

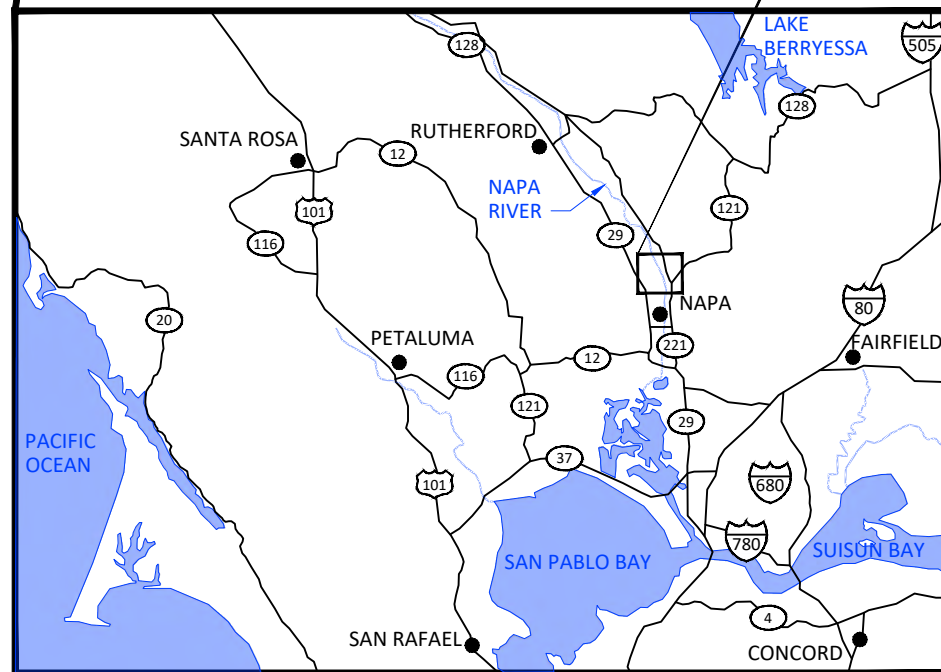
HdV STREAMBANK EROSION CONTROL AND RESTORATION PROJECT

