Notes Ck'd by
Map No.
Office Work
Checked
Date

Survey of
W. O. Tape No. St'd. °F
Surveyed by
Notes Date
Indexed

F. B. Pg.

Microfilmed Jan '88

RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY
ENGINEERING BLDG.

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.

F. B. _____ Pg. _____

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

F.B. 1216 PG. 1

PIER SURVEYS & SOUNDING DATA

Taken At

SEAL BEACH	See Pg. 31 + Contd.
BELMONT-E. LONG B.	" " 81 + "
REDONDO-MONSTADT	" " 107 + "
HERMOSA	" " 133 + "
MANHATTAN	" " 159 + "
OCEAN PARK	" " 185 + "
SANTA MONICA	" " 211 + "
MALIBU SPORT PIER	" " 237 + "

Preliminary Surveys Begun May 1946
Regular Sounding Schedule Begun July 1- " "
End of Period For This Book Apr. 7-1947
— Contd in F.B. 1291. —

J.N. 8429.

G.W. Kleineck
H. Gunderson
J.W.S. Moore
R. Anderson
R. Hobson
H. Stock
J. Gregory
L. De Tillo
A. Stangeland
G. Harris
D. Sappell

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 12-40

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

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Do not extend notes this side of this line.

F.B. 1216 PG. 2

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

F.B. 1216 PG. 3

PIER SOUNDINGS

ON PIERS ALONG THE COAST FROM SEAL BEACH TO MALIBU

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 3M 12-49

F.B. 1216 PG. 4

NOTE

WIND

Bearings for direction of wind indicate the direction from which the wind is blowing.

WAVES

Bearings of waves indicate the bearing along the Longitudinal axis of wave.
Height indicates distance trough to crest.

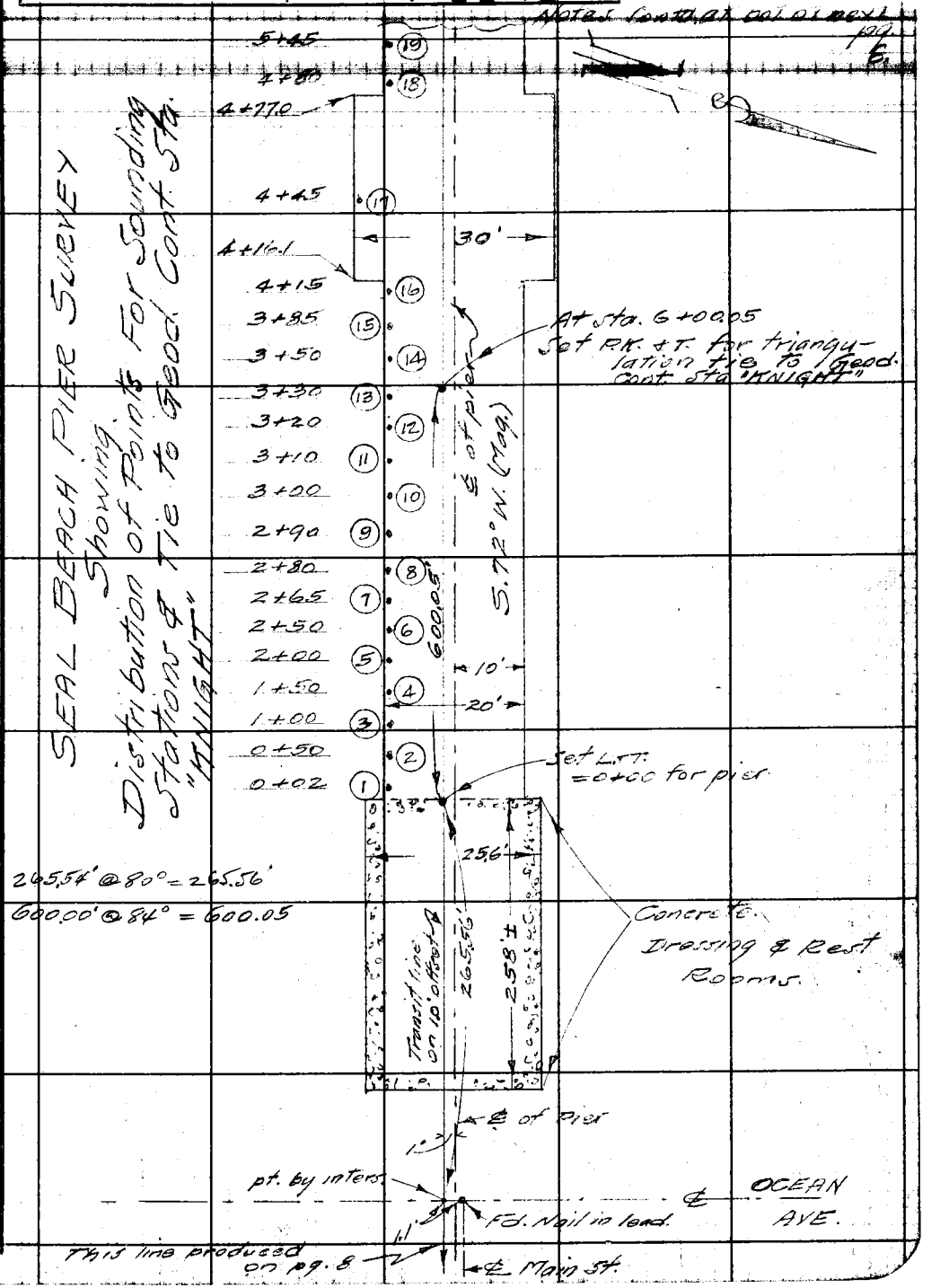
RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

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	F.B. 1216 Pg. 5
Map No.	W. O. 8429 Seal Beach Tape No. 088 St'd 68 °F	**SEAL BEACH**
Office Work	Surveyed by G.W. Meincek	
Checked	Notes GWLK Date 6-18-46	
Date	Indexed A. C. Johnson 7-22-46	

Notes Contd. at bot. of next pg. 6



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.

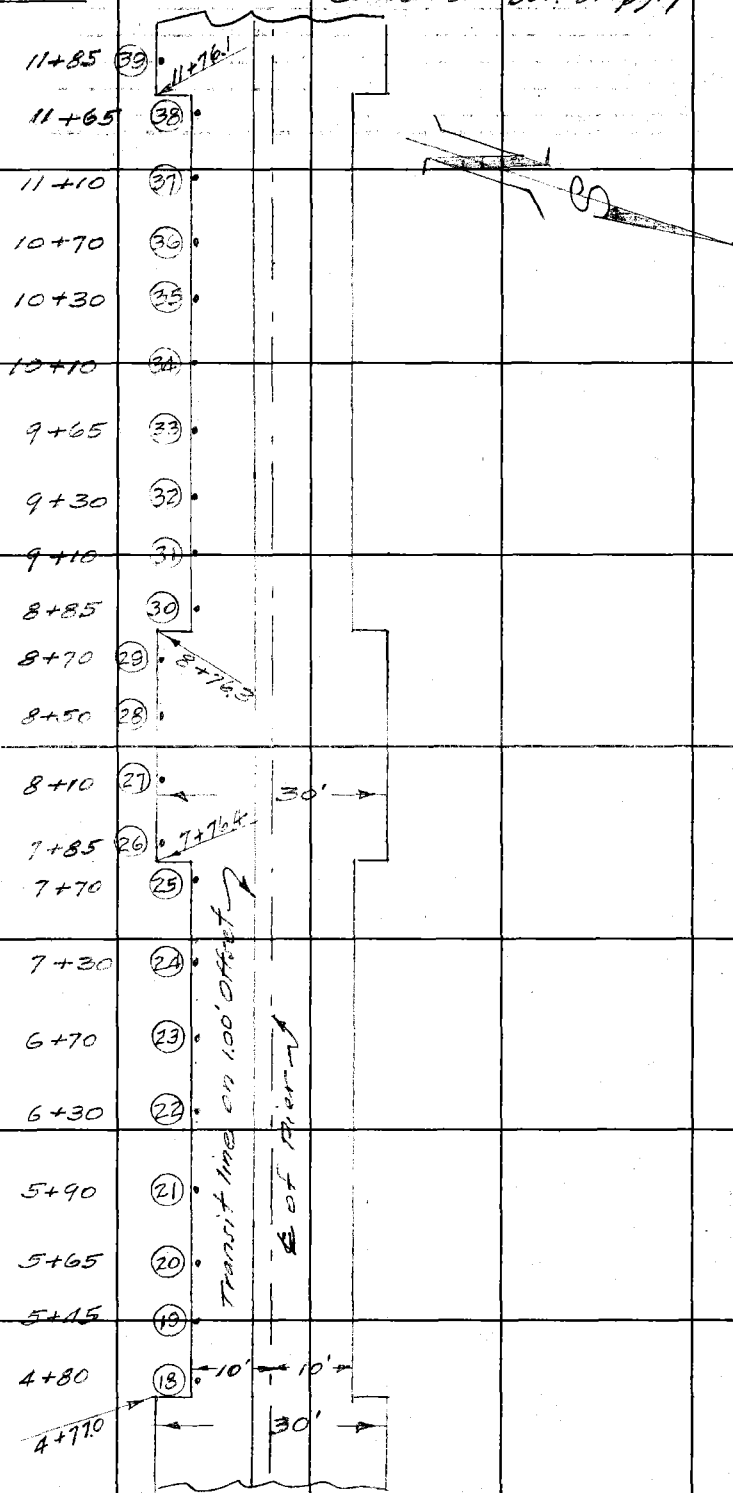
RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 5M 11-41

F.B. 1216 PG. 6

Contd at bot. of pg. 7

Seal Beach Pier Survey - Contd



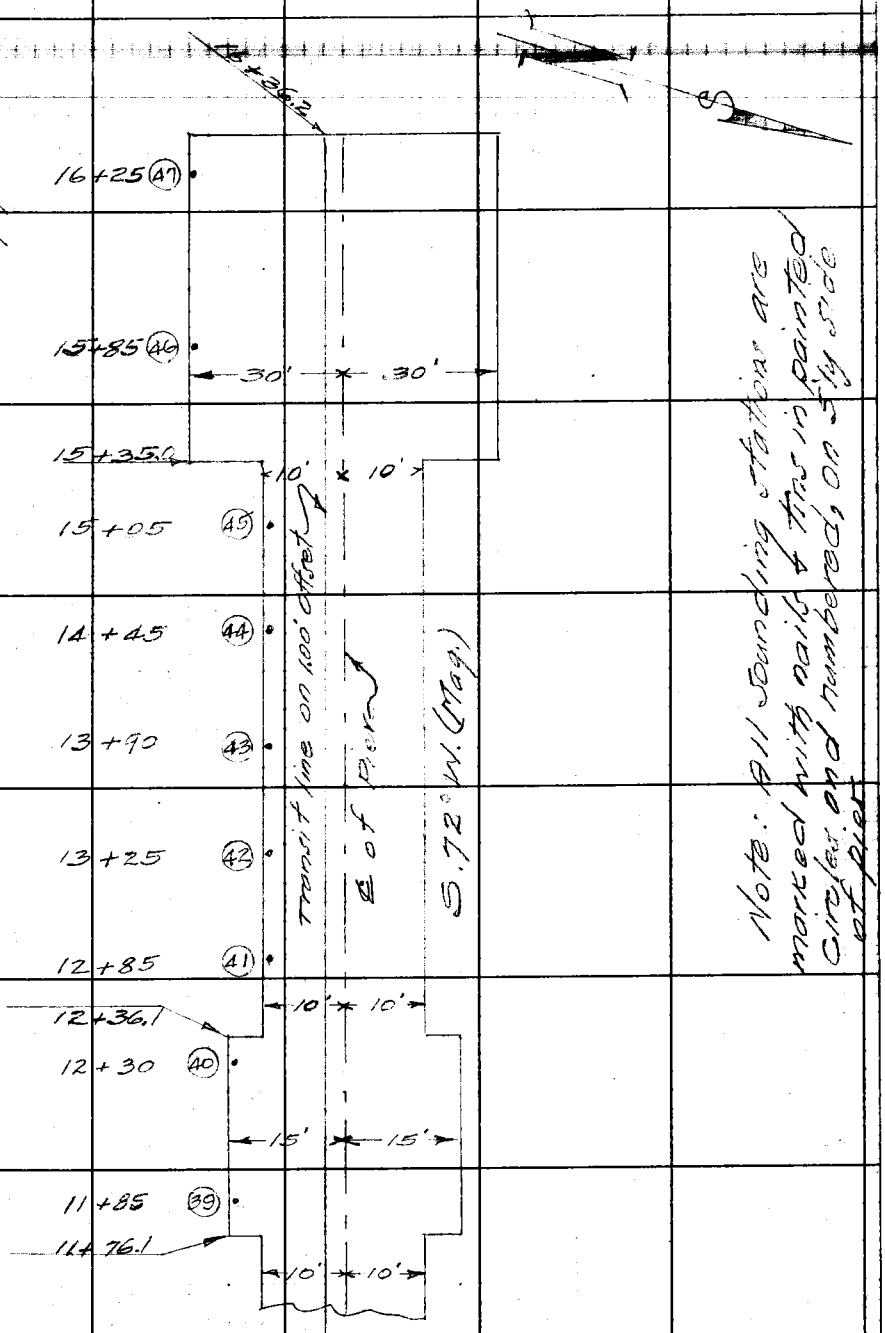
Contd from top preceding pg. 5

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 Seal Beach
Map No.	W. O. 8429 Tape No. 088 St'd 68 °F
Office Work	Surveyed by G. Kleineck
Checked	Notes GWK Date 6-18-46
Date	Indexed L. C. Jannes

F.B. 1216 PG. 7



Seal Beach Pier Survey - Cont'd
For tie to Geod. Sys. See next pg. 8.

Note: All sounding stations are marked with nails & tins in painted circles and numbered, on sly side of pier

Note: Cont'd from top of pg. 6

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

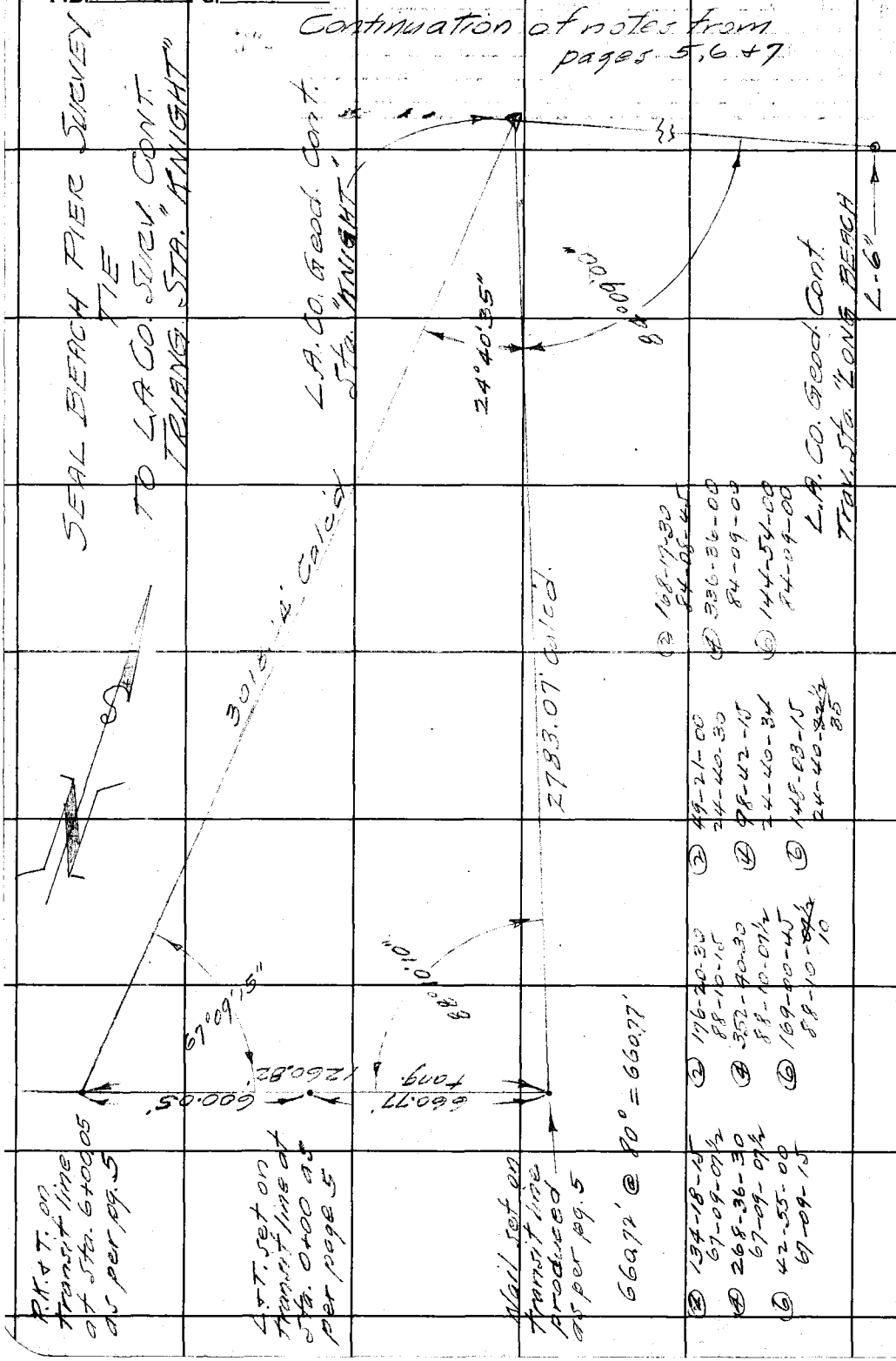
RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

FORM 247 BM 11-41

F.B. 1216 PG. 8

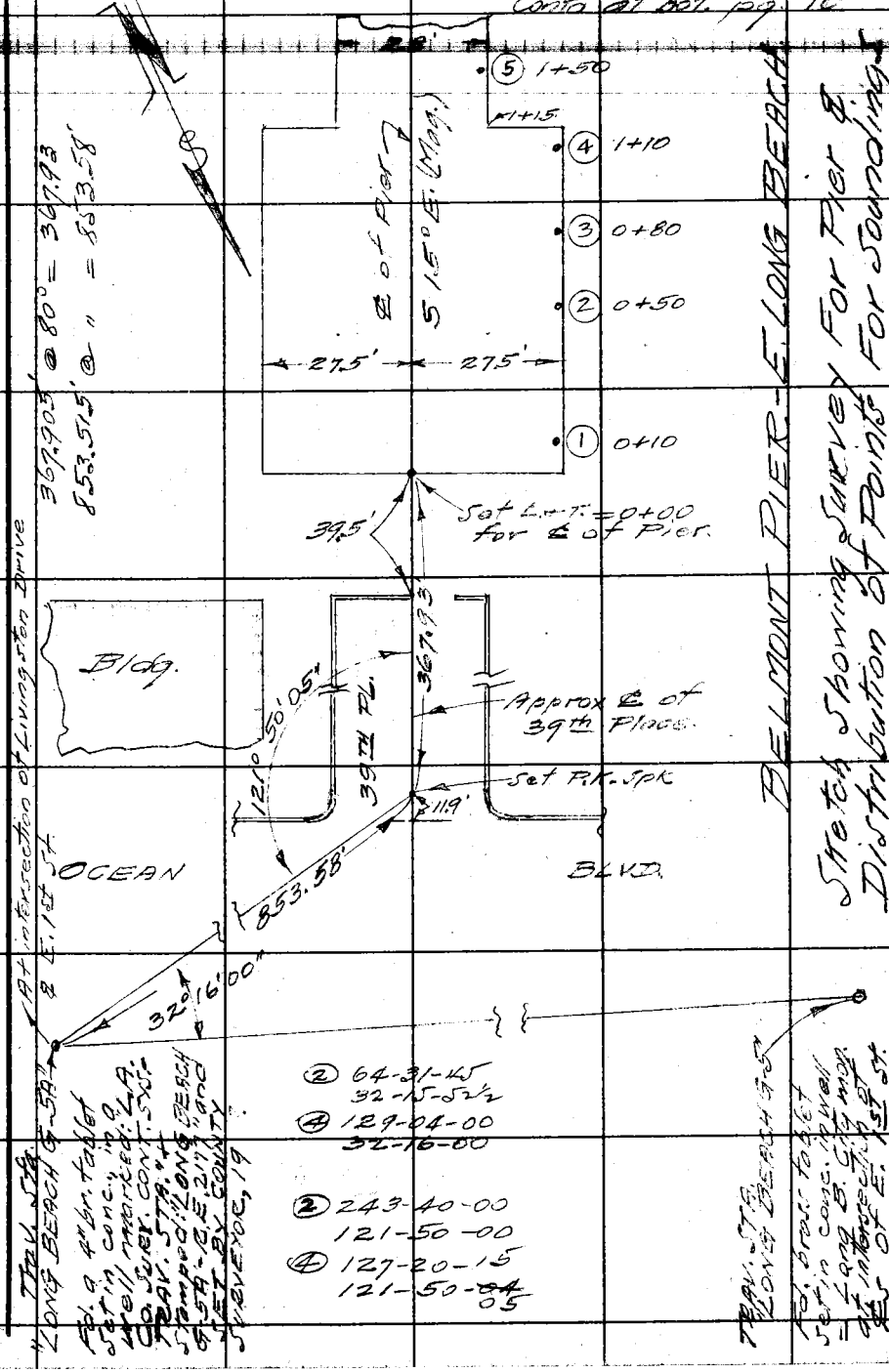
Continuation of notes from pages 5, 6 + 7



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 Tide Soundings	F.B. 1216 Pg. 9
Map No.	W. 0429 Tape No. 088 St'd 68 °F	**BELMONT PIER**
Office Work	Surveyed by G. Kleineck	
Checked	Notes GWK Date 6-10-46	
Date	Indexed A. C. Johnson 7-22-46	

Contd at bot. pg. 10



BELMONT PIER - E. LONG BEACH

Sketch Showing Survey For Pier & Distribution of Points For Soundings June 10, 1946.

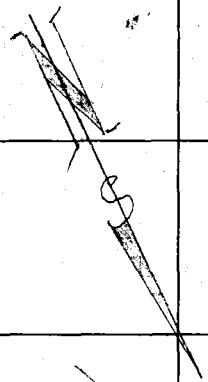
Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

Do not extend notes this side of this line.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

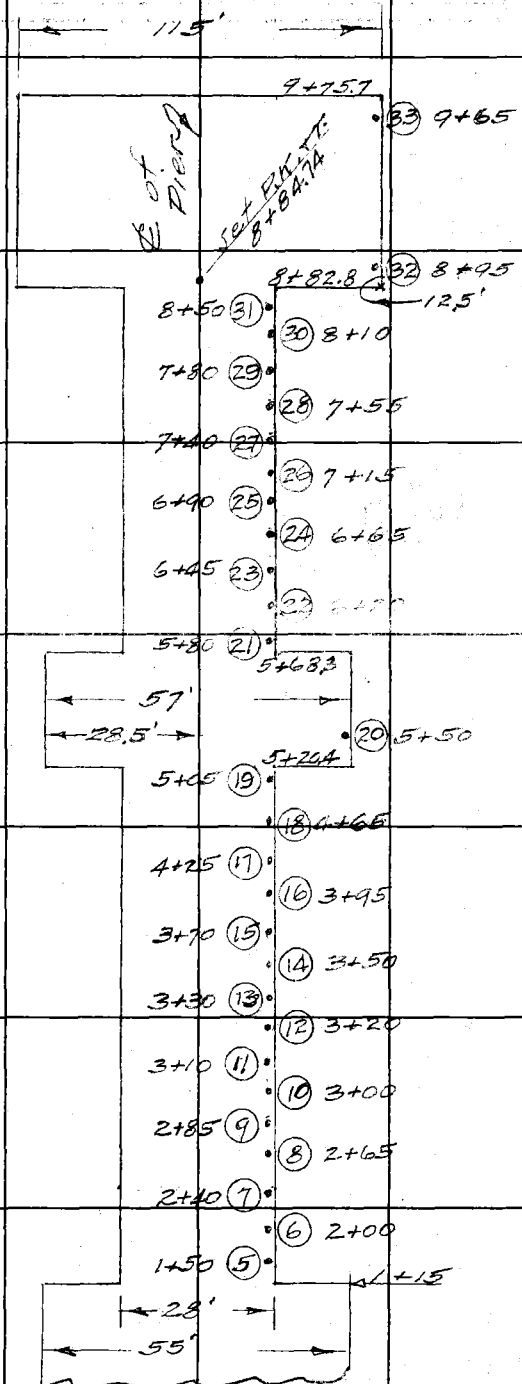
FORM 247 5M 11-41

F.B. 1216 PG. 10



~ BELMONT PIER ~

Note: All Stations are marked with a chisled + in pointed circle, on w'ly edge of pier, and numbered.



Cont'd from top pg. 9.

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS
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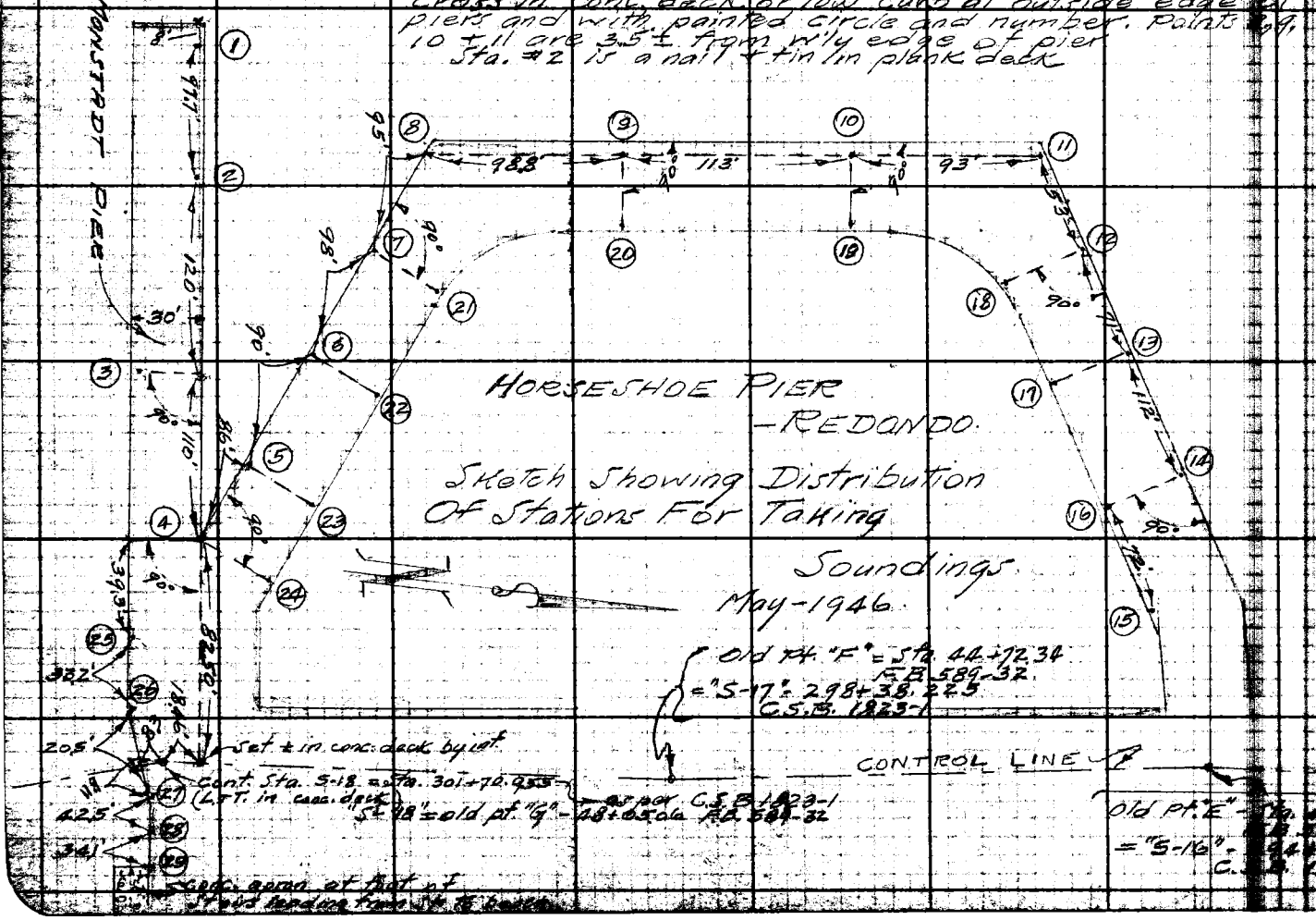
FORM 247 5M 12-40

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.

Note: All Stations except #2 are marked with chisled cross in conc. deck or low curb at outside edge of piers and with painted circle and number. Points 8, 9, 10 + 11 are 3.5 ± from w'ly edge of pier. Sta. #2 is a nail + tin in plank deck



Notes Ck'd by
Map No.
Office Work
Checked
Date

Survey of Redondo
W. O. 8224 Tape No. 088 Std. 68°F
Surveyed by F. Kleineck
Notes G.W.K. Date 5-14-46
Indexed C. Jeanson

F.B. 1716 PG. 11

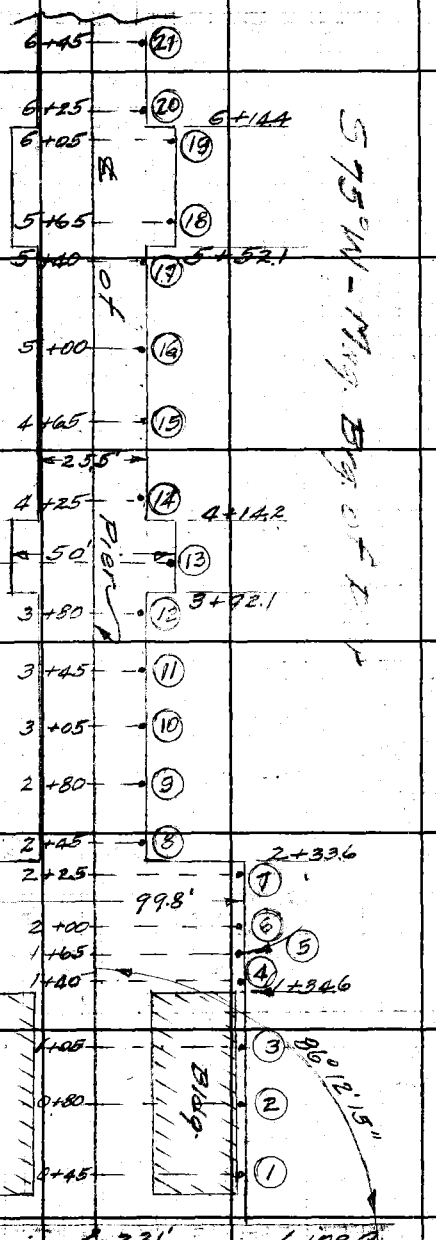
REDONDO

F.B. 1216 Pg. 12

Notes contd at bot. pg. 13

Note: All stations from ① to (21) incl. are marked with chisled +'s on top of conc. curb along outside edge of pier and with painted circles & numbers

HERMOSA PIER
-HERMOSA
Sketch Showing Distribution Of Stations For Taking Soundings. May-1946



② 172-24-30
96-12-15
③ 344-49-00
96-12-15

For L.A. City notes on this survey see L.B. 988-A3

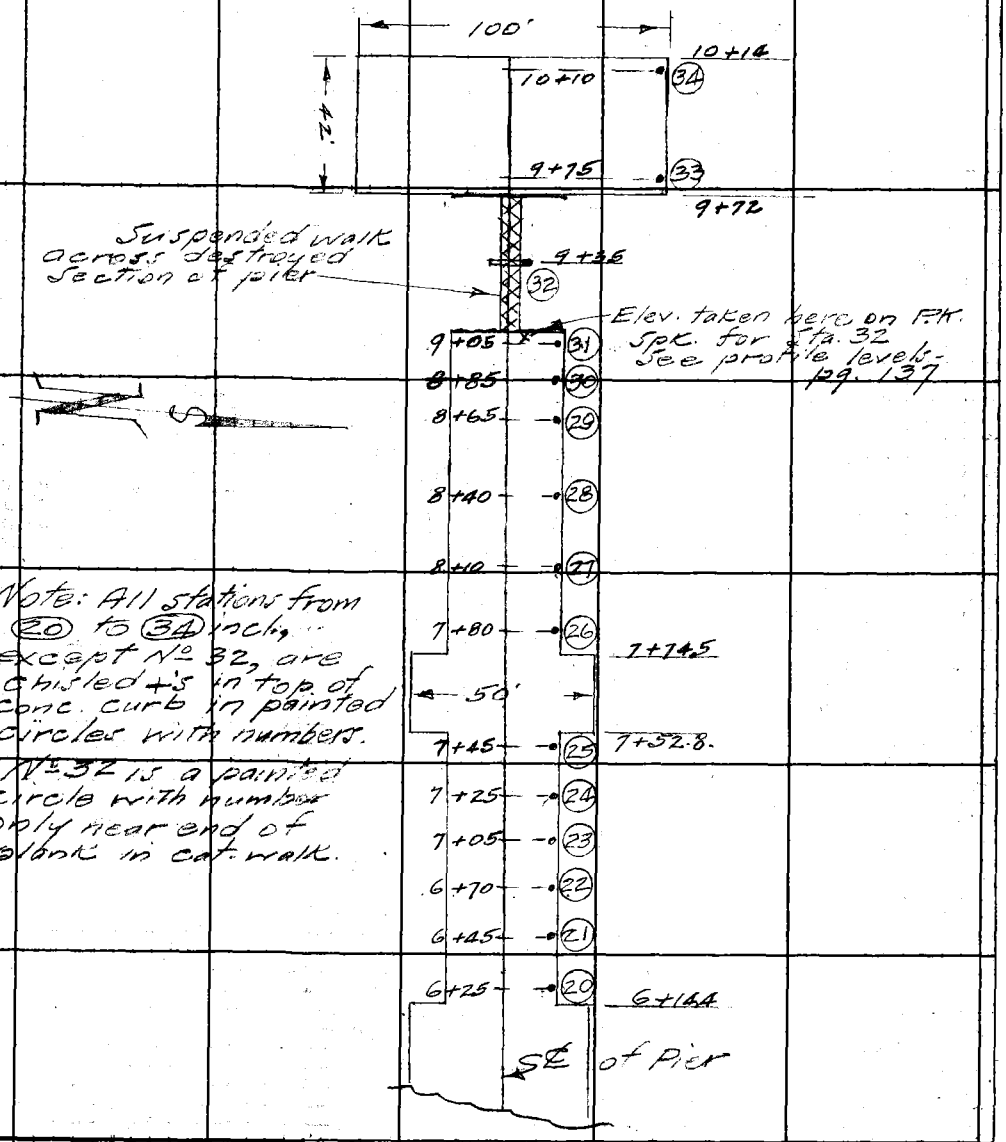
RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

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	F.B. 1216 PG. 13
Map No.	W. O. 8429 Tape No. 088 St'd 68° °F	**HERMOSA**
Office Work	Surveyed by G. Kleineck	
Checked	Notes G.W.K. Date 5-23-46	
Date	Indexed A. C. Jonnson 7-22-46	

Outer Section of Hermosa Pier Showing Location of Sounding Stations



Note: All stations from 20 to 34 incl., except No. 32, are chisled +'s in top of conc. curb in painted circles with numbers.

