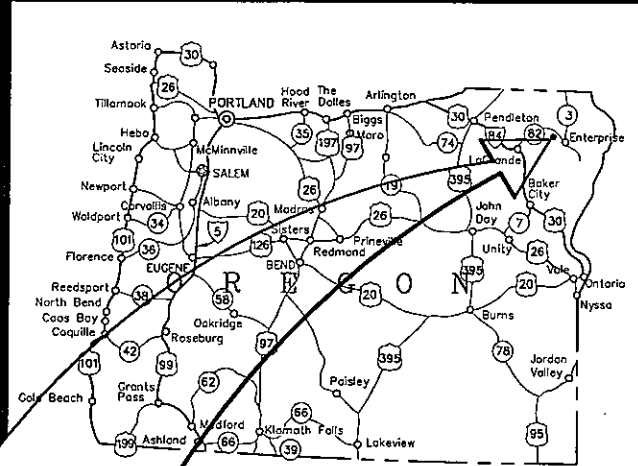


GRANDE RONDE MODEL WATERSHED

LOSTINE RIVER - LOSTINE DIVERSION FISH PASSAGE IMPROVEMENTS - 2012 WALLOWA COUNTY, OREGON

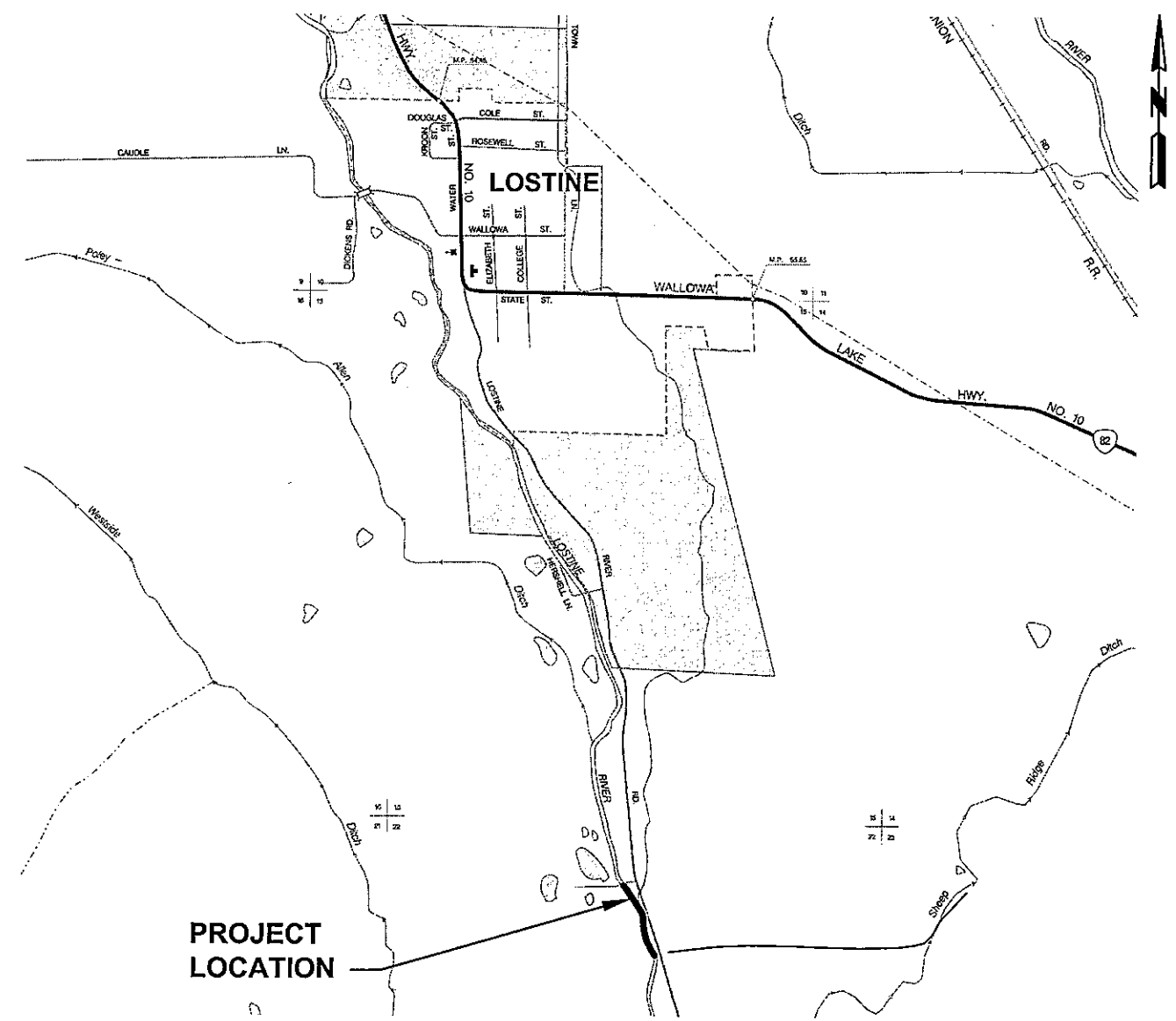


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- COVER
- 1 EXISTING SITE PLAN AND LEGEND
- 2 RIVER PLAN AND PROFILE
- 3 CROSS SECTIONS
- 4 GRADE CONTROL DETAILS
- 5 WOODY DEBRIS DETAILS



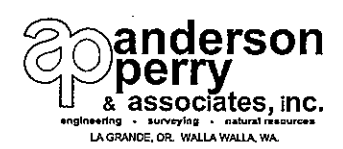
PROJECT
LOCATION

VICINITY MAP
N.T.S.

The Grande Ronde Model Watershed has reviewed these drawings and approved them for construction to fulfill the intended project objectives.

