

Appendix A

Conceptual Design Drawings

Mad River RM 1.1 – 4.3

Concept - Basis of Design Report

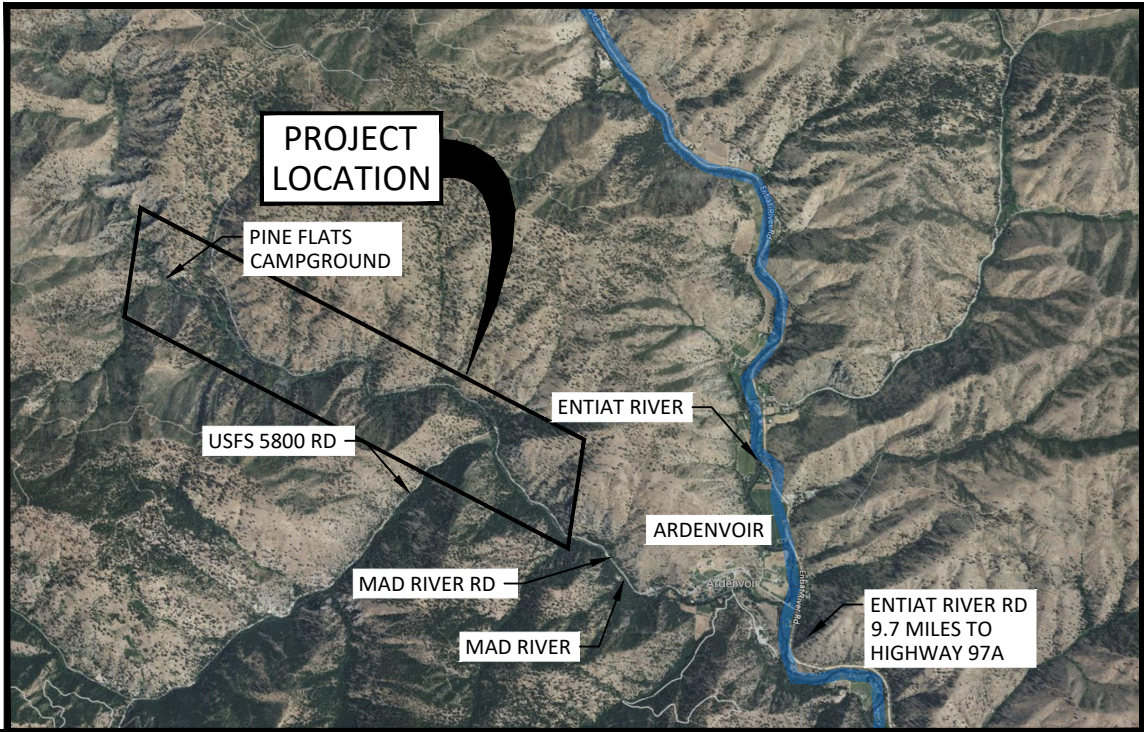
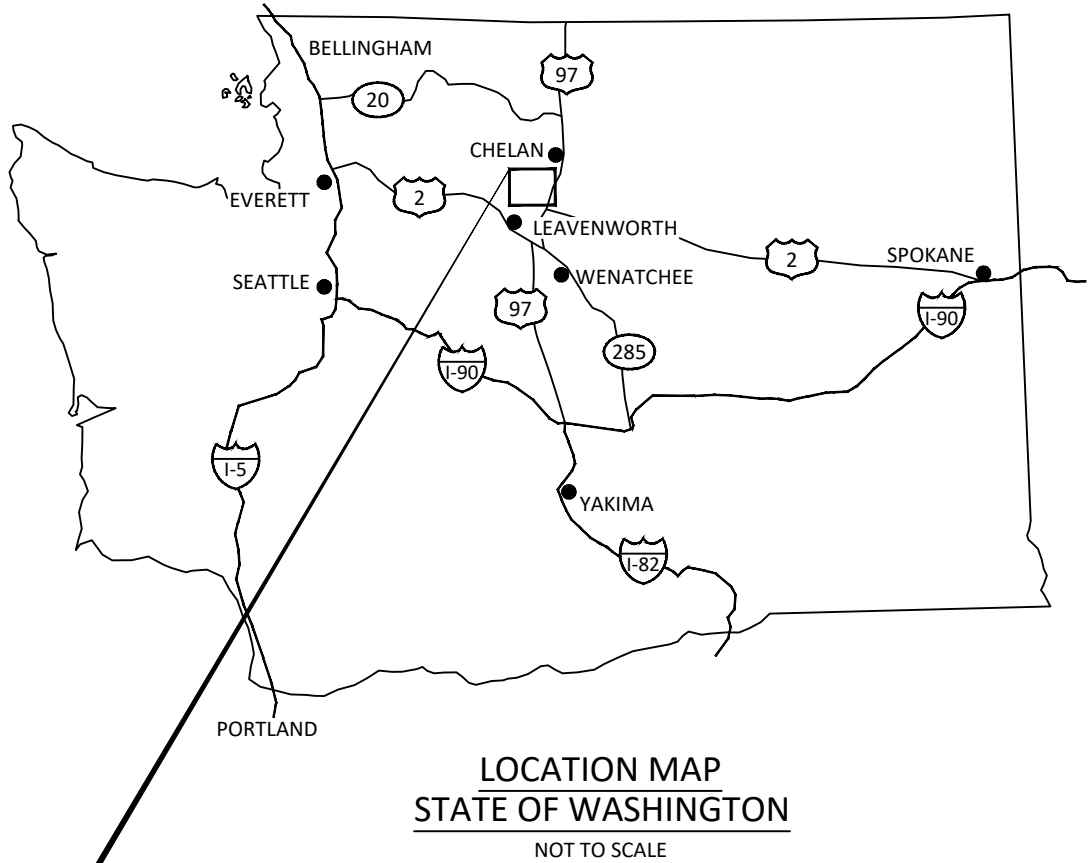


MAD RIVER

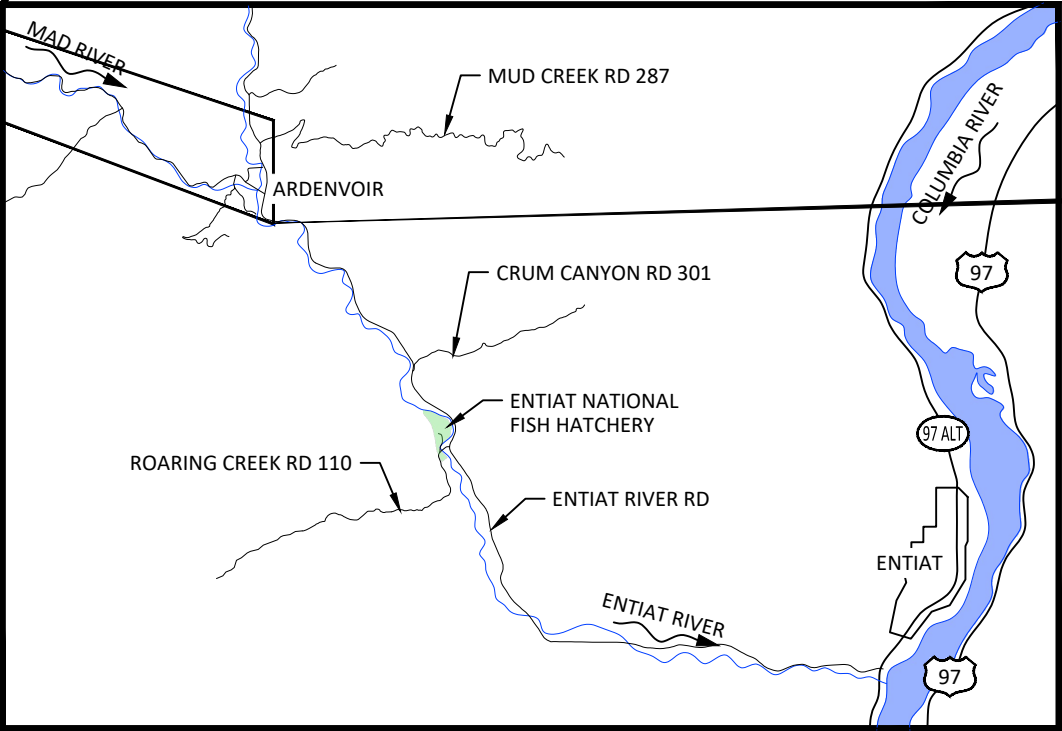
RIVER MILE 1.1-4.3

DRAFT CONCEPT DESIGN

MARCH 3, 2022



SITE MAP



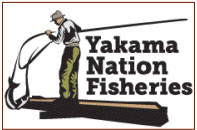
VICINITY MAP

SHEET INDEX:

- 1 COVER SHEET, VICINITY, INDEX
- 2 PROPOSED IMPROVEMENT AREAS OVERVIEW
- 3 PROPOSED CONDITIONS PLAN RIVER MILE 1.0-1.3
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- 5 PROPOSED CONDITIONS PLAN RIVER MILE 1.5-1.6
- 6 PROPOSED CONDITIONS PLAN RIVER MILE 1.6-1.7
- 7 PROPOSED CONDITIONS PLAN RIVER MILE 1.7-2.0
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- 9 PROPOSED CONDITIONS PLAN RIVER MILE 2.6-3.0
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- 15 LARGE WOOD STRUCTURE TYPICAL DETAILS (2 OF 2)
- 16 PROFILES AND CROSS SECTIONS

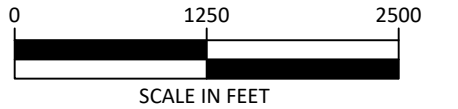
COORDINATES:

LATITUDE 47° 44' 20.95" N
LONGITUDE 120° 22' 54.41" W
TOWNSHIP 26N, RANGE 20E, SECTION 19
WATERBODY: MAD RIVER
TRIBUTARY OF: ENTIAI RIVER

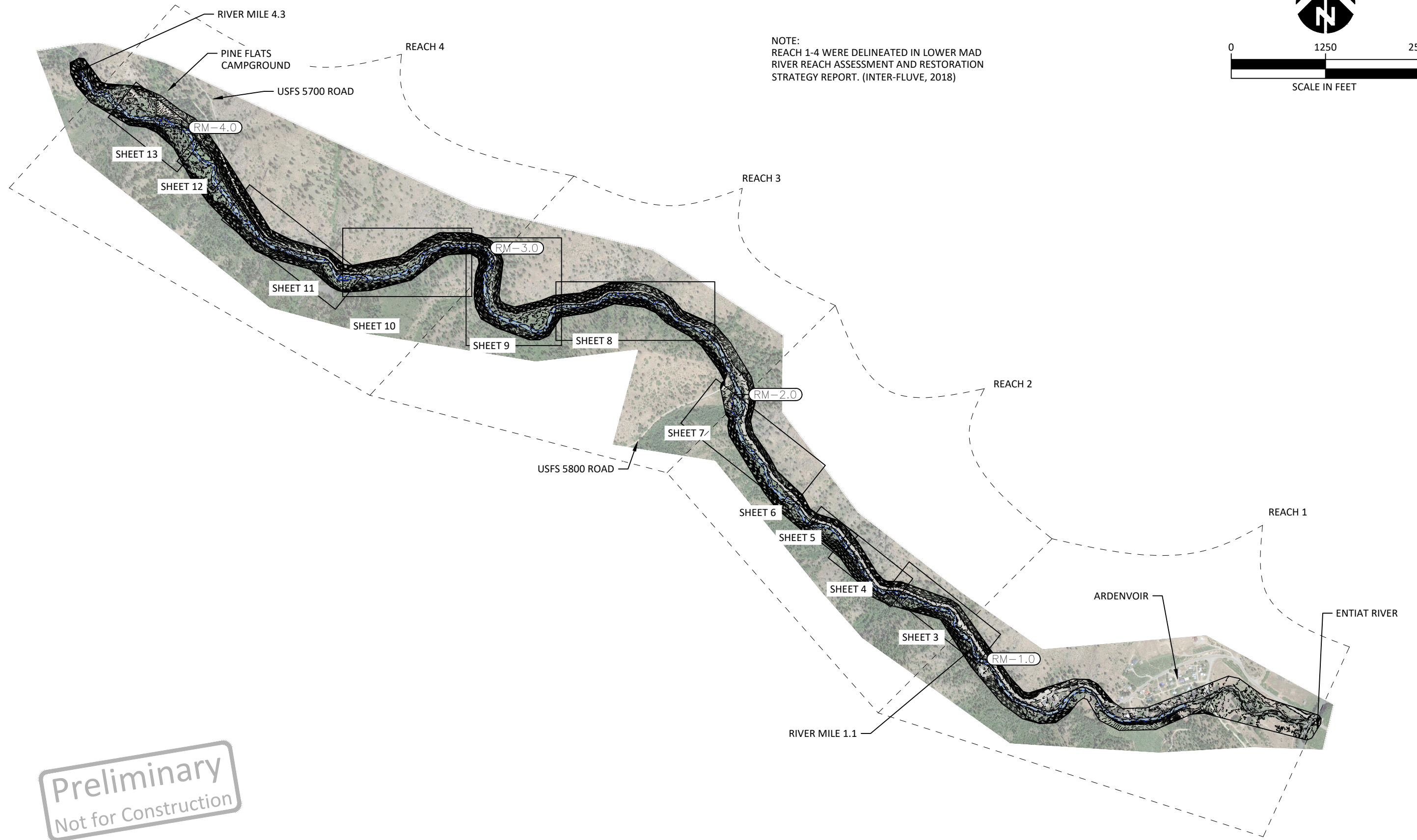


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NOTE:
REACH 1-4 WERE DELINEATED IN LOWER MAD
RIVER REACH ASSESSMENT AND RESTORATION
STRATEGY REPORT. (INTER-FLUVE, 2018)



