LOS ANGELES COUNTY SURVEYOR

1292

INSTRUCTIONS TO FIELD PARTY
for
MONTHLY PIER SOUNDINGS

In order to standardize the operations of taking monthly soundings from piers the following observations will be recorded by field parties engaged in this work:

1. Obtain elevations of bottom at designated points on pier.

2. Obtain wind direction by compass needle and estimate velocity. (Verify at weather station if conveniently located).

3. Obtain wave direction by compass needle. (Longitudinal axis of crest)

4. Obtain wave speed by measured course and stop watch.

5. Obtain average wave height (trough to crest) by observations on sounding cable.

6. Obtain littoral drift, direction and speed by corner-less cubes, stop watch and compass needle. (Exact method to be established by experiment and attached hereto).

7. Record Date and Hour.

E.T. MANKEY, ASST.LOCATING ENGINEER

By: H.F. Evans

FIELD OBSERVATIONS FOR OBTAINING SPEED & DIRECTION OF LITTORAL DRIFT

1. Littoral drift observations are to be made in conjunction with pier soundings.

2. Data to be obtained is to be based on actions of weighted cornerless cubes with floats attached and stop watch.

3. METHOD:

   a. Select a station on the Beach Control Line each side of pier, sufficiently distant from the pier that drift will not carry cube under pier before observation can be completed.

   b. From a point at the water edge approximately 90° from the selected station throw the cube and float into the surf ~~50~~ 25 to ~~75~~ 50 feet, at the same time starting the stop watch.

   c. Follow the float closely by eye to make certain that it does not become fouled by kelp or other drift. If the cube becomes fouled remove from the water and start the test again.

   d. Allow the cube to remain in the surf long enough to determine the direction and speed of the drift (10 to 15 minutes is ample) and then remove, taking the watch reading at the same time.

   e. Measure and record the distance along the beach from the starting point to point of removal and record whether the travel was upcoast (northerly) or down coast (southerly) together with the elapsed time.

   f. Repeat the same test on the opposite side of the pier.

   g. Record the date and time of day of each test.

NOTE: [illegible]

Notes Ck'd by	Survey of
Map No.	W. O. Tape No. St'd °F
Office Work	Surveyed by
Checked	Notes Date
Date	Indexed

F. B. 1292 PG. 1

PIER SURVEYS & SOUNDING DATA
Continued From F.B. 1291.

Taken At:-

SEAL BEACH	See Pg. 5 & Cont'd			
BELMONT-E. LONG B.	"	" 59 +	"	"
REDONDO-MONSTAD	"	" 87 +	"	"
HERMOSA	"	" 115 +	"	"
MANHATTAN	"	" 143 +	"	"
OCEAN PARK	"	" 171 +	"	"
SANTA MONICA	"	" 199 +	"	"
MALIBU SPORT FISHING PIER	"	" 227 +	"	"

Beginning of Sounding Period For This Book - - - July 6, 1948.

End of Sounding Period For This Book - - - -

J.N. 8429.

G.W. Kleineck
J.W.S. Moore.
R. Mitchell.
A.S. Stangeland.
H. Raphael.
T. Larson.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B 1292 PG. 2

RETURN TO
LOS ANGELES COUNTY SURVEYOR
7DO HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

F. B. 1292 PG. 3

Notes Ck'd by	Survey of
Map No.	W. O. Tape No. St'd °F
Office Work	Surveyed by
Checked	Notes Date
Date	Indexed

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B. 1292 PG. 4

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Notes Ck'd by	Survey of Pier Soundings
Map No.	W. O. 8429 Tape No. St'd °F
Office Work	Surveyed by G. W. Hemeck
Checked	Notes Date
Date	Indexed A. C. Johnson 7-12-48

F. B. 1292 PG. 5

~ SEAL BEACH PIER ~

SURVEY & SOUNDING DATA.
July 7, 1948 TO

~ INDEX ~

FOR: -
SKETCH + SURVEY See F.B. 1216 - 5.
PROFILE LEVELS " " " - 33.
BEGINNING SOUNDINGS & ETC.,
THIS BOOK See Pg. 7.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B. 1292 PG. 6

RETURN TO
LOS ANGELES COUNTY SURVEYOR
7DO HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1292-7

X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Seal Beach

Notes Chkd. ____ Checked ____ Survey by Kleineck Notes T.L.-G.K. Date 7-7-'48

Date ____ Date ____ Map No. ____ Indexed A. O. Johnson Date ____

~ PIER SOUNDINGS ~

"SEAL BEACH"

Elevations are based on M.L.L.W.

July 7, 1948.

AVERAGE WAVE HT. = 1.3 FT.

Notes Cont'd on pg. 8

STATION	B.S.	Elev. + Sta.	F.S. (−)	ELEV. Bottom
Sta. No. 1		233	11.7	+116
2		232	11.9	+113
3		232	12.0	+112
4		232	12.6	+106
5		232	12.4	+108
6		233	11.5	+118
7		232	11.4	+118
8		233	11.2	+121
9		233	12.2	+111
10		233	13.9	+94
11		233	15.3	+80
12		233	16.7	+66
13		233	17.8	+55
14		233	19.2	+41
15		232	20.6	+26
16		233	21.2	+21
17		233	21.5	+18
18		233	22.3	+10
19		232	23.0	+02
20		232	23.2	+00
21		233	23.9	−06

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev. Sta.	F. S.	ELEV. Bottom	
Sta. No. 22		233	24.9	-16	Notes Cont'd from pg. 7
23		233	25.8	-25	
24		233	28.2	-49	
25		233	29.2	-59	
26		233	29.5	-62	
27		233	30.0	-67	
28		232	30.8	-76	
29		233	31.0	-77	
30		233	31.8	-85	
31		233	32.5	-92	
32		233	33.1	-98	
33		233	34.1	-108	
34		233	35.4	-121	
35		234	35.6	-122	
36		233	35.9	-126	
37		233	36.8	-135	
38		233	37.0	-137	
39		233	37.3	-140	
40		233	37.1	-138	
41		233	37.2	-139	
42		233	37.8	-145	Notes Cont'd on pg. 9

F.B. 1292 - 8
Job No. 8429 Division No. Notes Red. Plotted No. Profile
Survey of Pier Soundings - Seal Beach Date Date X-Sec.
Survey by G. Kleinau Notes T.L.-G.K. 7-7-48 Notes Chkd. Checked No.
Indexed L. C. Johnson Date Date Date

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev.-Sta.	F. S. (-)	ELEV. Bottom		
Sta. No. 43		233	38.0	-147	Notes Cont'd from pg. 8	
44		233	38.7	-154		
45		233	38.9	-156		
46		233	38.9	-156		
47		233	37.5	-142		

Element	Time	Direction	Velocity	Height
WIND	9:15 AM.	S. 12° W.	3 miles per hr.	—
WAVES	"	S. 71° E.	10-11 " " "	1.3'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per min.	Tide
400' Up Coast	10 AM.	200' in 3½ mins.	Up Coast	57'	High flood
400' Down "	9:45 "	150' in 4¾ "	" "	32'	" "
					3.9 High.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8424 Division No. ____ F.B. 1292-9
Date ____ Date ____ Survey of Pier Soundings - Seal Beach
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Flemack Notes Jr. - G.K. Date 7-7-'48
Date ____ Date ____ Map No. ____ Indexed ____ Date ____

F.B. 1292-10

Job No. _____ Division No. _____ Notes Red. _____ Plotted _____

Survey of _____ Date _____ Date _____

Survey by _____ Notes _____ Notes Chkd. _____ Checked _____

Indexed _____ Date _____ Date _____ Date _____

Profile No. _____

X-Sec. No. _____

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

STATION	B. S.	H. I.	F. S.	ELEV.	

Profile No. _____ Notes Red. _____ Plotted _____ Job No. 8429 Division No. _____ F.B. 1297 PG. 11

X-Sec. No. _____ Date _____ Date _____ Survey of Pier Soundings - Seal Beach

Notes Chkd. _____ Checked _____ Survey by Mleinack Notes A.S. - G.K. Date 8-3-'48

Date _____ Date _____ Map No. _____ Indexed Johnson Date AUG 10 '48

~ PIER SOUNDINGS ~
"SEAL BEACH"
Elevations are based on M.L.L.W.
Aug. 3-1948.

Notes Contd on pg. 12

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

FORM 307 10M 10-46

STATION	B.S.	Elev. - Sta	F.S.	ELEV. Bottom
[illegible]		233	11.7	+116
[illegible]		232	11.8	+114
[illegible]		232	11.9	+113
[illegible]		232	12.5	+107
[illegible]		232	12.2	+110
[illegible]		233	11.5	+118
[illegible]		232	11.1	+121
[illegible]		233	11.7	+116
[illegible]		233	13.9	+94
[illegible]		233	15.3	+80
[illegible]		233	16.4	+69
[illegible]		233	17.5	+58
[illegible]		233	18.5	+48
[illegible]		233	19.9	+34
[illegible]		232	21.0	+22
[illegible]		233	22.1	+12
[illegible]		233	22.2	+11
[illegible]		233	24.0	-07
[illegible]		232	24.0	-08
[illegible]		232	24.2	-10
[illegible]		233	25.3	-20

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. Sta.	F. S. (−)	~~ELEV.~~ Bottom		
Sta. No. 22		233	26.1	−28	Average Wave Ht. = 02.0'	
23		233	27.0	−37	Notes Cont'd from pg. 11	
24		233	29.1	−58		
25		233	30.0	−67		
26		233	29.9	−66		
27		233	31.0	−77		
28		232	31.8	−86		
29		233	31.8	−85		
30		233	32.2	−89		
31		233	33.1	−98		
32		233	34.0	−107		
[illegible]		233	34.5	−112		
[illegible]		233	34.9	−116		
[illegible]		234	35.8	−124		
[illegible]		233	36.1	−128		
[illegible]		233	36.8	−135		
[illegible]		233	37.0	−137		
[illegible]		233	37.2	−139		
40		233	37.0	−137		
41		233	37.5	−142		
42		233	37.8	−145		

Notes Cont'd on pg. 13.

F.B. 1297 PG. 12

Job No. 8429 Division No. Notes Red. Plotted No. Profile

Survey of Pier Soundings - Seal Beach Date Date X-Sec.

Survey by G. Klemeck Notes A.S.-G.K. 8-3-48 Notes Chkd. Checked No.

Indexed A. C. Johnson Date Date Date

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta.	F. S. (−)	ELEV. Bottom		
[illegible]		233	37.7	−144	Notes Cont'd from pg. 12.	
44		233	38.2	−149		
45		233	38.8	−155		
46		233	39.0	−157		
47		233	37.6	−143		

Element	✓ Time	✓ Direction	✓ Velocity	✓ Height
WIND	9:30 A.M.	S. 14° W.	3-4 miles per hr.	—
WAVES	" "	S. 72° E	10 " " "	2.0'

— LITTORAL DRIFT —

Observation At.	✓ Time	✓ Drift	✓ Direction	Feet per min.	✓ Tide.
400' Up Coast.	10:30 A.M.	200' in 1½ min's.	Up coast	133'	High ebb
400' Down " .	10 "	200' in 2¾ " .	" "	73'	" "

3.5 Falling.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1298 PG. 13
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Seal Beach
Notes Chkd. ____ Checked ____ Survey by Meinecke Notes A.S.-H.H. Date 8-3-'48
Date ____ Date ____ Map No. ____ Indexed Johnson Date AUG 10 '48

F.B. 1292 PG. 14

Job No. _____ Division No. _____ Notes Red. _____ Plotted _____ Profile

Survey of _____ Date _____ Date _____ No. _____

Survey by _____ Notes _____ Notes Chkd _____ Checked _____ X-Sec.

