Calapooia River Reach 3
Restoration, Stabilization, and Conservation Projects

PROJECT PARTNERS

LOCAL LANDOWNERS LOCATED IN REACH 3 OF THE CALAPOOIA RIVER NEAR BROWNSVILLE, OREGON.

PROJECT DESCRIPTION

PROPOSED RESTORATION, STABILIZATION, AND CONSERVATION PROJECTS ARE PROPOSED FOR REACH 3 OF THE CALAPOOIA RIVER. THE CALAPOOIA WATERSHED COUNCIL IS WORKING WITH LANDOWNERS TO ENHANCE RIVER AND FLOODPLAIN HABITAT IN REACH 3.

BENCHMARK

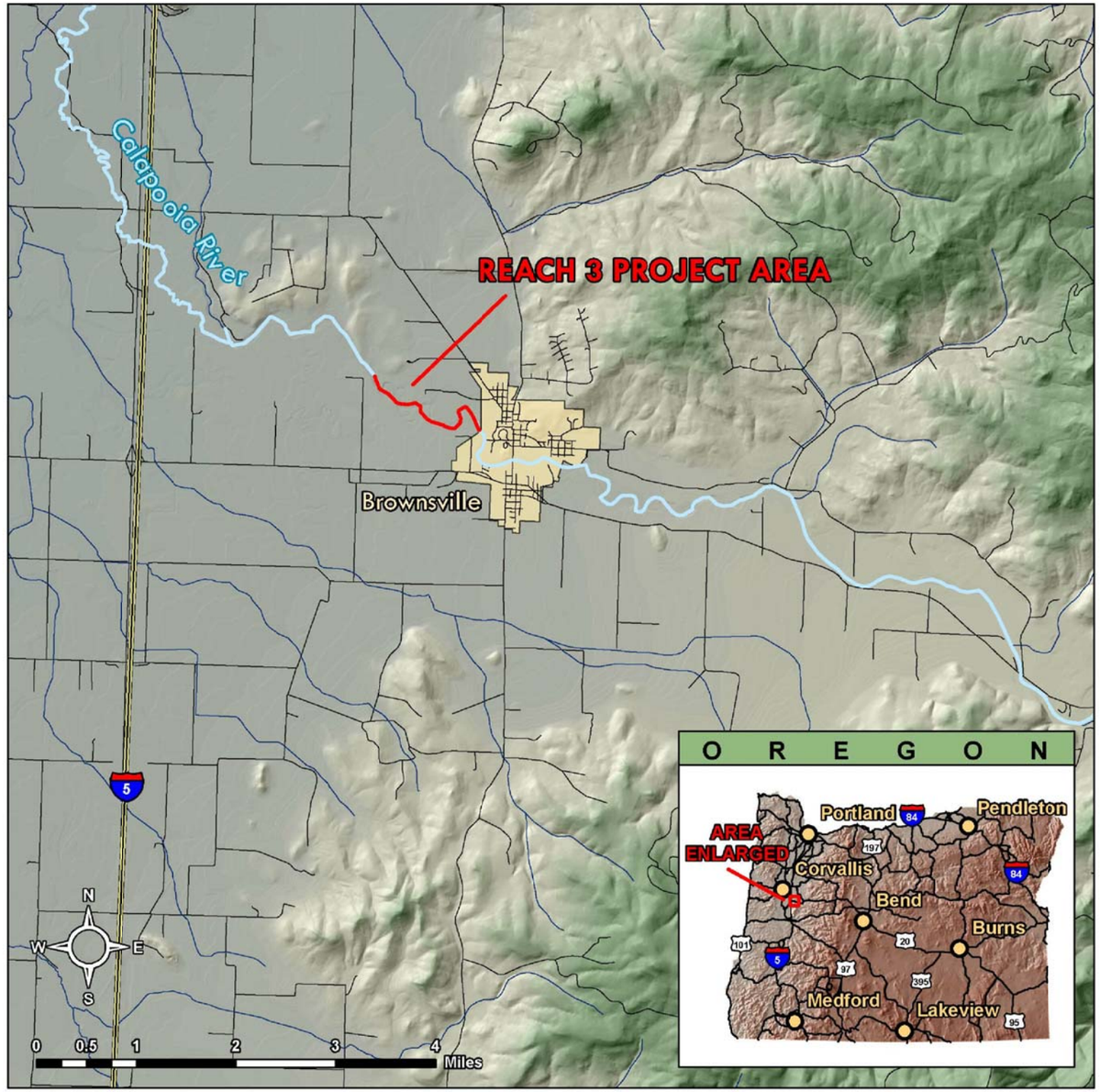
SURVEY CONTROL USED FOR THE PROJECT IS PROVIDED ON DRAWING 2.0. THE HORIZONTAL DATUM IS NAD 83, STATE PLANE COORDINATES, OREGON ZONE NORTH, AND THE VERTICAL DATUM IS NAVD 88. THE BENCHMARK COORDINATES CORRESPOND TO THE TOP CENTER OF CONTROL MARKERS LISTED ON DRAWING.