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MAD RIVER
RIVER MILE 1.1-4.3
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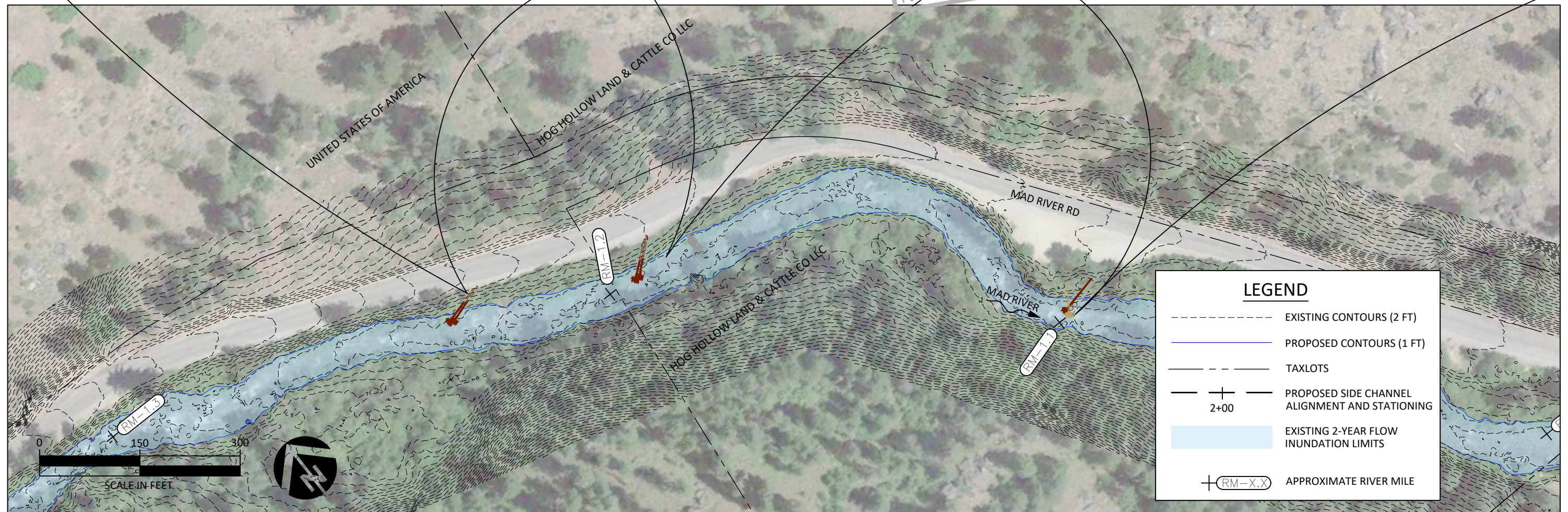
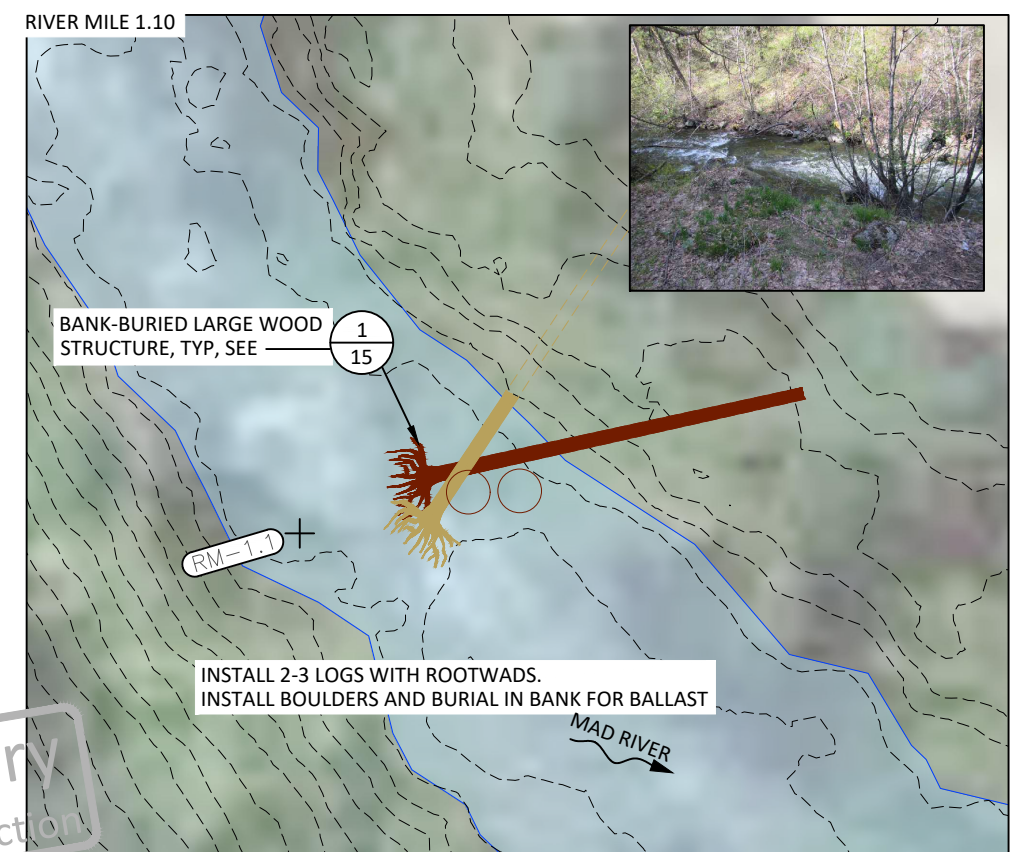
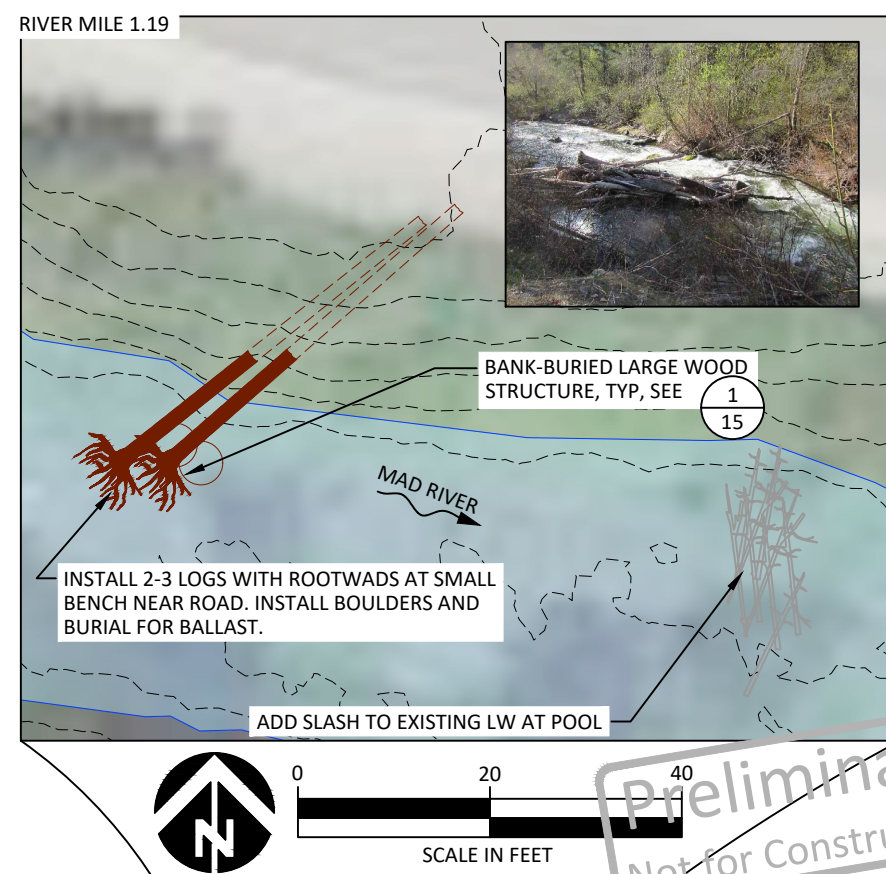
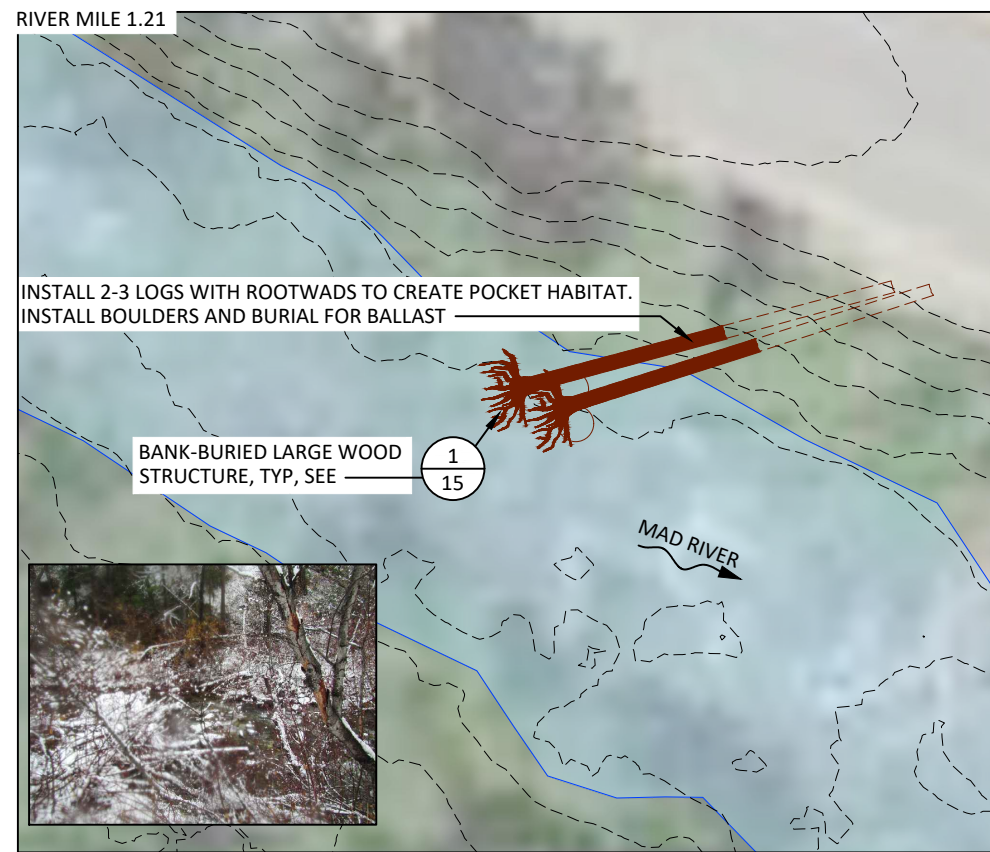


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PROPOSED IMPROVEMENT AREAS
OVERVIEW

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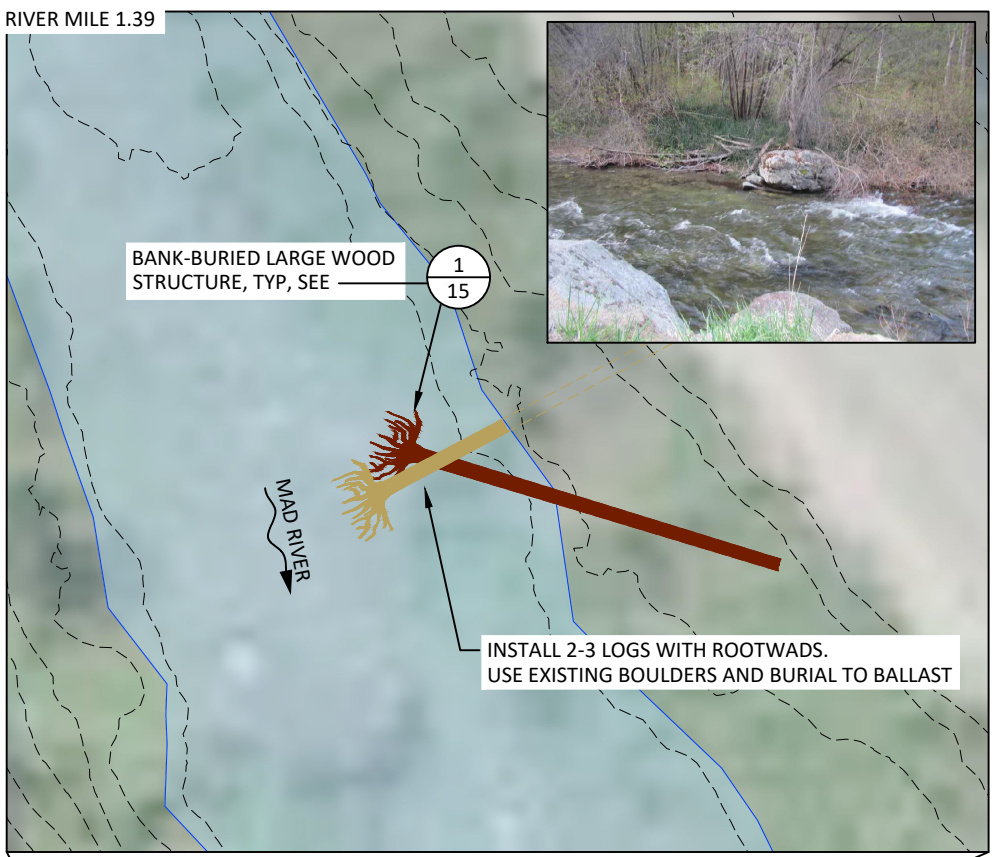
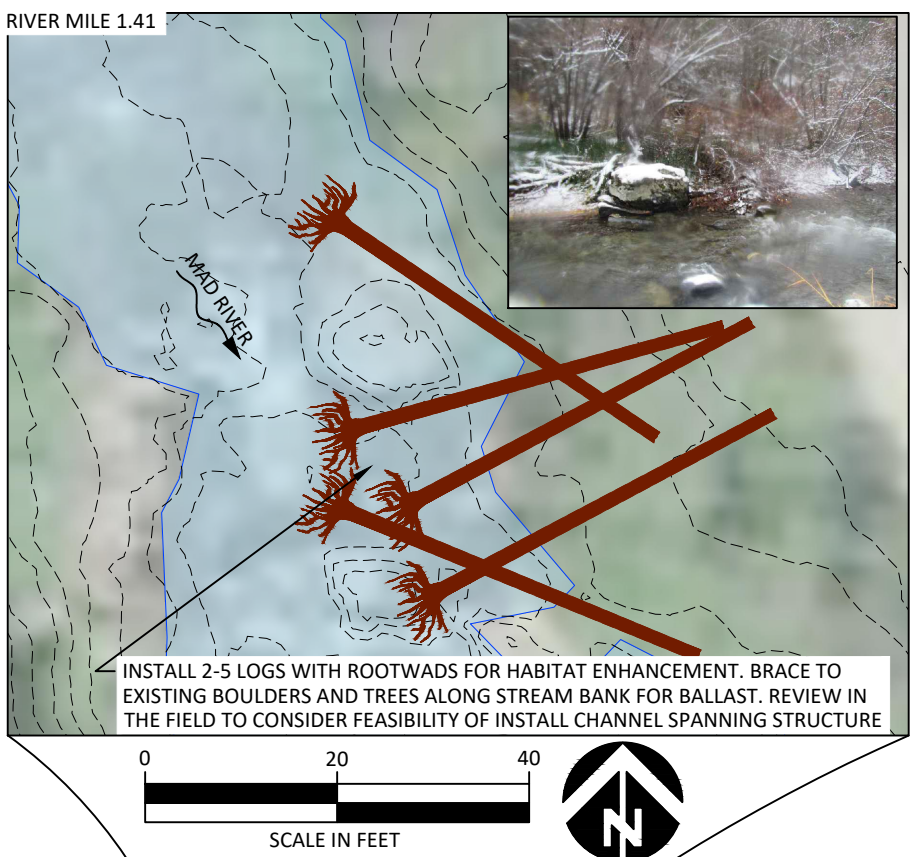
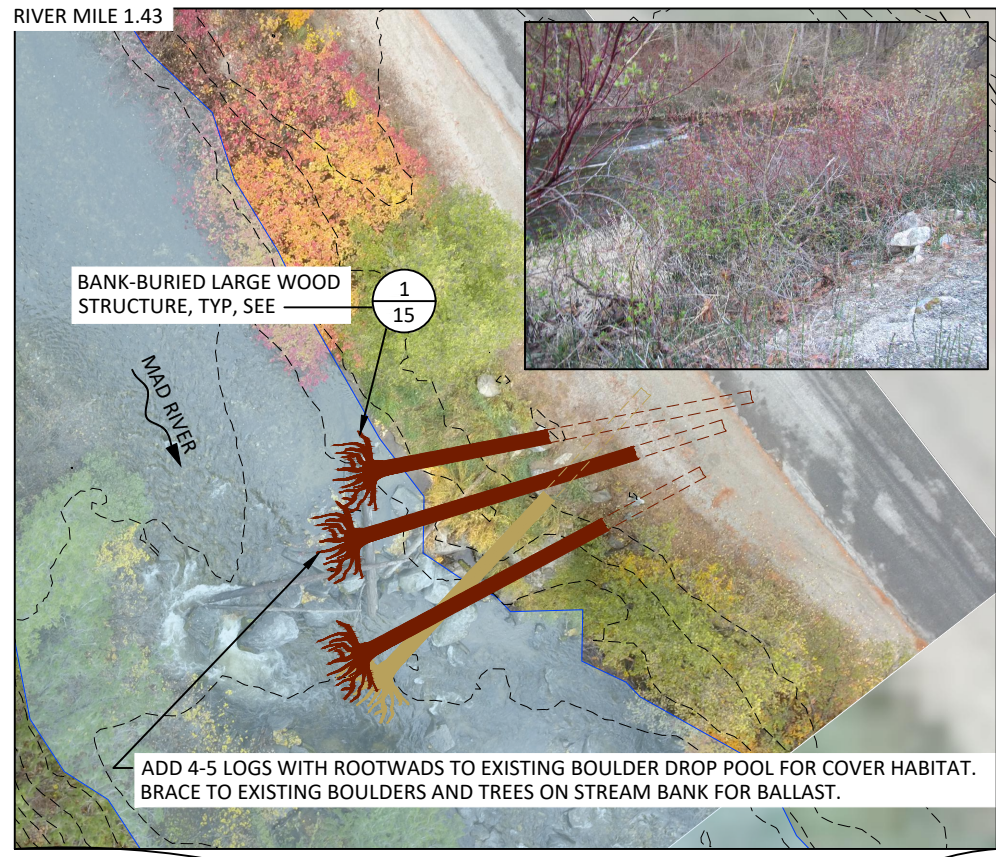


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PROPOSED CONDITIONS PLAN
RIVER MILE 1.0-1.3