Date

FOR REVIEW ONLY
NOT FOR CONSTRUCTION



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PLAN LEGEND

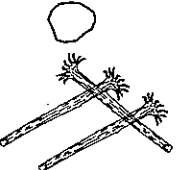
GENERAL

	EXISTING	PROPOSED
FENCE LINE/GATE		
DITCH C		
ORDINARY HIGH WATER		
RIVER THALWEG		
STRUCTURE		
FILL AREA		
CUT AREA		

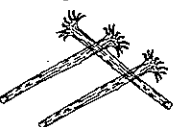
SITE SURVEY

INDEX CONTOUR		750
INTERMEDIATE CONTOUR		750
CENTERLINE		
CONTROL POINT		

ROCK



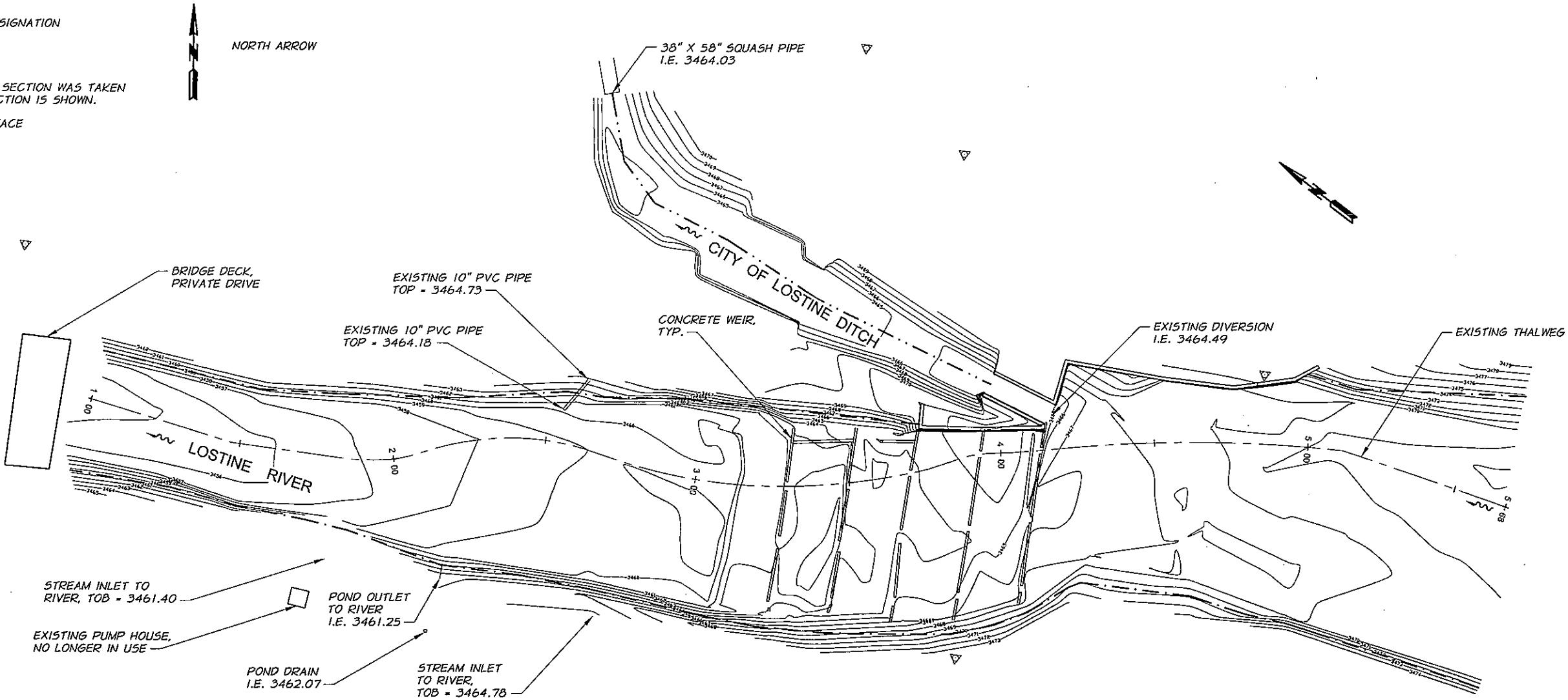
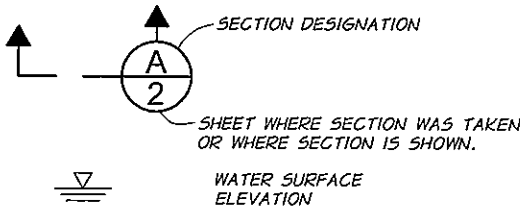
WOODY DEBRIS



