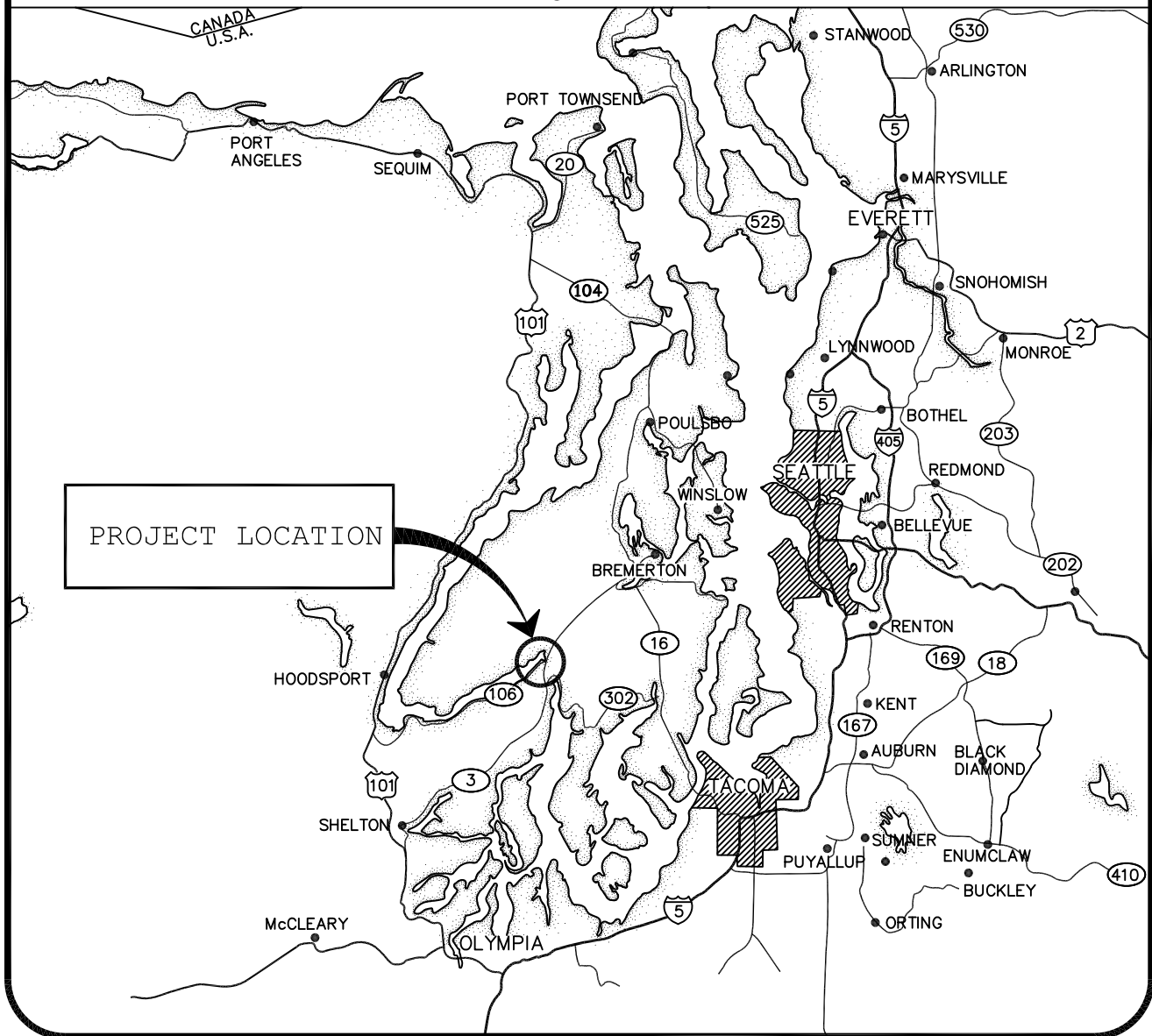


SITE LOCATION MAP

NORTH



VICINITY MAP

47°26'24.9"N 122°50'21.8"W

MASON COUNTY

SECTION 32, TOWNSHIP 23 NORTH, RANGE 1 WEST, W.M.

PURPOSE: FISH PASSAGE AND
HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT

LANDOWNERS:

LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

THELER TRAIL
DIKE REMOVAL &
HABITAT RESTORATION

COVER

IN: **Union River estuarine tidelands**

NEAR: BELFAIR, WASHINGTON

COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT.
FISH & WILDLIFE

SHEET 1 OF 13 600 CAPITOL WAY N

DATE: 1-4-24 OLYMPIA, WA 98501

Revised 2/2/24 CW

SHEET NO.