Indexed _____ Date _____ Date _____ Date _____ No. _____

STATION	B. S.	H. I.	F. S.	ELEV.
Note: No pier soundings taken during the latter part of August or the first part of Sept. 1948. G.W.H.				

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. Sta.	~~[illegible]~~ (−)	~~ELEV.~~ Bottom		
Sta. 1		233	11.6	+117		
2		232	11.7	+115	AVERAGE WAVE HGT. = 1.0	
3		232	11.8	+114		
4		232	12.4	+108		
5		232	12.1	+111		
6		233	11.3	+120		
7		232	11.0	+122		
8		233	12.1	+112		
9		233	13.0	+103		
10		233	14.4	+89		
11		233	15.4	+79		
12		233	16.5	+68		
13		233	17.5	+58		
14		233	18.9	+44		
15		232	20.9	+23		
16		233	21.9	+14		
17		233	22.0	+13		
18		233	23.8	−05		
19		232	23.8	−06		
20		232	24.1	−09		
21		233	25.0	−17		

— Rise Soundings —
"Seal Beach"
Elevations based on M.L.L.W.
Sept. 27, 1948.

Notes Cont'd on pg. 16.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. V
Date ____ Date ____ Survey of Pier Soundings - Seal Beach
X-Sec. No. ____ Notes Chkd ____ Checked ____ Survey by Kleinecke Notes H.H.R. Date 9-27-48
Date ____ Date ____ Map No. ____ Indexed Johnson Date 9-30-48

F.B. 1129 PG. 15

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. - Sta	(—) F. S.	ELEV. Bottom		
22		233	26.8	-[illegible]	Notes Cont'd from pg. 15	
23		233	27.8	-[illegible]		
24		233	28.5	-5[illegible]		
25		233	29.9	-[illegible]		
26		233	30.0	-6[illegible]		
27		233	31.0	-[illegible]		
28		232	31.4	-[illegible]		
29		233	32.0	-8[illegible]		
30		233	32.1	-8[illegible]		
31		233	33.5	-1[illegible]		
32		233	34.0	-1[illegible]		
33		233	34.1	-1[illegible]		
34		233	35.9	-[illegible]		
35		234	35.8	-1[illegible]		
36		233	36.0	-1[illegible]		
37		233	36.7	-1[illegible]		
38		233	37.0	-1[illegible]		
39		233	37.1	-1[illegible]		
40		233	36.9	-1[illegible]		
41		233	37.1	-1[illegible]		
42		233	37.5	-1[illegible]		

Notes cont'd on pg. 17

F.B. 129 PG. 16

Profile

Survey of Pier Soundings - Seal Beach Job No. 8V29 Division No. ✓ Notes Red. Plotted No.

Survey by Kleinecke Notes HHE - 9-27-48 Date Date X-Sec.

Indexed A. C. Johnson Date Notes Chkd. Checked No.

Date Date

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev.-Sta.	(—) F. S.	ELEV. Bottom		
43		233	37.6	-143	Notes Cont'd from pg. 16.	
44		233	38.0	-147		
45		233	38.9	-156		
46		233	38.9	-156		
47		233	37.6	-143		

Element	Time	Direction	Velocity	Height
WIND	10:15 A.M.	S 11° W.	3 miles per hr.	—
WAVES	" "	S 68° E.	12 " " "	1.0'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per min.	Tide
400' Up Coast	11 A.M.	150' in 3¾ mins.	Up Coast	40'	Low.
400' Down "	10:15 "	170' in 12 "	" "	14'	"
					(3.3 Rising)

Profile Notes Red ____ Plotted ____ Job No. 8424 Division No. ✓ F.B. 1297 PG. 17
No. ____ Date ____ Date ____ Survey of Flor Sounding - Seal Beach.
X-Sec. Notes Chkd ____ Checked ____ Survey by Kleinek Notes H.H.K. Date 9/27/48
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

F.B. 27 PG. 18

Job No. _____ Division No. _____ Notes Red. _____ Plotted _____

Profile No. _____

Survey of _____ Date _____ Date _____

X-Sec.

Survey by _____ Notes _____ Notes Chkd. _____ Checked _____

Indexed _____ Date _____ Date _____ Date _____ No. _____

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

STATION	B. S.	H. I.	F. S.	ELEV.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sq.	F. S.	ELEV.		
Sta. [illegible]		233	11 5	+11 8		
2		232	11 6	+11 6		
3		232	11 9	+11 3		
4		232	12 4	+10 8		
5		232	12 1	+11 1		
6		233	11 1	+12 2		
7		232	11 0	+12 2		
8		233	11 4	+11 9		
9		233	12 [illegible]	+11 3		
10		232	13 [illegible]	+10 1		
11		[illegible]	14 7	+8 [illegible]		
12		[illegible]	15 9	+[illegible]		
13		[illegible]	17 1	+6 7		
14		[illegible]	18 9	+4 4		
15		232	20 [illegible]	+2 6		
16		233	22 3	+1 3	Average [illegible] 0.8'	
17		233	22 1	+1 2		
18		233	23 8	−0 5		
19		232	24 [illegible]	−1 4		
20		[illegible]	24 9	−1 7		
21		[illegible]	25 6	−2 3		

Notes contd on pg 20

"[illegible]"

Profile No. ____ Notes Red ____ Plotted ____ Job No. 5428 Division No. 5

X-Sec. No. ____ Date ____ Date ____ Survey of [illegible] Beach Pa

Notes Chkd ____ Checked ____ Survey by [illegible] Notes [illegible] Date [illegible]

Date ____ Date ____ Map No. ____ Indexed [illegible] Date NOV 23 '48

F.B. 1/4 Pg. 19

F.B. [illegible] PG. 20

Job No. 844 Division No. ______ Notes Red. ______ Plotted ______ Profile No. ______

Survey of [illegible] Date ______ Date ______ X-Sec.

Survey by [illegible] Notes [illegible] Notes Chkd. ______ Checked ______

Indexed [illegible] Date ______ Date ______ Date ______ No. ______

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	
22		233	26 7	-[illegible]	Notes [illegible] from pg. 19
23		233	28 3	-[illegible]	
24		233	29 6	-[illegible]	
25		233	30 1	-[illegible]	
26		233	30 6	-[illegible]	
27		233	31 3	-[illegible]	
28		232	31 [illegible]	-[illegible]	
29		232	32 0	-[illegible]	
30		232	33 1	-[illegible]	
31		232	33 6	-[illegible]	
32		232	34 3	-[illegible]	
33		232	34 7	-[illegible]	
34		232	34 [illegible]	-[illegible]	
35		232	35 0	-11[illegible]	
36		232	35 4	-[illegible]	
37		232	36 0	-12 7	
38		232	36 9	-12[illegible]	
39		232	36 9	-1[illegible]	
40		232	36 9	-13[illegible]	
41		232	37 0	-13[illegible]	
42		232	37 2	-13[illegible]	

Notes [illegible] on pg. 21

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
43		[illegible]	37 5	[illegible]	Notes Cont'd from pg 20.	
44		[illegible]	37 8	[illegible]		
45		[illegible]	38 1	[illegible]		
46		[illegible]	38 9	[illegible]		
47		[illegible]	37 8	[illegible]		

Element	Time	Direction	Velocity	Height
WIND	10 A.M.	N. 13° E.	2 miles per hr.	—
[illegible]	"	S. 45° E.	13-14 " " "	0.8'

LITTORAL DRIFT

Observation At	Time	Drift	Direction	Feet per min.	Tide
400' [illegible]	11 A.M.	150' in 7½ mins	[illegible]	20'	High ebb
400' [illegible]	10:30 A.M.	200' in 5	" " "	40'	" "
					(5.0 - Falling)

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. [illegible] Division No. ____
X-Sec. Notes Chkd ____ Checked ____ Survey of [illegible] Survey by [illegible] Notes [illegible] Date [illegible]
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

F.B. [illegible] PG. 21

F.B. 312 PG. 22

Job No. _____ Division No. _____ Notes Red. _____ Plotted _____

Profile No. _____

Survey of _____ Date _____ Date _____

X-Sec.

Survey by _____ Notes _____ Notes Chkd. _____ Checked _____

Indexed _____ Date _____ Date _____ Date _____ No. _____

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

STATION	B. S.	H. I.	F. S.	ELEV.

Notes Ck'd by	Survey of Pier Soundings
Map No.	W. O. 8429 Tape No. St'd. °F
Office Work	Surveyed by G.W. Meinecke
Checked	Notes Date
Date	Indexed A. C. Johnson 7-12-48

F. B. 1292 PG. 59

BELMONT PIER - E. LONG BEACH.

Survey & Sounding Data
July 7, 1948 TO

~ INDEX ~

For:-
Sketch & Survey See F.B. 1216 - 9.
Profile Levels " " " - 83.
Beginning Soundings & Etc.
- This Book See Pg. 61.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B 1292 PG. 60

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

Profile No.____ X-Sec. No.____ Notes Red.____ Date____ Notes Chkd.____ Date____ Plotted____ Date____ Checked____ Date____ Job No. 5239 Division No.____ Survey of Belmont Shore - Belmont Survey by Hermach Notes Indexed G. Johnson Map No.____ Date 7-7-48

F.B. 1293 pg. 61

STATION	B. S.	~~H.I.~~ Elev. - Sta.	F. S. (−)	ELEV. Bottom		
Sta. No. 1		232	11.4	+118	Average Wave Ht. = 0.8'	
2		232	11.5	+117		
3		231	12.8	+103		
4		232	13.0	+102		
5		232	13.5	+97		
6		232	13.6	+96		
7		231	11.8	+113		
8		231	13.0	+101		
9		231	14.3	+88		
10		231	15.2	+79		
11		231	16.0	+71		
12		232	16.8	+64		
13		231	17.4	+57		
14		232	18.0	+52		
15		232	18.9	+43		
16		232	19.6	+36		
17		232	20.5	+27		
18		232	21.5	+17		
19		231	22.8	+03		
20		232	24.0	−08		
21		231	24.7	−16	Note Cont'd on Pg 62	

~ RIDE SOUNDINGS ~
"BELMONT - E. LONG BEACH"
ELEVATIONS ARE BASED ON DATUM.
JULY 7, 1948.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. - Sta.	F. S. (-)	ELEV. Bottom		
Sta. No. 22		232	26.3	-31	Notes Cont'd from pg. 61	
23		232	28.0	-48		
24		232	29.1	-59		
25		232	31.0	-78		
26		232	33.1	-99		
27		232	34.9	-117		
28		232	36.1	-129		
29		233	38.1	-148		
30		232	38.9	-157		
31		231	40.0	-169		
32		230	40.1	-171		
33		230	41.3	-183		

Element	Time	Direction	Velocity	Height
WIND	10:30 AM	S 11° W	3 miles per hr.	—
WAVES	" "	S. 65° E.	6 " " "	0.8'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Tide
400' Up Coast	11 AM	None	—	High.
400' Down "	10:45 AM	"	—	" (3.9 - High)

F.E. 1292-62 Job No. 8424 Division No. Notes Red. Plotted Profile
Survey of Fire Soundings - Belmont Date Date No.
Survey by G. Meinecke Notes A.S.-G.K. 7-7-48 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date Date No.

Profile No. _____ Notes Red. _____ Plotted _____ Job No. 8429 Division No. _____ F.B/129 PG. 63

X-Sec. No. _____ Date _____ Date _____ Survey of Pier Soundings – Belmont.

Notes Chkd. _____ Checked _____ Survey by Kleinack Notes H.R.-GK Date 8-3-48

Date _____ Date _____ Map No. _____ Indexed Johnson Date AUG 10 '48

~PIER SOUNDINGS~

"BELMONT – E. LONG BEACH"

Elevations are based on M.L.L.W.