PROJECT DESCRIPTION

THE PURPOSE OF THE PROJECT IS TO IMPROVE FISH PASSAGE AND HABITAT THROUGH THIS REACH OF THE LOSTINE RIVER BY INSTALLING GRADE CONTROL AND WOODY DEBRIS STRUCTURES AND REGRADING THE EXISTING CHANNEL DOWNSTREAM OF THE MOST UPSTREAM EXISTING CONCRETE WEIR.

DRAFTING



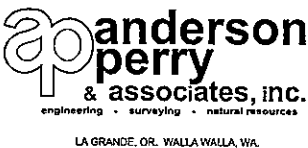
EXISTING SITE PLAN

1"=20'

REVISION	BY	DATE	HORIZ. SCALE	AS SHOWN	VERT. SCALE
DESIGNED BY	C. HUTCHINS		JOB NUMBER	81-25	DATE
DRAWN BY	R. RASMUSSEN		ACAD FILE	LEGEND.dwg	2012
REVIEWED BY	B. MOORE				
XREFS: LOSTINE-TB.DWG					
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BARSCALE SHOWN IS ACCURATE.

PRELIMINARY



GRANDE RONDE MODEL WATERSHED
LOSTINE DIVERSION
FISH PASSAGE

EXISTING SITE PLAN AND LEGEND

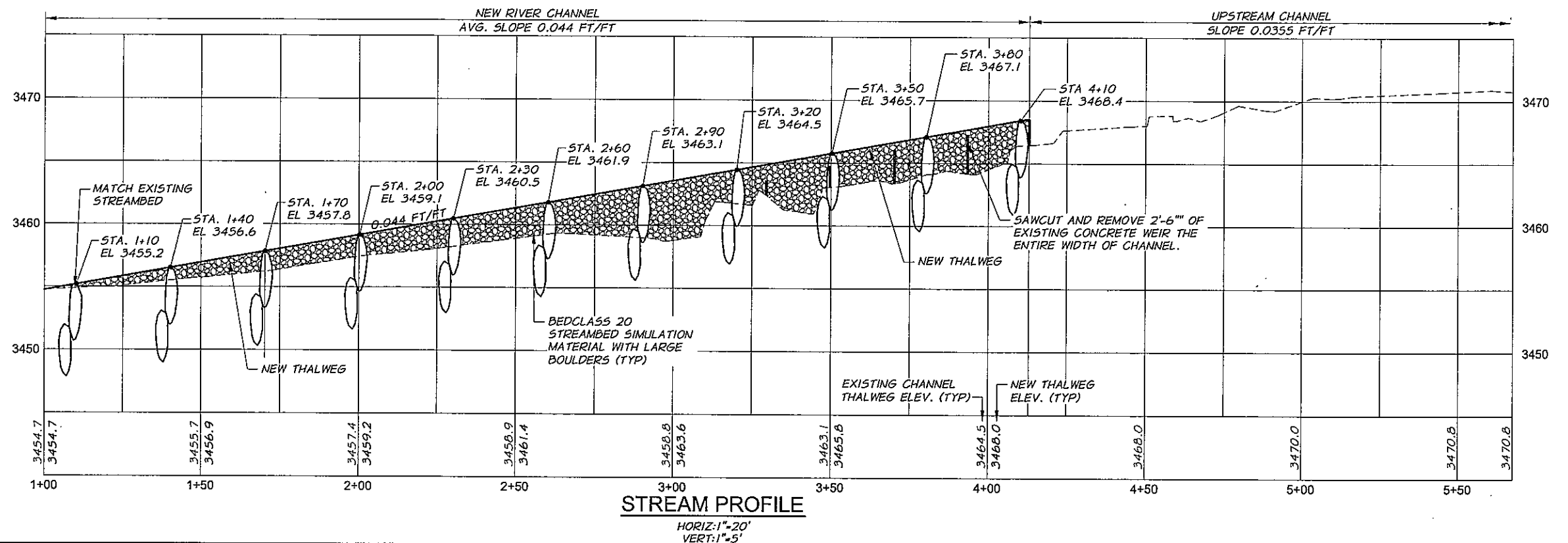
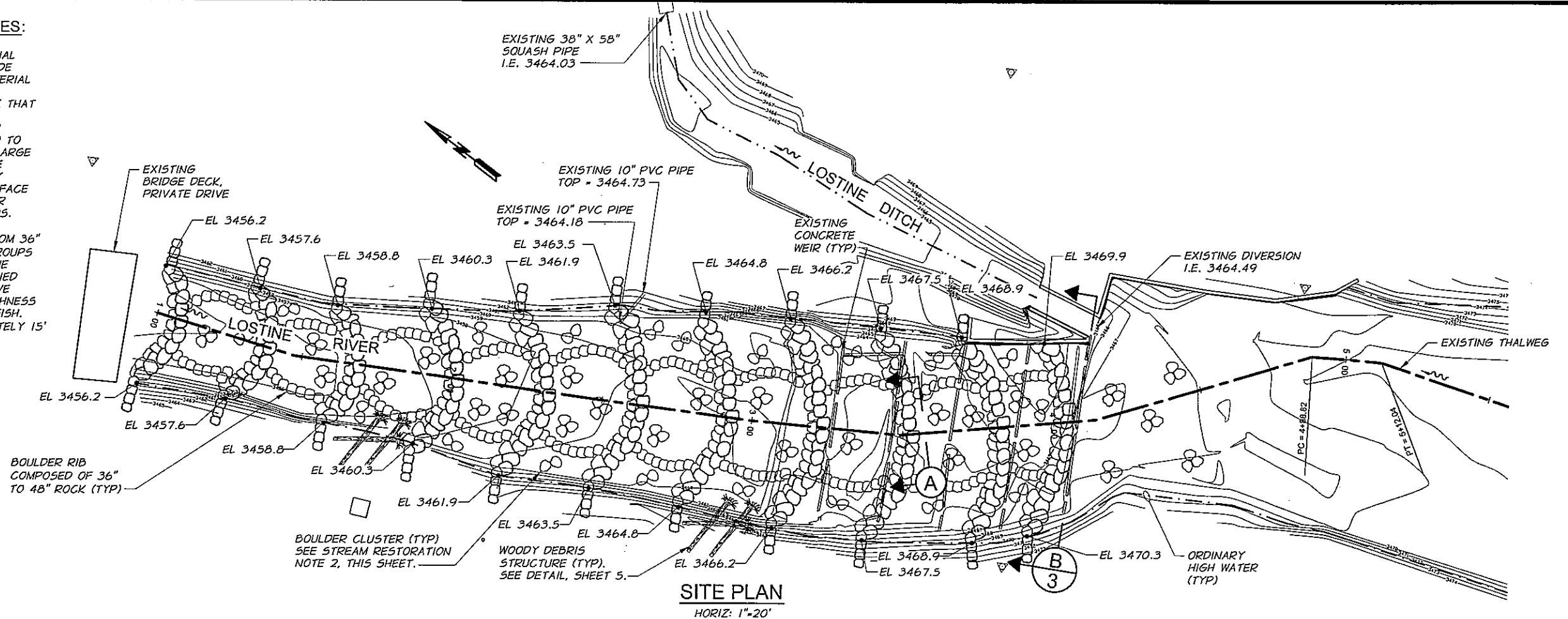
SHEET