FINAL DESIGN

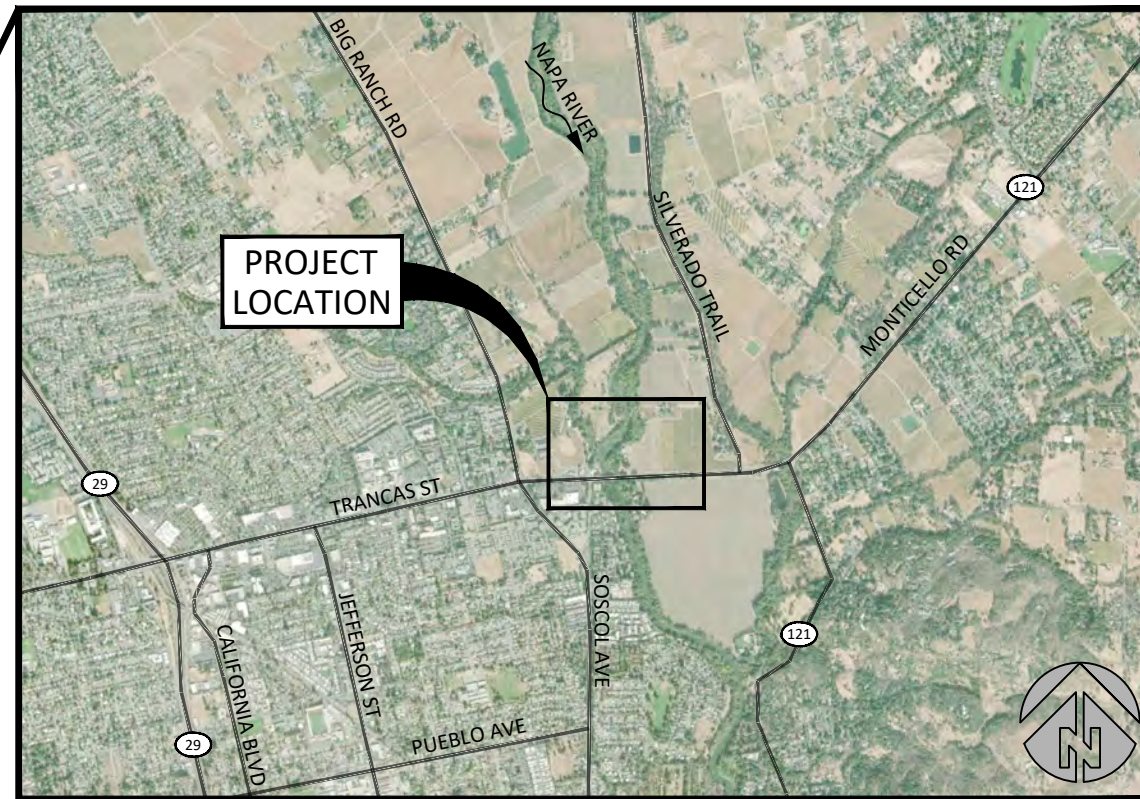
APRIL, 2020



LOCATION MAP
STATE OF CALIFORNIA
NOT TO SCALE



VICINITY MAP
NOT TO SCALE



SITE MAP
1" = 3000'

ABBREVIATIONS

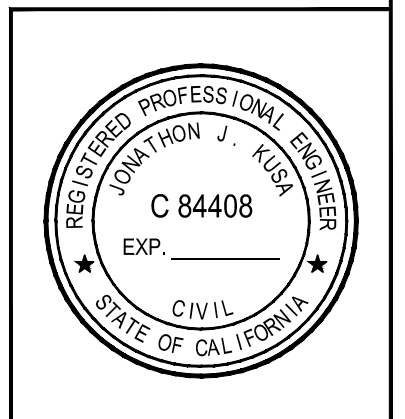
°	DEGREE
'	FEET
"	INCH
%	PERCENT
AC	ACRE
APPROX	APPROXIMATE
AVE	AVERAGE
BLVD	BOULEVARD
CA	CALIFORNIA
CALTRANS	CALIFORNIA DEPARTMENT OF TRANSPORTATION
CDFW	CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
CY	CUBIC YARD
DIA	DIAMETER
DBH	DIAMETER AT BREAST HEIGHT
EA	EACH
ELEV	ELEVATION
ESC	EROSION SEDIMENT AND CONTROL
EXIST	EXISTING
FES	FABRIC ENCAPSULATED SOIL
FPS	FEET PER SECOND
FT	FEET
GIS	GEOGRAPHIC INFORMATION SYSTEMS
H	HORIZONTAL
IN	INCH
LBS	POUNDS
LF	LINEAR FEET
LIDAR	LIGHT DETECTION AND RANGING
MAX	MAXIMUM
MHHW	MEAN HIGHER HIGH WATER
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MPH	MILES PER HOUR
N	NORTH
NAD83	NORTH AMERICAN DATUM OF 1983
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988
O.C.	ON CENTER
OHW	ORDINARY HIGH WATER
Q2	2-YEAR RETURN INTERVAL WATER SURFACE ELEVATION
RD	ROAD
RTK GPS	REAL-TIME KINEMATIC GLOBAL POSITIONING SYSTEM
SF	SQUARE FEET
ST	STREET
TYP	TYPICAL
US	UNITED STATES
V	VERTICAL
W	WEST
XS	CROSS-SECTION

SHEET INDEX:

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COORDINATES:

LATITUDE: 38°19'35"N
LONGITUDE: 122°16'60"W
WATERBODY: NAPA RIVER



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NO.	BY	DATE	REVISION DESCRIPTION