1. COVER SHEET
2. SHEET INDEX
3. EXISTING PLAN VIEW
4. PROPOSED PLAN VIEW
5. PROPOSED CULVERT PLAN VIEW
6. PROPOSED CULVERT PROFILE
7. PROPOSED CULVERT SECTION
8. PROPOSED CHANNEL PLAN VIEW
9. PROPOSED CHANNEL SECTION
10. WETLAND IMPACTS AND PLANTING PLAN
11. PLANTING SPECIES
12. MATERIAL QUANTITIES
13. USACE MATERIAL QUANTITIES

DESIGN STANDARDS

STREAM HABITAT IMPROVEMENT AND MANAGEMENT: PS 395
AQUATIC ORG PASSAGE: PS 396
OPEN CHANNEL: PS 582
ACCESS ROAD: PS 560

PROJECT PARTNERS

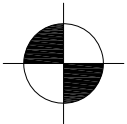
HOOD CANAL SALMON ENHANCEMENT GROUP (HCSEG)

WASHINGTON DEPARTMENT
FISH & WILDLIFE

MASON COUNTY PUBLIC WORKS

LANDOWNER REPRESENTATIVE

WDFW WILDLIFE AREA MANAGER



VERTICAL DATUM
NAVD 88

PURPOSE: FISH PASSAGE AND
HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT

LANDOWNERS:

LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

THELER TRAIL
DIKE REMOVAL &
HABITAT RESTORATION

SHEET INDEX

IN: Union River estuarine tidelands

NEAR: BELFAIR, WASHINGTON

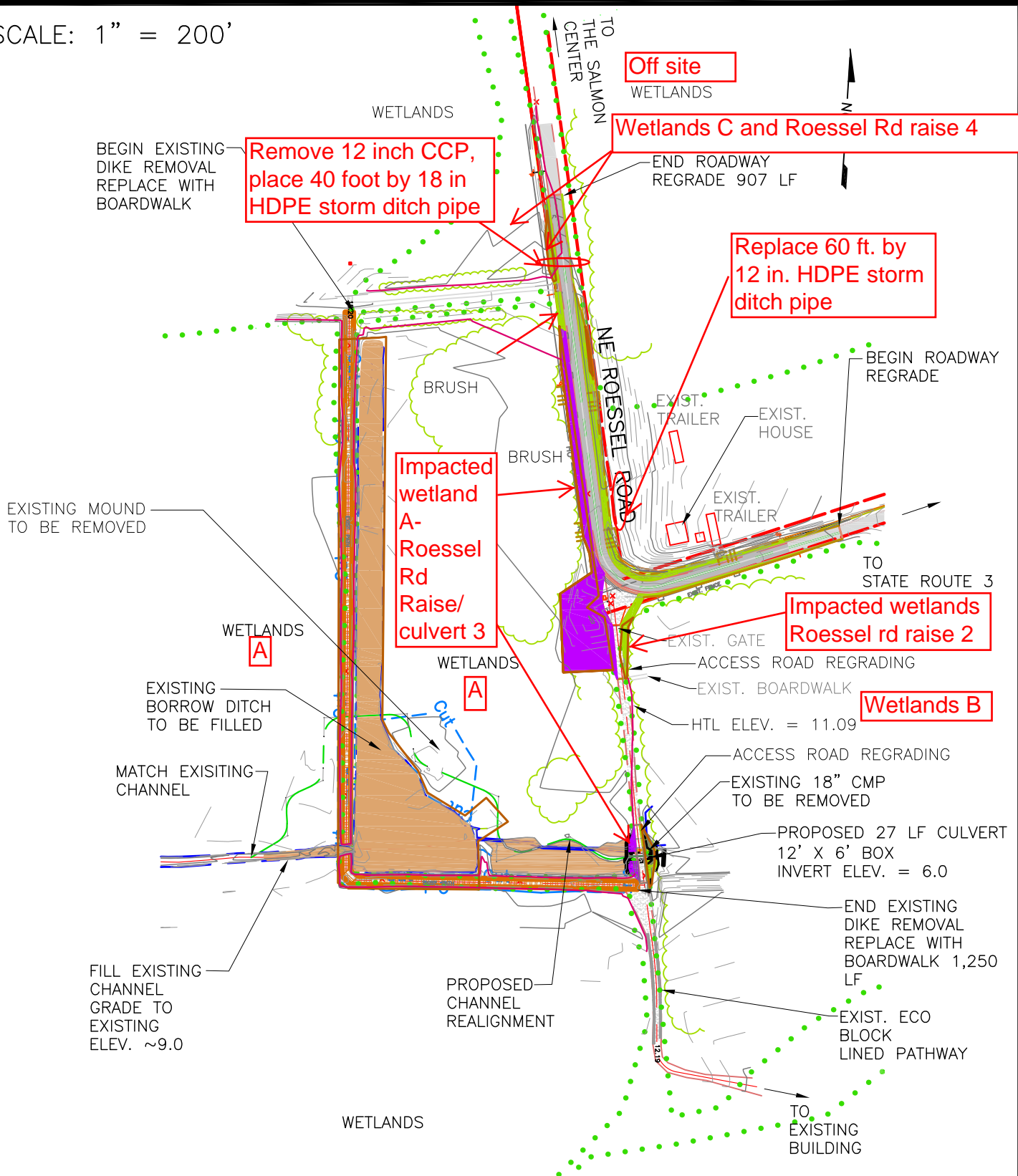
COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT.