No. 32 is a painted circle with number only near end of plank in cat. walk.

Cont'd from top 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.

RETURN TO LOS ANGELES COUNTY SURVEYOR 700 HALL OF RECORDS

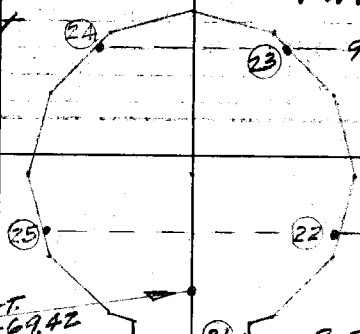
Do not extend notes this side of this line.

FORM 247 5M 11-41

F.B. 1216 PG. 14

MANHATTAN

Note: All stations except #1 are marked with chisled + on top of conc. curb on N. side of pier.
No 1 is a chisled + on top of + of N.E. Cor. of conc. support base for light Standard at S.W. Cor. of a bldg.



MANHATTAN PIER
— MANHATTAN BEACH.
Sketch of Pier & Layout of Sounding Stations.
May 27-1946.

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.

Notes BR'd by	Survey of
Map No.	W. O. 2529 Tape No. 2008 St'd 68 of.
Office Work	Surveyed by G. Steineck
Checked	Notes GWK Date 5-28-46
Date	Indexed L. O. Johnson 7-25-46

F.B. 1216 PG. 15

OCEAN PARK

Notes ANY ADDITIONS OR CHANGES OF 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 10M 3-51

OCEAN PARK PIER.
STRETCH SHOWING
TRANSIT LINE & LOCATION
OF SOUNDING STATIONS
ALONG NORTHERLY SIDE.
MAY 28-1946.

Basis of Bearings: N. 55° 40' W. (Mag. Brg.) Zone 7 Boulevard

Ocean Front Walk

Ocean Park Pier

Casino Gardens Dance Hall

Parking Lot

Transit Line

Set L.T. 3+00

Set L.T. 5+80

Set N.T. 5+80

3400' offset

9+10

8 5+80

7 5+45

6 4+75

5 4+25

4 4+00

3 3+50

2 3+40

1 3+20

3+12

Set L.T. 3+00

Set L.T. 1.15' up conc. Step down conc. walk.

Set L.T. 1.15' up conc. walk.

Set L.T. 1.15' up conc. Step down 5+00 for Pier Survey

F.S.

130.33'

91°25'55"

89°22'15"

264.92'

12.34' @ 68° = same
132.64' @ " = "
264.92' @ " = "
130.33' @ " = "

① 178°44'15"
89°22'07½
④ 357-29-00
89-22-07½
② 179-45-45
89-52-52½
④ 359-31-45
89-52-52½

See LB 976-69 for more notes.

"N-90° Fd. L.T. 339+01.355"

339+83.235

Fd. L.T. as per L.B. 976-69. 339+83.235

89°52'55"

331+44.36

12.334

132.64'

255.995 rec. (255.98' meas.)

2.50 Ft.

Fd. L.T. L.B. 976-69.

25.05' Offset Transit Line

BASE LINE
℄ Ocean Front Walk

℄ Pier Ave.

℄ Marine Ave.

331+22.22

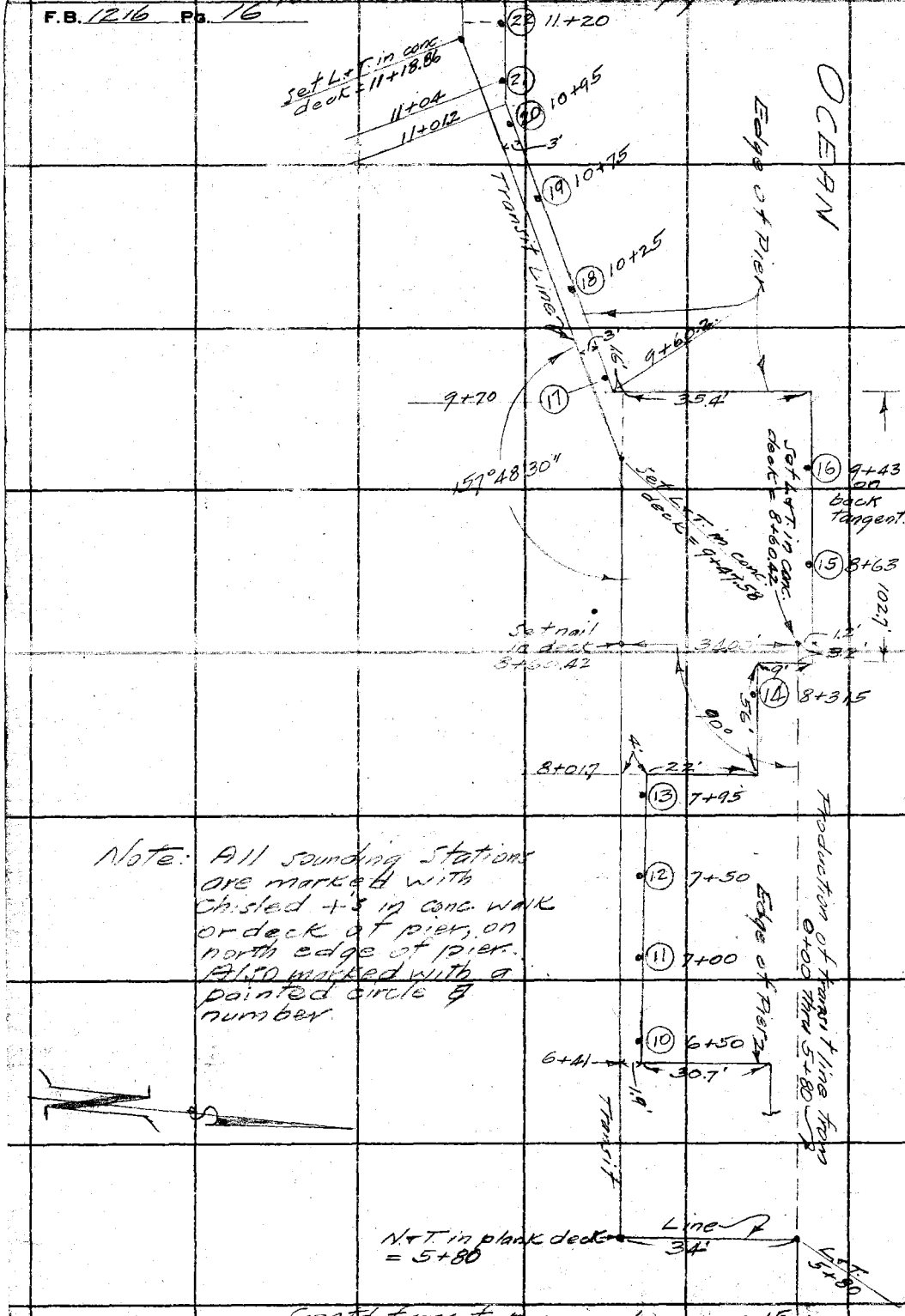
"N. 29° E. Brass tack in concrete well."

Pier Ave.

② 182-52-00
91-26-00
④ 05-43-45
91-25-55

F.B. 1216 Pg. 16

Notes Contd at bot pg. 17



Note: All sounding Stations are marked with Chisled +'s in conc. walk or deck of pier, on north edge of pier. Also marked with a painted circle & number.

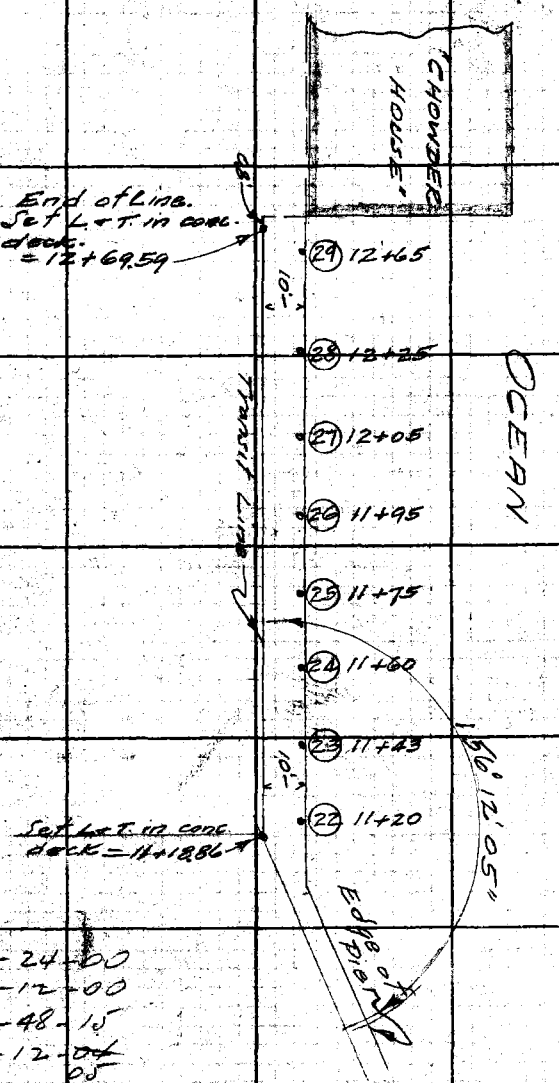
Contd from top preceding page 15

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. 8827 Tape No. 088 St'd 68 °F.
Office Work	Surveyed by G. Kleineck
Checked	Notes GHW Date 5-28-46
Date	Indexed C. Johnson

F.B. 1216 Pg. 17

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.



(2) 312-24-00
156-12-00
(4) 264-48-15
156-12-~~04~~ 05

Notes Contd from top pg. 16

RETURN TO

LOS ANGELES COUNTY SURVEYOR

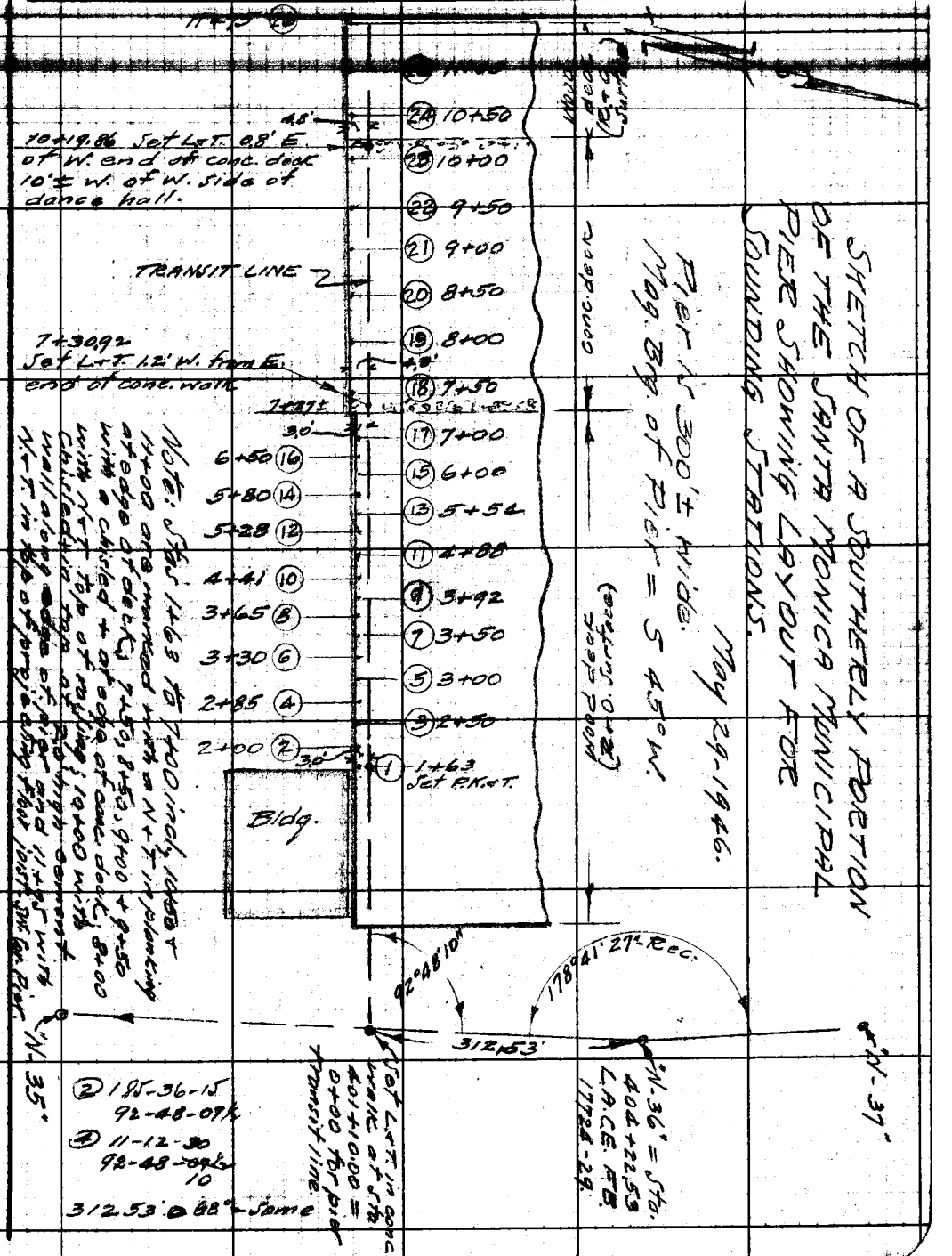
700 HALL OF RECORDS

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

F.B. 1216 Pg. 18

Notes Ck'd by	Survey of [illegible]	F.B. 1216 PG. 19
Map No.	W. O. [illegible] Tape No. 088 Std. 68 °F	**SANTA MONICA**
Office Work	Surveyed by G. Kleineck	
Checked	Notes [illegible] Date 5-24-46	
Date	Indexed A. C. Johnson 7-22-46	



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

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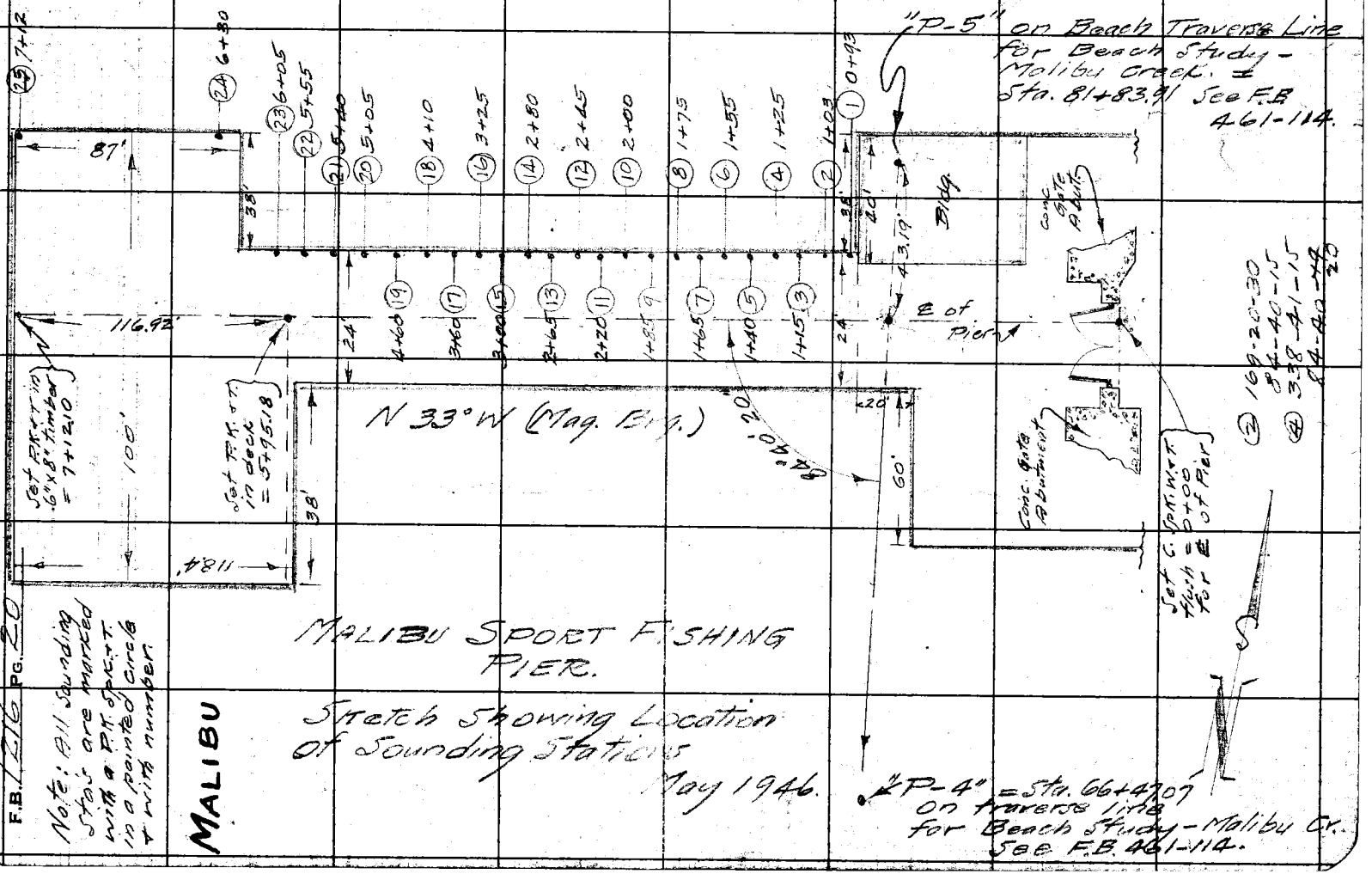
RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 247 BM 11-41

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.



Notes Ck'd by		Survey of	
Map No.		W. O.	Tape No. Std °F
Office Work		Surveyed by	
Checked		Notes	Date
Date		Indexed	A. O. Johnson 7-22-46

F.B. 1216 Pg. 31

~ SEAL BEACH DIKE ~

SURVEY & SOUNDING DATA.
June 18-'46 to April 3, 1947

~ INDEX. ~

Sketch & Survey.		Pages	5-8.
Profile Levels		"	33-36
Soundings & Etc.	- July 1, 1946	"	37-39.
	- " 29,	"	41-43
	- Aug 27,	"	45-47
	- Oct. 16	"	49-51
	- Nov. 14	"	53-55
	- Dec. 27	"	57-59
	- Jan. 31 1947	"	61-63
	- Mar. 4	"	65-67.
	- Apr. 3,	"	69.

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 3M 12-40

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.

F.B. 1216 PG. 32

FORM 307 5M 7-43

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. ____ Notes Red. ____ Plotted ____ Job No. 5[illegible] Division No. ____
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey of [illegible] Notes [illegible] Date 6-15-[illegible]
Date ____ Date ____ Date ____ Survey by [illegible] Date ____
Map No. ____ Date ____

STATION	B. S.	H. I.	F. S.	ELEV.		
L.B.City Bk.				22585	Fd. U.S.C.&G.S. disc in S.E. curb return at Ocean Ave. & 2nd St. Seal Beach. Elev. 23.58	
				+ 2.20		
				25.78 V = M.L.L.W.		
	5250	30615				
TP	5005	30[illegible]	5250	25605 V		
TP	5290	30522	5337	25235 V		
T	[illegible]	30440	03305	25160 V		
TP	5170	29600	5155	24430 V		
TBM	507	2[illegible]	[illegible]	22980 V	L.F.T. = 0400 on pg. 5	
Sta. No. 1			2[illegible]	2330	X.F.T. in curb Sta. 2+11 6"X6" brass 25'	
No. 2			4[illegible]	2322 V		
No. 3			4[illegible]	2323 V		
No. 4			4[illegible]	2323 V		
No. 5			[illegible]	2319 V		
No. 6			[illegible]	2321 V		
No. 7			[illegible]	2325 V		
No. 8			[illegible]	2326		
No. 9			[illegible]	2326 V		
No. 10			4[illegible]	2327 V		
No. 11			[illegible]	2327 V		
No. 12			[illegible]	2327 V		
No. 13			4[illegible]	2331 V		

Profile Notes

Contd on pg. 34.

F.B. [illegible] PG. [illegible]

FORM 307 5M 7-43

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.		
		[illegible]			Brot Fwd from pg. 33.	
Sta. No 14			475	2329	N & T. in painted circle in 6"x6" binder - S. Ely edge of pier.	
No 15			[illegible]	2324		
No 16			[illegible]	[illegible]		
No 17			478	2326		
No 18			[illegible]	2330		
No 19			[illegible]	2324		
No 20			479	2325		
No 21			[illegible]	2326		
No 22			[illegible]	[illegible]		
[illegible]			472	2332		
~~No 24~~			~~[illegible]~~			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
No 24			468	2332		
No 25			[illegible]	2326		
No 26			[illegible]	[illegible]		
No 27			[illegible]	2324		
No 28			[illegible]	2325		
No 29			[illegible]	2326		
No 30			[illegible]	2327		
No 31			[illegible]	2330		

Contd on pg. 35.

F.B. 1216 PG. 34 Job No. 8429 Division No. ____ Notes Red. ____ Plotted ____ Profile ____
Survey of [illegible] Date ____ Date ____ No. ____
Survey by Kleineck Notes [illegible] Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed A. C. Johnson Date ____ Date ____ Date ____ No. ____

FORM 307 5M 7-43

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.		
		[illegible]			Brot Ford from pg. 34.	
					[illegible] in [illegible] circle, in 6"x6" binder - [illegible] edge of [illegible]	
Sta. No. [illegible]			[illegible]	2333		
No. 33			[illegible]	2331		
[illegible]			[illegible]	2334		
[illegible]			461	2339		
[illegible]			[illegible]	2330		
[illegible]			[illegible]	[illegible]		
[illegible]			[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	518	[illegible]		
No. [illegible]				2332		
[illegible]			[illegible]	2331		
[illegible]			[illegible]	2332		
[illegible]			[illegible]	2330		
[illegible]			[illegible]	2321		
[illegible]			[illegible]	2331		
[illegible]			[illegible]	2321		
TP	[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]			[illegible]	2330		
[illegible]			[illegible]	2324		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		

Profile Notes.

Cont'd on pg. 36.

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

F.B. 1216 PG. 35

FORM 307 5M 7-43

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.		
		28030			Brot. Ford from pg. 35.	
T.P.	5215	28075	517	[illegible]		
T.B.M.	6730	29720	5085	[illegible]	L.+T. = 0+00 on pg. 33.	
T.P.	5540	30130	5130	[illegible]		
T.P.	5400	30500	5025	[illegible]		
T.P.	5190	30485	5210	[illegible]		
T.P.	4950	30655	4780	[illegible]		
Long B. City B.M.			5225	[illegible]	U.S.C.&G.S. Disc. - See pg. 33.	

F.B. 1216 PG. 36
Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Sounding & Seal Beach Date Date No.
Survey by Meneck Notes GWK-6-18-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

Profile	Notes Red.	Plotted	Job No. 8429	Division No.	F.B. 1216 Pg. 37
No.	Date	Date	Survey of [illegible]		
X-Sec.	Notes Chkd.	Checked	Survey by Klemeck	Notes GWK.	Date 7-1-'46
No.	Date	Date	Map No.	Indexed C. Johnson	Date

~ PIER SOUNDINGS ~

"SEAL BEACH PIER"

Seal Beach, Calif.

July 1, 1946.

Elevations based on M.L.L.W.

STATION	B.S.	~~H.I.~~ Elev.-Sta	F.S. (−)	ELEV. Bottom
Sta. No. 1		2330	11.8	+115
2		2321	12.1	+111
3		2323	12.6	+106
4		2323	12.9	+103
5		[illegible]	[illegible]	+102
6		2321	12.1	+112
7		2325	[illegible]	+115
8		[illegible]	13.9	+94
9		2326	15.3	+80
10		[illegible]	16.6	+67
11		[illegible]	17.6	+57
12		2327	18.6	+47
13		[illegible]	19.5	+38
14		[illegible]	20.5	+26
15		[illegible]	21.6	+16
16		[illegible]	22.4	+09
17		2326	22.6	+07
18		[illegible]	23.5	−02
19		[illegible]	23.4	−05
20		2325	24.0	−08
21		[illegible]	24.6	−13

Contd on pg. 38

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 5M 7-43

FORM 307 5M 7-43

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		2328	25.8	-25	Contd from pg. 37.	
23		2332	25.[illegible]	-[illegible]3		
24		2332	26.9	-[illegible]		
25		2326	27.2	-39		
26		2330	27.5	-42		
27		2324	28.5	-52		
28		2325	30.5	-73		
29		2326	30.9	-71		
30		2327	31.3	-85		
31		2330	32.1	-9[illegible]		
32		2333	33.3	-10[illegible]		
33		2331	34.0	-10[illegible]		
34		2334	35.5	-12[illegible]		
35		2331	36.2	-12[illegible]		
36		2330	37.8	-14[illegible]		
37		2330	37.3	-14[illegible]		
38		2330	37.8	-14[illegible]		
39		2332	37.7	-14[illegible]		
40		2331	37.7	-14[illegible]		
41		2332	38.7	-15[illegible]		
42		2330	38.[illegible]	-15[illegible]		

F.B. 1216 PG. 38
Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Seal Beach Date Date No.
Survey by Kleinert Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

FORM 307 2M 8-45

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. 43		2329	39.1	−158	Contd from pg. 38
44		2331	39.3	−160	WIND: S 10° E. - 7 miles per hr. at 10 AM
45		2328	39.8	−165	
46		2330	38.7	−154	
47		2334	38.1	−148	

WAVES: S. 60° E. — 10 miles per hr. at 10 A.M.
Hgth = 1.5'

LITTORAL DRIFT: {Tide: Incoming - near high. 10:30 — 11:00 A.M. (3.6 Rising)

400' North of Pier - Mag. brg. of beach = N. 56° W.
(36.3 Ft. per min.) Cube (Cork float) 200' in 5 min - 30 sec } 0.4 mi. per hr.
" (Block ") " " " " }
Direction - N. 56° W. (Up Coast)

400' South of Pier - Mag. brg. of beach = S. 60° E.
(19 Ft. per min.) Cube (Cork float) 200' in 10½ mins. - 0.22 mi. per hr.
" (Block ") " " 8¼ " - 0.27 " " "
Direction - S. 60° E. (Down Coast)

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 7216 PG. 39
X-Sec. No. ____ Date ____ Date ____ Survey of ____ Beach
Notes Chkd. ____ Checked ____ Survey by Kleinecke Notes Kwk Date 7-1-46
Date ____ Date ____ Map No. ____ Date ____

F.B. 2/6 PG. 40

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.	

FORM 307 2M 8-45

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.

Profile	Notes Red.	Plotted	Job No. 8429	Division No.	F.B. 1216 PG. 41
No.	Date	Date	Survey of [illegible]		
X-Sec.	Notes Chkd.	Checked	Survey by Kleinecke	Notes GWK	Date 7-29-46
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date

— PIER SOUNDINGS —

"SEAL BEACH PIER."

Seal Beach, Calif

July 29, 1946

Elevations based on MLLW.

STATION	B. S.	Elev. - Sta.	F. S. (-)	ELEV. Bottom
Sta No 1		2330	11.8	+11.5
2		2321	12.0	+11.2
3		2323	12.4	+10.9
4		2323	12.8	+10.4
5		2319	12.8	+10.4
6		2328	11.9	+11.4
7		2325	11.7	+11.5
8		2326	14.7	+8.6
9		2326	16.0	+7.3
10		2327	17.2	+6.1
11		2327	18.2	+5.1
12		2329	19.0	+4.3
13		2331	19.6	+3.7
14		2329	20.3	+3.0
15		2324	21.3	+1.9
16		2330	22.8	+0.5
17		2326	22.3	+1.0
18		2330	24.1	-0.8
19		2324	23.7	-0.5
20		2325	24.2	-1.0
21		2326	25.2	-1.9

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 5M 7-43

FORM 307 5M 7-43

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		2328	25.8	-25		
23		2332	26.2	-29		
24		2332	27.6	-[illegible]		
25		2326	28.2	-[illegible]		
26		2330	28.3	-50		
27		2334	29.3	-60		
28		2325	30.6	-[illegible]		
29		2326	30.9	-[illegible]		
30		2327	31.6	-[illegible]		
31		2330	32.7	-[illegible]		
32		2333	33.5	-102		
33		2331	33.9	-[illegible]		
34		2334	35.1	-[illegible]		
35		2339	36.0	-12[illegible]		
36		2330	36.4	-131		
37		2330	37.3	-[illegible]		
38		2330	37.6	-143		
39		2332	37.5	-14[illegible]		
40		2331	38.0	-[illegible]		
41		2332	38.7	-154		
42		2330	38.3	-150		

F.B. 1216 PG. 42
Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Sounding & Seal Beach Date Date No.
Survey by G. Klemeck Notes Fwk - 7-29-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date Date No.

FORM 307 5M 7-43

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. # 43		2329	39.2	-159		
44		2331	39.3	-160		
45		2328	39.9	-166		
46		2330	38.7	-154		
47		2334	38.1	-148		

Element	Time	Direction	Velocity	Height
WIND	10:30 AM	S 18° W.	6 mi. per hr.	—
WAVES	"	S 80° E	10 " " "	2.0'

~LITTORAL DRIFT~

Observation At	Time	Drift	Direction	
400' Up Coast	11 A.M.	300' in 6½ mins.	Up Coast	(46 ft per min)
400' Down "	11:30 A.M.	200' in 15¼ "	" "	(13 ft. per min)

Stage of tide:- High ebb. HGT = 4.4 Falling

Profile No. ____ Notes Red. ____ Plotted ____ Date ____
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Date ____
Job No. 5429 Division No. ____
Survey of [illegible] Survey by [illegible] Notes [illegible] Date 7-29-66
Map No. ____ Indexed [illegible] Date [illegible]

F.B. 1216 PG. 43

F.B. 1216 PG. 44

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.

