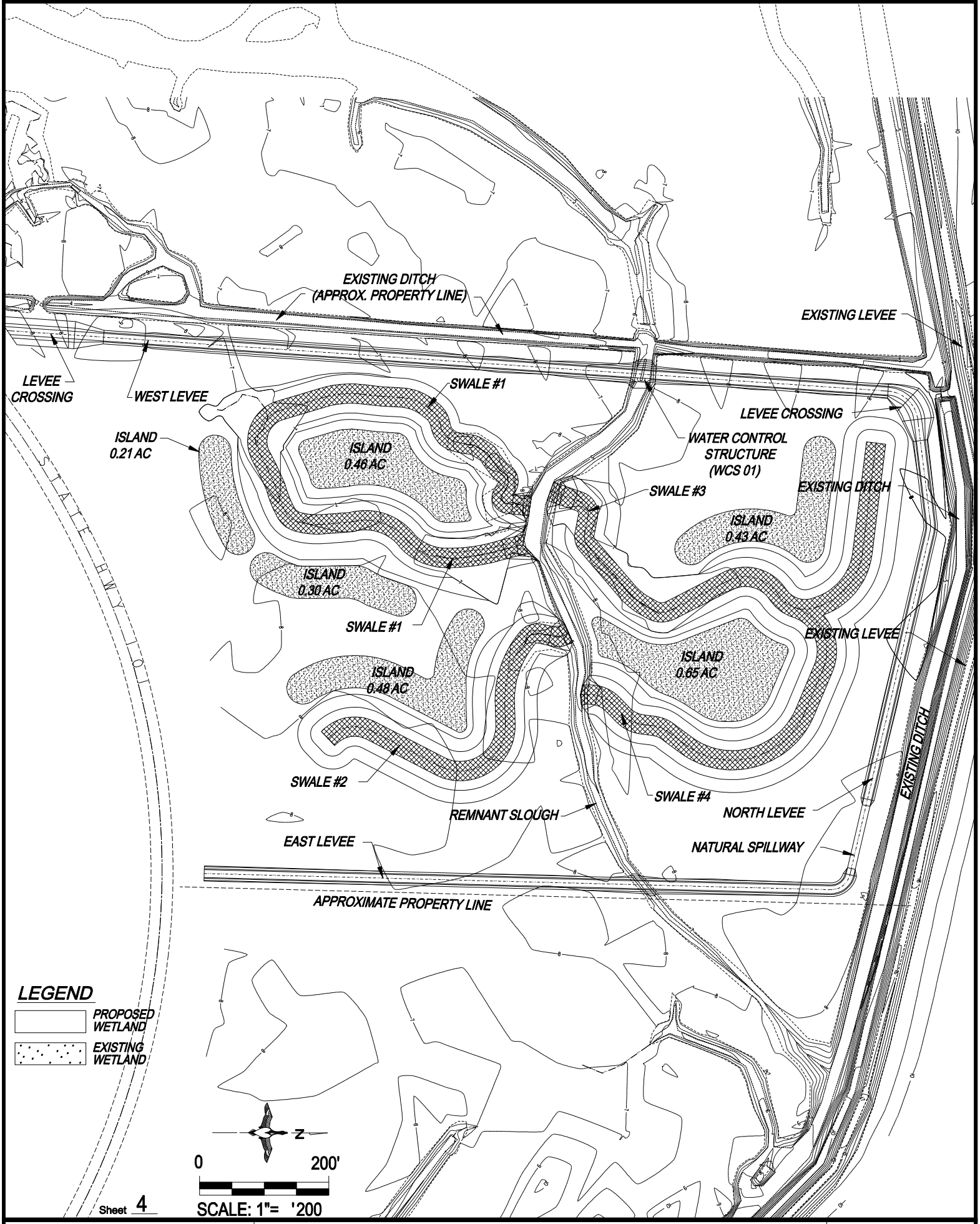


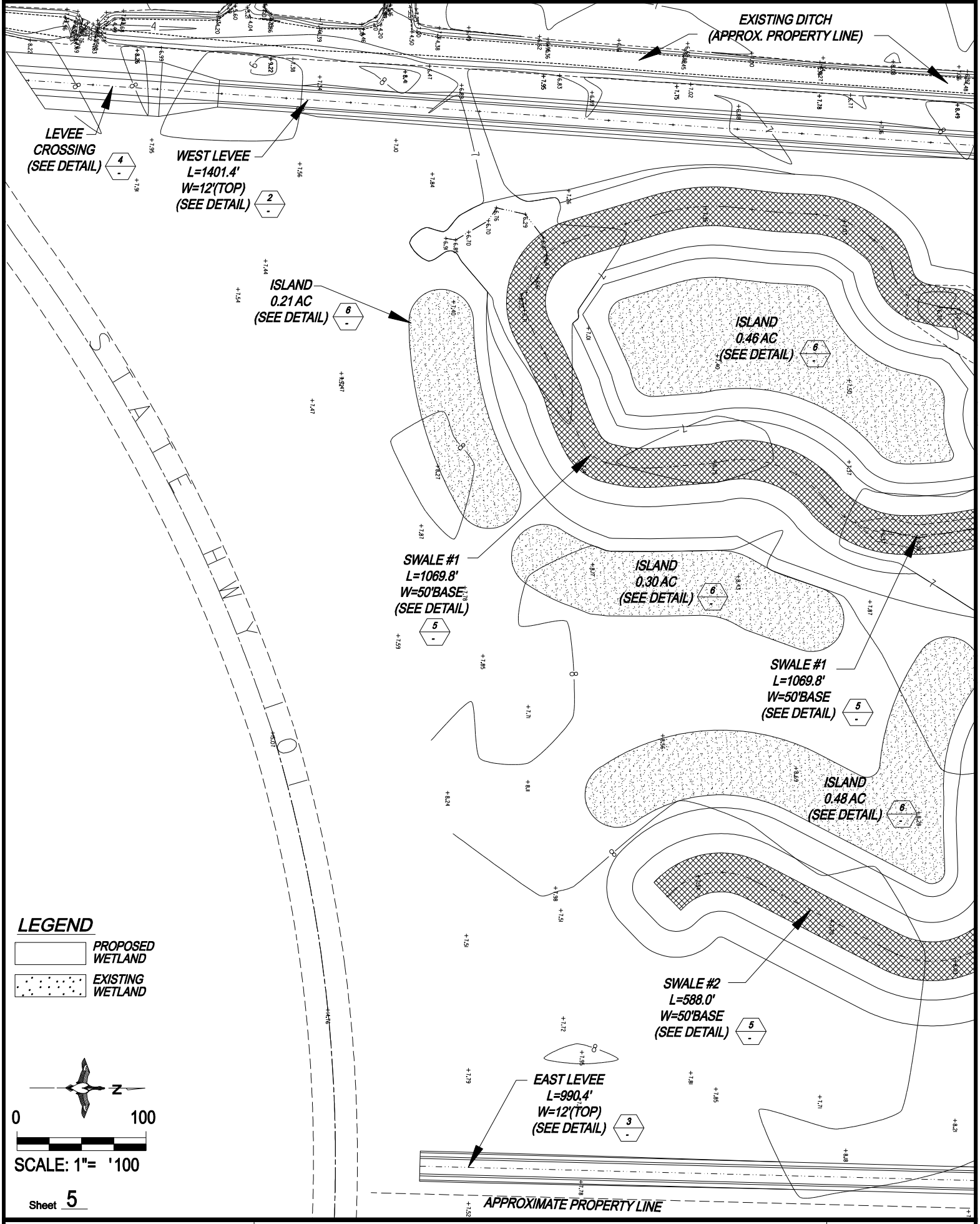
Sheet 4

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-116-1

NRCS WRP EASEMENT
SITE #2
WETLANDS SHEET 33 OF 51. DATE: MAY, 2004.

