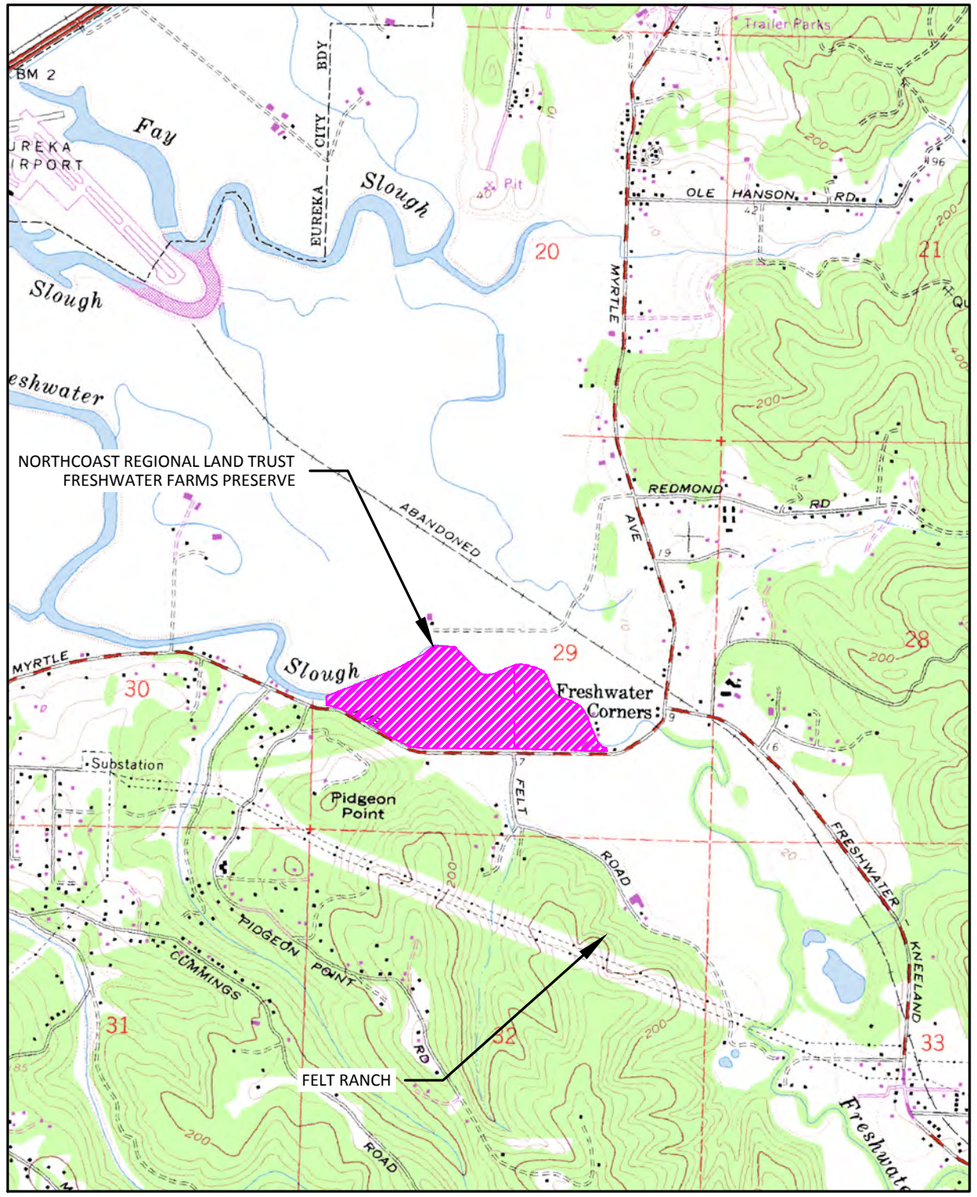
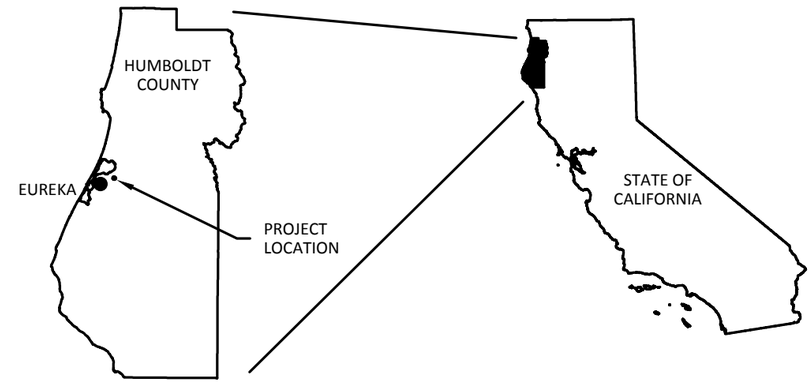
Exhibit 4: 65% Designs.



NORTHCOAST REGIONAL LAND TRUST FRESHWATER FARMS PRESERVE
MAP SOURCE: USGS 7-1/2' QUADRANGLE MAP
SOUTH ARCATA, CA

0 2000'

N



PROJECT LOCATION
(N.T.S.)

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6	PHASE II PROPOSED TOPOGRAPHY (COLOR FILL)
7	PHASE II PROPOSED TOPOGRAPHY
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9	PHASE II SLOUGH ALIGNMENTS
10	PHASE II SLOUGH PROFILES
11	PHASE II SURFACE CROSS SECTIONS
12	PHASE II LARGE WOOD AND REVEGETATION PLAN

WOOD CREEK AQUATIC HABITAT ENHANCEMENT PHASE II
65% DESIGN PLANS
NORTHCOAST REGIONAL LAND TRUST FRESHWATER FARMS PRESERVE
HUMBOLDT COUNTY, CA
(NOT FOR CONSTRUCTION)

REGISTERED PROFESSIONAL ENGINEER
CONOR COLMAN SHEA
C 71843
CIVIL
STATE OF CALIFORNIA

U.S. FISH AND WILDLIFE SERVICE
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PREPARED FOR:
NORTHCOAST REGIONAL LAND TRUST
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WOOD CREEK AQUATIC HABITAT ENHANCEMENT PHASE II
65% DESIGN PLANS

LOCATION MAP AND TABLE OF CONTENTS

NOTES:

DESIGNED BY: CCS
DRAWN BY: CCS
APPROVED BY: CCS
DATE: REV. 8/18/2015
SHEET NUMBER: 1
SCALE: AS INDICATED

Exhibit 4: 65% Designs.

