SILVER LAKE DAM - DRAINAGE
STRUCTURE UPDATE - SINCE 1957 →

VER

A- DR

RUCTU

UCF

Mel Daniels
Peter Daniels
Sarah
Harry

Silver Lake Dam dry

1545 arr'd

- WL = -2.5' @ top of U/S cor stop log structure
- gate closed
- stop logs in culverts set .3-.4 higher than invert - only flow through culverts is leakage through stop logs
- WL @ top d/s stop log -2.45 ft
- culverts wet - most flow is leakage through back top d/s board cracked most likely
- stream enters culvert #3 (from left)
- u/s conc wall looks good
- road surface good

DIETZGEN NO. 386-5

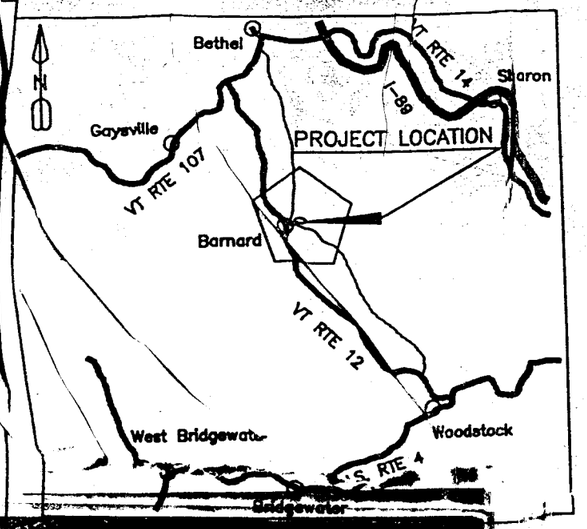
8/20/87

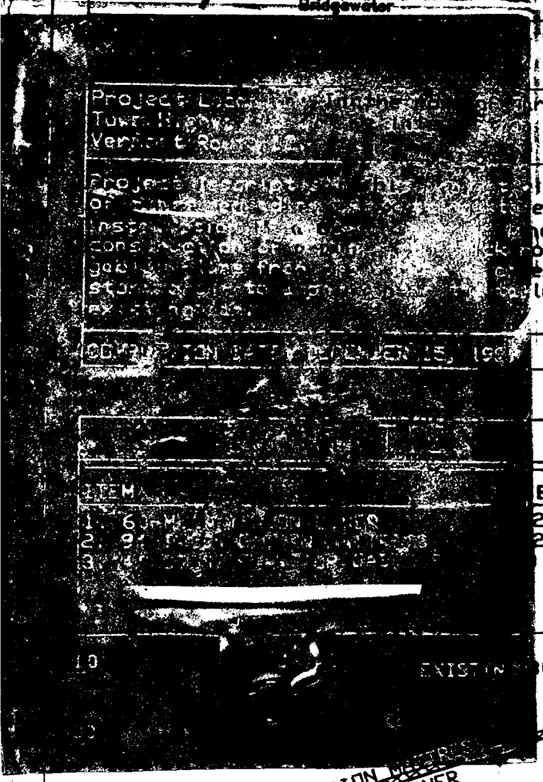
Silver Lake

D/S slope — some debris, weeds
- some riprap displaced below 4-culvert
- all 4 clear (crystal stream)
- defined channel below 42" (top top steel plate)
- mean width below 30'
- gravel/sand at bottom
- O/R mid 4 culvert
- Stable sediments in TW pool
- Upstream overall OK but needs some additional riprap below 4-culvert

Photos

1000 hrs





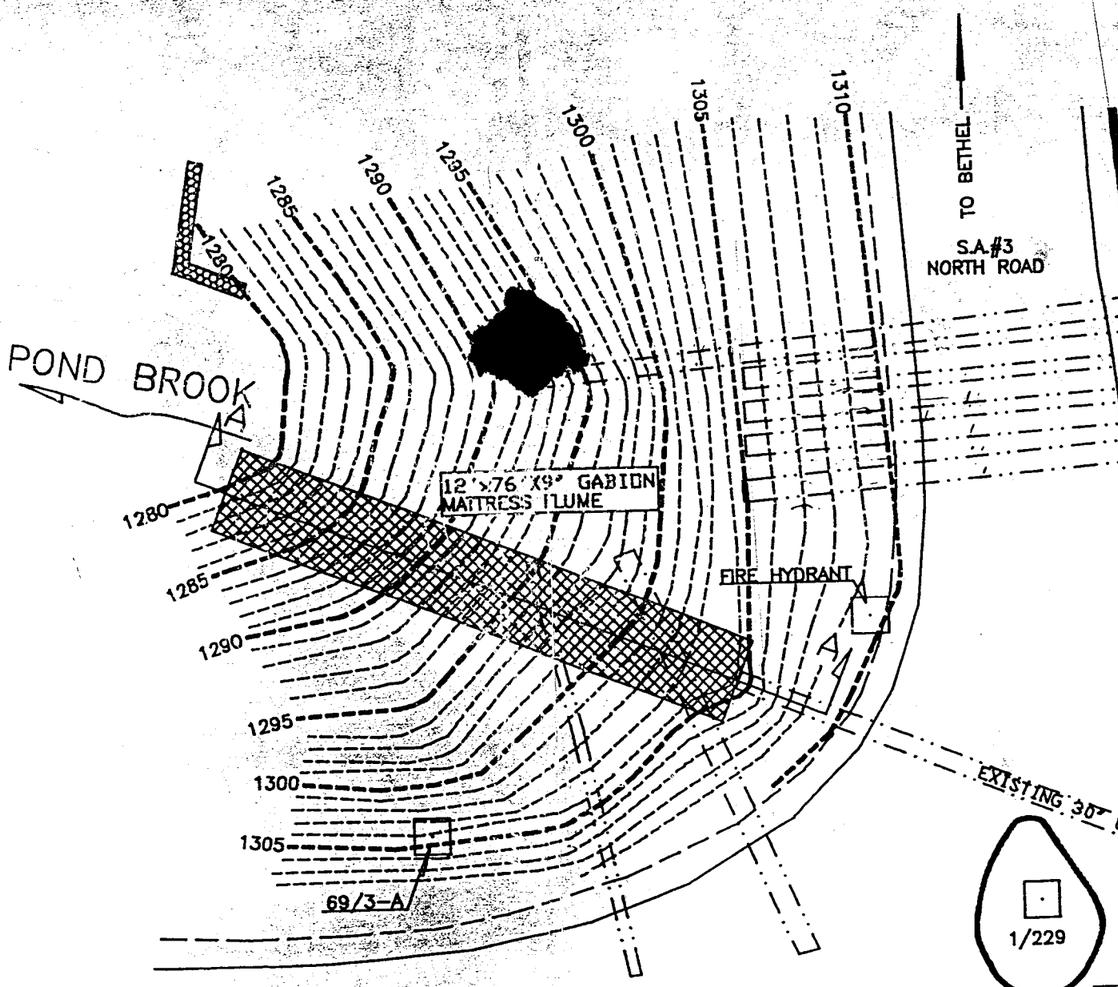
ITEM	EST	FINAL
1	S.F.	
2	S.F.	
3	C.Y.	

10 EXISTING 30" CMP

GABION MATTRESS
HYPALON LINER

1290
1280

SECTION A-A



SCALE
0 10 20 30 40 50
IN FEET

SILVER LAKE

STATE OF VERMONT
JOHN B. DUDLEY
NO. 4146
REGISTERED PROFESSIONAL ENGINEER

STATE OF VERMONT
AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AGENCY FACILITIES DIVISION
WATERBURY, VERMONT 05676

DEPARTMENT OF ENVIRONMENTAL CONSERVATION	DESIGNED JBD 9/89
PROJECT SILVER LAKE DAM – GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN	DRAWN KCF 5/88
	SHEET 1 OF 1
TOWN OF BARNARD	

MACCAFERRI GABIONS INC.

MAIN OFFICE: 950 THIRD AVENUE, NEW YORK, N.Y. 10022

TELEX: 12379 CABLE ADDRESS: GABIONS NEW YORK TELEPHONE: 212-832-6780

AREA OFFICES

ENGLEWOOD, COLORADO
ST. LOUIS, MISSOURI
HAGERSTOWN, MARYLAND
MINNEAPOLIS, MINNESOTA
ATLANTA, GEORGIA

New England Office
83 Hunnewell Avenue
Brighton, Mass. 02135
(617)964-3344

DISTRIBUTION POINTS

DENVER, COLORADO
WILLIAMSPORT, MARYLAND

April 10, 1981

Mr. John Dudley
Vermont Agency for Environmental Conservation
Division of Environmental Engineering
State Office Building
Montpelier, Vt. 05602

Dear Mr. Dudley:

Thanks for your call this week requesting gabion information for your possible dam spillway work. I am sending all the applicable literature I could find , in two packets. I hope this proves helpful.

Concerning your question about the large (5m x 2m x 1') revet gabions: these are only made up in lots of at least 350 units. The price is the same per square foot as the regular 12' x 3' x 1' gabions ($42.03/unit = $1.17/sf). The cost advantage to this type of gabion is that it is easier to install on very large projects because the lacing is easier and the lids are separate.

A possible alternative, if your slope is less that 2.5:1, is the 9" thick revet mattress. These cover more area per unit than the gabions, and use smaller stone. The wire is thinner, and the openings in the mesh are smaller (see specs in red book.)

I hope that this information helps. Please let me know if I can be of any further assistance.

Sincerely,

John F. Paul
Technical Advisor

CONTRACT
INVOLVING LABOR AND MATERIAL

AGREEMENT BETWEEN
STATE OF VERMONT
DIVISION OF PURCHASING
DEPARTMENT OF GENERAL SERVICES
STATE ADMINISTRATION BUILDING
MONTPELIER, VERMONT 05602-2502
AND

CONTRACT NO.	15135C	DATE	11/20/89
REQUISITION NO.	0856	AID NO.	16387-3
VENDOR NO.	11000506010	ENC. NO.	
TERMS	Net 30	RETAINAGE	5 %

COMPLETION NOT TO EXCEED **20** WORKING DAYS

CONTRACTOR: Neil H. Daniels Inc.
P. O. Box 246
Ascutney, VT 05030

Telephone: 674-6323

INVOICE TO: VT Agency of Natural Resources
Department of Environmental Conservation
Attn: H. Ritchie
103 South Main Street, 1 South
Waterbury, VT 05676

Contractor agrees to furnish all labor, supervision, transportation, insurance, materials, tools and equipment unless otherwise specified; and to complete the project described below in accordance with the specifications and conditions set forth herein.

PROJECT LOCATION: Silver Lake Dam, Barnard on Town Highway #3 at the intersection with Vermont Route 12

SPECIFICATIONS: General Specifications entitled "Contracts Involving Labor and Material" dated November 2, 1987; Technical Specifications entitled "Gabion Flume of Town Storm Drain dated September 25, 1989 and Project Drawing (Sheet 1 of 1).

PROJECT DESCRIPTION: The project will consist of minor regrading of existing stone fill, the installation of a 60-mil hypalon liner, and the construction of a 9-inch thick rock filled gabion mattress flume from the outlet of an existing town storm drain to a point near the tailrace of the existing dam.

Prices are in accordance with the attached Bid Sheet.

Upon satisfactory completion of the project and acceptance by the State, the State shall pay contractor compensation as follows:

Total $6,966.00

This contract form is to be considered FORMAL ACCEPTANCE of Contractor's Bid dated: 11/13/89 and in accordance with State of Vermont Proposal dated: 10/19/89.

Departments and institutions are requested to advise the State Commissioner of General Services **AT ONCE** of failure on the part of the contractor to fulfill any of the term or conditions of this contract.

On all correspondence, and invoices please refer to Contract No. 15135C.

I certify that this contract is written in accordance with 29 V.S.A. 953.

Paul Ohlson

PAUL F. OHLSON
Commissioner of General Services

Purchasing Agent: Mr. Rixford
Telephone Number: 802/828-2215

SILVER LAKE DAM

GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN

Item	Description	Est.	Unit	Unit Price	Total
1	60-Mil Hypalon Liner	720	s.f.	3.55	2556
2	9-Inch Thick Gabion Mattress	720	s.f.	3.00	2160
3	4-Inch stone Fill for Gabions	30	c.y.	75.00	2250
TOTAL BID					6966

TOTAL BID IN WORDS Six thousand Nine hundred Sixty Six dollars

CONTRACTOR Neil H. Daniels Inc

ADDRESS P.O. Box 296

Ascutney Vt. 05030

TELEPHONE 674-6323

AUTHORIZED SIGNATURE ~~Peter~~ Neil M. Daniels V. Pr.

AGENCY OF NATURAL RESOURCES

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILVER LAKE DAM

GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN

BARNARD, VERMONT

TECHNICAL SPECIFICATIONS

OCT 7 1989 89
EO-ANR-1

Department of Environmental Conservation

Facilities Engineering Div.

John B. Dudley, P.E.

September 25, 1989

I N D E X

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GENERAL CONDITIONS	
Project Location	1
Project Description.	1
Scope of Work.	1
SPECIFICATIONS.	7
Item #1 - 60 Mil Hypalon Liner.	7
Item #2 - 9-Inch Thick Gabion Mattress.	8
Item #3 - 4-Inch Stone Fill for Gabions	8
BASIS OF PAYMENT.	9

OCT 2 1 57 PM '85
EQ-ADM

GENERAL CONDITIONS

PROJECT LOCATION

In the Town of Barnard on Town Highway #3 at the intersection with Vermont Route 12.

PROJECT DESCRIPTION

This project will consist of minor regrading of existing stone fill, the installation of an 60 mil hypalon liner, and the construction of a nine inch thick rock filled gabion flume from the outlet of an existing town storm drain to a point near the trailrace of the existing dam.

Completion Date: December 15, 1989

RECEIVED
SEP 7 - 1989

SCOPE OF WORK

1. Federal Government funds are being used on this project. The following Federal requirements apply:

   A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color or national origin. Such action shall include,

but not be limited to the following: employment, upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer, setting forth the provisions of this non-discrimination clause.

B. The Contractor will, in all solicitations, or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, or national origin.

C. The Contractor will send to each labor union or representative or workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Agency contracting officer, advising the labor union or worker's representative of the Contractor's commitments under Section 202 of Executive Order 11246, as amended (3 CFS, Part 169 [1974]), shall post copies of notices in conspicuous places available to employees and applicants for employment.

D. The Contractor will comply with all provisions of Executive Order 11246, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor.

E. The Contractor will furnish all information and reports required by Executive Order 11246, as amended, by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

F. In the event of the Contractor's non-compliance with the non-discrimination clauses of this contract or with any such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended, in whole or in part and the Contractor may be declared ineligible for Government contracts in accordance with procedures authorized in Executive Order 11246, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, as amended, by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.

G. The Contractor will include the provisions of paragraphs A through G above in every subcontract or purchase order unless exempted by rules, regulations,

or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246, as amended, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for non-compliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as result of such directions by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

2. The Contractor shall comply with the "Copeland Anti-Kickback" (18 U.S.C. 874) as supplemented by Department of Labor Regulations (29 CFR, Part 3).

3. The State, NPS, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor for the purpose of making audit, examination, exerpts, and transcriptions.

4. The Engineer shall establish initial field control. All dimensions indicated on the plans are to be verified in the field by the Contractor.

5. The Contractor shall provide all material, labor, equipment, and facilities necessary for the completion of the project.
6. The Contractor is assumed to be thoroughly familiar with all requirements of the contract and specifications, having investigated the site and satisfied himself regarding the character of the work and local conditions that may affect his performance.
7. All workmanship shall, in every respect, be in accordance with the best modern practice.
8. The Contractor shall be responsible for any damage occurring to the existing premises during the construction project.
9. The Contractor shall take extreme care to avoid pollution of downstream waters.
10. The State shall not be held responsible for any damage caused by vandalism to either the project or to the Contractor's property.
11. Access to the construction site shall be only over public roads and across State owned property.
12. Bids are to be submitted using the enclosed bid sheet.
13. The Contractor shall comply with all State and local regulations where applicable to this contract.
14. The Contractor shall remove all construction equipment, materials, and debris caused by the project from the site.
15. The Contractor shall adhere to all Federal, State, and Local safety standards and regulations.