DESIGNED BY:	J.SPOLAR
DRAWN BY:	DMC/J.SPOLAR
SURVEYED BY:	DU
CHECKED BY:	

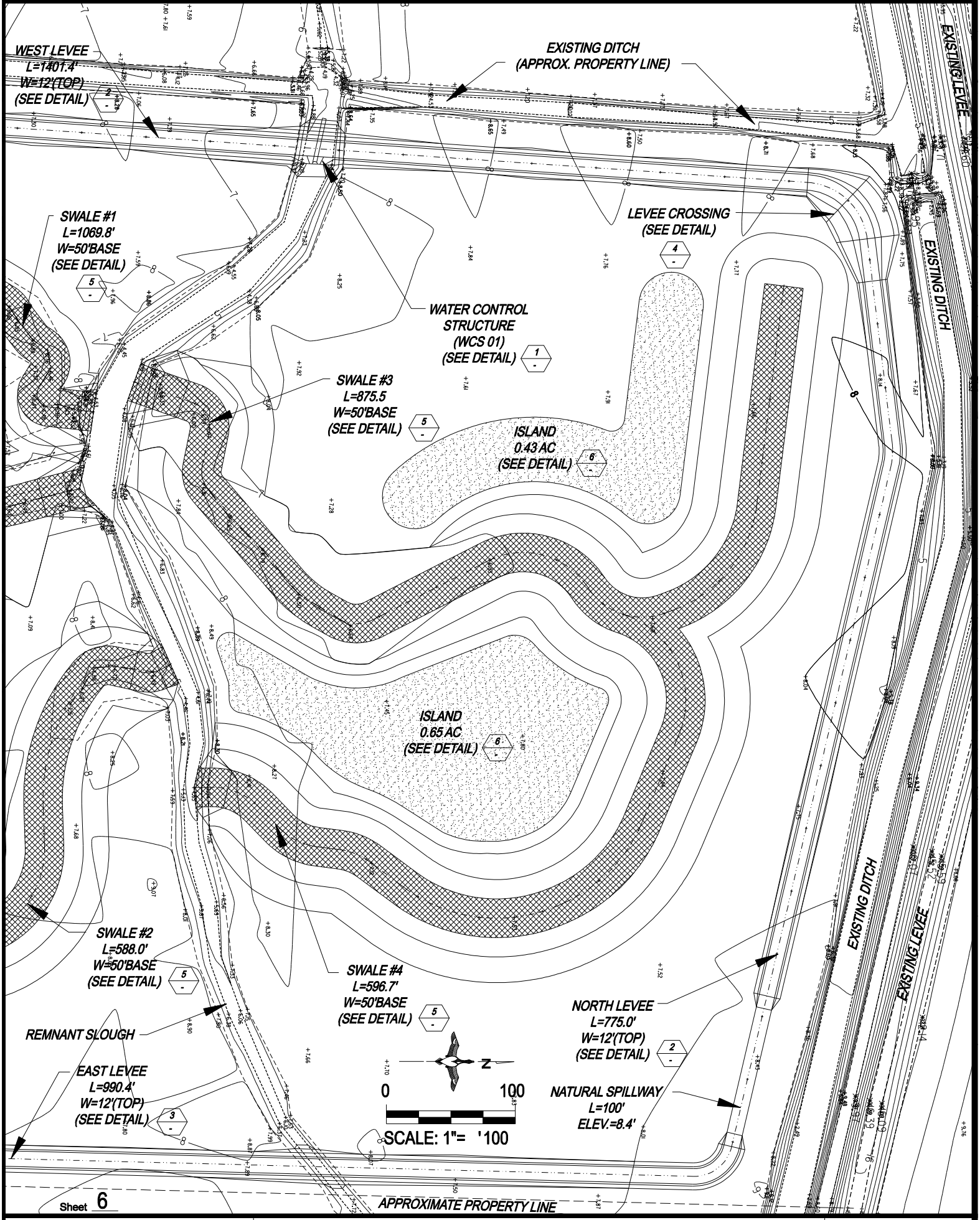


DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-116-1

NRCS WRP EASEMENT
SITE #2
WETLANDS SHEET 34 OF 51. DATE: MAY, 2004.

DESIGNED BY:	J.SPOLAR
DRAWN BY:	DMC/J.SPOLAR
SURVEYED BY:	DU
CHECKED BY:	



Sheet 6

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

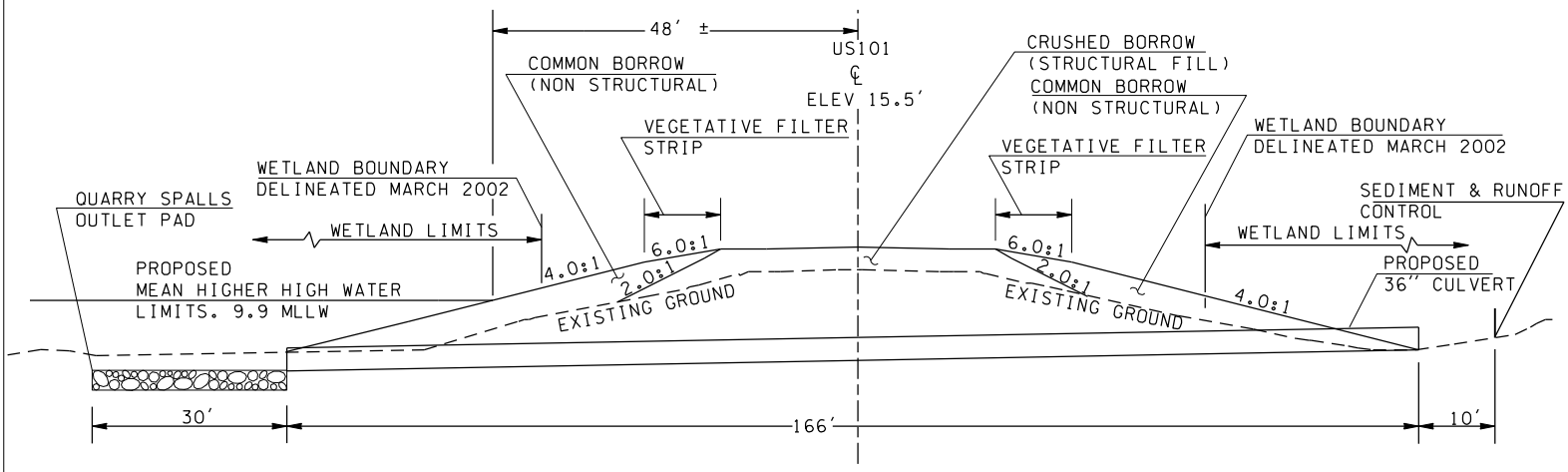
PROJECT NO. WA-116-1

NRCS WRP EASEMENT
SITE #2
WETLANDS SHEET 35 OF 51. DATE: MAY, 2004.

DESIGNED BY:	J.SPOLAR
DRAWN BY:	DMC/J.SPOLAR
SURVEYED BY:	DU
CHECKED BY:	

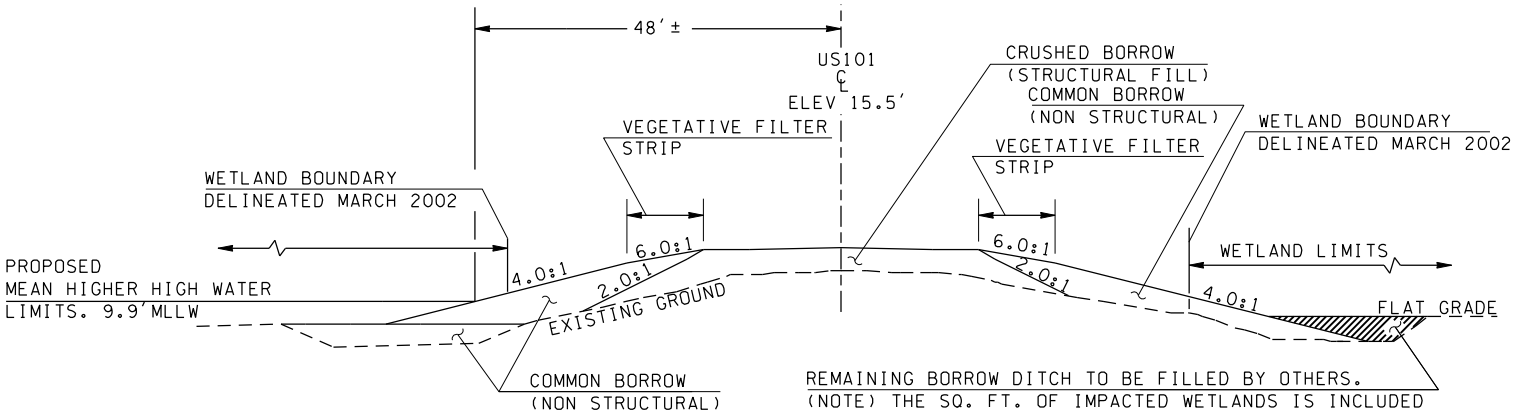
SECTION VIEW A-A

EXISTING AND PROPOSED FOOTPRINT, AND
PROPOSED CULVERT PIPE SECTION AT US101,
STA. 1045+50 LOOKING TOWARD SOUTH BEND



SECTION VIEW B-B

EXISTING AND PROPOSED FOOTPRINT AT US101
STA. 1051+00. TYPICAL SECTION MP 51.29 TO MP52.51
LOOKING TOWARD SOUTH BEND



REMAINING BORROW DITCH TO BE FILLED BY OTHERS.
(NOTE) THE SQ. FT. OF IMPACTED WETLANDS IS INCLUDED
IN THE TOTAL WETLANDS IMPACTED QUANTITY THAT IS ON
WSDOT DRAWINGS