Aug. 3, 1948.

Note Contd on pg 64

STATION	B. S.	Elev. Sta	F.S. (–)	ELEV. Bottom	
[illegible]		232	11.3	+119	Average [illegible]
2		232	11.4	+118	
3		231	12.5	+106	
4		232	13.0	+102	
5		232	13.5	+97	
6		232	13.1	+101	
7		231	11.9	+112	
8		231	12.9	+102	
9		231	14.1	+90	
10		231	15.1	+80	
11		231	15.9	+72	
12		232	16.6	+66	
13		231	17.1	+60	
14		232	18.0	+52	
15		232	18.7	+45	
16		232	19.2	+40	
17		232	20.1	+31	
18		232	20.9	+23	
19		231	22.1	+10	
20		232	23.5	–03	
21		231	24.3	–17	

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H.I. Elev. - Sta.	F. S. (-)	ELEV. Bottom		
[illegible] 21		232	26.5	-33	Notes Cont'd from pg. 63.	
22		232	[illegible]	-48		
24		232	[illegible]	-59		
25		232	[illegible]	-77		
[illegible]		232	33.0	-98		
[illegible]		232	[illegible]	-118		
[illegible]		232	36.1	-129		
[illegible]		233	38.1	-148		
[illegible]		232	[illegible]	-158		
31		231	[illegible]	-169		
[illegible]		230	[illegible]	-179		
[illegible]		230	42.0	-190		

Element	Time	Direction	Velocity	Height
WIND	10:45 AM	S. 35° W.	3-4 miles per hr.	—
WAVES	" "	N. 82° E.	9 " " "	0.8'

~LITTORAL DRIFT~

Observation At	Time	Drift	Direction	Feet per min.	Tide
400' Up Coast	11:15 AM	130' in 9 mins.	Up Coast	14'	Mean High ebb
400' Down "	11:00 "	150' in 6½ "	" "	23'	(2.9" Falling)

F.B. 1797 PG. 64

Job No. 8429 Division No. Pier Soundings - Belmont

Survey of Pier Soundings - Belmont

Survey by G. Kleinecke Notes HR-GW 8-3-48

Indexed A. O. Johnson Date

Notes Red. Date Plotted Date

Notes Chkd. Date Checked Date

Profile No. X-Sec. No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~M. I.~~ Elev. - Sta.	(-) F. S.	ELEV. Bottom		
Sta. 1		232	11.2	+120		
2		232	11.3	+119	AVERAGE WAVE HGT. = 0.3	
3		231	12.7	+104		
4		232	13.0	+102		
5		232	13.4	+98		
6		232	13.1	+101		
7		231	11.7	+114		
8		231	12.8	+103		
9		231	14.0	+91		
10		231	14.8	+83		
11		231	15.4	+77		
12		232	16.3	+69		
13		231	16.9	+62		
14		232	17.6	+56		
15		232	18.5	+47		
16		232	19.0	+42		
17		232	19.9	+33		
18		232	20.5	+27		
19		231	21.7	+14		
20		232	23.1	+01		
21		231	25.1	-20		

Notes cont'd on pg. 66.

~ PIED. SOUNDINGS ~
"BELMONT - E. LONG BEACH"
Elevations based on M.L.L.W.
Sept. 27, 1948.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. V
X-Sec. Date ____ Notes Chkd ____ Checked ____ Survey of Pier Soundings - Belmont.
No. ____ Date ____ Survey by Flowers Notes H.H.R. Date 9-27-48
Map No. ____ Indexed ____ Date 9-30-48

F.B. 1297 Pg. 65

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. - Sta	(-) F. S.	ELEV. Bottom		
22		232	26.7	-35	Notes Cont'd from pg. 65.	
23		232	28.0	-48		
24		232	29.3	-61		
25		232	30.9	-77		
26		232	33.0	-98		
27		232	34.8	-116		
28		232	36.0	-118		
29		233	38.0	-147		
30		232	39.0	-158		
31		231	40.0	-169		
32		230	40.0	-175		
33		230	41.2	-182	(SOFT MUD AT BOTTOM - SOLID BOTTOM 0.7 LOWER)	

Element	Time	Direction	Velocity	Height
WIND	11:30 AM	S 34° W	3-4 miles per hr.	—
WAVES	" "	S 51° E	(?) Rippley.	0.3'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Tide
400' Up Const.	12 Noon	No drift	—	Low.
400' Down "	11:45 AM	" "	—	"

(3.5 - Rising)

F.B. 1292 PG. 66

Job No. 8429 Division No. Notes Red. Plotted No. Profile

Survey of Pier Soundings - Belmont Date Date X-Sec.

Survey by Meinecke Notes HHR 9-27-48 Notes Chkd. Checked No.

Indexed A. C. Johnson Date Date Date

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. V | F.B. 1292 PG. 67

X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings – Belmont Shores

Notes Chkd. ____ Checked ____ Survey by Kleineck Notes RJM Date 11/17/48

Date ____ Date ____ Map No. ____ Indexed A. C. Jennison Date NOV 23 48

~ BELMONT ~

Elevations based on M.L.L.W.

Nov. 17, 1948

Average Wave Height = 0.3'

Notes Rated on 29.51

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H.I.	F. S.	ELEV.
Sta. No. 1		232	11 1	+12 1
2		232	11 5	+11 7
3		231	12 3	+10 8
4		232	12 9	+10 3
5		232	13 3	+9 9
6		232	13 0	+9 2
7		231	11 8	+9 3
8		231	12 5	+10 3
9		231	13 8	+9 3
10		231	14 8	+8 3
11		231	15 7	+7 4
12		232	16 1	+7 1
13		231	16 4	+6 7
14		232	17 0	+6 2
15		232	17 7	+5 5
16		232	18 7	+4 5
17		232	19 6	+3 6
18		232	20 6	+2 6
19		231	21 5	+1 3
20		232	23 0	+0 2
21		231	23 9	-0 8

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Sta. No. 22		237	26 0	[illegible]	Notes Cont'd from pg. 67.	
23		237	[illegible]	[illegible]		
24		237	27 2	[illegible]		
25		237	30 8	[illegible]		
26		[illegible]	32 8	[illegible]		
27		[illegible]	34 3	[illegible]		
28		[illegible]	36 0	[illegible]		
29		[illegible]	37 7	[illegible]		
30		[illegible]	38 5	[illegible]		
31		[illegible]	[illegible]	[illegible]		
32		[illegible]	[illegible]	[illegible]		
33		[illegible]	41 2	[illegible]		

Element	✓ Time	✓ Direction	✓ Velocity	✓ Height
WIND	2 AM	N. 14° E.	2-3 miles per hr.	—
WAVES	"	Calm	—	0.5'

~LITTORAL DRIFT~

Observation At	Time	✓ Drift	✓ Direction	Feet per min.	Tide
400' Up Coast	9:45 A.M.	35' in 11 min's	Down Coast	3.2'	High
400' Down	"	9:15 "	None	0	"

(5.7 Falling.)

F.B. 239 PG. 68

Job No. [illegible] Division No. [illegible] Notes Red. [illegible] Plotted [illegible] Profile

Survey of Dirksondings - Belmont Date [illegible] Date [illegible] No. [illegible] X-Sec.

Survey by Flannah Notes C.J.M. 11-7-48 Notes Chkd. [illegible] Checked [illegible] No. [illegible]

Indexed [illegible] Date [illegible] Date [illegible] Date [illegible]

Notes Ck'd by	Survey of Pier Soundings
Map No.	W. O. 8429 Tape No. St'd. °F
Office Work	Surveyed by G. W. Kleinerk
Checked	Notes Date
Date	Indexed A. C. Johnson 7-12-48

F. B. 1292 PG. 87

REDONDO - MONSTAD PIERS.

Survey & Sounding Data.
July 7, 1948 To

~ INDEX ~

For:-
Sketch + Survey See F.B. 1216 - 11
Profile Levels " " " - 110
Beginning Soundings + Etc.
- This Book See Pg. 89.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B 1292 PG. 88

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev-Sta.	F. S. (−)	ELEV. Bottom		
Sta. No 1		220	42.9	−209	Average Wave Ht. = 02.0	
2		216	39.1	~~−175~~ −12.5 ~~Ht~~		
3		218	27.5	−57		
4		204	20.4	00		
5		240	26.6	−26		
6		241	30.4	−63		
7		241	35.0	−109		
8		241	38.9	−148		
9		238	38.6	−148		
10		236	38.8	−152		
11		241	37.1	−130		
12		240	34.2	−102		
13		235	31.1	−76		
14		221	25.3	−32		
15		217	21.1	+06		
16		222	24.0	−18		
17		236	30.1	−65		
18		241	33.5	−94		
19		241	34.2	−101		
20		240	37.5	−135		
21		239	34.1	−102	Notes Cont'd on pg. 90	

~ PIER SOUNDINGS ~
~ MONSTAD-REDONDO PIERS ~
Elevations based on M.L.L.W.
July 7, 1948.

Profile
No. ____ Notes Red ____ Plotted ____ Job No. 8424 Division No. ____
Date ____ Date ____ Survey of Pier Soundings - Redondo
X-Sec. Notes Chkd. ____ Checked ____ Survey by Meinecke Note AS-6/11 Date 7-7-'48
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

F.B. 1292-89

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev.-Sta.	F. S.	ELEV. Bottom		
Sta. No. 22		240	30.0	-60	Notes Cont'd from pg. 89.	
23		240	25.7	-17		
24		20.1	17.9	+22		
25		193	15.2	+41		
26		193	10.7	+86		
27		194	09.6	+98		
28		196	08.3	+113		
29		197	08.3	+114		

Element	Time	Direction	Velocity	Height
WIND	1 P.M.	N. 84° W.	6-7 miles per hr.	—
WAVES	"	N. 12° W.	17 " " "	2.0'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Tide
350' Down Coast	1 PM	Negligible	—	High ebb. (2.8 Falling)

F.B. 1392-90 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Per Wyndmer - Redondo Date Date No. X-Sec.
Survey by G. N. Maines Notes Apr-Oct 7-7-48 Notes Chkd. Checked
Indexed A. C. Johnson Date Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H.I. Elev.-Sta.	F. S. (-)	ELEV. Bottom		
[illegible]		220	[illegible]	-208	Average Wave [illegible] 1.1 ft.	
2		216	32.[illegible]	-~~74~~ -12.4 ~~Hz~~		
3		218	27.7	-59		
4		204	[illegible]	-02		
5		240	27.5	-35		
[illegible]		241	30.5	-64		
[illegible]		241	34.8	-107		
[illegible]		241	38.[illegible]	-147		
[illegible]		238	38.7	-149		
[illegible]		236	37.[illegible]	-140		
[illegible]		241	31.0	-129		
[illegible]		240	34.[illegible]	-106		
17		235	31.0	-75		
[illegible]		221	25.2	-31		
[illegible]		217	27.0	-07		
[illegible]		222	25.1	-29		
17		236	29.6	-60		
18		241	33.4	-93		
[illegible]		241	35.[illegible]	-117		
[illegible]		240	37.5	-135		
[illegible]		239	33.9	-100		

~ PIER SOUNDINGS ~
"MONSTAD-REDONDO PIERS"
Elevations based on M.L.L.W.
Aug. 3, 1948.

