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## NOTICE OF INTENT

pursuant to

The Regulations of the Massachusetts Wetlands Protection Act  
310 CMR 10.00

and

Chapter F: The Town of Acton Wetland Protection Bylaw

ERIKSON DAM SPILLWAY  
STABILITY IMPROVEMENTS

Acton, Massachusetts

Applicant:

Erikson Grain Mill, Inc.  
113 Main Street  
Acton, Massachusetts 01720

January 20, 2010



January 22, 2010

Acton Conservation Commission  
472 Main Street  
Acton, Massachusetts 01720

**Re: Extension to Open Public Hearing  
Erikson Dam Spillway Stability Improvements  
Notice of Intent  
PARE Project No. 08128.01**

Dear Member of the Acton Conservation Commission:

On behalf of the our client, the Erikson Grain Mill, this letter is to authorize an extension of the regulatory 21-day time period to open a public hearing on the above-captioned Notice of Intent until February 17, 2010.

If you have any questions please feel free to contact our office.

Sincerely,

A handwritten signature in black ink, appearing to read 'A R Orsi', is positioned above the typed name.

Allen R. Orsi, P.E.  
Project Engineer

cc: DEP Central Region  
John Erikson, Erikson Grain Mill

ENGINEERS  
SCIENTISTS  
PLANNERS



www.parecorp.com

January 20, 2010

Tom Tidman - Director  
Acton Conservation Commission  
472 Main Street  
Acton, Massachusetts 01720

Re: **Notice of Intent**  
**Erikson Dam Spillway Stability Improvements**  
**Acton, MA**  
PARE Project No. 08128.01

Dear Mr. Tidman and Members of the Conservation Commission:

On behalf of the Erikson Grain Mill, Inc. and pursuant to the Regulations of the Massachusetts Wetlands Protection Act 310 CMR 10.00 and Chapter F: The Town of Acton Wetland Protection Bylaw, Pare Corporation (PARE) is pleased to present the attached Notice of Intent for your review. Enclosed are the following:

- One (1) original and four (4) copies of a Notice of Intent for Repairs to the Erikson Dam Spillway;
- Five (5) sets of Project Plans, entitled "Erikson Dam Spillway Stability Improvements," in 4 sheets, dated November 2009, prepared by Pare Corporation (4 half sized sets bound in reports, one full sized set);
- A check in the amount of \$362.50, to cover the municipal portion of the filing fee.

Please note that abutters are being notified via certified mail as provided for under 310 CMR 10.05(4)(a). Certified mail receipts will be supplied at the public hearing. It is requested that the required advertising fee be billed to the applicant.

The intent of the project is to make repairs and improvements to the Erikson Dam, a significant hazard potential (Class II) structure impounding Fort Pond Brook to the northeast of the intersection of Main Street (Route 27) and High Street in Acton. Repairs to the dam are limited to installing a stone stability buttress on the downstream side of the spillway wall, plugging two metal pipes located within the spillway wall, pointing of stone masonry, and select tree removal.

Thank you for your consideration of this application. If you have any questions, please feel free to contact us.

Sincerely,

PARE CORPORATION

A handwritten signature in black ink, appearing to read 'A R Orsi', is written over the printed name of the project engineer.

Allen R. Orsi, P.E.  
Project Engineer

ARO/lmh

cc: DEP Central Regional Office  
Acton Town Clerk  
Mr. John Erikson  
File

Z:\JOBS\08 Jobs\08128.01 Erikson Dam Stability Design Eng Serv\NOI\NOI-Cover-Letter.doc

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## **Administrative Documentation**

WPA Form 3 – Notice of Intent  
Filing Fee Transmittal Form  
Municipal Filing Fee Determination



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:  
**85-1036**  
MassDEP File Number  
Document Transaction Number  
Acton  
City/Town

**Important:**  
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:  
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

## A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

<u>113 Main Street</u>	<u>Acton</u>	<u>01720</u>
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:		
<u>42°27'34"</u>	<u>-71°29'38"</u>	
d. Latitude	e. Longitude	
<u>H-2A</u>	<u>57</u>	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

<u>John</u>	<u>Erikson</u>	
a. First Name	b. Last Name	
<u>Erikson Grain Mill, Inc.</u>		
c. Organization		
<u>113 Main Street</u>		
d. Street Address		
<u>Acton</u>	<u>MA</u>	<u>01720</u>
e. City/Town	f. State	g. Zip Code
<u>978-263-4733 (bus.)</u>		
h. Phone Number	i. Fax Number	j. Email Address

3. Property owner (required if different from applicant):  Check if more than one owner

<u></u>	<u></u>	
a. First Name	b. Last Name	
<u></u>		
c. Organization		
<u></u>		
d. Street Address		
<u></u>	<u></u>	<u></u>
e. City/Town	f. State	g. Zip Code
<u></u>	<u></u>	<u></u>
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

<u>Allen</u>	<u>Orsi</u>	
a. First Name	b. Last Name	
<u>Pare Corporation</u>		
c. Company		
<u>10 Lincoln Road, Suite 103</u>		
d. Street Address		
<u>Foxboro</u>	<u>MA</u>	<u>02035</u>
e. City/Town	f. State	g. Zip Code
<u>508-543-1755</u>	<u>508-543-1881</u>	<u>AOrsi@parecorp.com</u>
h. Phone Number	i. Fax Number	j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

<u>\$500.00</u>	<u>\$237.50</u>	<u>\$262.50</u>
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Acton
City/Town

## A. General Information (continued)

6. General Project Description:

Repairs and Improvements to the Erikson Dam, as described in the Narrative Project Description of this Notice of Intent.

7a. Project Type Checklist:

- 1.  Single Family Home
- 2.  Residential Subdivision
- 3.  Limited Project Driveway Crossing
- 4.  Commercial/Industrial
- 5.  Dock/Pier
- 6.  Utilities
- 7.  Coastal Engineering Structure
- 8.  Agriculture (e.g., cranberries, forestry)
- 9.  Transportation
- 10.  Other – Dam repairs

7b. Is any portion of the proposed activity eligible to be treated as a limited project subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1.  Yes  No If yes, describe which limited project applies to this project:

310 CMR 10.53(3) i: maintenance, repair, and improvement of a dam

2. Limited Project

8. Property recorded at the Registry of Deeds for:

Middlesex

a. County

12958

c. Book

Document #60212515

b. Certificate # (if registered land)

265

d. Page Number

## B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- 1.  Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2.  Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input checked="" type="checkbox"/> Bank	7 1. linear feet	Temporary Only 2. linear feet
b. <input type="checkbox"/> Bordering Vegetated Wetland	- 1. square feet	- 2. square feet
c. <input checked="" type="checkbox"/> Land Under Waterbodies and Waterways	801 S.F. 1. linear feet 3. cubic yards dredged	429 S.F. Temp Impacts 2. linear feet



WPA Form 3 - Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Table with 3 columns: Resource Area, Size of Proposed Alteration, Proposed Replacement (if any). Rows include: d. Bordering Land Subject to Flooding, e. Isolated Land Subject to Flooding, f. Riverfront Area.

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
100 ft. - New agricultural projects only
200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 8,722 square feet

4. Proposed alteration of the Riverfront Area:

133 a. total square feet, 133 b. square feet within 100 ft., 0 c. square feet between 100 ft. and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI? [X] Yes [ ] No

6. Was the lot where the activity is proposed created prior to August 1, 1996? [X] Yes [ ] No

3. [ ] Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Table with 3 columns: Resource Area, Size of Proposed Alteration, Proposed Replacement (if any). Rows include: a. Designated Port Areas, b. Land Under the Ocean, c. Barrier Beach, d. Coastal Beaches, e. Coastal Dunes.



WPA Form 3 - Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Table with 3 columns: Description, Size of Proposed Alteration, Proposed Replacement (if any). Rows include Coastal Banks, Rocky Intertidal Shores, Salt Marshes, Land Under Salt Ponds, Land Containing Shellfish, Fish Runs, and Land Subject to Coastal Storm Flowage.

4. Restoration/Enhancement
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW
b. square feet of Salt Marsh

C. Other Applicable Standards and Requirements

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in Estimated Habitat of Rare Wildlife as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the Massachusetts Natural Heritage Atlas or go to http://www.mass.gov/dfwele/dfw/nhosp/nhregmap.htm.

a. Yes No If yes, include proof of mailing or hand delivery of NOI to:

2008 (MassGIS data layers PRIHAB\_POLY, ESTHAB\_POLY)

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
Route 135, North Drive
Westborough, MA 01581

b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.C, and include requested materials with this Notice of Intent (NOI); OR complete Section C.1.d, if applicable. If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).



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## C. Other Applicable Standards and Requirements (cont'd)

1. c. Submit Supplemental Information for Endangered Species Review \*

1.  Percentage/acreage of property to be altered:
  - (a) within wetland Resource Area \_\_\_\_\_  
percentage/acreage
  - (b) outside Resource Area \_\_\_\_\_  
percentage/acreage
2.  Assessor's Map or right-of-way plan of site
3.  Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work \*\*
  - (a)  Project description (including description of impacts outside of wetland resource area & buffer zone)
  - (b)  Photographs representative of the site
  - (c)  MESA filing fee (fee information available at: <http://www.mass.gov/dfwele/dfw/nhosp/nhenvmesa.htm>)  
Make check payable to "Natural Heritage & Endangered Species Fund" and **mail to NHESP** at above address  
*Projects altering 10 or more acres of land, also submit:*
  - (d)  Vegetation cover type map of site
  - (e)  Project plans showing Priority & Estimated Habitat boundaries

d. OR Check One of the Following

1.  Project is exempt from MESA review.  
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <http://www.mass.gov/dfwele/dfw/nhosp/nhenvexemptions.htm>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
2.  Separate MESA review ongoing.
 

a. NHESP Tracking Number	b. Date submitted to NHESP
--------------------------	----------------------------
3.  Separate MESA review completed.  
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

\* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see [www.nhosp.org](http://www.nhosp.org) regulatory review tab). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

\*\* MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
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## C. Other Applicable Standards and Requirements (cont'd)

2. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a.  Not applicable – project is in inland resource area only

b.  Yes  No

If yes, include proof of mailing or hand delivery of NOI to either:

South Shore - Cohasset to Rhode Island, and the Cape & Islands:

North Shore - Hull to New Hampshire:

Division of Marine Fisheries - Southeast Marine Fisheries Station  
Attn: Environmental Reviewer  
838 South Rodney French Blvd.  
New Bedford, MA 02744

Division of Marine Fisheries - North Shore Office  
Attn: Environmental Reviewer  
30 Emerson Avenue  
Gloucester, MA 01930

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

3. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

a.  Yes  No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

b. ACEC

4. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

a.  Yes  No

5. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

a.  Yes  No

6. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

a.  Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

1.  Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
2.  A portion of the site constitutes redevelopment
3.  Proprietary BMPs are included in the Stormwater Management System.

b.  No. Check why the project is exempt: N/A: Dam repair project with no stormwater implications

1.  Single-family house
2.  Emergency road repair
3.  Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

**Online Users:**  
Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Acton

City/Town

## D. Additional Information

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

**Online Users:** Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1.  USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2.  Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.
3.  Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.
4.  List the titles and dates for all plans and other materials submitted with this NOI.