16. The Contractor shall be responsible for safety on the job. He shall take due care to protect the public. He shall protect the rights and property of adjacent landowners and shall be fully responsible for any damage beyond the limits of construction shown on the plans. He shall take due care to protect the property of the State of Vermont. Damage to roads and structures caused by tracked vehicles and trucks shall be repaired at the Contractor's expense.

17. The Contractor shall guarantee the materials and workmanship of the project for a period of one year after the acceptance of the project by the State.

18. The Contractor shall notify the Engineer at least three (3) days prior to moving equipment onto the project.

19. The Contractor shall not sublet or assign any portion of this contract without written consent of the Engineer. In any event, the Contractor shall perform with his own organization not less than 50 percent of the total initial contract cost. No subcontracts or assignments shall in any case release the Contractor of his liability under his contract and bonds.

20. The Contractor shall submit requisitions for payment in the following manner: (1) Bills shall be addressed to the Agency of Natural Resources, 103 South Main Street, Building 1 South, Waterbury, Vermont 05676, to the attention of the Engineer in charge; (2) all requisitions shall be originals - no photocopies will be acceptable; (3) the Contractor

shall include the contract number, requisition number, and appropriation number as shown on the contract; (4) the Contractor shall also include either his personal social security number or his firm's State Tax Department identification number; (5) if the contract is for an itemized bid, then the Contractor shall itemize all requisitions for payments.

21. The successful bidder shall be given three additional sets of project plans and specifications for the project. At least one such set shall be present at the project site at any time that construction is being performed.

22. The bidder should obtain or have a copy of the "Standard Specifications for Construction - 1986" by the State of Vermont, Agency of Transportation. One may be obtained at nominal cost from the Agency of Transportation, Division of Contract Administration.

SPECIFICATIONS

All work related to the following specifications, unless otherwise noted, shall be accomplished in accordance with the State of Vermont, Agency of Transportation - "Standard Specifications for Construction", dated 1986 (hereafter referred to as AOT), and the most recent revision of the Agency of Transportation's "General Special Provisions."

Item #1 - 60 Mil Hypalon Liner -

This item shall consist of the installation of an

elastomeric liner of the type normally approved for pond and lagoon lining such as that made by Staff Industries, Stevens Elastomerics, and other manufacturers. The material shall be 60 mils nominal thickness. Included in this item shall be a minor amount of regrading of the existing riprap surface to minimize the likelihood of damage to the liner.

Item #2 - 9-Inch Thick Gabion Mattress -

This item shall consist of the installation of a vinyl coated gabion basket of the dimensions shown on the plans. The material shall meet or exceed the specifications for wire type and thickness and coating characteristics of Reno Mattresses as manufactured by Maccaferri Gabions, Inc., P.O. Box 157, Wyckoff, NH 07481. Installation shall be as shown on the plans or directed in the field by the Engineer and shall conform to the manufacturer's recommendations. Particular care shall be used to avoid any damage to the underlying elastomeric liner.

Item #3 - 4-Inch Stone Fill for Gabions -

This item shall consist of the placement of stone fill into the Gabion Mattress specified above. The stone shall be hard, durable, well-graded stone ranging in size from 2 to 6 inches and may be either shot rock or cobbles. The stone fill shall be placed in strict conformance with the manufacturer's recommendations and the directions of the Engineer.

BASIS FOR PAYMENT

Bid Item #1 -

This item shall be paid for at the contract unit price per square foot as measured in place. The unit price shall be full compensation for furnishing, transporting, handling and placing the material specified including regrading of bedding as indicated in the field.

Bid Item #2 -

This item will be paid for at the contract unit price per square foot as measured in place. The unit price shall be full compensation for furnishing, transporting, handling and placing the material specified.

Bid Item #3 -

This item will be paid for at the contract unit price per cubic yard as measured in place. The unit price shall be full compensation for furnishing, transporting, handling and placing the material specified.

SILVER LAKE DAM

GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN

Item	Description	Est.	Unit	Unit Price	Total
1	60-Mil Hypalon Liner	720	s.f.	_____	_____
2	9-Inch Thick Gabion Mattress	720	s.f.	_____	_____
3	4-Inch stone Fill for Gabions	30	c.y.	_____	_____

TOTAL BID _____

TOTAL BID IN WORDS _____

CONTRACTOR _____

ADDRESS _____

_____

TELEPHONE _____

AUTHORIZED SIGNATURE _____

STATE OF VERMONT
DIVISION OF PURCHASING
DEPARTMENT OF GENERAL SERVICES
STATE ADMINISTRATION BUILDING
MONTPELIER, VERMONT 05602-2502

November 2, 1987

GENERAL SPECIFICATIONS
CONTRACTS INVOLVING LABOR AND MATERIAL

SITE EXAMINATION: Contractor has examined the site and is fully informed as to the extent and character of the project. No consideration will be given for any alleged misunderstanding of same.

CONTRACTOR'S RESPONSIBILITY TO AGENCY HEAD: The contractor shall report to the administrative officer or the engineer in charge of the project where the work shall be undertaken. He shall inform the officer (engineer) of the date on which he expects to start work under the contract. It shall be the responsibility of the contractor to keep the chief administrative officer (engineer) informed as to the progress of the work and when all work under the contract has been accomplished.

WORKMANSHIP AND MATERIALS: Contractor agrees to furnish all supervision, labor, transportation, materials, tools, and equipment necessary to complete the project.

Work not specifically described in the specifications shall be done in accordance with the standard practice and all work shall be completed in neat and workmanlike manner. The contractor shall re-execute any work that fails to conform to the requirements of the contract and that appears during the progress of the work, and shall remedy any defects due to faulty materials or workmanship which appears within a period of one year from the date of completion of the contract. Unless otherwise agreed, the contractor shall provide free service for all mechanical and electrical equipment for a period of one year from date of completion. The provisions of this paragraph apply to work done by subcontractors as well as to work done by direct employees of the contractor.

The contractor shall adequately protect the project, adjacent property and public, and shall be responsible for any damage or injury due to the contractor's act or neglect, and shall save the State harmless in respect thereto. The contractor shall keep the premises free from accumulation of waste material and rubbish and upon completion of the work the contractor shall remove all tools, implements, scaffolds, excess material and rubbish which have accumulated on the premises and shall leave same in a clean and satisfactory condition.

GENERAL SPECIFICATIONS - CONTRACTS INVOLVING LABOR AND MATERIAL
November 2, 1987

TAXES

The State is exempt from all sales and Federal excise taxes. An exemption certificate will be furnished upon request.

ASSIGNMENT

Contractor shall not have the right to sublet, transfer, or assign this contract or any part thereof, without the prior written consent of the State and such consent shall not relieve the contractor of any liability or responsibility hereunder. The failure of the State to assert any of its rights hereunder shall not be construed as a waiver thereof.

PAYMENTS

All invoices shall be submitted directly to the Agency of State Government as indicated on the face of the contract, and shall make reference to the contract number. At the option of the contractor, a single invoice may be submitted after completion of all work; or progress invoices may be submitted on, or about the first of each month for all work completed during the preceding month. Progress invoices shall certify that payments for all labor and materials are on a current basis. Payments on progress invoices shall be subject to a withholding of the percentage indicated on face of contract and in accordance with this specification.

RETAINAGE

Based upon application to the State by the contractor, the State will make progress payments, less the retainage as shown on face of contract, if applicable, of the contract sum properly allocable to labor, materials and equipment incorporated in the work, less the aggregate of previous payments. Retainage amount should be paid within 30 days after final acceptance of project by the State.

AMENDMENTS

The State may increase, decrease, or alter the work or materials, or it may otherwise modify the specifications or conditions of the project to be furnished hereunder, and any changes occasioned thereby, including changes in amounts to be paid hereunder, shall be in the form of a change order which shall be agreed to and approved in writing by the Director of the Division of Purchasing, and which shall become a part of this contract. Verbal instructions, from any source, shall not be valid. No claim may be made under the contract with respect to such changes unless agreed to in writing.

LIENS

Contractor shall keep state property free from liens arising hereunder. Prior to final payment the state may require contractor to furnish waivers of liens or such other evidence of compliance herewith.

INSURANCE

The contractor shall not commence work on the project until all insurance specified below has been acquired for the term of the contract, nor shall the contractor allow any subcontractor to commence work under this contract until the required insurance has been obtained; proof of all insurance coverage shall be submitted to the State and subject to the approval of the State.

INSURANCE(Cont)

(a) Compensation Insurance - The contractor shall maintain such liability insurance as is required by the applicable workmen's compensation and other employee benefit laws for bodily injury and death that may directly or indirectly arise from work under this contract and contractor shall require each subcontractor, if any, to maintain similar insurance coverage and furnish proof thereof, unless such coverage is provided by the subcontractor to provide adequate employer's liability insurance for the protection of employees engaged in hazardous work and not protected under the workmen's compensation laws.

(b) Contractor's Public Liability, Property Damage Insurance, & Automobile Bodily Injury Insurance - The contractor shall maintain Contractor's Public Liability Insurance and Contractor's Property Damage Insurance in the amounts of $100,000/$300,000 bodily injury and $100,000 property damage. Also, the contractor shall maintain Automobile Liability Insurance in the amount of $100,000/$300,000 for bodily injury and $100,000 for property damage.

(c) Subcontractor's Public Liability & Property Damage Insurance - The contractor shall require each subcontractor, if any, to maintain the same Public Liability and Property Damage Insurance as that specified in subparagraph (b) above.

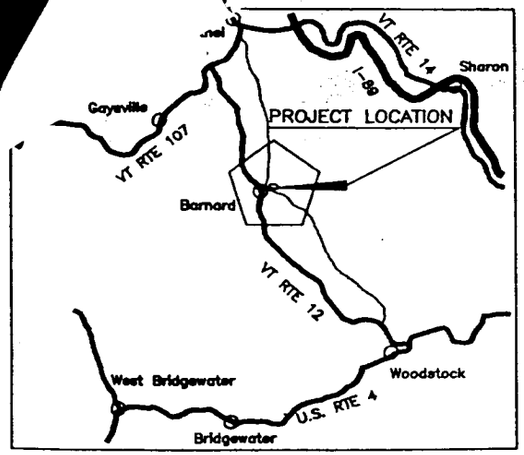
(d) Scope of Insurance & Special Hazards - The insurance required under subparagraphs (b) and (c) above shall provide adequate protection for the contractor and the subcontractors, if any, against damage claims which may arise from work being performed, including any special hazards which may be encountered by the insured or by any person directly or indirectly employed by the contractor or a subcontractor.

LAWS

Contractor shall comply with all public laws, ordinances, and requirements respecting the work, obtain and pay for all required permits and comply with regulations of any insurance company which issues a policy on any part of the work or site. The contractor agrees to comply with all of the requirements of Title 21 V.S.A., Chapter 5, Subchapter 6 relating to fair employment practices, to the extent applicable, and agrees further to include a similar provision in any and all subcontracts. Contractor shall acquaint himself with limits of the property or right-of-way of the state and shall not trespass on other property. All work shall be done in such a manner as not to interfere with the State's operating functions. Contractor and his employees shall familiarize themselves and comply with all posted rules.

PROGRESS

If in the sole opinion of the State, the contractor fails to commence work on the project or to complete the work of said project within the time specified above, or to prosecute the work in such a manner that it appears that the completion date can be assured, the State shall have the right to notify the contractor by Certified Mail that the terms of the contract have been violated, and that effective immediately the contract is terminated and the State has the right to and in fact is taking over and attending to completion of the project without prejudice to the State's remedies for any losses sustained.



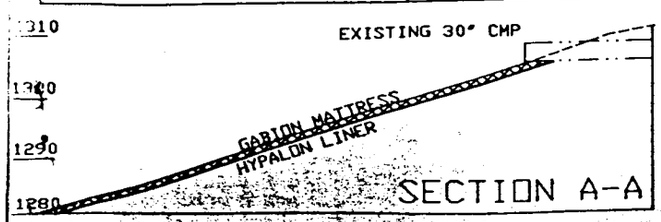
Project Location: In the town of Barnard on Town Highway #3 at the intersection with Vermont Route 12.

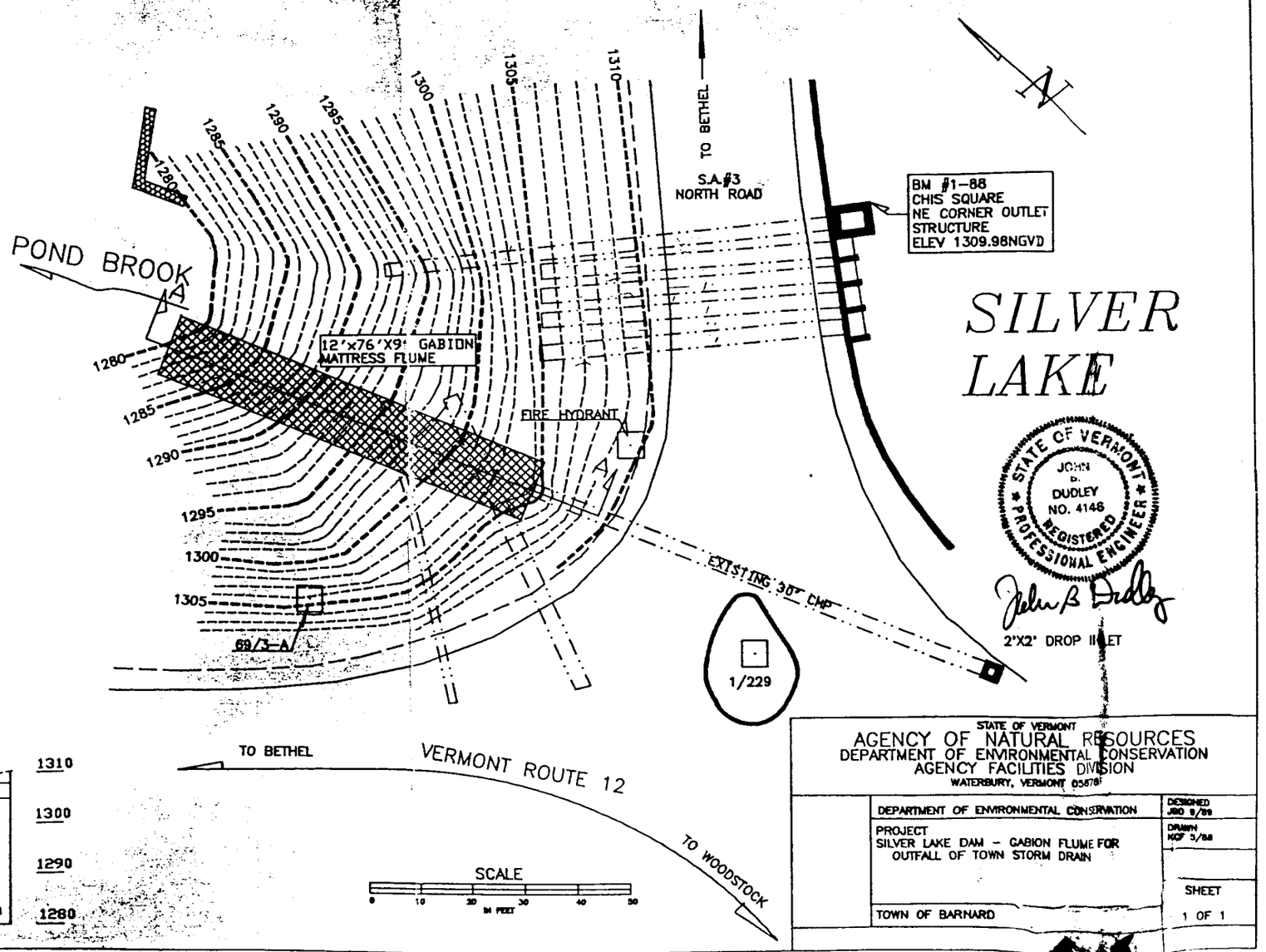
Project Description: This project will consist of minor regrading of existing stone fill, the installation of a 60-mil hypalon liner, and the construction of a nine-inch thick rock-filled gabion flume from the outlet of an existing Town storm drain to a point near the tailrace of the existing dam.