FORM 307 5M 7-43

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 5M 1-46

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		2330	115	+ 118
2		2321	120	112
3		2323	123	109
4		2323	129	103
5		2319	128	104
6		2328	120	113
7		2325	124	108
8		2326	142	91
9		2326	157	76
10		2327	171	62
11		2327	179	54
12		2329	185	48
13		2331	191	42
14		2329	197	36
15		2324	216	16
16		2330	213	20
17		2326	215	18
18		2330	224	09
19		2324	232	+ 00
20		2325	237	−05
21		2326	241	−08

Cont'd on pg. 46

~ PIER SOUNDINGS ~
"SEAL BEACH PIER"
Seal Beach, Calif.
Aug. 27, 1946
Elevations based on M.L.L.W.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 5429 Division No. ____
X-Sec. No. ____ Date ____ Date ____ Survey of [illegible]
Notes Chkd. ____ Checked ____ Survey by Kleineck Notes [illegible] Date 8-27-46
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date 2-4-47

F.B. 1216 PG. 45

FORM 307 5M 1-46

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		2328	251	18	Contd from pg. 45	
23		2332	260	27		
24		2332	277	44		
25		2326	286	53		
26		2330	288	55		
27		2334	298	65		
28		2325	310	78		
29		2326	312	79		
30		2327	319	86		
31		2330	333	100		
32		2333	338	105		
33		2331	339	106		
34		2334	354	121		
35		2339	361	127		
36		2330	365	132		
37		2330	376	143		
38		2330	378	145		
39		2332	376	143		
40		2331	381	148		
41		2332	389	156		
42		2330	388	155		

Contd on pg. 47

F.B. 1216 PG. 46 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Seal Beach Date Date No. X-Sec.
Survey by Meineck Notes Gwk - 8-27-'46 Notes Chkd. Checked
Indexed A. C. Johnson Date Date Date No.

FORM 307 5M 1-46

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		2329	387	− 154	Cont'd from pg. 46	
44		2331	394	− 161		
45		2328	400	− 167		
46		2330	390	− 157		
47		2334	382	− 149		

Element	Time	Direction	Velocity	Height
WIND	7 A.M.	North	2 mi's per hr.	—
WAVES	"	S. 61° E.	9 " " "	2.0'

~ LITTORAL DRIFT ~

Observation At.	Time	Drift	Direction
400' Up Coast.	7:30 AM	200' in 7 min's.	Up Coast. (29 ft per min)
400' Down "	7:45 AM.	100' in 7 3/4 "	" " (13 ft per min)

Stage of tide – Mean flood. No float used
HGT = 3.9 Rising

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8479 Division No. ____
X-Sec. No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey of [illegible] Survey by Kleinecke Notes [illegible] Date 8-27-46
Map No. ____ Date ____ Indexed C. Jannsen Date ____

F.B. 1216 PG. 47

F.B. 1216 PG. 48

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 SM 1-46

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. 1216 PG. 49

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

Notes Chkd. ____ Checked ____ Survey by Kleineck Notes G.W.K. Date 10/16/46

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

~ PIER SOUNDINGS ~

"SEAL BEACH PIER"

Seal Beach, Calif.

Oct. 16, 1946.

Elevations based on MLLW.

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
Sta. No. 1		233	11.8	+11.5
2		232	12.1	+11.1
3		232	12.5	+10.7
4		232	13.0	+10.2
5		232	12.9	+10.3
6		233	11.9	+11.4
7		232	12.7	+10.5
8		233	14.5	+8.8
9		233	16.2	+7.1
10		233	17.6	+5.7
11		233	18.6	+4.7
12		233	19.2	+4.1
13		233	19.7	+3.6
14		233	20.5	+2.8
15		232	21.4	+1.8
16		233	22.2	+1.1
17		233	22.2	+1.1
18		233	23.2	+0.1
19		232	26.6	-3.4
20		232	24.0	-0.8
21		233	24.6	-1.3

FORM 307 5M 1-46

FORM 307 5M 1-46

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	25.3	−20		
23		233	26.1	−28		
24		233	28.3	−50		
25		233	29.5	−62		
26		233	29.5	−62		
27		233	30.3	−70		
28		232	31.4	−80		
29		233	31.7	−81		
30		233	32.2	−87		
31		233	32.9	−96		
32		233	33.5	−102		
33		233	34.3	−110		
34		233	35.4	−121		
35		234	36.1	−127		
36		233	36.4	−131		
37		233	37.1	−138		
38		233	37.4	−141		
39		233	37.4	−141		
40		233	37.9	−146		
41		233	38.6	−153		
42		233	38.3	−150		

F.B. 1216 PG. 50

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

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

Survey by Klemeck Notes Chkd. Checked

Indexed A. C. Jonnson Date Date No.

FORM 307 5M 1-46

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	39.2	-159		
44		233	39.2	-159		
45		233	39.8	-165		
46		233	38.8	-155		
47		233	38.3	-150		

Element	Time	Direction	Velocity	Height
WIND	11 A.M.	S 79° W	13 miles per hr.	—
WAVES	"	N 35° W	10 " " "	2.0'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Tide

Observations not made. Weighted cube lost

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. Surv. Division No. ____
X-Sec. Date ____ Survey of ____
No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey by Flowers Notes Civil Date 10-16-46
Map No. ____ Indexed C. Johnson Date ____

F.B. 1218 PG. 57

F.B. 1216 PG. 52

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 5M 1-46

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. 5429 Division No. _____ F.B. 216 PG. 53

X-Sec. No. _____ Date _____ Date _____ Survey of [illegible]

Notes Chkd. _____ Checked _____ Survey by Kleineck Notes J.H.-G.K. Date 11-14-'46

Date _____ Date _____ Map No. _____ Indexed C. Johnson Date _____

~ PIER SOUNDINGS ~

"SEAL BEACH PIER"

Seal Beach, Calif.

Nov. 14, 1946

Elevations based on M.L.L.W.

STATION	B.S.	Elev. Sta.	F.S. (-)	ELEV. Bottom
Sta. No. 1		233	11.7	+116
2		232	12.0	+112
3		232	12.3	+109
4		232	12.7	+105
5		232	12.7	+105
6		233	11.8	+115
7		232	14.2	+90
8		233	14.5	+88
9		233	17.7	+56
10		233	18.5	+48
11		233	19.0	+43
12		233	19.8	+35
13		233	19.7	+36
14		233	20.8	+25
15		232	21.4	+18
16		233	24.2	-09
17		233	23.1	+02
18		233	24.6	-13
19		232	24.3	-11
20		232	24.5	-13
21		233	25.3	-20

Cont'd on pg 54

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 5M 1-46

FORM 307 5M 1-46

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	25.9	-26	Cont'd from pg. 53
23		233	26.5	-32	
24		233	28.4	-51	
25		233	29.9	-66	
26		233	28.4	-51	
27		233	30.8	-75	
28		232	31.2	-80	
29		233	31.9	-86	
30		233	32.4	-91	
31		233	33.3	-100	
32		233	34.1	-108	
33		233	34.2	-109	
34		233	35.2	-119	
35		234	36.3	-129	
36		233	35.9	-126	
37		233	36.1	-128	
38		233	37.5	-142	
39		233	37.3	-140	
40		233	37.6	-143	
41		233	38.1	-148	
42		233	38.2	-149	Cont'd on pg. 55

F.B. 1216 Pg. 54

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

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

Survey by Kleneck Notes G.H.-GK 11-14-46 Notes Chkd Checked

Indexed A. C. Jannes Date Date Date No.

FORM 307 5M 1-46

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	38.4	-151	Cont'd from pg. 54.	
44		233	38.7	-154		
45		233	38.8	-155		
46		233	39.2	-159		
47		233	38.8	-153		

Element	Time	Direction	Velocity	Height
WIND	2 P.M.	5, 50° W.	9 miles per hr.	
WAVES	"	N. 70° W.	6 " " "	2.2'

~LITTORAL DRIFT~

Observation At.	Time	Drift	Direction	Speed per min	Tide
400' Up Coast.	2:45 P.M.	100' in 1½ mins.	Up Coast.		66'
400' Down "	2:30 P.M.	120' in 9 "	" "		13'

HGT = 4.3 Fol. 9

Profile
Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____
No. ____ Date ____ Date ____ Survey of [illegible] Bench
X-Sec. Notes Chkd. ____ Checked ____ Survey by Kleinert Notes [illegible] Date 11-14-46
No. ____ Date ____ Date ____ Map No. ____ Indexed J. Jordan Date ____

F.B. 126 Pg. 55

F.B. 1216 PG. 56

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 5M 1-46

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. [illegible] Division No. ____ F.B. 1216 PG. 57

Date ____ Date ____ Survey of [illegible] Seal Beach

X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Kleineck Notes D.S. Date 12-27-'46

Date ____ Date ____ Map No. ____ Indexed [illegible] Date ____

PIER SOUNDINGS ~

"SEAL BEACH PIER"

Seal Beach, Calif.

Dec. 27-'46

Elevations based on M.L.L.W.

Average Wave height 2.3'

STATION	B. S.	~~H.I.~~ Elev.-Sta.	~~F.S.~~ (-)	ELEV. Bottom
Sta. No 1		233	11.9	+11.4
2		232	12.3	+10.9
3		232	12.7	+10.5
4		232	13.0	+10.2
5		232	12.9	+10.3
6		233	12.0	+11.3
7		232	13.1	+10.1
8		233	14.8	+8.5
9		233	15.9	+7.4
10		233	17.0	+6.3
11		233	17.8	+5.5
12		233	18.6	+4.7
13		233	19.1	+4.2
14		233	19.5	+3.8
15		232	20.7	+2.5
16		233	22.2	+1.1
17		233	22.3	+1.0
18		233	23.4	-0.1
19		232	24.1	-0.9
20		232	24.5	-1.3
21		233	24.9	-1.6

Cont'd on pg. 58

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 5M 1-46

FORM 307 5M 1-46

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	25.9	−26	Cont'd from pg. 57.
23		233	26.8	−35	
24		233	27.8	−45	
25		233	29.0	−57	
26		233	29.2	−59	
27		233	30.1	−6[illegible]	
28		232	31.5	−83	
29		233	32.1	−8[illegible]	
30		233	32.6	−9[illegible]	
31		233	33.2	−99	
32		233	33.7	−104	
33		233	34.[illegible]	−113	
34		233	35.7	−124	
35		234	36.0	−126	
36		233	36.2	−129	
37		233	36.8	−135	
38		233	37.6	−143	
39		233	37.4	−141	
40		233	37.8	−145	
41		233	38.7	−154	
42		233	38.7	−154	Cont'd on pg. 59

F.B. 216 PG. 58

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

Survey of Plot Soundings - Seal Beach Date Date No.

Survey by Fleisch Notes D.S. 12-27-46 Notes Chkd. Checked X-Sec.

Indexed A. C. Jannsen Date Date Date No.

FORM 307 5M 1-46

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	39.1	-158	Cont'd from pg. 58	
[illegible]		233	39.3	-160		
[illegible]		233	39.9	-166		
[illegible]		233	39.1	-158		
[illegible]		233	39.1	-158		

Element	✓	Time	✓	Direction	✓	Velocity	✓	Height
WIND		12 Noon		S 71° W		13 miles per hr.		—
WAVES		"		N 32° W		14 " " "		2.8'

~ LITTORAL DRIFT ~

Observation	At	✓	Time	✓	Drift	✓	Direction	✓	Tide
400' Up	Coast		12:30 P.M.		200' in 9½ mins (= 21 ft. per Min)		Down Coast		High e.b.
400' Down	"		12:15 "		100' in 1¾ " (= 57 ft. per min.)		" "		" "

+3.8 Falling.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. [illegible] Division No. ____
X-Sec. Notes Chkd. ____ Checked ____ Survey of ____ Notes [illegible] Date 12-27-'46
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____
Survey by [illegible] C. Jonnson

F.B. [illegible] Pg. [illegible]

F.B. 216 PG. 60

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 5M 1-46

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. 8429 Division No. ____ F.B. 1216 Pg. 61

Date ____ Date ____ Survey of Pier Soundings - Seal Beach

X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Klemeck Notes Chk. - Date 1-31-'47

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

~PIER SOUNDINGS~

"SEAL BEACH"

Jan. 31, 1947

Elevations based on M.L.L.W.

STATION	B. S.	Elev. Sta.	F. S. (-)	ELEV. Bottom
Sta. No 1		233	12.0	+113
2		232	12.1	+111
3		232	12.7	+105
4		232	13.0	+102
5		232	13.0	+102
6		233	12.0	+113
7		232	12.9	+103
8		233	14.4	+89
9		233	15.8	+75
10		233	17.0	+63
11		233	17.8	+55
12		233	18.6	+47
13		233	19.3	+40
14		233	20.1	+32
15		232	21.5	+17
16		233	22.8	+05
17		233	23.1	+02
18		233	24.4	-11
19		232	24.7	-1.5
20		232	24.8	-1.6
21		233	25.2	-1.9

Cont'd on pg. 62

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

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 307 2M 11-41

FORM 307 2M 11-41

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	Cont'd from pg. 61	
23		233	26.9	-36		
24		233	28.7	-54		
25		233	29.7	-64		
26		233	29.9	-66		
27		233	29.7	-64		
28		232	31.7	-85		
29		233	32.1	-88		
30		233	32.8	-95		
31		233	33.4	-101		
32		233	34.3	-110		
33		233	34.9	-116		
34		233	35.5	-122		
35		234	35.9	-125		
36		233	36.1	-128		
37		233	36.8	-135		
38		233	37.4	-141		
39		233	37.3	-140		
40		233	37.8	-145		
41		233	38.4	-151		
42		233	38.5	-152	Cont'd on pg. 63	

F.B. 1216 PG. 62 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of First Soundings - Seal Beach Date Date No.
Survey by Klemack Notes Gt. Gt. 1-31-49 Notes Chkd. Checked X-Sec.
Indexed C. Jannus Date Date No.

FORM 307 2M 11-41

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	38.8	-155	Cont'd from pg. 62	
44		233	39.0	-157		
45		233	39.6	-163		
46		233	39.5	-162		
47		233	38.7	-154		

Element	Time	Direction	Velocity	Height
WIND	9:45 A.M.	N 38° E.	2 miles per hr.	—
WAVES	"	N 43° W	9 " " "	1.2'

~ LITTORAL DRIFT ~

Observation	AT	Time	Drift	Direction	Tide
400' Up Coast		10:15 A.M.	100' in 9 mins. (=11 ft. per min)	Down Coast	Low ebb
400' Down	"	10 A.M.	100' in 6½ mins. (=15 ft per min)	Down Coast	" "

+1.0 Rising.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ FB 1716 PG. 63
Date ____ Date ____ Survey of Per Sundings - Seal Beach
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Kennedy Notes Chkd. Date 1-31-47
Date ____ Date ____ Map No. ____ Indexed C. Jones Date ____

F B. 1216 PG. 64 | 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.

FORM 307 2M 11-41

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 2M 11-41

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		233	120	+113	Average Wave Hght	2.6
2		232	123	+109		
3		232	128	+104		
4		232	132	+100		
5		232	132	+100		
6		233	121	+112		
7		232	129	+103		
8		233	143	+90		
9		233	152	+81		
10		233	163	+70		
11		233	173	+60		
12		233	181	+52		
13		233	189	+44		
14		233	198	+35		
15		232	210	+22		
16		233	241	-08		
17		233	237	-04		
18		233	246	-13		
19		232	255	-23		
20		232	260	-28		
21		233	261	-28		

contd on pg 66

~PIER SOUNDINGS~
"SEAL BEACH"
March 4, 1947
Elevations based on M.L.L.W.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 65
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Seal Beach
Notes Chkd. ____ Checked ____ Survey by Kleinsek Notes J.W.S.M. Date 3-4-47
Date ____ Date ____ Map No. ____ Indexed: Johnson Date MAR 21 47

FORM 307 2M 11-41

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.A.~~ Elev.-Sta.	~~F. S.~~ (-)	ELEV. Bottom		
Sta No 22		233	267	-34	Contd from pg. 65	
23		233	270	-37		
24		233	270	-37		
25		233	278	-45		
26		233	270	-37		
27		233	280	-47		
28		232	295	-63		
29		233	295	-62		
30		233	312	-79		
31		233	323	-90		
32		233	342	-109		
33		233	356	-123		
34		233	366	-133		
35		234	370	-136		
36		233	375	-142		
37		233	377	-144		
38		233	371	-138		
39		233	371	-138		
40		233	375	-142		
41		233	379	-146		
42		233	380	-147		

contd on pg. 67

F B 1216 PG. 66 Job No. 8419 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Seal Beach Date Date No.
Survey by Kleinack Notes LWSM & GK Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

FORM 307 2M 11-41

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	383	-150	Contd from pg 66.	
44		233	386	-153		
45		233	391	-158		
46		233	389	-156		
47		233	383	-150		

Element	Time	Direction	Velocity	Height
WIND	8:30 A.M.	N 20° E.	1 mile per hr.	—
WAVES	"	N 47° W	11 miles " "	2.6

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Tide
400' Up Coast	9 A.M.	Negligible - Reversals	Up + Down Coast	high e.b.
400' Down "	8:45 A.M.	150' in 6 mins (= 25ft per min)	Down Coast	" "
				+4.7 Falling

Profile Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG 67
No. ____ Date ____ Date ____ Survey of Pier Soundings - Seal Beach
X-Sec. Notes Chkd. ____ Checked ____ Survey by H. Lamack Notes [illegible] Date 3-4-47
No. ____ Date ____ Date ____ Map No. ____ Index [illegible] Date ____

FB. 1216 PG. 68 | 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.

FORM 307 2M 11-41

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 5M 11-35

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		233	12.0	+113	Wave Hght. 2.6	
2		232	12.2	+110		
3		232	12.6	+106		
4		232	13.0	+102		
5		232	13.0	+102		
6		233	12.0	+113		
7		232	12.7	+105		
8		233	13.6	+97		
9		233	14.4	+8.9		
10		233	15.8	+75		
11		233	16.9	+64		
12		233	18.0	+53		
13		233	19.0	+43		
14		233	19.9	+34		
15		232	21.5	+17		
16		233	23.2	+01		
17		233	23.4	−01		
18		233	24.7	−14		
19		232	25.5	−23		
20		232	25.7	−25		
21		233	26.3	−30		

Contd on pg. 70

Elevations based on M.L.L.W.

April 3, 1947

"Seal Beach"

Pier Soundings

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8424 Division No. ____ F. B. 1216 PG. 69

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

Notes Chkd. ____ Checked ____ Survey by Kleineck Notes R. Arnold Date 4-3-'47

Date ____ Date ____ Map No. ____ Date MAY 20 '47

Form 307 5M 11-35

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	26.6	-[illegible]	Cont'd from pg. 69.
23		233	27.0	-37	
24		233	27.0	-[illegible]	
25		233	27.3	-[illegible]	
26		233	27.1	-[illegible]	
27		233	28.1	-48	
28		232	29.6	-[illegible]	
29		233	30.2	-[illegible]	
30		233	31.0	-[illegible]	
31		233	32.[illegible]	-[illegible]	
32		233	33.2	-[illegible]	
33		233	34.1	-[illegible]	
34		233	35.7	-[illegible]	
35		234	36.1	-[illegible]	
36		233	37.0	-[illegible]	
37		233	37.3	-[illegible]	
38		233	38.0	-[illegible]	
39		233	37.7	-[illegible]	
40		233	37.6	-[illegible]	
41		233	37.8	-[illegible]	
42		233	38.6	-[illegible]	

Cont'd on pg. 71

F. B. 1216 PG. 70 | Job No. 8469 | Division No. | Notes Red. | Plotted | Profile
Survey of Piet Sandings - Seal Beach | Date | Date | No.
Survey by Kleineck | Notes Rt. - Gwk | Notes Chkd. | Checked | X-Sec.
Indexed A. C. Johnson | Date | Date | Date | No.

Form 307 5M 11-35

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 7	−15 4	cont'd from pg. 70	
44		233	39 2	−15 9		
45		233	39 7	−16 4		
46		233	38 8	−15 5		
47		233	38 5	−15 2		

Element	Time	Direction	Velocity	Height
WIND	9:15 A.M.	N 45° W	14 miles per hr.	
WAVES	" "	N 35° W	12 " " "	2.6'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min	Tide
400' Up Coast	9:45 A.M.	200' in 3½ mins.	Down Coast	62'	Mean e.b.c.
400' Down "	9:30 "	200' in 2⅔ "	" "	75'	" "

+4.0 Falling

(See F.B. 1291 for add'l. Soundings)

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 5409 Division No. ____ F. B. 1296 PG. 71
Date ____ Date ____ Survey of Pier Soundings - Seal Beach
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Kleinrock Notes UM-GWH Date 4-3-49
Date ____ Date ____ Map No. ____ Checked Jennsen Date ____

F. B. 1216 PG. 72 | 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.

Form 307 5M 11-35

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

Notes Ck'd by	Survey of
Map No	W. O. Tape No. St'd °F
Office Work	Surveyed by
Checked	Notes Date
Date	Indexed A. S. Johnson 7-22-46

F.B. 1216 PG. 81

BELMONT PIER - E. LONG BEACH.

SURVEY & SOUNDING DATA.

June 10, 1946 to April 3, 1947

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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 11-41

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.

F.B. 1216 PG. 82

FORM 307 2M 8-48

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.

Profile No. _____ Notes Red. _____ Plotted _____ Job No. 2422 Division No. _____
No. _____ Date _____ Date _____ Survey of _____
T. Sec. _____ Notes Chkd. _____ Checked _____ Survey by W. Lee Notes Stirk Date 6-48
No. _____ Date _____ Date _____ Map No. _____ Add'd Notes G. Johnson Date _____

F.B. 1218 Pg. 83

STATION	B. S.	H. I.	F. S.	ELEV.	
L.B.City B.M. #211				5809	Park Ave. & Ocean Blvd. Fd. Round headed bolt set in conc. well at N.E. Cor. of inter. 4.2' E. & 2.8 N. of curbs.
				+2800	
	5765	14374		8609	= M.L.L.W.
T.P.	5022	14414	4982	9392	
T.P.	5245	14469	5190	9224	
T.P.	7760	17644	4605	9864	
L.B.City B.M. #37			1143	16501	1st Termino & Ocean Blvd. Fd. Round headed bolt set in conc. well at N.E. Cor. of intersection. 7.0' N. & E. of curbs. Elev. = 13.725
	*	*	*	*	+ 2800
B.M. #37	4212	21337		16525	16.525 = M.L.L.W.
T.P.	9743	27275	3605	17532	
	4032	28517	2790	24485	
T.B.M.			5030	23487	L.T. of Sta. 0+00 - See Sketch pg. 9.
Sta. No. 1			537	2315	Chiseled + in painted circle on W'ly edge of curb.
No. 2			532	2320	
No. 3			542	2310	
No. 4			526	2316	
No. 5			536	2316	
No. 6			529	2323	
No. 7			539	2313	
T.P.	490	28562	4955	23607	
No. 8			546	2310	

Profile Notes

Cont'd on pg. 84

FORM 307 2M 8-45

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.		
		28.562			Brot Fwd. from pg. 83.	
[illegible] No 9			5 46	[illegible]	Chisled + in pointed circle on Wly edge of pier	
No 10			5 42	[illegible]		
No 11			5 44	[illegible]		
No 12			5 39	[illegible]		
No 13			5 [illegible]	[illegible]		
No 14			5 [illegible]	[illegible]		
[illegible]			5 [illegible]	[illegible]		
[illegible]			[illegible]	[illegible]		
[illegible]			[illegible]	[illegible]		
[illegible]			[illegible]	[illegible]		
No 19			[illegible]	23 12		
No 20			5 37	[illegible]		
No 21			5 [illegible]	[illegible]		
No 22			[illegible]	[illegible]		
No 23			5 [illegible]	[illegible]		
No 24			5 [illegible]	23 12		
No 25			5 [illegible]	23 [illegible]		
No 26			5 [illegible]	23 12		
No 27			5 25	23 21		
No 28			5 [illegible]	23 22		

Contd on pg. 85

F.B. 1218 Pg. 84
Job No. [illegible] Division No.
Survey of Pier Soundings (Belmont Pier)
Survey by Wlemoos Notes G.W.K. 6-17-46
Indexed L. C. Johnson Date
Notes Red. Date
Notes Chkd. Date
Plotted Date
Checked Date
Profile No.
X-Sec. No.

FORM 307 2M 8-45

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.		
		28562			Brot Ford from pg. 84	
T.P.	[illegible]	28554	[illegible]	23744	Chisled + in painted circle on W'ly edge of [illegible]	
[illegible]			[illegible]	2327		
[illegible]			[illegible]	2325		
[illegible]			[illegible]	2313		
[illegible]			[illegible]	2305		
[illegible]			[illegible]	2305		
T.P.	[illegible]	28541	[illegible]	23511		
T.P.	[illegible]	28581	[illegible]	23371		
L+T. (Sta. 0+00)	6505	30006	[illegible]	23501	See pg. 83	
T.P.	[illegible]	21283	[illegible]	19381		
T.P.	6595	22723	5155	16121		
L.B.C. [illegible]			6185	16538	See pg. 83	

Profile Notes

Profile No. ____ Notes Red. ____ Plotted ____ Job No. [illegible] Division No. ____ F.B. 1216 PG. 85
X:Sec. No. ____ Date ____ Date ____ Survey of ____ Date ____
Notes Chkd. ____ Checked ____ Survey by Meineck Notes [illegible] Date 6-17-46
Date ____ Date ____ Map No. ____ Checked P. Johnson Date ____

F.B. 216 PG. 86

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.	

FORM 307 2M 8-45

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.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. [illegible] Division No. ____ F.B. 1216 PG. 87

Date ____ Date ____ Survey of [illegible]

X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Kleineck Notes [illegible] Date 7-1-46

Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

~ PIER SOUNDINGS ~

BELMONT PIER - E. LONG BEACH.

July 1, 1946

Elevations based on M.L.L.W.

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 5M 7-43

STATION	B. S.	Elev. ~~H.I.~~ Sta.	F. S. (−)	ELEV. Bottom
Sta. No. 1.		2315	12.2	110
2		2320	11.3	119
3		2310	12.8	102
4		2316	13.9	13
5		2316	15.0	82
6		2323	15.0	82
7		2313	12.8	103
8		2310	14.1	90
9		2310	17.0	61.
10		2314	18.5	46
11		2312	19.3	38
12		2317	20.0	32
13		2313	20.0	31
14		2316	20.4	28
15		2318	20.8	24
16		2319	21.5	17
17		2320	23.0	02
18		2316	24.0	−08
19		2317	25.0	−19
20		2319	26.0	−28
21		2314	26.8	−37

Contd on pg. 88

FORM 307 5M 7-43

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		2319	29 0	-38	Cont'd from pg. 87	
23		2317	31 0	-76	WIND: S38°W. 7 miles per	
24		2322	31 8	-80	hr. at 1 P.M.	
25		2327	34 5	-112		
26		2322	37 0	-1[illegible]		
27		2321	38 1	-156	WAVES: S.73°E. - 8 miles	
28		2322	39 0	-1[illegible]	per hr. at 1 P.M.	
29		2327	40 0	-170	Hgth = 1.0'	
30		2325	41 7	-1[illegible]		
31		2313	42 5	-19[illegible]		
32		2305	41 8	-1[illegible]	LITTORAL DRIFT:	
33		2305	42 1	-191	1:30-2:30 P.M. (Ebb tide.) (3.4 Falling)	

400' West of Pier. - Mag. brg. of beach N. 73°W.
(27 Ft per min) Cube (block float) 200' in 7½ min's. (0.3 mi. per hr.)
(17.4 Ft. per min.) " (Cork ") " " 11½ " (0.2 " " ")
Up Coast - Direction - N. 73°W.

400' East of Pier. - Brg. of beach, N 73°W.
(12 Ft per min) Cube (block float) 100' in 8½ min's. (0.13 mi. per hr.)
(7.8 Ft. per min.) " (Cork ") " " 12¾ " (0.09 " " ")
Up Coast - Direction N 73°W.

F.B. 1216 PG. 88 Job No. 8424 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Belmont Date Date No.
Survey by Meineck Notes Gulf - 7-1-'46 Notes Chkd. Checked X-Sec.
Indexed Date Date No.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 89

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

Notes Chkd. ____ Checked ____ Survey by Klemens Notes Hobson Date 7-29-'46

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

~PIER SOUNDINGS~

BELMONT PIER - E. Long Beach.

July 29, 1946.

Elevations based on M.L.L.W.

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 5M 1-45

STATION	B. S.	Elev. - Sta.	F. S. (-)	ELEV. Bottom
Sta. No. 1		2315	122	+110
2		2320	115	+117
3		2310	129	+102
4		2316	139	+93
5		2316	149	+83
6		2323	146	+86
7		2313	121	+110
8		2310	150	+81
9		2310	174	+57
10		2314	188	+43
11		2312	198	+33
12		2317	207	+25
13		2313	218	+13
14		2316	210	+22
15		2318	218	+14
16		2319	233	-01
17		2320	229	+03
18		2316	246	-14
19		2312	263	-32
20		2319	271	-39
21		2314	290	-59

FORM 307 5M 1-46

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		2319	290	-58
23		2317	288	-56
24		2322	309	-77
25		2327	337	-104
26		2322	352	-120
27		2321	377	-145
28		2322	380	-148
29		2327	398	-165
30		2325	417	-184
31		2313	425	-194
32		2305	415	-185
33		2305	418	-188

Element	Time	Direction	Velocity	Height
WIND	1 P.M.	5.35° W.	7 mi's per hr.	—
WAVES	"	5.89° W.	9.7 " " "	2.5'

~LITTORAL DRIFT~

Observation At	Time	Drift	Direction	Speed per min.	Tide
400' Up Coast	2:30 P.M.	700' in 18 min's	(39' per m.) Up Coast	39'	Low ebb.
400' Down	"	3 P.M. 200' in 9 "	(22' per m.) " "	22'	" " (1.9 Falling)

F.B. 1216 PG. 90

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

Survey of Per Soundings - Belmont Date Checked Date No. X-Sec.

Survey by G. Kleinecke Notes Hobson - 7-29-'46 Notes Chkd. Date Date No.

Indexed C. Johnson Date

FORM 307 5M 1-46

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		2315	120	+ 112
2		2320	124	108
3		2310	129	102
4		2316	139	93
5		2316	149	83
6		2323	142	90
7		2313	120	111
8		2310	142	89
9		2310	174	57
10		2314	187	44
11		2312	194	37
12		2317	202	30
13		2313	204	27
14		2316	210	22
15		2318	216	16
16		2319	222	+ 10
17		2320	237	- 05
18		2316	244	- 12
19		2312	254	- 23
20		2319	262	- 30
21		2314	266	- 35

Cont'd on pg. 92

~ PIER SOUNDINGS ~

BELMONT PIER - E. LONG BEACH.

Aug. 27, 1946.

Elevations based on M.L.W.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1218 Pg. 91

X-Sec. No. ____ Date ____ Date ____ Survey of [illegible] Date 8-27-46

Notes Chkd. ____ Checked ____ Survey by Kleinert Notes [illegible] Date 8-27-46

Date ____ Date ____ Map No. ____ Indexed C. Johnson Date 2-4-47

FORM 307 5M 1-46

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		23 19	28 2	-5 0	Contd from pg. 91	
23		23 17	30 2	7 0		
24		23 22	31 4	8 2		
25		23 27	33 8	10 5		
26		23 22	35 5	12 3		
27		23 21	37 2	14 0		
28		23 22	38 2	15 0		
29		23 27	40 0	16 7		
30		23 25	41 4	18 2		
31		23 13	42 4	19 3		
32		23 05	40 6	17 6		
33		23 05	41 8	18 8		

Element	Time	Direction	Velocity	Height
WIND	8:15 A.M.	S 83° E.	3 mi's per hr	
WAVES	"	S 76° E.	9 " " "	2.6'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed	Tide
400' Up Coast	8:30 A.M.	100' in	6 mins Up Coast	17'	High Flood.
400' Down "	9 A.M.	200' in	4½ " " "	44'	" "

Note: No float used. (4.5 Rising)

F.B. 1216 PG. 92 Job No. 8429 Division No. Notes Red. Plotted No. Profile
Survey of Pier Soundings - Belmont Date Date X-Sec.
Survey by Kleineck Notes Gulk - 8-27-46 Notes Chkd. Checked No.
Indexed C. Jannsen Date Date Date

FORM 307 5M 1-46

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		232	12.1	+111
2		232	11.4	+118
3		231	12.9	+102
4		232	13.7	+95
5		232	14.8	+84
6		232	14.0	+92
7		231	11.6	+115
8		231	14.2	+89
9		231	17.6	+55
10		231	19.4	+37
11		231	20.2	+29
12		232	21.8	+14
13		231	20.9	+22
14		232	21.4	+18
15		232	21.9	+13
16		232	22.8	+04
17		232	24.1	-09
18		232	24.9	-17
19		231	25.1	-20
20		232	26.0	-28
21		231	27.8	-47

~ PIER SOUNDINGS ~

"BELMONT PIER - E. LONG BEACH

Oct. 16, 1946

Elevations based on M.L.L.W.