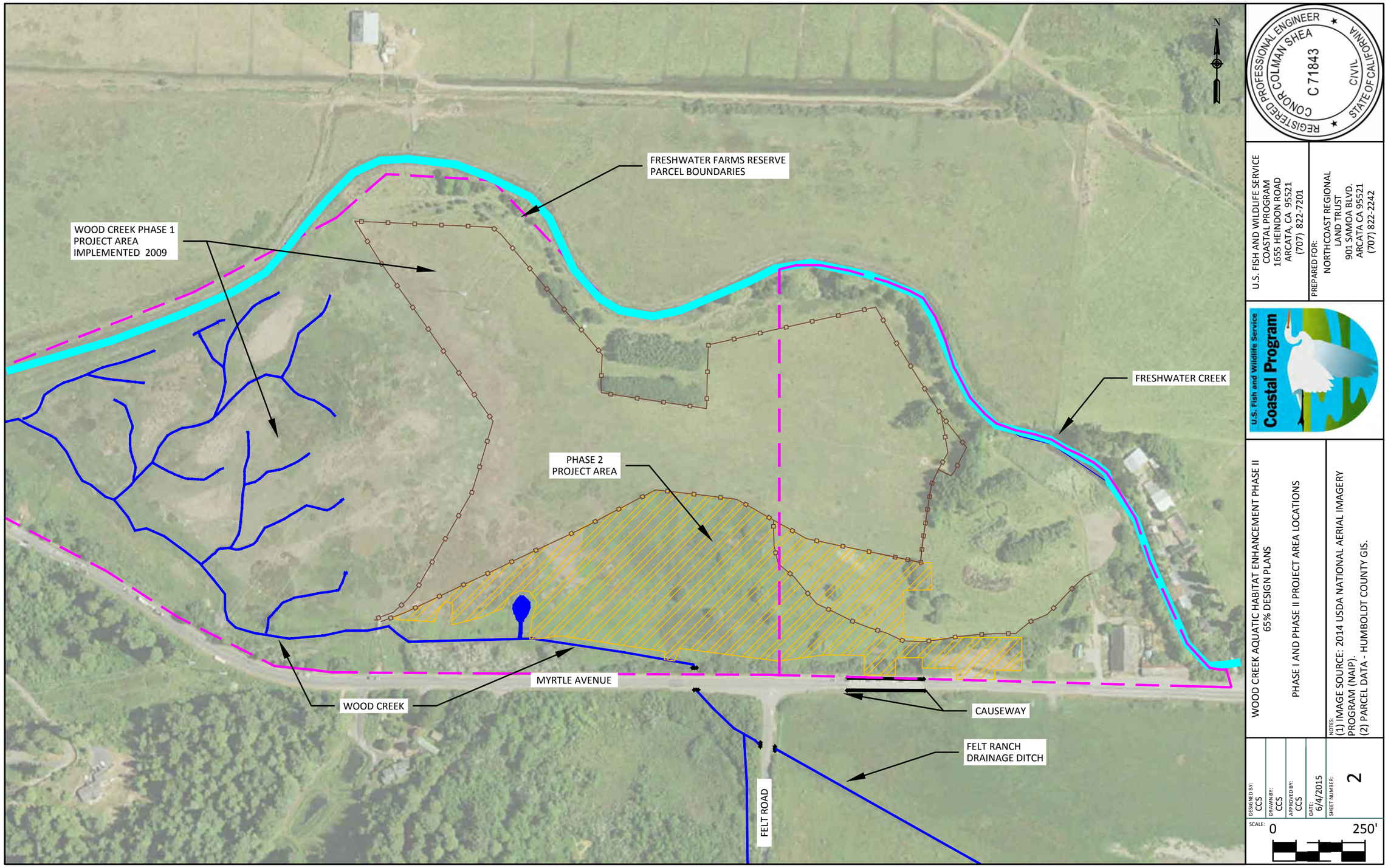

Exhibit 4: 65% Designs.

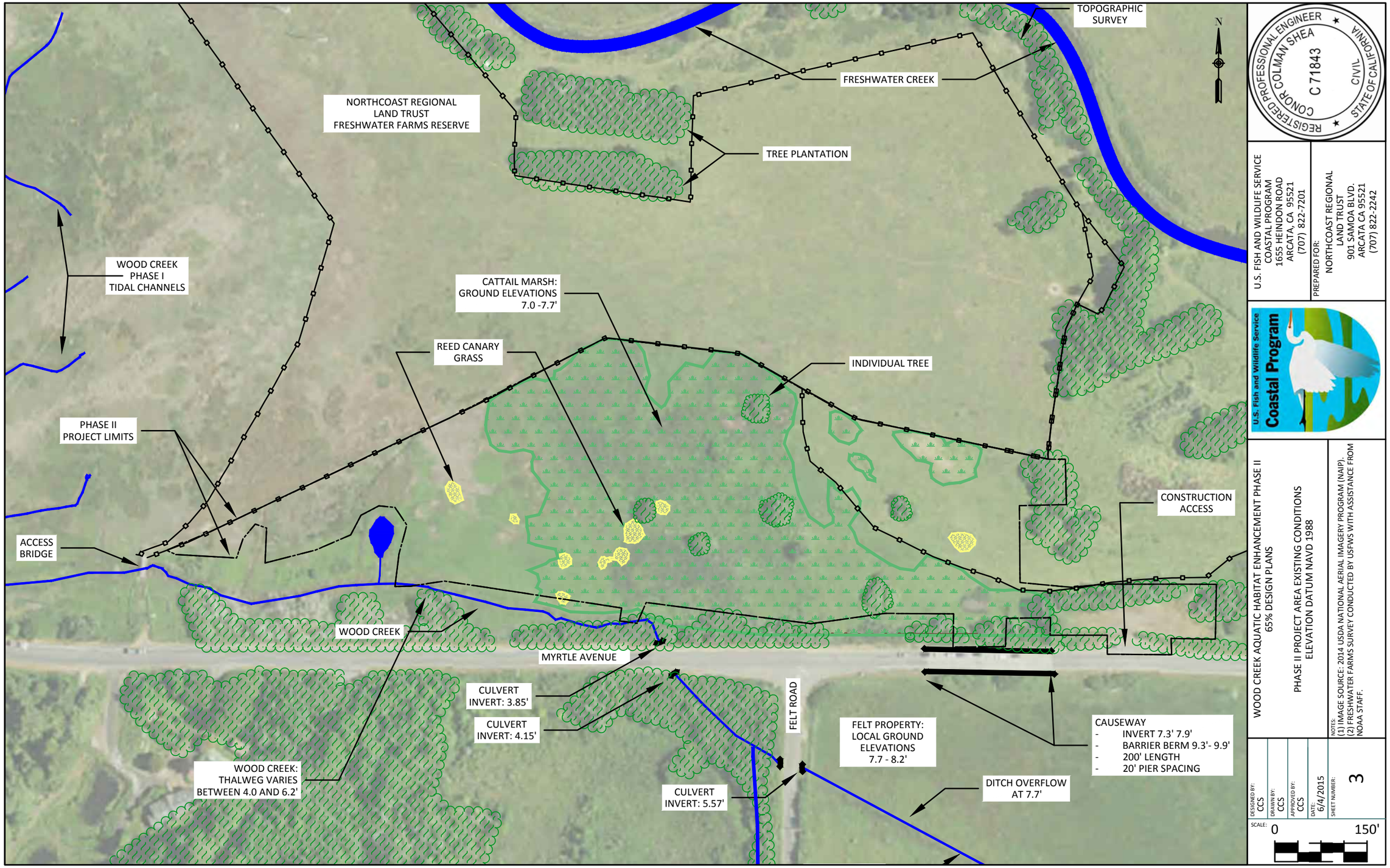

Exhibit 4: 65% Designs.

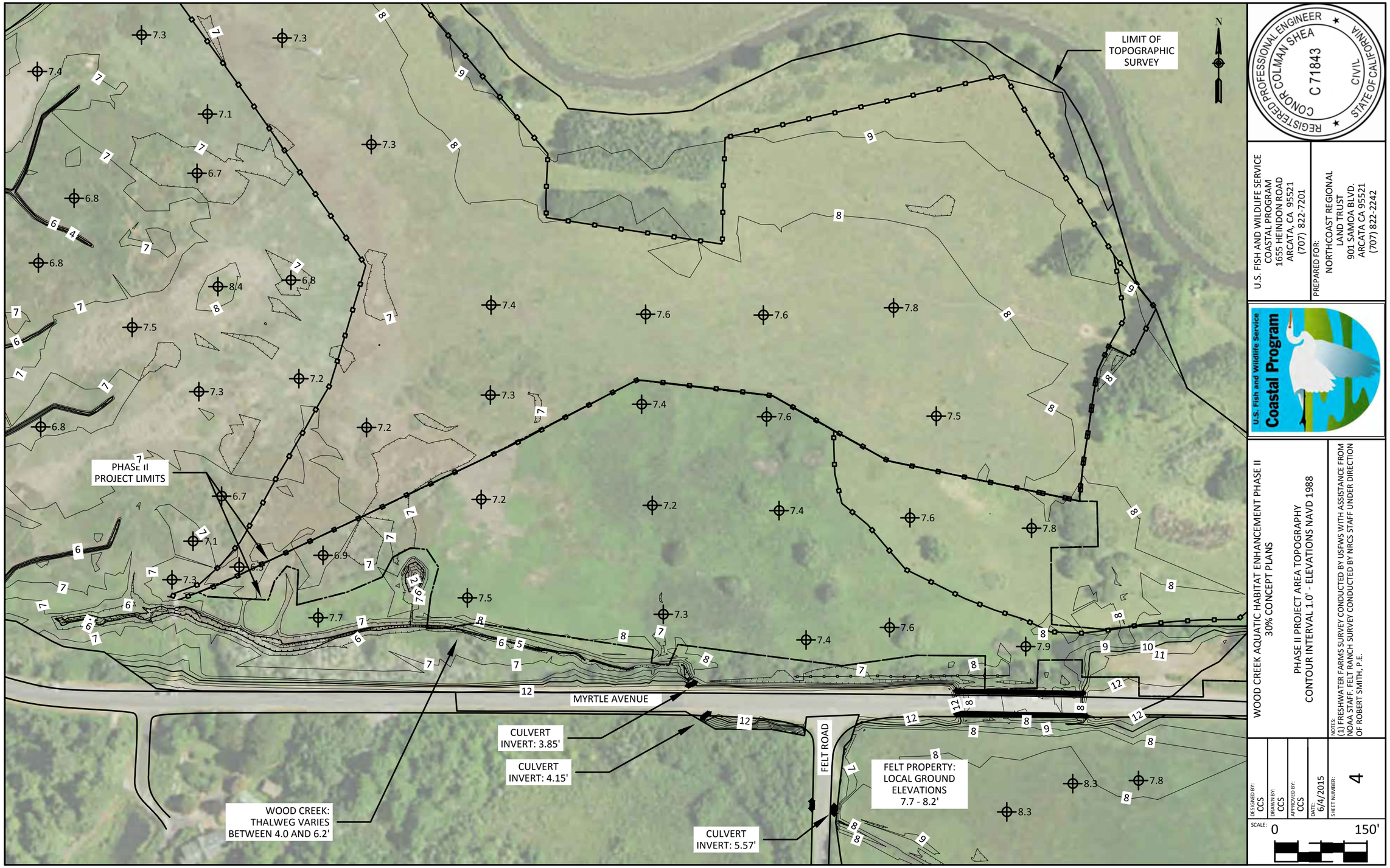

Exhibit 4: 65% Designs.

