

NOVATO CREEK 2018 CONDITION HYDROGRAPHIC SURVEY

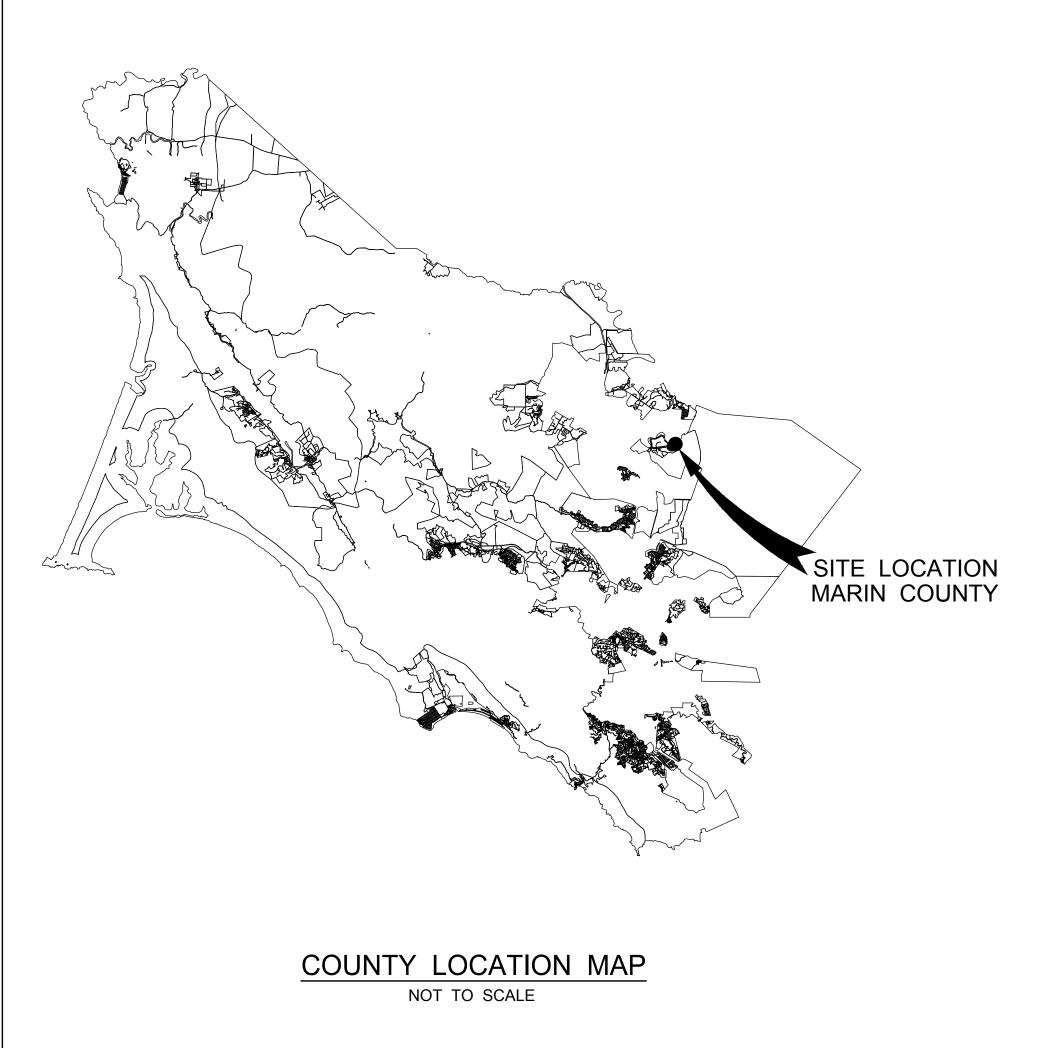
BEL MARIN KEYS COMMUNITY SERVICES DISTRICT
#4 MONTEGO KEY
NOVATO, CA 94949

MAY, 2019

Prepared By



PROJECT NUMBER: 18M113





SV-106	CHANNEL SI	TE PLAN AND CROSS SECTIONS STA 113+00 TO 93+00	8
SV-107	CHANNEL SI	TE PLAN AND CROSS SECTIONS STA 93+00 TO 72+00	9
SV-108	CHANNEL SI	TE PLAN AND CROSS SECTIONS STA 72+00 TO 52+00	10
SV-109	CHANNEL SI	TE PLAN AND CROSS SECTIONS STA 52+00 TO 32+00	11
SV-110	CHANNEL SI	TE PLAN AND CROSS SECTIONS STA 32+00 TO 12+00	12
SV-111	CHANNEL SI	TE PLAN AND CROSS SECTIONS STA 12+00 TO 0+00	13
		I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPAR BY ME OR UNDER MY DIRECT PERSONAL SUPERVISON AND THAT I A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.	M
		PRINTED OR TYPED NAME	DATE

INDEX

DESCRIPTION

CHANNEL SITE PLAN AND CROSS SECTIONS STA 213+00 TO 194+00

CHANNEL SITE PLAN AND CROSS SECTIONS STA 194+00 TO 173+00

CHANNEL SITE PLAN AND CROSS SECTIONS STA 173+00 TO 153+00

CHANNEL SITE PLAN AND CROSS SECTIONS STA 153+00 TO 133+00 CHANNEL SITE PLAN AND CROSS SECTIONS STA 133+00 TO 113+00

DRAWING NO.

