



2018 Nason Creek Kahler Stream & Floodplain Enhancement

Project

Columbia River

Honor. Protect.
Restore.

OFFICE
P.O. Box 151
401 Fort Road
Toppenish, WA 98948

PHONE
(509) 860-5351

FAX
(509) 423-7616

EMAIL
brej@yakamafish-nsn.gov

WEB
Yakamafish-nsn.gov

Dear Contractor:

March 19, 2018

The Yakama Nation's Upper Columbia Habitat Restoration Project is requesting bids for construction of a **Salmon Habitat Enhancement Project** to be implemented on Nason Creek in July of 2018. The project will involve all work elements and specifications found in the Project Plans attached to this bid packet.

By the close of business on **Thursday, May 3, 2018**, each contractor must have completed and submitted a signed copy of the attached Nason Creek Kahler Project Bid Sheet & Daily Equipment Standby Rate Form. Please specify in writing on the bid sheets that all bid prices will be valid for at least 150 days. All competitive bid materials must be either hand delivered or sent by parcel delivery service or postal mail to:

**Yakama Nation
Attn: Jackie Olney
RE: Nason Creek Kahler Project
PO Box 151
Toppenish WA, 98948
(Shipping address: 401 Fort Road, Toppenish, WA 98948)**

All portions of the project will be conducted between **July 1 and July 31, 2018**, to coincide with the permitted in-water work windows negotiated with NOAA, USFWS, and WDFW for this project. The full project will occur when ESA-listed juvenile and adult salmon and steelhead may be present in or near the project area so turbidity control via cofferdam systems will be of the utmost importance. The winning contractor will understand the magnitude of this project and be equipped to perform all necessary elements for a project of this type within a critical habitat stream. The winning contractor will have extensive experience in the following: building cofferdams, de-watering following NMFS fish screening protocols, placing large woody anchored material, excavating engineered channels and minimizing local disturbance.

All contractors submitting bids for this project shall provide and/or demonstrate, at a minimum, the following:

- ***A list of experienced equipment operators that will be on-site during project construction. Please provide details of their work on constructing in-stream habitat work.***
- ***A detailed construction timeline of how you propose to get all project tasks completed within the stated project timeline.***

- ***Experience and preferably examples of the ability to create de-watered work areas through the use of coffering techniques. A cofferdam and surface water diversion plan should be submitted with the bid documents.***
- ***A list of key pieces of heavy equipment that will be used in construction of the project.***

Please note:

- Davis Bacon Wages apply to this contract. The winning contractor will adhere to the Davis Bacon rules and comply and submit all necessary paperwork to the Yakama Nation.
- The Yakama Nation is exempt from state taxes on this project. Please see the attached Treaty Fishery Exempt Cover Letter and Treaty Fishery Exempt Certificate as well as a Certified Payroll Form. The winning contractor will receive signed copies for their records.
- This project has adopted by reference in the Engineer's Planset the 2014 Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction. Please download a digital copy of the WSDOT 2014 Standard Specifications from <http://www.wsdot.wa.gov/publications/manuals/fulltext/M41-10/SS2014.pdf>.
- This project will occur completely on Private land.
- Awarded contractor must provide "san-i-can" service as well as dust abatement control measures during all ground disturbing activities.
- It will be the contractor's responsibility to submit a request for an Industrial Fire Precaution Level (IFPL) waiver request in the event of a partial shutdown due to increasing levels.

The attached template Construction Services Agreement provides an overview of the scope of work likely to be incorporated into the awarded contract. Please make note of specific provisions provided in this Construction Services Agreement, including the detailed Exhibits, that may be in addition to the specifications and directions found in the Project Planset.

Also, please note that this project is pending on permitting. The Yakama Nation reserves the right to accept or reject any and all of the proposals received as a result of this request, or to cancel in part or entirely this request if it is in the best interest of the Yakama Nation to do so. This request does not commit the Yakama Nation to pay any costs incurred in the preparation of a proposal.

For questions regarding the site visit, please contact me at the numbers provided below.

Sincerely,

Jason Breidert

Jason Breidert
YN Project Manager
(509)-860-5351
brej@yakamafish-nsn.gov

Nason Creek Kahler Project - Exhibit "B" Budget Bid tab Please use the Engineer's Stamped Project Plans and the bid packet to produce your competitive bids.

Item	Quantity	Units	Unit Price	Extended Price
Mobilization	1	LS		
Traffic Control	1	LS		
Clearing and grubbing	1	LS		
ESC, SPCC plan and implementation	1	LS		
Cofferdams	1	LS		
Pumping	1	LS		
Excavation icluding Floodplain Habitat	1	LS		
Fill	1	LS		
LWM	1	LS		
Log Crib Installation	1	LS		
Weed free straw mulch	1	LS		
			Subtotal =	
			Subtotal =	
			Total Bid = \$	
			(do not include tax)	
LS = lump sum, CY = cubic yards, LF = linear feet				

Notes:

- 1) Includes excavation from existing grade to finished grade
- 2) Includes placement of excavated materials and excess excavated materials displaced by logs into Spoils Placement Area.
- 3) Includes excavation, placement of logs and backfill. Includes vertical logs and connections.
- 4) Requires Owner's written authorization before work is begun.
- 5) Unit price shall apply without modification to any variation in final quantity.
- 6) Includes import of material; rock, top soil, threaded rod, etc...

Company Name:

Date Prepared:

Certification

Printed Name & Title

Signature

By signing and submitting this form you are agreeing to honor the completed bid for a period of up to 150 days from the date this form was prepared.

CONSTRUCTION SERVICES AGREEMENT

BETWEEN:

THE CONFEDERATED TRIBES AND BANDS OF THE YAKAMA NATION

on behalf of its _____ program or department

P.O. Box 151 / 401 Fort Road

Toppenish, WA 98948

General Phone: (509) 865-5121

Program Phone:

(HEREAFTER "YAKAMA NATION")

AND

[CONTRACTOR NAME]

Address Line 1

Address Line 1

Phone:

(HEREAFTER "CONTRACTOR")

This Construction Services Agreement ("Agreement") is executed by and between Contractor and Yakama Nation, a federally recognized sovereign Nation pursuant to the Treaty with the Yakamas of 1855 (12 Stat. 951). Contractor and Yakama Nation may be collectively referred to herein as the "Parties," and each may be referred to as a "Party."

1. TERM

The effective term of this Agreement shall be from _____, through _____, absent a valid termination action in accordance with the express terms of this Agreement.

2. PERFORMANCE

Contractor agrees to perform the services set forth in the attached scope of work, Exhibit "A" (collectively, the "Services"), which is incorporated by reference in this Agreement.

3. COMPENSATION

A. *Maximum Compensation.* The **total compensation amount** approved by Yakama Nation for this Agreement is limited to, and ***shall not exceed*** _____ (\$_____); which amount shall include any and all compensation for the Services as described herein and set forth in detail in the budget attached as Exhibit "B". If Exhibit "B" describes separate and specific maximum compensation amounts for services and expenses, then at the end of the term of this Agreement, any remaining balance in the amount allocated for expenses may be used by Yakama Nation, at its sole discretion, to cover fees for authorized services, so long as the total compensation amount set forth above is not exceeded.

B. *Invoicing, Progress Reports and Payment of Compensation.* Yakama Nation shall compensate Contractor according to the billing rate(s) and/or fee schedule(s) set forth in Exhibit "C" in an amount not to exceed that stated above. Contractor shall submit monthly invoices and appropriate supporting

documentation to Yakama Nation, including a progress report that provides of brief summary of daily activities associated with services performed and completed by Contractor. Unless the Parties agree in writing to different terms, invoice periods shall begin on the first day of each month and end on the last day of each month. Invoices shall be submitted by Contractor to Yakama Nation's designated staff contact within fifteen (15) days after the end of the month in which the services were provided and/or expenses were incurred. Contractor waives the right to receive full payment on invoices submitted more than sixty (60) days following the end of the proper invoice period. If a question or concern arises regarding an item on an invoice, Yakama Nation shall notify Contractor of the question or concern. Within five (5) business days following such notification, Contractor shall take action to sufficiently explain or correct the item, or Contractor shall be deemed to have waived their right to demand payment for the item.

C. *Availability of Funds.* Notwithstanding any other provisions of this Agreement, Contractor understands and agrees that compensation for services and expenses under the terms of this Agreement shall be contingent upon the availability of funds (a) placed to the credit of Yakama Nation in the Treasury of the United States, (b) appropriated by Congress, or (c) from local funds maintained in the name of Yakama Nation.

D. *Federal & Grant Funds.* Contractor understands and agrees that agreements and contracts funded by federal funds or other grant funds may be subject to certain legal requirements. These may include, but are not limited to, those requirements set forth in the United States Office of Budget Management's Uniform Guidance, 2 C.F.R. Part 200, and/or the terms of an applicable source grant. Contractor agrees to comply with and utilize funds in accordance with all applicable laws, regulations, and guidelines, and with any applicable grant or contract terms, and further understands and agrees that the use of such funds may be subject to audit by the grantor agency. Contractor shall reimburse Yakama Nation for any costs of Contractor that are disallowed by a grantor.

4. PROPERTY DEVELOPED BY CONTRACTOR

Contractor agrees that it will retain no interest in the information, data, proposals, papers, copyrights, patents, or any other material or property developed, discovered, invented, and/or accumulated by Contractor in connection with the performance of this Agreement. Subject to applicable law, Contractor shall turn over such information, data, proposals, papers, copyrights, patents, discoveries, inventions, and other material or property to Yakama Nation upon the expiration or termination of this Agreement or upon request.

5. PUBLICATION OF INFORMATION

The dissemination or publication of documents, information material or other property developed or generated by Contractor during the course of this Agreement shall require the written approval of Yakama Nation.

6. RECORDS

A. *Access.* Subject to applicable law, Yakama Nation will provide Contractor with reasonable access to its personnel, facilities, and records necessary to the performance of this Agreement.

B. *Maintenance & Retention of Records; Financial Management for Accounting and Audits.* Contractor shall maintain and retain auditable records during the term of this Agreement and for a period of at least three (3) years following the expiration or termination of this Agreement. Contractor shall maintain its records to comply with the Audit Act of 1984, P.L. 98-502 (31 U.S.C. § 7501 et. seq., as

amended) and the Office of Management and Budget's Uniform Guidance requirements set forth at, 2 C.F.R. part 200, Subpart F, as amended. Contractor shall adhere to a systematic accounting method that assures timely and appropriate resolution of audit findings and recommendations in compliance with the Uniform Guidance. Subject to applicable law, Contractor agrees that Yakama Nation, the grantor agency (if applicable), the Comptroller General of the United States, or any of their duly authorized representatives, shall have timely access to Contractor's records which are pertinent to the subject matter of this Agreement and the performance of obligations contained herein, for the purpose of conducting an audit and/or examination, and/or creating excerpts and/or transcriptions.

7. INDEPENDENT CONTRACTORS

Contractor shall employ, at its own expense, all personnel and equipment reasonably necessary to perform the Services called for by this Agreement. Such personnel shall not be considered Yakama Nation employees. Contractor shall be responsible to ensure that all personnel engaged in performing Services are fully qualified to undertake the work in accordance with applicable tribal, federal, state, and local laws. Contractor shall at all times in performance of this Agreement operate as, and have the status of, an independent contractor, and will not be an agent or employee of Yakama Nation; nor will Contractor or its personnel be entitled to any employee benefits provided by Yakama Nation. The Parties are not engaged in a joint venture or partnership. Neither party can represent or bind the other. Unless otherwise expressly agreed, Contractor shall be solely responsible to secure and pay for any necessary or appropriate permits, fees, licenses, inspections, or other prerequisites necessary for proper performance of the Services called for by this Agreement.

8. SUBCONTRACTING

A. Contractor shall not be permitted to hire a subcontractor to perform the Services called for by this Agreement without express prior written consent. Any unauthorized attempt by Contractor to subcontract for such Services shall be null and void, and Contractor shall be responsible for all expenses, fees, and costs associated with any such unauthorized subcontract.

B. An award of this Agreement based on a bid or proposal naming specific subcontractors and identifying the portions of the work to be performed by the subcontractors shall constitute prior written consent to the hiring of the named subcontractor(s). Subcontractor selection and subcontractor employment shall be subject to applicable TERO and Indian Preference requirements described above. Contractor shall be responsible to ensure their subcontractors are in compliance with Yakama Nation TERO and Indian Preference requirements.

9. ASSIGNMENT OF INTEREST

Contractor shall not assign its interest in this Agreement, or any part thereof, including its right to receive payment for services performed, to another party. Any attempt by Contractor to assign any obligations, rights, or fees under this Agreement will be null and void, and Contractor shall be responsible for all expenses, fees, and or costs associated with any unauthorized assignment.

10. INDEMNIFICATION

Contractor shall, at its sole expense, hold harmless, indemnify, and defend Yakama Nation and its officers, agents, employees, and assigns against any and all losses, costs, damages, expenses or other liabilities whatsoever, including reasonable attorney's fees and expenses, that arise out of or are connected

with, directly or indirectly, Contractor's actions or omissions, or Contractor's agents' acts or omissions related to this Agreement, including, but not limited to, accidents or injuries to persons or property.

11. SITE INVESTIGATION AND CONDITIONS AFFECTING THE WORK

A. Contractor acknowledges that it has taken steps reasonably necessary to ascertain the nature and location of the work, and that it has investigated and satisfied itself as to the general and local conditions which can affect the work or its cost, including but not limited to:

- (1) Conditions bearing upon transportation, disposal, handling, and storage of materials;
- (2) The availability of labor, water, electric power, and roads;
- (3) Uncertainties of weather, river stages, tides, or similar physical conditions at the site;
- (4) The conformation and conditions of the ground; and
- (5) The character of equipment and facilities needed preliminary to and during work performance.

Contractor also acknowledges that it has satisfied itself as to the character, quality, and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by Yakama Nation and information available to the public from local government agencies, as well as from the drawings and specifications made a part of this Agreement. Any failure of Contractor to take the actions described and acknowledged in this paragraph will not relieve Contractor from responsibility for properly estimating the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to Yakama Nation.

B. Yakama Nation assumes no responsibility for any conclusions or interpretations made by Contractor based on the information made available by Yakama Nation. Nor does Yakama Nation assume responsibility for any understanding reached or representation made concerning conditions that can affect the work by any of its officers or agents before the execution of this Agreement, unless that understanding or representation is expressly stated in this Agreement.

12. PHYSICAL DATA

Data and information furnished or referred to below or in the attached exhibits is for Contractor's information. Yakama Nation shall not be responsible for any interpretation of or conclusion drawn from the data or information made available to Contractor. Further, Yakama Nation specifically does not warrant construction methodology that may be included in such documents.

- (a) The indications of physical conditions on any drawings or specifications that have been provided are the result of general inspection of the site.

13. SCHEDULE FOR CONSTRUCTION

A. *Construction Schedule.* Unless the construction schedule is specifically addressed elsewhere in this Agreement, Contractor shall, within five (5) days after the work commences on the Agreement or another period of time determined by Yakama Nation, prepare and submit to Yakama Nation three (3) copies of a practicable schedule showing the order in which Contractor proposes to perform the work, and the dates on which Contractor contemplates starting and completing the several salient features of the work (including acquiring materials, plant, and equipment). The schedule shall be in the form of a progress chart of suitable scale to indicate appropriately the percentage of work scheduled for completion

each week during the Agreement period. If Contractor fails to submit a schedule within the time prescribed, Yakama Nation may withhold approval of progress payments until Contractor submits the required schedule. Should Contractor fall behind its schedule, a revised schedule shall be forwarded with the next Contractor's request for progress payment. Additional schedules shall be furnished to Yakama Nation as soon as practicable if so requested.

B. *Rate of Progress.* With any and each partial payment request, Contractor shall submit a copy of the last submitted schedule annotated to indicate actual progress made to date. If at any time, in the opinion of Yakama Nation, Contractor has fallen behind the schedule to an extent which would jeopardize timely completion, Contractor shall take the steps necessary to improve its progress, including those that may be required, to enable timely completion without additional cost to Yakama Nation. Such steps may include, but are not limited to, increasing the number of shifts, the amount of overtime, days of work per week, and/or the amount of construction plant being utilized. Contractor shall submit any supplementary schedules Yakama Nation deems necessary to demonstrate how the rate of progress necessary for timely completion will be regained.

C. *Breach.* Failure of Contractor to comply with the requirements of this section shall be considered a material breach and grounds for a determination by Yakama Nation that Contractor is not prosecuting the work with sufficient diligence to ensure completion within the time specified in the Agreement. Upon making this determination, Yakama Nation may terminate Contractor's right to proceed with the work, or any separable part of it, in accordance with the default terms of this Agreement.

14. DIFFERING SITE CONDITIONS

Contractor shall promptly, and before the conditions are disturbed, give a written notice to Yakama Nation of (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this Agreement, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent to the type of work provided for in the Agreement. Unless specifically identified in the Agreement, discoveries of archaeological or historical remains such as graves, fossils, skeletal materials and artifacts protected by the Archaeological Resources Protection Act (36 CFR 1214) are considered type 2 conditions.

15. LAYOUT OF WORK

Contractor shall lay out its work from Yakama Nation established base lines and bench marks indicated on the drawings or any other manner furnished by Yakama Nation. Contractor shall be responsible for all measurements in connection with the layout. Contractor shall furnish, at its own expense, all stakes, templates, platforms, equipment, tools, materials, and labor required to lay out any part of the work. Contractor shall be responsible for the execution of the work to the lines and grades that may be established or indicated by Yakama Nation. Contractor shall also be responsible for maintaining and preserving all stakes and other marks established by Yakama Nation until authorized to remove them. If such marks are destroyed by Contractor or through its negligence before their removal is authorized, Yakama Nation may replace them and deduct the expense of the replacement from any amounts due or to become due to Contractor.

16. SPECIFICATIONS, DRAWINGS AND MATERIAL SUBMITTALS

A. Omissions from any drawings and specifications that have been provided, or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, or which are customarily performed, shall not relieve Contractor from performing such omitted or

misdescribed details of the work. Work shall be performed as if fully and correctly set forth and described in the drawings and specifications.

B. Contractor shall check all drawings furnished by Yakama Nation prior to starting work and shall promptly notify Yakama Nation of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. Large-scale drawings shall in general govern small-scale drawings. Contractor shall compare all drawings and verify the figures before laying out the work, and will be responsible for any errors which might have been avoided thereby.

