

LOCATION MAP THE PROJECT SITE

SENIOR LAND SURVEYOR'S CERTIFICATE:

N.T.S

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYOR'S ACT; THIS 23RD DAY OF SEPTEMBER, 2021.

PACIFIC OCEAN

MICHAEL KUBISTY, PLS. SENIOR LAND SURVEYOR

DEPUTY COUNTY SURVEYOR'S STATEMENT:

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH THE PROFESSIONAL LAND SURVEYOR'S ACT; THIS 23RD DAY OF SEPTEMBER, 2021.



WADE WEAVER, PLS. DEPUTY COUNTY SURVEYOR



OC PUBLIC WORKS DEPARTMENT

JAMES TREADAWAY, DIRECTOR OF PUBLIC WORKS
KEVIN HILLS, COUNTY SURVEYOR
SANTA ANA RIVER (E01) OUTLET

1918 ORDINARY HIGH WATER MARK

FOUND CGPS "FVPK"

N: 2188769.57'
E: 6048756.25'
THIS IS A CONTINUOUS GPS STATION
(CGPS) AND IS PART OF THE CALIFORNIA
SPATIAL REFERENCE NETWORK (CSRN),
FROM WHICH DATA CAN BE DOWNLOADED
HERE: HTTP://SOPACCSRC.UCSD.EDU/.





BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS BASED ON THE CALIFORNIA COORDINATE SYSTEM (CCS83), ZONE VI, NAD 83, OCS (2017.50) EPOCH ADJUSTMENT, AS DETERMINED LOCALLY BY A LINE BETWEEN CONTINUOUS GLOBAL POSITIONING STATIONS CGPS STATIONS (TRAK) AND (FVPK) BEING NORTH 67°14'53" WEST AS DERIVED FROM THE COORDINATES PUBLISHED ETHE CALIFORNIA SPATIAL REFERENCE CENTER (CSRC) ALONG WITH DATA SHEETS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

HORIZONTAL DATUM

COORDINATES SHOWN ARE BASED ON THE CALIFORNIA COORDINATE SYSTE (CCS83), ZONE VI, NAD 83, OCS (2017.50) EPOCH ADJUSTMENT.

ALL DISTANCES SHOWN ARE GRID, UNLESS OTHERWISE NOTED. TO OBTAIN GROUND DISTANCES MULTIPLY GRID BY A COMBINED FACTOR OF 1.00002739.

THIS COMBINATION FACTOR WAS DERIVED AT PT #4115, N: 2177600.04', E: 6041681.20', EL: 10.6'

ALL DISTANCES ARE BASED ON THE U.S. SURVEY FOOT.

VERTICAL DATUM

VERTICAL DATUM: NAVD 88

BENCHMARK: AN ORTHOMETRIC HEIGHT OF 10.61' WAS COMPUTED AT CONTROL POINT #4115 SHOWN HEREIN

ELEVATIONS WERE DERIVED FROM STATIC GNSS MEASUREMENTS BY COMBINING GEOID12B WITH CCS83, ZONE VI, 2017.50 EPOCH ELLIPSOID HEIGHTS, HOLDING TH ELLIPSOID HEIGHT ON CGPS STATION FVPK OF -35.603' AS SHOWN ON THE

ELLIPSOID HEIGHT ON CGPS STATION FVPK OF -35.603' AS SHOWN ON THE HORIZONTAL CONTROL DATA SHEET NAMED "FVPK", ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR. THE GEOID HEIGHT COMPUTED AT "FVPK" IS -115.773'

SHEET INDEX

SHEET NO. DESCRIPTION
SHEET 1 TITLE SHEET

SHEET 2-3 BOUNDARY MAP
SHEET 4 SIGN PLACEMENT EXHIBIT

PURPOSE OF SURVEY

THE PURPOSE OF THE SURVEY IS TO PROVIDE FIELD LAYOUT OF THE 1918 ORDINARY HIGH WATER MARK PER RECORD OF SURVEY 35/9-13 AS IT CROSSES THE SANTA ANA RIVER MOUTH OUTLET. OCPW OPERATION AND MAINTENANCE WILL PLACE PERMANENT SIGNS AT THESE LOCATIONS AS SHOWN ON SHEET 4 OF 4 HEREIN

-FOUND CGPS "TRAK"

N: 2171992.61' E: 6088761.19'

THIS IS A CONTINUOUS GPS STATION

(CGPS) AND IS PART OF THE CALIFORNIA SPATIAL REFERENCE NETWORK (CSRN), FROM WHICH DATA CAN BE DOWNLOADED

HERE: HTTP://SOPACCSRC.UCSD.EDU/.