SHEET

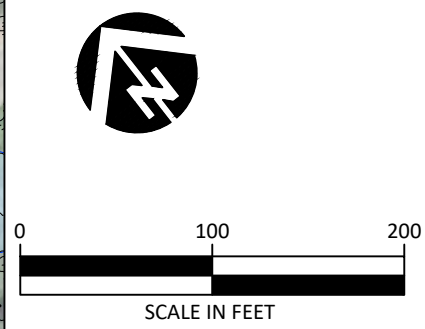
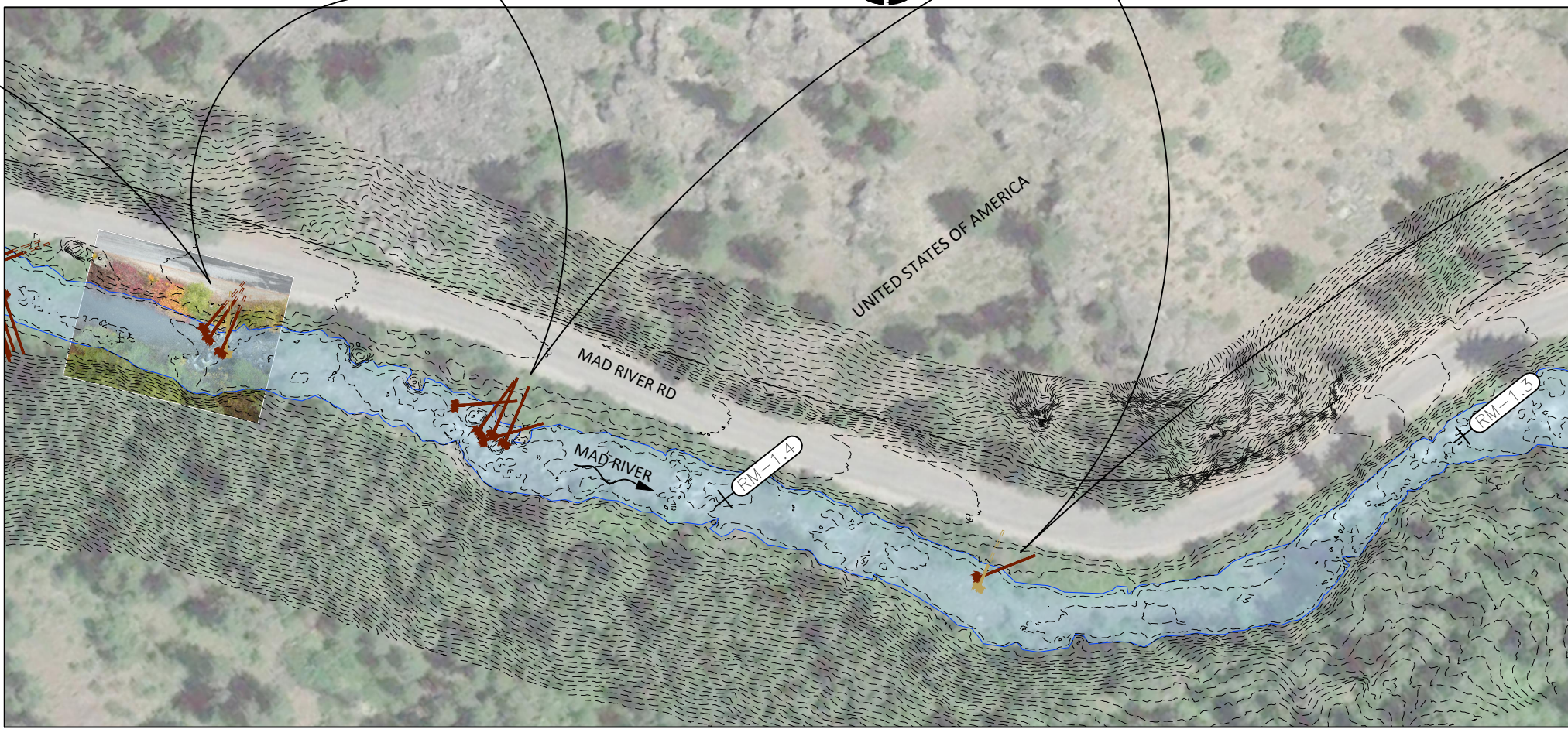
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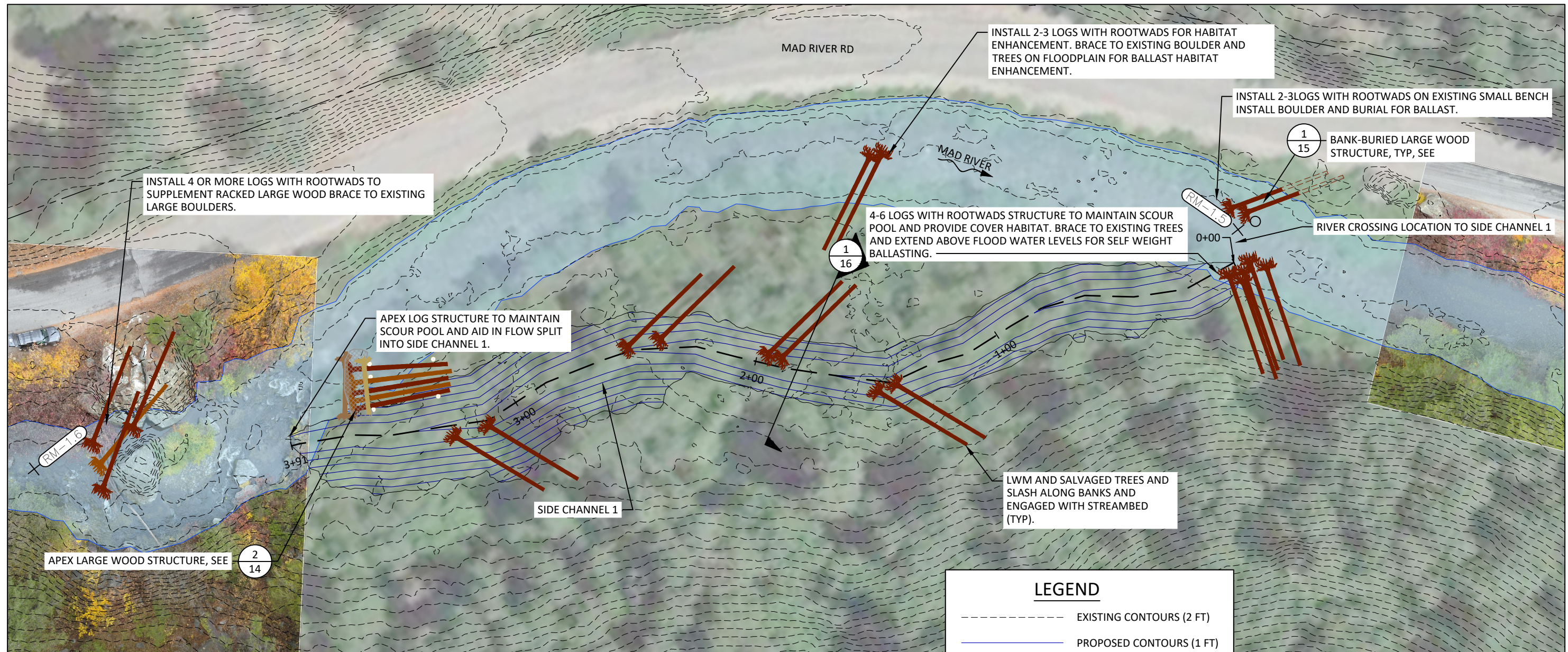
LEGEND

- EXISTING CONTOURS (2 FT)
- PROPOSED CONTOURS (1 FT)
- - - TAXLOTS
- +— PROPOSED SIDE CHANNEL ALIGNMENT AND STATIONING
- 2+00
- EXISTING 2-YEAR FLOW INUNDATION LIMITS
- + (RM-X.X) APPROXIMATE RIVER MILE



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LEGEND

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- + RM-X.X APPROXIMATE RIVER MILE

0 40 80
SCALE IN FEET

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RIVER MILE 1.1-4.3
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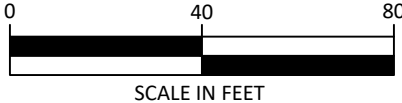
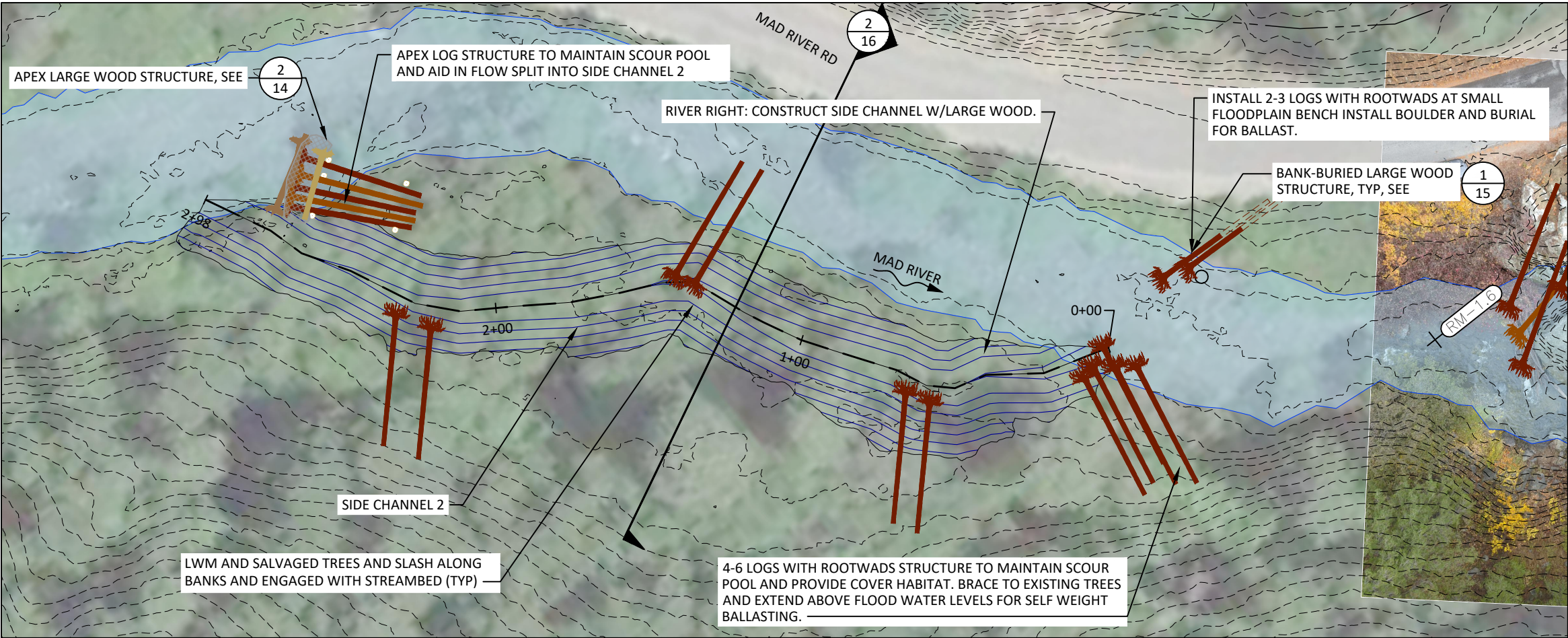
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PROPOSED CONDITIONS PLAN
RIVER MILE 1.5-1.6

LOOKING DOWNSTREAM AT SIDE CHANNEL 2 INLET




LOOKING FROM LEFT STREAM BANK



LEGEND

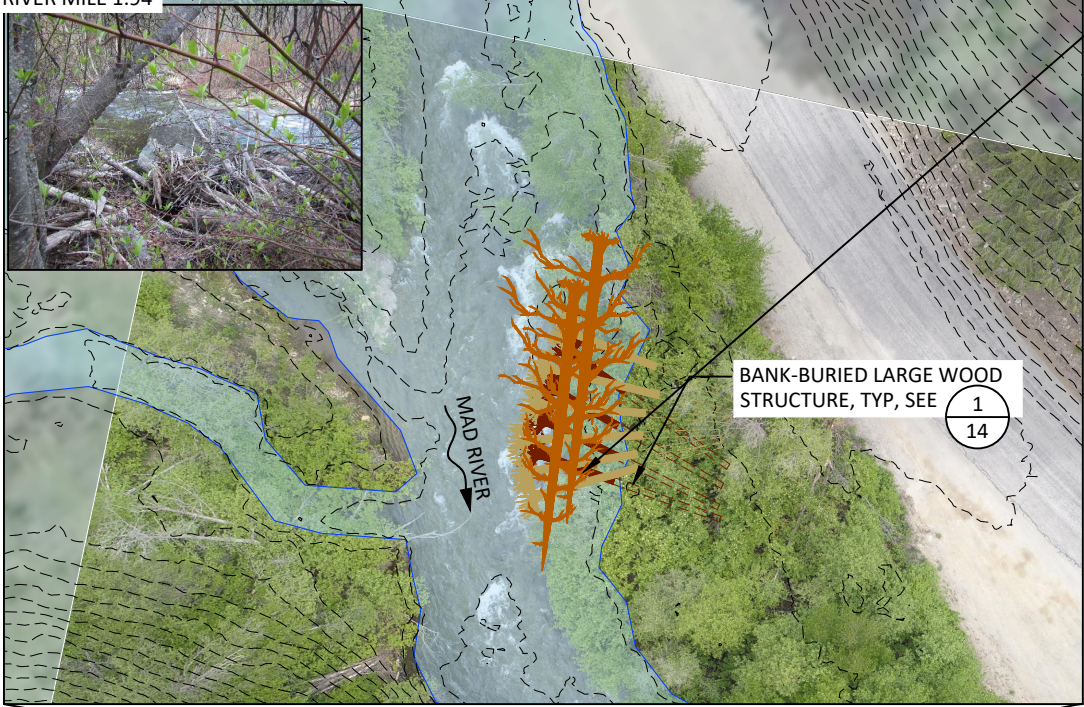
- EXISTING CONTOURS (2 FT)
- PROPOSED CONTOURS (1 FT)
- - - TAXLOTS
- PROPOSED SIDE CHANNEL ALIGNMENT AND STATIONING
- EXISTING 2-YEAR FLOW INUNDATION LIMITS
- APPROXIMATE RIVER MILE

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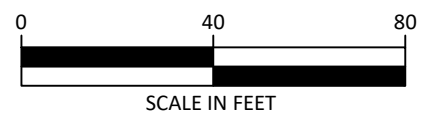
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RIVER MILE 1.94

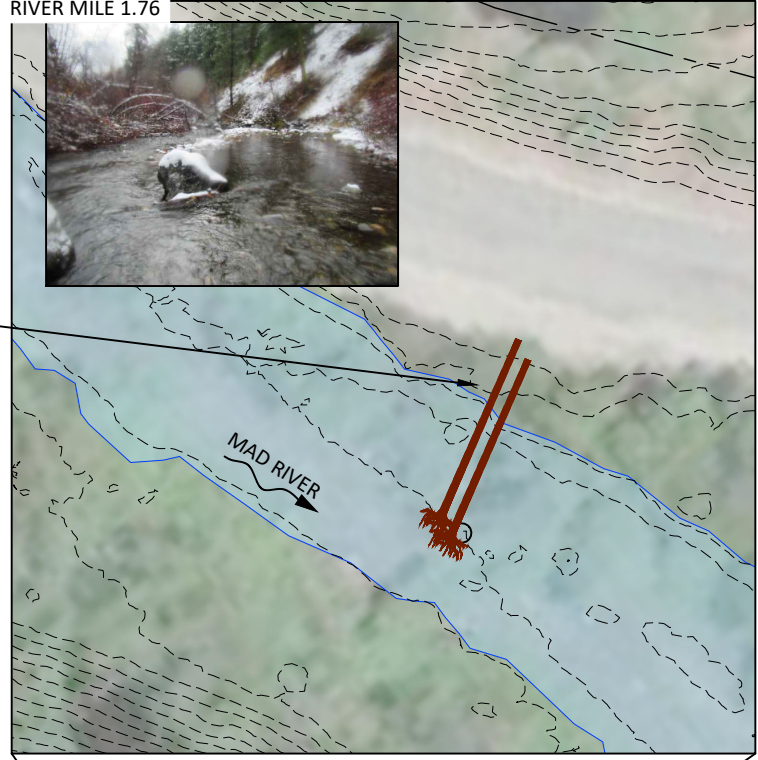


INSTALL ABOUT 10 LOGS WITH ROOTWADS WITH SLASH OR TREE TOPS FOR HABITAT ENHANCEMENT. USE EXISTING BOULDERS AND BURIAL FOR BALLAST.

INSTALL 2-3 LOGS WITH ROOTWADS FOR HABITAT ENHANCEMENT. INSTALL BOULDERS AND BRACE TO EXISTING TREES FOR BALLAST.

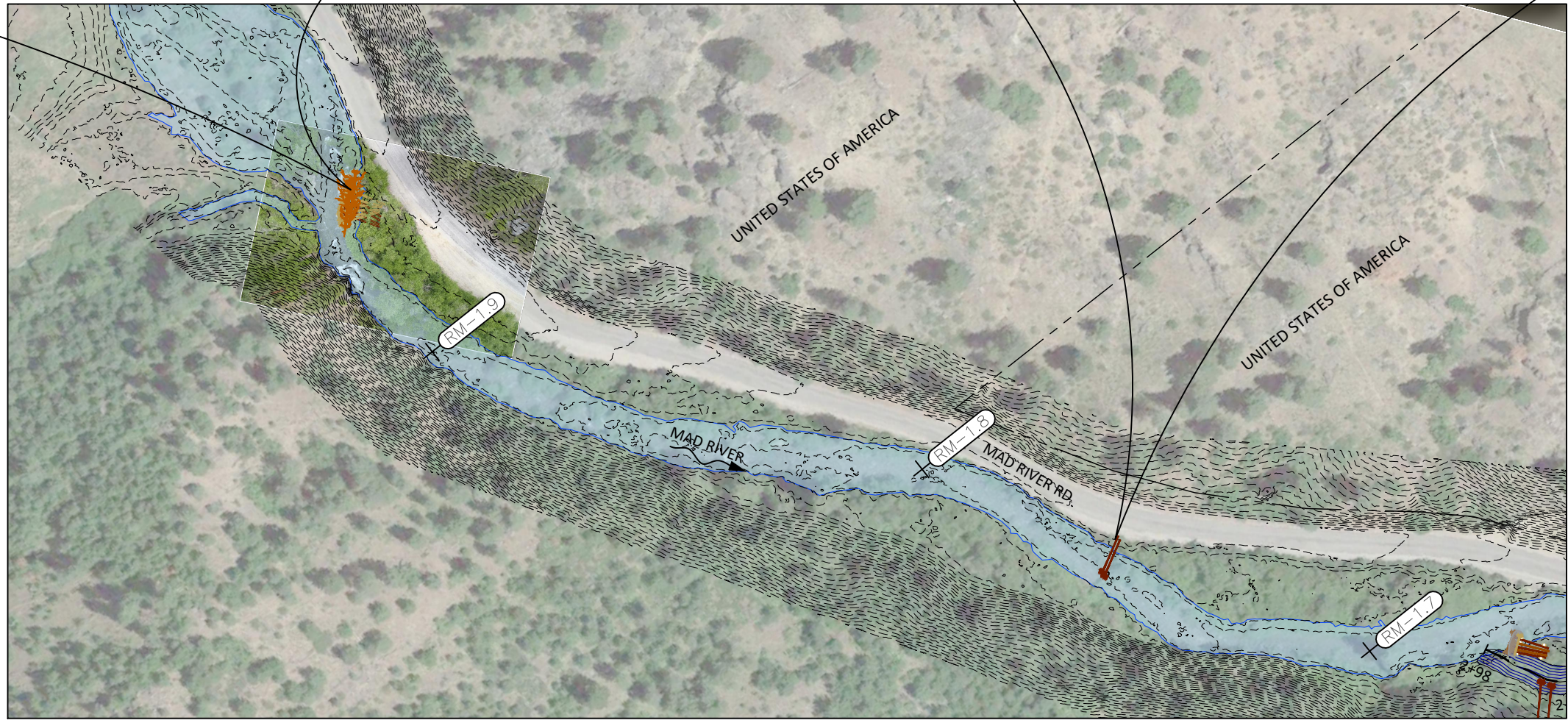
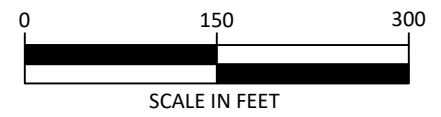