NS DRAWN	MR, JE DESIGNED	JE CHECKED
JK APPROVED	4/2/2020 DATE	180234 PROJECT

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EROSION CONTROL & RESTORATION PROJECT
FINAL DESIGN**

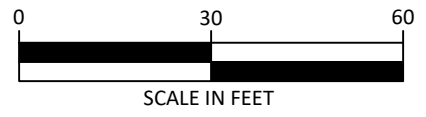
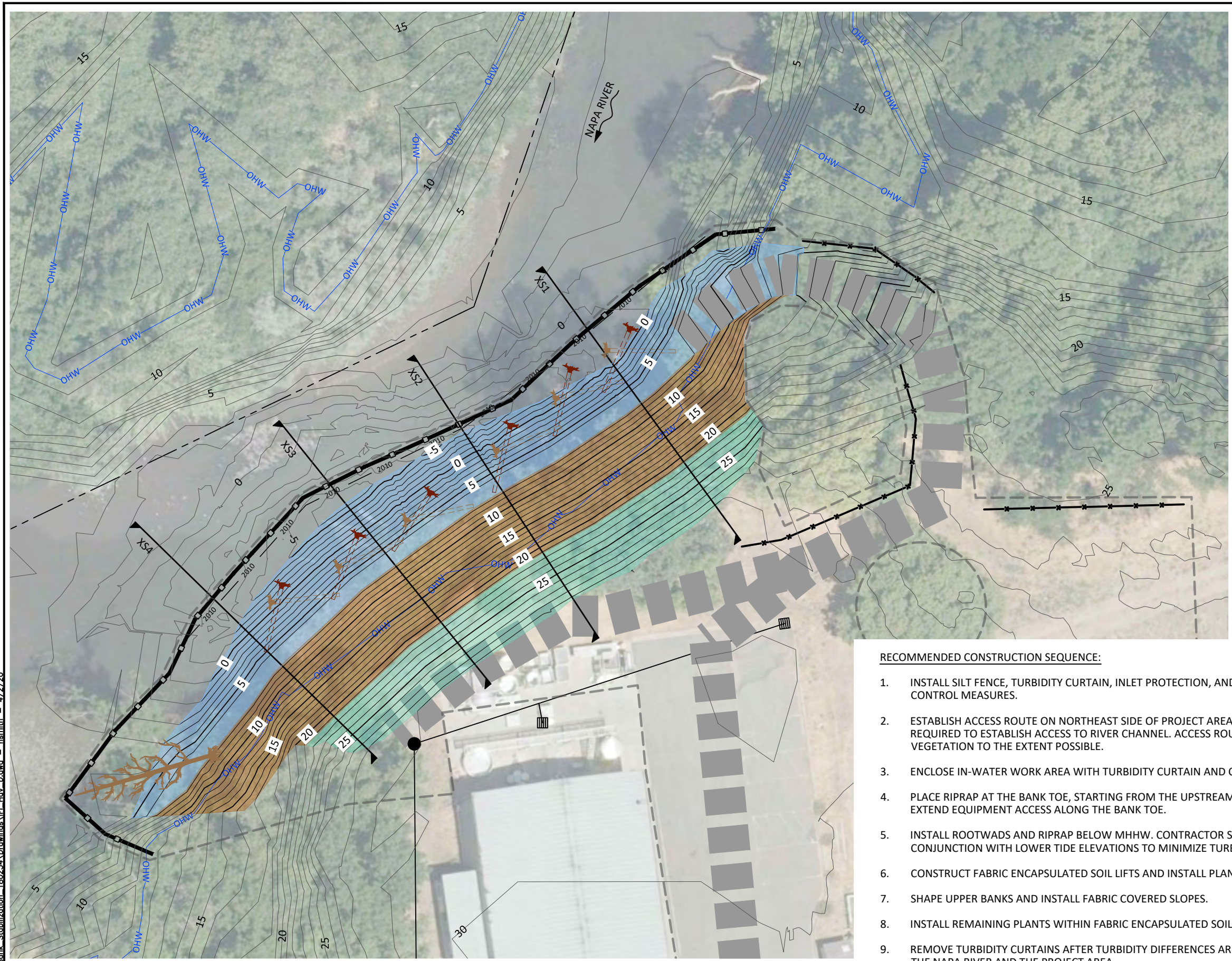


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**COVER, VICINITY MAP
& SHEET INDEX**