Profile
No. _____ Date _____ Notes Red. _____ Plotted _____ Job No. 8429 Division No. _____
X-Sec. _____ Date _____ Survey of Pier Soundings - Belmont
No. _____ Date _____ Notes Chkd. _____ Checked _____ Survey by Klaneck Notes Rule Date 10/16/46
Map No. _____ Indexed _____ Date _____

F.B. 1216 Pg. 93

FORM 307 5M 1-46

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	28.3	-51		
23		232	31.2	-80		
24		232	33.2	-100		
25		232	35.1	-119		
26		232	36.1	-129		
27		232	37.4	-142		
28		232	38.9	-157		
29		233	40.3	-170		
30		232	41.3	-181		
31		231	42.3	-192		
32		230	41.9	-189		
33		230	42.3	-193		

Element	Time	Direction	Velocity	Height
WIND	9:30 A.M.	S 72° W	9 miles per hr.	—
WAVES	"	S 35° E	9 " " "	2.0'

~ LITTORAL DRIFT ~

Observation At.	Time	Drift	Direction	Speed	Tide
400' Up Coast.	10 A.M.	200' in 5 mins.	Down Coast	40'	Mean Flood.
400' Down "	9:45 "	200' in 5½ "	" "	36'	" " (4.3 Rising)

F.B. 1216 PG. 94

Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Belmont Date Date No.
Survey by Mlemeck Notes GWK 10-16-46 Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

FORM 307 5M 1-46

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		232	11.8	+114
2		232	11.1	+121
3		231	12.8	+103
4		232	13.3	+99
5		232	14.3	+89
6		232	13.8	+94
7		231	15.1	+80
8		231	16.4	+67
9		231	17.1	+60
10		231	17.8	+53
11		231	18.[illegible]	+50
12		232	[illegible]	+41
13		231	[illegible]	+42
14		232	20.7	+25
15		232	22.8	+04
16		232	25.8	-26
17		232	26.3	-31
18		232	26.9	-37
19		231	28.1	-50
20		232	27.8	-46
21		231	27.[illegible]	-46

— HER SOUNDINGS —

"BELMONT PIER - E. LONG BEACH"

NOV. 14, 1946.

Elevations based on M.L.L.W.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1211 Pg. 95

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

Notes Chkd. ____ Checked ____ Survey by Kleinecke Notes [illegible] Date 11-14-46

Date ____ Date ____ Map No. ____ Indexed ____ Date ____

FORM 307 5M 1-46

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	29.6	-6.4		
23		232	31.1	-7.9		
24		232	32.9	-9.7		
25		232	34.5	-11.3		
26		232	35.7	-12.5		
27		232	37.4	-14.2		
28		232	38.2	-15.0		
29		233	39.2	-15.9		
30		232	40.4	-17.2		
31		231	40.8	-17.7		
32		230	39.9	-16.9		
33		230	41.4	-18.4		

Element	Time	Direction	Velocity	Height
WIND	1 P.M.	N 11° E	3 miles per hr.	—
WAVES	"	N 77° E	10 " " "	1.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
400' Up Coast	2 P.M.	200' in 4½ mins.	Up Coast	44'	High ebb.
400' Down "	1:45 "	200' in 5 "	" "	.40'	" "

(4.8 Falling)

F.B. 1216 PG. 96

Job No. 8429 Division No. Notes Red Plotted Profile

Survey of Pier Soundings - Belmont Date Date No.

Survey by Kleineck Notes G.H. 5811-14-46 Notes Chkd. Checked X-Sec.

Indexed C. Jarrett Date Date Date No.

FORM 307 5M 1-46

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.~~ (−)	~~Top~~ ELEV. Bottom		
Sta. No 1		232	12.1	+111	Average wave height 1.5'	
2		232	11.4	+118		
3		231	13.0	+101		
4		232	13.5	+97		
5		232	14.2	+90		
6		232	14.2	+90		
7		231	13.9	+92		
8		231	14.9	+82		
9		231	17.0	+61		
10		231	18.3	+48		
11		231	19.2	+39		
12		232	21.7	+15		
13		231	20.9	+22		
14		232	21.7	+15		
15		232	23.0	+02		
16		232	25.0	−18		
17		232	25.5	−23		
18		232	26.4	−32		
19		231	26.3	−32		
20		232	27.0	−38		
21		231	27.7	−46	Cont'd on pg. 98	

~PIER SOUNDINGS~

"BELMONT-E. LONG BEACH"

Dec. 27-'46

Elevations based on M.L.L.W.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____
X-Sec. ____ Date ____ Survey of ____ Notes ____ Date 12-27-46
No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey by Newport Notes D.S. Date ____
Map No. ____ Indexed E. Jannsen Date ____

F.B. 1216 Pg. 97

FORM 307 5M 1-46

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	29.9	-67	Contd from pg. 97.	
23		232	31.3	-81		
24		232	32.8	-96		
25		232	34.8	-116		
26		232	36.0	-128		
27		232	37.9	-147		
28		232	38.5	-153		
29		233	39.9	-166		
30		232	41.9	-187		
31		231	42.1	-190		
32		230	41.7	-187		
33		230	42.2	-192		

Element	Time	Direction	Velocity	Height
WIND	10:30 A.M.	S 61° W	9 miles per hr.	—
WAVES	" "	S 42° E	Choppy - ?	1.5'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
400' up Coast	11 A.M.	100' in 3 3/4 mins	Down Coast	27'	High,
400' Down "	"	100' in 4 3/4 "	" "	21'	"

(5.1 Falling)

F.B. 1216 PG. 98

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

Survey of Pier Soundings - Belmont Date ___ Date ___ No. ___

Survey by Kleinert Notes D.S., 12-27-46 Notes Chkd. ___ Checked ___ X-Sec.

Indexed C. JOHNSON Date ___ Date ___ Date ___ No. ___

FORM 307 2M 11-41

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 Notes Red.____ Plotted____ Job No. 2129 Division No.____

No.____ Date____ Date____ Survey of Pier Bound. Inst. - Belmont Pier FB 1116 PG. 17

X-Sec. Notes Chkd.____ Checked____ Survey by Alameda Notes Date 4-21-42

No.____ Date____ Date____ Map No.____ Indexed Jackson Date MAR 21 '42

STATION	B. S.	H.I. Elev. - Sta	F. S. (-)	ELEV. Bottom	
Sta. No. 1		232	12.1	+111	Average Wave-height 5'
2		232	11.5	+117	
3		231	13.1	+100	
4		232	13.6	+96	
5		232	14.3	+89	
6		232	14.2	+90	
7		231	14.1	+90	
8		231	15.4	+77	
9		231	16.6	+65	
10		231	17.8	+53	
11		231	18.1	+50	
12		232	19.8	+34	
13		231	20.4	+27	
14		232	21.3	+19	
15		232	22.2	+10	
16		232	22.9	+03	
17		232	24.7	-15	
18		232	25.7	-25	
19		231	26.2	-31	
20		232	26.8	-36	
21		231	27.4	-43	Cont'd on pg. 100

Elevations based on U.S.C. & G.S. Sta. 31-49

Elevations based on U.S.C. & G.S. Sta. 31-49

FORM 307 2M 11-41

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	29.6	−6.4	Cont'd from pg. 99.	
23		232	31.1	−7.9		
24		232	32.5	−9.3		
25		232	34.4	−11.2		
26		232	36.0	−12.8		
27		232	37.6	−14.4		
28		232	38.3	−15.1		
29		232	39.7	−16.4		
30		232	40.7	−17.5		
31		231	41.8	−18.7		
32		230	41.5	−18.5		
33		230	41.9	−18.9		

Element	✓ Time	✓ Direction	✓ Velocity	✓ Height
WIND	10:45 A.M.	S 29° W	3 miles per hr.	—
WAVES	"	S 75° E	? Ripply.	0.5'

~ LITTORAL DRIFT ~

Observation At	✓ Time	✓ Drift	✓ Direction	Speed per min.	Tide
400' Up Coast.	11:15 A.M.	20' in 20 mins.	Down Coast	1'	low ebb
400' Down " "	" A.M.	None	—	0	" "

(0.2" Falling)

F B. 1216 Pg. 100 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Per Soundings - Belmont Date Date No.
Survey by Klement Notes Sta. 1-31-47 Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

FORM 307 2M 11-41

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		232	12.2	+110	Average Wave Ht. = 1.3'	
2		232	11.7	+115		
3		231	13.3	+98		
4		232	13.7	+95		
5		232	14.3	+89		
6		232	14.3	+89		
7		231	14.1	+90		
8		231	13.9	+92		
9		231	16.3	+68		
10		231	18.3	+48		
11		231	19.3	+38		
12		232	20.0	+32		
13		231	20.4	+27		
14		232	21.0	+22		
15		232	21.7	+15		
16		232	22.3	+09		
17		232	23.2	00		
18		232	24.0	-08		
19		231	25.0	-19		
20		232	26.0	-28		
21		231	26.6	-35		

~ PIER SOUNDINGS ~
"BELMONT - E. LONG BEACH"
March 4, 1947
Elevations based on M.L.L.W.

Cont'd on pg. 102

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 Pg. 101
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Belmont.
Notes Chkd. ____ Checked ____ Survey by Kleinack Notes A.C.S. Date 3-4-47
Date ____ Date ____ Map No. ____ Indexed 4-5 Johnson Date ____

FORM 307 2M 11-41

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

F.B. 1216 Pg. 102 Job No. 8429 Division No. Notes Red Plotted Profile
Survey of Pier Soundings - Belmont Date No.
Survey by Kleinsek Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

STATION	B. S.	Elev. - Sta.	F. S. (−)	ELEV. Bottom		
Sta. 1+22		232	29.4	−62	Contd from pg. 101.	
23		232	30.7	−75		
24		232	32.2	−90		
25		232	33.9	−107		
26		232	35.5	−123		
27		232	37.4	−142		
28		232	38.2	−150		
29		233	39.4	−161		
30		232	40.6	−174		
31		231	41.3	−182		
32		230	41.4	−184		
33		230	41.8	−188		

Element	Time	Direction	Velocity	Height
WIND	9:45 AM	N 69° W.	20 miles per hr.	
WAVES	"	S 75° E	9 " "	1.3'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
400' Up Coast	10:15 A.M.	100' in 3½	mins. Down Coast		29' Mean ebb.
400' Down "	10 A.M.	100' " "	" " "		29' " " (2.8 Falling)

Form 307 5M 5-39

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		232	12 1	+111	Wave Hght. 2.8	
2		232	11 5	+117		
3		231	13 1	+100		
4		232	13 6	+96		
5		232	14 2	+90		
6		232	14 2	+90		
7		231	13 3	+98		
8		231	13 7	+94		
9		231	17 4	+57		
10		231	19 3	+38		
11		231	20 2	+29		
12		232	21 5	+17		
13		231	21 2	+19		
14		232	21 7	+15		
15		232	22 2	+10		
16		232	22 2	+10		
17		232	23 0	+02		
18		232	23 9	-07		
19		231	24 6	-15		
20		232	25 3	-21		
21		231	25 1	-20		

~ PIER SOUNDINGS ~
"BELMONT - E. LONG BEACH"
April 3. 1947
Elevations based on M.L.L.W.

Cont'd on pg. 104

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F B. 1216 PG. 103
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Belmont
Notes Chkd. ____ Checked ____ Survey by Kleine & Notes R.P. Gutt Date 4-3-'47
Date ____ Date ____ Map No. ____ Date MAY 20 '47

Form 307 5M 5-39

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.	~~W. I.~~ Elev. Sta.	~~F. S.~~ (-)	ELEV. Bottom	
Sta. No. 22		232	26.6	-34	Cont'd from pg. 103.
23		232	26.1	-29	
24		232	29.6	-64	
25		232	31.5	-83	
26		232	35.0	-118	
27		232	36.7	-135	
28		232	37.6	-144	
29		233	37.8	-145	
30		232	39.1	-159	
31		231	41.0	-179	
32		230	40.9	-179	
33		230	41.9	-189	

Element	Time	Direction	Velocity	Height
WIND	10:45 A.M.	West	15 miles per hr.	—
WAVES	" "	N. 27° W.	12 miles per hr.	2.8'

~LITTORAL DRIFT~

Observation At	Time	Drift	Direction	Speed per min.	Tide
400' up Coast	11:15 A.M.	200' in 4 3/4 mins.	Down Coast	42'	Mean ebb.
400' Down	" "	200' in 4 mins	Down Coast	50'	(+1.7 Falling)

(See FB 1291 for Add'l. Soundings)

F.B. 1216 Pg. 104 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Belmont Date Date No.
Survey by Kleinock Notes R.A. GWK Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

Notes Ck'd by	Survey of
Map No.	W. O. Tape No. St'd °F
Office Work	Surveyed by
Checked	Notes Date
Date	Indexed 7-22-46

F.B. 1216 PG. 109

~ REDONDO-MONTAUK PIER ~

SURVEY & SOUNDING DATA.
May 14, 1946 to April 4, 1947.

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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 SM 11-41

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.

F.B. 1216 PG. 108

Profile No. _____ Notes Red. _____ Date _____ Plotted _____ Date _____ Job No. 8429 Division No. _____ F.B. 216 PG. 109

X:Sec. No. _____ Notes Chkd. _____ Date _____ Checked _____ Date _____ Survey of _____ Survey by Klieneck Notes GWK Date _____ Map No. _____ Indexed _____ Date _____

PIER SOUNDINGS

MONSTAOT - HORSESHOE PIERS

Redondo -
May 14, 1946

Klieneck and Party

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.

Do not extend notes this side of this line.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 307 2M 8-48

FORM 307 2M 8-45

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

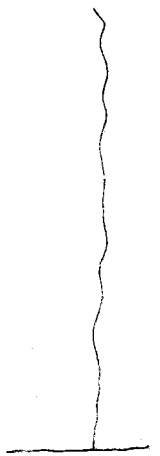
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Elev. = MLLW.
BM. - "5-18"	9470	28795		19325	Control Line Sta. - 5-18 = L & T. in Sly edge of conc. deck of Monstadt Pier See F.B. 1184-12.
No 1			681	2[illegible]	+ in conc. deck Monstadt Pier.
No 2			723	21[illegible]	N & T. in plank deck " "
TP	5550	27195	715	21645	
No 3			535	2[illegible]	+ in conc. deck " "
BM. - "5-18"			788	1[illegible]	See above.
	*	*		*	*
BM. - 5-18	585	25[illegible]		1[illegible]	
No 4			482	2[illegible]	+ in curb - Horseshoe Pier (Outside Edge)
No 5			122	2[illegible]	
No 6			108	24[illegible]	
No 7			110	24[illegible]	
No 8			110	24[illegible]	
No 9			143	2[illegible]	
No 10			153	2[illegible]	
No 11			107	[illegible]	
No 12			117	24[illegible]	
No 13			164	2[illegible]	
No 14			310	2[illegible]	
No 15			345	2173.	+ in conc. deck - inside Horseshoe Pier
No 16			299	22[illegible]	+ in conc. deck - " " "

Profile Notes.

F.B. 1216 PG. 110 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Redondo Date Date No.
Survey by G. Kleineck Notes G.W.K. 5-14-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.



FORM 307 2M 6-45

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.		
		25175			Brot Ford from pg. 110	
No 17			163	2355	+ in conc. curb - inside Horse Shoe [illegible]	
No 18			107	2411		
No 19			110	2408		
No 20			116	2402		
No 21			127	2391		
No 22			120	[illegible]		
No 23			115	[illegible]		
No 24			507	2011		
B.M.-S-18	439	23715	585	[illegible]	Check.	
No 25			440	1932	+ in conc. deck at [illegible] edge Monstad [illegible]	
No 26			438	1934		
No 27			435	1937		
No 28			416	1955		
No 29			403	1969		
			1252	1120	Newly Cor. conc. landing [illegible] at foot of stairs - shore end Monstad [illegible]	
B.M.-S-18			439	1935	Check.	

Profile Notes.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. [illegible] Division No. ____ F.B. [illegible] PG. 111
X:Sec. No. ____ Date ____ Date ____ Survey of [illegible] Date [illegible]
Notes Chkd. ____ Checked ____ Survey by Kleinecke Notes [illegible] Date 5-14-46
Date ____ Date ____ Map No. ____ Indexed S. Johnson Date ____

F.B. 216 PG. 112

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.	

FORM 307 2M 8-45

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 5M 7-43

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	Notes Red.	Plotted	Job No. [illegible] Division No.	F.B. Pg. 113
No.	Date	Date	Survey of [illegible]	
X-Sec.	Notes Chkd.	Checked	Survey by [illegible] Notes [illegible]	Date 6-5-46
No.	Date	Date	Map No. Indexed Johnson	Date

~ PIER SOUNDINGS ~

"MONSTADT - HORSESHOE PIERS"

Redondo, Calif.
June 5, 1946.

Elev's based on M.L.L.W.

STATION	B.S.	Elev.-Sta	F.S. (—)	ELEV. Bottom
Sta. [illegible]		220	[illegible]	[illegible]
No. 2		216	[illegible]	[illegible]
No. 3		218	277	[illegible]
No. 4		204	217	[illegible]
No. 5		220	[illegible]	[illegible]
No. 6		241	[illegible]	[illegible]
[illegible]		241	[illegible]	[illegible]
[illegible]		24.1	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]
[illegible]		241	[illegible]	[illegible]
[illegible]		240	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]
No. [illegible]		221	[illegible]	[illegible]
No. [illegible]		[illegible]	[illegible]	[illegible]
[illegible]		222	250	[illegible]
No. 17		236	[illegible]	[illegible]
No. 18		241	337	[illegible]
No. 19		241	356	-11.5
No. 20		240	367	-12.7

Contd on pg. 114

FORM 307 5M 7-43

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		
					Cont'd from pg. 113.	
Sta. No 21		[illegible]	[illegible]	[illegible]		
No 22		240	[illegible]	[illegible]		
No 23		[illegible]	26.4	[illegible]		
No 24		201	201	[illegible]	11 AM.	
No 25		[illegible]	[illegible]	[illegible]	Heavy Surf. - Waves 5 to 6' high	
No 26		[illegible]	[illegible]	[illegible]	Brg. - S 10° E.	
No 27		[illegible]	[illegible]	[illegible]	Wind less than 5 miles per	
No 28		[illegible]	[illegible]	[illegible]	hr. from S 65° W.	
No 29		[illegible]	[illegible]	[illegible]		

F.B. 1216 PG. 114 Job No. 8429 Division No. _____ Notes Red. _____ Plotted _____ Profile _____
Survey of Pier Surveying - (Cedar Ave) Date _____ Date _____ No. _____
Survey by Meineck Notes Surv - 6-5-46 Notes Chkd. _____ Checked _____ X-Sec. _____
Indexed C. Johnson Date _____ Date _____ No. _____

Profile	Notes Red.	Plotted	Job No. [illegible]	Division No.	F.B. [illegible] PG. 115
No.	Date	Date	Survey of		
X-Sec.	Notes Chkd.	Checked	Survey by Kleinert	Notes	Date 6-21-'46
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date

~PIER SOUNDINGS~

"MONSTADT-HORSESHOE PIERS"

Redondo, Calif.

June 21, 1946

Elev's based on M.L.L.W.

STATION	B.S.	Elev. - Sta.	F.S.	ELEV. Bottom
Sta. No. 1		21 99	[illegible]	-21 5
2		21 57	34 [illegible]	-12 4
3		21 55	[illegible]	-5 7
4		20 36	21 5	-11
5		23 96	28 [illegible]	-4 0
6		24 10	31 5	-7 4
7		24 08	34 5	-10 4
8		24 08	38 [illegible]	-13 9
9		23 75	38 5	-14 2
10		23 65	37 5	-13 9
11		24 11	34 5	-12 4
12		24 01	[illegible]	-10 3
13		23 54	[illegible]	-7 6
14		22 08	[illegible]	-8 1
15		21 73	22 3	-0 6
16		22 19	25 7	-3 5
17		23 55	30 [illegible]	-6 5
18		24 11	33 8	-9 7
19		24 08	35 7	-11 6
20		24 02	36 8	-12 8

Contd on pg. 116

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 5M 7-43

FORM 307 5M 7-43

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	
					Soundings Cont'd from pg. 115
Sta. No 21		2391	33 2	-1 0	
22		2398	31 2	-[illegible]	LITTORAL DRIFT: (High tide)
23		2403	21 2	-[illegible]	350' S. of pier at 3 P.M.
24		2011	[illegible] 2	-[illegible]	90' in 30 min's parallel to
25		1932	17 7	+ 6	Shore and N. 10° W. Consid-
26		1934	12 [illegible]	+[illegible]	eral seaweed in water.
27		1937	10 6	+[illegible]	Tide: 4.1-HIGH | Up Coast
28		1956	8 7	+10 1	800' N. of pier at 3.30 P.M.
29		1969	5 2	+11 6	86' in 18 min's away from Shore- (Down coast) S. 10° W. (Shore brg., S 23° E) Water free from debris.

WIND: S. 82° E. 10 Miles per hour at 2 P.M.

WAVES: S. 22° E. 10 " " " (Est'd.) Choppy, not Continuous. 1.5' high. {Time: 2 P.M. {Flood tide.

3 ft. per min = 90' in 30 min's = approx. .003 mi. per hr.
4.77 ft. " " = 86' " 18 " = " 0.25 " " "

F.B. 1216 PG. 116
Job No. 8429 Division No. ____ Notes Red. ____ Plotted ____ Profile ____
Survey of Pier Soundings (Redondo) Date ____ Date ____ No. ____
Survey by Kleineck Notes Bwk. - 6-21-46 Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed A. C. Johnson Date ____ Date ____ No. ____

FORM 307 5M 7-43

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		2199	431	-211
2		2157	339	-123
3		2185	284	-66
4		2036	221	-17
5		2396	281	-41
6		2410	317	-76
7		2408	348	-107
8		2408	384	-143
9		2375	383	-145
10		2365	377	-141
11		2411	368	-127
12		2401	347	-107
13		2354	315	-80
14		2208	261	-40
15		2173	222	-05
16		2219	263	-41
17		2355	311	-75
18		2411	339	-98
19		2408	344	-103
20		2402	369	-129
21		2391	342	-103

~ PIER SOUNDINGS ~
MONSTADT - HORSESHOE PIER
Redondo, Calif.
July 30, 1946
Elevations based on MLLW.

Profile No. ____ Notes Red. ____ Plotted ____ Date ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 117
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Date ____ Survey of Pier Soundings - Redondo
Survey by Meineck Notes 8 Alt Date 7-30-46
Map No. ____ Indexed A. C. Johnson

FORM 307 5M 7-43

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		2398	31 6	-76		
23		2403	28 3	-43		
24		2011	20 2	-01		
25		1932	17 1	+22		
26		1934	13 8	+55		
27		1937	11 3	+81		
28		1956	8 4	+112		
29		1969	7 7	+120		

Element	Time	Direction	Velocity	Height.
WIND	9:30 AM.	S 79° W	7 miles per hr.	—
WAVES	"	N 37° W	6.2 " " "	2.2'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide.
800' Up Coast	10 AM.	31' in 10 min's.	Down. Coast.	3'	High Flood
350' Down "	11 AM	25' in 15 "	Up. "	1.7'	High. (4.3 Rising)

Note:- No float attached to cube. Cube used as a sinker on end of fishing line and allowed to move freely.

F.B. 1216 Pg. 118 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Redondo Date Date No.
Survey by Kleinack Notes GWK - 7-30-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

Profile	Notes Red.	Plotted	Job No. 8429	Division No.	F.B 1216 Pg. 119
No.	Date	Date	Survey of Pier Soundings - Redondo		
X-Sec.	Notes Chkd.	Checked	Survey by Kleineck	Notes GWK	Date 8-27-46
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date 2-4-47

~ PIER SOUNDINGS ~

"MONSTADT-HORSESHOE PIER"

Redondo, Calif.

Aug. 27, 1946

Elevations based on MLLW.

STATION	B. S.	Elev.-Sta.	F. S. (-)	ELEV. Bottom
Sta. No. 1		2199	427	-207
2		2157	338	-122
3		2185	284	-66
4		2036	217	-13
5		2396	283	-43
6		2410	319	-78
7		2408	348	-107
8		2408	384	-143
9		2375	382	-144
10		2365	378	-142
11		2411	368	-127
12		2401	347	-107
13		2354	314	-79
14		2208	262	-41
15		2173	220	-03
16		2219	263	-41
17		2355	311	-75
18		2411	339	-98
19		2408	343	-102
20		2402	369	-129
21		2391	341	-102

Contd on pg. 120

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 5M 7-43

FORM 307 5M 7-43

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		2398	316	−76	Cont'd from pg. 119	
23		2403	279	−39		
24		2011	205	−04		
25		1932	177	+16		
26		1934	133	+60		
27		1937	105	+89		
28		1956	83	+113		
29		1969	77	+120		

Element	Time	Direction	Velocity	Height
WIND	10:15 A.M.	S 74° W	3 mi's per hr.	—
WAVES	"	N. 16° W.	{Low swells Not obtainable	1.3'

— LITTORAL DRIFT —

Observation At.	Time	Drift	Direction	Tide.
800' Up Coast.	(Not possible to take – Extensive riprap operation in progress)			
350' Down " "	10 A.M.	Negligible	—	High. (4.9 High)

Note: No float used.

F.B. 1216 PG. 120 Job No. 8429 Division No. — Notes Red. — Plotted — Profile
Survey of Pier Soundings – Redondo Date — Date — No.
Survey by Klemeck Notes GWK – 8-27-'46 Notes Chkd. — Checked — X-Sec.
Indexed A. C. Johnson Date — Date — No.

FORM 307 5M 1-46

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. No 1		220	427	-207
2		216	335	-119
3		218	283	-65
4		204	208	-04
5		240	283	-43
6		241	319	-78
7		241	348	-107
8		241	384	-143
9		238	384	-146
10		236	378	-142
11		241	361	-120
12		240	331	-91
13		235	315	-80
14		221	259	-38
15		217	220	-03
16		222	261	-39
17		236	303	-67
18		241	336	-95
19		241	354	-113
20		240	362	-122
21		239	341	-102

~ PIER SOUNDINGS ~
"MONSTADT-HORSESHOE PIER"
Redondo, Calif.
Elevations based on M.L.L.W.
Oct. 1, 1946.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 2425 Division No. ____
X-Sec. ____ Date ____ Survey of ____
No. ____ Date ____ Notes Chkd ____ Checked ____ Survey by Kleinecke Notes Gulk Date 10-1-46
Map No. ____ Indexed J. Johnson Date ____

F.B. 1218 PG. 121

FORM 307 5M 1-46

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	31 2	-72	Contd from pg. 121.	
23		240	28 2	-42		
24		201	19 4	+07		
25		193	17 0	+23		
26		193	13 9	+54		
27		194	11 0	+84		
28		196	8 3	+113		
29		197	77	+120		

Element	✓	Time	✓	Direction	✓	Velocity	✓	Height.
WIND		11 A.M.		S 71° 30' W.		8 miles per hr.		—
WAVES		"		N 2° 30' W.		9 mi's per hr., est'd.		Choppy

~ LITTORAL DRIFT ~

Observation At.	✓	Time	✓	Drift	✓	Direction	Speed per min.	✓	Tide.
350' down Coast		11:30 A.M.		Reverses	75' in 6 min's.	Up Coast		125'	Flood.
800' Up	"	Not taken - Riprap		work in progress					(4.5 - HIGH)

F.B. 1216 PG. 122

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

Survey of Per Lemoines - Redondo Date Date No. X-Sec.

Survey by Kleinert Notes De Tille - 10-1-46 Notes Chkd. Checked

Indexed A. C. Jannell Date Date Date No.

Profile No. _____ Notes Red _____ Plotted _____ Job No. 8479 Division No. _____ F.B. 1216 PG. 123

X-Sec. No. _____ Date _____ Date _____ Survey of _____

Notes Chkd. _____ Checked _____ Survey by Maineck Notes G.H.-G.K. Date 11-14-'46

Date _____ Date _____ Map No. _____ Indexed C. Jannson Date _____

~ PIER SOUNDINGS ~

"MONSTADT-HORSESHOE PIER"

Redondo, Calif

Elevations based on MLLW.

Nov. 14, 1946

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 5M 1-46

STATION	B. S.	~~H.I.~~ Elev.-Sta.	~~F.S.~~ (-)	ELEV. Bottom
Sta. No. 1		220	44.0	-220
2		216	39.8	-132
3		218	27.0	-52
4		204	21.6	-12
5		240	27.5	-35
6		241	31.2	-71
7		241	34.6	-105
8		241	38.4	-143
9		238	38.3	-145
10		236	37.8	-142
11		241	36.6	-125
12		240	34.9	-109
13		235	30.7	-72
14		221	25.7	-36
15		217	22.6	-09
16		222	25.4	-32
17		236	30.6	-70
18		241	34.7	-106
19		241	35.6	-115
20		240	36.8	-128
21		239	34.0	-101

FORM 307 5M 1-46

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	29.8	−58		
23		240	26.5	−25		
24		201	20.3	−02		
25		193	15.2	+41		
26		193	12.3	+70		
27		194	10.6	+8[illegible]		
28		196	8.8	+109		
29		197	78	+119		

Element	Time	Direction	Velocity	Height.
WIND	10:45 A.M.	N. 45° E.	6 miles per hr.	—
WAVES	"	N 39° W	10 " " "	2.0'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide.
350' Down Coast	11 A.M.	100' in 4 mins.	Up. coast	25'	High flood.
800' Up	"	Not possible account new rip-rap work.			

(4.9 - Rising)

F.B. 1216 Pg. 124

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

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

Survey by Klemeck Notes G.H.-G.K. 11-14-46 Notes Chkd. Checked

Indexed C. Johnson Date Date No.

FORM 307 5M 1-46

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	44.3	−223
2		216	35.1	−135
3		218	28.3	−65
4		204	21.6	−12
5		240	28.5	−45
6		241	31.8	−77
7		241	35.0	−109
8		241	38.5	−144
9		238	38.4	−146
10		236	37.8	−142
11		241	37.3	−132
12		240	35.2	−112
13		235	31.6	−81
14		221	25.5	−34
15		217	21.4	+03
16		222	26.3	−41
17		236	31.0	−74
18		241	34.3	−102
19		241	35.9	−118
20		240	37.2	−132
21		239	34.4	−105

Cont'd on pg 126

~ PIER SOUNDINGS ~
"MONSTADT-HORSESHOE PIER"
Redondo, Calif.
Elevations based on M.L.L.W.
Dec. 26, 1946

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 5824 Division No. ____
X-Sec. Notes Chkd ____ Checked ____ Survey of ____ Survey by Wairoch Notes Rd Date 12-26-46
No. ____ Date ____ Date ____ Map No. ____ Indexed Jannsen Date ____

F.B. 813 Pg. 125

FORM 307 5M 1-46

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	30.4	−6.4	Cont'd from pg. 125	
23		240	28.1	−4.1		
24		201	19.8	+[illegible].3		
25		193	15.3	+[illegible]		
26		193	12.0	+7.3		
27		194	10.5	+8.9		
28		196	8.8	+1[illegible]		
29		197	7.8	+11.9		

Element	Time	Direction	Velocity	Height
WIND	10:30 A.M.	567° W.	2 miles per hr.	—
WAVES	"	None	Light-Choppy	0.8'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
350' Down Coast	10:30 A.M.	50' in 3¼ min's.	Up. Coast	15'	High
800' Up Coast.	(Not taken account new rip-rap work)				(5.4 Rising)

F.B. 1216 PG. 126

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

Survey of Pier Soundings - Redondo Date Notes Chkd. Date No. X-Sec.

