30 Bonney Street
P.O. Box B
Freeport, Maine 04032
Phone: 207.865.0000
Fax: 207.865.4836
www.cpmconstructors.com

February 22, 2019

BY EMAIL ONLY
David Lent
Northeast Odd Fellows Association
335 Main Street
Princeton, ME 04668

Re: Project: Trues Pond Dam Repair Proposal *Revision 1*
Location: Trues Pond, Montville, Maine
Owner: Northeast Odd Fellows Association

Dear David:

CPM Constructors understands the issue to be as follows: the Trues Pond Dam does not retain water properly during the summer as water leaks through the gate and also under the dam structure itself. CPM has partnered with Calderwood Engineering to design and construct a fix for the dam. Based upon the information we presently have, we believe we can address this issue and a preliminary design has been used for the cost estimate. Please refer to the attached repair detail. The repair scope and price may change after the final design is complete and once we arrive onsite.

A) Scope of Work

A. Initial Design and Permit Process

a. Site visit and field measurements by engineer during low water conditions,
b. Initial dam repair design,
c. Public meeting,
d. Site Conditions report and functional assessment report,
e. Submit NRPA permit applications to USACE and DEP,
f. Agency review of permits and possible resubmission,
g. Permit approval, and
h. Dam repair design finalized per any required changes during permit review.

B. Dam Repair Construction Process

a. Mobilize to site,
b. Install erosion control measures,
c. Install access around the dam,
d. Setup bypass pumping system with a sand bag cofferdam and submersible pumps during low water conditions,
e. Remove concrete apron under the existing gate,
f. Plug or remove existing corrugated metal pipe located under the gate,
g. Excavate existing material 1 ft below existing sinkholes and underneath the gate,
h. Install self-consolidating concrete in the excavated areas,
i. Install 40 mil HDPE Geomembrane on top of SCC and existing pond bed,
j. Install 1 ft thick layer of existing material on top of Geomembrane,
k. Install 1 ft thick layer of riprap on top of existing material,
l. Install heavy riprap at an average depth of 3 feet downstream for scour protection,
m. Fill any voids with grout where the dam gate meets the concrete cap,
n. Remove cofferdam and bypass pumping system,
o. Restore site, and
p. Demobilize.

B) Project Pricing

Item Description	Cost
Trues Dam construction repairs	*$118,104*
NRPA permit application fee	$325
In-Lieu permit fees *(1680 sqft permanent impact area)*	*$12,130*
Permit process (Calderwood Engineering)	$10,000
Project design (Calderwood Engineering)	$13,000
Total estimated cost	**$153,559**

Time & Material Rates for any unforeseen and extra costs:

Item Description	Cost
Supervisor	$600/day
Laborer	$400/day
Excavator w/ operator	$1,500/day
Bypass pumping	$715/day
Dump truck with operator	$750/day
Tractor-trailer	$1000/day
Additional mobilizations	$2500/each

Quantity over-runs

Since this estimate has been completed prior to final design, the repair material quantities were estimated. Any increases in actual field quantity shall be invoiced as detailed below. Any construction repair items not listed below are considered lump sum and have a fixed cost.

a) 40 CY of self-consolidating concrete has been included in the lump sum price. Price per CY over 40 CY is $300/CY.
b) 100 SY of Geomembrane has been included in the lump sum price. Price per SY over 100 SY is $4/SY.
c) 40 CY of plain riprap has been included in the lump sum price. Price per CY over 40 CY is $90/CY.
d) 93 CY of heavy riprap has been included in the lump sum price. Price per CY over 93 CY is $105/CY.
e) 70CY of excavation and backfill of streambed material has been included in the lump sum price. Price per CY over 70 CY is $60/CY.
f) 3 weeks of bypass pumping has been included in the lump sum price. Price per week after 3 weeks is $5000/week.

C) Summary of Work – Key Points:

A. Permit and Design

a. The dam inspection/design would occur summer 2019. The permitting process would occur during the fall/winter of 2019 and into early 2020.
b. The Trues Dam owner is responsible for any increases in the estimated permitting costs. Please refer to the attached proposal form from Calderwood Engineering for a breakdown of their permitting costs.
c. The In-Lieu permit fee is a budget estimate based on 910 square feet of permanent streambed impact. Please also refer to the attached DEP fact sheet for more information regarding the In-Lieu permit fee.

B. Construction

a. The Trues Dam repairs would be constructed during low water conditions in summer/early fall 2020.
b. Since this estimate has been completed prior to final design, the repair material qtys were estimated. Any increases in actual quantity shall be invoiced as noted in this proposal.
c. Final limits of excavation and fill will be determined during the design process.
d. CPM has estimated the onsite repairs will take approximately 3 weeks to complete.
e. Heavy riprap downstream will act as scour protection to protect against erosion. This riprap may require yearly maintennce.