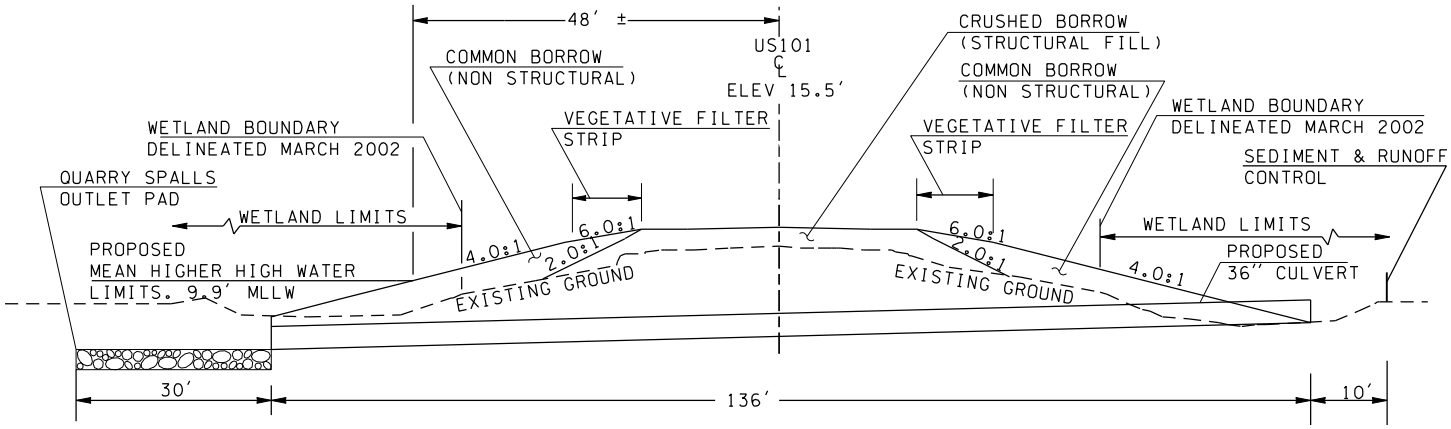
PURPOSE: Estuarine Restoration
PROPOSED: Restore Estuarine Habitat by raising road, filling borrow ditches, and removing dike
DATUM: NAVD 88, 8.4' = MLLW 9.9'
ADJACENT PROPERTY OWNERS:
WASH. DEPT. OF FISH AND WILDLIFE, & NRCS

0 12 24
SCALE IN FEET

PROJECT LOCATION:
Potters Slough vicinity, 1 mile north of South Bend, Pacific County, WA
APPLICATION BY: WDFW., USACE., WSDOT NRCS., DU.
Sheet 36 of 51. DATE: May, 2004

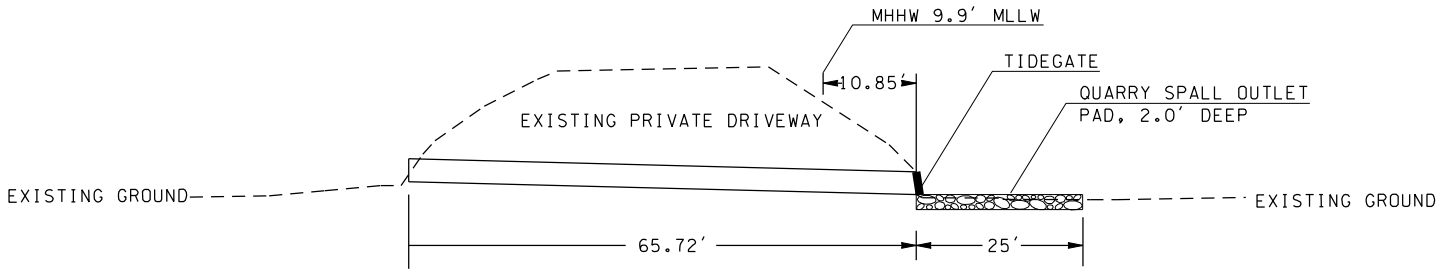
SECTION VIEW C-C

EXISTING AND PROPOSED FOOTPRINT, AND
PROPOSED CULVERT PIPE SECTION AT US101,
STA. 1063+00 LOOKING TOWARD SOUTH BEND



SECTION VIEW D-D

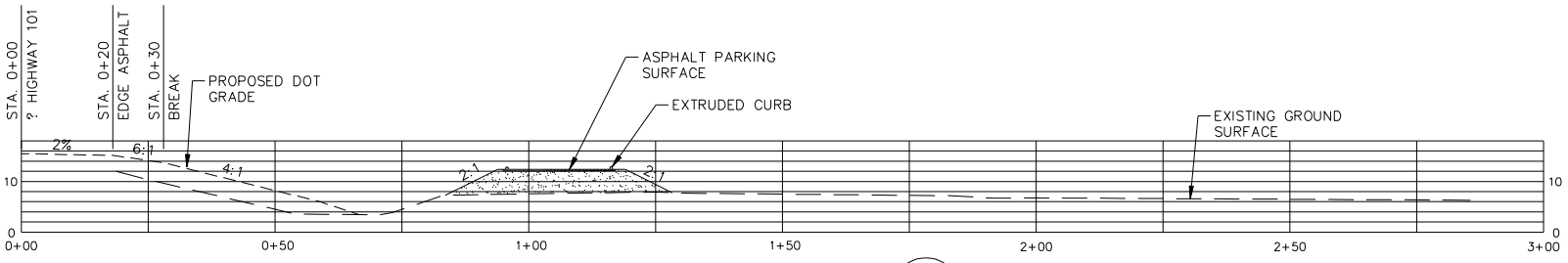
PROPOSED 30" CULVERT PIPE SECTION AT
US101, STA. 1083+50 VICINITY, 60' RT.,



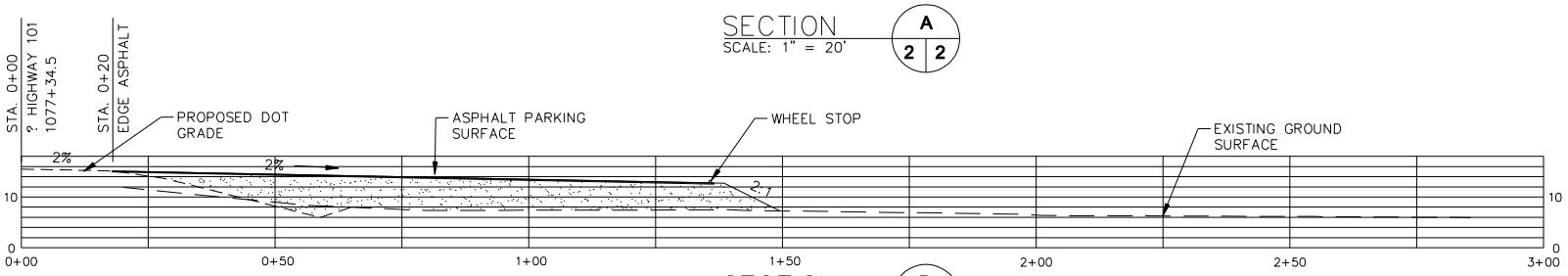
PURPOSE: Estuarine Restoration
PROPOSED: Restore Estuarine Habitat by raising road, filling borrow ditches, and removing dike
DATUM: NAVD 88, 8.4' = MLLW 9.9'
ADJACENT PROPERTY OWNERS:
WASH. DEPT. OF FISH AND WILDLIFE, & NRCS

0 12 24
SCALE IN FEET

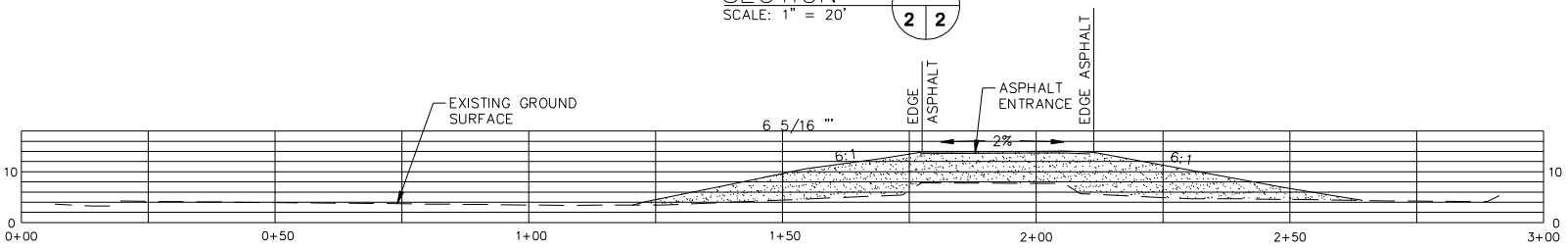
PROJECT LOCATION:
Potters Slough vicinity, 1 mile north of South Bend, Pacific County, WA
APPLICATION BY: WDFW., USACE., WSDOT NRCS., DU.



