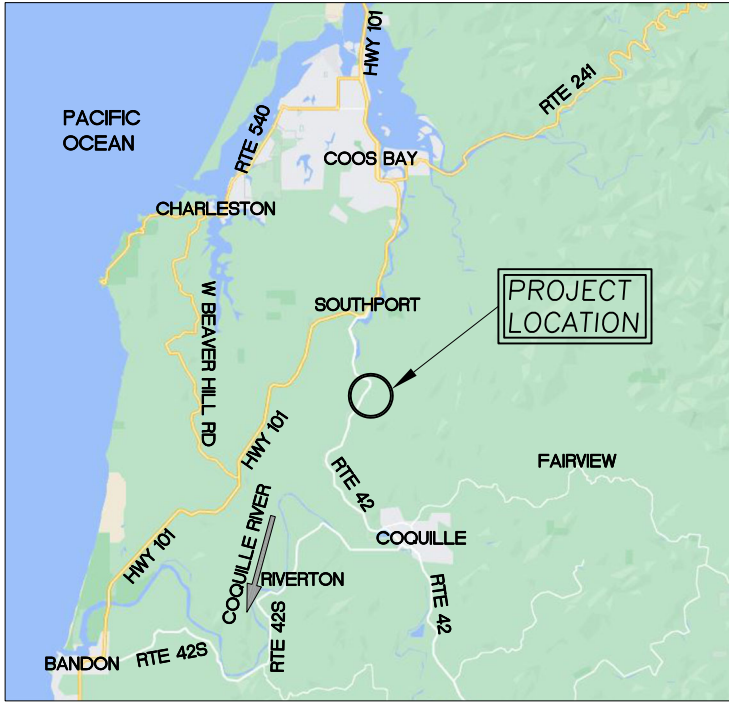


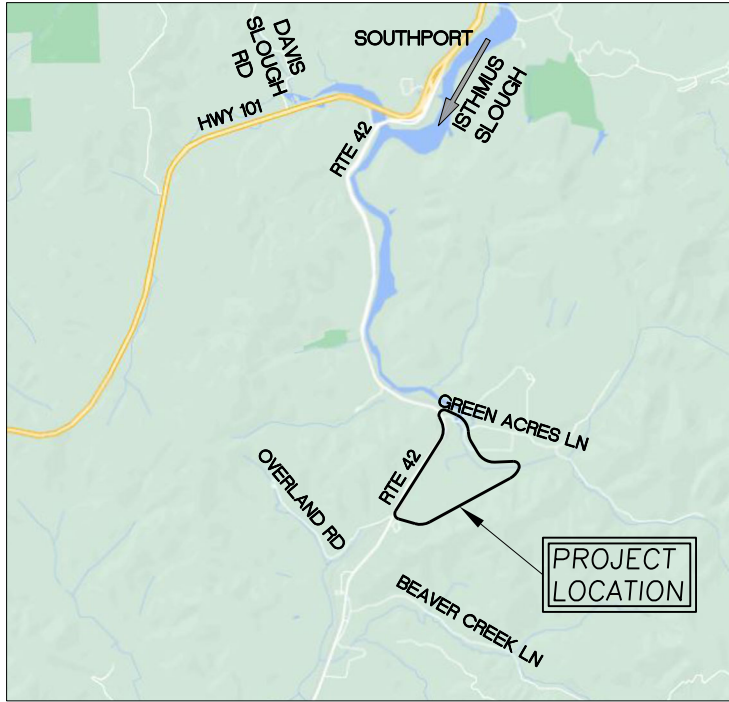
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NOBLE CREEK TIDELANDS RESTORATION PROJECT

60% DRAFT DESIGN SUBMITTAL - REVISION 1



VICINITY MAP
N.T.S. (GOOGLE)



REGIONAL MAP
N.T.S. (GOOGLE)

GENERAL NOTES

- TOPOGRAPHIC MAPPING WAS PERFORMED BY:
WATERWAYS CONSULTING, INC.
1020 SW TAYLOR STREET, SUITE 380
PORTLAND, OR 97205
SURVEY DATES: JANUARY 19 & 20, 2022, APRIL 19, 2022, JANUARY 18, 2023, AND FEBRUARY 11, 2026.
- ELEVATION DATUM: GPS TIES TO NAVD88 USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
- BASIS OF BEARINGS: GPS TIES TO NAD83 OREGON SOUTH USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
- AERIAL PHOTO SOURCE: AUTODESK CIVIL 3D 2019. IMAGE SHIFTED TO ALIGN WITH SURVEYED LINework.
- CONTOUR INTERVAL IS ONE FOOT. ELEVATIONS AND DISTANCES SHOWN ARE IN DECIMAL FEET.
- THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES WERE COMPILED FROM RECORD INFORMATION. THE LOCATION OF THESE LINES IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A COMPLETE BOUNDARY SURVEY.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE 2024 EDITION OF THE STATE OF OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, ISSUED BY THE DEPARTMENT OF TRANSPORTATION (HEREAFTER REFERRED TO AS "STANDARD SPECIFICATIONS").
- THESE DESIGNS ARE INCOMPLETE WITHOUT THE FINAL STAMPED TECHNICAL SPECIFICATIONS PREPARED BY WATERWAYS CONSULTING, INC. REFER TO TECHNICAL SPECIFICATIONS FOR DETAILS NOT SHOWN HEREON.

SECTION AND DETAIL CONVENTION

SECTION OR DETAIL IDENTIFICATION
(NUMBER OR LETTER)

5
C3

SHEET REFERENCE

*** CALL BEFORE YOU DIG ***

CONTACT UNDERGROUND SERVICE ALERT (USA)
PRIOR TO ANY CONSTRUCTION WORK 1-800-332-2344

PROJECT DESCRIPTION

THESE DRAWINGS PROVIDE DETAILS FOR THE REPLACEMENT OF THREE (3) CULVERTED TIDE GATE CROSSINGS TO IMPROVE FISH PASSAGE ALONG NOBLE CREEK CREEK IN COOS COUNTY, OREGON.

WORK SHALL CONSIST OF REMOVAL AND DISPOSAL OF FOUR EXISTING CULVERTS. THE GREEN ACRES LANE CULVERTS WILL BE REPLACED WITH A NEW BRIDGE AND TWO TIDE GATES WITH MATED TIDAL REGULATORS AND AFFIXED TO A CONCRETE WALL JUST UPSTREAM OF THE BRIDGE. GREEN ACRES LANE WILL BE REALIGNED ON THE EAST SIDE OF NOBLE CREEK TO IMPROVE ROAD STABILITY AND RIPARIAN HABITAT. IN ADDITION, TWO INTERIOR CULVERTS WILL BE REPLACED WITH ROUND PIPE CULVERTS WITH TIDE GATES. ONE EXISTING TIDE GATE WILL BE REMOVED AND PLUGGED. LEVEE REPAIRS WILL BE CONSTRUCTED TO PROTECT EXISTING BUILDINGS. NEW SINUOUS TIDAL CHANNELS WILL BE CONSTRUCTED AND OLD LINEAR DITCHES WILL BE FILLED. LARGE WOOD WILL BE ADDED TO NOBLE CREEK AND THE TIDAL CHANNEL SYSTEM TO CREATE SHADE AND STRUCTURE FOR FISH. FOUR POOLS WILL BE CONSTRUCTED ALONG THE TIDAL CHANNELS.

ABBREVIATIONS

AVG.	AVERAGE	N.T.S.	NOT TO SCALE
CONC	CONCRETE	O.C.	ON CENTER
CY	CUBIC YARDS	RC	RELATIVE COMPACTION
DIA.	DIAMETER	RSP	ROCK SLOPE PROTECTION
E	EXISTING	SPK	SPIKE
EG	EXISTING GROUND	SQ.FT.	SQUARE FOOT
ELEV.	ELEVATION	T	TREE
DI	DRAINAGE INLET	T.B.D.	TO BE DETERMINED
FG	FINISHED GRADE	TYP	TYPICAL
FT	FEET	UNK	UNKNOWN
GAL	GREEN ACRES LANE	WSE	WATER SURFACE ELEVATION
INV	INVERT		
LOC.	LOCATION		
MIN	MINIMUM		
MTR	MATED TIDAL REGULATOR		
N	NEW		
NIC	NOT IN CONTRACT		

TREE SPECIES

T TREE (SPECIES UNKNOWN)
W WILLOW

SHEET INDEX

C1	COVER
C2	OVERVIEW PLAN
C3	GAL TIDE GATE - EXISTING CONDITIONS
C4	GAL TEMPORARY WATER AND TRAFFIC MANAGEMENT PLAN
C5	GAL BRIDGE AND ROADWAY PLAN AND PROFILE
C6	GAL TIDE GATE PLAN AND PROFILE
C7	ROADWAY AND LEVEE REPAIR PLAN
C8	LEVEE TIDE GATE - EXISTING CONDITIONS
C9	LEVEE TIDE GATE - SITE PLAN AND PROFILE
C10	LEVEE TIDE GATE - SECTIONS
C11	BRAMBLE LANE TIDE GATE - EXISTING CONDITIONS
C12	BRAMBLE LANE TIDE GATE - SITE PLAN AND PROFILE
C13	BRAMBLE LANE TIDE GATE - SECTIONS
C14	NORTH TIDAL CHANNEL PLAN
C15	MIDDLE TIDAL CHANNEL PLAN
C16	SOUTH TIDAL CHANNEL PLAN
C17	SW CHANNEL AND POND ENHANCEMENT PLAN
C18	BRAMBLE LANE POND ENHANCEMENT PLAN
C19	TIDAL CHANNEL PROFILES
C20	TIDAL CHANNEL AND POND ENHANCEMENT PROFILES
C21	NOBLE CREEK AND LEVEE PROFILES
C22	TYPICAL SECTIONS AND WALL SECTION
C23	REVEGETATION PLAN
C24	LOG STRUCTURE DETAILS
C25	LIVESTOCK CROSSING CULVERT DETAIL
C26	NOTES AND EROSION CONTROL DETAILS
B1	ROAD SITE PLAN
B2	GREEN ACRES ROAD PROFILE
B3	UPPER LOOP ROAD PROFILE & SUPER DIAGRAM
B4	TYPICAL ROAD CROSS-SECTIONS
B5	GUARDRAIL DETAILS
B6	TEMPORARY BYPASS ROAD SITE PLAN
B7	TEMPORARY BYPASS ROAD PROFILES
B8	BRIDGE SITE PLAN
B9	BRIDGE PLAN, ELEVATION, & DECK SECTION

PRELIMINARY

NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:

COOS SOIL AND
WATER DISTRICT

COVER

**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

DESIGNED BY: J.H.
DRAWN BY: D.H.
CHECKED BY: J.H.
DATE: 7/27/2026
JOB NO.: 20-067

BAR IS ONE INCH ON
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C1

1
OF
35

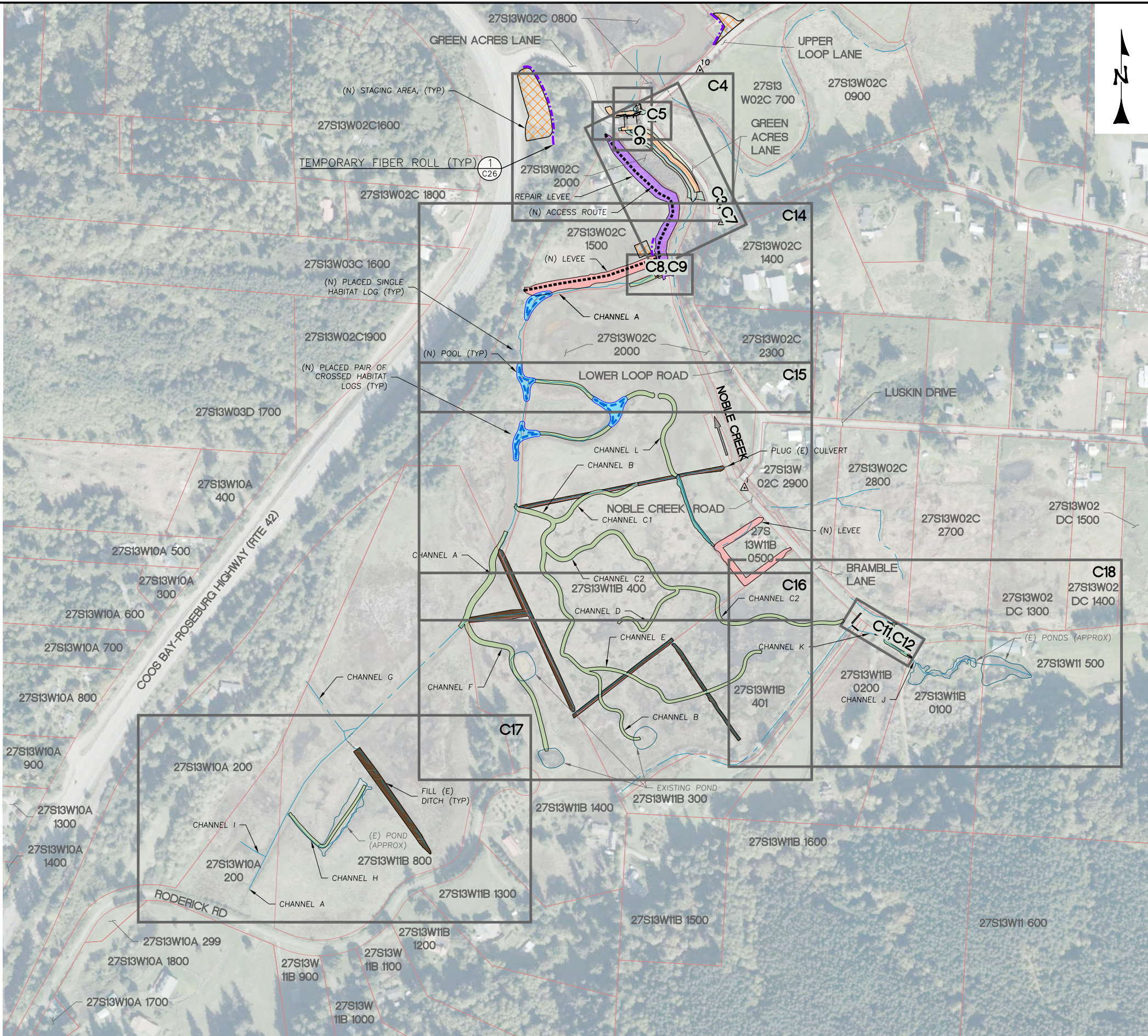
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LEGEND

	EXISTING FLOW LINE
	EXISTING CULVERT/TIDE GATE
	EXISTING EDGE OF PAVEMENT
	EXISTING PARCEL BOUNDARY (COOS COUNTY GIS DATABASE)
	PROPOSED POOL BOTTOM
	TEMPORARY FIBER ROLL
	PROPOSED CREEK BANK
	PROPOSED CREEK FLOODPLAIN
	PROPOSED ROCK SLOPE PROTECTION
	PROPOSED TIDAL CHANNEL
	PROPOSED DITCH FILL
	PROPOSED PARTIAL DITCH FILL
	PROPOSED LEVEE REPAIR
	PROPOSED NEW LEVEE
	TEMPORARY STAGING AREA
	PROPOSED TIDAL POOL
	EXISTING POND (APPROX. LOCATION)
	CONTROL POINT
	FLOW DIRECTION ARROW

NOTES:

1. THE PROPOSED BERM AND PROPOSED LEVEE REPAIR EXTENTS WILL BE BASED ON THE SELECTED WATER MANAGEMENT PLAN FOR THE TIDE GATES AT GREEN ACRES LANE AND THE LEVEE TIDE GATE FOR CHANNEL A.
2. HABITAT LOGS AND BANK LOG STRUCTURES ARE OMITTED FOR GRAPHICAL CLARITY. SEE OTHER PLAN SHEETS FOR LOCATIONS.



OVERVIEW PLAN

SCALE: 1" = 200'

PRELIMINARY

NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:

**COOS SOIL AND
WATER DISTRICT**

OVERVIEW PLAN

**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

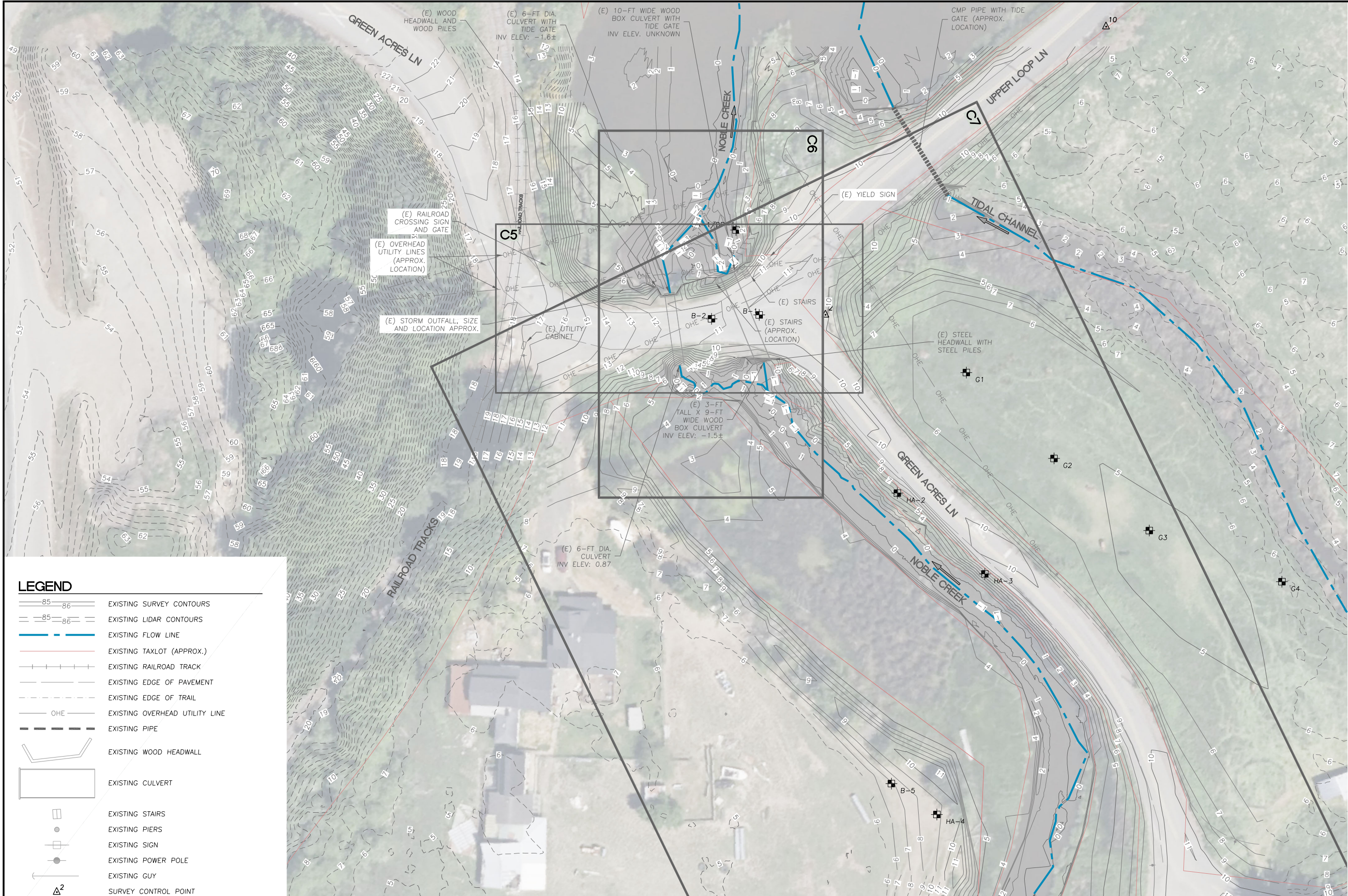
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LEGEND

- 85 86 EXISTING SURVEY CONTOURS
- 85 86 EXISTING LIDAR CONTOURS
- EXISTING FLOW LINE
- EXISTING TAXLOT (APPROX.)
- EXISTING RAILROAD TRACK
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF TRAIL
- OHE EXISTING OVERHEAD UTILITY LINE
- EXISTING PIPE
- EXISTING WOOD HEADWALL
- EXISTING CULVERT
- EXISTING STAIRS
- EXISTING PIERS
- EXISTING SIGN
- EXISTING POWER POLE
- EXISTING GUY
- △² SURVEY CONTROL POINT
- HA-4 APPROX. GEOTECHNICAL EXPLORATION LOC.