COUNTY OF ORANGE
OC PUBLIC WORKS/ENGINEERING SERVICES
OC SURVEY/FIELD SERVICES/BOUNDARY ANALYSIS & MAPPING

SANTA ANA RIVER (E01) OUTLET 1918 ORDINARY HIGH WATER MARK

TITLE SHEET

PROJECT LIMITS: SANTA ANA RIVER BETWEEN BROOKHURST ST. AND HIGHLAND ST.

DATE OF SURVEY:10/29/2020 BY: T. LOFGREEN & PARTY

MAPPING BY: A. VU

OFFICE CHECK BY: E. MEDINA, PLS

ITEM FIELD CHECK BY: T. LOFGREEN & PARTY Of

MARK DATE ITEM FIELD CHECK BY: E. MEDINA, PLS

SCALE: N.T.S. W.O. #EF21246 FILE #2021PW-PM0009

FILE:SAR OUTLET OHWM_BOUNDARY_2020.DWG

ESTABLISHMENT NOTES FOUND MONUMENT BUT DUE TO TRAFFIC CONDITIONS, THE CENTERLINE INTERSECTION OF BROOKHURST ST. AND P.C.H. WAS ESTABLISHED BY TIES (B) ESTABLISHED THE CENTERLINE OF BROOKHURST ST. HOLDING ESTABLISHMENT NOTE (A) AND MONUMENT [1] PER (R1).

- © ESTABLISHED THE CENTERLINE BC OF P.C.H. HOLDING RECORD DATA BETWEEN ESTABLISHMENT NOTES (A) AND (D) PER (R1).
- (D) ESTABLISHED THE CENTERLINE EC OF P.C.H. BY TIES HOLDING MONUMENTS [7] AND 8 PER (R3).
- (E) ESTABLISHED THE CENTERLINE BC OF P.C.H. HOLDING RECORD DATA BETWEEN ESTABLISHMENT NOTES (A) AND (F) PER (R1).
- (F) ESTABLISHED THE CENTERLINE EC OF P.C.H. BY TIES HOLDING MONUMENTS [11] AND 12 PER (R3).
- © ESTABLISHED THE CENTERLINE BC OF P.C.H. BY TIES HOLDING MONUMENTS 13 AND 14 PER (R3).
- (H) ESTABLISHED THE CENTERLINE EC OF P.C.H. BY TIES HOLDING MONUMENTS 15 AND [16] PER (R3).
- ESTABLISHED THE CENTERLINE BC OF P.C.H. BY TIES HOLDING MONUMENTS 17 AND 18 PER (R3).
- (J) ESTABLISHED THE CENTERLINE OF P.C.H. BETWEEN ESTABLISHMENT NOTES (S) , b, f, g, h, h HOLDING RECORD DATA PER (R1) & (R3).
- (K) ESTABLISHED THE OLD CENTERLINE OF P.C.H. HOLDING RECORD DATA PER (R1) BETWEEN ESTABLISHMENT NOTES (N) AND (2).
- ESTABLISHED THE CENTERLINE OF SEASHORE DR. HOLDING MONUMENTS 19 AND 22 PER (R7).
- M ESTABLISHED THE NW'LY LINE OF BLOCK "N" OF (R9) HOLDING MONUMENT 23 AND A LINE PERPENDICULAR TO ESTABLISHMENT NOTE 🖒 NE'LY FROM MONUMENT 23 PER (R2).
- (N) ESTABLISHED THE INTERSECTION OF THE OLD CENTERLINE OF P.C.H. AND THE NW'LY RIGHT OF WAY OF SANTA ANA RIVER (E01) HOLDING RECORD DATA PER (R11) NE'LY FROM THE E.C. OF ESTABLISHMENT (ALONG ESTABLISHMENT NOTE (K).
- ESTABLISHED A PORTION OF THE SANTA ANA RIVER (E01) RIGHT OF WAY HOLDING A LINE BETWEEN MON NOTE 24 & ESTABLISHMENT NOTE (N)