GENERAL NOTES

1. DUE TO THE INHERENT VARIABILITY AND DYNAMIC NATURE OF RIVERS, IT IS NECESSARY TO REVIEW CURRENT CONDITIONS PRIOR TO IMPLEMENTATION OF THE DESIGN DRAWINGS TO ENSURE SITE CONDITIONS MATCH CONDITIONS DEPICTED IN DRAWINGS.
2. RIVER DESIGN GROUP MAKES NO REPRESENTATION OF THE EXISTENCE OR NONEXISTENCE OF UTILITIES. CONTRACTOR IS RESPONSIBLE FOR CALLING THE OREGON UTILITY NOTIFICATION CENTER (800-332-2344) AT LEAST TWO BUSINESS DAYS PRIOR TO DIGGING.
3. EXCAVATION, TRENCHING, SHORING, AND SHIELDING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING THE WORK, THESE DRAWINGS ARE NOT INTENDED TO PROVIDE MEANS OR METHODS OF CONSTRUCTION.
4. PRESERVE AND PROTECT ALL VEGETATION TO THE FULLEST EXTENT POSSIBLE.
5. METHODS FOR WORK AREA ISOLATION, FISH REMOVAL, AND EROSION CONTROL SHALL BE SUBMITTED TO RIVER DESIGN GROUP FOR APPROVAL PRIOR TO COMMENCING WORK.
6. THE LANDOWNER IS RESPONSIBLE FOR PROCURING AND COMPLYING WITH ALL PERMITS AND EASEMENTS INCLUDING ALL FEDERAL, STATE, COUNTY, AND LOCAL PERMITS.
7. THESE DRAWINGS AND THE ASSOCIATED WRITTEN SPECIFICATIONS REPRESENT THE CONSTRUCTION DOCUMENTS. ANY DEVIATIONS FROM THESE DRAWINGS AND ASSOCIATED SPECIFICATIONS WITHOUT WRITTEN APPROVAL FROM RIVER DESIGN GROUP, INC. MAY RESULT IN NOT MEETING CONTRACT DOCUMENTS AND MAY RESULT IN NOT BEING ACCEPTED FOR PAYMENT.