FISH & WILDLIFE
SHEET 2 OF 13 600 CAPITOL WAY N

DATE: 1-4-24 OLYMPIA, WA 98501

SCALE: 1" = 200'



PURPOSE: FISH PASSAGE AND HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT LANDOWNERS:
LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

PROPOSED PLAN VIEW

IN: **Union River estuarine tidelands**

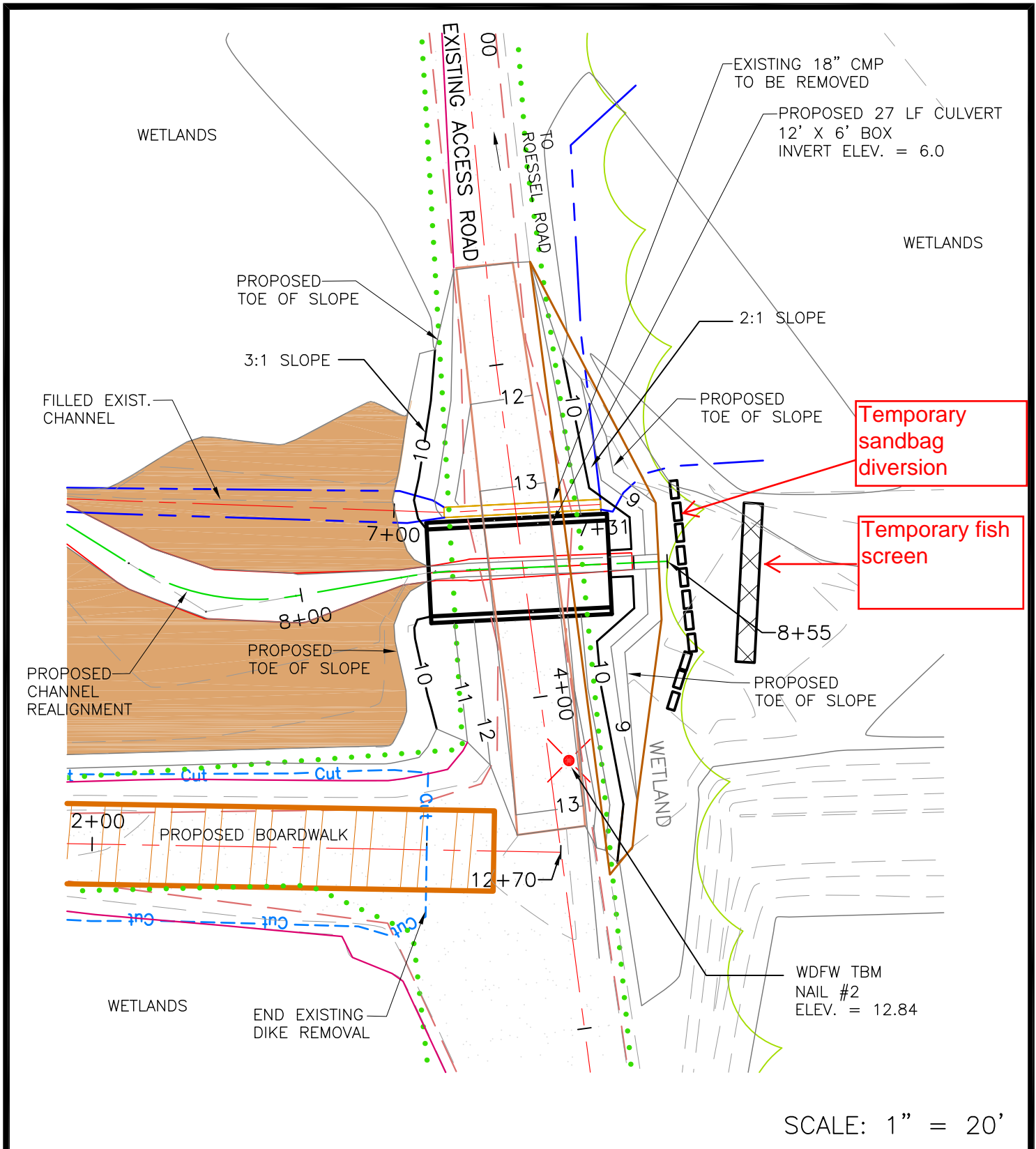
NEAR: BELFAIR, WASHINGTON

COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT. FISH & WILDLIFE

SHEET 4 OF 13 600 CAPITOL WAY N

DATE: 1-4-24 OLYMPIA, WA 98501



PURPOSE: FISH PASSAGE AND HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT LANDOWNERS:
 LEPERE, DONALD R & SANDRA K
 MOLNAR INVESTMENT GROUP
 NORTH MASON SCHOOL DISTRICT

PROPOSED CULVERT PLAN VIEW

IN: **Union River estuarine tidelands**

NEAR: BELFAIR, WASHINGTON

COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT. FISH & WILDLIFE

SHEET 5 OF 13 600 CAPITOL WAY N

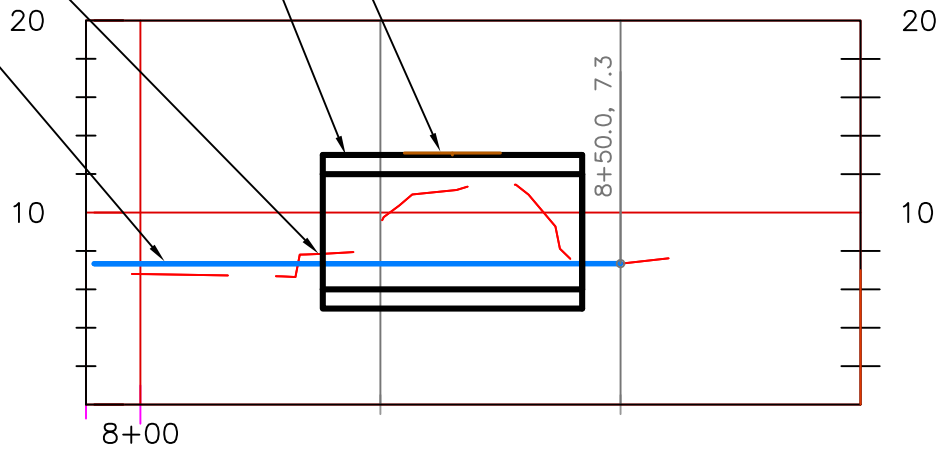
DATE: 1-4-24 OLYMPIA, WA 98501

PROPOSED 10' WIDE
ROAD SURFACE

PROPOSED 27 LF CULVERT
12' X 6' BOX
INVERT ELEV. = 6.0
S = 0.0%.

EXISTING GRADE

FINISH GRADE



SCALE: 1" = 20', HORIZ., 1" = 5' VERT.

PURPOSE: FISH PASSAGE AND
HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT

LANDOWNERS:

LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

PROPOSED
CULVERT
PROFILE

IN: Union River estuarine tidelands

NEAR: BELFAIR, WASHINGTON

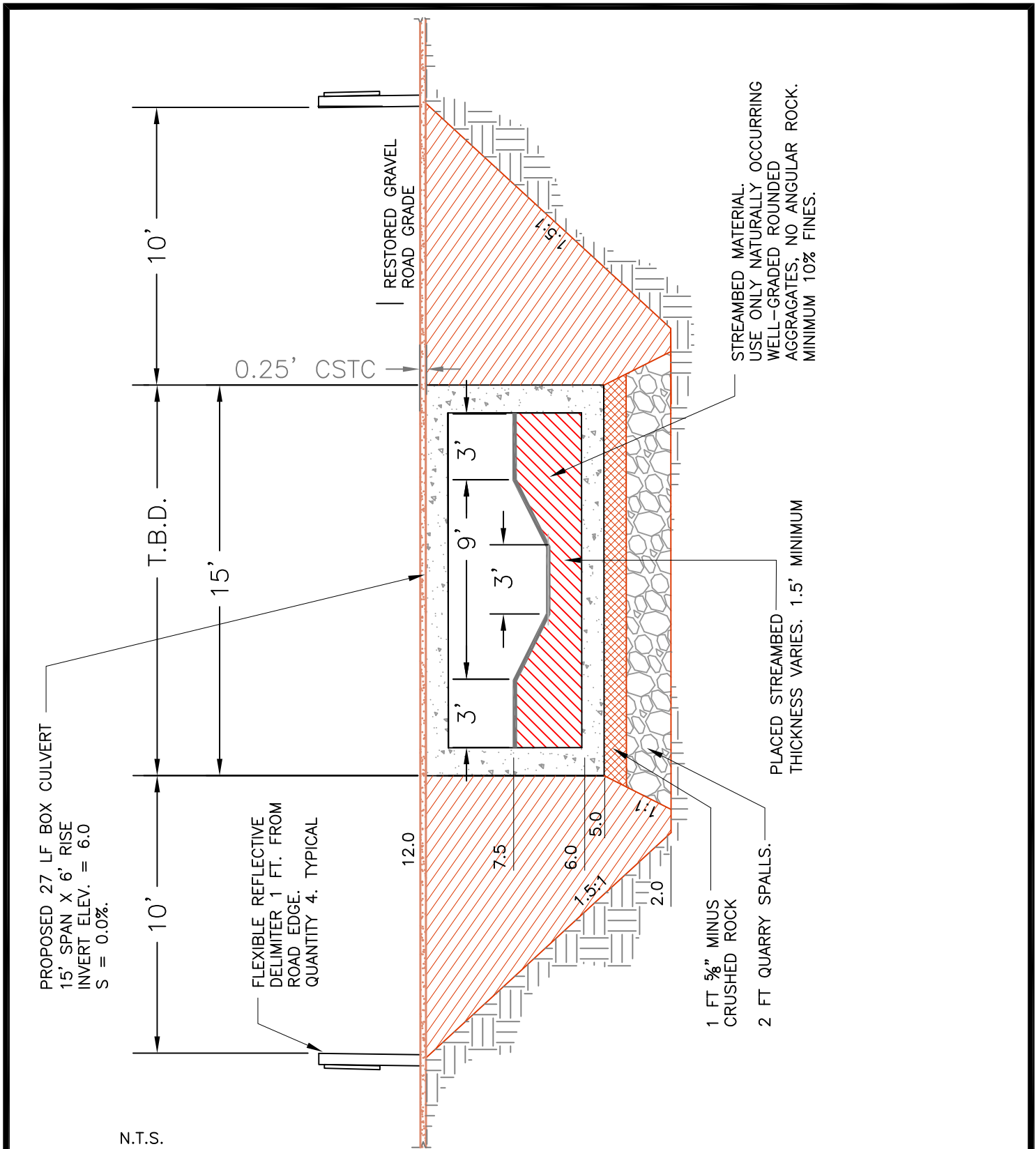
COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT.

SHEET 6 OF 13 FISH & WILDLIFE

DATE: 1-4-24 600 CAPITOL WAY N

OLYMPIA, WA 98501



PURPOSE: FISH PASSAGE AND HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT LANDOWNERS:
LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