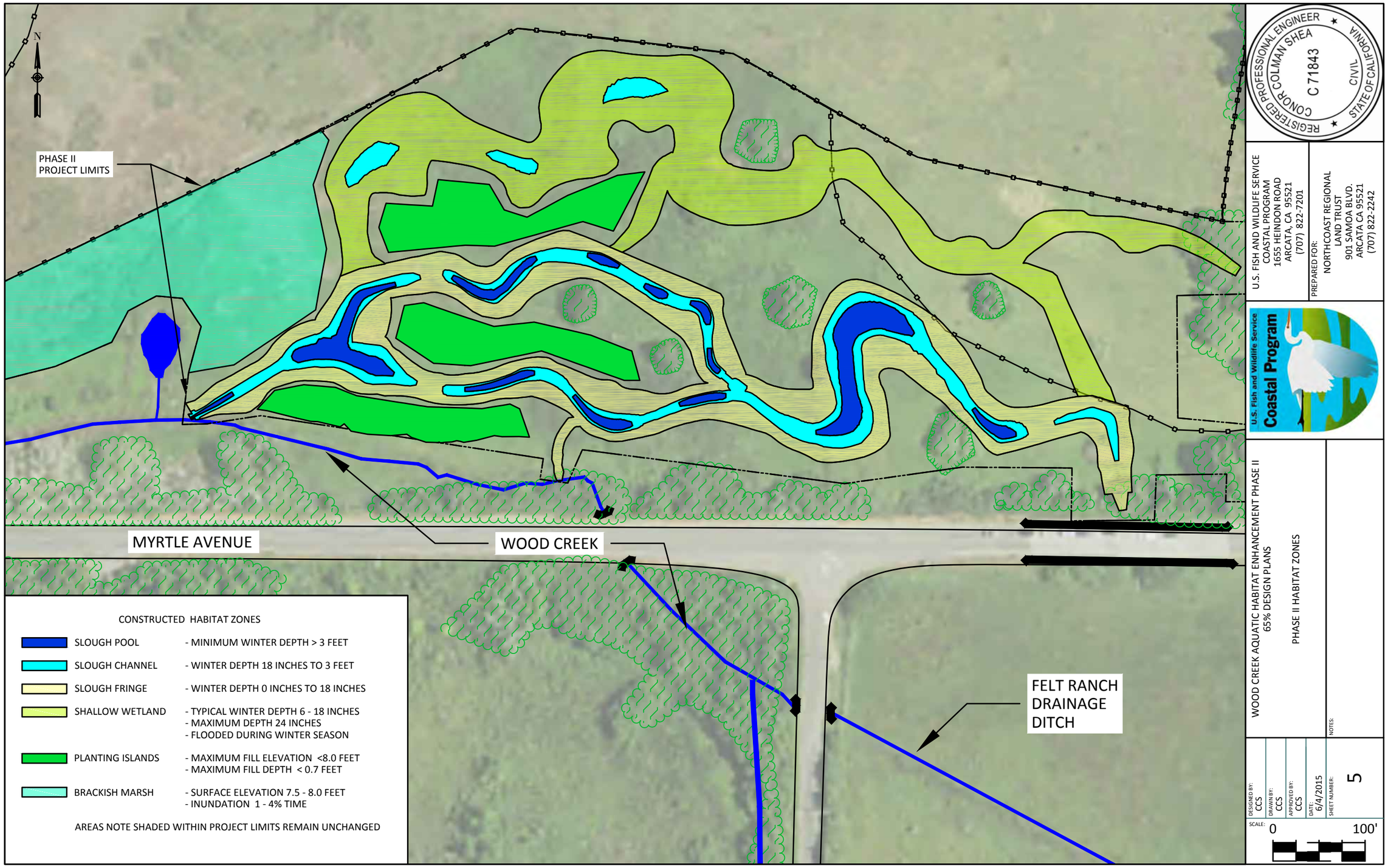

Exhibit 4: 65% Designs.

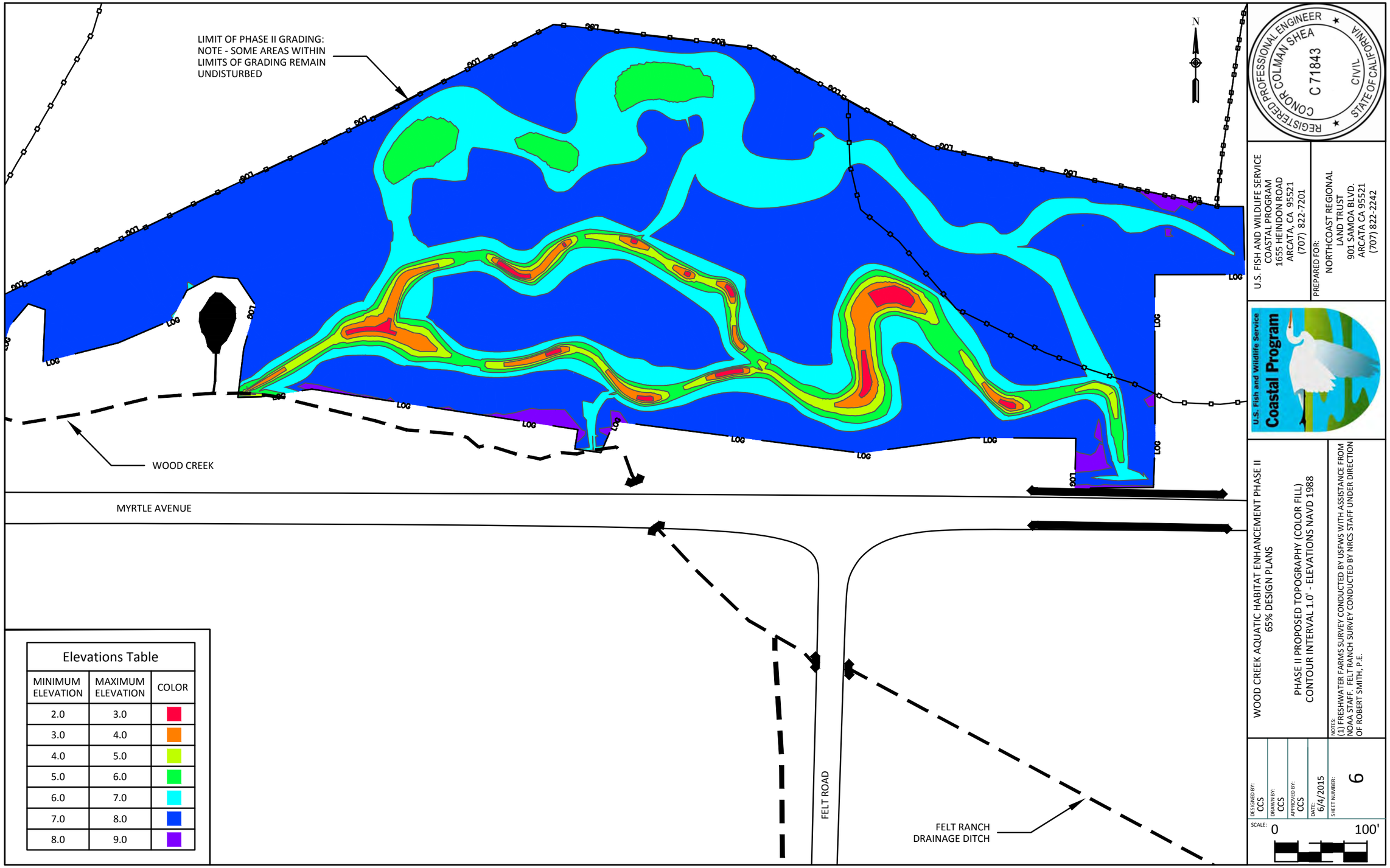

Exhibit 4: 65% Designs.