GAL TIDE GATE - EXISTING CONDITIONS
SCALE: 1" = 30'



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WATER DISTRICT**

**GAL TIDE GATE
- EXISTING
CONDITIONS**

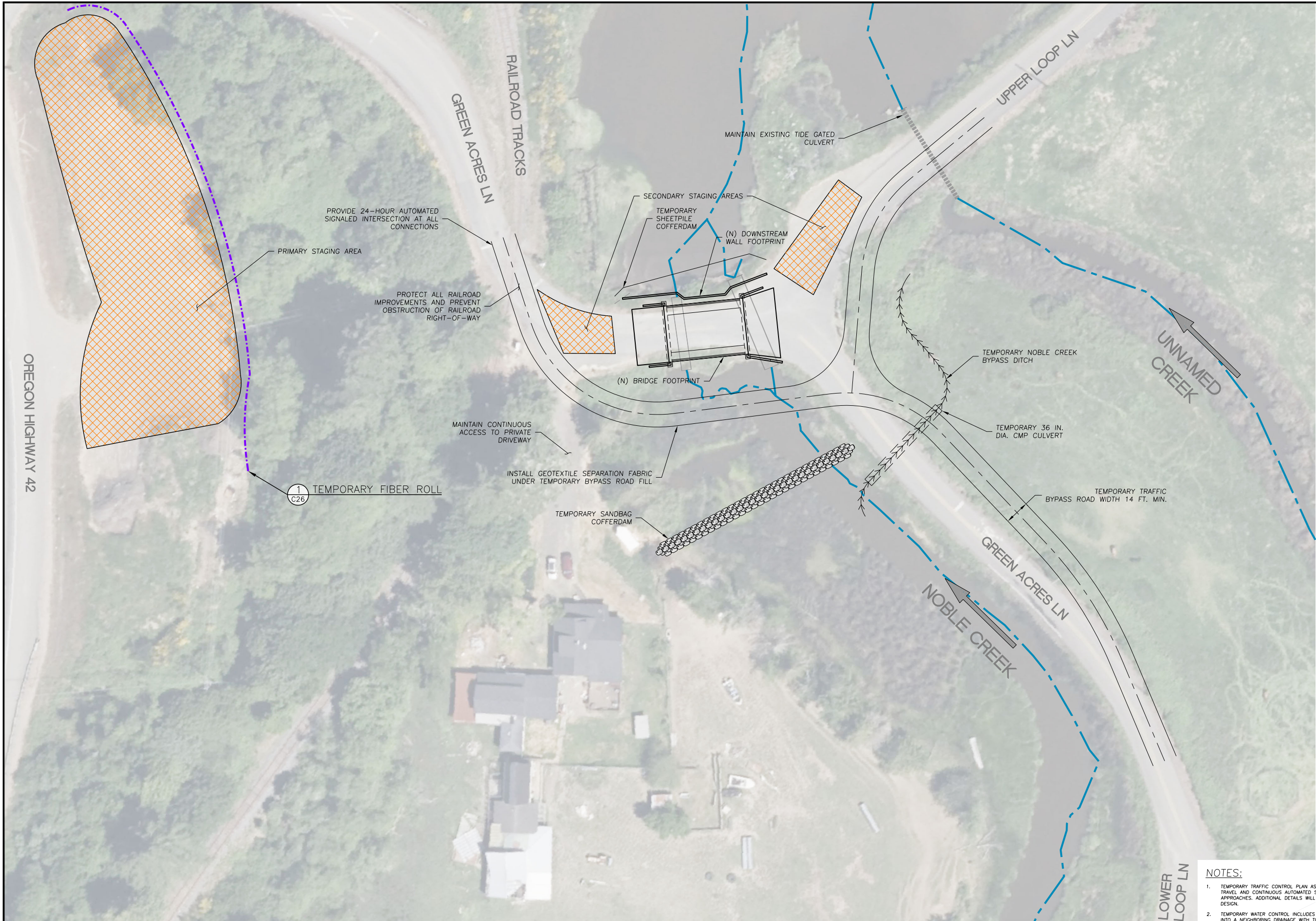
**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

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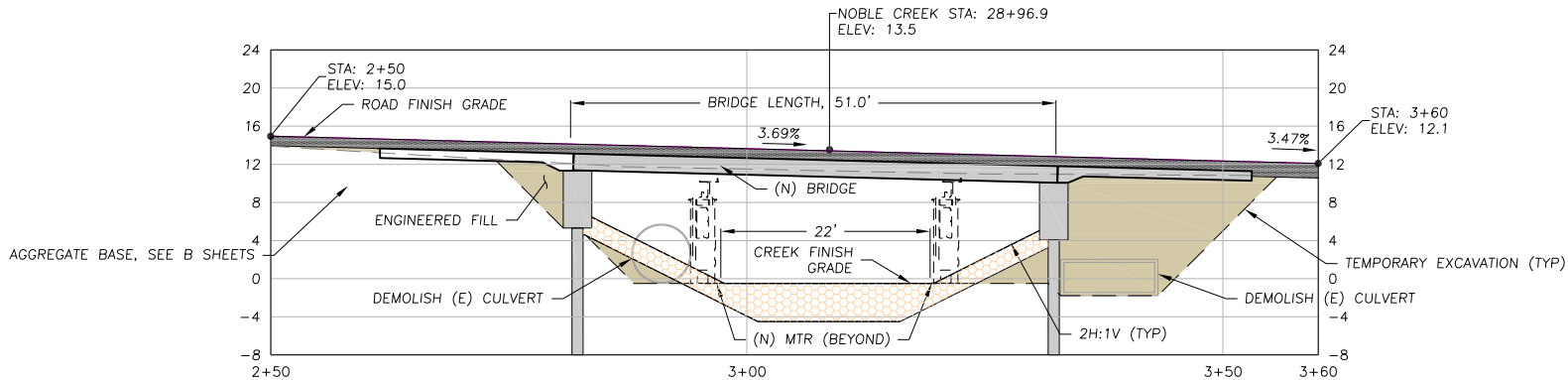
GREEN ACRES LN. WATER AND TRAFFIC MANAGEMENT PLAN
SCALE: 1" = 30'

NOTES:

- TEMPORARY TRAFFIC CONTROL PLAN ASSUMES A SINGLE LANE OF TRAVEL AND CONTINUOUS AUTOMATED SIGNALING AT ALL ROAD APPROACHES. ADDITIONAL DETAILS WILL BE INCLUDED IN THE 90% DESIGN.
- TEMPORARY WATER CONTROL INCLUDES DIVERSION OF NOBLE CREEK INTO A NEIGHBORING DRAINAGE WITH TIDE GATE, AND CONSTRUCTING A SHEET PILE COFFERDAM AROUND THE SLOUGH SIDE OF THE BRIDGE WORK AREA. THESE DRAWINGS ARE CONCEPTUAL AND THE CONTRACTOR SHALL SUBMIT AN FORMAL TEMPORARY WATER MANAGEMENT PLAN STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OREGON.

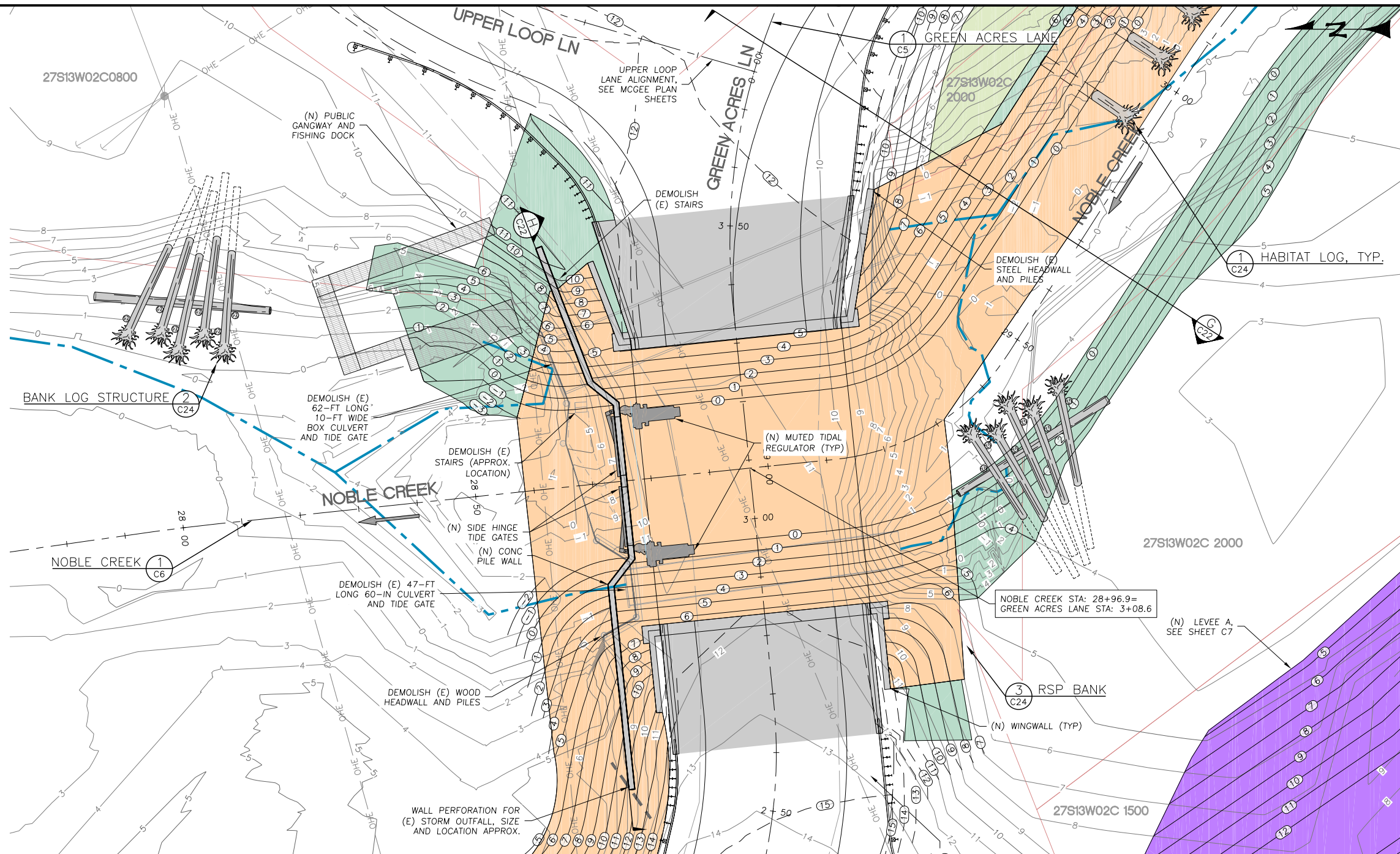


GREEN ACRES TIDE GATE - SITE PLAN
SCALE: 1" = 10'

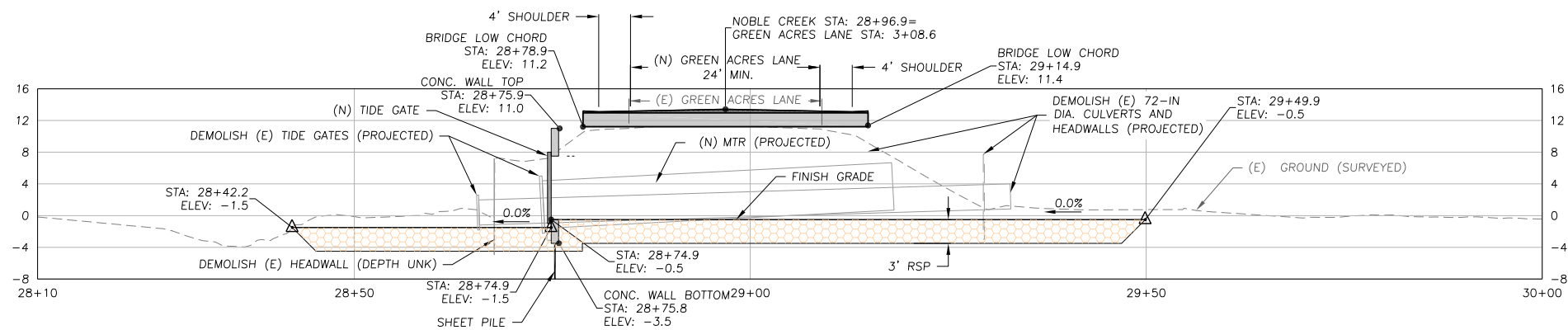


GREEN ACRES LANE PROFILE
SCALE: 1" = 10'

- NOTES:
1. THE PROPOSED GANGWAY AND FISHING DOCK GEOMETRY IS A CONCEPTUAL SCHEMATIC. DIMENSIONS, MATERIALS AND PERFORMANCE CRITERIA TBD.
 2. SEE B SHEETS FOR BRIDGE AND ROADWAY DESIGN PLANS.



GREEN ACRES LANE TIDE GATE PLAN
SCALE: 1" = 10'



DETAILED NOBLE CREEK PROFILE (1)
SCALE: 1" = 10' C6

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COOS SOIL AND
WATER DISTRICT

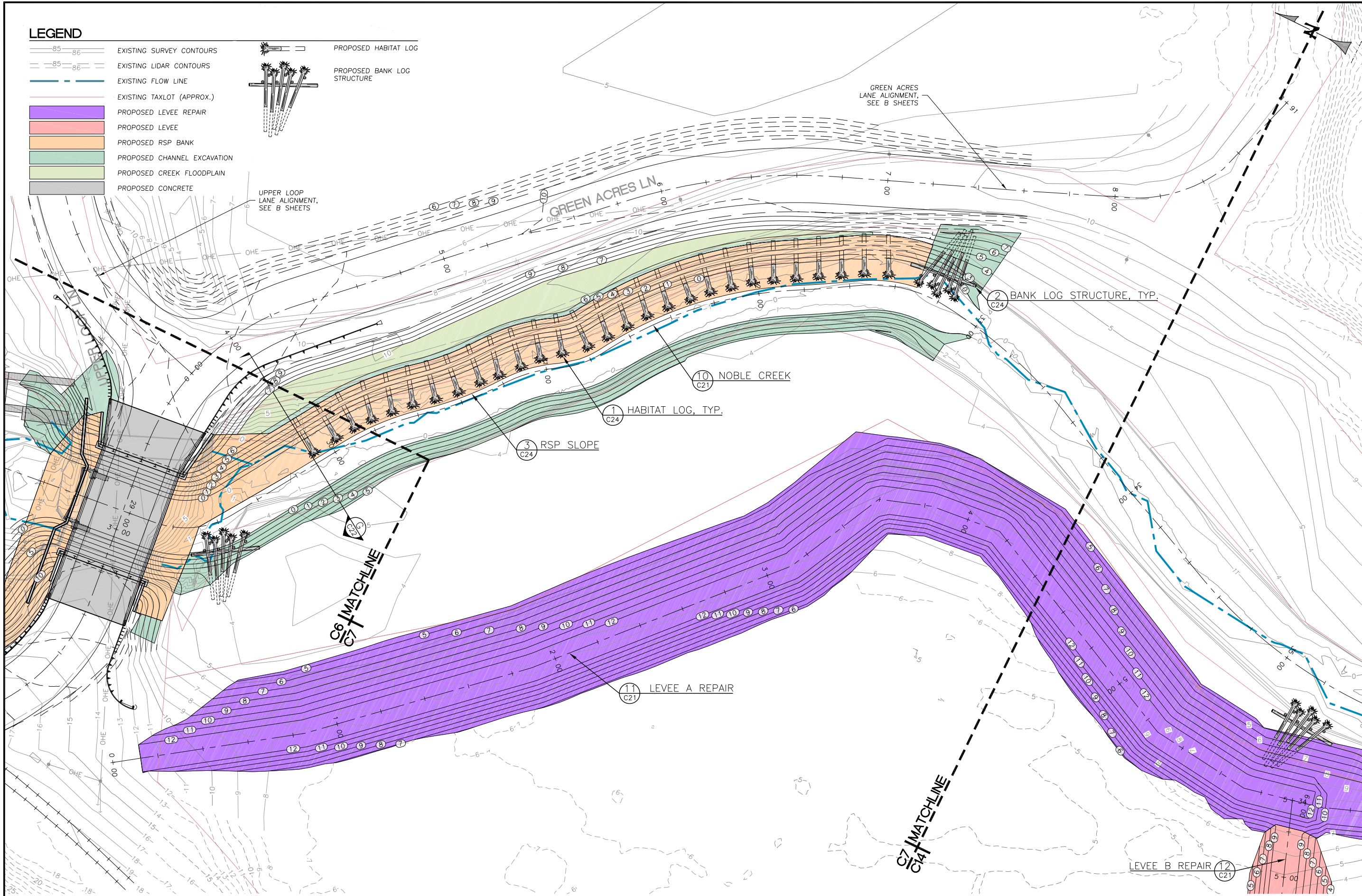
GAL TIDE GATE PLAN AND PROFILE

NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1

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CHECKED BY: J.H.
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ROADWAY AND LEVEE REPAIR PLAN

SCALE: 1" = 20'

WATERWAYS CONSULTING INC. 1020 SW TAYLOR STREET, STE. 380 PORTLAND, OR 97205 PH: (503) 227-5979 // FAX: (888) 819-6847 WWW.WATWAYS.COM	
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PREPARED AT THE REQUEST OF: COOS SOIL AND WATER DISTRICT	
ROADWAY AND LEVEE REPAIR PLAN	
NOBLE CREEK TIDELANDS RESTORATION 60% DRAFT DESIGN REVISION 1	
DESIGNED BY: J.H. DRAWN BY: D.H. CHECKED BY: J.H. DATE: 7/27/2026 JOB NO.: 20-067	
BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS 0 1"	
C7	7 OF 35

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LEGEND

- 8586

EXISTING SURVEY CONTOURS
- 8586

EXISTING LIDAR CONTOURS
- EXISTING FLOW LINE
- EXISTING TAXLOT (APPROX.)



LEVEE TIDE GATE - EXISTING CONDITIONS
SCALE: 1" = 10'

WATERWAYS CONSULTING INC. 1020 SW TAYLOR STREET, STE. 380 PORTLAND, OR 97205 PH: (503) 227-5979 // FAX: (503) 819-6847 WWW.WATWAYS.COM	
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PREPARED AT THE REQUEST OF: COOS SOIL AND WATER DISTRICT	
LEVEE TIDE GATE - EXISTING CONDITIONS	
NOBLE CREEK TIDELANDS RESTORATION 60% DRAFT DESIGN REVISION 1	
DESIGNED BY: J.H. DRAWN BY: D.H. CHECKED BY: J.H. DATE: 7/27/2026 JOB NO.: 20-067	
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS 0 1"	
C8	8 OF 35

LEGEND

- EXISTING SURVEY CONTOURS
- EXISTING LIDAR CONTOURS
- PROPOSED CONTOURS
- EXISTING FLOW LINE
- EXISTING TAXLOT (APPROX.)
- PROPOSED CHANNEL EXCAVATION
- PROPOSED ROCK SLOPE PROTECTION
- PROPOSED LEVEE REPAIR
- PROPOSED LEVEE
- PROPOSED MUTED TIDAL REGULATOR
- PROPOSED TIDE GATE
- PROPOSED CULVERT
- PROPOSED HABITAT LOG
- PROPOSED BANK LOG STRUCTURE

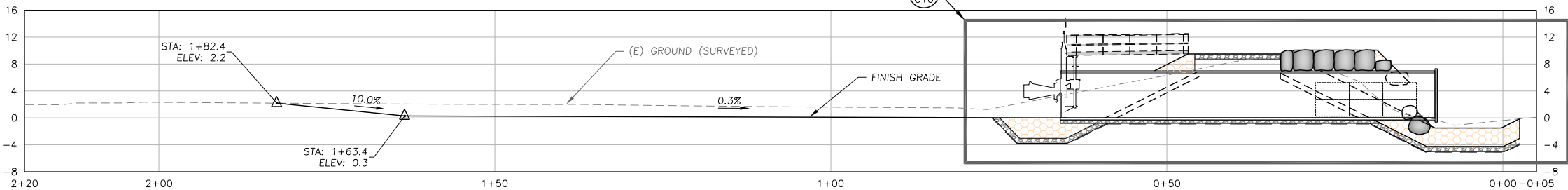
NOTES:

- WATER MANAGEMENT PLAN FOR TIDE GATED CULVERT TO BE DETERMINED FOLLOWING CONFIRMATION OF WATER MANAGEMENT PLAN TIDE GATES AT GREEN ACRES LANE.

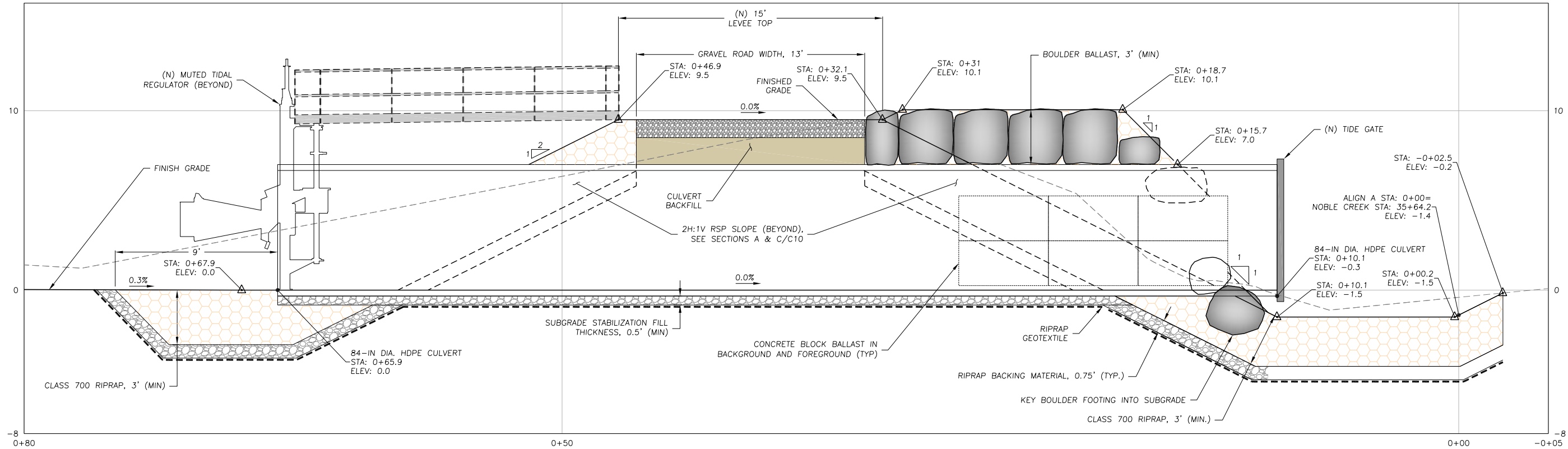


LEVEE TIDE GATE - SITE PLAN AND PROFILE
SCALE: 1" = 10'

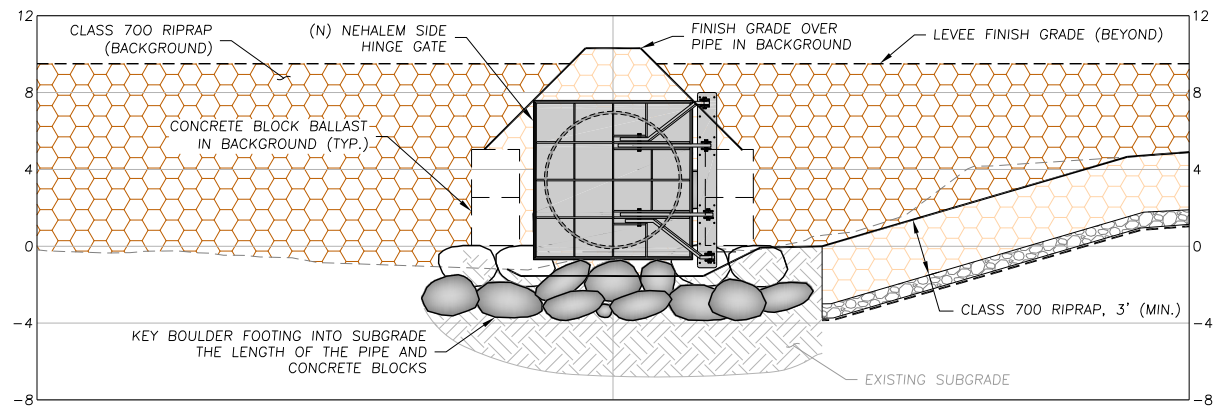
DETAILED CHANNEL A PROFILE AT LEVEE



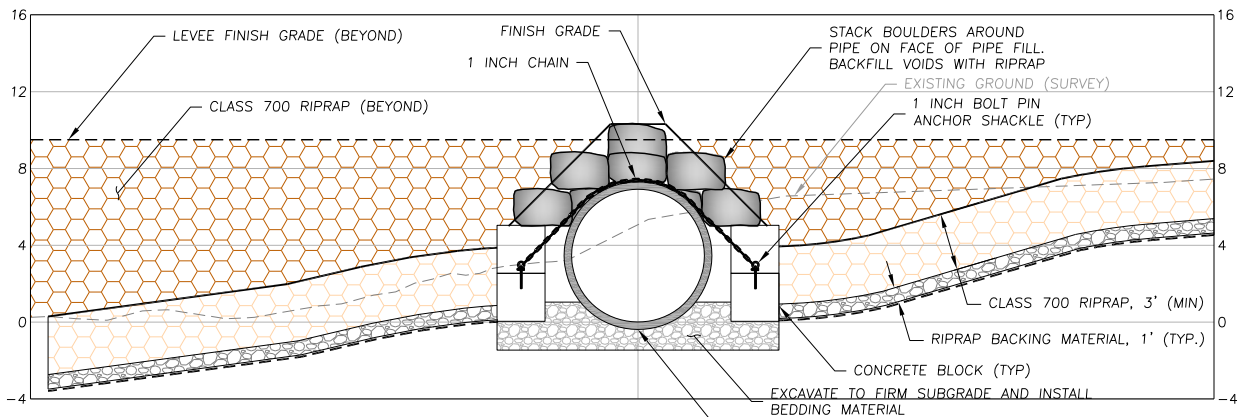
CHANNEL A PROFILE AT LEVEE
SCALE: 1" = 10'



