"	LOT 7	18.0	90	105	15	107	100	
316	"	LOT 7	17.4	90	105	12	109	100	
317	"	LOT 6	24.0	90	105	14	106	100	
318	"	LOT 6	23.5	90	105	14	95	91	
319	"	LOT 5	27.3	90	105	14	110	100	
320	"	LOT 5	26.8	90	105	12	100	96	
321	"	LOT 1	23.0	90	105	16	101	96	
322	"	LOT 16	12.7	90	105	14	103	98	
323	"	LOT 24	12.2	90	105	18	107	100	RETEST OF 267
324	"	LOT 32	10.7	90	105	18	100	95	
325	02/05/82	LOT 1	22.5	90	105	20	106	100	
326	"	LOT 2	20.0	90	105	16	102	97	
327	"	LOT 3	13.1	90	105	17	106	100	
328	"	LOT 35	8.0	90	105	19	102	97	
329	"	LOT 35	8.7	90	105	20	101	96	
330	02/10/82	LOT 1	23.5	90	105	17	112	100	

OWNER <i>KACOR REALTY, INC</i>	JOB NO. <i>03786-005</i>
JOB ENGINEER <i>GARY YAMAGATA</i>	PAGE <i>10</i> OF <i>10</i>

DAMES & MOORE

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SR-70

201-21-0411

Date: September 8, 1982

TO: Kacor Realty, Inc.
7120 Kalanianaʻole Highway
Honolulu, Hawaii 96825

Gentlemen:

Re: MARINA 10-B, TMK: 3-9-08: 13

We are sending you herewith ☒

Under separate cover

No. of Copies	Description
1	Approved Grading Permit No. 175


For:

☒ Your information and use
☐ Review and comment
☐ As requested

☐ Approval
☐ Signature

Remarks:

The date of our approval, September 1, 1982, is the closing date of the permit. The bond filed with the City for the grading work shall remain in effect for a period of one year after the closing date; therefore, it will be returned to you on September 1, 1983.


MICHAEL J. CHUN
For, Director and Chief Engineer

JL:pto
Attach.
cc: VTN-Pacific
Federal Insurance Company
bcc: Service Engineer w/original

PERMIT CLOSED

PERMIT NO. 175

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

DEPT 24 ENG 12

03/12/82 T90011

TRAN 005533

RCT# 932621 C#1

\$7.50

\$7.50

To the Director and Chief Engineer
Department of Public Works
City and County of Honolulu

APPLICATION AND PERMIT FOR

GRADING

Application is hereby made to do grading work in conformity with Chapter 23, R. O. 1978, As Amended, as follows:

TAX MAP KEY					ENG. SOILS REPORT	EST. QUANTITY	PERMIT FEE	FEE RECEIVED
ZONE	SEC.	PLAT	PAR.	LOT	DATE FILED:	EXCAV. CU.YD.		
3	9	08	13			grassing only	\$ 7 50	\$ 7 50
						FILL CU.YD.	\$	BY: <u>CP</u>
								DATE: 3-12-82

Located at Marina 10B, Maunaloa

☒ Temporary Erosion Control

Procedures on File w/G.P. 9629

Lot Area 14.2 Sq. Ft. 14.2 Acres

☒ Bond on file w/GP 9629 (Fed. Ins. Co.)

Description of Soil Fill Material

☒ Dept. of Public Works to Inspect

Existing Ground grassing only

☐ Bldg. Dept. to Inspect

Estimated Starting Date March 1982 Estimated Completion Date June 15 1982

Remarks/Purpose of Work: Grassing only; grading of site. Continuat'n.
of G.P. No. 9629

Owner KACOR REALTY CO. INC. Address P.O. BOX 25007 Phone 395-2331

Engineer VTN-PACIFIC Address 1164 Bishop ST., #906 Phone 521-5651

Contractor OAHU CONSTRUCTION Address 3059 LALENA ST. Phone 836-2981

Date of Application March 12 1982 Permittee Michael M. Monta

Application Reviewed By SERVICE ENGINEER Date 19

To the Applicant:

Permission is hereby given to do the above work according to the conditions hereon and according to the approved plans and specifications pertaining thereto, subject to compliance with Chapter 23, R. O. 1978, As Amended.

Remarks:

Date March 12 1982

Issued By:

Contractor shall notify this office two working days before commencing any work and arrange for necessary inspectional services.

Cheryl P. Ayana
FOR DIRECTOR AND CHIEF ENGINEER, DEPT. OF PUBLIC WORKS

THIS PERMIT WILL EXPIRE UNLESS WORK IS STARTED WITHIN 90 DAYS FROM DATE OF ISSUE; OR IF WORK IS SUSPENDED OR ABANDONED FOR 60 DAYS OR MORE AFTER WORK IS BEGUN; OR ONE YEAR FROM DATE OF ISSUE

I hereby certify that all work as requested above has been completed in conformity with Chapter 23, R. O. 1978, As Amended and in accordance with the approved plans and specifications.

Date Aug. 13, 1982

Permittee Michael M. Monta

Date September 1, 1982

Approved By: John C. J. Lee

Final Soils Report Date Filed 8/25/82

19

PERMIT CLOSED

18241085

RECEIVED
DIV. OF ENGINEERING
AUG 25 4 24 PM '82
VTN PACIFIC, INC.

1164 Bishop Street, Suite 906
Honolulu, Hawaii 96813
August 25, 1982

Telephone: (808) 521-5651

Mr. Michael Chun
Director and Chief Engineer
Department of Public Works
City and County of Honolulu
Honolulu, Hawaii 96813

Attention: Division of Engineering

Subject: Marina 10B
TMK: 3-9-08:13(por)

Gentlemen:

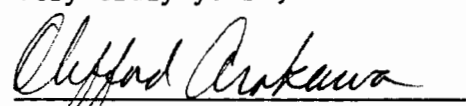
This is to certify that the grading for the subject project has been completed in accordance with the lines and grades shown on the attached as-built plans. Please note that the slope bench in lots 18 to 23 shown on the original grading plans was deleted. The as-built drawings also do not include the minor grading required for the house pads and individual lot swales.

We are also transmitting at this time a copy of the final soils report prepared by Dames and Moore consisting of the following:

- a. Dames and Moore Letter No. 1 dated 5/28/81
- b. Dames and Moore Letter No. 2 dated 10/28/81
- c. Dames and Moore Letter No. 3 dated 3/9/82

We trust that this meets with your satisfaction and approval. If there are any additional questions, please feel free to call us at any time.

Very truly yours,


Clifford Arakawa
Project Manager

CA:db
Enclosures