Survey by Meineck Notes G.O.H. - 12-26-46

Indexed C. Johnson Date

FORM 307 2M 11-41

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	397	~~−177~~ 22.7 used.	Average Wave-height 1.5'
2		216	353	−137	
3		218	171	+47	
4		204	216	−12	
5		240	279	−39	
6		241	320	−79	
7		241	352	−111	
8		241	387	−146	
9		238	385	−147	
10		236	380	−144	
11		241	372	−131	
12		240	352	−112	
13		235	315	−80	
14		221	261	−40	
15		217	211	+06	
16		222	262	−40	
17		236	300	−64	
18		241	336	−95	
19		241	358	−117	
20		240	370	−130	
21		239	347	−108	cont'd on pg. 128

~ PIER SOUNDINGS ~
"MONSTADT-HORSESHOE PIER"
Redondo, Calif.
Elevations based on M.L.L.W.
Jan. 27, 1947

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8424 Division No. ____ F.B. 1216 PG. 127
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Redondo B.
Notes Chkd. ____ Checked ____ Survey by Meineck Notes Gt. Gk. Date 1-27-47
Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

FORM 307 2M 11-41

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	31.4	−74	Cont'd from pg. 127.	
23		240	28.1	−41		
24		201	19.8	+03		
25		193		—	→ Bldg. (obstruction)	
26		193		—	→ " "	
27		194	11.1	+83		
28		196	8.6	+110		
29		197	7.8	+119		

Element	Time	Direction	Velocity	Height
WIND	2:30 P.M.	S 35° W	2 miles per hr.	—
WAVES	"	N 10° W	9 " " "	1.5'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
350' Down Coast.	2:30 P.M.	100' in 9½ mins.	Up Coast		8' Mean Ebb.
800' Up	"	(Not taken)			(3.0 - Falling)

F.B. 1216 Pg. 128 Job No. 8429 Division No. ____ Notes Red. ____ Plotted ____ Profile ____
Survey of Pier Soundings - Redondo B. Date ____ Date ____ No. ____
Survey by Kleinecke Notes G.H. - G.K. 1-27-47 Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed C. Jonnes Date ____ Date ____ No. ____

FORM 307 2M 11-41

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	42.5	-205	Average Wave Ht. = 2.5'
2		216	35.2	-136	
3		218	27.7	-59	
4		204	20.6	-02	
5		240	28.6	-46	
6		241	31.7	-76	
7		241	34.8	-107	
8		241	38.1	-140	
9		238	37.8	-140	
10		236	37.2	-136	
11		241	36.7	-126	
12		240	34.4	-104	
13		235	30.8	-73	
14		221	25.8	-37	
15		217	20.9	+08	
16		222	25.9	-37	
17		236	30.7	-71	
18		241	32.7	-86	
19		241	35.0	-109	
20		240	36.2	-122	
21		239	34.1	-102	

Contd on pg 130

Elevations based on M.L.L.W.
March 4-1947

"MONS-TADT-HORSESHOE PIER"
Redondo, Calif.

PIER SOUNDINGS

Profile Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 Pg. 129
No. ____ Date ____ Date ____ Survey of Pier Soundings - Redondo
X-Sec. Notes Chkd. ____ Checked ____ Survey by Hlaimack Notes A.C.S. Date 3/3/47
No. ____ Date ____ Date ____ Map No. ____ Index Johnson Date MAR 21 '47

FORM 307 2M 11-41

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	31.0	-70	Cont'd from pg. 129	
23		240	27.9	-39		
24		201	18.4	+17		
25		193	16.1	+32		
26		193	12.6	+67		
27		194	10.6	+88		
28		196	7.8	+118		
29		197	77	+120		

Element	Time	Direction	Velocity	Height
WIND	10:45 AM.	S 75° W	8 miles per hr.	—
WAVES	" "	N. 49° W.	8 " " "	2.5'

—LITTORAL DRIFT—

Observation At	Time	Drift	Direction	Speed per min.	Tide
350' Down Coast	10:30 AM.	100' in 2½ mins	Up Coast	40'	Mean ebb. (2.4 Falling)

F B 1216 Pg 130 Job No. 8424 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Redondo Date Date No.
Survey by Meineck Notes A.C.S. & G.K. Notes Chkd. Checked X-Sec.
Indexed C. J. Date Date No.

FORM 307 5M 7-43

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	434	-214	Wave Hght. 4.0'
2		216	352	-136	
3		218	262	-44	
4		204	210	-06	
5		240	262	-22	
6		241	307	-66	
7		241	343	-102	
8		241	386	-145	
9		238	381	-143	
10		236	380	-144	
11		241	376	-135	
12		240	350	-110	
13		235	313	-78	
14		221	250	-29	
15		217	221	-04	
16		222	245	-23	
17		236	302	-66	
18		241	333	-92	
19		241	352	-111	
20		240	370	-130	
21		239	343	-104	

Elevations based on M.L.W.

"MONSTADT-HORSESHOE PIER"

Redondo, Calif

April 4, 1947

— PIER SOUNDINGS —

Contd on pg. 132

Profile No. ____ Notes Red. ____ Plotted ____ Date ____ Job No. 1429 Division No. ____

X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of Pier Soundings - Redondo

Survey by Alvarez Notes SM-GW Date 4-4-47

Map No. ____ Indexed Jan [illegible] Date MAY 20 '47

F.B. 1216 Pg. 131

FORM 307 5M 7-43

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	303	−63	Cont'd from pg. 131.	
23		240	269	−29		
24		201	202	−01		
25		193	173	+20		
26		193	155	+38		
27		194	137	+57		
28		196	80	+116		
29		197	78	+119		

Element	Time	Direction	Velocity	Height
WIND	9:30 A.M.	S 72° W	5 miles per hr.	—
WAVES	" "	N 15° W	15 " " "	4.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min	Tide
350' Down Coast	9 A.M.	75' in 6 min's	Up Coast	13°	High ebb. (5.1 Falling)

(See F.B. 1291 for Add'l Soundings)

F.B. 1216 Pg. 132 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Redondo Date Date No.
Survey by Kleinack Notes J.M.-Gwk 4-4-47 Notes Chkd. Checked X-Sec.
Indexed A. C. Jennings Date Date No.

Notes Ck'd by	Survey of
Map No.	W. O. Tape No. St'd °F
Office Work	Surveyed by
Checked	Notes Date
Date	Indexed E. S. Johnson 7-22-46

F.B. 1216 PG. 133

~~ALAMITOS PIER~~

SURVEY & SOUNDING DATA.
May 23, 1946 TO April 4, 1947

~INDEX.~

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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 11-41

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.

F.B. 1016 PG. 134

Profile	Notes Red.	Plotted	Job No. 8429	Division No.	F.B. 1216 Pg. 135
No.	Date	Date	Survey of Pier Soundings - Hermosa B		
X:Sec.	Notes Chkd.	Checked	Survey by Kleineck	Notes GWK	Date 5-24-46
No.	Date	Date	Map No.	Indexed A. C. Johnson	

PIER SOUNDINGS

HERMOSA BEACH CAL.

May 24, 1946

G. Kleineck + Party

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 2M 8-45

FORM 307 2M 8-45

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.

F.B. 1126 Pg. 136 | Job No. 8429 Division No. | Profile No. | X-Sec. No.
Survey of Elev. Monuments - Hermosa
Survey by G. Klemmeck Notes Chkd. 5-24-46
Indexed A. C. Johnson Date | Notes Red. Date | Plotted Date | Checked Date

Profile Notes

STATION	B. S.	H. I.	F. S.	ELEV.	
B.M.					Elev = M.L.L.W.
U.S. 1250	2275	20826		18.51	Ft Hermosa Beach, L.A.Co., at the S.W. Cor. of the intersection of Hermosa Ave. & 13th St. about 150' N.W. of City Hall at a large 2 story granite bldg. occupied by the Hermosa Theater, in the N.E. face of the bldg. 2 ft. S.E. of the N. Cor. + 1.5' above sidewalk.
T.P.	4721	21147	[illegible]	[illegible]	
T.P.	5235	21[illegible]	5252	[illegible]	
Set BM	8[illegible]	26127	3[illegible]	[illegible]	Cross □ on S'ly end of S.E. step from section of flight of [illegible] 4' from N. face of [illegible] Pier on W. 1.5' S. of entrance
Sounding Sta. No 1			4[illegible]	21[illegible]	Chiseled [illegible] conc. curb, N'ly side of Pier
No 2			2[illegible]	22[illegible]	" " " " "
No 3			2[illegible]	23[illegible]	" " " " "
T.P.	2[illegible]	2[illegible]	22[illegible]	2[illegible]	
No 4			729	21[illegible]	" " " " "
No 5			6[illegible]	2[illegible]	" " " " "
No 6			[illegible]	2[illegible]	" " " " "
No 7			[illegible]	24[illegible]	
No 8			[illegible]	26[illegible]	" " " " "
No 9			464	24[illegible]	" " " " "
No 10			[illegible]	26[illegible]	" " " " "
No 11			[illegible]	26[illegible]	" " " " "
T.P.	4[illegible]	3[illegible]	[illegible]	[illegible]	
No 12			493	26[illegible]	" " " " "
No 13			512	26[illegible]	" " " " "
No 14			499	26[illegible]	" " " " "

cont'd on pg. 137

FORM 307 2M 8-48

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.

STATION	B. S.	H. I.	F. S.	ELEV.		
		31688			Brot Fwd from pg. 136	
No 15			502	2667	Chisled + top conc. curb, N'ly [illegible]	
No 16			493	2676	" " " "	" " "
No 17			484	2685	" " " "	" " "
No 18			495	2674	" " " "	" " "
No 19			513	2656	" " " "	" " "
No 20			492	2677	" " " "	" " "
No 21			493	2676	" " " "	" " "
T.P.	474	31503	4925	26763		
No 22			469	2681	" " " "	" " "
No 23			480	2670	" " " "	" " "
No 24			[illegible]	2675	" " " "	" " "
No 25			488	2662	" " " "	" " "
No 26			486	2664	" " " "	" " "
No 27			474	2676	" " " "	" " "
No 28			486	2664	" " " "	" " "
No 29			477	2673	" " " "	" " "
No 30			472	2678	" " " "	" " "
No 31			481	2669	" " " "	" " "
No 32			512	2638	Elev. on P.K. in chisled □ in deck of pier on N'ly side of broken out section (of pier) and in line with N'ly side of suspended cat walk. Sta. [illegible] on and near center of cat-walk. Depth measurements can be made by sighting on horizontal [illegible] Sta. mark = painted circle on plank.	
No 33			506	2644		

contd on pg. 138.

Profile Notes

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

F.B. 1216 Pg. 137

F.B. 216 PG. 138 Job No. 8429 Division No. ______ Notes Red. ______ Plotted ______ Profile No. ______

Survey of Pier Soundings – Hermosa Date ______ Date ______

Survey by G. Menck Notes [illegible] Notes Chkd. ______ Checked ______ X-Sec. No. ______

Indexed A. C. Johnson Date ______ Date ______ Date ______

FORM 307 2M 8-45

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.		
		[illegible]			Contd from pg. 137	
No. 34			524	26.6	[illegible] + [illegible]	[illegible] side of pier
T.P.	477	31.632	460	[illegible]		
T.P.	2.731	26.127	7.28	[illegible]		
[illegible]			9.33	17.4[illegible]	[illegible] on conc. [illegible] BM. set on 2nd preceding page, Elev. 17.154.	
B.M.	3.855	21.031		[illegible]	Above B.M. Returning circuit to U.S.B.M.-1280.	
T.P.	4.380	20.[illegible]	4.622	1[illegible]		
U.S.B.M.-1280			2.225	18.55[illegible]	Check in. B.M. Elev. = 18.551	

B.M. U.S.-1280 – Description completed + contd from 2nd preceding page:– A std disk, stamped: "T-50-1926" and set vertically.

1941 U.S.C.+G.S. Adj. Elev. 15.751 } M.L.L.W. Elev. = 18.551.

Form 307 5M 5-39

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	Notes Red.	Plotted	Job No. 8479	Division No.	F B. 12 PG. 139
No.	Date	Date	Survey of [illegible]		
X-Sec.	Notes Chkd.	Checked	Survey by Klemeck	Notes [illegible]	Date [illegible]
No.	Date	Date	Map No.	Indexed Johnson	Date

— KIEK SOUNDINGS —

"HERMOSA BEACH"

June 5, 1946

Elev's based on M.L.L.W.

STATION	B. S.	Elev. Sta.	F. S. (−)	ELEV. Bottom
56. N1		217	71	+146
N2		226	97	+128
N3		232	110	+122
N4		241	141	+100
N5		247	[illegible]	+[illegible]
N6		257	219	+38
N7		264	[illegible]	+24
N8		[illegible]	[illegible]	+15
N9		268	264	+04
N10		268	240	−02
N11		261	281	−18
N12		268	296	−28
N13		268	[illegible]	−36
N14		267	[illegible]	−58
N15		267	[illegible]	−52
N16		268	[illegible]	−52
N17		268	332	−64
N18		267	313	−46
N19		266	310	−44
N20		268	312	−44

Cont'd on pg. 140

Form 307 5M 5-39

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		
					Cont'd from pg. 139.	
Sta. No 21		265	314	—		
No 22		266	341	—		
No 23		267	362	—		
No 24		268	373	—		
No 25		269	386	—		
No 26		266	394	—		
No 27		268	401	—	3:30 P.M.	
No 28		266	412	—	Heavy Surf. Swells 5 to 6 ft.	
No 29		267	430	—	Brg-S. 20° E.	
No 30		268	449	—	Wind 10 miles from S 50° W.	
No 31		269	452	—		
No 32		269	455	—		
No 33		269	456	—		
No 34		263	469	—		

F B/216 Pg. 140 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings (Hermosa) Date Date No.
Survey by Meinecke Notes Bulk - 6-5-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

FORM 307 2M 8-45

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 Notes Red. Plotted Job No. Div. Division No.
No. Date Date Survey of
X-Sec. Notes Chkd. Checked Survey by Date
No. Date Date Map No. Date

F.B. Pg.

~ PIER SOUNDINGS ~
HERMOSA PIER
Hermosa Beach, Calif.
July 2 - 1946.
Elevations based on MLLW.

STATION	B. S.	Elev. Sta.	F. S.	ELEV. BOTTOM
Sta. No. 1		217	7.1	146
2		226	9.7	129
3		232	10.9	123
4		241	14.2	99
5		247	17.0	77
6		257	20.5	54
7		264	22.3	41
8		268	23.7	31
9		268	24.9	19
10		268	25.7	11
11		268	28.2	-14
12		268	28.9	-21
13		266	29.5	-29
14		267	30.5	-38
15		267	31.2	-45
16		268	31.5	-47
17		268	31.8	-50
18		267	31.6	-49
19		266	31.9	-53
20		268	32.2	-54
21		268	32.6	-58

cont'd on pg. 142

FORM 307 2M 8-45

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	33.9	-71	Cont'd from pg. 141.
23		267	37.3	-106	WIND: 5 miles per hr. at 11 A.M.
24		268	38.0	-112	S 66° W.
25		266	38.8	-122	
26		266	39.8	-132	WAVES: S. 16° W. 2.0' high
27		268	40.8	-140	10 miles per hr.
28		266	41.8	-152	
29		267	43.4	-167	LITTORAL DRIFT:
30		268	44.4	-176	11:30-12:30 P.M. {Flood tide Near high
31		267	44.9	-182	500' North of Pier:-
32		264	45.2	-188	Brg. of beach, S. 16° E.
33		264	46.0	-196	(31' per min) Cube (Block float) 300' in 9¾ mins.
34		263	46.8	-205	(18' per min) " (Cork ") 100' in 5½
					Direction - S. 16° E {Down Coast
300' in 9¾ mins = 0.35 mls per					(Tide: 4.0 Rising)
100' in 5½ " = 0.21 " "					500' South of Pier:-
100' in 3½ " = 0.32					Brg. of beach, S. 18° E.
					Cube (Cork float) 100' in 3½ mins.
100' in 5½ " = 18.14 ft. per min.					(29 ft. per min) Direction - {S. 18° E. Down Coast.
100' " 3½ " = 28.6 " " "					

F.B. 1216 PG. 142

Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Hermosa Date Date No.
Survey by Fleming Notes Mult. - 7-2-46 Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

Profile No. ____ X-Sec. No. ____ | Notes Red. ____ Date ____ | Plotted ____ Date ____ | Notes Chkd. ____ Date ____ | Checked ____ Date ____

Job No. 3429 Division No. ____ F.B. 1216 Pg. 143

Survey of Pier Soundings - Hermosa

Survey by Klameck Notes [illegible] Date 7-30-46

Map No. ____ Indexed ____ A. C. Johnson

~ PIER SOUNDINGS ~

"HERMOSA PIER"

Hermosa Beach, Calif.

July 30, 1946.

Elevation based on MLLW.

STATION	B.S.	H.I. Elevation	F.S.	ELEV. Bottom
		2169	7 3	+ 14.4
		2263	9 6	+ 13.0
		2316	11 0	+ 12.7
		2412	14 0	+ 10.1
		2471	16 5	+ 8.2
		2520	20 0	+ 5.7
		2635	22 1	+ 4.3
		2680	23 5	+ 3.3
		2677	24 3	+ 2.5
		2677	25 2	+ 1.6
		2675	27 3	− 0.5
		2676	28 5	− 1.7
		2676	29 1	− 2.5
		2670	29 8	− 3.1
		2667	30 3	− 3.6
		2672	31 3	− 4.5
		2671	31 7	− 4.9
		2674	31 7	− 5.0
		2656	32 0	− 5.4
		2677	33 2	− 6.6
		2676	33 9	− 7.1

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

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 307 5M 7-43

FORM 307 5M 7-43

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		2661	35 2	−84		
23		2670	37 5	−108		
24		2675	38 0	−112		
25		2662	39 0	−124		
26		2664	39 8	−132		
27		2676	40 8	−140		
28		2664	42 2	−156		
29		2673	43 3	−166		
30		2678	44 3	−175		
31		2669	45 0	−183		
32		2638	45 9	−195		
33		2644	46 0	−196		
34		2626	47 0	−207		

Note: No float attached to Cube. Cube used as a sinker on end of fishing line and allowed to move freely.

Element	Time	Direction	Velocity	Height
WIND	1:15 P.M.	S. 72° W.	6 miles per hr.	—
WAVES	"	S 24° E.	10 " " "	2.4'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' Up Coast	1:30 P.M.	110' in 15 min's.	Down Coast	7'	High Ebb.
500' Down	" 2:30 "	225' in 7½ "	"	" 30'	Mean " "

(3.0 - Falling)

Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Hermosa Date Date No.
Survey by Blemeck Notes Chkd. Checked X-Sec.
Indexed Date Date No.

B.V. 16 Pg. 144

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 126 Pg. 145

Date ____ Date ____ Survey of Pier Soundings - Hermosa

X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Meinecke Notes Gwk Date 8-29-46

Date ____ Date ____ Map No. ____ Indexed A. C. Johnson Date 2-4-47

~ PIER SOUNDINGS ~

"HERMOSA PIER"

Hermosa Beach, Calif.

Aug. 27, 1946

Elevations based on MLLW.

STATION	B.S.	~~H.I.~~ Elev. - Sta.	~~F.S.~~ (-)	ELEV. Bottom
Sta. No. 1		2169	73	+ 144
2		2263	99	+ 127
3		2316	114	+ 118
4		2412	142	+ 99
5		2471	158	+ 89
6		2570	197	+ 60
7		2635	221	+ 43
8		2680	235	+ 33
9		2677	244	+ 24
10		2679	253	+ 15
11		2680	257	+ 11
12		2676	274	- 06
13		2656	284	- 18
14		2670	284	- 17
15		2667	294	- 27
16		2676	302	- 34
17		2685	314	- 46
18		2674	320	- 53
19		2656	328	- 62
20		2677	328	- 60
21		2676	343	- 75

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 5M 7-43

FORM 307 5M 7-43

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

B 1216 PG. 146 | Job No. 5W-2 | Division No. | Notes Red. | Plotted | Profile
Survey of Redondo Beach Sounding - Harbor Entrance | Date | No.
Survey by Wagner & Kinnick | Date | X-Sec.
Indexed by C. Johnson | Notes Chkd. | Checked | No.
Notes Sht. 1 & 2 | Date | Date

STATION	B. S.	~~H.I.~~ Elev. - Sta.	~~F. S.~~ (—)	ELEV. Bottom		
Sta. N-22		26 81	354	— 86	Contd from pg. 145	
23		26 70	368	— 101		
24		26 75	377	— 109		
25		26 68	387	— 121		
26		2664	397	— 131		
27		2676	409	— 141		
28		2664	420	— 154		
29		2673	434	— 167		
30		2678	439	— 171		
31		2669	447	— 180		
32		2638	457	— 193		
33		2644	459	— 195		
34		2626	466	— 203		
Element	✓	Time	✓ Direction		✓ Velocity	✓ Height
WIND		11 A.M.	S 56° W.		4 mi's per hr.	—
WAVES		"	S 15° E.		9 " "	2.3'
		~ LITTORAL DRIFT ~				
Observation	At	✓ Time	✓ Drift		✓ Direction	Speed per min. ✓ Tide (4.2 - Falling)
500' Up Coast		11:30 A.M.	(Negligible		Back & forth	0 High Ebb.
500' Down	"	11:15 "	210' in 3½ mins.*		Up Coast	60' " "

* Drift negligible for first 10 mins. No float used.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8422 Division No. ____ F.B 1216 PG. 147

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

Notes Chkd. ____ Checked ____ Survey by Kleineck Notes L. DeT. Date 10-4-46

Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

~ PIER SOUNDINGS ~

"HERMOSA PIER"

Hermosa Beach, Calif.

Oct. 4, 1946.

Elevations based on M.L.L.W.

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
Sta. No. 1		217	71	+146
2		226	97	+129
3		232	112	+120
4		241	170	+71
5		247	149	+98
6		257	194	+63
7		264	224	+40
8		268	240	+28
9		268	257	+11
10		268	271	-03
11		268	281	-13
12		268	292	-24
13		266	292	-26
14		267	304	-37
15		267	313	-46
16		268	320	-52
17		268	333	-65
18		267	334	-67
19		266	338	-72
20		268	348	-80
21		268	350	-82

FORM 307 5M 1-46

FORM 307 5M 1-46

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	36 5	-97		
23		267	38 8	-121		
24		268	38 6	-118		
25		266	39 3	-127		
26		266	40 4	-138		
27		268	41 4	-146		
28		266	42 5	-159		
29		267	43 9	-172		
30		268	44 7	-179		
31		267	45 9	-192		
32		264	44 4	-180		
33		264	47 6	-212		
34		263	47 0	-207		

Element	Time	Direction	Velocity	Height.
WIND	7 A.M.	S. 5° W.	3 miles per hr.	—
WAVES	"	S 12° E	" " " "	3.7'

~ LITTORAL DRIFT ~

Observation At.	Time	Drift	Direction	Speed per min.	Tide.
500' Up Coast	8 A.M.	200' in 3 mins.	Down Coast	67'	High Ebb.
500' Down Coast	7:30 A.M.	200' in 2 "	"	100'	" " (3.9-Falling)

F.B. 1216 Pg. 148

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

Survey of Pier Soundings - Hermosa Date Date No.

Survey by Hanack Notes L. Det. 10-4-'46 Notes Chkd. Checked X-Sec.

Indexed A. C. Johnson Date Date Date No.

FORM 307 5M 1-46

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	7.2	+145		
2		226	9.9	+127		
3		232	11.2	+120		
4		241	15.3	+88		
5		247	17.9	+68		
6		257	21.1	+46		
7		264	23.0	+34		
8		268	24.5	+23		
9		268	26.3	+05		
10		268	27.0	−02		
11		268	29.0	−22		
12		268	31.2	−44		
13		266	31.3	−47		
14		267	31.9	−52		
15		267	31.6	−49		
16		268	33.0	−62		
17		268	34.5	−77		
18		267	34.7	−80		
19		266	35.6	−90		
20		268	36.6	−98		
21		268	36.4	−96		

~ PIER SOUNDINGS ~

"HERMOSA PIER"

Nov. 8, 1946.

Elevations based on M.L.L.W.

Profile No. ____ Date ____ Notes Red ____ Plotted ____ Date ____ Job No. [illegible] Division No. ____ Survey of [illegible] Notes [illegible] Date 11-8-46

X-Sec. No. ____ Date ____ Notes Chkd. ____ Checked ____ Date ____ Survey by Klewer Notes [illegible] Date ____ Map No. ____ Indexed ____ Date ____

F.B. 12/16 PG. 149

FORM 307 5M 1-46

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	38.7	−119		
23		267	38.8	−121		
24		268	39.0	−122		
25		266	40.9	−143		
26		266	41.7	−151		
27		268	41.6	−148		
28		266	43.2	−166		
29		267	45.3	−186		
30		268	46.5	−197		
31		267	45.4	−187		
32		264	46.5	−201		
33		264	47.6	−212		
34		263	49.4	−231		

Element	✓ Time	✓ Direction	✓ Velocity	✓ Height
WIND	11:30 A.M.	S 64° W.	6 miles per hr.	—
WAVES	"	S 22° W	" " " "	5.3'

~ LITTORAL DRIFT ~

Observation At	✓ Time	✓ Drift	✓ Direction	Speed per min.	✓ Tide
500' Up Coast	12 Noon	100' in 2½ min's	Down Coast	40'	Low ebb
500' Down	"	11:45 A.M. Not appreciable	Fluctuating	0	"

(1.7 Falling)

F.B. 1216 PG. 150

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

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

Survey by Mlewecz Notes G.H.-GK. 11-5-46 Notes Chkd. Checked

Indexed C. Johnson Date Date Date No.

FORM 307 5M 1-46

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	7.0	+147	Average Wave-height 2.3'	
2		226	9.6	+130		
3		232	11.0	+122		
4		241	14.2	+99		
5		247	16.2	+85		
6		257	19.8	+59		
7		264	21.8	+46		
8		268	23.2	+36		
9		268	25.4	+14		
10		268	26.1	+07		
11		268	28.0	−12		
12		268	29.6	−28		
13		266	29.3	−27		
14		267	30.3	−36		
15		267	30.8	−41		
16		268	31.4	−46		
17		268	31.9	−51		
18		267	32.3	−56		
19		266	31.3	−47		
20		268	32.9	−61		
21		268	33.0	−62	Cont'd on pg. 152	

~ PIER SOUNDINGS ~
"HERMOSA PIER"
Dec. 26-'46.
Elevations based on M.L.L.W.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 5-37 Division No. ____
X-Sec. Notes Chkd. ____ Checked ____ Survey of Del Sur Sup. Notes 9 Oct. Date 12-26-'46
No. ____ Date ____ Date ____ Survey by Meinert Indexed Jones Date ____
Map No. ____ Date ____

F.B. 1216 PG. 151

FORM 307 5M 1-46

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	33.8	−70	Cont'd from pg. 151	
23		267	36.0	−93		
24		268	37.1	−103		
25		266	38.2	−116		
26		266	39.8	−132		
27		268	41.1	−143		
28		266	42.1	−155		
29		267	42.3	−156		
30		268	44.6	−178		
31		267	45.4	−187		
32		264	45.3	−189		
33		264	46.2	−198		
34		263	48.1	−215		

Element	Time	Direction	Velocity	Height
WIND	9:30 A.M.	S 02° E	2 miles per hr.	—
WAVES	"	S 20° E	8½ " " "	2.3'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' Up Coast	9 AM	200' in 3⅔ min's.	Up coast	55'	High.
500' Down "	9:45 AM	200' in 4⅕ "	" "	48'	"

(5.5 - HIGH)

F.B. 1216 PG. 152

Job No. 8424 Division No. Notes Red Plotted Profile

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

Survey by Element Notes G.O.H. 12-26-46 Notes Chkd Checked

Indexed A. C. Jonnson Date Date Date No.

FORM 307 2M 11-41

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	Average Wave Ht. 2'
2		226	9.3	+133	
3		232	11.3	+119	
4		241	13.5	+106	
5		247	15.4	+93	
6		257	20.3	+54	
7		264	22.7	+37	
8		268	24.2	+26	
9		268	25.7	+11	
10		268	26.6	+02	
11		268	27.7	−09	
12		268	29.2	−24	
13		266	29.3	−27	
14		267	31.8	−51	
15		267	31.6	−49	
16		268	31.7	−49	
17		268	31.3	−45	
18		267	30.4	−37	
19		266	30.8	−42	
20		268	31.8	−50	
21		268	32.7	−59	Cont'd on pg. 154

Elevations based on M.L.L.W.

Jan. 27, 1947

"HERMOSA PIER"

PIER SOUNDINGS

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ E.B. 1216 PG. 153

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

Notes Chkd. ____ Checked ____ Survey by Alleinert Notes A.S.-G.A. Date 1-27-47

Date ____ Date ____ Map No. ____ Inspected Johnson Date ____

FORM 307 2M 11-41

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	35.2	−84	Cont'd from pg. 153	
23		267	36.9	−102		
24		268	38.1	−113		
25		266	39.3	−127		
26		266	40.3	−137		
27		268	41.5	−147		
28		266	42.4	−158		
29		267	44.2	−175		
30		268	44.5	−177		
31		267	45.6	−189		
32		264	44.6	−182	Elev. taken from Sta 31.	
33		264	47.8	−214		
34		263	49.7	−2[illegible]4		

Element	Time	Direction	Velocity	Height.
WIND	1:15 P.M.	S 12° E	2 miles per hr.	—
WAVES	"	N 12° W	11 " " "	2.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' Up Coast	1:45 P.M.	100' in 6 mins.	Down Coast	17'	High ebb
500' Down "	1:30 P.M.	100' in 6½ "	" "	15'	" "

(3.6 - Falling)

F.B. 1216 Pg. 154 Job No. 8429 Division No. ____ Notes Red. ____ Plotted ____ Profile ____
Survey of Pier Soundings - Hermosa Date ____ Date ____ No. ____
Survey by Meinecke Notes P.S. - GK - 1-27-47 Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed C. Johnson Date ____ Date ____ No. ____

FORM 307 2M 11-41

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 6	+141	Average Wave Hght. 4.9'	
2		226	9 5	+131		
3		232	11 4	+118		
4		241	15.7	+84		
5		247	18.7	+60		
6		257	22.2	+35		
7		264	23 9	+25		
8		268	24 8	+20		
9		268	25 9	+09		
10		268	26 9	−01		
11		268	28 3	−15		
12		268	32 1	−53		
13		266	32 6	−60		
14		267	34 2	−75		
15		267	32 9	−62		
16		268	32 8	−60		
17		268	33 8	−70		
18		267	34 1	−74		
19		266	34 9	−83		
20		268	34 7	−79		
21		268	34 2	−74		

~PIER SOUNDINGS~

"HERMOSA PIER"

March 3, 1947

Elevations based on M.L.L.W.

Contd on pg. 156.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F B. 1216 Pg. 155

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

Notes Chkd. ____ Checked ____ Survey by Kleeneck Notes J.W.S.M. Date 3-3-47

No. ____ Date ____ Date ____ Map No. ____ Indexed Tobacco Date MAR 21 '47

FORM 307 2M 11-41

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	345	−77	Cont'd from pg. 155	
23		267	349	−82		
24		268	348	−80		
25		266	348	−82		
26		266	355	−89		
27			—		Pier Washed Out in Feb. 1947	
28						
29						
30						
31						
32						
33						
34						

Element	Time	Direction	Velocity	Height
WIND	12:30 Noon	S. 70° W.	6 miles per hr.	—
WAVES	"	N 23° W.	12 " " "	4.9'

~LITTORAL DRIFT~

Observation At	Time	Drift	Direction	Speed	Tide
500' Up Coast	1 P.M.	Not appreciable	Reversals	0	Low
500' Down	"	"	"	0	"

(−1.2 − Low)

F.B. 1216 Pg. 156 Job No. 8424 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings – Hermosa Date Date No.
Survey by Kleinock Notes WSM & G.K. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

FORM 307 5M 1-46

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	75	+142	Wave Hght 6.4	
2		226	97	+129		
3		232	112	+120		
4		241	141	+100		
5		247	176	+71		
6		257	218	+39		
7		264	237	+27		
8		268	247	+21		
9		268	272	-04		
10		268	287	-19		
11		268	311	-43		
12		268	320	-52		
13		266	307	-41		
14		267	352	-85		
15		267	332	-65		
16		268	340	-72		
17		268	341	-73		
18		267	331	-64		
19		266	340	-74		
20		268	350	-82		
21		268	344	-76		

~PIER SOUNDINGS~
"HERMOSA"
April 4, 1947.
Elevations based on M.L.L.W.

Contd on pg. 158

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____
X-Sec. ____ Date ____ Survey of Pier Soundings - Hermosa
No. ____ Date ____ Notes Chkd ____ Checked ____ Survey by Kleineck Notes W.M. Eult Date 4-4-'47
Map No. ____ Date ____ Aug. Johnson Date MAY 20 '47

F.B. 1216 Pg. 157

FORM 307 5M 1-46

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	350	-82	Cont'd from pg. 157.
23		267	350	-83	
24		268	355	-87	
25		266	357	-91	
26		266	365	-99	
27					End of pier washed away in Feb. 1947.
28					
29					
30					
31					
32					
33					
34					

Element	Time	Direction	Velocity	Height
WIND	" A.M.	S 77° W	7 miles per hr.	
WAVES	" "	N 25° W	11 " " "	6.4'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' Up. Coast	11:30 A.M.	None			Mean ebb.
500' Down "	11:15 "	150' in 7 mins.	Up Coast	21'	" "

(See F.B. 1291 for Add'l Soundings) (2.5 - Falling)

F.B. 1216 Pg. 158

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

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

Survey by Kleinert Notes J.M. Gulf 4.4 Notes Chkd Checked Date No.