D) Key Assumptions

a) We have included one construction mobilization for this project and will stay onsite from start of project until completion. Additional mobilizations will be billed at $2500/each.
b) Work as noted above is not required to comply with any type of "historic" regulation and / or requirements.
c) No payment retainage shall be withheld.
d) No liquidated damages associated with any completion dates shall be assumed.
e) Any survey work shall be done by CPM.
f) This price proposal is a lump sum proposal. CPM and the Owner shall agree upon any changes to the scope and price prior to start of additional work.

E) Special Notations

a) This proposal is valid for thirty (30) calendar days. If accepted, an agreement will be drafted and executed by the parties.
b) Sales tax has been included in our pricing.
c) Due to the difficult nature of this work, no guarantee or warranty can be given that this repair will work as intended. Calderwood Engineering and CPM Constructors have experience with dam repairs and have high confidence the proposed repair will work.
d) The estimated life expectancy for the proposed repairs is 25-50 years.
e) A preliminary design detail has been used for this price proposal. Please refer to the attached repair detail. The dam repair scope and price may change after the final design and permitting is complete.
f) Yearly inspection and maintenance of the dam after the repair is not included in this proposal but can be negotiated for an additional price.

F) Noted Exclusions

Any items not specifically mentioned above are considered excluded. Some examples are as follows:

a) Snow plowing, snow removal, sanding and ice removal,
b) Overtime, premium time, and work on any federal holiday,
c) Bonds, E&O insurance, builders risk insurance, or other special insurances,
d) Posted wage rates such as Davis Bacon, State of Maine, Union and / or any special related fees, dues, training, etc.,
e) Any concrete or soils testing/analysis or independent inspection, and
f) Yearly inspection and maintenance.

G) Payment Terms

25% owed at signing of contract,
25% owed at completion of design and permit approval,
25% owed at start of work onsite, and
25% owed at project completion.

We look forward to further working with the Northeast Odd Fellows Association to repair the dam so future generations can enjoy the water Trues Pond has to offer.

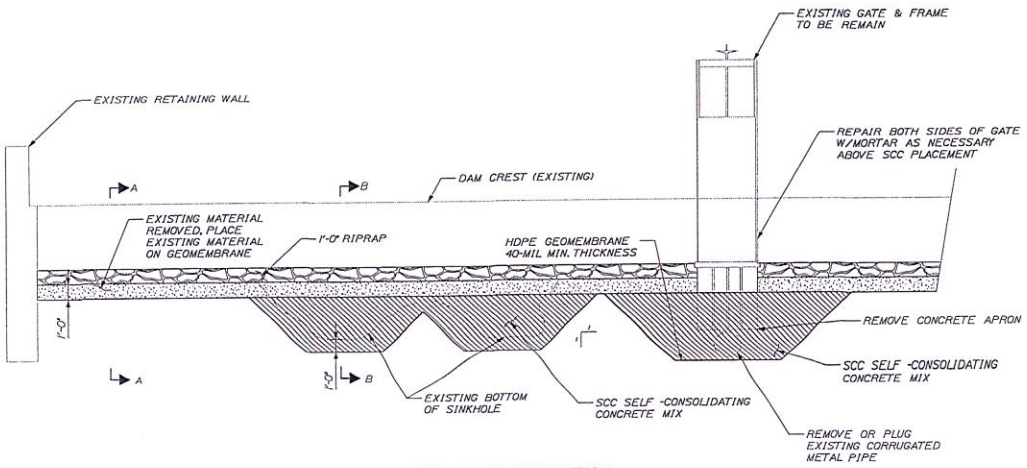
Regards,

Mitchell Bois, Project Manager

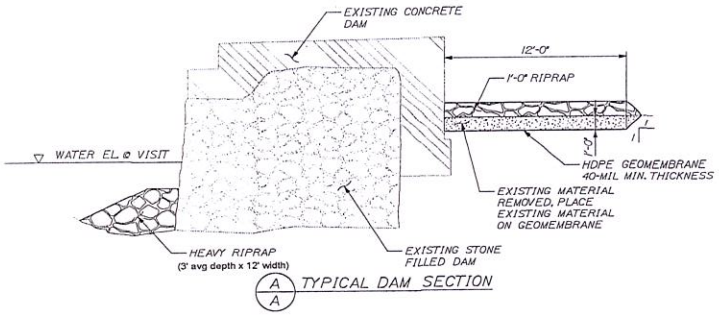
We have read and agree to these terms and conditions.