Notes Contd on pg. 92

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Date ____ Job No. 8429 Division No. ____
X-Sec. Notes Chkd ____ Checked ____ Survey of Pier Soundings - Redondo Survey by Klamack Notes HR-GH Date 8-3-48
No. ____ Date ____ Date ____ Map No. ____ Made by [illegible] Date ____

F.B. 1297 PG. 91
AUG 10 48

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. - Sta	F. S. (-)	ELEV. Bottom		
Sta. No. 22		240	[illegible]	-58	Notes cont'd from pg. 91.	
23		240	[illegible]	-31		
24		201	[illegible]	+15		
25		193	14.8	+45		
26		193	9.8	+95		
27		194	9.4	+100		
28		196	8.3	+113		
29		197	[illegible]	+115		

Element	Time	Direction	Velocity	Height
WIND	1:15 P.M.	S. 48° W.	8 miles per hr.	—
WAVES	" "	Choppy	?	1.1'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Tide
350' Down Coast	1:00 P.M.	None	—	Mean High (2.2-High)

F.B. 1298 Pg. 92
Job No. 8429 Division No. Notes Red. Plotted No. Profile
Survey of Pier Soundings - Redondo Date Date No. X-Sec.
Survey by G. Kleineck Notes H.R.-G.K. 8-3-48 Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev.-Sta.	F. S. (−)	~~ELEV.~~ Bottom		
1		220	43.0	−210		
2		216	38.9	~~−43~~ −123		
3		218	28.1	−63		
4		204	20.3	−01		
5		240	27.1	−31		
6		241	30.3	−62		
7		241	34.7	−106		
8		241	39.0	−149		
9		238	38.4	−146		
10		236	37.6	−140		
11		241	37.5	−134		
12		240	34.1	−101	Average Wave Hgt. = 1.5	
13		235	31.0	−75		
14		221	25.7	−36		
15		217	20.8	−09		
16		222	24.9	−27		
17		236	29.5	−59		
18		241	33.5	−94		
19		241	33.9	−98		
20		240	36.9	−129		
21		239	34.0	−101		

Notes Contd on pg. 94.

~ PIER SOUNDINGS ~
"MONSTAD-REDONDO PIERS"
Elevations based on M.L.W.
Sept. 27, 1948.

Profile
No. ____ Date ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____
X-Sec. Date ____ Notes Chkd. ____ Checked ____ Survey of Pier Soundings - Redondo
No. ____ Date ____ Map No. ____ Indexed ____ Notes S.H. Date 9-27-48
Date ____ Date ____ Survey by Kleinert Date 9-30-48
F.B. 1297 Pg. 93

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta	(—) F. S.	ELEV. Bottom		
22		240	30.5	−65	Notes Cont'd from pg. 93.	
23		240	27.0	−30		
24		201	19.2	+09		
25		193	15.9	+34		
26		193	11.5	+18		
27		194	9.0	+64		
28		196	8.1	+[illegible]		
29		197	8.3	+[illegible]		

Element	Time	Direction	Velocity	Height
WIND	2 P.M.	S 75° W	8 miles per hr.	—
WAVES	" "	Choppy	(?)	1.5'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Tide
350' Down Coast	1:45 P.M.	None	—	Mean flood.
		Heavy accumulation of Kelp + debris		(4.4 Rising)

F.B/29 PG. 94

Job No. 8424 Division No. ✓ Notes Red. Plotted Date Date No. Profile

Survey of Pier Soundings, Redondo Date Date No. X-Sec.

Survey by Wieneck Notes S. H. 9-27-48 Notes Chkd. Checked

Indexed A. C. Johnson Date Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. = Sta.	F. S. (−)	ELEV. (Bottom)		
Sta No 1		220	42 8	−20[illegible]		
2		216	38 6	−~~[illegible]~~	−12.0 Hgs	
3		218	28 0	−[illegible]	Average Wave height = 2.0'	
4		204	20 7	−[illegible]		
5		240	27 8	−[illegible]		
6		241	30 5	−[illegible]		
7		241	34 6	−105		
8		241	39 0	−149		
9		238	38 2	−114		
10		236	37 3	−[illegible]		
11		[illegible]	37 2	−131		
12		[illegible]	34 7	−107		
13		235	30 7	−72		
14		[illegible]	25 6	−[illegible]		
15		217	20 6	+11		
16		222	25 4	−3.2		
17		236	30 1	−65		
18		241	33 5	−94		
19		241	35 9	−118		
20		240	36 8	−128		
21		239	34 0	−101		

~ PIER SOUNDINGS ~
"MONSTAD-REDONDO PIERS"
Elevation Based on MLW
Vol. 4, 1948

Contd on pg. 96

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. 4 F.B. 1292 PG. 95
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings Redondo
Notes Chkd. ____ Checked ____ Survey by Hewack Notes RJN Date 11/4/48
Date ____ Date ____ Map No. ____ Indexed C. Jantzen Date NOV 23 '48

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	Elev. Sta	F. S.	ELEV. Bottom		
Sta No 22		240	30 2	[illegible]	Cont'd from pg. 95.	
23		240	27 1	-[illegible]1		
24		201	18 9	+[illegible]2		
25		193	15 8	+[illegible]		
26		193	11 9	+[illegible]		
27		194	9 2	+[illegible]		
28		196	8 3	+[illegible]		
29		197	8 3	+11[illegible]		

Element	Time	Direction	Velocity	Height
WIND	9 A.M.	[illegible]	6 miles per hr.	—
WAVES	"	N. 20° [illegible]	13-14 mi's per hr.	2.0'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per Min.	Tide
350' Down Coast	1:20 A.M.	100' in 11 mins	Down Coast	9'	High flood. (5.8 Rising)

F.B. 1297 Pg. 96
Job No. 8429 Division No. 4
Survey of Pier Soundings - Redondo
Survey by K. Kleineck Notes RJM
Indexed A. C. Johnson Date
Notes Red. Date Plotted Date No. Profile
Notes Chkd. Date Checked Date No. X-Sec.

Notes Ck'd by	Survey of Pier Soundings
Map No.	W. O. 8429 Tape No. St'd °F
Office Work	Surveyed by G.W. Meinecke
Checked	Notes Date
Date	Indexed A. C. Johnson 7-12-48

F. B. 1292 PG. 115

HERMOSA PIER.

Survey & Sounding Data
July 7, 1948 TO

—INDEX—

For:-

Sketch & Survey, See F.B. 1216 - 12
Profile Note: " " " - 136.
Beginning Soundings & Etc.
- This Book, See Pg. 117.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B. 1292 PG. 116

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev. Sta.	F. S. (−)	ELEV. Bottom		
Sta. No. 1		217	7.3	+144		
2		226	8.3	+143	AVERAGE WAVE	HT. = 01.8
3		232	12.0	+112		
4		241	13.3	+108		
5		247	14.9	+98		
6		257	16.2	+95		
7		264	19.8	+66		
8		268	20.9	+59		
9		268	22.6	+42		
10		268	23.8	+30		
11		268	24.5	+23		
12		268	25.5	+13		
13		266	26.2	+04		
14		267	27.6	−09		
15		267	30.0	−33		
16		268	34.1	−73		
17		268	35.0	−82		
18		267	34.0	−73		
19		266	33.0	−64		
20		268	33.5	−67		
21		268	33.0	−62	Notes Cont'd on pg. 118.	

~ PIER SOUNDINGS ~
"HERMOSA"
Elevations based on M.L.L.W.
July 7, 1948

Profile No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8829 Division No. ____ F.B. 12 92-117
X-Sec. No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey of Her Soundings - Hermosa
Date ____ Survey by Kleinsch Notes HR-G.A. Date 7-7-'48
Map No. ____ Date ____ Indexed Johnson Date ____

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev.-Sta. (-)	F. S.	ELEV. Bottom		
Sta. No. 22		26 8	33.3	-65	Notes Cont'd	from pg. 117
23		26 7	33.6	-69		
24		26 8	34.0	-72		
25		26 6	34.5	-79		
26		26 6	35.3	-87		
27		26 8	37.0	-102		
28		26 6	38.8	-122		
29		26 7	40.6	-139		
30		26 8	42.0	-152		

Element	Time	Direction	Velocity	Height
WIND	1:30 P.M.	N. 81° W.	8 miles per hr.	—
WAVES	"	N 02° W.	10-11 " " "	1.8'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per min.	Tide
500' Up Coast	2 P.M.	200' in 2½ mins.	Down Coast	80'	Low ebb
500' Down	" 1:45 "	100' in 4 "	" "	25'	" " (2.4 " Falling)

F.B. 1292-118 Job No. 8424 Division No. Notes Red. Plotted No. Profile
Survey of Pier Soundings - Hermosa Date Date No. X-Sec.
Survey by G. Kleinecke Notes HR-GA 7-7-48 Notes Chkd. Checked
Indexed A. C. Johnson Date Date No.

Profile No. _____ Notes Red _____ Plotted _____ Job No. 8429 Division No. _____ F.B. 129 PG. 49

X-Sec. No. _____ Date _____ Date _____ Survey of Pier Soundings — Hermosa

Notes Chkd. _____ Checked _____ Survey by Kleinock Notes TL-GK Date 8-3-'48

Date _____ Date _____ Map No. _____ Indexed Johnson Date AUG 10 '48

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

FORM 307 10M 10-46

~ PIER SOUNDINGS ~

"HERMOSA"

Elevations based on MLLW.

Aug. 3. 1948.

Average Wave Ht. = 01.2

STATION	B. S.	H.I. Elev. Sta	F. S. (-)	ELEV. Bottom
[illegible]		217	7.2	+45
[illegible]		226	8.1	+135
[illegible]		232	11.5	+117
[illegible]		241	[illegible]	+109
[illegible]		247	[illegible]	+103
[illegible]		257	[illegible]	+102
[illegible]		264	19.2	+72
[illegible]		268	20.0	+68
[illegible]		268	22.0	+48
[illegible]		268	23.0	+38
[illegible]		268	24.2	+26
[illegible]		268	25.5	+13
[illegible]		266	26.3	+03
[illegible]		267	27.2	-05
[illegible]		267	28.7	-20
[illegible]		268	31.3	-45
[illegible]		268	33.1	-63
[illegible]		267	33.0	-63
[illegible]		266	32.0	-54
[illegible]		268	33.3	-57
[illegible]		268	32.4	-56

Notes Cont'd on pg. 120

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta.	F. S. (-)	ELEV. Bottom		
Sta No 22		268	[illegible]	-60	Notes Contd from pg. 119.	
23		267	33.[illegible]	-69		
24		268	34.0	-72		
25		266	34.[illegible]	-77		
26		266	35.[illegible]	-86		
27		268	37.0	-102		
[illegible]		266	38.5	-119		
[illegible]		267	40.0	-133		
30		268	41.0	-142		

Element	Time	Direction	Velocity	Height
WIND	1:45 P.M.	S. 72° W.	5 miles per hr.	—
WAVES	" "	N. 15° W.	13 " " "	12'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per min.	Tide
500' Up Coast	2:45 P.M.	200' in 4¼ mins.	Up Coast	47'	Low
500' Down "	2:15 "	150' in " "	" "	35'	" "

(2,6 Rising)

F.B. 129 PG. 120 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Hermosa Date Date No. X-Sec.
Survey by G. Wieneck Notes T.L. - G.R. 8-3-48 Notes Chkd. Checked
Indexed A. O. Johnson Date Date Date No.

Profile No. _____ Notes Red. _____ Plotted _____ Job No. 8429 Division No. _____ F.B/292 PG. 121

X-Sec. No. _____ Date _____ Date _____ Survey of Pier Soundings - Hermosa

Notes Chkd. _____ Checked _____ Survey by Klemeck Notes S. H. Date 9-27-48

Date _____ Date _____ Map No. _____ Indexed C. Johnson Date 9-30-48

~ PIER SOUNDINGS ~
"HERMOSA"
Elevations based on M.L.L.W.
Sept. 27, 1948.