PROPOSED CULVERT SECTION

IN: Union River estuarine tidelands

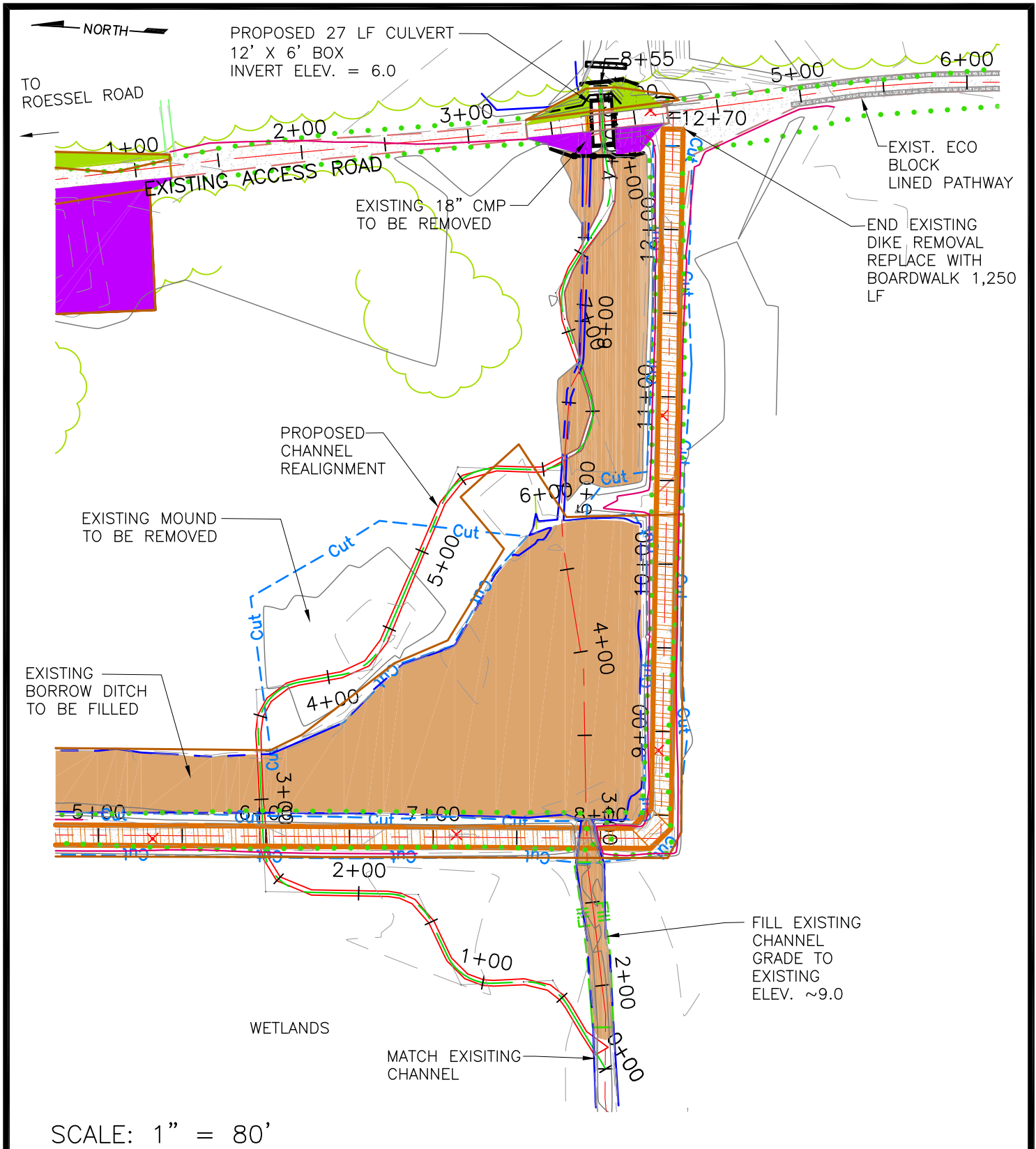
NEAR: BELFAIR, WASHINGTON

COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT. FISH & WILDLIFE
600 CAPITOL WAY N
OLYMPIA, WA 98501