_____ _____

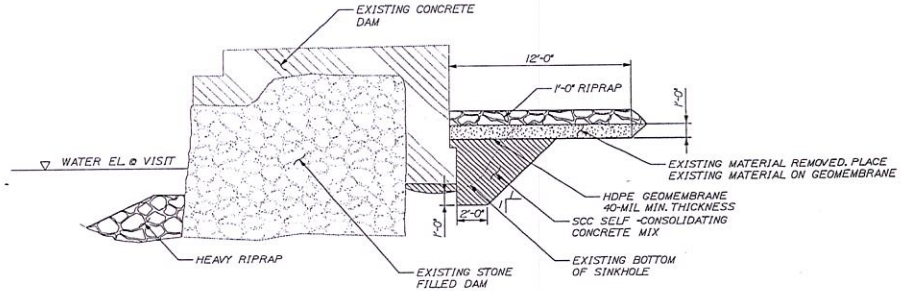
Northeast Odd Fellows Association Date



UPSTREAM DAM ELEVATION



A/A TYPICAL DAM SECTION



B/B DAM SECTION AT SINKHOLE

PRELIMINARY ~ NOT FOR CONSTRUCTION

CALDERWOOD ENGINEERING, ETC.
STRUCTURAL ENGINEERING • DETAILING SERVICES
222 RIVER RD, RICHMOND, ME 04357 PH/FX (207)737-2307/(207) 737-2308