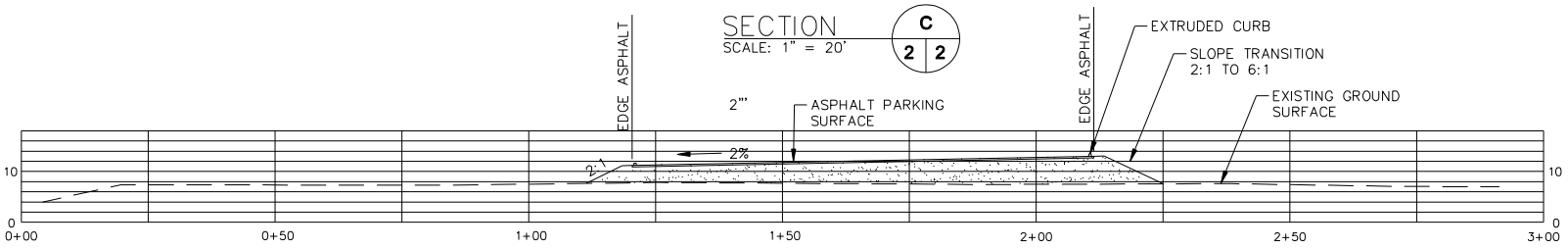
SECTION A
SCALE: 1" = 20'



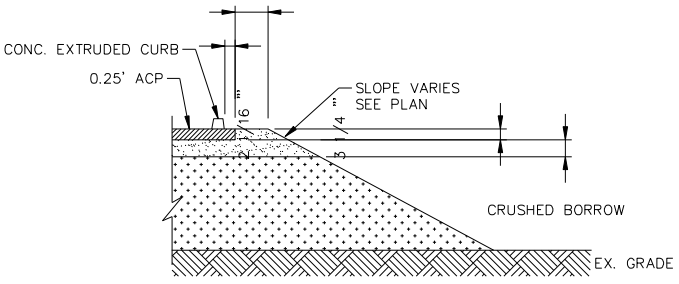
SECTION B
SCALE: 1" = 20'



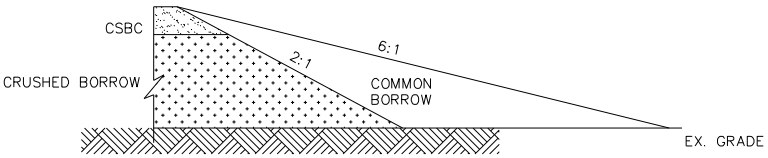
SECTION C
SCALE: 1" = 20'



SECTION D
SCALE: 1" = 20'



TYPICAL PAVEMENT SECTION
SCALE: NONE



TYPICAL FILL SLOPE
SCALE: NONE

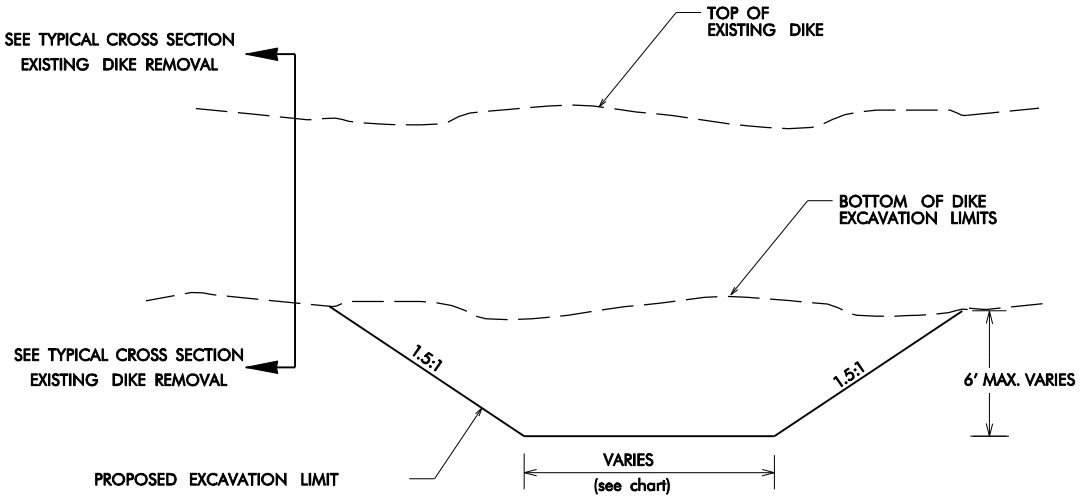
WILLAPA ACCESS
SITE PLAN

WASHINGTON DEPT. of FISH & WILDLIFE
600 CAPITOL WAY N
OLYMPIA, WA 98501 -- 1091

ENG. PROJECT NO. _____

DATE: MAY, 2004 **SHEET** 38 **OF** 51

TYPICAL CROSS SECTIONS
(DITCH, CHANNEL,& DIKE)

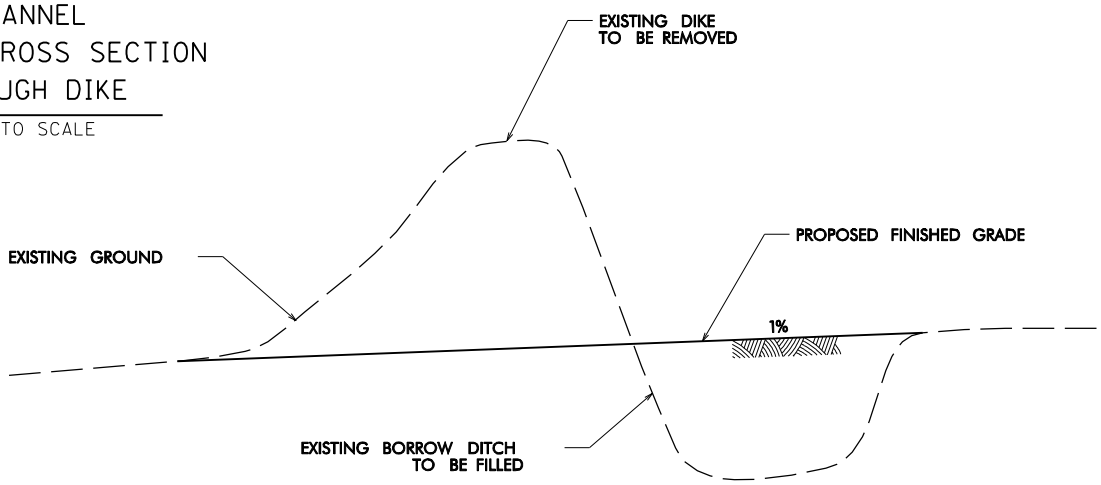


CHANNEL •	WIDTH (FT) MIN.	MAX.
1	40	40
2	10	40
5	20	60
7	2	20
8	20	30
SECONDARY 5	10	30
SECONDARY 5A	25	25
SECONDARY 7	2	2
SECONDARY 8	2	2

• NOTE:- WIDTH DIMENSION APPLIES TO FULL LENGTH OF CHANNEL

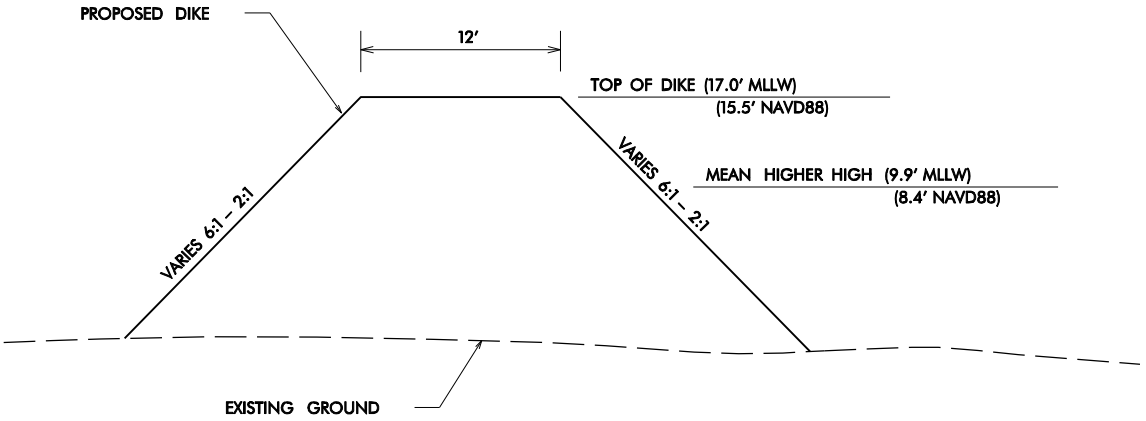
CHANNEL
TYPICAL CROSS SECTION
THROUGH DIKE

NOT TO SCALE



TYPICAL CROSS SECTION
EXISTING DIKE REMOVAL

NOT TO SCALE



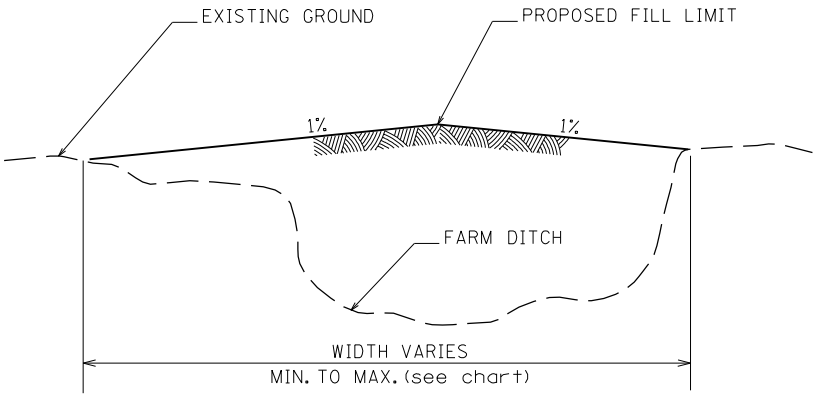
TYPICAL CROSS SECTION
PROPOSED CROSS DIKE

NOT TO SCALE

PURPOSE: Estuarine Restoration
PROPOSED: Restore Estuarine Habitat
DATUM: NAVD 88, 8.4' = MLLW 9.9'
ADJACENT PROPERTY OWNERS:
WASH. DEPT. OF FISH & WILDLIFE, NRCS
WASH. DEPT OF TRANSPORTATION, & ROBERT ROSE

PROJECT LOCATION:
Potters Slough vicinity, 1 mile
north of South Bend, Pacific County, WA
APPLICATION BY: WDFW., USACE., WSDOT., NRCS., & DU.
Sheet 39 of 51. DATE: May, 2004.