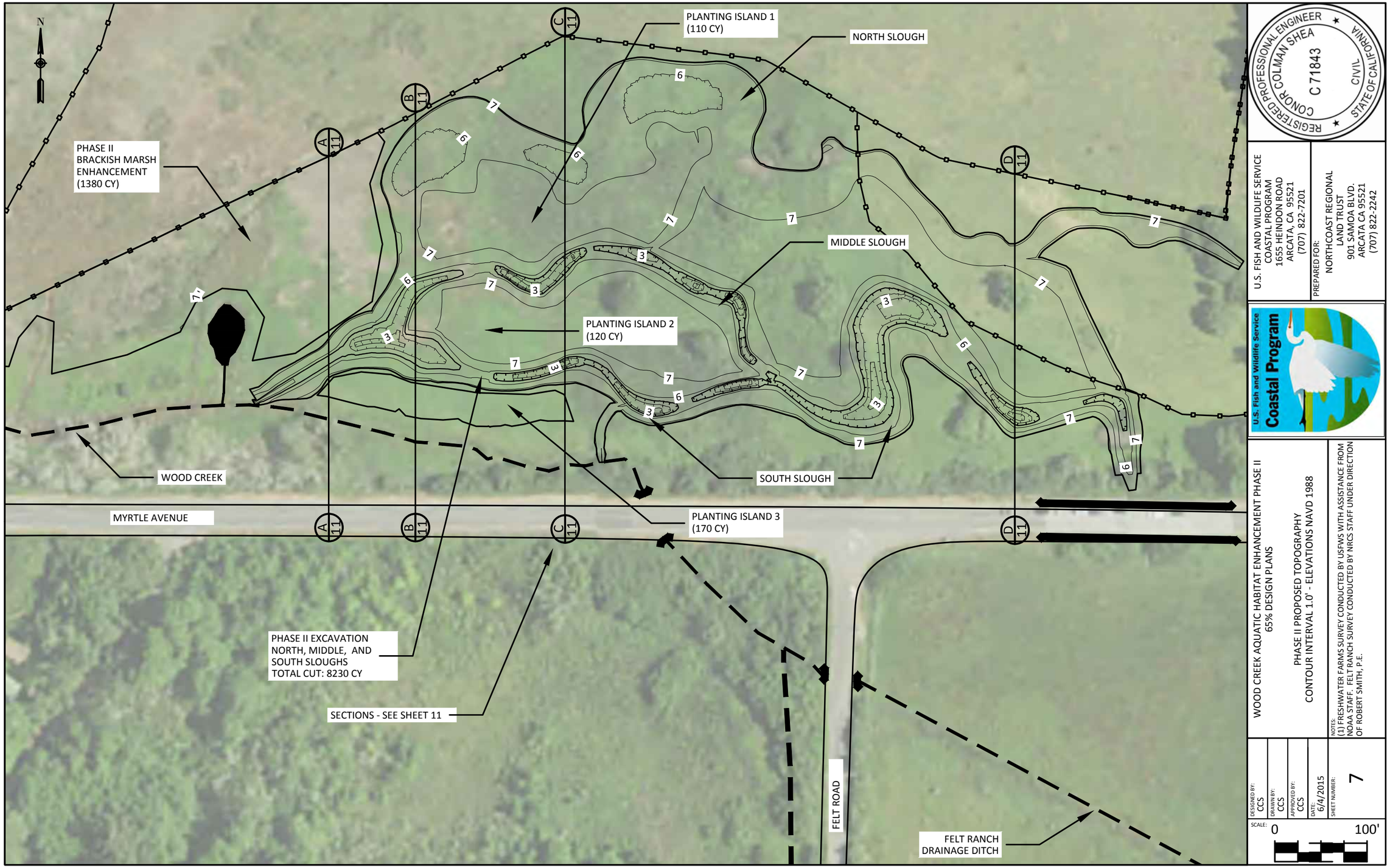

Exhibit 4: 65% Designs.

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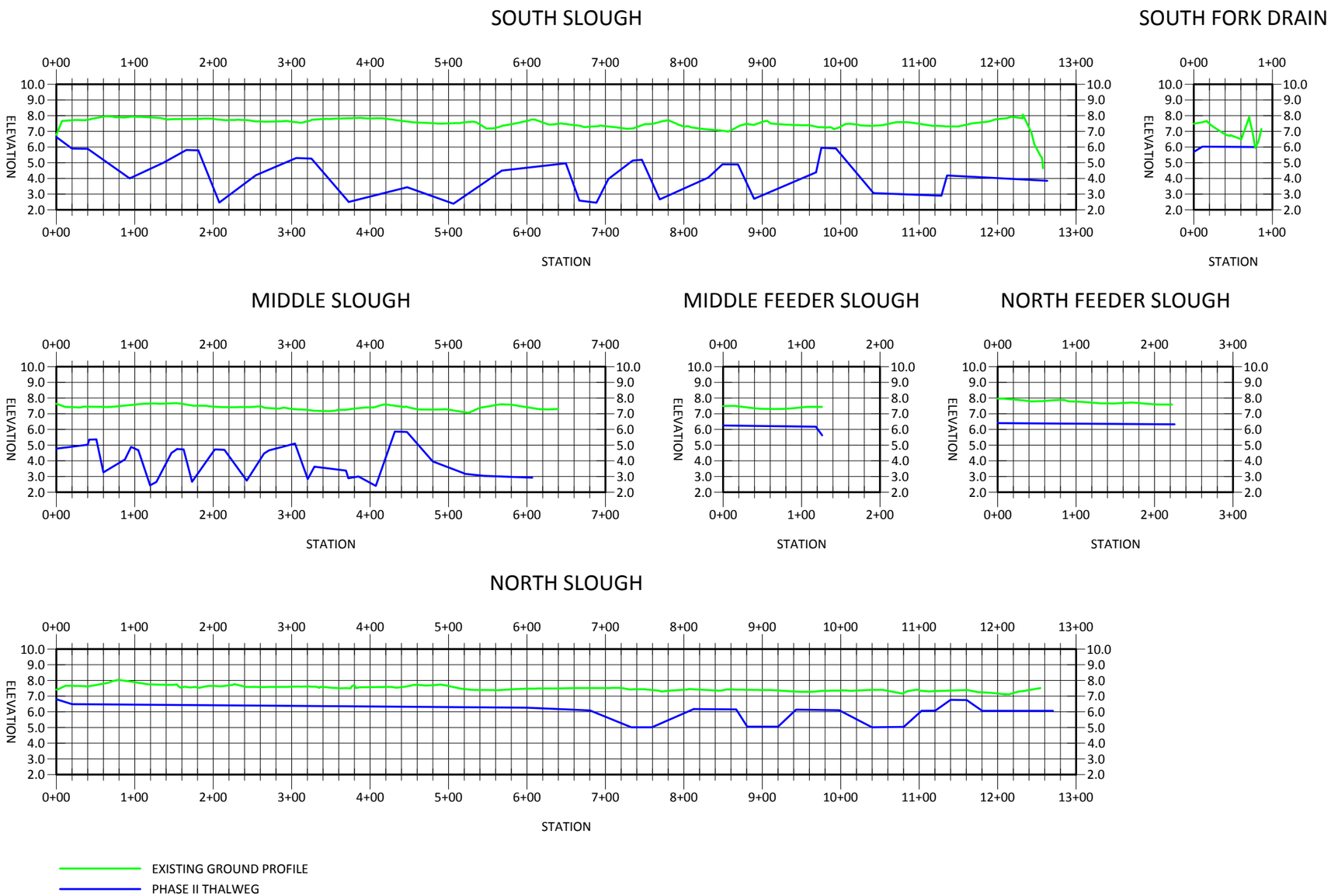

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WOOD CREEK AQUATIC HABITAT ENHANCEMENT PHASE II
65% DESIGN PLANS

PHASE II SLOUGH PROFILES

VERTICAL EXAGGERATION 20X

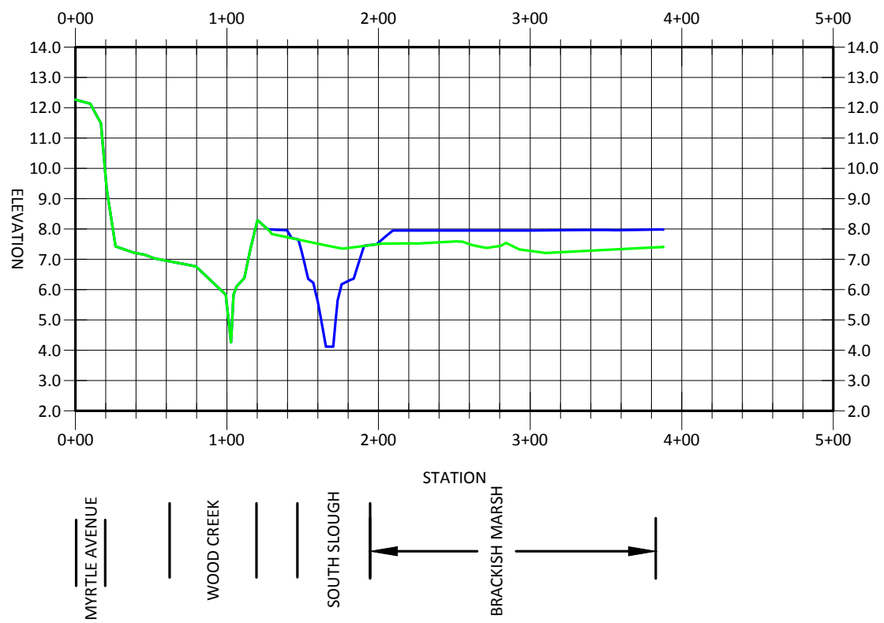
NOTES:

DESIGNED BY: CCS
DRAWN BY: CCS
APPROVED BY: CCS
DATE: 6/4/2015
SHEET NUMBER: 10

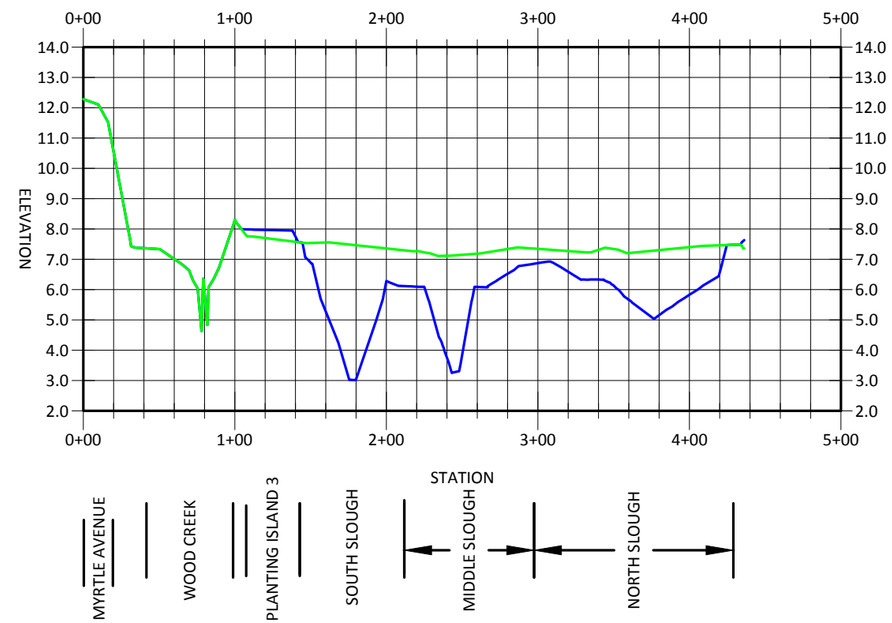
SCALE: 0 150'

Exhibit 4: 65% Designs.

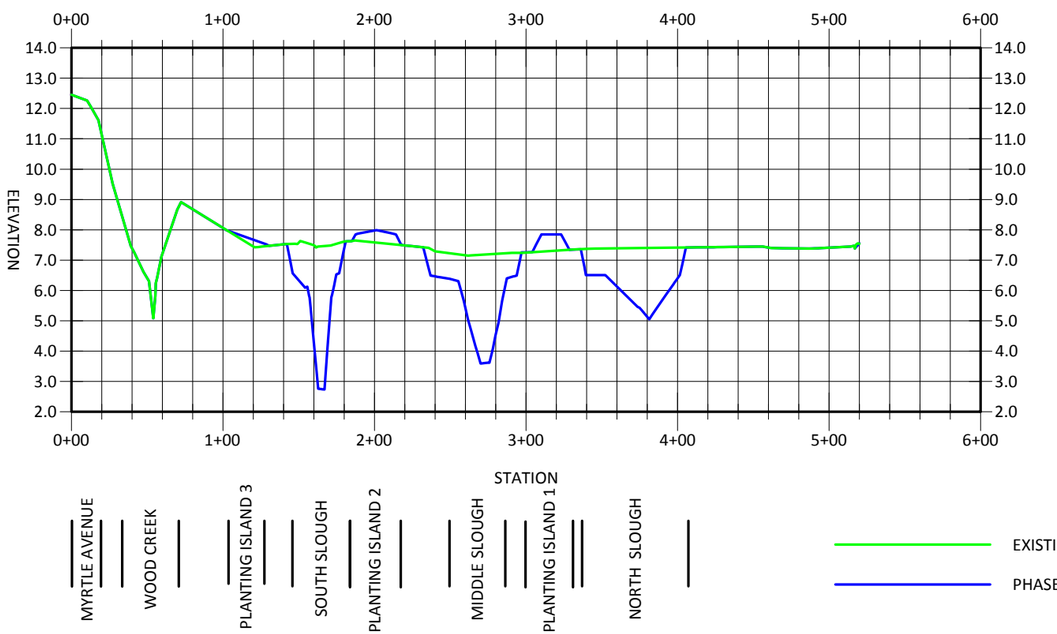
SECTION A-A



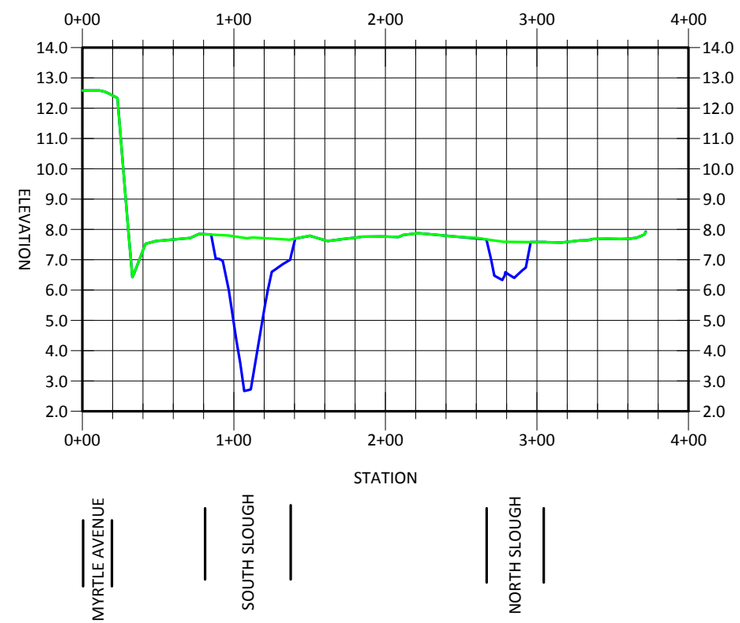
SECTION B-B



SECTION C-C



SECTION D-D



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WOOD CREEK AQUATIC HABITAT ENHANCEMENT PHASE II
65% DESIGN PLANS

PHASE II SURFACE CROSS SECTIONS

VERTICAL EXAGGERATION 20X

NOTES:

DESIGNED BY: CCS
DRAWN BY: CCS
APPROVED BY: CCS
DATE: 6/4/2015
SHEET NUMBER: 11

SCALE: 0 100'

Exhibit 4: 65% Designs.