RIVER MILE 1.76



LEGEND

- EXISTING CONTOURS (2 FT)
- PROPOSED CONTOURS (1 FT)
- - - TAXLOTS
- + 2+00 PROPOSED SIDE CHANNEL ALIGNMENT AND STATIONING
- EXISTING 2-YEAR FLOW INUNDATION LIMITS
- + RM-X.X APPROXIMATE RIVER MILE



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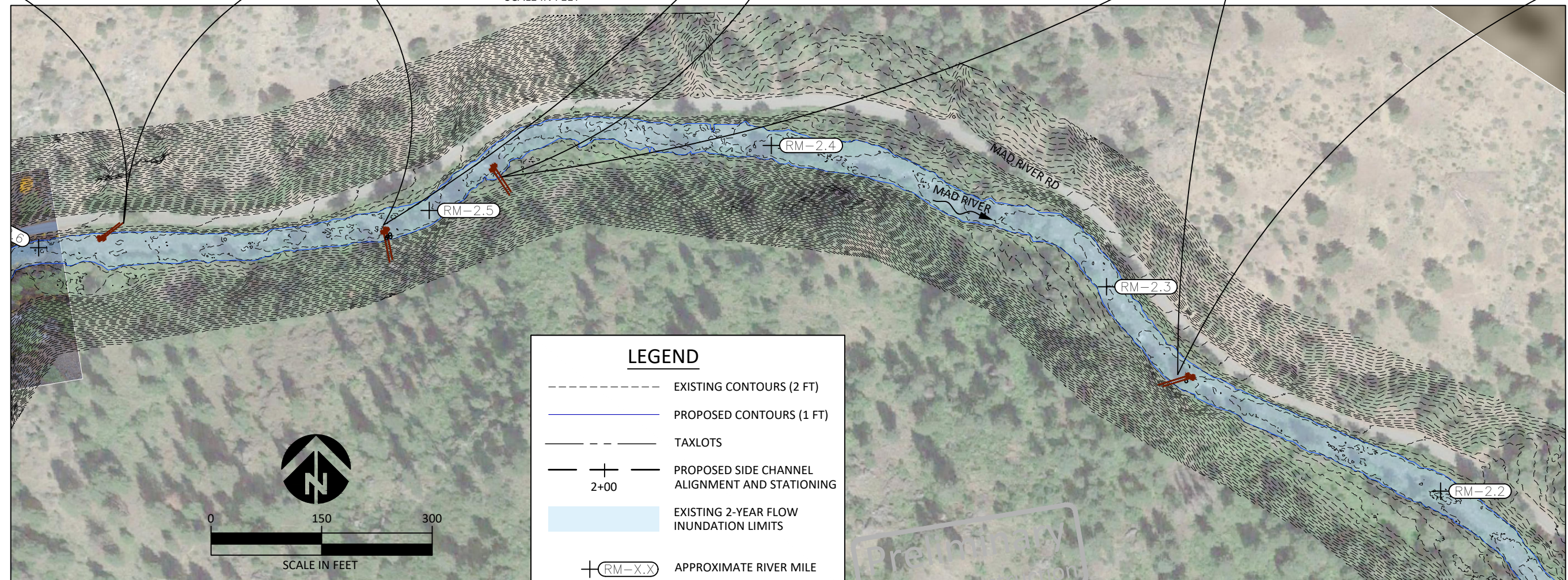
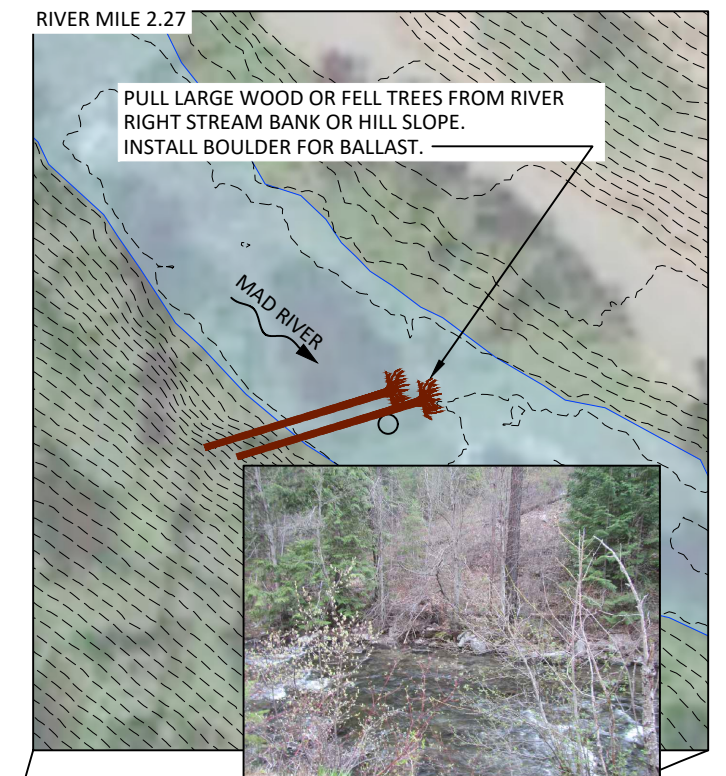
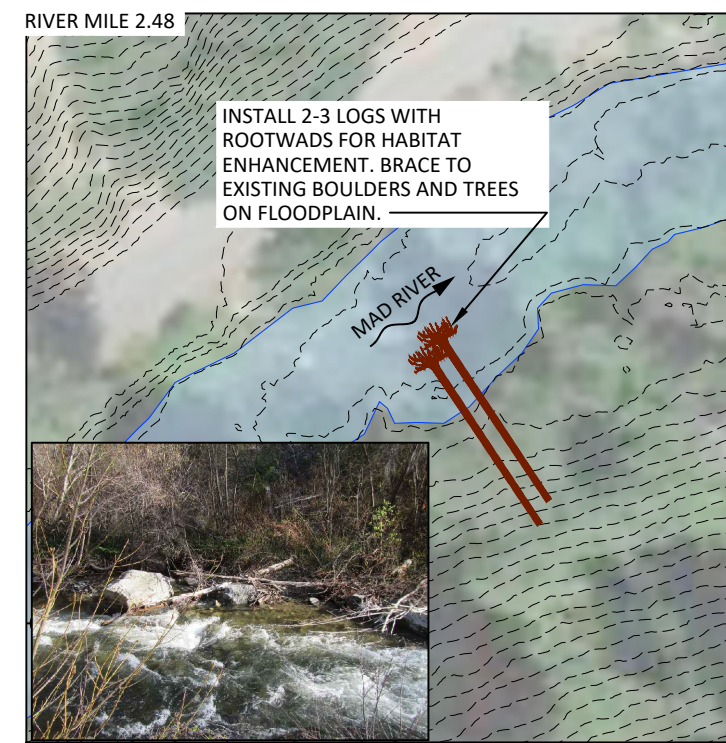
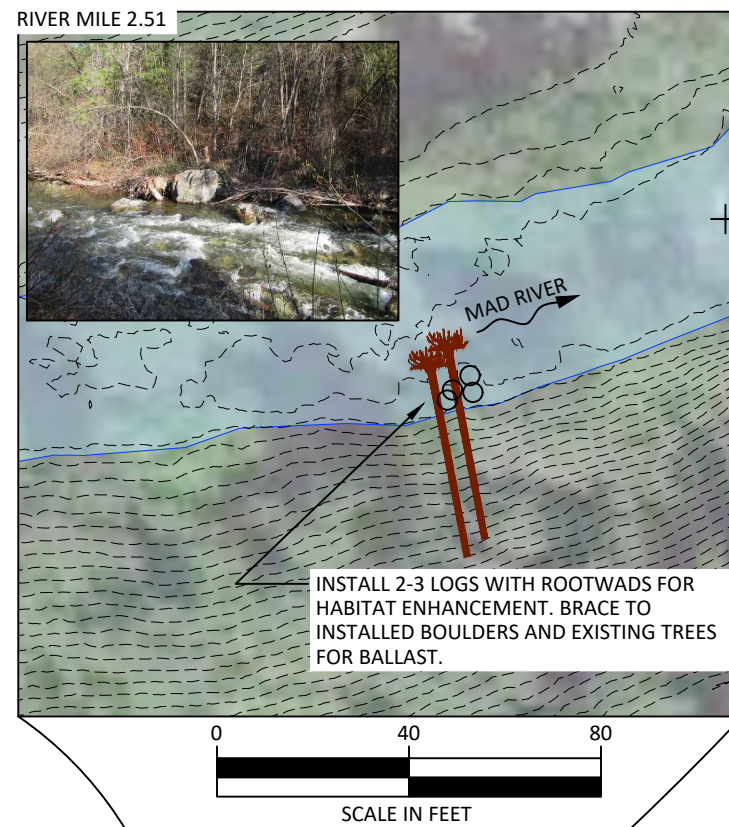
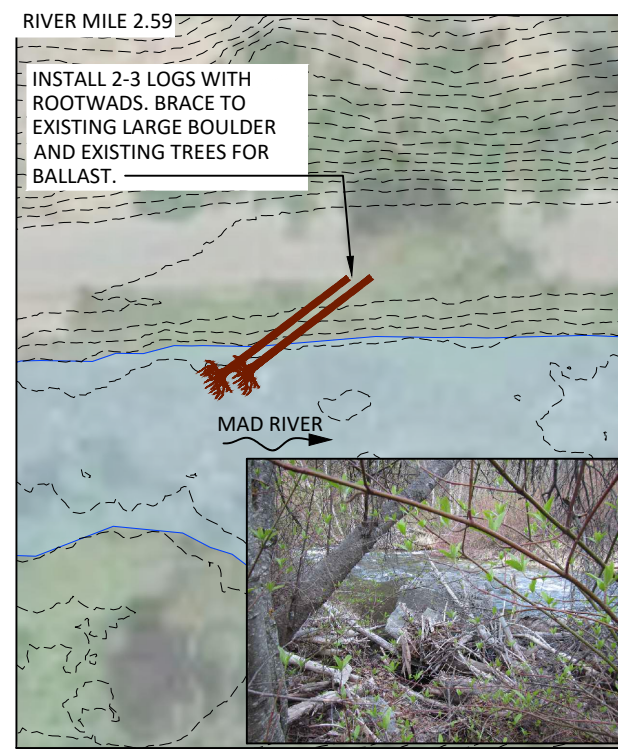
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PROPOSED CONDITIONS PLAN
RIVER MILE 1.7-2.0



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RIVER MILE 1.1-4.3
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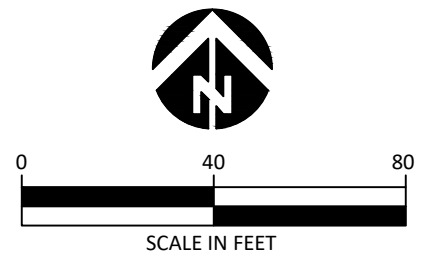
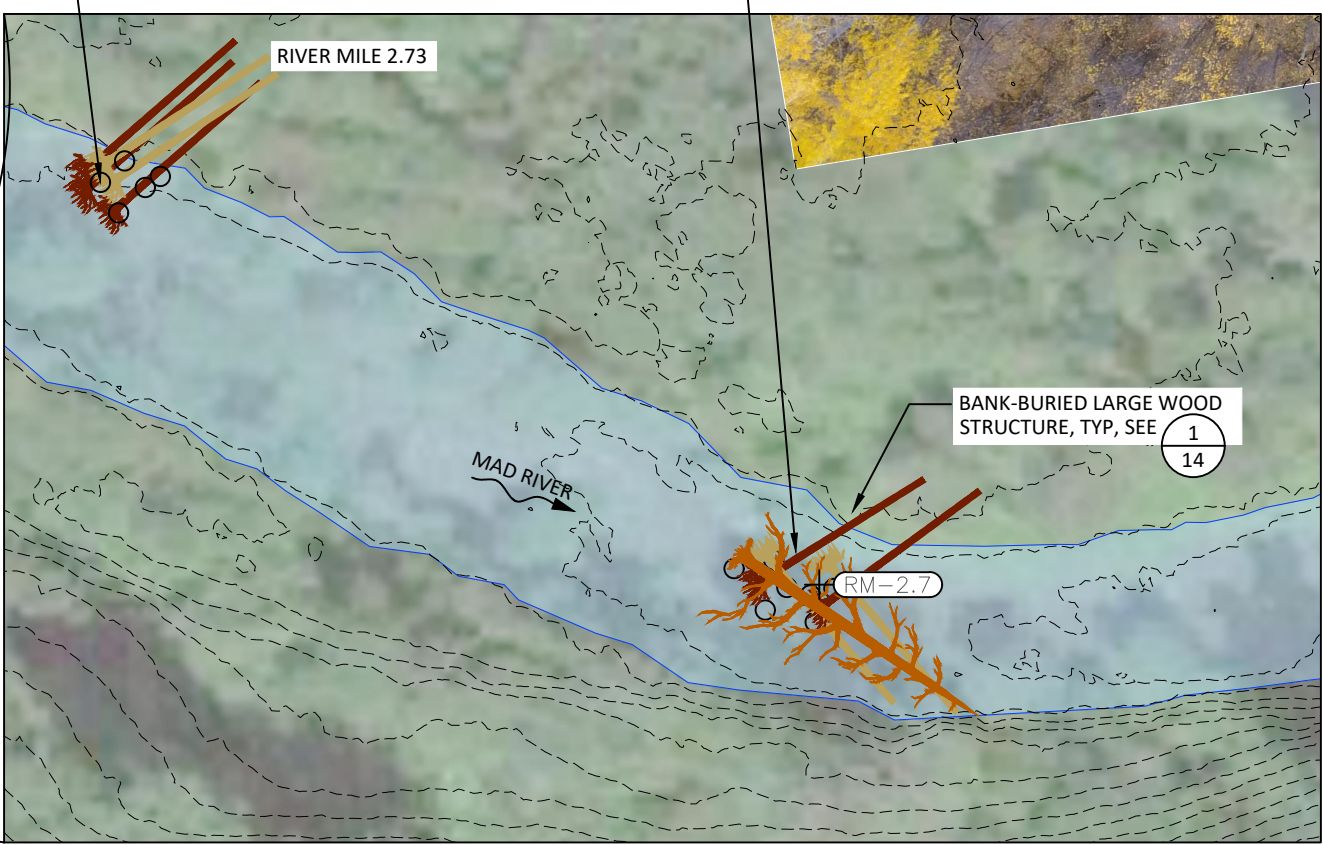
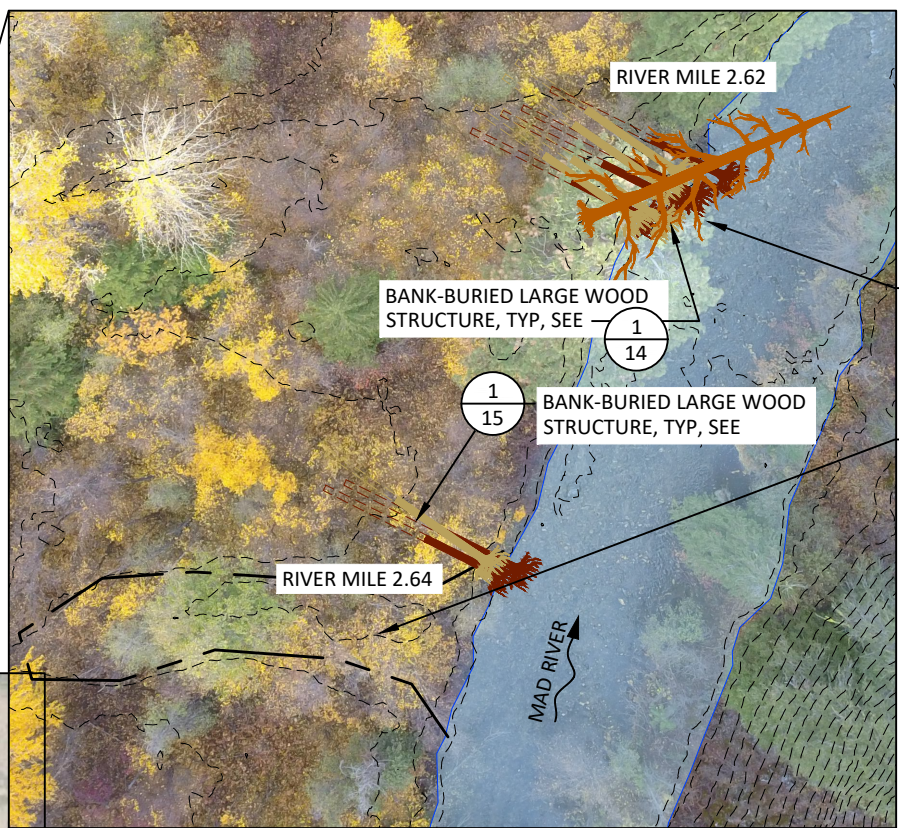
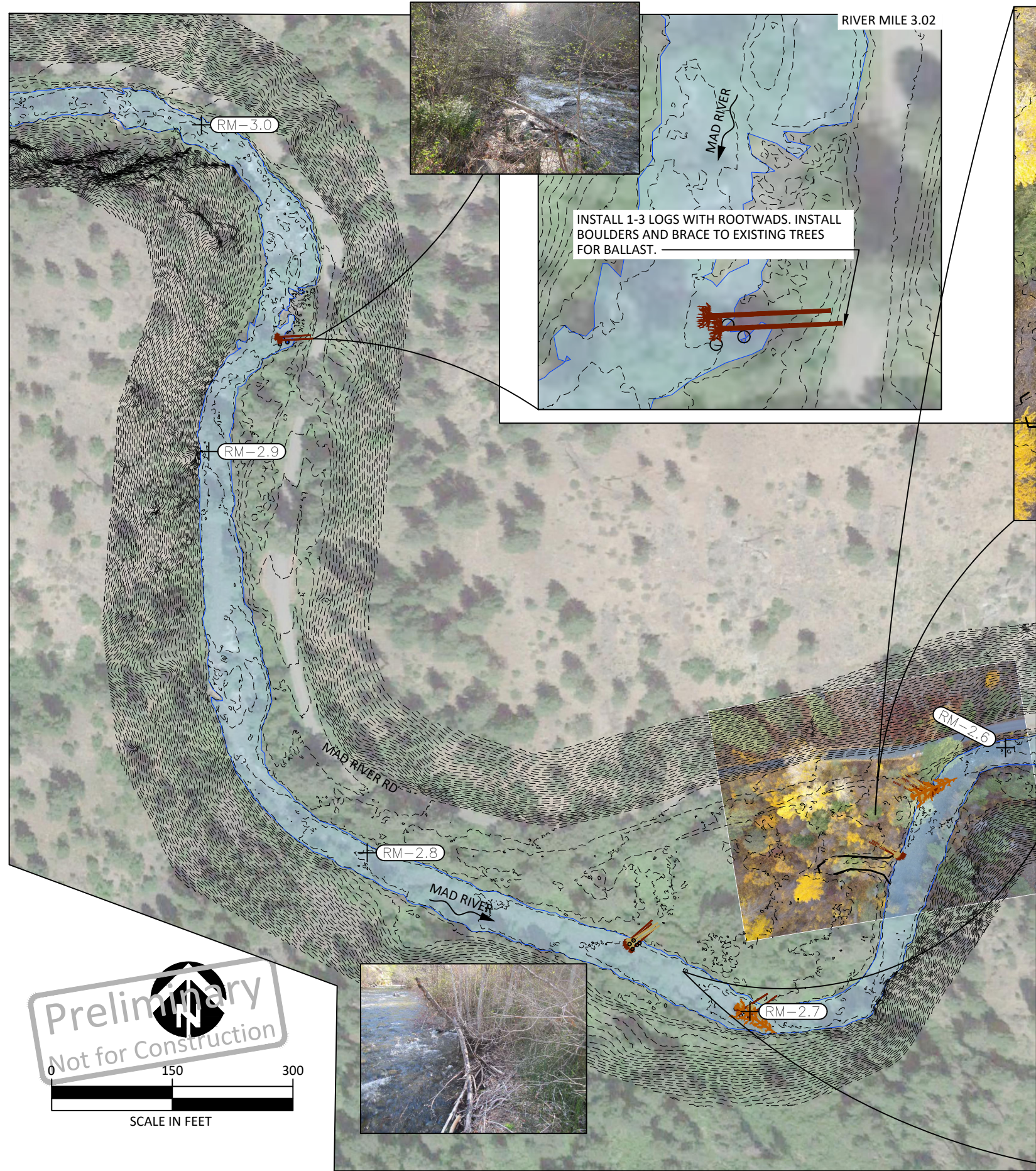
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PROPOSED CONDITIONS PLAN RIVER MILE 2.2-2.6