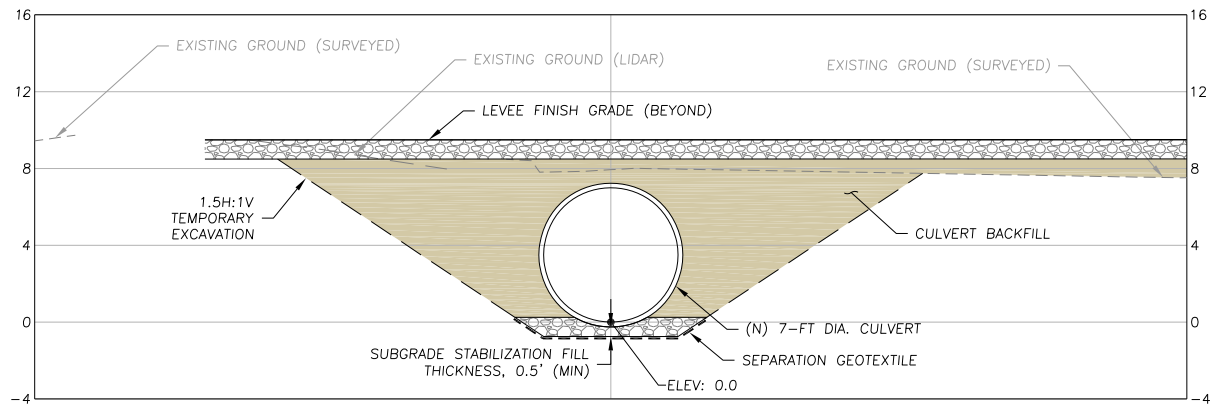
DETAILED CHANNEL A PROFILE AT LEVEE 1
C9
SCALE: 1" = 5'



CHANNEL A TIDE GATE SECTION 1
C9
SCALE: 1" = 5'



CHANNEL A BOULDER SLOPE SECTION 1
C9
SCALE: 1" = 5'



CHANNEL A RIPRAP PIPE FILL SECTION 1
C9
SCALE: 1" = 5'

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LEGEND

- 85—86— EXISTING SURVEY CONTOURS
- -85- -86- - EXISTING LIDAR CONTOURS
- — — EXISTING FLOW LINE
- — — EXISTING TAXLOT (APPROX.)
- — — EXISTING CULVERT, DIA. AS SHOWN
- ⊕ B-3 APPROX. GEOTECHNICAL EXPLORATION LOC.

BRAMBLE LANE TIDE GATE - EXISTING CONDITIONS

SCALE: 1" = 10'

WATERWAYS

CONSULTING INC.



1020 SW TAYLOR STREET, STE. 380
PORTLAND, OR 97205
PH: (503) 227-5979 // FAX: (503) 819-6847
WWW.WATWAYS.COM

PRELIMINARY

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PREPARED AT THE REQUEST OF:

COOS SOIL AND
WATER DISTRICT

BRAMBLE LANE
TIDE GATE -
EXISTING
CONDITIONS

NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1

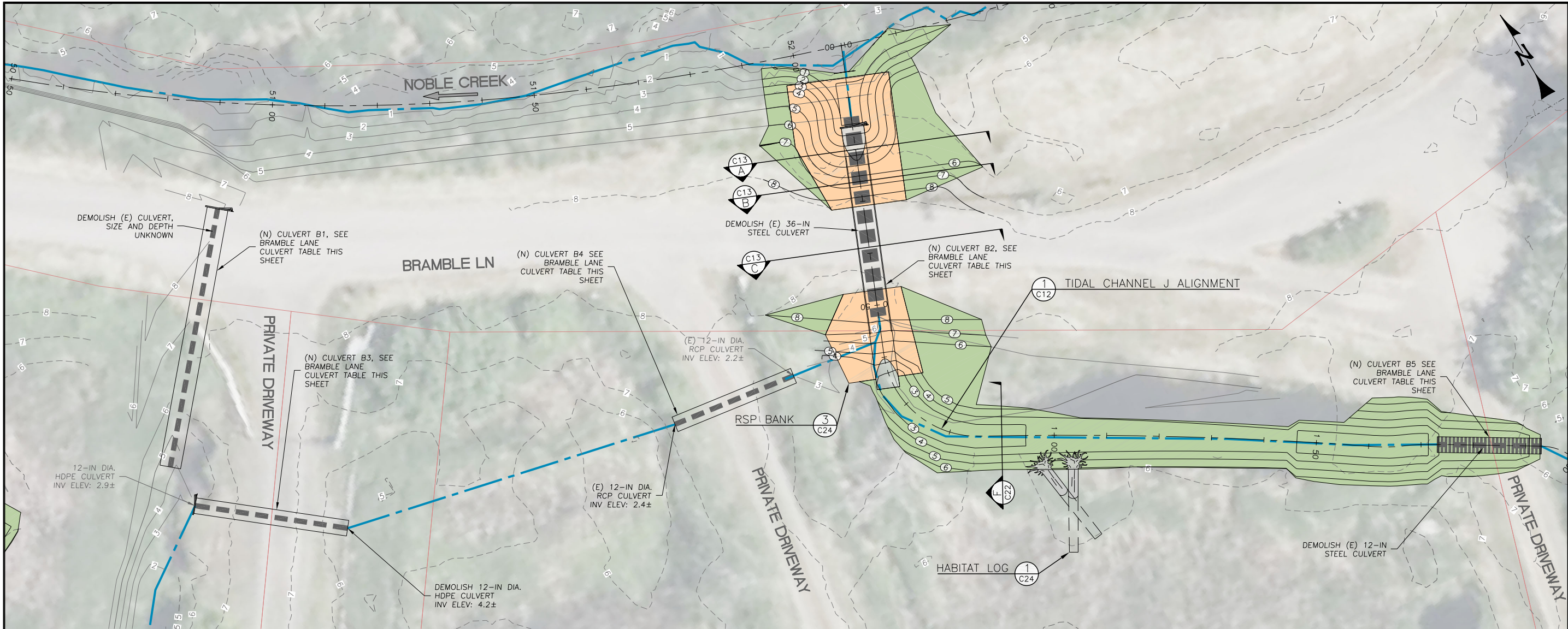
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DRAWN BY: D.H.
CHECKED BY: J.H.
DATE: 7/27/2026
JOB NO.: 20-067

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C11

11
OF
35



LEGEND	
	EXISTING SURVEY CONTOURS
	EXISTING LIDAR CONTOURS
	PROPOSED CONTOURS
	EXISTING FLOW LINE
	EXISTING TAXLOT (APPROX.)
	PROPOSED CHANNEL EXCAVATION
	PROPOSED ROCK SLOPE PROTECTION
	EXISTING CULVERT, DIA. AS SHOWN
	PROPOSED TIDE GATE
	PROPOSED CULVERT

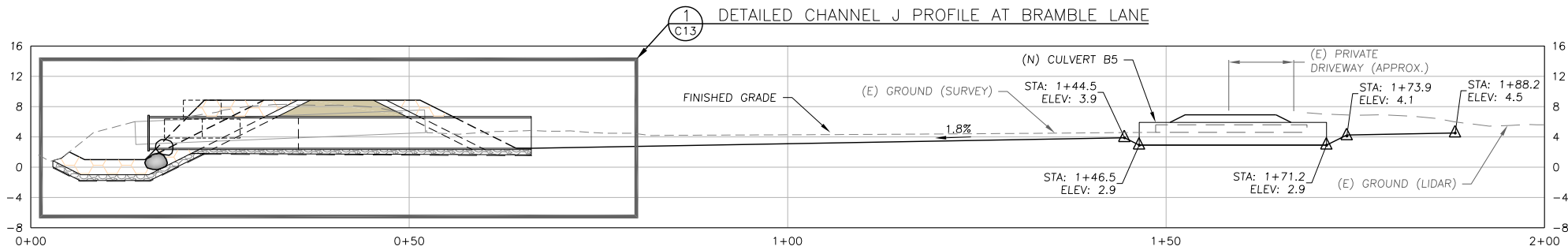
BRAMBLE LANE TIDE GATE - SITE PLAN AND PROFILE
SCALE: 1" = 10'

BRAMBLE LANE CULVERTS TABLE

CULVERT ID.	DIAMETER, IN.	LENGTH	UPSTREAM I.E.	DOWNSTREAM I.E.	TIDE GATE	PET DOOR
B1	48	50	2.5	2.5	Y	Y
B2	48	40	2.5	2.5	Y	Y
B3	36	25	2.5	2.5	Y	N
B4	36	25	1.5	1.5	N	N/A
B5	36	25	2.9	2.9	N	N/A

NOTES:

- CULVERT LENGTHS ASSUMES THE EXISTING ROAD GEOMETRY WILL NOT BE CHANGED AS PART OF THIS PROJECT.
- EMBED THE CULVERT INVERTS A MINIMUM OF 1 FOOT BELOW ADJACENT THALWEG ELEVATION ON CULVERTS WITHOUT TIDE GATES.



TIDAL CHANNEL J PROFILE
SCALE: 1" = 10'

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WATER DISTRICT**

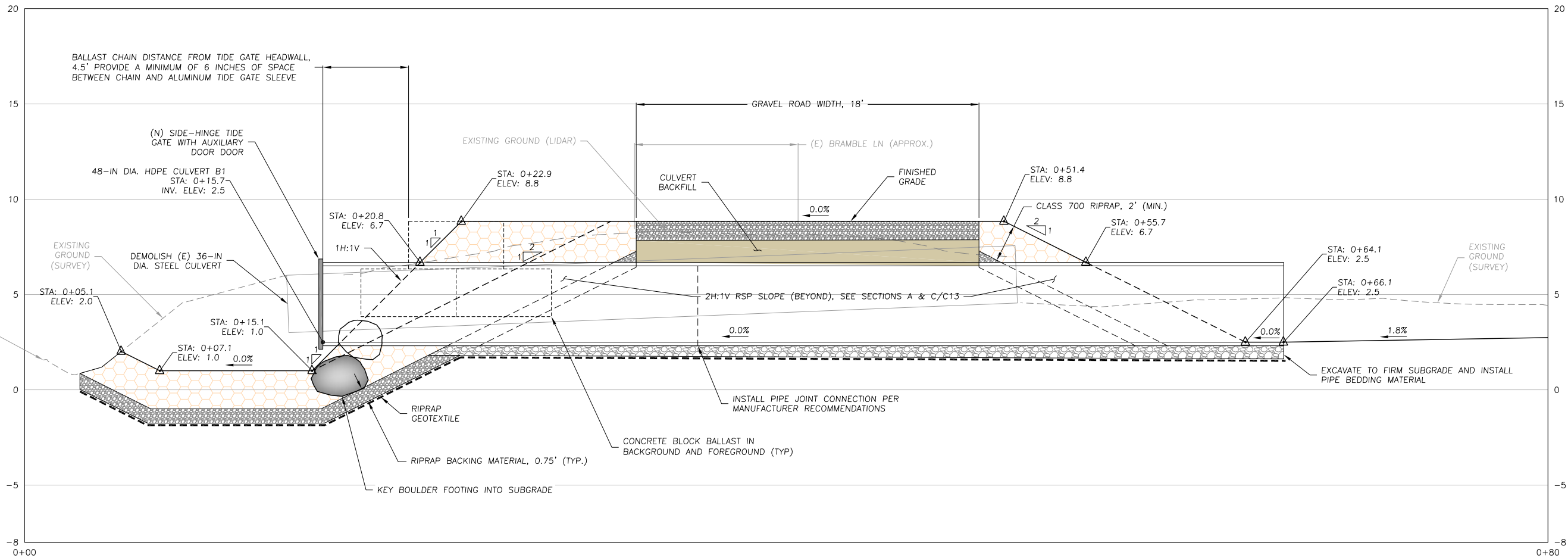
**BRAMBLE LANE
TIDE GATE -
SITE PLAN AND
PROFILE**

**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

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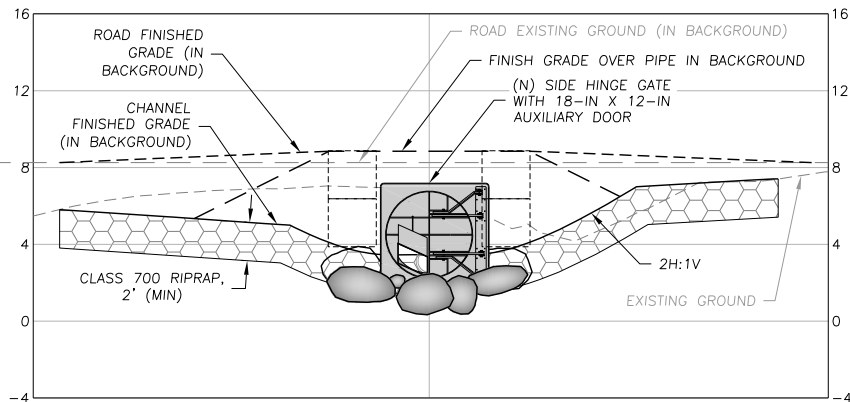
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REDUCED PLOTS

10



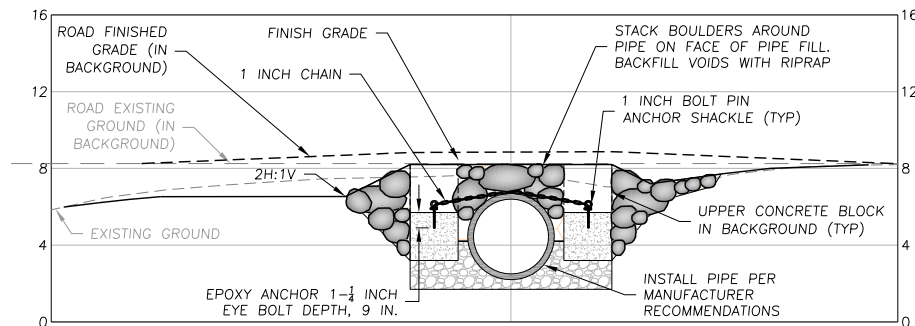
DETAILED CHANNEL J PROFILE AT BRAMBLE LANE
1" = 3'

1
C12



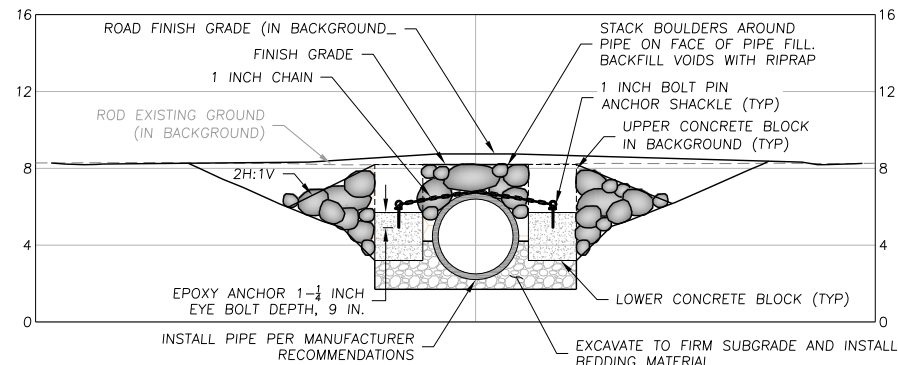
BRAMBLE LANE TIDE GATE SECTION
SCALE: 1" = 5'

A
C12



BRAMBLE LANE BOULDER SLOPE SECTION
SCALE: 1" = 5'

B
C12



BRAMBLE LANE RIPRAP PIPE FILL SECTION
SCALE: 1" = 5'

C
C12

PRELIMINARY

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PREPARED AT THE REQUEST OF:

COOS SOIL AND
WATER DISTRICT

BRAMBLE LANE
TIDE GATE -
SECTIONS

NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
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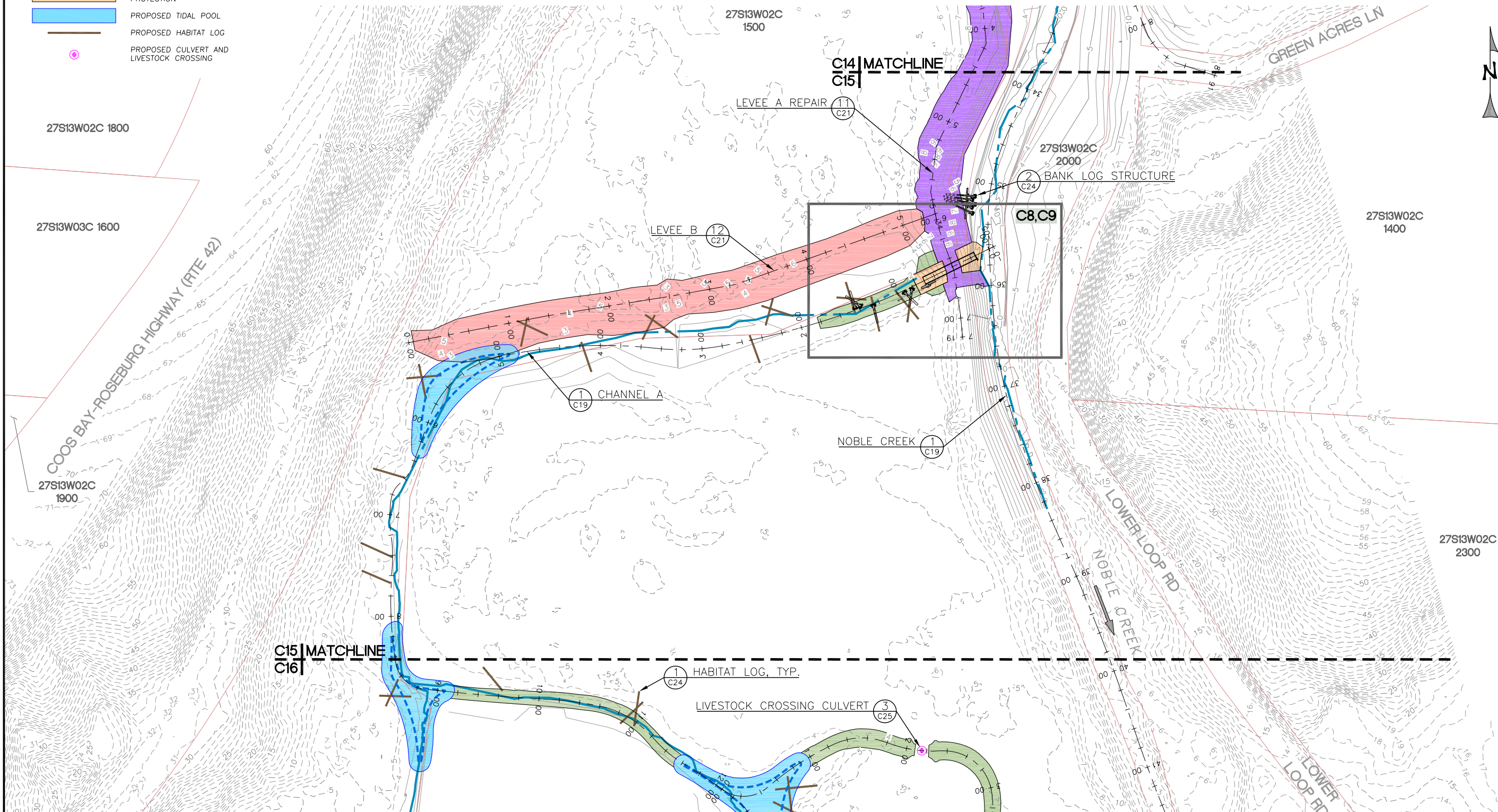
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C13

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OF
35

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- LEGEND**
- EXISTING SURVEY CONTOURS
 - EXISTING LIDAR CONTOURS
 - EXISTING FLOW LINE
 - EXISTING TAXLOT (APPROX.)
 - PROPOSED LEVEE REPAIR
 - PROPOSED LEVEE
 - PROPOSED CHANNEL EXCAVATION
 - PROPOSED ROCK SLOPE PROTECTION
 - PROPOSED TIDAL POOL
 - PROPOSED HABITAT LOG
 - PROPOSED CULVERT AND LIVESTOCK CROSSING



NORTH TIDAL CHANNEL PLAN
SCALE: 1" = 50'



PRELIMINARY
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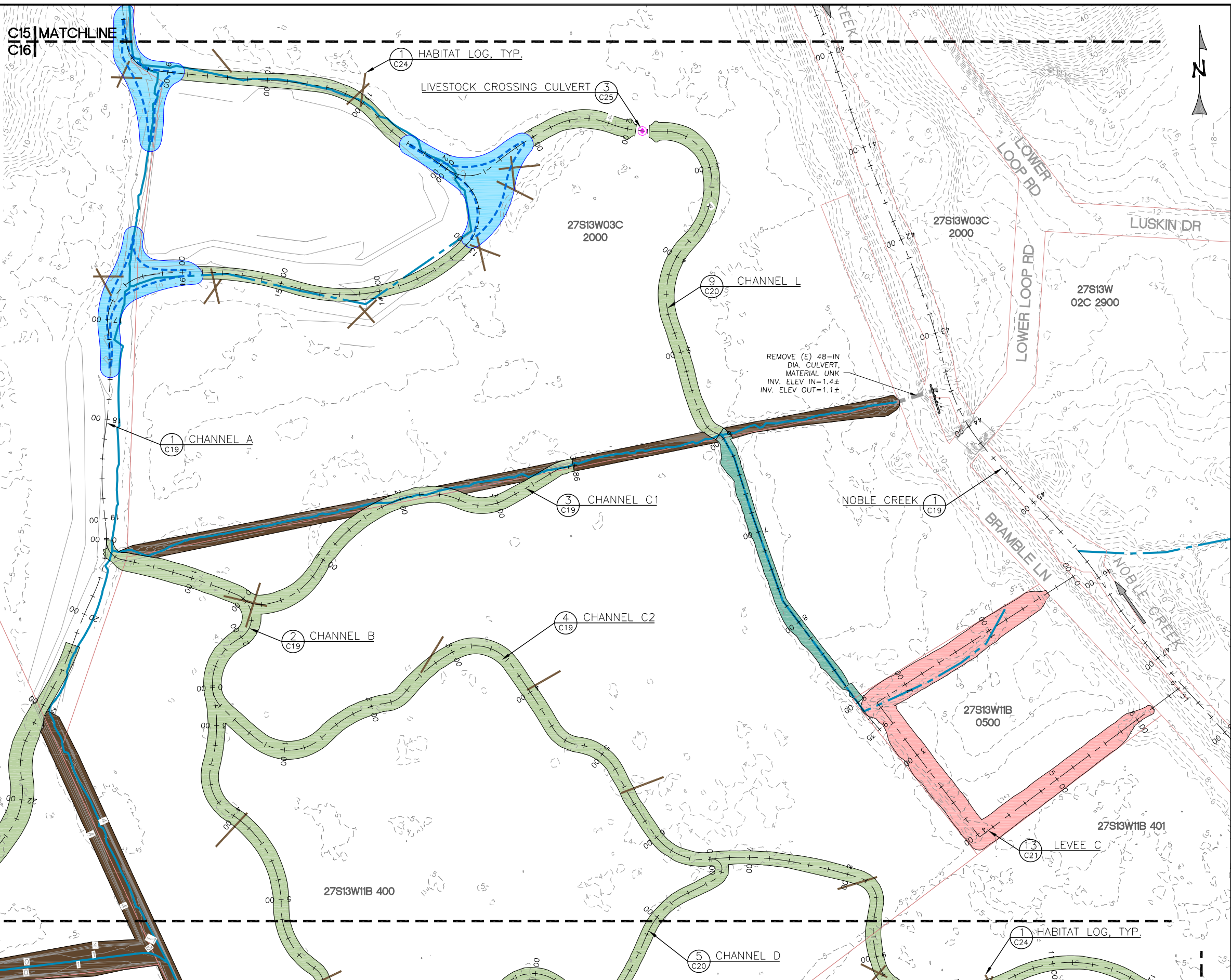
PREPARED AT THE REQUEST OF:
**COOS SOIL AND
WATER DISTRICT**

**NORTH TIDAL
CHANNEL PLAN**

**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

DESIGNED BY: J.H.
DRAWN BY: D.H.
CHECKED BY: J.H.
DATE: 7/27/2026
JOB NO.: 20-067

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MIDDLE TIDAL CHANNEL PLAN
SCALE: 1" = 50'

NOTES:
1. REMOVAL ALL (E) CULVERTS WITHIN DITCH FILL AREAS.