"Erikson Dam Spillway Stability Improvements"

a. Plan Title

Pare Corporation

b. Prepared By

December 2009 (Issued for Permits)

d. Final Revision Date

J. Matthew Bellisle, P.E.

c. Signed and Stamped by

As noted

e. Scale

f. Additional Plan or Document Title

g. Date

5.  If there is more than one property owner, please attach a list of these property owners not listed on this form.
6.  Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.
7.  Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.
8.  Attach NOI Wetland Fee Transmittal Form
9.  Attach Stormwater Report, if needed.

## E. Fees

1.  Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name



# WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number:

Acton

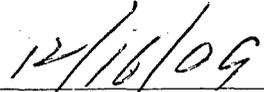
City/Town

## F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

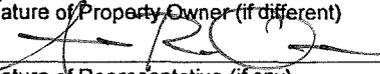
I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

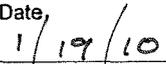
  
\_\_\_\_\_  
1. Signature of Applicant

  
\_\_\_\_\_  
2. Date

\_\_\_\_\_  
3. Signature of Property Owner (if different)

\_\_\_\_\_  
4. Date

  
\_\_\_\_\_  
5. Signature of Representative (if any)

  
\_\_\_\_\_  
6. Date

### For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

### For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

### Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands  
**NOI Wetland Fee Transmittal Form**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**Important:** When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

**A. Applicant Information**

1. Applicant:

John Erikson  
 a. First Name b. Last Name  
Erikson Grain Mill, Inc.  
 c. Organization  
113 Main Street  
 d. Mailing Address  
Acton MA 01720  
 e. City/Town f. State g. Zip Code  
978-263-4733 (bus.)  
 h. Phone Number i. Fax Number j. Email Address

2. Property Owner (if different):

\_\_\_\_\_  
 a. First Name b. Last Name  
 \_\_\_\_\_  
 c. Organization  
 \_\_\_\_\_  
 d. Mailing Address  
 \_\_\_\_\_  
 e. City/Town f. State g. Zip Code  
 \_\_\_\_\_  
 h. Phone Number i. Fax Number j. Email Address

3. Project Location:

Main Street (Route 27) Acton  
 a. Street Address b. City/Town

**B. Fees**

The fee should be calculated using the following six-step process and worksheet. **Please see Instructions before filling out worksheet.**

**Step 1/Type of Activity:** Describe each type of activity that will occur in wetland resource area and buffer zone.

**Step 2/Number of Activities:** Identify the number of each type of activity.

**Step 3/Individual Activity Fee:** Identify each activity fee from the six project categories listed in the instructions.

**Step 4/Subtotal Activity Fee:** Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

**Step 5/Total Project Fee:** Determine the total project fee by adding the subtotal amounts from Step 4.

**Step 6/Fee Payments:** To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



**Massachusetts Department of Environmental Protection**  
 Bureau of Resource Protection - Wetlands  
**NOI Wetland Fee Transmittal Form**  
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**B. Fees** (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
Category 2e.) inland limited projects minus road crossings and agriculture	1	\$500.00	\$500.00
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<b>Step 5/Total Project Fee:</b>			\$500.00
<b>Step 6/Fee Payments:</b>			
Total Project Fee:			\$500.00
			a. Total Fee from Step 5
State share of filing Fee:			\$237.50
			b. 1/2 Total Fee <b>less</b> \$12.50
City/Town share of filing Fee:			\$262.50
			c. 1/2 Total Fee <b>plus</b> \$12.50

**C. Submittal Requirements**

- a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection  
 Box 4062  
 Boston, MA 02211

- b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

**To MassDEP Regional Office** (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

\*\* Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth.

**TOWN OF ACTON WETLAND PROTECTION BYLAW  
NOTICE OF INTENT BYLAW FEE DETERMINATION (RULE 2.4)**

---

The proposed work includes improvements to the Erikson Dam located along Fort Pond Brook in Acton. This work qualifies as an inland limited project, and falls under Category 2 with a \$500 DEP filing fee.

According to Rule 2.4(2) of the Town of Acton Wetland Protection Bylaw Rules and Regulations, the Bylaw fee is 20% of that fee which is applied under the State Notice of Intent filing fee. The bylaw fee is in addition to the fee assessed by the state regulations.

Category	Total State Fee	Town Portion	State Portion	Bylaw Fee 20%	Total fee to Town
2	\$500.00	\$262.50	\$237.50	\$100.00	\$362.50

**Fee=\$362.50**

## **Abutter Notification Information**

Notification to Abutters

List of Abutters

Excerpt from Acton Assessor's Map

**NOTIFICATION TO ABUTTERS  
UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT  
AND THE TOWN OF ACTON WETLANDS BYLAW**

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40 and the Town of Acton Bylaws, you are hereby notified of the following:

The Applicant: Erikson Grain Mill, Inc.

Address 113 Main Street Phone 978-263-4733

has filed a Notice of Intent with the Acton Conservation Commission seeking permission to remove, fill, dredge or alter an Area Subject to Protection under the Wetlands Protection Act.

Applicant's Representative: Pare Corporation (Attn: Allen R. Orsi, P.E.)

Address 10 Lincoln Rd Suite 103, Foxboro, MA 02035 Phone 508-543-1755

The address of the property where the activity is proposed 113 Main Street; northeast of the intersection of Main Street (Route 27) and High Street at the Erikson Dam

Town Atlas Plate/Map H-2A Parcel/Lot 57

Project Description Installation of a stone buttress to stabilize the existing dam and appurtenant site access work and other minor repairs

Copies of the Notice of Intent may be examined at the Conservation Office, Acton Town Hall, 472 Main Street, Acton between the hours of 9:00 A.M. and 4:30 P.M. Monday through Friday. For more information please call the Conservation Office at 978-264-9631.

A Public Hearing will be held at the Acton Town Hall, 472 Main Street, on Wednesday,  
February 17, 2010 at 7:40 P.M.  
(date)

The notice of the public hearing will be published at least five (5) days in advance in the Acton edition of the *Beacon* newspaper or *Metrowest Daily News*.

NOTE: You may also contact your local conservation commission or the nearest Department of Environmental Protection Regional Office\* for the information about this application or, the Wetlands Protection Act. Acton is in the Central Region. To contact DEP, call:

**\*DEP Central Region: 508-792-7650  
627 Main Street, Worcester MA 01608**



**Town of Acton**  
472 Main Street  
Acton, MA 01720  
Telephone (978) 264-9622  
Fax (978) 264-9630

Brian McMullen  
Assistant Assessor

**Locus:** 113 MAIN ST  
**Parcel ID:** H2.A-57

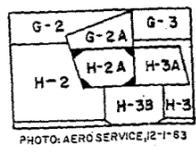
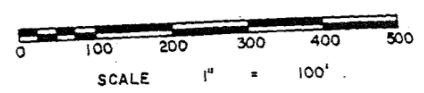
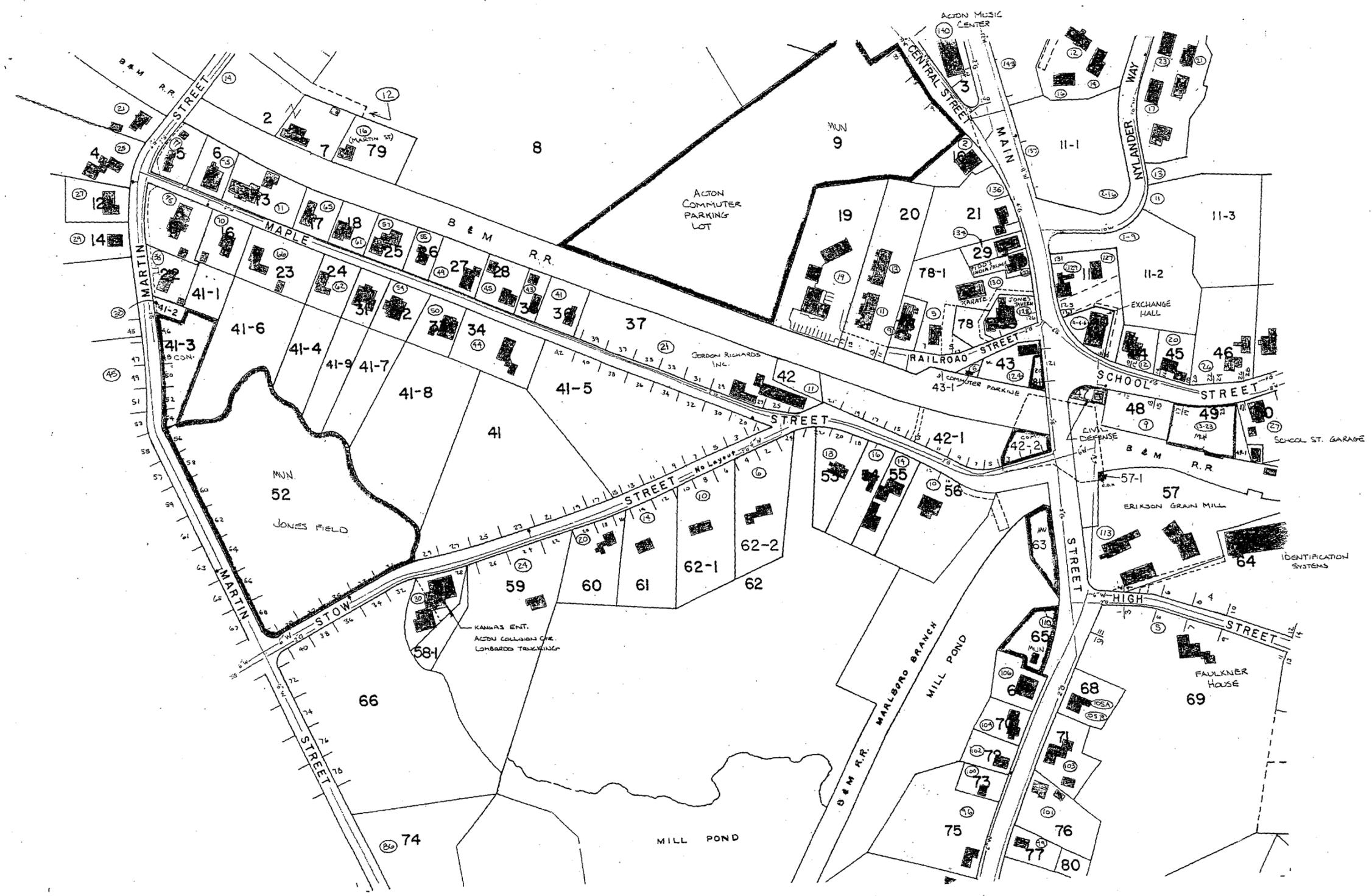
Location	Parcel ID	Owner	Co-Owner	Mailing Address	City	ST	Zip
3 SCHOOL ST	H2.A-47	TOWN OF ACTON	TREE DE	472 MAIN STREET	ACTON	MA	01720 01720
9 SCHOOL ST	H2.A-48	PORRAZZO DANIEL		43 KINSLEY ROAD	ACTON	MA	01720 01720
13 SCHOOL ST	H2.A-49	TOWN OF ACTON		472 MAIN STREET	ACTON	MA	01720 02446
25 SCHOOL ST	H2.A-49-1	BOLDIZAR JOZEF		27 SCHOOL ST	ACTON	MA	01720 01720
25-27 SCHOOL ST	H2.A-50	BOLDIZAR JOZEF		27 SCHOOL STREET	ACTON	MA	01720
112 MAIN ST	H2.A-63	TOWN OF ACTON		472 MAIN STREET	ACTON	MA	01720
8 HIGH ST	H2.A-64	FAULKNER MILL REALTY LLC		PO BOX 985	ACTON	MA	01720
110 MAIN ST	H2.A-65	TOWN OF ACTON		472 MAIN STREET	ACTON	MA	01720
5 HIGH ST	H2.A-69	IRON WORK FARM IN ACTON INC	C P O BOX 1111	W. ACTON	MA	MA	01720
29 SCHOOL ST	H3.A-22	SOUTH ACTON CONGREGATIONAL		35 SCHOOL STREET	ACTON	MA	01720
5 RIVER ST	H3.A-38	MBTA	ATTN VANESSA	PO BOX 845142	BOSTON	MA	02284-5142

The owner of land sharing a common boundry or corner with the site of the proposed activity (100 feet) in any direction, including land located directly across a street, way, creek, river, stream, brook or canal. The above are as they appear on the most recent applicable taxes.

Kimberly Hoyt  
Assessing Clerk  
Acton Assessors Office

15-Apr-09

H-2A



TOWN of ACTON

H-2A

## **Figures**

Figure 1 – Site Location Map

Figure 2 – Annotated MassGIS Aerial Photograph

Figure 3 – FEMA Flood Insurance Rate Map



## LOCATION MAP

SCALE: 1" = 2000'



PARE CORPORATION  
 10 LINCOLN RD, SUITE 103  
 FOXBORO, MA 02035  
 (508) 543-1755

**FIGURE 1**  
 ERIKSON DAM  
 SPILLWAY STABILITY IMPROVEMENTS  
 MAIN STREET  
 ACTON  
 NOTICE OF INTENT



## ANNOTATED AERIAL PHOTOGRAPH

SCALE: 1" = 100'



PARE CORPORATION  
 10 LINCOLN RD, SUITE 103  
 FOXBORO, MA 02035  
 (508) 543-1755

PARE Project No. 08128.01      September 2009

**FIGURE 2**  
 ERIKSON DAM  
 SPILLWAY STABILITY IMPROVEMENTS  
 MAIN STREET  
 ACTON  
 NOTICE OF INTENT



# Project Narrative

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## I. Introduction

This Notice of Intent, submitted to the Acton Conservation Commission and Department of Environmental Protection pursuant to the Massachusetts Wetlands Protection Act (MGL c. 131, s. 40) and Regulations (310 CMR 10.00), addresses the proposed repairs to the Erikson Dam. The NOI is submitted pursuant to the provisions of 310 CMR 10.53(3)(i) for the maintenance, repair and improvement (but not substantial enlargement) of structures, including dams and reservoirs and appurtenant works to such dams and reservoirs, buildings, piers, towers, headwalls, bridges, and culverts which existed on the effective date of 310 CMR 10.51 through 10.60 (April 1, 1983). The repairs are necessary to comply with current dam safety regulations and to protect downstream areas.

The dam is located to the northeast of the intersection of Main Street (Route 27) and High Street, and is accessible from the Erickson Grain Mill property. The project is located within the Town of Acton, and occupies a portion of Lot 57 on Acton Assessor's Map H-2A. During recent inspections, the dam has been found to be in **poor** condition with areas of leakage, unwanted vegetation, rotation and displacement of the spillway wall, and dislodged stone.

Wetland resource areas in the project vicinity include Bank, Bordering Vegetated Wetland, Land Under Water, Bordering Land Subject to Flooding, and 200-Foot Riverfront Area. Wetland and buffer zone impacts have been avoided and minimized to the extent possible, and the remaining, unavoidable impacts are allowable under the Regulations of the Massachusetts Wetlands Protection Act. The following narrative will discuss the project background and existing site conditions; demonstrate the need for the work; describe the proposed repairs; discuss activity within jurisdictional areas; and demonstrate project compliance with the applicable regulatory provisions. The existing site conditions and the proposed repairs and modifications are shown on plans entitled "*Erikson Dam Spillway Stability Improvements*," prepared by Pare Corporation, dated September 2009 (the "Project Plans"). The Project Plans are bound into Section 6 of this NOI.



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## II. Existing Site Conditions and Background

### *a. Erikson Dam*

The Erikson Dam is located approximately 25 feet downstream of a stone masonry culvert beneath Route 27 (Main Street). A small portion of the impoundment is located between the dam and the culvert, while the majority of the impoundment area is upstream (west) of the roadway. Access to the dam is via a gravel road/path leading from the Erikson Grain Mill property on the right abutment of the dam. The dam is classified as an **intermediate** size, **significant hazard potential** (Class II) structure under Commonwealth of Massachusetts dam safety rules and regulations stated in 302 CMR 10.00 and amended by Chapter 330 of the Acts of 2002. The southern side of the dam is accessible from the Erikson Grain Mill facility on Main Street, and the northern side can also be accessed from the cleared area on the opposite side of the river.

The dam consists of a stone masonry spillway roughly 53 feet long spanning between a natural steeply sloped abutment on the left and stone masonry foundations for the adjacent buildings at the right. The dam has a maximum structural height of approximately 17-feet and a current hydraulic height of approximately 16-feet. The existing spillway wall is constructed of stacked cut stone blocks founded upon the natural bedrock channel. A pipe (reportedly 18") extends mid height through the downstream face of the spillway within the right portion of the dam. The purpose, function, or configuration of this pipe is not currently known. A second steel pipe is also present near the base of the right portion of the dam with unknown geometry and purpose.

Recent inspections conducted by PARE have found the dam to be in **poor** condition. Leaks were noted along the spillway and abutments, including an area of orange staining and seepage on the downstream right abutment wall. The stone masonry walls supporting the channel and some of the stones within the channel have experienced some movement and displacement due to flow velocities. Areas of unwanted vegetation are located along the dam and appurtenant structures. Lastly, the steel pipe present at the toe of the spillway appears to be damaged.



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*b. Wetlands and Floodplain*

Wetland resource areas in the vicinity of the dam were delineated by PARE in September 2008. Wetlands present in the vicinity of the dam include the Banks, Land Under Water, and Bordering Land Subject to Flooding, and 200-foot Riverfront Area associated with Fort Pond Brook and Mill Pond; and two Bordering Vegetated Wetlands (BVW) located downstream of the dam beyond the proposed limits of work. Wetland resource areas are described briefly below, and are discussed in greater detail within the Wetland Field Report included in Section 5 of this Notice of Intent.

The Bank and Land Under Waterbodies/Waterways associated with Mill Pond and Fort Pond Brook are located within the limits of work. In the vicinity of the dam, the right bank of the impoundment and the outlet consist of the vertical walls of the adjacent mill building. The left banks of the impoundment and outlet are natural in character, and consist of steep slopes vegetated with trees and shrubs. Upstream of the dam, the pond bottom consists of a coarse sandy substrate with scattered rocks. Downstream of the dam, the river bottom consists of an unvegetated channel of solid bedrock. The left side of the channel is strewn with large boulders and masonry blocks which appear to have once been a part of the dam and appurtenant structures. At the time of delineation, the spillway passed rapid flow into the bedrock channel, and it is expected that this area experiences rapid flow throughout the year. Further downstream, the river channel takes on a more natural character, and broadens into a slow-moving channel with scattered rocks.

According to the USGS Topographic Quadrangle for the area, Fort Pond Brook is a perennial stream, and receives a 200-foot Riverfront Area. Since Mill Pond has a defined channel and passes flow in the area directly upstream of the dam, both the upstream and downstream sides of the dam have associated 200-foot Riverfront Areas.

Two areas of BVW were delineated along the spillway outlets in the vicinity of the project site. These include Wetland C along the north side of the river, and Wetland D along the south side. Both are small pockets of forested wetland located at the toe of the steep slopes of the river channel. Both of these areas collect overland runoff and groundwater seepage from the adjacent uplands, and overflow from the



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adjacent waterway during storm events. Both BVW areas and their associated 100-foot buffer zones are outside the limits of the proposed work.