17. MATERIAL & WORKMANSHIP

A. *Materials.* All equipment, material, and articles incorporated into the work covered by this Agreement shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this Agreement. Use of recycled materials for the manufacture of such products is encouraged. Equipment, material, or articles specified by trade name, make, or catalog number, shall be provided. Equivalent items are not acceptable unless specifically authorized in the specification.

B. *Professional Work.* All work under this Agreement shall be performed in a professional, thorough, skillful, and safe manner, and shall be consistent with relevant professional standards. Yakama Nation may require, in writing, that Contractor remove from the work any employee Yakama Nation deems incompetent, unsafe, or otherwise objectionable.

C. *Legally Compliant Work.* In performing its obligations under this Agreement, Contractor shall comply with all applicable tribal, federal, state and local laws, regulations, guidelines and policies in performance of services under this Agreement. Such laws may include, but are not limited to, the Davis Bacon Act and related federal labor law requirements associated with federally funded construction projects. Contractor represents that it has reviewed, and is familiar with, all laws relevant to the performance of services under this Agreement.

18. SUPERINTENDENCE BY THE CONTRACTOR

At all times during performance of this Agreement, and until the work is completed and accepted, Contractor shall directly superintend the work or assign and have on the worksite a competent superintendent who is satisfactory to Yakama Nation and has authority to act for Contractor.

19. PERMITS AND RESPONSIBILITIES

Unless otherwise provided in this Agreement, Contractor shall, without additional expense to Yakama Nation, be responsible for obtaining any and all necessary licenses and permits, and for complying with any tribal, federal, state, and municipal laws, codes, and regulations applicable to the performance of the work. Contractor shall also be responsible for all damages to persons or property that occur as a result of Contractor's fault or negligence, and shall take proper safety and health precautions to protect the work, the workers, the public, and the property of Yakama Nation and others. Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work which may have been accepted under this Agreement.

20. OTHER CONTRACTS

Yakama Nation may undertake or award other contracts for additional work, or may utilize in-house construction forces, at or near the site of the work. Contractor shall fully cooperate with such other contractors and Yakama Nation employees, and carefully adapt scheduling and performance of the work under this Agreement to accommodate simultaneous performance, heeding any direction that may be provided by Yakama Nation. Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractors or by Yakama Nation employees.

21. USE AND POSSESSION PRIOR TO COMPLETION

Yakama Nation shall have the right to take possession of or use any completed or partially completed part of the work call for by this Agreement. Before taking possession of or using any work, Yakama Nation shall furnish Contractor a list of items of work remaining to be performed or corrected on those portions of the work that Yakama Nation intends to take possession of or use. However, failure of Yakama Nation to list any item of work shall not relieve Contractor of responsibility for complying with the terms of this Agreement. Yakama Nation's possession or use shall not be deemed an acceptance of any work under this Agreement.

22. CLEANING UP

A. Contractor shall at all times keep the work area, including storage areas, free from accumulations of waste materials. Before completing the work, Contractor shall remove from the work and premises any rubbish, tools, scaffolding, equipment, and materials that are not the property of the owner of the underlying real property. Upon completing the work, Contractor shall leave the work area in a clean, neat, and orderly condition satisfactory to Yakama Nation.

B. Unless specifically set forth in the Agreement, Contractor shall not burn any material on site, on the right-of-way or on the access roads to the sites. All material and debris shall be hauled to an appropriate disposal site.

23. ROAD MAINTENANCE

Contractor shall maintain all roads used by it, and upon completion of the job shall leave them in as good a condition as when first used. A road-grading machine (not a bulldozer) shall be used for maintenance and final grading. In no event shall Contractor interfere with the property owner's use of roads existing prior to Contractor's entry.

24. STOP WORK ORDER

A. Yakama Nation may order Contractor to suspend all or any part of the work call for by this Agreement for the period of time that Yakama Nation determines appropriate for the convenience of Yakama Nation.

B. Contractor shall immediately comply with Yakama Nation's order and take all reasonable steps to minimize the incurring of costs allocable to the work covered by the order.

25. PROTECTION OF EXISTING VEGETATION, STRUCTURES, AND IMPROVEMENTS

A. Contractor shall preserve and protect all structures, equipment, utilities, other improvements, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this Agreement. Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will

remain in place. If any limbs or branches of trees are broken during performance of this Agreement, or by the careless operation of equipment, or by workers, Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by Yakama Nation's representative.

B. If Contractor fails or refuses to repair the damage promptly, Yakama Nation may have the necessary work performed and charge the cost to Contractor.

26. INSURANCE

A. The following minimum kinds and amounts of insurance are applicable in the performance of the work under this Agreement. Contractor shall (subject to applicable law) maintain such insurance, naming Yakama Nation as an additional insured:

(1) *Workers' compensation and employer's liability.* Contractor is required to comply with applicable Federal and State workers compensation and occupational disease statutes. Employer's liability coverage of at least \$100,000 shall be required.

(2) *General liability.* Contractor shall provide general liability insurance of at least \$1,000,000 per occurrence. Any policy aggregate limits which apply, shall be modified to apply to each location and project. The policy shall name Yakama Nation, its officials, officers, employees and agents, as insureds with respect to Contractor's performance of services.

(3) *Automobile liability.* Contractor shall provide automobile liability insurance covering the operation of all automobiles used in the performance of this Agreement. Policies shall provide limits of at least \$1,000,000 per accident and include coverage for all owned, non-owned and hired automobiles. Contractor's policy shall be primary to any insurance of Yakama Nation.

(4) *Environmental impairment liability.* Contractor shall provide environmental impairment liability insurance of at least \$1,000,000 per occurrence. Such insurance will include coverage for the clean up, removal, storage, disposal, transportation and/or use of pollutants. The insurance policy shall name Yakama Nation, its officials, officers, employees and agents as insured. Contractor's policy shall be primary to any insurance of Yakama Nation.

B. Contractor may, with the approval of Yakama Nation, maintain a self-insurance program; provided that, with respect to workers' compensation, Contractor is qualified pursuant to statutory authority.

C. Before commencing work under this Agreement, Contractor shall provide to Yakama Nation certificates of insurance from the insurance company stating the insurance required has been obtained and is in force. The certificate(s) shall identify Contractor and the contract(s) for which coverage is provided, and shall contain a statement that the insurer will give notice of cancellation or any material change to Yakama Nation at least thirty (30) days before the effective date. In addition, Contractor shall provide certificates as the policies are renewed throughout the period of this Agreement. If Contractor's insurance does not cover the subcontractors involved in the work, Contractor shall provide certificates stating that the required insurance has been obtained by the subcontractors.

27. INSPECTION - SERVICES AND CONSTRUCTION

A. Yakama Nation may inspect the work called for by this Agreement at any time and place. Where possible and practicable, Yakama Nation will perform inspections in a manner that will not unduly delay the work.

B. If any of the services do not conform with the requirements of this Agreement, or with applicable laws, regulations or governmental policies, Yakama Nation may require the Contractor to perform the services again in conformity at no cost to Yakama Nation. When the defects in services cannot be corrected by re-performance, Yakama Nation may deduct from the Agreement payments an amount which reflects the reduced value of the services performed.

C. Neither inspection, lack of inspection, acceptance, nor payment shall relieve the Contractor of any of its obligations under this Agreement. Contractor's duty to re-perform non-conforming work is intended to survive the expiration of this Agreement's term, and shall apply even where non-conformance is discovered following its expiration.

D. If Contractor does not promptly replace or correct rejected work, Yakama Nation may (without limiting any other legal or equitable remedies available to it) (1) by contract or otherwise, replace or correct the work and charge the cost to Contractor, and may (2) terminate this Agreement for default.

E. Unless otherwise specified in the Agreement, acceptance by Yakama Nation will be in writing and shall be made as promptly as practicable after completion and inspection of all work called by this Agreement or that portion of the work Yakama Nation determines can be accepted separately. Acceptance shall be final and conclusive except for latent defects, fraud, gross mistakes amounting to fraud, non-compliance with applicable law, or Yakama Nation's rights under any warranty or guarantee.

28. WARRANTY - CONSTRUCTION

A. In addition to any other warranties in this Agreement, Contractor warrants, except as provided in paragraph (H)(1) of this clause, that work performed by it and/or its subcontractors under this Agreement conforms to applicable law and to the contract requirements, and is free of any defect in equipment, material, or design furnished, or workmanship performed by Contractor or any subcontractor or supplier at any tier.

B. This warranty shall continue for a period of three (3) years from the date of final acceptance of the work. If Yakama Nation takes possession of any part of the work before final acceptance, this warranty shall continue for a period of three (3) years from the date Yakama Nation takes possession.

C. Contractor shall remedy at Contractor's expense any failure to conform, or any defect. In addition, Contractor shall remedy at Contractor's expense any damage to Yakama Nation-owned or controlled real or personal property, when that damage is the result of:

- (1) Contractor's failure to conform to applicable law or contract requirements; or
- (2) Any defect of equipment, material, workmanship, or design furnished by Contractor.

D. Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. Contractor's warranty with respect to work repaired or replaced will run for three (3) years from the date of repair or replacement.

E. Yakama Nation shall notify Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

F. If Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, Yakama Nation shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at Contractor's expense.

G. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this Agreement, Contractor shall:

- (1) Obtain all warranties that would be given in normal commercial practice;
- (2) Require all warranties to be executed, in writing, for the benefit of Yakama Nation, if directed by Yakama Nation; and
- (3) Enforce all warranties for the benefit of Yakama Nation, if directed by Yakama Nation.

H. Unless a defect is caused by the negligence of Contractor or subcontractor or supplier at any tier, Contractor shall not be liable for the repair of any defects of material or design furnished by Yakama Nation nor for the repair of any damage that results from any defect in Yakama Nation-furnished material or design.

- (1) This warranty shall not limit Yakama Nation's rights under the Inspection and Acceptance clause of this Agreement with respect to latent defects, gross mistakes, or fraud.

29. TAXES

The compensation for Services performed under this Agreement shall include all applicable Tribal, Federal, State, and local taxes and duties. Depending on the location and nature of the Services provided, when applicable, Yakama Nation shall provide Contractor a single use Tax Exemption Certificate.

30. TERMINATION

A. *Notice.* Yakama Nation may terminate all or any part of this Agreement, at any time, with or without cause, upon written notice to Contractor. Upon receipt of the termination notice, Contractor shall promptly stop work on the terminated portion of the Agreement. Contractor obligations shall be consistent with those set forth above in the Stop Work Order clause of this Agreement.

B. *Breach.* In the event of termination for breach or violation of the terms and provisions of this Agreement, Yakama Nation, to the extent permitted by applicable law, shall be entitled to enforce its rights under this Agreement, and recover its court costs and reasonable attorney's fees, as determined by the court. The foregoing shall not in any way limit or restrict any right or remedy at law or equity which would otherwise be available to Yakama Nation, including, but not limited to, the right to contract with other qualified persons to complete the performance of services identified in or called for by this Agreement.

C. *Termination By Tribal Council Executive Committee.* Notwithstanding anything herein to the contrary, Contractor understands and agrees that the Yakama Nation Tribal Council Executive Committee may immediately terminate this Agreement by written notice.

D *Effect of Complete Termination.* Upon the complete termination of this Agreement, the liability of the Parties for the further performance of this Agreement shall cease, but the Parties shall not be relieved of the duty to perform their obligations up to the date of termination.

E. *Effect of Partial Termination.* The compensation amount shall be revised as a result of a partial termination under this section. On fixed-price contracts the revised amount shall not exceed the pre-termination contract price plus reasonable termination expenses. On cost-reimbursement contracts the revised amount shall not exceed the total of allowable and allocable costs of performance prior to termination plus termination expenses plus an adjustment of the fee on the terminated portion of the Agreement. No payment will be made for anticipated profits on the terminated portion, or consequential damages, of this Agreement. Contractor shall submit a settlement proposal within thirty (30) days of the notice of termination.

31. FORCE MAJEURE

This Agreement is subject to force majeure, and is contingent on strikes, accidents, acts of God, weather conditions, fire regulations, the actions of any government, including funding and/or budgetary decisions, and other circumstances which are beyond the control of the parties. If the terms and conditions of this Agreement are unable to be performed as a result of any cause of force majeure, then this Agreement shall be void, without penalty to any party for such non-performance.

32. NOTICE

Notice to Contractor shall consist of a letter, delivered postage prepaid, addressed to:

[Contractor's Legal Agent's Name]
[Contractor Name]
[Address No. 1]
[Address No. 2]

Notice to Yakama Nation shall consist of a letter, delivered postage prepaid, addressed to:

JoDe L. Goudy, Chairman
Yakama Tribal Council
PO Box 151 / 401 Fort Road
Toppenish, WA 98948

With courtesy copies to Yakama Nation's Designated Representative detailed below, and the Lead Attorney of Yakama Nation's Office of Legal Counsel at P.O. Box 150, Toppenish, WA 98948.

Either party may from time to time change its designated address for notice, or designated contact(s) for notice, by giving the other party reasonable notice of such change.

33. SUPERVISION OF CONTRACTOR/DESIGNATED REPRESENTATIVE

Contractor shall act under the supervision of the following Designated Representative of Yakama Nation in performing services under this Agreement:

Name:	
Address:	

Phone:	
Email:	

The Designated Representative is designated for project management purposes only, and does not have authority to authorize any changes, modifications or addendums to this Agreement, nor does the Designated Representative have signing authority on behalf of Yakama Nation. Yakama Nation shall provide Contractor reasonable notice if there is a change in the Designated Representative.

34. COMPLIANCE PROVISIONS

A. *Discrimination.* Contractor shall not discriminate against any employee or applicant for employment because of handicap, race, age, religion, or sex. Contractor will take affirmative steps to ensure that applicants are employed, and that employees are treated fairly during employment, without regard to their handicap, race, age, religion, or sex.

B. *Indian Preference.* Notwithstanding the above, Contractor shall, for all work performed on or near the Yakama Reservation pursuant to this Agreement, and consistent with Section 703(i) of the 1964 Civil Rights Act, give preference in employment (including any authorized subcontracts) to equally qualified Indians regardless of their handicap, age, religion or sex. To the extent feasible and consistent with the efficient performance of this Agreement, Contractor shall provide employment and training opportunities to Indians that are not fully qualified to perform under this Agreement, regardless of their handicap, age, religion or sex. Further, Contractor shall comply with any and all applicable Indian preference laws and requirements established by Yakama Nation, including those set forth in the Yakama Nation Tribal Employment Rights Ordinance ("TERO"), as amended (Yakama Revised Law & Order Codes, Title 71).

35. JURISDICTION & VENUE

The validity, interpretation, and performance of this Agreement, and any and all written instruments, agreements, specifications and other writings of whatever nature which relate to or are part of this Agreement, shall be governed by and construed in accordance with the laws of Yakama Nation. Both Parties understand and agree that this Agreement establishes a consensual business relationship between the Parties for purposes of Yakama Tribal Court jurisdiction. Venue of any court action filed to enforce or interpret the provisions of this Agreement shall be exclusively in Yakama Nation Tribal Court(s). In the event of litigation to enforce the provisions of this Agreement, the prevailing party shall be entitled to reasonable legal fees and expenses in addition to any other relief allowed.

36. DISPUTE RESOLUTION

A. *Meet and Confer Meeting.* In the event that a dispute arises between the Parties over the performance, interpretation, or enforcement of this Agreement, the Parties in the first instance shall attempt in good faith to resolve the dispute informally by mutual Agreement in a face-to-face meet and confer meeting. All offers, promises, conduct and statements, whether oral or written, made in the course of the meet and confer meeting by any of the Parties, their agents, employees, experts and attorneys shall be considered confidential, privileged and inadmissible for any purpose, including impeachment, in any other proceeding involving the Parties, provided that evidence that is otherwise admissible or discoverable shall not be rendered inadmissible or non-discoverable as a result of its use in the meet and confer meeting.

B. *By Tribal Council Chairman.* If the Parties are unable to resolve the dispute during the meet and confer meeting, the aggrieved party shall submit the matter, in writing, to the Chairman of the Yakama Nation Tribal Council. A copy of the aggrieved party's submission shall be served upon the other party in accordance with the notice provisions of this Agreement. The Chairman shall promptly convene a meeting of the Parties, which shall be held in Toppenish, Washington, to resolve the matter. The decision of the Chairman shall be final and binding upon both Parties. Provided, however, that nothing shall operate to limit or prohibit Yakama Nation from otherwise enforcing its rights under this Agreement. In the event that the Chairman has a conflict of interest that would prevent her/him from hearing the dispute, s/he may, at her/his sole discretion, either decline to hear the dispute, or appoint an alternate Tribal Leader or Elder to serve in his/her place.

C. Nothing in this section shall operate to prohibit Yakama Nation from enforcing its rights under this Agreement in a court of appropriate jurisdiction. Yakama Nation may at its own election seek recovery of monetary damages from Contractor's breach of any terms in this Agreement.

37. GENERAL TERMS

A. *Headings.* Headings are provided for convenience and do not affect the meaning of the provisions to which they are affixed.

B. *Severability.* If any term of this Agreement is to any extent illegal, otherwise invalid, or incapable of being enforced, such term shall be excluded to the extent of such invalidity or unenforceability; all other terms hereof shall remain in full force and effect; and, to the extent permitted and possible, the invalid or unenforceable term shall be deemed replaced by a term that is valid and enforceable and that comes closest to expressing the intention of such invalid or unenforceable term.

C. *Changes to the Agreement.* No change, amendment, modification, or addendum to this Agreement shall be valid unless it is in writing and executed by authorized representatives of both Parties.

D. *Additional Services.* Except as otherwise provided in this Agreement, no payment for additional services shall be made unless such services and the price therefore have been requested and authorized in advance in writing by Yakama Nation.

E. *Survival.* The requirements of Section 4 (Property Developed by Contractor), Section 6 (Maintenance & Retention of Records; Financial Management for Accounting & Audits), Section 10 (Indemnification), Section 28 (Warranty-Construction) and Section 36 (Dispute Resolution) of this Agreement shall survive termination of this Agreement.

F. *No General Waiver.* Any waiver or failure of the Parties to enforce or insist upon any term in this Agreement does not constitute a general waiver or relinquishment of that term.

G. *No Construction Against Drafter.* Each party has participated in negotiating and drafting this Agreement. If any ambiguity or question of intent or interpretation arises, this Agreement is to be construed as if the Parties had drafted it jointly, as opposed to being construed against one party because it was responsible for drafting one or more provisions.