PRELIMINARY
NOT FOR CONSTRUCTION

COOS SOIL AND
WATER DISTRICT

MIDDLE TIDAL
CHANNEL PLAN

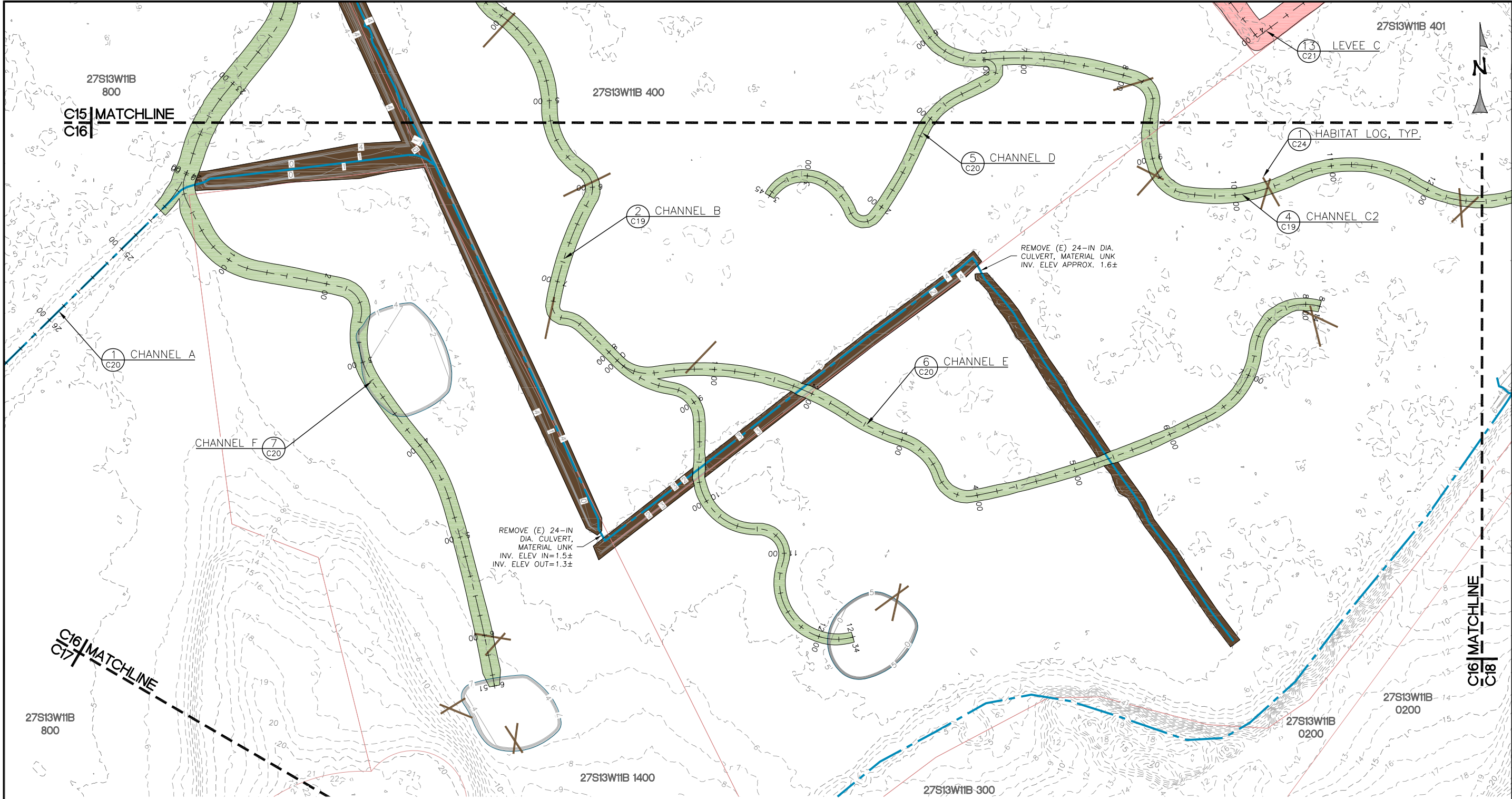
**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

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0  1"

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LEGEND	
	EXISTING SURVEY CONTOURS
	EXISTING LIDAR CONTOURS
	EXISTING FLOW LINE
	EXISTING POND (APPROX. LOCATION)
	EXISTING TAXLOT (APPROX.)
	PROPOSED CHANNEL EXCAVATION
	PROPOSED DITCH FILL
	PROPOSED HABITAT LOG

SOUTH TIDAL CHANNEL PLAN
SCALE: 1" = 50'

NOTES:
1. REMOVAL ALL (E) CULVERTS WITHIN DITCH FILL AREAS.

PRELIMINARY
NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:
COOS SOIL AND
WATER DISTRICT

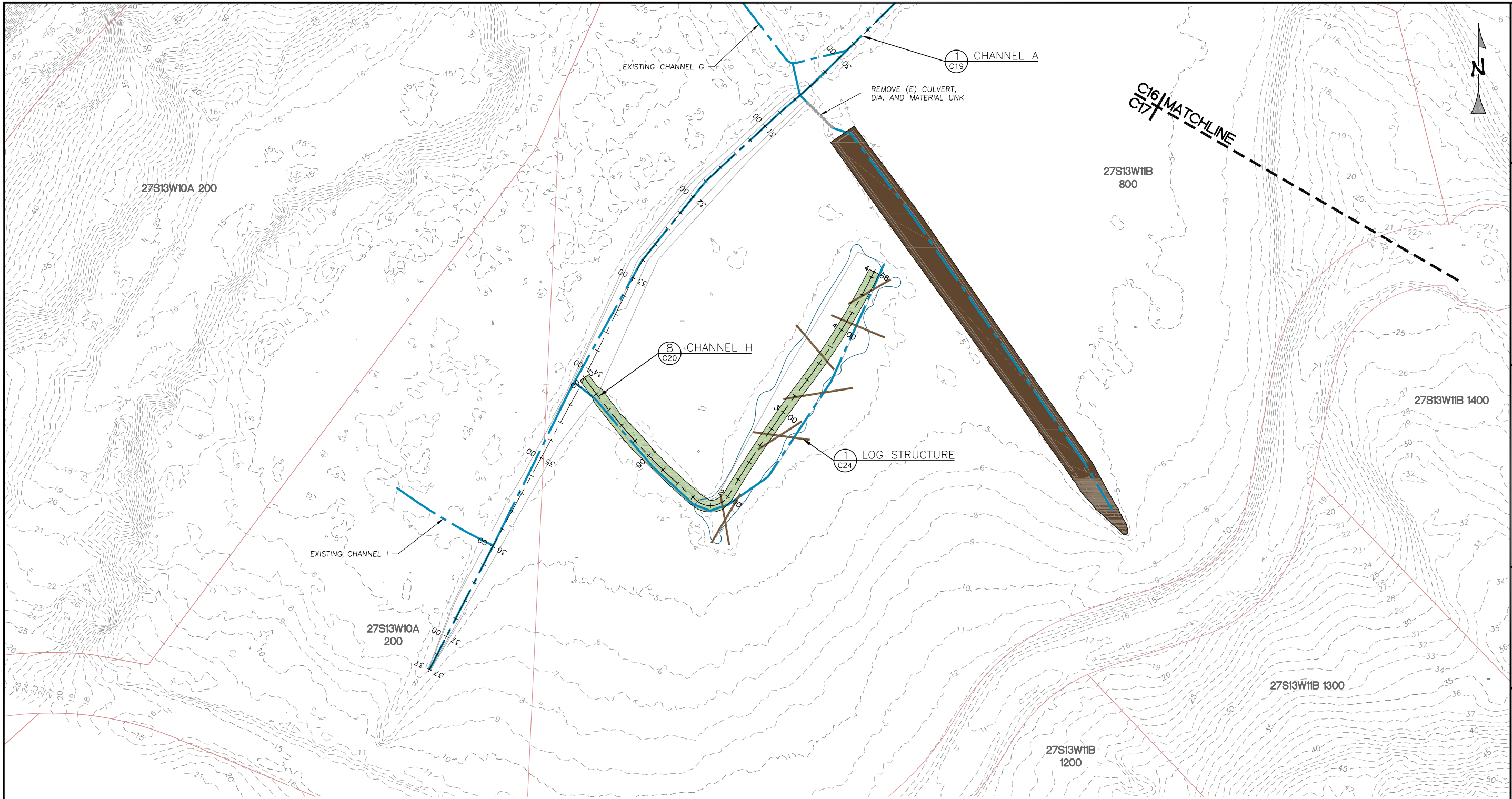
SOUTH TIDAL
CHANNEL PLAN

NOBLE CREEK
TIDELANDS
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60% DRAFT DESIGN
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LEGEND

- EXISTING SURVEY CONTOURS
- EXISTING LIDAR CONTOURS
- EXISTING FLOW LINE
- EXISTING TAXLOT (APPROX.)
- PROPOSED CHANNEL EXCAVATION
- PROPOSED DITCH FILL
- PROPOSED HABITAT LOG

SW CHANNEL AND POND ENHANCEMENT PLAN

SCALE: 1" = 50'

- NOTES:
- REMOVAL ALL (E) CULVERTS WITHIN DITCH FILL AREAS.

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**COOS SOIL AND
WATER DISTRICT**

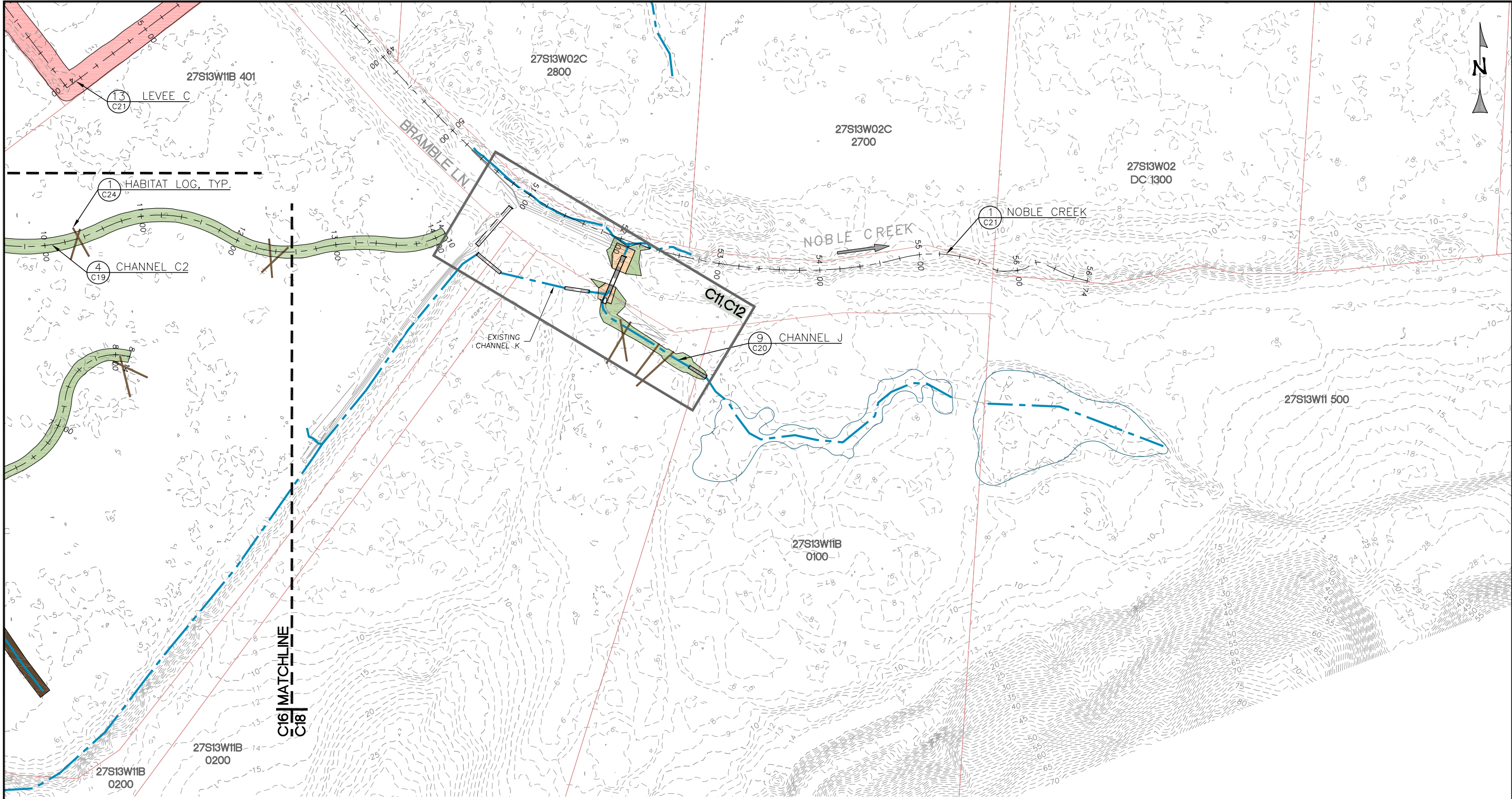
**SW CHANNEL
AND POND
ENHANCEMENT
PLAN**

**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
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LEGEND

- 85 86 EXISTING SURVEY CONTOURS
- 85 86 EXISTING LIDAR CONTOURS
- EXISTING FLOW LINE
- EXISTING POND (APPROX. LOCATION)
- EXISTING TAXLOT (APPROX.)
- PROPOSED DITCH FILL
- PROPOSED LEVEE
- PROPOSED ROCK SLOPE PROTECTION
- PROPOSED CHANNEL EXCAVATION
- PROPOSED HABITAT LOG

BRAMBLE LANE POND ENHANCEMENT PLAN

SCALE: 1" = 50'

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COOS SOIL AND
WATER DISTRICT

BRAMBLE LANE
POND
ENHANCEMENT
PLAN

NOBLE CREEK
TIDELANDS
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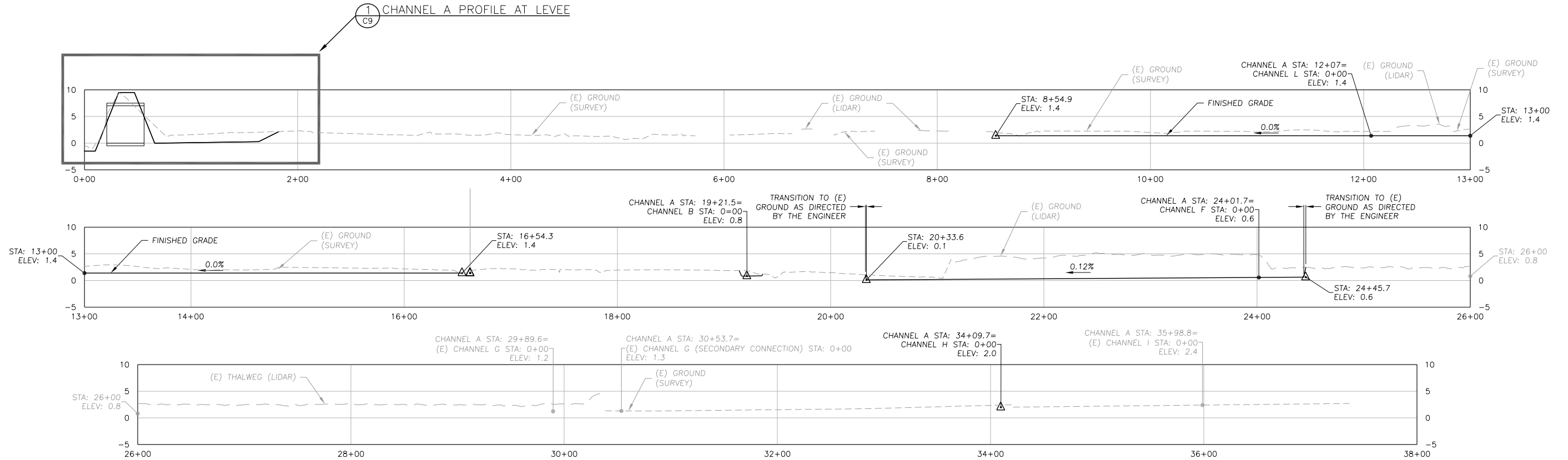
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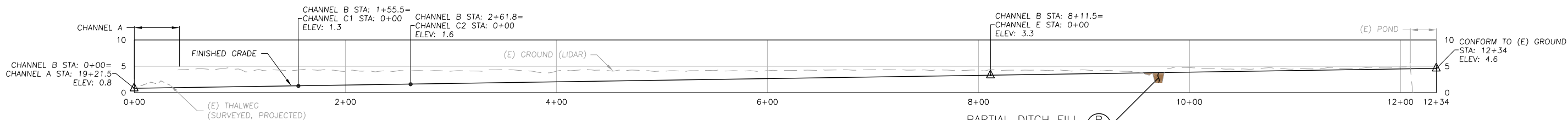
C18

18
OF
35

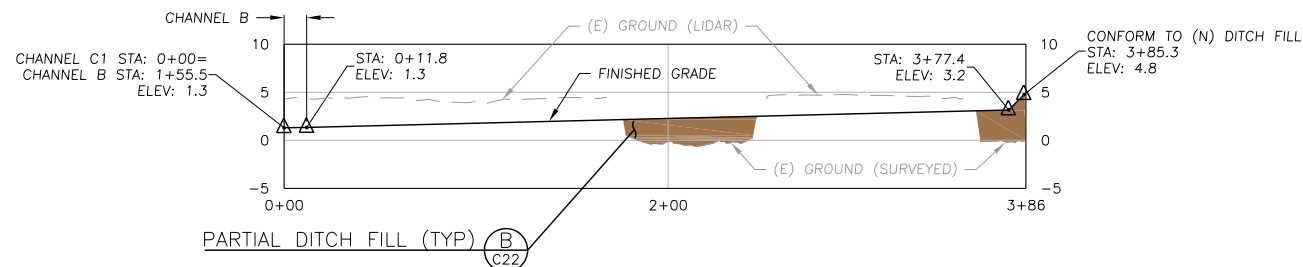
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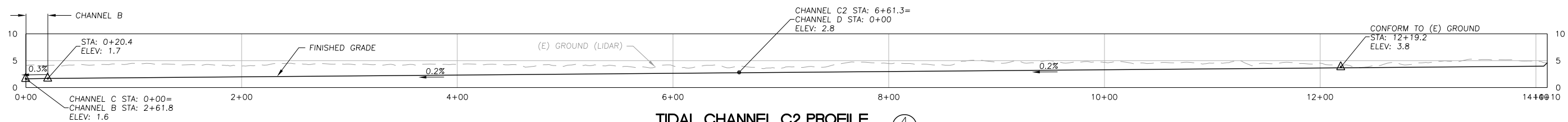
TIDAL CHANNEL A PROFILE
SCALE: HORIZ: 1" = 50', VERT: 1" = 10' C3 - C9, C7 - C17