SHEET 7 OF 13

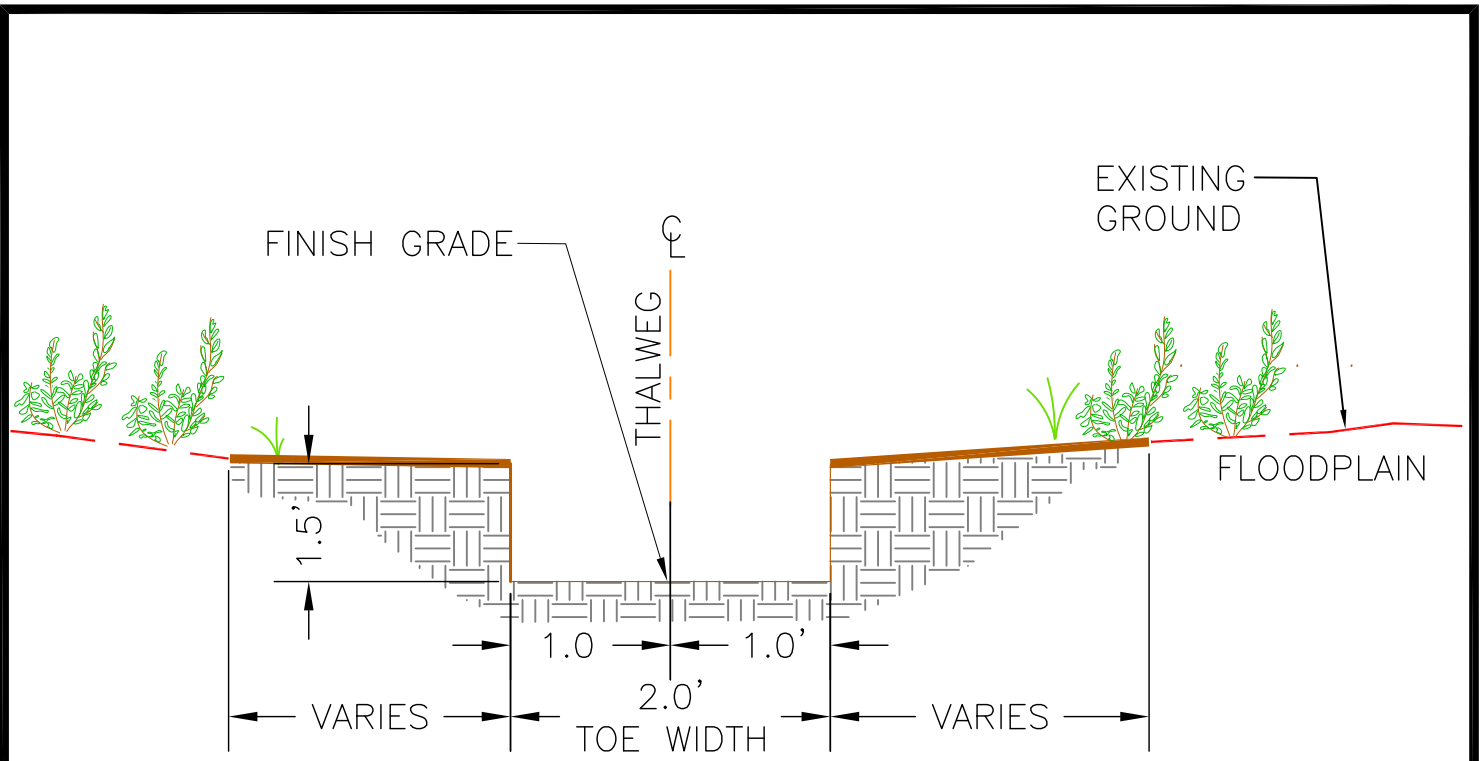
DATE: 1-4-24



PURPOSE: FISH PASSAGE AND HABITAT RESTORATION
 DATUM: NAVD 88
 ADJACENT LANDOWNERS:
 LEPERE, DONALD R & SANDRA K
 MOLNAR INVESTMENT GROUP
 NORTH MASON SCHOOL DISTRICT

PROPOSED CHANNEL PLAN VIEW

IN: Union River estuarine tidelands
 NEAR: BELFAIR, WASHINGTON
 COUNTY OF: MASON STATE: WASHINGTON
 APPLICATION BY: WASHINGTON DEPT. FISH & WILDLIFE
 SHEET 8 OF 13 600 CAPITOL WAY N
 DATE: 1-4-24 OLYMPIA, WA 98501



N.T.S.

PURPOSE: FISH PASSAGE AND HABITAT RESTORATION
 DATUM: NAVD 88
 ADJACENT LANDOWNERS:
 LEPERE, DONALD R & SANDRA K
 MOLNAR INVESTMENT GROUP
 NORTH MASON SCHOOL DISTRICT

PROPOSED CHANNEL
 DETAIL

IN: **Union River estuarine tidelands**
 NEAR: BELFAIR, WASHINGTON
 COUNTY OF: MASON STATE: WASHINGTON
 APPLICATION BY: WASHINGTON DEPT. FISH & WILDLIFE
 SHEET 9 OF 13 600 CAPITOL WAY N
 DATE: 1-4-24 OLYMPIA, WA 98501

SCALE: 1" = 200'

IMPACT WETLAND C,
SLOPE PLANTING

WETLANDS

WETLANDS

NORTH

TO THE SALMON
CENTER

IMPACT "OFF-SITE" WETLAND,
SLOPE PLANTING

STORMWATER
DITCH PLANTING

WETLANDS