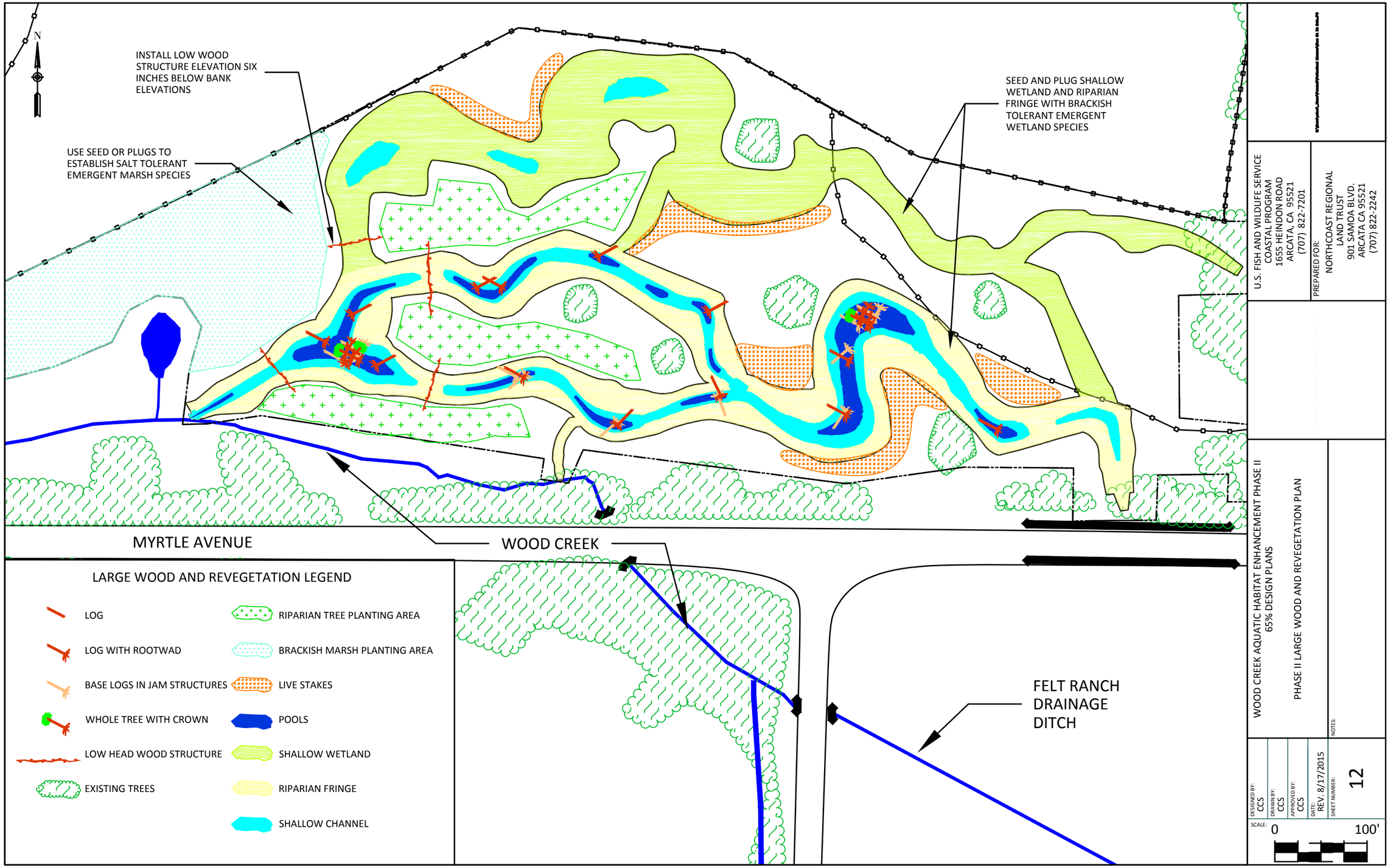
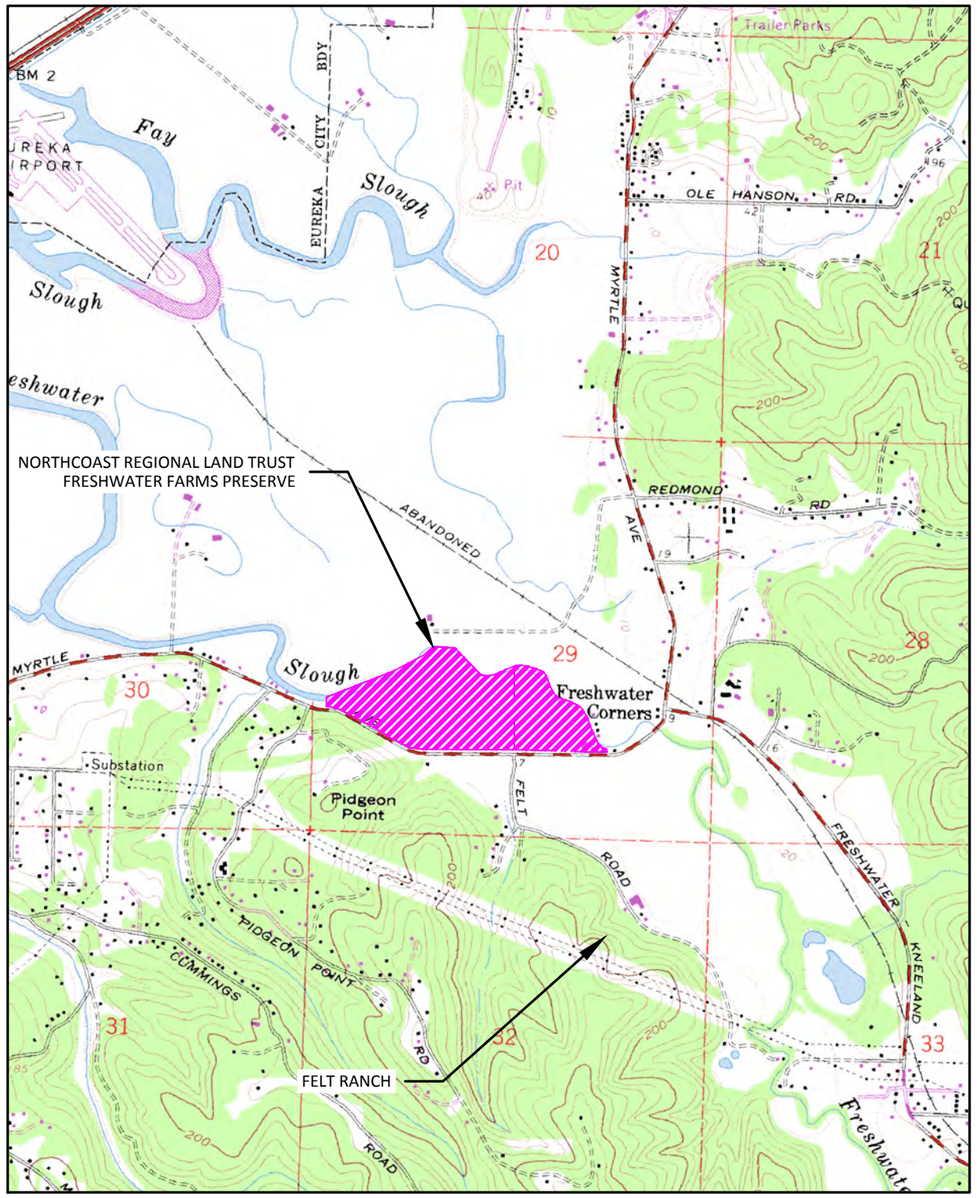


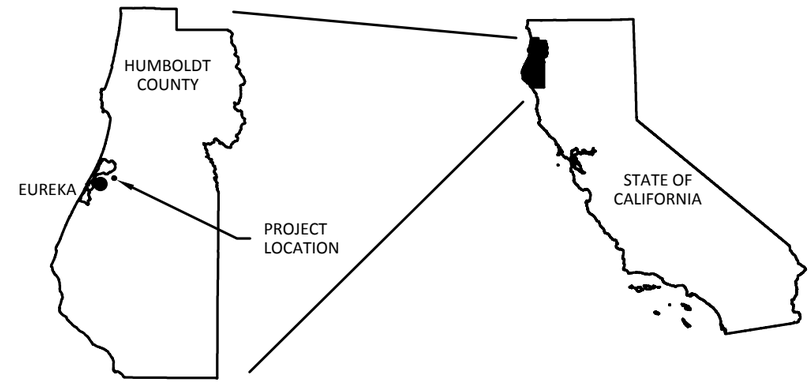
Exhibit 4: 65% Designs.



NORTHCOAST REGIONAL LAND TRUST FRESHWATER FARMS PRESERVE
MAP SOURCE: USGS 7-1/2' QUADRANGLE MAP
SOUTH ARCATA, CA

0 2000'

N



PROJECT LOCATION
(N.T.S.)

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4	PHASE I PROPOSED MARSH AREA RAISE TOPOGRAPHY
5	PHASE I PROPOSED MARSH AREA - FINE SCALE TOPOGRAPHY
6	PHASE I PROPOSED MARSH FILL DEPTHS
7	PHASE I LOG SILL AND LOG STACK INSTALLATIONS

WOOD CREEK AQUATIC HABITAT ENHANCEMENT
PHASE I ADAPTIVE MANAGEMENT
65% DESIGN PLANS
NORTHCOAST REGIONAL LAND TRUST
FRESHWATER FARMS PRESERVE
HUMBOLDT COUNTY, CA
(NOT FOR CONSTRUCTION)

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WOOD CREEK AQUATIC HABITAT ENHANCEMENT
PHASE I ADAPTIVE MANAGEMENT 65% DESIGN PLANS

LOCATION MAP AND TABLE OF CONTENTS

NOTES:

DESIGNED BY: CCS
DRAWN BY: CCS
APPROVED BY: CCS
DATE: 6/4/2015
SHEET NUMBER: 1
SCALE: AS INDICATED

Exhibit 4: 65% Designs.