PREPARED FOR: CPM CONSTRUCTORS

	BY	DATE
DESIGN-DETAILED	DJW	DEC 2015
CHECKED-REVIEWED		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

P.E. NUMBER

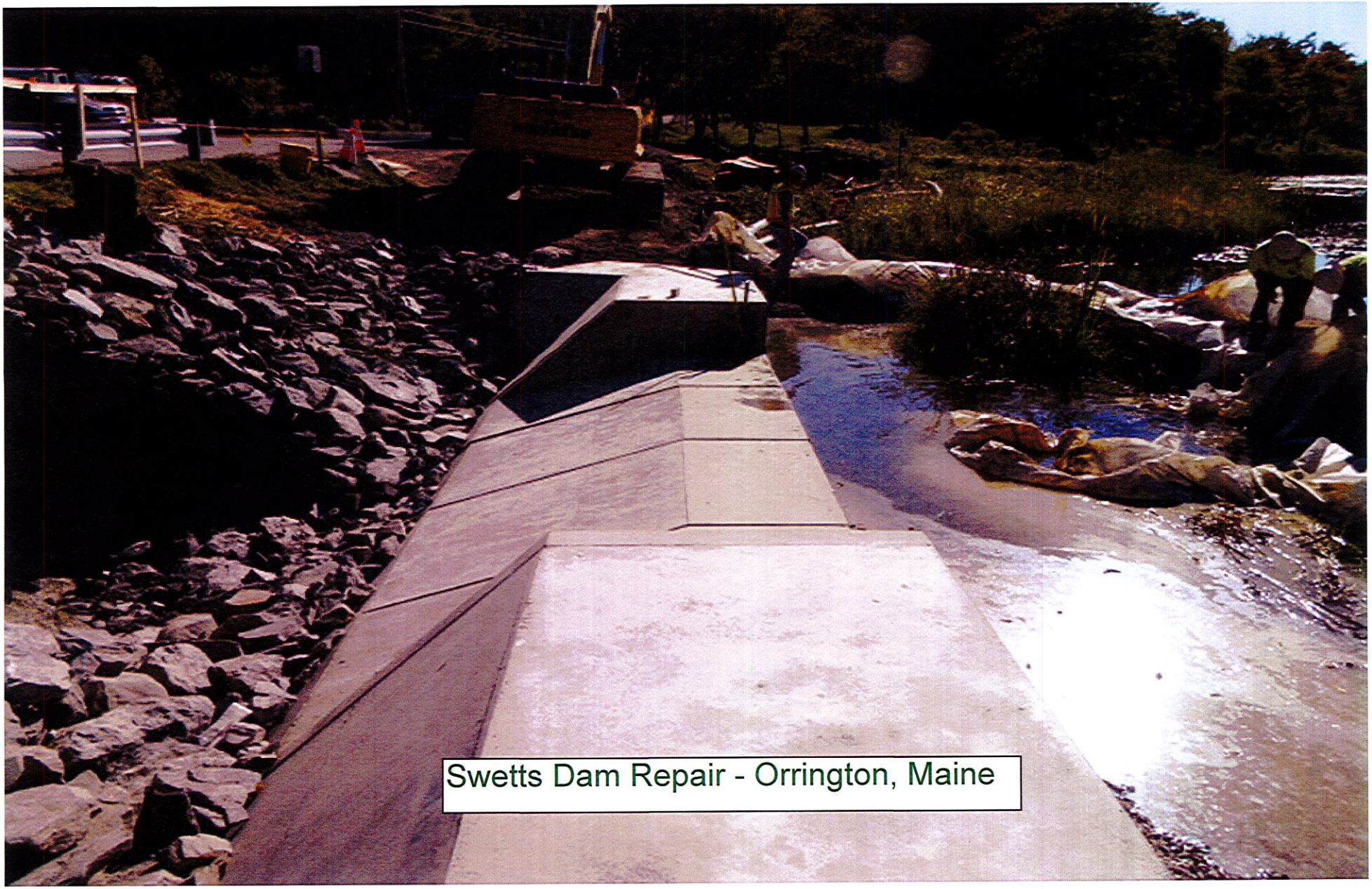
DATE

TRUES POND DAM
MONTVILLE, ME

PRELIM REHAB DETAILS

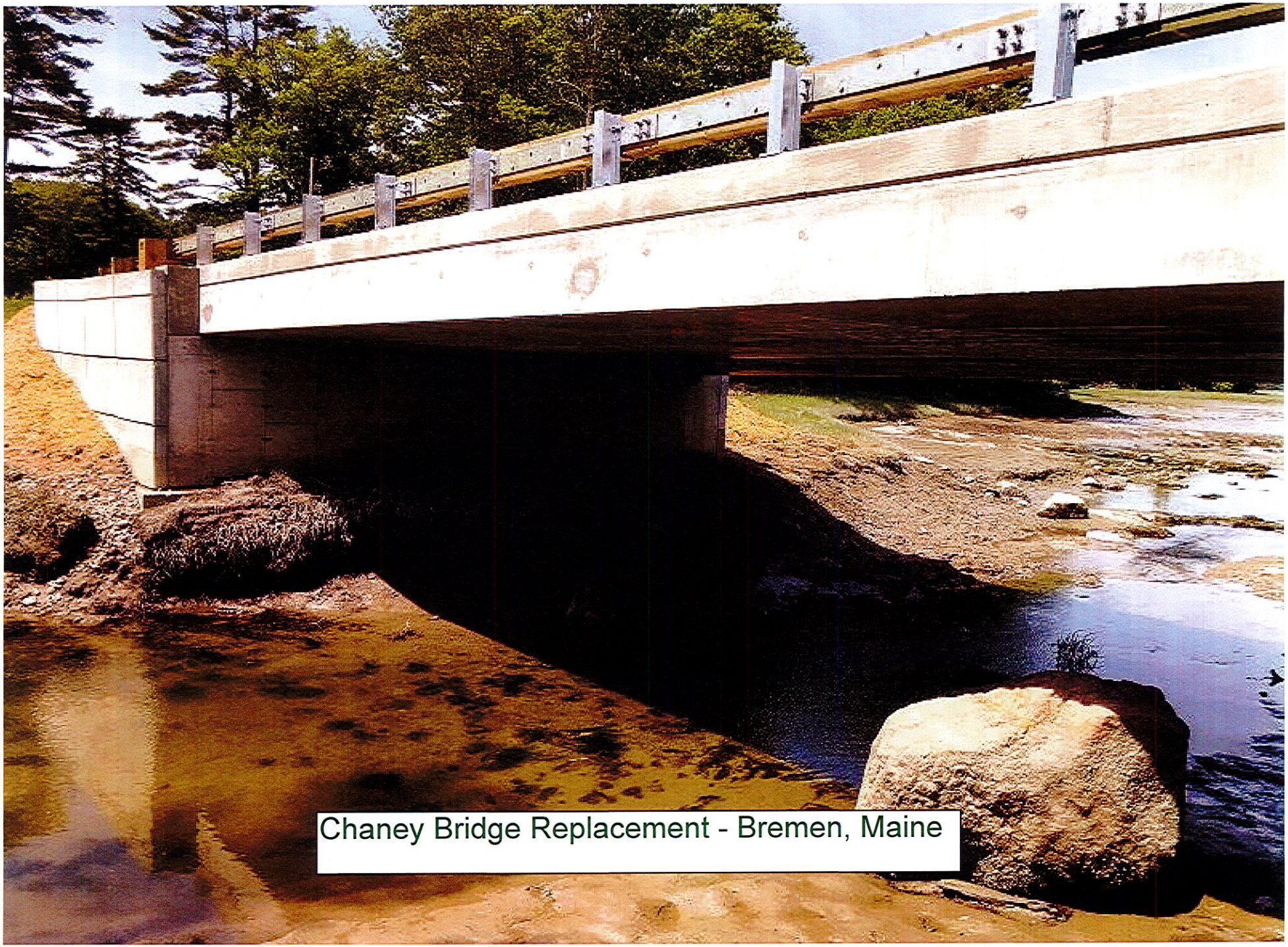
SHEET NUMBER
1

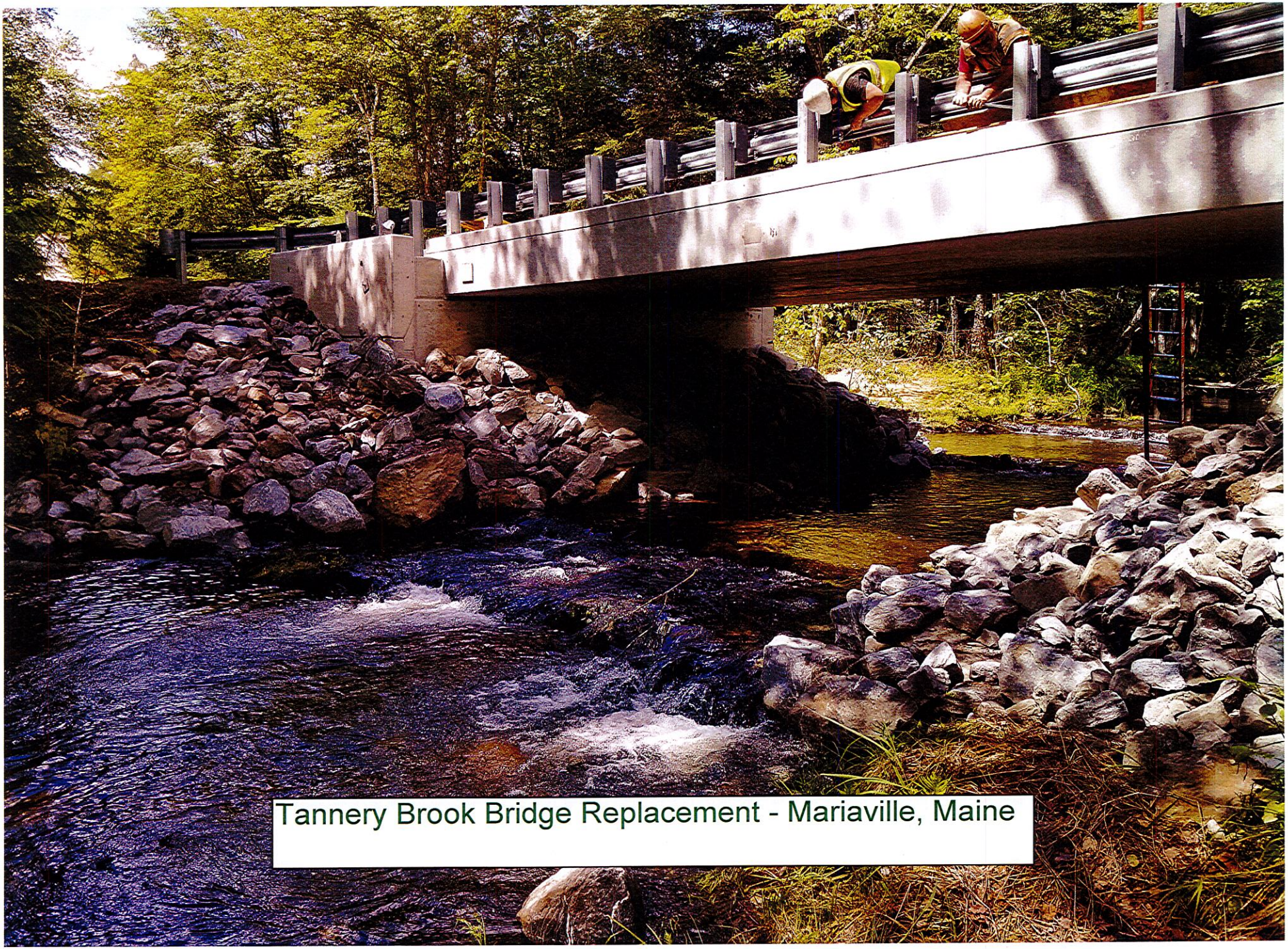
Calderwood Engineering Past Project Pictures


Swetts Dam Repair - Orrington, Maine

Swetts Dam Repair - Orrington, Maine


Wadsworth Street Bridge Replacement - Thomaston, Maine


Chaney Bridge Replacement - Bremen, Maine


Tannery Brook Bridge Replacement - Mariaville, Maine


Twin Bridge Replacement - Sumner Maine

CALDERWOOD ENGINEERING
222 RIVER ROAD
RICHMOND, ME 04357
PH. (207) 737-2007 FAX (207) 737-2008

Date: January 21, 2019

Engineering Proposal for: CPM Constructors

Project Description and scope:

This project will consist of Calderwood Engineering making an inspection of the Trues Dam located in Montville Maine. Calderwood Engineering will develop a rehabilitation design for CPM Constructors.