COMPLETION DATE: DECEMBER 15, 1989

QUANTITIES

ITEM	EST	FINAL
1. 60-MIL HYPALON LINER	912 S.F.	
2. 9" THICK GABION MATTRESS	912 S.F.	
3. 4' STONE FILL FOR GABIONS	30 C.Y.	





STATE OF VERMONT
JOHN B. DUDLEY NO. 4148 REGISTERED PROFESSIONAL ENGINEER

STATE OF VERMONT
AGENCY OF NATURAL RESOURCES
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AGENCY FACILITIES DIVISION
WATERBURY, VERMONT 05676

	DEPARTMENT OF ENVIRONMENTAL CONSERVATION	DESIGNED JBD 8/88
	PROJECT SILVER LAKE DAM - GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN	DRAWN MCF 5/88
		SHEET 1 OF 1
	TOWN OF BARNARD	

Silver Lake Plaza

Overrun explanation

Item 1 & 2 – Error in bid sheet calculation
Field change required –
72' x 12' instead of 60' x 12' on bid sheet

Item 3
Additional stone fill required for bedding + length as with items 1 & 2

TO

DATE	ORDER NO
SHIP TO	

SALESMAN	DATE SHIPPED	SHIPPED VIA	F.O.B. POINT	TERMS

QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL

QUADRUPLICATE

Thank You!

DEC 7 10 32 PM '09

NEIL H. DANIELS, INC.
P.O. Box 246
ASCUTNEY, VERMONT 05030

(802) 674-6323

8451 № 8423

DATE	ORDER NO. (CONTRACT NO.)
12/12/89	15135C

SHIP TO
220425

TO
VT Agency of Natural Resources
Dept of Environmental Conservation
Attn: H. Ritchie
103 South Main St, 1 South
Waterbury, VT 05676

SALESPERSON	DATE SHIPPED	SHIPPED VIA	F.O.B. POINT	TERMS
RW				

	DESCRIPTION		UNIT PRICE	TOTAL
	Silver Lake Dam Gabion Flume			
ITEM				
1	60-Mil Hapalon Liner	864 S.F.	3 55	3067 20
2	9-Inch Thick Gabion Mattress	864 S.F.	3 00	2592 00
3	4-Inch Stone Fill For Gabions	44 cy	75 00	3300 00
	(Item 3 includes (2) 10 cy loads For grading)			
		Total Due		8959 20
	okay to pay John B Dudley 12/13/89			
AID	16387-3 Contract # 15135C			

ORIGINAL

Thank You

~~AA~~-PUR 307

STATE OF VERMONT

OFFICE MEMO

TO: John Dudley

FROM: Steve Kifford

DATE: 11/15

SUBJECT: Silver Lake Dam Project

- ☐ APPROVAL
- ☐ NOTE AND SEE ME
- ☐ PER CONVERSATION
- ☐ SIGNATURE
- ☐ NOTE AND RETURN
- ☐ AS REQUESTED
- ☐ COMMENT
- ☐ NOTE AND FILE
- ☐ NECESSARY ACTION
- ☐ REVIEW
- ☑ FOR YOUR INFORMATION
- ☐ GIVE ME THE FACTS
- ☐ PREPARE REPLY FOR MY SIGNATURE
- ☐ SUGGESTIONS REQUESTED
- ☐ YOUR ACTION REQUESTED BY THIS DATE

REMARKS:

Here are copies of the two bids I did not have a response from Webster Const, the other company represented at the job showing.

STATE OF VERMONT
DIVISION OF PURCHASING
DEPARTMENT OF GENERAL SERVICES
MONTPELIER, VERMONT 05602-2502

PROPOSAL FOR CONTRACT
INVOLVING LABOR AND MATERIAL

DATE 10/19/89 REQUISITION NO. 0856
AID NO. 16387-3 ENCUMBRANCE NO. n/a

TO

Neil H. Daniels Inc.
P. O. Box 246
Ascutney, VT 05030

INVOICE TO: VT Agency of Natural Resources
Department of Environmental Conservation
Attn: H. Ritchie
103 South Main Street, 1 South
Waterbury, VT 05676

BID OPENING November 15, 1989 @ 2:00 pm

The bidder agrees to furnish all labor, supervision, transportation, insurance, material, tools and equipment, unless otherwise specified; and to complete the project described below in accordance with the specifications and conditions set forth herein.

RETAINAGE APPLICABLE: AT 5 % PER GENERAL SPECIFICATIONS

PROJECT LOCATION: Silver Lake Dam, Barnard on Town Highway #3 at the intersection with Vermont Route 12

SPECIFICATIONS: General Specifications entitled "Contracts Involving Labor and Material" dated November 2, 1987; Technical Specifications entitled "Gabion Flume of Town Storm Drain dated September 25, 1989 and Project Drawing (Sheet 1 of 1).

PROJECT DESCRIPTION: The project will consist of minor regrading of existing stone fill, the installation of a 60-mil hypalon liner, and the construction of a 9-inch thick rock filled gabion mattress flume from the outlet of an existing town storm drain to a point near the tailrace of the existing dam.

BID SHEET: The attached Bid Sheet must be filled in and returned with this sheet.

Purchasing Agent: Mr. Rixford, 802/828-2215 **Bid Total** $ 6966

The bidder agrees that the time required for substantial completion after receipt of contract will not exceed 20 Working days. Bid Valid Until 11/17/89 Payment Terms ____ Date 11/13/89

COMPANY NAME NEIL H. DANIELS, INC TELEPHONE NO. 674 6323
BY Nellie M. Daniels V. Pres. SIGNATURE ____

VERMONT TAX CERTIFICATION: To meet the requirements of Vermont Statute 32 V.S.A. §3113, the certification shown below must be completed, signed and returned with your bid. By law, no agency of the State may enter into, extend or renew any contract for the provision of goods, services or real estate space with any person unless such person first certifies, under the pains and penalties of perjury, that he or she is in good standing with the Department of Taxes. A person is in good standing if no taxes are due, if the liability for any tax that may be due is on appeal, or if the person is in compliance with a payment plan approved by the Commissioner of Taxes, 32 V.S.A. §3113.

IN SIGNING THIS BID, THE BIDDER CERTIFIES UNDER THE PAINS AND PENALTIES OF PERJURY THAT THE COMPANY/INDIVIDUAL IS IN GOOD STANDING WITH RESPECT TO, OR IN FULL COMPLIANCE WITH A PLAN TO PAY, ANY AND ALL TAXES DUE THE STATE OF VERMONT AS OF THE DATE THIS STATEMENT IS MADE.

SILVER LAKE DAM

GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN

Item	Description	Est.	Unit	Unit Price	Total
1	60-Mil Hypalon Liner	720	s.f.	3.55	2556
2	9-Inch Thick Gabion Mattress	720	s.f.	3.00	2160
3	4-Inch stone Fill for Gabions	30	c.y.	75.00	2250
TOTAL BID					6966

TOTAL BID IN WORDS Six thousand Nine hundred Sixty Six dollars

CONTRACTOR Neil H. Daniels Inc

ADDRESS P.O. Box 296

Ascutney Vt. 05030

TELEPHONE 674-6323

AUTHORIZED SIGNATURE ~~X~~ Neil M. Daniels V. Pr.

STATE OF VERMONT
DIVISION OF PURCHASING
DEPARTMENT OF GENERAL SERVICES
MONTPELIER, VERMONT 05602-2502

PROPOSAL FOR CONTRACT
INVOLVING LABOR AND MATERIAL

DATE 10/19/89 REQUISITION NO. 0856
AID NO. 16387-3 ENCUMBRANCE NO. n/a

Thygeson Construction Co.
51 Smith Street
Barre, VT 05641

INVOICE TO: VT Agency of Natural Resources
Department of Environmental Conservation
Attn: H. Ritchie
103 South Main Street, 1 South
Waterbury, VT 05676

BID OPENING November 15, 1989 @ 2:00 pm

The bidder agrees to furnish all labor, supervision, transportation, insurance, material, tools and equipment, unless otherwise specified; and to complete the project described below in accordance with the specifications and conditions set forth herein.

RETAINAGE APPLICABLE: AT 5 % PER GENERAL SPECIFICATIONS

PROJECT LOCATION: Silver Lake Dam, Barnard on Town Highway #3 at the intersection with Vermont Route 12

SPECIFICATIONS: General Specifications entitled "Contracts Involving Labor and Material" dated November 2, 1987; Technical Specifications entitled "Gabion Flume of Town Storm Drain dated September 25, 1989 and Project Drawing (Sheet 1 of 1).

PROJECT DESCRIPTION: The project will consist of minor regrading of existing stone fill, the installation of a 60-mil hypalon liner, and the construction of a 9-inch thick rock filled gabion mattress flume from the outlet of an existing town storm drain to a point near the tailrace of the existing dam.

BID SHEET: The attached Bid Sheet must be filled in and returned with this sheet.

Purchasing Agent: Mr. Rixford, 802/828-2215 **Bid Total** $ 12,793.00

The bidder agrees that the time required for substantial completion after receipt of contract will not exceed 5 Working days. Bid Valid Until 11-30-89 Payment Terms Payment in full upon completion Date 11-13-89

COMPANY NAME THYGESEN CONST. CO. TELEPHONE NO. 1-802-476-3795
BY C. T. Thygesen Jr. SIGNATURE C. T. Thygesen Jr.

VERMONT TAX CERTIFICATION: To meet the requirements of Vermont Statute 32 V.S.A. §3113, the certification shown below must be completed, signed and returned with your bid. By law, no agency of the State may enter into, extend or renew any contract for the provision of goods, services or real estate space with any person unless such person first certifies, under the pains and penalties of perjury, that he or she is in good standing with the Department of Taxes. A person is in good standing if no taxes are due, if the liability for any tax that may be due is on appeal, or if the person is in compliance with a payment plan approved by the Commissioner of Taxes, 32 V.S.A. §3113.

IN SIGNING THIS BID, THE BIDDER CERTIFIES UNDER THE PAINS AND PENALTIES OF PERJURY THAT THE COMPANY/INDIVIDUAL IS IN GOOD STANDING WITH RESPECT TO, OR IN FULL COMPLIANCE WITH A PLAN TO PAY, ANY AND ALL TAXES DUE THE STATE OF VERMONT AS OF THE DATE THIS STATEMENT IS MADE.

SILVER LAKE DAM

GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN

Item	Description	Est.	Unit	Unit Price	Total
1	60-Mil Hypalon Liner	720	s.f.	$9.25	$6660.00
2	9-Inch Thick Gabion Mattress	720	s.f.	$6.65	$4788.00
3	4-Inch stone Fill for Gabions	30	c.y.	$45.00	$1350.00
TOTAL BID					$12,798.00

TOTAL BID IN WORDS Twelve Thousand, Seven Hundred and Ninety Eight Dollars

CONTRACTOR THYGESEN CONSTRUCTION CO.

ADDRESS 51 SMITH STREET

BARRE, VERMONT 05641

TELEPHONE 1-802-476-3795

AUTHORIZED SIGNATURE Charles T. Thygesen Sr.

CHARLES T. THYGESEN SR.

AGE[illegible]IRONMENTAL CONSERVATION PURCHASE REQUISITION / CONTRACT RELEASE

Tran.Code	Encumbrance	Total Cost	Aid No.	Pg. Of	Contract No.
A54		9,000	16387-3	1 of 2	

Date Prepared	Date Required	Ind.	Items	Vendor No.	Department
9/27/89	11/1/89	F	1		Environmental Conservation

Ship to:
Agency of Natural Resources
Dept. of Environmental Conservation
103 South Main Street - Building 1 South
Waterbury, VT 05676
Attn: John B. Dudley, P.E.

Invoice to:
Agency of Natural Resources
Dept. of Environmental Cons., Att: H. Ritchie
103 S. Main St., 1 South
Waterbury, VT 05676

Vendor:

SEE ATTACHED BID INVITATION LIST

Normal delivery time is 6-8 weeks
Special Instructions:

Substitutes:

Item No.	Quant	Unit	Description (Include Catalog & Pg. No.)	Est. Amount	Object Code
1	1	each	Contract for labor and materials Location: In the Town of Barnard on Towh Highway #3 at the intersection with Vermont Route 12. Description: The project will consist of minor re-grading of the existing stone fill, the installation of a 60-mil hypalon liner, and the construction of a 9-inch thick rock filled gabion mattress flume from the outlet of an existing town storm drain to a point near the tailrace of the existing dam. Completion Date: December 15, 1989 Job Showing: November 8, 1989 Bid Opening: November 15, 1989	$9,000.00 [NO BONDING REQUIRED]	

Div./Subdiv.:

Person to contact for information John B. Dudley, P.E. Tel. No. 244-8755

Approvals: Sign & Date Below Please

9/28/89

STATE OF VERMONT
DIVISION OF PURCHASING
DEPARTMENT OF GENERAL SERVICES
STATE ADMINISTRATION BUILDING
MONTPELIER, VERMONT 05602-2502

October 19, 1989
Req. No. 0856

PROPOSAL FOR CONTRACT

DATE OF BID OPENING: November 15, 1989

TIME OF BID OPENING: 2:00 pm

LOCATION OF BID OPENING: 128 State Street, Montpelier, Vermont

PROJECT LOCATION: Silver Lake Dam, Barnard, Vermont

PROJECT TITLE: Gabion Flume For Outfall of Town Storm Drain

JOB SHOWING: A representative of the Facilities Engineering Division will be at the job site on November 8, 1989 between the hours of 11:00 AM and 12:00 Noon. Interested bidders are urged to attend. Any technical questions regarding this proposal should be directed to John Dudley, telephone number 802/244-8755.

COMPLETION DATE: By December 15, 1989

INSTRUCTIONS TO BIDDERS

BIDS Bids must be submitted on and in accordance with forms provided by the State of Vermont, Division of Purchasing

All information required on proposal form, in connection with each item against which a bid is submitted, must be given to constitute a regular bid. prices and information required on proposal, except signature of bidder, should be typewritten for legibility. All signatures must be written in ink. Stamped or typewritten signatures are not acceptable.

All bids must be sealed. They may be submitted either in plain envelopes or those furnished by the State of Vermont, Division of Purchasing. All bids must be addressed to the State of Vermont, Division of Purchasing, State Administration Building, Montpelier, Vermont 05602. Bid envelopes must be clearly marked with the requisition number, proposal title, opening date, and name of bidder.

Telegraphic bids may be considered at the discretion of the State Commissioner of General Services. Once permission is received from the Division of Purchasing, the telegram must be prefixed by the words "Bid Message." Bidders are cautioned, if telegraphic means are selected, it is the bidder's responsibility to originate the message in sufficient time to insure receipt by the Division of Purchasing prior to the time of opening of bids. Telegraphic bids not in possession of the Division of Purchasing at time of bid opening will not be considered.

Telephone quotations or amendments will not be accepted at any time.

All bids will be publicly opened and read. Any interested party may attend bid openings.

SUBSTITUTIONS Any bidder who wishes to provide under the governing specifications what he considers to be an approved equal to any item or method specified, must receive written approval for such use from the Purchasing Director.

NON COLLUSION The State of Vermont is conscious of and concerned about some instances where collusion seems evident. It should, therefore, be understood by all bidders that, in signing the bid with which this General Specifications is concerned, they agree that the prices quoted have been arrived at without collusion and that no prior information concerning these prices has been received from or given to a competitive company. If there is sufficient evidence to warrant consideration of this bid by the Office of the Attorney General, all bidders should understand that this paragraph may be used as a basis for litigation.

METHOD OF AWARD Awards will be made to the lowest responsible bidder, the quality of the articles to be supplied, their conformity with the specifications, their suitability to the requirements of the State, and delivery terms shall be taken into consideration.

The Purchasing Director reserves the right to reject any or all bids, to waive any informality in bids, to accept in whole or in part such bid or bids as may be deemed in the best interest of the State. Preference shall be given to resident bidders of the State and products raised or manufactured in the State, all other things being equal.

