PFA Grant Amendment Request

PFA Grants Program

Submission of this form constitutes a request and does not guarantee approval.

Project Information

Project Name: Conyers Creek Habitat Diversification & Enhancement

PFA Project Tracking Number: PFA2024-04

ODFW Agreement Number: 204-25

Lead Organization Name: Columbia Soil & Water Conservation District

Lead Organization Address: 35285 Millard Rd., St. Helens, OR 97051

Project Start Date: 6/30/2025

Project End Date: 12/31/2028

Original Grant Award Amount ($): 572,242.00

Proposed Effective Date for Amendment: 6/1/2026

Amendment Request Details

Amendment Type (select all that apply and attach supporting documentation):

- ☑ Budget Category Realignment
- ☐ Budget Increase/Reduction Request
- ☑ Scope of Work Modification
- ☑ Project Term Adjustment

Required attachments:

- Revised line-item budget (.xlsx) for any budget-related changes. **Attach the original budget too.**

- Updated project map(s) for **all** scope of work changes

- **Tracked changes** to deliverables table for timeline or deliverables modifications

- Updated engineering/design plans if applicable

Revised Total Budget (if applicable): $NA

Impact Summary

Will the amendment affect project deliverables?

☑ Yes – Attach revised deliverable table with tracked changes

☐ No

Will the amendment alter engineering plans or project designs?

☑ Yes - If Yes, please describe and attach revised plans:

☐ No

See Attached Pages.

List of attached Exhibits:

Exhibit A - Supplemental Information (responses to Project Amendment request questions)

Exhibit B - Grant Agreement Budget (Original Budget)

Exhibit C - Adjusted Budget

Exhibit D - Adjusted Deliverables Timeline

Exhibit E - 90% Designs

Exhibit F: Diagrams of Proposed Design Modifications

PFA Stream Biologist Consultation.

It is required that you consult your regional PFA Stream Biologist before submitting this amendment to the PFA Grants Program.

If you are requesting a simple budget realignment, then consultation is not required.

Name of PFA Stream Biologist: Kelsey Anderson

Date PFA Stream Biologist was Consulted: 12/6/2025

Have you evaluated alternative solutions to this amendment?

☑ Yes

☐ No

Describe any alternatives considered or describe why an alternative is not necessary:

See Attached Pages.

Explanation and Justification

Please provide a clear explanation of the reason(s) for the requested amendment. Be sure to address the following:

- Briefly describe the current status of your project (e.g., % complete, phases completed, upcoming milestones)

- Justification for the amendment (include any financial, regulatory, or logistical factors)

- Effect on project goals and objectives (including ecological or restoration outcomes)

- Any potential future impacts resulting from the proposed change

Attach additional pages or documentation as needed.

See Attached Pages.

Submission Instructions

Submit the completed form and all required attachments at least 30 days prior to the proposed change to:

Andrew J. Spyrka
Private Forest Accord Grant Coordinator
Oregon Department of Fish and Wildlife
andrew.j.spyrka@odfw.oregon.gov

PFA Grants staff will work with the grantee to adjust timelines as needed based on the nature of the amendment.

Certification Statement by Grantee

By signing below, I certify that the information provided in this request is accurate and complete. I understand that submission does not guarantee approval and that all amendments are subject to review by the Oregon Department of Fish and Wildlife. I also confirm I have the authority to request this amendment on behalf of the Grantee.

The following must be signed by the same signatory on the PFA Grant Agreement.

Signature: Taylor Murray

Title: Executive Director

Date: 4/15/2026

Primary/Project Manager Contact for Questions(if different from above):

Name: Crystalyn Bush

Phone: 971-813-9055

Will the Amendment affect project deliverables?

Yes. The amendment request includes changes to the project scope of work and design and extends timelines for many of the deliverables. See Exhibit B for adjustments to project deliverable timelines.

Will the Amendment alter engineering plans or project designs?

Yes. The recently completed 90% designs include the following changes from the 60% designs submitted with the grant application. (Changes are indicated on the attached Exhibit C - 90% Plan Set by their associated numbers in this amendment and organized by their relative location within the Project Area):

Upper Reach Plan:

1) Added: A log structure has been added to each side of the creek at the temporary stream crossing access site in the "Upper Reach Plan".

2) Added: Placement of large Alder logs throughout upstream floodplain area.

3) Modified: A complex log structure has been added to the upstream Side Channel C "alcove."

4) Added: 2 BDAS will be installed just downstream of the facing log structures in the upstream work site area.

5) Removed: The "willow nursery" planting area proposed for the floodplain bench just downstream of the upstream side channel area has been eliminated from the scope of work.

Middle Reach Plan:

6) Removed: The Roaring Creek side channel reconnection has been eliminated from the scope of work.

7) Removed: The ~0.2 acre upland wetland enhancement in the Gibbon's field has been removed from the scope of work.

8) Modified: The log structure design along the original bank layback area has been modified to include 4 complex log structures that protrude into the stream channel ~ 50% of its width as well as a row of rootwads installed against the bank.

Lower Reach Plan:

9) Modified: The number of BDAs in Side Channel A has been reduced from 3 to 1.

10) Added: Another ~40' of bank layback area has been added to the NW bank of Conyers Creek upstream of the log structure location. Work will include installing a row of single rootwads along the toe of the bank terminating in a complex log structure, in similar fashion to the upstream bank layback area.

11) Modified: A complex log structure has been added to the downstream Side Channel A "alcove."

Have you evaluated alternative solutions to this amendment?

Alternatives considered for each design modification are as follows:

1) Do not add complex log structures at temporary creek crossing. Not selected based on the anticipated benefits of this activity. The design team agreed that there could be a significant benefit to increasing channel complexity, slowing flow velocities and creating a pinchpoint for water at this location. Increasing floodplain engagement and inundation will increase benefits from other restoration activities in the area, including the side channel restoration, and provides an opportunity to install BDAs downstream of the structures where streampower will be greatly reduced. Finally, installing structures here will provide stabilization to the streambanks, repairing any damage caused by heavy equipment during construction.

2) Do not place Alder material in floodplain or only incorporate material into log structures. Not selected based on the free availability of Alder material from trees that will have to be removed during construction and the potential benefits of adding more wood and roughness onto the floodplain. Floodplain roughness increases water retention and storage, enhances flood resiliency, provides important habitat for native amphibian species, and supports nutrient cycling through the process of decomposition.

3) Do not add more wood to Side Channels. Rejected due to material availability and anticipated benefit of increasing log structures.

4) Do not add BDAs or add BDAs at a different location. Alternatives rejected due to engineer's opinion that placing BDAs downstream of pinchpoint log structures will improve their longevity and increase the odds of beaver maintenance or adoption. Additionally, historical observations note attempts at dam building by beavers in this area.

5) Keep "willow nursery" in plans but use only mechanical and chemical weed control techniques. This was not selected given the challenge of successfully establishing willow stakes in an area with no ability to remove thick Reed canary thatch, partial canopy cover, and potentially heavy beaver forage.

6) Reroute Roaring Creek side channel through upland forest. Not selected based on unfavorable site conditions and topography as well as likely damage to surrounding forest from altered hydrology.

7) Eliminate grading activities and focus only on vegetation management in wetland. This alternative was not selected based on the landowner's existing contract with NRCS which already provides weed control and planting services for this area.

8) Maintain original log structure design for this area. Not selected based on the potential benefit to floodplain engagement and off-channel habitat of extending log structure engagement further into

the stream and the availability of sufficient logs to accomplish all goals of improving habitat conditions and protecting sensitive banks.

9) Remove all BDAs from Side Channel A. The design team still sees value in installing one structure based on modeling indicating that 1 structure is not likely to backwater the channel into Conyers Creek during most flow events, could create beneficial habitat features, and will encourage greater floodplain engagement, potentially improving conditions for native vegetation in the surrounding wetland.

10) Do not add bank layback area or install 2 large wood structures into bank instead of the line of single rootwads with 1 log structure. The team believes there is more habitat value in treating a longer stretch of streambank with single rootwads than in treating a shorter reach with several large, complex structures.

11) Do not add more wood to Side Channel pools or place no wood in pools. These alternatives were not selected based on the engineer's observations from past projects of the benefit of these habitat features.

Explanation and Justification:

Status of Project:

Upon applying for funding to the PFA, the Columbia SWCD (project sponsor) submitted 60% designs that were developed in 2023. Since the execution of the grant agreement on June 30, 2025, the following deliverables detailed in the Grant Agreement have been accomplished:

- ✓ A wetland delineation of the project site was commissioned and executed. The assessment and accompanying report have been to submitted to DSL and are under review.
- ✓ A cultural resources survey and report were commissioned and executed.
- ✓ The Project Manager applied for and received ODFW Fish Passage approval for the project. (A follow up review will be required based on changes design)
- ✓ The Engineer completed 90% designs which were initially received by the Project manager on December 12, 2025. Further revisions were made to the designs following an on-site meeting with the landowners on 2/18/2026.

Following PFA Committee approval, the Project Manager will submit permit applications to DSL, USACE, and DEQ.

A request for proposals will be sent out to contractors by early fall for Construction and Log Harvesting operations, with an onsite pre-bid meeting scheduled prior to the end of October. Rootwad and log harvesting will be scheduled for early 2027.

Implementation is now planned for summer 2027.

Justification for Amendment:

Site conditions have evolved dramatically since the initial 60% designs were completed in 2023 with significant changes occurring in the time between the first iteration of the 90% designs in mid-December 2025 until now. The first set of design changes were driven by observations made during a site visit in September 2025 by the Project Manager, Engineer, Geomorphologist, and landowners. Design changes were incorporated into the 90% design set, which was completed and shared with the Project Manager and landowners in mid-December 2025. Shortly after this, the Project Manager made a site visit to discuss concerns/questions with one of the landowners and observed significant, project-impacting changes to the site again, most notably the extreme loss of floodplain area between the mainstem Conyers Creek and historic Roaring Creek channel which was to be reconnected during project implementation. As a result of the altered site conditions and, in an effort to maximize habitat/environmental benefits utilizing the resources on site while respecting landowner concerns, the Project Team has made several significant changes to the scope of work over several iterations of design modifications. These changes are outlined below, correspond with the numbers above, and are laid out from the upstream extent of the project area moving sequentially downstream.

1) Add log structures at temporary crossing site. By placing log structures on either side of the stream, a pinchpoint is created, decreasing streampower and forcing water up onto the floodplain more frequently. Greater floodplain inundation and engagement will enhance other project activities in the area, increase flood resiliency, and hopefully improve conditions for native species to establish. Other benefits of this activity include using bioengineered bank stabilization as a prescription for any damage caused by crossing the stream with heavy equipment, and the creation of more favorable conditions for natural and artificial beaver structures to persist.

2) Due to ongoing erosion and proposed project activities, several large Alders along the creek will be taken down during the course of construction in the Upper Reach area. There is a high likelihood that these trees may come down on their own prior to project implementation given the undercutting that is occurring. The design team proposes to incorporate this material into log structures for increased detrital inputs and to place larger trunks and branches throughout the floodplain for increased roughness, habitat complexity, and enhancement of beneficial natural processes. Floodplain logs will be secured using wood stakes to prevent movement during storm events.

3) The pools located at the ends of Side Channel A and C will receive more large wood pieces for increased habitat value, as well as better protection from predators and solar exposure. The Project Engineer noted high juvenile salmonid use of these habitat features on previous projects, and observed that having a lot of large wood in the pools was critical for protection and shade for rearing juvenile fish.

4) 2 BDAs added into Upper Reach area. Log structures will slow flow velocities through the reach, making BDAs more viable, and creating favorable conditions for structure durability and beaver utilization. Natural dam building was noted in this reach during a habitat survey in the summer of 2024, providing support for the possibility of beaver occupation here.

5) Elimination of "willow nursery" planting area. The project team made the decision to eliminate this planting area in favor of focusing resources installing and maintaining plantings throughout areas disturbed during construction and along streambanks that need revegetation. Funds are better spent ensuring those plantings are successful. Willows will be one of the primary species planted throughout all planting areas particularly close to the water, in floodplain areas, and within log structures and BDAs. Furthermore, recent conversations with DSL staff indicate that permit approval may be made easier through efforts to minimize impacts to wetland areas as much as possible, even if actions are intended to improve condition and function.

6) Elimination of the Roaring Creek side channel reconnection element. Over the last several winters (and especially during the most recent winter) Conyers Creek has experienced severe erosion in this area which has eaten away at the space required to rebuild and reconnect the historic Roaring Creek channel. Elimination of the Roaring Creek reconnection also results in the elimination of the 6 BDAs that were originally planned for installation in the reconnected channel.

7) Upland wetland enhancement removed from scope of work. Recent conversations with DSL staff about this activity indicate that grading activities would trigger required mitigation for the impacts to the current wetland (despite its degraded state) and expensive monitoring of both the "restored wetland" and proposed mitigation site. Based on that information, it was decided that the landowner would instead work with NRCS regarding wetland enhancement in that area. The landowner currently has an active EQIP contract with NRCS that includes funds for weed control and planting work in the wetland, so transitioning this element of the project work to NRCS is logical and simplifies roles.

8) Modification to large wood design along original bank layback area. Small adjustments have been made to the log structure design in this area. Changes reflect the objectives of protecting the streambank, reducing stream power through the reach, providing in-stream refuge and habitat, and directing water onto the adjacent floodplain and into relic channels at more frequent intervals. In an effort to meet these objectives, the design has been modified from 4 complex log structures installed closely to the bank, to a combination of complex log structures that protrude into the stream approximately halfway and a row of single rootwads that line the toe of the exposed bank.

9) BDA reduction in Side Channel A. The design team has reached the conclusion that 1 structure for the size of the channel and flow volume is a more appropriate use of resources. More structures could have the undesirable effect of backing up water to the confluence with Conyers Creek, negating some of the positive impacts of restoring this side channel. The BDA design for all 3 remaining structures has been modified from complete living structures to a hybrid structure with living stakes along the ends only. The purpose of this is to prevent the BDAs from possibly becoming a fish passage barrier due to aggressive willow growth, while providing additional stability

through the rooting of live stakes along the edges. This design was recommended by a contractor with experience designing and installing BDAs.

10) Adding 40' of bank layback with rootwads just downstream of original bank layback area. Both sections of streambank are experiencing severe erosion. Log structures in both layback sections will be installed where pools currently exist for added habitat value. Increasing the area treated with large wood will enhance the overall habitat value of the project and create more long term benefits for fish and other aquatic organisms that include slowing flow velocities, increasing gravel retention, encouraging greater floodplain engagement, and improving water quality.

10) Same explanation as #3.

Effect on Project Goals & Objectives:

All proposed changes are in line with the project's specified goals and objectives to increase habitat quantity and quality throughout the reach with a focus on supporting the needs of native salmonid spawning and rearing life stages. The overall effect of the changes on achieving the project's goals and objectives should be enhancing, with the exception of the removal of the Roaring Creek side channel reconnection, which is based on circumstances outside of our control. Positive alterations to the scope of work include treating an additional 40' or more of streambank with large wood and bank laybacks, installation of additional log structures, placement of Alder logs in the floodplain for improved amphibian habitat and increased floodplain roughness, increasing the amount of wood in the side channel pools for more productive rearing habitat, and increased channel engagement of log structures, promoting greater access to peripheral habitat areas over time.

Potential Future Impacts Resulting from Proposed Changes:

The most significant future impacts anticipated from the proposed changes are 1) increased floodplain engagement; 2) reduced streampower; 3) increased sediment deposition as a result of more wood in the stream and slower velocities, 4) more complex pool habitat as a result of expanded large wood treatment areas; and 5) greater streambank protection and reduced erosion from additional bank layback areas.

Impacts to Budget:

We do not anticipate any changes to the overall project budget at this time as a result of these design modifications. The elimination of 6 of the 9 BDAs, as well as the modification of the BDA design to a hybrid structure, should net savings of approximately $30,000. Eliminating the Roaring Creek side channel reconnection results in significant savings from the diminished excavation work and ESM material which will offset the additional cost of the expanded large wood installations as well as the additional design work. The Project Manager has learned of some additional permit fees (reflected in the attached (Budget Table – Exhibit C) that apply to the Project. Funds from cancelled construction activities have also been reallocated to cover those costs. Labor and material costs saved by the elimination of the "willow nursery" planting area will be reallocated towards planting

the additional areas of disturbance created by the increased bank work. Any additional funds in the planting budget will provide greater resources for supplemental plantings, plant protection, and weed maintenance activities to ensure plantings are successfully established and strong enough to survive competition from aggressive invasive species over time. The upland wetland enhancement work was only budgeted for $500. Those savings will also be reallocated to other project activities. Finally, the construction cost estimate for the project was produced over 2 years ago now. Prices and costs for materials and labor have continued to rise over that time. Consequently, costs for project activities will likely be slightly higher than initially budgeted for. (See Exhibit C for proposed budget category revisions.)

Thank you for your time and consideration of this amendment request.