Scope of Preliminary Design:

Preliminary design phase is not required for this project. Calderwood Engineering will develop repair and rehabilitation alternatives for the dam working with CPM Constructors to simplify and cut construction costs. Calderwood Engineering will secure all permits required for repair and rehabilitation if selected to do so.

Scope of Final Design:

Calderwood Engineering will design the rehabilitation according to industry design standards. Deliverable elements will consist of detailed plans with dimensions, reinforcement, reinforcing steel, and installation procedures. Calderwood Engineering will not perform construction inspection under this proposal but will enter into an additional agreement if asked by the Owner.

Construction Administration:

Calderwood Engineering will develop a separate proposal for performing construction inspection and administration on behalf of the Owner if requested.

Pertinent Design Criteria:

Steel Sheet Piling Design Manual
ACI 318

Project Schedule:

Kickoff:
Field Inspection including pertinent field measurements to be acquired in the summer of 2019. Design details and construction methods to be complete by July for construction in the August of 2020 depending on the level of permitting required. It is not anticipated that permitting will be an issue in this location. Some of this may vary from our estimate as they are dependent on the contractors plan and schedule.

CALDERWOOD ENGINEERING
222 RIVER ROAD
RICHMOND, ME 04357
PH. (207) 737-2007 FAX (207) 737-2008

Cost Estimate:

Estimate to perform required work as discussed in the proposal above broken into (2) separate prices ash shown:
The estimated costs are Lump Sum proposals. Actual hours worked will be invoiced at Calderwood Engineering's billing rates as shown in the attached detailed cost breakdown. Billing will be performed monthly based on hours worked.

Design of Trues Dam Rehabilitation..... $13,000.00

Permitting of Trues Dam Rehabilitation..... $10,000.00

Additional work required beyond the scope of this project will be billed at our standard engineering rates, as attached. Calderwood Engineering will not perform work outside of the scope of this proposal, without authorization. Work that is within the scope of this proposal but is beyond the cost provided by this proposal will be invoiced at no cost.

Payment Schedule:

Invoices for the project will be sent monthly. Terms of payment will be net 30. Any engineering or detailing required beyond the scope of this proposal will be billed out at Calderwood Engineering standard hourly engineering rates.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
CONSULTANTS' DETAILED COST PROPOSAL FORM

Consultant Name: Calderwood Engineering etc, llc
Vendor/Customer No.:
Project Title/Location: Trues Dam
MaineDOT WIN:
Service Area or Phase of Work: Phase II - Final Design

Orig. Date: November 28, 2018
Revised Date: n/a
Contact Name: Eric Calderwood
Contact e-mail address: eric@calderwoodengineering.com

#	Task Descriptions	Dana Merrill Hours	Gregory Macalister Hours	Jesse Helms Hours	Eric Calderwood Hours	Roger Gagnon Hours	Marshall Cole Hours	Thad Chamberland Hours	Paige Martin Hours	Lyn Calderwood Hours	TOTAL Hours
1	Task Descriptions										0.00
2											0.00
3	General Supervision and Coordination		8.00		8.00						16.00
4											0.00
5	Site Inspection & Mapping of repair locations		16.00					16.00			32.00
6											0.00
7	Design of Rehab		8.00		4.00			16.00			28.00
8											0.00
9	Develop Plans with rehabilitation details		8.00		4.00			32.00			44.00
10											0.00
11	Review Construction Plans and edit		4.00		2.00			8.00			
12											0.00
13	Miscellaneous Communications throughout the project including Construction Methods		4.00		8.00			8.00			20.00
14											0.00
15	Clerical Support									8.00	8.00
16											0.00
17											0.00
18											0.00
19											0.00
20											0.00
21											0.00
22											0.00
	TOTAL HOURS	**0.00**	**48.00**	**0.00**	**26.00**	**0.00**	**0.00**	**80.00**	**0.00**	**8.00**	**148.00**
	HOURLY RATE	$24.00	$35.00	$32.00	$35.00	$40.00	$25.00	$25.00	$24.00	$25.00	
	DIRECT LABOR TOTAL	**$0.00**	**$1,680.00**	**$0.00**	**$910.00**	**$0.00**	**$0.00**	**$2,000.00**	**$0.00**	**$200.00**	**$4,790.00**
									Overhead %	143.94%	$6,894.73
									Profit/Fee %	10.00%	$1,168.47
										Subtotal =	**$12,853.20**

DIRECT EXPENSES	$
Subconsultant 1	$0.00
Subconsultant 2	$0.00
Mileage ($.44 per mile)	$146.80
Postage	$0.00
Printing	$0.00
Miscellaneous	$0.00
TOTAL DIRECT EXPENSES =	**$146.80**

NOTES:

Proposal should include: (a) Description of Services; (b) Scope of Work; (c) DBE form; (d) Appendix A-1; (e) Certified Payroll; (f) Insurance Certificates; (g) Subconsultant Proposal; and (h) Direct Expenses.