STATION	B. S.	H.I. Elev.	F. S.	ELEV.
1		217	7.3	+14.4
2		226	9.1	+3.5
3		232	11.5	+11.7
4		241	13.2	+10.9
5		247	14.2	+10.5
6		257	15.1	+10.6
7		264	17.8	+8.6
8		268	20.3	+6.5
9		268	22.8	+4.0
10		268	23.8	+3.0
11		268	24.2	+2.6
12		268	25.4	+1.4
13		266	25.9	+0.7
14		267	27.3	-0.6
15		267	28.1	-1.4
16		268	28.6	-1.8
17		268	31.5	-4.7
18		267	32.3	-5.6
19		266	32.3	-5.7
20		268	33.2	-6.4
21		268	33.1	-6.3

Notes Contd on pg. 122

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. Sta.	F. S. (—)	~~ELEV.~~ Bottom		
22		26 8	33.7	-6 9	Notes Cont'd from pg. 121.	
23		26 7	34.1	-7 4		
24		26 8	34.8	-8 0	Average Wave Hgt. = 1.5	
25		26 6	35.4	-8 8		
26		26 6	36 5	-9 9		
27		26 8	37.1	-10 3		
28		26 6	38.8	-12 2		
29		26 7	40.1	-13 [illegible]		
30		26 2	41.5	-14 7		

Element	Time	Direction	Velocity	Height
WIND	2:30 P.M.	5.76° W	4 miles per hr.	—
WAVES	" "	5.06° E	12 " " "	1.5'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per min.	Tide
500' Up Coast	3:30 P.M.	100 in	5 mins. Up coast	20'	Mean flood
500' Down "	3 P.M.	35' in	7 " " "	5'	" "
				(4.7 Rising)	

F.B. 292 PG. 122

Job No. 8429 Division No. Notes Red. Plotted Date No. Profile

Survey of Pier Soundings - Hermosa Date Date X-Sec.

Survey by Meineck Notes S.H. 9-27-48 Notes Chkd. Checked

Indexed A. C. Johnson Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev. = 5.0	F. S.	ELEV. Bottom		
STA. No. 1		217	7.2	+4.5	AVERAGE WAVE HGT. = 2.5'	
2		226	9.1	+2.5		
3		232	11.4	+1.8		
4		241	13.1	+1.0		
5		247	13.7	+1.0		
6		252	15.9	+0.8		
7		264	19.1	+0.5		
8		268	21.2	+0.6		
9		268	23.0	+0.8		
10		266	24.7	+0.1		
11		265	25.1	+0.7		
12		268	26.6	+0.2		
13		266	26.9	-0.3		
14		267	28.5	-1.8		
15		267	28.5	-1.8		
16		268	28.9	-2.1		
17		268	29.3	-2.5		
18		267	29.0	-2.3		
19		266	29.0	-2.4		
20		268	29.9	-3.1		
21		268	30.0	-3.1		

PIER 58. SOUNDINGS
"HERMOSA"
Elevations based on MLLW.
NOV. 4, 1948.

Notes Continued on pg. 124.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. V F.B. 1223 PG. 123
X-Sec. No. ____ Date ____ Date ____ Survey of PIER SOUNDINGS - HERMOSA
Notes Chkd ____ Checked ____ Survey by KLEIN & CO. Notes HER. Date 11-4-48
Date ____ Date ____ Map No. ____ Checked by ____ Date NOV 23 '48

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. Sta	(-) F. S.	ELEV. Bottom		
22		268	32.0	[illegible]	Notes Cont'd from pg. 123.	
23		267	35.0	[illegible]		
24		268	35.4	[illegible]		
25		266	36.2	[illegible]		
26		266	37.4	[illegible]		
27		268	38.3	[illegible]		
28		266	39.7	[illegible]		
29		267	41.0	[illegible]		
30		268	42.2	[illegible]		

Element	Time	Direction	Velocity	Height.
WIND	10 A.M.	5 76° E	2 miles per hr.	—
WAVES	"	5 7° E	13-14 " " "	2.5'

~LITTORAL DRIFT~

Observation Aty	Time	Drift	Direction	Feet per min.	Tide
500' Up Const	10:30 A.M.	100' in 4 1/2 mins	Up Const	24'	High flood.
500' Down "	10:15 "	None	—		" "

(5.9 - High)

F.B. 1292 PG. 124 Job No. 8429 Division No. ✓ Notes Red. Plotted Profile
Survey of Pier Soundings ~ Hermosa Date Date No. X-Sec.
Survey by Klemeck Notes H.R. 11-4-48 Notes Chkd. Checked
Indexed A. C. Johnson Date Date Date No.

Notes Ck'd by	Survey of Pier Soundings
Map No.	W. O. 8429 Tape No. St'd °F
Office Work	Surveyed by G. W. Hlavacek
Checked	Notes Date
Date	Indexed A. C. Johnson 7-12-48

F. B. 1292 PG. 143

MANHATTAN PIER.

Survey & Sounding Data.
July 6, 1948 TO

~ INDEX ~

For:-
Sketch & Survey, See F.B. 1216 - 14
Profile Levels " " " - 162.
Beginning Soundings + Etc.
- This Book See Pg. 145.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B. 1292 PG. 144

RETURN TO
LOS ANGELES COUNTY SURVEYOR
7DO HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. - Sta.	F. S. (-)	ELEV. Bottom		
Sta. No. 1		259	12.5	+134	Average Wave Ht. = 01.5'	
2		270	13.5	+135		
3		268	15.3	+115		
4		267	15.7	+110		
5		267	15.0	+117		
6		267	18.9	+78		
7		268	20.8	+60		
8		268	21.8	+50		
9		267	22.9	+38		
10		268	23.8	+30		
11		268	26.1	+07		
12		268	29.5	-27		
13		268	30.0	-32		
14		268	28.6	-18		
15		268	29.8	-30		
16		268	32.0	-52		
17		265	34.1	-76		
18		267	36.5	-98		
19		270	38.6	-116		
20		286	43.0	-144		
21		305	47.4	-169	Notes Cont'd on pg. 146	

— PIER SOUNDINGS —
"MANHATTAN BEACH"
Elevations based on M.L.L.W.
July 6, 1948.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____
X-Sec. No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey of Pier Soundings - Manhattan
Date ____ Survey by Klemeck Notes 6A5-6K Date 7-6-'48
Map No. ____ Indexed Johnson Date ____

F.B. 1292.145

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta.	F. S. (−)	ELEV. Bottom		
Sta. No. 22		308	48.2	−174	Notes Cont'd from pg. 145	
23		308	48.3	−175		
24		306	46.4	−158		
25		306	46.5	−159		

Element	Time	Direction	Velocity	Height
WIND	10 A.M.	S. 83° W.	3 miles per hr.	—
WAVES	"	S. 20° E.	10-11 " " "	1,5'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per min.	Tide
500' Up Coast	11 A.M.	150' in 3½ mins.	Down Coast	43'	High
500' Down "	10:30 "	200' in 8 "	" "	25'	" (3.6 Falling)

F.B. 1292-146 Job No. 8429 Division No. Notes Red. Plotted No. Profile
Survey of Fire Mainings - Manhattan Date Date No. X-Sec.
Survey by G. Mainings Notes A.S. - Oct 7-6-46 Notes Chkd. Checked
Indexed A. C. Johnson Date Date No.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1292 PG. 147

X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Manhattan

Notes Chkd. ____ Checked ____ Survey by Klamock Notes T.L. - G.K. Date 8-2-48

Date ____ Date ____ Map No. ____ Indexed ____ Date AUG 10 '48

~PIER SOUNDINGS~

~MANHATTAN BEACH~

Elevations based on MLLW.

Aug. 2, 1948.

Notes Contd on pg. 146

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

FORM 307 10M 10-46

STATION	B. S.	H.I. Elev. Sta.	F. S.	ELEV. Bottom
[illegible]		259	125	+134
[illegible]		270	135	+135
[illegible]		268	15.4	+114
[illegible]		267	15.6	+111
[illegible]		267	15.7	+110
[illegible]		267	15.8	+88
[illegible]		268	19.8	+70
[illegible]		268	21.3	+55
[illegible]		267	22.0	+40
[illegible]		268	23.7	+31
[illegible]		268	25.5	+13
[illegible]		268	28.0	-12
[illegible]		268	29.5	-27
[illegible]		268	29.8	-25
[illegible]		268	30.9	-31
[illegible]		268	32.5	-57
[illegible]		265	34.0	-75
[illegible]		267	36.5	-98
[illegible]		270	38.9	-119
[illegible]		286	43.0	-144
[illegible]		305	47.6	-171

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev.-Sta.	F. S. (-)	ELEV. Bottom		
[illegible] 22		308	48.9	-181	Notes Contd from pg. 147	
23		308	[illegible]	-178		
24		306	47.[illegible]	-164		
25		306	[illegible]	-162		

Element	Time	Direction	Velocity	Height
WIND	9:45 AM.	S. 52° W.	6 miles per hr.	—
WAVES	" "	N. 16° W.	11 " " "	2.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Feet per min.	Tide
500' Up Coast	10:15 AM.	150' in 6½ mins.	Up Coast	23'	High ebb.
500' Down "	10:00 "	150' in 4 "	" "	38'	" " (3.1' Falling)

F.B. 129 PG. 148

Job No. 8429 Division No. Notes Red. Plotted Profile

Survey of Pier Soundings - Manhattan Date Date No. X-Sec.

Survey by G. Kleineck Notes T.L.-GK. 8-2-48 Notes Chkd. Checked

Indexed A. C. Johnson Date Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev.-Sta.	F. S. (-)	~~ELEV.~~ Bottom		
Sta. 1		259	12.0	+139	AVERAGE WAVE HGT. = 2.0	
2		270	13.7	+133		
3		267	15.3	+115		
4		267	15.0	+117		
5		267	14.6	+121		
6		267	17.1	+96		
7		268	19.5	+73		
8		268	21.5	+53		
9		267	22.9	+38		
10		268	24.1	+27		
11		268	27.5	-07		
12		268	29.0	-22		
13		268	28.8	-20		
14		268	29.1	-23		
15		268	29.9	-31		
16		268	33.0	-62		
17		265	35.0	-85		
18		267	37.0	-103		
19		270	39.4	-124		
20		286	44.0	-154		
21		[illegible]	47.1	-166		

Notes Cont'd on Pg. 150

P.E.C. SOUNDINGS —
"MANHATTAN BEACH"
Elevations based on 7 L.L.W.
Sept. 28-1945.

Profile
No. ____ Notes Red ____ Plotted ____ Job No. [illegible] Division No. ____
X-Sec. ____ Date ____ Date ____ Survey of [illegible]
No. ____ Notes Chkd. ____ Checked ____ Survey by [illegible] Notes H H R Date [illegible]
Date ____ Date ____ Map No. ____ Indexed [illegible] Date 9-30-48

F.B. 129 Pg. 149

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. Sta.	~~E.S.~~ E.S.	ELEV. Station		
Sta. 22		30 8	48.8	-180	Notes Cont'd from pg. 149.	
23		30 8	48.8	-180		
24		30 6	46.5	-189		
25		30 6	46.0	-154		

Element	Time	Direction	Velocity	Height
WIND	9 A.M.	—	Calm	—
WAVES	" "	S 30° E	15 miles per hr.	2.0'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per min.	Tide
500' Up Coast	9:45 AM	200'	4 min's. Up Coast	50'	Mean ebb.
500' Down "	9:20 "	200'	2 " " "	100'	" "

(3.2 Falling)

F.B. 1292 PG. 150

Job No. 8179 Division No. Notes Red. Plotted Profile

Survey of Pier Soundings - Manhattan Date Date No. X-Sec.