Indexed A. C. Johnson Date Date

Notes Ck'd by	Survey of
Map No.	W. O. Tape No. St'd °F
Office Work	Surveyed by
Checked	Notes Date
Date	Indexed 7-22-46

F.B. 12-N Pg. 154

Manhattan Beach Pier

Survey & Sounding Data.

May 27-1946 To April 4, 1947.

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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 11-41

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.

F.B. 1516 PG. 160

Profile	Notes Red.	Plotted	Job No. 3429	Division No.	F.B. 1216 Pg. 161
No.	Date	Date	Survey of Pier Soundings Rock Fence Study		
X:Sec.	Notes Chkd.	Checked	Survey by Kleineck	Notes G.W.K.	Date May 1946
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date

PIER SOUNDINGS

MANHATTAN BEACH

May 27-1946

G. Kleineck + Party

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 2M 8-45

FORM 307 2M 8-45

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.

F.B. 1218 PG. 162 Job No. 8429 Division No. _____ Profile
Survey of Elevations along Manhattan Beach Blvd. No. _____
Survey by Hydrographic Notes Chk. 5-27-48 Date _____ X-Sec.
Indexed by C. Johnson Date _____ Notes Red. _____ Date _____ No. _____
Notes Chkd. _____ Date _____
Checked _____ Date _____

STATION	B. S.	H. I.	F. S.	ELEV.	
					U.S.B.M. 98. 20(6 Sta.) At Manhattan Beach, L.A. Co., at the E. Cor. of a triangular island at the NE Rwy + 2 on Sta. 7, +3.8' S.E. of the ℄ of the Sta. 3 T.R.R. ℄ of the ℄ of the track + 6.8' S.W. of a point 4 ft. S.E. of the N. end of a conc. ap. at rail of the S.W. edge of a conc. walk parallel to the track. A U.S.B.M.
U.S.B.M. 98	432	3105		(M.L.L.W. 2.675)	Chiseled + on top + at N.E. Cor. of conc. support base for light standard, S.W. Cor. of Sta.
No 1			511	25 94	Chiseled + in painted circle - top conc. N. side of
No 2			406	24 19	
No 3			430	25 15	
No 4			436	25 21	
No 5			431	25 16	
No 6			431	25 16	
No 7			426	25 11	
No 8			430	25 15	
No 9			432	25 17	
No 10			429	25 14	
TP.	436	3109	422	26 73	
No 11			430	25 15	
No 12			429	25 14	
No 13			426	25 11	
No 14			427	25 12	
No 15			430	25 79	
No 16			429	25 78	
No 17			457	25 106	

Profile Notes.

1941 Rec. of Survey Bk. 22 Pg. 30-44 (26.730-44 W.)

cont'd on pg. 163

FORM 307 2M 8-45

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.		
		3109			Brot. Ford from pg. 162	
No 18			435	[illegible]	Chiseled + [illegible] painted [illegible]; top curb [illegible]	
No 19			410	2699	" " "	" " "
T.P.	776	3477	408	2701	" " "	top iron strap, top curb
No 20			613	[illegible]	" " "	top curb [illegible]
No 21			426	3051	" " "	" "
T.P.	506	3501	[illegible]	[illegible]		
No 22			422	[illegible]	" " "	
No 23			423	[illegible]	" " "	- N.W. cor. of pier
No 24			439	[illegible]		- S.W. cor. of pier
T.P.	418	[illegible]	[illegible]	[illegible]		
No 25			438	3068	" " "	- Top curb [illegible]
T.P.	4[illegible]	3111	819	2677		
T.P.	429	3103	437	2674		
U.S.B.M.-98			431	2672	Check in Bench Elev. = 26730 - pg. 62	

Profile Notes

Profile No. ____ Notes Red. ____ Plotted ____ Job No. [illegible] Division No. ____
X:Sec. No. ____ Date ____ Date ____ Survey of ____ Notes [illegible] Date [illegible]
Notes Chkd. ____ Checked ____ Survey by Hlamack Notes [illegible] Date [illegible]
Date ____ Date ____ Map No. ____ Index [illegible] Johnson Date ____

F.B. 1216 Pg. 163

B. 120 PG. 164 Job No. 5429 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.	

FORM 307 2M 8-45

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.

Profile	Notes Red.	Plotted	Job No. 8429	Division No.	F.B. 316 Pg. 165
No.	Date	Date	Survey of Pier Soundings (Manhattan)		
X-Sec.	Notes Chkd.	Checked	Survey by Klemock	Notes GWK	Date 6-5-46
No.	Date	Date	Map No.	Indexed C. Johnson	Date

— PIER SOUNDINGS —

"MANHATTAN BEACH"

June 5, 1946.

Elev's based on M.L.L.W.

STATION	B. S.	~~H. I.~~ Elev. Sta.	F. S. (−)	ELEV. Bottom
Sta. No. 1		259	125	+134
No. 2		270	141	+129
No. 3		268	144	+124
No. 4		267	162	+105
No. 5		267	195	+72
No. 6		267	221	+46
No. 7		268	238	+30
No. 8		268	249	+19
No. 9		267	259	+08
No. 10		268	264	−06
No. 11		268	298	−30
No. 12		268	313	−45
No. 13		268	323	−38
No. 14		268	313	−45
No. 15		268	313	−45
No. 16		268	322	−54
No. 17		265	324	−59
No. 18		267	357	−90
No. 19		270	394	−124
No. 20		270	432	−146

contd on pg. 166.

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

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 307 5M 7-43

FORM 307 5M 7-43

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		
					Cont'd from pg. 165	
Sta. No. 21		30[illegible]	462	[illegible]		
No. 22		[illegible]	47[illegible]	[illegible]	2 PM.	
No. 23		30[illegible]	[illegible]	[illegible]	Heavy [illegible]	(Brg.)
No. 24		30[illegible]	[illegible]	[illegible]	Swells 4 to 5' [illegible] S 25° E.	
No. 25		30[illegible]	45[illegible]	[illegible]	Wind Velocity [illegible] miles per hr. from S 60° W.	

Job No. 8424 Division No. Notes Red. Plotted Profile
Survey of [illegible] Date Date No.
Survey by [illegible] Notes [illegible] Notes Chkd. Checked X-Sec.
Indexed [illegible] Date Date No.

S. 1216 Pg. 166

F.B. 1216 PG. 167

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

X:Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of [illegible]

Survey by Hemed Notes GWK Date 7-3-46

Map No. ____ Indexed C. Johnson Date ____

~ PIER SOUNDINGS ~

"MANHATTAN PIER"

Manhattan Beach, Calif.

July 3, 1946

Elevations based on MLLW

STATION	B. S.	H.I. Elev. Sta.	F.S. (-)	ELEV. Bottom
[illegible]		2574	13.5	134
2		2677	14.1	129
3		2675	14.3	125
4		2669	16.0	107
5		2668	18.9	78
6		2674	21.2	55
7		[illegible]	23.4	34
8		[illegible]	24.9	19
9		[illegible]	25.9	08
10		[illegible]	27.0	-02
11		2670	29.1	-23
12		[illegible]	32.5	-57
13		[illegible]	34.4	-76
14		[illegible]	32.8	-60
15		[illegible]	32.6	-58
16		[illegible]	32.5	-57
17		2652	32.8	-63
18		2674	36.5	-98
19		2677	39.9	-129
20		2864	42.8	-142
21		3051	46.2	-157

Contd on pg. 168

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 2M 8-45

FORM 307 2M 8-45

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]		3079	467	-159	Contd from pg. 167.	
23		3078	462	-15[illegible]	WIND: 5.50° E. 3 miles per hr.	
24		3062	46[illegible]	-1[illegible]	10:30 A.M.	
25		3063	463	-[illegible]		
					WAVES: 5.29° E. 3' high.	
					Velocity - 100' in 6 Secs	
					11 miles per hr.	
					— LITTORAL DRIFT —	
500' N.W. of pier. - Beach Brg. = 5.26° E.						11:30 A.M.
Cube (Cork float) 100' in 10½ mins. = 9.75 ft. per min.						
0.11 miles per hr.						
Direction - 5.26° E. (Down Coast)						
500' S.E. of pier. - Beach brg. = 5.27° E.						
Cube (Cork float) - 100' in 20½ mins. = 4.88 ft. per min.						
0.06 miles per hr.						
Direction - N 27° W. (Up Coast)						
Note: This cube reversed its direction a time or two and actually traveled 300' ±						
(Tide: 3.1 - Rising.)						

Profile No. ___ X-Sec. No. ___
Plotted ___ Date ___ Checked ___ Date ___
Notes Red. ___ Date ___ Notes Chkd. ___ Date ___
Job No. 8429 Division No. ___ Notes [illegible] Date ___
Survey of [illegible] Survey by [illegible] Indexed A. C. Johnson
F.B. 1210 G. 168

FORM 307 5M 1-46

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		2594	125	+134
2		2699	141	+129
3		2675	143	+125
4		2669	161	+106
5		2668	182	+85
6		2674	204	+63
7		2681	225	+43
8		2675	239	+29
9		2673	245	+22
10		2676	[illegible]	+15
11		2676	2[illegible]7	−11
12		2680	305	−37
13		2683	31[illegible]2	−44
14		2682	31[illegible]	−48
15		2679	321	−53
16		2680	335	−67
17		2652	35[illegible]2	−87
18		2674	[illegible]	−108
19		2699	[illegible]	−126
20		2864	428	−142
21		3051	4[illegible]5	−160

~ PIER SOUNDINGS ~
"MANHATTAN BEACH"
July 30, 1946.
Elevations based on M.L.L.W.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 Pg. 169
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings
Notes Chkd. ____ Checked ____ Survey by Heinecke Notes GWK Date 7-30-46
Date ____ Date ____ Map No. ____ Indexed A. C. Johnson Date ____

FORM 307 5M 1-46

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		30 79	47	-16 2
23		30 78	46	-15 3
24		30 62	45	-15 3
25		30 63	45	-15 4

Element	Time	Direction	Velocity	Height
WIND	3 P.M.	S 49° W.	5 miles per hr.	—
WAVES	"	S 40° E	10.5 " " "	2.2'

~ LITTORAL DRIFT ~

Observation At.	Time	Drift	Direction	Speed per min.	Tide.
500' Up Coast	3 P.M.	250' in 6½ min's.	Down Coast	38'	(2.2 Falling) Mean Ebb.
500' Down "	3:20 P.M.	200' in 9½ "	" "	21'	" "

Note: No float attached to cube. Cube used as a sinker on end of fishing line and allowed to move freely. This arrangement apparently superior to any used heretofore.

F.B. 1216 PG. 170

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

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

Survey by G. Kleineck Notes GWK - 7-30-46 Notes Chkd. Checked Date No.

Indexed A. C. Johnson Date Date

Profile	Notes Red.	Plotted	Job No. 8429	Division No.	F.B. 1216 Pg. 171
No.	Date	Date	Survey of Pier Soundings — Manhattan		
X-Sec.	Notes Chkd.	Checked	Survey by Kleineck	Notes GWK	Date 8-29-46
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date 10-14-46

~ PIER SOUNDINGS ~

"MANHATTAN BEACH"

Aug. 29, 1946.

Elevations based on M.L.L.W.

STATION	B.S.	Elev. Sta.	F.S. (-)	ELEV. Bottom
Sta. No. 1		2594	125	+ 134
2		2699	141	+ 129
3		2675	144	+ 124
4		2669	159	+ 108
5		2668	175	+ 92
6		2674	193	+ 74
7		2681	214	+ 54
8		2675	229	+ 39
9		2673	239	+ 28
10		2676	249	+ 19
11		2676	266	+ 02
12		2680	294	- 26
13		2683	294	- 26
14		2682	304	- 36
15		2679	319	- 51
16		2680	344	- 76
17		2652	355	- 90
18		2674	374	- 107
19		2699	390	- 120
20		2864	424	- 138
21		3051	460	- 155

Contd on pg. 172.

FORM 307 5M 7-43

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 5M 7-43

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		3079	469	−161	Contd from pg. 171.	
23		3078	460	−152		
24		3062	465	−159		
25		3063	470	−164		

Element	Time	Direction	Velocity	Height
WIND	9:45 A.M.	N 62° E	5 mi's per hr.	—
WAVES	"	S 28° E	11 " " "	2.8'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' Up Coast	9 A.M.	200' in 9½ min's.	Down Coast	21'	High Flood.
500' Down "	9:30 A.M.	100' in 9 "	Up "	11'	" " (4.2 - Rising)

Note: No float used.

B 1216 PG. 172 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Manhattan B. Date Date No.
Survey by Alexander Notes G.W.C. - 8-29-'46 Notes Chkd. Checked X-Sec.
Indexed Date Date No.

FORM 307 5M 1-46

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	125	+134
2		270	140	+130
3		268	145	+123
4		267	158	+109
5		267	163	+104
6		267	198	+69
7		268	230	+38
8		268	244	+24
9		267	256	+11
10		268	268	00
11		268	299	-31
12		268	318	-50
13		268	333	-65
14		268	318	-50
15		268	325	-57
16		268	349	-81
17		265	364	-99
18		267	393	-126
19		270	416	-146
20		286	438	-152
21		305	468	-163

~~HIER SOUNDINGS~~

"MANHATTAN BEACH"

Oct. 4, 1946

Elevations based on M.L.L.W.

Profile No. ____ Date ____ Notes Red ____ Plotted ____ Job No. [illegible] Division No. ____ F.B. 1216 Pg. 173

X-Sec. No. ____ Date ____ Notes Chkd. ____ Checked ____ Date ____ Survey of [illegible] Survey by [illegible] Notes L. De T. Date 10-4-46

Map No. ____ Indexed L. Johnson Date 2-4-47

FORM 307 5M 1-46

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	46 7	-159		
23		308	47 9	-171		
24		306	46 5	-159		
25		306	47 0	-164		

Element	Time	Direction	Velocity	Height
WIND	8:15 A.M.	S 45° W.	1 mile per hr.	—
WAVES	" "	S 20° E.	11 mi's " "	4.5'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' Up Coast	8:45 A.M.	300' in 3 mins	Down Coast	100'	Mean Flood
500' Down "	8:30 "	300' in 3 2/3 "	" "	82'	" "
				(3.7 - Falling)	

F.B. 1216 PG. 174

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

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

Survey by Klemeer Notes L. De T. 10-4 '46 Notes Chkd. Checked Date No.

Indexed R. C. Johnson Date Date

FORM 307 5M 1-46

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		25.9	12.5	+13.4
2		27.0	14.0	+13.0
3		26.8	14.3	+12.5
4		26.7	17.1	+9.6
5		26.7	19.9	+6.8
6		26.7	21.8	+4.9
7		26.8	23.3	+3.5
8		26.8	24.3	+2.5
9		26.7	25.3	+1.4
10		26.8	27.0	−0.2
11		26.8	30.0	−3.2
12		26.8	32.2	−5.4
13		26.8	33.6	−6.8
14		26.8	33.6	−6.8
15		26.8	33.8	−7.0
16		26.8	34.4	−7.6
17		26.5	35.9	−9.4
18		26.7	39.5	−12.8
19		27.0	41.8	−14.8
20		28.6	44.8	−16.2
21		30.5	47.6	−17.1

~ PIER SOUNDINGS ~
"MANHATTAN BEACH"
NOV. 8, 1946.
Elevations based on M.L.W.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 1424 Division No. ____
X-Sec. ____ Date ____ Survey of ____
No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey by Blomeck Notes ____ Date Nov 8-46
Map No. ____ Indexed ____ Date ____

F.B. 1216 Pg. 175

FORM 307 5M 1-46

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	48.7	-179
23		308	48.9	-181
24		306	45.9	-153
25		306	44.8	-142

Element	Time	Direction	Velocity	Height
WIND	10:15 A.M.	None	None	—
WAVES	"	522° E.	13 miles per hr.	3.5'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' up Coast.	10:45 A.M.	200' in 3 min's	Down Coast.	67'	Mean ebb.
500' Down " .	10:30 A.M.	200' in 5 min's	Down Coast.	40'	" " .

(3.6 Falling)

F.B. 1216 PG. 176

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

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

Survey by Kleinert Notes G.H.-A.K. 11-8-46 Notes Chkd. Checked No.

Indexed C. Johnson Date Date

FORM 307 5M 1-46

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-height 1.8
2		270	14.1	+129	
3		268	14.3	+125	
4		267	16.5	+102	
5		267	18.1	+86	
6		267	20.6	+61	
7		268	22.8	+40	
8		268	24.4	+24	
9		267	25.8	+09	
10		268	26.8	00	
11		268	29.0	−22	
12		268	30.4	−36	
13		268	30.9	−41	
14		268	31.4	−46	
15		268	31.6	−48	
16		268	32.5	−57	
17		265	33.3	−68	
18		267	36.2	−95	
19		270	39.7	−127	
20		286	43.4	−148	
21		305	47.1	−166	Cont'd on pg. 178.

~ TREE SOUNDINGS ~

"MANHATTAN BEACH"

Dec. 20, 1946

Elevations based on M.L.W.

Profile No. ____ Date ____ Notes Red ____ Plotted ____ Job No. Sh. Division No. ____ F.B. 1216 Pg. 177

X-Sec. No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey of ____ Survey by Kleiner Notes G.O.H. Date 12-20-46

Map No. ____ Date ____ Indexed ____ Date ____

FORM 307 5M 1-46

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	47.4	-166	Cont'd from pg. 177	
23		308	47.2	-164		
24		306	46.0	-154		
25		306	46.2	-156		

Element	Time	Direction	Velocity	Height.
WIND	1:15 P.M.	S 53° W.	2 miles per hr.	—
WAVES	" "	S 6° E.	11 " " "	1.8'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide.
500' Up Coast.	1 P.M.	100' in 5½ min's.	Up Coast.	18'	Low ebb.
500' Down "	12:45 Noon	100' in 6 "	Down "	17'	" " (+0.1 Falling)

F.B. 1216 PG. 178

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

Survey of Pier Foundings Manhattan Beach Date Date X-Sec.

Survey by Kleinecke Notes Chkd. Checked No.

Indexed C. Jannsen Date Date No.

FORM 307 2M 11-41

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	+13.4	Average wave ht. = 3.9
2		270	14.2	+12.8	
3		268	14.3	+12.5	
4		267	15.8	+10.9	
5		267	18.2	+8.5	
6		267	21.4	+5.3	
7		268	23.8	+3.0	
8		268	24.6	+2.2	
9		267	25.6	+1.1	
10		268	26.1	+0.7	
11		268	28.4	−1.6	
12		268	30.5	−3.7	
13		268	30.5	−3.7	
14		268	30.4	−3.6	
15		268	31.0	−4.2	
16		268	32.3	−5.5	
17		265	34.4	−7.9	
18		267	37.5	−10.8	
19		270	40.0	−13.0	
20		286	43.5	−14.9	
21		305	47.0	−16.5	Cont'd on pg. 180

"PIER SOUNDINGS"
~~MANHATTAN BEACH PIER~~
Jan. 27, 1947
Elevations based on M.L.L.W.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 Pg. 179
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings - Manhattan
Notes Chkd. ____ Checked ____ Survey by Heinecke Notes AS-GK Date 1-27-'47
Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

FORM 307 2M 11-41

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	47.7	−169	Cont'd from pg. 179.	
23		308	47.2	−164		
24		306	46.9	−163		
25		306	46.1	−155		

Element	Time	Direction	Velocity	Height
WIND	12:30 Noon	S 59° E	2 miles per hr.	—
WAVES	"	N 17° W	10 " " "	2.0' ±

~ LITTORAL DRIFT ~

Observation	AT.	Time	Drift	Direction	Speed per min.	Tide.
500' Up Coast		12:45 Noon	200' in 1½ min's.	Down Coast	133'	High ebb.
500' Down	"	1:00 P.M.	200' in 1¾ "	" "	114'	" "
						(4.0 Falling)

F.B. 1216 PG. 180 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Manhattan Date Date No.
Survey by Kleinau Notes A.S.-G.K. 1-27-47 Notes Chkd. Checked X-Sec.
Indexed C. Johns Date Date No.

FORM 307 2M 11-41

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	125	+134	Average Wave Ht. = 3.4'	
2		270	13.7	+133		
3		268	15.9	+109		
4		267	18.6	+81		
5		267	21.3	+54		
6		267	23.4	+33		
7		268	25.7	+11		
8		268	27.8	-10		
9		267	30.1	-34		
10		268	32.0	-52		
11		268	32.3	-55		
12		268	34.0	-72		
13		268	35.0	-82		
14		268	34.9	-81		
15		268	34.6	-78		
16		268	34.6	-78		
17		265	34.1	-76		
18		267	36.7	-100		
19		270	38.8	-118		
20		286	42.7	-141		
21		305	45.8	-153		

Elevations based on M.L.L.W.

March 3, 1947

"MANHATTAN BEACH PIER"

~ PIER SOUNDINGS ~

Cont'd on pg. 182

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 Pg. 181

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

Notes Chkd. ____ Checked ____ Survey by Flaneack Notes A.C.J. Date 3/3/47

Date ____ Date ____ Map No. ____ Indexed S. Johnson Date MAR 21 '47

FORM 307 2M 11-41

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	46.3	-155	Cont'd from pg. 181.	
23		308	44.9	-141		
24		306	46.4	-158		
25		306	45.3	-147		

Element	Time	Direction	Velocity	Height
WIND	1:45 P.M.	S 60° W	10 miles per hr.	—
WAVES	"	N 22° W	10 " " "	3.4'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' Up Coast	2:15 P.M.	Not appreciable	Reversals	0	Low.
500' Down "	2 "	100' in 7 mins.	Down Coast	14'	" (-1.0 Rising)

F.B. 1216 PG. 182 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Manhattan Date Date No.
Survey by Kleinecke Notes A.C.S. & G.W.K. Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

FORM 307 5M 1-46

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	125	+134	Average Wave Ht. = 5.0'	
2		270	133	+137		
3		268	151	+117		
4		267	188	+79		
5		267	212	+55		
6		267	238	+29		
7		268	261	+07		
8		268	290	-22		
9		267	301	-34		
10		268	311	-43		
11		268	318	-50		
12		268	34.0	-72		
13		268	34.3	-75		
14		268	33.3	-65		
15		268	33.0	-62		
16		268	33.0	-62		
17		265	32.8	-63		
18		267	34.5	-78		
19		270	38.0	-110		
20		286	42.8	-142		
21		305	46.3	-158		

Cont'd on pg. 184

~PIER SOUNDINGS~
"MANHATTAN BEACH."
April 4, 1947.
Elevations based on M.L.L.W.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 183
Date ____ Date ____ Survey of Pier Soundings - Manhattan
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Klemeck Notes M.-Owen Date 4-4-'47
Date ____ Date ____ Map No. ____ Indexed Johnson Date MAY 20 '47

FORM 307 5M 1-46

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.	~~P.S.~~ (-)	~~ELEV.~~ Bottom	
Sta. No. 22		30.8	47.2	-16.4	Cont'd from pg. 183.
23		30.8	47.5	-16.7	
24		30.6	44.8	-14.2	
25		30.6	44.6	-14.0	

Element	Time	Direction	Velocity	Height
WIND	1 P.M.	S 69° W	10 miles per hr.	—
WAVES	" "	N 27° W	12 " " "	5.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
500' Up Coast	1:30 P.M.	100' in 8 mins.	Down Coast	13'	low ebb.
500' Down "	1:15 "	None	—	0	" (-0.6 Falling)

(See F.B. 1291 for Add'l Soundings)

F.B. 1216 Pg. 184

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

Survey of Rio Soundings - Manhattan Date ____ Date ____ No. ____

Survey by Kleinert Notes J.M.-Gwk. Notes Chkd. ____ Checked ____ X-Sec. ____

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

Notes Ck'd by	Survey of	F.B. 17.46 PG. 185
Map No.	W. O. Tape No. St'd °F	
Office Work	Surveyed by	
Checked	Notes Date	
Date	Indexed A. D. Johnson 7-22-46	

~ OCEAN PARK PIER ~

SURVEY & SOUNDING DATA.
May 28, 1946 TO April 4, 1947.

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

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

FORM 247 5M 11-41

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.

F.B. 1216 PG. 186

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 A. C. Johnson

F.B. 1216 PG. 187

PIER SOUNDINGS

OCEAN PARK PIER

June 2 - 1946

G. Kleineck + Party

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 2M 8-48

FORM 307 2M 8-45

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.	
U.S. 38-[illegible]				25.384 + 2.[illegible]	Established by U.S.C. + G.S. in 1925. "No L-50" Ocean Park, set in steps at north entrance to Pac. South. West Bank, Ocean Park Branch (another bank in this bldg. now) on Pier Ave. - Std bronze disc set in conc. steps.
	3942	32126		2[illegible].134 - M.L.L.W.	Field Elev. — 25.131
T.P.	2348	29034	5440	26.[illegible]	Final " , 1928 — 25.423
T.P.	1092	21736	8370	20.[illegible]	1932 Adj. Elev. — 25430
T.P.	10720	26527	5929	15.[illegible]	1934 " " — 25.384
T.B.M. 0+00	656	2778	5305	2[illegible]	L. + T. in conc. Step. at entrance on pier side To "Casino Gardens" See pg. 15.
Sta. No 1 - T.P.	505	2856	477	23[illegible]	+ in conc. walk N. edge [illegible]
No 2			565	22[illegible]	
No 3			558	22[illegible]	
No 4			542	23[illegible]	
No 5			5[illegible]	2329	
No 6			5[illegible]	2342	
No 7			[illegible]	23[illegible]	
No 8			460	23[illegible]	
No 9			457	2349	
T.P.	505	2910	454	[illegible]	
No 10			516	2[illegible]	
No 11			509	2401	
No 12			495	2415	
No 13			478	2432	

Profile Notes

Cont'd on pg. 189

F.B. 1216 PG. 188 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings (Ocean Park) Date Date No.
Survey by G. Kleineck Notes G.W.M. - 6-3-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

FORM 307 2M 8-45

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.		
		2910			Brot Fwd. from pg. 188.	
Sta. No 14			400	2450	+ in conc. walk - N. Edge of Pier	
TP	[illegible]	[illegible]	[illegible]	[illegible]		
No 15			[illegible]	[illegible]		
No 16			[illegible]	2478		
No 17			503	[illegible]		
No 18			475	2505		
No 19			457	2514		
No 20			448	2533		
No 21			449	2532		
No 22			457	2524		
No 23			454	2527		
No 24			439	2542		
No 25			436	2545		
No 26			435	2546		
No 27			429	2552		
No 28			[illegible]	2564		
No 29			400	2581		
TP	4[illegible]	[illegible]	[illegible]	[illegible]		
TP	428	27665	[illegible]	23385		
T.B.M. 0+00	5648	26865	[illegible]	21220	L+T - See preceding page.	

Profile Notes

Profile No. ____ Notes Red. ____ Plotted ____ Job No. [illegible] Division No. ____ F.B. [illegible] Pg. 189

X:Sec. No. ____ Date ____ Date ____ Survey of ____

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

Date ____ Date ____ Map No. ____ Issued C. Jobbs Date ____

FORM 307 2M 8-45

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.		
		26 868			Brot. Fwd.	
T.P.	5 813	21 436	11 245	[illegible]		
T.P.	7 [illegible]	25 [illegible]	0 462	[illegible]		
T.P.	5 612	32 327	20 [illegible]	[illegible]		
USBM-1273			3 [illegible]	[illegible]	Check in [illegible] initial	BM-Elev. 28.184

F.B. 1216 PG. 190 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings (Ocean Park) Date Date No.
Survey by Kleinack Notes G.W.K. 6-3-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. ____ Division No. ____ F B. ____ PG. 191

X-Sec. No. ____ Date ____ Date ____ Survey of ____

Notes Chkd. ____ Checked ____ Survey by ____ Notes HOBSON Date 7-8-46

Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

Form 307 5M 5-39

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

~ PIER SOUNDINGS ~

"OCEAN PARK PIER"

Ocean Park, Calif.

July 8, 1946

Elevations based on M.L.L.W.

STATION	B. S.	~~H.I.~~ Elev. - Sta.	F. S. (-)	ELEV. Bottom
[illegible]		2301	27.2	-42
[illegible]		2252	28.1	-52
[illegible]		[illegible]	28.6	[illegible]
[illegible]		2314	28.7	-56
[illegible]		2329	29.0	[illegible]
[illegible]		2345	28.7	-53
[illegible]		2367	28.2	[illegible]
[illegible]		[illegible]	29.1	-51
[illegible]		[illegible]	30.1	-61
[illegible]		2344	29.7	[illegible]
[illegible]		[illegible]	30.0	-60
[illegible]		2415	30.6	[illegible]
[illegible]		[illegible]	31.4	-71
[illegible]		[illegible]	32.0	-75
[illegible]		2463	33.5	-89
[illegible]		[illegible]	33.1	[illegible]
[illegible]		[illegible]	32.9	-81
[illegible]		2506	33.9	-88
[illegible]		2514	35.6	-105
[illegible]		2522	36.8	-115
[illegible]		2522	37.1	-118

contd on pg. 192

Form 307 5M 5-39

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]		25[illegible]	37.5	[illegible]	Contd from pg. 191.	
[illegible]		25[illegible]	3[illegible]	[illegible]	WIND: S.64° W. 10 mi. per hr.	
[illegible]		25[illegible]	39.8	[illegible]	3 PM	
[illegible]		25[illegible]	41.2	[illegible]		
[illegible]		[illegible]	42.0	[illegible]	WAVES: N.29° W. 1.8' high	
[illegible]		[illegible]	43.1	[illegible]	Velocity – 100' in 7 secs.	
[illegible]		[illegible]	43.8	[illegible]	9.7 miles per hr.	
[illegible]		[illegible]	45.3	[illegible]		

~ LATERAL DRIFT ~ {Flood tide 3 to 4 P.M.

1000 N.W. from Amusement Zone Promenade, or } Bearing brg. (Mag) = 5.31° E.
350' " " N. edge of pier
Cube (Cork float) Moved back & forth over a distance of 30 or 40 ft. but finished up at starting point at the end of 15 mins.

1000' S.E. from Amusement Zone Promenade, or } Bearing brg. (Mag.) = 5.42° E.
600' " " S. edge of pier
Cube (Cork float) Moved 5.42° E. (Down Coast)
100' in 8 Min. = 12.5 ft. per min.
or .14 miles per hr.

(Tide: 4.5 Rising)

F.B. 1[illegible] Pg. 192 Job No. [illegible] Division No. [illegible] Notes Red. Plotted Profile
Survey of [illegible] Date Date No.
Survey by [illegible] Notes [illegible] Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

FORM 307 5M 1-46

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
Pt. No 1		2301	27 4	-44
2		2288	27 9	-50
3		2298	28 6	-56
4		2314	28 8	-57
5		2329	28 8	-55
6		2342	28 8	-54
7		2367	28 8	-51
8		2396	29 8	-58
9		2399	31 2	-72
10		2402	30 6	-66
11		2394	30 7	-68
12		2401	31 4	-74
13		2415	32 3	-81
14		2432	33 1	-88
15		2450	34 7	-102
16		2463	34 1	-95
17		2478	33 7	-89
18		2506	34 7	-96
19		2514	36 7	-116
20		2533	37 2	-119
21		2532	38 1	-128

~ PIER SOUNDINGS ~

"OCEAN PARK PIER"

July 31, 1946

Elevations based on M.L.L.W.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 Pg. 193

X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings Date 7-31-46

Notes Chkd. ____ Checked ____ Survey by Kleineck Notes E.W.K. Date ____

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

FORM 307 5M 1-46

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 24	38 0	-12 8
23		25 27	39 1	-13 [illegible]
24		25 42	40 1	-14 7
25		25 45	41 1	-15 7
26		25 46	41 7	-16 [illegible]
27		25 52	42 4	-16 9
28		25 64	43 5	-17 [illegible]
29		25 81	44 9	-19 [illegible]

Element	Time	Direction	Velocity	Height
WIND	10 A.M.	S. 58° W.	5 miles per hr	—
WAVES	"	S 49° E	9.7 " " "	2.4'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
350' Up Coast	10 A.M.	200' in 7¼ mins.	Up Coast	28'	High Flood
600' Down	" 10:30 AM	50' in 14 "	Down Coast	3'	" " (3.7 Rising)

Note: No float used on Cube. Used as a sinker on the end of a fish line proves to be more satisfactory.