Total Direct Exp. = $146.80

Total Proposed Cost **$13,000.00**

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
CONSULTANTS' DETAILED COST PROPOSAL FORM

Consultant Name: Calderwood Engineering etc, llc
Vendor/Customer No.:
Project Title/Location: Trues Dam
MaineDOT WIN: TBD
Service Area or Phase of Work: Permitting

Orig. Date: January 21, 2019
Revised Date: n/a
Contact Name: Eric Calderwood
Contact e-mail address: eric@calderwoodengineering.com

	Consultant Positions =>	Dana Merrill	Gregory Macalister	Jesse Helms	Eric Calderwood	Roger Gagnon	Marshall Cole	Thad Chamberland	Paige Martin	Lyn Calderwood	TOTAL
#	**Task Descriptions**	*Hours*	*Hours*	*Hours*	*Hours*	*Hours*	*Hours*	*Hours*	*Hours*	*Hours*	*Hours*
1	Task Descriptions										0.00
2											0.00
3	General Supervision and Coordination				4.00						4.00
4											0.00
5	Onsite Meeting for Permitting		16.00					16.00			32.00
6											0.00
7	Prelim Permit Details		4.00		2.00			12.00			18.00
8											0.00
9	Site Conditions Report		2.00					8.00			10.00
10											0.00
11	Public Meeting		4.00					4.00			8.00
12											0.00
13	Functional Assessment		2.00		2.00			8.00			12.00
14											0.00
15	Application		2.00		2.00			16.00			20.00
16											0.00
17	Miscellaneous Communications for Permitting		8.00		4.00			8.00			20.00
18											0.00
19	Clerical Support									4.00	4.00
20											0.00
21											0.00
22											0.00
	TOTAL HOURS	**0.00**	**38.00**	**0.00**	**14.00**	**0.00**	**0.00**	**72.00**	**0.00**	**4.00**	**128.00**
	HOURLY RATE	$24.00	$35.00	$32.00	$35.00	$40.00	$25.00	$25.00	$24.00	$25.00	
	DIRECT LABOR TOTAL	**$0.00**	**$1,330.00**	**$0.00**	**$490.00**	**$0.00**	**$0.00**	**$1,800.00**	**$0.00**	**$100.00**	**$3,720.00**
	Overhead %									143.94%	$5,354.57
	Profit/Fee %									10.00%	$907.46
										Subtotal =	**$9,982.02**

DIRECT EXPENSES	$
Subconsultant 1	$0.00
Subconsultant 2	$0.00
Mileage ($.44 per mile)	$0.00
Postage	$0.00
Printing	$0.00
Miscellaneous	$17.98
TOTAL DIRECT EXPENSES =	**$17.98**

NOTES:

Proposal should include: (a) Description of Services; (b) Scope of Work; (c) DBE form; (d) Appendix A-1; (e) Certified Payroll; (f) Insurance Certificates; (g) Subconsultant Proposal; and (h) Direct Expenses.

Total Direct Exp. = $17.98

Total Proposed Cost **$10,000.00**

DEP FACT SHEET
In Lieu Fee Compensation Program

August 18, 2017 – December 31, 2019

Mitigating adverse environmental impacts is an integral part of Maine's Natural Resources Protection Act (NRPA) (38 M.R.S.A. § 480 A – BB), a regulatory program administered by the Maine Department of Environmental Protection (DEP). In general, mitigation is a sequential process of avoiding adverse impacts, minimizing impacts that cannot be practicably avoided, and then compensating for those impacts that cannot be further minimized. Both State and Federal agencies administering resource protection regulations may require appropriate and practicable compensatory mitigation as a condition of their permit approvals and authorizations.

Compensation is required to off-set an adversely affected resource function with a function of equal or greater value. If on-site or off site ecologically appropriate permittee-responsible mitigation is not available, practicable or otherwise wholly or in part acceptable to off-set lost resource function and value, an applicant may opt to pay a fee in lieu of (ILF) a compensation project as outlined in the Natural Resources Protection Act 38 M.R.S.A. § 480 (Z).

Table 1 Resource Compensation Rates

County	Natural Resource Enhancement & Restoration Cost/ Sq. Ft.	Avg. Assessed Land Value/ Sq. ft.*
Androscoggin	$3.61	$0.17
Aroostook	$2.86	$0.02
Cumberland	$3.61	$0.69
Franklin	$2.86	$0.03
Hancock	$2.86	$0.21
Kennebec	$3.61	$0.16
Knox	$3.61	$0.34
Lincoln	$3.61	$0.30
Oxford	$3.61	$0.07
Penobscot	$2.86	$0.06
Piscataquis	$2.86	$0.03
Sagadahoc	$3.61	$0.27
Somerset	$3.61	$0.04
Waldo	$3.61	$0.09
Washington	$2.86	$0.04
York	$3.61	$0.47

* Figures based on 2013 MRS statistical Summary

The ILF compensation program was established to provide applicants with a flexible compensation option over and above traditional permittee-responsible compensation projects. The applicant may choose which method of compensation is preferred for a given project.