TIDAL CHANNEL B PROFILE
SCALE: HORIZ: 1" = 50', VERT: 1" = 10' C15 - C16



TIDAL CHANNEL C1 PROFILE
SCALE: HORIZ: 1" = 50', VERT: 1" = 10' C15



TIDAL CHANNEL C2 PROFILE
SCALE: HORIZ: 1" = 50', VERT: 1" = 10' C15, C16, C18

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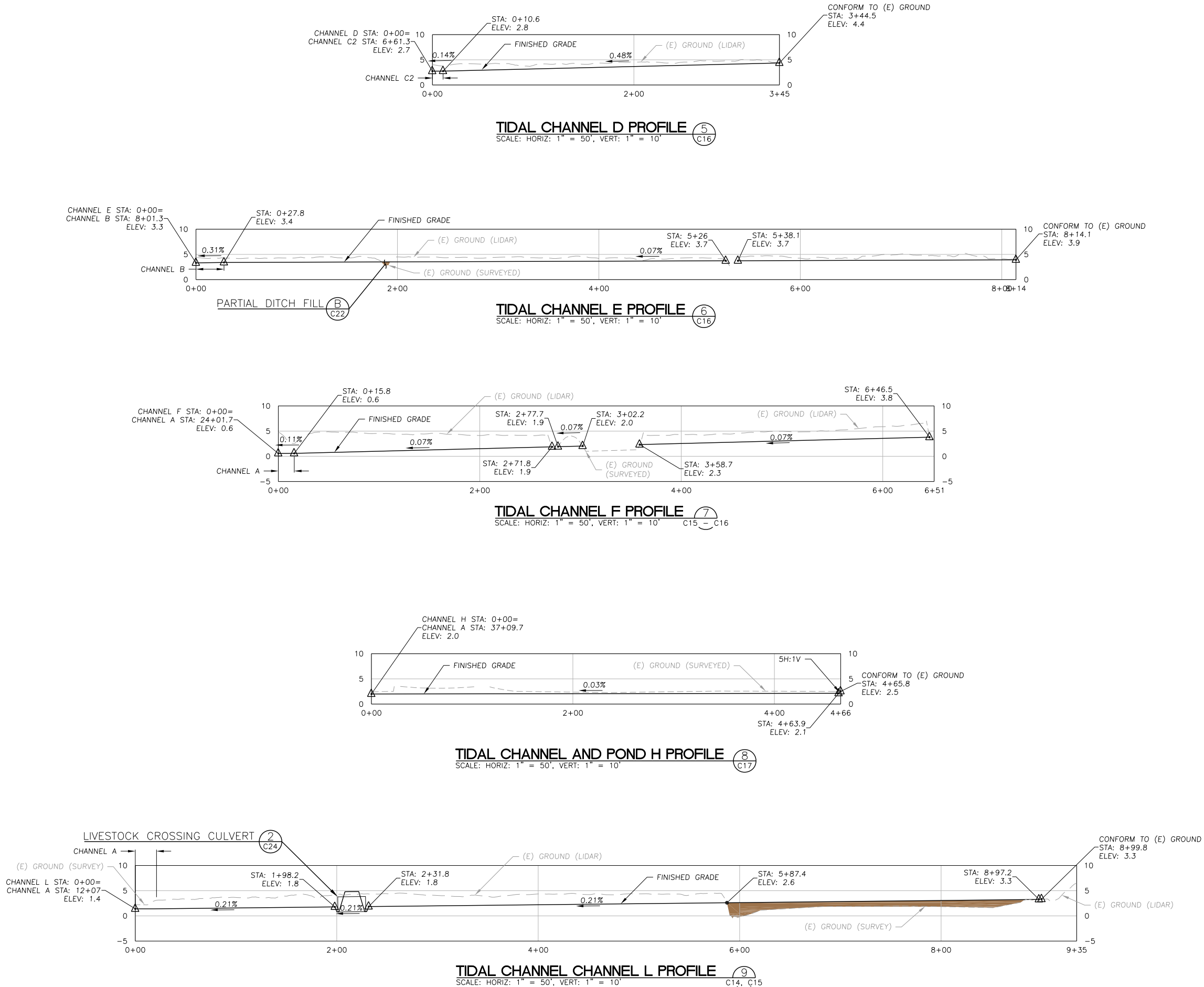
**TIDAL CHANNEL
PROFILES**

**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

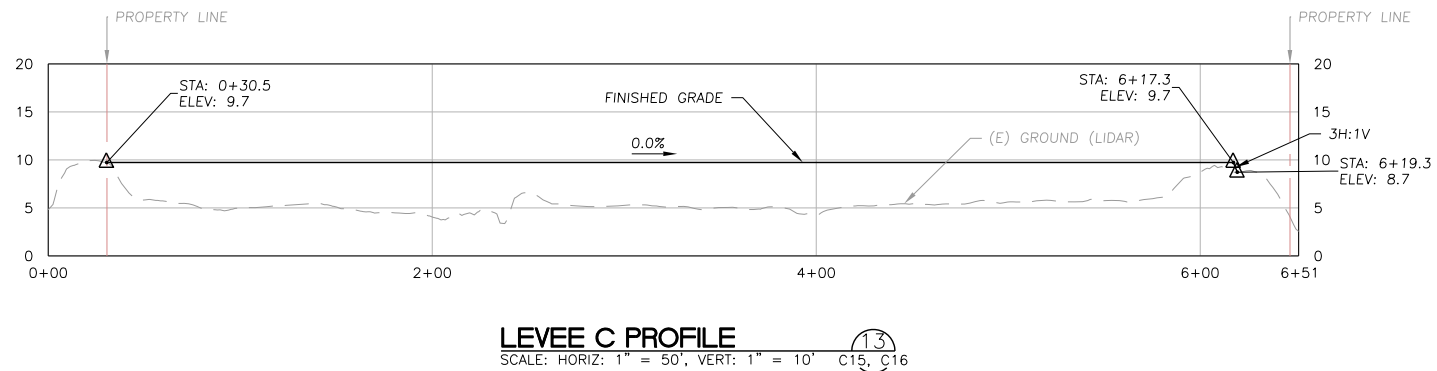
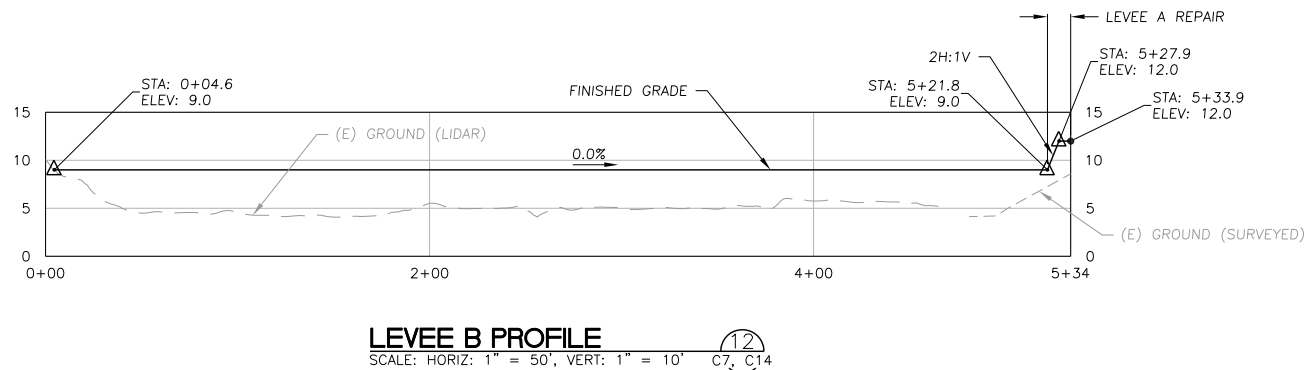
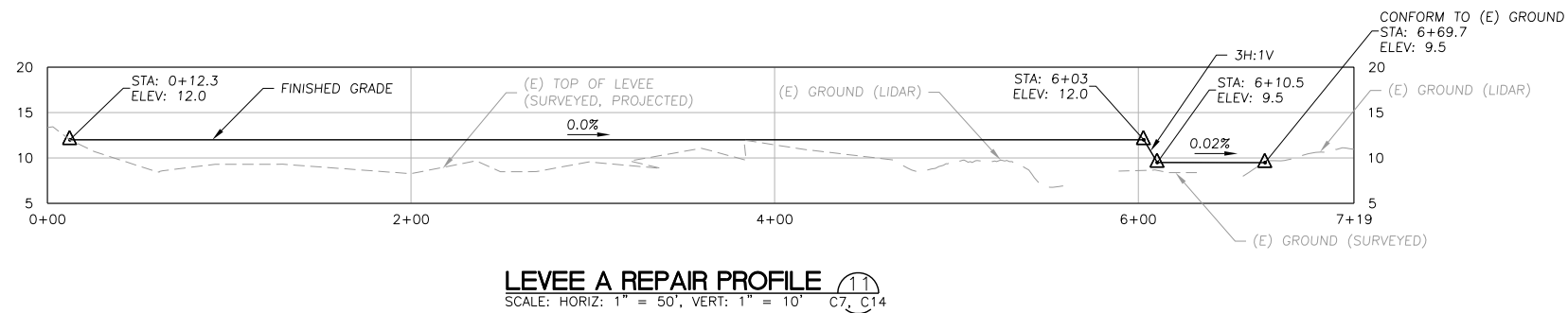
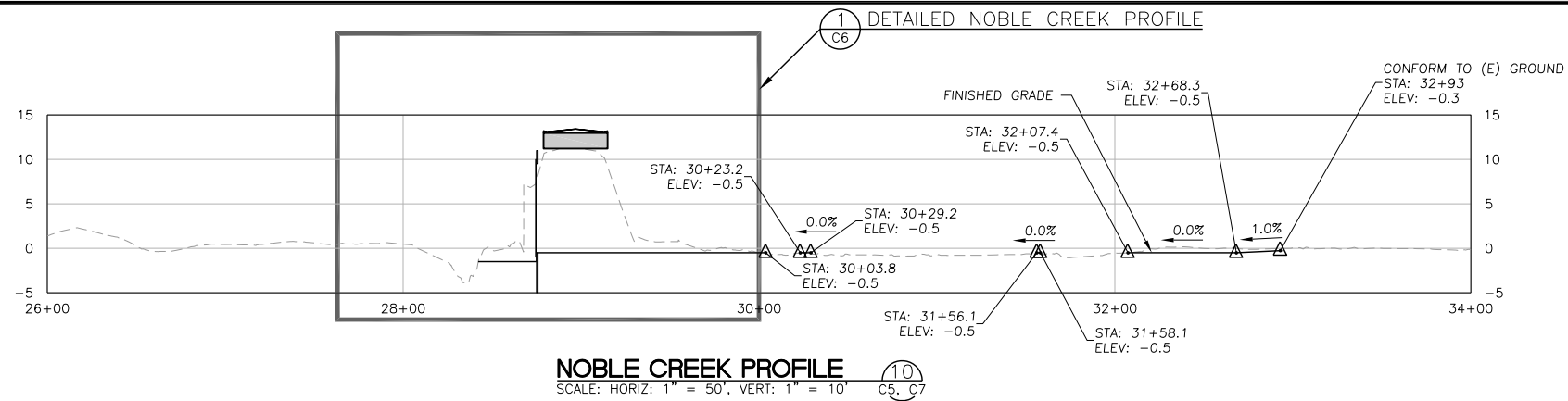
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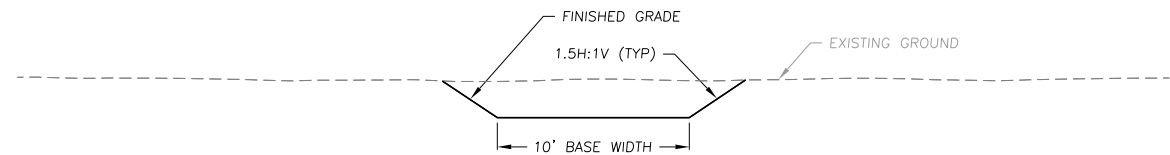
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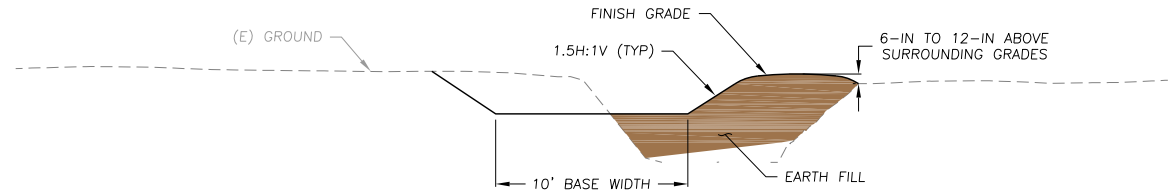
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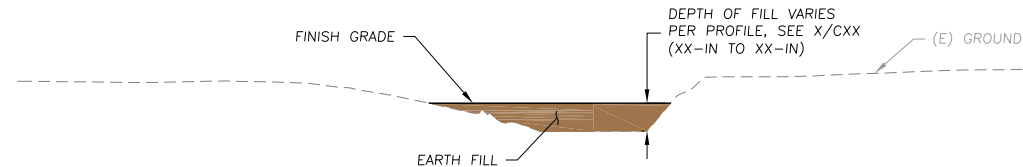
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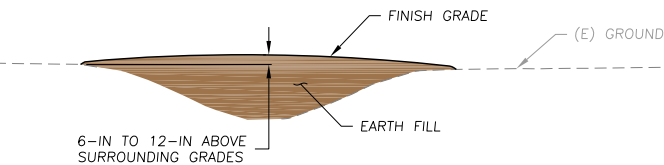
TYPICAL TIDAL CHANNEL SECTION (A)
SCALE: 1" = 5'
C8, C11, C14, C15, C16, C17, C18



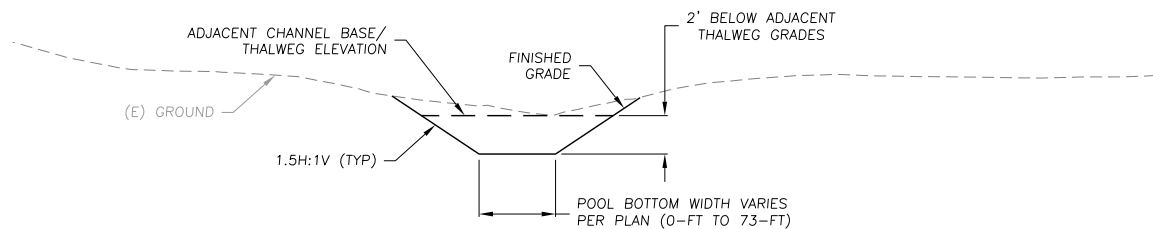
TYPICAL PARTIAL DITCH FILL ADJACENT TO TIDAL CHANNEL SECTION (B)
SCALE: 1" = 5'
C15, C16



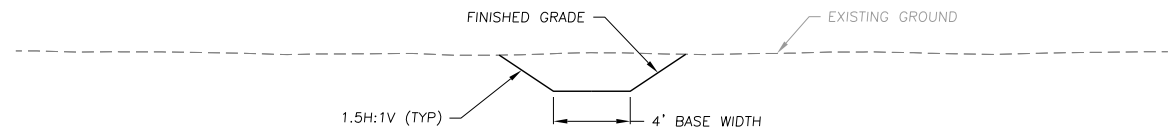
TYPICAL PARTIAL DITCH FILL SECTION (C)
SCALE: 1" = 5'
C15



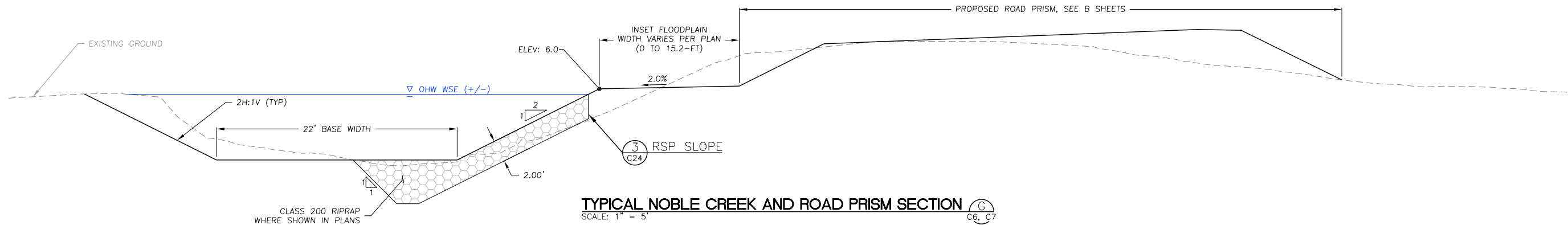
TYPICAL DITCH FILL SECTION (D)
SCALE: 1" = 5'
C15, C16, C17, C18



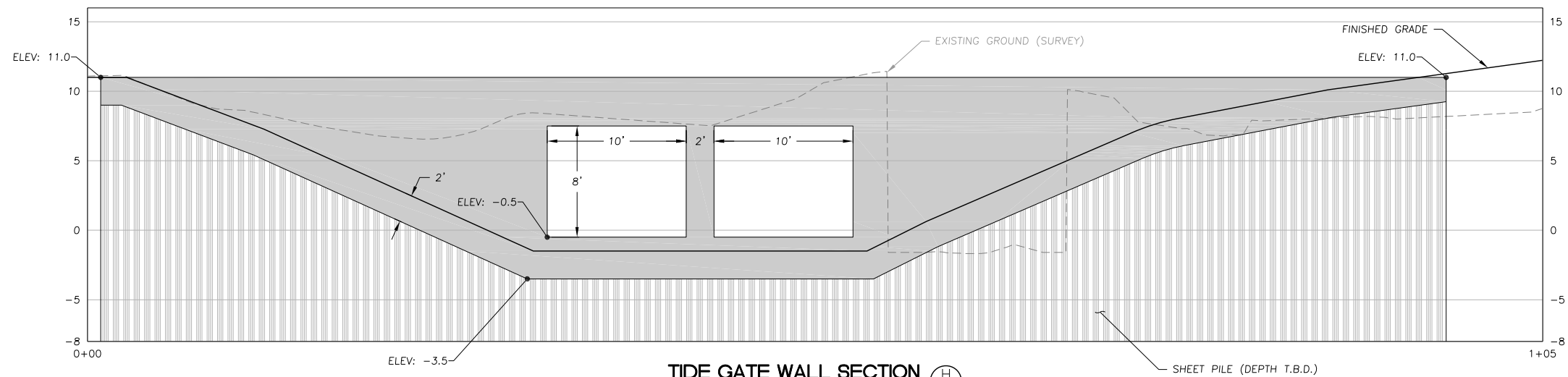
TYPICAL POOL SECTION (E)
SCALE: 1" = 5'
C14, C15



TYPICAL CHANNEL J SECTION (F)
SCALE: 1" = 5'
C12



TYPICAL NOBLE CREEK AND ROAD PRISM SECTION (G)
SCALE: 1" = 5'
C6, C7



TIDE GATE WALL SECTION (H)
SCALE: 1" = 5'
C5, C6

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**COOS SOIL AND
WATER DISTRICT**

**TYPICAL
SECTIONS AND
WALL SECTION**

**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

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LEGEND

- 10

12

2-FT EXISTING CONTOURS (SOUTH COAST 2009 LIDAR)

EXISTING FLOW LINE

EXISTING POND (APPROX. LOCATION)

EXISTING CULVERT/TIDE GATE

EXISTING EDGE OF PAVEMENT

EXISTING PARCEL BOUNDARY (COOS COUNTY GIS DATABASE)

PROPOSED LEVEE SEEDING

PROPOSED FLOODPLAIN SEEDING
- SEEDING NOTES
1. SEEDING MAY BE VIA HYDROSEEDING OR BROADCAST SEEDING AT THE CONTRACTOR'S OPTION.

2. SEEDING SHALL NOT BE REQUIRED FOR AREAS WHERE SOIL IS SPREAD TO A DEPTH EQUAL TO OR LESS THAN 3" OVER EXISTING VEGETATED SURFACES.

3. NO SEEDING SHALL BE PLACED BELOW ELEVATION 4. ALL EXPOSED SOILS ABOVE ELEV. 4 ASSOCIATED WITH EXCAVATION OF CHANNELS, PONDS, AND DITCH FILL SHALL BE SEEDED AND MULCHED.

4. SEEDING SHALL BE APPLIED AT A RATE OF 180 LBS/ACRE.

5. SEEDING MIXES AND PLACEMENT METHODS SHALL BE BASED ON 2 ZONES SUMMARIZED AS FOLLOWS:

5.1. NEW LEVEE AND LEVEE REPAIR ZONES – SEEDING SHALL BE PERFORMED ON ALL EXCAVATED AND FILL SLOPES ALONG THE LEVEES (TABLE 1, THIS SHEET).

5.2. FLOODPLAIN ZONE – SEEDING SHALL BE PERFORMED ON ALL EXCAVATED SLOPES ABOVE ELEVATION 4 FOR CHANNELS, PONDS, AND DITCH FILL (TABLE 3, THIS SHEET).
- TABLE 1: LEVEE SEED MIX
- | BOTANICAL NAME | COMMON NAME | % MIX BY PLS (PURE LIVE SEED) |
|----------------------|--------------------|-------------------------------|
| POA PRATENSIS | KENTUCKY BLUEGRASS | 20% |
| AGROSTIS STOLONIFERA | CREEPING BENTGRASS | 20% |
| FESTYCA ARYNDUNACEA | TALL FESCUE | 20% |
| LOLIUM MULTIFLORUM | ANNUAL RYE | 20% |
| DISTICHLIS SPICATA | SALTGRASS | 20% |
- TABLE 2: FLOODPLAIN SEED MIX
- | BOTANICAL NAME | COMMON NAME | % MIX BY PLS (PURE LIVE SEED) |
|----------------------|--------------------|-------------------------------|
| AGROSTIS STOLONIFERA | CREEPING BENTGRASS | 50% |
| LOLIUM MULTIFLORUM | ANNUAL RYE | 50% |
| TOTAL | | 100% |
-
- REVEGETATION PLAN
SCALE: 1" = 200'
- WATERWAYS

CONSULTING INC.