SHEET

1 OF 19



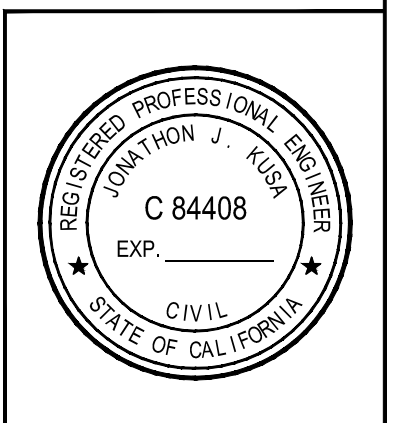
LEGEND

- EXISTING CONTOURS (1 FT)
- PROPOSED CONTOURS (1 FT)
- - - TAXLOTS (NAPA COUNTY GIS)
- OHW — ORDINARY HIGH WATER ELEVATION (11.5 FT)
- - - LIMITS OF DISTURBANCE
- [Symbol] — TEMPORARY TURBIDITY CURTAIN (SEE DETAIL 1, SHEET 4)
- [Symbol] — TEMPORARY SILT FENCE (SEE DETAIL 2, SHEET 4)
- [Symbol] TEMPORARY ACCESS
- [Symbol] PROPOSED ROCK TOE (SEE DETAIL 1, SHEET 13)
- [Symbol] PROPOSED FABRIC ENCAPSULATED SOIL LIFTS (SEE DETAIL 2, SHEET 9)
- [Symbol] PROPOSED FABRIC COVERED SLOPE (SEE DETAIL 1, SHEET 9)
- [Symbol] PROPOSED ROOTWAD PLACEMENT (SEE SHEET 13)
- [Symbol] WHOLE TREE PLACEMENT
- [Symbol] INLET PROTECTION
- [Symbol] STORM MANHOLE

NOTE:
EXISTING ORDINARY HIGH WATER (OHW) IS BASED ON SITE CONDITIONS AS OF JUNE 2019, DEFINED AS 11.5 FT NAVD88.

RECOMMENDED CONSTRUCTION SEQUENCE:

1. INSTALL SILT FENCE, TURBIDITY CURTAIN, INLET PROTECTION, AND ANY OTHER NECESSARY EROSION CONTROL MEASURES.
2. ESTABLISH ACCESS ROUTE ON NORTHEAST SIDE OF PROJECT AREA. INCIDENTAL EXCAVATION MAY BE REQUIRED TO ESTABLISH ACCESS TO RIVER CHANNEL. ACCESS ROUTE WILL AVOID MATURE VEGETATION TO THE EXTENT POSSIBLE.
3. ENCLOSE IN-WATER WORK AREA WITH TURBIDITY CURTAIN AND CONDUCT FISH RESCUE.
4. PLACE RIPRAP AT THE BANK TOE, STARTING FROM THE UPSTREAM END, UTILIZING PLACED RIPRAP TO EXTEND EQUIPMENT ACCESS ALONG THE BANK TOE.
5. INSTALL ROOTWADS AND RIPRAP BELOW MHHW. CONTRACTOR SHALL CONDUCT WORK IN CONJUNCTION WITH LOWER TIDE ELEVATIONS TO MINIMIZE TURBIDITY GENERATION.
6. CONSTRUCT FABRIC ENCAPSULATED SOIL LIFTS AND INSTALL PLANTS UP TO ELEVATION 11.5 FT.
7. SHAPE UPPER BANKS AND INSTALL FABRIC COVERED SLOPES.
8. INSTALL REMAINING PLANTS WITHIN FABRIC ENCAPSULATED SOIL LIFTS AND FABRIC COVERED SLOPES.
9. REMOVE TURBIDITY CURTAINS AFTER TURBIDITY DIFFERENCES ARE NOT VISUALLY DETECTED BETWEEN THE NAPA RIVER AND THE PROJECT AREA.