- ESTABLISHED A PORTION OF THE NW'LY RIGHT OF THE WAY OF SANTA ANA RIVER (E01) HOLDING A LINE BETWEEN MONUMENTS 24 AND 25 PER (R2).
- STABLISHED A PORTION OF THE NW'LY RIGHT OF WAY OF THE SANTA ANA RIVER (E01) PER (R2) HOLDING RECORD DATA BETWEEN MONUMENTS 25 AND 26
- R ESTABLISHED ANGLE POINT IN THE SANTA ANA RIVER (E01) RIGHT OF WAY PER (R2) HOLDING A RECORD DISTANCE OF 300.00' PER (R2) SW'LY FROM MON 26 ALONG LINE ESTABLISHMENT S
- S ESTABLISHED A PORTION OF THE NW'LY RIGHT OF WAY OF THE SANTA ANA RIVER (E01) PER (R2) HOLDING A LINE SW'LY FROM MONUMENT 26 ALONG THE SW'LY PROLONGATION OF LINE ESTABLISHMENT NOTE 🚳
- (T) ESTABLISHED A PORTION OF THE SE'LY RIGHT OF WAY OF THE SANTA ANA RIVER (E01) HOLDING A LINE PARALLEL AND 30.00' NW'LY OF ESTABLISHMENT NOTE MPER (R11). FITS MONUMENT 27
- ESTABLISHED ANGLE POINT IN THE SE'LY RIGHT OF WAY OF THE SANTA ANA RIVER (E01) BY HOLDING A RECORD DISTANCE OF 191.49' PER (R2) SW'LY FROM MON 27 ALONG LINE ESTABLISHMENT NOTE TO AND 30.00' NW'LY OF LINE ESTABLISHMENT TO
- STABLISHED THE S'LY ANGLE POINT IN THE SANTA ANA RIVER RIGHT (E01) OF WAY HOLDING RECORD DATA PER (R2) S'LY FROM ESTABLISHMENT NOTE (1)
- W ESTABLISHED THE SE'LY RIGHT OF WAY OF SANTA ANA RIVER (E01) HOLDING RECORD DATA PER (R2) BETWEEN ESTABLISHMENT NOTES (1) AND (1)
- ESTABLISHED THE 1918 ORDINARY HIGH WATER MARK PER (R10) BY HOLDING A LINE BETWEEN ESTABLISHMENT NOTES 🚯 AND 🚯 PER (R2).
- ESTABLISHED A PORTION OF THE SE'LY RIGHT OF WAY OF THE SANTA ANA RIVER (E01) HOLDING RECORD DATA BETWEEN MONUMENTS 27 AND 28 PER
- (Z) ESTABLISHED POINT ON OLD CENTERLINE OF P.C.H. HOLDING RECORD DISTANCE OF 582.68' SE'LY FROM THE E.C. OF ESTBLISHMENT NOTE (K) ALONG THE LINE OF ESTABLISHMENT NOTE (K)
- ESTABLISHED THE E'LY RIGHT OF WAY OF SANTA ANA RIVER HOLDING RECORD DATA BETWEEN MONUMENT 28 AND ESTABLISHMENT NOTE (2) PER (R2).
- (R10) AB ESTABLISHED A POINT ON THE 1918 ORDINARY HIGH WATER MARK PER (R10) HOLDING RECORD DATA PER (R2) NE'LY FROM ESTABLISHMENT NOTE 👀
- (R10) ESTABLISHED A POINT ON THE 1918 ORDINARY HIGH WATER MARK PER (R10) HOLDING RECORD DATA PER (R2) NW'LY FROM ESTABLISHMENT NOTE R
- ESTABLISHED N'LY CORNER OF (R9) BY INTERSECTION OF A LINE 20' SW'LY OF AND PARALLEL WITH LINE ESTABLISHMENT NOTE (AND 30' SE'LY OF AND PARALLEL WITH A LINE ESTABLISHMENT NOTE (T)
- (AB) ESTABLISHED THE SW'LY RIGHT OF WAY OF SANTA ANA RIVER (E01) HOLDING A LINE BETWEEN ESTABLISHMENT NOTES (R) AND (V)

MONUMENT NOTES

- 1 FOUND MAG NAIL & 1 1/2" WASHER STAMPED "LS 5411" PER (R4), FLUSH IN AC, ACCEPTED AS THE CENTERLINE INTERSECTION OF BROOKHURST ST. & BUSHARD ST.
- 2 FOUND LEAD TACK & 3/4" TAG STAMPED "CALTRANS TIE" PER (R5), FLUSH IN CURB, ACCEPTED AS TIE FOR CENTERLINE INTERSECTION OF P.C.H. & BROOKHURST ST.
- [3] FOUND LEAD TACK & 3/4" TAG STAMPED "OCS TIE" PER (R5), FLUSH IN CURB, ACCEPTED AS TIE FOR CENTERLINE INTERSECTION OF P.C.H. & BROOKHURST ST.
- 4 FOUND LEAD TACK & 3/4" TAG STAMPED "OCS TIE" PER (R5), FLUSH IN CURB, ACCEPTED AS TIE FOR CENTERLINE INTERSECTION OF P.C.H. & BROOKHURST ST.
- 5 FOUND LEAD TACK & 3/4" TAG STAMPED "CALTRANS TIE" PER (R5), FLUSH IN CURB, ACCEPTED AS TIE FOR CENTERLINE INTERSECTION OF P.C.H. & BROOKHURST ST.