Crystalyn Bush
Project Manager

EXHIBIT B
Project Budget Sheet

Budget Categories	Quantity	Unit	Cost/Unit	Total
Personnel Costs (Titles)				
Resource Conservationist (Project Manager)	200	Hours	$50.00	$10,000.00
		Hours		$0.00
			Personnel Cost Subtotal:	**$10,000.00**
Contractual Costs				
Engineering Services: Final designs and project oversight	1	Contract	$59,280.00	$59,280.00
Permitting: Wetland Assessment	1	Contract	$10,000.00	$10,000.00
Permitting: Cultural Resource Survey and Report	1	Contract	$30,000.00	$30,000.00
Construction Contractor	1	Contract	$389,740.00	$389,740.00
Planting: Materials	1	Each	$36,950.00	$55,150.00
Aerial Imaging & Photogrammetry: Effectiveness monitoring	8	Hours	$175	$1,400.00
			Contractual Cost Subtotal:	**$545,570.00**
Supply Costs (Lump into categories. Details should be in Scope of Work)				
	0	Each	$0.00	$0.00
	0	Each	$0.00	$0.00
			Supply Cost Subtotal:	**$0.00**
Equipment Costs (Any single purchase over $5,000)				
	0	Each	$0.00	$0.00
	0	Each	$0.00	$0.00
			Equipment Cost Subtotal:	**$0.00**
Travel Costs				
		Miles	$0.67	$0.00
	0	Miles	$0.00	$0.00
	0	Miles	$0.00	$0.00
	0	Miles	$0.00	$0.00
			Travel Cost Subtotal:	**$0.00**
Other Costs				
DSL Wetland Delineation Fee	1	Each	$559	$559
DEQ 1200C Stormwater Construction Permit	1	Each	$2,984.00	$2,984.00
DEQ Water Quality Certification Fee	1	Each	$985.00	$985.00
County Grade & Fill Permit	1	Each	$1,200.00	$1,200.00
County Land Use Compliance Review	1	Each	$315.00	$315.00
Oregon Rescue/Salvage Authorization	1	Each	$150.00	$150.00
Post Project Maintenance Funding	100	Contract	$70.00	$7,000.00
			Other Costs Subtotal:	**$13,193.00**

Indirect costs (Percentage of personnel costs, supply costs, equipment costs, and other costs. Auto-generated)	Insert Indirect Rate Manually up to 15% only ->	**15%**	$3,478.95
		Total Funding Requested from ODFW	**$572,241.95**

Match (If applicable)				
Columbia SWCD Resource Conservationist (Project Manager)	200	In-kind	$50	$10,000.00
Columbia SWCD Outreach Coordinator	80	In-kind	$40.00	$3,200.00
Columbia SWCD Outreach Video Production	1	Unsecured	$20,000.00	$20,000.00
Landowner donated logs on site (DBH 12"+)	120	In-kind	$150.00	$18,000.00
NRCS Contract with Landowner	1	Partner	$63,175.00	$63,175.00
Landowner Wetland Data Collection	30	In-kind	$32.00	$960.00
Landowner NRCS Cost Share (10% of Contract)	1	In-kind	$6,318.00	$6,318.00
Columbia SWCD Mileage	1800	In-kind	$0.67	$1,206.00
	0	Dollar	$0.00	$0.00
	0	Dollar	$0.00	$0.00
		Total Math Provided		**$122,859.00**

Total Cost of Project	**$695,100.95**

Exhibit C

Adjusted Budget Details				
Budget Categories	**Item**	**Current Budget**	**Adjusted Budget**	**Change to Budget Line**
Personnel Costs	~~Resource Conservationist~~ (Project Manager)	~~$10,000.00~~	$20,000.00	$10,000.00
Contractual Costs	Engineering Services	~~$59,280.00~~	$77,000.00	$17,720.00
Contractual Costs	Permitting: Wetland Assessment	~~$10,000.00~~	$8,000.00	-$2,000.00
Contractual Costs	Permitting: Cultural Resources Survey	~~$30,000.00~~	$30,500.00	$500.00
Contractual Costs	Construction Contractor	~~$389,740.00~~	$358,900.00	-$30,840.00
Contractual Costs	Planting: Materials & Labor	$55,150.00	$55,150.00	$0.00
Contractual Costs	Aerial Imaging & Photogrammetry: Monitoring	~~$1,400.00~~	$2,000.00	$600.00
Other Costs	DSL Wetland Delineation Fee	~~$559.00~~	$575.00	$16.00
Other Costs	DSL R/F Application Fee	~~$0.00~~	$700.00	$700.00
Other Costs	DEQ 1200 C Stormwater Construction Permit	~~$2,984.00~~	$3,073.00	$89.00
Other Costs	DEQ Water Quality Certification Fee	~~$985.00~~	$1,044.00	$59.00
Other Costs	County Grade and Fill Permit	$1,200.00	$1,200.00	$0.00
Other Costs	Land Use Compliance Review	~~$315.00~~	$325.00	$10.00
Other Costs	County Floodplain Development Permit	~~$0.00~~	$1,300.00	$1,300.00
Other Costs	Oregon Rescue/Salvage Authorization	$150.00	$150.00	$0.00
Other Costs	Post Project Maintenance Funding	$7,000.00	$7,000.00	$0.00
Indirect Costs	Indirect Costs associated with project	~~$3,478.95~~	$5,305.05	$1,826.10
	Totals:	**$572,241.95**	**$572,222.05**	-$19.90

*New lines have been added for a DSL Application fee as well as a County Floodplain Development permit. Neither of these costs were anticipated at the time of application

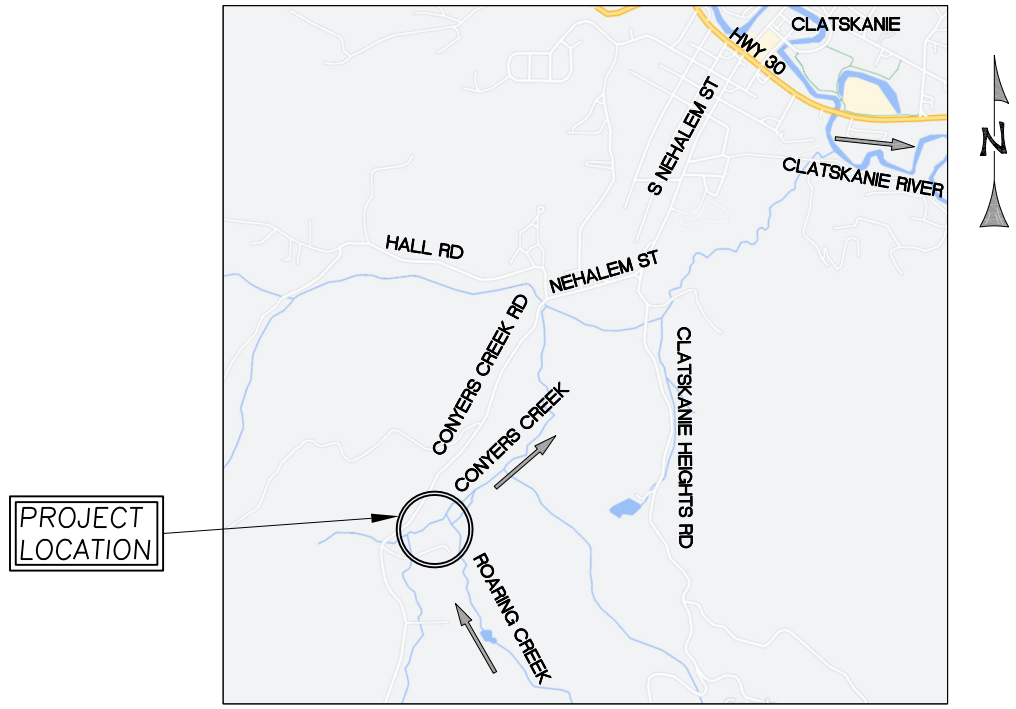
Exhibit D

Adjusted Deliverables Timeline				
Done	Measureable Objective	Deliverable	Current Timeline	Adjusted Timeline
☐	Design Finalization	Contractor Plan Set: 90-100% Designs/Technical Specifications/Bid Sheet	3/30/2026	3/30/2027
☑	Permit Approvals	Wetland Assessment	12/31/2025	No Change
☑	Permit Approvals	Cultural Resource Survey & Report	1/30/2026	No Change
☐	Permit Approvals	Obtain all necessary Federal, State, and Local authorizations	6/15/2026	6/15/2027
☐	Implementation	Contracting	7/1/2026	7/1/2027
☐	Implementation	Construction	9/15/2026	9/15/2027
☐	Implementation	Planting	3/30/2027	3/30/2028
☐	Monitoring	Orthoimage of Site Completed in Year 1, 3, and 5 post-implementation	12/31/2028	12/31/2029
☐	Reporting	Mid-Project Performance Report	7/1/2026	7/1/2027
☑	Reporting	Draft Implementation Monitoring Plan	10/31/2025	No Change
☐	Reporting	Draft Project Completion Report	11/30/2028	11/30/2029
☐	Reporting	Final Project Completion Report	1/30/2029	1/30/2030

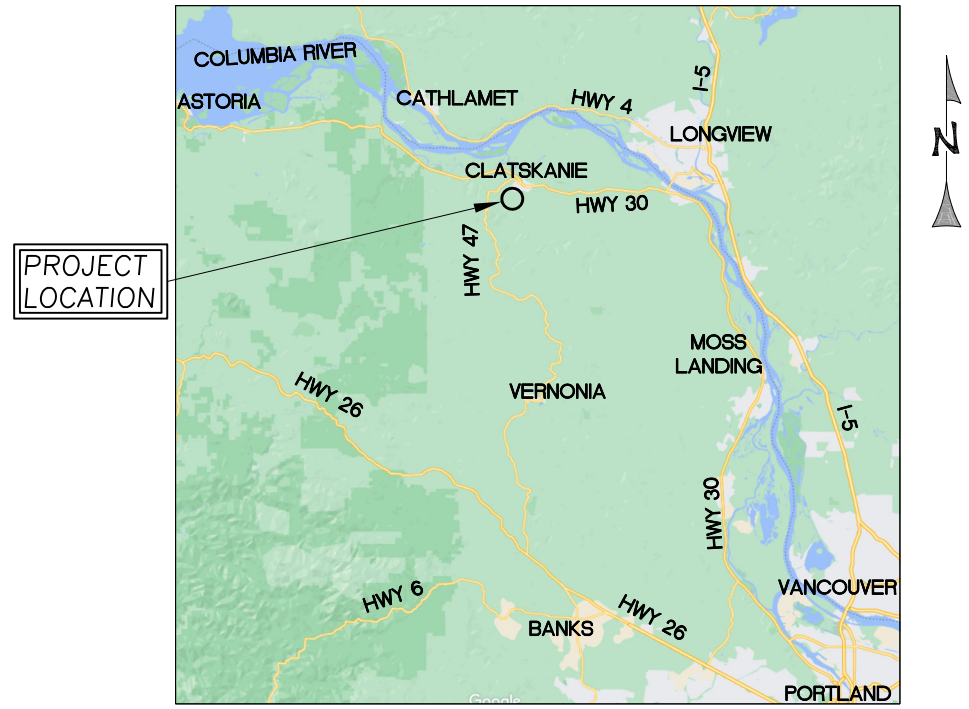
Exhibit E

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT

90% DESIGN SUBMITTAL - REVISION 1



VICINITY MAP
N.T.S. (GOOGLE)



REGIONAL MAP
N.T.S. (GOOGLE)

GENERAL NOTES

1. TOPOGRAPHIC MAPPING WAS PERFORMED BY:
   WATERWAYS CONSULTING, INC.
   1020 SW TAYLOR STREET, SUITE 380
   PORTLAND, OR 97205
   SURVEY DATE; NOVEMBER 8 AND 9, 2023; JANUARY 3, 2024; AND OCTOBER 9, 2025.
2. LIDAR CONTOURS OUTSIDE OF TOPOGRAPHIC MAPPING AREA WERE PROVIDED BY DOGAMI, 2010.
3. ELEVATION DATUM: GPS TIES TO NAVD88 USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
4. BASIS OF BEARINGS: GPS TIES TO NAD83 OREGON STATE PLANE, NORTH USING THE LEICA GEOSYSTEMS SMARTNET GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) NETWORK.
5. AERIAL PHOTO SOURCE: AUTOCAD CIVIL3D GEOLOCATION MAP
6. CONTOUR INTERVAL IS ONE FOOT. ELEVATIONS AND DISTANCES SHOWN ARE IN DECIMAL FEET.
7. THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES WERE COMPILED FROM RECORD INFORMATION. THE LOCATION OF THESE LINES IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A COMPLETE BOUNDARY SURVEY.
8. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST EDITION OF THE STATE OF OREGON STANDARD SPECIFICATIONS, ISSUED BY THE DEPARTMENT OF TRANSPORTATION (HEREAFTER REFERRED TO AS "STANDARD SPECIFICATIONS").
9. THESE DESIGNS ARE INCOMPLETE WITHOUT THE FINAL STAMPED TECHNICAL SPECIFICATIONS PREPARED BY WATERWAYS CONSULTING, INC. REFER TO TECHNICAL SPECIFICATIONS FOR DETAILS NOT SHOWN HEREON.

*** CALL BEFORE YOU DIG ***
CONTACT UNDERGROUND SERVICE ALERT (USA)
PRIOR TO ANY CONSTRUCTION WORK 1-800-332-2344

ABBREVIATIONS

AVG.	AVERAGE
CC	CONCRETE
CY	CUBIC YARDS
DIA.	DIAMETER
E	EXISTING
EG	EXISTING GROUND
ELEV.	ELEVATION
DI	DRAINAGE INLET
FG	FINISHED GRADE
FT	FEET
INV	INVERT
MAX	MAXIMUM
MIN	MINIMUM
N	NEW
NIC	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
RC	RELATIVE COMPACTION
RSP	ROCK SLOPE PROTECTION
SPK	SPIKE
SQ.FT.	SQUARE FOOT
T	TREE
T.B.D.	TO BE DETERMINED
TYP	TYPICAL
UNK	UNKNOWN
WSE	WATER SURFACE ELEVATION
YR	YEAR

TREE SPECIES

A	ALDER
ASH	OREGON ASH
C	COTTONWOOD
DF	DOUGLAS FIR
M	MAPLE
O	OAK
T	TREE (SPECIES UNKNOWN)
W	WILLOW

SECTION AND DETAIL CONVENTION

SECTION OR DETAIL IDENTIFICATION (NUMBER OR LETTER) — 5 / C3 — SHEET REFERENCE

PROJECT DESCRIPTION

THESE DRAWINGS PROVIDE DESIGN DETAILS FOR GRADING OF TWO (2) SIDE CHANNELS, INSTALLATION OF LOG STRUCTURES, AND STREAM BANK GRADING TO IMPROVE HABITAT CONDITIONS AND REDUCE EROSION ALONG CONYERS CREEK AND ITS FLOODPLAIN IN COLUMBIA COUNTY, OREGON.

WORK SHALL CONSIST OF EXCAVATION OF SIDE CHANNELS, LAYBACK OF VERTICAL CHANNEL BANKS, CONSTRUCTION OF LOG STRUCTURES AND BEAVER ANALOG STRUCTURES, AND REVEGETATION OF DISTURBED AREAS.

SHEET INDEX

WATERWAYS CONSULTING INC.
509A SWIFT ST.
SANTA CRUZ, CA 95060
PH:(831)421-9291 // FAX:(888)819-6847
WWW.WATWAYS.COM

DRAFT
NOT FOR CONSTRUCTION

PREPARED AT THE REQUEST OF:
COLUMBIA SOIL AND WATER CONSERVATION DISTRICT

COVER

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
90% DESIGN SUBMITTAL
REVISION 1

DESIGNED BY:	D.M./J.H.
DRAWN BY:	C.B.
CHECKED BY:	J.H.
DATE:	4/1/26
JOB NO.:	22-051

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
0 — 1"

C1 | 1 OF 18

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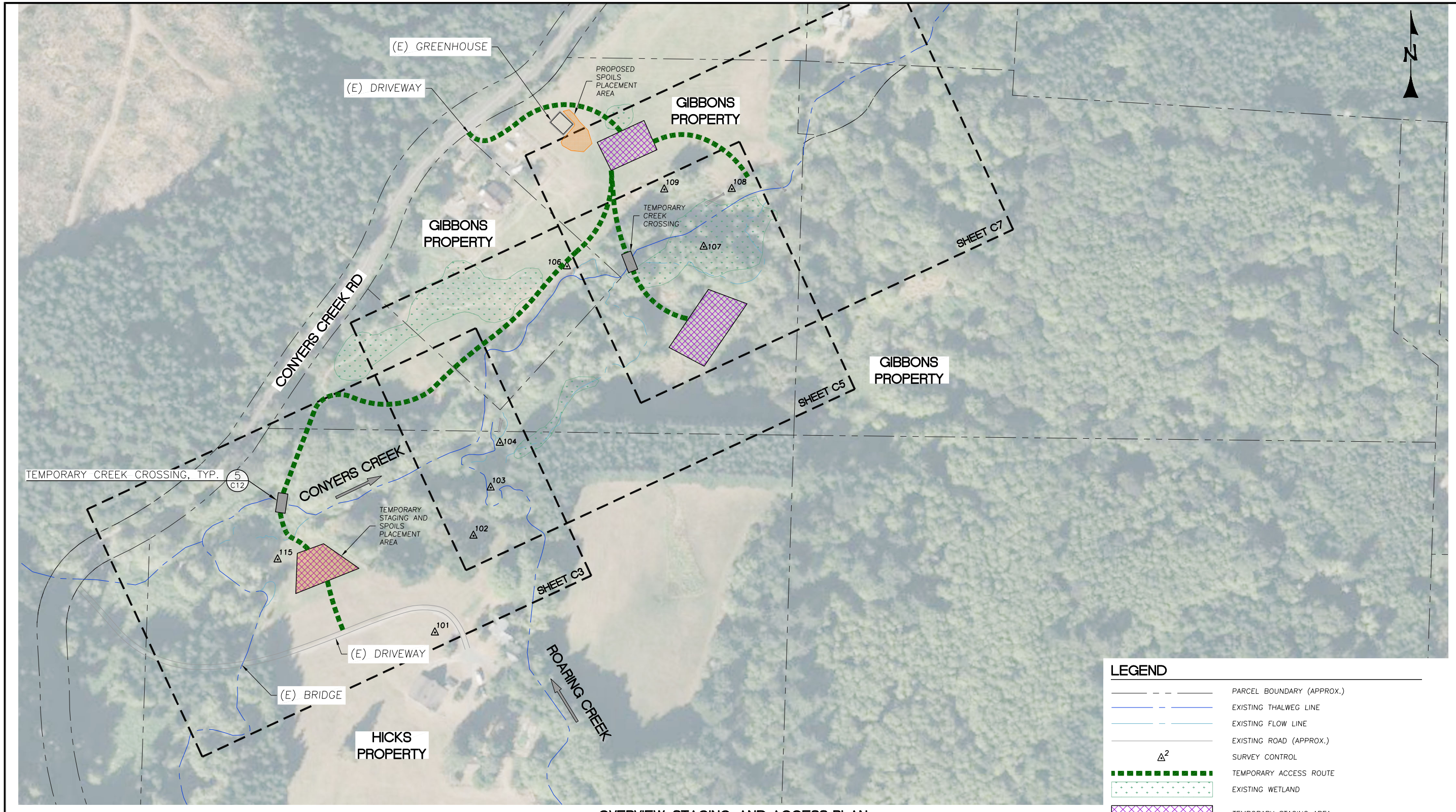

OVERVIEW, STAGING, AND ACCESS PLAN
SCALE: 1" = 100'

ACCESS AND STAGING AREA NOTES

1. USE ONLY THE APPROVED ACCESS POINTS, AS SHOWN ON THE DRAWINGS. STOCKPILE MATERIALS WITHIN AN EXISTING FLAT AND PREVIOUSLY DISTURBED AREA.
2. THE ACCESS PLAN SHOWN ON THE DRAWINGS IS SCHEMATIC. SUBMIT A SITE ACCESS PLAN FOR APPROVAL BY THE ENGINEER, PRIOR TO MOBILIZATION.
3. CONTAIN THE DOWNSLOPE PERIMETER OF STAGING OR STOCKPILE AREAS WITH STRAW WATTLES.
4. STORE, MAINTAIN AND REFUEL ALL EQUIPMENT AND MATERIALS IN A DESIGNATED PORTION OF THE STAGING AREA.
5. COORDINATE WITH UTILITIES FOR TEMPORARY RELOCATION OF SERVICES DURING CONSTRUCTION.