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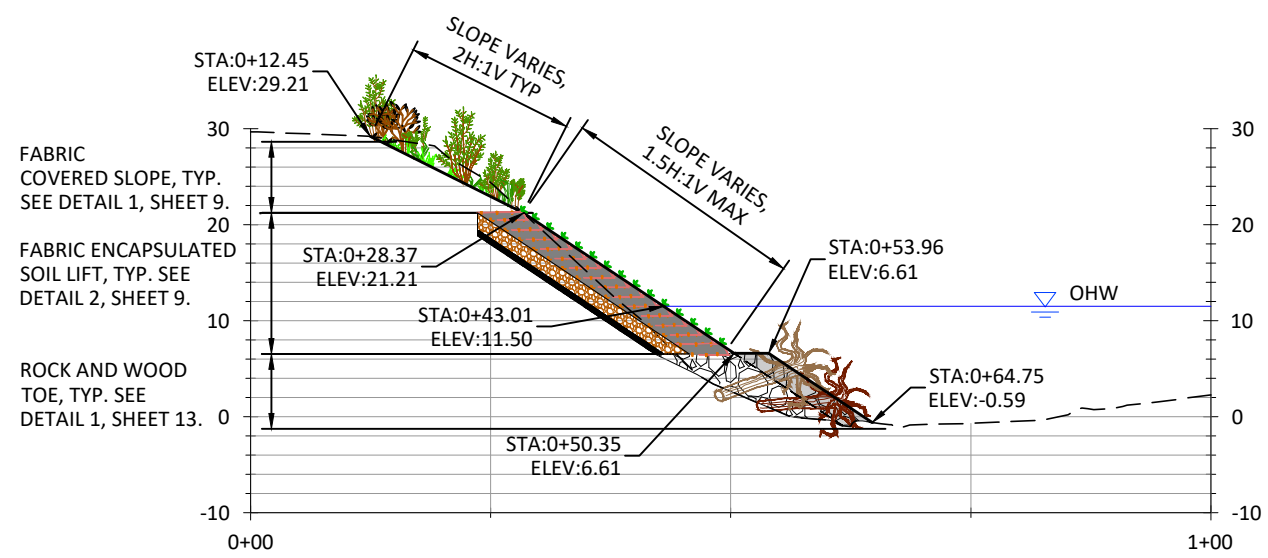
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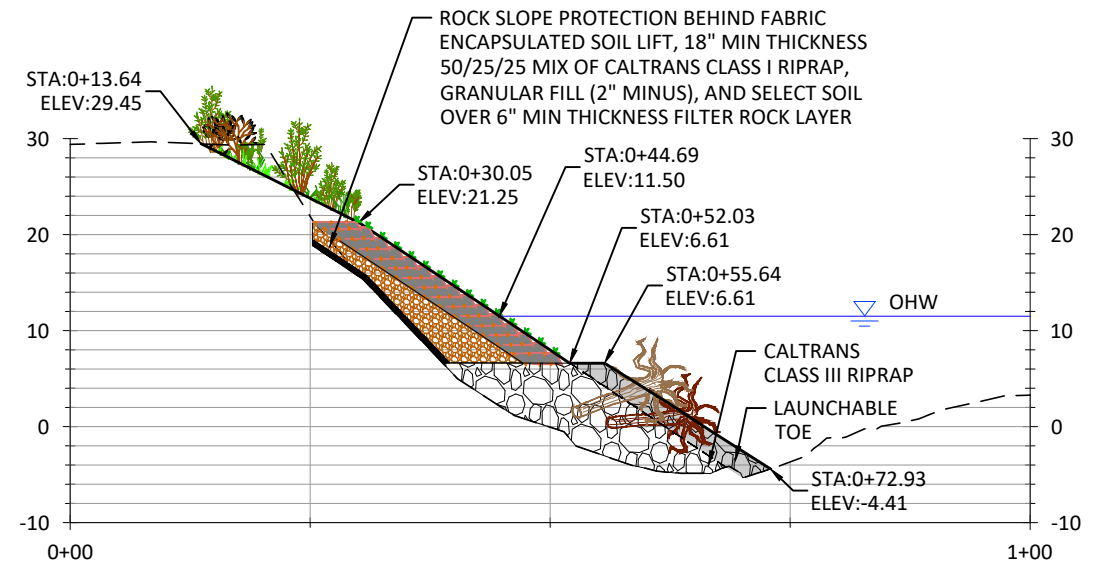
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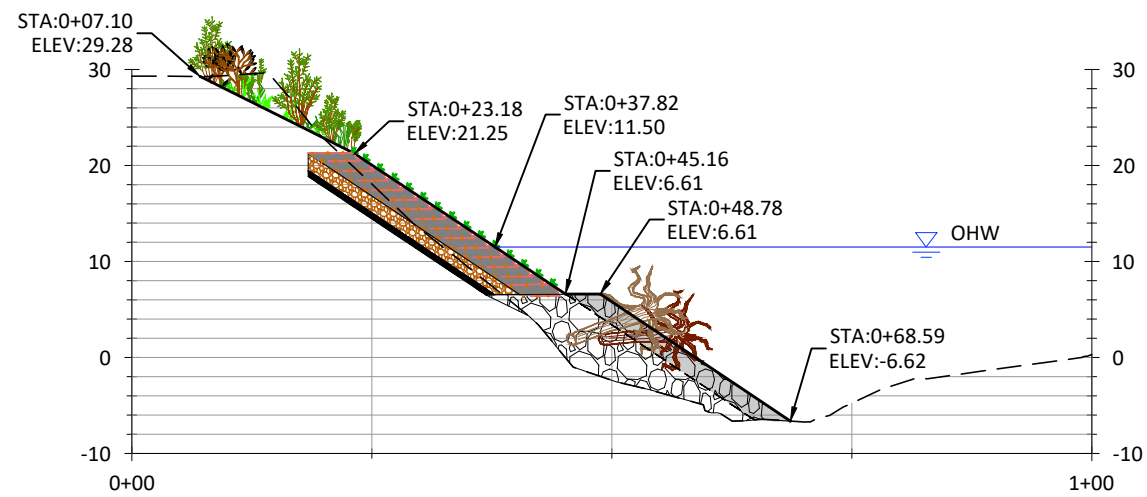
**PROPOSED CONDITIONS -
PLAN VIEW**