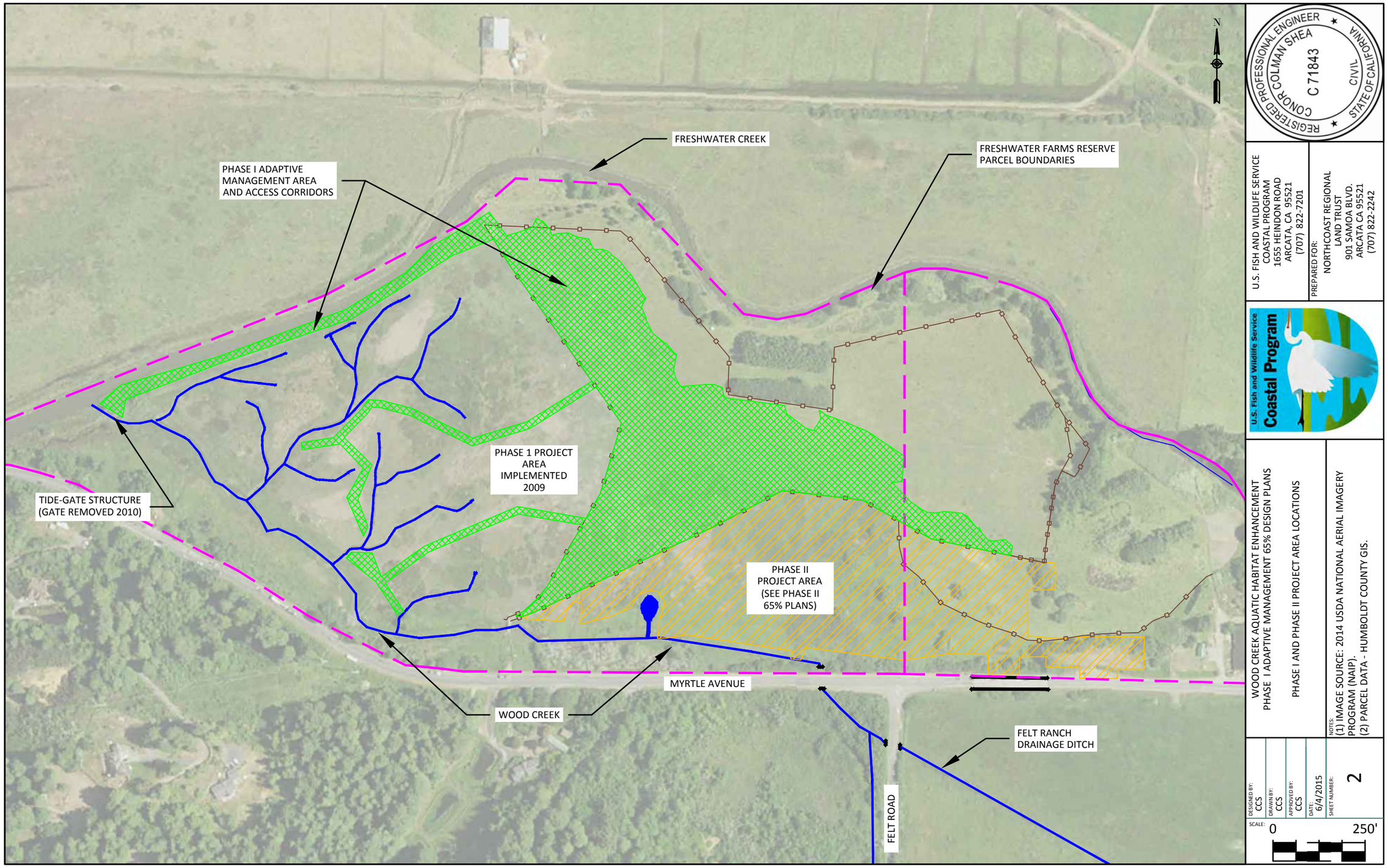

Exhibit 4: 65% Designs.

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WOOD CREEK AQUATIC HABITAT ENHANCEMENT
PHASE I ADAPTIVE MANAGEMENT 65% DESIGN PLANS

EXISTING TOPOGRAPHY
CONTOUR INTERVAL 0.5 FEET - NAVD 1988 DATUM

NOTES:
(1) TOPOGRAPHY BASED ON SURVEYS CONDUCTED BY USFWS 2013-2015.

DESIGNED BY: CCS
DRAWN BY: CCS
APPROVED BY: CCS
DATE: 6/4/2015
SCALE:
SHEET NUMBER: 3

Exhibit 4: 65% Designs.

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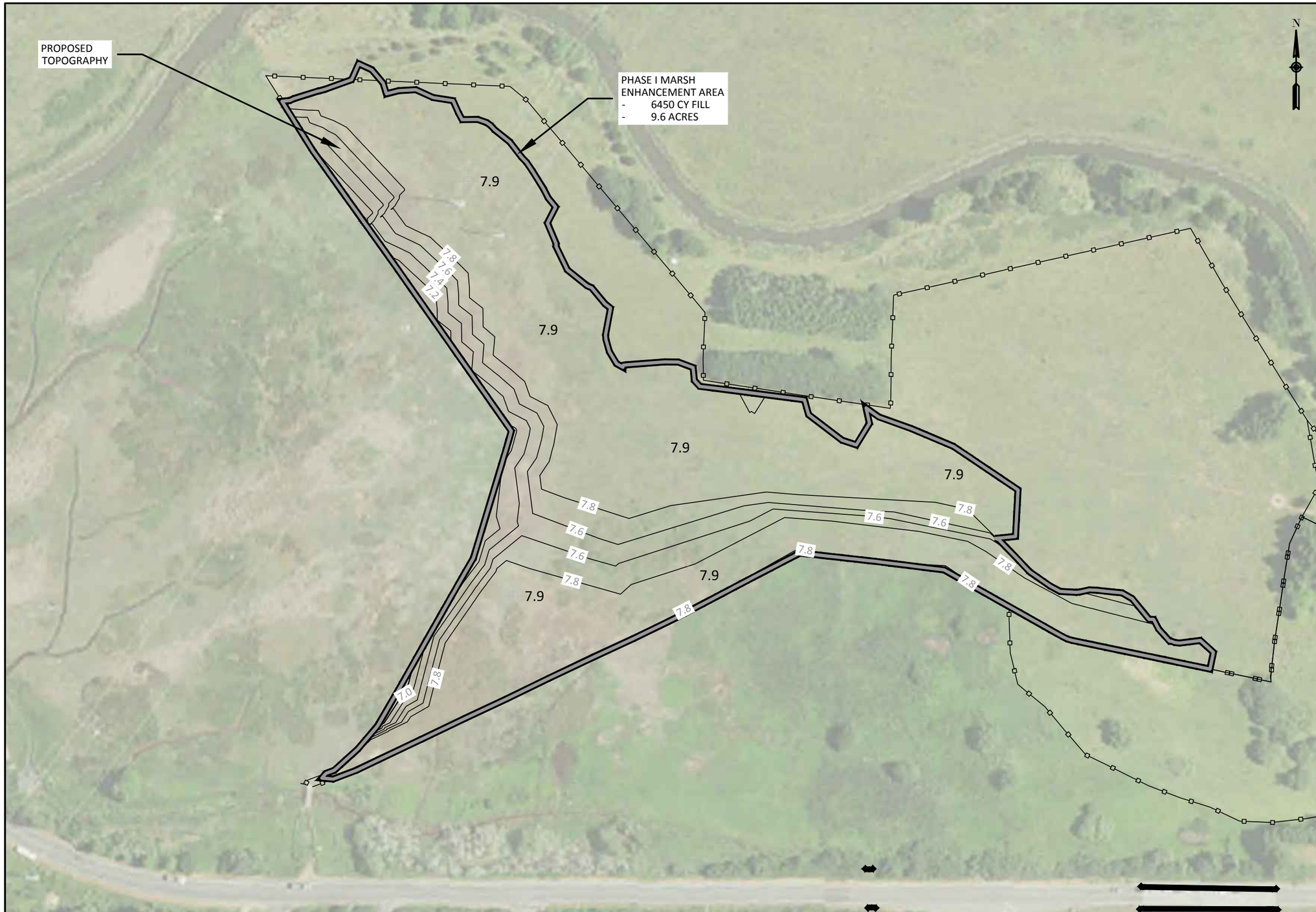
WOOD CREEK AQUATIC HABITAT ENHANCEMENT
PHASE I ADAPTIVE MANAGEMENT 65% DESIGN PLANS

PHASE I PROPOSED MARSH ELEVATION RAISE TOPOGRAPHY
CONTOUR INTERVAL 0.5 FEET - NAVD 1988 DATUM

NOTES:
(1) TOPOGRAPHY BASED ON SURVEYS CONDUCTED BY USFWS 2013-2015.

DESIGNED BY: CCS
DRAWN BY: CCS
APPROVED BY: CCS
DATE: 6/4/2015
SHEET NUMBER: 4
SCALE:

Exhibit 4: 65% Designs.