SV-102

SV-103

SV-104

TITLE SHEET

GENERAL NOTES & LEGENDS

SITE LOCATION MAP

T. N., R. E.

	LICENSED PROFESSIONAL ENGINEER UNDER THE OF IOWA.	LAWS OF THE
PRINTE	D OR TYPED NAME	DATE
MY LIC	ENSE RENEWAL DATE IS DECEMBER 31,	
PAGES	OR SHEETS COVERED BY THIS SEAL:	

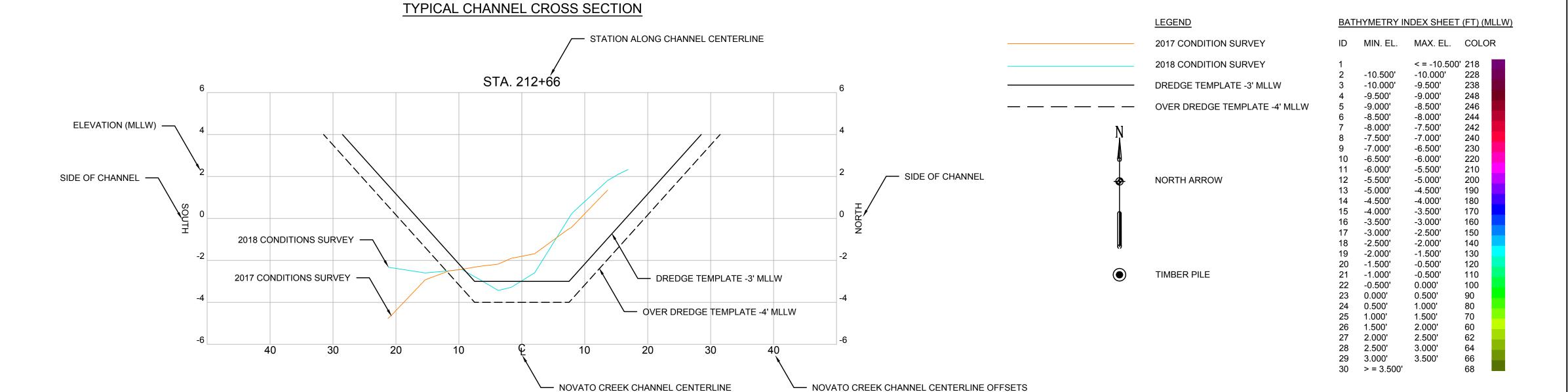
TITLE SHEET

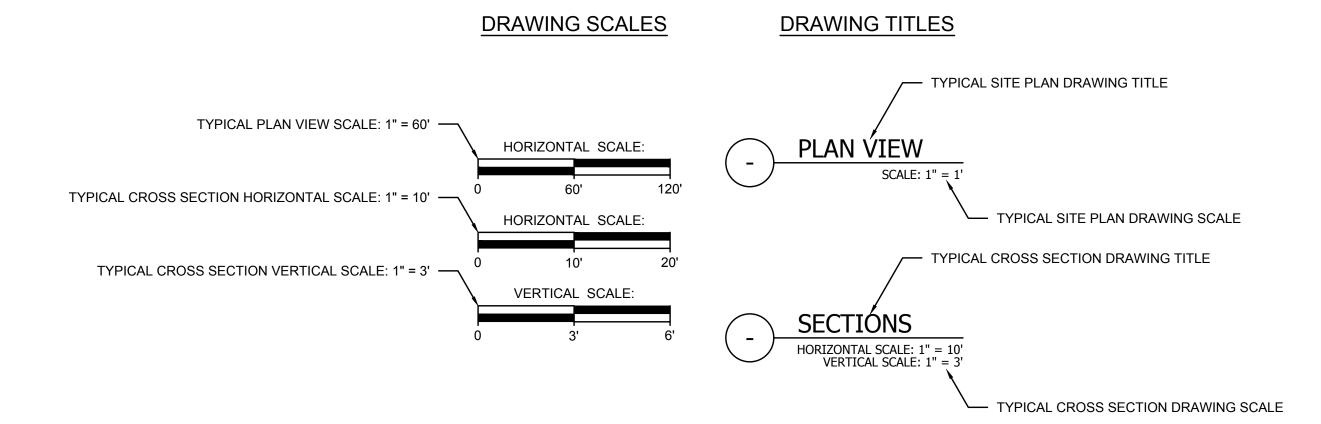
SHEET NO.