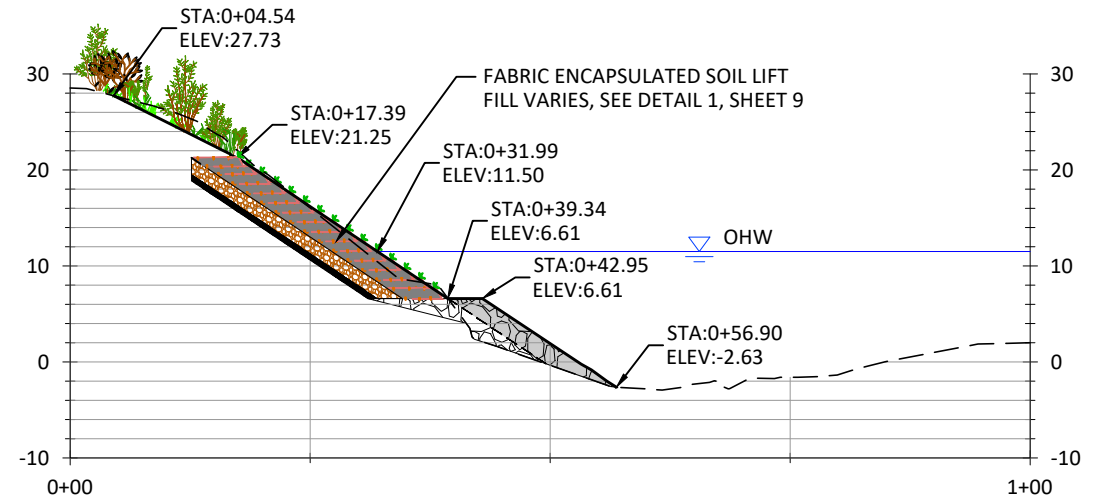
CROSS-SECTION VIEW - XS1



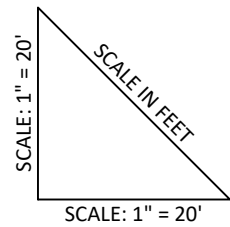
CROSS-SECTION VIEW - XS2



CROSS-SECTION VIEW - XS3



CROSS-SECTION VIEW - XS4

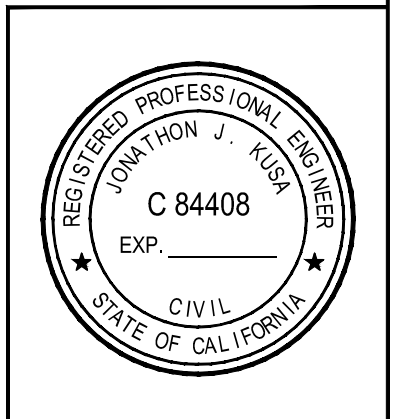


LEGEND

- 2019 SURVEYED SURFACE
- PROPOSED BANK LINE

NOTE:

CROSS-SECTIONS ARE LOOKING DOWNSTREAM.