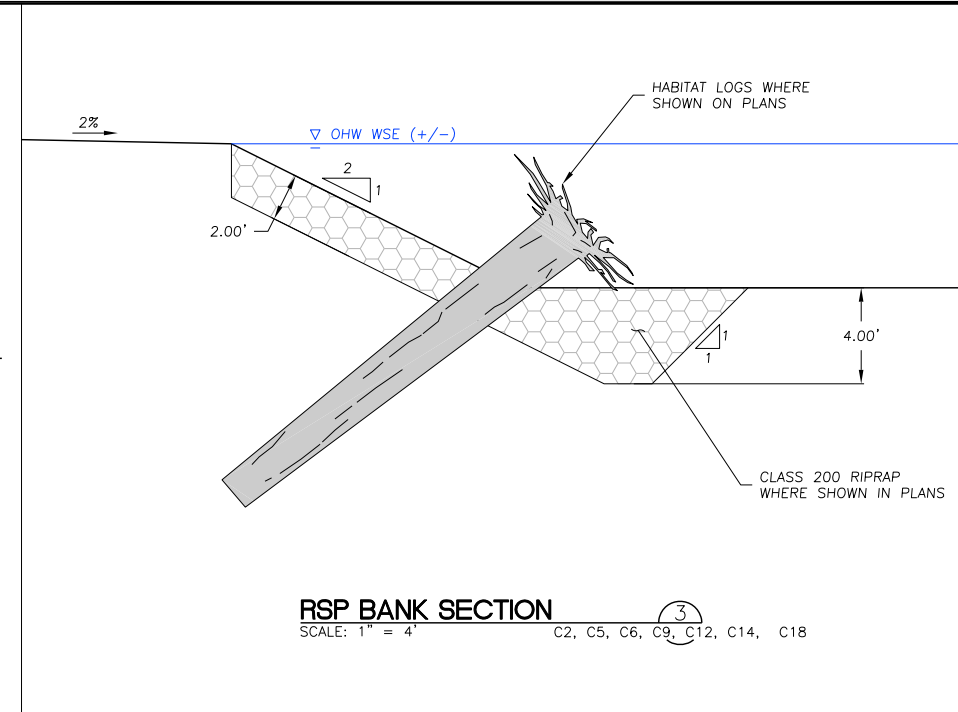
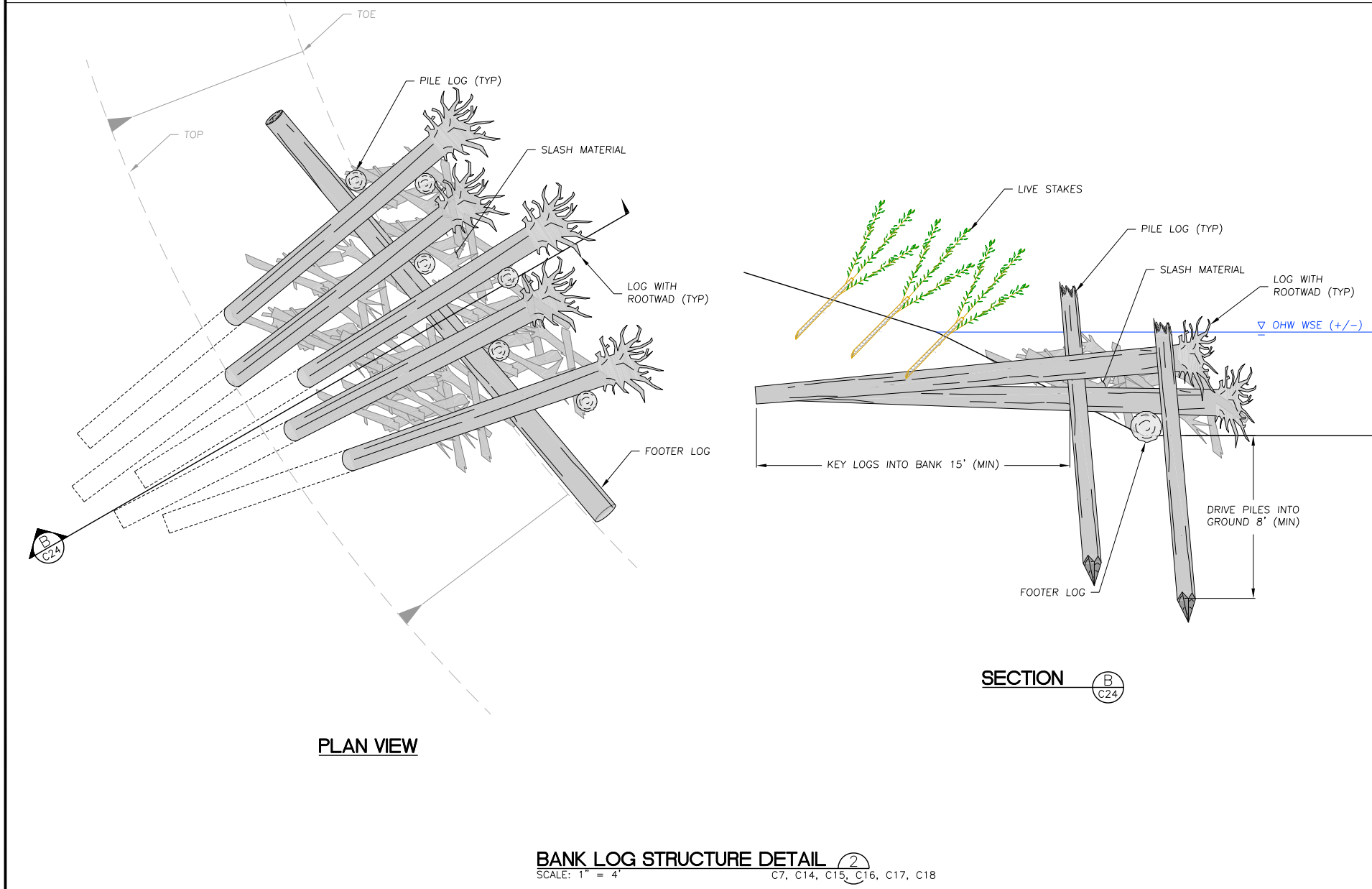
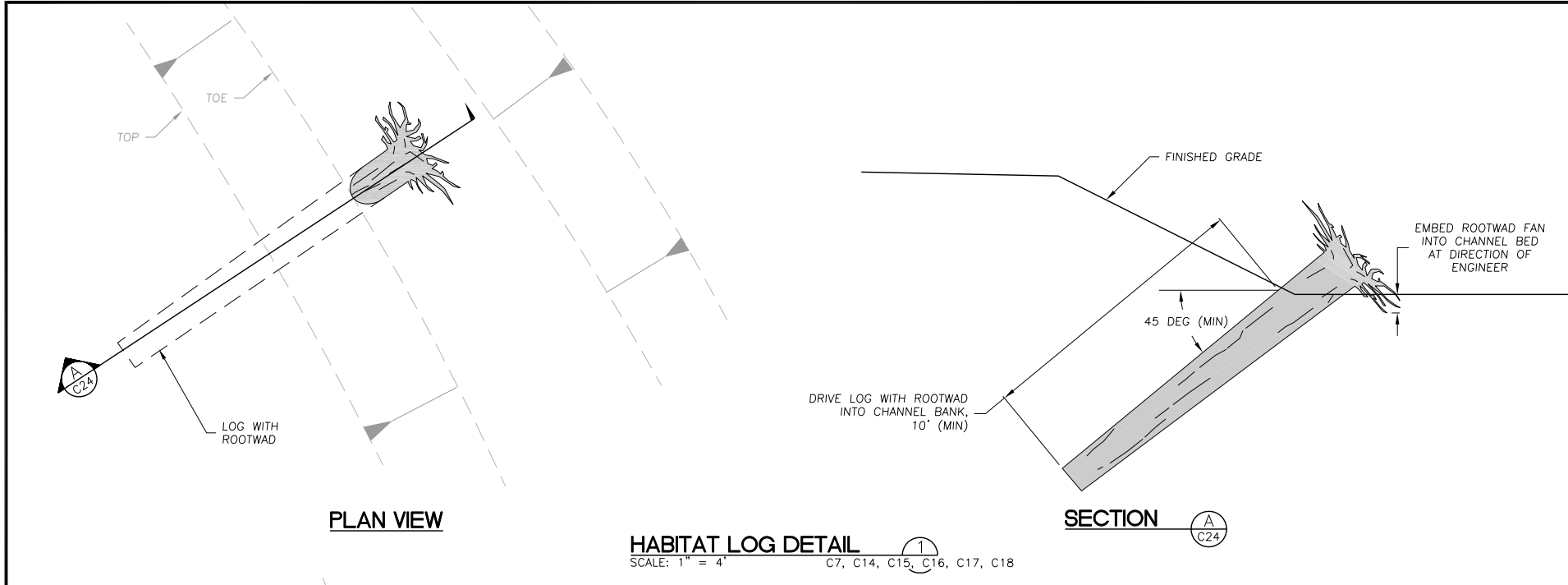
1020 SW TAYLOR STREET, STE. 380

PORTLAND, OR 97205

PH: (503) 227-5979 // FAX: (503) 819-6847

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WATER DISTRICT
- REVEGETATION
PLAN
- NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
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35

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LOG STRUCTURE NOTES

1. GENERAL

1.1. PRIOR TO THE START OF WORK, THE ENGINEER SHALL DESIGNATE REPRESENTATIVES AUTHORIZED TO OBSERVE THE CONTRACTOR'S PLACEMENT OF LOG STRUCTURES. CONTRACTOR SHALL NOTIFY THE AUTHORIZED REPRESENTATIVE 72 HOURS PRIOR TO PLACEMENT OF LOG STRUCTURES. CONSTRUCT ALL LOG STRUCTURES IN THE PRESENCE OF THE AUTHORIZED REPRESENTATIVE.

1.2. LOG STRUCTURE DESIGNS ARE SHOWN CONCEPTUALLY DUE TO THE INHERENT VARIABILITY OF MATERIAL PROPERTIES. THE DESIGN REQUIRES THAT THE ENGINEER WILL OBSERVE CONSTRUCTION OF THE LOG STRUCTURES TO ENSURE THE INTENT OF THE DESIGN IS MET. OBSERVATIONS MUST INCLUDE LOG SELECTION, PLACEMENT, CONNECTIONS FOR BALLASTING, AND PLACEMENT OF BACKFILL. ANY LOG STRUCTURES CONSTRUCTED WITHOUT THE ENGINEER PRESENT MAY RESULT IN REJECTION OF THE WORK BY THE ENGINEER.

1.3. THE CONSTRUCTION OF LOG STRUCTURES REQUIRES EQUIPMENT WHICH CAN PLACE LOGS IN PRECISE LOCATIONS. AN EXCAVATOR OF A SUITABLE SIZE WITH A THUMB OR CLAMSHELL ATTACHMENT IS SUGGESTED (CLAMSHELL PREFERRED).

1.4. LOG PLACEMENT. LOG PLACEMENT LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT LOCATIONS SHALL BE AS APPROVED BY THE ENGINEER, OR HIS AUTHORIZED REPRESENTATIVE.

1.5. PLACE ROOTWADS AT AN ELEVATION WHERE THE MAJORITY OF THE ROOT MASS IS BELOW ORDINARY LOW WATER, AS APPROVED BY THE ENGINEER.

1.6. ALL EXPOSED ENDS OF LOGS SHALL BE BROKEN OR ROUGHENED TO CREATE NATURAL APPEARANCE AS DIRECTED BY THE ENGINEER. CUT LOG ENDS SHALL ONLY BE USED IN LOCATIONS WHERE THE END WILL BE BURIED.

LOGS: LOGS SHALL BE SPRUCE, HEMLOCK OR DOUGLAS FIR, SOUND AND FREE OF SIGNIFICANT DECAY. FOR CLARITY,

2. LOG DIMENSIONS AND QUANTITIES:

HABITAT LOGS	*DIAMETER (IN.)	**LENGTH (FT.)	TOTAL
LOGS WITH ROOTWAD	12-18	15	100

BANK LOG STRUCTURE (5)	*DIAMETER (IN.)	**LENGTH (FT.)	PER STRUCTURE	TOTAL
LOGS WITH ROOTWAD	12-18	30	5	25
FOOTER LOG	18	20	1	5
SLASH	-	-	2 CY	10 CY
PILE LOG	12	12	6	30
LOG/LOG CONNECTION	-	-	8	40

*ALL LOGS WITH ROOTWADS SHALL MEET THE MINIMUM DIAMETER LISTED IN THE TABLE ABOVE AS MEASURED AT THE APPROXIMATE STANDING TREE DIAMETER AT BREAST HEIGHT. ALL LOGS WITHOUT ROOTWADS SHALL MEET THE MINIMUM DIAMETER LISTED IN THE TABLE ABOVE AT ANY POINT ALONG THE LENGTH OF THE LOG, NOT INCLUDING THE ROOTWAD.

**LENGTHS LISTED IN THE TABLE ABOVE INCLUDE THE ROOTWAD WHERE SPECIFIED.

3. SLASH

3.1. SLASH SHALL CONSIST OF WOODY DEBRIS (BRANCHES AND LOGS LESS THAN 10 INCHES IN DIAMETER, AND ROOTWADS) OF NATIVE TREES AND SHRUBS PACKED INTO THE VOID SPACES OF THE LOG STRUCTURES WHERE SHOWN ON PLANS.

WATERWAYS CONSULTING INC.

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COOS SOIL AND WATER DISTRICT

LOG STRUCTURE DETAILS

NOBLE CREEK TIDELANDS RESTORATION 60% DRAFT DESIGN REVISION 1

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C24

24 OF 35

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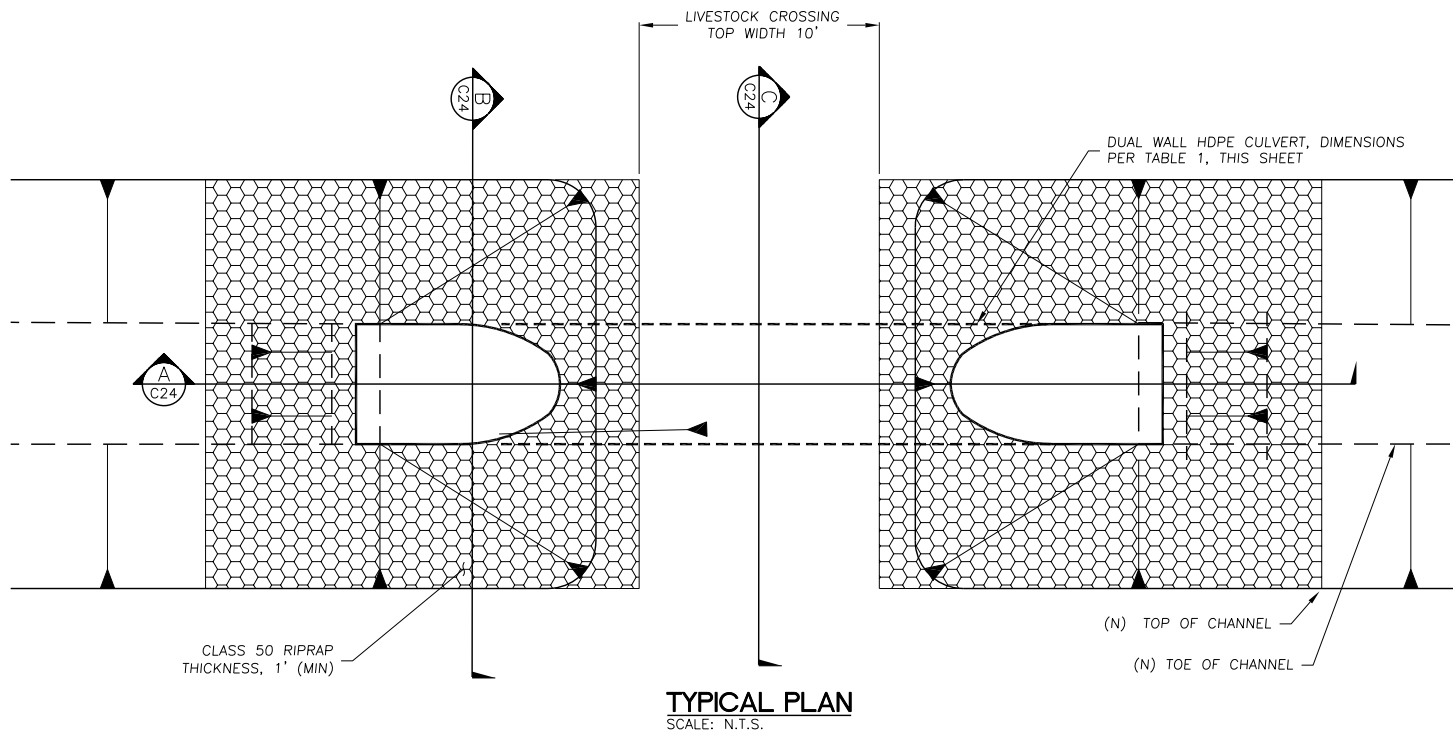
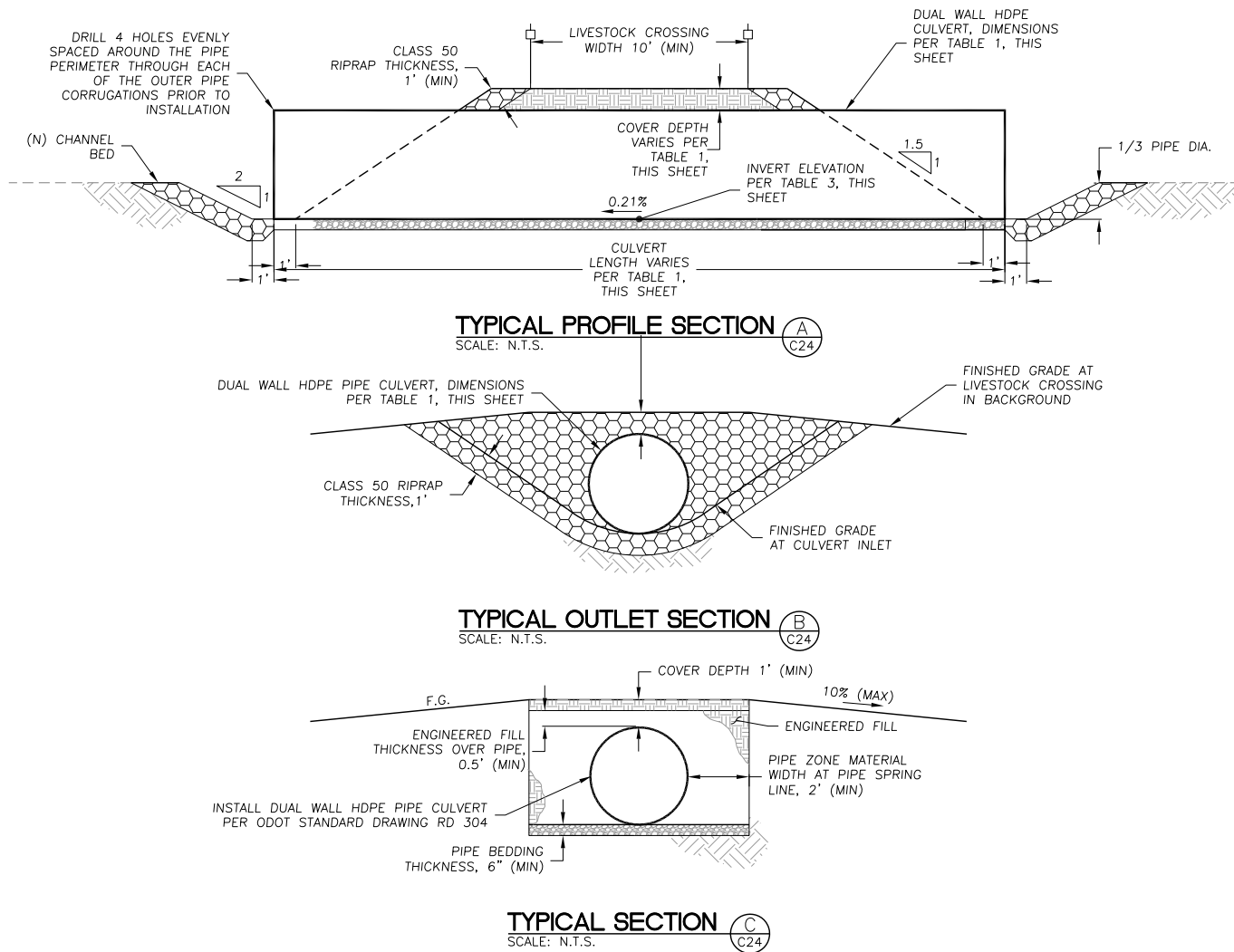


TABLE 1: CULVERT SIZE AND INVERT ELEVATIONS

CHANNEL	ALIGNMENT STATION	MIN. COVER DEPTH (FT)	DIAMETER (FT)	CULVERT LENGTH (FT)	INVERT ELEV. (FT)
L	2+15	1.00	3	28	0.80



LIVESTOCK CROSSING CULVERT DETAIL (3)
SCALE: N.T.S. C14, C15

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**LIVESTOCK
CROSSING
CULVERT DETAIL**

**NOBLE CREEK
TIDELANDS
RESTORATION
60% DRAFT DESIGN
REVISION 1**

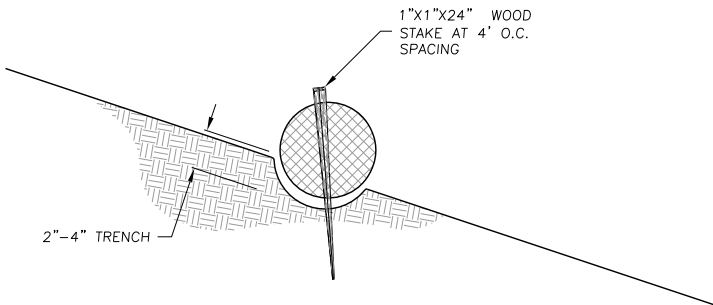
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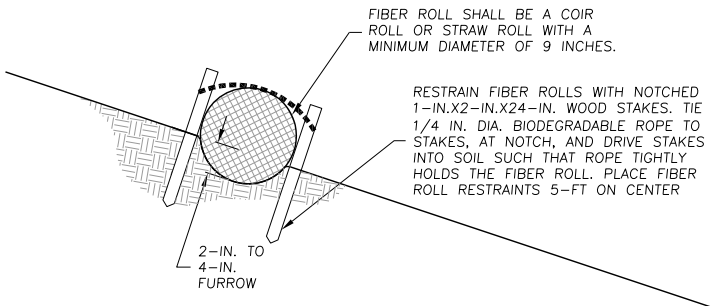
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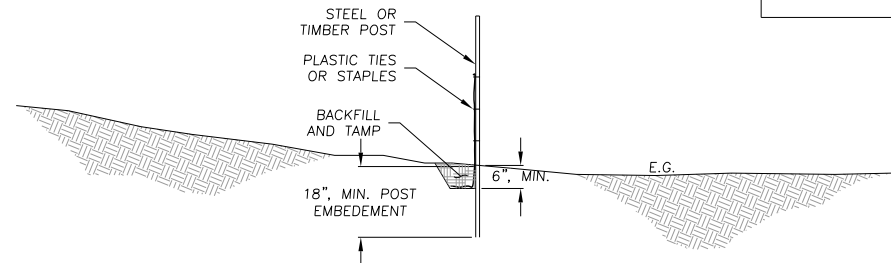
TEMPORARY STRAW WATTLE DETAIL (1)
SCALE: 1" = 1' C2, C4



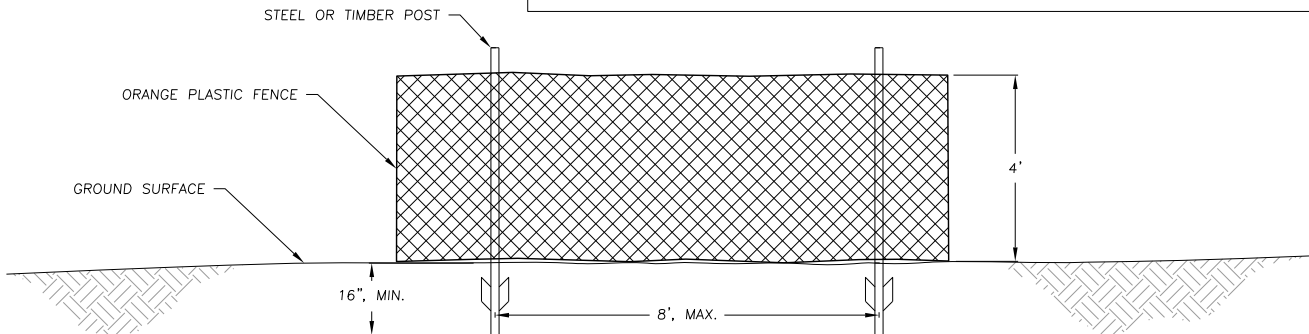
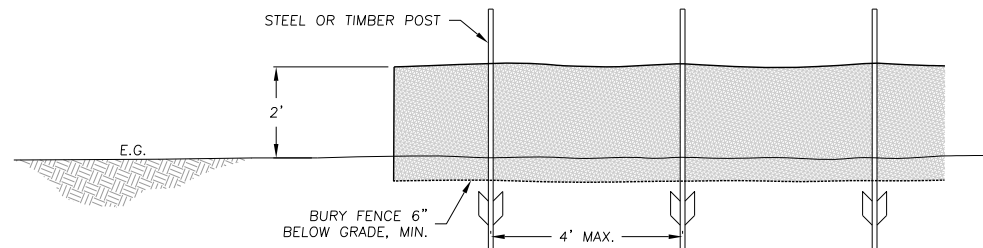
PERMANENT STRAW WATTLE DETAIL (2)
SCALE: 1" = 1' XX

SILT FENCE NOTES

1. DIG TRENCH FIRST, THEN ERECT FENCE IN TRENCH. BACKFILL AND COMPACT SOIL TO SECURE FABRIC.
2. PROVIDE 1' MINIMUM OVERLAP AT FENCE SPLICES.
3. PLACE SILT FENCE PARALLEL WITH SLOPE CONTOURS.
4. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE ACCUMULATED SEDIMENT, TO AN APPROVED AREA.
5. TURN ALL FENCE TERMINATIONS UPSLOPE TO PREVENT FLANKING.