LEGEND

- PARCEL BOUNDARY (APPROX.)
- EXISTING THALWEG LINE
- EXISTING FLOW LINE
- EXISTING ROAD (APPROX.)
- $\triangle^{2}$ SURVEY CONTROL
- TEMPORARY ACCESS ROUTE
- EXISTING WETLAND
- TEMPORARY STAGING AREA
- PROPOSED SPOILS PLACEMENT
- TEMPORARY CREEK CROSSING

CONTROL POINTS

POINT	NORTHING	EASTING	ELEV.	DESC.
101	894130.99	7512374.74	85.18	REBAR
102	894329.73	7512453.92	78.04	REBAR
103	894428.62	7512489.26	69.41	REBAR
104	894520.70	7512508.19	68.00	REBAR
106	894883.01	7512645.77	62.66	REBAR
107	894923.23	7512926.41	56.57	REBAR
108	895041.90	7512984.12	58.68	REBAR
115	894280.99	7512052.02	974.83	REBAR

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COLUMBIA SOIL AND WATER CONSERVATION DISTRICT

OVERVIEW, STAGING, AND ACCESS PLAN

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
90% DESIGN SUBMITTAL
REVISION 1

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0 1"

C2 | 2 OF 18

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CONYERS CREEK RD

CONYERS CREEK

ROARING CREEK

(E) RIPRAP

(E) ERODED BANK

(E) GRAVEL BAR

(E) DEEP POOL

(E) GRAVEL DRIVEWAY

(E) BRIDGE

(E) WOOD BRIDGE

HICKS PROPERTY

MATCHLINE C3 | C5

48"M (5 TRUNK)

12"A

6"A

24"A

18"A

48"A

18"DF

24"DF

16"DF

12"DF

8"DF

36"DF

8"S

6"S

14"DF

16"A

60"SP

115

104

103

102

101

LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
- (E) THALWEG LINE
- (E) ORDINARY HIGH WATER (MODELED)
- PARCEL BOUNDARY (APPROX.)
- (E) ROAD (APPROX.)
- (E) WETLAND
- (E) TREE
- SURVEY CONTROL

EXISTING CONDITIONS PLAN - UPPER REACH

SCALE: 1" = 30'

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0 1"

C3

3 OF 18

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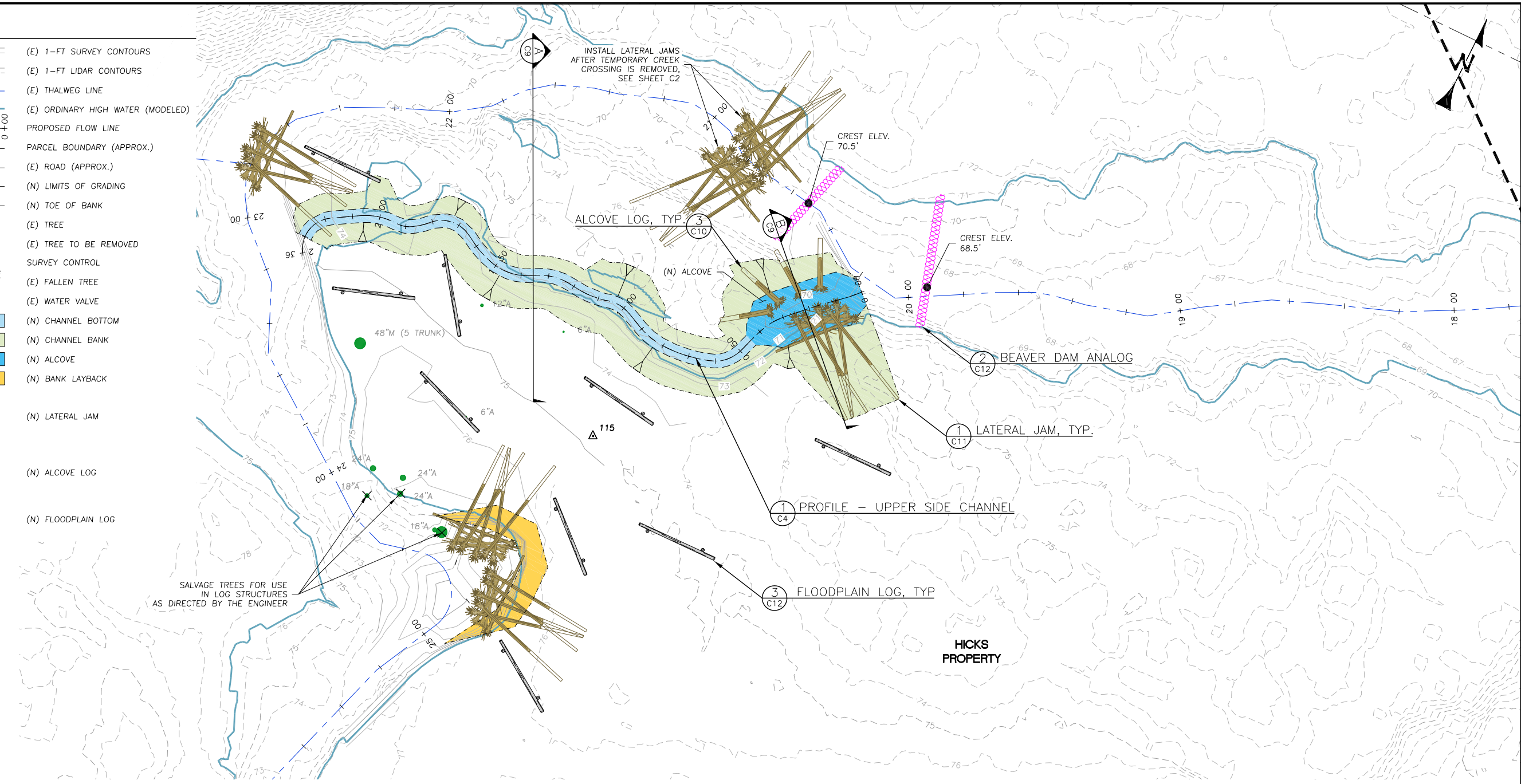
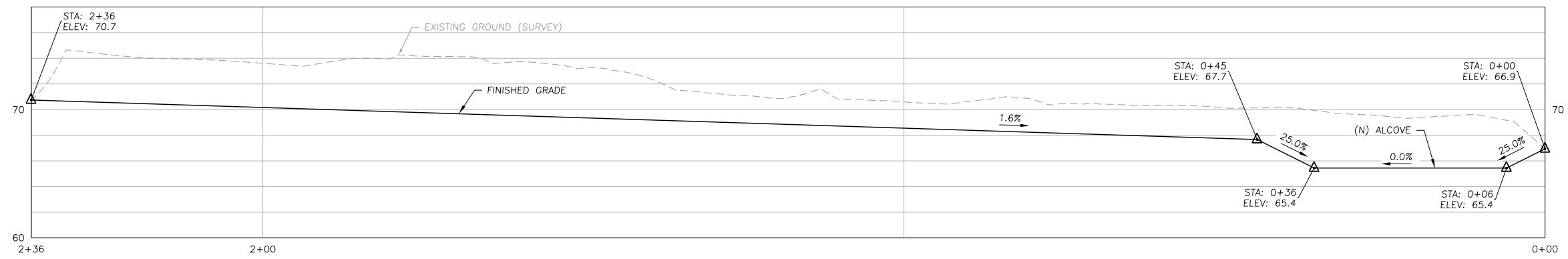
LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
- (E) THALWEG LINE
- (E) ORDINARY HIGH WATER (MODELED)
- PROPOSED FLOW LINE
- PARCEL BOUNDARY (APPROX.)
- (E) ROAD (APPROX.)
- (N) LIMITS OF GRADING
- (N) TOE OF BANK
- (E) TREE
- (E) TREE TO BE REMOVED
- SURVEY CONTROL
- (E) FALLEN TREE
- (E) WATER VALVE
- (N) CHANNEL BOTTOM
- (N) CHANNEL BANK
- (N) ALCOVE
- (N) BANK LAYBACK
- (N) LATERAL JAM
- (N) ALCOVE LOG
- (N) FLOODPLAIN LOG



UPPER REACH PLAN
SCALE: 1" = 20'



PROPOSED PROFILE - UPPER SIDE CHANNEL 1 C4 C4
SCALE: 1" = 10'

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UPPER REACH PLAN AND PROFILE

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
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0 1"

C4 | 4 OF 18

GIBBONS PROPERTY

COWERS CREEK

ROARING CREEK

(E) ERODED BANK

(E) PICNIC AREA

(E) SIDE CHANNEL

(E) WOOD FOOT BRIDGE

C3 | MATCHLINE | C5

C5 | MATCHLINE | C7

EXISTING CONTIONS PLAN - MIDDLE REACH

SCALE: 1" = 30'

LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
- (E) THALWEG LINE
- (E) ORDINARY HIGH WATER (MODELED)
- PARCEL BOUNDARY (APPROX.)
- (E) ROAD (APPROX.)
- (E) WETLAND
- (E) TREE
- SURVEY CONTROL
- (E) FALLEN TREE
- (E) WATER VALVE

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EXISTING CONTIONS PLAN - MIDDLE REACH

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C5 | 5 OF 18

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LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
- (E) THALWEG LINE
- (E) FLOW LINE
- (E) ORDINARY HIGH WATER (MODELED)
- PROPOSED FLOW LINE
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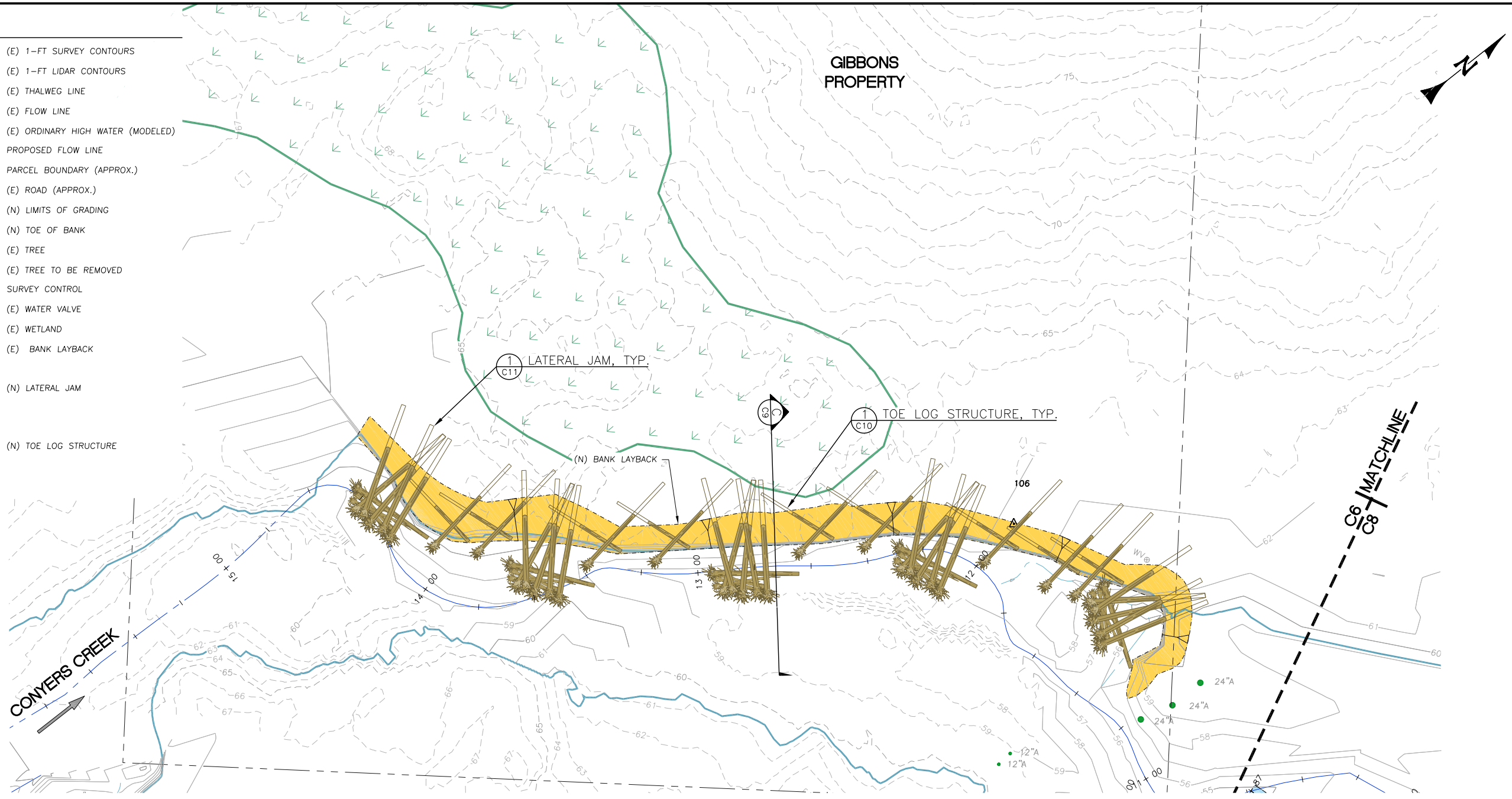
- (E) TREE
- (E) TREE TO BE REMOVED
- SURVEY CONTROL
- (E) WATER VALVE
- (E) WETLAND
- (E) BANK LAYBACK
- (N) LATERAL JAM
- (N) TOE LOG STRUCTURE



MIDDLE REACH PLAN
SCALE: 1" = 20'

NOTES:
1. DRAIN TILE OR OTHER PIPES FOUND DURING BANK LAYBACK EXCAVATION SHALL BE REMOVED AT LEAST 30-FT BACK FROM FINISHED GRADE OR AS DIRECTED BY ENGINEER. BACKFILL WITH EARTH FILL MATERIAL.

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MIDDLE REACH
PLAN AND
PROFILE - NORTH

CONYERS CREEK HABITAT
DIVERSIFICATION AND
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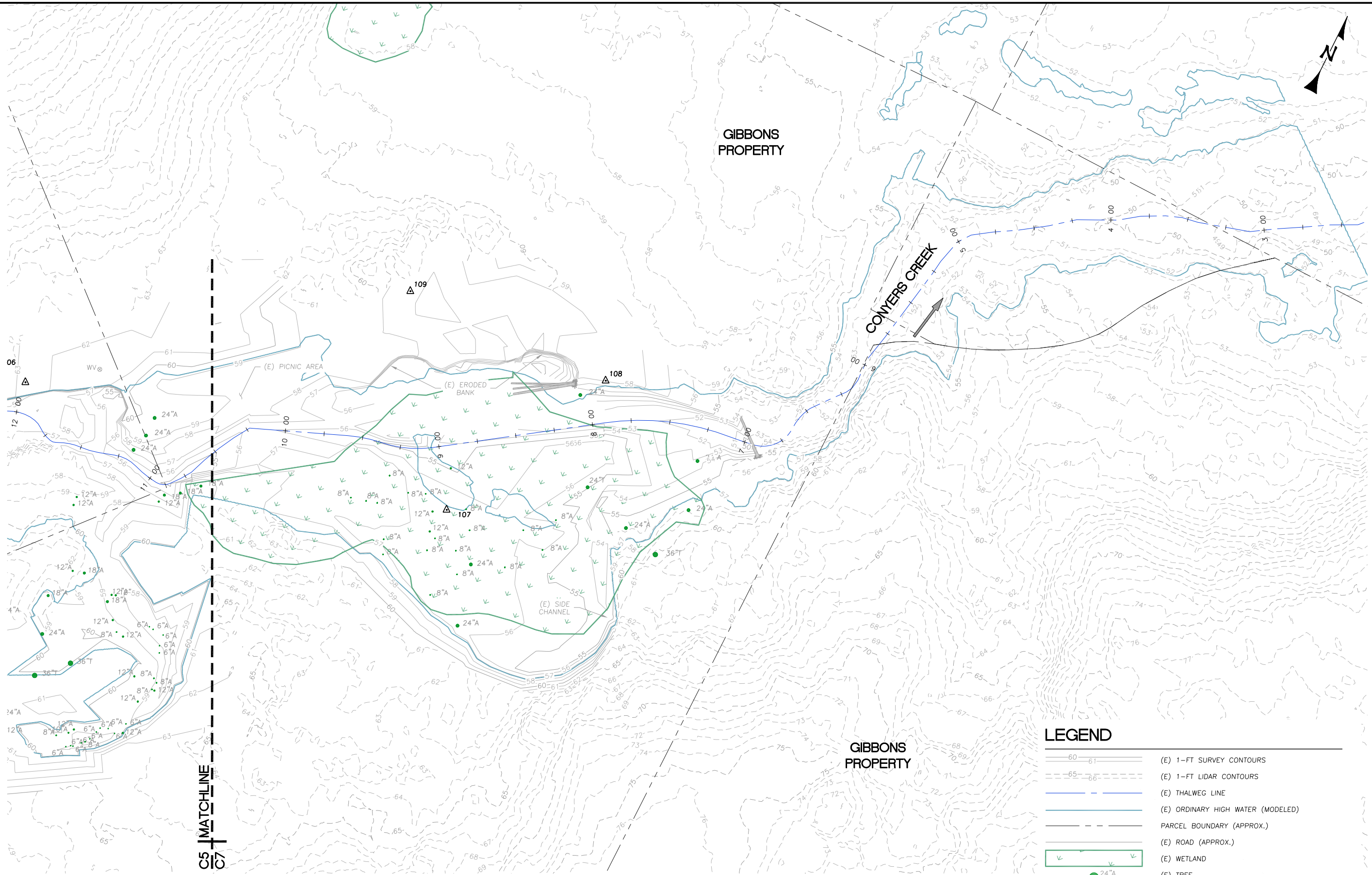
C6 | 6 OF 18