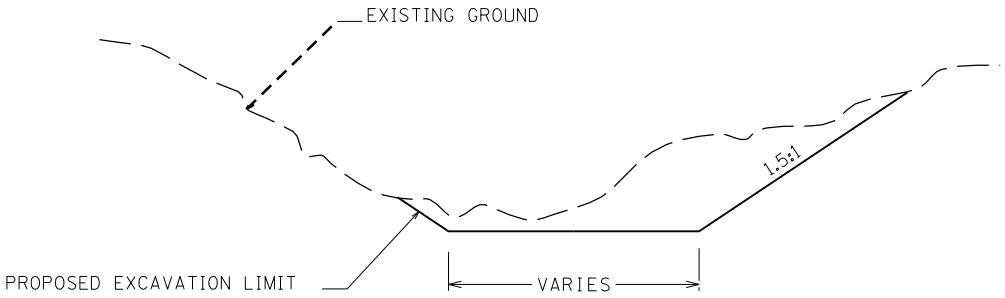
TYPICAL CROSS SECTIONS
(DITCH, CHANNEL,& DIKE)



FARM DITCH #	WIDTH MIN.	MAX.
1	30'	150'
2	20'	125'
7	15'	120'

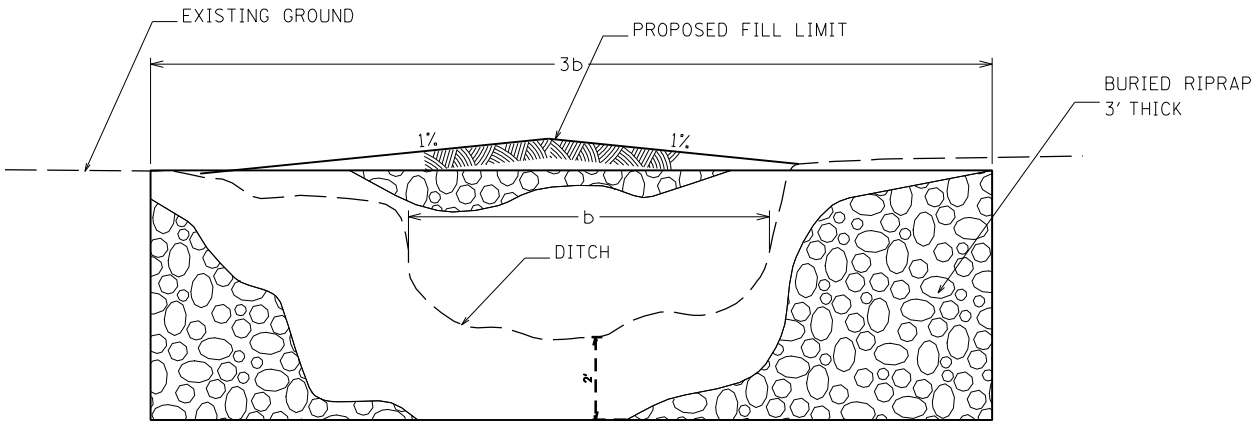
TYPICAL CROSS SECTION
THROUGH FARM DITCH

NOT TO SCALE



TYPICAL CROSS SECTION
THROUGH CHANNELS

NOT TO SCALE



TYPICAL CROSS SECTION
NON-ERODABLE PLUG

NOT TO SCALE

PURPOSE: Estuarine Restoration
PROPOSED: Restore Estuarine Habitat
DATUM: NAVD 88, 8.4' = MLLW 9.9'
ADJACENT PROPERTY OWNERS:
WASH. DEPT. OF FISH & WILDLIFE, NRCS
WASH. DEPT OF TRANSPORTATION, & ROBERT ROSE

PROJECT LOCATION:
Potters Slough vicinity, 1 mile
north of South Bend, Pacific County, WA
APPLICATION BY: WDFW., USACE., WSDOT., NRCS., & DU.
Sheet 40 of 51. DATE: May, 2004.

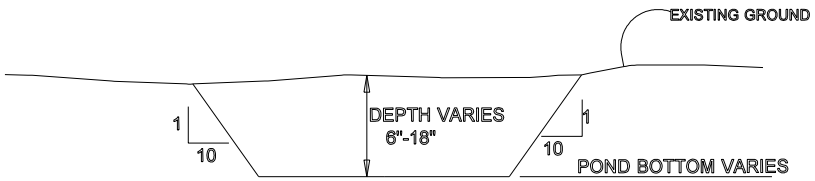
Sheet 5

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-44-45

NRCS WRP EASEMENT SITE #1
DETAIL 1 SHEET 41 OF 51, DATE: MAY, 2004.

DESIGNED BY: J.SPOLAR
DRAWN BY: DMC/J.SPOLAR
SURVEYED BY: DUL
CHECKED BY:



2 / - AMPHIBIAN POND

N.T.S.

Sheet 6

DUCKS UNLIMITED INC.

PacNW Field Office (360)885-2011

PROJECT NO. WA-44-45

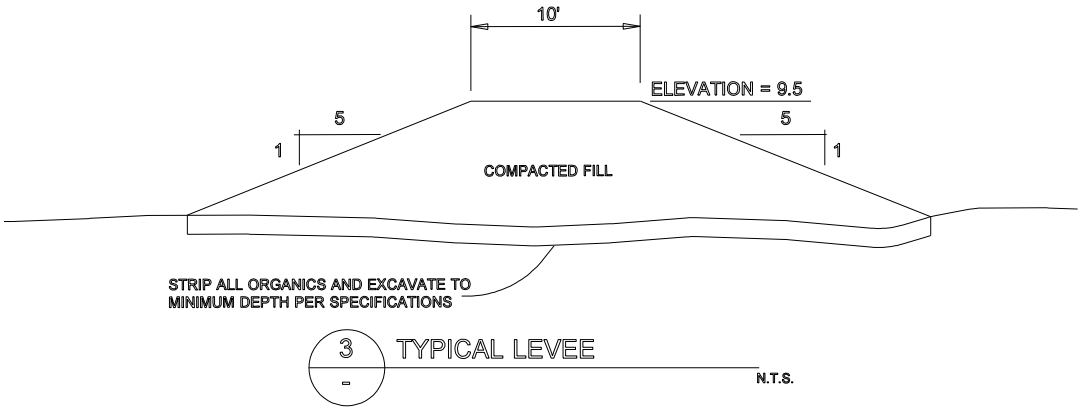
NRCS WRP EASEMENT SITE #1
DETAIL 2 SHEET 42 OF 51, DATE: MAY, 2004.

DESIGNED BY: J.SPOLAR

DRAWN BY: DMC/J.SPOLAR

SURVEYED BY: DLB

CHECKED BY:



3 - TYPICAL LEVEE

N.T.S.

Sheet 7

DUCKS UNLIMITED INC.

PacNW Field Office (360)885-2011

PROJECT NO. WA-44-45

NRCS WRP EASEMENT SITE #1

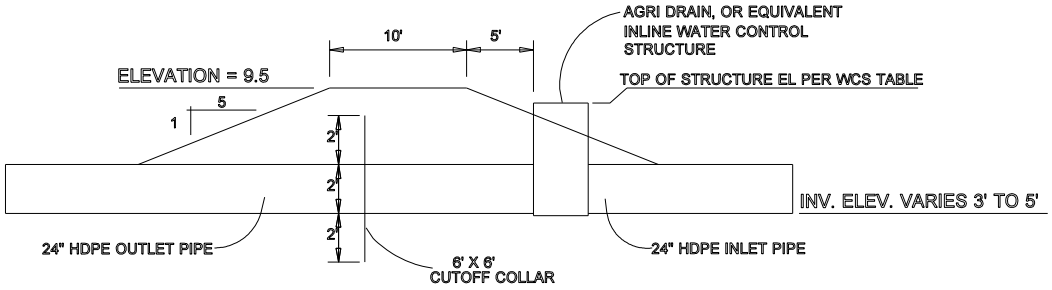
DETAIL 3 SHEET 43 OF 51, DATE: MAY, 2004.