1

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STREAM RESTORATION NOTES:

1. STREAMBED SIMULATION MATERIAL SHALL BE PLACED TO THE GRADE SHOWN ON THE DRAWINGS. MATERIAL SHALL BE PLACED BY FIRST INSTALLING THE LARGEST ROCK THAT WILL PROTRUDE ABOVE THE STREAMBED SURFACE. SMALLER MATERIAL SHALL THEN BE USED TO FILL THE VOIDS BETWEEN THE LARGE ROCK. THIS MATERIAL SHALL BE TAMPED IN PLACE FOLLOWED BY JETTING OR FLOODING THE SURFACE WITH WATER TO WASH THE FINER MATERIAL INTO REMAINING VOIDS.
2. BOULDERS RANGING IN SIZE FROM 36" TO 48" SHALL BE PLACED IN GROUPS OF 3 NEAR THE SURFACE OF THE STREAMBED AND SHALL BE BURIED APPROXIMATELY 60% TO ACHIEVE LARGE SCALE HYDRAULIC ROUGHNESS AND RESTING LOCATIONS FOR FISH. SPACING SHALL BE APPROXIMATELY 15' O.C. THROUGHOUT THE NEWLY CONSTRUCTED REACH.



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REVIEWED BY B. MOORE									

20 0 20 40 60

SCALE IN FEET

5 0 5 10 15

SCALE IN FEET

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LOSTINE DIVERSION

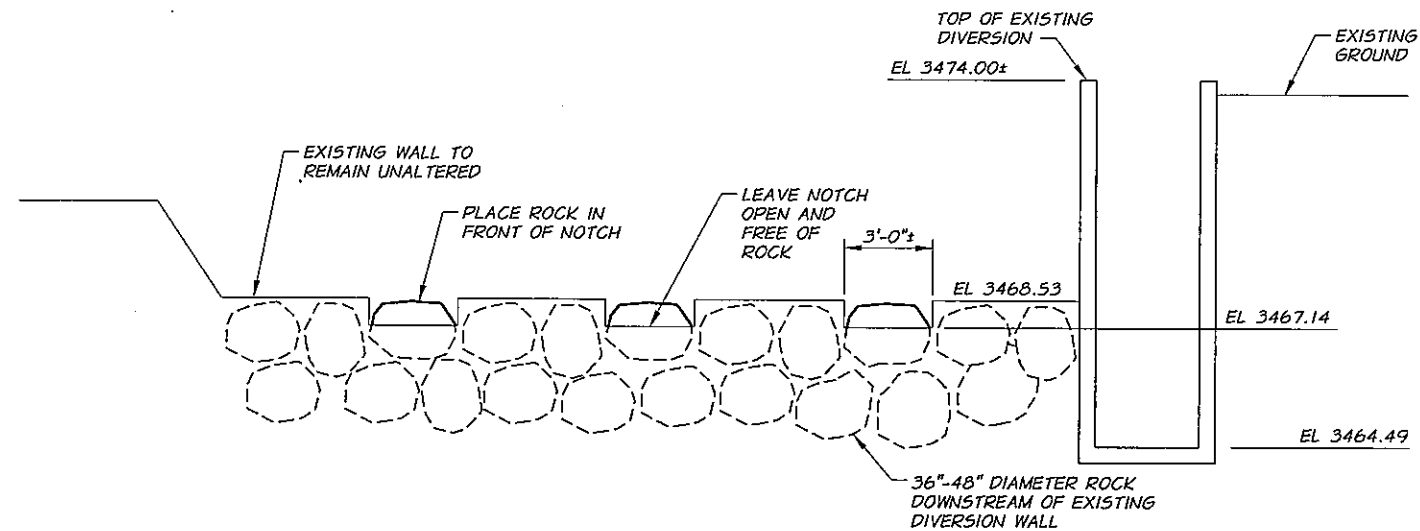
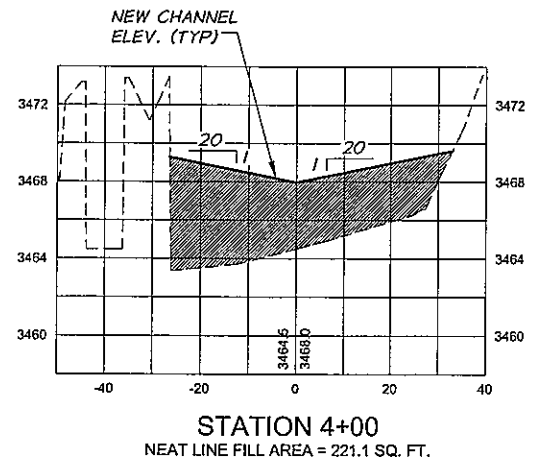
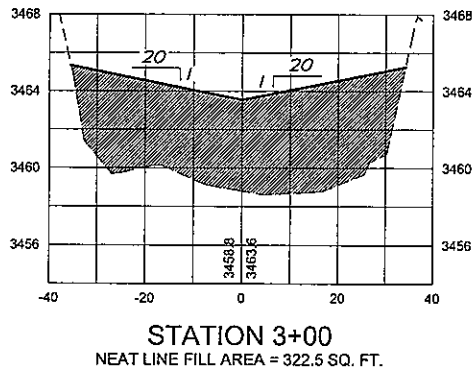
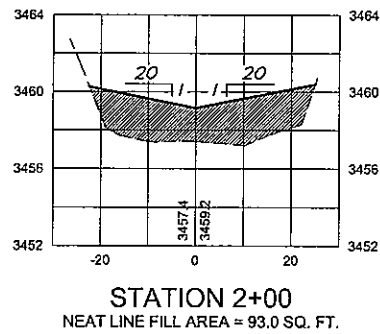
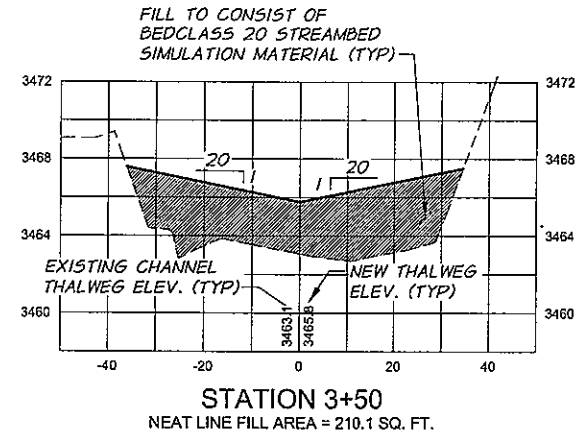
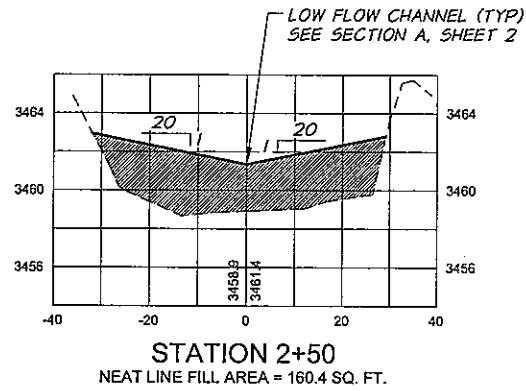
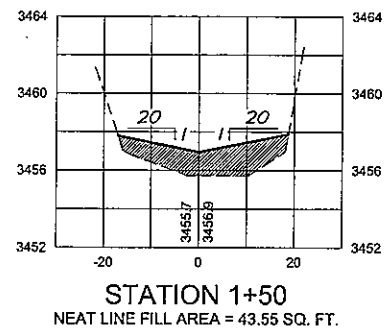
FISH PASSAGE