EXISTING CONDITIONS PLAN - LOWER REACH
SCALE: 1" = 30'

LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
- (E) THALWEG LINE
- (E) ORDINARY HIGH WATER (MODELED)
- PARCEL BOUNDARY (APPROX.)
- (E) ROAD (APPROX.)
- (E) WETLAND
- (E) TREE
- SURVEY CONTROL
- (E) FALLEN TREE
- (E) WATER VALVE

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EXISTING CONDITIONS PLAN - LOWER REACH

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
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0 1"

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LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
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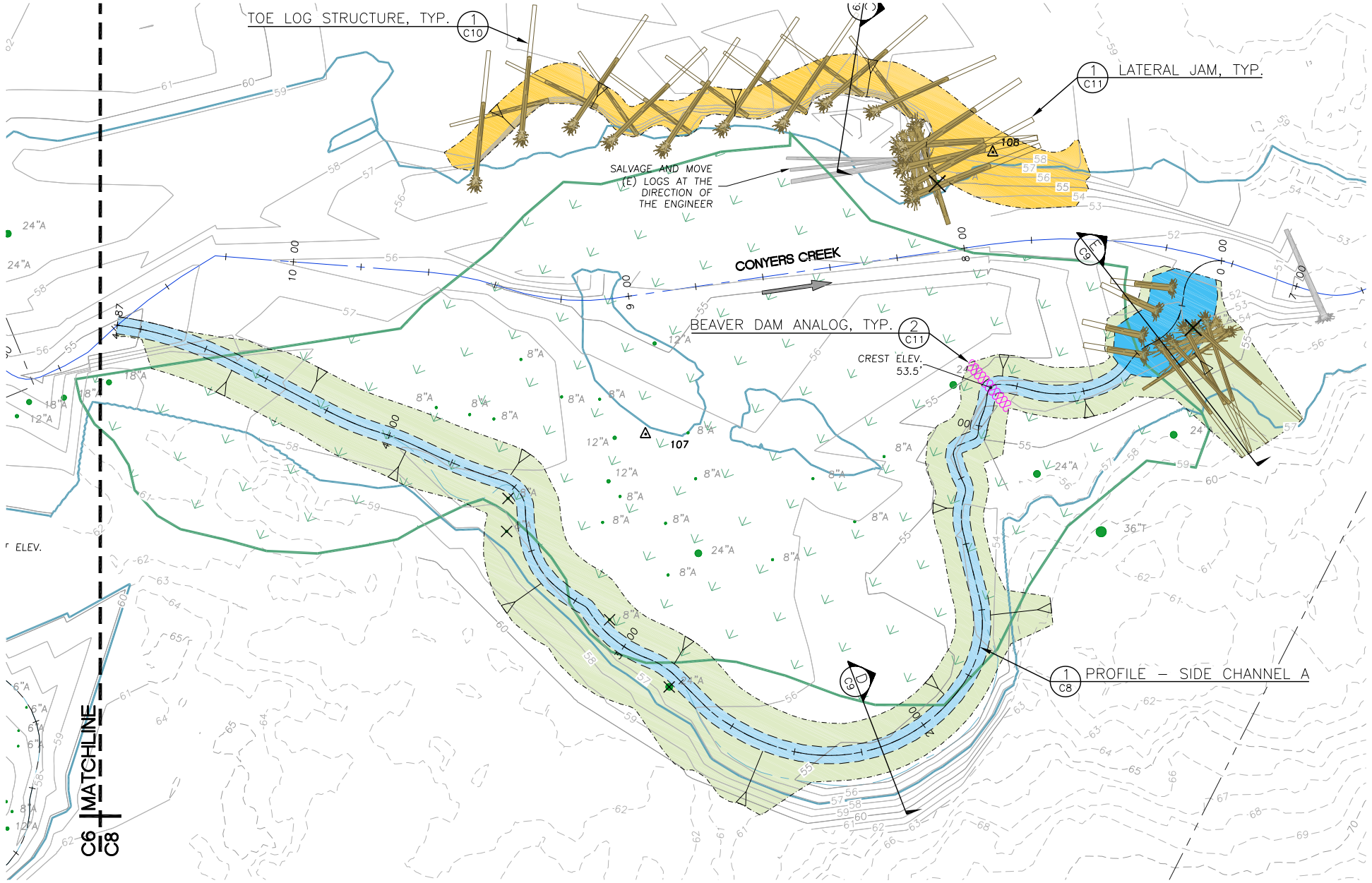
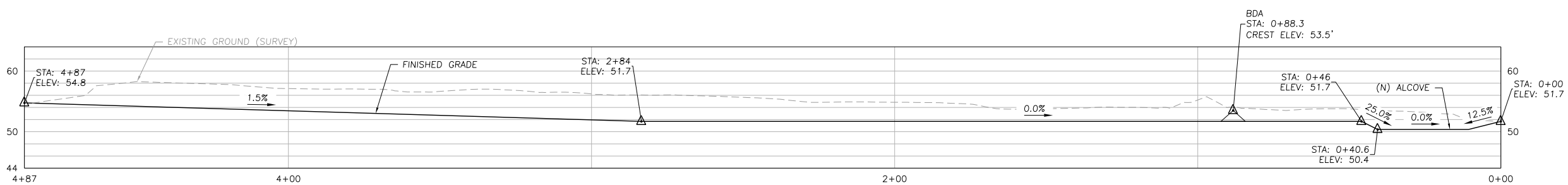
- (E) FALLEN TREE
- (E) WATER VALVE
- (E) WETLAND
- (N) CHANNEL BOTTOM
- (N) CHANNEL BANK
- (N) ALCOVE
- (N) FILL AREA
- (E) BANK LAYBACK
- (N) BEAVER DAM ANALOG
- (N) LOG STRUCTURE
- (N) ALCOVE LOG
- (N) TOE LOG STRUCTURE



LOWER REACH PLAN
SCALE: 1" = 20'



PROPOSED PROFILE - SIDE CHANNEL A
SCALE: H: 1" = 20'; V: 1"= 10'

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LOWER REACH PLAN AND PROFILE

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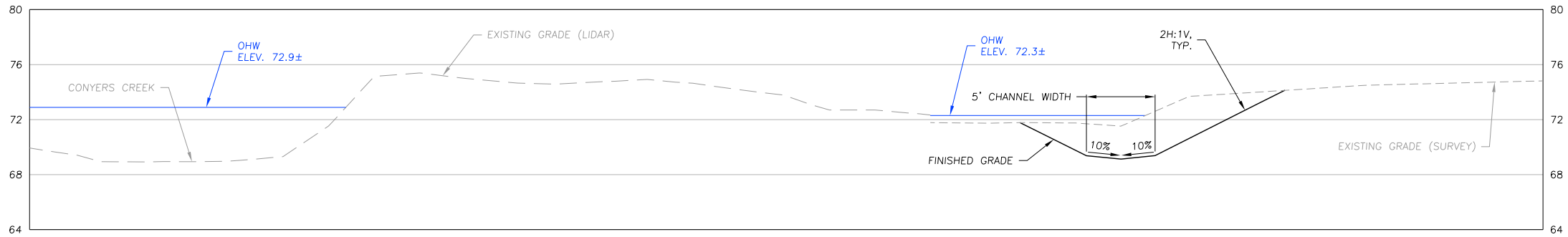
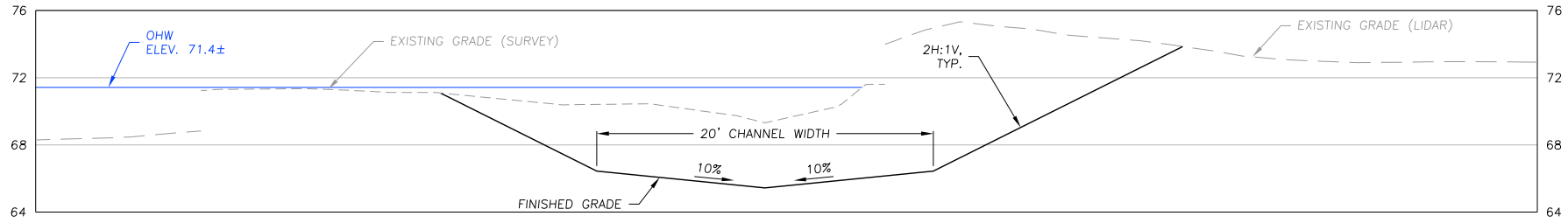
0 1"

C8 | 8 OF 18

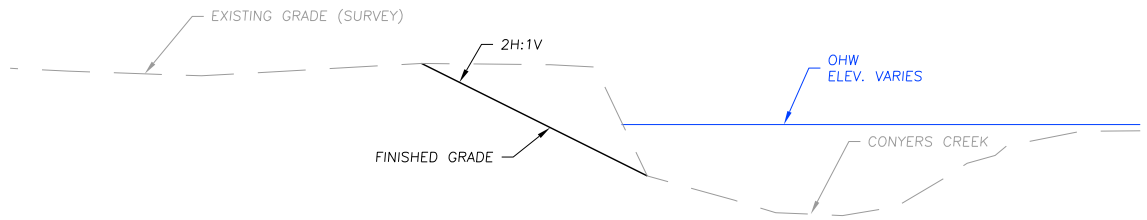


UPPER SIDE CHANNEL SECTION
SCALE: 1" = 5'
A C4|C9

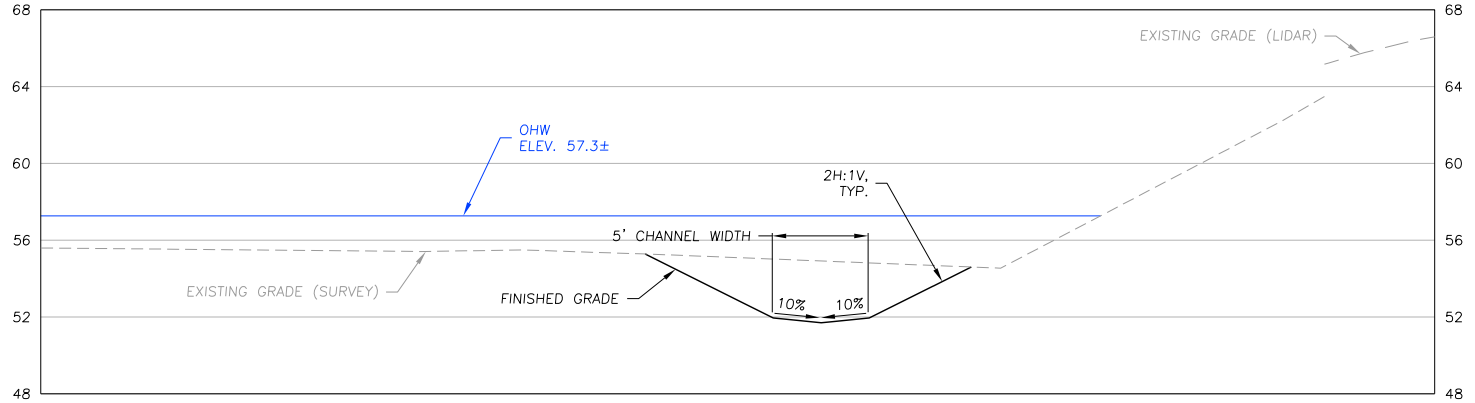


UPPER SIDE CHANNEL ALCOVE SECTION
SCALE: 1" = 5'
B C4|C9

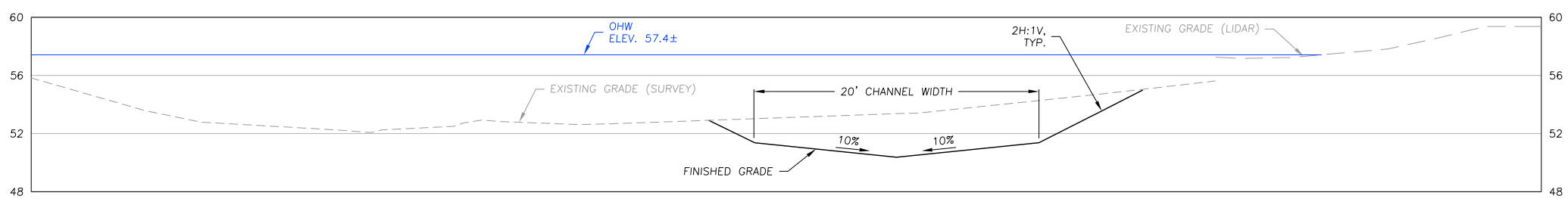
NOTES:
1. LOG STRUCTURES OMITTED FROM SECTION VIEW FOR CLARITY.



TYPICAL SECTION - BANK LAYBACK
SCALE: 1" = 5'
C C8|C9



LOWER SIDE CHANNEL SECTION
SCALE: 1" = 5'
D C8|C9



LOWER SIDE CHANNEL ALCOVE SECTION
SCALE: 1" = 5'
E C8|C9

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SECTIONS

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
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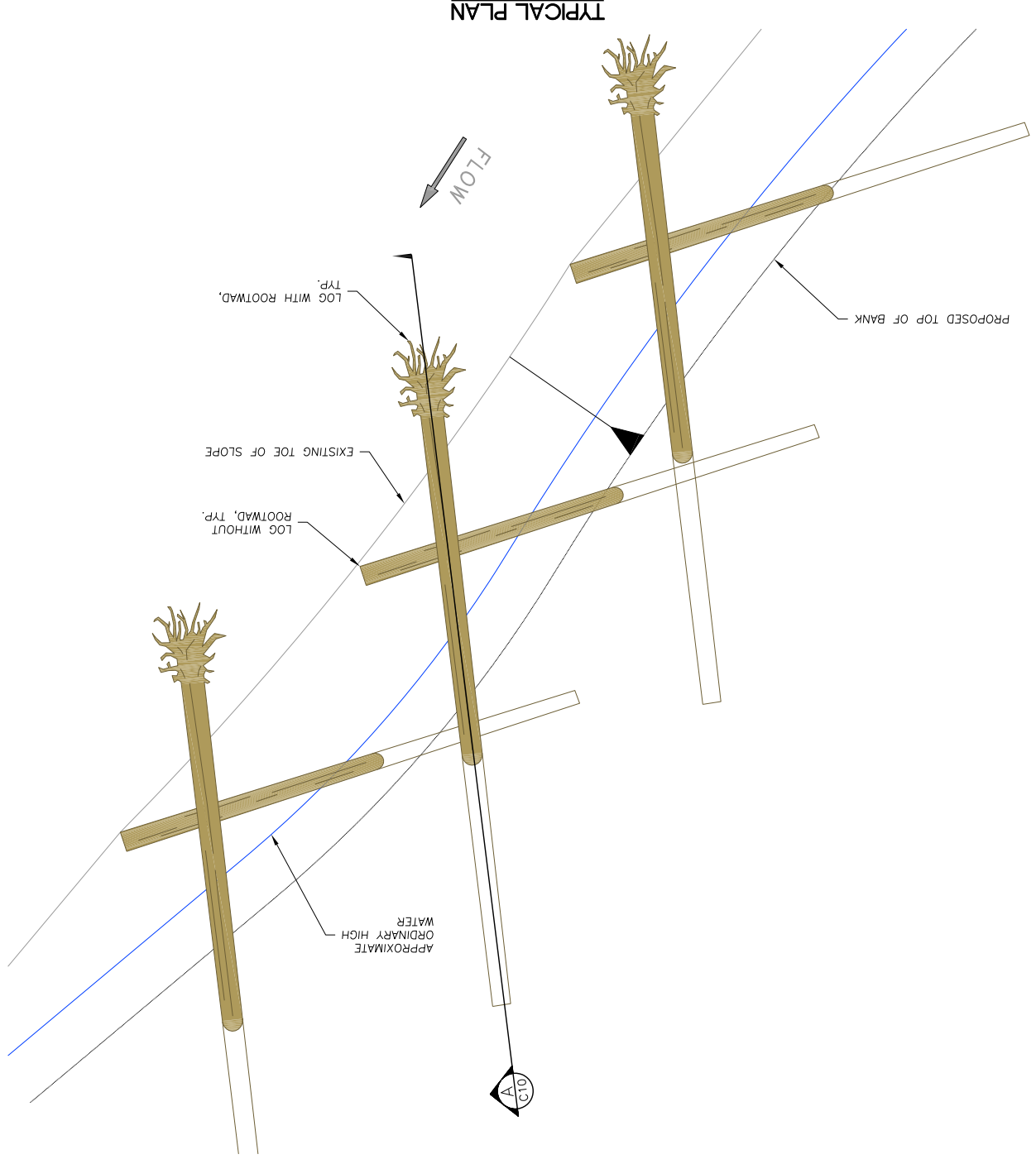

TYPICAL PLAN

SCALE: 1" = 5'

SECTION

SCALE: 1" = 5'

C10 | A | C10

TYPICAL TOE LOG STRUCTURE

SCALE: 1" = 5'

C6,C8 | 1 | C10

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LOG STRUCTURE NOTES:

1. GENERAL

1.1. PRIOR TO THE START OF WORK, THE ENGINEER SHALL DESIGNATE REPRESENTATIVES AUTHORIZED TO OBSERVE THE CONTRACTOR'S PLACEMENT OF LOG STRUCTURES. CONTRACTOR SHALL NOTIFY THE AUTHORIZED REPRESENTATIVE 72 HOURS PRIOR TO PLACEMENT OF LOG STRUCTURES. CONSTRUCT ALL LOG STRUCTURES IN THE PRESENCE OF THE AUTHORIZED REPRESENTATIVE.