BRUSH

BRUSH

EXIST.
TRAILER

DITCH PLANTING
WIDTH ~ 4' FT.

IMPACTED WETLAND A +
PROPOSED & EXISTING
STREAM CHANNELS,
RESTORED TO NATURAL
ESTUARINE CONDITIONS WITH
EXISTING ON-SITE SEEDBANK

IMPACTED WETLAND A,
ESTUARINE PLANTING

EXIST.
TRAILER

TO STATE ROUTE 3

WETLANDS

WETLANDS

IMPACTED WETLAND B,
SLOPE PLANTING

IMPACTED WETLAND A,
ESTUARINE PLANTING

WETLANDS

TO
EXISTING
BUILDING

PURPOSE: FISH PASSAGE AND
HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT
LANDOWNERS:

LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

WETLAND IMPACTS AND PLANTING PLAN

IN: **Union River estuarine tidelands**

NEAR: BELFAIR, WASHINGTON

COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT.
FISH & WILDLIFE

SHEET 10 OF 13 600 CAPITOL WAY N
DATE: 1-4-24 OLYMPIA, WA 98501

ESTUARINE PLANTING

SMALL TREE SPECIES

VINE MAPLE
CASCARA
SERVICEBERRY
HOOKERS WILLOW
SCOULER'S WILLOW
WESTERN RED ALDER

SHRUB SPECIES

INDIAN PLUM
NOOTKA ROSE
SWAMP ROSE
BLACK HAWTHORN
BEAKED HAZELNUT
RED ELDERBERRY
LOW OREGON GRAPE
TALL OREGON GRAPE
SALAL
SNOWBERRY
OCEANSPRAY
THIMBLEBERRY