REQUEST FOR BID
STATE OF VERMONT
DIVISION OF PURCHASING
DEPARTMENT OF GENERAL SERVICES
MONTPELIER, VERMONT 05602-2502

PROPOSAL FOR CONTRACT
INVOLVING LABOR AND MATERIAL

DATE 10/19/89 REQUISITION NO. 0856
AID NO. 16387-3 ENCUMBRANCE NO. n/a

TO

INVOICE TO: VT Agency of Natural Resources
Department of Environmental Conservation
Attn: H. Ritchie
103 South Main Street, 1 South
Waterbury, VT 05676

BID OPENING November 15, 1989 @ 2:00 pm

The bidder agrees to furnish all labor, supervision, transportation, insurance, material, tools and equipment, unless otherwise specified; and to complete the project described below in accordance with the specifications and conditions set forth herein.

RETAINAGE APPLICABLE: AT 5 % PER GENERAL SPECIFICATIONS

PROJECT LOCATION: Silver Lake Dam, Barnard on Town Highway #3 at the intersection with Vermont Route 12

SPECIFICATIONS: General Specifications entitled "Contracts Involving Labor and Material" dated November 2, 1987; Technical Specifications entitled "Gabion Flume of Town Storm Drain dated September 25, 1989 and Project Drawing (Sheet 1 of 1).

PROJECT DESCRIPTION: The project will consist of minor regrading of existing stone fill, the installation of a 60-mil hypalon liner, and the construction of a 9-inch thick rock filled gabion mattress flume from the outlet of an existing town storm drain to a point near the tailrace of the existing dam.

BID SHEET: The attached Bid Sheet must be filled in and returned with this sheet.

Purchasing Agent: Mr. Rixford, 802/828-2215 **Bid Total** $_____

The bidder agrees that the time required for substantial completion after receipt of contract will not exceed ____ Working days. Bid Valid Until _____ Payment Terms _____ Date _____

COMPANY NAME _____ TELEPHONE NO. _____
BY _____ SIGNATURE _____

VERMONT TAX CERTIFICATION: To meet the requirements of Vermont Statute 32 V.S.A. §3113, the certification shown below must be completed, signed and returned with your bid. By law, no agency of the State may enter into, extend or renew any contract for the provision of goods, services or real estate space with any person unless such person first certifies, under the pains and penalties of perjury, that he or she is in good standing with the Department of Taxes. A person is in good standing if no taxes are due, if the liability for any tax that may be due is on appeal, or if the person is in compliance with a payment plan approved by the Commissioner of Taxes, 32 V.S.A. §3113.

IN SIGNING THIS BID, THE BIDDER CERTIFIES UNDER THE PAINS AND PENALTIES OF PERJURY THAT THE COMPANY/INDIVIDUAL IS IN GOOD STANDING WITH RESPECT TO, OR IN FULL COMPLIANCE WITH A PLAN TO PAY, ANY AND ALL TAXES DUE THE STATE OF VERMONT AS OF THE DATE THIS STATEMENT IS MADE.

FC 62
APB
ref JD

State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council

AGENCY OF NATURAL RESOURCES
103 South Main Street
Waterbury, Vermont 05676

Department of Environmental Conservation

M E M O R A N D U M

TO: Steve Rixford, Purchasing Agent

FROM: John B. Dudley, P.E., Facilities Engineer JBD

DATE: November 8, 1989

SUBJECT: Job Showing - Silver Lake Dam - Gabion Flume

For your information three contractors were represented at the job showing for the above project held today.

1. Thygesen Construction, Barre
2. Webster Construction, Barnard
3. Daniels Construction, Ascutney

JBD:arm
CC: Reginald A. LaRosa, Chief of Operations

AGENCY OF NATURAL RESOURCES

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILVER LAKE DAM

GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN

BARNARD, VERMONT

TECHNICAL SPECIFICATIONS

Department of Environmental Conservation

Facilities Engineering Div.

John B. Dudley, P.E.

September 25, 1989

I N D E X

Page

GENERAL CONDITIONS

Project Location 1

Project Description. 1

Scope of Work. 1

SPECIFICATIONS. 7

Item #1 - 60 Mil Hypalon Liner. 7

Item #2 - 9-Inch Thick Gabion Mattress. 8

Item #3 - 4-Inch Stone Fill for Gabions 8

BASIS OF PAYMENT. 9

GENERAL CONDITIONS

PROJECT LOCATION

In the Town of Barnard on Town Highway #3 at the intersection with Vermont Route 12.

PROJECT DESCRIPTION

This project will consist of minor regrading of existing stone fill, the installation of an 60 mil hypalon liner, and the construction of a nine inch thick rock filled gabion flume from the outlet of an existing town storm drain to a point near the trailrace of the existing dam.

Completion Date: December 15, 1989

SCOPE OF WORK

1. Federal Government funds are being used on this project. The following Federal requirements apply:

   A. The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, creed, color or national origin. Such action shall include,

but not be limited to the following: employment, upgrading; demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer, setting forth the provisions of this non-discrimination clause.

B. The Contractor will, in all solicitations, or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, or national origin.

C. The Contractor will send to each labor union or representative or workers with which he has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Agency contracting officer, advising the labor union or worker's representative of the Contractor's commitments under Section 202 of Executive Order 11246, as amended (3 CFS, Part 169 [1974]), shall post copies of notices in conspicuous places available to employees and applicants for employment.

D. The Contractor will comply with all provisions of Executive Order 11246, as amended, and the rules, regulations, and relevant orders of the Secretary of Labor.

E. The Contractor will furnish all information and reports required by Executive Order 11246, as amended, by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

F. In the event of the Contractor's non-compliance with the non-discrimination clauses of this contract or with any such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended, in whole or in part and the Contractor may be declared ineligible for Government contracts in accordance with procedures authorized in Executive Order 11246, as amended, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, as amended, by rules, regulations, or orders of the Secretary of Labor, or as otherwise provided by law.

G. The Contractor will include the provisions of paragraphs A through G above in every subcontract or purchase order unless exempted by rules, regulations,

or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246, as amended, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for non-compliance; provided, however, that in the event the Contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as result of such directions by the contracting agency, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

2. The Contractor shall comply with the "Copeland Anti-Kickback" (18 U.S.C. 874) as supplemented by Department of Labor Regulations (29 CFR, Part 3).

3. The State, NPS, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor for the purpose of making audit, examination, exerpts, and transcriptions.

4. The Engineer shall establish initial field control. All dimensions indicated on the plans are to be verified in the field by the Contractor.

5. The Contractor shall provide all material, labor, equipment, and facilities necessary for the completion of the project.
6. The Contractor is assumed to be thoroughly familiar with all requirements of the contract and specifications, having investigated the site and satisfied himself regarding the character of the work and local conditions that may affect his performance.
7. All workmanship shall, in every respect, be in accordance with the best modern practice.
8. The Contractor shall be responsible for any damage occurring to the existing premises during the construction project.
9. The Contractor shall take extreme care to avoid pollution of downstream waters.
10. The State shall not be held responsible for any damage caused by vandalism to either the project or to the Contractor's property.
11. Access to the construction site shall be only over public roads and across State owned property.
12. Bids are to be submitted using the enclosed bid sheet.
13. The Contractor shall comply with all State and local regulations where applicable to this contract.
14. The Contractor shall remove all construction equipment, materials, and debris caused by the project from the site.
15. The Contractor shall adhere to all Federal, State, and Local safety standards and regulations.

16. The Contractor shall be responsible for safety on the job. He shall take due care to protect the public. He shall protect the rights and property of adjacent landowners and shall be fully responsible for any damage beyond the limits of construction shown on the plans. He shall take due care to protect the property of the State of Vermont. Damage to roads and structures caused by tracked vehicles and trucks shall be repaired at the Contractor's expense.

17. The Contractor shall guarantee the materials and workmanship of the project for a period of one year after the acceptance of the project by the State.

18. The Contractor shall notify the Engineer at least three (3) days prior to moving equipment onto the project.

19. The Contractor shall not sublet or assign any portion of this contract without written consent of the Engineer. In any event, the Contractor shall perform with his own organization not less than 50 percent of the total initial contract cost. No subcontracts or assignments shall in any case release the Contractor of his liability under his contract and bonds.

20. The Contractor shall submit requisitions for payment in the following manner: (1) Bills shall be addressed to the Agency of Natural Resources, 103 South Main Street, Building 1 South, Waterbury, Vermont 05676, to the attention of the Engineer in charge; (2) all requisitions shall be originals - no photocopies will be acceptable; (3) the Contractor

shall include the contract number, requisition number, and appropriation number as shown on the contract; (4) the Contractor shall also include either his personal social security number or his firm's State Tax Department identification number; (5) if the contract is for an itemized bid, then the Contractor shall itemize all requisitions for payments.

21. The successful bidder shall be given three additional sets of project plans and specifications for the project. At least one such set shall be present at the project site at any time that construction is being performed.

22. The bidder should obtain or have a copy of the "Standard Specifications for Construction - 1986" by the State of Vermont, Agency of Transportation. One may be obtained at nominal cost from the Agency of Transportation, Division of Contract Administration.

SPECIFICATIONS

All work related to the following specifications, unless otherwise noted, shall be accomplished in accordance with the State of Vermont, Agency of Transportation - "Standard Specifications for Construction", dated 1986 (hereafter referred to as AOT), and the most recent revision of the Agency of Transportation's "General Special Provisions."

Item #1 - 60 Mil Hypalon Liner -

This item shall consist of the installation of an

elastomeric liner of the type normally approved for pond and lagoon lining such as that made by Staff Industries, Stevens Elastomerics, and other manufacturers. The material shall be 60 mils nominal thickness. Included in this item shall be a minor amount of regrading of the existing riprap surface to minimize the likelihood of damage to the liner.

Item #2 - 9-Inch Thick Gabion Mattress -

This item shall consist of the installation of a vinyl coated gabion basket of the dimensions shown on the plans. The material shall meet or exceed the specifications for wire type and thickness and coating characteristics of Reno Mattresses as manufactured by Maccaferri Gabions, Inc., P.O. Box 157, Wyckoff, NH 07481. Installation shall be as shown on the plans or directed in the field by the Engineer and shall conform to the manufacturer's recommendations. Particular care shall be used to avoid any damage to the underlying elastomeric liner.

Item #3 - 4-Inch Stone Fill for Gabions -

This item shall consist of the placement of stone fill into the Gabion Mattress specified above. The stone shall be hard, durable, well-graded stone ranging in size from 2 to 6 inches and may be either shot rock or cobbles. The stone fill shall be placed in strict conformance with the manufacturer's recommendations and the directions of the Engineer.

BASIS FOR PAYMENT

Bid Item #1 -

This item shall be paid for at the contract unit price per square foot as measured in place. The unit price shall be full compensation for furnishing, transporting, handling and placing the material specified including regrading of bedding as indicated in the field.

Bid Item #2 -

This item will be paid for at the contract unit price per square foot as measured in place. The unit price shall be full compensation for furnishing, transporting, handling and placing the material specified.

Bid Item #3 -

This item will be paid for at the contract unit price per cubic yard as measured in place. The unit price shall be full compensation for furnishing, transporting, handling and placing the material specified.

SILVER LAKE DAM

GABION FLUME FOR OUTFALL OF TOWN STORM DRAIN

Item	Description	Est.	Unit	Unit Price	Total
1	60-Mil Hypalon Liner	720	s.f.	_____	_____
2	9-Inch Thick Gabion Mattress	720	s.f.	_____	_____
3	4-Inch stone Fill for Gabions	30	c.y.	_____	_____

TOTAL BID _____

TOTAL BID IN WORDS_____

CONTRACTOR_____

ADDRESS _____

_____

TELEPHONE _____

AUTHORIZED SIGNATURE_____

MONTPELIER, VERMONT 05602

PURCHASE REQUISITION

REQUISITION NO.	DATE ACCEPTED	TRAN. NO.	TRAN. CODE	ENCUMBRANCE NO.	TOTAL COST	AID NO.	PAGE __ OF __
856			A54		9,000.00	16387-3	1 2

PURCHASING AGENT	DATE PREPARED	DATE REQUIRED	IND.	ITEMS	ORGANIZATION	F/Y	FUND	DEPARTMENT
	10/3/89	11/1/89	F	1				Environmental Cons.

INSTRUCTIONS

- Give complete specifications as to size, color, grade, capacity, etc.
- Double space within each item to allow for editing.
- You may charge only ONE AID per encumbrance.
- Do not have more than 25 items per encumbrance unless you attach a list and encumber in a lump sum.

SHIP TO: Agency of Natural Resources
Dept. of Env. Cons., Attn: John B. Dudley
103 So. Main St., Building 1 South
Waterbury, VT. 05676

INVOICE TO: Agency of Natural Resources
Dept. of Env. Cons., Attn: H. Ritchie
103 So. Main St., 1 South
Waterbury, VT. 05676

ITEM NO.	QUANTITY	UNIT	DESCRIPTION	ESTIMATED AMOUNT	OBJECT CODE	AGENCY USE — OPTIONAL
1.	1	each	Contract for labor and Materials Location: In the Town of Barnard on Town Highway#3 at the intersection with Vermont Route 12. Description: The project will consist of minor re-grading of existing stone fill, the installation of a 60-mil hypalon liner, and the construction of a 9-inch thick rock filled gabion mattress flume from the outlet of an existing town storm drain to a point near the tailrace of the existing dam. Job Showing: November 8,1989 Bid Opening: November 15,1989 Completing Date: December 15,1989 See attached list of bidders. Agency Use: 21-37-010-0010-07	$9,000.00 (NO BONDING	520000 REQUIRED)	

F + I
10/25/89
KK

Person to contact for information John B. Dudley, P.E. Tel. No. 244-8755

NOTE: To use agency use optional column, first remove original PURCHASING COPY. If you do not wish to agency encumber, remove part 2 before sending parts 1 thru 4 to Purchasing. Part 5 is retained in agency. Please remove carbons.

I certify that funds are available for purchase of the items on this requisition.

AGENCY FILE COPY

HEAD OF DEPARTMENT OR AUTHORIZED AGENT

AA-PUR-59 4M 7/88

Gulf Seal Corporation
601 Jefferson · Suite 558
Houston, Texas 77002 (713) 759-0861

May 16, 1983

Mr. F. J. Costello
State of Vermont
Env. Conservation
Montpelier, Vermont 05602

Dear Mr. Costello:

For your information and reference, we are enclosing our brochure which we hope will be of interest to you.

With over 30 years of experience in liquid containment and more than 50 million square feet of completed installations, Gulf Seal Corporation is in the unique position of being able to offer everything expected in the way of complete service--from assisting in the initial design stage and material selection through to the completed installation.

We would be pleased to discuss with you at any time any linings or covers you may be considering, or to furnish any additional information you may desire, such as guide specifications, material samples, or cost estimates.

We hope we may have the opportunity to be of service to you.

Very truly yours,

GULF SEAL CORPORATION

Ralph E. Crumbliss
Manager, Sales and Marketing

REC:lmp
Enclosure

2.19 GULF

Tran. Code	Encumbrance	Total Cost	Aid No.	Pg. Of	Contract No.
A54		9,000	16387-3	1 of 2	

Date Prepared	Date Required	Ind.	Items	Vendor No.	Department
9/27/89	11/1/89	F	1		Environmental Conservation

Ship to:
Agency of Natural Resources
Dept. of Environmental Conservation
103 South Main Street - Building 1 South
Waterbury, VT 05676
Attn: John B. Dudley, P.E.