SHEET

3 OF 16

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INSTALL 7-8 LOGS WITH ROOTWADS. LOG STRUCTURE TO CREATE AND MAINTAIN SCOUR POOL. RL: EXCAVATE SMALL ALCOVE. PLACE SLASH OR TREE TOPS WITHIN ROOTWAD. USE EXISTING LARGE BOULDER AND BURIAL FOR BALLAST.

EXCAVATE SMALL ALCOVE INTO FLOODPLAIN PLACE 3-4 BANK BURIED LOGS WITH ROORWADS TO MAINTAIN SCOUR POOL AT DOWNSTREAM CORNER.

LEGEND

- EXISTING CONTOURS (2 FT)
- PROPOSED CONTOURS (1 FT)
- TAXLOTS
- PROPOSED SIDE CHANNEL ALIGNMENT AND STATIONING
- EXISTING 2-YEAR FLOW INUNDATION LIMITS
- APPROXIMATE RIVER MILE

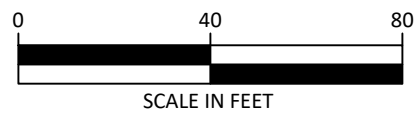
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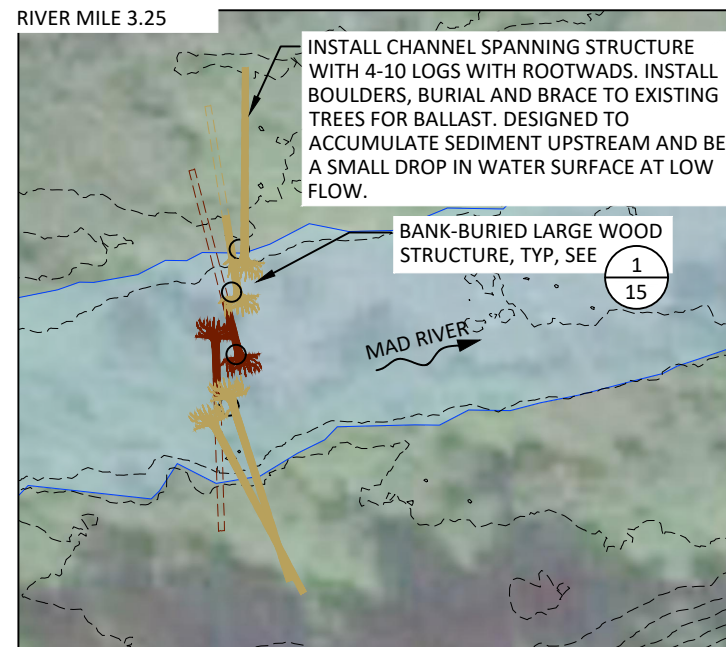
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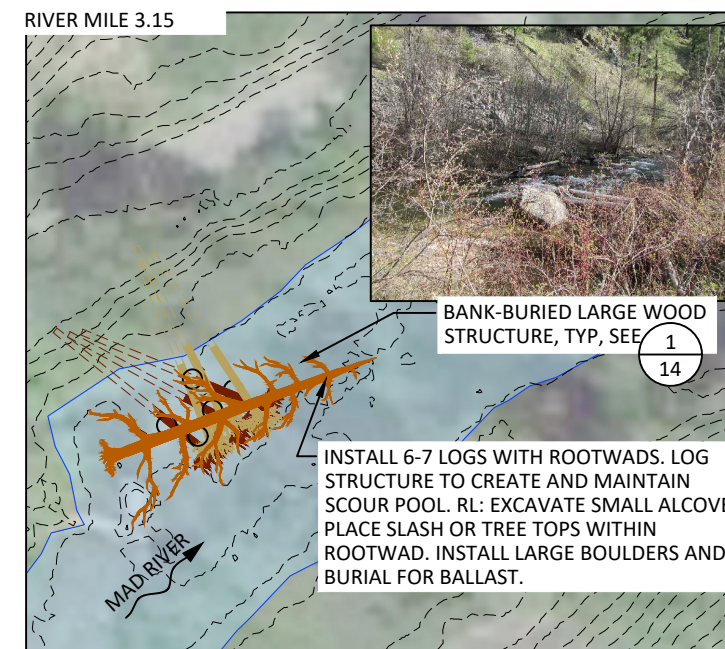
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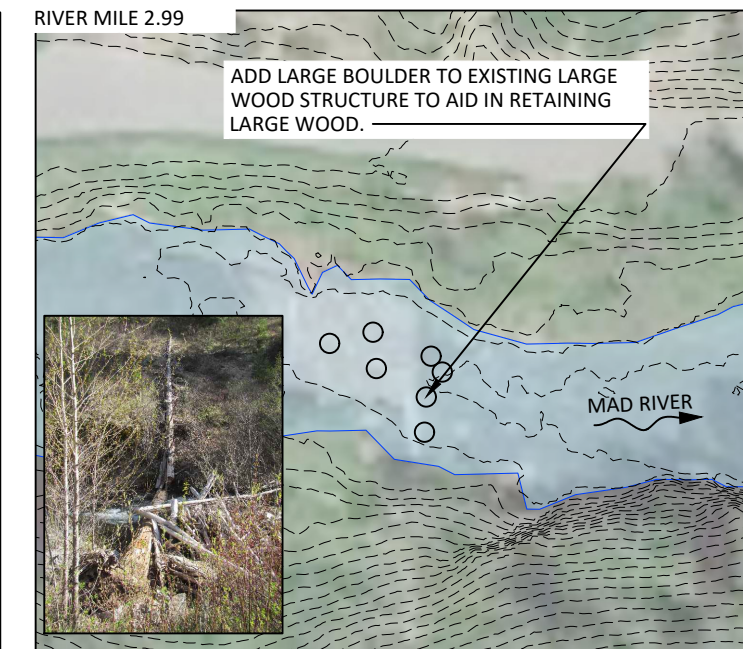
RIVER MILE 3.25



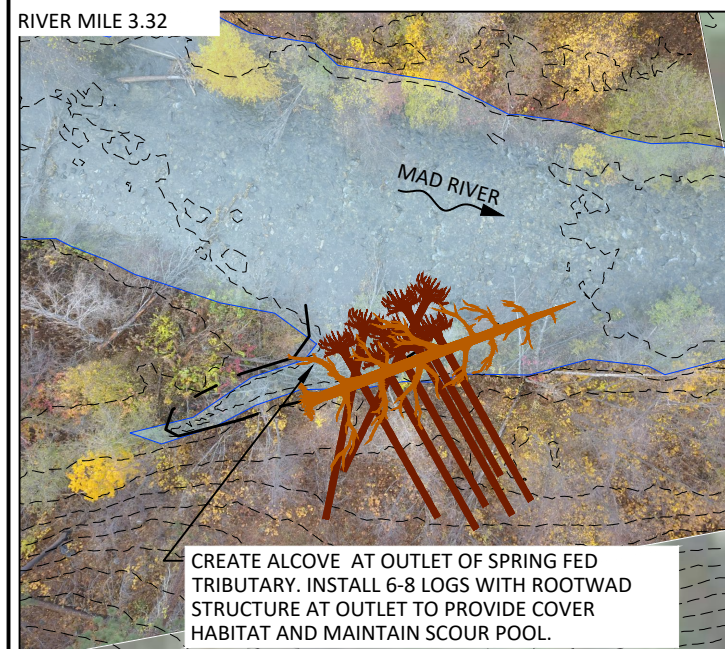
RIVER MILE 3.15



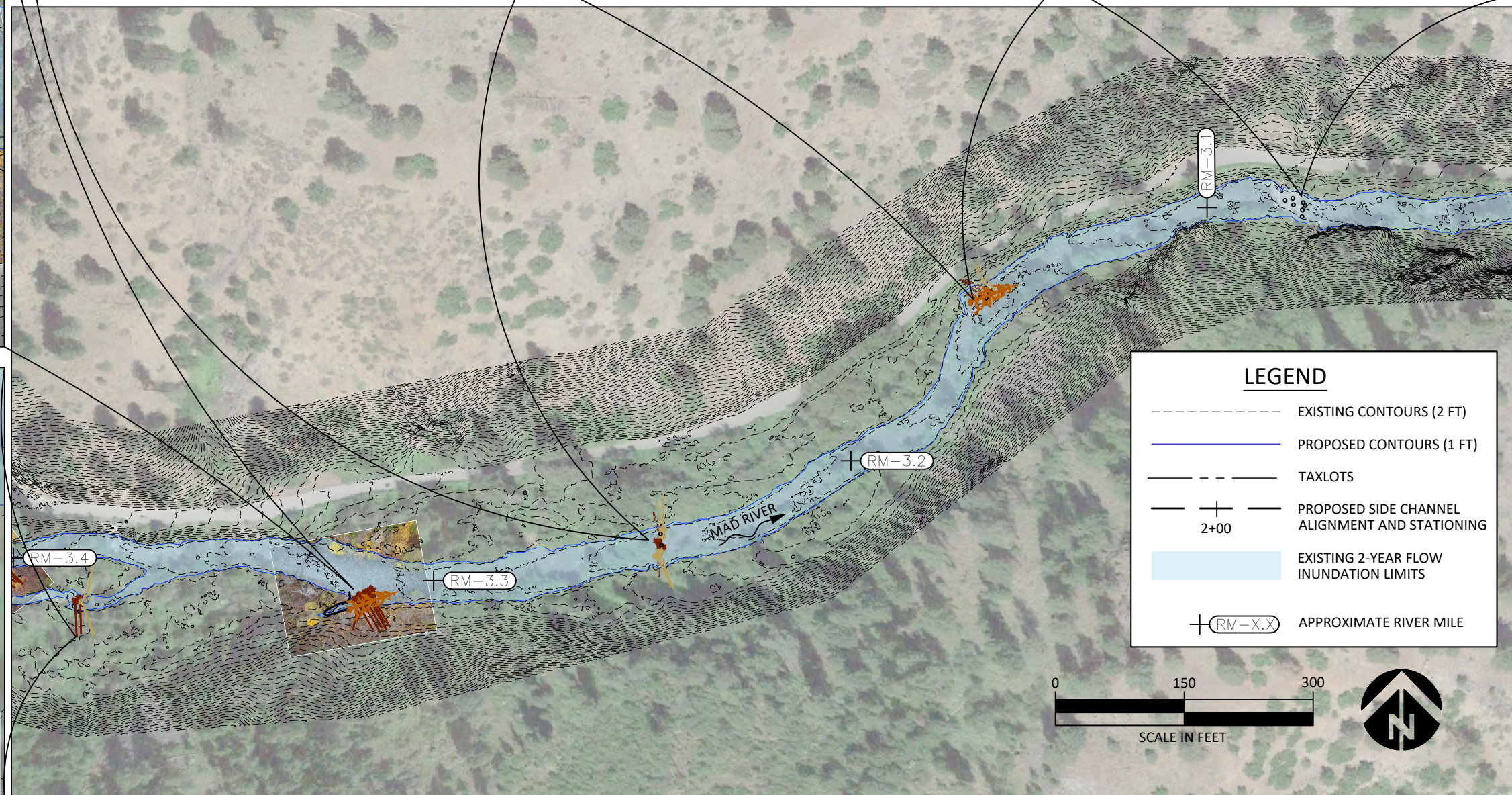
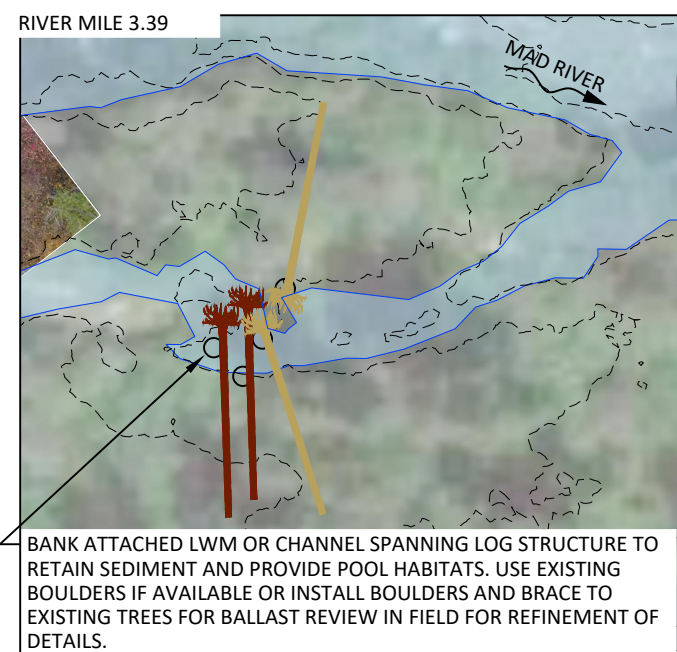
RIVER MILE 2.99