H. *Execution.* This Agreement may be executed in counterparts, electronically, or by facsimile.

38. ENTIRE AGREEMENT

This Agreement incorporates all the agreements, covenants and understandings between the Parties. No agreement or understanding, verbal or otherwise, of the Parties regarding their responsibilities under this Agreement shall be valid or enforceable unless embodied in this Agreement.

The following Exhibits are incorporated by reference into this Agreement:

- Exhibit "A" – Project Overview & Scope of Work
- Exhibit "B" – Budget
- Exhibit "C" – Payment
- Exhibit "D" – Project Planset
- Exhibit "E" -- Daily Equipment Standby Rate

39. SOVEREIGN IMMUNITY

Notwithstanding any other terms or provisions of this Agreement, Contractor understands and agrees that Yakama Nation, by entering into this Agreement, does not waive its sovereign immunity from suit, nor does it waive, alter, or otherwise diminish its rights, privileges, remedies or services guaranteed by the Treaty with the Yakamas of 1855 (12 Stat. 951).

40. SPECIAL PROVISIONS

In addition to the forgoing terms and conditions, the following requirements are agreed to and shall apply to this Agreement:

A. [Mark as n/a, or insert special provision text.]

IN WITNESS WHEREOF, we set our hands and seals:

[Signature page(s) to follow.]

CONFEDERATED TRIBES & BANDS OF THE YAKAMA NATION:

By:_____

Date:_____

Name: JoDe Goudy (or authorized designee)

Title: Yakama Nation Tribal Council Chairman

CONTRACTOR NAME:

EIN #

By:_____

Date:_____

Name:

Title:

EXHIBIT A

Project Overview and Scope of Work

1. Background:

Yakama Nation Fisheries (Owner) is conducting a salmon habitat restoration project along Nason Creek, tributary to the Wenatchee River known as the Nason Creek Kahler Stream & Floodplain Enhancement Project. This project is funded through the Columbia River Fish Accords, which provides dedicated funding from Bonneville Power Administration to Yakama Nation Fisheries for the purposes of protecting and improving salmon habitat in the natal tributaries of the Upper Columbia Basin. This project has been developed under the 2007 Salmon Recovery Plan framework, in coordination with private landowners, the Nason Creek Kahler Reach Assessment and the Upper Columbia Salmon Recovery Board Regional Technical Team's Revised Biological Strategy.

The project has been developed by professional engineers. A stamped Engineer's Construction Plan Set has been produced to describe the work being performed under this contract. Taken together, multiple accompanying Exhibits to this Exhibit A provide the full Scope of Work to be executed per the terms of this contract.

The attached **Exhibit B** provides the contract Line Item Budget which is referenced to the work tasks described on the Specifications Sheet in **Exhibit D**. **Exhibit C** provides a payment schedule and requirements associated with this contract.

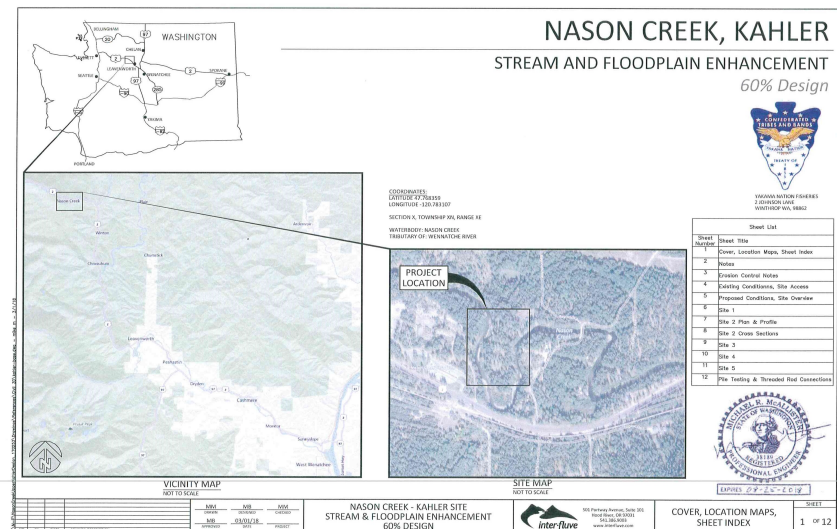
2. Designated Representative:

The Owner's Designated Representatives for this project include Yakama Nation Habitat Biologist Jason Breidert, as well as other Yakama Nation Habitat Biologists associated with the Yakama Nation Upper Columbia Habitat Restoration Project (UCHRP) and construction oversight staff provided by the engineering firm who produced the project planset; Interfluve Inc.

3. Location

The project will take place on private land at the following address: 19195 REYNOLDS AVE LEAVENWORTH, WA 98826

Reynolds Ave turns off of USFS Rd 6910. Rd 6910 hits US Hwy 2 east of the DOT Rest Area



4. **Project Tasks:**

All tasks will be completed as per **Exhibit D**. Major project elements include but are not limited to the following:

- TESC, SPCC Plan and Implementation
- Mobilization
- Cofferdam
- Pumping
- Large Woody Material Placement
- Spoils Placement
- Anchoring
- Excavation Including Floodplain Habitat
- Log Crib Installation

5. **Project Schedule and Key Deliverables:**

This project will occur on private land. Work hours permitted will be from 7 AM to Sunset.

Environmental permits for this project require some work be performed during the normal in-water work window for Nason Creek to avoid adverse impacts to spawning salmonids and fertilized redds.

Environmental permits will dictate the implementation timeline for portions of the project that could affect aquatic habitats. The typical in-water work window for this portion of Nason Creek is July 1 to July 31.

6. **Contractor Obligations:**

The Contractor shall furnish all supervision, labor, equipment and tools necessary to complete the project as described in **Exhibit D**.

7. **Consistent Satisfactory Progress**

Consistent satisfactory progress in this project will be required. Satisfactory progress will be measured by both the quality and quantity of work. If for any reason no work is performed, the Contractor may be given a notice of contract cancellation. Consistent satisfactory progress will also be determined by the Contractor's demonstrated ability to perform all work tasks described in **Exhibit D**. If it appears that the Contractor is unable to complete the project tasks within the permitting work window, the Contractor may

be given a notice of contract cancellation. The Yakama Nation's designated representative will monitor progress closely.

8. Fish Removal

In-water construction activities will require fish removal of all isolated in-water work sites. Fish removal will be conducted in a timely manner by the Owner's Designated Representatives and the time taken to implement proper fish removal protocols will be considered incidental to the contractor's work tasks.

9. Fire Suppression

The contractor will be familiar with and prepared for the requirements associated with IFPL Levels II & III and the restrictions associated with those. The contractor may seek to acquire IFPL shut down exemptions to allow work to continue on schedule.

10. Road Signage

The Contractor will observe all road signage regulations regardless of the project location and as per Exhibit D if applicable. In addition, the contractor will be responsible for keeping equipment out of the right-of-way. Dust abatement will be of utmost importance and will be required during all ground disturbing activities.

11. Utilities Location

The Contractor will locate all utilities prior to any excavation.

12. Communication with Landowners

The Contractor expressly agrees that Contractor and his staff will not communicate with the Landowner in any manner, whether it be in regard to the project or otherwise, without express permission from, or in the presence of the Designated Representative.

13. Exclusivity

During the term of this Agreement, including time taken for mobilization and demobilization of construction equipment, Contractor shall not conduct any work on the property designated in this Agreement unless so directed by the Designated Representative. Contractor shall require in all contracts with subcontractors that subcontractors not conduct any work on the property designated in this Agreement unless so directed by the Designated Representative. Any additional work conducted on the property designated in this Agreement by Contractor without the express consent of the Designated Representative shall constitute a material breach of this Agreement, thereby relieving the Yakama Nation from all payment obligations to the Contractor.

EXHIBIT B

Budget

[Attach the budget for the work to be performed. The total compensation amount shown in this budget must be consistent with the total compensation amount listed in Section 3 of the Agreement.]

[If there are separate subtotal amounts allocated for services and expenses, make sure to note these, along with any applicable hourly rate expectations, or item/activity cost expectations.]

EXHIBIT C

Payment

1. Payment Schedule

- ☐ **Progress:** The Contractor shall submit a separate bill for each major project task element after the work has been completed, reviewed and accepted by Yakama Nation's Designated Representative. The Contractor is encouraged to invoice monthly when payment is necessary.
- ☒ **Percentage:** The Contractor shall invoice monthly and will be allowed to submit a bill for percentage of work completed after the work has been reviewed and accepted by Yakama Nation's Designated Representative.
- ☐ **Actual Work Completed:** The Contractor shall invoice monthly and will be allowed to submit a bill for actual work completed.
- ☐ **Alternative Schedule:** The Contractor shall invoice and be allowed to submit a bill as follow: [alternate payment plan description, e.g., 30% deposit with balance due after work has been reviewed and accepted by Yakama Nation's Designated Representative]

2. Tax Exempt Certificate

Due to the location and nature of the Services being provided by Contractor:

☐ The Contractor **has not** been given a Tax Exemption Certificate

☒ The Contractor **has** been given a single use Tax Exemption Certificate. Due to the nature of this Agreement, as a fisheries enhancement project being undertaken by a federally recognized Treaty Tribe, the Contractor should be allowed to use the tax-exempt certificate that is included with this document.

3. Davis Bacon Wages

Davis Bacon Wages Apply to this contract. The contractor will adhere to the Davis Bacon rules and comply and submit all necessary paperwork and certified payroll to the Yakama Nation with each invoice submitted.

Exhibit D

NASON CREEK, KAHLER

STREAM AND FLOODPLAIN ENHANCEMENT

60% Design



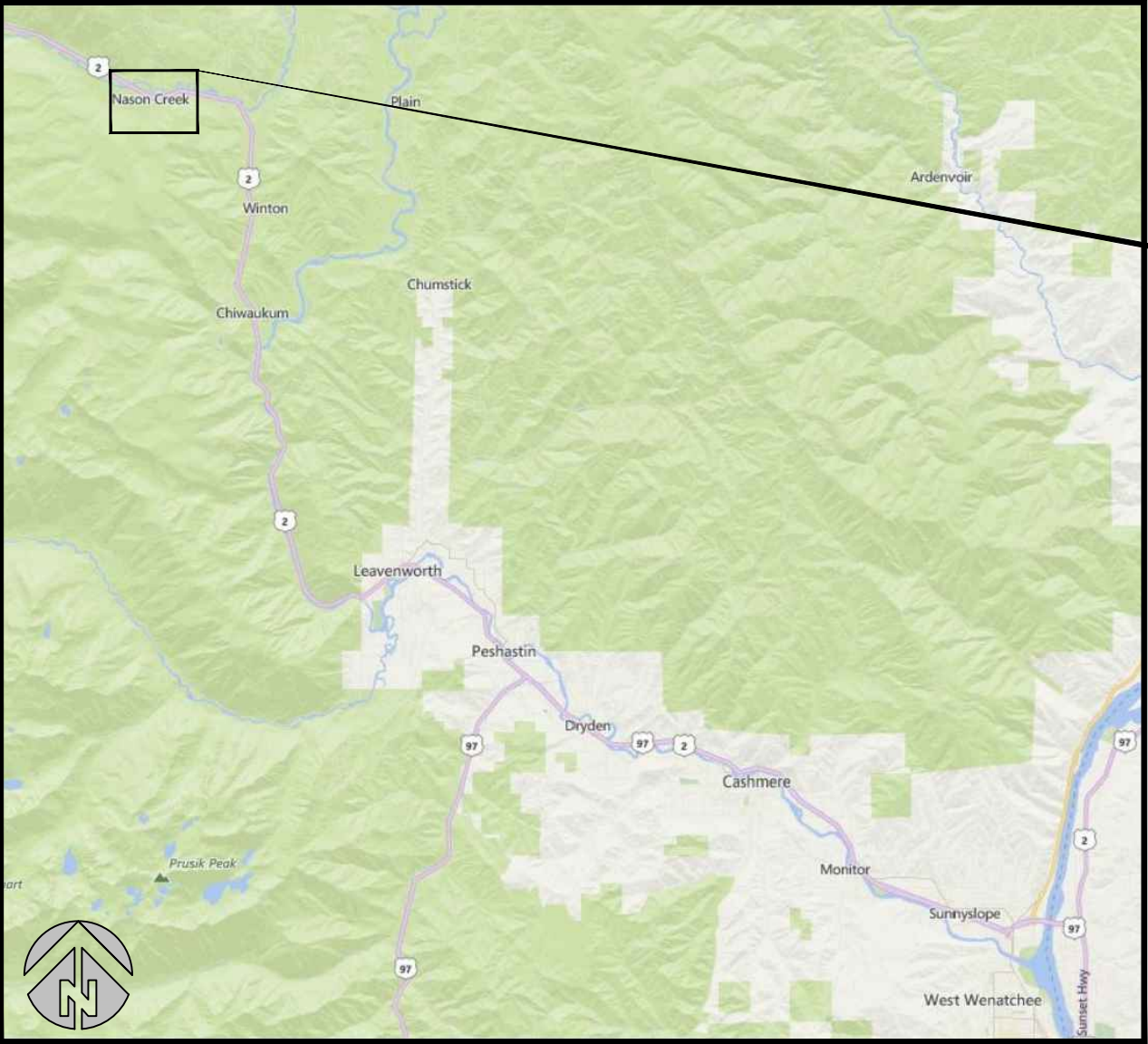
YAKAMA NATION FISHERIES
2 JOHNSON LANE
WINTHROP WA, 98862

COORDINATES:
LATITUDE 47.768359
LONGITUDE -120.783107

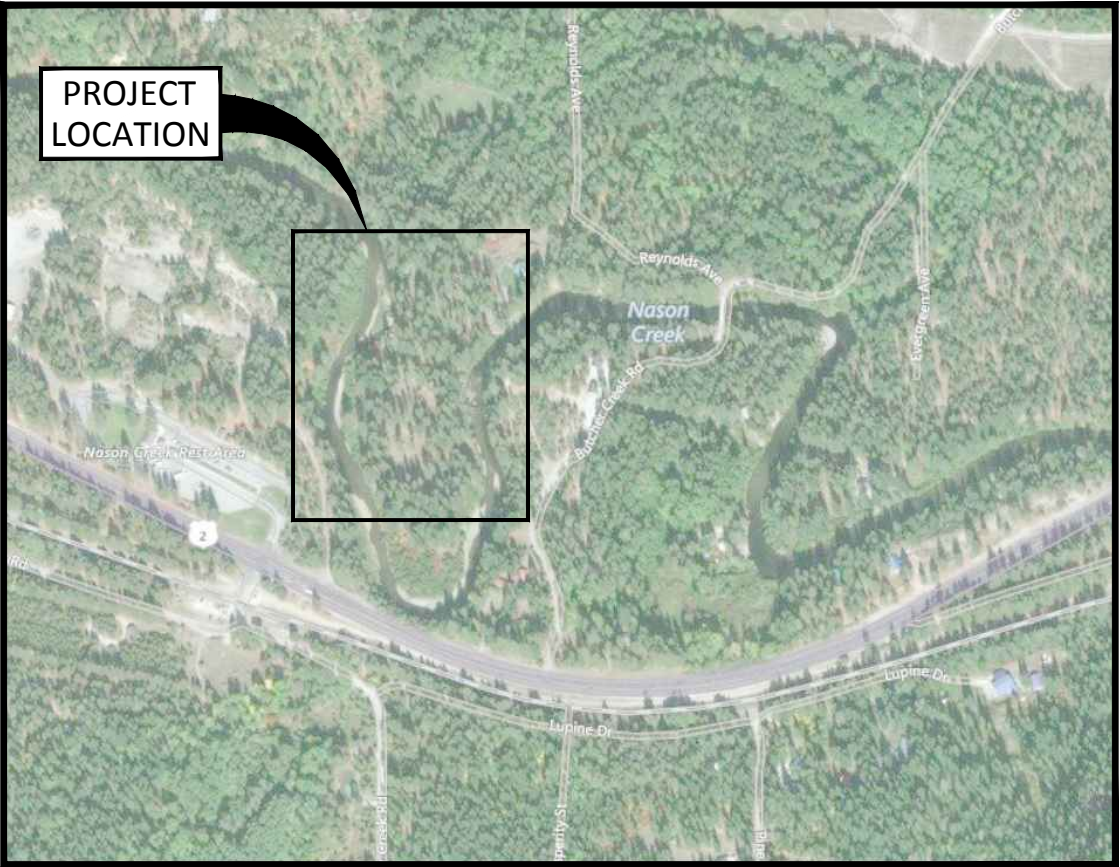
SECTION X, TOWNSHIP XN, RANGE XE

WATERBODY: NASON CREEK
TRIBUTARY OF: WENNATCHE RIVER

Sheet List	
Sheet Number	Sheet Title
1	Cover, Location Maps, Sheet Index
2	Notes
3	Erosion Control Notes
4	Existing Conditionns, Site Access
5	Proposed Conditions, Site Overview
6	Site 1
7	Site 2 Plan & Profile
8	Site 2 Cross Sections
9	Site 3
10	Site 4
11	Site 5
12	Pile Testing & Threaded Rod Connections



VICINITY MAP
NOT TO SCALE



SITE MAP
NOT TO SCALE

G:\M-P\NasonCreek\UpperKahlerDesign_170253\Drawings\References\Civil_3D\Kahler-base.dwg - mike.m - 3/1/18

NO.	BY	DATE	REVISION DESCRIPTION

MM	MB	MM
DRAWN	DESIGNED	CHECKED
MB	03/01/18	
APPROVED	DATE	PROJECT

NASON CREEK - KAHLER SITE
STREAM & FLOODPLAIN ENHANCEMENT
60% DESIGN



501 Portway Avenue, Suite 101
Hood River, OR 97031
541.386.9003
www.interfluve.com

COVER, LOCATION MAPS,
SHEET INDEX

G:\M-P\NasonCreek\UpperKahlerDesign_170253\Drawings\References\Civil_3D\Kahler-base.dwg – mlike_m – 3/1/18

IT IS STRONGLY SUGGESTED THAT THE CONTRACTOR ATTEND A PRE-BID SITE MEETING (SPRING 2018).

THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING WITH THE OWNER AND OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION.