SILT FENCE (3)
SCALE: 1"=2' XX



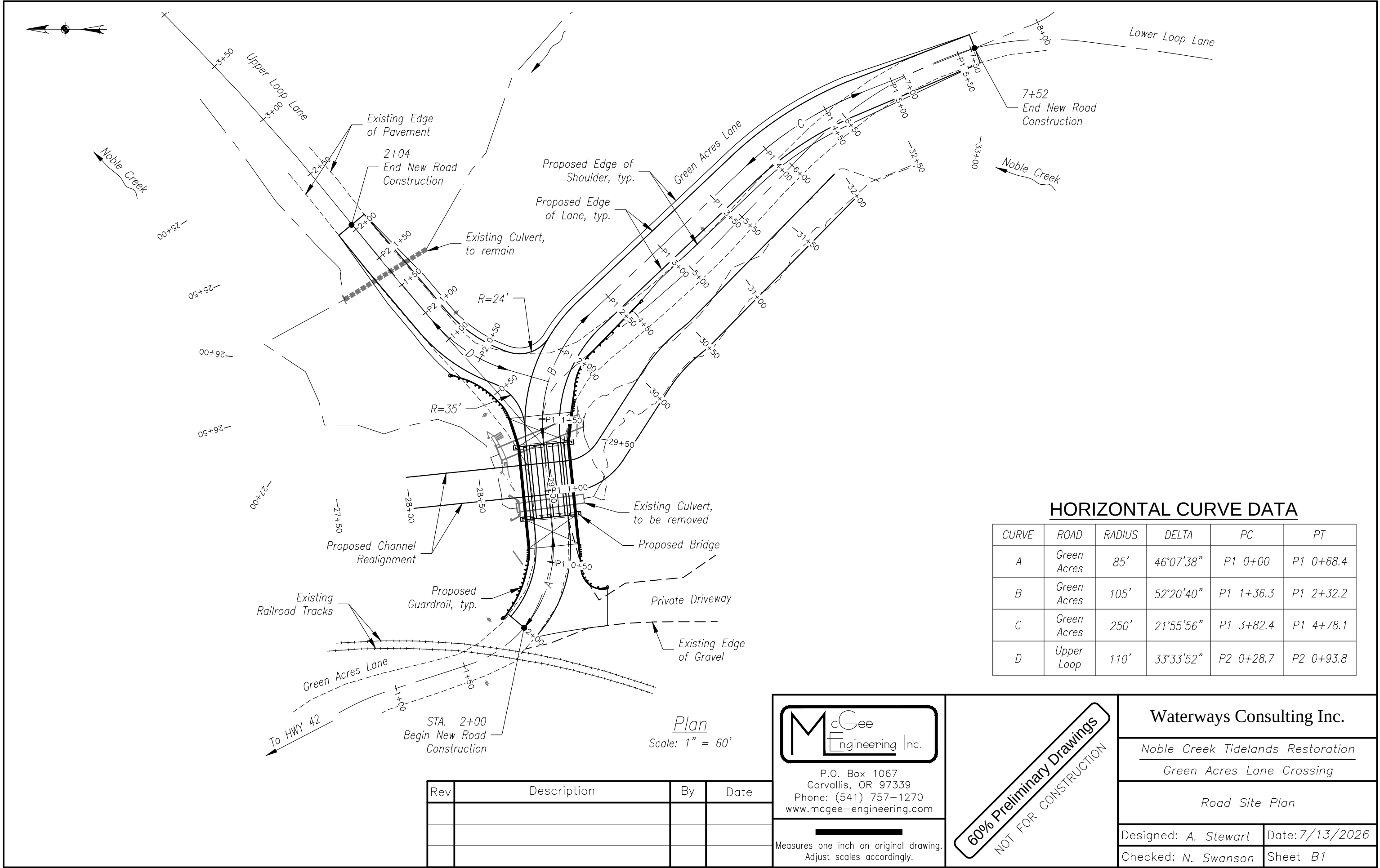
BOUNDARY FENCE (4)
SCALE: 1"=2' XX

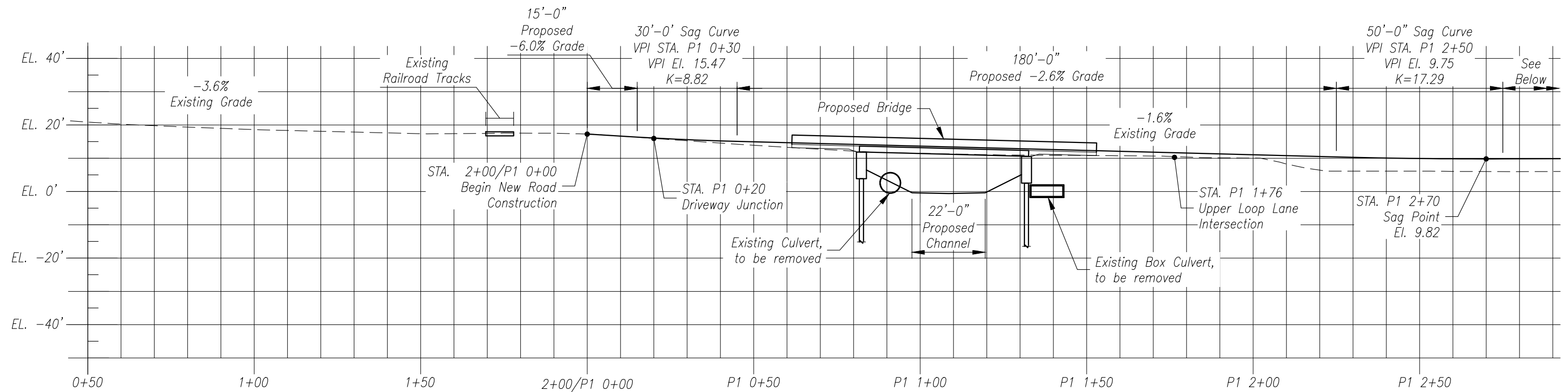
STREAM/WETLAND CONSTRUCTION BEST MANAGEMENT PRACTICES

1. ALL WORK WITHIN THE WETTED CHANNEL SHALL BE COMPLETED WITHIN THE IN-WATER WORK WINDOW AS LISTED IN THE PERMITS.
2. FISH RELOCATION
 - 2.1. SHALL BE PERFORMED BY THE CONTRACTOR (UNLESS STATED OTHERWISE IN THE CONTRACT DOCUMENTS) PRIOR TO PERFORMING ANY CONSTRUCTION WITHIN THE WETTED CHANNEL. ALL FISH RELOCATION WORK SHALL BE SUPERVISED BY A QUALIFIED FISHERIES BIOLOGIST WITH EXPERIENCE IN WORK AREA ISOLATION, AND A VALID ODFW SCIENTIFIC TAKE PERMIT. PERFORM THE FOLLOWING STEPS IN THE ORDER LISTED FOR FISH RELOCATION:
 - 2.2. CONDUCT FISH RELOCATION ACTIVITIES DURING PERIODS OF THE DAY WITH THE COOLEST AIR AND WATER TEMPERATURES POSSIBLE.
 - 2.3. ISOLATE THE WETTED STREAM CHANNEL AT THE UPSTREAM END OF THE LIMITS OF DISTURBANCE WITH BLOCK NETS. CLOSELY MONITOR ALL BLOCK NETS THROUGHOUT CONSTRUCTION TO ENSURE THEY STAY SECURED TO THE BANKS AND FREE OF ORGANIC ACCUMULATION.
 - 2.4. CONDUCT AN INITIAL SWEEP OF THE WETTED CHANNEL WITH SEIN NETS WITHIN THE WORK ZONE FROM UPSTREAM TO DOWNSTREAM.
 - 2.5. ISOLATE THE DOWNSTREAM END OF THE WETTED CHANNEL WITH BLOCK NETS.
 - 2.6. INSTALL DEWATERING EQUIPMENT AND BEGIN SLOWLY DEWATERING WHILE CONTINUING FISH RELOCATION ACTIVITIES.
 - 2.7. ELECTROFISHING SHALL FOLLOW NMFS (2000) GUIDELINES
 - 2.8. FISH TRANSPORT
 - 2.8.1. MINIMIZE THE TIME FISH ARE IN TRANSPORT CONTAINERS.
 - 2.8.2. KEEP TRANSPORT CONTAINERS IN SHADED AREA.
 - 2.8.3. LIMIT THE NUMBER OF FISH WITHIN CONTAINERS AND ONLY KEEP FISH OF RELATIVELY COMPARABLE SIZE WITHIN A GIVEN CONTAINER.
 - 2.8.4. USE AERATORS OR REPLACE THE WATER IN THE CONTAINERS AT LEAST EVERY 15 MINUTES WITH COLD CLEAR WATER.
 - 2.8.5. RELEASE FISH IN AN AREA UPSTREAM OF THE CONSTRUCTION AREA WITH ADEQUATE COVER AND FLOW REFUGE. DOWNSTREAM IS ACCEPTABLE PROVIDED THE RELEASE SITE IS BELOW THE INFLUENCE OF CONSTRUCTION.
 - 2.8.6. MONITOR AND RECORD FISH PRESENCE, HANDLING, AND INJURY/MORTALITY DURING ALL PHASES OF FISH RELOCATION AND SUBMIT A FISH SALVAGE REPORT AS REQUIRED BY PERMITS WITHIN 60 DAYS.
3. DEWATERING/BYPASS FLOWS
 - 3.1. PUMPS: WHENEVER A PUMP IS USED TO DEWATER THE ISOLATION AREA AND ESA-LISTED FISH MAY BE PRESENT, A FISH SCREEN WILL BE USED THAT MEETS THE MOST CURRENT VERSION OF NMFS'S FISH SCREEN CRITERIA (NMFS 2011A). NMFS APPROVAL IS REQUIRED FOR PUMPING AT A RATE THAT EXCEEDS 3 CFS.
 - 3.2. TREAT ALL DISCHARGE WATER FROM DEWATERING ACTIVITIES WITHIN THE CONSTRUCTION AREA USING BEST MANAGEMENT PRACTICES TO REMOVE DEBRIS, SEDIMENT, PETROLEUM PRODUCTS, AND ANY OTHER POLLUTANTS LIKELY TO BE PRESENT.DEWATER THE SHORTEST LINEAR EXTENT OF WORK AREA PRACTICABLE.
 - 3.3. FLOW BYPASS SHALL BE PERFORMED AS SHOWN ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.
 - 3.4. RE-WATERING OF THE WORK AREA FOLLOWING CONSTRUCTION SHALL BE PERFORMED SLOWLY TO PREVENT LOSS OF SURFACE FLOW DOWNSTREAM AND ANY SUDDEN INCREASE IN STREAM TURBIDITY.
4. TEMPORARY STREAM CROSSINGS
 - 4.1. MINIMIZE THE NUMBER OF STREAM CROSSINGS TO MAXIMUM EXTENT PRACTICABLE.
 - 4.2. NO STREAM CROSSINGS SHALL BE ALLOWED IN ACTIVE SPAWNING SITES, WHEN HOLDING ADULT LISTED FISH ARE PRESENT, OR WHEN EGGS OR ALEVINS ARE IN THE GRAVEL.
 - 4.3. TEMPORARY CROSSINGS SHALL NOT OCCUR IN AREA THAT MAY INCREASE THE RISK OF CHANNEL RE-ROUTING OR AVULSION, OR IN POTENTIAL SPAWNING HABITAT.
 - 4.4. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL CROSS STREAMS AT RIGHT ANGLES TO THE MAIN CHANNEL.
 - 4.5. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL ONLY BE ALLOWED TO CROSS STREAMS IN THE WET WHERE THE STREAMBED IS BEDROCK, OR WHERE MATS OR OFF-SITE LOGS ARE PLACED IN THE STREAM AND USED AS A CROSSING.
 - 4.6. DECOMMISSION ALL TEMPORARY STREAM CROSSINGS IMMEDIATELY FOLLOWING CONSTRUCTION AND RETURN AREA TO PRECONSTRUCTION CONDITIONS.

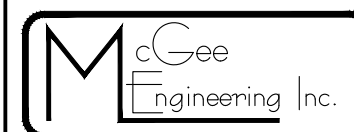
EROSION CONTROL NOTES

1. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS.
2. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
3. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS.
4. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED.
5. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
6. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.
7. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS.
8. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES.
9. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE.
10. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS.
11. FUELING ACTIVITIES MUST BE LOCATED A MINIMUM OF 150 FEET FROM ORDINARY HIGH WATER AND SENSITIVE WATERS, INCLUDING WETLANDS.
12. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES.
13. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
14. ONSITE VEHICLE SPEED ON UPAVED SURFACES SHALL BE LIMITED TO 15 MPH.
15. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE.
16. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
17. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR.
18. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS.
19. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER.
20. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL.
21. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME.
22. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS, DRAINAGE WAYS, OR WETLANDS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS.
23. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE.
24. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE.
25. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS AS THEY ARE COMPLETED. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS.

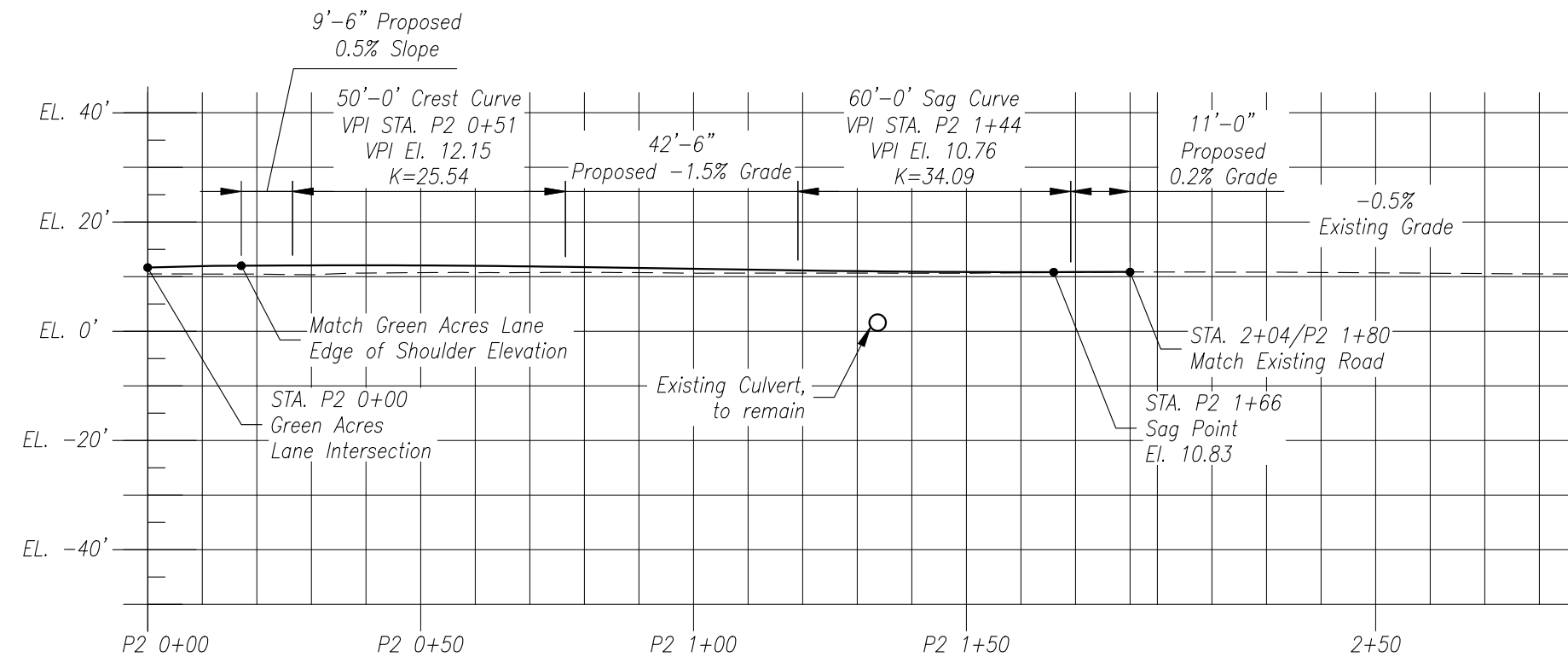




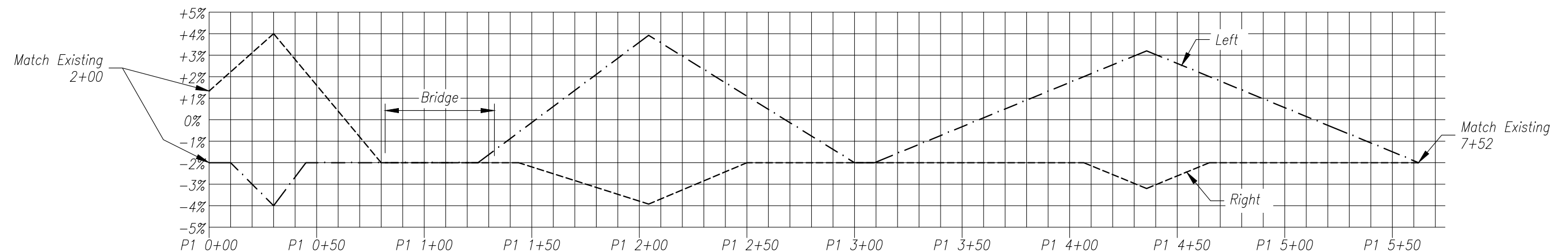
Green Acres Road Profile
Scale: 1" = 30'



60% Preliminary Drawings
NOT FOR CONSTRUCTION

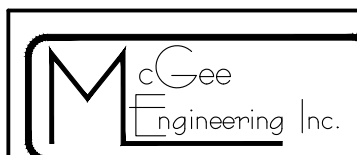


Upper Loop Lane Road Profile
Scale: 1" = 30'



Green Acres P1 Line Superelevation Diagram
No Scale

Rev	Description	By	Date



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Measures one inch on original drawing.
Adjust scales accordingly.

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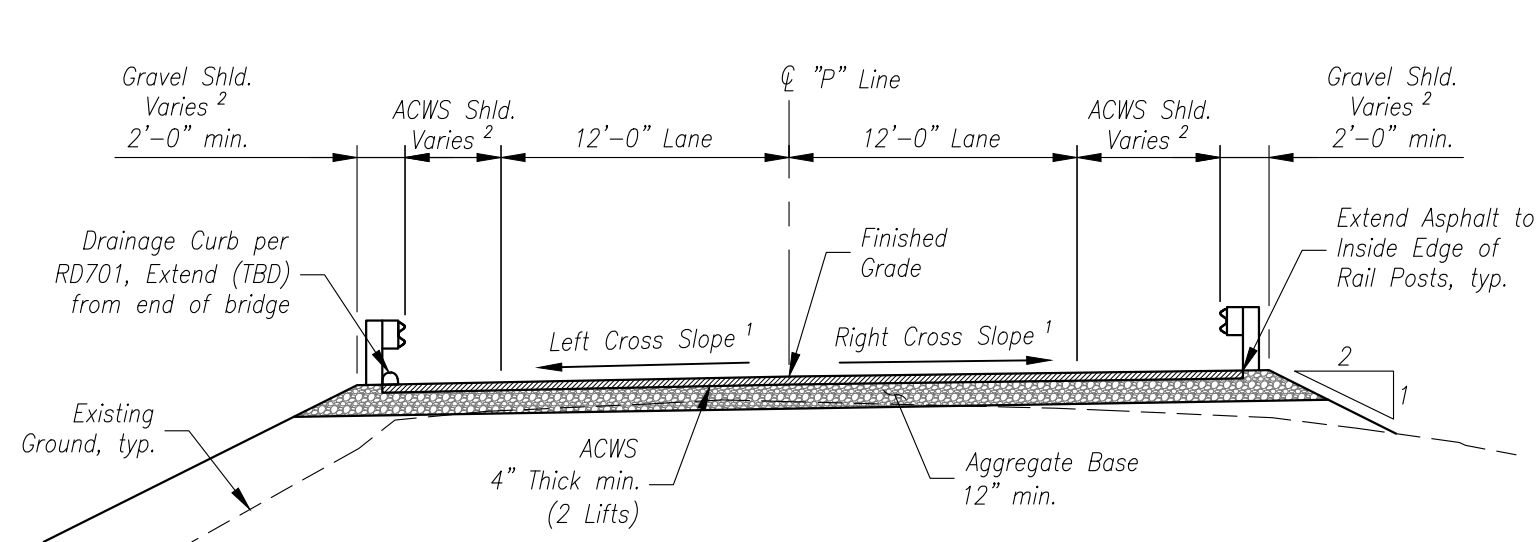
Waterways Consulting Inc.