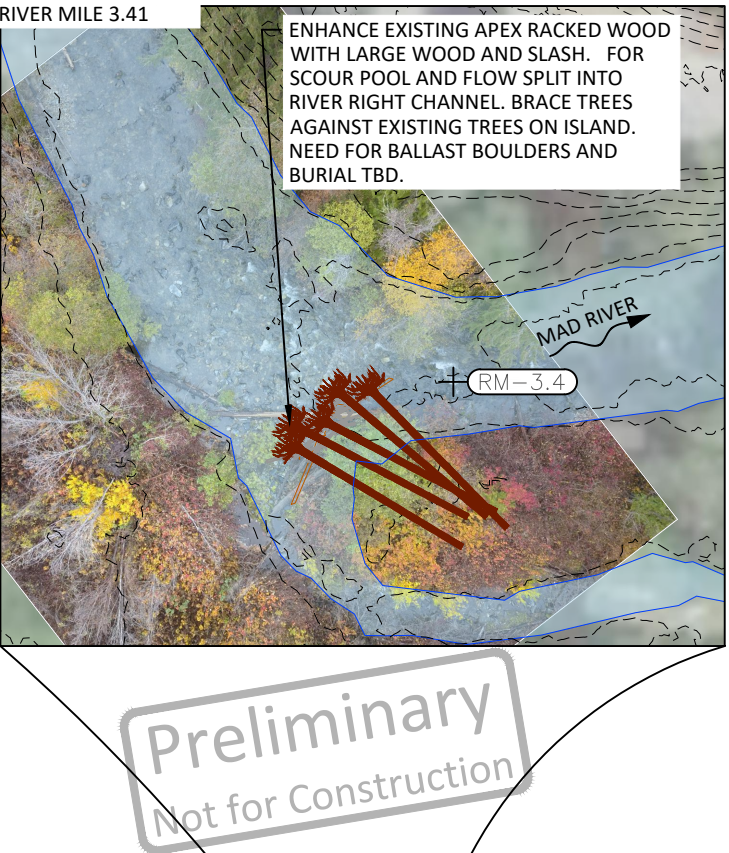
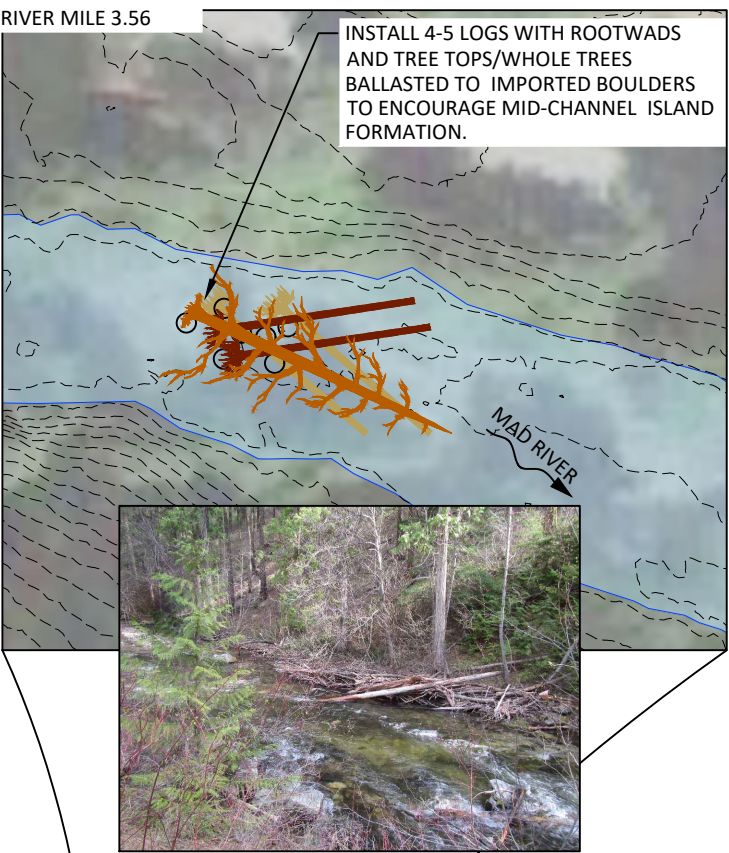
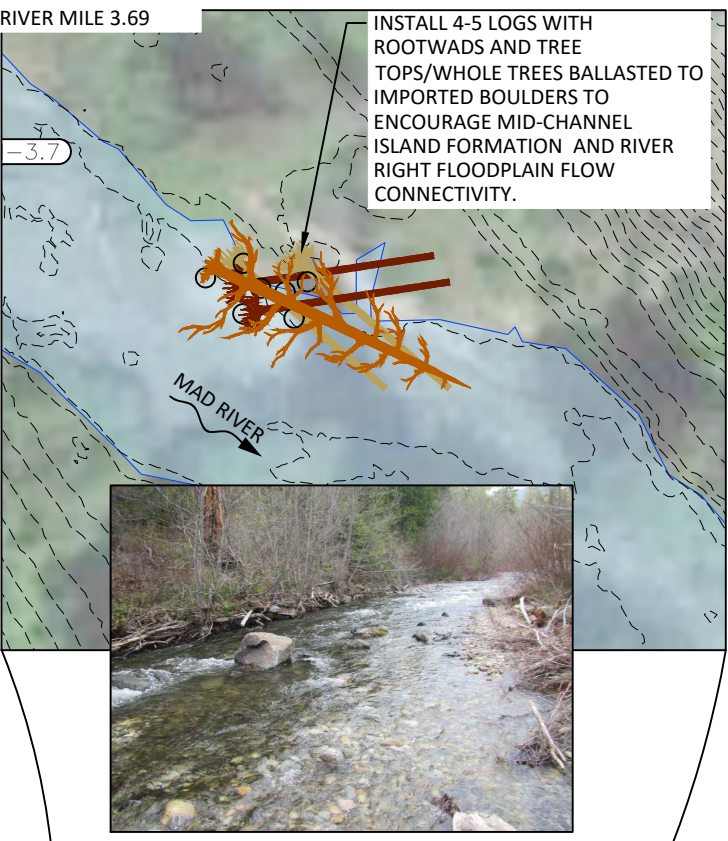
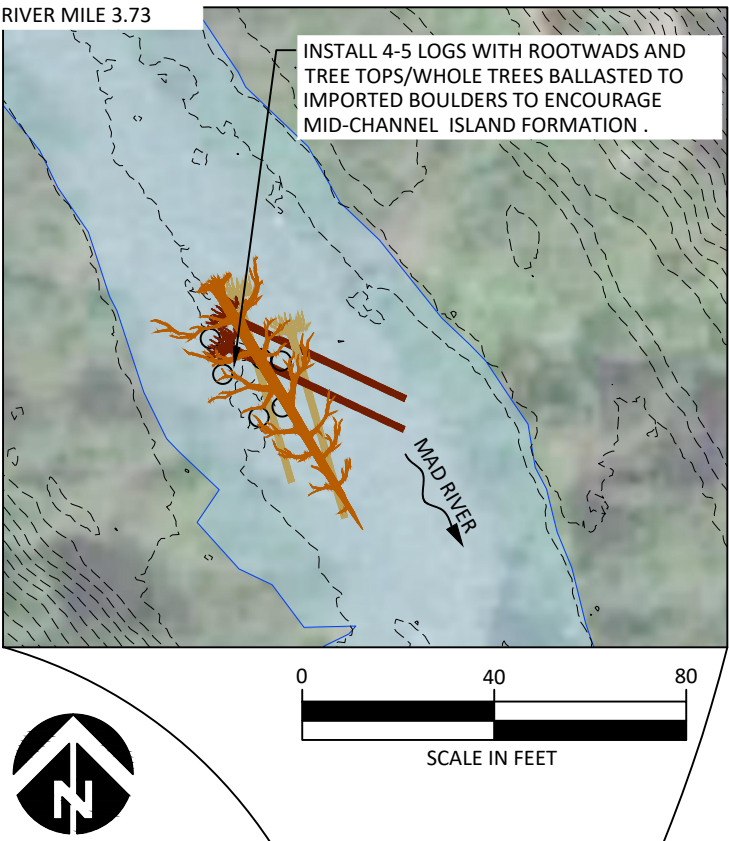
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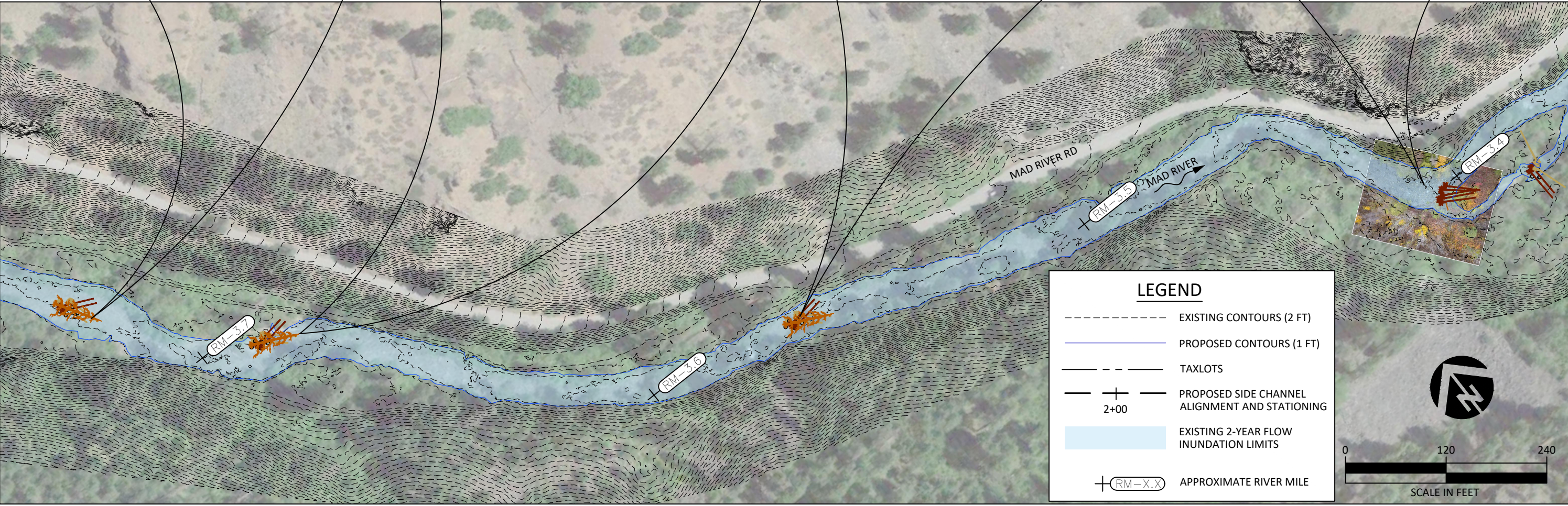
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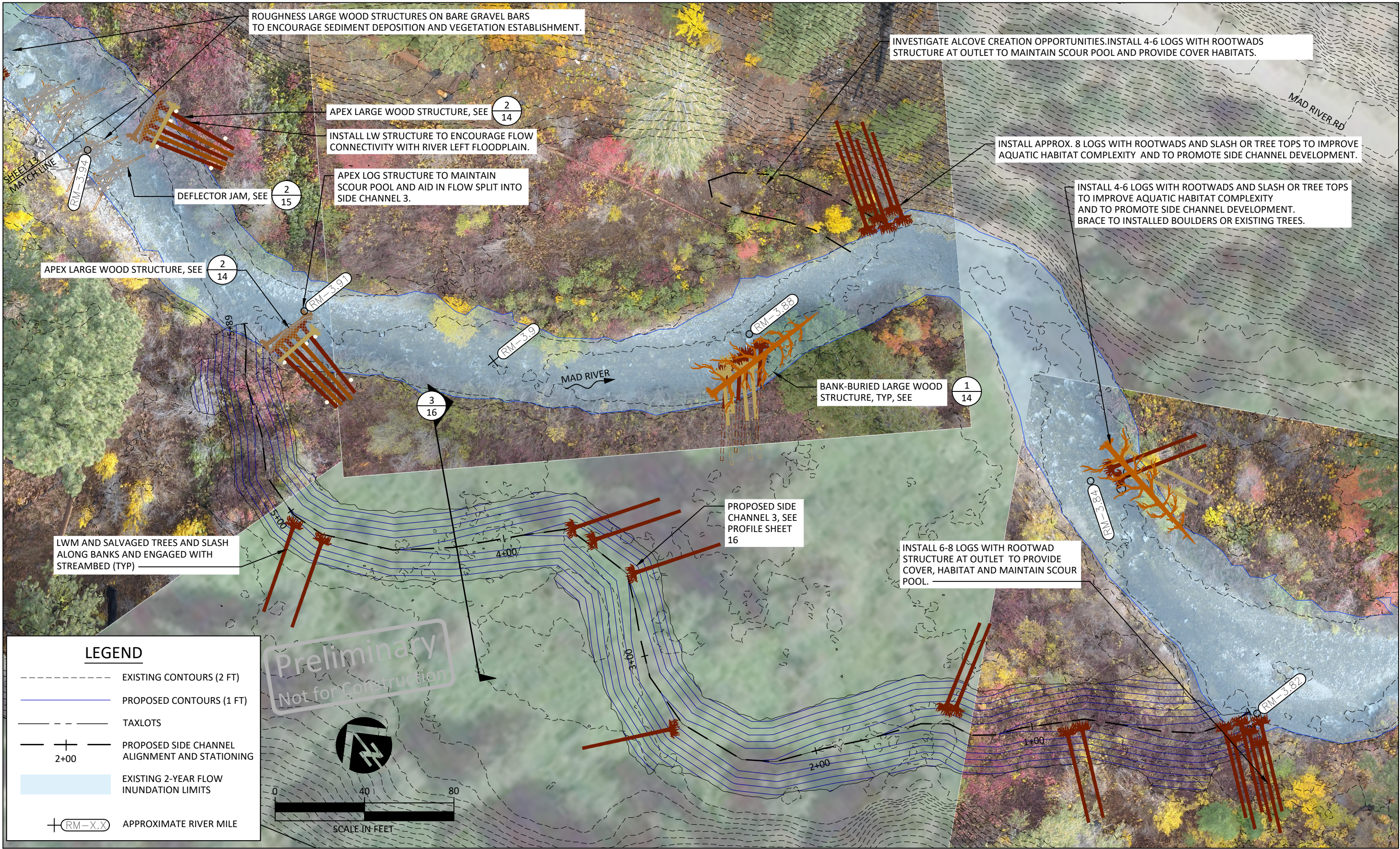
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PROPOSED CONDITIONS PLAN
RIVER MILE 3.4-3.75



ROUGHNESS LARGE WOOD STRUCTURES ON BARE GRAVEL BARS TO ENCOURAGE SEDIMENT DEPOSITION AND VEGETATION ESTABLISHMENT.

INVESTIGATE ALCOVE CREATION OPPORTUNITIES. INSTALL 4-6 LOGS WITH ROOTWADS STRUCTURE AT OUTLET TO MAINTAIN SCOUR POOL AND PROVIDE COVER HABITATS.

APEX LARGE WOOD STRUCTURE, SEE 2/14

INSTALL LW STRUCTURE TO ENCOURAGE FLOW CONNECTIVITY WITH RIVER LEFT FLOODPLAIN.

APEX LOG STRUCTURE TO MAINTAIN SCOUR POOL AND AID IN FLOW SPLIT INTO SIDE CHANNEL 3.

INSTALL APPROX. 8 LOGS WITH ROOTWADS AND SLASH OR TREE TOPS TO IMPROVE AQUATIC HABITAT COMPLEXITY AND TO PROMOTE SIDE CHANNEL DEVELOPMENT.

INSTALL 4-6 LOGS WITH ROOTWADS AND SLASH OR TREE TOPS TO IMPROVE AQUATIC HABITAT COMPLEXITY AND TO PROMOTE SIDE CHANNEL DEVELOPMENT. BRACE TO INSTALLED BOULDERS OR EXISTING TREES.

APEX LARGE WOOD STRUCTURE, SEE 2/14

DEFLECTOR JAM, SEE 2/15

BANK-BURIED LARGE WOOD STRUCTURE, TYP, SEE 1/14

LWM AND SALVAGED TREES AND SLASH ALONG BANKS AND ENGAGED WITH STREAMBED (TYP)

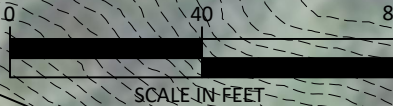
PROPOSED SIDE CHANNEL 3, SEE PROFILE SHEET 16

INSTALL 6-8 LOGS WITH ROOTWAD STRUCTURE AT OUTLET TO PROVIDE COVER, HABITAT AND MAINTAIN SCOUR POOL.