Survey by Flaherty Notes HHR - 9-28-48 Notes Chkd. Checked

Indexed A. C. Johnson Date Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. - Sta.	F. S. (-)	ELEV. Bottom		
Sta No. 1		259	12 1	+13[illegible]		
2		270	13 4	+13[illegible]		
3		268	15 0	+118		
4		267	14 5	+122		
5		267	15 1	+116		
6		267	16 5	+52		
7		268	21 0	+58		
8		268	22 3	+45		
9		267	23 8	+29		
10		268	24 5	+23		
11		268	26 8	00		
12		268	29 9	-31		
13		268	30 0	-32	Average Wave Height = 2.0'	
14		268	29 9	-31		
15		268	29 7	-29		
16		268	31 0	-42		
17		265	32 6	-61		
18		267	36 5	-98		
19		270	39 9	-129		
20		286	43 9	-153		
21		305	47 4	-169		

~PIER SOUNDINGS~
"MANHATTAN BEACH"
Elevations based on M.L.W.
Nov. 4, 1948.

Notes Contd on Pg. 152.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. V
X-Sec. Date ____ Date ____ Survey of Pier Soundings ~ Manhattan Beach
No. ____ Date ____ Notes Chkd ____ Checked ____ Survey by Kleineck Notes RJM Date 11/4/48
Date ____ Date ____ Map No. ____ Indexed ____ Date NOV 23 '48

F.B. 1297 Pg. 151

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta.	~~F. S.~~ CS	ELEV. Bottom		
Sta No 22		30 8	48 2	-1[illegible]	Notes Contd from pg. [illegible]	
23		30 8	48 3	-1[illegible]		
24		30 6	47 8	-1[illegible]		
25		30 6	47 6	-1[illegible]		

Element	Time	Direction	Velocity	Height
WIND	11:5 A.M.	5.65° W.	3 miles per hr.	—
WAVES	"	5.21° E	11 " " "	2.0'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Tide (Feet per min.)
500' Up Coast	12 Noon	200' in 10 mins	Down Coast	20' High
500' Down "	11:40 A.M.	100' in 8 "	Up "	13' " (5.1 Falling)

F.B. 1292 PG. 152 Job No. 8429 Division No. V Notes Red. Plotted No. Profile
Survey of Pier Soundings ~ Manhattan Date Date X-Sec.
Survey by Kennedy Notes R.M. 11-4-48 Notes Chkd. Checked No.
Indexed A. C. Johnson Date Date Date

Notes Ck'd by	Survey of Pier Soundings F. B. 1292 PG. 171
Map No.	W. O. 8429 Tape No. St'd. °F
Office Work	Surveyed by Fw Kleineck
Checked	Notes Date
Date	Indexed A. C. Johnson 7-12-48

OCEAN PARK - "LICH PIER"

Survey & Sounding Data.
July 6, 1948 To

~INDEX~

For:-
Sketch & Survey, See F.B 1216 - 15.
Profile Levels " " " - 188.
Beginning Soundings & Etc.
- This Book See Pg. 173.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. 1292 PG. 172

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must Be Made or Circled in Red Ink With Date and Name of Person Making Change.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. - Sta.	F. S. (-)	ELEV. Bottom		
Sta. No. 1		230	21.4	+16	AVERAGE WAVE	HT. = 01.7
2		229	22.9	00		
3		230	24.4	-14		
4		231	28.0	-49		
5		233	29.0	-57		
6		234	28.9	-55		
7		237	29.0	-53		
8		240	29.5	-55		
9		240	30.0	-60		
10		239	29.4	-55		
11		240	29.8	-58		
12		242	30.4	-62		
13		243	31.0	-67		
14		245	32.0	-75		
15		246	33.6	-90		
16		248	32.6	-78		
17		248	32.3	-75		
18		251	33.7	-86		
19		251	34.6	-95		
20		253	35.7	-104		
21		253	36.4	-111	Notes Contd on pg. 174	

~ PIPE SOUNDINGS ~
"OCEAN PARK - LIGHT PIER"
Elevations based on MLLW.
July 6, 1948

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1292-173
X-Sec. No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey of Pier Soundings - Ocean Park
Survey by Kleinrock Notes HR-6A Date 7-6-'48
Map No. ____ Date ____ Indexed Johnson Date ____

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev.-Sta.	F. S. (-)	ELEV. Bottom		
Sta. N-22		252	36.5	-113	Notes Cont'd from pg. 173.	
23		253	38.0	-127		
24		254	39.1	-137		
25		254	39.8	-144		
26		255	41.0	-155		
27		255	41.6	-161		
28		256	43.4	-178		
29		258	45.1	-193		

Element	Time	Direction	Velocity	Height.
WIND	11:30 A.M.	5.78° W.	6 miles per hr.	—
WAVES	"	5.26° E.	12 " " "	1.7'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per Min.	Tide.
350' Up Coast.	12 Noon	125' in 9½ mins.	Up Coast	13'	High ebb
600' Down " "	11:30 A.M.	150' in 4¼ "	Down "	35'	" " (3.1 Falling)

Note:- New beach line extends out 3 or 400' beyond old line on down Coast side of pier.

F.B. 1292-174 Job No. 5429 Division No. Notes Red. Plotted No. Profile
Survey of Pier Soundings - Ocean Park Date Date X-Sec.
Survey by G. Klemack Notes H.R.-G.K. 7-6-48 Notes Chkd. Checked No.
Indexed A. C. Johnson Date Date

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8424 Division No. ____ F.B. 1292 PG. 175

X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Ocean Park

Notes Chkd. ____ Checked ____ Survey by Kleinecke Notes N.R.-G.K. Date 8-2-'48

Date ____ Date ____ Map No. ____ Indexed C. Johnson Date AUG 10 '48

~ PIER SOUNDINGS ~

"OCEAN PARK - LICK PIER".

Elevations based on M.L.L.W.

Aug. 2, 1948.

Notes Cont'd on pg. 176

STATION	B.S.	H.L. Elev. of Sta.	F.S.	ELEV. Bottom
1		230		+30
2		229		+20
3		230		+14
4		231		-39
5		233		-54
6		234		-61
7		237		-51
8		240		-53
9		240		-61
10		239		-59
11		240		-57
12		242		-58
13		243		-66
14		245		-72
15		246		-80
16		248		-71
17		248		-77
18		251		-89
19		251		-91
20		253		-97
21		253		-102

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev.-Sta.	F. S. (-)	ELEV. Bottom	
[illegible]		252	[illegible]	-106	Notes Cont'd from pg. 175
23		253	[illegible]	-118	
24		254	[illegible]	-126	
25		254	[illegible]	-139	
26		255	[illegible]	-147	
27		255	[illegible]	-163	
28		256	[illegible]	-179	
29		258	[illegible]	-196	

Element	Time	Direction	Velocity	Height
WIND	12 Noon	S. 65° W.	5-6 miles per hr.	—
WAVES	" "	N. 12° W.	12 " " "	2.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Feet per Min.	Tide
350' Up Coast	11:45 A.M.	100' in 3 min's.	Up Coast	33'	Mean high ebb
600' Down "	11:00 "	50' in 3½ "	" "	14'	" " " (2.6 Falling)

Note: New beach extends out 3 or 400' beyond old beach line. So. of pier.
North of pier accretion of sand has built the beach out 100'±

F.B. 1298 PG. 176
Job No. 8429 Division No. Notes Red Plotted No. Profile
Survey of Pier Spundings - Ocean Park Date Date X-Sec.
Survey by G. Klemecki, H.R. - G.K. 8-2-48 Notes Chkd Checked
Indexed C. Johnson Date Date No.

Profile No. _____ Notes Red _____ Plotted _____ Job No. 8429 Division No. _____ F.B. 1292 PG. 177

Date _____ Date _____ Survey of Pier Soundings - Ocean Park

X-Sec. No. _____ Notes Chkd. _____ Checked _____ Survey by Klemeck Notes R.J.M. Date 9-28-48

Date _____ Date _____ Map No. _____ Indexed C. Johnson Date 9-30-48

— PIER SOUNDINGS —
"OCEAN PARK - LICK PIER"
Elevations based on M.L.L.W.
Sept. 28 - 1948.

Average Wave Ht. = 1.8'

Notes Cont'd on Pg. 178

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. of Sta.	F. S. (-)	ELEV. Bottom
Sta. 1		230	21 4	+16
2		229	22 1	+10
3		230	22 5	+05
4		231	26 9	-38
5		233	28 3	-56
6		234	29 1	-57
7		237	29 0	-53
8		240	29 3	-53
9		240	30 7	-67
10		239	29 9	-60
11		240	30 0	-60
12		242	31 0	-68
13		243	30 9	-66
14		245	32 4	-79
15		246	33 0	-84
16		248	32 5	-77
17		248	32 3	-75
18		251	33 9	-88
19		251	34 8	-97
20		253	35 2	-99
21		253	36 0	-107

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. - Sta	~~F. S.~~ C	ELEV. Bottom		
Sta. 22		252	36 1	-1[illegible]9	Notes Cont'd from pg. 177.	
23		253	37 7	-124		
24		254	38 8	-1[illegible]1		
25		254	39 7	-143		
26		255	40 3	-1[illegible]8		
27		255	41 8	-1[illegible]3		
28		256	42 8	-1[illegible]		
29		258	43 4	-176		

Element	Time	Direction	Velocity	Height
WIND	11 A.M.	S. 88° W.	4 miles per hr	—
WAVES	" "	S. 23° E.	14 " " "	1.8'

LITTORAL DRIFT

Observation At	Time	Drift	Direction	Feet per Min.	Tide
350' Up Coast	11:15 A.M.	150' in 8½ mins.	Up coast	18'	Low ebb.
600' Down "	10:30 "	100 in 10½ "	" "	10'	" "

(2.7 Falling)

F.B. 129 PG. 178

Job No. 8429 Division No. Notes Red. Plotted Profile

Survey of Bear Soundings - Ocean Park Date Date No. X-Sec.

Survey by Hancock Notes RJM 9-28-48 Notes Chkd. Checked

Indexed C. Johnson Date Date Date No.

Profile No. _____ Notes Red _____ Plotted _____ Job No. 8429 Division No. V

F.B. 1242 PG. 179

X-Sec. No. _____ Date _____ Date _____ Survey of Pier Soundings – Ocean Park

Notes Chkd. _____ Checked _____ Survey by Kleineck Notes R.J.M. Date 11/15/48

Date _____ Date _____ Map No. _____ Indexed [illegible] Date NOV 23 '48

~ PIER SOUNDINGS ~

"OCEAN PARK – LICK PIER"

Elevations based on M.L.L.W.

Nov. 15, 1948

Note Contd on pg. 180

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO

LOS ANGELES COUNTY SURVEYOR

700 HALL OF RECORDS

Do not extend notes this side of this line.

STATION	B. S.	H.I.	F. S.	ELEV. Bottom
Sta No. 1		230	216	+14
2		229	236	-07
3		230	249	-19
4		231	282	-51
5		233	298	-65
6		234	300	-66
7		237	298	-61
8		240	303	-63
9		240	311	-71
10		239	295	-56
11		240	295	-55
12		242	299	-57
13		243	309	-66
14		245	320	-75
15		246	325	-79
16		249	315	-67
17		248	314	-66
18		251	329	-78
19		251	337	-86
20		253	341	-88
21		253	349	-96

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta.	F. S.	ELEV. Bottom		
Sta No. 22		25 2	35 1	-9 9	Notes Cont'd from pg. 179.	
23		25 3	36 5	-1[illegible]		
24		25 4	37 2	[illegible]		
25		25 4	38 8	-[illegible]		
26		25 5	40 0	-[illegible]		
27		25 5	41 4	-1[illegible]		
28		25 6	42 6	-1[illegible]		
29		25 8	44 8	-1[illegible]		

Element	Time	Direction	Velocity	Height
WIND	11:45 A.M.	S. 16° W.	5 miles per hr.	—
WAVES	"	S 14° E	[illegible] " " "	1.8'

~LITTORAL DRIFT~

Observation At	Time	Drift	Direction	Feet per Min.	Tide
350' Up Coast	11 Noon	200' in 2 3/4 mins	Down Coast	30'	Mean ebb
600' Down Coast	12:30 P.M.	No definite drift.	Short reversals—		

(1.3 Falling)

F.B. 1249 PG. 180 Job No. 8229 Division No. Notes Red. Plotted Profile
Survey of Per Soundings-Ocean Park Date Date No.
Survey by Hemmer Notes R.M. 11-15-48 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date Date No.