ALL WORK SHALL CONFORM TO THE CURRENT EDITIONS OF STANDARD PLANS AND SPECIFICATIONS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION (WSDOT), AND LOCAL STANDARDS UNLESS INDICATED OTHERWISE BY THE CONTRACT DOCUMENTS. IN CASE OF A CONFLICT BETWEEN THE REGULATORY STANDARDS OR SPECIFICATIONS, THE MORE STRINGENT SHALL PREVAIL.

IN CASE OF DISCREPANCY, BETWEEN NOTES, LOCAL REGULATIONS, OR OTHER CONTRACT DOCUMENTATION, CONTRACTOR SHALL OBTAIN CLARIFICATION/DIRECTION FROM OWNER.

EXISTING DATA

TOPOGRAPHIC SURVEY COLLECTED BY TETRATECH (2016) AND INTER-FLUVE, INC. (2017) BY RTK GPS AND TOTAL STATION. DATA IS REFERENCED TO NAD83 WASHINGTON STATE PLANE, NORTH ZONE US FEET NAVD 88.

PROPERTY BOUNDARIES PROVIDED BY CHELAN COUNTY, 2015.

WETLAND BOUNDARIES DISPLAYED IN THIS SET ARE THE RESULT OF A WETLAND ASSESSMENT PERFORMED BY INTER-FLUVE, INC. IN 2017.

THE ORDINARY HIGH WATER (OHW) AND APPROXIMATE LOW WATER LINES DISPLAYED IN THE DESIGN PACKAGE WERE DELINEATED BY INTER-FLUVE STAFF, AND ARE BASED UPON ANALYSIS, MODELING AND BEST PROFESSIONAL JUDGEMENT.

HYDRAULIC MODELING BY INTER-FLUVE USING USACE HEC-RAS (5.0.3). MODEL CALIBRATED USING SURVEYED WATER SURFACE ELEVATIONS AND EXISTING HIGH WATER MARKS.

SOILS

NASON CREEK GRAVEL AND FLOODPLAIN SOILS.

UTILITIES

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR HAVING UTILITIES LOCATED PRIOR TO CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE AFFECTED UTILITY SERVICE TO REPORT ANY DAMAGED OR DESTROYED UTILITIES. THE CONTRACTOR SHALL PROVIDE EQUIPMENT OR LABOR TO AID THE AFFECTED UTILITY SERVICE IN REPAIRING DAMAGED OR DESTROYED UTILITIES AT NO COST TO THE OWNER.

WDFW IN-WATER WORK PERIODS

WORK SHALL OCCUR DURING THE PERMITTED IN-WATER WORK PERIOD AS STATED IN THE HYDRAULIC PROJECT APPROVAL.

FISH RESCUE

ALL FISH RESCUE EFFORTS SHALL BE SUPERVISED BY A QUALIFIED FISHERIES/AQUATIC BIOLOGIST EXPERIENCED WITH THE COLLECTION AND HANDLING OF SALMONID FISHES FROM CONSTRUCTION SITES.

ALL FISH TRAPPED IN RESIDUAL POOLS WITHIN THE PROJECT AREA SHALL BE CAREFULLY COLLECTED BY SEINE AND/OR DIP NETS AND PLACED IN CLEAN TRANSFER CONTAINERS WITH ADEQUATE VOLUME OF WATER AND HELD WITHIN NO LONGER THAN 10 MINUTES.

CAPTURED FISHES SHALL BE IMMEDIATELY RELEASED INTO THE RIVER.

CULTURAL RESOURCES

IF ANY ARCHAEOLOGICAL RESOURCES AND/OR ARTIFACTS ARE ENCOUNTERED DURING CONSTRUCTION ALL CONSTRUCTION ACTIVITY SHALL IMMEDIATELY CEASE AND THE OWNER SHALL BE CONTACTED.

TREE SALVAGE

ALL SAPLING AND TREES TO BE REMOVED SHALL BE APPROVED AND CLEARLY MARKED BY THE OWNER'S REPRESENTATIVE.

ALL REMOVED VEGETATION SHALL BE INCORPORATED INTO LOG JAM STRUCTURES AS DIRECTED BY THE OWNER'S REPRESENTATIVE. IF EXCESS MATERIAL NEEDS DISPOSAL OUTSIDE OF CHANNEL WORK, IT SHALL BE DISTRIBUTED ON THE FLOODPLAIN AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

ALL TREES REMOVED WITHIN CLEARING LIMITS SHALL BE REMOVED WHOLE WITH ROOTS INTACT AND UTILIZED IN THE SIDE CHANNEL CONSTRUCTION OR IN MAINSTEM WORK AS DIRECTED BY OWNER'S REPRESENTATIVE.

REMOVE SOIL FROM ROOTS OF SALVAGED TREES BEFORE PLACEMENT IN THE WATERWAY.

LIVE TREES

ALL TREES NOT MARKED FOR REMOVAL SHALL BE PRESERVED AND UNDISTURBED. CONSTRUCTION ACTIVITY SHALL NOT DEBARK OR DAMAGE LIVE TREES.

KEEP OUT OF DRIP LINE OF ALL PRESERVED EXISTING TREES.

IMPORTED LOGS

WOOD SHALL BE PROVIDED BY THE OWNER.

PLANTINGS

OWNER SUPPLIED PLANTS WILL BE DELIVERED ON THE DAY OF INSTALLATION. CONTRACTOR SHALL STORE PLANTS IN SHADE AND WATER THREE TIMES DAILY UNTIL INSTALLED. PLANTS SHALL BE INSTALLED DURING CONSTRUCTION AS DIRECTED BY THE OWNER.

CONSTRUCTION ACCESS

THE CONTRACTOR IS ADVISED THAT ACCESS TO THE SITE WILL BE BY RURAL ROADS OF LIMITED WIDTH.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OBTAINING ANY REQUIRED TRAFFIC CONTROL OR ACCESS PERMITS, AND PROVIDING REQUIRED TRAFFIC CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, SIGNAGE AND FLAGGERS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSERVATION MEASURES DETAILED IN THE FOREST SERVICE ROAD USE PERMIT.

ALL EQUIPMENT, MATERIALS AND PERSONNEL SHALL REMAIN WITHIN THE LIMITS OF DISTURBANCE.

THE CONTRACTOR SHALL KEEP THE WORK AREAS IN A NEAT AND CLEAN CONDITION FREE OF DEBRIS AND LITTER FOR THE DURATION OF THE PROJECT.

TEMPORARY ACCESS ROUTES IN AREAS PRONE TO INUNDATION DURING THE IN-WATER WORK WINDOW SHALL BE DECOMMISSIONED BEFORE THE END OF THE IN-WATER WORK WINDOW.

ALL WOODY DEBRIS AND ALL SHRUBS AND TREES REMOVED FROM ACCESS SHALL BE SALVAGED FOR USE IN LOG STRUCTURES.

CONSTRUCTION STAKING

THE OWNER OR DESIGNATED REPRESENTATIVE WILL INSTALL STAKES AND OR FLAGGING TO DELINEATE EQUIPMENT ENTRY AND EXIT POINTS, STAGING AND STOCKPILE AREAS, AND PROJECT LIMITS. THE OWNER WILL INSTALL GRADE STAKES, AND ELEVATION CONTROL POINTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING DAMAGED OR MISSING STAKES.

CONTRACTOR SHALL MEET WITH THE OWNER AND OWNER'S REPRESENTATIVE TO DEFINE AND MARK LIMITS OF DISTURBANCE PRIOR TO MOBILIZATION OF EQUIPMENT OR MATERIALS ONTO THE SITE.

SOME FIELD ADJUSTMENTS TO THE LINES AND GRADES ARE TO BE EXPECTED. LOCATION, ALIGNMENT, AND ELEVATION OF LOGS AND LOGS WITH ROOTWADS ARE SUBJECT TO ADJUSTMENT BASED ON FIELD CONDITIONS, AND MATERIAL SIZE.

STAGING, STORAGE, AND STOCKPILE AREAS

STAGING AREAS (USED FOR CONSTRUCTION EQUIPMENT STORAGE, VEHICLE STORAGE, FUELING, SERVICING, AND HAZARDOUS MATERIAL STORAGE) SHALL BE 150 FEET OR MORE FROM ANY NATURAL WATER BODY OR WETLAND, OR ON AN ADJACENT, ESTABLISHED ROAD AREA IN A LOCATION AND MANNER THAT WILL PRECLUDE EROSION INTO OR CONTAMINATION OF THE STREAM OR FLOODPLAIN.

EXCAVATED MATERIALS SHALL BE STOCKPILED NEATLY IN AN APPROVED LOCATION WITHIN THE STOCKPILE AND STAGING AREA. AT COMPLETION OF WORK, THE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY PERMITS AND FEES REQUIRED FOR LEGAL DISPOSAL.

NATURAL MATERIALS USED FOR IMPLEMENTATION OF AQUATIC RESTORATION, SUCH AS LARGE WOOD, SLASH, GRAVEL, AND TOPSOIL, MAY BE STAGED WITHIN THE 100-YEAR FLOODPLAIN.

ANY LARGE WOOD, TOPSOIL, AND NATIVE CHANNEL MATERIAL DISPLACED BY CONSTRUCTION SHALL BE STOCKPILED FOR USE DURING SITE RESTORATION AT A SPECIFICALLY IDENTIFIED AND FLAGGED AREA.

ANY MATERIAL NOT USED IN RESTORATION, AND NOT NATIVE TO THE FLOODPLAIN, SHALL BE REMOVED TO A LOCATION OUTSIDE OF THE 100-YEAR FLOODPLAIN FOR DISPOSAL.

EQUIPMENT

MECHANIZED EQUIPMENT AND VEHICLES SHALL BE SELECTED, OPERATED, AND MAINTAINED IN A MANNER THAT MINIMIZES ADVERSE EFFECTS ON THE ENVIRONMENT (E.G., MINIMALLY-SIZED, LOW PRESSURE TIRES; MINIMAL HARD-TURN PATHS FOR TRACKED VEHICLES; TEMPORARY MATS OR PLATES WITHIN WET AREAS OR ON SENSITIVE SOILS). ALL VEHICLES AND OTHER MECHANIZED EQUIPMENT SHALL BE:

- STORED, FUELED, AND MAINTAINED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM ANY NATURAL WATER BODY OR WETLAND OR ON AN ADJACENT, ESTABLISHED ROAD AREA
- REFUELED IN A VEHICLE STAGING AREA PLACED 150 FEET OR MORE FROM A NATURAL WATERBODY OR WETLAND, OR IN AN ISOLATED HARD ZONE, SUCH AS A PAVED PARKING LOT OR ADJACENT, ESTABLISHED ROAD (THIS MEASURE APPLIES ONLY TO GAS-POWERED EQUIPMENT WITH TANKS LARGER THAN 5 GALLONS)
- BIODEGRADABLE LUBRICANTS AND FLUIDS SHALL BE USED IN EQUIPMENT OPERATING IN AND ADJACENT TO THE STREAM CHANNEL AND LIVE WATER.
- INSPECTED DAILY FOR FLUID LEAKS BEFORE LEAVING THE VEHICLE STAGING AREA FOR OPERATION WITHIN 150 FEET OF ANY NATURAL WATER BODY OR WETLAND
- THOROUGHLY CLEANED BEFORE OPERATION BELOW ORDINARY HIGH WATER, AND AS OFTEN AS NECESSARY DURING OPERATION, TO REMAIN GREASE FREE.

ABBREVIATIONS

APPROX CY	APPROXIMATE CUBIC YARDS
•	DEGREES
DIA or ø	DIAMETER
DBH	DIAMETER AT BREAST HEIGHT
EA	EACH
EL or ELEV	ELEVATION
ESC	EROSION AND SEDIMENT CONTROL
EXIST	EXISTING
FT or ’	FEET
FTR	FULLY THREADED ROD
HORIZ	HORIZONTAL
IN or ”	INCH
INV	INVERT
LWM	LARGE WOODY MATERIAL
MAX	MAXIMUM
MIN	MINIMUM
OHW	ORDINARY HIGH WATER
%	PERCENT
RMx	RIVER MILE x
STA	STATION
TBD	TO BE DETERMINED
TYP	TYPICAL
VERT	VERTICAL
WSE	WATER SURFACE ELEVATION
YR	YEAR

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EROSION CONTROL

CONTRACTOR SHALL BE SOLELY RESPONSIBLE AT OWN EXPENSE FOR PROVIDING AND MAINTAINING ALL NECESSARY EROSION CONTROL FACILITIES TO COMPLY WITH APPLICABLE EROSION CONTROL REGULATIONS AND TO MAINTAIN CLEAN ACCESS ROUTES.

EROSION/SEDIMENTATION CONTROL (ESC) PLAN

THE EROSION AND SEDIMENT CONTROL (ESC) PLAN PROVIDED IS FOR INFORMATIONAL PURPOSES ONLY, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING EROSION CONTROL MEASURES TO COMPLY WITH APPLICABLE REGULATIONS.

THE RECOMMENDATIONS FOR AN ESC PLAN INCLUDED HEREIN WILL PROVIDE GUIDELINES FOR THE CONTRACTOR TO DEVELOP AND IMPLEMENT AN ESC PLAN. THE CONTRACTOR'S ESC PLAN SHALL BE SUBMITTED TO THE OWNER PRIOR TO MOBILIZATION.

- A. THE IMPLEMENTATION OF AN ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION / LANDSCAPING IS ESTABLISHED.
- B. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF CONSTRUCTION.

ESC FACILITIES AS APPROXIMATELY SHOWN ON THIS PLAN ARE TO BE CONSTRUCTED PRIOR TO CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM.

STABILIZE SOILS AND PROTECT SLOPES

FROM MAY 1 THROUGH SEPTEMBER 30, ALL EXPOSED SOILS SHALL BE PROTECTED FROM EROSION BY MULCHING, PLASTIC SHEETING, HYDROSEED COVERING, OR OTHER APPROVED MEASURES WITHIN THREE DAYS OF GRADING. FROM OCTOBER 1 THROUGH APRIL 30, ALL EXPOSED SOILS MUST BE PROTECTED WITHIN 2 DAYS OF GRADING. SOILS SHALL BE STABILIZED BEFORE A WORK SHUTDOWN, HOLIDAY OR WEEKEND IF NEEDED BASED ON THE WEATHER FORECAST. SOIL STOCKPILES MUST BE STABILIZED AND PROTECTED WITH SEDIMENT TRAPPING MEASURES. MULCH AS SOON AS PRACTICAL ALL DISTURBED AREAS NOT INDICATED IN THE CONTRACT DOCUMENTS FOR OTHER PERMANENT STABILIZATION MEASURES. HAY, STRAW, AND MULCH USED ON SITE MUST BE 99.9% WEED-FREE.

DESIGN, CONSTRUCT, AND PHASE CUT AND FILL SLOPES IN A MANNER THAT WILL MINIMIZE EROSION. REDUCE SLOPE VELOCITIES ON DISTURBED SLOPES BY PROVIDING TEMPORARY BARRIERS. STORMWATER FROM OFF SITE SHOULD BE HANDLED SEPARATELY FROM STORMWATER GENERATED ON SITE.

AFTER FINAL SITE STABILIZATION

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY BMPS ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE REMOVED FROM THE SITE OR INCORPORATED INTO FINISHED GRADING. DISTURBED SOIL AREAS RESULTING FROM REMOVAL SHALL BE PERMANENTLY STABILIZED.

DUST CONTROL

THE CONTRACTOR SHALL CONTROL DUST FOR THE DURATION OF THE PROJECT. CONTROL MEASURES SHALL BE IN ACCORDANCE WITH APPLICABLE REGULATIONS.

INVASIVE SPECIES CONTROL

THE FOLLOWING MEASURES WILL BE FOLLOWED TO AVOID INTRODUCTION OF INVASIVE PLANTS AND NOXIOUS WEEDS INTO PROJECT AREAS:

PRIOR TO ENTERING THE SITE, ALL VEHICLES AND EQUIPMENT WILL BE POWER WASHED, ALLOWED TO FULLY DRY, AND INSPECTED TO MAKE SURE NO PLANTS, SOIL, OR OTHER ORGANIC MATERIAL ADHERES TO THE SURFACE.

WATERCRAFT, WADERS, BOOTS, AND ANY OTHER GEAR TO BE USED IN OR NEAR WATER WILL BE INSPECTED FOR AQUATIC INVASIVE SPECIES.

WADING BOOTS WITH FELT SOLES ARE NOT TO BE USED DUE TO THEIR PROPENSITY FOR AIDING IN THE TRANSFER OF INVASIVE SPECIES.

CONSTRUCTION DEWATERING

CONTRACTOR SHALL PERFORM CONSTRUCTION DEWATERING IN SUCH A MANNER AS TO AVOID THE RELEASE OF TURBID OR SEDIMENT-LADEN WATER IN ORDER TO PREVENT CONTAMINATION OR INCREASE TURBIDITY OF SURFACE WATERS. EXCAVATION OF DEWATERING SUMPS BEYOND LIMITS SHOWN SHALL BE AT NO ADDITIONAL COST. SEDIMENT LADEN WATER MAY BE PUMPED TO AN UPLAND DISCHARGE LOCATION AND ALLOWED TO SHEET FLOW THROUGH EXISTING VEGETATION BEFORE INFILTRATING INTO THE GROUND. IF THIS METHOD IS NOT SUFFICIENT TO PREVENT RETURN OF TURBID WATER TO SURFACE WATERS OR SENSITIVE FLOODPLAIN AREAS, A 'DIRT-BAG' OR SEDIMENT RETENTION STRUCTURE MAY BE REQUIRED AS NECESSARY TO COMPLY WITH LAWS AND PERMIT REQUIREMENTS AT NO ADDITIONAL COST.

CONTRACTOR SHALL PROVIDE, OPERATE, AND MAINTAIN NUMBER AND SIZE OF PUMPS AS NECESSARY TO ACHIEVE DEWATERING NEEDS. AT A MINIMUM, CONTRACTOR SHALL PROVIDE A 6" DRI-PRIME DIESEL POWERED PUMP AND A PORTABLE 2" PUMP. ADDITIONAL PUMPS AND OF DIFFERENT CAPACITIES MAY BE REQUIRED AT CONTRACTOR'S EXPENSE.

OWNER OR OWNER'S REPRESENTATIVE SHALL APPROVE DEWATERING DISCHARGE LOCATION PRIOR TO IMPLEMENTATION.

- A. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED AT NO ADDITIONAL COST FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- B. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- C. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 24 HOURS FOLLOWING A STORM EVENT.
- D. STABILIZED CONSTRUCTION ENTRANCES AND ADDITIONAL MEASURES MAY BE REQUIRED AND SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT.