According to the FEMA Flood Insurance Rate Maps (FIRM) for Acton (Community Panel No. 250176 0003C, revised January 6, 1988), an area of **Bordering Land Subject to Flooding** (defined under Rule 10.57 (2)(a) of the Regulations) encompasses a stretch of land surrounding the impoundment and the outlet. The floodplain is located within Zone AE, areas with 1% annual chance of flooding. Flood Elevations have been determined at 195 feet (NGVD) upstream of the dam, and 181 feet downstream of the dam. Upland areas to the north and south of the project area are located within Zone C, areas of minimal flooding.

*c. Surficial Geology and Soils*

Surficial geology data from the Massachusetts Geographic Information System (MassGIS) indicate that the entire project area overlies till or bedrock (data layer sgconcp1.shp). According to the Soil Survey of Worcester County, Massachusetts, Northwestern Part, as viewed on the USDA Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>), soils in the vicinity of the dam consist entirely of Udorthentis-Urban Land complex.

*d. Other Environmental Considerations*

According to the MASSGIS data layers PRIHAB\_POLY and ESTHAB\_POLY (2008), the entire site is located outside of NHESP Priority and Estimated Habitats of Rare Species. Information obtained from MassGIS (data layers CVP\_PT, pvpx1, orwp1, and acecs\_poly) indicates that the site does not contain any certified or potential vernal pools, Outstanding Resource Waters, or Areas of Critical Environmental Concern.



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### III. Project Need and Proposed Work

In December 2006, PARE completed a Phase I Inspection/Evaluation of the Erikson Dam. Included within the Inspection Report were recommendations to improve the safety of and stabilize the existing condition of the dam. Remedial measures are required to stabilize the existing wall to provide a spillway section meeting the current state regulations requirements for stability.

As part of the evaluation of existing conditions at the dam and spillway, several alternatives were considered for addressing the stability concerns. These alternatives included complete demolition and replacement of the spillway structure, maintenance type repairs, and removal of the dam. As described below, the proposed approach was selected due to the overall project costs. It is also anticipated that the proposed project provides the approach with the least impact to the surrounding resource areas both during and post construction, while still meeting the dam safety requirements.

#### *a. Stability Buttress*

In order to remediate stability concerns, a stone riprap buttress is being proposed along the downstream side of the spillway wall. The buttress will be a maximum 9.8-feet high and extend a distance of approximately 20 feet downstream of the spillway, with a maximum width of approximately 23 feet directly downstream of the wall. The top elevation of the buttress will be at 188 feet, graded at a 2:1 slope to the downstream channel which varies in elevation between approximately El. 177 and El. 179. The final configuration of the buttress will be a continuous buttress across the downstream side of the spillway wall with remnants of the existing vertical center wall dividing the proposed buttress to the right and the existing stone slope to the left. The buttress will provide enough passive resistance to stabilize the spillway section.

The downstream left portion of the site is currently littered with scattered rock that was once part of the dam structure. The applicant is proposing to make use of the displaced stone by incorporating it into the stability buttress. This option would restore the downstream area to its original character, cut construction costs, and reduce the need for placement of additional stone within the channel. A “stone borrow area”



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measuring approximately 20 by 23 feet has been selected for boulder removal. Stone removal will be limited to the designated area.

*b. Site Access*

Access to the downstream side of the spillway wall will be provided by creating a temporary access path along the earthen slope to the north of the dam and the downstream channel. An area along the slope is currently colonized by woody vegetation and will need to be cleared for temporary construction vehicle access. The cleared area will measure approximately 25 feet wide, and will allow machinery to enter the channel approximately 25 feet downstream of the spillway, between the proposed buttress and the stone borrow area.

*c. Abandon Outlet Pipes*

Previous inspections have noted two pipes extending through the spillway; one near the top of the wall and one at the base. The pipes do not appear to be serving any essential function to the dam and should be abandoned, as the installation of the buttress will render them inaccessible. PARE is proposing that the pipes be plugged with Avanti AV-280 Hydrofoam or an equivalent.

## **V. Erosion and Sedimentation Control**

Erosion and sedimentation controls shall consist of hay bale and siltation fence barriers installed at the limits of work as shown on the Project Plans. Erosion controls shall be provided as follows:

1. Contractor shall maintain all erosion control devices for the duration of the project.
2. Contractor shall prevent sediment from entering the impoundment or the downstream channel via discharges through any drainage structures or runoff from within the limits of work.
3. No work or discharges, other than that shown, shall be performed within the wetland area without first receiving proper permits from the regulatory agencies. Contractor shall be responsible for



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removing, restoring, and repairing all damage as a result of unauthorized work or discharges to the wetland area at no additional cost to the owner.

4. Upon completion of the work, all disturbed areas shall be dressed and seeded with grass plot mix in accordance with M.6.03.0 of the MHD Standard Specifications.

## **VI. Diversion and Dewatering**

Discharge of water will be regulated throughout the construction as needed to enable the proposed construction activities. Diversion of water shall be provided as follows:

1. The contractor shall regulate the discharge of water as required to enable construction. The contractor shall maintain flow throughout construction. All diversions and dewatering shall be completed in accordance with environmental permits.
2. The contractor shall be responsible for preventing any grout, concrete, soil or other material from entering the stream channel or impoundment, unless otherwise noted on the plans.
3. The contractor shall be responsible for all loss and damage due to failure of any diversion structures constructed during the work.
4. The contractor shall regulate discharges and phase construction so that construction equipment does not pass through flowing water.
5. The contractor shall maintain the water level of the impoundment as indicated on the drawings and in accordance with all environmental permits for the duration of the project.

## **VII. Anticipated Construction Sequence**

The following sequence is intended to be general in nature. Although it is likely that some of the work items will overlap, construction sequences for the various project components are described separately and may not necessarily proceed in consecutive order. All work shall be performed in accordance with the Project Plans and Specifications. It is anticipated that the following construction sequences will be followed:



- 
1. Install erosion, sedimentation, and control of water devices.
  2. Remove vegetation and stabilize access route.
  3. Install buttress as shown on the drawings and indicated within the project specifications.
  4. Loam and seed disturbed areas on dam, staging areas, access paths, or other areas of disturbance.
  5. Clean site and demobilize.

In stream work will be confined to the low-flow period of July 1 to October 31, as specified in the US Army Corps of Engineers Programmatic General Permit (PGP) for the Commonwealth of Massachusetts.

## VIII. Wetland Impacts and Regulatory Compliance

Work is being proposed within Bank, Land Under Water, Bordering Lands Subject to Flooding, and 200-foot Riverfront Area. Due to the nature of this project, work within these wetland resource areas is unavoidable, and all efforts have been made to avoid and minimize permanent impacts. Impacts to the various resource areas on the project site, and compliance with the applicable performance standards, are described below.

### *a. Bank*

Alterations to Bank are limited to approximately 7 linear feet along the downstream left side of the dam. All proposed bank impacts are temporary in nature. These impacts are associated with clearing an access path that will allow construction vehicles to safely reach the downstream side of the spillway wall. The portion of the bank to be cleared is a previously developed area, as indicated by the remnants of a stone wall along the edge of the channel.

This work will not negatively affect the physical stability of the Bank, ground water and surface water quality, or whatever capacity the Bank may have to provide breeding habitat, escape cover, and food for fisheries. The proposed bank alterations are necessary in order to access the area where the stone buttress will be installed, which is a necessary activity to ensure the future safety of the structure and the character of the surrounding resource areas.



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*b. Land Under Waterbody/Waterway*

A combined total of 801 square feet of Land Under Water will be impacted by the proposed project. Alterations are limited to the downstream area, and will result from the installation of a stone buttress that is being constructed to stabilize the spillway wall. Permanent alterations to the resource area are limited to the 372 square feet of the proposed buttress footprint. The top elevation of the buttress will be at 188 feet, graded at a 2:1 slope to the downstream channel.

Approximately 36 square feet of the channel will be temporarily impacted by construction vehicle access into the downstream area. An additional 393 square feet of land within the channel will experience temporary impacts resulting from the removal of displaced stone (shown as the “stone borrow area” on the plans). This location within the channel is strewn with stone that had previously been dislodged from the dam and appurtenant structures. The applicant is proposing to use this stone, which will cut down on construction costs and also restore this resource area to its original condition.

The proposed impacts to Land Under Water are not expected to negatively impact the functions and values of this resource area. The stability buttress is being installed over bedrock in a portion of the channel that receives high flow velocities year-round; this area is unlikely to support biological functions that would be negatively affected by the proposed work. Removal of displaced stone from the designated “stone borrow area” will restore the channel to a more natural condition in this location. The area to be impacted by construction vehicle access has been minimized in order to prevent unnecessary impacts to Land Under Water within the limits of work.

*d. Bordering Land Subject to Flooding*

According to the FEMA Flood Insurance Rate Maps (FIRM) for Acton (Community Panel No. 250176 0003C, revised January 6, 1988), an area of floodplain located within Zone AE encompasses a portion of the upstream and downstream areas on the site. FEMA has determined Flood Elevations of 195 feet (NGVD) upstream of the dam, and 181 feet downstream of the dam. The proposed buttress consists of an approximately 331 square foot footprint at an elevation of 181. With an average depth of approximately



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2.5 feet below Elevation 181, the proposed buttress will result in a loss of approximately 900 cubic feet of flood storage volume in this area. However, removal of stones from within the area denoted as a stone burrow area will add approximately 900 cubic feet of flood storage volume. Therefore, there is negligible change to flood storage capacity of the site due to the proposed work.

Installation of the buttress will not restrict flows within any location of the outlet, and will not negatively impact flood storage or the ability of the auxiliary outlet channel to pass flows associated with the 100-year storm. The buttress will ensure the safety of the structure during storm events, and is necessary to protect the flood storage function of the impoundment. Post-construction flows will match the existing flow conditions in the channel, as no work has been proposed that will modify the structure or carrying capacity of the channel. In light of this, and in consideration of the Limited Project status of the activity, the applicant requests that the Conservation Commission find, pursuant to 310 CMR 10.57(4)(a)1, that the project will not cause an increase, or contribute incrementally to an increase in, the horizontal extent and level of flood waters during peak flows, and that the Conservation Commission not require further study of potential flooding impacts or compensatory flood mitigation.