Invoice to:
Agency of Natural Resources
Dept. of Environmental Cons., Att: H. Ritchie
103 S. Main St., 1 South
Waterbury, VT 05676

Vendor:

SEE ATTACHED BID INVITATION LIST

Normal delivery time is 6-8 weeks
Special instructions:

Substitutes:

Item No.	Quant	Unit	Description (Include Catalog & Pg. No.)	Est. Amount	Object Code
1	1	each	Contract for labor and materials Location: In the Town of Barnard on Towh Highway #3 at the intersection with Vermont Route 12. Description: The project will consist of minor re-grading of the existing stone fill, the installation of a 60-mil hypalon liner, and the construction of a 9-inch thick rock filled gabion mattress flume from the outlet of an existing town storm drain to a point near the tailrace of the existing dam. Completion Date: December 15, 1989 Job Showing: November 8, 1989 Bid Opening: November 15, 1989	$9,000.00 [NO BONDING REQUIRED]	

Div./Subdiv.:

Person to contact for information John B. Dudley, P.E. Tel. No. 244-8755

Approvals: Sign & Date Below Please

LIST OF CONTRACTORS

Niel H. Daniels, Inc.
P.O. Box 246
Ascutney, VT 05030

Fran Bean Excavating, Inc.
RD 2 Box 576
Bethel, VT 05032

Clifford Construction
West Hartford
Vermont 05084

Mackenzie Const. Inc.
Chester
Vermont 05143

Thygeson Const. Co.
51 Smith Street
Barre, Vermont 05641

Rober S. Webster
Box 22
Barnard, VT 05031

L.H. Cook
Norwich, VT 05055

Alan Dunklee Excavating
P.O. Box 182
Wilder, Vermont 05088

E.E. Packard
P.O. Box 129
Montpelier, VT 05602

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Land and Water Conservation Fund Project Agreement

State	Project Number 50-00462
Project Title Silver Lake Dam	
Project Period Date of Approval December 31, 1991	Project Stage Complete Covered by this Agreement

Project Scope (Description of Project)

The Agency of Natural Resources, Department of Environmental Conservation will construct a drainage structure apron at the Silver Lake Dam on Route 12 in Barnard, which is in Windsor County, Vermont.

Project Cost		The following are hereby incorporated into this agreement:
Total Cost	$ 7,840.00	
Fund Support not to exceed 50%		1. General Provisions (LWCF Manual)
Fund Amount	$ 3,920.00	2. Project Application and Attachments.
Cost of this Stage	$ 7,840.00	3.
Assistance this Stage	$ 3,920.00	4.

NPS 10-902

The United States of America, represented by the Director, National Park Service, United States Department of the Interior, and the State named above (herinafter referred to as the State), mutually agree to perform this agreement in accordance with the Land and Water Conservation Fund Act of 1965, 78 Stat. 897 (1964), the provisions and conditions of the Land and Water Conservation Fund Grants Manual, and with the terms, promises, conditions, plans, specifications, estimates, procedures, project proposals, maps, and assurances attached hereto or retained by the State and hereby made a part hereof.

The United States hereby promises, in consideration of the promises made by the State herein, to obligate to the State the amount of money referred to above, and to tender to the State that portion of the obligation which is required to pay the United States' share of the costs of the above project stage, based upon the above percentage of assistance. The State hereby promises, in consideration of the promises made by the United States herein, to execute the project described above in accordance with the terms of this agreement.

The following special project terms and conditions were added to this agreement before it was signed by the parties hereto:

In witness whereof, the parties hereto have executed this agreement as of the date entered below.

THE UNITED STATES OF AMERICA

By _____

(Signature)

National Park Service
United States Department
of the Interior

Date 19 SEP 1988

STATE

Vermont

By _____
(Signature)

George E. Plumb
(Name)

Alternate State Liaison Officer
(Title)

NPS 10-902
(7-81)

State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council

AGENCY OF NATURAL RESOURCES
103 SOUTH MAIN STREET
Waterbury, Vermont 05676

Department of Environmental Conservation
802-244-8755

August 24, 1988

FC
re f SD

Don A. Bourdon, Executive Director
Two Rivers-Ottauquechee Regional
Planning & Development Commission
39 Central Street
Woodstock, Vermont 05091

Dear Mr. Bourdon:

The Department of Environmental Conservation has received preliminary approval for LWCF Funding of a maintenance project at the Silver Lake Dam in the Town of Barnard. The purpose of the project will be to correct a problem caused by highway storm drains that discharge directly onto the downstream face of the dam. The project will include the installation of extension pipes to the existing storm drains and required bedding materials.

One of the requirements of the LWCF Program is that we have a letter of support from the Regional Planning Commission on file. If you see no problems or have no comments or questions, I would appreciate such a letter as soon as possible.

If you do have any questions or comments, please contact me at 244-8755.

Sincerely,

John B. Dudley

John B. Dudley, P.E.
Facilities Engineer

JBD:arm

CC: Tex & Mike Fraysier

APPENDIX 'D'
EXECUTIVE DIRECTORS
REGIONAL PLANNING AND DEVELOPMENT COMMISSIONS

Karen N. Meyer, Commissioner
Department of Housing and Community Affairs
Agency of Development and Community Affairs
Pavilion Office Building, 109 State Street
Montpelier, Vermont 05602
(802) 828-3217

Mr. Michael H. Preziose, Executive Director
Addison County Regional Planning and Development Commission
58 North Pleasant Street
Middlebury, Vermont 05753
(802) 388-3141

Mr. Gregory G. Burke, Executive Director
Bennington County Regional Commission
Post Office Building
Arlington, Vermont 05250
(802) 375-2576 or 375-9964

Ms. Susan Sinclair, Executive Director
Central Vermont Regional Planning Commission
26 State Street
Montpelier, Vermont 05602
(802) 229-0389

Mr. Arthur R. Hogan, Jr., Executive Director
Chittenden County Regional Planning and Development Commission
P. O. Box 108
Essex Junction, Vermont 05452
(802) 658-3004

Mr. Russell P. Greene, Executive Director
Franklin-Grand Isle Regional Planning and Development Commission
26 Lake Street
St. Albans, Vermont 05478
(802) 524-6979

Mr. Anthony F. Ciaraldi, Executive Director
Lamoille County Development Council
P. O. Box 577
Morrisville, Vermont 05661
(802) 888-4548

Mr. Charles E. Carter, Executive Directo
Northeastern Vermont Development Assoc.
P. O. Box 640, 44 Main Street
St. Johnsbury, Vermont 05819
(802) 748-5181

Mr. Mark Blucher, Executive Director
Rutland Regional Commission
P. O. Box 965, The Opera House
Rutland, Vermont 05701
(802) 775-0871

Mr. Stuart T. Arnett, Executive Directo
Southern Windsor County Regional Planni
and Development Commission
P. O. Box 88
Windsor, Vermont 05089-0088
(802) 674-9201

Mr. Don A. Bourdon, Executive Director
Two Rivers - Ottauquechee Regional Planning and Development Commission
39 Central Street
Woodstock, Vermont 05091
(802) 457-3188

Mr. Robert W. Varney, Executive Directo
Upper Valley - Lake Sunapee Council
314 National Bank Building
Lebanon, New Hampshire 03766
(603) 448-1680

Mr. Stephen J. Holmes, Executive Direc
Windham Regional Planning and Developm
Commission
P. O. Box 818, 139 Main Street
Brattleboro, Vermont 05301
(802) 257-4547

AGENCY OF ENVIRONMENTAL CONSERVATION AND ENVIRONMENTAL BOARD
PROJECT REVIEW SHEET

THIS IS NOT A PERMIT

District # III

Application #

Applicant John Dudley - Agency of Natural Resources

Town Barnard

On 10/21/19 87 I reviewed information concerning a project on a tract or tracts of land of 2.3 acres, proposed by Vtcast - Facilities Division. The project will be on lands owned by [redacted] 103 S. Main Street in , Vermont, and is generally described as: Building 1, South - Waterbury 05676 construction of a concrete apron drainage structure at the Silver Lake Dam on Route 12 in Barnard.

A permit must be obtained for this project under the following permit programs which I have checked:

NO ACT 250 PROTECTION DIVISION PERMITS: _____ Deferral of Subdivision; _____ Public Building; _____ Subdivision; _____ Tent and Travel Trailer; _____ Mobile Home Park Law; _____ Stream Alteration Law; FISH AND GAME DEPT. PERMIT: _____ Stream Obstruction Permit

Prior permits from this office: #

The above jurisdictional determination is based upon the project specifically as described above and the following:

Based on info provided - state project on less than 10 acres of involved land does not require an Act 250 permit.

THESE ARE THE ONLY PERMITS OBTAINABLE FROM THIS OFFICE. NO CONSTRUCTION OR SALE OF LOTS IS PERMITTED UNTIL ALL PERMITS CHECKED ABOVE HAVE BEEN ISSUED IN WRITING.

THIS IS AN ADVISORY OPINION AND MAY BE APPEALED. ANY PARTY WHO DISAGREES WITH THIS OPINION MAY REQUEST A REVIEW BY THE EXECUTIVE OFFICER OF THE ENVIRONMENTAL BOARD, (ACT 250), OR THE DIRECTOR OF THE PROTECTION DIVISION, AS APPROPRIATE. ANY SUCH REQUEST MUST BE MADE IN WRITING THROUGH THIS OFFICE BY 11 / 21 /19 87.

I also recommend that you contact the following Vermont State agencies because this project may need approval under their programs:

1. AGENCY OF ENVIRONMENTAL CONSERVATION, Waterbury, VT 05676
   - _____ Air Pollution Control (244-8731)
   - _____ Hydro Electric Projects (244-7347)
   - _____ Dam Operations & Review (244-8755)
   - _____ Management of Lakes & Ponds (244-6951)
   - _____ Discharge of Temporary Pollution Permit (244-5674)
   - _____ Waste Management; Sanitary Landfills (244-8702)
   - _____ Industrial Furnace/ Boiler Conversion/ Installation (244-8731)
   - _____ Water Quality Certificate, if Federal permit req. (244-6951)
   - _____ Use of chemicals in State waters (244-5638)
   - _____ Extension of Sewer Lines (244-8744)
   - _____ Municipal Water Line Ext. (244-8744)
   - _____ Bulk Fuel/Chemical Storage/ Hazardous Wastes (244-8702)
   - _____ Industrial Process Air Emissions (244-8731)
   - _____ Division of Historic Preservation (828-3226)
2. DEPARTMENT OF LABOR AND INDUSTRY, Montpelier, VT 05602 - Tel. 828-2106
   - _____ Electrical Wiring Approval
   - _____ Fire Prevention Approval
   - _____ Access for the Handicapped Approval
   - _____ Boilers and Pressure Vessels
   - _____ Tramways and Ski Facilities
   - _____ Storage of Flammable Liquids, Explosives
   - _____ Elevators
   - _____ Plumbing in Single Family Residences served by Public Water/Sewer w/ 10 or more customers
3. DEPARTMENT OF HEALTH, Burlington, VT 05401 - Tel. 863-7220 (Contact: _____)
   - _____ Food, lodging, bakeries and children's camps
   - _____ Nursing homes, hospitals and homes for the aged
   - _____ Public water systems
   - _____ Extensions of water lines over 500'
4. DISTRICT TRANSPORTATION ADMINISTRATOR (Consult the telephone directory under VERMONT, STATE OF, Highways) (Contact: _____)
   - _____ Access to State Highways (Residential Driveways)
   - _____ Development within 500' of a limited access highway
5. AGENCY OF TRANSPORTATION, Montpelier, VT 05602 - Tel. 828-2823
   - _____ Signs (Travel Information Council) (828-2651)
   - _____ Construction within a state highway right-of-way (Utilities, Signs, Driveways) (828-2653)
   - _____ Airports and Landing Strips (828-2828)
   - _____ Junkyards (828-2587)
6. DEPARTMENT OF AGRICULTURE, Montpelier, VT 05602 (Contact: _____)
   - _____ Use of Pesticides (828-2428)
   - _____ Milk Processing Facilities
   - _____ Slaughter Houses (828-2426)
   - _____ Animal Shelters/ Kennels
7. AGENCY OF HUMAN SERVICES, Waterbury, VT 05676 - Tel. 241-2158 (Contact: _____)
   - _____ Day Care Facilities
   - _____ Community Care Homes
   - _____ Residential Child Care Facilities
8. PUBLIC SERVICE BOARD (828-2358)/ PUBLIC SERVICE DEPARTMENT (828-2811)
   - _____ Hydro Projects
   - _____ Alternative Sources of Energy
9. _____ LOCAL PERMITS - Contact your town officials
10. OTHER: _____

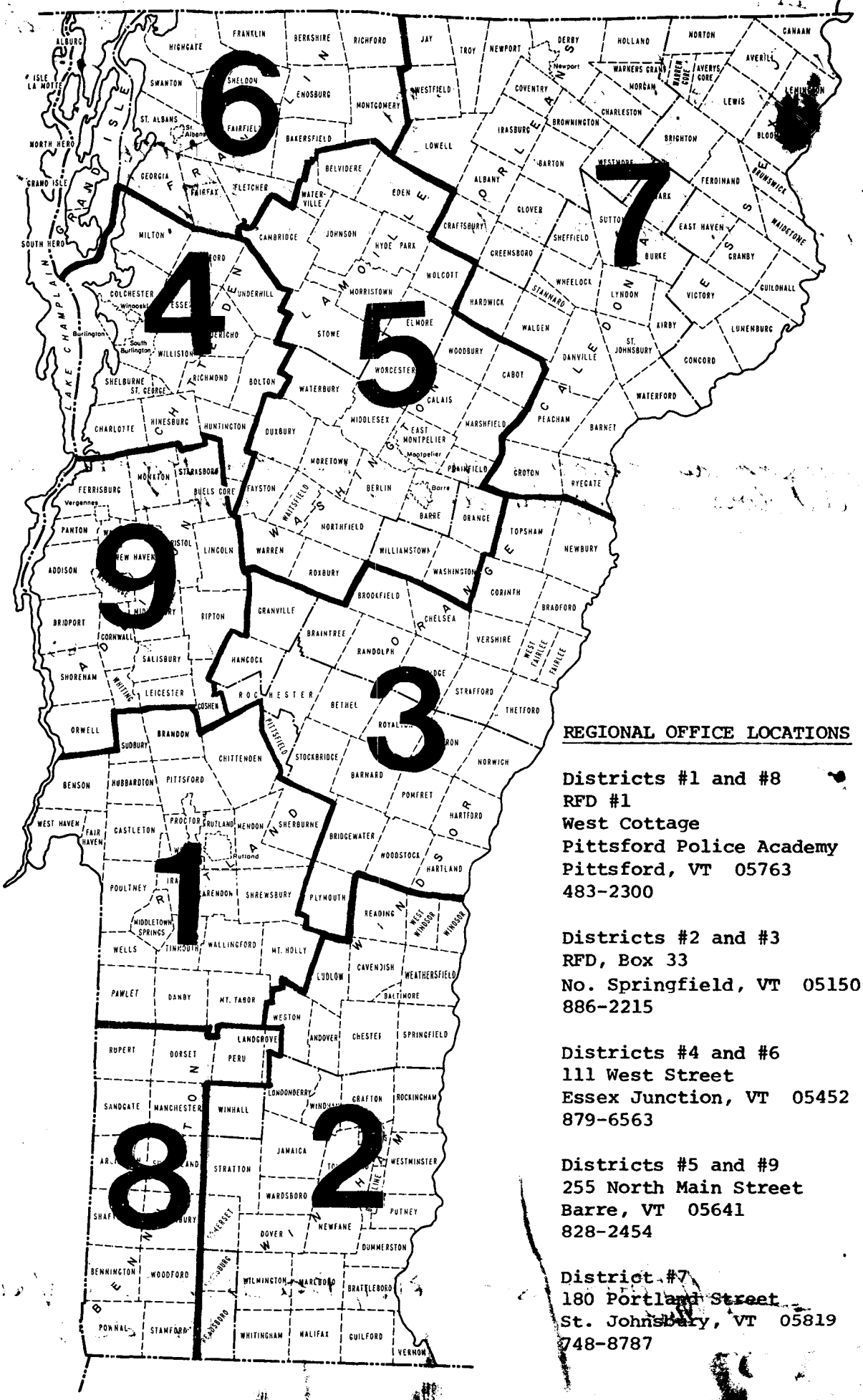
BY Jeff Powers - RR 1, Box 33 N. Springfield
District Administrator/ District Coordinator — Regional Office Address and Telephone Number

Sent to 6084 parties: (yes) no

886-2245

9/84-3000 - AEC — White copy - Applicant — Yellow copy - File — Pink copy - Protection Division (Waterbury)

DISTRICT ENVIRONMENTAL COMMISSION BOUNDARY MAP



REGIONAL OFFICE LOCATIONS

Districts #1 and #8
RFD #1
West Cottage
Pittsford Police Academy
Pittsford, VT 05763
483-2300