1.2. LOG STRUCTURE DESIGNS ARE SHOWN CONCEPTUALLY DUE TO THE INHERENT VARIABILITY OF MATERIAL PROPERTIES. THE DESIGN REQUIRES THAT THE ENGINEER WILL OBSERVE CONSTRUCTION OF THE LOG STRUCTURES TO ENSURE THE INTENT OF THE DESIGN IS MET. OBSERVATIONS MUST INCLUDE LOG AND BOULDER SELECTION, PLACEMENT, CONNECTIONS FOR BALLASTING, AND PLACEMENT OF BACKFILL. ANY LOG STRUCTURES CONSTRUCTED WITHOUT THE ENGINEER PRESENT MAY RESULT IN REJECTION OF THE WORK BY THE ENGINEER.

1.3. THE CONSTRUCTION OF LOG STRUCTURES REQUIRES EQUIPMENT WHICH CAN PLACE LOGS IN PRECISE LOCATIONS. AN EXCAVATOR OF A SUITABLE SIZE WITH A THUMB OR CLAMSHELL ATTACHMENT IS SUGGESTED (CLAMSHELL PREFERRED).

1.4. LOG PLACEMENT. LOG PLACEMENT LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. EXACT LOCATIONS SHALL BE AS APPROVED BY THE ENGINEER, OR HIS AUTHORIZED REPRESENTATIVE.

1.5. PLACE ROOTWADS AT AN ELEVATION WHERE THE MAJORITY OF THE ROOT MASS IS BELOW ORDINARY LOW WATER, AS APPROVED BY THE ENGINEER.

1.6. ALL EXPOSED ENDS OF LOGS SHALL BE BROKEN OR ROUGHENED TO CREATE NATURAL APPEARANCE AS DIRECTED BY THE ENGINEER. CUT LOG ENDS SHALL ONLY BE USED IN LOCATIONS WHERE THE END WILL BE BURIED.

2. LOGS: LOGS SHALL BE HEMLOCK OR DOUGLAS FIR, SOUND AND FREE OF SIGNIFICANT DECAY. MATERIALS FOR USE IN THE STRUCTURES SHALL MEET THE FOLLOWING SIZE CRITERIA:

3. LOG DIMENSIONS AND QUANTITIES:

LATERAL JAM (13)	*DIAMETER (IN.)	**LENGTH (FT.)	PER STRUCTURE	TOTAL
LOGS WITH ROOTWAD	12	30	5	65
FOOTER LOG WITH ROOTWAD	12	20	1	13
PILE LOG	12	20	8	104
SLASH	–	–	8 CY	104 CY
LOG/LOG CONNECTION	–	–	11	143

FLOODPLAIN LOG STRUCTURE (9)	*DIAMETER (IN.)	**LENGTH (FT.)	PER STRUCTURE	TOTAL
LOGS WITHOUT ROOTWAD	12	30	1	9
PILE LOG	12	15	2	18
LOG/LOG CONNECTION	–	–	2	18

TOE LOG STRUCTURE (18)	*DIAMETER (IN.)	**LENGTH (FT.)	PER STRUCTURE	TOTAL
LOGS WITH ROOTWAD	15	40	1	18
LOG WITHOUT ROOTWAD	12	30	1	18

ALCOVE LOG (8)	*DIAMETER (IN.)	**LENGTH (FT.)	PER STRUCTURE	TOTAL
LOGS WITH ROOTWAD	12	30	1	8

*ALL LOGS WITH ROOTWADS SHALL MEET THE MINIMUM DIAMETER LISTED IN THE TABLE ABOVE AS MEASURED AT THE APPROXIMATE STANDING TREE DIAMETER AT BREAST HEIGHT. ALL LOGS WITHOUT ROOTWADS SHALL MEET THE MINIMUM DIAMETER LISTED IN THE TABLE ABOVE AT ANY POINT ALONG THE LENGTH OF THE LOG, NOT INCLUDING THE ROOTWAD.

**LENGTHS LISTED IN THE TABLE ABOVE INCLUDE THE ROOTWAD WHERE SPECIFIED.

4. SLASH

4.1. SLASH SHALL CONSIST OF WOODY DEBRIS (BRANCHES AND LOGS LESS THAN 10 INCHES IN DIAMETER, AND ROOTWADS) OF NATIVE TREES AND SHRUBS PACKED INTO THE VOID SPACES OF THE LOG STRUCTURES WHERE SHOWN ON PLANS.

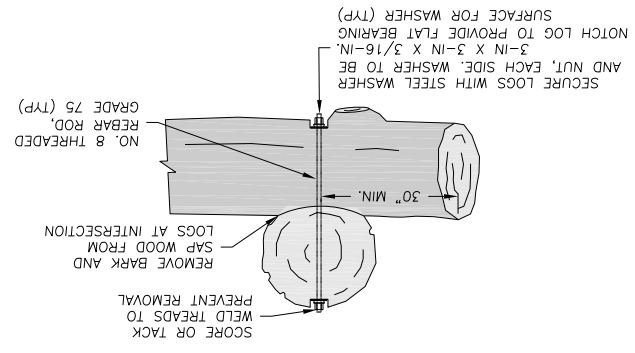
5. CONNECTIONS:

5.1. CONNECTIONS SHALL CONSIST OF LOG/LOG CONNECTIONS, AS SHOWN ON DETAIL 3, SHEET C11 – LOG STRUCTURE DETAILS.

LOG/LOG CONNECTION

4 | C11 | C10

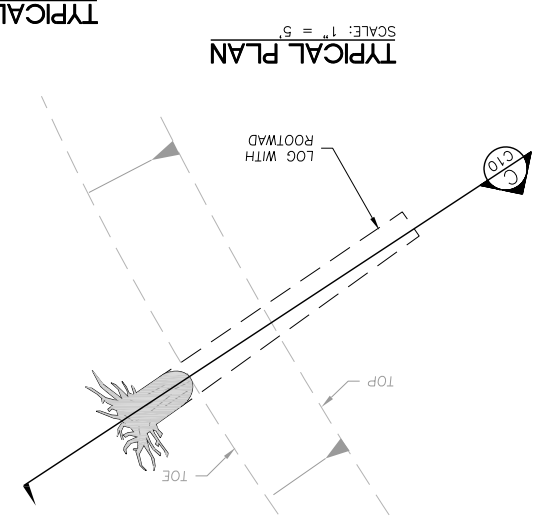
SCALE: 1" = 2'



TYPICAL ALCOVE LOG

3 | C4,C6,C8 | C10

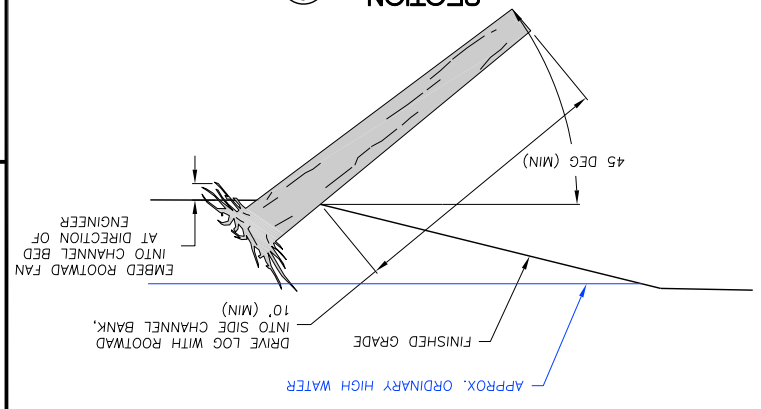
SCALE: 1" = 5'



SECTION

C | C10 | C10

SCALE: 1" = 5'



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COLUMBIA SOIL AND WATER CONSERVATION DISTRICT

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NOT FOR CONSTRUCTION

WATERWAYS CONSULTING INC.
509A SWIFT ST.
SANTA CRUZ, CA 95060
PH:(831)421-9291 // FAX:(888)819-6847
WWW.WATWAYS.COM

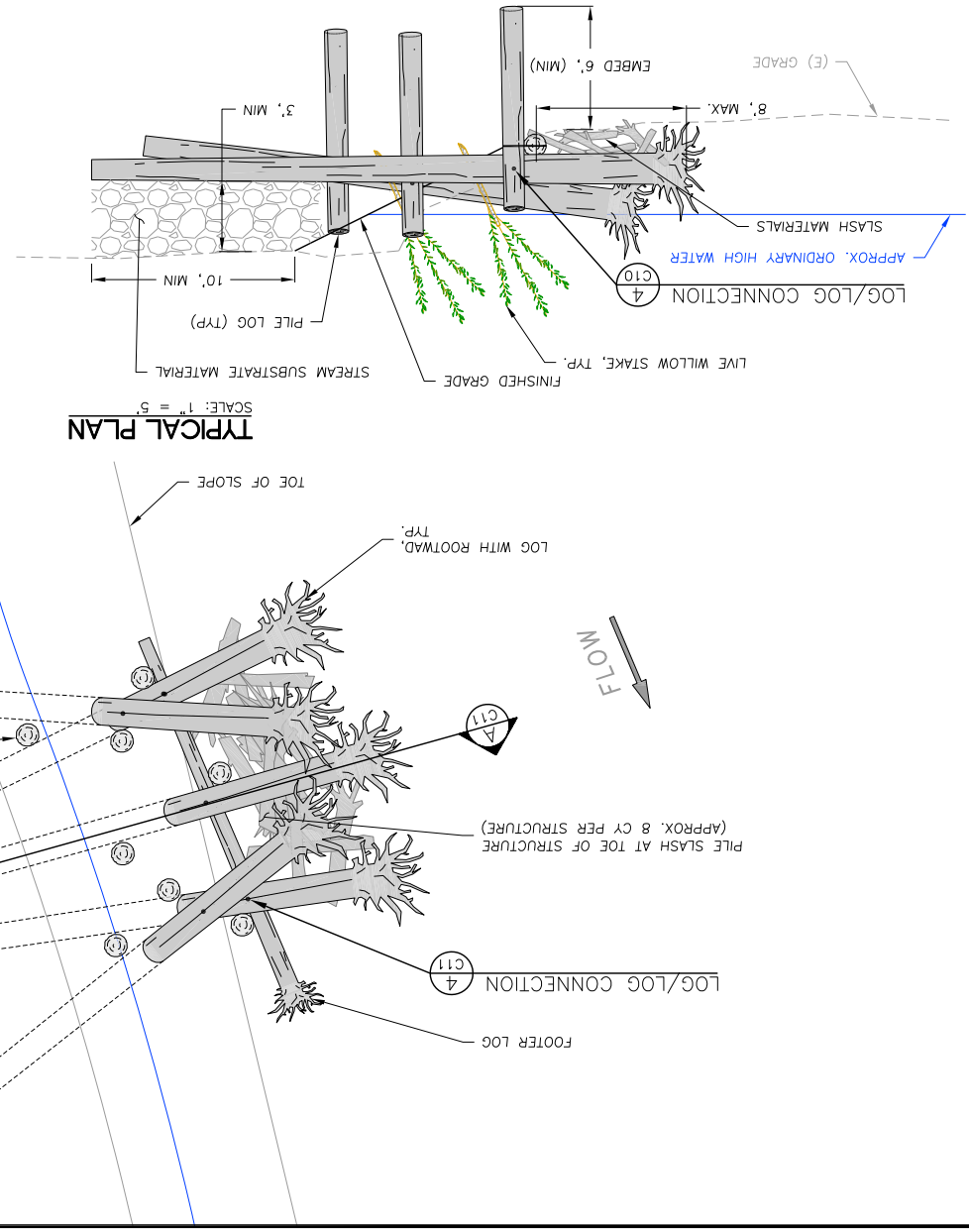
LOG STRUCTURE DETAILS AND NOTES

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
90% DESIGN SUBMITTAL
REVISION 1

DESIGNED BY:	D.M./J.H.
DRAWN BY:	C.B.
CHECKED BY:	J.H.
DATE:	4/1/26
JOB NO.:	22-051

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS
0 1"

C10 | 10 OF 18



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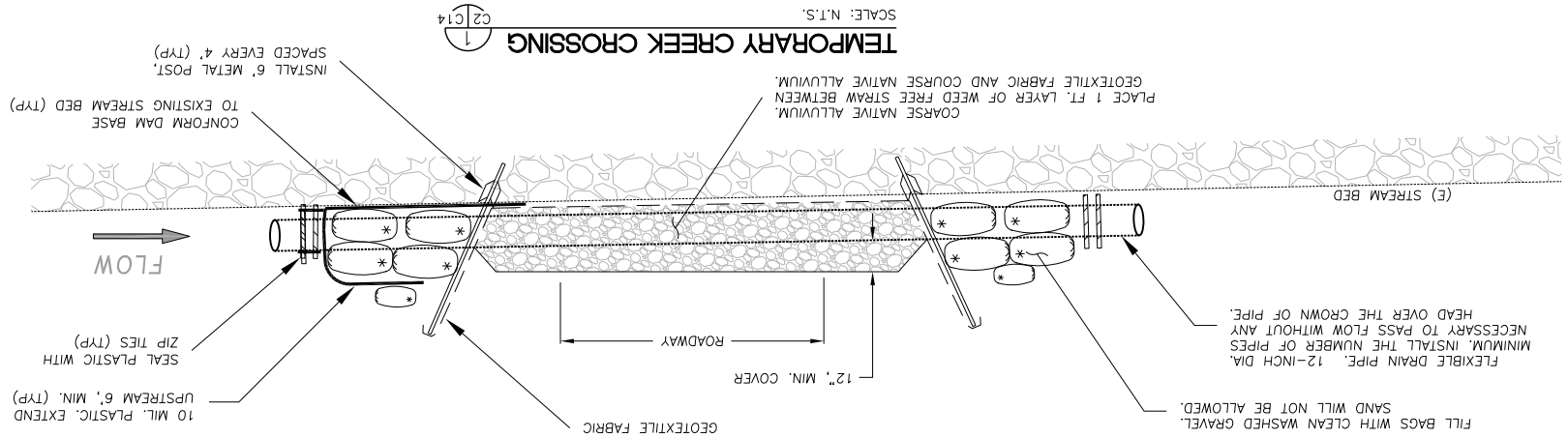
C11
11 OF 18

TEMPORARY CREEK CROSSING

1 / C2 C14

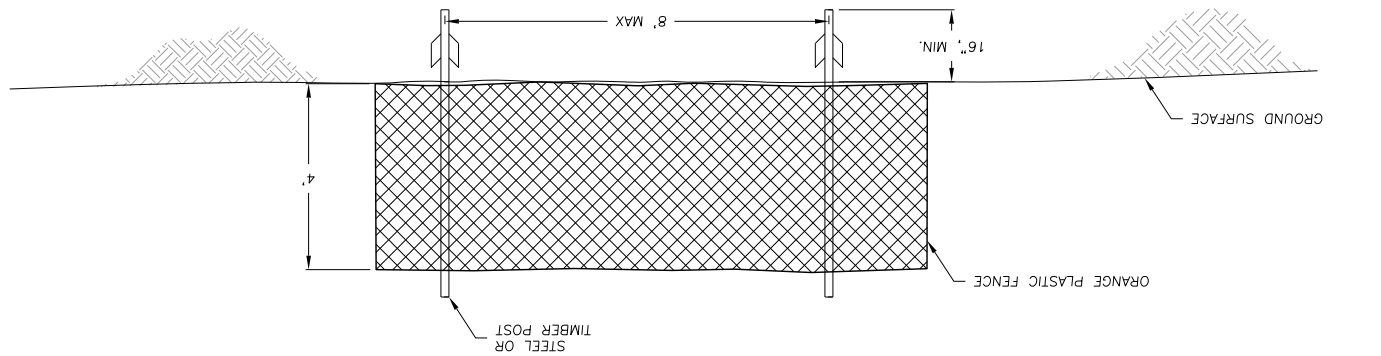
SCALE: N.T.S.



BOUNDARY FENCE DETAIL

2 / ###

SCALE: 1"=2'

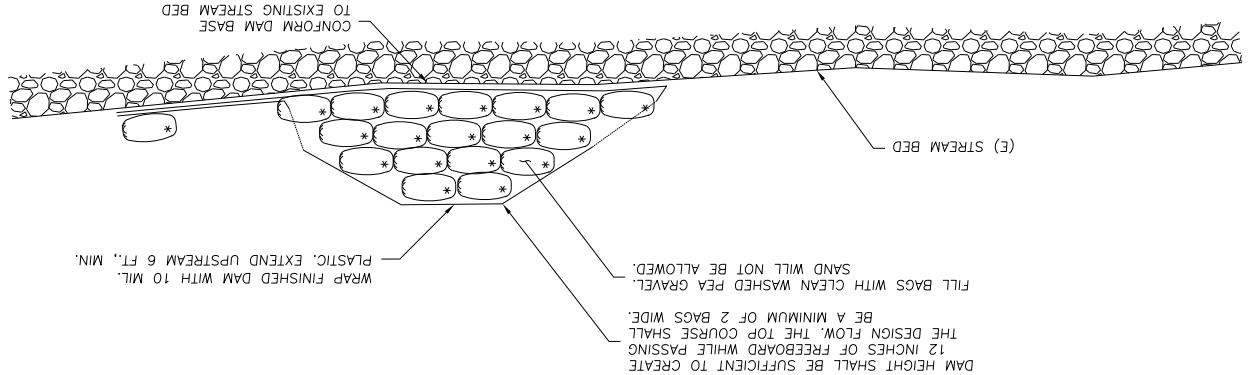


DIVERSION DAM

3 / C12

SCALE: 1" = 5'

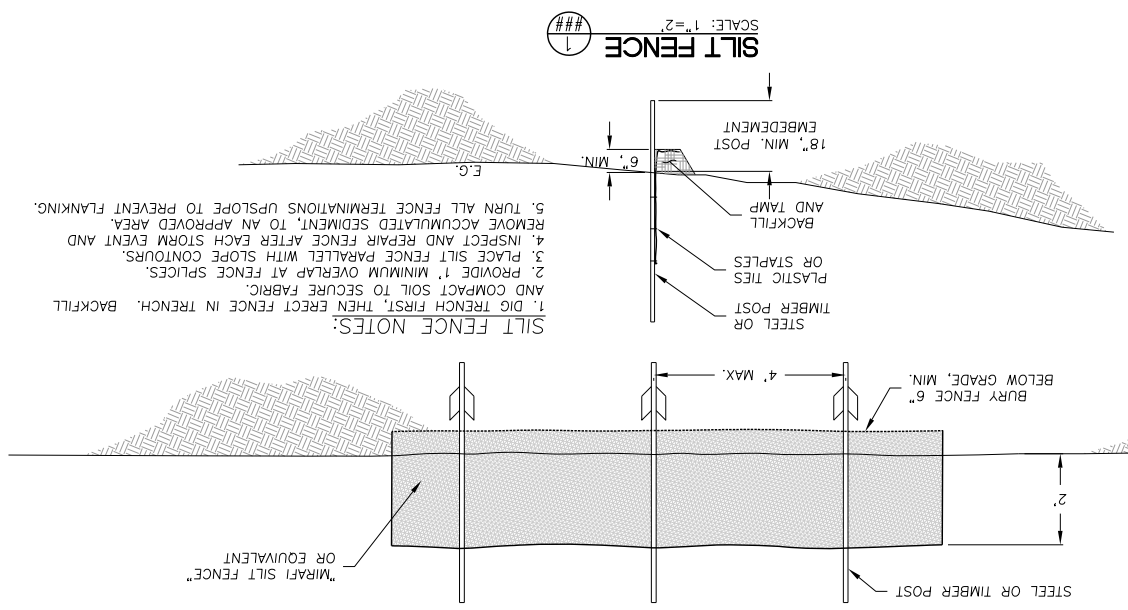
NOTE: CONTRACTOR MAY USE ALTERNATE DAM DETAIL, SUBJECT TO APPROVAL OF THE ENGINEER AND THE PERMITTING AGENCIES.