SPILL PREVENTION, CONTROL, AND COUNTER MEASURES

THE USE OF MECHANIZED MACHINERY INCREASES THE RISK FOR ACCIDENTAL SPILLS OF FUEL, LUBRICANTS, HYDRAULIC FLUID, OR OTHER CONTAMINANTS INTO THE RIPARIAN ZONE OR DIRECTLY INTO THE WATER. THE PROJECT SPONSOR WILL ADHERE TO THE FOLLOWING MEASURES:

A DESCRIPTION OF HAZARDOUS MATERIALS THAT WILL BE USED, INCLUDING INVENTORY, STORAGE, AND HANDLING PROCEDURES WILL BE AVAILABLE ON-SITE.

WRITTEN PROCEDURES FOR NOTIFYING ENVIRONMENTAL RESPONSE AGENCIES WILL BE POSTED AT THE WORK SITE.

SPILL CONTAINMENT KITS (INCLUDING INSTRUCTIONS FOR CLEANUP AND DISPOSAL) ADEQUATE FOR THE TYPES AND QUANTITY OF HAZARDOUS MATERIALS USED AT THE SITE WILL BE AVAILABLE AT THE WORK SITE.

WORKERS WILL BE TRAINED IN SPILL CONTAINMENT PROCEDURES AND WILL BE INFORMED OF THE LOCATION OF SPILL CONTAINMENT KITS.

ANY WASTE LIQUIDS GENERATED AT THE STAGING AREAS WILL BE TEMPORARILY STORED UNDER AN IMPERVIOUS COVER, SUCH AS A TARPULIN, UNTIL THEY CAN BE PROPERLY TRANSPORTED TO AND DISPOSED OF AT A FACILITY THAT IS APPROVED FOR RECEIPT OF HAZARDOUS MATERIALS.

VEGETABLE BASED HYDRAULIC FLUIDS (BIODEGRADABLE OIL) WILL BE USED IN ANY VEHICLE THAT WILL BE OPERATED NEAR THE WATER.

INSPECTION AND MAINTENANCE

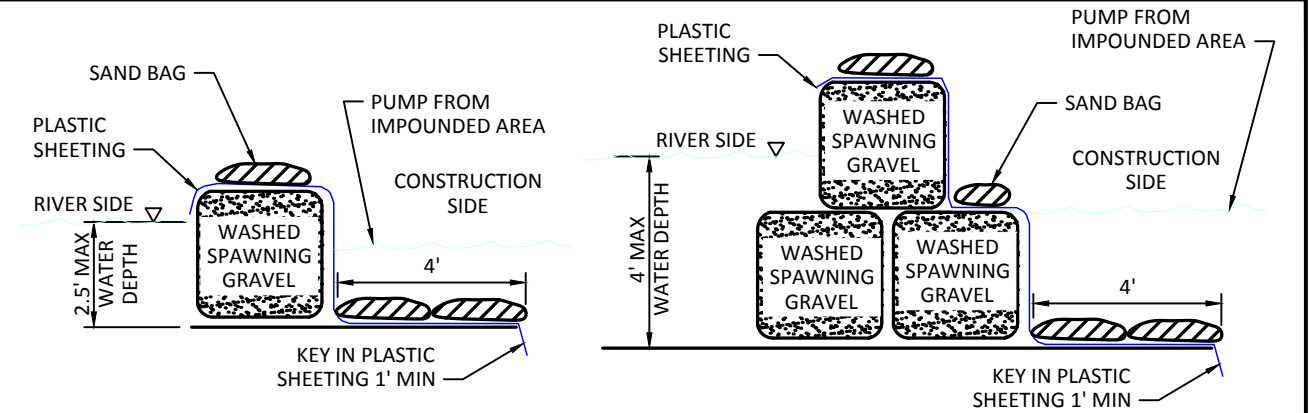
ALL ESC FACILITIES SHALL BE INSPECTED, MAINTAINED, AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL ESC FACILITIES SHALL BE INSPECTED DAILY AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN PER 24 HOUR PERIOD AND AFTER EVENTS EXCEEDING 2 HOURS DURATION.

CONTRACTOR'S ESC RECORD

WEEKLY REPORTS SUMMARIZING THE SCOPE OF INSPECTIONS, THE PERSONNEL CONDUCTING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN, AND ACTIONS TAKEN AS A RESULT OF THESE INSPECTIONS SHALL BE PREPARED AND RETAINED ON SITE BY THE CONTRACTOR. IN ADDITION, A RECORD OF THE FOLLOWING DATES SHALL BE INCLUDED IN THE REPORTS:

- WHEN MAJOR GRADING ACTIVITIES OCCUR,
- DATES OF RAINFALL EVENTS EITHER EXCEEDING 2 HOURS DURATION OR MORE THAN 0.5 INCHES/24 HOURS,
- WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON SITE, OR ON A PORTION OF THE SITE,
- WHEN STABILIZATION MEASURES ARE INITIATED FOR PORTIONS OF THE SITE.

ESC RECORDS SHALL BE MADE AVAILABLE TO THE OWNER AND OWNER'S REPRESENTATIVE ON REQUEST AND SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO APPLICATION FOR PAYMENT.



SINGLE LAYER COFFERDAM

(WATER DEPTH LESS THAN 2.5')

STACKED BULK BAG COFFERDAM

(WATER DEPTH GREATER THAN 2.5')

TEMPORARY COFFERDAM DETAILS

NOT TO SCALE

BULK BAG NOTES:

- BULK BAG COFFERDAM SHALL BE CONSTRUCTED OF SEVERAL UNITS OF BULK BAGS FILLED WITH WASHED SPAWNING GRAVEL, AND ABUTTED SIDE BY SIDE TO CREATE A ROW THAT ISOLATES THE CONSTRUCTION SITE FROM THE RIVER.
- IF WATER DEPTH EXCEEDS 85% OF THE BULK BAG HEIGHT, AN ADDITIONAL TOP ROW OF BULK BAGS SHALL BE INSTALLED, SUPPORTED BY TWO BOTTOM ROWS OF BULK BAGS.
- BULK BAG COFFERDAM SHALL BE SEALED BY COVERING THE COFFERDAM WITH PLASTIC SHEETING HELD IN PLACE BY STANDARD SANDBAGS PLACED IN ROWS ON TOP OF COFFERDAM, AND AT TOE OF COFFERDAM. THE PLASTIC SHEETING SHALL BE DRAPED ALONG THE CHANNEL BOTTOM ON THE WORK AREA SIDE OF THE COFFERDAM WITH OUTWARD EDGE OF SHEETING MINIMUM 4-FEET FROM TOE OF COFFERDAM. THE DRAPED PORTION OF PLASTIC SHEETING SHALL BE PINNED TO THE CHANNEL BED BY MINIMUM TWO ROWS OF STANDARD SANDBAGS.
- THE OUTWARD EDGE OF PLASTIC SHEETING ON WORK AREA SIDE SHALL BE TOED INTO THE CHANNEL BED MINIMUM 1-FT. TOEING IN THE OUTWARD EDGE OF PLASTIC SHEETING SHALL OCCUR AFTER THE COFFERDAM IS CLOSED TO PREVENT TURBIDITY RELEASE TO THE WATERWAY.
- IF POSSIBLE, THE COFFERDAM SHALL BE EXTENDED ONTO A GRAVEL BAR AND OUT OF THE WATER. IF THE END MUST BE TERMINATED AT THE RIVERBANK, THE COFFERDAM SHALL BE TIGHTLY SEALED TO THE GROUND BY PLASTIC SHEETING AND STANDARD SANDBAGS. MULTIPLE LAYERS OF SHEETING AND SANDBAGS MAY BE REQUIRED TO FORM A WATERTIGHT SEAL.
- BULK BAGS SHALL BE WATERPROOF CUBE-SHAPED POLYPROPYLENE WOVEN FABRIC BAGS WITH FULLY OPEN TOP, FLAT BOTTOM, FOUR LOOPS, MINIMUM 2-TON WEIGHT CAPACITY, MINIMUM 5:1 SAFETY FACTOR.
- PLASTIC SHEETING SHALL BE MINIMUM 6-MIL THICKNESS. ROLL LENGTH SHALL BE LONG ENOUGH TO ENSURE THAT ENTIRE LENGTH OF COFFERDAM WILL BE COVERED WITHOUT A SEAM. MINIMUM 12-FT WIDE ROLL SHALL BE USED FOR SINGLE LAYER BULK BAG COFFERDAM. MINIMUM 16-FT WIDE ROLL SHALL BE USED FOR 2-LAYER STACKED BULK BAG COFFERDAM.
- CONTRACTOR SHALL PROVIDE PUMPING SUFFICIENT FOR A NET INFLOW TO THE WORK AREA, AND DISCHARGE TURBID WATER TO UPLAND FLOODPLAIN.
- BULK BAG COFFERDAM SHALL BE COMPLETELY REMOVED AFTER CONSTRUCTION IS COMPLETED AND TURBIDITY HAS BEEN REMOVED. UPON OWNER'S REQUEST, SOME BULK BAGS WILL BE OPENED AND ENCLOSED SPAWNING GRAVEL APPLIED TO THE RIVER.
- ALTERNATE COFFERDAM MATERIALS AND CONFIGURATIONS MAY BE ALLOWED BUT SHALL NOT BE IMPLEMENTED WITHOUT REVIEW AND APPROVAL BY THE OWNER OR OWNER'S REPRESENTATIVE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND/OR VENDOR CUT SHEETS FOR SUBSTITUTIONS.
- IF NECESSARY, GAPS BETWEEN BULK BAGS SHALL BE FILLED WITH WASHED GRAVEL TO SEAL AND IMPROVE COFFER DAM SEAL. DISPOSAL OF ROCK WASH SHALL BE DETERMINED BY OWNER.

NO.	BY	DATE	REVISION DESCRIPTION	

MM	MB	MM
DRAWN	DESIGNED	CHECKED
MB	03/01/18	
APPROVED	DATE	PROJECT

NASON CREEK - KAHLER SITE
STREAM & FLOODPLAIN ENHANCEMENT
60% DESIGN



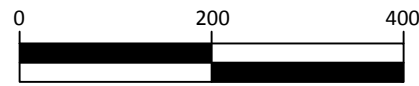
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EROSION CONTROL NOTES

SHEET

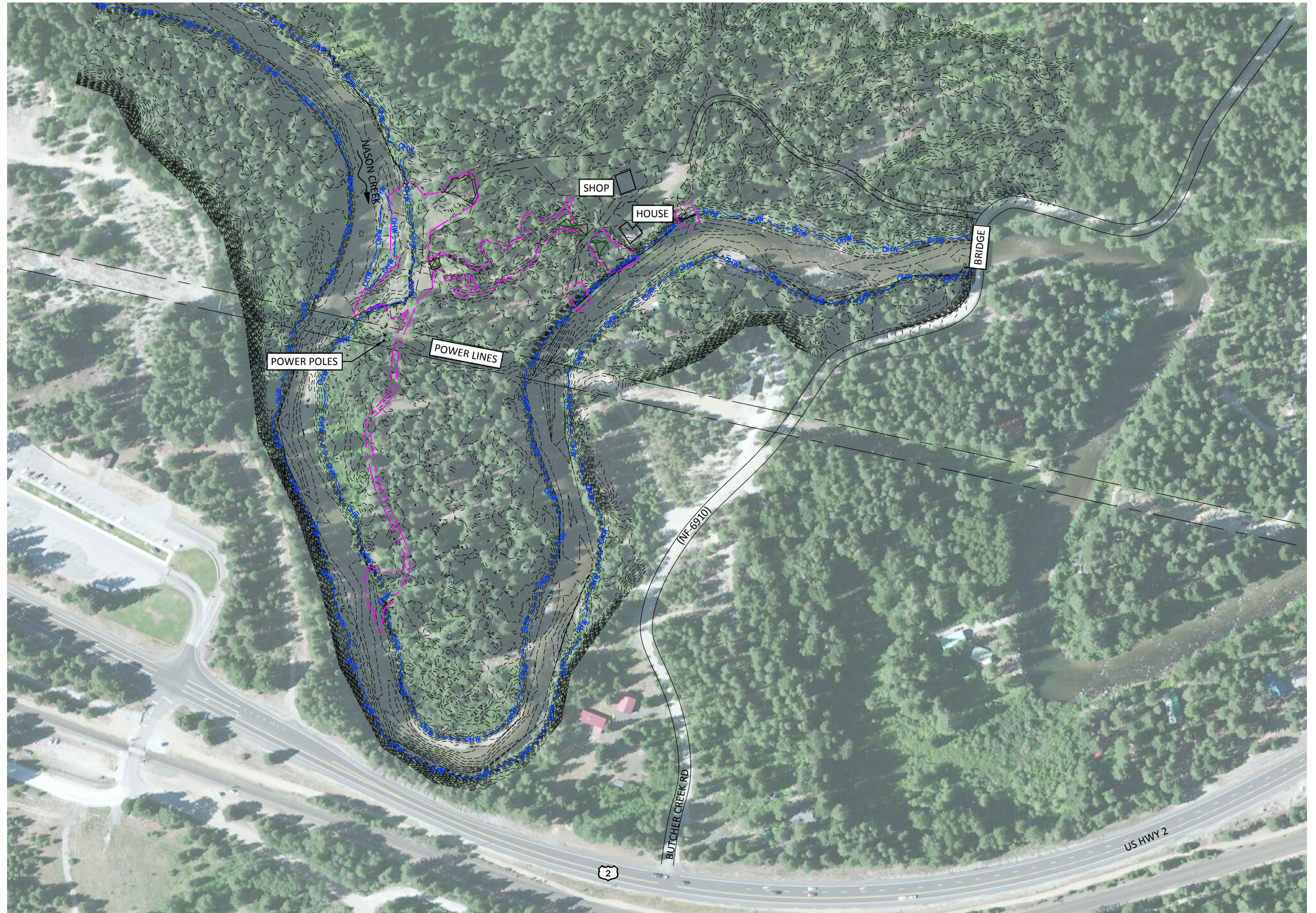
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SCALE IN FEET

AERIAL VIEW



NO.	BY	DATE	REVISION DESCRIPTION

MM	MB	MM
DRAWN	DESIGNED	CHECKED
MB	03/01/18	
APPROVED	DATE	PROJECT

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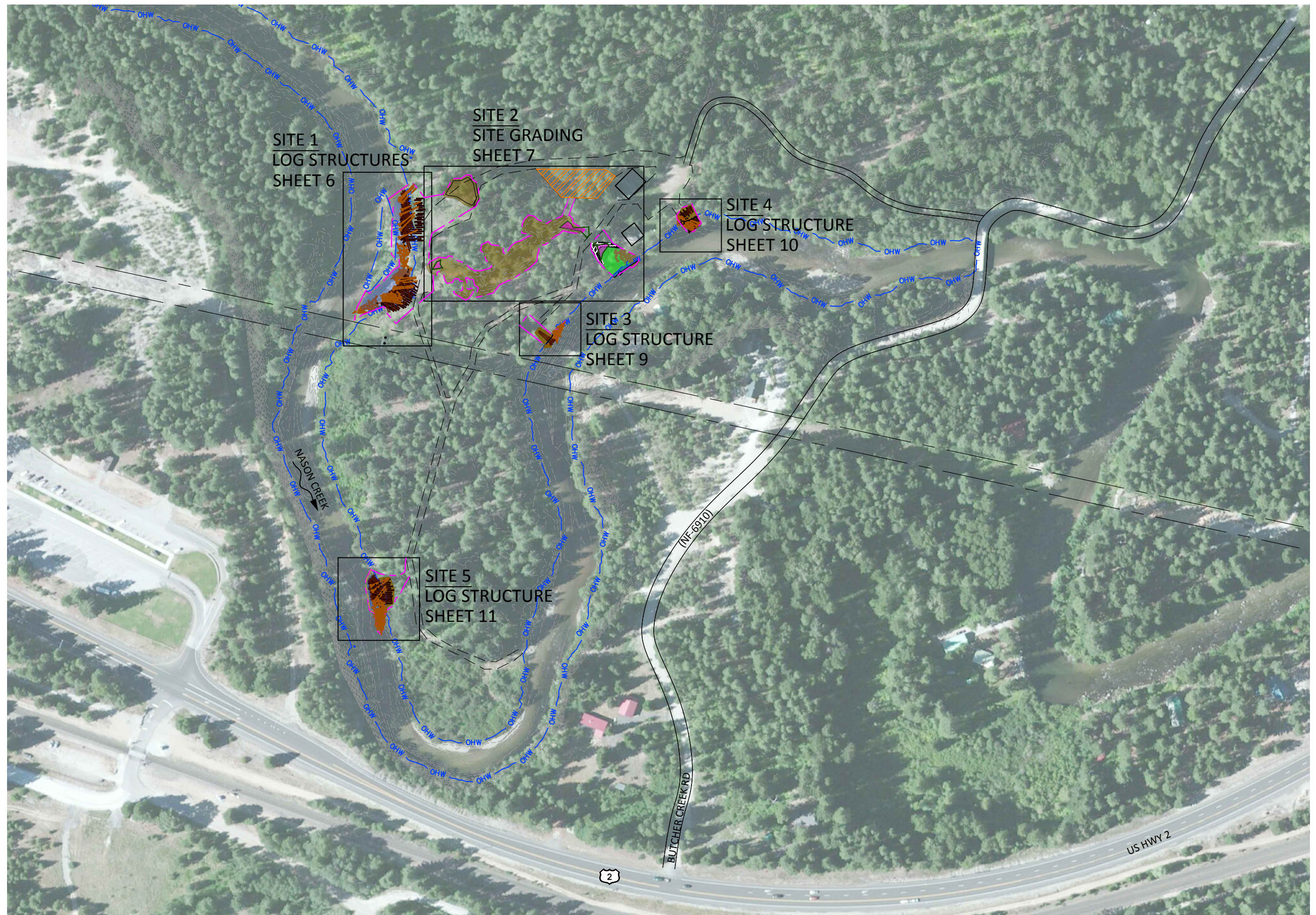
EXISTING CONDITIONNS, SITE ACCESS	SHEET 4 OF 12
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SCALE IN FEET