WASHER PER (R3), FLUSH IN AC, ACCEPTED AS TIE FOR CENTERLINE OF P.C.H.

- 6 FOUND MAG NAIL & 1 1/2" WASHER STAMPED "CAL TRANS" IN LIEU OF SPIKE &
- [7] FOUND MAG NAIL IN LIEU OF SPIKE AND WASHER STAMPED "CALTRANS" PER (R3), FLUSH IN AC, ACCEPTED AS TIE FOR CENTERLINE OF P.C.H.
- 8 FOUND MAG NAIL & ILLEGIBLE 1 1/2" WASHER IN LIEU OF SPIKE AND WASHER STAMPED "CALTRANS" PER (R3), FLUSH IN AC, ACCEPTED AS TIE FOR CENTERLINE OF
- 9 FOUND MAG NAIL & 1 1/2" WASHER IN LIEU OF SPIKE AND WASHER STAMPED "CALTRANS" PER (R3), FLUSH IN AC, ACCEPTED AS TIE FOR CENTERLINE OF P.C.H.
- 10 FOUND MAG NAIL & 1 1/2" WASHER STAMPED "CALTRANS" IN LIEU OF SPIKE AND WASHER PER (R3), FLUSH IN AC, ACCEPTED AS TIE FOR CENTERLINE OF P.C.H.

REFERENCES

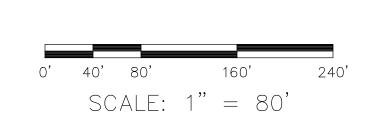
- (R1) = RECORD OF SURVEY 94-1003, R.S.B. 147/6-13
- (R2) = RECORD OF SURVEY 2002-1092, R.S.B. 193/10-12
- (R3) = CALTRANS FIELD BOOK, S.R. 92-028
- (R4) = CORNER RECORD, C.R. 2005-0847
- (R5) = CORNER RECORD, C.R. 2019-0013
- (R6) = CORNER RECORD, C.R. 0494
- (R7) = RECORD OF SURVEY 91-1018, R.S.B. 132/14-18
- (R8) = TRACT NO. 4400, M.M. 162/20-26
- (R9) = SEASHORE COLONY TRACT, M.M. 7/25
- (R10) = RECORD OF SURVEY, RSB 35/9-13
- (R11) = RECORD OF SURVEY 90-1152, RSB 156/1-6
- (R12) = DEED OR 4978/524
- (R13) = DEED OR 5987/199

LEGEND

- FOUND MONUMENT AS NOTED
- ⊗ S.F.N. SEARCHED, FOUND NOTHING
- POSITION ESTABLISHED BY TIES (MONUMENT INACCESSIBLE)

	CURVE TABLE						
CURVE #	DELTA	RADIUS	LENGTH	RECORD DELTA	RECORD RADIUS	RECORD LENGTH	
C1	3°01'57"	5000.00'	264.64	(3°01'54" R1)	(5000.00' R1)	(264.58' R1)	
C2	3°01'54"	5000.00'	264.55	(3°01'54" R1)	(5000.00' R1)	(264.58' R1)	

	LINE TABLE								
LINE #	BEARING	MEASURED DISTANCE	RECORD DISTANCE						
L1	N50°03'32"W	98.76	(98.76' R1)						
L27	N37°00'29"E	53.38'	(53.27' R3)						
L28	N39°54'44"E	48.52'	(48.49' R3)						
L29	N39°54'44"E	48.18'	(48.16' R3)						
L30	N39°56'15"E	48.36'	(48.30' R3)						
L31	N39°56'15"E	48.41'	(48.54' R3)						
L40	N23°21'20"W	113.93'	(113.94' R5)						
L41	N65°23'33"E	117.72'	(117.73' R5)						
L42	N11°55'14"W	81.15'	(81.16' R5)						
L43	N88°29'24"E	85.67	(85.68' R5)						





SEE SHEET 3

COUNTY OF ORANGE OC PUBLIC WORKS/ENGINEERING SERVICES OC SURVEY/FIELD SERVICES/BOUNDARY ANALYSIS & MAPPING SANTA ANA RIVER (E01) OUTLET 1918 ORDINARY HIGH WATER MARK BOUNDARY MAP PROJECT LIMITS: SANTA ANA RIVER BETWEEN BROOKHURST ST. AND HIGHLAND ST. BY: T. LOFGREEN & PARTY OFFICE CHECK BY: E. MEDINA, PLS MARK DATE BY: T. LOFGREEN & PARTY SCALE:1" = 80' W.O. #EF21246 | FILE #2021PW-PM0009 REVISIONS

FILE: SAR OUTLET OHWM_BOUNDARY_2020.DWG