SILT FENCE

1 / ###

SCALE: 1"=2'



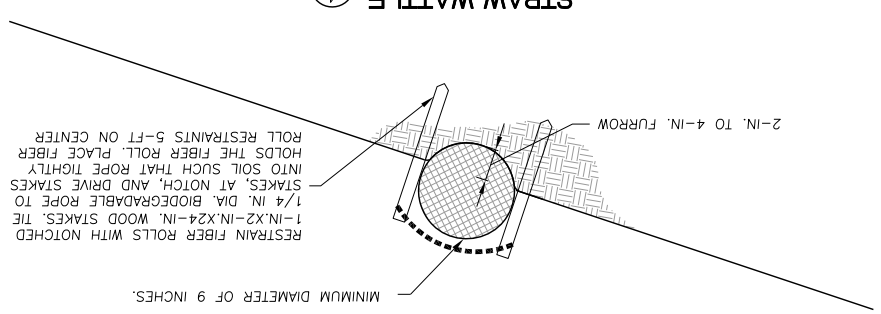
SILT FENCE NOTES:

1. DIG TRENCH FIRST, THEN ERECT FENCE IN TRENCH. BACKFILL AND COMPACT SOIL TO SECURE FABRIC.
2. PROVIDE 1' MINIMUM OVERLAP AT FENCE SPLICES.
3. PLACE SILT FENCE PARALLEL WITH SLOPE CONTOURS.
4. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE ACCUMULATED SEDIMENT, TO AN APPROVED AREA.
5. TURN ALL FENCE TERMINATIONS UPSLOPE TO PREVENT FLANKING.

STRAW WATTLE

4 / C12

SCALE: 1" = 1'



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DETAILS

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0 1"

C12
12 OF 18

WATERWAYS CONSULTING INC.
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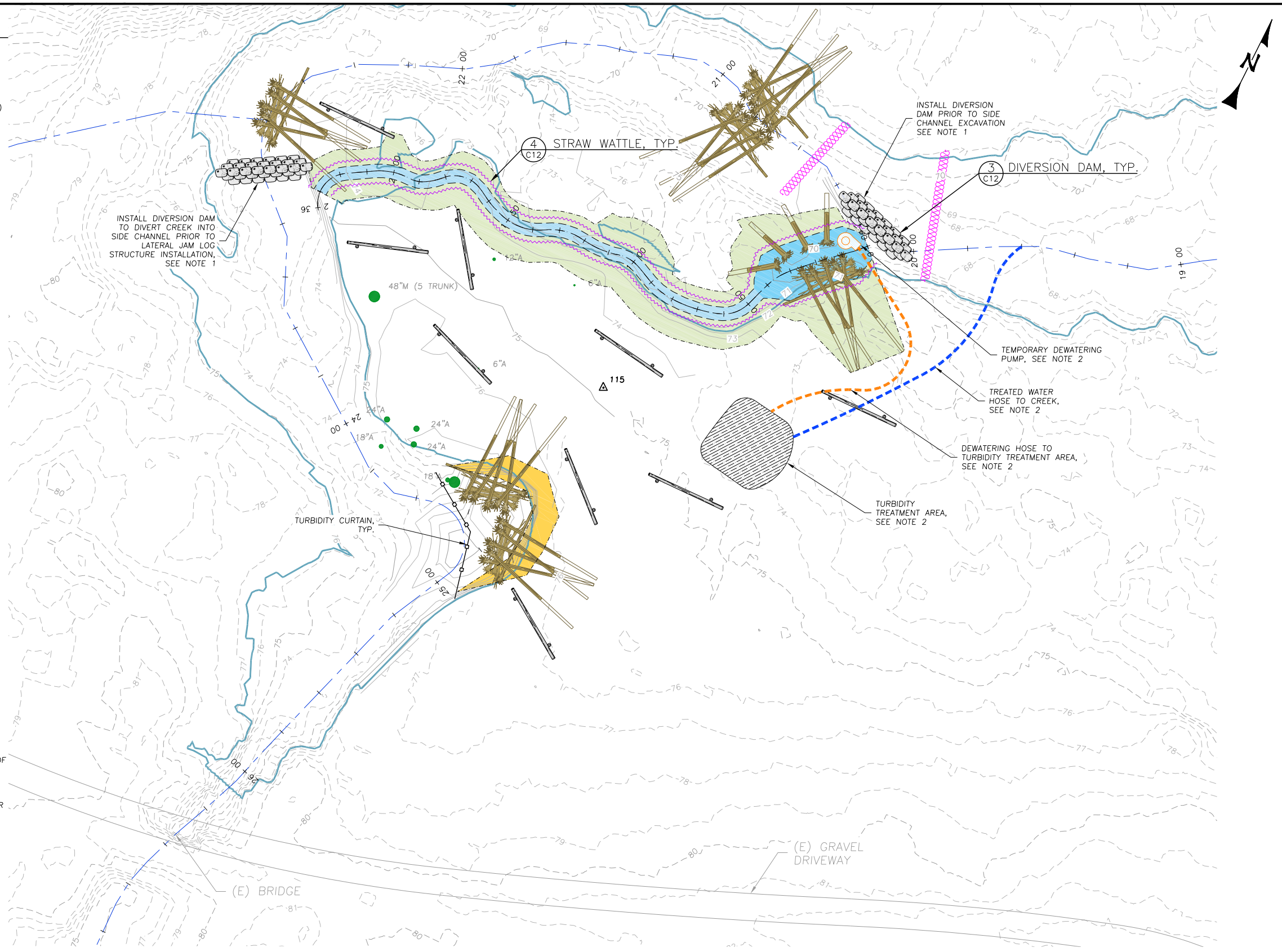
LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
- (E) THALWEG LINE
- (E) ORDINARY HIGH WATER (MODELED)
- PROPOSED FLOW LINE
- PARCEL BOUNDARY (APPROX.)
- (E) ROAD (APPROX.)
- (N) LIMITS OF GRADING
- (N) TOE OF BANK
- (E) TREE
- (E) TREE TO BE REMOVED
- SURVEY CONTROL
- (E) FALLEN TREE
- (E) WATER VALVE
- (E) WETLAND
- (N) BANK LAYBACK
- (N) CHANNEL BOTTOM
- (N) CHANNEL BANK
- (N) ALCOVE
- (N) FILL AREA
- (N) BEAVER DAM ANALOG
- (N) LOG STRUCTURE
- PROPOSED STRAW WATTLE
- TURBIDITY CURTAIN
- TEMPORARY DEWATERING PUMP
- TEMPORARY DEWATERING HOSE
- TEMPORARY RETURN HOSE
- TEMPORARY DIVERSION DAM
- TURBIDITY TREATMENT AREA



NOTES:

1. CONDUCT AQUATIC ORGANISM SALVAGE AND WORK AREA ISOLATION BEFORE ANY WORK WITHIN WETTED CHANNEL.
2. PUMP ALL TURBID WATER FROM WITHIN THE WORK AREA TO THE TURBIDITY TREATMENT AREA. TREAT SEDIMENT LADEN WATER BY INFILTRATING OR CONVEYANCE THROUGH SEDIMENT CAPTURING DEVICES TO ACHIEVE REQUIRED TURBIDITY STANDARDS BEFORE RETURNING FLOW TO THE CREEK AT THE DOWNSTREAM EXTENTS OF WORK.
   - 2.1. DEWATERING PUMPS AND PIPE LOCATIONS ARE SHOWN SCHEMATICALLY. POSITION DEWATERING AND DIVERSION EQUIPMENT WITHIN THE EXTENTS OF WORK AS NECESSARY FOR CONSTRUCTION.
3. SEED AND STRAW MULCH ALL DISTURBED SURFACES OUTSIDE THE ROADWAY SURFACES AND BED OF CHANNELS.

UPPER REACH EROSION CONTROL PLAN

SCALE: 1" = 20'

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PREPARED AT THE REQUEST OF:
COLUMBIA SOIL AND WATER CONSERVATION DISTRICT

UPPER REACH EROSION CONTROL PLAN

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
90% DESIGN SUBMITTAL
REVISION 1

DESIGNED BY:	D.M./J.H.
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DATE:	4/1/26
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0 1"

C13

13 OF 18

LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
- (E) THALWEG LINE
- (E) ORDINARY HIGH WATER (MODELED)
- PROPOSED FLOW LINE
- PARCEL BOUNDARY (APPROX.)
- (E) ROAD (APPROX.)
- (N) LIMITS OF GRADING
- (N) TOE OF BANK
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- (N) BEAVER DAM ANALOG
- (N) LOG STRUCTURE
- PROPOSED STRAW WATTLE
- TURBIDITY CURTAIN
- TEMPORARY DEWATERING PUMP
- TEMPORARY DEWATERING HOSE
- TEMPORARY RETURN HOSE
- TEMPORARY DIVERSION DAM

NOTES:

1. CONDUCT AQUATIC ORGANISM SALVAGE AND WORK AREA ISOLATION BEFORE ANY WORK WITHIN WETTED CHANNEL.
2. PUMP ALL TURBID WATER FROM WITHIN THE WORK AREA TO THE TURBIDITY TREATMENT AREA. TREAT SEDIMENT LADEN WATER BY INFILTRATING OR CONVEYANCE THROUGH SEDIMENT CAPTURING DEVICES TO ACHIEVE REQUIRED TURBIDITY STANDARDS BEFORE RETURNING FLOW TO THE CREEK AT THE DOWNSTREAM EXTENTS OF WORK.
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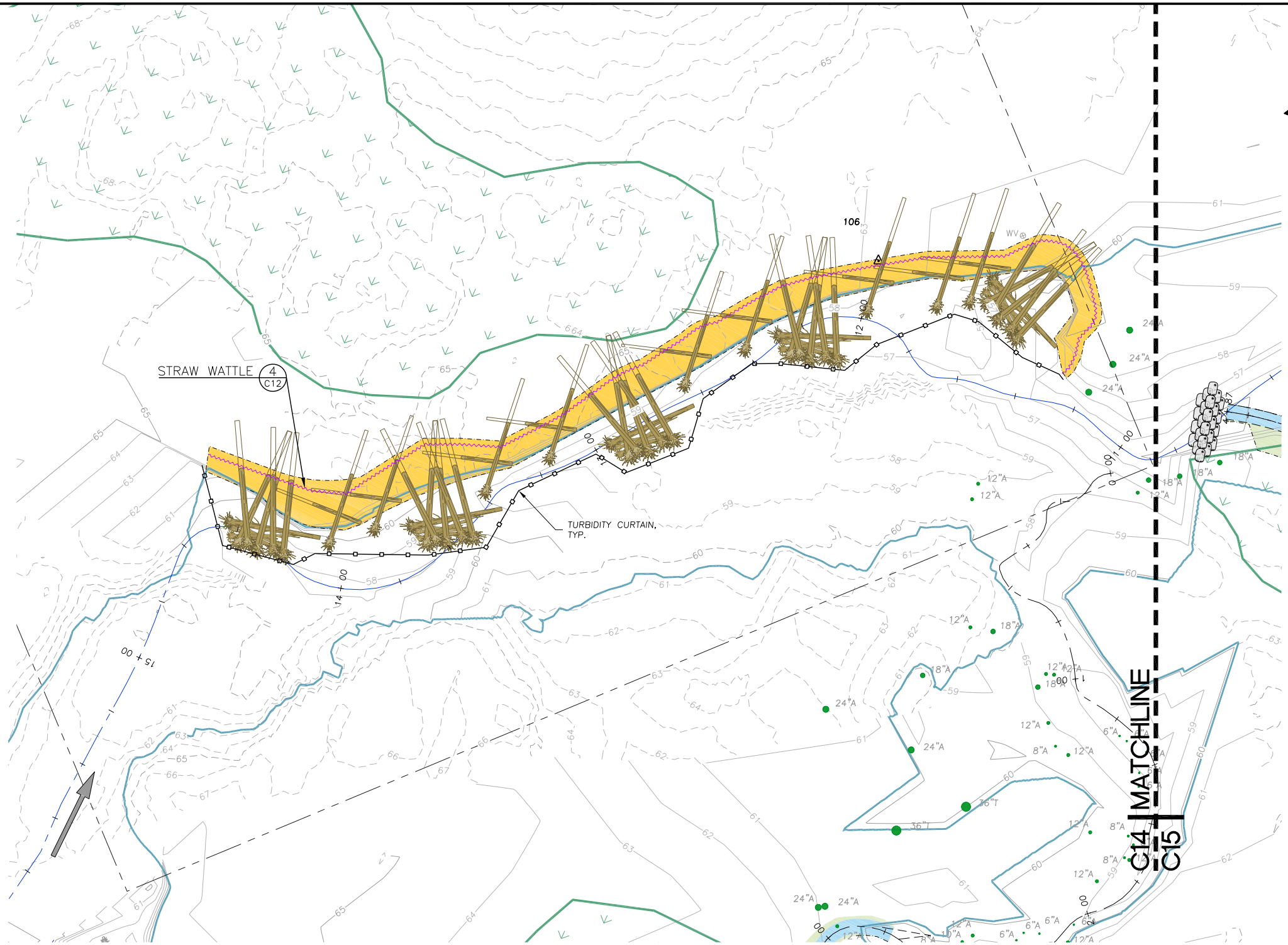
3. SEED AND STRAW MULCH ALL DISTURBED SURFACES OUTSIDE THE BED OF CHANNELS.



MIDDLE REACH EROSION CONTROL PLAN
SCALE: 1" = 20'

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PREPARED AT THE REQUEST OF:
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MIDDLE REACH EROSION CONTROL PLAN

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DATE:	4/1/26
JOB NO.:	22-051

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0 1"

C14 | 14 OF 18

LEGEND

- (E) 1-FT SURVEY CONTOURS
- (E) 1-FT LIDAR CONTOURS
- (E) THALWEG LINE
- (E) ORDINARY HIGH WATER (MODELED)
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- PARCEL BOUNDARY (APPROX.)
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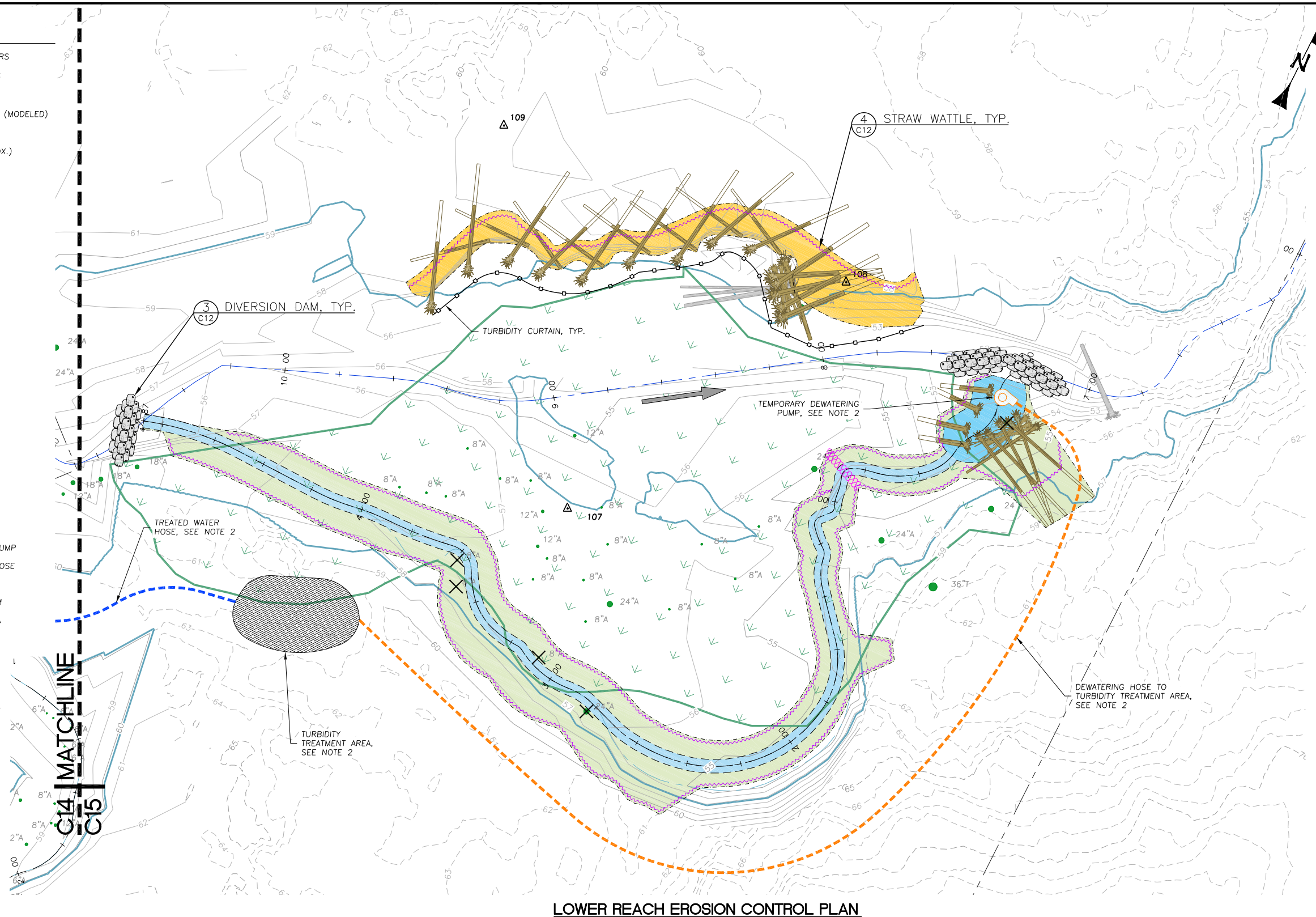
- TEMPORARY RETURN HOSE
- TEMPORARY DIVERSION DAM
- TURBIDITY TREATMENT AREA

NOTES:

1. CONDUCT AQUATIC ORGANISM SALVAGE AND WORK AREA ISOLATION BEFORE ANY WORK WITHIN WETTED CHANNEL.
2. PUMP ALL TURBID WATER FROM WITHIN THE WORK AREA TO THE TURBIDITY TREATMENT AREA. TREAT SEDIMENT LADEN WATER BY INFILTRATING OR CONVEYANCE THROUGH SEDIMENT CAPTURING DEVICES TO ACHIEVE REQUIRED TURBIDITY STANDARDS BEFORE RETURNING FLOW TO THE CREEK AT THE DOWNSTREAM EXTENTS OF WORK.
   - 2.1. DEWATERING PUMPS AND PIPE LOCATIONS ARE SHOWN SCHEMATICALLY. POSITION DEWATERING AND DIVERSION EQUIPMENT WITHIN THE EXTENTS OF WORK AS NECESSARY FOR CONSTRUCTION.
3. SEED AND STRAW MULCH ALL DISTURBED SURFACES OUTSIDE THE BED OF CHANNELS.