AERIAL VIEW



NO.	BY	DATE	REVISION DESCRIPTION

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APPROVED	DATE	PROJECT

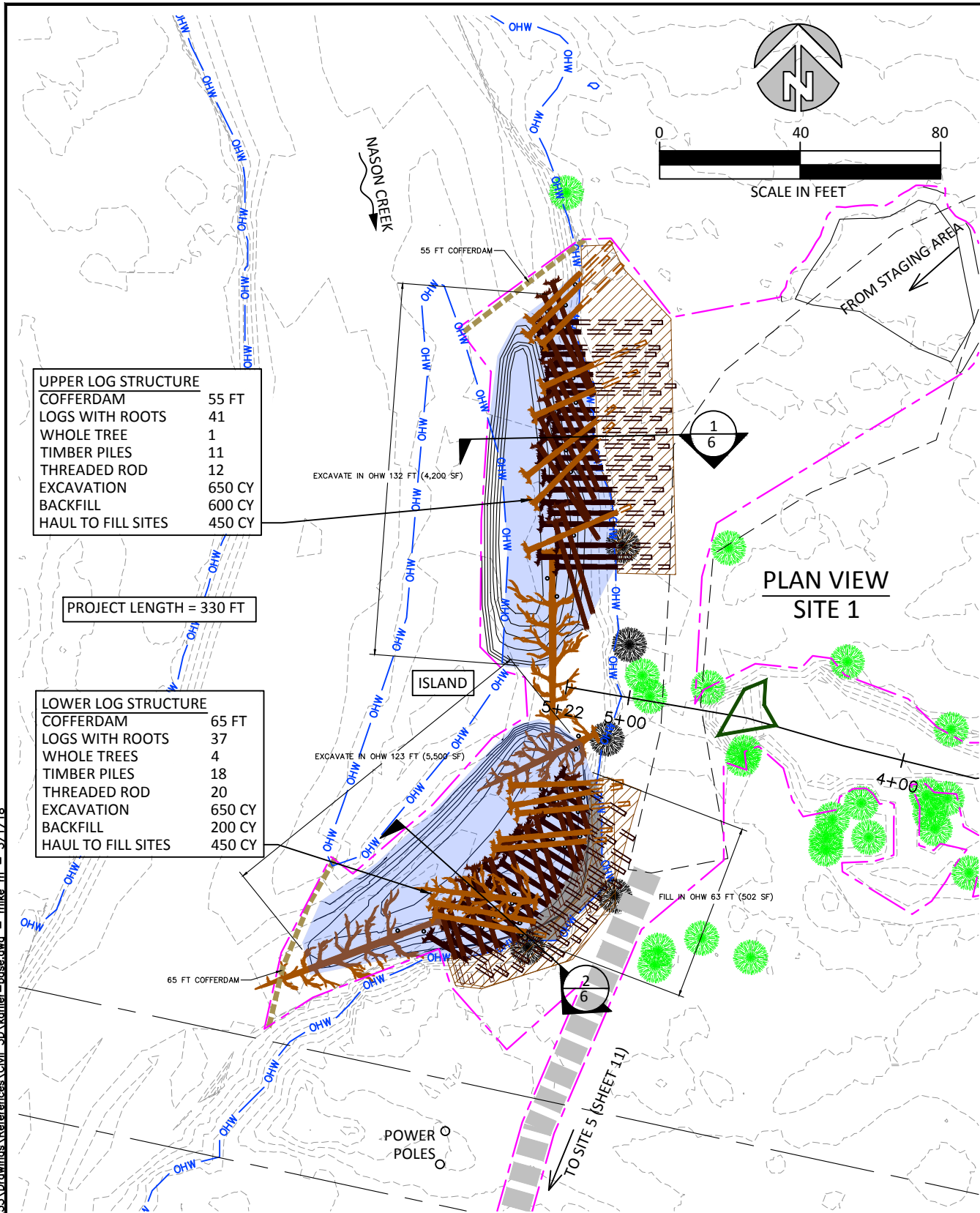
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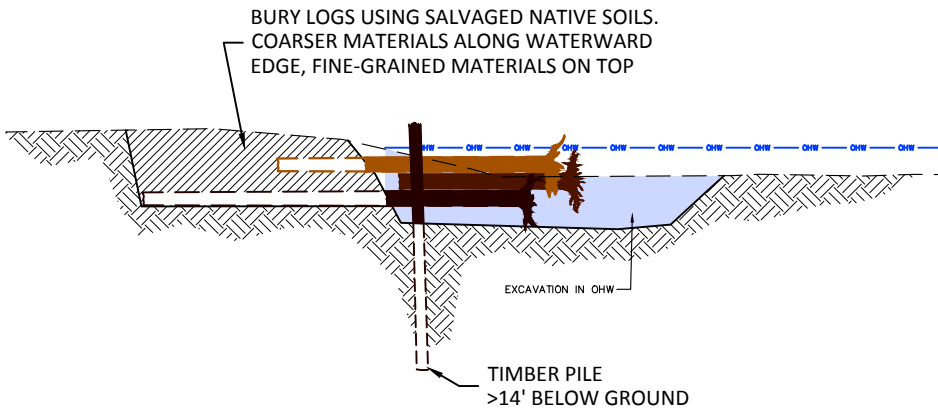
UPPER LOG STRUCTURE	
COFFERDAM	55 FT
LOGS WITH ROOTS	41
WHOLE TREE	1
TIMBER PILES	11
THREADED ROD	12
EXCAVATION	650 CY
BACKFILL	600 CY
HAUL TO FILL SITES	450 CY

LOWER LOG STRUCTURE	
COFFERDAM	65 FT
LOGS WITH ROOTS	37
WHOLE TREES	4
TIMBER PILES	18
THREADED ROD	20
EXCAVATION	650 CY
BACKFILL	200 CY
HAUL TO FILL SITES	450 CY

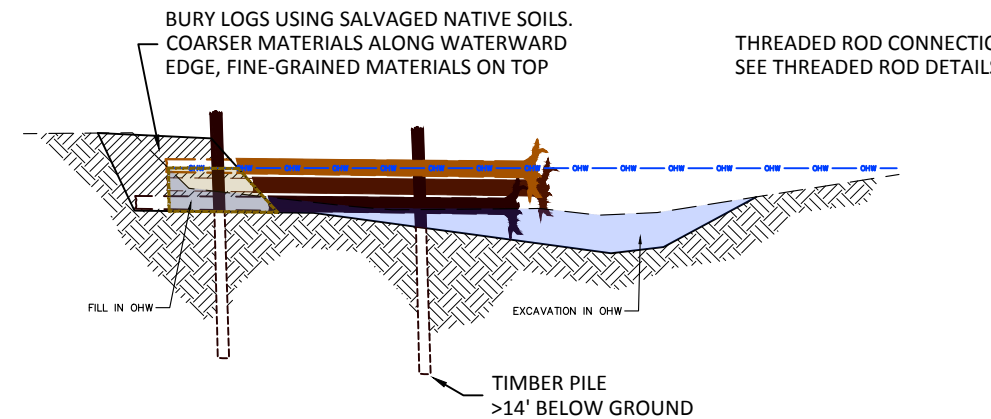
- SITE 1 RECOMMENDED CONSTRUCTION SEQUENCE:**
1. INSTALL TEMPORARY COFFERDAM.
 2. CLEAR AND GRUB LOG BURIAL AREA. SALVAGE REMOVED SHRUBS AND TREES FOR USE IN LOG STRUCTURE.
 3. EXCAVATE POOL. EXCAVATE LOG BURIAL AREA.
 4. INSTALL LOGS AND TIMBER PILES. INSTALL THREADED ROD.
 5. REMOVE COFFERDAM.
 6. APPLY STRAW MULCH TO DISTURBED GROUND WITH SLOPES GREATER THAN 10%

LEGEND

- ORDINARY HIGH WATER
- LIMITS OF DISTURBANCE
- TEMPORARY COFFERDAM
- EXISTING CONTOUR (1 FT)
- PROPOSED CONTOUR (1 FT)
- PRESERVE EXISTING TREE
- REMOVE/SALVAGE EXISTING TREE OR SNAG
- LOGS
- BACKFILL (LOG BURIAL)
- EXCAVATION IN OHW
- FILL IN OHW



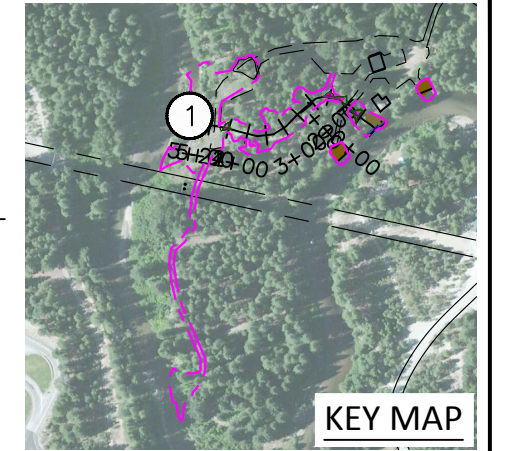
1
6 SITE 1 UPPER LOG STRUCTURE



2
6 SITE 1 LOWER LOG STRUCTURE

SECTION VIEWS LOOKING DOWNSTREAM

- LOG NOTES:**
1. LOG LOCATIONS, SIZES, AND ALIGNMENTS ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR.
 2. SHRUBS AND SLASH GENERATED FROM SITE CLEARING SHALL BE INCORPORATED INTO THE STRUCTURE AS SLASH. INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.
 3. VARY THE APPEARANCE OF TIMBER PILES BY INSTALLING THEM AT ANGLES AND WITH DIFFERENT TOP HEIGHTS. BREAK OR ROUGHEN THE TOP OF PILES FOR A NATURAL APPEARANCE. PILES SHALL BE INSTALLED BY VIBRATORY DRIVER. PILE DEPTH SHALL BE MINIMUM 14'. FINAL DEPTH TO BE DETERMINED BY PULLOUT TEST RESULTS



SITE 1 WATERBODY IMPACTS

ACTIVITY	WATERBODY NAME	IMPACT LOCATION	DURATION OF IMPACT	VOLUME OF MATERIAL PLACED OR REMOVED	AREA (SF) OR LENGTH (LF) OF IMPACT
COFFERDAM	NASON CREEK	INSTREAM	5 DAYS	N/A	120 LF DAM 11,740 SF IMPOUNDMENT
EXCAVATION	NASON CREEK	INSTREAM	PERMANENT	819 CY NATIVE GRAVEL REMOVED	155 LF/9,700 SF
WOOD PLACEMENT	NASON CREEK	INSTREAM	PERMANENT	~ 160 CY WOOD	330 LF/6,100 SF
BACKFILL	NASON CREEK	INSTREAM	PERMANENT	98 CY NATIVE GRAVEL FILL	63 LF/502 SF



NO.	BY	DATE	REVISION DESCRIPTION

MM DRAWN	MB DESIGNED	MM CHECKED
MB APPROVED	03/01/18 DATE	PROJECT

NASON CREEK - KAHLER SITE STREAM & FLOODPLAIN ENHANCEMENT 60% DESIGN



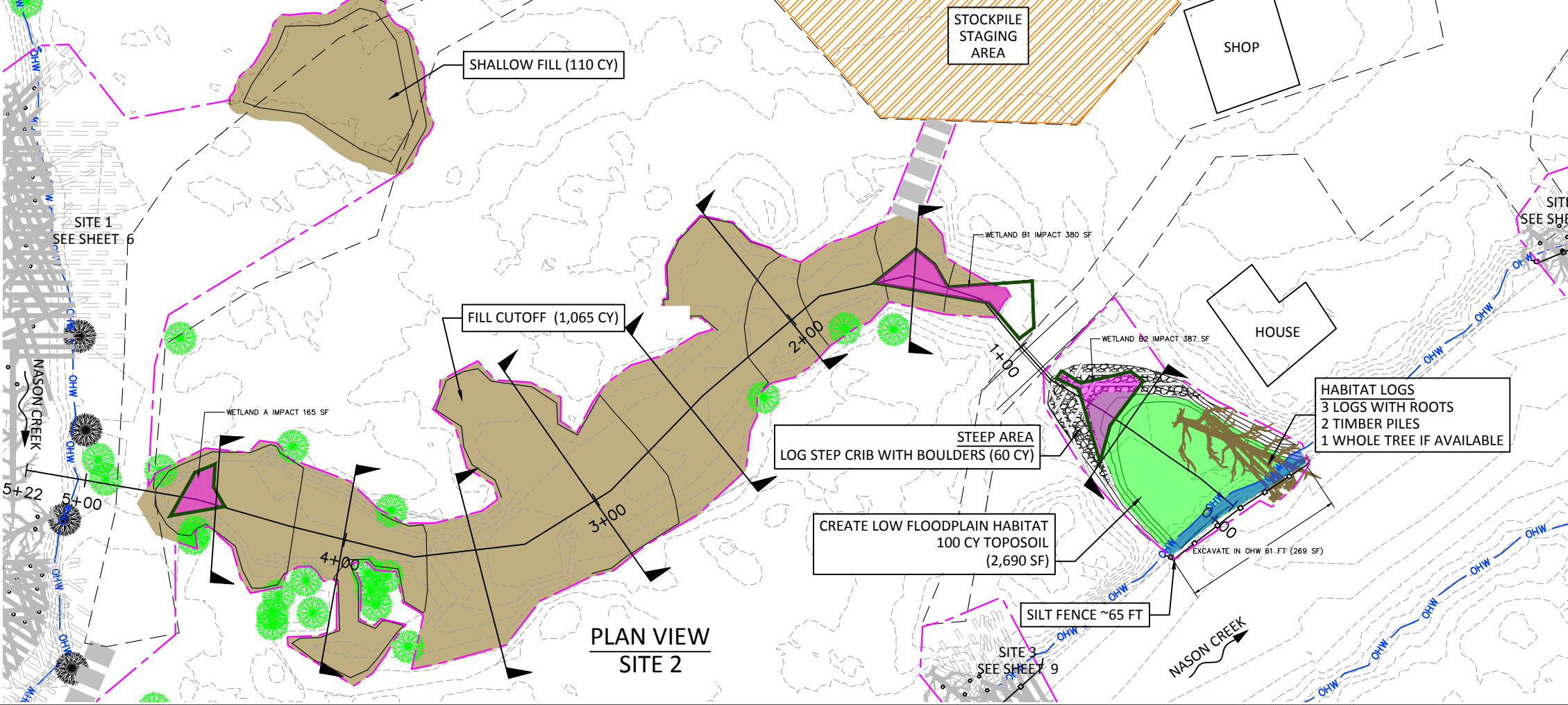
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SITE 1

SHEET
6 OF 12

SITE 2 RECOMMENDED CONSTRUCTION SEQUENCE:

1. THIS SITE WILL BE COINCIDENT WITH SITE 1. EXCAVATED MATERIAL FROM SITE 1 WILL BE PLACED IN SITE 2 FILL AREAS. USE COARSER MATERIALS AT DESIGNATED AREA.
2. INSTALL SILT FENCE AT DOWNSTREAM END.
3. EXCAVATE "LOW FLOODPLAIN" AREA TO SUBGRADE. SALVAGE BOULDERS AND TOPSOIL. PLACE EXCAVATED MATERIAL IN DESIGNATED FILL AREAS.
4. INSTALL LOG STEP CRIB AND BOULDERS.
5. INSTALL TOPOSOIL.
6. REMOVE SILT FENCE.
7. INSTALL LOGS AND TIMBER PILES.
8. APPLY STRAW MULCH TO DISTURBED GROUND WITH SLOPES GREATER THAN 10%.
9. REPLANT SITE.



LEGEND

Legend symbols and scale:

- ORDINARY HIGH WATER (OHW)
- EXISTING WETLAND
- LIMITS OF DISTURBANCE
- EXISTING CONTOUR (1 FT)
- PROPOSED CONTOUR (1 FT)
- SILT FENCE
- PRESERVE EXISTING TREE
- REMOVE/SALVAGE EXISTING TREE OR SNAG
- LOGS
- FILL (NATIVE MATERIAL)
- TOPOSOIL
- BOULDERS
- STAGING/STOCKPILE
- WETLAND IMPACT
- EXCAVATION IN OHW

SEE SITE 2 SECTION VIEWS, SHEET 8

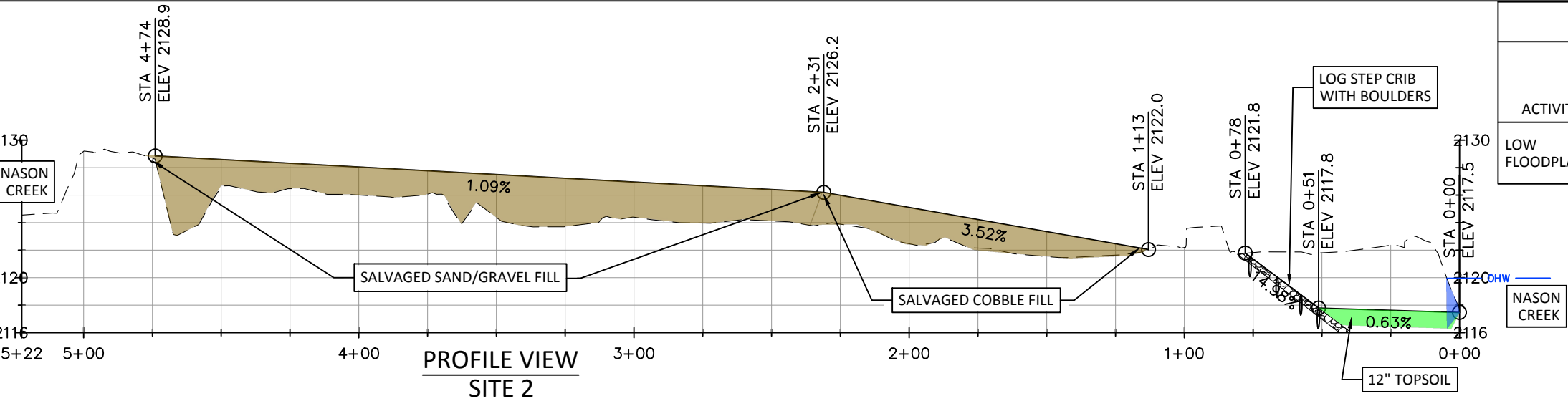
SCALE IN FEET: 0, 40, 80

SITE 2 WETLAND IMPACTS

ACTIVITY	IMPACT LOCATION	DURATION OF IMPACT	VOLUME OF MATERIAL PLACED OR REMOVED	AREA (SF) OR LENGTH (LF) OF IMPACT
FILL CUTOFF	WETLAND A	PERMANENT	18 CY NATIVE GRAVEL PLACED	165 SF
FILL CUTOFF	WETLAND B1	PERMANENT	18 CY NATIVE GRAVEL PLACED	380 SF
LOW FLOODPLAIN	WETLAND B2	PERMANENT	18 CY NATIVE SOIL REMOVED	387 SF