RIVER PLAN AND PROFILE

SHEET

2

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REVISION	BY	DATE	HORZ. SCALE 1"=20'	VERT. SCALE 1"=5'
DESIGNED BY C. HUTCHINS	XREFS: LOSTINE-TB.DWG	JOB NUMBER 81-25	DATE 2012	
DRAWN BY P. RICHARDSON		ACAD FILE: SITE-PP2B.dwg		
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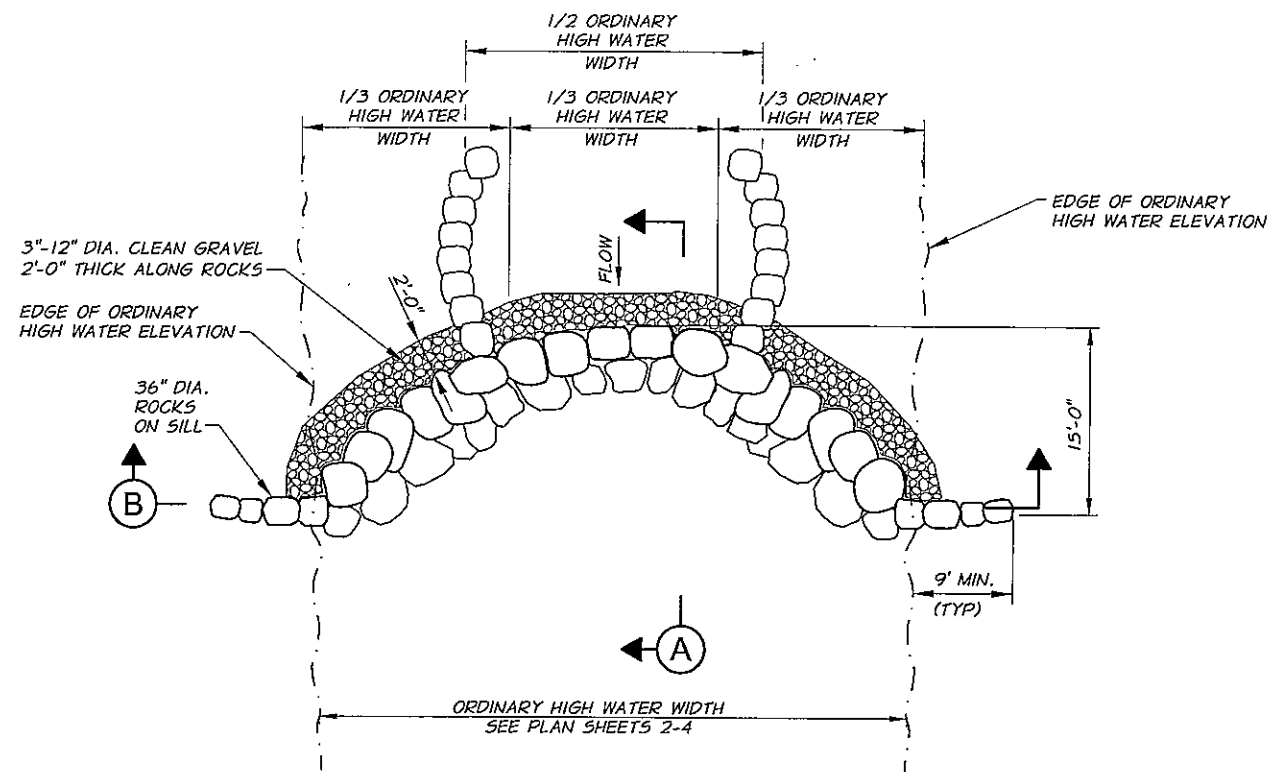
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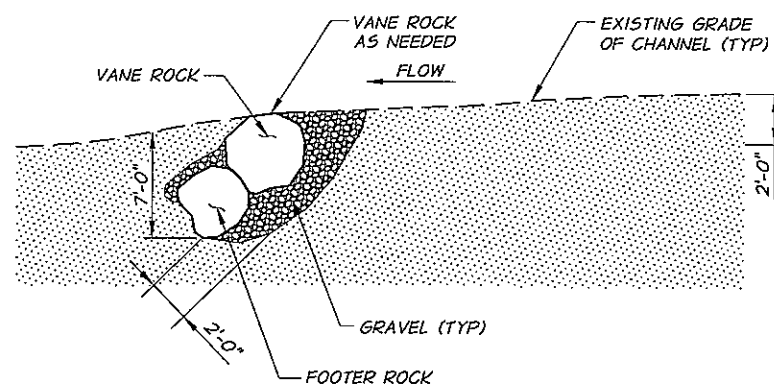
CROSS SECTIONS