*f. 200-Foot Riverfront Area*

The entirety of the proposed work is located within the 200-foot Riverfront Area of Fort Pond Brook, a perennial River. Approximately 8,722 square feet of Riverfront Area surrounding the outlet is located within the limits of disturbance. All proposed alterations within Riverfront Area are temporary in nature. With the exception of approximately 133 square feet at the southern limit of the proposed access path, the entire project area is located within the inner riparian zone (within 100 feet of the bank). As with all dam repair projects, impacts to Riverfront Area are unavoidable due to the nature of the proposed work. Because the project consists of the maintenance of a structure in existence on August 7, 1996, it is exempt from the requirements for Riverfront Area pursuant to 310 CMR 10.58(6)(a).

Approximately 462 square feet of impacts have these impacts will result from the clearing of vegetation for a construction vehicle access path. In this location, trees and shrubs will be cut to allow safe access to the downstream left side of the channel. The remaining portions of the Riverfront Area within the Limits of Disturbance may be temporarily impacted from less invasive construction activities. These include



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vehicle access in previously cleared areas, installation of erosion controls, staging, and stockpile areas. Upon completion of the work, all disturbed areas will be loamed and seeded, and allowed to naturally revegetate.

*g. Compliance with Stormwater Management Standards*

The project is not an industrial, commercial, or residential project and is not subject to the current (2008) Stormwater Management Standards. Regardless, the work would qualify as a Redevelopment under the Stormwater Management Standards.

## **IX. Summary**

This NOI addresses the proposed repairs to the Erikson Dam spillway and is submitted pursuant to the Limited Project provisions of 310 CMR 10.53(3)(i). The project is necessary to promote public safety, the safety of the structure, the downstream areas, and the upstream impoundment and associated wetland areas. Proposed repairs are limited to the installation of a stone buttress to provide structural stabilization on the downstream side of the spillway wall.

Wetland resource areas within the Limits of Disturbance include Land Under Waterbodies/ Waterways, Bank, and 200-foot Riverfront Area. All efforts have been made to avoid and minimize wetland impacts, and the unavoidable impacts are the minimum necessary to achieve the project purpose and are allowable within the Regulations.

Because the project consists of maintenance of a structure in existence on August 7, 1996, it is exempt from the requirements for Riverfront Area pursuant to 310 CMR 10.58(6)(a). In accordance with the Limited Project status of the activity and the unique nature of the project, the applicant respectfully requests that the Acton Conservation Commission issue an Order of Conditions allowing the repairs to proceed as proposed.



## **Wetland Delineation Documentation**

Wetland Field Report

DEP BVW Data Forms

Wetland Photo Attachment



## WETLAND FIELD REPORT

**PROJECT TITLE:** Erikson Dam Flagging

**DATE:** 9/24/08

**LOCATION:** Acton, Massachusetts

**WEATHER:** Sunny, 65 degrees

**PARE JOB NO.:** 08128.00

**PERFORMED BY:** Lauren Hastings

### DISCUSSIONS AND COMMENTS

Wetland resource areas in the vicinity of the Erikson Dam were defined and delineated in accordance with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00, referred to as the Regulations), Chapter F: The Acton Wetlands Protection Bylaw, and the methodology specified in the publication entitled Delineating Bordering Vegetated Wetlands under the Massachusetts Wetlands Protection Act (Jackson, 1995). Inspection and delineation of wetlands were completed on September 24, 2008.

The project involves improvements to the Erikson Dam, a small size, significant hazard stone masonry overflow dam. The dam impounds Fort Pond Brook to create Fort Pond, a linear impoundment located to the west of Main Street in Acton. According to the USGS Topographic Quadrangle for the area, Fort Pond Brook is perennial. The dam is owned and operated by Erikson Grain Mill, Inc. The project area and associated freshwater wetlands are located within the Concord River Basin. No Outstanding Resource Waters, Areas of Critical Environmental Concern, Estimated or Priority Habitats of rare species, or Certified or Potential Vernal Pools are located on the site.

Blue field flags were placed at appropriate intervals along the wetland/upland border. Primary parameters evaluated in Bordering Vegetated Wetland (BVW) delineation included soils and indicators of hydrology. Secondary factors included vegetation and best professional judgment. Banks were delineated according to the first observable break in slope. Observed wetland hydrologic indicators, vegetation and soils are described in the following sections and within the Bordering Vegetated Wetland (BVW) data forms. Wetland resource areas within the vicinity of the site include the following: **Bordering Vegetated Wetlands, Land Under Waterways, Bank, 100-Foot Buffer Zone, 200-Foot Riverfront Area, and Bordering Land Subject to Flooding.**

### WETLAND DESCRIPTIONS

#### **Fort Pond Brook**

##### *Bank*

The edges of the dam's perennial outlet are defined in section 10.54 (2) of the Regulations as **Bank**. The banks of the river in the vicinity of the dam were delineated in two flag series: series A-1 to A-18 defines the northern bank of the river in the vicinity of the dam, and series B-1 to B-10 defines the southern edge. The delineated river edge includes manmade and natural bank features. Manmade bank features along the northern side of the river include vertical stone masonry walls in the vicinity of the dam spillway. On the southern side of the river between flags B-1 and B-2, the bank consists of the northern side of a mill building for approximately ## feet. Natural banks, which make up the remainder of the delineated river edge, consist of forested areas located at the toes of steep slopes. Typical vegetation observed along the banks include, but are not limited to, the following species:

## WETLAND FIELD REPORT

Common Name	Scientific Name	Indicator Status
Norway Maple	<i>Acer platanoides</i>	NI
White Ash	<i>Fraxinus americana</i>	FACU
Black Oak	<i>Quercus velutina</i>	NI
Slippery Elm	<i>Ulmus rubra</i>	FAC
Witch Hazel	<i>Hamamelis virginiana</i>	FAC-
Japanese Honeysuckle	<i>Lonicera japonica</i>	FAC-
Japanese Barberry	<i>Berberis thunbergii</i>	FACU
Oriental Bittersweet	<i>Celastrus orbiculata</i>	UPL
Poison Ivy	<i>Toxicodendron radicans</i>	FAC
Red Raspberry	<i>Rubus idaeus</i>	FAC-

### *Land Under Waterway*

According to 10.56 (2) of the Regulations, land within the Fort Pond Brook channel both upstream and downstream of the dam is classified as **Land Under Waterways**. Upstream of the dam, the pond bottom consists of a coarse sandy substrate with scattered rocks. Vegetation within the vicinity of the dam was limited to small amounts of Duckweed (*Lemna sp.*), and patches of submergent Millfoil (*Myriophyllum sp.*) and Wild Celery (*Vallisneria americana*). The upstream area passed slow flow at the time of delineation, and was one to two feet deep in most areas.

Downstream of the dam, the river bottom consists of an unvegetated channel of solid bedrock. The area directly downstream of the spillway is strewn with large masonry blocks that were formerly removed from the dam crest to prevent upstream flooding. At the time of delineation, the spillway passed rapid flow into the bedrock channel, and it is expected that this area experiences rapid flow throughout the year. Further downstream, the river channel takes on a more natural character, and broadens into a slow-moving channel with scattered rocks. The delineated portion of this channel was approximately 120 feet wide.

According to Rule 10.58 (2) of the Regulations, the Fort Pond Brook is perennial and thus has an associated 200-foot Riverfront Area. The Riverfront Area on the site overlaps with the Bordering Vegetated Wetlands and their 100-Foot Buffer Zones. In addition, the Riverfront Area encompasses the entire Erikson Mill complex and portions of the adjacent railroad and public roadways.

### **Bordering Vegetated Wetlands**

Two **Bordering Vegetated Wetlands** (section 10.55 (2) of the Regs.) were delineated within the project area. These include the C series located along the northern edge of the pond, and the D series located along the southern edge of the outlet. According to section 10.02 (2)(b), each of these wetlands has a 100-foot buffer zone. Bordering Vegetated Wetland (BVW) data forms for each wetland area are attached. The delineated BVW areas is described below.

#### *Wetland C*

Flag series C-1 to C-4 define the edge of a small area of BVW located adjacent to Fort Pond Brook at the toe of a steep railway embankment slope. The wetland is sparsely colonized by saplings, shrubs, and climbing vines. A drainage pipe outfall located at the crest of the slope has created an eroded swale that enters the

## WETLAND FIELD REPORT

wetland from the north. At the time of delineation, the pipe and the swale were completely dry, although it is expected that the wetland receives point discharges from this outfall during storm events. The wetland appears to be fed mainly by groundwater seepage, and sheet flow from the steeply sloping adjacent upland, and temporary overflow from the river. At the time of delineation, a flowing area of groundwater seepage was observed at the central portion of the wetland. Other indicators of wetland hydrology included watermarks, saturated soils, and redoximorphic soil features. Wetland vegetation observed included, but is not limited to, the following:

Common Name	Scientific Name	Indicator Status
Norway Maple	<i>Acer platanoides</i>	NI
Slippery Elm	<i>Ulmus rubra</i>	FAC
Japanese Honeysuckle	<i>Lonicera japonica</i>	FAC-
Japanese Barberry	<i>Berberis thunbergii</i>	FACU
Poison Ivy	<i>Toxicodendron radicans</i>	FAC

### *Wetland D*

Flag series D-1 to D-3 defines the edge of a BVW located along the southern edge of the outlet, at the toe of the fill slope located directly east of the mill buildings. The northern part of this wetland is seasonally saturated to seasonally flooded, and is densely colonized by saplings, shrubs, and climbing vines. Further south, the wetland is colonized almost exclusively by Common Reed, and has a seasonally to semipermanently flooded hydrology. Like Wetland C, the wetland appears to be fed by surface runoff from the steeply sloping adjacent upland, groundwater seepage, and temporary overflow from the river. Indicators of wetland hydrology included groundwater seepage, saturated soils, watermarks, and leaf staining. Wetland vegetation observed included, but is not limited to, the following:

Common Name	Scientific Name	Indicator Status
Norway Maple	<i>Acer platanoides</i>	NI
Slippery Elm	<i>Ulmus rubra</i>	FAC
Yellow Birch	<i>Betula allegheniensis</i>	FAC
Catalpa	<i>Catalpa speciosa</i>	FAC
Japanese Barberry	<i>Berberis thunbergii</i>	FACU
Poison Ivy	<i>Toxicodendron radicans</i>	FAC
Evergreen Woodfern	<i>Dryopteris intermedia</i>	FACU

### **Bordering Lands Subject to Flooding**

According to the FEMA Flood Insurance Rate Map (FIRM) for Swansea (Community No. 250176 0003C, revised January 6, 1988), an area of **Bordering Land Subject to Flooding** (defined under Rule 10.57 (2)(a) of the Regulations) encompasses a broad stretch of land surrounding entire project site, on both the upstream and downstream sides of the dam. Floodplain on the site is located within Zone AE, areas with 1% annual chance of flooding. Flood Elevations have been determined at 195 feet (NGVD) upstream of the dam, and 180 feet downstream.