SITE 2 WATERBODY IMPACTS

ACTIVITY	WATERBODY NAME	IMPACT LOCATION	DURATION OF IMPACT	VOLUME OF MATERIAL PLACED OR REMOVED	AREA (SF) OR LENGTH (LF) OF IMPACT
LOW FLOODPLAIN	NASON CREEK	INSTREAM (BANK)	PERMANENT	20 CY NATIVE GRAVEL REMOVED	61 LF/269 SF



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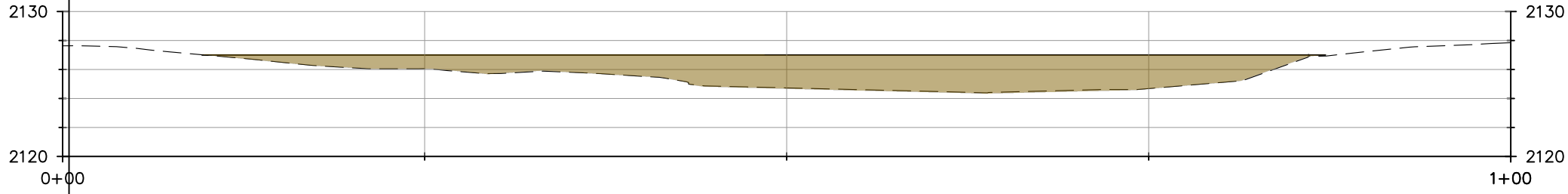
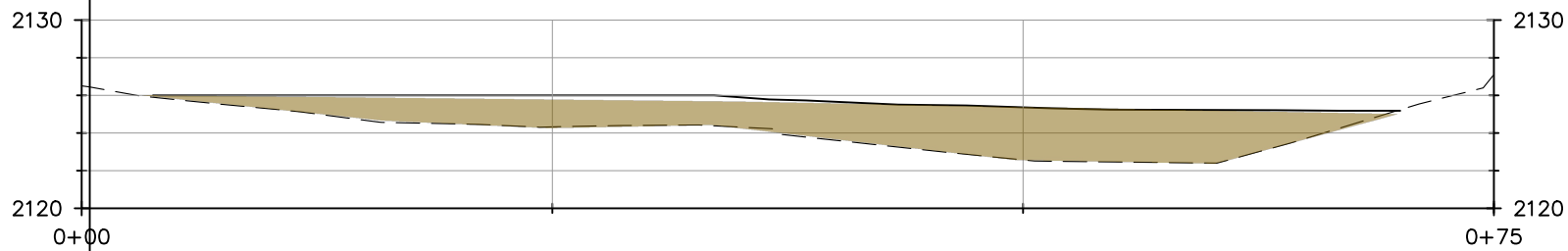
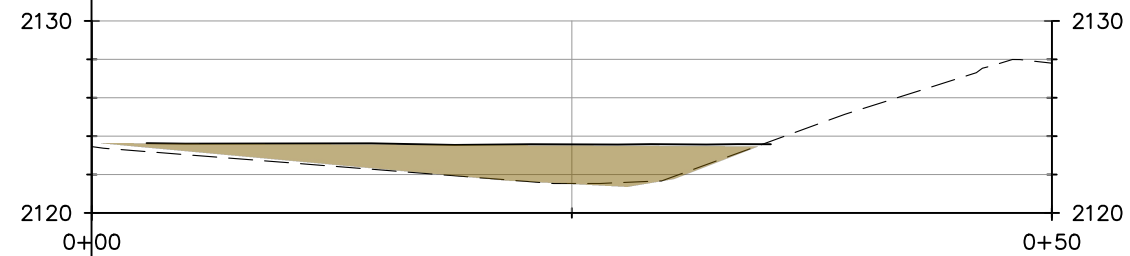
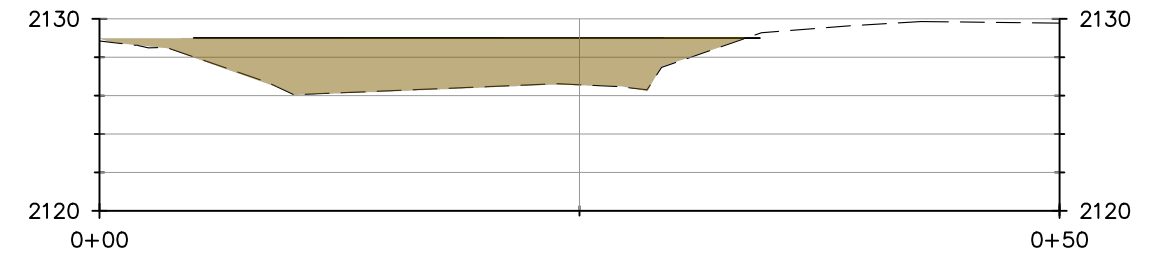
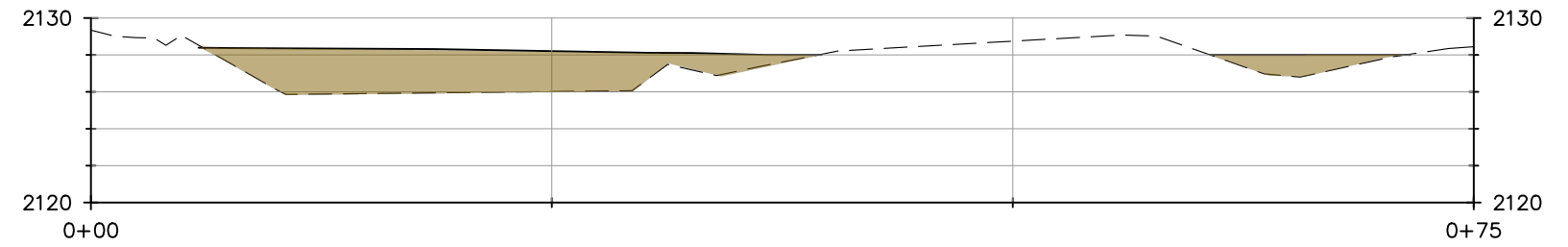
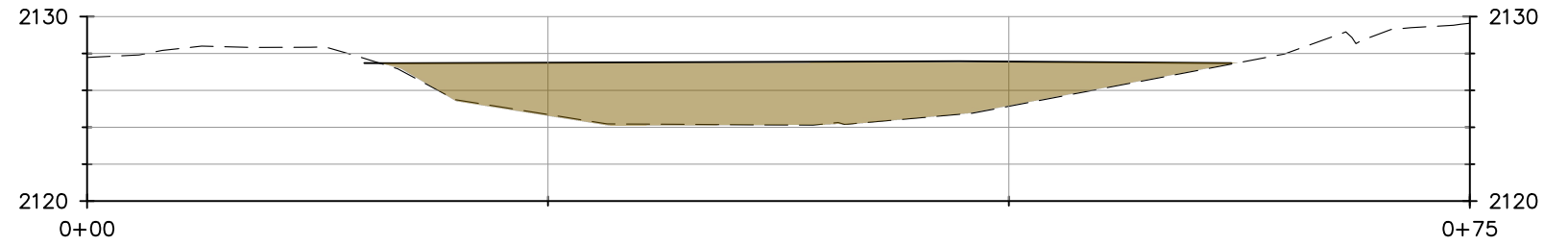
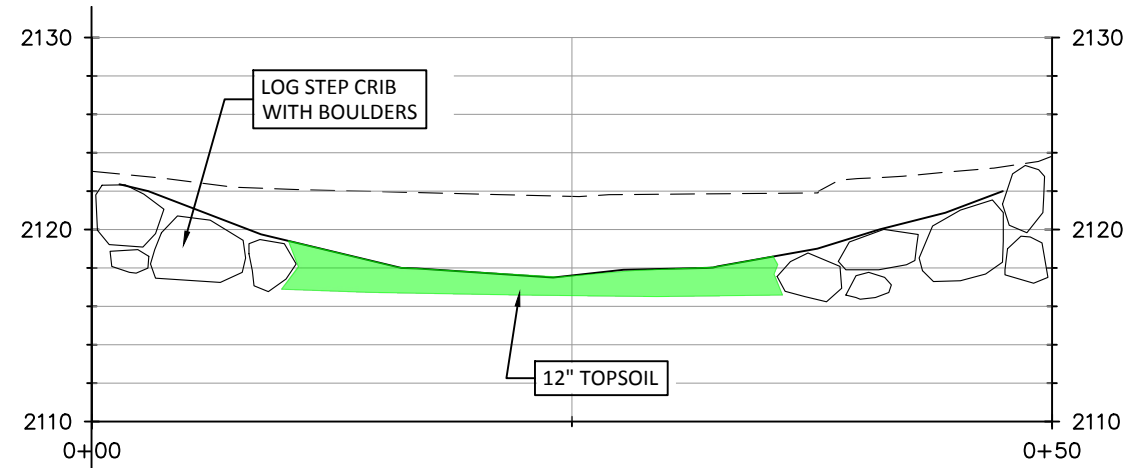
MM	MB	MM
DRAWN	DESIGNED	CHECKED
MB	03/01/18	
APPROVED	DATE	PROJECT

NASON CREEK - KAHLER SITE
STREAM & FLOODPLAIN ENHANCEMENT
60% DESIGN

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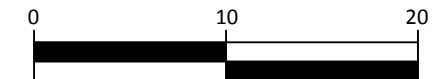


LEGEND

--- EXISTING GROUND
— PROPOSED GROUND



FILL



SCALE IN FEET

1. SECTION VIEWS LOOKING DOWNSTREAM
2. SECTION ID ASSOCIATED WITH CENTERLINE ALIGNMENT STATIONING, SHEET 7



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NASON CREEK - KAHLER SITE STREAM & FLOODPLAIN ENHANCEMENT 60% DESIGN

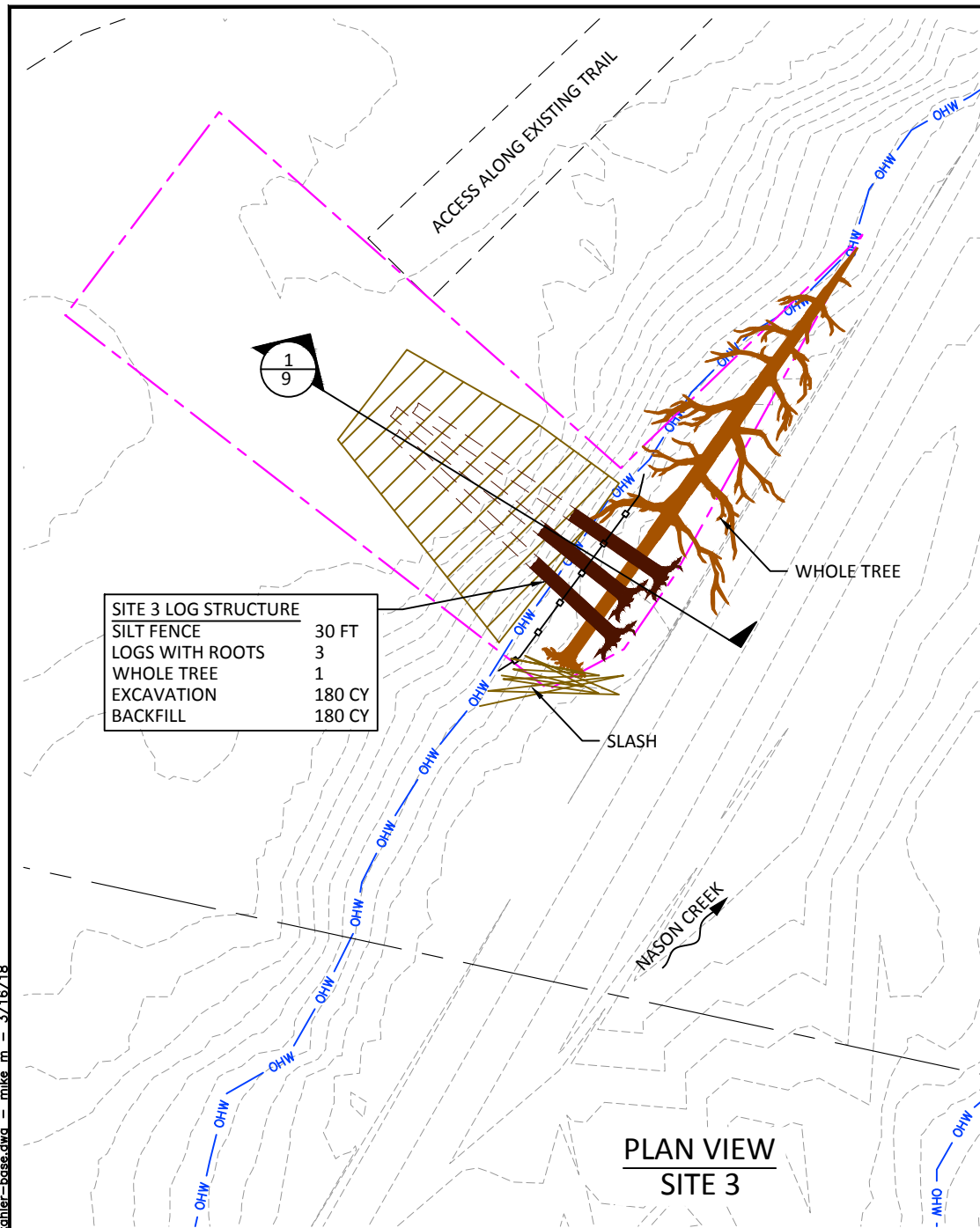


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SITE 2 CROSS SECTIONS

SHEET

8 OF 12



SITE 3 LOG STRUCTURE	
SILT FENCE	30 FT
LOGS WITH ROOTS	3
WHOLE TREE	1
EXCAVATION	180 CY
BACKFILL	180 CY

— WHOLE TREE

PLAN VIEW
SITE 3

SITE 3

LEGEND

Diagram illustrating the cross-section of a stream bed and the proposed silt fence location. The diagram shows the following features and their corresponding elevations:

- ORDINARY HIGH WATER (indicated by a blue line)
- LIMITS OF DISTURBANCE (indicated by a pink dashed line)
- EXISTING CONTOUR (1 FT) (indicated by a grey dashed line)
- PROPOSED CONTOUR (1 FT) (indicated by a solid black line)
- SILT FENCE (indicated by a line with square markers)
- LOGS (indicated by a pile of logs)
- BACKFILL (LOG BURIAL) (indicated by a hatched area)

ORDINARY HIGH WATER

LIMITS OF DISTURBANCE

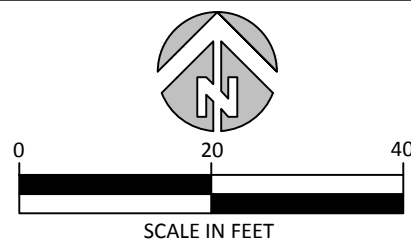
EXISTING CONTOUR (1 FT)

PROPOSED

SILT F

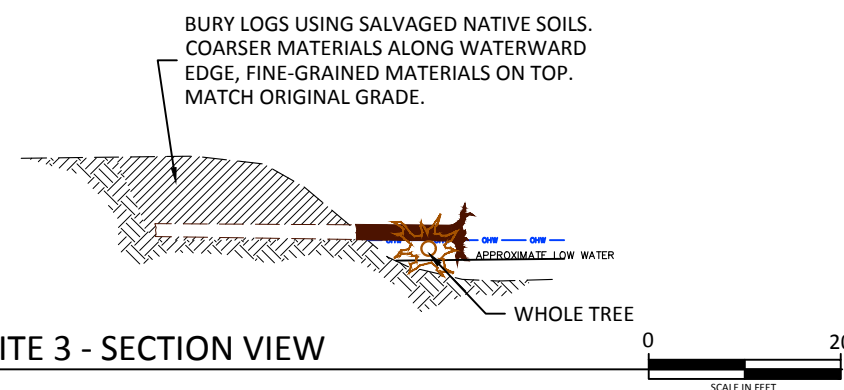
LOGS

BACKFILL (LOG BURIAL)



LOG NOTES:

1. LOG LOCATIONS, SIZES, AND ALIGNMENTS ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR.
2. SHRUBS AND SLASH GENERATED FROM SITE CLEARING SHALL BE INCORPORATED INTO THE STRUCTURE AS SLASH. INSTALL SLASH LOOSELY ALONG UPSTREAM SIDE OF TREE ROOTWAD.



SITE 3 - SECTION VIEW

SECTION VIEW LOOKING DOWNSTREAM

SITE 3 RECOMMENDED CONSTRUCTION SEQUENCE:

1. INSTALL SILT FENCE.
2. CLEAR AND GRUB LOG BURIAL AREA. SALVAGE REMOVED SHRUBS AND TREES FOR USE IN LOG STRUCTURE.
3. EXCAVATE LOG BURIAL AREA TO ELEVATION 2121'.
4. REMOVE SILT FENCE.
5. INSTALL WHOLE TREE.
6. INSTALL THREE LOGS WITH ROOTS TO HOLD DOWN WHOLE TREE.
7. BACKFILL LOG BURIAL AREA.
8. APPLY STRAW MULCH TO SURFACES STEEPER THAN 10%.

SITE 3 WATERBODY IMPACTS					
ACTIVITY	WATERBODY NAME	IMPACT LOCATION	DURATION OF IMPACT	VOLUME OF MATERIAL PLACED OR REMOVED	AREA (SF) OR LENGTH (LF) OF IMPACT
WOOD PLACEMENT	NASON CREEK	INSTREAM	PERMANENT	~ 6 CY WOOD	~60 LF/200 S



SITE 3

SHEET

9 OF 12

NASON CREEK - KAHLER SITE
STREAM & FLOODPLAIN ENHANCEMENT
60% DESIGN










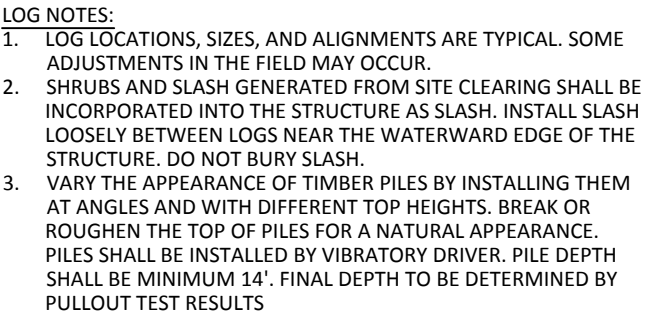
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SHEET



LEGEND

	ORDINARY HIGH WATER
	LIMITS OF DISTURBANCE
	EXISTING CONTOUR (1 FT)
	PROPOSED CONTOUR (1 FT)
	SILT FENCE
	LOGS
	BACKFILL (LOG BURIAL)



BURY LOGS USING SALVAGED NATIVE SOILS.
COARSER MATERIALS ALONG WATERWARD
EDGE, FINE-GRAINED MATERIALS ON TOP.
MATCH ORIGINAL GRADE.