LOWER REACH EROSION CONTROL PLAN

SCALE: 1" = 20'

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LOWER REACH EROSION CONTROL PLAN

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0 1"

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GENERAL NOTES

1. PREPARED AT THE REQUEST OF:
   COLUMBIA SOIL AND WATER CONSERVATION DISTRICT
   35285 MILLARD RD
   ST. HELENS, OR 97051
2. THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES WERE COMPILED FROM RECORD INFORMATION AND FROM FIELD TIES TO EXISTING BOUNDARY MONUMENTATION. THE LOCATION OF THESE LINES IS SUBJECT TO CHANGE, PENDING THE RESULTS OF A COMPLETE BOUNDARY SURVEY.
3. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE LATEST EDITION OF THE STATE OF OREGON STANDARD SPECIFICATIONS, ISSUED BY THE DEPARTMENT OF TRANSPORTATION (HEREAFTER REFERRED TO AS "STANDARD SPECIFICATIONS").
4. THESE DESIGNS ARE NOT COMPLETE WITHOUT THE FINAL STAMPED TECHNICAL SPECIFICATIONS PREPARED BY WATERWAYS CONSULTING, INC. REFER TO SPECIFICATIONS FOR DETAILS NOT SHOWN HEREON.
5. NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE ENGINEER OR A DESIGNATED REPRESENTATIVE SHALL OBSERVE THE CONSTRUCTION PROCESS, AS NECESSARY TO ENSURE PROPER INSTALLATION PROCEDURES.
6. EXISTING UNDERGROUND UTILITY LOCATIONS:
   A. CALL UNDERGROUND SERVICE ALERT (1-800-642-2444) TO LOCATE ALL UNDERGROUND UTILITY LINES PRIOR TO COMMENCING CONSTRUCTION.
   B. PRIOR TO BEGINNING WORK, CONTACT ALL UTILITIES COMPANIES WITH REGARD TO WORKING OVER, UNDER, OR AROUND EXISTING FACILITIES AND TO OBTAIN INFORMATION REGARDING RESTRICTIONS THAT ARE REQUIRED TO PREVENT DAMAGE TO THE FACILITIES.
   C. EXISTING UTILITY LOCATIONS SHOWN ARE COMPILED FROM INFORMATION SUPPLIED BY THE APPROPRIATE UTILITY AGENCIES AND FROM FIELD MEASUREMENTS TO ABOVE GROUND FEATURES READILY VISIBLE AT THE TIME OF SURVEY. LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND DEPTH OF UNDERGROUND UTILITIES.
   D. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE LOCATION AND/OR PROTECTION OF ALL EXISTING AND PROPOSED PIPING, UTILITIES, TRAFFIC SIGNAL EQUIPMENT (BOTH ABOVE GROUND AND BELOW GROUND), STRUCTURES, AND ALL OTHER EXISTING IMPROVEMENTS THROUGHOUT CONSTRUCTION.
   E. PRIOR TO COMMENCING FABRICATION OR CONSTRUCTION, DISCOVER OR VERIFY THE ACTUAL DIMENSIONS, SIZES, MATERIALS, LOCATIONS, AND ELEVATIONS OF ALL EXISTING UTILITIES AND POTHOLE THOSE AREAS WHERE POTENTIAL CONFLICTS ARE LIKELY OR DATA IS OTHERWISE INCOMPLETE.
   F. TAKE APPROPRIATE MEASURES TO PROTECT EXISTING UTILITIES DURING CONSTRUCTION OPERATIONS. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COST OF REPAIR/REPLACEMENT OF ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
   G. UPON LEARNING OF THE EXISTENCE AND/OR LOCATIONS OF ANY UNDERGROUND FACILITIES NOT SHOWN OR SHOWN INACCURATELY ON THE PLANS OR NOT PROPERLY MARKED BY THE UTILITY OWNER, IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY BY TELEPHONE AND IN WRITING.
   H. UTILITY RELOCATIONS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT FACILITIES WILL BE PERFORMED BY THE UTILITY COMPANY, UNLESS OTHERWISE NOTED.
7. IF DISCREPANCIES ARE DISCOVERED BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THESE DRAWINGS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
8. ALL TESTS, INSPECTIONS, SPECIAL OR OTHERWISE, THAT ARE REQUIRED BY THE BUILDING CODES, LOCAL BUILDING DEPARTMENTS, OR THESE PLANS, SHALL BE DONE BY AN INDEPENDENT INSPECTION COMPANY. JOB SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN OFFICIAL INSPECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE REQUIRED TESTS AND INSPECTIONS ARE PERFORMED.
9. PROJECT SCHEDULE: PRIOR TO COMMENCEMENT OF WORK, SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL A DETAILED CONSTRUCTION SCHEDULE. DO NOT BEGIN ANY CONSTRUCTION WORK UNTIL THE PROJECT SCHEDULE AND WORK PLAN IS APPROVED BY THE ENGINEER. ALL CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER SO THAT THE QUALITY OF WORK CAN BE CHECKED FOR APPROVAL. PURSUE WORK IN A CONTINUOUS AND DILIGENT MANNER TO ENSURE A TIMELY COMPLETION OF THE PROJECT.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, PERMITTING, INSTALLATION, AND MAINTENANCE OF ANY AND ALL TRAFFIC CONTROL MEASURES DEEMED NECESSARY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GENERAL SAFETY DURING CONSTRUCTION. ALL WORK SHALL CONFORM TO PERTINENT SAFETY REGULATIONS AND CODES. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE PROVISIONS OF OSHA IN THE CONSTRUCTION PRACTICES FOR ALL EMPLOYEES DIRECTLY ENGAGED IN THE CONSTRUCTION OF THIS PROJECT.
12. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTION LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL. NEITHER THE PROFESSIONAL ACTIVITIES OF CONSULTANT NOR THE PRESENCE OF CONSULTANT OR THEIR OR HER EMPLOYEES OR SUB-CONSULTANTS AT A CONSTRUCTION SITE SHALL RELIEVE THE CONTRACTOR AND ITS SUBCONTRACTORS OF THEIR RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND APPLICABLE HEALTH OR SAFETY REQUIREMENTS OF ANY REGULATORY AGENCY OR OF STATE LAW.
13. MAINTAIN A CURRENT, COMPLETE, AND ACCURATE RECORD OF ALL AS-BUILT DEVIATIONS FROM THE CONSTRUCTION AS SHOWN ON THESE DRAWINGS AND SPECIFICATIONS, FOR THE PURPOSE OF PROVIDING THE ENGINEER OF RECORD WITH A BASIS FOR THE PREPARATION OF RECORD DRAWINGS.
14. MAINTAIN THE SITE IN A NEAT AND ORDERLY MANNER THROUGHOUT THE CONSTRUCTION PROCESS. STORE ALL MATERIALS WITHIN APPROVED STAGING AREAS.
15. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE FULLY INFORMED OF AND TO COMPLY WITH ALL PERMIT CONDITIONS, LAWS, ORDINANCES, CODES, REQUIREMENTS AND STANDARDS, WHICH IN ANY MANNER AFFECT THE COURSE OF CONSTRUCTION OF THIS PROJECT, THOSE ENGAGED OR EMPLOYED IN THE CONSTRUCTION AND THE MATERIALS USED IN THE CONSTRUCTION.
16. PROVIDE, AT CONTRACTOR'S SOLE EXPENSE, ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLY WITH ALL APPLICABLE PERMIT CONDITIONS AND REQUIREMENTS.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND LAYOUT, UNLESS OTHERWISE SPECIFIED.
18. FIELD INSPECTIONS AND OR THE PROVISION OF CONSTRUCTION STAKES DO NOT RELIEVE THE CONTRACTOR OF THEIR SOLE RESPONSIBILITY FOR ESTABLISHING ACCURATE CONSTRUCTED LINES AND GRADES, AS SPECIFIED.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND PRESERVATION OF ALL SURVEY MONUMENTS OR PROPERTY CORNERS. DISTURBED MONUMENTS SHALL BE RESTORED BACK TO THEIR ORIGINAL LOCATION AND SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER OR LAND SURVEYOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
20. THE OWNER SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL PROPERTY LINES AND EASEMENTS AND CONFIRMING THAT PROPOSED PROJECT ELEMENTS ARE LOCATED ON DISTRICT OWNED LANDS OR ARE COORDINATED WITH OWNERS AND APPROPRIATE PERMISSIONS ARE GRANTED FOR THE WORK.
21. TREE DIMENSIONS: TRUNK DIAMETERS SHOWN REPRESENT DIAMETER AT BREAST HEIGHT (DBH), MEASURED IN INCHES. DBH IS MEASURED 4.5 FT ABOVE GROUND FOR SINGLE TRUNKS AND TRUNKS THAT SPLIT INTO SEVERAL STEMS CLOSE TO THE GROUND. THE DBH FOR TREES THAT SPLIT INTO SEVERAL STEMS CLOSE TO THE GROUND MAY BE CONSOLIDATED INTO A SINGLE DBH BY TAKING THE SQUARE ROOT OF THE SUM OF ALL SQUARED STEM DBH'S, UNLESS OTHERWISE NOTED. WHERE TREES FORK NEAR BREAST HEIGHT, TRUNK DIAMETER IS MEASURED AT THE NARROWEST PART OF THE MAIN STEM BELOW THE FORK. FOR TREES ON A SLOPE, BREAST HEIGHT IS REFERENCED FROM THE UPPER SIDE OF THE SLOPE. FOR LEANING TREES, BREAST HEIGHT IS MEASURED ON THE SIDE THAT THE TREE LEANS TOWARD. TREES WITH DBH LESS THAN 8" ARE TYPICALLY NOT SHOWN.

    12"P = 12" DBH PINE
22. TREE SPECIES ARE IDENTIFIED WHEN KNOWN. HOWEVER, FINAL DETERMINATION SHOULD BE MADE BY A QUALIFIED BOTANIST. REFER TO THE LEGEND FOR TREE SPECIES SYMBOLS.
23. TREE TRUNK DIMENSIONS MAY BE SHOWN OUT-OF-SCALE FOR PLOTTING CLARITY. CAUTION SHOULD BE USED IN DESIGNING NEAR TREE TRUNKS. THERE ARE LIMITATIONS ON FIELD ACCURACY, DRAFTING ACCURACY, MEDIUM STRETCH AS WELL AS THE "SPREAD" OR "LEANING" OF TREES. REQUEST ADDITIONAL TOPOGRAPHIC DETAIL WHERE CLOSE TOLERANCES ARE ANTICIPATED. INDIVIDUAL TREES ARE NOT TYPICALLY LOCATED WITHIN DRIPLINE CANOPY AREAS SHOWN.
24. APPROXIMATE CENSUS OF TREES TO BE REMOVED:

COMMON NAME	NUMBER
ALDER	3

25. WILLOWS TO BE REMOVED SHALL BE TRIMMED, TRANSPLANTED, AND UTILIZED IN THE REVEGETATION PLAN.
26. ALL STANDARD STREET MONUMENTS, LOT CORNER PIPES, AND OTHER PERMANENT MONUMENTS DISTURBED DURING THE PROCESS OF CONSTRUCTION SHALL BE REPLACED AND A RECORD OF SURVEY OR CORNER RECORD PER COUNTY AND STATE STANDARDS.
27. CONTRACTOR IS REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
28. CULTURAL RESOURCES: IN THE EVENT THAT HUMAN REMAINS AND/OR CULTURAL MATERIALS ARE FOUND, ALL PROJECT-RELATED CONSTRUCTION SHALL CEASE WITHIN A 100-FOOT RADIUS AND CONTACT THE CLIENT AND COUNTY CORONER IMMEDIATELY.

DIVERSION NOTES (TURBIDITY CURTAINS)

1. DIVERSION SYSTEM

1.1 THE CONTRACTOR SHALL INSTALL AND MAINTAIN A TURBIDITY CURTAIN OUTSIDE THE WORK LIMITS OF THE LOG STRUCTURE LOCATIONS TO ELIMINATE THE DISCHARGE OF SEDIMENT TO THE CREEK DURING CONSTRUCTION. THE TURBIDITY CURTAIN ALIGNMENT SHALL MAXIMIZE THE WIDTH OF UNDISTURBED CHANNEL AND REMAIN IN PLACE UNTIL THE LOG STRUCTURE CONSTRUCTION IS COMPLETE AND MATERIALS AND EQUIPMENT HAVE BEEN REMOVED FROM THE WORK AREA.

1.2 LOCALIZED PUMPING MAY BE REQUIRED TO CONTAIN TURBID WATER WITHIN THE WORK LIMITS. PUMPED WATER SHALL BE DISCHARGED IN A MANNER WHICH DOES NOT RESULT IN AN EXCEEDANCE OF ANY WATER QUALITY REQUIREMENTS ESTABLISHED BY REGULATORY AGENCIES HAVING JURISDICTION.

1.3 CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATER QUALITY IN STRICT ACCORDANCE WITH THE PERMIT REQUIREMENTS, THE DRAWINGS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND OPERATION OF THE DIVERSION AT ALL TIMES.

EMERGENCY PROCEDURES:

1.4 MAINTAIN CLOSE ATTENTION TO FLOWS AND FORECASTED WEATHER CONDITIONS DURING CONSTRUCTION. SHOULD A RAIN EVENT BE FORECAST OR INCREASED FLOWS BE PREDICTED FROM FIELD OBSERVATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ALL NECESSARY MEASURES TO PREPARE THE SITE. MEASURES SHALL INCLUDE, AT A MINIMUM; REMOVAL OF ALL MACHINERY AND TOOLS FROM THE CHANNEL, CONSTRUCTION OF TEMPORARY GRAVEL/COBBLE BERMS TO ISOLATE DISTURBED AREAS CONTAINING ERODE ABLE SOILS, PREPARATION OF A SAFE AND STABLE FLOW PATH THROUGH THE CONSTRUCTION SITE, AND ANY OTHER MEASURES NECESSARY TO PROTECT WATER QUALITY, AS APPROVED BY THE ENGINEER.

2. FISH REMOVAL

2.1 PRIOR TO PLACEMENT OF THE TURBIDITY CURTAIN, FISH SHALL BE REMOVED FROM THE PROJECT SITE CONSTRUCTION AREAS BY A QUALIFIED FISHERIES BIOLOGIST, LICENSED FOR SUCH ACTIVITIES BY THE NATIONAL MARINE FISHERIES SERVICE AND THE OREGON DEPARTMENT OF FISH AND WILDLIFE.

2.2 BLOCK NETS SHALL BE PROVIDED AND INSTALLED BY THE FISHERIES BIOLOGIST AND MAINTAINED BY THE CONTRACTOR, THROUGHOUT THE PERIOD OF CONSTRUCTION. MAINTENANCE INCLUDES PERIODIC REMOVAL OF ACCUMULATED DEBRIS, AS NECESSARY TO ENSURE FUNCTION. BLOCK NETS SHALL BE REMOVED BY THE FISHERIES BIOLOGIST FOLLOWING REMOVAL OF ANY DEWATERING PUMPS, HOSES, AND TURBIDITY CURTAINS.