SHEET

3



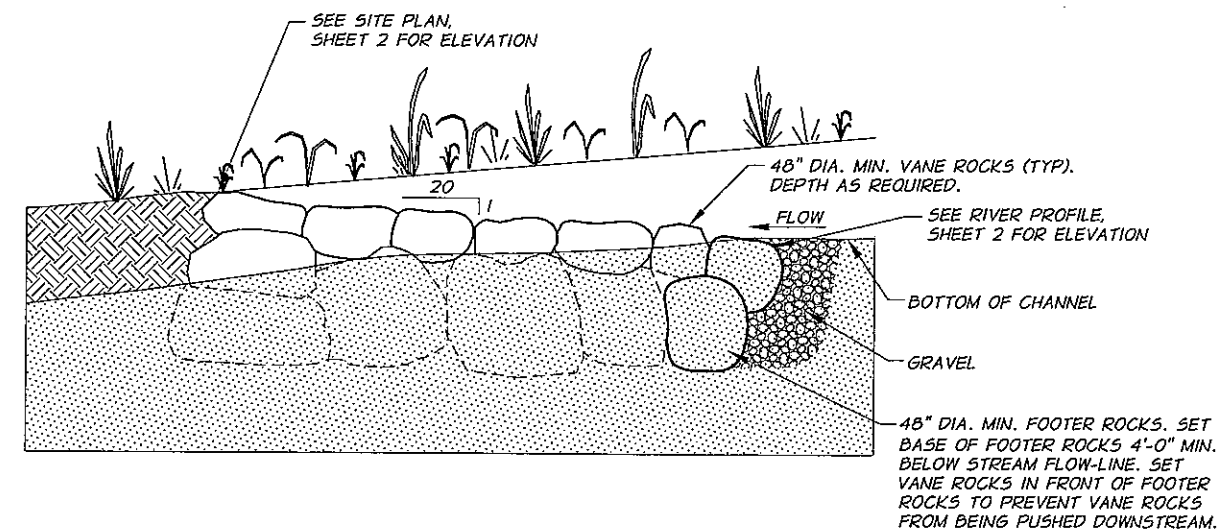
PLAN
N.T.S.



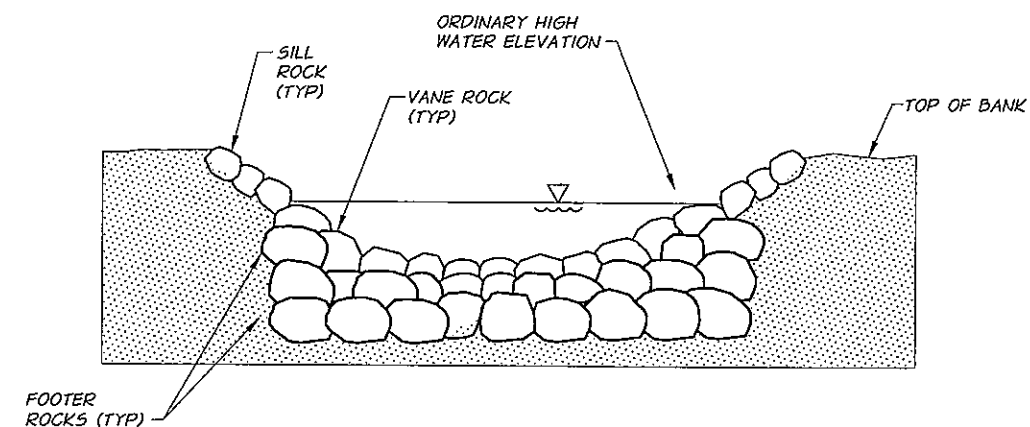
ROCK PLACEMENT DETAIL
N.T.S.

NOTES:

1. VANE ROCKS SHALL BE PLACED UPSTREAM AND AGAINST FOOTER AND LOWER VANE ROCKS, NOT ON TOP OF THEM.
2. GRAVEL SHALL BE COARSE GRADED AND INSTALLED SO THAT IT DOES NOT WASH THROUGH THE SPACES BETWEEN THE FOOTER AND VANE ROCKS.



GRADE CONTROL SECTION A
(ROCKS SHOWN OUT OF SECTION FOR CLARITY)
N.T.S.



GRADE CONTROL SECTION B
(ROCKS SHOWN OUT OF SECTION FOR CLARITY)
N.T.S.

NOTE:

1. SEE ROCK PLACEMENT DETAIL THIS SHEET FOR HOW TO INSTALL ROCK.

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DRAWN BY	P. RICHARDSON		ACAD FILE	VaneDetails.dwg		
REVIEWED BY	D. MOORE					
REVISION						
BY						
DATE						
HORIZ. SCALE	NONE		VERT. SCALE			
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FISH PASSAGE

GRADE CONTROL DETAILS

SHEET

4