Noble Creek Tidelands Restoration
Green Acres Lane Crossing

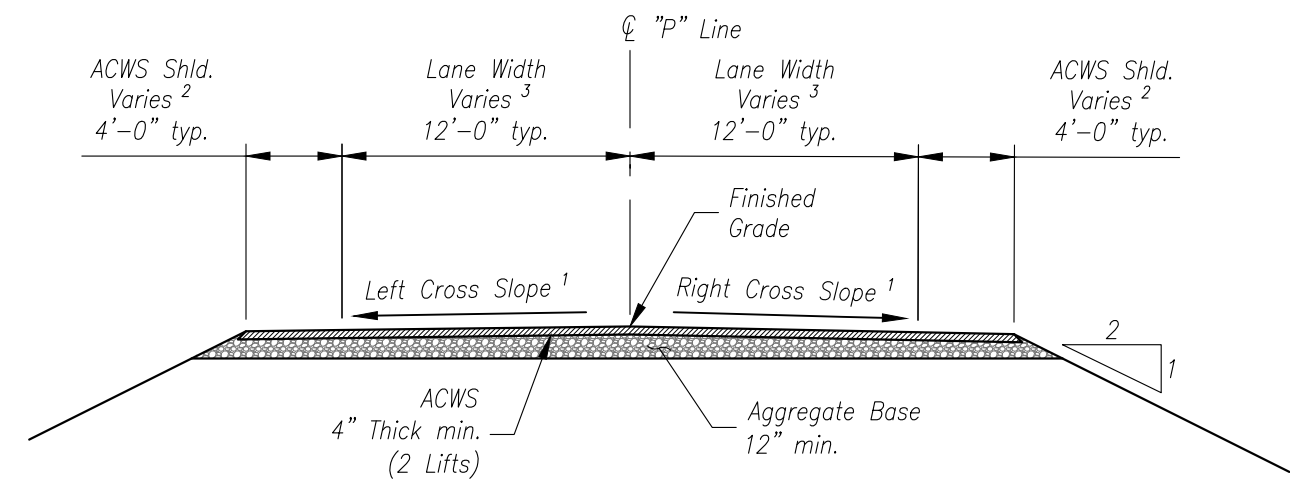
Upper Loop Road Profile & Super Diagram

Designed: A. Stewart Date: 7/13/2026

Checked: N. Swanson Sheet B3



Typical Roadway with Guardrail Cross Section
 Scale: 1/8" = 1'-0"

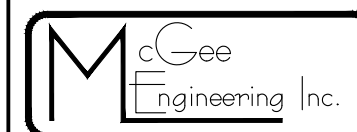


Typical Roadway Cross Section
 Scale: 1/8" = 1'-0"

NUMBERED NOTES:

1. Cross slope varies, see Superelevation Diagram on Sheet B3.
2. Shoulder width varies with guardrail, see Sheet B5 for details. Shoulder width also varies at ends of project to match existing roadway.
3. Lane width varies from 12'-0" design lane (maximum) to approximately 11'-0" (minimum) to match existing roadway.

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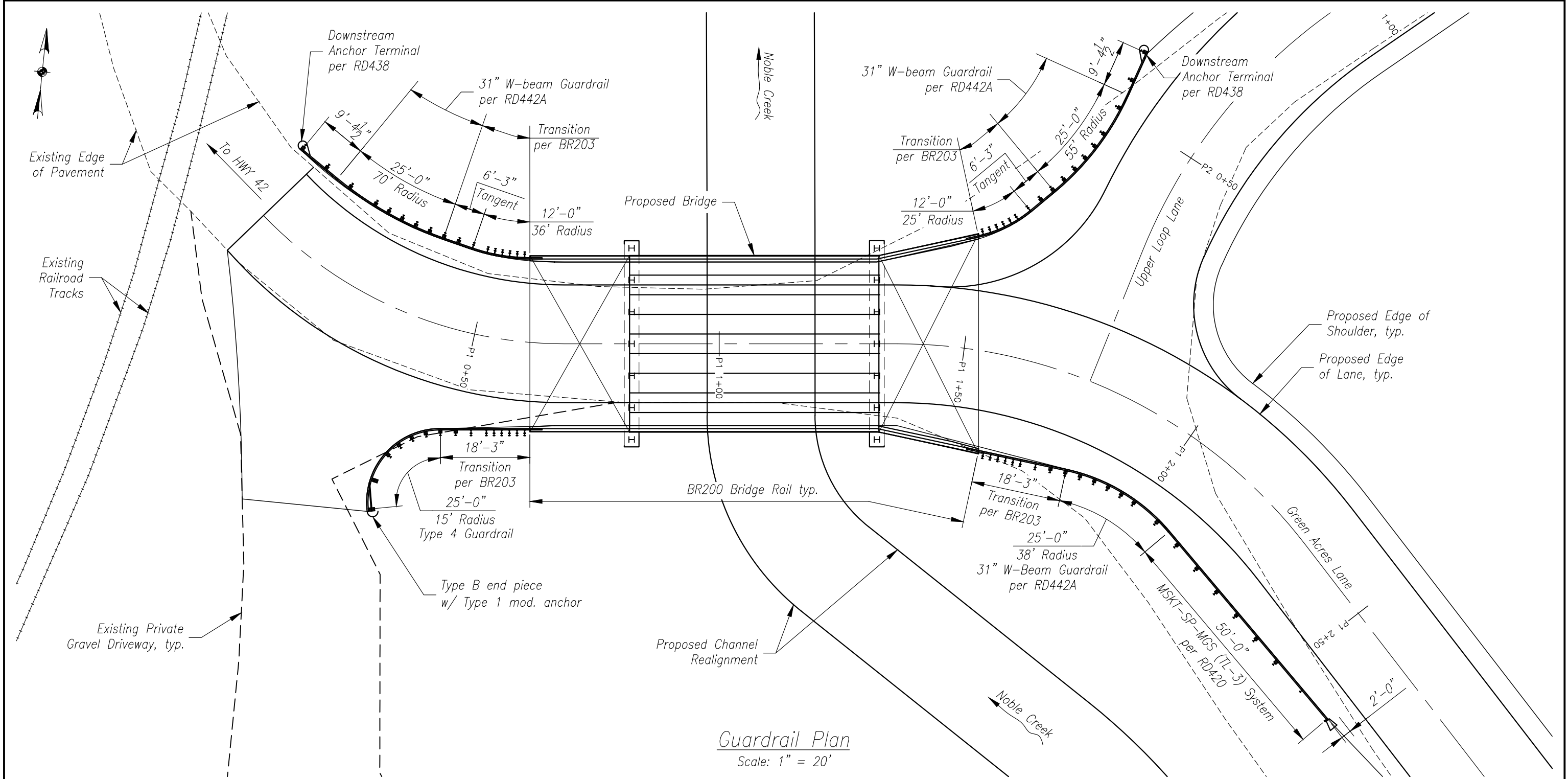
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Green Acres Lane Crossing

Typical Road Cross-Sections

Designed: A. Stewart	Date: 7/13/2026
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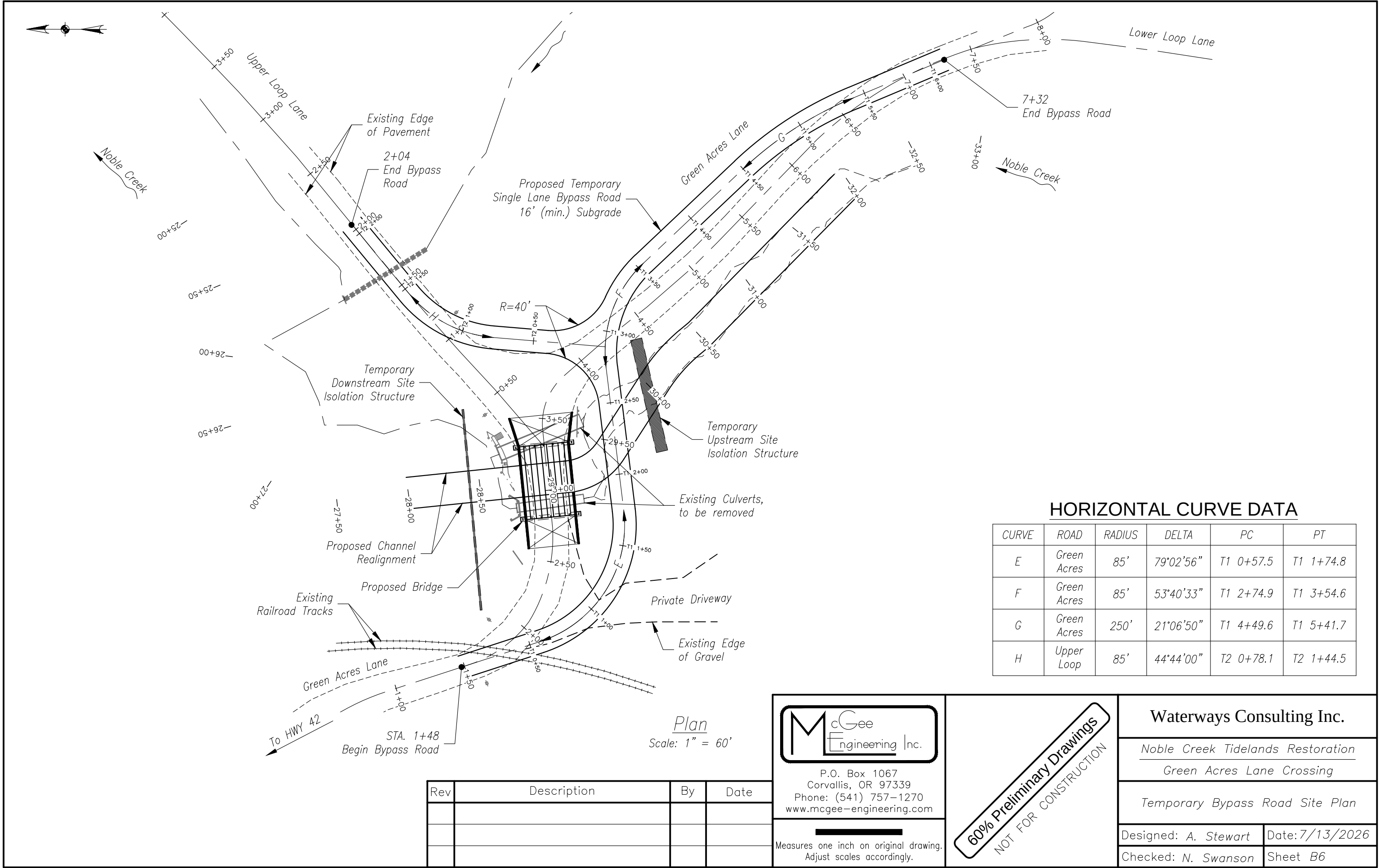
Guardrail Details

Designed: A. Stewart

Date: 7/13/2026

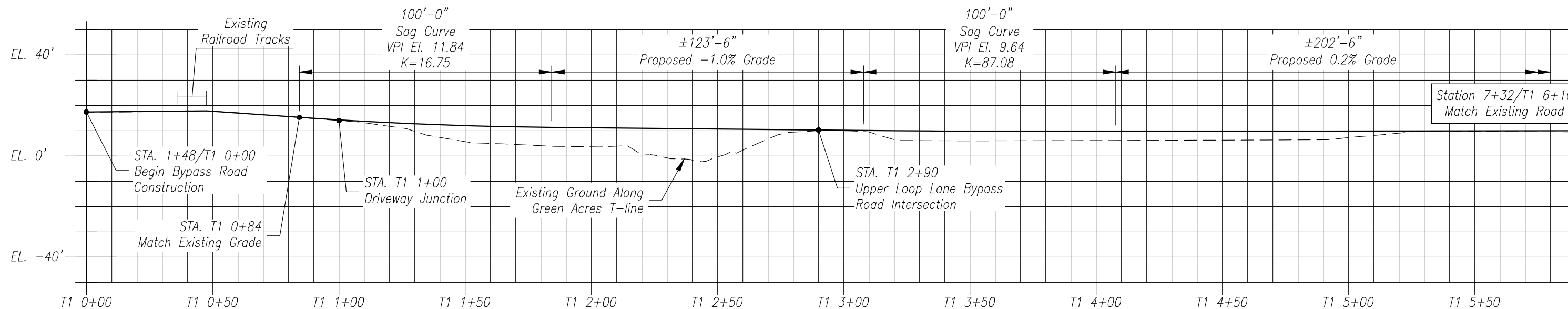
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Sheet B5



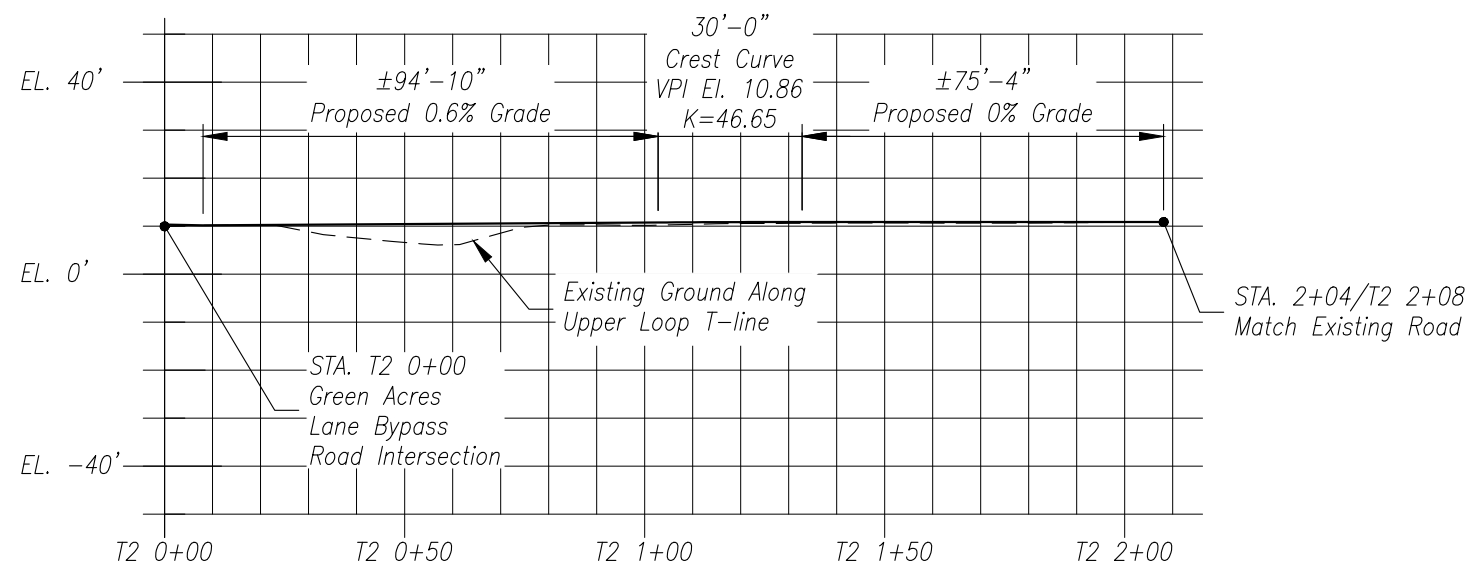
HORIZONTAL CURVE DATA

CURVE	ROAD	RADIUS	DELTA	PC	PT
E	Green Acres	85'	79°02'56"	T1 0+57.5	T1 1+74.8
F	Green Acres	85'	53°40'33"	T1 2+74.9	T1 3+54.6
G	Green Acres	250'	21°06'50"	T1 4+49.6	T1 5+41.7
H	Upper Loop	85'	44°44'00"	T2 0+78.1	T2 1+44.5



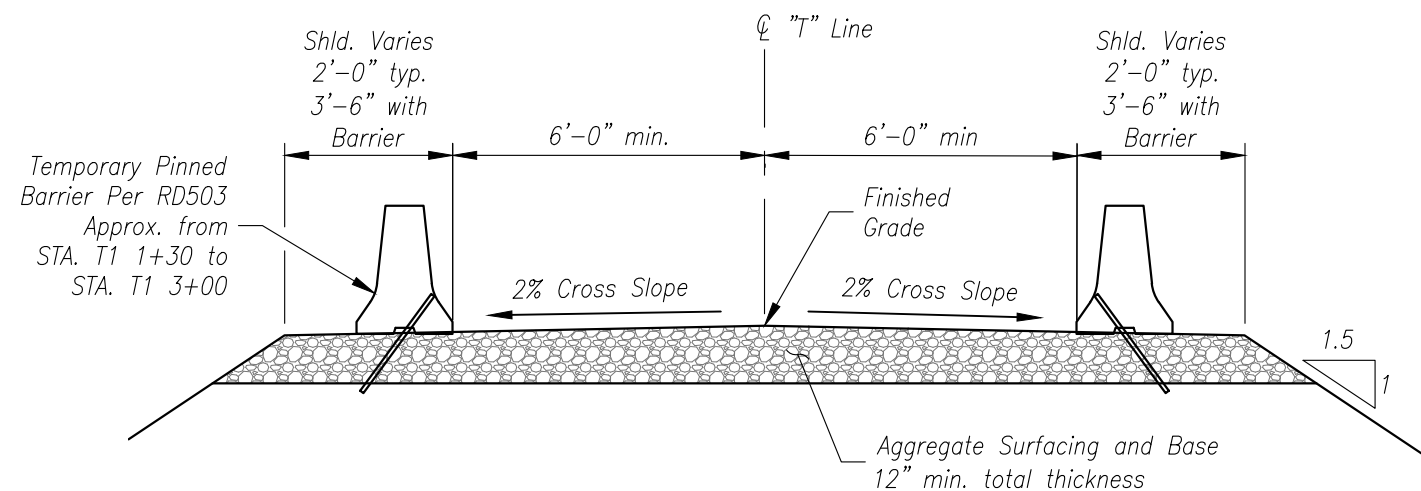
Green Acres Lane Bypass Road Profile

Scale: 1" = 40'



Upper Loop Lane Bypass Road Profile

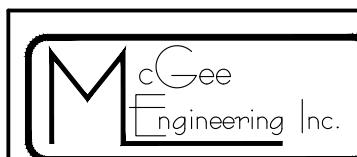
Scale: 1" = 40'



Typical Bypass Roadway Cross Section

Scale: 1/4" = 1'-0"

Rev	Description	By	Date



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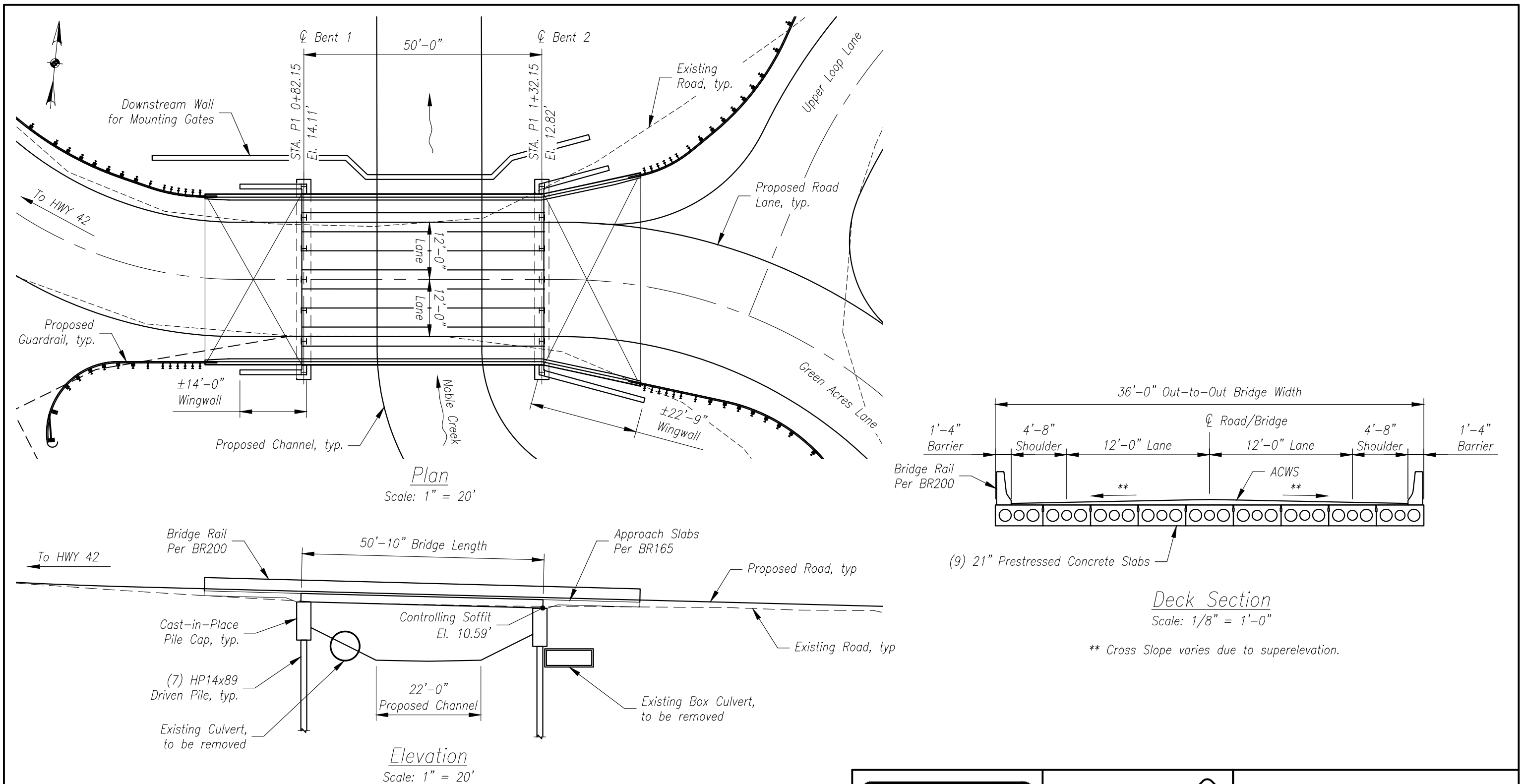
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Noble Creek Tidelands Restoration
Green Acres Lane Crossing

Temporary Bypass Road Profiles

Designed: A. Stewart Date: 7/13/2026
Checked: N. Swanson Sheet B7



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Bridge Plan, Elevation, & Deck Section

Designed: A. Stewart	Date: 7/13/2026
Checked: N. Swanson	Sheet B9