DRAWING INDEX

CALAPOOIA RIVER REACH 3 VICINITY MAP



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COVER PAGE AND NOTES

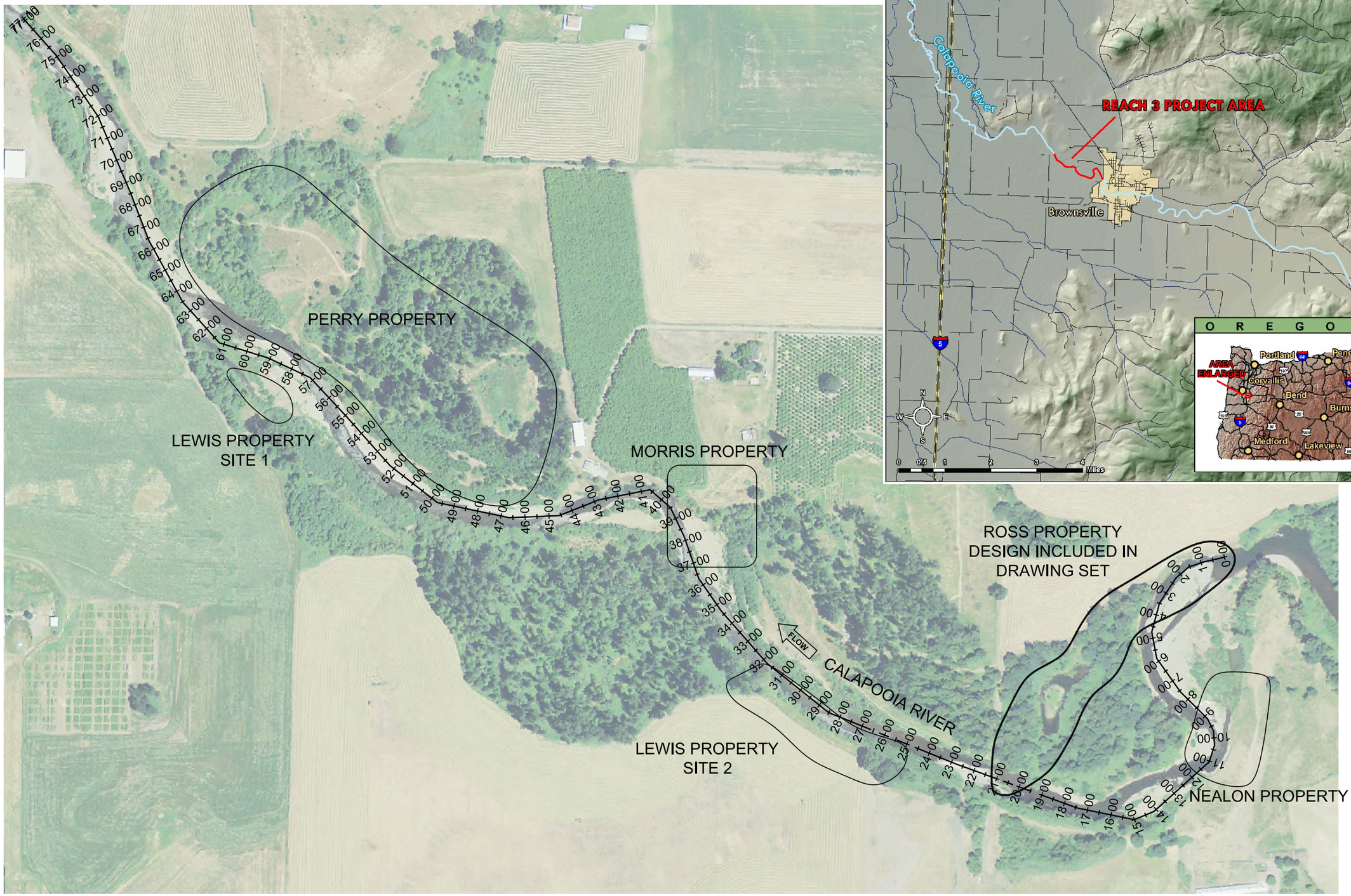
CALAPOOIA RIVER REACH 3 RESTORATION

CALAPOOIA WATERSHED COUNCIL - ROSS PROPERTY

NO.	DATE	BY	DESCRIPTION	CHK
1	12/17/09	RB	90% DESIGN	TB

PROJECT NUMBER
RDG-08-067

DRAWING NUMBER
1.0



1 **PROJECT SITES OVERVIEW**
1" = 400'