Districts #2 and #3
RFD, Box 33
No. Springfield, VT 05150
886-2215

Districts #4 and #6
111 West Street
Essex Junction, VT 05452
879-6563

Districts #5 and #9
255 North Main Street
Barre, VT 05641
828-2454

District #7
180 Portland Street
St. Johnsbury, VT 05819
748-8787

Record #9

PROJECT SILVER LAKE DAM - STORM DRAIN APRON

PRIORITY 5

SURVEY IN HOUSE

DESIGN IN HOUSE

DATE_COMP 11/88

PERCENT_COMP

METHOD CONTRACT

ESTCOST 7000

ASSIGNMENT DUDLEY

LOC_ZONING

REV_SHT C

LAKE_POND ----

PROTECTION ----

BIOLOGIST

NAT_HER C

LAB_INDUSTRY ----

HIST_PRES C

HEALTH ----

AOT

USFW

CORPS

LOC_PLANNING

LWCF C

STREAM_ALT ----

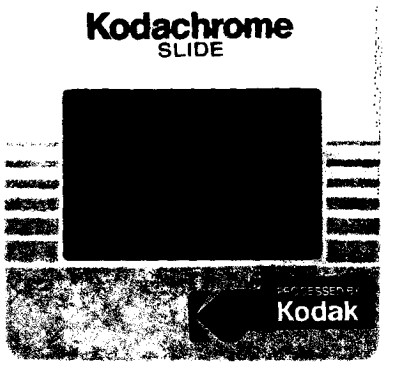
DAMS ----

PUBL_BLDGS ----

ACT_250 ----

CLIENT

REMARKS





John Dudley DF
Forests, Parks, & Rec.
Waterbury - 10 South

SILVER LAKE APRON

FCE
APB
net JD

STATE OF VERMONT

AGENCY OF DEVELOPMENT AND COMMUNITY AFFAIRS

MONTPELIER, VERMONT 05602

DEPARTMENTS OF:
Economic Development 828-3221
Housing & Community Affairs 828-3217

OFFICE OF THE SECRETARY (802) 828-3211

DIVISIONS OF:
Administration 828-3231
Historic Preservation 828-3226
Vermont Travel Division 828-3236
Film Bureau 828-3236
Vermont Life Magazine 828-3241

ELBERT G. MOULTON, SECRETARY

February 26, 1988

DAVID CASSEDY

John Dudley
Facilities Engineer
Department of Environmental Conservation
Agency of Natural Resources
103 South Main Street
Waterbury, VT 05676

Re: LWCF Project at Silver Lake Dam in Barnard.

Dear Mr. Dudley:

Thank you very much for the prompt submission of additional plans and photos of the drain construction project at Silver Lake Dam in Barnard.

The Division for Historic Preservation has reviewed this undertaking according to the standards set forth in 36 C.F.R. 800, regulations established by the Advisory Council on Historic Preservation to implement Section 106 of the National Historic Preservation Act.

The photographs and maps document that the planned construction will be taking place within areas previously disturbed by modern construction. Please note that visible foundations of an historic 19th century grist mill are located approximately 30 feet from the downhill end of the gabion flume on the east bank of the creek. These foundations were identified by Daniel Cassedy during a field inspection on February 23, and they are plotted on your design plans.

As long as the grist mill foundations are restricted from any construction impacts, we conclude that the proposed project will not affect any properties of historic, architectural or archeological significance that are listed on or eligible for inclusion in the National Register of Historic Places.

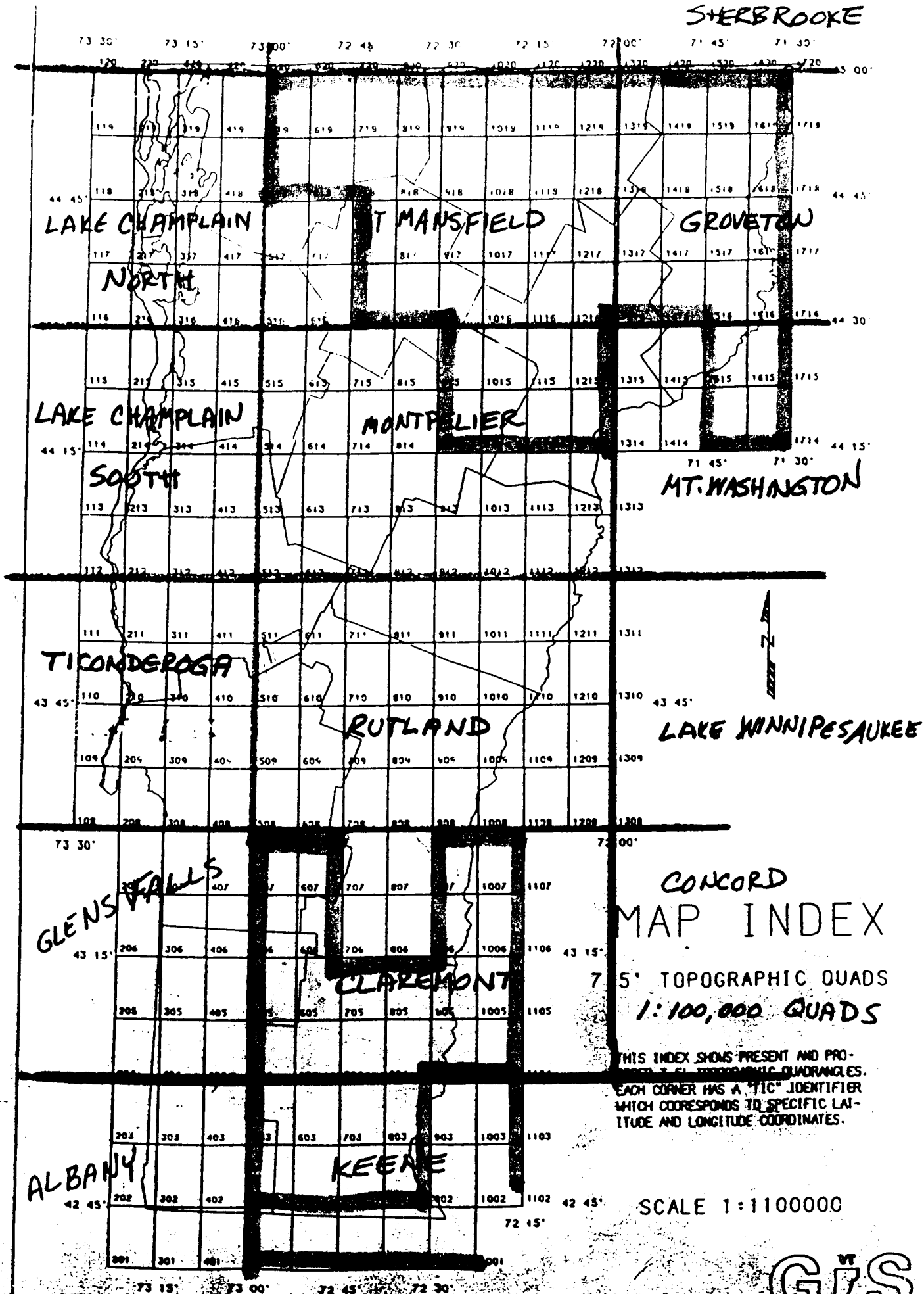
We request that the existence of the foundations and the need for avoiding them be included in any construction documents provided to contractors or state work crews.

Sincerely,

DIVISION FOR HISTORIC PRESERVATION

Eric Gilbertson
Director/State Historic
Preservation Officer

EG/DC/gmm


SHERBROOKE
LAKE CHAMPLAIN
NORTH
T MANSFIELD
GROVETON
LAKE CHAMPLAIN
SOUTH
MONTPELIER
MT. WASHINGTON
TICONDEROGA
RUTLAND
LAKE WINNIPESAUKEE
GLENS FALLS
CONCORD
CLAREMONT
ALBANY
KEENE
MAP INDEX
7.5' TOPOGRAPHIC QUADS
1:100,000 QUADS
THIS INDEX SHOWS PRESENT AND PRO-
EACH CORNER HAS A "TIC" IDENTIFIER
WHICH COORESPONDS TO SPECIFIC LAT-
ITUDE AND LONGITUDE COORDINATES.
SCALE 1:1100000
GIS
VT

JEP 8/24/89

SILVER LAKE DAM
TOWN CULVERT SPILLAGE PROTECTION DESIGN

NEED A ~~FLEXIBLE~~ STRUCTURE-
RIGID CULVERT STRUCTURE

1) Very expensive
2) Difficult to construct
3) Hard to guarantee

TRY RENO REVET MATRESSES
- over either hypalon or woven geotextile

~~I~~ on a 65' x 12' chute underlain with ~~fabric~~

6" x 12'½ = 812.5# of fabric @ $~~1.0~~ 812

$\frac{65 \times 12 \times .75}{27}$ = 22 cy stone fill @ $50 $1100

~~$~~ $1912

+ 10 Baskets @ 150 1500

$3400

Silver Lake

Contractors

Roger Webster	234-9116
Miel Daniels	674-6327
Fran Bean	234-9339
L H Cook	649-1147

STATE OF VERMONT

AGENCY OF DEVELOPMENT AND COMMUNITY AFFAIRS

MONTPELIER, VERMONT 05602

DEPARTMENTS OF:
Economic Development 828-3221
Housing & Community Affairs 828-3217

OFFICE OF THE SECRETARY (802) 828-3211

DIVISIONS OF:
Administration 828-3231
Historic Preservation 828-3226
Vermont Travel Division 828-3236
Film Bureau 828-3236
Vermont Life Magazine 828-3241

ELBERT G. MOULTON, SECRETARY

February 22, 1988

John Dudley
Facilities Engineer
Department of Environmental Conservation
Agency of Natural Resources
103 South Main Street
Waterbury, VT 05676

Re: LWCF Projects in Barnard and Craftsbury

Dear Mr. Dudley:

Thank you for your recent request for a review of the proposed dam construction projects to be funded by LWCF at Little Hosmer Pond in Craftsbury and Silver Lake in Barnard. From your brief description, it sounds like both of these projects may be taking place in areas previously disturbed by modern construction. However, since the outlets of both of these ponds are known to have contained historic mill sites, please provide additional documentation for our review. Any old or current site plans or sketch maps would be useful, as well as any photographs or additional work descriptions you might have available that would document the location of past disturbances in relationship to proposed construction.

Thank you for your assistance in completing this review.

Sincerely,

DIVISION FOR HISTORIC PRESERVATION

Dan Cassedy

Daniel Cassedy
Environmental Review Coordinator

DC/gmm

LETTER OF TRANSMITTAL

AGENCY OF ENVIRONMENTAL CONSERVATION
Department of Water Resources
and
Environmental Engineering
103 South Main Street
Waterbury, Vermont 05676

(802) 244-

TO Dan Cassidy

Date	Project Name
Attention	
Re:	

WE ARE SENDING /X/Attached / /Under separate cover via _____ the following items:

/ /Prints / /Plans / /Specifications

/ /Copy of letter / /Change order / /

COPIES	DATE	NO.	DESCRIPTION

THESE ARE TRANSMITTED as checked below:

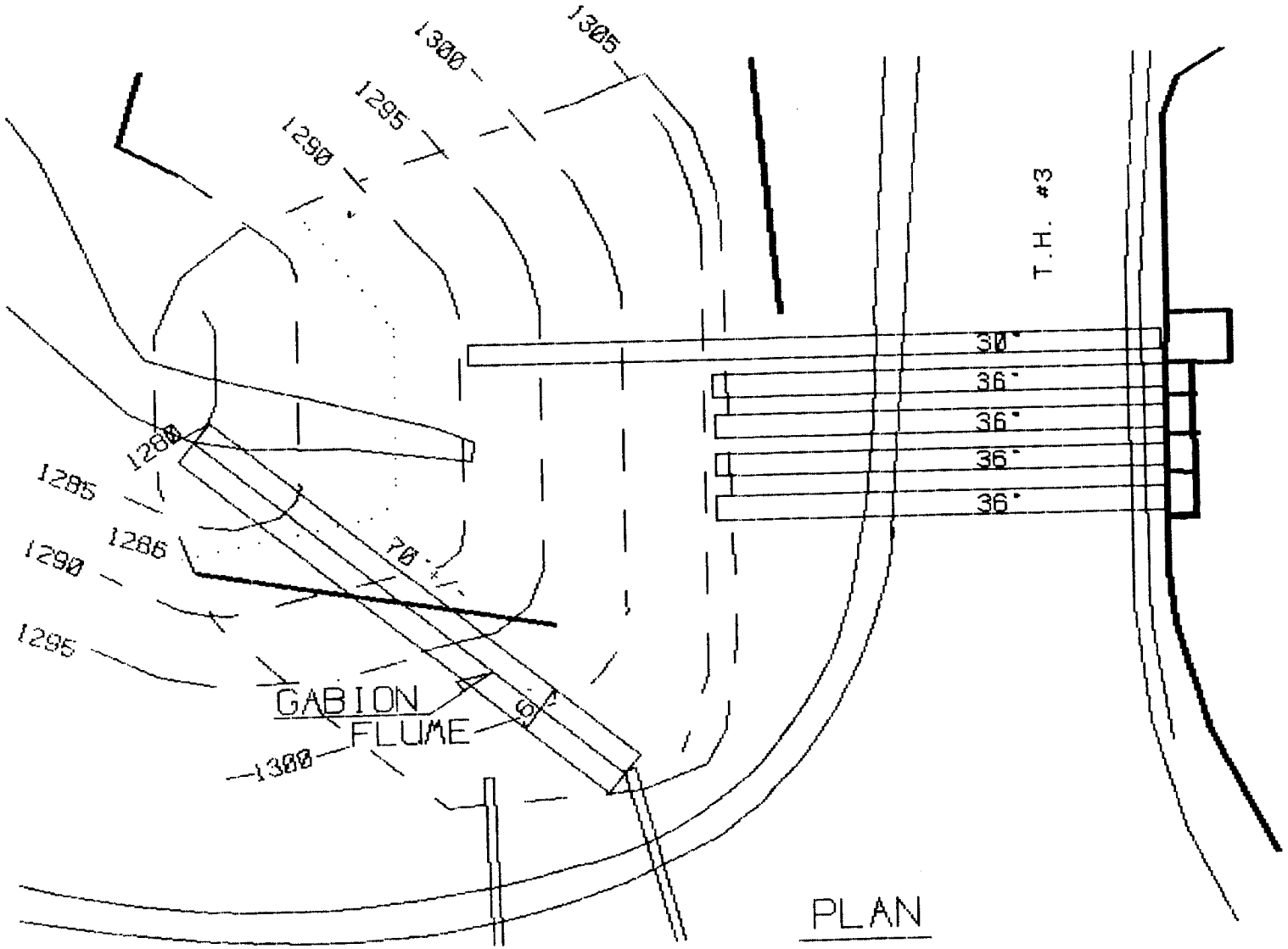
/ /For approval / /Approved as submitted / /Resubmit___copies for approval