F.B. 1216 PG. 194 Job No. 8429 Division No. Notes Red Plotted Profile
Survey of Pier Soundings - Ocean Park Date Date No. X-Sec.
Survey by G. Weinert Notes G.W.K. - 7-31-46 Notes Chkd. Checked
Indexed A. C. Johnson Date Date Date No.

FORM 307 5M 7-43

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		2301	274	-44
2		2288	283	-54
3		2298	291	-61
4		2314	289	-58
5		2329	290	-57
6		2342	289	-55
7		2367	292	-55
8		2396	297	-57
9		2399	305	-65
10		2402	302	-62
11		2394	303	-64
12		2401	309	-69
13		2415	318	-76
14		2432	328	-85
15		2450	340	-95
16		2463	339	-93
17		2478	333	-85
18		2506	349	-98
19		2514	365	-114
20		2533	375	-122
21		2532	383	-130

Contd on pg. 196

~ PIER SOUNDINGS ~
"OCEAN PARK PIER"
Aug. 29, 1946.
Elevations based on M.L.L.W.

Profile No. ____ Notes Red. ____ Plotted ____ Date ____ Date ____
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Date ____ Date ____
Job No. 84-29 Division No. ____ Survey of Pier Soundings - Ocean Park
Survey by Meirech Notes QWK Date 8-29-46
Map No. ____ Index C. Johnson Date 2-4-47
F.B. 1216 PG. 195

FORM 307 5M 7-43

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		2524	384	−132	Contd from pg. 195	
23		2527	397	−144		
24		2542	402	−148		
25		2545	413	−159		
26		2546	421	−166		
27		2552	436	−181		
28		2564	440	−184		
29		2581	449	−191		

Element	Time	Direction	Velocity	Height
WIND	10 A.M.	S 50° W	7 miles per hr.	—
WAVES	"	S 31° E	10 " " "	2.9'

~ LITTORAL DRIFT ~

Observation	At	Time	Drift	Direction	Speed per min.	Tide
350' Up Coast		10 A.M.	100' in 12¾ mins	Up Coast	8'	High Flood.
600' Down	"	10:30 A.M.	100' in 15½ "	" "	*6'	" "

(4.8 Rising)

* Shifted back + forth in dist. traveled. No float used.

F.B. 1216 PG. 196 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Ocean Park Date Date No.
Survey by Klemack Notes GWK - 8-29-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

Profile No. _____ Notes Red. _____ Plotted _____ Job No. 8429 Division No. _____ F.B. 1216 PG. 197

X-Sec. No. _____ Date _____ Date _____ Survey of [illegible] Ocean Park

Notes Chkd. _____ Checked _____ Survey by Meineck Notes U. De T. Date 10-4-'46

Date _____ Date _____ Map No. _____ Indexed C. Johnson Date _____

~PIER SOUNDINGS~

"OCEAN PARK PIER"

Oct. 4, 1946

Elevations based on M.L.L.W.

STATION	B. S.	Elev. Sta.	F. S.	ELEV.
Sta. No. 1		230	27 2	-42
2		229	27 4	-45
3		230	27 8	-48
4		231	27 6	-45
5		233	28 0	-47
6		234	27 8	-44
7		237	28 2	-45
8		240	29 7	-57
9		240	31 3	-73
10		239	31 5	-76
11		240	31 7	-77
12		242	32 0	-78
13		243	32 7	-84
14		245	32 3	-78
15		246	34 1	-95
16		248	35 3	-105
17		248	35 8	-110
18		251	36 6	-115
19		251	37 2	-121
20		253	37 6	-123
21		253	37 6	-123

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 5M 1-46

FORM 307 5M 1-46

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.~~ (-)	ELEV. Bottom		
Sta. No 22		252	38 2	-130		
23		253	38 9	-136		
24		254	39 8	-144		
25		254	40 9	-155		
26		255	42 0	-165		
27		255	42 8	-173		
28		256	43 6	-180		
29		258	45 0	-192		

Element	Time	Direction	Velocity	Height
WIND	9:30 A.M.	S 86° W	10 miles per hr.	—
WAVES	" "	S 24° E	10 " " "	2.3

~ LITTORAL DRIFT ~

Observation At.	Time	Drift	Direction	Speed per min.	Tide
350' Up Coast	9:45 A.M.	200' in 2 2/3 mins	Down Coast	75'	Low Ebb.
600' Down	" 10 A.M.	200' in 3 1/4 "	" "	62'	" " (3.4 Falling)

F.B. 1216 Pg. 198

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

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

Survey by Meinecke Notes L. Det. 10-4-46 Notes Chkd. Checked

Indexed A. C. Johnson Date Date Date No.

FORM 307 5M 1-46

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	27.5	-45
2		229	27.7	-48
3		230	27.9	-49
4		231	28.2	-51
5		233	30.0	-67
6		234	28.7	-53
7		237	29.3	-56
8		240	29.8	-58
9		240	31.0	-70
10		239	31.0	-71
11		240	33.1	-91
12		242	31.9	-77
13		243	32.3	-80
14		245	33.2	-87
15		246	35.2	-106
16		248	35.3	-105
17		248	34.9	-101
18		251	35.3	-107
19		251	36.4	-113
20		253	37.4	-121
21		253	37.3	-120

~PIER SOUNDINGS~
"OCEAN PARK PIER"
Nov. 14, 1946
Elevations based on M.L.L.W.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8424 Division No. ____
X-Sec. No. ____ Date ____ Date ____ Survey of ____
Notes Chkd. ____ Checked ____ Survey by [illegible] Notes G.H.-G.H. Date 11-14-'46
Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

F.B. 1216 PG. 199

FORM 307 5M 1-46

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	39.3	-14 1		
23		25 3	38.6	-13 3		
24		25 4	39.7	-14 3		
25		25 4	40.5	-15 1		
26		25 5	41.7	-16 2		
27		25 5	41.9	-16 4		
28		25 6	43.4	-17 8		
29		25 8	43.6	-17 8		

Element	Time	Direction	Velocity	Height
WIND	9:15 A.M.	N. 27° E.	3 miles per hr.	—
WAVES	"	S. 39° E.	11 miles per hr.	3.1'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide.
350' Up Coast	9:30 A.M.	100' in 4½ mins.	Up Coast	22'	Mean Flood.
600' Down "	10 A.M.	200' in 3½ "	" "	57'	" "
				(4.3 Rising)	

F.B. 1216 Pg. 200

Job No. 8629 Division No. Plotted No. Profile

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

Survey by Meiners Notes G.H.-G.W.K. 11-14-46 Notes Checked Checked

Indexed A. C. Johnson Date Date Date No.

FORM 307 5M 1-46

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	28.7	-57	
2		229	29.5	-66	
3		230	29.7	-67	
4		231	30.0	-69	
5		233	30.1	-68	
6		234	30.1	-67	
7		237	30.2	-65	
8		240	30.9	-69	
9		240	30.8	-68	
10		239	31.5	-76	
11		240	32.2	-82	
12		242	33.0	-88	
13		243	34.2	-99	
14		245	35.3	-108	
15		246	36.4	-118	
16		247	36.8	-120	
17		248	36.5	-117	
18		251	37.2	-121	
19		251	38.5	-134	
20		253	39.2	-139	
21		253	39.8	-145	Cont'd on pg. 202

~ PIER SOUNDINGS ~
OCEAN PARK - "LIGHT PIER"
Dec. 2, 1946.
Elevations based on MLLW.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 24 Pg. 201
Date ____ Date ____ Survey of [illegible]
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by [illegible] Notes C. W. & BK Date 12-2-46
Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

FORM 307 5M 1-46

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		252	40.0	−148	Cont'd from pg. 201	
23		253	40.8	−155		
24		254	41.4	−160		
25		254	41.9	−165		
26		255	42.1	−166		
27		255	42.7	−17[illegible]		
28		256	43.6	−1[illegible]		
29		258	45.8	−2[illegible]0		

Element	Time	Direction	Velocity	Height
WIND	12:30 Noon	S 31° W	2 miles per hr.	
WAVES	"	S 29° E	8½ " " "	1.6"

— LITTORAL DRIFT —

Observation At.	Time	Drift	Direction	Speed per min.	Tide
350' Up Coast	12:30 Noon	30' in 10 min's.	Up Coast	3'	Mean Flood.
600' Down "	1 P.M.	40' " " "	" "	4'	" " (2.9" Rising)

F.B. 1216 PG. 202

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

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

Survey by Meineck Notes Cut & Fill 12-2-46 Notes Chkd. Checked

Indexed A. C. Johnson Date Date Date No.

FORM 307 2M 11-41

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	28.8	-58	Average wave ht. = 1'
2		229	29.0	-61	
3		230	29.3	-63	
4		231	29.8	-67	
5		233	30.0	-67	
6		234	30.2	-68	
7		237	29.9	-62	
8		240	30.3	-63	
9		240	30.9	-69	
10		239	30.4	-65	
11		240	30.8	-68	
12		242	31.9	-77	
13		243	33.3	-90	
14		245	38.0	-135 (?)	
15		246	36.2	-116	
16		248	36.8	-120	
17		248	36.2	-114	
18		251	37.0	-119	
19		251	38.2	-131	
20		253	39.1	-138	
21		253	39.5	-142	Cont'd on pg. 204

~ PILE SOUNDINGS ~

"OCEAN PARK - LICK PIER"

Jan. 3-'47

Elevations based on M.L.L.W.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 203

X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of Pier Soundings - ~~[illegible]~~ Survey by Hanson Notes GOH Date 1-3-'47

Map No. ____ Indexed S. Johnson Date ____ Ocean Park

FORM 307 2M 11-41

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		252	39.8	-14.6	Cont'd from pg. 203	
23		253	40.6	-15.3		
24		254	41.2	-15.8		
25		254	42.3	-16.9		
26		255	42.6	-17.1		
27		255	43.0	-17.5		
28		256	43.8	-18.2		
29		258	45.6	-17.8		

Element	Time	Direction	Velocity	Height
WIND	1 P.M.	5 19° E	5 miles per hr.	—
WAVES	"	5 34° E	8 " " "	1.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
350' Up Coast	1:15 P.M.	100' in 5½ mins	Up coast	18'	Low.
600' Down "	1:30 P.M.	No drift.	—	0	"
				(-0.3 Low)	

F B. 1216 Pg. 204 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Her Soundings - Ocean Park Date Date No.
Survey by Kleinert Notes G.D.H. - 1-3-47 Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

FORM 307 2M 11-41

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	30.2	−72	Average wave ht. = 2.6'	
2		229	29.6	−67		
3		230	30.4	−74		
4		231	30.0	−69		
5		233	30.7	−74		
6		234	30.2	−68		
7		237	29.9	−62		
8		240	30.5	−65		
9		240	31.4	−74		
10		239	31.3	−74		
11		240	31.7	−77		
12		242	33.2	−90		
13		243	34.1	−98		
14		245	35.6	−111		
15		246	36.7	−121		
16		248	37.1	−123		
17		248	36.6	−118		
18		251	37.2	−121		
19		251	38.3	−132		
20		253	39.3	−140		
21		253	39.8	−145	Contd on pg. 206	

~ HILL SOUNDINGS ~

OCEAN PARK - "LICK PIER"

Elevations based on M.L.L.W.

Jan. 31, 1947

Profile Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ FB 1216 PG. 205

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

X-Sec. Notes Chkd. ____ Checked ____ Survey by Meinack Notes Ab.-Gt. Date 1-31-'47

No. ____ Date ____ Date ____ Map No. ____ Indexed E. Johnson Date ____

FORM 307 2M 11-41

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		252	40.0	-148	Cont'd from pg. 205	
23		253	40.8	-155		
24		254	41.6	-162		
25		254	42.4	-170		
26		255	43.1	-176		
27		255	44.2	-187		
28		256	44.7	-191		
29		258	46.5	-207		

Element	Time	Direction	Velocity	Height
WIND	1:30 P.M.	S 77° W	3 miles per hr.	—
WAVES	" "	S 10 E	9 " " "	2.6'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min	Tide
350' Up Coast	1:45 P.M.	10' in 10 min's.	Down Coast	1'	Mean Flood.
600' Down "	2 P.M.	100' in 7 "	Up "	14'	" " (0.7' Rising)

F B 1216 PG. 206 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings Ocean Park Date Date No.
Survey by Meineck Notes 1/25-Oct. 1-31-45 Notes Chkd. Checked X-Sec.
Indexed C. Jannsen Date Date No.

FORM 307 2M 11-41

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	298	-68	Average Wave Hght. 4.1'	
2		229	304	-75		
3		230	306	-76		
4		231	314	-83		
5		233	310	-77		
6		234	310	-76		
7		237	308	-71		
8		240	315	-75		
9		240	324	-84		
10		239	322	-83		
11		240	326	-86		
12		242	339	-97		
13		243	346	-103		
14		245	361	-116		
15		246	378	-132		
16		248	377	-129		
17		248	366	-118		
18		251	375	-124		
19		251	381	-130		
20		253	387	-134		
21		253	392	-139		

~ PIER SOUNDINGS ~
"OCEAN PARK - LIGHT PIER"
March 4, 1947
Elevations based on M.L.L.W.

Contd on pg. 208

Profile Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 207
No. ____ Date ____ Date ____ Survey of Pier Soundings - Ocean Park
X-Sec. Notes Chkd. ____ Checked ____ Survey by Atkinson Notes J.W.S.M. Date 3-4-47
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date MAR 21 '47

FORM 307 2M 11-41

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		252	394	-142	Contd from pg. 207	
23		253	404	-151		
24		254	413	-159		
25		254	417	-163		
26		255	423	-168		
27		255	422	-167		
28		256	439	-183		
29		258	452	-194		

Element	Time	Direction	Velocity	Height
WIND	1 P.M.	5.88° W.	12 miles per hr.	—
WAVES	"	5.26° E.	12 " " "	4.1'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	speed per min	Tide
350' Up Coast	1 P.M.	100' in 5½ min's	Up Coast	18'	Low.
600 Down "	1:20 "	100' in 4½ "	Down "	22'	"
					(-1.2 Falling)

F.B. 1216 PG. 208 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Ocean Park Date Date No.
Survey by Meinack Notes L.S.M. & G.K. Checked X-Sec.
Indexed C. Job Date Date No.

FORM 307 5M 1-46

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	298	-68	Wave Hght. 3.1	
2		229	280	-51		
3		230	290	-60		
4		231	285	-54		
5		233	298	-65		
6		234	292	-58		
7		237	297	-60		
8		240	302	-62		
9		240	310	-70		
10		239	312	-73		
11		240	319	-79		
12		242	331	-89		
13		243	347	-104		
14		245	361	-116		
15		246	368	-122		
16		248	367	-119		
17		248	357	-109		
18		251	359	-108		
19		251	369	-118		
20		253	378	-125		
21		253	381	-128		

Contd on pg 209

~ PIER SOUNDINGS ~
"OCEAN PARK - LICK PIER"
April 4, 1947
Elevations based on M.L.L.W.

Profile
No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____
X-Sec. ____ Date ____ Date ____ Survey of ____
No. ____ Notes Chkd. ____ Checked ____ Survey by Kleinecke Notes [illegible] Date 4-4-'47
Date ____ Date ____ Map No. ____ Index G. Johnson Date MAY 20 '47

F.B. 1216 PG. 2089

FORM 307 5M 1-46

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		252	387	-135	Cont'd from pg. 208.	
23		253	398	-145		
24		254	407	-153		
25		254	412	-158		
26		255	420	-165		
27		255	427	-172		
28		256	438	-182		
29		258	450	-192		

Element	Time	Direction	Velocity	Height
WIND	2:30 P.M.	S 87° W	15 miles per hr.	—
WAVES	" "	N 18° W	14 " " "	3.1'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
350' Up Coast.	2:30 P.M.	60' in 8 mins	Up Coast.	7.5'	Low.
600' Down "	3:00 "	100' in 3½ "	Down "	.29'	"

(-0.4 Low).

(See F.B. 1291 for Addl Soundings)

F.B. 1216 Pg. 210 Job No. 8429 Division No. Notes Red. Plotted Date No. Profile
Survey of Pier Soundings - Ocean Park Date X-Sec.
Survey by Meinecke Notes H.M. - GWK Notes Chkd. Checked Date No.
Indexed A. C. Johnson Date

Notes Ck'd by	Survey of
Map No.	W. O. Tape No. Std °F
Office Work	Surveyed by
Checked	Notes Date
Date	Indexed A. C. Johnson 7-22-46

F.B. 1216 PG. 211

~ SANTA MONICA PIER ~

SURVEY & SOUNDING DATA.

May 29, 1946 To April 7, 1947.

~ INDEX ~

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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 12-40

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

F.B. 1216 PG. 212

F.B. 1216 PG. 213

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 A. C. Johnson

PIER SOUNDINGS

SANTA MONICA PIER

May 29-1946

G. Kleineck + Party

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 2M 8-48

FORM 307 2M 8-45

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.		
U.S.C. + G.S. B.M. #4, 1940	3888	32408		28.52	= M.L.L.W.	B.M. #4 - U.S. 3764. On N'ly side of overhead bridge extending westwardly along ℄ of Colorado Ave. onto Santa Monica Municipal Pier + E'ly from the Strand walk along beach to first roadway parallelling this walk, a std disc set in w'ly curb just N. of curb return. 1942 Tidal Datum El. 28.52 above M.L.L.W. (U.S.C. + G.S.) This desc. is not official.
T.P.	0054	21084	[illegible]	21030		
T.B.M.	3652	21013	3723	17361	1½" I.P. See below	
T.P.	11349	32223	0134	20874		
B.M. - "4, 1940"			[illegible]	28517	Check in.	
T.B.M.	782	2518		1736	→ From above. 1½" I.P. at E. edge Ocean Front walk 5' ± S. of pier traverse line.	
T.P.	612	2999	131	2387		
Sta. No 1			509	2490	N. + T. in S. edge of pier	
No 2			553	2446		
No 3			526	2473		
No 4			541	2458		
No 5			548	2451		
No 6			544	2455		
No 7			554	2445		

Profile Notes.

Cont'd on pg. 215

F.B. 1218 Pg. 214
Job No. 8429 Division No.
Survey of Pier Soundings (Santa Monica)
Survey by G. Klewack Notes Gwk 5-29-46
Indexed A. C. Johnson Date
Notes Red. Date
Notes Chkd. Date
Plotted Date
Checked Date
Profile No.
X-Sec. No.

FORM 307 2M 8-45

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.		
		2999			Brot. Ford. from pg. 214	
Sta. No 8			557	2442	N+T. in S. edge of Pier	
No 9			555	2444		
No 10			578	2421		
T.P.	514	2994	519	2480		
No 11			576	2418		
No 12			549	2445		
No 13			[illegible]	2456		
No 14			553	2441		
No 15			548	2446		
No 16			518	2476		
No 17			469	2525		
No 18			429	2565	+ in conc. deck - S. edge pier	
No 19			312	2682	N+T. top 2x8 in hand rail.	
No 20			447	2547	+ in conc. deck - S. edge of pier	
T.P.	504	3056	442	2552	" " "	"
No 21			524	2532	" " "	"
No 22			522	2534	" " "	"
No 23			261	2795	+ Top conc. wall - S. edge pier	
No 24			526	2530	N+T. in plank deck - " " "	
No 25			524	2532	" " " " " " "	

Contd on pg. 216.

Profile Notes

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 215
X:Sec. No. ____ Date ____ Date ____ Survey of ____ Notes GWE Date 5-24-46
Notes Chkd. ____ Checked ____ Survey by Klemeer Date ____
Date ____ Date ____ Map No. ____ Chk. C. Johnson Date ____

FORM 307 2M 8-45

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.		
		3056			Brot. Ford. from pg. 215	
Sta. No 26			544	2512	V & T. Top Stringer S.W. end (Cor.) pier	
T.P.	493	3031	498	2558		
T.P.	525	3006	550	2451		
T.P.	179	2500	685	2321		
T.B.M.			762	1738	1½" I.P. - See pg. 214.	

F.B. 126 PG. 216
Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Santa Monica Date Date No.
Survey by G. Klemed Notes Gwk - 5-29-46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

Profile No. ____ Notes Red. ____ Date ____ Plotted ____ Date ____ Job No. 1429 Division No. ____ Survey of ____

X:Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey by Heineck Notes Stock Date 7-8-46 Map No. ____ Checked C. Johnson Date ____

F.B. 1216 PG. 217

— PIER SOUNDINGS —

"SANTA MONICA PIER"

Santa Monica, Calif.

July 8, 1946.

Elevations based on MLLW.

STATION	B. S.	Elev. - Sta	F. S. (-)	ELEV. Bottom
Sta. No. 1		2490	15.6	93
2		2446	14.1	104
3		2473	13.6	111
4		2458	13.7	109
5		2451	13.9	[illegible]
6		2455	15.0	96
7		2445	14.9	95
8		2442	14.4	100
9		2444	14.2	102
10		2421	19.1	51
11		2418	21.4	28
12		2445	23.0	14
13		2456	23.4	12
14		2441	23.5	09
15		2446	24.0	05
16		2476	26.0	-12
17		2525	27.9	-27
18		2565	30.1	-45
19		2682	32.1	-53
20		2547	32.8	-73
21		2532	32.8	-75

Contd on pg. 218.

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 2M 8-45

FORM 307 2M 8-45

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		2534	33.2	-[illegible]	Contd from pg. 217. 2 P.M.	
23		2795	36.0	-8.0	WIND: S.80°W.	5 miles per hr.
24		2530	33.9	-[illegible]		
25		2532	35.3	-[illegible]		
26		2512	35.8	-[illegible]	WAVES: S.72°E. 1.2' high 100' in 9 secs. 7.5 miles per hr.	

~ LITTORAL DRIFT ~

1500' N.W. from N. edge of pier approx. opp. N'ly end of breakwater & on a line projected westwardly along N'ly side of 3½ story red brick on Strand walk. (Pier = 300' wide)
Cube. (Cork float) Moved S.19°E. parallel to beach—(Down Coast)
50' in 7.4 minutes
6.75 ft. per min. = 0.08 mile per hr.

3 P.M. Flood tide

700' S.E. of pier. Beach Brg. = S.54°E.
Cube (Cork float) Moved S.54°E.—(Down Coast)
100' in 12½ minutes.
8 ft. per min. 0.09 mile per hr.
(Tide: 4.2 Rising)

F.B. 1216 PG. 218
Job No. 8429 Division No.
Survey of Pier Surveying - Santa Monica
Survey by Kleineck Notes Store - 7-8-46
Indexed C. Johnson Date
Notes Red. Date
Notes Chkd. Date
Plotted Date
Checked Date
Profile No.
X-Sec. No.

FORM 307 5M 1-46

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		2490	13 6	93
2		2446	14 [illegible]	104
3		2473	[illegible]	111
4		2458	[illegible]	109
5		2451	140	105
6		2455	150	96
7		2445	149	95
8		2442	[illegible]	99
9		2444	145	99
10		2421	[illegible]	49
11		2418	[illegible]	28
12		2445	234	10
13		2456	[illegible]	10
14		2441	[illegible]	04
15		2446	[illegible]	-02
16		2476	262	-14
17		2525	216	-24
18		2565	296	-40
19		2682	330	-62
20		2547	328	-73
21		2532	331	-78

~PIER SOUNDINGS~

"SANTA MONICA PIER"

July 31, 1946

Elevations based on M.L.L.W.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 5429 Division No. ____ F.B. 1216 Pg. 219

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

Notes Chkd. ____ Checked ____ Survey by Meinrat Notes GWK Date 7-31-'46

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

FORM 307 5M 1-46

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		2534	33 3	-8 0		
23		2795	35 9	-7 9		
24		2530	33 9	-[illegible]6		
25		2532	35 3	-1[illegible]		
26		2512	35 9	-1[illegible]1		

Element	Time	Direction	Velocity	Height
WIND	11 AM	S 61° W.	6 miles per hr	—
WAVES	"	S 68° E.	8.5 " " "	2.3'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
700' Up Coast	11 A.M.	15' in 10 min's.	Down Coast	1.5'	High Flood
1500' " "	11:30 A.M.	17' in 10 "	" "	1.7'	" "
700' Down "	12 Noon	40' in 10 " *	Up "	.4'	High

* Cube traveled down Coast for 50'± reversed its direction + went up coast (4.5-High)

F.B. 1216 Pg. 220 Job No. 8429 Division No. Notes Red. Plotted No. Profile
Survey of Pier Soundings - Santa Monica Date Date X-Sec.
Survey by G. Kleinecke Notes G.W.K. 7-31-46 Notes Chkd. Checked No.
Indexed A. C. Johnson Date Date

FORM 307 5M 7-43

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		2490	155	+ 94		
2		2446	141	+ 104		
3		2473	136	+ 111		
4		2458	137	+ 109		
5		2451	140	+ 105		
6		2455	150	+ 96		
7		2445	150	+ 94		
8		2442	145	+ 99		
9		2444	145	+ 99		
10		2421	193	+ 49		
11		2418	213	+ 29		
12		2445	230	+ 14		
13		2456	237	+ 09		
14		2441	243	+ 01		
15		2446	248	- 03		
16		2476	259	- 11		
17		2525	274	- 22		
18		2565	296	- 40		
19		26.82	333	- 65		
20		2547	329	- 74		
21		2532	330	- 77		

~ PIER SOUNDINGS ~
"SANTA MONICA PIER"
Aug. 29, 1946.
Elevations based on M.L.L.W.

Cont'd on pg. 222

Profile No. ____ Notes Red. ____ Plotted ____ Date ____
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Date ____
Job No. 8429 Division No. ____
Survey of Pier Soundings - Santa Monica
Survey by Memack Notes Gulk Date 8-29-46
Map No. ____ Indexed Johnson Date 2-4-47

F.B. 1216 PG. 221

FORM 307 5M 7-43

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		2534	334	-81	Cont'd from pg. 221	
23		2795	363	-83		
24		2530	339	-86		
25		2532	352	-99		
26		2512	358	-107		

Element	Time	Direction	Velocity	Height
WIND	12:30 Noon	S 78° W	6 miles per hr.	—
WAVES	12:45 "	S 45° E	9 " " "	2.3'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
700' Up Coast	1 P.M.	45' in 10½ mins	Down Coast	4.3' *	High ebb
1500' "	" 1:15 P.M.	150' in 9½ "	" "	16'	" "
700' Down	" 12:30 P.M.	150' in 12¼ mins	Up Coast ‡	12'	" "

* Wind 10 mi's per hr. S 82° W.
‡ " - See above.
Note: No float used.

(4.0 - Falling)

F.B. 1216 PG 222
Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Santa Monica Date Date No.
Survey by Kleinecke Notes GWK - 8.29.46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

FORM 307 5M 1-46

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		249	15 5	+94
2		245	14 2	+103
3		247	13 7	+110
4		246	13 7	+109
5		245	13 0	+115
6		246	15 1	+95
7		244	14 9	+95
8		244	15 2	+92
9		244	17 8	+66
10		242	18 5	+57
11		242	21 2	+30
12		244	23 4	+10
13		246	23 0	+16
14		244	23 3	+11
15		245	23 7	+08
16		248	25 6	−08
17		252	26 7	−15
18		256	28 6	−30
19		268	32 0	−52
20		255	32 3	−68
21		253	32 9	−76

~ PIER SOUNDINGS ~
"SANTA MONICA PIER"
Oct. 4, 1946
Elevations based on M.L.L.W.

Profile No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 842 Division No. ____
X-Sec. No. ____ Date ____ Notes Chkd ____ Checked ____ Survey of ____ Survey by Howard Notes L. Th. T. Date 10-4-'46
Map No. ____ Date ____ Indexed C. Johnson Date ____

F.B. 126 PG. 223

FORM 307 5M 1-46

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	33 2	-79		
23		280	35 8	-78		
24		253	33 5	-82		
25		253	35 0	-97		
26		251	35 9	-108		

Element	Time	Direction	Velocity	Height
WIND	11:15 A.M.	S 1° W	7 miles per hr.	—
WAVES	"	S 53° E	9 " " "	1.7'

~ LITTORAL DRIFT ~

Observation Ht	Time	Drift	Direction	Speed per min.	Tide
700' Up Coast.	12:15 P.M.	200' in 1⅓ mins	Down Coast.	150'	High ebb.
1500' " "	12:30 "	200' in 2 mins	" "	100'	" "
700' Down Coast	12 Noon	Reversals 46' in 7½ mins	Down Coast.	6'	" " (3.4 - Rising)

Note: Wind as noted above observed down coast from pier
Wind at 12:30 P.M. 1500' Up coast from pier.
was from S 83° W at 11 miles per hr. & waves about
S 7° E at approximately 10 or 11 miles per hr.

F.B. 1216 PG. 334 Job No. 8424 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Santa Monica Date Date No. X-Sec.
Survey by Klaneck Notes L. Det. 10-4-46 Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

FORM 307 5M 1-46

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		249	15.6	+93
2		245	13.9	+106
3		247	13.6	+111
4		246	13.7	+109
5		245	14.0	+105
6		246	14.9	+97
7		244	14.7	+97
8		244	14.9	+95
9		244	16.0	+84
10		242	18.0	+62
11		242	20.6	+36
12		244	23.3	+11
13		246	23.6	+10
14		244	22.5	+1.9
15		245	24.9	-04
16		248	25.8	-10
17		252	26.8	-16
18		256	28.7	-3.1
19		268	32.1	-53
20		255	32.1	-66
21		253	32.7	-74

~ PIER SOUNDINGS ~
"SANTA MONICA PIER"
Nov. 8-'46.
Elevations based on MLLW.

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____
X-Sec. Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of ____ Survey by Kleinert Notes Sch. Date 11-8-'46
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

F.B. 1216 PG. 225

FORM 307 5M 1-46

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	331	−78
23		280	35.7	−77
24		253	33.4	−81
25		253	35.0	−97
26		251	35.7	−10[illegible]

Element	Time	Direction	Velocity	Height
WIND	7:30 A.M.	—	None	—
WAVES	"	S 43° E	10 miles per hr.	3.5'

— LITTORAL DRIFT —

Observation	At	Time	Drift	Direction	Speed per min.	Tide
700' Up Coast		8:15 A.M.	200' in 1½ min's	Down Coast	133'	High
1500' "	"	8:30 "	40' in 4 "	Up "	10'	"
700' Down	"	7:45 "	200' in 1½ "	Down "	133'	"

(6.4-High)

Note: At 1500' Up Coast - No wind. Waves about parallel to shore (N. 22° W.) & 3.0' ± high.

F.B. 4216 Pg. 226

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

Survey of Pier Soundings - Santa Monica Date Date No. X-Sec.

Survey by Klemeet Notes 11-8-46 Notes Chkd. Checked

Indexed C. Johnson Date Date Date No.

FORM 307 5M 1-46

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.____ Notes Red____ Platted____ Job No. 2-22 Division No.____ F.B. 1115 PG. 227
X-Sec. No.____ Date____ Date____ Survey of Topo Notes Chkd. Date 12-2-46
Notes Chkd.____ Checked____ Survey by Mr. Jones Notes by Johnson
Date____ Date____ Map No.____ Indexed Date____

STATION	B. S.	H.I. Elev. - Sta.	F.S. (-)	ELEV. Bottom		
Sta. No 1		24 4	15-4	+9 5		
2		24 5	13-9	+10 6		
3		24 7	13 5	+11 2		
4		24 6	13 4	+11 2		
5		24 5	13 5	+11 0		
6		24 6	15 7	+8 9		
7		24 4	17 9	+6 5		
8		24 4	16.9	+7 5		
9		24 4	16.4	+7 0		
10		24 2	17.2	+7 0		
11		24 2	19.9	+4 3		
12		24 4	22.7	+1 7		
13		24 6	23.0	+1 6		
14		24 4	23 8	+0 6		
15		24 5	24.2	+0 3		
16		24 8	25.9	-1 1		
17		25 2	27.9	-2 7		
18		25 6	29.7	-4 1		
19		26 1	32.1	-5 3		
20		25 5	32 0	-6 5		
21		25 3	32.7	-7 4	Cont'd on pg. 228	

~ TIES TO BENCH MARKS ~
"SANTA MONICA MUNICIPAL"
Dec. 2, 1946.
Elevations based on M.L.L.W.

FORM 307 5M 1-46

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	33.3	-80	Cont'd from pg. 227.	
23		280	36.1	-81		
24		253	34.1	-85		
25		253	35.3	-100		
26		251	35.8	-107		

Element	Time	Direction	Velocity	Height
WIND	11:15 A.M.	—	None	—
WAVES	"	S 51° E	8 ± miles per hr.	0.8'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
700' Up Coast	11:45 A.M.	18' in 10 mins.	Down Coast	1.8'	Low
1500' " "	* 12 Noon	12' " "	" " "	1.2'	"
700' Down "	‡ 11:15 A.M.	100' in 3½ "	" " "	29' (2.7-Rising)	"

* Waves Up Coast running about S 22° E.
‡ " Down " " " S 51° E.