LMH

Z:\Mass\08128.01 Erickson Dam\Reports\Wetland Documentation\Wetland Field Report.doc



**Photo 1: Impounded, slow-flowing area of Fort Pond Brook upstream of dam**



**Photo 2: Bedrock channel directly downstream of spillway**



**Photo 3: Broad, shallow channel located further east of dam**



**Photo 4: Typical view of north bank of outlet**



**Photo 5: Typical view of south bank of outlet**



**Photo 6: Wetland D, located at the south side of the outlet**



**Photo 7: Wetland C, located at the north side of the outlet**



**Photo 8: Groundwater seepage within Wetland C**



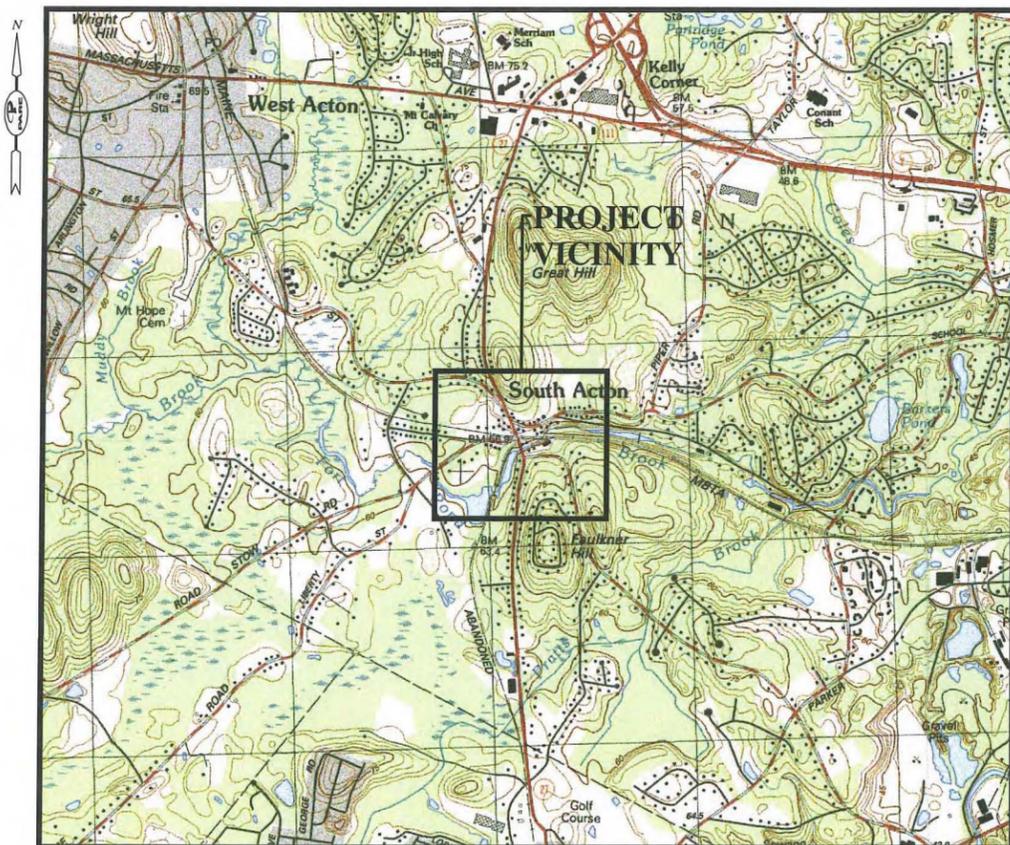
**Photo 9: Drainage outfall and eroded swale leading into Wetland C**

# Project Plans

Prepared for The:  
ERIKSON GRAIN MILL, INC.  
**ERIKSON DAM SPILLWAY  
STABILITY IMPROVEMENTS**

MA00195 / 4-9-2-1  
ACTON, MASSACHUSETTS

NOVEMBER 2009



LOCUS PLAN



VICINITY/AERIAL MAP

Drawing Index

1. NOTES AND LEGEND
2. EXISTING SITE AND EROSION CONTROL PLAN
3. PROPOSED SITE PLAN AND SECTION

Prepared by:  
**PARE CORPORATION**  
Foxboro, Massachusetts



**GENERAL NOTES:**

- ALL CONSTRUCTION INDICATED ON THESE PLANS SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE MASSACHUSETTS STATE BUILDING CODE, THE SPECIFICATIONS INCLUDED IN THIS CONTRACT, THE MASSACHUSETTS HIGHWAY DEPARTMENT (MASSACHUSETTS DEPARTMENT OF TRANSPORTATION) STANDARD SPECIFICATIONS, AND 302 CMR10.00 DAM SAFETY.
- PLAN DEVELOPED BASED UPON TOPOGRAPHIC AND BATHYMETRIC SURVEY COMPLETED BY PARE PERSONNEL ON OCTOBER 4, 2008.
- INFORMATION REGARDING THE LOCATION OF SURROUNDING STRUCTURES, UTILITIES, AND THE AS-BUILT CONFIGURATION AND CONDITION OF THE EXISTING DAM, SPILLWAY, AND ADJACENT AREAS IS FURNISHED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR AND SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL CONDUCT ITS OWN INDEPENDENT EXAMINATION OF SITE CONDITIONS FOR THE PURPOSE OF BIDDING, FABRICATION, AND CONSTRUCTION ASSOCIATED WITH THE PROJECT. ANY RELIANCE UPON INFORMATION MADE AVAILABLE BY THE OWNER OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.
- THE VERTICAL DATUM UTILIZED FOR THE DEVELOPMENT OF THE BASEPLAN IS BASED UPON THE ORIGINAL CREST OF THE SPILLWAY (TOP OF WALL), ELEVATION 191.4 FEET. THE ELEVATION REPORTEDLY REFERENCES NGVD 1929, AS INDICATED IN THE MAY 1998 INSPECTION REPORT PREPARED BY HYDRAULIC & WATER RESOURCES ENGINEERS, INC. THE ELEVATION REPORTEDLY REFERENCES A 1962 PLAN PREPARED BY FAY, SPOFFORD, & THORNDIKE.
- HORIZONTAL DATA SHOWN REFERENCES NAD 83 MASSACHUSETTS STATE PLANE COORDINATE SYSTEM. HORIZONTAL COORDINATES ARE APPROXIMATE.
- SUBSURFACE INFORMATION INCLUDING GEOMETRY AND EXTENTS OF BELOW GRADE STRUCTURES ARE APPROXIMATED BASED UPON LIMITED SURFICIAL INFORMATION. ACTUAL CONDITIONS MAY DIFFER.
- CONTRACTOR SHALL MAINTAIN FLOW THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH THESE DRAWINGS AND ALL ENVIRONMENTAL PERMITS.
- CONTRACTOR SHALL ESTABLISH HORIZONTAL AND VERTICAL CONTROL AS REQUIRED TO ENABLE COMPLETION OF THE WORK THROUGHOUT THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL PROJECT DEMOLITION AND EXCESS MATERIAL IN ACCORDANCE WITH MASSACHUSETTS, LOCAL, AND FEDERAL LAWS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATION OF ANY UTILITIES ON THE SITE.
- THE CONTRACTOR SHALL FOLLOW ALL OSHA AND OTHER APPLICABLE FEDERAL, STATE AND LOCAL STANDARDS FOR ALL PROJECT COMPONENTS AND ACTIVITIES.
- ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE LIMITS OF WORK AND TEMPORARY EASEMENTS DEFINED HEREIN.
- THE SITE WORK WILL TAKE PLACE WITHIN AREAS ACCESSIBLE TO THE PUBLIC. CONTRACTOR SHALL MAINTAIN A SECURE SITE AND PROVIDE APPROPRIATE SAFETY MEASURES TO PREVENT ACCIDENTS. THE SAFETY MEASURES MAY INCLUDE, BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FENCES, FLASHING WARNING LIGHTS, AND POLICING.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR RETURNING ALL PORTIONS OF DISTURBED ROADWAY, PAVEMENTS, PATHS, GRASSED AREAS, AND ANY OTHER PROPERTY TO PRE CONSTRUCTION CONDITION. CONTRACTOR SHALL RESET ANY FENCING DISTURBED BY CONSTRUCTION ACTIVITIES.
- ANY UTILITIES THAT MAY BE LOCATED AT THE DAM OR AREAS SURROUNDING THE PROJECT AREA SHALL BE PROTECTED DURING CONSTRUCTION. THE CONTRACTOR SHALL CONTACT DIG SAFE PRIOR TO UNDERTAKING ANY EXCAVATION.
- WETLAND FLAG LOCATIONS BASED UPON RELATIVE LOCATION TO EXISTING SITE FEATURES AND A WETLAND DELINEATION COMPLETED BY PARE CORPORATION ON SEPTEMBER 24, 2008.