/ /For your use / /Approved as noted / /Submit___copies for distribution

/ /As requested / /Returned for corrections / /Return___corrected prints

REMARKS _____

COPY TO _____ SIGNED: _____



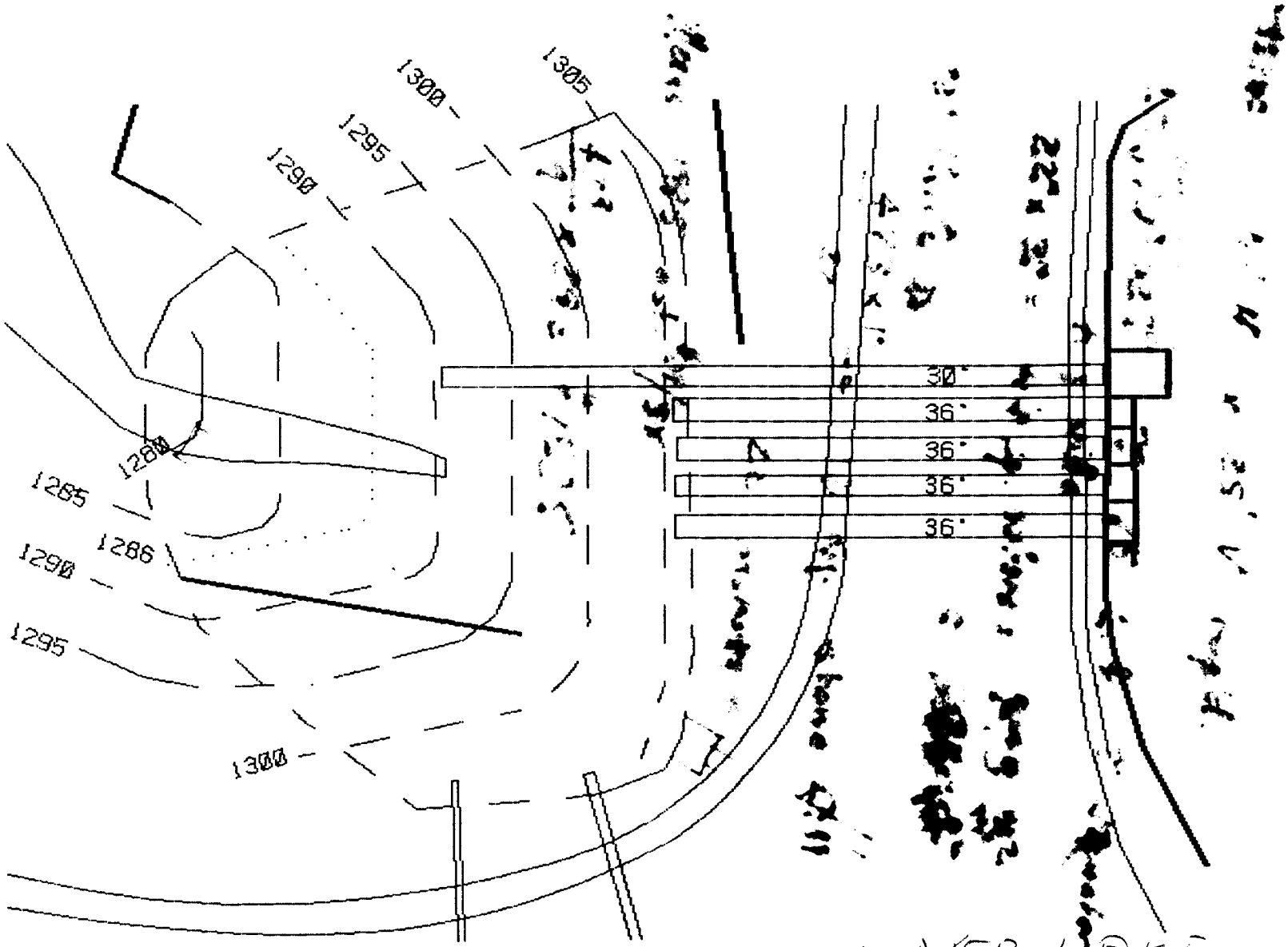
PLAN

0 10 20 30 40

SCALE IN FEET

TO BETHEL VT RTE 12 TO WOODSTOCK

SILVER LAKE DAM
STORM DRAIN OUTFALL FLUME
PRELIMINARY DESIGN



SILVER LAKE DAM

Assume 70' H x 25' V req'd.

$L = \sqrt{70^2 + 25^2} \cong 75$ L. ft. $\cong$ 22 meters

two sides

22 x 2" = 44 sq. meters = 475 ft^2

= [illegible] ft^2

12" thick

$\frac{473 \times 1'}{27}$ = 18 cu. stone ft. fill

22 brackets

Mass 185 cub. ft/sq

$\frac{47^3}{9} \times 29 \approx$ 1525

State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
Natural Resources Conservation Council

AGENCY OF NATURAL RESOURCES
103 SOUTH MAIN STREET
Waterbury, Vermont 05676

Department of Environmental Conservation

M E M O R A N D U M

TO: Eric Gilbertson, Director/Deputy
State Historic Preservation Officer

FROM: John B. Dudley, P.E., Facilities Engineer

DATE: February 18, 1988

SUBJECT: LWCF Assisted Construction Projects for 1988

The Department of Environmental Conservation is applying for financial assistance from the Land and Water Conservation Fund for two construction projects.

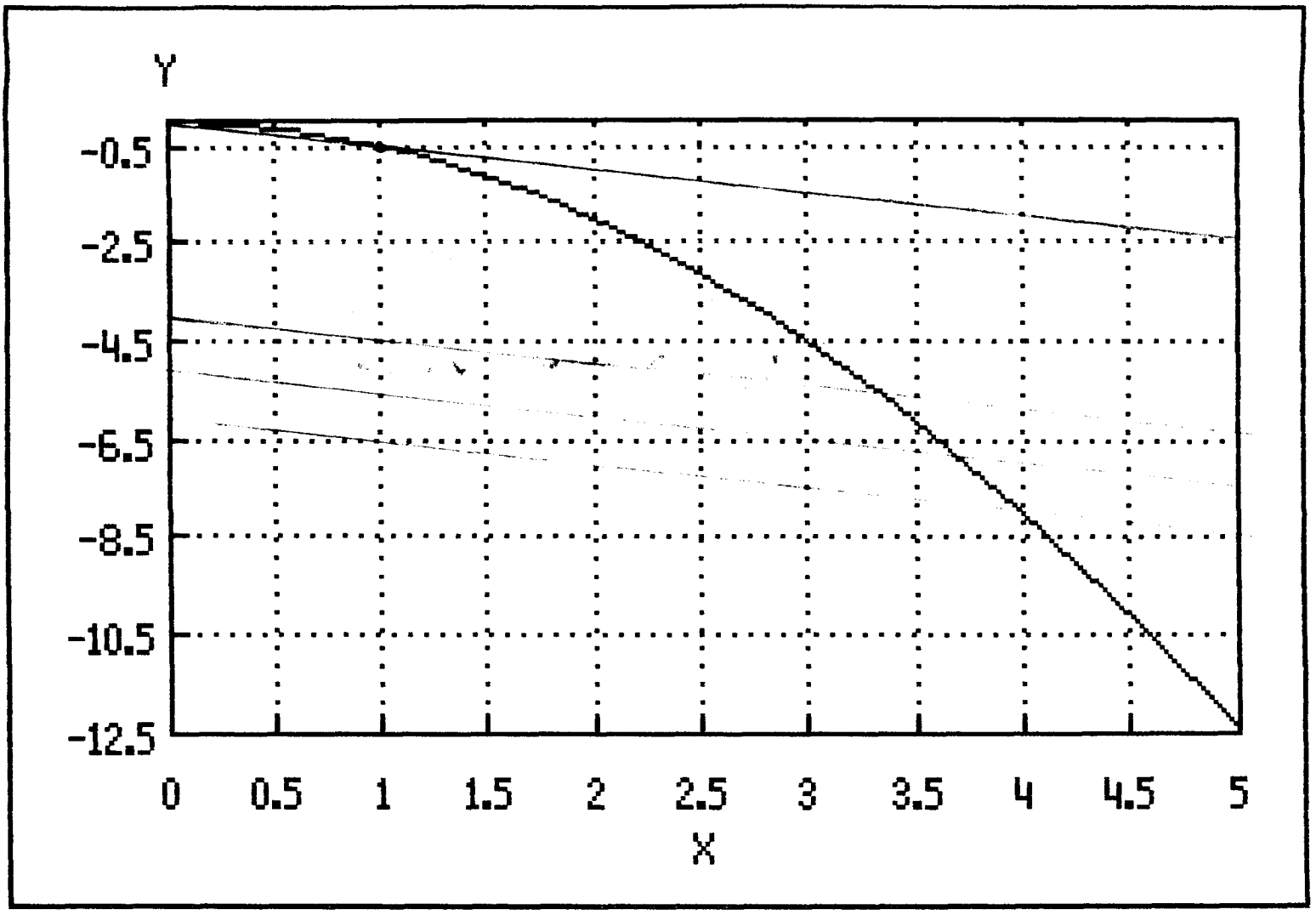
The first project will be at Silver Lake Dam in Barnard and involves the construction of an erosion resistant flume at the outlet of a storm drain that discharges on the downstream slope of the dam. The dam was totally reconstructed in 1984 and the storm drains were later installed by the Town of Barnard.

The second project will be at the Little Hosmer Pond Dam in the Town of Craftsbury. This dam was reconstructed in the 1960's and is a relatively modern reinforced concrete structure. We intend to install a filtered underdrain to firm the embankment downstream from the right abutment.

It is very important that we have any comments on the above projects your Division may have as soon as possible so that we may proceed with formal funding requests and final construction design.

If you have any questions or comments, please contact me at 244-8755.

JBD:arm
CC: Reginald A. LaRosa, Chief of Operations
Sherry Miller, LWCF Grants Administrator



t	H	V
0.000	0.000	0.000
0.100	0.570	-0.161
0.200	1.140	-0.644
0.300	1.710	-1.449
0.400	2.280	-2.576
0.500	2.850	-4.025
0.600	3.420	-5.796
0.700	3.990	-7.889
0.800	4.560	-10.304
0.900	5.130	-13.041
1.000	5.700	-16.100
1.100	6.270	-19.481
1.200	6.840	-23.184
1.300	7.410	-27.209
1.400	7.980	-31.556
1.500	8.550	-36.225
1.600	9.120	-41.216

A. TITLE: SILVER LAKE DAM - EROSION RESISTANT APRON FOR STORM DRAIN OUTFALL

B. ENGINEERING
   1. HYDRAULICS
      a) TRAJECTORY OF FLOW
         1) FREE FALL EQUATION
      b) FLOW VELOCITY FOR GRADE, ROUGHNESS, AND DISCHARGE
      c) CONSEQUENCES OF FAILURE
   2. HYDROLOGY
      a) WHICH STORM TO USE
   3. SLOPE STABILITY
      a) EXISTING SLOPE 1:2
   4. STRUCTURAL STRENGTH
      a) FORCE OF WATER
      b) OTHER CULVERT UNDERNEATH
   5. COSTS OF ALTERNATIVES
      a) RENO MATS OR GABIONS
      b) ~~REINFORCED CONCRETE~~
      c) PAVING BLOCKS

C. PUBLIC RELATIONS
   1. ABUTTING LANDOWNERS
      a) HAVE HAD PROBLEMS IN THE PAST
   2. AESTHETICS
      a) SOME OBJECTIONS TO CONCRETE LIKELY
      b) MAY BE SOME OBJECTIONS TO PAVING BLOCKS

D. PERMITS AND FUNDING
   1. LOCAL
   2. ANR DAM SAFETY
   3. LWCF
      a) PARTIAL FUNDING SOURCE
      b) 1984 PROJECTS FUNDED BY LWCF

SILVER LAKE
2/22/99



$\frac{40 \text{ cfs}}{4(\text{ft})}$ say $= 10 \text{ cfs/ft}$

$\frac{Q}{w} = \frac{1.49}{n} A R^{2/3} S^{1/2}$ — $A = wd$ $\frac{A}{w} = d$

$q = \frac{1.49}{n} d R^{2/3} S^{1/2}$

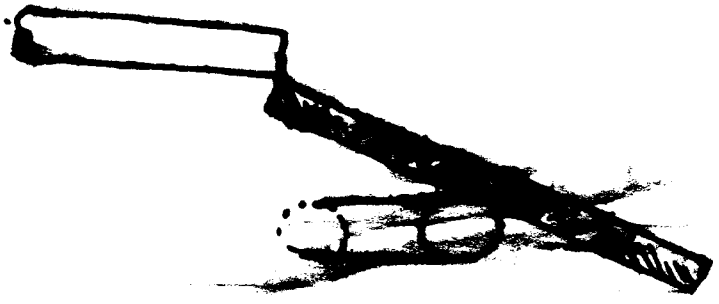
Mannings usually not considered accurate for
$S \geq .10$
but try anyway

$R^{2/3} d = \frac{q n}{1.49 S^{1/2}} = \frac{10 \times .04}{1.49 \sqrt{.5}} = 0.38 = d^{5/3}$

$R = \frac{A}{P} \approx d$

$d = .38^{3/5} = 0.56'$

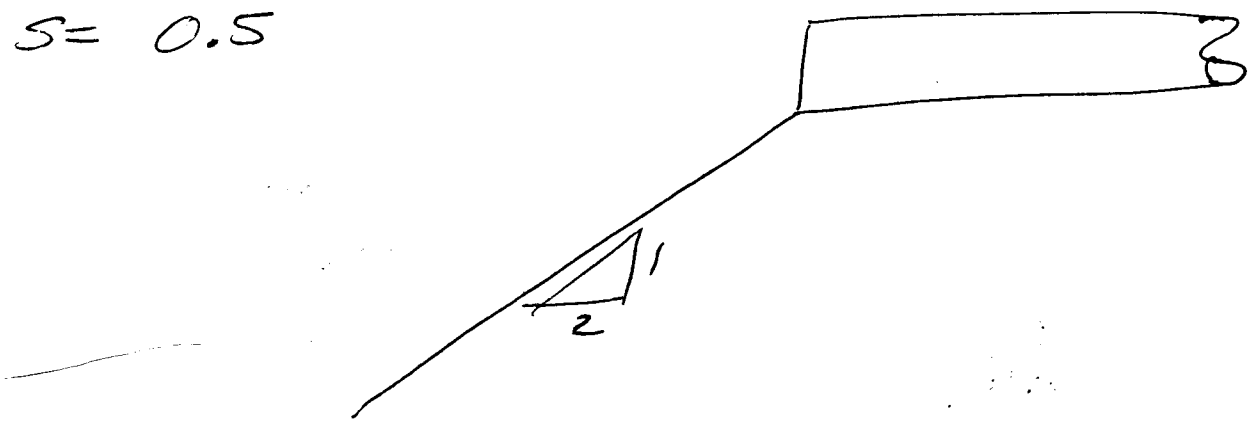
$V = \frac{q}{d} = \frac{10}{.56} = 18 \text{ fps}$ RENO MATS OKAY 12" Thickness req'd



Silver Lake Dam
Drainage Apron

Assume 36" culvert discharging onto 1/2 slope rock fill

$S = 0.5$



Planimetered D.A. $= 0.54\ in^2$

$$0.54\ in^2 \times \frac{2000^2\ ft^2}{in^2} \times \frac{acre}{43560\ ft^2} = 49.6\ acres$$

$$= 0.08\ sq.mi.$$

Summary (SCS TP-40 charts)

Q_2 - 11 cfs
Q_{10} - 31 cfs — 36" CGMP $\Leftrightarrow$ 40 cfs max
Q_{25} - 53 cfs
Q_{50} - 67 cfs

$$Q = VA \Rightarrow V = \frac{Q}{A}$$

$$A = \frac{\pi d^2}{4} = \frac{\pi \times 3^2}{4} = 7.07 \text{ ft}^2$$

$$Q = 40 \frac{\text{ft}^3}{\text{sec}}$$

$$V = \frac{40}{7.07} = 5.7 \text{ fps} = V_H \text{ (constant)}$$

$$V_V = \sqrt{2gS} = \sqrt{645} = 8\sqrt{S} = gt = 32.2t$$

$$H = V_H t$$

$$V = V_V t = \frac{gt^2}{2} = 16.1t^2$$

$$H = 5.7t \qquad V = 16.1t^2$$

PRIORITY #1

M E M O R A N D U M

TO: Sherry Miller, LWCF Grants Administrator

FROM: Patrick A. Parenteau, Commissioner

DATE: October

SUBJECT: Preliminary LWCF Applications

This memorandum shall serve as a letter of intent to apply for LWCF funds for the following project.

Location: Barnard, VT

Name of Project: Silver Lake Dam - Drainage structure apron

Type: Development

Purpose: Protect downstream slope of new dam from storm runoff of culverts

General Size:

Estimated Cost: $3,000

Estimated Duration: 1 month

Beneficiaries of Project: General public; Downstream riparian landowners

Other Comments: Dam was 90% reconstructed in 1984
Major South-central Vermont recreation area

Date Project Review Sheet Requested: 10/20/87

Name and Title of Contact Person: John B. Dudley, P.E.
Facilities Engineer

Agency of: Natural Resources

Address: 103 South Main Street
Building 1 South
Waterbury, Vermont 05676

Telephone: 802-244-8755

SCORP II T2-4 P.16 DIST I & ~~III~~

Public safety / Preserve pond - could lose

Safety / Recreation / add Handicap (?)