EROSION CONTROL NOTES

1. THE ESCP MEASURES SHOWN ON THIS PLAN ARE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, UPGRADE THESE MEASURES AS NEEDED TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL EROSION AND SEDIMENT CONTROL REGULATIONS.
2. PHASE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION.
3. IDENTIFY, MARK, AND PROTECT (BY FENCING OFF OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS.
4. PRESERVE EXISTING VEGETATION WHEN PRACTICAL AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED.
5. EROSION AND SEDIMENT CONTROL MEASURES INCLUDING PERIMETER SEDIMENT CONTROL MUST BE IN PLACE BEFORE VEGETATION IS DISTURBED AND MUST REMAIN IN PLACE AND BE MAINTAINED, REPAIRED, AND PROMPTLY IMPLEMENTED FOLLOWING PROCEDURES ESTABLISHED FOR THE DURATION OF CONSTRUCTION, INCLUDING PROTECTION FOR ACTIVE STORM DRAIN INLETS AND CATCH BASINS AND APPROPRIATE NON-STORMWATER POLLUTION CONTROLS.
6. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES AND FOR ALL ROADWAYS INCLUDING GRAVEL ROADWAYS.
7. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS.
8. PREVENT TRACKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND-DISTURBING ACTIVITIES.
9. WHEN TRUCKING SATURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE.
10. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, LEFTOVER PAINTS, SOLVENTS, AND GLUES FROM CONSTRUCTION OPERATIONS.
11. FUELING ACTIVITIES MUST BE LOCATED A MINIMUM OF 150 FEET FROM ORDINARY HIGH WATER AND SENSITIVE WATERS, INCLUDING WETLANDS.
12. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES.
13. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL.
14. ONSITE VEHICLE SPEED ON UPAVED SURFACES SHALL BE LIMITED TO 15 MPH.
15. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE.
16. IF A STORMWATER TREATMENT SYSTEM (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN PLAN APPROVAL BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
17. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR.
18. AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS.
19. CONSTRUCTION ACTIVITIES MUST AVOID OR MINIMIZE EXCAVATION AND CREATION OF BARE GROUND DURING WET WEATHER.
20. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL.
21. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DIVISION OF STATE LANDS REQUIRED TIMEFRAME.
22. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS, DRAINAGE WAYS, OR WETLANDS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO CLEANUP RELEASED SEDIMENTS.
23. THE ENTIRE SITE MUST BE TEMPORARILY STABILIZED USING VEGETATION OR A HEAVY MULCH LAYER, TEMPORARY SEEDING, OR OTHER METHOD SHOULD ALL CONSTRUCTION ACTIVITIES CEASE FOR 30 DAYS OR MORE.
24. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE.
25. PROVIDE PERMANENT EROSION CONTROL MEASURES ON ALL EXPOSED AREAS AS THEY ARE COMPLETED. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED. HOWEVER, DO REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AS EXPOSED AREAS BECOME STABILIZED, UNLESS DOING SO CONFLICTS WITH LOCAL REQUIREMENTS. PROPERLY DISPOSE OF CONSTRUCTION MATERIALS AND WASTE, INCLUDING SEDIMENT RETAINED BY TEMPORARY BMPS.

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COLUMBIA SOIL AND WATER
CONSERVATION DISTRICT

NOTES

CONYERS CREEK HABITAT
DIVERSIFICATION AND
ENHANCEMENT PROJECT
90% DESIGN SUBMITTAL
REVISION 1

DESIGNED BY:	D.M./J.H.
DRAWN BY:	C.B.
CHECKED BY:	J.H.
DATE:	4/1/26
JOB NO.:	22-051

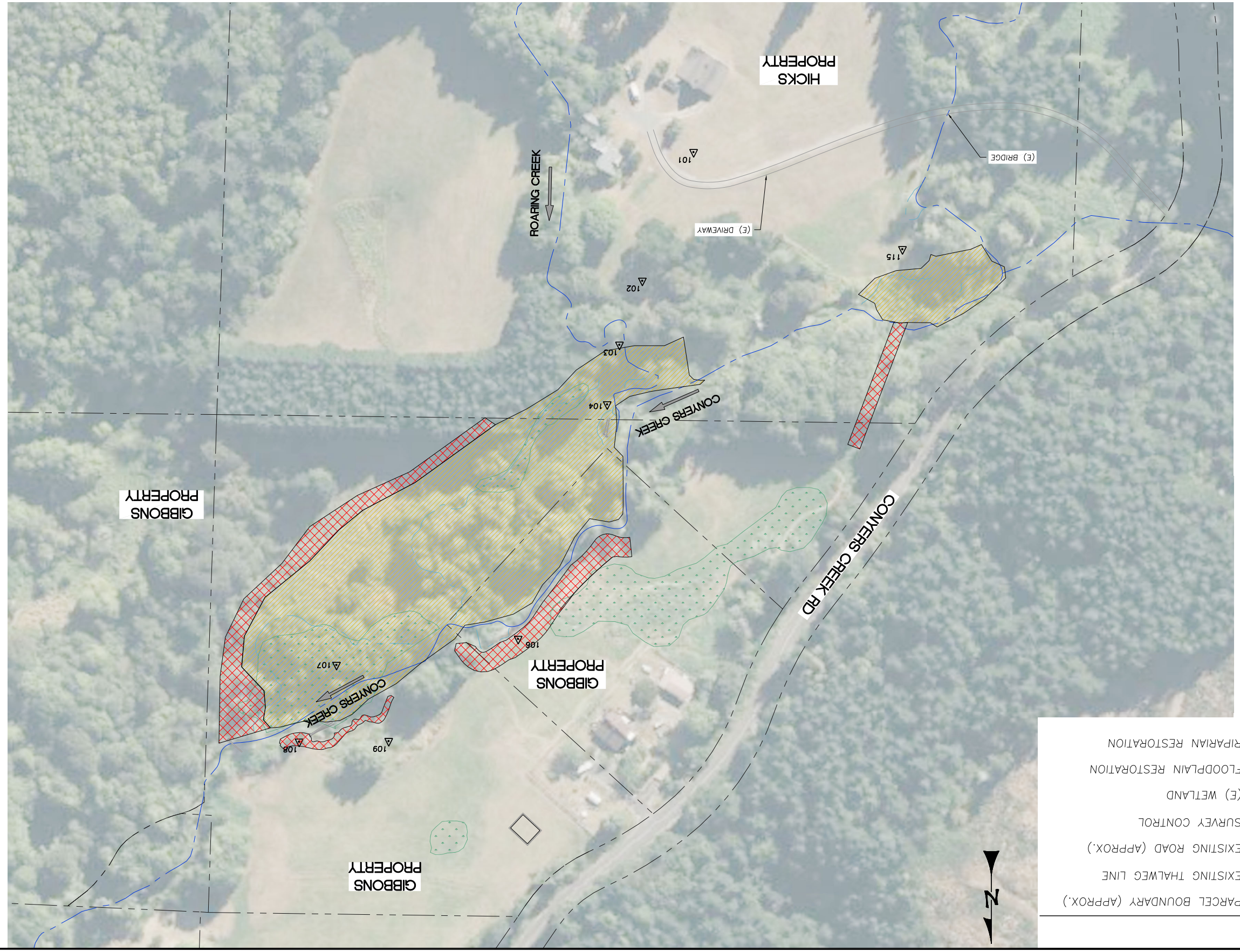
BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
0 1"

C16 | 16 OF 18

REVEGETATION PLAN

SCALE: 1" = 80'

NOTES:
1. SEE SHEET C18 FOR REVEGETATION TABLES WITH SEED MIXES AND PLANT SPECIFICATIONS.



CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
90% DESIGN SUBMITTAL
REVISION 1

REVEGETATION PLAN

PREPARED AT THE REQUEST OF:
COLUMBIA SOIL AND WATER CONSERVATION DISTRICT

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DESIGNED BY: D.M./J.H.
DRAWN BY: C.B.
CHECKED BY: J.H.
DATE: 4/1/26
JOB NO.: 22-051

BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALES FOR REDUCED PLOTS
0 1"

C17
17 OF 18

TABLE 1: FLOODPLAIN SEED

SPECIES	COMMON NAME	PERCENT	LBS
AGROSTIS EXARATA	SPIKE BENTGRASS	0.1	10.5
BIDENS CERNUA	NODDING BEGGARSTICK	0.05	5.25
BROMUS SITCHENSIS	SITKA BROME	0.05	5.25
BROMUS VULGARIS	COLUMBIA BROME	0.05	5.25
CAREX OBNUPTA	SLOUGH SEDGE	0.05	5.25
CAREX STIPATA	SAWBEAK SEDGE	0.05	5.25
DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	0.1	10.5
DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS	0.1	10.5
GLYCERIA OCCIDENTALIS	WESTERN MANNAGRASS	0.1	10.5
GRINDELIA INTEGRIFOLIA	ENTIRE-LEAVED GUMWEED	0.05	5.25
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	0.05	5.25
LUPINUS POLYCARPUS	SMALL-FLOWERED LUPINE	0.05	5.25
LUPINUS POLYPHYLLUS	LARGE-LEAVED LUPINE	0.05	5.25
MIMULUS GUTTATUS	SEEP MONKEY FLOWER	0.05	5.25
PLAGIOBOTHRYS FIGURATUS	FRAGRANT POPCORNFLOWER	0.05	5.25
SAGITTARIA LATIFOLIA	WAPATO	0.05	5.25

NOTES:

1. ACRES: 4.2 ACRES
   POUNDS PER ACRE: 25 LB/ACRE
   TOTAL POUNDS: 105 LB.

TABLE 2: FLOODPLAIN TREES AND SHURBS

SPECIES	COMMON NAME	PERCENT	STEMS	SIZE	TYPE
ALNUS RUBRA	RED ALDER	0.025	294	BARE-ROOT	TREE
CORNUS SERICEA	RED-OSIER DOGWOOD	0.1	1176	BARE-ROOT	SHRUB
LONICERA INVOLUCRATA	BLACK TWINBERRY	0.1	1176	BARE-ROOT	SHRUB
PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	0.05	588	BARE-ROOT	TREE
ROSA PISOCARPA	SWAMP ROSE	0.1	1176	BARE-ROOT	SHRUB
SALIX LASIANDRA	PACIFIC WILLOW	0.1	1176	CUTTING	TREE
SALIX PIPERI	PIPER'S WILLOW	0.1	1176	CUTTING	TREE
SALIX SITCHENSIS	SITKA WILLOW	0.15	1764	CUTTING	SHRUB
SAMBUCUS RACEMOSA	RED ELDERBERRY	0.15	1764	BARE-ROOT	SHRUB
SPIRAEA DOUGLASII	DOUGLAS SPIRAEA	0.125	1470	CUTTING	SHRUB

NOTES:

1. ACRES: 4.2 ACRES
   STEMS PER ACRE: 2800 STEMS/ACRE
   TOTAL PLANTS: 11760

TABLE 3: RIPARIAN SEED

SPECIES	COMMON NAME	PERCENT	LBS
ACHILLEA MILLEFOLIUM	YARROW	0.05	1.1
AGROSTIS EXARATA	SPIKE BENTGRASS	0.1	2.2
BROMUS SITCHENSIS	SITKA BROME	0.1	2.2
BROMUS VULGARIS	COLUMBIA BROME	0.1	2.2
DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	0.1	2.2
DESCHAMPSIA ELONGATA	SLENDER HAIRGRASS	0.1	2.2
GLYCERIA OCCIDENTALIS	WESTERN MANNAGRASS	0.1	2.2
GRINDELIA INTEGRIFOLIA	ENTIRE-LEAVED GUMWEED	0.05	1.1
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	0.1	2.2
LUPINUS POLYCARPUS	SMALL-FLOWERED LUPINE	0.05	1.1
LUPINUS POLYPHYLLUS	LARGE-LEAVED LUPINE	0.05	1.1
MIMULUS GUTTATUS	SEEP MONKEY FLOWER	0.05	1.1
PLAGIOBOTHRYS FIGURATUS	FRAGRANT POPCORNFLOWER	0.05	1.1

NOTES:

1. ACRES: 1.68 ACRES
   POUNDS PER ACRE: 25 LB/ACRE
   TOTAL POUNDS: 42 LBS

TABLE 4: RIPARIAN PLUGS

SPECIES	COMMON NAME	PERCENT	PLUGS	TYPE
ACHILLEA MILLEFOLIUM	YARROW	0.25	958	PLUGS
AQUILEGIA FORMOSA	RED COLUMBINE	0.25	958	PLUGS
TELLIMA GRANDIFLORA	FRINGECUP	0.25	958	PLUGS
TOLMIEA MENZIESII	PIGGY-BACK PLANT	0.25	958	PLUGS

NOTES:

1. ACRES: 0.88 ACRES
   PLUGS PER ACRE: 4356 PLUGS/ACRE
   TOTAL PLUGS: 3833

TABLE 5: RIPARIAN TREES AND SHURBS

SPECIES	COMMON NAME	PERCENT	STEMS	SIZE	TYPE
ACER CIRCINATUM	VINE MAPLE	0.05	120	BARE-ROOT	SHRUB
ACER MACROPHYLLUM	BIG LEAF MAPLE	0.05	120	BARE-ROOT	TREE
ALNUS RUBRA	RED ALDER	0.05	120	BARE-ROOT	TREE
AMELANCHIER ALNIFOLIA	WESTERN SERVICEBERRY	0.05	120	BARE-ROOT	TREE
CORNUS SERICEA	RED-OSIER DOGWOOD	0.05	120	BARE-ROOT	SHRUB
MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	0.05	120	BARE-ROOT	SHRUB
OEMLERIA CERASIFORMIS	OSOBERRY	0.05	120	BARE-ROOT	SHRUB
PHILADELPHUS LEWISII	MOCK-ORANGE	0.05	120	BARE-ROOT	SHRUB
PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	0.05	120	BARE-ROOT	SHRUB
POLYSTICHUM MUNITUM	WESTERN SWORDFERN	0.05	120	BARE-ROOT	HERBACEOUS
RHAMNUS PURSHIANA	CASCARA	0.05	120	BARE-ROOT	TREE
RIBES BRACTEOSUM	STINK CURRANT	0.05	120	BARE-ROOT	SHRUB
RUBUS PARVIFLORUS	THIMBLEBERRY	0.05	120	BARE-ROOT	SHRUB
RUBUS SPECTABILIS	SALMONBERRY	0.05	120	BARE-ROOT	SHRUB
SALIX PIPERI	PIPER WILLOW	0.1	235	CUTTING	SHRUB
SALIX SITCHENSIS	SITKA WILLOW	0.1	235	CUTTING	SHRUB
SAMBUCUS RACEMOSA	RED ELDERBERRY	0.05	120	BARE-ROOT	SHRUB
SYMPHORICARPOS ALBUS	COMMON SNOWBERRY	0.05	120	BARE-ROOT	SHRUB

NOTES:

1. ACRES: 1.68 ACRES
   STEMS PER ACRE: 2650 STEMS/ACRE
   TOTAL PLANTS: 2332

TABLE 6: EMERGENT WETLAND

SPECIES	COMMON NAME	PERCENT	PLUGS	TYPE
CAREX DENSA	DENSE SEDGE	0.2	4530	PLUGS
CAREX DEWEYANA	DEWEY'S SEDGE	0.2	4530	PLUGS
CAREX OBNUPTA	SLOUGH SEDGE	0.2	4530	PLUGS
JUNCUS TENUIS	SLENDER RUSH	0.2	4530	PLUGS
SCIRPUS MICROCARPUS	SMALL-FLOWERED BULRUSH	0.2	4530	PLUGS

NOTES:

1. ACRES: 0.13 ACRES
   PLUGS PER ACRE: 174240 PLUGS/ACRE
   TOTAL PLUGS: 22651

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REVEGETATION TABLES

CONYERS CREEK HABITAT DIVERSIFICATION AND ENHANCEMENT PROJECT
90% DESIGN SUBMITTAL
REVISION 1

DESIGNED BY: D.M./J.H.
DRAWN BY: C.B.
CHECKED BY: J.H.
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JOB NO.: 22-051

BAR IS ONE INCH ON ORIGINAL DRAWING, ADJUST SCALES FOR REDUCED PLOTS
0 1"

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Exhibit F

Diagrams of Proposed Project Modifications

Created By: Crystalyn Bush, Project Manager
For: PFA Project & Budget Amendment Request
Date: 4/15/2026

1) Upper Project Reach #1:
Floodplain Logs Added

Changes to Designs:

1) Pinned logs placed in floodplain
2) Large Wood Structure installed into Side Channel C “alcove”

2) Upper Project Reach #2:
Adding Log Structures and BDAs

Changes to Designs:

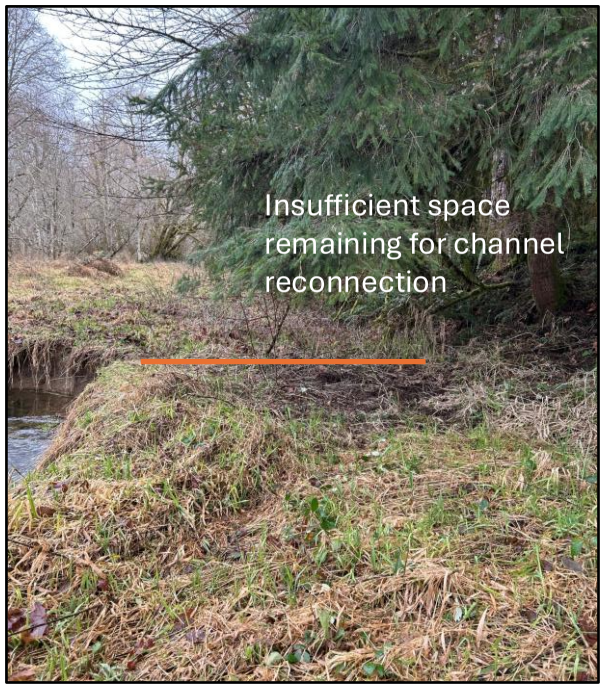
1) Log Structures installed at temporary stream crossing location
2) Log structure added to “alcove” at terminal end of Side Channel C
3) 2 BDAs installed downstream of log structures at stream crossing

3) Middle Project Reach #1:
Roaring Creek Reconnection – Work Removed

Change to Design:

1) Roaring Creek historic channel reconnection eliminated from designs due to severe erosion on Conyers Creek cutting into historic channel

2) BDAS removed from Roaring Creek channel due to removal of channel reconnection from designs



4) Middle Project Reach #2:
Modification to Log Structure Design

Changes to Designs:

1) 5 Large log structures; 1 each installed in pools at upstream and downstream end of treatment area; 3 installed along eroding streambank

2) Log structures will protrude into stream channel ~50% of channel width to encourage water onto the opposite floodplain to enhance side channel and off-channel habitat

3) Single rootwads installed close to bank along length of treatment area for bank stabilization and pool formation

5) Lower Project Reach:

Downstream Bank Layback and Large Wood Added

Changes to Designs:

1) Add bank layback and LWD treatments to this area
2) 1 Large log structure in pool at downstream extent of treatment reach
3) Single rootwads installed close to bank along length of treatment area for bank stabilization and pool formation