ROADSIDE PLANTING

SMALL TREE SPECIES

HOOKE'S WILLOW
VINE MAPLE
CASCARA

SHRUB SPECIES

INDIAN PLUM
RED FLOWERING CURRANT
BEAKED HAZELNUT
RED ELDERBERRY
TALL OREGON GRAPE
SNOWBERRY
OCEANSPRAY
THIMBLEBERRY

ROADSIDE DITCH PLANTING

SHRUB SPECIES

LOW OREGON GRAPE
SALAL
LADY FERN
ROSA SPECIES
SNOWBERRY
RED-FLOWERING CURRANT

GROUND COVER SPECIES

BLEEDING HEART
CAMAS
INSIDE-OUT FLOWER
OREGON IRIS
WOOD SORRELS
COASTAL STRAWBERRY CHECKER
MALLOW SLOUGH SEDGE

PLANTING PLAN
SPECIES

PURPOSE: FISH PASSAGE AND
HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT

LANDOWNERS:

LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

IN: **Union River estuarine tidelands**

NEAR: BELFAIR, WASHINGTON

COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT.
FISH & WILDLIFE

SHEET 11 OF 13 600 CAPITOL WAY N
DATE: 1-4-24 OLYMPIA, WA 98501

MATERIAL QUANTITIES

ALL QUANTITIES SHOWN IN CUBIC YARDS

ALL AREAS SHOWN IN SQUARE FEET

VOLUME SUMMARY

NAME	TYPE	CUT FACTOR	FILL FACTOR	2D AREA (SQ.FT.)	CUT (CU.YD.)	FILL (CU.YD.)	NET (CU.YD.)
DIKE REMOVAL CUT	FUL	1.000	1.000	30151.53	2086.43	86.67	1999.75 <CUT>
MOUND CUT	FULL	1.000	1.000	12236.90	490.90	0.00	490.90 <CUT>
INTERIOR POOL FILL	FULL	1.000	1.000	55460.62	28.45	2758.13	2729.68 <FILL>
OUTLET CHANNEL FILL	FULL	1.000	1.000	1482.72	0.01	161.97	161.97 <FILL>
PRO CHANNEL	FULL	1.000	1.000	2811.80	178.31	6.91	171.39 <CUT>
ROESSELL RD AND ACCESS RD	FULL	1.000	1.000	35400.00	0.00	2287.63	2287.63 <FILL>
TOTALS							
				2D AREA (SQ.FT.)	CUT (CU.YD.)	FILL (CU.YD.)	NET (CU.YD.)
TOTAL				142557.00	2784.09	5151.43	2367.14 <FILL>

PURPOSE: FISH PASSAGE AND HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT

LANDOWNERS:

LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

MATERIAL QUANTITIES

IN: Union River estuarine tidelands

NEAR: BELFAIR, WASHINGTON

COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT.

FISH & WILDLIFE
SHEET 12 OF 13 600 CAPITOL WAY N

DATE: 1-3-24 OLYMPIA, WA 98501

MATERIAL QUANTITIES

ALL QUANTITIES SHOWN IN CUBIC YARDS

ALL AREAS SHOWN IN SQUARE FEET

EXCAVATION

CUT BELOW HTL =	2095.67 C.Y.	33708	S.F.
CUT ABOVE HTL =	688.41 C.Y.	46665	S.F.
FILL BELOW HTL =	2875.80 C.Y.	40416	S.F.
FILL ABOVE HTL =	2275.63 C.Y.	58408	S.F.

PURPOSE: FISH PASSAGE AND
HABITAT RESTORATION

DATUM: NAVD 88

ADJACENT

LANDOWNERS:

LEPERE, DONALD R & SANDRA K
MOLNAR INVESTMENT GROUP
NORTH MASON SCHOOL DISTRICT

USACE
MATERIAL
QUALITIES

IN: **Union River estuarine tidelands**

NEAR: BELFAIR, WASHINGTON

COUNTY OF: MASON STATE: WASHINGTON

APPLICATION BY: WASHINGTON DEPT.

FISH & WILDLIFE
SHEET 13 OF 13 600 CAPITOL WAY N

DATE: 1-4-24 OLYMPIA, WA 98501