The methods for resource mitigation are outlined further in the DEP Fact Sheet: *Natural Resource Compensation: Methods for Restoring Lost Function and Value.*

The ILF resource compensation rates are outlined in Table 1. All resource compensation fees shall be calculated using the resource dependent formulas outlined below based on the rates provided in Table 1 and a resource multiplier. The resource multiplier is an adjustment factor that reflects the significance of specific resources and the Department's resource compensation ratio outlined in the

Wetlands and Waterbodies Protection Rules, Chapter 310 and the Significant Wildlife Habitat Rules, Chapter 355. The resource multiplier shall be 1 except as follows:

1. A resource multiplier of 2 shall be used for:

   a. Direct impacts to wetland areas containing at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, except for artificial ponds or impoundments and areas of wetland routinely altered by anthropogenic activities such as road ditches etc;
   b. Direct impacts to peatlands dominated by shrubs, sedges and sphagnum moss;
   c. Direct impacts to coastal wetlands;
   d. Direct impacts to freshwater wetland areas contained within an inland wading bird & waterfowl habitat (IWWH);
   e. Direct & indirect impacts to a shorebird habitat and associated buffers;
   f. Direct impacts to great ponds; and
   g. Direct impacts to freshwater wetland areas contained within a significant vernal pool habitat.

Note: All ILF contributions received by the Department will be placed in the Maine Natural Resources Conservation Fund (MNRCF) and made available for grant awards to qualified natural resource conservation projects. The Department prefers to collect contributions into the MNRCP prior to the issuance of a Department permit; however, payment may be made a condition of a Department permit upon request by the applicant. The Department reserves the right to deny a request for conditional payment of a compensation fee based on an applicant's prior payment record.

Wetland Compensation Formula:

Wetland compensation fee

(Direct wetland impact/sq. ft. x (natural resource enhancement & restoration cost/sq. ft. + avg. assessed land valuation/sq. ft.)) x (resource multiplier)

Significant Vernal Pool Compensation Formula:

Vernal pool compensation fee

(Direct wetland impacts within the SVP habitat/sq. ft. x (natural resource enhancement & restoration cost/sq. ft. + avg. assessed land valuation/sq. ft.)) x (resource multiplier of 2)
+
(Direct non-wetland impacts within the SVP habitat/sq. ft. x avg. assessed land valuation/sq. ft.)

[Note: Projects that directly impact a portion of a significant vernal pool aquatic habitat (the pool) must compensate for the entire significant vernal pool habitat area unless otherwise determined by the Department.]

Inland Wading Bird and Waterfowl (IWWH) Compensation Formula:

IWWH compensation fee

(Direct wetland impacts within the IWWH/sq. ft. x (natural resource enhancement & restoration cost/sq. ft. + avg. assessed land valuation/sq. ft.)) x (resource multiplier of 2)
+
(Direct non-wetland impacts within the IWWH/sq. ft. x avg. assessed land valuation/sq. ft.)

Shorebird Habitat Compensation Formula:

Shorebird habitat compensation fee

(Direct shorebird habitat impacts/ sq. ft. + direct shorebird habitat buffer impacts/sq. ft. + shorebird habitat zone of influence impacts/sq. ft. x (natural resource enhancement & restoration cost/sq. ft. + avg. assessed land valuation/sq. ft.) x (resource multiplier of 2)

[*Note: The "zone of influence" includes all mapped shorebird habitat area within 300' of the proposed new pier, wharf or float. Shorebird habitat function and value is lost or highly degraded within the "zone of influence".]

All compensation fee amounts could be directly reduced by decreasing the amount of habitat degradation associated with each project.

For further information please contact your nearest DEP regional office, and ask to speak to the "on-call" person in the Bureau of Land Resources.

Central Maine Regional Office, 17 State House Station, Augusta, ME 04333-0017; Phone: (207) 287-7688 or toll-free 1-800-452-1942.

Eastern Maine Regional Office, 106 Hogan Road, Bangor, ME 04401; Phone: (207) 941-4570 or toll-free 1-888-769-1137.

Northern Maine Regional Office, 1235 Central Drive, Skyway Park; Presque Isle, ME 04769; Phone: (207) 764-0477 or toll-free 1-888-769-1053.

Southern Maine Regional Office, 312 Canco Road, Portland, ME 04103; Phone: (207) 822-6300 or toll-free 1-888-769-1036.