Notes Ck'd by	Survey of Pier Soundings
Map No.	W. O. 8429 Tape No. St'd °F
Office Work	Surveyed by G.W. Meinecke
Checked	Notes Date
Date	Indexed A. O. Johnson 2-12-48

F. B. 1292 PG. 199

SANTA MONICA MUNICIPAL PIER.

Survey & Sounding Data.

July 6, 1948 TO

~ INDEX ~

For:-

Sketch & Survey, See F.B. 1216 - 19
Profile Notes " " " - 214.
Beginning Soundings & Etc.
- This Book See Pg. 201.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B. 1292 PG. 200

RETURN TO
LOS ANGELES COUNTY SURVEYOR
7DO HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~Elev. = Sta.~~ H.I.	F. S. (-)	ELEV. ~~Bottom~~		
Sta. No 1		249	14.9	+100	AVERAGE WAVE	HT. = 1.3
2		245	13.6	+109		
3		249	13.3	+114		
4		246	13.6	+110		
5		245	13.7	+108		
6		246	15.6	+90	APPROX. 1 FT. CUT.	Readings taken at bottom of ditch
7		244	18.7	+57	APPROX. 3 FT. CUT.	
8		244	18.6	+58	APPROX. 3 FT. CUT.	
9		244	15.1	+93		Add cut figures to Bot. Elev. for average of beach.
10		242	17.9	+63		
11		242	20.1	+41		
12		244	21.9	+25		
13		246	22.6	+20		
14		244	22.8	+16	SANTA MONICA MUNICIPAL PIER	
15		245	23.6	+09	Elev's based on M.L.L.W.	
16		248	25.3	-05	July 6, 1948	
17		252	27.6	-24		
18		256	28.6	-30		
19		268	30.7	-39		
20		255	31.7	-62		
21		253	31.6	-63	Notes cont'd on pg. 202	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 1664 Division No. ____
X-Sec. No. ____ Date ____ Date ____ Survey of Pier & Soundings - Santa Monica
Notes Chkd ____ Checked ____ Survey by Weisgerber & Johnson Note Bk. No. 72-66 Date 7-6-48
Date ____ Date ____ Map No. ____ Indexed ____ Date ____

F.B. 1292-201

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta.	F. S. (—)	ELEV. Bottom		
Sta. No. 22		253	32.0	-67	Notes Contd from pg. 201	
23		280	34.8	-68		
24		253	32.6	-73		
25		253	33.6	-83		
26		251	33.7	-86		

Element	Time	Direction	Velocity	Height.
WIND	2:15 P.M.	S.83° W	7-8 miles per hr.	—
WAVES	"	S.30° E.	10 " " "	1.3'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Feet per Min.	Tide.
700' up Coast	1:45 P.M.	Negligible	—	0	Mean ebb
1500' " "	2 "	100' in 5 min's.	Down Coast	20'	" "
700' Down "	1:15 "	100' in 5 "	" "	20'	" "

(2.1. Falling)

F.B. 1292-202 Job No. 4429 Division No. Notes Red. Plotted Profile
Survey of Pier Jound mpl - Santa Monica Date Date No. X-Sec.
Survey by G. Kleinert Notes T.L.-GK 7-6-48 Notes Chkd. Checked
Indexed A. C. Johnson Date Date No.

Profile No. _____ Notes Red _____ Plotted _____ Job No. 8429 Division No. _____ F.B. 1292 Pg. 203

Date _____ Date _____ Survey of Pier Soundings - Santa Monica

X-Sec. No. _____ Notes Chkd. _____ Checked _____ Survey by Kleineck Notes A.S.-G.K. Date 8-2-'48

Date _____ Date _____ Map No. _____ Indexed Johnson Date AUG 10 '48

~PIER SOUNDINGS~

"SANTA MONICA MUNICIPAL PIER"

Elevations based on M.L.L.W.

Aug. 2, 1948.

Notes Cont'd on Pg. 204

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

STATION	B.S.	Elev. Sta.	F.S. (−)	ELEV. Bottom
		249		+99
		245		+110
		247		+116
		246		+113
		245		+109
		246		+91
		244		+74
		244		+86
		244		+94
		242		+63
		242		+37
		244		+25
		246		+22
		244		+18
		245		+15
		248		−07
		252		−15
		256		−38
		268		−46
		255		−65
		253		−74

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. Sta.	F. S. (−)	ELEV. Bottom		
Sta. No. 22		253	3	−65	Notes Cont'd from pg. 203.	
23		280		−40		
24		253		−67		
25		253	[illegible]	−87		
26		251	[illegible]	−84		

Element	Time	Direction	Velocity	Height
WIND	2:00 P.M.	S. 52° W	5 miles per hr.	—
WAVES	" "	S 55° E.	8 " " "	1.5'

~LITTORAL DRIFT~

Observation Pt.	Time	Drift	Direction	Tide.
700' up Coast	1:45 P.M.	None	—	Low
1500' " "	2:00 "	"	—	"
700' Down "	1:00 "	Could not check — Heavy accumulation of mussels. (2.8 Rising)		

Note:- Wave direction as above pertains to S. side of pier.
North of pier use S. 12° E.

F.B. 1298 PG. 204 Job No. 8424 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Santa Monica Date Date No. X-Sec.
Survey by G. H. Lemmon P.S. - G.K. 8-2-48 Notes Chkd. Checked
Indexed A. C. Johnson Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta.	F. S. (−)	ELEV. Bottom		
Sta. 1		249	14 9	+100		
2		245	13 4	+111		
3		247	13 0	+117		
4		246	13 1	+115		
5		245	13 4	+111		
6		246	15 2	+94		
7		244	15 1	+93		
8		244	14 5	+99		
9		244	14 2	+102		
10		242	16 6	+76		
11		242	20 2	+40		
12		244	22 6	+18		
13		246	22 7	+19		
14		244	22 5	+19		
15		245	23 0	+15		
16		248	25 6	−08		
17		252	26 1	−09		
18		256	28 0	−24		
19		268	32 2	−54	(pt. on guard rail — cut 1.2 to deck of pier)	
20		255	31 7	−62		
21		253	31 4	−61		

— PIER SOUNDINGS —
"SANTA MONICA MUNICIPAL"
Elevations based on M.L.W.
Sept. 28, 1948.

Notes Contd on pg. 206

Profile No.____ Notes Red____ Plotted____ Job No. 8479 Division No.____
X-Sec. No.____ Date____ Date____ Survey of Pier Soundings — Santa Monica
Notes Chkd____ Checked____ Survey by Pomeroy Notes RJM Date 9-28-48
Date____ Date____ Map No.____ Indexed Date 9-30-48

F.B. 1292 Pg. 205

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H.I. Elev. Sta.	F. S.	ELEV. Bottom		
Sta. 22		253	31 5	-6 2	Notes Cont'd from pg. 205	
23		280	34 8	-6 8		
24		253	32 2	-6 9	Average wave height = 2.5'	
25		253	31 0	-7 7		
26		251	33 3	-7		

Element	Time	Direction	Velocity	Height
WIND	1:15 P.M.	S. 85° W	6-7 miles per hr.	—
WAVES	" "	S. 50° E.	10 " " "	2.5'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per Min.	Tide
700' Up Coast	1:30 P.M.	50' in 10 mins.	Up coast	5'	Low flood.
1500' " "	1:45 "	No drift	—	0	" "
700' Dn. "	12:45 "	100' in 7 mins.	Down Coast	14'	" "
				(3.2 Rising)	

F.B. 1/2 PG. 206

Job No. 8429 Division No. ____ Notes Red. ____ Plotted ____ Profile

Survey of Pier Soundings - Santa Monica Date ____ No. ____

Survey by Kleinecke Notes R.M. - 9-28-48 Notes Chkd. ____ Checked ____ X-Sec.

Indexed A. C. Jennings Date ____ Date ____ No. ____

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~	~~F.S.~~ (=)	ELEV.		
1		[illegible]	14.9	+1.00	AVERAGE WAVE HGT. = 0.8	
2		[illegible]	13.3	+1.12		
3		[illegible]	13.1	+1.16		
4		[illegible]	13.2	[illegible]		
5		[illegible]	13.4	[illegible]		
6		[illegible]	15.2	+0.94		
7		[illegible]	15.6	+0.88		
8		[illegible]	14.5	+0.99		
9		[illegible]	14.0	[illegible]		
10		[illegible]	15.8	[illegible]		
11		[illegible]	20.1	+0.41		
12		[illegible]	22.3	+0.21		
13		[illegible]	22.2	+0.24		
14		[illegible]	22.7	+0.19		
15		[illegible]	23.1	[illegible]		
16		[illegible]	25.3	-0.05		
17		[illegible]	27.6	[illegible]		
18		[illegible]	28.9	-0.33		
19		[illegible]	32.4	-0.76	(FROM TIN ON GUARD RAIL)	
20		[illegible]	31.9	-0.64		
21		[illegible]	31.5	-0.72		

Notes [illegible]

STATION MONITOR WAVE HEIGHT FOR
STATION BEACH ON THURS.
NOV. 18, 1948

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 207 PG. 207
X-Sec. No. ____ Date ____ Date ____ Survey of PIER SOUNDINGS SANTA MONICA
Notes Chkd ____ Checked ____ Survey by KLEINECK Notes HHR Date 11-16-48
Date ____ Date ____ Map No. ____ Indexed Johnson Date ____ NOV 23 '48

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	Elev. ~~H.I.~~	F. S. (−)	ELEV.		
22		253	31.5	−6.2	Notes cont'd from pg. 207	
23		280	34.3	−6.3		
24		25[illegible]	31.8	−[illegible]		
25		25[illegible]	33.2	−7.9		
26		25[illegible]	32.9	−7[illegible]		

Element	Time	Direction	Velocity	Height
WIND	12:[illegible] P.M.	S.[illegible] W	[illegible] miles per hr	—
WAVES	"	[illegible] E	[illegible] " " "	0.5'

— [illegible] DRIFT —

Observation At	Time	Direction	Feet per Min.	Tide
700' Up Coast	[illegible]	No [illegible]	0	Mean [illegible]
1500' "	"	[illegible] P.M. [illegible] min's	Down Coast 10'	"
700' Down	"	11:45 P.M. ?*	"	"

(2.1 Falling)

* Could not [illegible] drift. Heavy accumulation of mussel shells [illegible]

Above wave direction [illegible] So. of pier.
Direction No. of pier = [illegible] E. Height of waves = 1.5' ±

F.B. 1292 PG. 208 Job No. 8429 Division No. Notes Red. Plotted No. Profile
Survey of PIER SOUNDINGS Santa Monica Date Date X-Sec.
Survey by KLEINECK Notes HHR 11-16-48 Notes Chkd. Checked No.
Indexed A. C. [illegible] Date Date

Notes Ck'd by	Survey of Pier Soundings
Map No.	W. O. 8224 Tape No. St'd. °F
Office Work	Surveyed by G. W. Hancock
Checked	Notes Date
Date	Indexed A. C. Johnson 7-12-48

F. B. 1292 PG. 227

MALIBU SPORT FISHING PIER.