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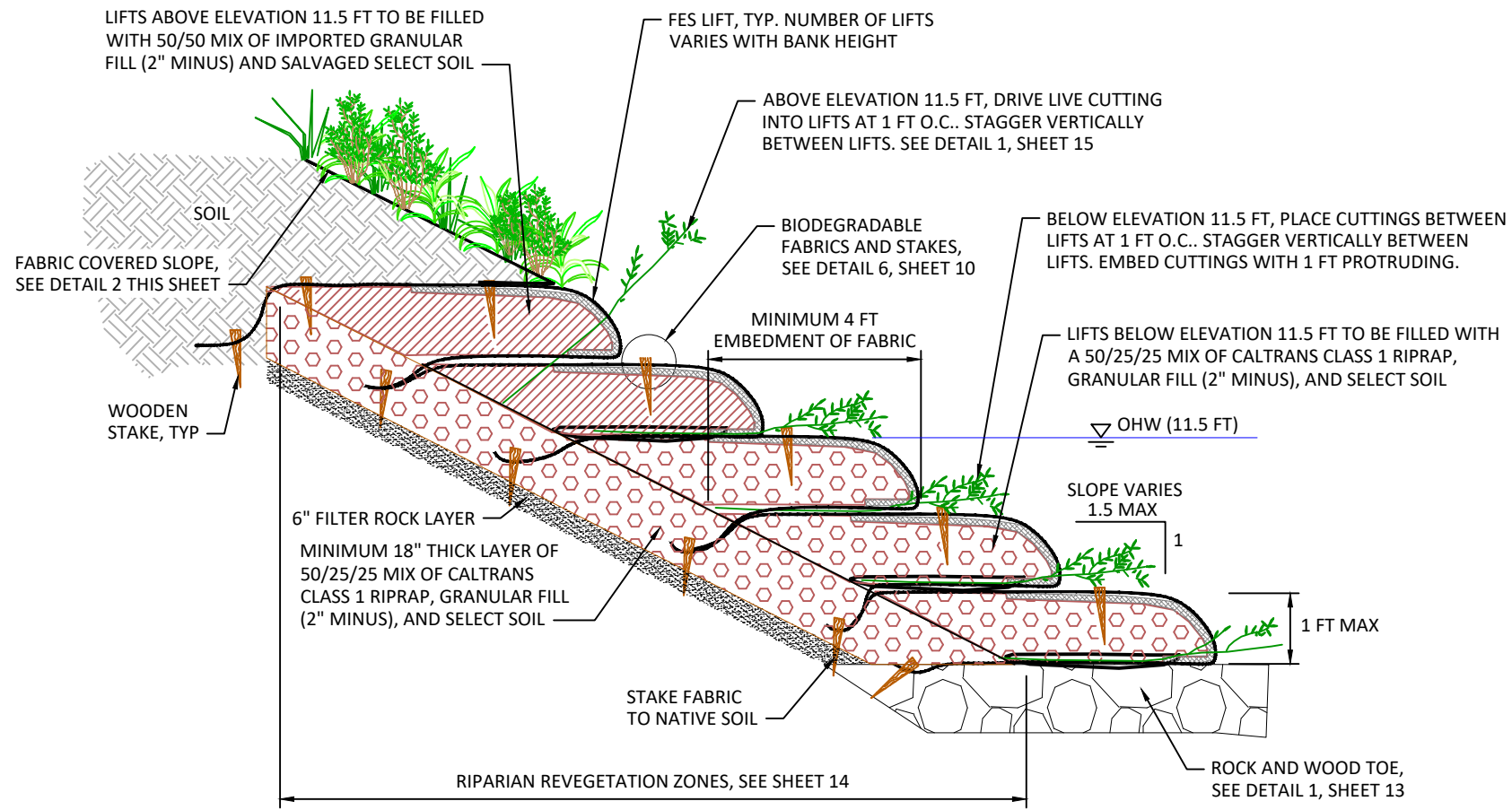
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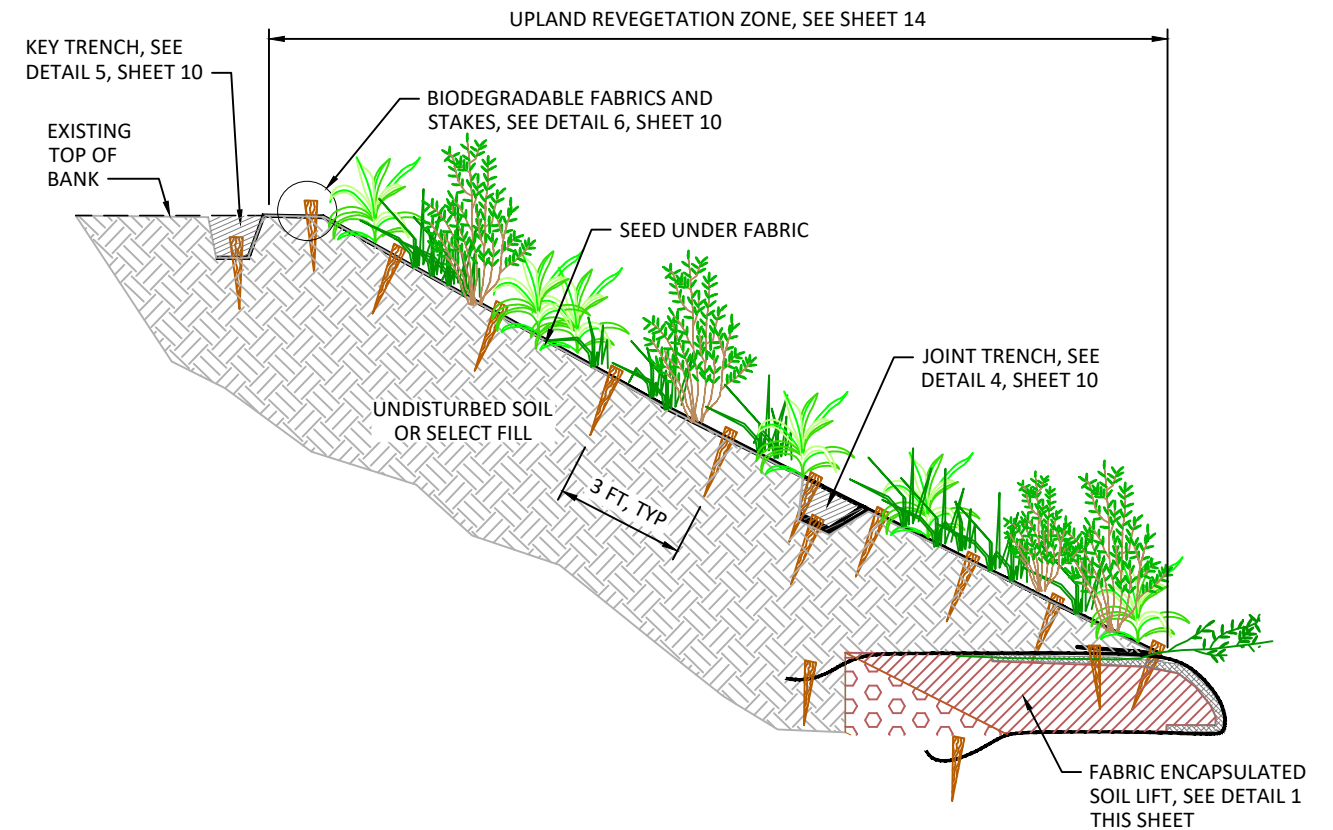
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PROPOSED CONDITIONS -
 SECTION VIEW



SECTION



SECTION



PHOTO

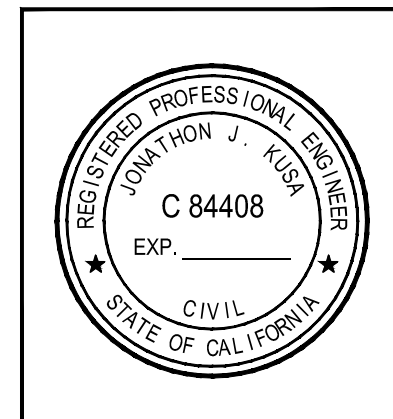


PHOTO

NOTE:
PHOTOS PROVIDED AS AN ILLUSTRATIVE EXAMPLE OF CONCEPT DESIGN TREATMENTS AND MAY VARY FROM THE SITE SPECIFIC DESIGNS DEVELOPED FOR THE HDV PROJECT.

1
9 TYPICAL DETAIL - FABRIC ENCAPSULATED SOIL LIFTS
NOT TO SCALE

2
9 TYPICAL DETAIL - FABRIC COVERED SLOPE
NOT TO SCALE



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TYPICAL SECTION AND PHOTO -
FES LIFTS AND FABRIC
COVERED SLOPE