DESIGNED BY: J.SPOLAR

DRAWN BY: DMC/J.SPOLAR

SURVEYED BY: DU

CHECKED BY:



4 – LEVEE SECTION AT WCS

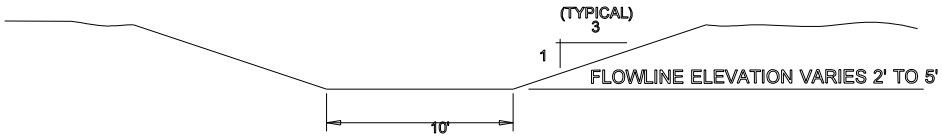
N.T.S.

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-44-45

NRCS WRP EASEMENT SITE #1
DETAIL 4 SHEET 44 OF 51, DATE: MAY, 2004.

DESIGNED BY: J.SPOLAR
DRAWN BY: DMC/J.SPOLAR
SURVEYED BY: DU
CHECKED BY:



5 / - TYPICAL SWALE

N.T.S.

Sheet 9

DUCKS UNLIMITED INC.

PacNW Field Office (360)885-2011

PROJECT NO. WA-44-45

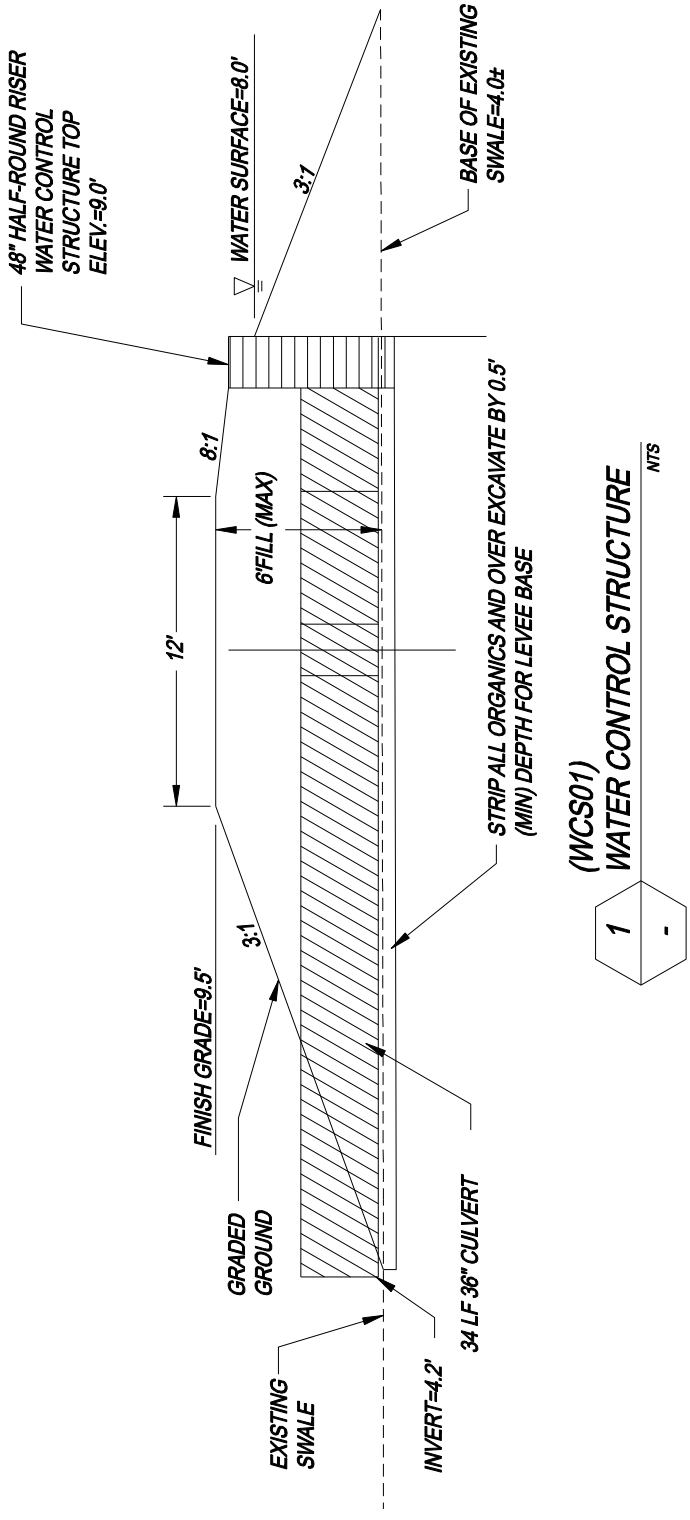
NRCS WRP EASEMENT SITE #1
DETAIL 5 SHEET 45 OF 51, DATE: MAY, 2004.

DESIGNED BY: J.SPOLAR

DRAWN BY: DMC/J.SPOLAR

SURVEYED BY: D.L.

CHECKED BY:



(WCS01)
WATER CONTROL STRUCTURE
NTS

1
-

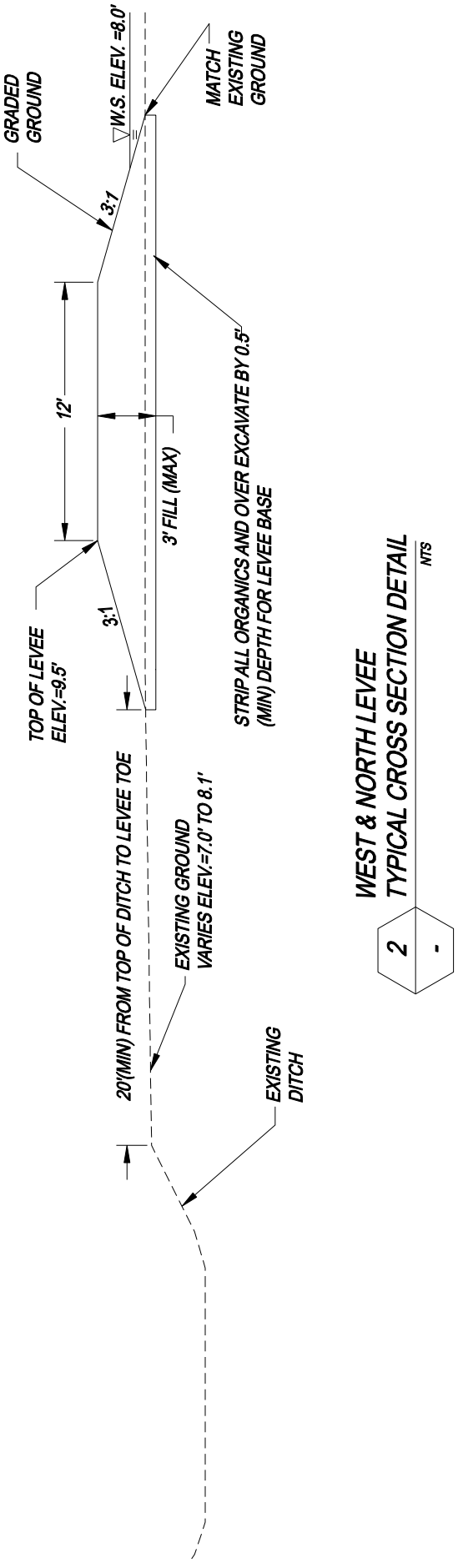
Sheet 7

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-116-1

NRCS WRP EASEMENT SITE #2
DETAIL SHEET 46 OF 51. DATE: MAY, 2004.
WATER CONTROL STRUCTURE (WCS01)

DESIGNED BY:	J.SPOLAR
DRAWN BY:	DMC/J.SPOLAR
SURVEYED BY:	DU
CHECKED BY:	