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REACH OVERVIEW

CALAPOOIA RIVER REACH 3 RESTORATION

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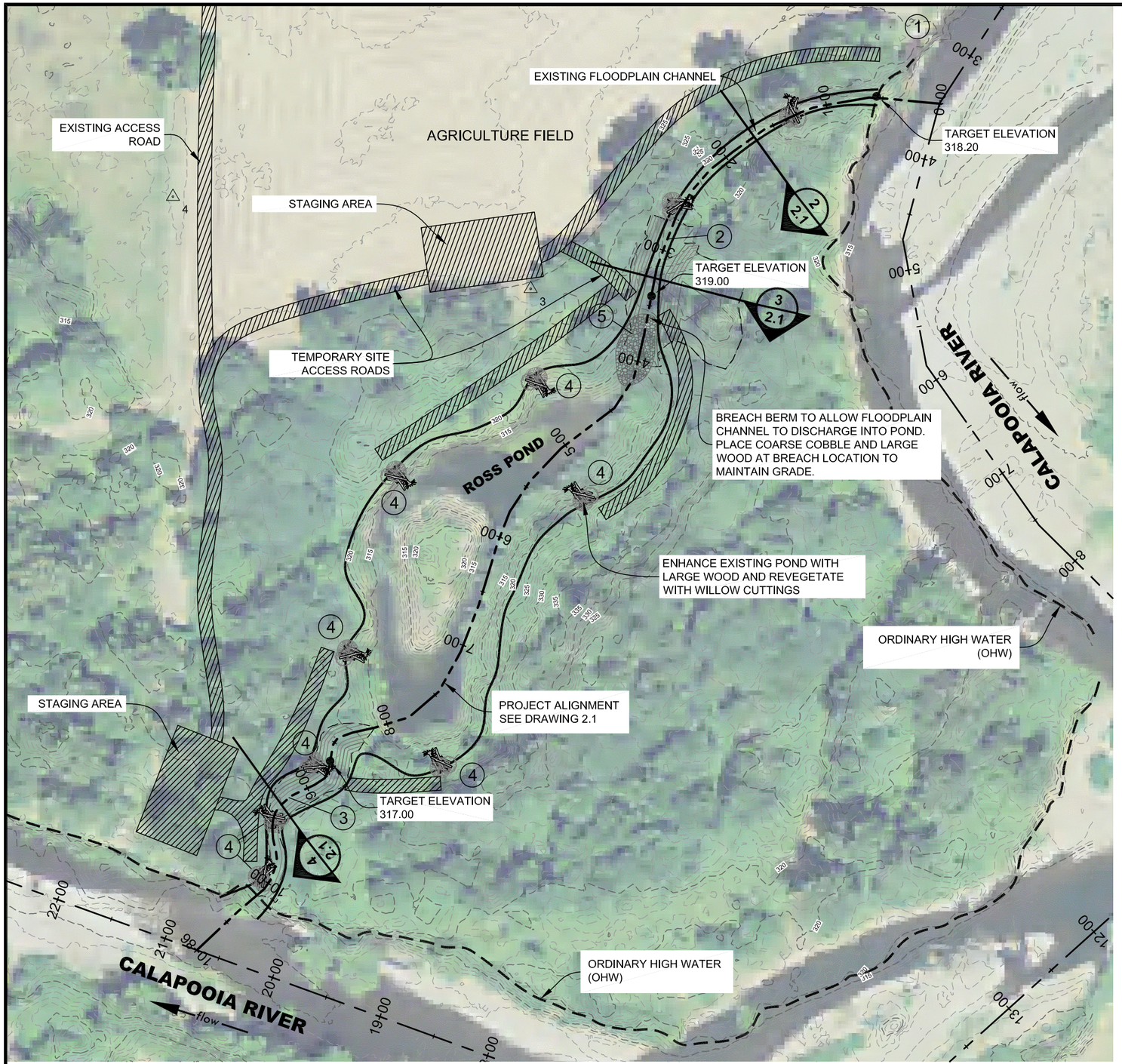
Drawing 2 of 5



1 PROJECT LAYOUT

1" = 100'

NOTES:
1. CONTOURS ARE FROM WATERSHED SCIENCES LIDAR DATA ACQUIRED FALL 2008.
2. AERIAL PHOTO IS 2009 NAIP IMAGE.

PROJECT INTENT

THE PROPOSED PROJECT IS INTENDED TO IMPROVE CHANNEL-FLOODPLAIN CONNECTIVITY, REDUCE IN-STREAM SHEAR STRESS DUE TO CONFINEMENT OF FLOOD FLOW, AND ENHANCE OFF-CHANNEL HABITAT FOR FISH AND WILDLIFE. THE PROJECT WILL INCLUDE REMOVAL OF A PORTION OF A FLOODPLAIN BERM THAT CURRENTLY BLOCKS FLOODWATER CONVEYANCE THROUGH AN ARTIFICIAL FLOODPLAIN POND THAT WAS ORIGINALLY EXCAVATED AS A GRAVEL SOURCE. THE PROJECT WILL REMOVE THE PORTION OF THE BERM THAT IS BLOCKING AN EXISTING FLOODPLAIN CHANNEL. THE OUTLET CHANNEL LEADING FROM THE DOWNSTREAM END OF THE POND TO THE CALAPOOIA RIVER WILL BE EXPANDED TO INCREASE THE FREQUENCY OF POND CONNECTIVITY WITH THE CALAPOOIA RIVER. LARGE WOOD HABITAT STRUCTURES WILL BE PLACED IN THE INLET CHANNEL, POND, AND OUTLET CHANNEL TO PROVIDE HABITAT AND STABILITY.