F.B. 1216 PG. 228 Job No. 8429 Division No. Notes Red Plotted Profile
Survey of Pier Soundings - Santa Monica Date Date No. X-Sec.
Survey by Klemack Notes C.W.&K. 12-2-46 Notes Chkd. Checked
Indexed A. C. Johnson Date Date No.

Profile No. ____ Notes Red. ____ Date ____ Plotted ____ Date ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 229

X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of Pier Soundings - Santa Monica

Survey by Kleinsen Notes G.O.H. Date 1-3-'47

Map No. ____ Indexed A. Johnson Date ____

~ PIER SOUNDINGS ~

"SANTA MONICA MUNICIPAL"

Jan. 3-'47.

Elevations based on M.L.L.W.

STATION	B.S.	Elev. Sta.	~~H.I.~~	~~F.S.~~	ELEV. Bottom
Sta. No. 1		249	15.6		+93
2		245	19.0		+105
3		247	13.7		+110
4		246	13.9		+107
5		245	14.1		+104
6		246	16.6		+80
7		244	18.4		+60
8		244	16.2		+82
9		244	15.4		+90
10		242	16.5		+77
11		242	20.9		+33
12		244	22.9		+15
13		246	23.8		+08
14		244	24.3		+01
15		245	24.8		-03
16		248	26.7		-19
17		252	28.5		-33
18		256	30.4		-48
19		268	32.7		-59
20		255	32.3		-68
21		253	32.7		-74

Cont'd on pg. 230

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

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 307 2M 11-41

FORM 307 2M 11-41

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	33.3	−80	Cont'd from pg. 229.		
23		280	36.3	−83			
24		253	34.2	−81			
25		253	35.2	−99			
26		251	36.1	−110			

Element	Time	Direction	Velocity (Locally only)	Height
WIND	10:45 AM.	N 7° W	6 miles per hr.	—
WAVES	" "	S. 64° E.	8 " " "	1.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide.
700' Up Coast.	11:15 AM.	50' in 11 min's	Down Coast	4.5'	Low ebb.
1500' "	" " 11:30 AM.	No drift	—	0	" "
700' Down	" " " AM.	100' in 5½ min's	Down Coast	19'	" " (+0.3 Falling)

Note:- Up coast, wind was S 28° E. (7 miles per hr) & waves S. 07° E.
Down coast, data above applies

F.B. 1216 PG. 230 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Santa Monica Date Date No.
Survey by Meiners Notes G.O.H. - 1-3-47 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

FORM 307 2M 11-41

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		249	15.6	+93	Average Wave-height 16'
2		245	14.1	+104	
3		247	13.7	+110	
4		246	14.1	+105	
5		245	14.4	+101	
6		246	15.4	+92	
7		244	18.3	+61	
8		244	16.3	+81	
9		244	15.3	+91	
10		242	17.3	+69	
11		242	21.2	+30	
12		244	23.2	+12	
13		246	23.9	+07	
14		244	24.7	−03	
15		245	25.1	−06	
16		248	26.8	−20	
17		252	28.4	−32	
18		256	30.0	−44	
19		268	32.2	−54	
20		255	32.4	−69	
21		253	32.4	−71	Cont'd on pg. 232

~ HIER SOUNDINGS ~
"SANTA MONICA MUNICIPAL"
Jan. 31-'47
Elevations based on M.L.L.W.

Profile Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 231
No. ____ Date ____ Date ____ Survey of Pier Soundings - Santa Monica
X-Sec. Notes Chkd. ____ Checked ____ Survey by Hlaineck Notes Est. Date 1-31-'47
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

FORM 307 2M 11-41

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	33.0	-77	Cont'd from pg. 231.	
23		280	36.0	-80		
24		253	33.9	-86		
25		253	34.9	-96		
26		251	35.9	-108		

Element	✓ Time	✓ Direction	✓ Velocity	✓ Height
WIND	2:30 P.M.	S 76° W	4 miles per hr.	—
WAVES	"	S 51° E	8 " " "	1.6'

— LITTORAL DRIFT —

Observation Pt.	✓ Time	✓ Drift	✓ Direction	Speed per min.	Tide
700' Up Coast	3 P.M.	100' in 3 mins.	Down Coast	33'	Mean Flood
1500' " "	3:15 P.M.	100' " 2½ "	" "	40'	" "
700' Down "	2:30 P.M.	200' " 9 "	" "	22'	" " (1.4-Rising)

Note:- Up Coast, waves were S 13° E and about 2.5' high.
Down Coast, data above applies.

F B 1216 PG 232 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Santa Monica Date Date No.
Survey by Meineck Notes GH-GK 1-31-47 Notes Chkd. Checked X-Sec.
Indexed C. Jordan Date Date Date No.

FORM 307 2M 11-41

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		249	15.7	+92	Average Wave Ht. = 2.6'	
2		245	14.3	+102		
3		247	13.8	+109		
4		246	14.4	+102		
5		245	14.5	+100		
6		246	16.7	+79		
7		244	17.5	+69		
8		244	17.0	+74		
9		244	15.4	+90		
10		242	18.8	+54		
11		242	21.4	+28		
12		244	23.2	+12		
13		246	24.2	+04		
14		244	24.8	−04		
15		245	25.5	−10		
16		248	27.0	−22		
17		252	28.4	−32		
18		256	30.4	−48		
19		268	31.0	−42		
20		255	31.1	−56		
21		253	31.0	−57		

~ PIER SOUNDINGS ~
"SANTA MONICA MUNICIPAL"
March 4, 1947
Elevations based on MLLW.

Contd on pg. 234

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG 233
Date ____ Date ____ Survey of Pier Soundings - Santa Monica
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Klaiseck Notes A.C.S. Date 3-4-47
Date ____ Date ____ Map No. ____ Indexed F. Johnson Date MAR 21 '47

FORM 307 2M 11-41

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	31.7	-64	Cont'd from pg. 233	
23		280	35.1	-71		
24		253	33.2	-79		
25		253	34.5	-92		
26		251	36.0	-109		

Element	Time	Direction	Velocity	Height
WIND	2 P.M.	S 84° W	10 miles per hr.	—
WAVES	"	S 39° E	11 " " "	2.6'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide
700' Up Coast	2 P.M.	200' in 2½ min's.	Down Coast	80'	Low.
1500' " "	2:15 P.M.	200' in 3½ "	" "	57'	"
700' Down "	1:30 P.M.	100' in 6½ min's.	Up Coast	15'	"
				(-1.4 Low)	

Note: Above wave information applies to down C. area. Up Coast waves were running about S 11° E.

F B. 1216 PG 234 Job No. 8429 Division No. ____ Notes Red. ____ Plotted ____ Profile
Survey of Pier Soundings - Santa Monica Date ____ Date ____ No. ____
Survey by Mieneck Notes B.C.S. - G.H. Notes Chkd. ____ Checked ____ X-Sec.
Indexed C. Johns Date ____ Date ____ No. ____

Form 307 5M 5-39

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		249	15.7	+92	Average Wave	Ht - 1.6'
2		245	14.1	+104		
3		247	13.8	+109		
4		246	14.0	+106		
5		245	14.3	+102		
6		246	16.7	+79		
7		244	16.4	+80		
8		244	15.3	+85		
9		244	16.0	+84		
10		242	18.9	+53		
11		242	21.6	+26		
12		244	23.2	+12		
13		246	24.1	+05		
14		244	24.8	-04		
15		245	25.3	-08		
16		248	26.6	-18		
17		252	28.2	-30		
18		256	30.1	-45		
19		268	33.4	-66		
20		255	32.8	-73		
21		253	32.5	-72		

Contd on pg. 236

Pier Soundings
"Santa Monica Municipal"
April 7, 1947
Elevations based on M.L.W.

Profile Notes Red. Plotted Job No. 8429 Division No.
No. Date Date Survey of Pier Soundings-Santa Monica
X-Sec. Notes Chkd. Checked Survey by Alleinecht Notes RCS-Bulk Date 4-7-47
No. Date Date Map No. Andrew Johnson Date MAY 20 '47

F.B. 1216 PG. 235

Form 307 5M 5-39

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	32.5	-72	Contd from pg. 235	
23		280	35.8	-78		
24		253	34.4	-91		
25		253	36.0	-107		
26		251	35.6	-105		

Element	Time	Direction	Velocity	Height
WIND	10:30 A.M.	S 80° W	5 miles per hr.	—
WAVES	9:45 "	N 68° W	10 " " "	1.6'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
700' Up Coast	10:15 A.M.	50' in 8 min's	Down Coast	6'	High
1500' " "	10:30 "	50' in 7 "	" "	7'	"
700' Down "	10:00 "	100' in 4 "	" "	25'	"

(4.0-High)

Note: Above wave information applies to down coast area. Up coast waves were running about S 10° E.

(See F.B. 1291 for Add'l. Soundings)

F.B. 1216 PG. 236 Job No. 8629 Division No. Notes Red. Plotted Date Profile No. X-Sec. No.
Survey of Pier Soundings - Santa Monica Date Checked Date
Survey by Meinard Notes RCS - GWK Notes Chkd. Date
Indexed A. C. Johnson Date

Notes Ck'd by	Survey of	F.B. 1211 PG. 237
Map No.	W. O. Tape No. St'd °F	
Office Work	Surveyed by	
Checked	Notes Date	
Date	Indexed A. C. Johnson 7-22-46	

~ MALIBU SPORT FISHING PIER ~

SURVEY & SOUNDING DATA.
May 31, 1946 To April 7, 1947.

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

RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

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FORM 247 5M 11-41

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.

F.B. 12216 PG. 138

FORM 307 2M 8-45

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.		
US-2994 R-576	533	25968		20638	(On Roosevelt Hwy (U.S. 101 Alt) 7.2 miles west of Castellammare Overhead Bridge, flush with conc. floor of entrance to Mal... Sport Fishing Pier", 70' N. Wly of the ... of the pier + 15' north of the hinge of ... gate. 1937 Profile Field Elev. — 17.8... 1940 " Unadj. " — 17.8... 1942 U.S.C. & G.S. Supple. Adj. — 17.8... +2.8... MLLW = 20.6...	
T.P.	466	26128	450	21468		
Sta No 1			468	2145	P.K. Spk & T. top of 6" x 8" binder.	
No 2			468	2145		
No 3			468	2145		
No 4			467	2146		
No 5			460	2153		
No 6			458	2155		
No 7			456	2157		
No 8			456	2157		
No 9			454	2159		

Cont'd on pg. 240

Profile Notes.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 3429 Division No. ____
X:Sec. No. ____ Date ____ Date ____ Survey of ____
Notes Chkd. ____ Checked ____ Survey by Alemack Notes GWK Date 5-31-'46
Date ____ Date ____ Map No. ____ Date ____

F.B. 1216 PG. 239

FORM 307 2M 8-45

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.		
		26128			Brot, Ford from pg. 239.	
No 10			459	2184	P.K. Spk. + T. Top 6"x8" Stringer for curb.	
No 11			454	2159		
No 12			457	[illegible]		
No 13			461	[illegible]		
No 14			458	[illegible]		
No 15			458	[illegible]		
No 16			457	[illegible]		
No 17			460	[illegible]		
No 18			443	2170		
No 19			389	[illegible]		
T.P.	601	2835	379	2234		
No 20			565	[illegible]		
No 21			521	[illegible]		
No 22			501	[illegible]		
No 23			459	[illegible]		
No 24			452	[illegible]		
No 25			445	[illegible]		
T.P.	344	2604	575	2260		
T.P.	450	2596	458	2146		
USBM-2994			530	2066	Check in. Elev. on preceding pg. - 20,635.	

F.B. 1216 PG. 240 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Malibu Date Date No.
Survey by Kleineck Notes G.W.K. - 5-31-'46 Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

Profile	Notes Red.	Plotted	Job No. 2429	Division No.	F.B. 1216 Pg. 241
No.	Date	Date	Survey of		
X:Sec.	Notes Chkd.	Checked	Survey by Kleinecke	Notes Hobson	Date 7-8-46
No.	Date	Date	Map No.	Indexed C. Johnson	Date

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 2M 8-45

— PIER SOUNDINGS —

"MALIBU SPORT FISHING PIER"

July 8, 1946

Elevations based on M.L.L.W.

STATION	B. S.	Elev. Sta	F. S. (−)	ELEV: Bottom
Sta. No. 1		2145	11.3	101
2		2145	12.7	87
3		2145	14.5	70
4		2146	15.7	58
5		2153	17.7	38
6		2155	19.3	23
7		2157	20.2	14
8		2157	22.4	−08
9		2159	22.8	−12
10		2158	23.4	−19
11		2157	24.4	−28
12		2156	25.4	−38
13		2158	27.3	−58
14		2155	28.8	−72
15		2155	29.5	−82
16		2156	30.8	−92
17		2153	31.3	−98
18		2170	32.2	−105
19		2224	33.4	−112
20		2270	34.3	−116
21		2314	35.3	−122

Contd on pg. 242

FORM 307 2M 8-45

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		[illegible]	36.0	[illegible]	Cont'd from pg. 241.	
23		[illegible]	37.2	-12.4	Wind: S 29° W 4 miles per hr.	
24		[illegible]	37.3	[illegible]	10:30 A.M.	
25		[illegible]	37.4	[illegible]		
					WAVES: Choppy Hght. - 0.5'	
					— LITTORAL DRIFT — 11 A.M. (Low tide)	
400' S.W. of pier. Beach Curved - Tang. brg. = N. 63° E.						
		Cube (Cork float)			Moved S. 63° W. (Down Coast)	
					9' in 17 min.	
					.006 mi. per hr. = 0.53 ft per min.	
400' N.E. of pier. Beach Curved - Tang. brg. = N. 49° E.						
		Cube (Cork float)			Moved N. 49° E. (Down Coast)	
					30' in 11 minutes.	
					.03 mi. per hr. = 2.73 ft. per min.	
					(Tide: 1.9 - Low)	

F.B. 1210 PG 242

Job No. R429 Division No. Notes Red. Plotted Profile

Survey of Pier Soundings - Malibu Date Date No.

Survey by Hainsack Notes Hobson 7-R-46 Notes Chkd. Checked X-Sec.

Indexed A. C. Jonnson Date Date No.

FORM 307 5M 1-46

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		2145	12 2	+ 92
2		2145	13 3	+ 81
3		2145	14 8	+ 66
4		2146	16 2	+ 53
5		2153	18 3	+ 32
6		2155	19 5	+ 21
7		2157	21 0	+ 06
8		2157	22 1	− 05
9		2159	22 3	− 07
10		2154	23 4	− 19
11		2159	24 5	− 29
12		2156	25 7	− 41
13		2152	27 6	− 61
14		2155	28 3	− 67
15		2155	30 1	− 85
16		2156	32 6	− 110
17		2153	32 1	− 106
18		2170	32 7	− 110
19		2224	33 9	− 117
20		2270	34 7	− 120
21		2314	36 0	− 129

~ PIER SOUNDINGS ~

"MALIBU SPORT FISHING PIER"

July 31, 1946

Elevations based on M.L.L.W.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1218 PG. 243

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

Notes Chkd. ____ Checked ____ Survey by Kleinert Notes G.W.K. Date 7-31-1946

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

FORM 307 5M 1-46

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		2334	36 3	-130
23		2376	37 5	-137
24		2383	37 8	-140
25		2390	37 3	-134

Element	Time	Direction	Velocity	Height
WIND	2:30 P.M.	5.30° W.	8 miles per hr.	—
WAVES	"	5.67° W.	8.5 " " "	1.7'

~LITTORAL DRIFT~

Observation	At	Time	Drift	Direction	Speed per min.	Tide.
400' down	Coast	2:30 P.M.	200' in 7¾ mins	Down Coast	26'	Mean Flood.
400' UP	"	3 P.M.	200' in 9¼ "	"	" 22'	" "
						(3.0- Falling)

F.B. 1216 PG. 244 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Mal. Bay Date Date No. X-Sec.
Survey by G. Meinert Notes GWK - 7-31-46 Notes Chkd. Checked
Indexed A. C. Johnson Date Date Date No.

FORM 307 5M 7-43

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		2145	122	+ 92		
2		2145	134	+ 80		
3		2145	149	+ 65		
4		2146	161	+ 54		
5		2153	181	+ 34		
6		2155	196	+ 20		
7		2157	207	+ 09		
8		2157	225	− 09		
9		2159	226	− 10		
10		2154	232	− 17		
11		2159	244	− 28		
12		2156	267	− 51		
13		2152	279	− 64		
14		2155	287	− 71		
15		2155	303	− 87		
16		2156	313	− 97		
17		2153	317	− 102		
18		2170	324	− 107		
19		2224	337	− 115		
20		2270	346	− 119		
21		2314	360	− 129		

Contd on pg. 246

~ Tree Soundings ~
"Malibu Sport Fishing Pier"
Aug. 29, 1946
Elevations based on M.L.W.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. P42A Division No. ____ F.B. 1216 PG. 245
X-Sec. No. ____ Date ____ Date ____ Survey of Pier Soundings Malibu
Notes Chkd. ____ Checked ____ Survey by Kiernan Notes GWK Date 8-29-46
Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

FORM 307 5M 7-43

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

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Do not extend notes this side of this line

STATION	B. S.	~~H. I.~~ Elev.-Sta.	~~F. S.~~ (−)	ELEV. Bottom		
Sta. No 22		2334	364	-12[illegible]	Cont'd from pg. 245	
23		2376	375	-13[illegible]		
24		2383	376	-12[illegible]		
25		2370	376	-12[illegible]		

Element	Time	Direction	Velocity	Height
Wind	2 P.M.	542° W	10 miles per hr.	
WAVES	"	560° W	Choppy	0.8'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide.
400' Up Coast	2:30 P.M.	100' in 6¾" mins.	Down Coast	15'	Mean Ebb.
400' Down "	2:15 "	175' in 11 "	"	" 16'	" "

(2.4 Falling)

Note: No float used

Profile No. X-Sec. No.
Plotted Date Checked Date
Notes Red. Date Notes Chkd. Date
Division No. 8429 Job No. 8429
Survey of Pier Soundings - Malibu
Survey by Kleineck Notes Fwk 8-29-46
Indexed A. C. Johnson Date
B/216 Pg. 246

Profile	Notes Red.	Plotted	Job No. 8429	Division No.	F.B. 1216 Pg 247
No.	Date	Date	Survey of Pier Soundings — Malibu		
X-Sec.	Notes Chkd.	Checked	Survey by Kleiner	Notes GWK	Date 11-25-46
No.	Date	Date	Map No.	Endorsed Johnson	Date 2-4-47

— PIER SOUNDINGS —

"MALIBU SPORT FISHING PIER"

Nov. 25, 1946.

Elevations based on M.L.L.W.

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 5M 7-43

STATION	B.S.	~~H.I.~~ Elev-Sta	F.S. (-)	ELEV. Bottom
Sta. No 1		2145	127	+87
2		2145	131	+83
3		2145	145	+70
4		2146	153	+62
5		2153	165	+50
6		2155	180	+36
7		2157	194	+22
8		2157	201	+15
9		2159	214	+02
10		2154	219	-04
11		2159	230	-14
12		2156	243	-27
13		2152	249	-34
14		2155	263	-47
15		2155	280	-64
16		2156	306	-90
17		2153	316	-101
18		2170	324	-107
19		2224	337	-115
20		2270	346	-119
21		2314	358	-127

FORM 307 5M 7-43

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		2334	362	-129		
23		2376	374	-136		
24		2383	375	-137		
25		2390	373	-134		

Element	Time	Direction	Velocity	Height
WIND	8 A.M.	5.45° E.	2 miles per hr.	—
WAVES	"	5.44° W	8 " " "	1.0'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Speed per min.	Tide
400' Up Coast	8:30 AM.	100' in 3 mins	Down Coast	33'	High Flood
400' Down "	8:15 AM.	100' in 9½ "	" "	11'	" "
					(5.6 Rising)

F.B. 1216 PG. 248 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Mail By Date Date No.
Survey by Kleineck Notes Gwk 11-25-46 Notes Chkd. Checked X-Sec.
Indexed C. Jordan Date Date Date No.

FORM 307 5M 1-46

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	13.7	+77	Average Wave-height 08	
2		214	14.4	+70		
3		214	15.2	+62		
4		215	15.9	+56		
5		215	17.3	+42		
6		216	18.8	+28		
7		216	19.7	+19		
8		216	20.4	+12		
9		216	21.2	+04		
10		215	22.3	-08		
11		216	23.3	-17		
12		216	24.7	-31		
13		215	25.4	-39		
14		216	26.6	-50		
15		216	28.1	-65		
16		216	30.4	-88		
17		215	31.6	-101		
18		217	32.2	-105		
19		222	33.8	-116		
20		227	34.8	-121		
21		231	35.8	-127	Contd on pg. 250	

Elevations based on MLLW

Dec. 20 '46

"Malibu Sport Fishing Pier"

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8 Division No. ____ F.B. 1216 Pg. 249

X-Sec. No. ____ Date ____ Date ____ Survey of ____ Notes Chkd. ____ Checked ____ Survey by Klemack Notes G.D.H. Date 12-20-'46

Date ____ Date ____ Map No. ____ Index Jobber Date ____

FORM 307 5M 1-46

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	36.3	-130	Cont'd from pg. 249.	
23		238	37.5	-137		
24		238	37.5	-137		
25		239	37.5	-136		

Element	Time	Direction	Velocity	Height.
WIND	10 A.M.	—	None locally	—
WAVES	"	—	Light-choppy.	0.8'

~ LITTORAL DRIFT ~

Observation At.	Time	Drift	Direction	Speed per min.	Tide.
400' Up Coast	10:30 A.M.	100' in 9 mins.	Down Coast	11'	Mean Flood.
400' Down "	10:15 A.M.	100' in 10 "	" "	10'	" "
				(3.0 Falling)	

F.B. 1246 PG. 250 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Malibu Date Date No. X-Sec.
Survey by Mlewack Notes GOH 12-20-46 Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

FORM 307 2M 11-41

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	13.8	+76	Average Wave-height 1.0	
2		214	14.5	+69		
3		214	14.9	+65		
4		215	15.5	+60		
5		215	17.4	+41		
6		216	18.9	+27		
7		216	20.5	+11		
8		216	21.3	+03		
9		216	21.9	−03		
10		215	22.8	−13		
11		216	23.6	−20		
12		216	25.5	−39		
13		215	25.9	−44		
14		216	26.7	−51		
15		216	28.4	−68		
16		216	29.9	−83		
17		215	31.3	−98		
18		217	32.3	−106		
19		222	33.8	−116		
20		227	35.7	−130		
21		231	35.8	−127	Cont'd on pg. 252	

~ PIER SOUNDINGS ~

"MALIBU SPORT FISHING PIER"

Elevations based on M.L.L.W.

Jan. 27, 1947.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG. 251

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

Notes Chkd. ____ Checked ____ Survey by Kleinert Notes G.H.-G.L. Date 1-27-'47

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

FORM 307 2M 11-41

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.~~ [illegible]	ELEV. Bottom		
Sta. No 22		233	36.4	-131	Contd from pg. 251	
23		238	37.5	-137		
24		238	37.4	-136		
25		239	37.6	-137		

Element	Time	Direction	Velocity	Height.
WIND	10:15 AM	561° E	2 miles per hr.	
WAVES	"	580° W	7 " " "	1.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Speed per min.	Tide.
400' Up Coast	10:45 AM	100' in 5 min's.	Down Coast	20'	High flood.
400' Down "	10:30 "	100' " 6 "	" "	17'	" "
					(4.0 Rising)

F B 1216 PG 252 Job No. 8424 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Malibu Date Date No.
Survey by Meinecke Notes G.H. Gt. 1-27-47 Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date No.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8429 Division No. ____ F.B. 1216 PG 253

Date ____ Date ____ Survey of Pier Soundings – Malibu

X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Kleinsack Notes A.C.S. Date 3-5-'47

Date ____ Date ____ Map No. ____ Indexed C. Johnson Date MAR 21 '47

~ PIER SOUNDINGS ~

"MALIBU SPORT FISHING PIER"

March 5, 1947

Elevations based on M.L.L.W.

Average Wave Hght. = 1 ft.

STATION	B.S.	Elev. ~~H.I.~~ Sta.	~~F.S.~~ (–)	ELEV. Bottom
Sta. No. 1		214	13.9	+75
2		214	15.0	+64
3		214	16.2	+52
4		215	17.1	+44
5		215	19.2	+23
6		216	20.8	+08
7		216	21.8	–02
8		216	22.3	–07
9		216	22.9	–13
10		215	23.9	–24
11		216	24.9	–33
12		216	25.8	–42
13		215	27.6	–61
14		216	28.4	–68
15		216	29.1	–75
16		216	31.2	–96
17		215	31.4	–99
18		217	32.4	–107
19		222	33.8	–116
20		227	34.9	–122
21		231	35.7	–126

Contd on pg. 254

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

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

FORM 307 2M 11-41

FORM 307 2M 11-41

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	36.3	−130	Contd from pg 253.	
23		238	37.4	−136		
24		238	37.6	−138		
25		239	38.1	−142		

Element	Time	Direction	Velocity	Height
WIND	10 A.M.	S 45° E.	2 miles per hr.	—
WAVES	"	S 36 W	8 " " "	1.0'

~ LITTORAL DRIFT ~

Observation At	Time	Drift	Direction	Feet per min.	Tide
400' Up Coast	10:30 A.M.	100' in 4 min's.	Down Coast	25'	Mean ebb.
400' Down "	10:15 A.M.	100' in 8 "	" "	13'	" "
					(3.7 Falling)

F.B. 1216 PG 254 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Malibu Date No.
Survey by Meineck Notes ACS - GH Notes Chkd. Checked X-Sec.
Indexed C. Jones Date Date No.

Profile No. ____ Notes Red. ____ Date ____ Plotted ____ Date ____ Job No. 8429 Division No. ____ F B. 1216 Pg. 255

X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of Pier Soundings – Malibu

Survey by Meineck Notes L.M. Gulk Date 4-7-47

Map No. ____ Indexed C. Johnson Date MAY 20 '47

~ PIER SOUNDINGS ~

"MALIBU SPORT FISHING PIER".

April 7, 1947

Elevations based on M.L.L.W.

Wave Hght. 0.9'

STATION	B. S.	Elev.	T. S.	ELEV. Bottom
Sta. No. 1		214	132	+82
2		214	145	+69
3		214	162	+52
4		215	174	+41
5		215	190	+25
6		216	205	+11
7		216	215	+01
8		216	224	-08
9		216	229	-13
10		215	233	-18
11		216	239	-23
12		216	252	-36
13		215	261	-46
14		216	276	-60
15		216	298	-82
16		216	312	-96
17		215	319	-104
18		217	324	-107
19		222	337	-115
20		227	348	-121
21		231	358	-127

Contd on pg. 256

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

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Form 307 5M 5-39

Form 307 5M 5-39

PLEASE RETURN TO
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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	36 6	-133	Cont'd from pg. 255	
23		238	37 7	-139		
24		238	37 9	-141		
25		239	37 4	-135		

Element	Time	Direction	Velocity	Height
WIND	11:45 AM.	S 44° W	8 miles per hr.	—
WAVES	" "	N 75° W	11 " " "	0.9'

— LITTORAL DRIFT —

Observation At	Time	Drift	Direction	Feet per min.	Tide
400' Up Coast	11:45 AM.	None	—		High ebb
400' Down "	11:30 "	100' in 10 min's.	Down Coast	10'	" " (3.6 Falling)

(See F.B. 1291 for Add'l. soundings)

F.B. 1216 PG. 256 Job No. 8429 Division No. Notes Red. Plotted Profile
Survey of Pier Soundings - Malibu Date Date No.
Survey by Kleinert Notes J.M. - G.W.K. Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

Form [illegible]

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

Transit at	Sight on	Stadia Intercepts	Stadia Distance	Stadia Rod—	Horizontal Angle 0° to 360° Right	Horiz. Distance	+ — Vertical Angle	Elevation of Point	+ Back Sight	+ — Difference Elevation	Height of Instrument	+ — Vertical Distance				
					° ′		° ′		1							
					° ′		° ′		2							
					° ′		° ′		3							
					° ′		° ′		4							
					° ′		° ′		5							
					° ′		° ′		6							
					° ′		° ′		7							
					° ′		° ′		8							
					° ′		° ′		9							
					° ′		° ′		10							
					° ′		° ′		11							
					° ′		° ′		12							
					° ′		° ′		13							
					° ′		° ′		14							
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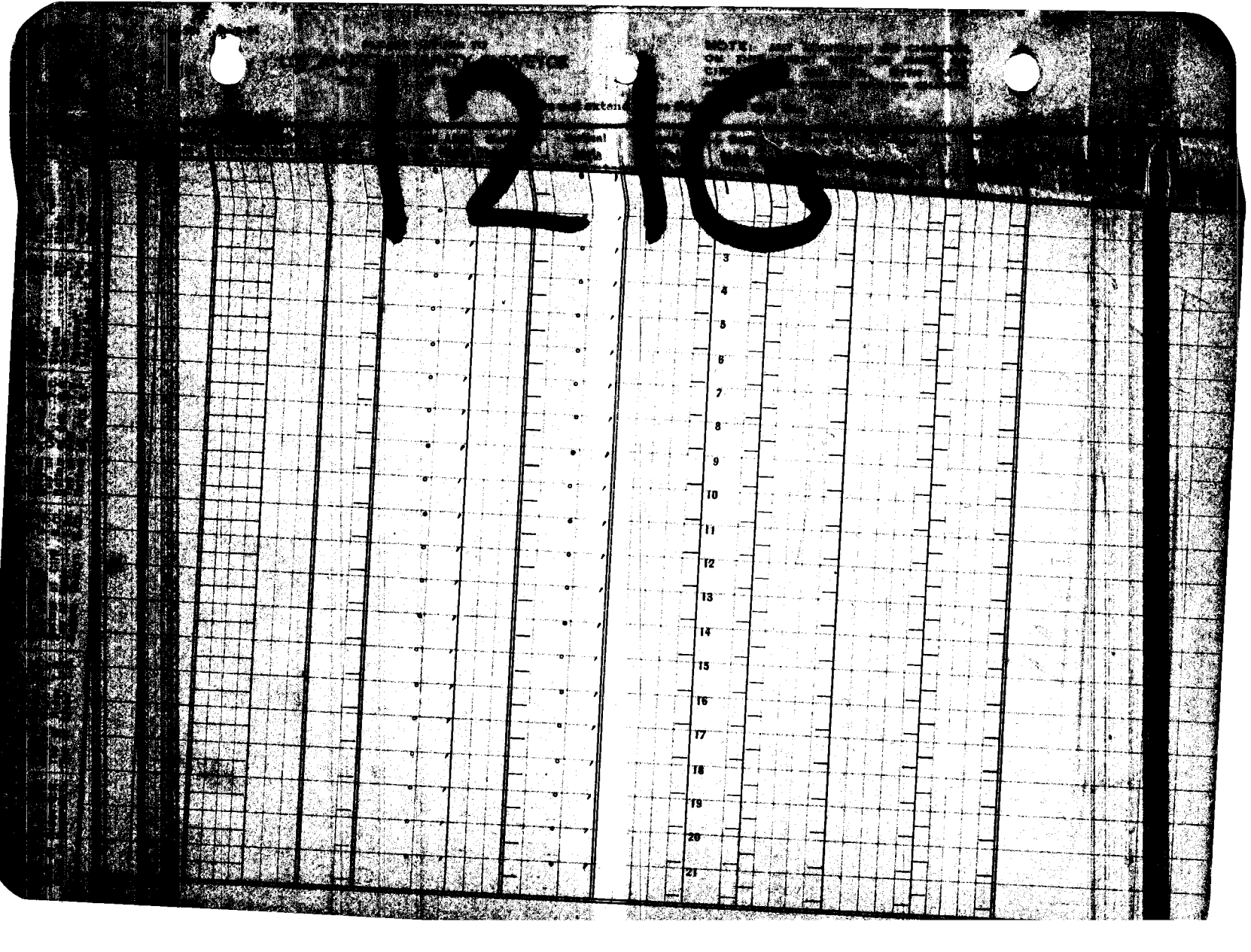
					° ′		° ′		17							
					° ′		° ′		18							
					° ′		° ′		19							
					° ′		° ′		20							
					° ′		° ′		21							

Notes Red. _____ Platted _____ Job No. _____ Division No. _____

Date _____ Date _____ Survey by _____ Notes _____ Date _____

Date _____ Date _____ Mon No. _____ Indexed _____ Date _____

F.B. 1216 Pg. [illegible]


1216