WEST & NORTH LEVEE
TYPICAL CROSS SECTION DETAIL
NTS
2
-

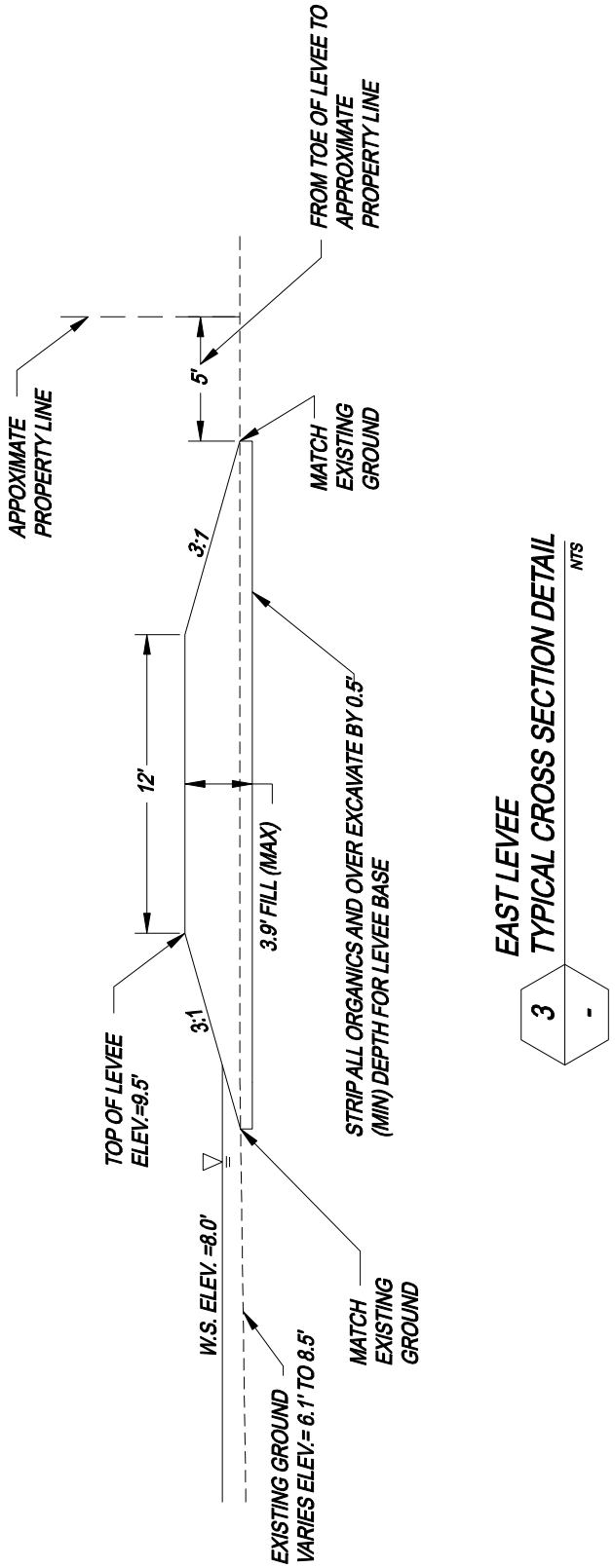
Sheet 8

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-116-1

NRCS WRP EASEMENT SITE #2
DETAIL SHEET 47 OF 51. DATE: MAY, 2004.
WEST & NORTH LEVEE CROSS SECTION

DESIGNED BY: J.SPOLAR
DRAWN BY: DMC/J.SPOLAR
SURVEYED BY: DU
CHECKED BY:



EAST LEVEE
TYPICAL CROSS SECTION DETAIL
NTS

3
-

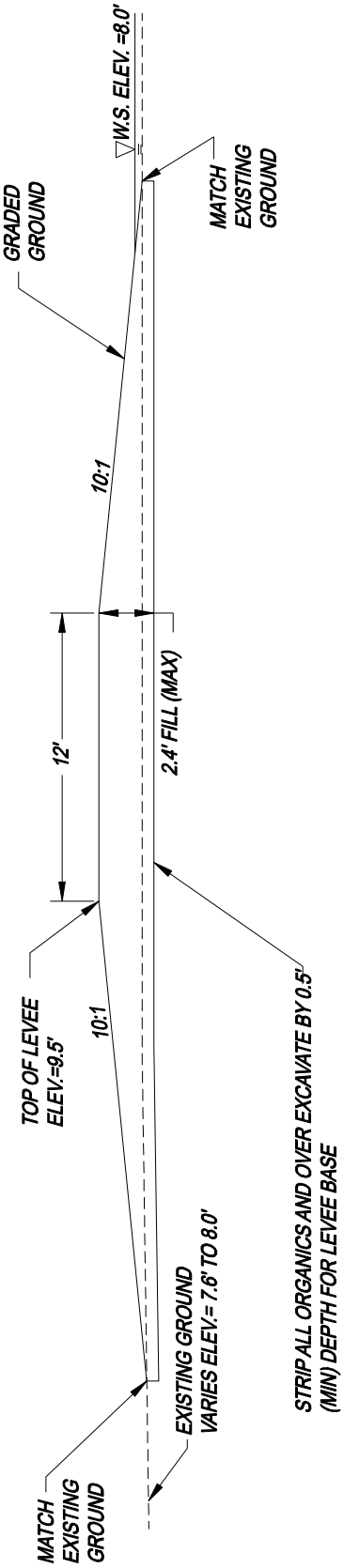
Sheet 9

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-116-1

NRCS WRP EASEMENT SITE #2
DETAIL SHEET 48 OF 51. DATE: MAY, 2004.
EAST LEVEE CROSS SECTION

DESIGNED BY:	J.SPOLAR
DRAWN BY:	DMC/J.SPOLAR
SURVEYED BY:	DU
CHECKED BY:	



LEVEE CROSSING
TYPICAL CROSS SECTION DETAIL
NTS

4
-

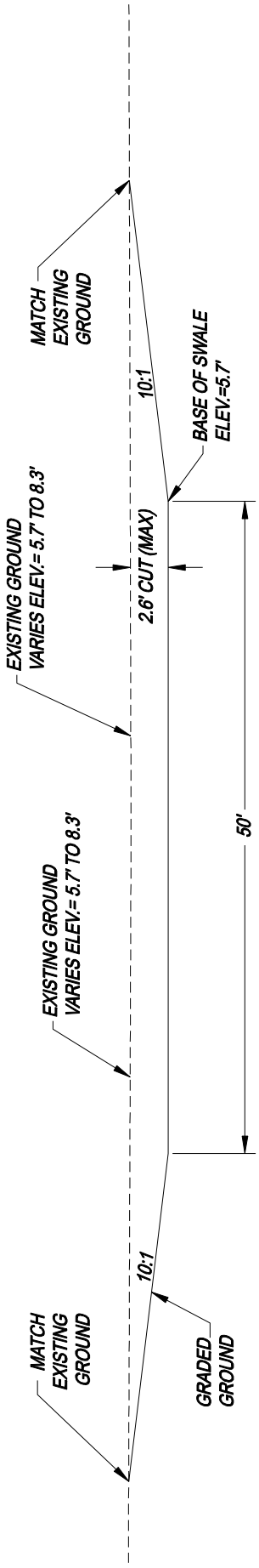
Sheet 10

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-116-1

NRCS WRP EASEMENT SITE #2
DETAIL SHEET 49 OF 51. DATE: MAY, 2004.
LEVEE CROSSING SECTION

DESIGNED BY: J.SPOLAR
DRAWN BY: DMC/J.SPOLAR
SURVEYED BY: DU
CHECKED BY:



SWALE TYPICAL CROSS SECTION DETAIL NTS

5 -

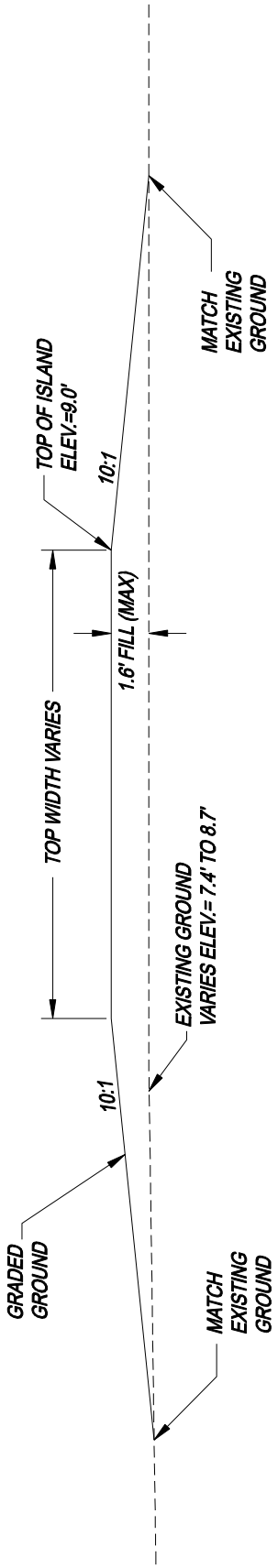
Sheet 11

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

PROJECT NO. WA-116-1

NRCS WRP EASEMENT SITE #2
DETAIL SHEET 50 OF 51. DATE: MAY, 2004.
SWALE CROSSING SECTION

DESIGNED BY:	J.SPOLAR
DRAWN BY:	DMC/J.SPOLAR
SURVEYED BY:	DU
CHECKED BY:	