PROJECT COMPONENTS

1. EXPAND THE RIPARIAN BUFFER ADJACENT TO NRCS BANK STABILIZATION PROJECT
2. PARTIALLY REMOVE FLOODPLAIN BERM
3. REMOVE SEDIMENT FROM HEAD OF OUTLET CHANNEL
4. LARGE WOOD HABITAT STRUCTURE INSTALLATION. SEE DRAWING 3.0
5. PLACEMENT OF POND INLET COBBLE

PROJECT MATERIALS/QUANTITIES

BERM EXCAVATION VOLUME (CY)	1,400 CY
10 LARGE WOOD HABITAT STRUCTURES	50 CY
ROOTWAD (20' X18", RWD 3' DIA)	25
TREE TOP (25' X >18")	25
BALLAST ROCK (0.75 CY TO 1.0 CY)	20 CY
REBAR PINS (1"Ø X 3' LENGTH)	50
SALVAGED MATERIAL OR PIT RUN	150 CY
POND INLET COBBLE (6 INCH COBBLE)	210 CY

BERM AT PROPOSED BREACH LOCATION

SITE BENCHMARKS

POINT #	NORTHING	EASTING	ELEV (FT)	DESCRIPTION
3	276357.18	7549405.32	325.35	SET RDG
4	276437.78	7549092.48	321.73	SET RDG
5	276709.28	7549851.65	322.73	SET RDG

COORDINATE SYSTEM: OREGON STATE PLANE NORTH
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88 (GEOID 03)
UNITS: INTERNATIONAL FEET

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FLOODPLAIN HABITAT ENHANCEMENT

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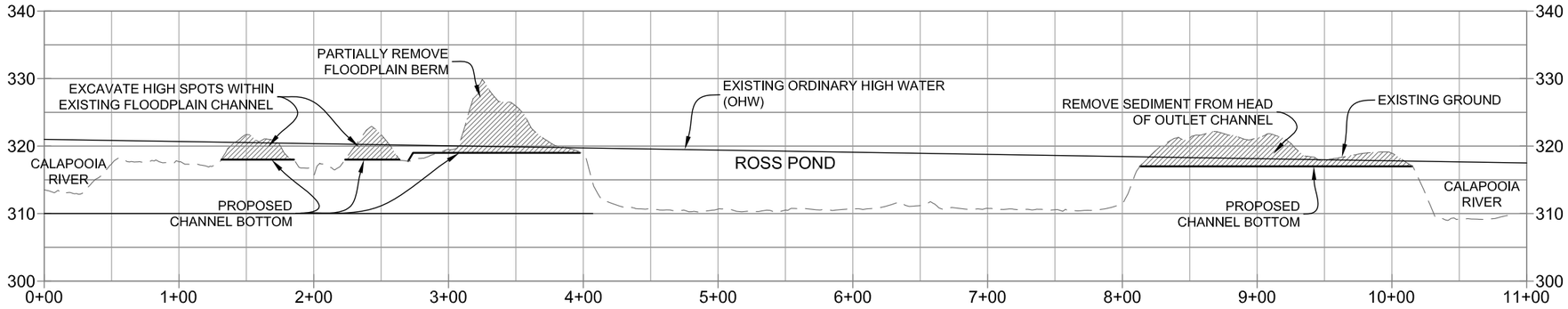
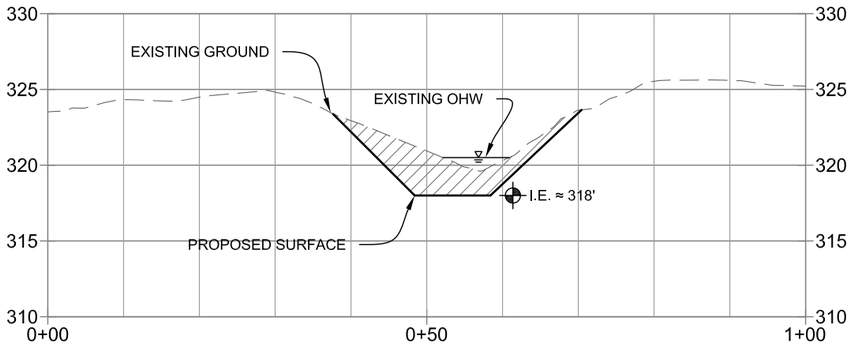
RDG-08-067