LEGEND

- EXISTING CONTOURS (2 FT)
- PROPOSED CONTOURS (1 FT)
- - - TAXLOTS
- +— PROPOSED SIDE CHANNEL ALIGNMENT AND STATIONING
- EXISTING 2-YEAR FLOW INUNDATION LIMITS
- + RM-X.X APPROXIMATE RIVER MILE

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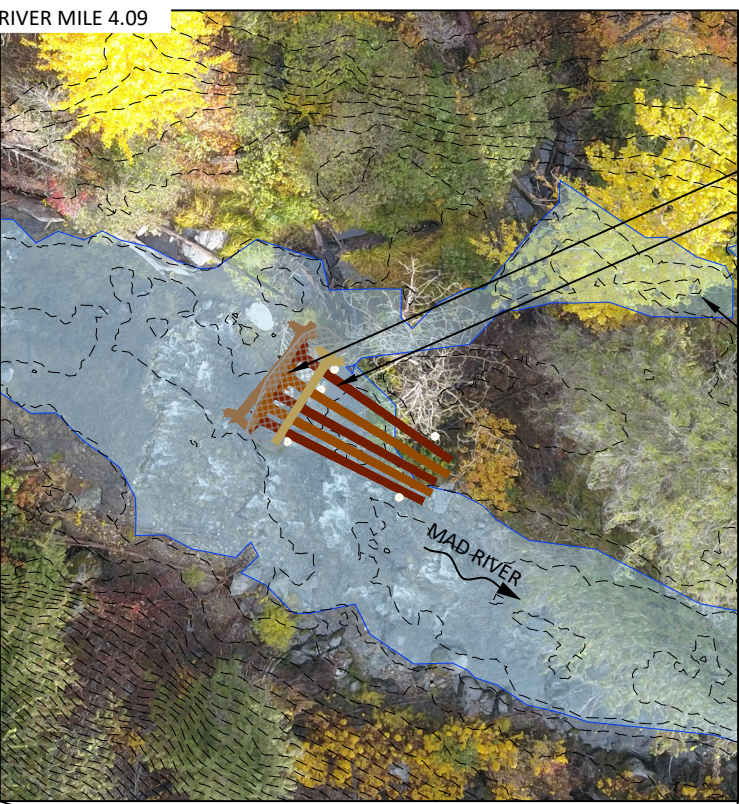
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MAD RIVER RIVER MILE 1.1-4.3 DRAFT CONCEPT DESIGN

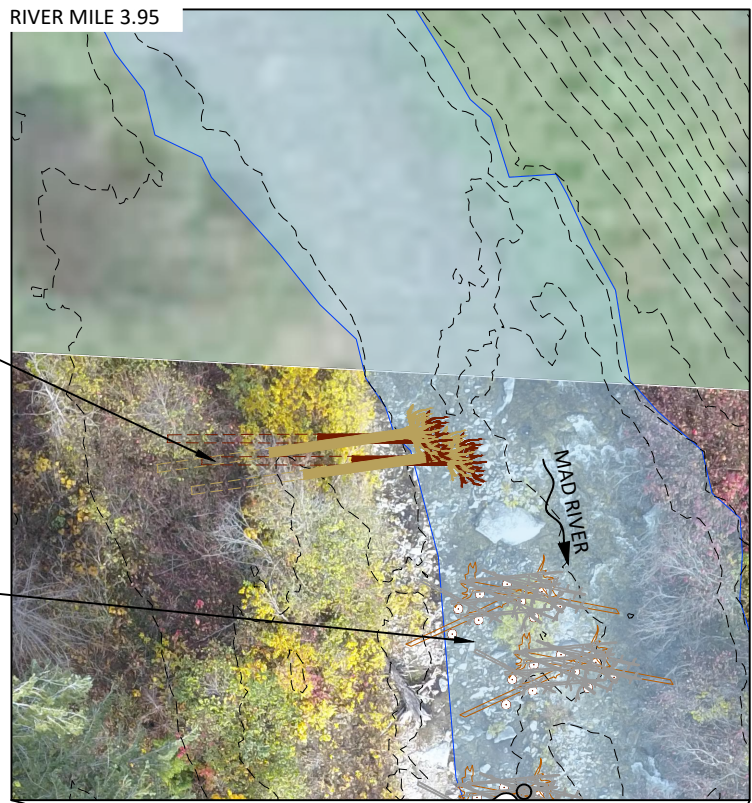


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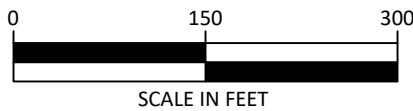
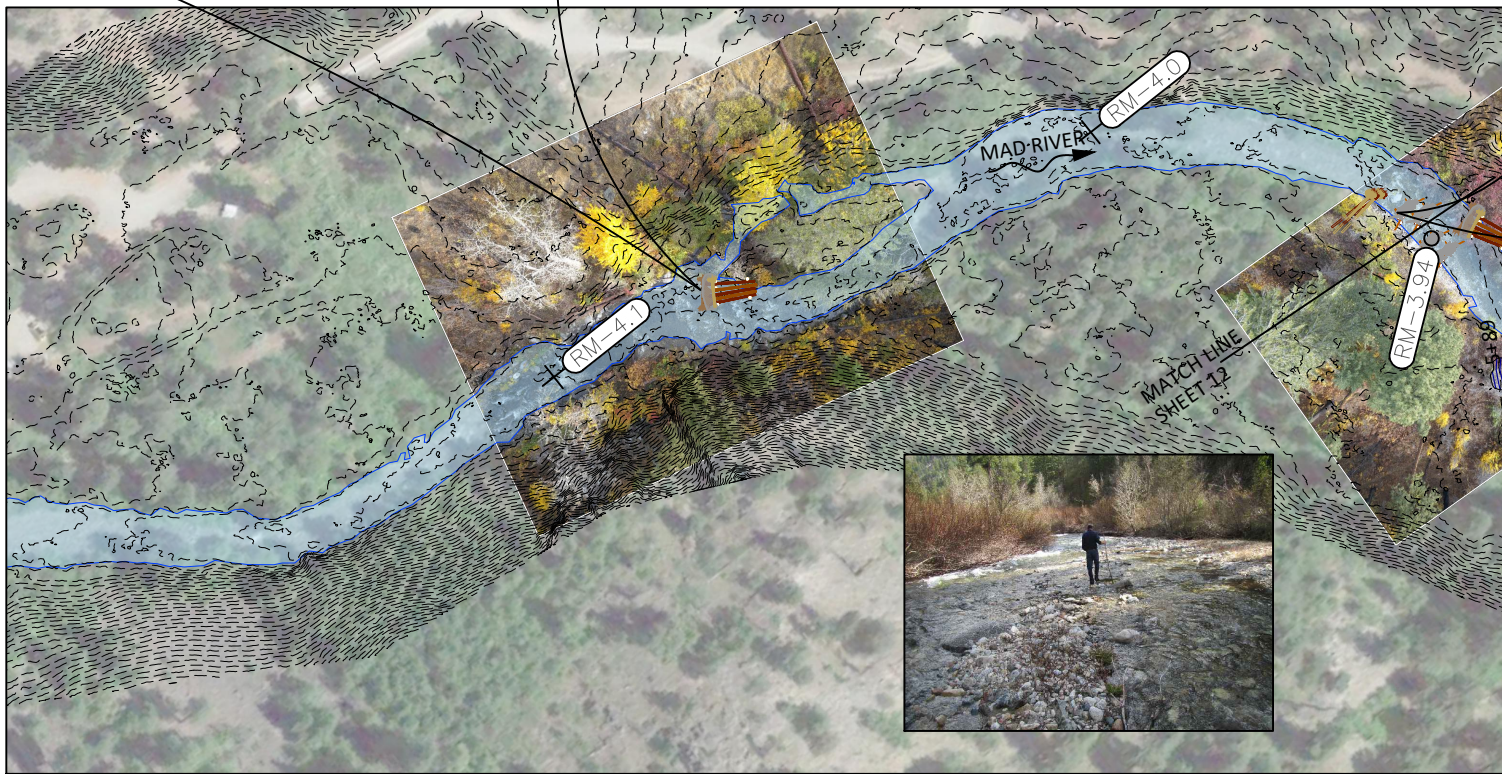
PROPOSED CONDITIONS PLAN RIVER MILE 3.8-3.95



- APEX LOG STRUCTURE TO MAINTAIN SCOUR POOL AND AID IN FLOW SPLIT INTO SIDE CHANNEL ALONG RIVER LEFT FLOODPLAIN.
- APEX LARGE WOOD STRUCTURE, SEE 2/14
- BANK-BURIED LARGE WOOD STRUCTURE, TYP, SEE 1/15
- ALONG RIVER LEFT FLOODPLAIN SIDE CHANNEL:
- SELECTIVELY SALVAGE EXISTING LW TO OPEN UP SIDE CHANNEL TO THROUGH FLOW.
 - RETAIN SOME LW FOR HABITAT COMPLEXITY.



DEFLECTOR JAM, SEE 2/15



LEGEND

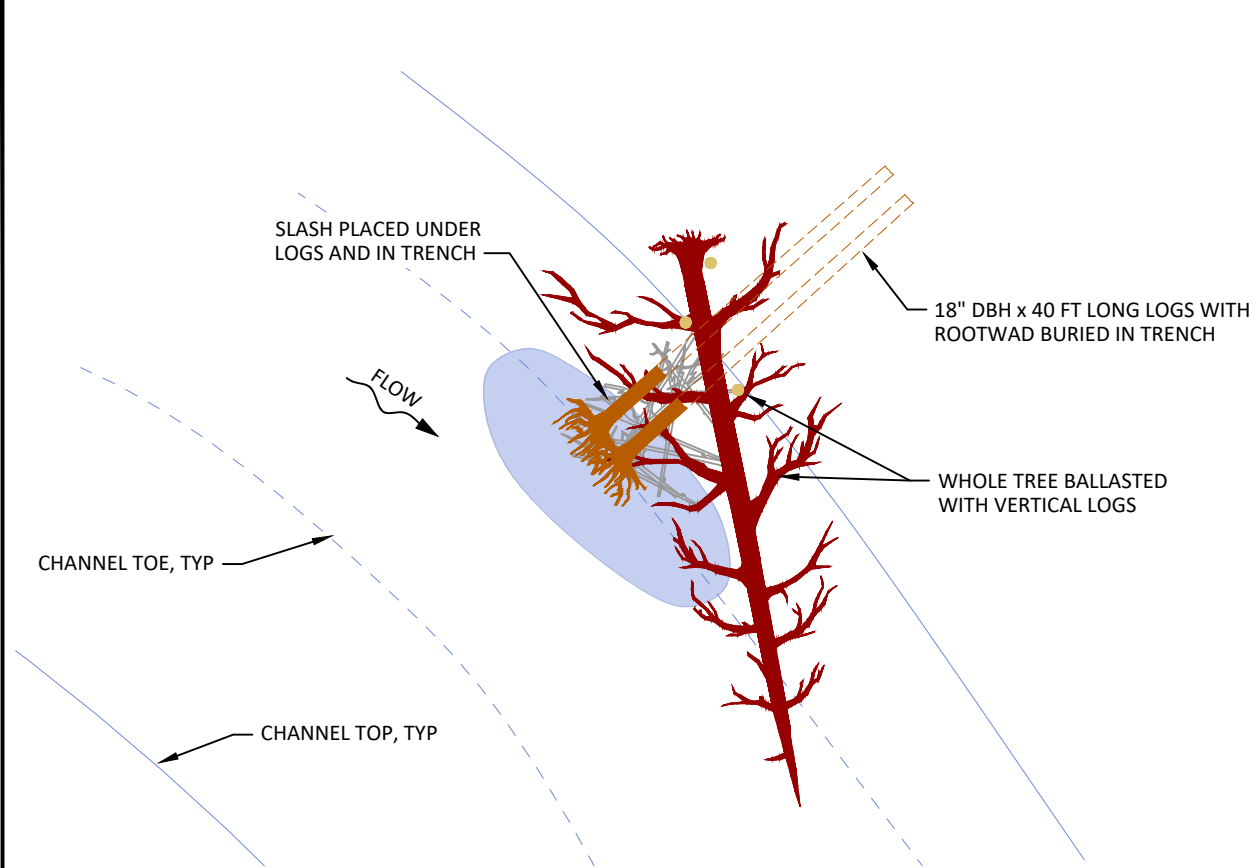
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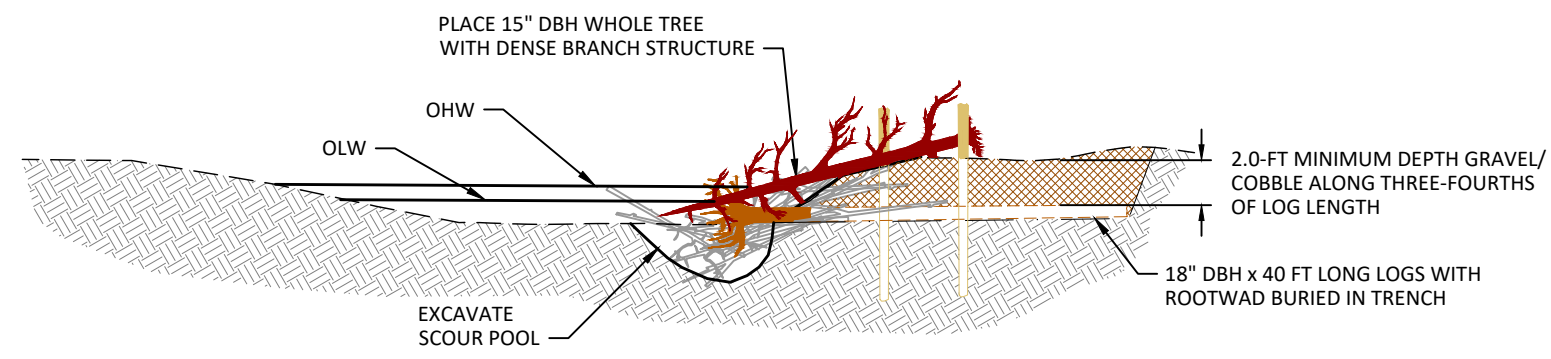
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				CM DRAWN			PL, DM DESIGNED			PL, DM, MB CHECKED			MAD RIVER RIVER MILE 1.1-4.3 DRAFT CONCEPT DESIGN				501 Portway Avenue, Suite 101 Hood River, OR 97031 541.386.9003 www.interfluve.com			PROPOSED CONDITIONS PLAN RIVER MILE 3.95-4.2			SHEET 13 OF 16	
NO.	BY	DATE	REVISION DESCRIPTION	PL, DM APPROVED	3/03/2022 DATE	PROJECT																		