FOR PURPOSES OF THIS PROJECT  
 OWNER: ERIKSON GRAIN MILL, INC.  
 113 MAIN STREET  
 ACTON, MA 01720  
 ENGINEER: PARE CORPORATION  
 10 LINCOLN RD, SUITE 103  
 FOXBORO, MA 02139

**EROSION CONTROL NOTES:**

- CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES FOR THE DURATION OF THE PROJECT.
- CONTRACTOR SHALL PREVENT SEDIMENT FROM ENTERING THE IMPOUNDMENT OR DOWNSTREAM CHANNEL VIA DISCHARGES THROUGH ANY DRAINAGE STRUCTURES OR RUNOFF FROM WITHIN THE LIMITS OF WORK.
- NO WORK OR DISCHARGES, OTHER THAN THAT SHOWN, SHALL BE PERFORMED WITHIN THE WETLAND AREA WITHOUT FIRST RECEIVING PROPER PERMITS FROM THE REGULATORY AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES TO THE WETLAND AREA AT NO ADDITIONAL COST TO THE OWNER.
- UPON COMPLETION OF THE WORK ALL DISTURBED AREAS SHALL BE DRESSED AND SEEDED WITH GRASS PLOT MIX IN ACCORDANCE WITH M.6.03.0 OF THE MHD STANDARD SPECIFICATIONS.

**SITE ACCESS**

- PRIMARY SITE ACCESS IS FROM OWNERS PROPERTY ON THE RIGHT (EASTERN) ABUTMENT OF THE DAM THROUGH PAVED DRIVEWAYS TO THE ERIKSON GRAIN MILL, CORP ALONG HIGH STREET
- THE CONTRACTOR SHALL VERIFY ACCESSIBILITY FOR ALL EQUIPMENT THROUGH EXISTING DRIVEWAYS AND ACCESS PATHS. CONTRACTOR SHALL VERIFY THE CAPACITY OF THE EXISTING STONE ARCH CULVERT TO SUPPORT THE LOAD OF ANY TRAFFIC ALONG THE ACCESS PATH IN THIS AREA.
- ANY ACTIVITIES FOR SITE ACCESS SHALL BE COORDINATED AS APPLICABLE WITH APPROPRIATE PROPERTY OWNERS.
- ACCESS TO COMPLETE THE PLACEMENT OF THE BUTTRESS IS ANTICIPATED TO BE VIA THE EXISTING STONE BUTTRESS ON THE LEFT HALF OF THE SPILLWAY. STONES ARE TO BE PLACED UTILIZING AN EXCAVATOR OR SIMILAR EQUIPMENT STAGED ON THE EXISTING BUTTRESS OR THROUGH THE USE OF A CRANE OR SIMILAR EQUIPMENT STAGED UPSTREAM OF THE DAM ON THE ACCESS ROADWAY.
- ACCESS TO COMPLETE THE WORK SHALL BE AS SHOWN ON THE DRAWINGS. ALL ACCESSWAYS SHALL BE IMPLEMENTED IN ACCORDANCE WITH ENVIRONMENTAL PERMITS.

**SCOPE OF WORK AND ANTICIPATED WORK SEQUENCE:**

THE FOLLOWING NOTES PROVIDE THE GENERAL SCOPE OF WORK FOR THE PROJECT:

- INSTALL EROSION AND SEDIMENT CONTROL DEVICES AND CONTROL OF WATER.
- REMOVE VEGETATION AND STABILIZE ACCESS ROUTES FOR COMPLETING THE WORK.
- INSTALL BUTTRESS AS SHOWN ON THE DRAWINGS AND INDICATED WITHIN THE PROJECT SPECIFICATIONS
- LOAM AND SEED DISTURBED AREAS ON DAM, STAGING AREAS, ACCESS PATHS, OR OTHER AREAS OF DISTURBANCE.
- CLEAN SITE AND DEMOBILIZE.

**RIPRAP SPECIFICATIONS**

- QUALITY OF STONE: A. ALL STONE SHALL CONSIST OF SOUND, HARD, DENSE, DURABLE ROCK WHICH HAS BEEN SEPARATED FROM BEDROCK IN PLACE BY QUARRYING. UNIT WEIGHT OF STONE SHALL NOT BE LESS THAN 165 POUNDS PER CUBIC FOOT, DRY IN AIR. THE STONE SHALL BE FREE FROM OPEN OR INCipient CRACKS, SEAMS AND FISSURES, AND FROM POROUS STRUCTURE, SOLUTION CAVITIES, PLANES OF WEAKNESS, AND FROM COMPONENT MINERALS AND CEMENTING OR BONDING MATERIALS THAT MAY CONTRIBUTE TO SPALLING OR BREAKDOWN DURING HANDLING AND PLACING AND FROM WAVE ACTION AND CHEMICAL ACTION FROM AIR AND WATER. NO STONE SHALL BE USED IN WHICH THE LEAST PRINCIPAL DIMENSION IS LESS THAN ONE THIRD OF THE GREATEST DIMENSION. SLABS, BOULDERS AND ROUND STONES WILL BE REJECTED. STONE SHALL, IN GENERAL, BE OF IRREGULAR AND ANGULAR SHAPE; HOWEVER, NOT MORE THAN 25% MAY BE ROUGHLY RECTANGULAR, PROVIDED SUCH STONE IS PLACED WITH ITS LONG AXIS PERPENDICULAR TO THE LENGTH OF THE STRUCTURE.
- STONE: STONE SHALL BE IMPORTED MATERIAL CONFORMING TO M2.02.2, OF THE MHD STANDARD SPECIFICATIONS WITH THE FOLLOWING GRADATIONS:
 

STONE WEIGHT (LB)	MAXIMUM % OF TOTAL WEIGHT SMALLER THAN GIVEN WEIGHT	APPROXIMATE STONE DIAMETER (IN)
1150	100	36
230	50	21
85	5	15
- STONE APPEARANCE: THE ARMOR STONE SHALL BE CLEAN AND HAVE A UNIFORM APPEARANCE. THE VISUAL APPEARANCE OF THE PROPOSED STONE MUST BE APPROVED BY THE OWNER.
- REUSE OF ONSITE STONE: ONSITE STONES WITHIN THE DOWNSTREAM CHANNEL IN THE AREA IDENTIFIED AS A BORROW AREA MAY BE USED FROM THE LIMITS SHOWN AND AS THEY MEET THE GRADATION SPECIFIED HEREIN.
- REJECTED STONE: ANY STONE NOT MEETING THE REQUIREMENTS OF THESE SPECIFICATIONS WILL BE REJECTED AND SHALL BE REMOVED FROM THE SITE AND REPLACED WITH SUITABLE STONE AT THE SOLE EXPENSE OF THE CONTRACTOR.
- HEIGHT OF FREEFALL OF RIPRAP DURING PLACEMENT SHALL NOT EXCEED ONE FOOT.
- IT IS THE INTENT OF THESE SPECIFICATIONS TO PRODUCE A FAIRLY COMPACT RIPRAP PROTECTION IN WHICH ALL SIZES OF MATERIAL ARE PLACED IN THEIR PROPER PROPORTIONS. HAND PLACING OR REARRANGING OF INDIVIDUAL STONES BY MECHANICAL EQUIPMENT MAY BE REQUIRED TO THE EXTENT NECESSARY TO SECURE THE RESULTS SPECIFIED. HAND PLACING OF CHINKING STONES TO FILL LARGE GAPS/VOIDS WILL ALSO BE REQUIRED.

**DIVERSION NOTES:**

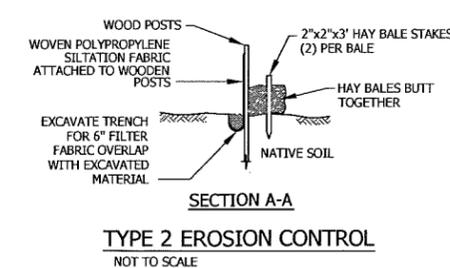
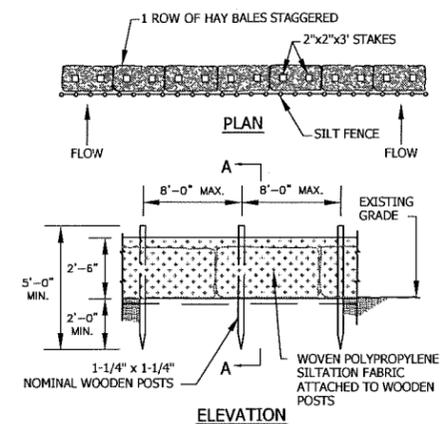
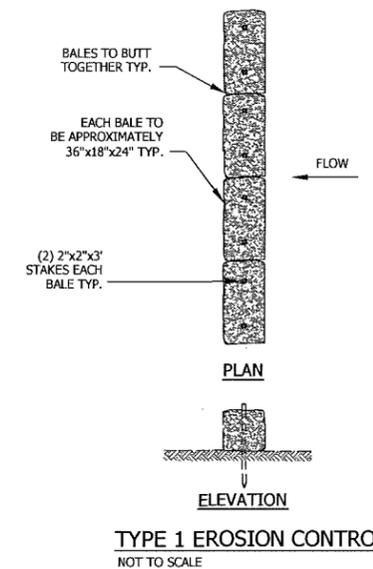
- CONTRACTOR SHALL REGULATE THE DISCHARGE OF WATER AS REQUIRED TO ENABLE CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN FLOW THROUGHOUT CONSTRUCTION. ALL DIVERSIONS AND DEWATERING SHALL BE COMPLETED IN ACCORDANCE WITH ENVIRONMENTAL PERMITS.
- CONTRACTOR SHALL PROVIDE TEMPORARY COFFERDAMS TO DEWATER AREAS TO ALLOW FOR WORK TO BE COMPLETED IN THE DRY AS NECESSARY TO COMPLETE THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY GROUT, CONCRETE, SOIL, OR OTHER MATERIAL FROM ENTERING THE STREAM CHANNEL OR IMPOUNDMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE DUE TO FAILURE OF ANY DIVERSION STRUCTURES CONSTRUCTED DURING THE WORK.
- CONTRACTOR SHALL REGULATE DISCHARGES AND PHASE CONSTRUCTION SO THAT CONSTRUCTION EQUIPMENT DOES NOT PASS THROUGH FLOWING WATER.
- CONTRACTOR SHALL MAINTAIN THE WATER LEVEL OF THE IMPOUNDMENTS AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH ALL ENVIRONMENTAL PERMITS FOR THE DURATION OF THE PROJECT.