Survey & Sounding Data.

July 6, 1948 TO

~ INDEX ~

For:-

Sketch & Survey, See F.B. 1216 - 20

Profile Notes " " " - 239.

Beginning Soundings + Etc.

- THIS Book See Pg. 229.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 5-46

F. B/1292 PG. 228

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev.-Sta.	F. S. (-)	ELEV. Bottom		
Sta. No 1		214	13.5	+79	AVERAGE WAVE HT. = 0.5 FT.	
2		214	14.9	+65		
3		214	16.5	+49		
4		215	17.8	+37		
5		215	19.4	+21		
6		216	21.2	+04		
7		216	21.6	00		
8		216	22.6	-10		
9		216	22.7	-11		
10		215	23.4	-19		
11		216	23.7	-21		
12		216	25.2	-36		
13		215	26.8	-53		
14		216	27.6	-60		
15		216	29.0	-74		
16		216	30.1	-85		
17		215	30.3	-88		
18		217	30.8	-91		
19		222	32.3	-101		
20		227	33.7	-110		
21		231	34.8	-117	Notes cont'd on pg. 230	

~PIER SOUNDINGS~
"MALIBU SPORT FISHING PIER"
Elevations based on M.L.L.W.
July 6, 1948

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8424 Division No. ____
X-Sec. Notes Chkd ____ Checked ____ Survey of Pier Soundings - Malibu
No. ____ Date ____ Date ____ Survey by Klaimer Note Th.-GK Date 7-6-48
Map No. ____ Indexed ____ Date ____

F.B. 4292 229

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. = Sta.	F. S. (−)	ELEV. Bottom		
Sta. No. 22		233	35.7	−124	Notes Cont'd from pg. 229.	
23		238	37.0	−132		
24		238	37.7	−139		
25		239	35.9	−120		

Element	Time	Direction	Velocity	Height
WIND	2:45 P.M.	S. 48° W.	9-10 miles per hr.	—
WAVES	"	S. 65° E	Choppy −(?)	0.5'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Feet per Min.	Tide.
400' Up Coast.	3:30 P.M.	Negligible	—	0	Low.
400' Down "	3:15 "	100' in 9½ min's.	Down Coast	11'	" (2.6 Rising)

F.B. 1292-230

Job No. 8424 Division No. Notes Red. Plotted No. Profile

Survey of Pier Soundings - Malibu Date Date No. X-Sec.

Survey by G. Meinecke Notes T.L. - G.K. 7-6-48 Notes Chkd. Checked

Indexed A. C. Johnson Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	Elev. Sta.	F. S. (−)	ELEV. Bottom		
[illegible]		214	13.1	+83	[illegible]	1.4 ft.
2		214	[illegible]	+68		
3		214	[illegible]	+49		
4		215	[illegible]	+36		
5		215	[illegible]	+19		
6		216	[illegible]	+10		
7		216	[illegible]	+07		
[illegible]		216	[illegible]	−08		
[illegible]		216	[illegible]	−05		
[illegible]		215	[illegible]	−15		
[illegible]		216	[illegible]	−26		
[illegible]		216	[illegible]	−48		
13		215	[illegible]	−60		
14		216	[illegible]	−63		
15		216	[illegible]	−71		
16		216	[illegible]	−84		
17		215	[illegible]	−86		
18		217	30.3	−91		
[illegible]		222	[illegible]	−99		
20		227	35.6	−109		
[illegible]		231	35.2	−121		

~PIER SOUNDINGS~
"MALIBU SPORT FISHING PIER"
Elevations based on M.L.L.W.
Aug. 2, 1948.

Notes Contd on pg. 232

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____
X-Sec. ____ Date ____ Date ____ Survey of Pier Soundings – Malibu
No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey by Hlaunack Notes H.R.-Gk. Date 8-2-48
Map No. ____ Date ____ And Col. Johnson Date AUG 10 '48

F.B. 1292 Pg. 231

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I. Elev. - Sta.	F. S. (—)	ELEV. Bottom		
Sta. No. 22		233	[illegible]	-124	Notes Cont'd from pg. 231.	
23		238	[illegible]	-131		
24		238	[illegible]	-141		
25		239	[illegible]	-120		

Element	Time	Direction	Velocity	Height
WIND	2:30 P.M.	S. 50° W.	11 miles per hr.	———
WAVES	" "	N. 65° E.	11 " " "	1.4'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per Min.	Tide
400' Up Coast	3:30 P.M.	100' in 9½ mins.	Down Coast	11'	Low flood.
400' Down	" 3:00 "	100' in 11¼ "	" "	9'	" " (4.1 Rising)

F.B. 1292 Pg. 232

Job No. 8429 Division No. Notes Red. Plotted No. Profile

Survey of Pier Soundings — Malibu Date Date X-Sec.

Survey by G. Wieneck Notes M.R.-GK-8-2-48 Notes Chkd. Checked No.

Indexed A. C. Johnson Date Date Date

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H.I.~~ Elev. Sta.	F. S.	ELEV. Bottom		
Sta. 1		21.4	13.0	+8.4		
2		21.4	14.3	+7.1	AVERAGE WAVE HGT. = 2.0	
3		21.4	16.1	+5.3		
4		21.5	17.6	+3.9		
5		21.5	19.0	+2.5		
6		21.6	20.0	+1.6		
7		21.6	20.5	+1.1		
8		21.6	21.3	+0.3		
9		21.6	21.4	+0.2		
10		21.5	22.3	-0.8		
11		21.6	23.8	-2.2		
12		21.6	25.9	-4.3		
13		21.5	27.2	-5.7		
14		21.6	27.5	-5.9		
15		21.6	28.3	-6.7		
16		21.6	29.6	-8.0		
17		21.5	30.1	-8.6		
18		21.7	30.5	-8.8		
19		22.2	32.0	-9.8		
20		22.2	33.5	-10.8		
21		23.1	35.0	-11.9		

"THE 30 FOOT FISHING PIER"
ELEVATIONS BASED ON MALIBU
SEPT 28, 1948.

~ PIER SOUNDINGS ~

Notes Cont'd on Pg. 232

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8439 Division No. ____ F.B. 1998 PG. 259
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Malibu
Notes Chkd ____ Checked ____ Survey by Mamaeck Notes H H R Date 9-28-48
Date ____ Date ____ Map No. ____ Checked J. Johnson Date 9-30-48

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	~~H. I.~~ Elev. Sta.	F. S.	ELEV. Bottom		
Sta. 22		233	35.3	-120	Notes Cont'd from pg. 233	
23		238	37.4	-136		
24		238	36.0	-122		
25		239	36.5	-126		

Element	Time	Direction	Velocity	Height
WIND	2:30 P.M.	S. 62° W	7 miles per hr	—
WAVES	" "	N. 85° E.	13 " " "	2.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Feet per Min.	Tide
400' Up Coast	3 P.M.	150' in 5 mins.	Down Coast	30'	Mean Flood
400' Down "	2:45 "	100' in 4½ "	" "	22'	" "

(4.4 Rising)

F.B. 1292 PG. 234

Job No. 8429 Division No. Notes Red. Plotted Profile

Survey of Pier Soundings - Mal 34 Date Date No. X-Sec.

Survey by Meineck Notes H.R. 4-28-48 Notes Chkd. Checked

Indexed C. Johnson Date Date Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	Elev. Sta	F. S. (−)	ELEV. Bottom		
Sta. No 1		214	13.9	+75	AVERAGE WAVE HGT. = 0.3	
2		214	15.4	+60		
3		214	16.8	+46		
4		215	17.5	+40		
5		215	18.1	+34		
6		216	20.1	+15		
7		216	21.4	+02		
8		216	21.9	−03		
9		216	22.5	−09		
10		215	23.5	−20		
11		216	24.1	−25		
12		216	25.4	−38		
13		215	26.3	−48		
14		216	27.0	−54		
15		216	28.2	−66		
16		216	29.3	−77		
17		215	29.4	−79		
18		217	30.7	−90		
19		222	32.1	−99		
20		227	34.0	−113		
21		231	35.0	+119		

~PIER SOUNDINGS~
"MALIBU SPORT FISHING PIER."
Elevations based on M.L.W.
Nov. 18-'48.

Notes Contd on Pg. 236.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1192 Pg. 235
Date ____ Date ____ Survey of PIER SOUNDINGS - MALIBU
X-Sec. No. ____ Notes Chkd ____ Checked ____ Survey by KLEINECK Notes HHR Date 11-18-48
Date ____ Date ____ Map No. ____ Indexed ____ Date NOV 23 '48

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	Elev. = 5 ft	F. S.	ELEV. Bottom		
22		233	35.7	-124	Notes Cont'd from pg. 235	
23		238	36.6	-128		
24		238	37.3	-135		
25		239	36.0	-121		

Element	Time	Direction	Velocity	Height
WIND	10:30 A.M.	S. 32° W.	8 miles per hr.	—
WAVES	"	Choppy	—	0.3'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Feet per Min.	Tide
400' Up Coast	10:45 A.M.	100' in 7¾ mins.	Down Coast	13'	High ebb
400' Down	"	11:00 "	Negligible	0	" " (5.5 Falling)

F.B. 1292 PG. 236

Job No. 8429 Division No. ____ Notes Red. ____ Plotted ____ Profile

Survey of PIER SOUNDINGS - MALIBU Date ____ Date ____ No. ____

Survey by KLEINECK Notes HHR 11-18-48 Notes Chkd. ____ Checked ____ X-Sec.

Indexed A. C. Johnson Date ____ Date ____ Date ____ No. ____

Profile No. _____ Notes Red _____ Date _____ Plotted _____ Date _____ Job No. _____ Division No. _____ Survey of _____

X-Sec. No. _____ Notes Chkd. _____ Date _____ Checked _____ Date _____ Survey by _____ Notes _____ Date _____ Map No. _____ Indexed _____ Date _____

F.B. PG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK. WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	

FORM 307 10M 10-46

F.B. PG.

Job No._____ Division No._____ Notes Red._____ Plotted_____ Profile

Survey of_____ Date_____ Date_____ No._____

Survey by_____ Notes_____ Notes Chkd._____ Checked_____ X-Sec.

Indexed_____ Date_____ Date_____ Date_____ No._____

FORM 307 10M 10-46

PLEASE RETURN TO

LOS ANGELES COUNTY SURVEYOR

700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	

Profile No. _____ Notes Red. _____ Plotted _____ Job No. _____ Division No. _____ **F.B.** **PG.**

Date _____ Date _____ Survey of _____

X-Sec. No. _____ Notes Chkd. _____ Checked _____ Survey by _____ Notes _____ Date _____

Date _____ Date _____ Map No. _____ Indexed _____ Date _____

STATION	B. S.	H. I.	F. S.	ELEV.	

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

FORM 307 10M 10-46

F.B. Pg.

Job No. _____ Division No. _____ Notes Red. _____ Plotted _____

Survey of _____ Date _____ Date _____

Survey by _____ Notes _____ Notes Chkd. _____ Checked _____

Indexed _____ Date _____ Date _____ Date _____

STATION	B. S.	H. I.	F. S.	ELEV.

PLEA[illegible]
LOS ANGELES [illegible]UNT[illegible] OR
700 HAL[illegible]F RECORD[illegible]

Do [illegible]end notes [illegible] side [illegible]

NOTE [illegible] ANY [illegible]DITIONS OR CHANGES ON [illegible] DE MADE OR CIRCLED [illegible] INK, WITH DATE AND NAME O[illegible] MAKING CHANGE.