DRAWING NUMBER
2.0



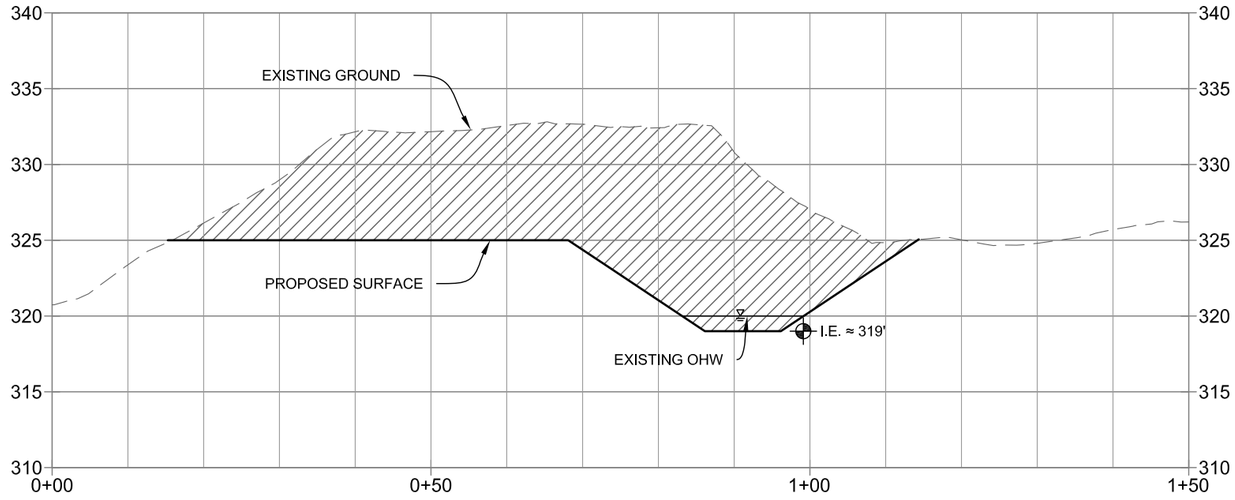
1 PROJECT ALIGNMENT

HORIZ 1" = 100'
VERT 1" = 20'



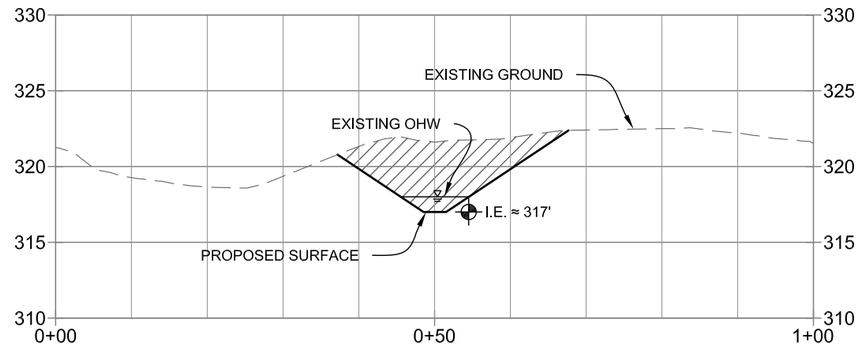
2 FLOODPLAIN INLET SECTION

HORIZ 1" = 20'
VERT 1" = 10'



3 BERM REMOVAL SECTION

HORIZ 1" = 20'
VERT 1" = 10'



4 POND OUTLET SECTION

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VERT 1" = 10'

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LONG PROFILE AND SECTIONS

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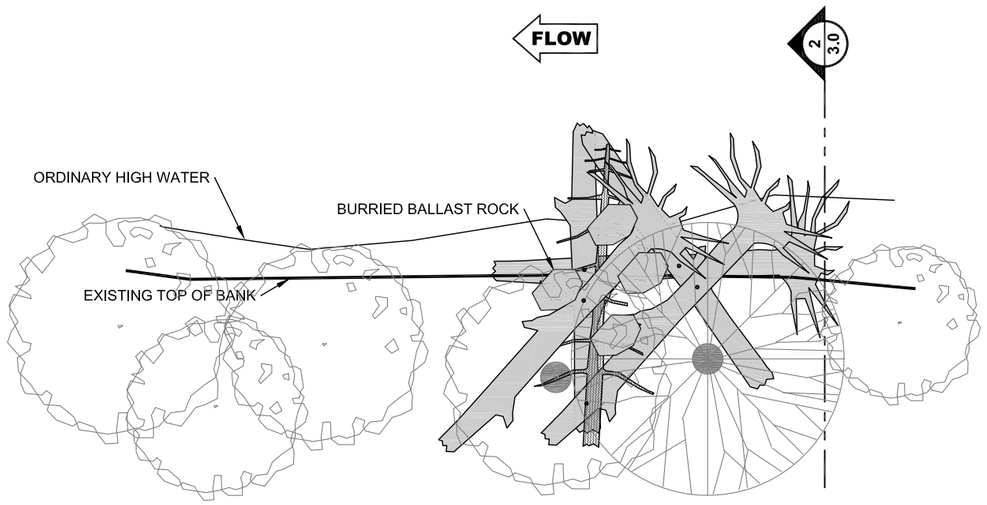