Preliminary
Not for Construction

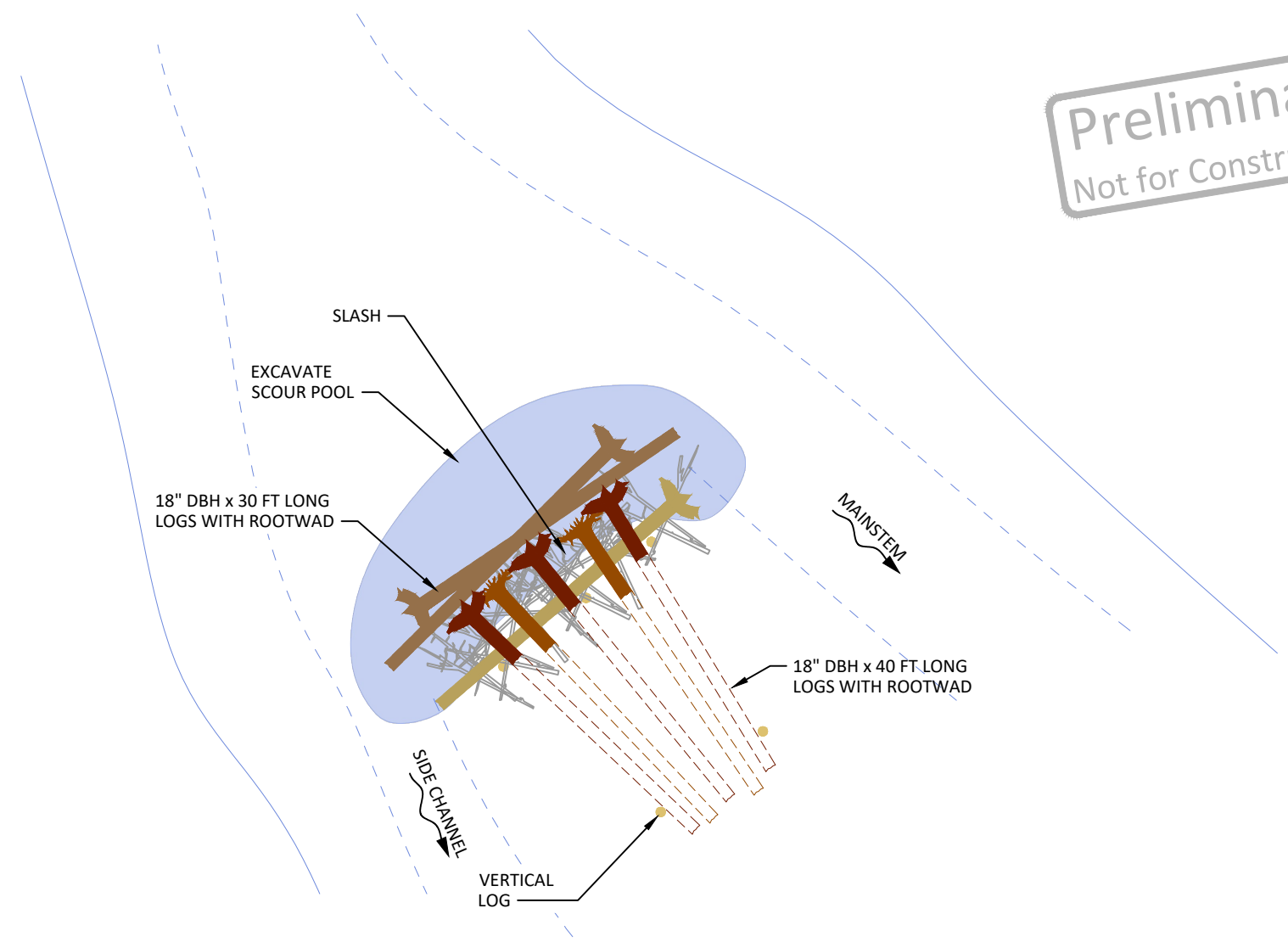


PLAN

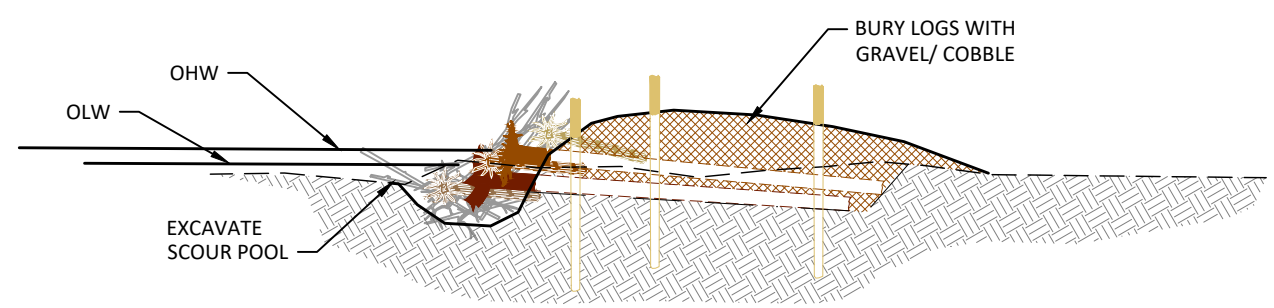


SECTION

1
14 TYPICAL DETAIL - BANK-BURIED LARGE WOOD STRUCTURE
NOT TO SCALE



PLAN

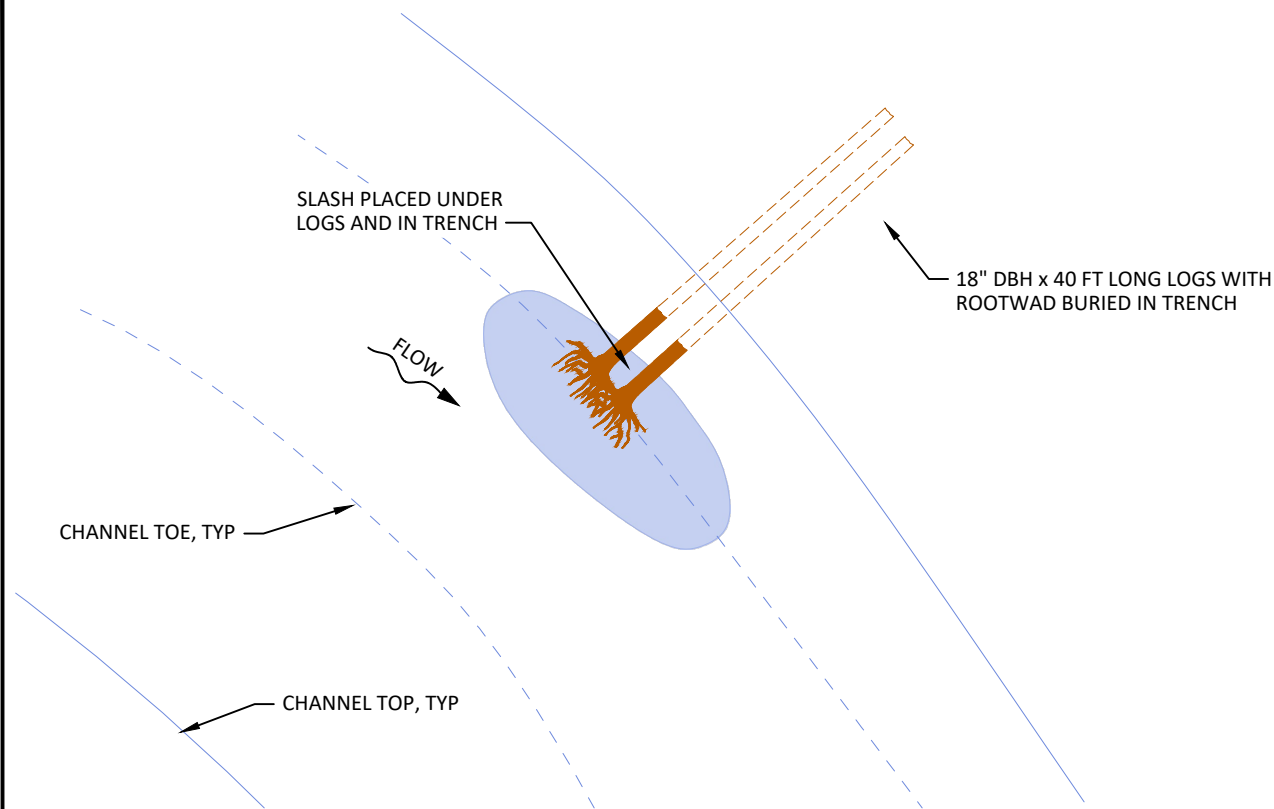


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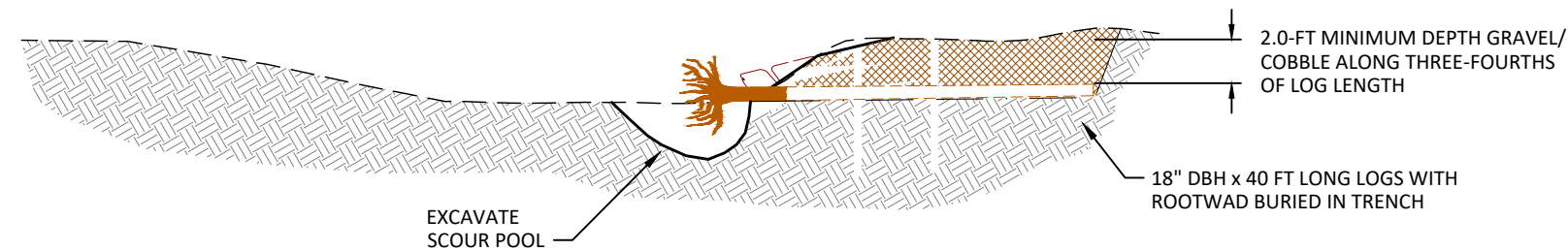
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14 TYPICAL DETAIL - APEX LARGE WOOD STRUCTURE
NOT TO SCALE

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Not for Construction

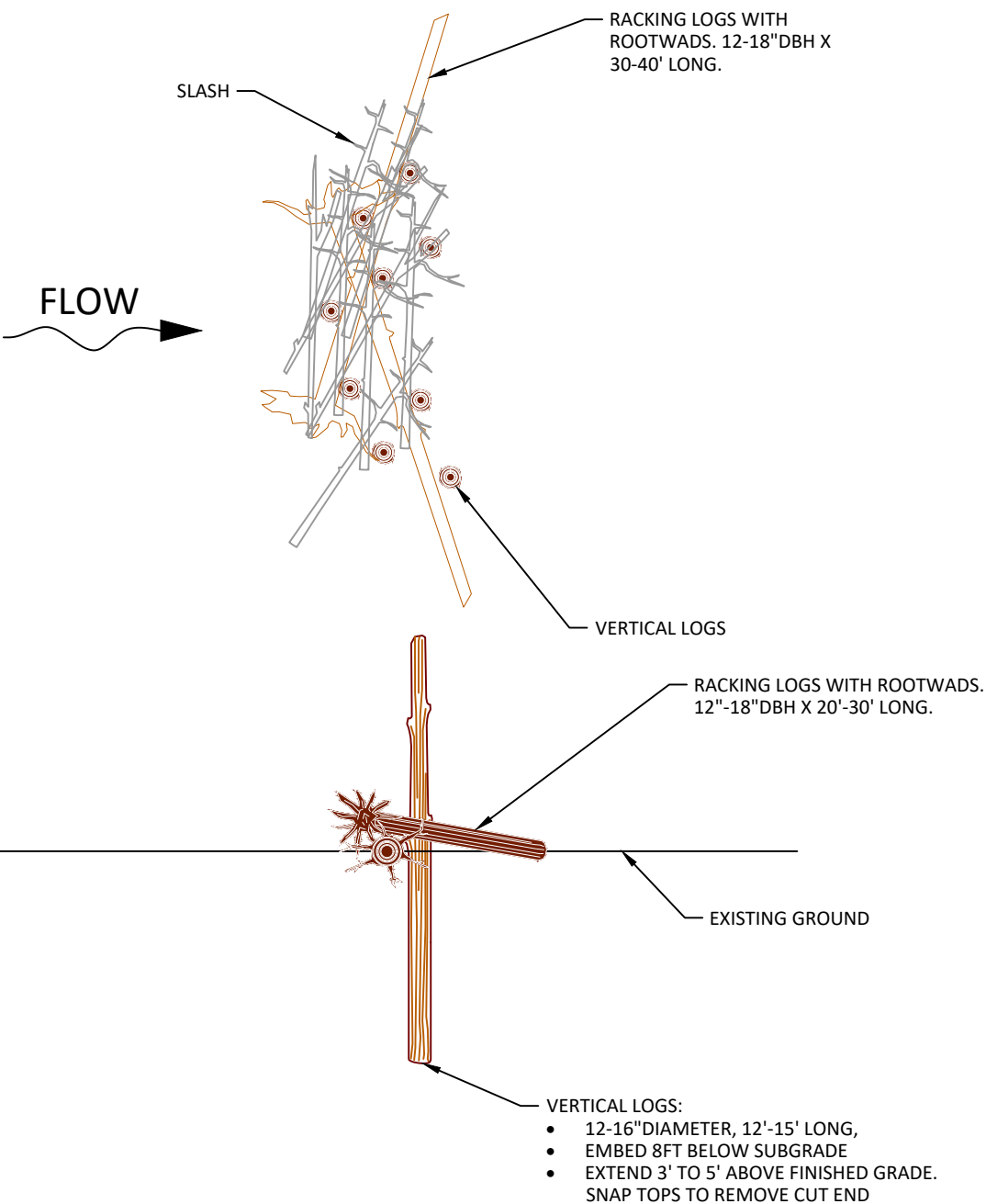


PLAN



SECTION

1
15 TYPICAL DETAIL - BANK-BURIED SMALL WOOD STRUCTURE
NOT TO SCALE



DEFLECTOR JAM

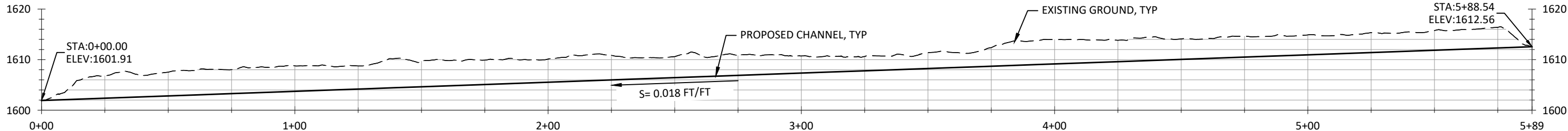
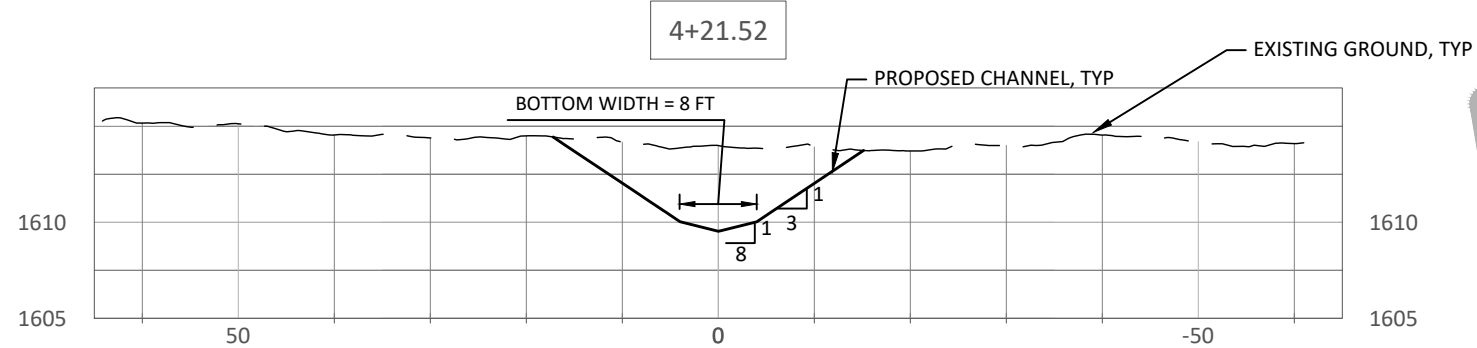
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15 TYPICAL DETAIL - DEFLECTOR JAM
NOT TO SCALE

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				CM DRAWN			PL, DM DESIGNED			PL, DM, MB CHECKED			MAD RIVER RIVER MILE 1.1-4.3 DRAFT CONCEPT DESIGN				501 Portway Avenue, Suite 101 Hood River, OR 97031 541.386.9003 www.interfluve.com		LARGE WOOD STRUCTURE TYPICAL DETAILS (2 OF 2)		SHEET 15 OF 16	
				PL, DM APPROVED			3/03/2022 DATE															
NO.				BY			DATE			REVISION DESCRIPTION												

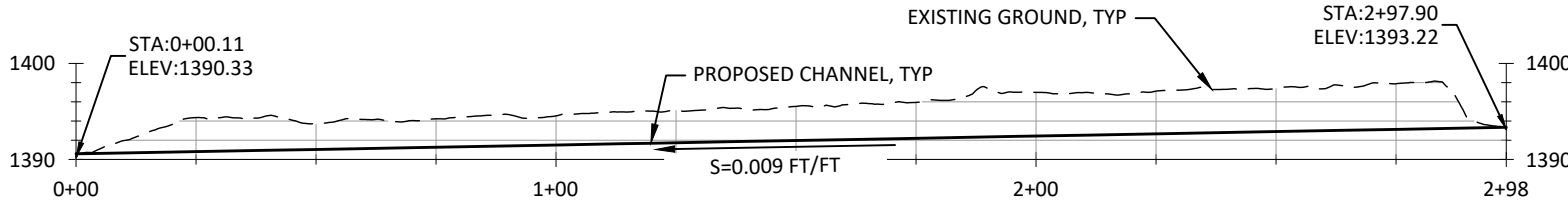
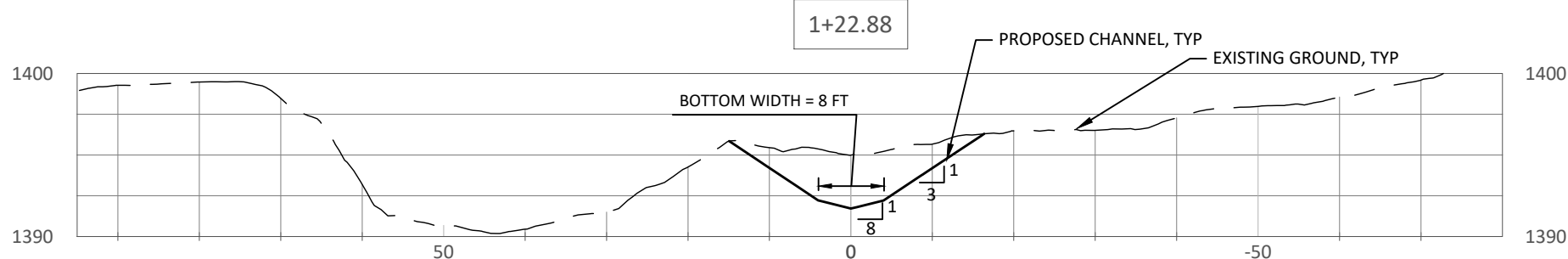
Preliminary
Not for Construction

3
12 TYPICAL SECTION - SIDE CHANNEL

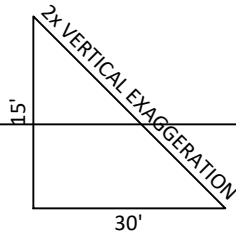


PROFILE - PROPOSED SIDE CHANNEL 3

2
6 TYPICAL SECTION - SIDE CHANNEL

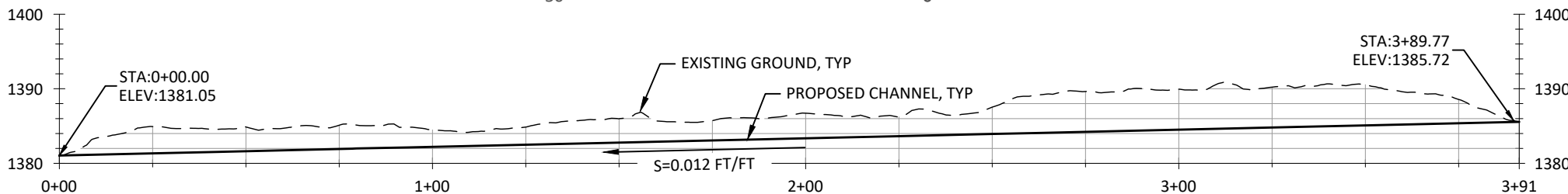
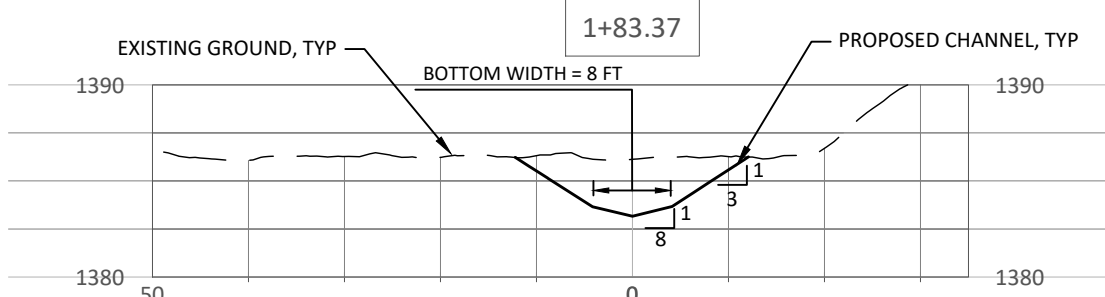


PROFILE - PROPOSED SIDE CHANNEL 2



NOTE: CROSS SECTION ORIENTATIONS
ARE LEFT TO RIGHT LOOKING
DOWNSTREAM.

1
5 TYPICAL SECTION - SIDE CHANNEL



PROFILE - PROPOSED SIDE CHANNEL 1

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				PL, DM APPROVED	3/03/2022 DATE	PROJECT
NO.	BY	DATE	REVISION DESCRIPTION			

MAD RIVER
RIVER MILE 1.1-4.3
DRAFT CONCEPT DESIGN



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PROFILES AND CROSS SECTIONS