ISLAND TYPICAL CROSS SECTION DETAIL NTS

6 -

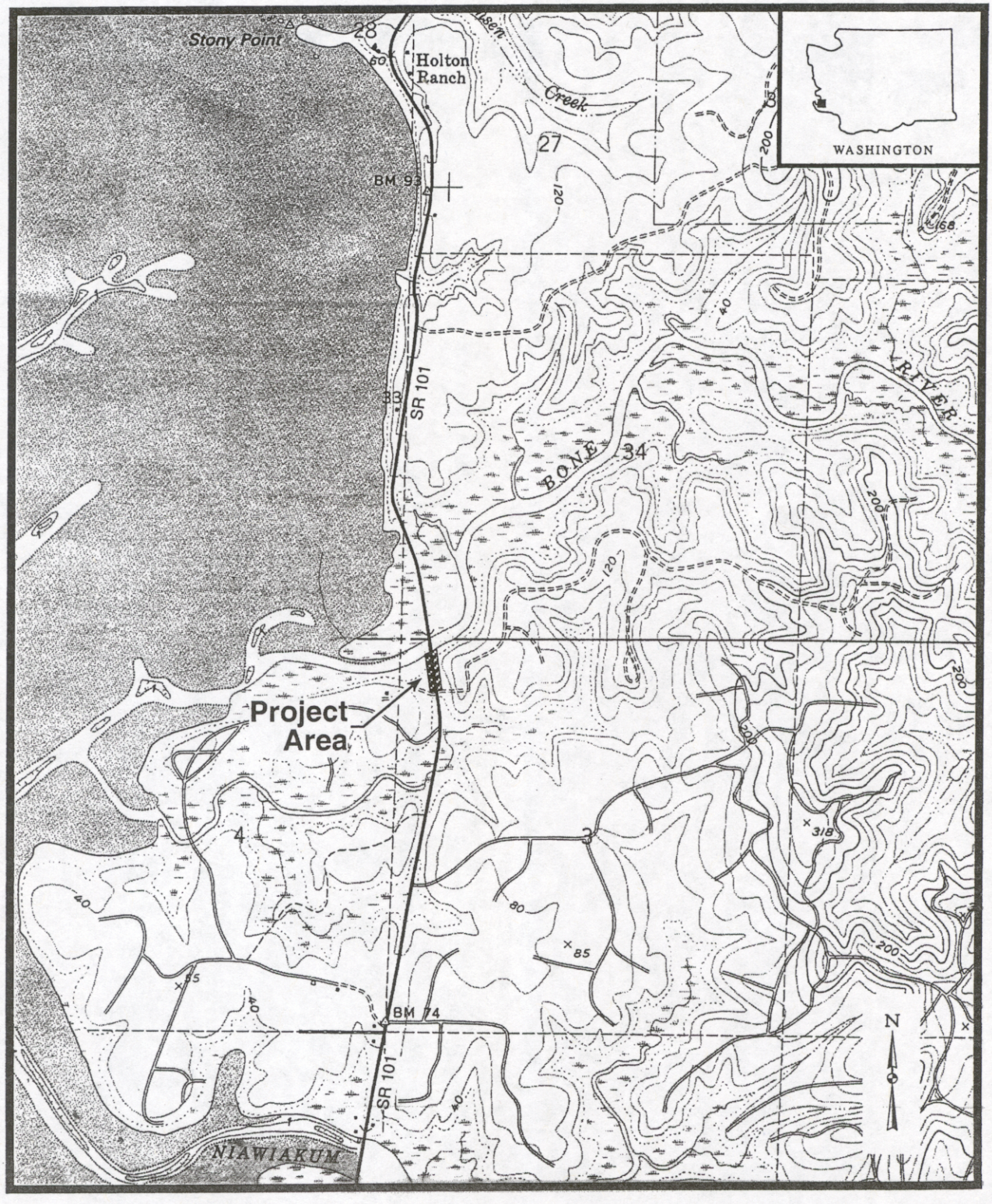
Sheet 12

DUCKS UNLIMITED INC.
PacNW Field Office (360)885-2011

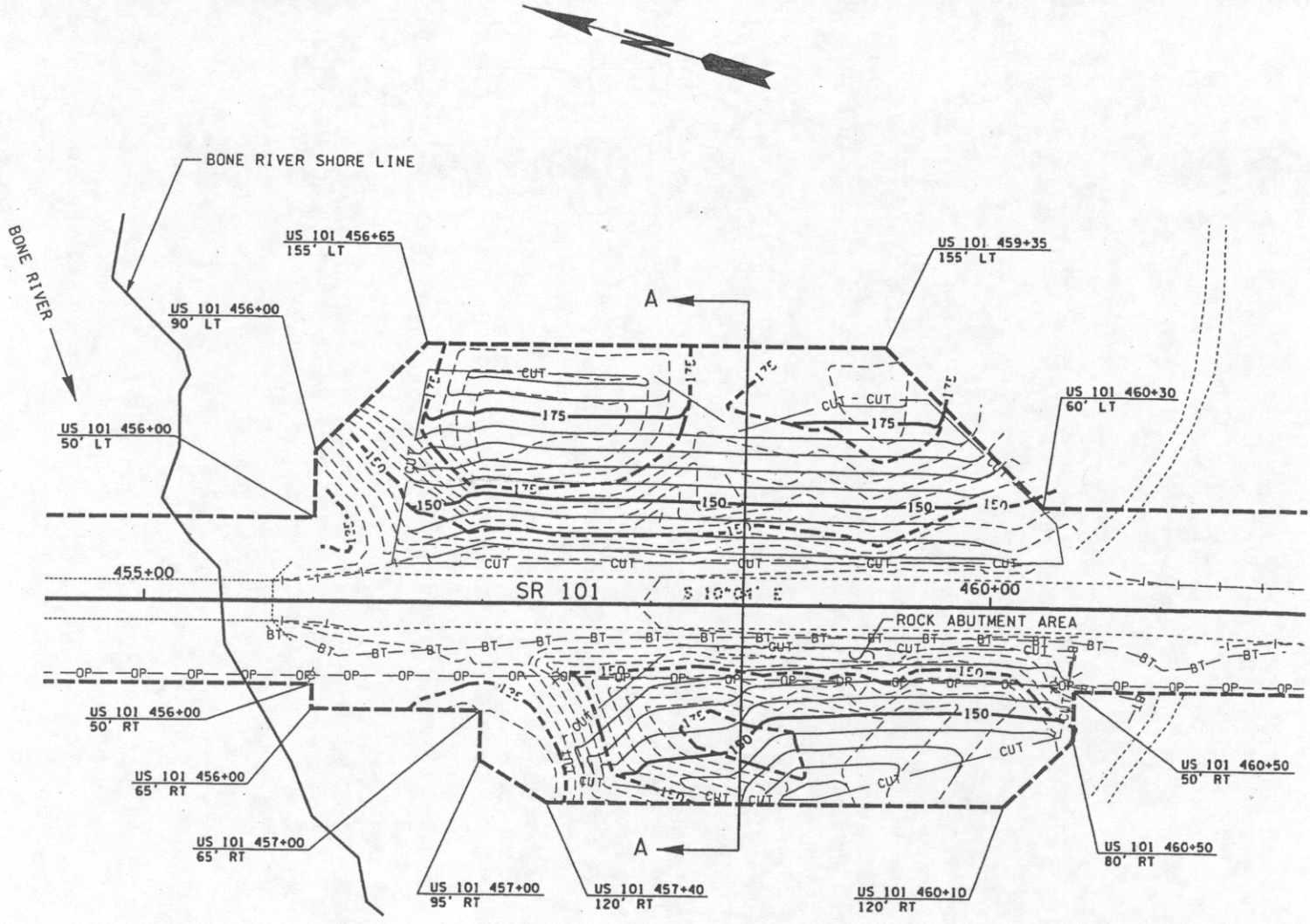
PROJECT NO. WA-116-1

NRCS WRP EASEMENT SITE #2
DETAIL SHEET 51 OF 51. DATE; MAY, 2004.
ISLAND CROSSING SECTION

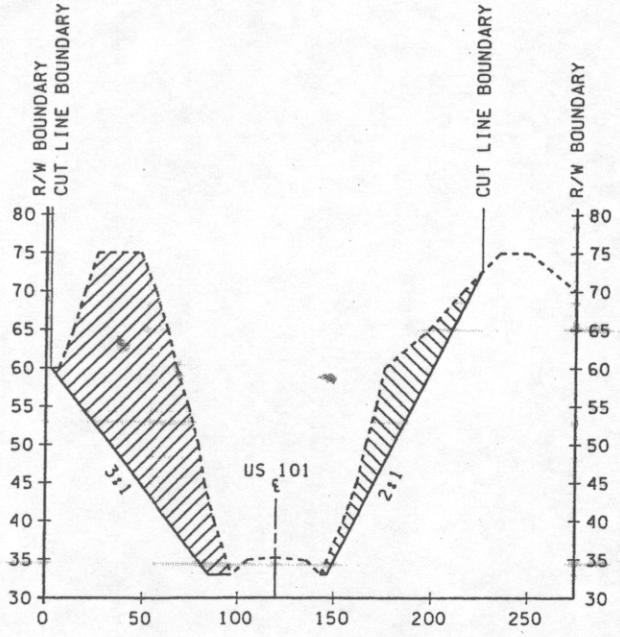
DESIGNED BY: J.SPOLAR
DRAWN BY: DMC/J.SPOLAR
SURVEYED BY: DU
CHECKED BY:



Sheet 52 Bone River borrow area location map



BONE RIVER BORROW SITE



SECTION A-A

LEGEND:

- BONE RIVER BORROW EXCAVATION INCL. HAUL
- EXISTING CONTOURS
- ULTIMATE CONTOURS

Sheet 53

SR 105

MITIGATION WILLAPA RIVER ESTUARINE RESTORATION

GRADING PLAN