1 **PLAN VIEW**

1" = 10'

DESIGN INTENT

THE LARGE WOOD HABITAT STRUCTURE IS INTENDED TO PROVIDE HABITAT DIVERSITY BY ENHANCING SCOUR POOLS, ACTING AS REFUGIA AREA DURING HIGH FLOW, CREATING NEAR-BANK FLOW PARTITION ZONES, AND POOL COVER.

CONSTRUCTION NOTES

LOGS FOR THE HABITAT STRUCTURES SHALL BE CEDAR, SPRUCE, PINE, OR FIR - APPROXIMATELY 15'-20' LONG AND 18" DIAMETER WITH 3' DIAMETER ROOTWADS. OTHER TYPES OF LOGS MAY BE USED IF APPROVED PRIOR TO CONSTRUCTION BY THE PROJECT ENGINEER.

LOGS SHALL BE ANCHORED TO EXISTING STABLE TREES. BALLAST ROCKS SHALL BE USED TO ANCHOR HABITAT LOGS WHEN STABLE TREES ARE NOT PRESENT OR INSUFFICIENT FOR STABILIZING STRUCTURES.

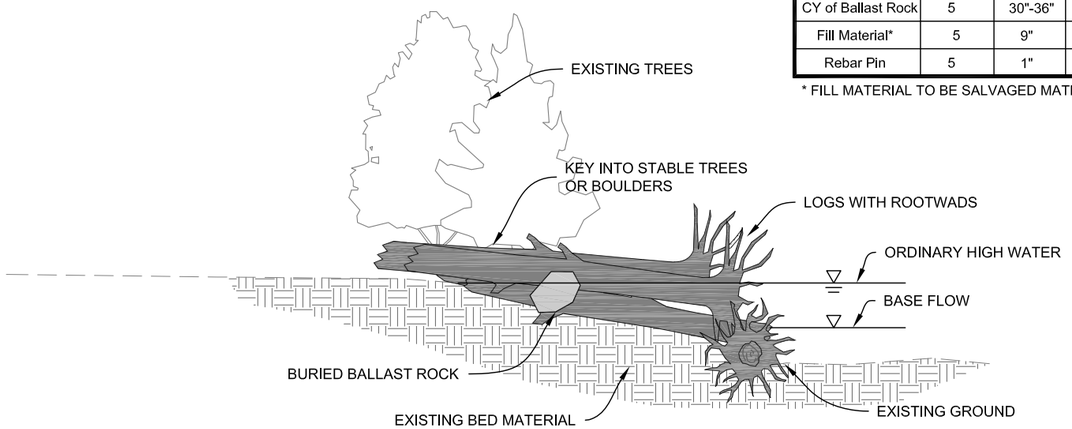
THE NUMBER OF LOGS AND ROOTWADS, THEIR ORIENTATION, AND BALLAST REQUIREMENTS FOR A PARTICULAR STRUCTURE WILL BE DETERMINED ON-SITE BY PROJECT ENGINEER BASED ON INDIVIDUAL SITE CHARACTERISTICS.

EXAMPLE LARGE WOOD HABITAT STRUCTURES

MATERIAL SCHEDULE (PER STRUCTURE)

Item	Quantity	Dia. (in)	Length (ft)	Rootwad (Y/N)
Rootwad Log	2/3	18	20	Yes - 3 ft Dia. Min.
Deflector Log	2/3	18	25	No
CY of Ballast Rock	5	30"-36"		
Fill Material*	5	9"		
Rebar Pin	5	1"	3	

* FILL MATERIAL TO BE SALVAGED MATERIAL OR PIT RUN



2 **STRUCTURE PROFILE**

HORIZ 1" = 10'
VERT 1" = 10'

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LARGE WOOD HABITAT STRUCTURE

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