**REPOINTING NOTES:**

- THE MASONRY JOINT REPOINTING MATERIAL SHALL BE AS STATED OR AN APPROVED EQUAL.
  - ABOVE WATER
    - FOR USE IN APPLICATIONS LESS THAN 3 INCHES: FIVE STAR STRUCTURAL CONCRETE V/O OR TAMMS SPEEDCRETE REDLINE
  - BELOW WATER
    - FOR USE IN APPLICATIONS LESS THAN 3 INCHES: TAMMS SPEEDCRETE BLUELINE OR CC CHEMICAL DURACRETE UNDERWATER GRADE, FIVE STAR STRUCTURAL CONCRETE UNDERWATER HP.
    - FOR USE IN APPLICATIONS GREATER THAN 3 INCHES: TAMMS AQUALSEAL GEL OR EPOXYSYSTEMS PRODUCT #707.
- MORTAR SHALL BE NON-TOXIC AND APPROVED FOR USE IN POTABLE WATER.

**LEGEND**

- D1  BORDERING VEGETATED WETLAND FLAG
- C1  RIVER / POND BANK FLAG
-  TREE
-  TREELINE
-  LIMITS OF DISTURBANCE



**ERIKSON DAM SPILLWAY STABILITY IMPROVEMENTS**  
 MA00195 / 4-9-2-1  
 ERIKSON GRAIN MILL, INC.  
 ACTON, MASSACHUSETTS

REVISIONS:	
PROJECT NO.:	08128.01
DATE:	NOVEMBER 2009
SCALE:	AS NOTED
DESIGNED BY:	VAV/ARO
CHECKED BY:	ARO
DRAWN BY:	ARO/GB
APPROVED BY:	JMB

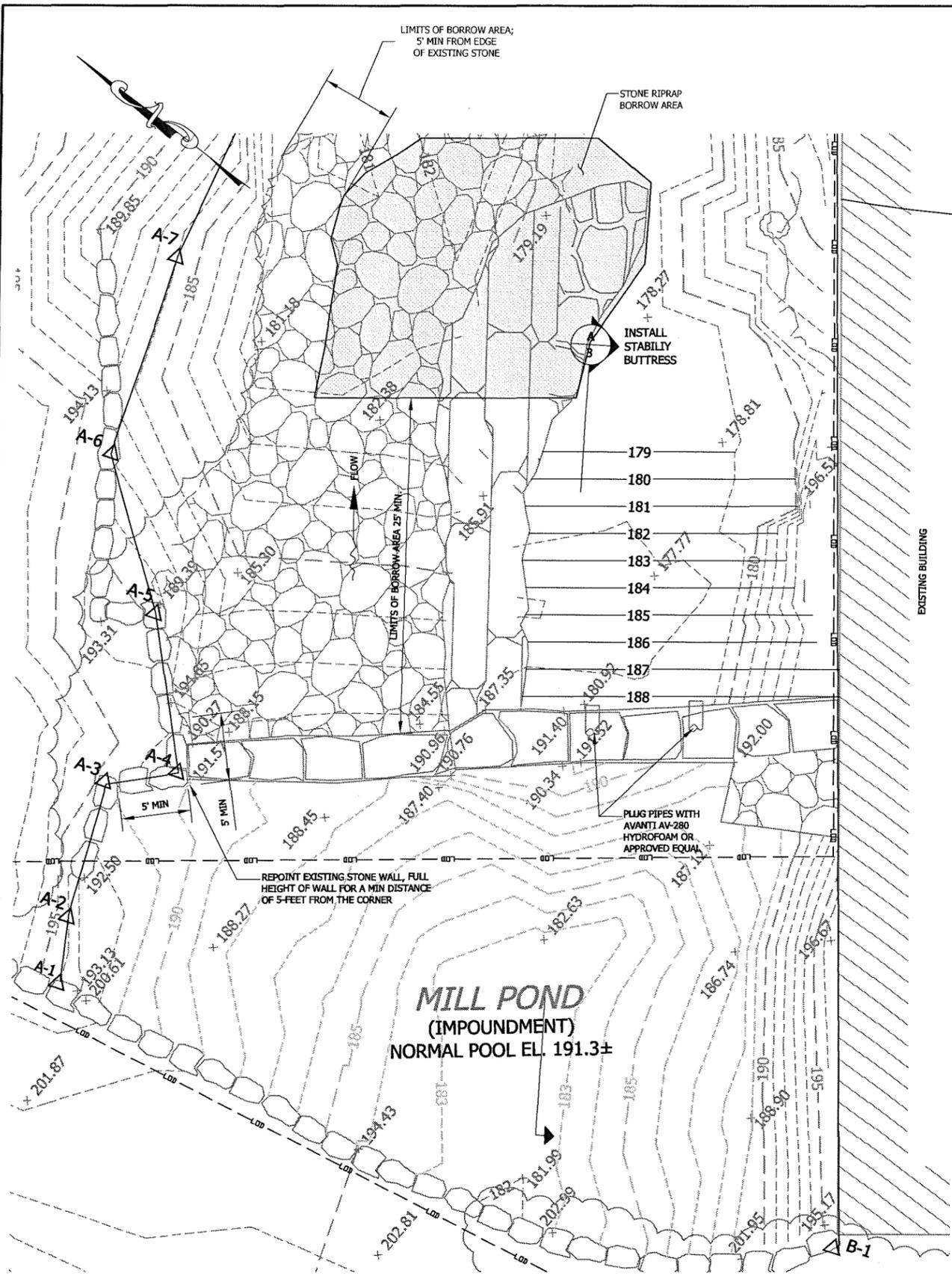
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 SHEET NO. 2 OF 4

ISSUED FOR PERMITS  
 NOT FOR CONSTRUCTION  
 HALF SIZED

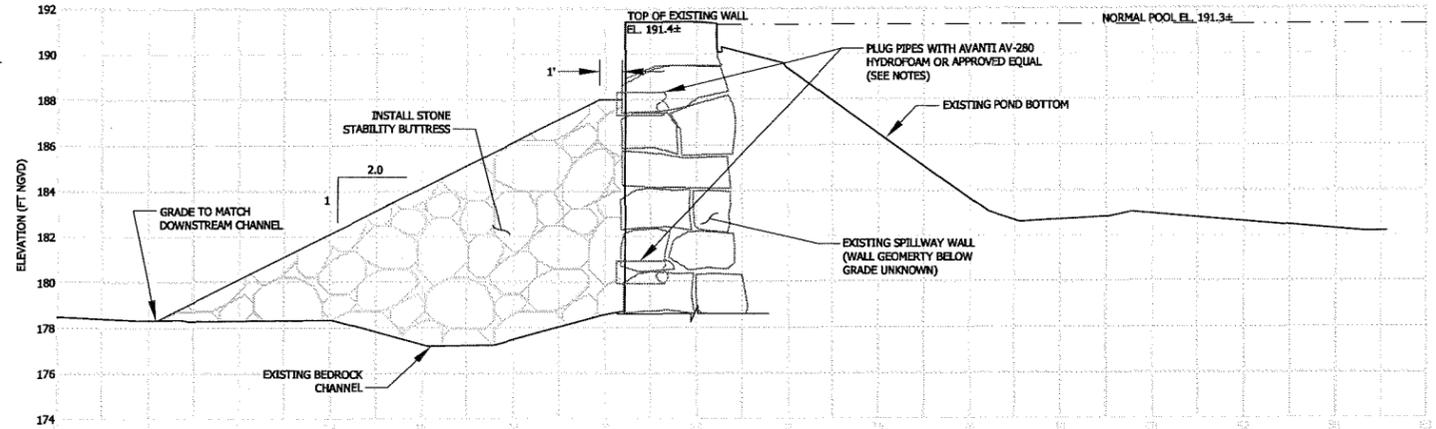


**ERIKSON DAM SPILLWAY  
 STABILITY IMPROVEMENTS**

MA00195 / 4-9-2-1  
 ERIKSON GRAIN MILL, INC.  
 ACTON, MASSACHUSETTS



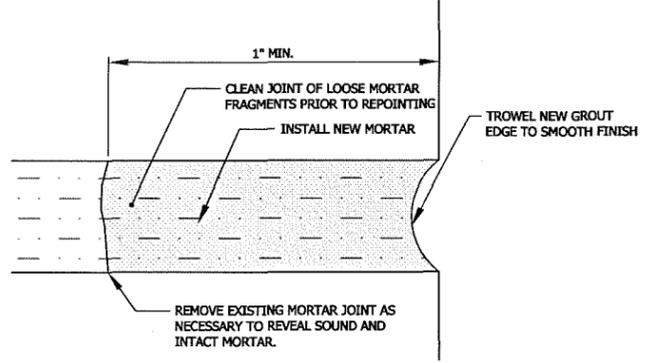
**PROPOSED SITE PLAN**  
 SCALE: 1"=5'



**PROPOSED BUTTRESS**  
 SCALE: 1"=4'

**PIPE PLUGGING NOTES**

1. PIPES SHALL BE FILLED IN THEIR ENTIRETY UTILIZING AN APPROVED HYDROPHOBIC GROUT OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
2. CONTRACTOR SHALL PROVIDE A TEMPORARY FORM AT THE DOWNSTREAM END OF THE PIPE TO FUNCTION AS A FORM DURING THE PLUGGING PROCEDURE.
3. PRIOR TO PLUG INSTALLATION, THE INTERIOR OF THE PIPE SHALL BE THOROUGHLY CLEANED OF ALL LOOSE DEBRIS, CORROSION, SEDIMENT, OR OTHER DELETERIOUS MATERIAL.



**NOTES**  
 1. BACKER ROD SHALL NOT BE USED UNLESS SPECIFIED OR DEEMED NECESSARY BY THE ENGINEER.

**TYPICAL REPOINTING DETAIL**  
 NOT TO SCALE

REVISIONS:	

PROJECT NO.:	08128.01
DATE:	NOVEMBER 2009
SCALE:	AS NOTED
DESIGNED BY:	VAV/ARO
CHECKED BY:	ARO
DRAWN BY:	ARO/GB
APPROVED BY:	JMB

**PROPOSED  
 SITE PLAN  
 & SECTION**

DRAWING NO. **3**  
 SHEET NO. 4 OF 4

ISSUED FOR PERMITS  
 NOT FOR CONSTRUCTION  
 HALF SIZED