APPROXIMATE LOW WATER

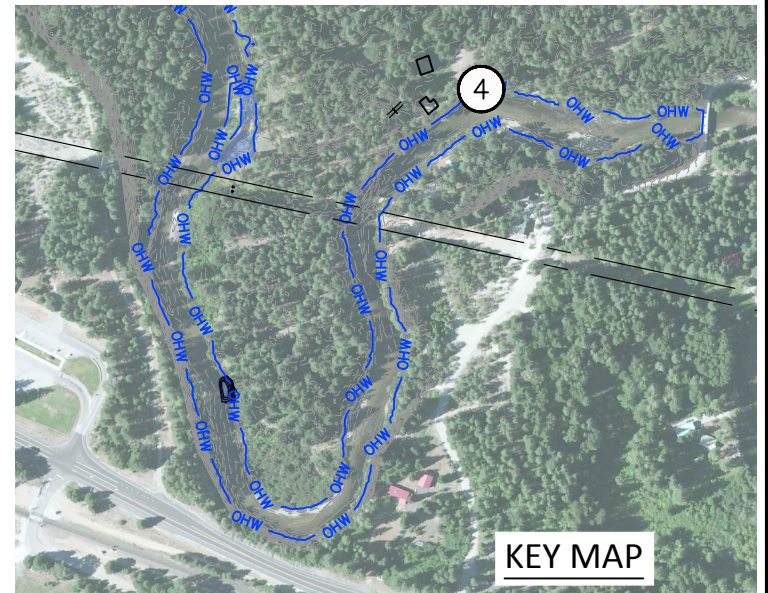
OHW OHW OHW OHW OHW OHW OHW

EXCAVATION AND BACKFILL IN OHW

TIMBER PILE
>14' BELOW GROUND

SITE 4 RECOMMENDED CONSTRUCTION SEQUENCE:

1. INSTALL SILT FENCE.
2. CLEAR AND GRUB LOG BURIAL AREA. SALVAGE REMOVED SHRUBS AND TREES FOR USE IN LOG STRUCTURE.
3. EXCAVATE LOG BURIAL AREA TO JUST ABOVE WATERLINE.
4. REMOVE SILT FENCE.
5. INSTALL LOGS AND TIMBER PILES. INSTALL THREADED ROD.
6. APPLY STRAW MULCH TO DISTURBED GROUND WITH SLOPES GREATER THAN 10%.

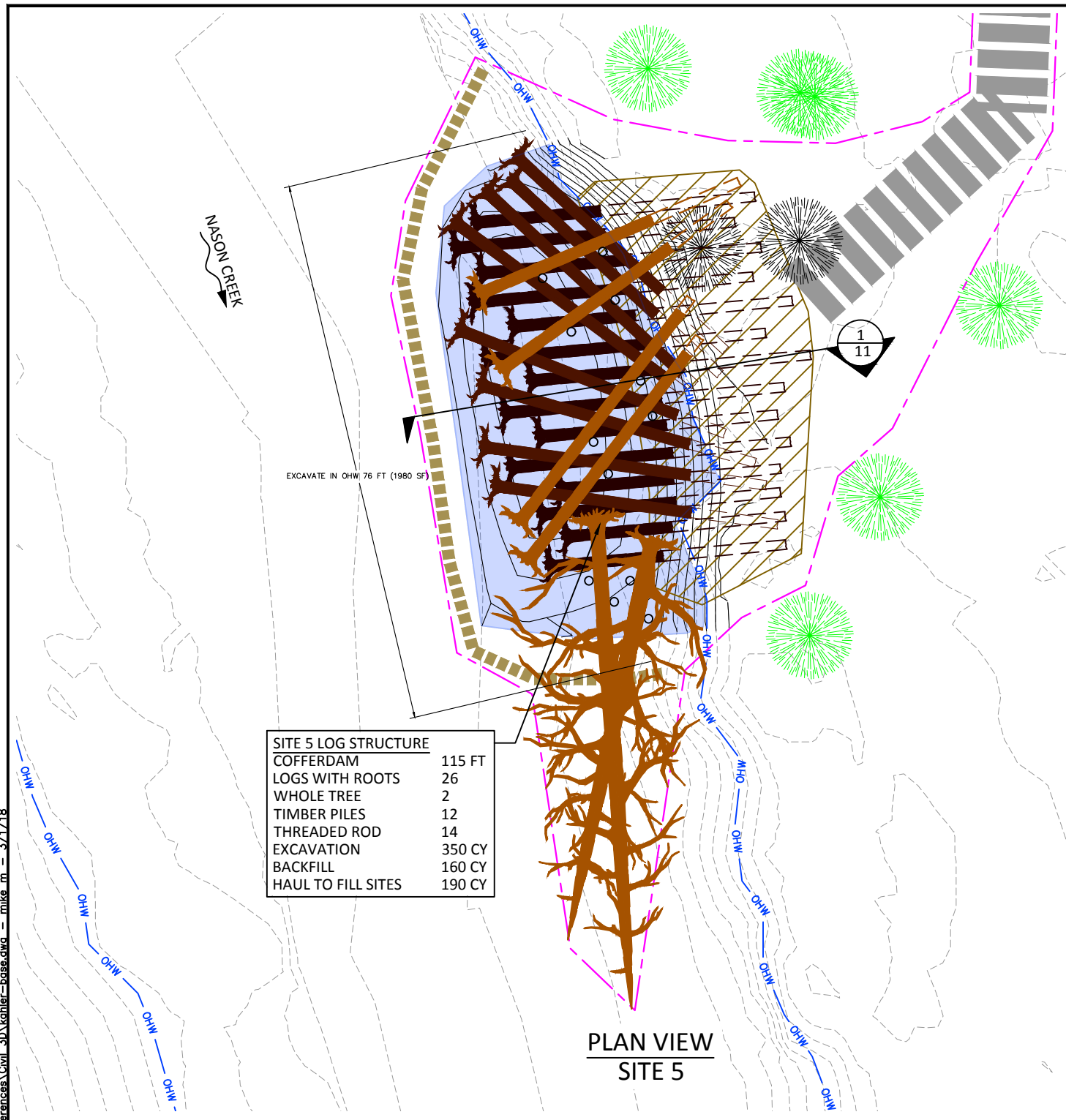


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SITE 4

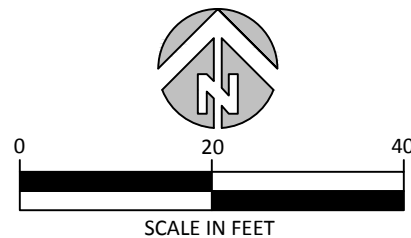


PLAN VIEW

SITE 5

LEGEND

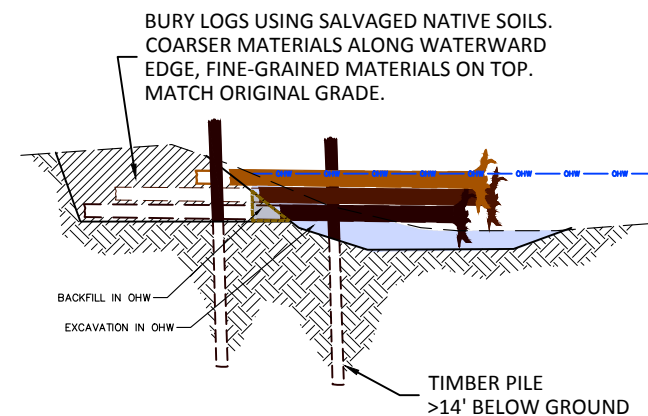
-
- OHW — OHW — OHW — OHW —
- ORDINARY HIGH WATER
- LIMITS OF DISTURBANCE
- EXISTING CONTOUR (1 FT)
- PROPOSED CONTOUR (1 FT)
- TEMPORARY COFFERDAM
- LOGS
- BACKFILL (LOG BURIAL)



LOG NOTES:

1. LOG LOCATIONS, SIZES, AND ALIGNMENTS ARE TYPICAL. SOME ADJUSTMENTS IN THE FIELD MAY OCCUR.
2. SHRUBS AND SLASH GENERATED FROM SITE CLEARING SHALL BE INCORPORATED INTO THE STRUCTURE AS SLASH. INSTALL SLASH LOOSELY BETWEEN LOGS NEAR THE WATERWARD EDGE OF THE STRUCTURE. DO NOT BURY SLASH.
3. VARY THE APPEARANCE OF TIMBER PILES BY INSTALLING THEM AT ANGLES AND WITH DIFFERENT TOP HEIGHTS. BREAK OR ROUGHEN THE TOP OF PILES FOR A NATURAL APPEARANCE. PILES SHALL BE INSTALLED BY VIBRATORY DRIVER. PILE DEPTH SHALL BE MINIMUM 14'. FINAL DEPTH TO BE DETERMINED BY PULLOUT TEST RESULTS

THREADED ROD CONNECTIONS AT EACH TOP LOG TO TIMBER PILES.
SEE THREADED ROD DETAILS, SHEET 12.


$$\frac{1}{11}$$

SITE 5 - SECTION VIEW

SECTION VIEW LOOKING DOWNSTREAM



SITE 5 RECOMMENDED CONSTRUCTION SEQUENCE:

1. INSTALL TEMPORARY COFFERDAM.
2. CLEAR AND GRUB LOG BURIAL AREA. SALVAGE REMOVED SHRUBS AND TREES FOR USE IN LOG STRUCTURE.
3. EXCAVATE POOL. EXCAVATE LOG BURIAL AREA.
4. INSTALL LOGS AND TIMBER PILES. INSTALL THREADED ROD.
5. REMOVE COFFERDAM.
6. INSTALL WHOLE TREES AND ASSOCIATED TIMBER PILES.
7. APPLY STRAW MULCH TO DISTURBED GROUND WITH SLOPES GREATER THAN 10%

SITE 5 WATERBODY IMPACTS

ACTIVITY	WATERBODY NAME	IMPACT LOCATION	DURATION OF IMPACT	VOLUME OF MATERIAL PLACED OR REMOVED	AREA (SF) OR LENGTH (LF) OF IMPACT
COFFERDAM	NASON CREEK	INSTREAM	5 DAYS	N/A	115 LF DAM 2,100 SF IMPOUNDMENT
EXCAVATION	NASON CREEK	INSTREAM	PERMANENT	152 CY NATIVE GRAVEL REMOVED	76 LF/1,980 SF
WOOD PLACEMENT	NASON CREEK	INSTREAM	PERMANENT	~ 50 CY WOOD	76 LF/1800 SF
BACKFILL	NASON CREEK	INSTREAM	PERMANENT	12 CY NATIVE GRAVEL FILL	40 LF/120 SF

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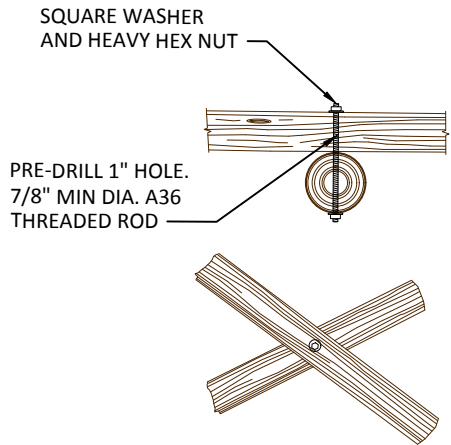
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SITE 5

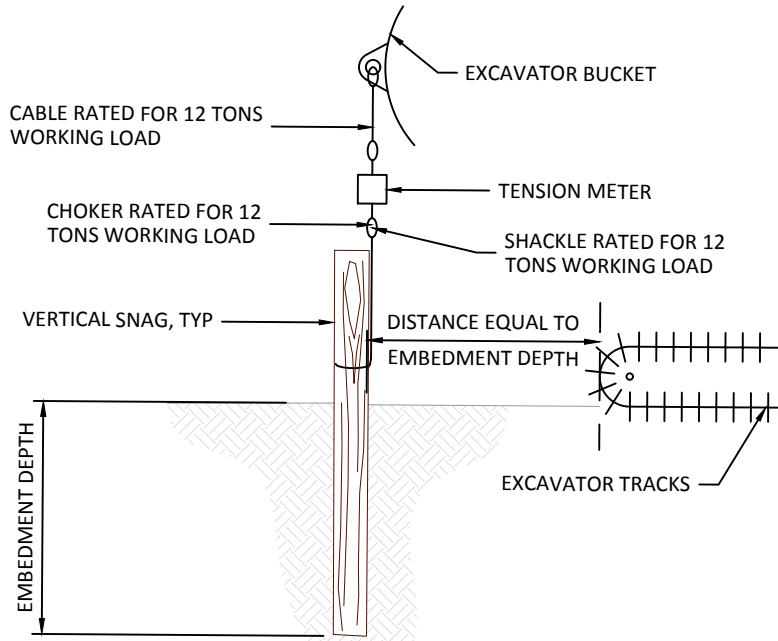
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NOTES:

1. BOLTS SHALL BE MINIMUM 7/8" DIAMETER THREADED ROD. BOLTS SHALL BE GRADE A36 STEEL AND MEET THE REQUIREMENTS OF ASTM F1554. WASHERS SHALL BE 4" OUTER DIAMETER. NUTS SHALL BE HEAVY HEX. ALL HARDWARE SHALL BE HOT-DIP GALVANIZED.
2. DRILL 1" HOLE THROUGH LOGS.
3. INSERT 7/8" DIA ALL-THREAD REBAR.
4. INSTALL STEEL PLATES AND HEAVY HEX NUTS. SECURE NUTS BY CHISELING THREADS.
5. EXCESS THREDED ROD SHALL BE CUT WITH A MAXIMUM OF 2 INCHES EXTENDING FROM THE TOP OF THE NUT TO THE CUT LOCATION.
6. FILE OR GRIND OFF SHARP EDGES.

1
**FULLY THREADED ROD (FTR) CONNECTION**
NOT TO SCALE



2
**VERTICAL SNAG PULLOUT TESTING**
NOT TO SCALE

VERTICAL SNAGS

ALL VERTICAL SNAGS SHALL BE INSTALLED USING VIBRATORY PILE DRIVING EQUIPMENT. INSTALLATION BY EXCAVATION OR HAMMERING WILL NOT BE ALLOWED.

RIGGING

RIGGING FOR VERTICAL SNAG TESTING SHALL CONFORM TO THE TENSION SCALE MANUFACTURER'S RECOMMENDATIONS.

CHOKERS, CABLES AND SHACKLES SHALL HAVE MINIMUM WORKING LOAD RATING OF 12 TONS. FITTINGS SHALL BE SIZED ACCORDINGLY

TESTING

TESTING OF VERTICAL SNAGS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER OR OTHER QUALIFIED PERSONNEL.

EACH VERTICAL SNAG TEST SHALL HAVE UPWARD LOAD GRADUALLY INCREASED AND AS CLOSELY ALIGNED TO AXIS OF VERTICAL SNAG AS POSSIBLE. RECORD THE VERTICAL SNAG DIAMETER, EMBEDMENT DEPTH AND MAXIMUM FORCE REQUIRED TO MOVE THE VERTICAL SNAG . UP TO A TOTAL OF THREE LOADINGS MAY BE REQUIRED AT EACH EMBEDMENT DEPTH.

PROOF TESTS SHALL BE MADE AT UP TO FOUR EMBEDMENT DEPTHS TO BE DETERMINED IN THE FIELD. AS A GUIDELINE TEST EMBEDMENT DEPTHS MAY INCLUDE 6', 8', 10', AND 12'.

EXCAVATOR CONDUCTING PULL OUT LOADING SHALL BE POSITIONED NO CLOSER THAN EMBEDMENT DEPTH OF VERTICAL SNAG IF POSSIBLE. IF A CLOSER POSITIONING IS REQUIRED, EXCAVATOR SHALL BE NO CLOSER THAN THAT REQUIRED TO GENERATE DESIRED LOADING WITH DISTANCE FROM VERTICAL SNAG NOTED IN THE TEST RECORD. LOAD MAY BE SPREAD IN THIS SITUATION BY POSITIONING THE EXCAVATOR ACROSS HORIZONTAL LOGS, WITH DISTANCE FROM VERTICAL LOG, LOG NUMBERS AND LENGTH NOTED IN THE TEST RECORD.

PULL OUT RESISTANCE READING SHALL BE COMPARED AGAINST EXCAVATOR MAX LIFT OFFSET TABLE.

10% OF PRODUCTION VERTICAL SNAGS SHALL BE PROOF TESTED. IF RESULTS VARY MORE THAN 50% THEN IT SHOULD BE ANTICIPATED THAT UP TO 25% OF THE PRODUCTION VERTICAL SNAGS SHALL BE PROOF TESTED. IF THE VERTICAL SNAG EMBEDDMNT DEPTH DOES NOT MEET MINIMUM, OWNER'S REPRESENTATIVE MAY REQUEST ADDITIONAL PULLOUT TESTING.

CONSTRUCTED DRIVEN VERTICAL SNAG EMBEDMENT DEPTH SPECIFIED IN THE DRAWINGS MAY BE REDUCED OR INCREASED, PENDING PULL OUT TEST RESULTS, AT THE CONTRACTOR'S EXPENSE.



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PILE TESTING & THREADED
ROD CONNECTIONS

**(Exhibit-E) Heavy Equipment List and Daily Standby Rates – Nason
Creek Kahler Project 2018**

#	Item Description	Daily Standby Rate
1		\$
2		\$
3		\$
4		\$
5		\$
6		\$
7		\$
8		\$
9		\$
10		\$
11		\$
12		\$
13		\$
14		\$
15	Example: 160 Series Excavator	\$ 50.00