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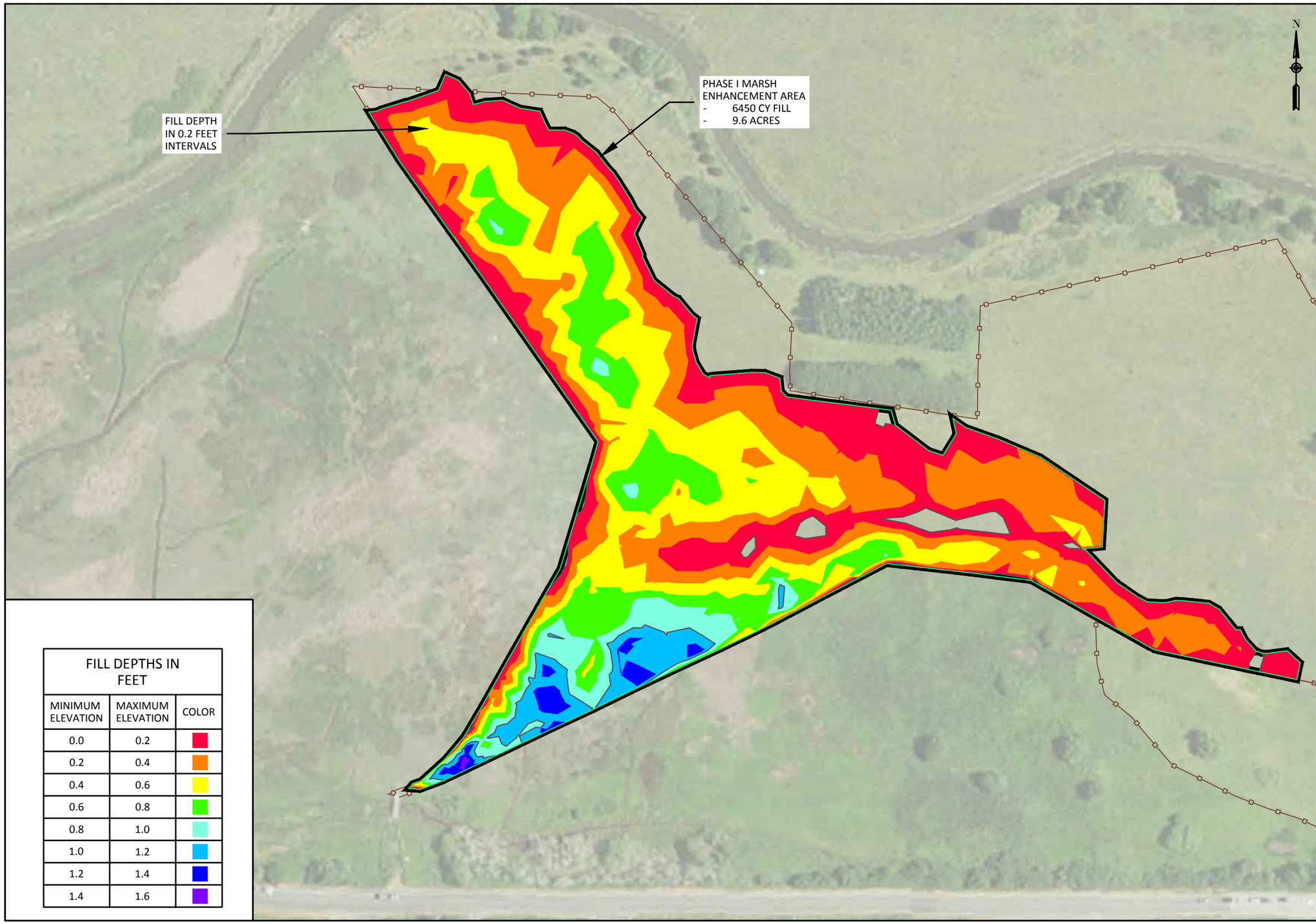
WOOD CREEK AQUATIC HABITAT ENHANCEMENT
PHASE I ADAPTIVE MANAGEMENT 65% DESIGN PLANS

PHASE I PROPOSED MARSH ELEVATION FINE SCALE TOPOGRAPHY
CONTOUR INTERVAL 0.2 FEET - NAVD 1988 DATUM

NOTES:
(1) TOPOGRAPHY BASED ON SURVEYS CONDUCTED BY USFWS 2013-2015.

DESIGNED BY: CCS
DRAWN BY: CCS
APPROVED BY: CCS
DATE: 6/4/2015
SHEET NUMBER: 5
SCALE:

Exhibit 4: 65% Designs.



FILL DEPTHS IN FEET		
MINIMUM ELEVATION	MAXIMUM ELEVATION	COLOR
0.0	0.2	
0.2	0.4	
0.4	0.6	
0.6	0.8	
0.8	1.0	
1.0	1.2	
1.2	1.4	
1.4	1.6	

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WOOD CREEK AQUATIC HABITAT ENHANCEMENT
PHASE I ADAPTIVE MANAGEMENT 65% DESIGN PLANS

PHASE I PROPOSED MARSH FILL DEPTHS
CONTOUR INTERVAL 0.2 FEET

NOTES:
(1) TOPOGRAPHY BASED ON SURVEYS CONDUCTED BY USFWS 2013-2015.

DESIGNED BY: CCS
DRAWN BY: CCS
APPROVED BY: CCS
DATE: 6/4/2015
SHEET NUMBER: 6
SCALE:
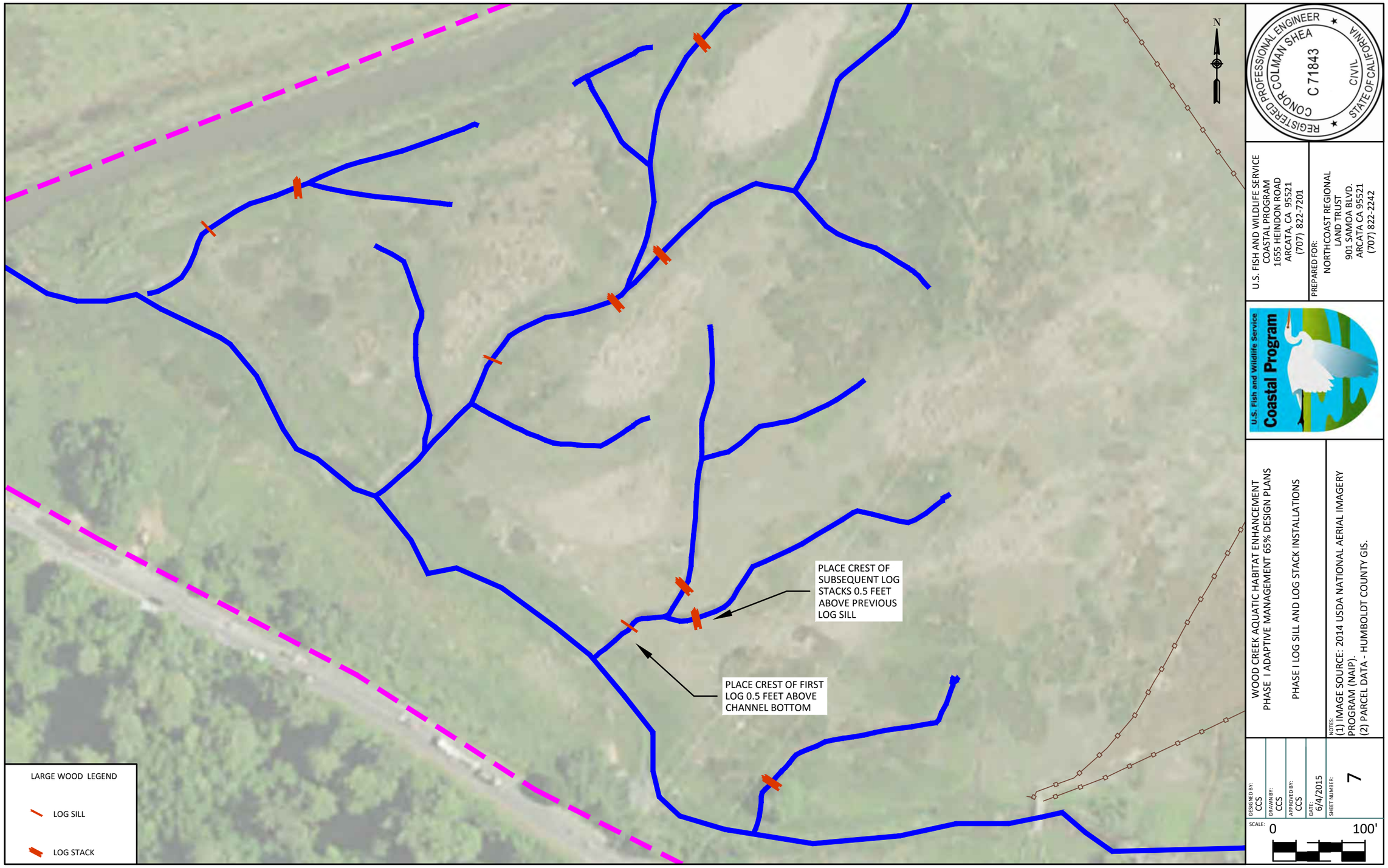
Exhibit 4: 65% Designs.