NOTES:

- 1. SINGLEBEAM SWEEP BATHYMETRIC DATA WERE COLLECTED BY CLE ENGINEERING ON OCTOBER 20, 23 AND 24TH, 2017. RESULTS OF HYDROGRAPHY TAKEN FOR THE 2018 SURVEY FROM XXXXXX.
- 2. CHANNEL LIMITS AND CONTROL REFER TO LAMBERT GRID SYSTEM FOR CALIFORNIA, CHANNEL COORDINATES REFER TO NAD-83.
- 3. SHORE LINE TOPOGRAPHY IN SOME AREAS WAS TAKEN FROM AERIAL SURVEY IN 2002 AND MAY VARY IN SUBSEQUENT YEARS, 2005 CONDITIONS WERE NOT VERIFIED.
- 4. BENCHMARK REFERS TO VERTICAL DATUM PROVIDED BY OTHERS. CONTRACTOR IS ADVISED THAT WATER REFERENCE ELEVATIONS VARY FROM ONE END OF NOVATO CREEK TO THE OTHER BY AS MUCH AS TWO FEET AT PEAK TIDAL FLOWS.
- 5. THE INFORMATION SHOWN ON THIS PLAN REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE INDICATED, AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS PRESENT AT THAT TIME. INTERPOLATED INFORMATION BETWEEN SOUNDINGS MAY NOT REPRESENT ACTUAL CONDITIONS, OBSTRUCTIONS OR ROCK OUTCROPPINGS MAY EXIST THAT ARE NOT SHOWN. THIS PLAN SHOULD NOT BE USED FOR NAVIGATION.
- 6. DEPTHS SHOWN HEREON REPRESENT BOTTOM SOUNDINGS USING A 208 KHZ TRANSDUCER. THE ELEVATIONS SHOWN INDICATE BOTTOM CONDITIONS ONLY, AND NOT NECESSARILY INDICATE THAT THE BOTTOM MATERIALS ARE CAPABLE OF SUSTAINING LOADS OR SUPPORTING SIDE SLOPES.
- 7. SOUNDINGS ARE REFERENCED TO FT. MLLW BASED ON THE SURVEY PK NAIL LOCATED ON THE WLY SIDE OF THE PILE WITHIN THE NORTH LOCK.
- 8. THE SINGLEBEAM BATHYMETRIC SONAR SYSTEM WAS COMPRISED OF THREE TELEDYNE CVM SHALLOW WATER SINGLEBEAM ECHO SOUNDERS (200 KHZ, 3° BEAM ANGLE), LEICA SYSTEM 1200 RTK FOR POSITIONING (H AND V) AND HYPACK 2017 HYDROGRAPHIC SURVEY ACQUISITION SOFTWARE.
- FOR POSITIONING (H AND V) AND HYPACK 2017 HYDROGRAPHIC SURVEY ACQUISITION SOFTWARE.

 9. A CODA F180 INERTIAL MOTION REFERENCE UNIT SUPPLIED MOTION AND GYRO DATA TO THE SURVEY COMPUTER.
- 10. SURVEY VESSEL, EQUIPMENT AND PROTOCOLS CONFORM TO CLASS 1 SPECIFICATIONS AS OUTLINED IN THE U.S. ARMY CORPS OF ENGINEERS SURVEY MANUAL (EM 1110-2-1003, JANUARY 2002).





NO.	BY	DATE	
$\overline{\mathbb{A}}$	Α	Α	Α
Δ	Α	А	A
<u>3</u>	Α	А	A
4	Α	А	A
REC	ORD	DRAWING	OF COMPLETED CONSTRUCTION BY:
RECORD DRAWINGS OF COMPLETED CONSTRUCTION CONFORMING TO CONTRACTOR AND/OR OWNERS RECORDS.			
BY	BY DATE		

NOVATO CREEK 2018 CONDITION HYDROGRAPHIC SURVEY BEL MARIN KEYS COMMUNITY SERVICES DISTRICT #4 MONTEGO KEY NOVATO, CA 94949

DISTRICT				
		BY	DATE	
	SURVEYED			
	DRAWN	TJM	MAY, 2019	
OALIEODAHA	DESIGNED			
CALIFORNIA	CHECKED			

Foth
Foth Infrastructure & Environment, 384 Bel Marin Keys Boulevard, Suite 140 Novato, CA 94949 Phone: 415.884.8011

USE IS THE SOLE RESPONSIBILITY OF THE UNAUTHORIZED USER.

GENERAL NOTES & LEGENDS

PROJECT ID: 18M113

AND NOT G-002

REUSE OF DOCUMENTS

THIS DOCUMENT HAS BEEN DEVELOPED FOR A SPECIFIC APPLICATION AND NOT FOR GENERAL USE. THEREFORE IT MAY NOT BE USED WITHOUT THE WRITTEN APPROVAL OF FOTH INFRASTRUCTURE AND ENVIRONMENT, LLC. UNAPPROVED