Scorp II - 5.2 (1) (8)

Annual Usage of ~~Beach~~ Parks

SILVER LAKE

MEMORANDUM

TO: Sherry Miller, LWCF Grants Administrator

FROM: Patrick A. Parenteau, Commissioner

DATE: October 26, 1987

SUBJECT: Preliminary LWCF Grant Application
Agency of Natural Resources
Department of Environmental Conservation
PROJECT: SILVER LAKE DAM - DRAINAGE STRUCTURE APRON

Location: BARNARD, VT.
Type: DEVELOPMENT
Purpose: PROTECT DOWNSTREAM SLOPE OF NEW DAM FROM STORM RUNOFF EROSION
Priority rating: 1

Estimated cost: $7,000
Estimated duration: ONE MONTH
Beneficiaries of project: GENERAL PUBLIC, DOWNSTREAM RIPARIAN LANDOWNERS

Other comments: Dam was 90% reconstructed in 1984. Town installed storm drain under road discharging onto downstream slope of dam creating a potentially dangerous situation. Silver lake is a major recreation spot for Districts I & III.

Date project review sheet requested: OCTOBER 21, 1987
Contact person: John B. Dudley, P.E., Facilities Engineer
Dept. of Environmental Conservation
Building 1 South
103 SOUTH MAIN ST.
Waterbury, VT 05676

PRELIMINARY ESTIMATE

1	SITE PREPARATION	1 L.S.	1000	1000
2	REINFORCED CONCRETE	15 C.Y.	400	6000
	TOTAL			7000

10/20/87

SILVER LAKE DAM
DRAINAGE STRUCTURE APRON

PRELIMINARY ESTIMATE

SITE PREPARATION	$1000
REINFORCED CONCRETE (6' x 1.5' x 45' = 15 CY @ $400)	$6000
TOTAL	$7000

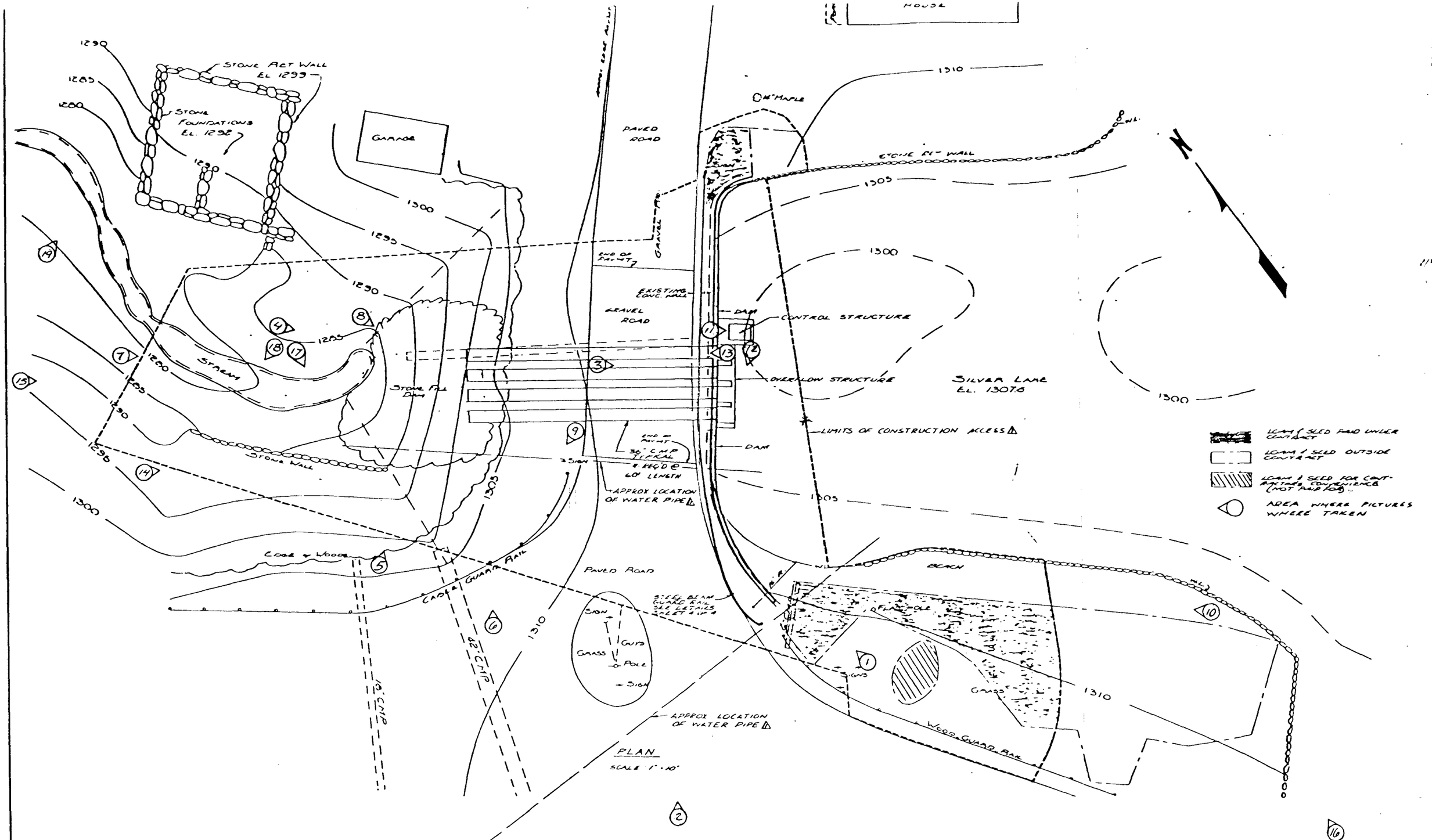
[redacted] FOR PROJ. REVIEW SHEET

AREA DISTURBED = 1/20 ACRE

[redacted] = [redacted] E.C.

AREA OF TRACT = 0.3 ACRE

$3349 in^2 \times \frac{20^2 ft^2}{in^2}$



ORIGINAL DRAWING PREPARED BY.
DUBOIS & KING RANDOLPH, VERMONT 1968

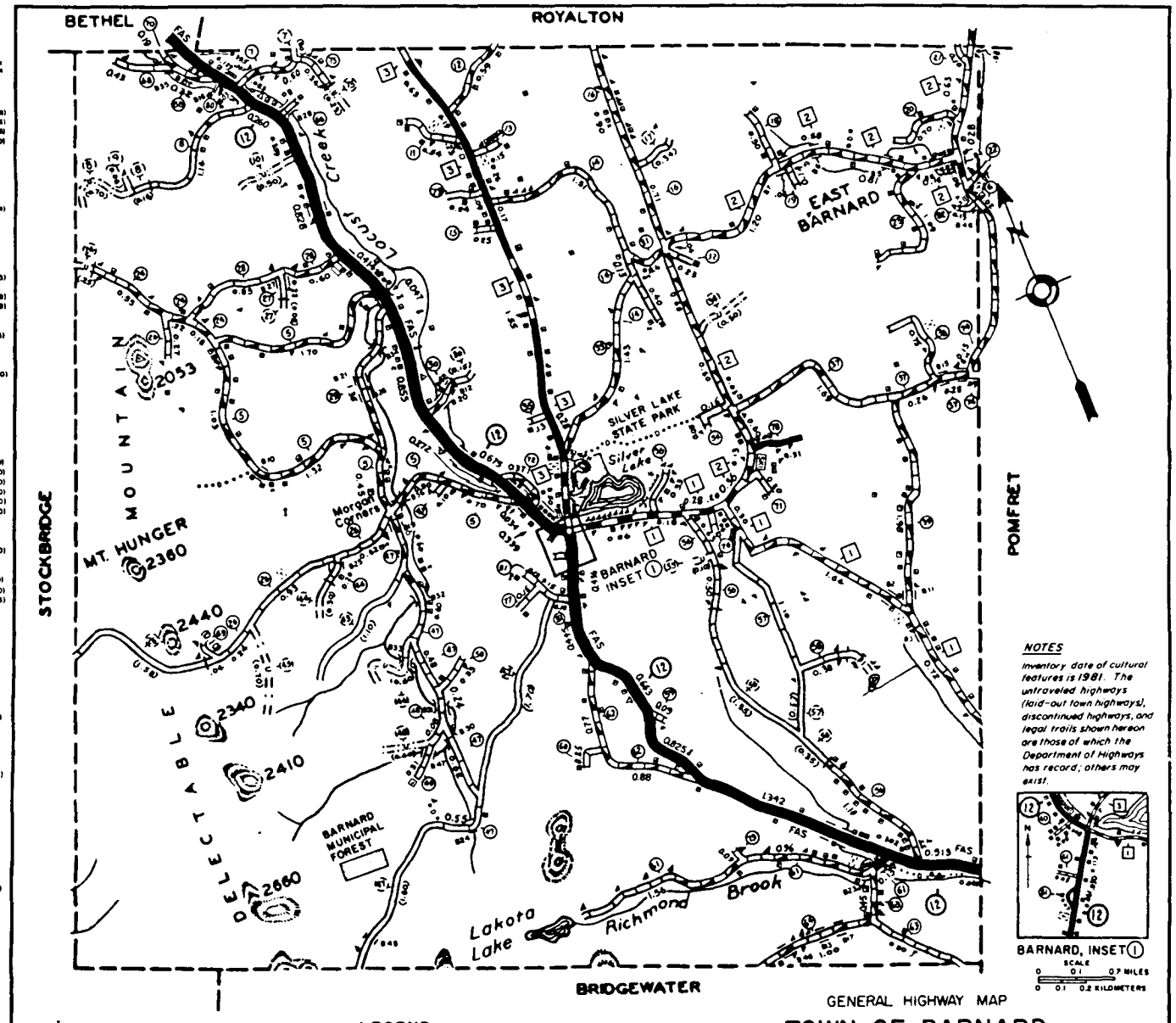
DuBois & King INC.
engineering and environmental services
RANDOLPH, VERMONT CONCORD, NEW HAMPSHIRE

Department of the Army
New England Division
Corps of Engineers
Waltham, MA 02154

NATIONAL DAM INSPECTION PROGRAM
SILVER LAKE DAM
BARNARD, VERMONT
SITE PLAN

DRAWN BY JAS	DATE 1/80
CHECKED BY RMC	PROJ NO 91119
PROJ ENG -	DRAW NO B-1

NOT TO SCALE



SUMMARY OF TOWN HIGHWAYS

TOWN NO.	LENGTH IN MILES CLASS 1	CLASS 2	CLASS 3	CLASS 4
5	5.70			
6	0.19			
7	0.50			(0.08)
8	1.14			(0.86)
9				(0.08)
10				10.501
11	0.54			
12	0.59			
13	0.15			
14	2.04			
15	0.25			
16	1.61			
17				(0.34)
18	0.50			
19	0.14			
20	0.70			
21	0.10			
22	0.07			
23	1.09			
24	0.95			(0.25)
25	0.27			
26	1.65			(1.58)
27	0.22			10.081
28	1.45			
29	1.35			
30	0.42			(0.15)
31	0.26			
32	0.23			
33	1.43			
34				(0.50)
35	0.13			
36	0.33			
37	2.23			
38	0.73			
39	1.98			
40	0.05			
41	0.05			
42	0.10			
43				(1.10)
44	0.20			(0.30)
45				(0.70)
46				(0.60)
47	3.09			(1.60)
48	0.08			(0.40)
49	0.31			
50	0.33			
51	0.40			
52				(1.70)
53	—			
54	0.21			
55				(0.10)
56	2.03			(1.70)
57	1.10			(0.53)
58	0.38			
59	0.09			
60	0.25			
61	2.85			
62	1.65			
63	1.25			
64	1.00			
65	1.08			
67	—			
68	0.75			
69				(0.10)
70	0.19			
71	0.20			
72	0.37			
73	0.09			
74	0.24			
75	0.34			(0.23)
76	0.06			
77	0.15			
78	0.31			
79	0.24			
80	0.03			
81	0.07			
82	0.13			
83	—			
84	—			
85	—			
TOTALS	47.41			(13.46)

NOTES

Inventory date of cultural features is 1981. The untraveled highways (laid-out town highways), discontinued highways, and legal trails shown hereon are those of which the Department of Highways has record; others may exist.

BARNARD, INSET (1)

SCALE 0 0.1 0.7 MILES; 0 0.1 0.2 KILOMETERS

GENERAL HIGHWAY MAP

TOWN OF BARNARD

1980 POPULATION: 790

PREPARED BY VERMONT AGENCY OF TRANSPORTATION PLANNING DIVISION

SCALE 0.5 0 1 MILE; 1 0.5 0 1 2 KILOMETERS

LEGEND

HIGHWAYS

- DIVIDED HWY, INTERSTATE OR STATE
- (7) INTERCHANGE NUMBER
- 2-LANE STATE HIGHWAY
- END OF STATE HIGHWAY
- TOWN HIGHWAY
- UNTRAVELLED ROAD
- PRIVATE ROAD AND NUMBER
- DISCONTINUED HIGHWAY
- LT LEGAL TRAIL (FORMER TOWN HWY)
- FT FOOT TRAIL
- (89) INTERSTATE NUMBERED ROUTE
- (2) U.S. NUMBERED ROUTE
- (22) STATE NUMBERED ROUTE
- (4) CLASS 1 TOWN HIGHWAY
- [2] CLASS 2 TOWN HIGHWAY
- (21) CLASS 3 TOWN HIGHWAY
- ⟨4⟩ CLASS 4 TOWN HIGHWAY
- FCA FULLY CONTROLLED ACCESS
- FAP FEDERAL AID PRIMARY HIGHWAY
- FAS FEDERAL AID SECONDARY HIGHWAY
- ⌐FAS FEDERAL AID SECONDARY ENDS
- NFH NATIONAL FOREST HIGHWAY
- SFH STATE FOREST HIGHWAY

ROAD SURFACE TYPES

- BITUMINOUS MIX, MACADAM MIX, MACADAM PENETRATION, CONCRETE BITUMINOUS CONCRETE, BRICK OR BLOCK
- SURFACE TREATED GRAVEL
- GRAVEL
- SOIL SURFACE (2ND CLASS GRAVEL)
- GRADED AND DRAINED EARTH
- UNIMPROVED EARTH
- PRIMITIVE

BRIDGES

- BRIDGE OR CULVERT (LESS THAN 6' SPAN)
- BRIDGE OR CULVERT (6' THRU 20' SPAN)
- BRIDGE (OVER 20' SPAN)
- HIGHWAY UNDERPASS
- HIGHWAY OVERPASS
- COVERED BRIDGE
- B10 BRIDGE NUMBER

MISCELLANEOUS

- RAILROAD AND GRADE CROSSING
- VILLAGE CENTER

CULTURAL FEATURES

- FARM UNIT
- DWELLING (other than farm)
- SEASONAL DWELLING
- MOBILE DWELLING
- TC TOWN CLERK'S OFFICE
- BUSINESS
- SCHOOL
- CHURCH
- POST OFFICE
- FIRE STATION
- CEMETERY
- SANITARY LANDFILL
- GRAVEL PIT
- SUGAR HOUSE
- HALL (T-town, C-community, G-grange, F-fraternal)

TOWN BOUNDARIES AND ROAD ALIGNMENTS ARE APPROXIMATE

MILEAGE SUMMARY

CLASS 1 TOWN HIGHWAYS:		0.000
CLASS 2 TOWN HIGHWAYS:		
NO. 1	3.86	
NO. 2	6.14	
NO. 3	3.95	
NO.		
TOTAL, CLASS 2 TOWN HWYS.		13.95
CLASS 3 TOWN HIGHWAYS:		47.41
TOTAL, TOWN HWYS.		61.36
STATE HIGHWAYS:		
STATE HWY. VT. 12	9.615	
STATE HWY.		
STATE HWY.		
TOTAL, STATE HWYS		9.615
TOTAL TRAVELED HWYS., FEB. 10, 1986.		70.975 *

* EXCLUDES CLASS 4 MILEAGE