

January 16, 1984

Richard E. Kingsley
Morley, Thomas, Kingsley and Reuter
PO Box 98
Lebanon, OR 97355

Dear Mr. Kingsley:

REFERENCE: File 60823, Lacombe Irrigation District Hydro Project

Thank you for the copy of the proposed agreement between Lacombe Irrigation District and Renwick Organization, Incorporated for the construction of the districts hydroelectric project.

Application 60823 will be in satisfactory form for issuance of a permit when:

Construction plans and specifications for the project are approved by the Director,

A copy of the signed agreement complete with all schedules,

A copy of the new contract with Pacific Power and Light Company, and

An excerpt from the minutes of a meeting of the Board of Directors of the Lacombe Irrigation District approving the new agreement are received in this office.

I look forward to receiving the additional information.

Sincerely,

DONALD R. BUELL
Hydroelectric Licensing Engineer

DRB:wpc
cc: Lacombe Irrigation District
Lloyd Lipman
0148C

M E M O R A N D U M

TO: LARRY THOMPSON

DATE: JANUARY 12, 1984

FROM: DON BUELL *DOB*

SUBJECT: PROPOSED AGREEMENT BETWEEN LACOMB IRRIGATION DISTRICT AND
RENWICK ORGANIZATION, INC.

Attached is a copy of a proposed agreement for financing of Lacombe Irrigation District's Hydroelectric Project on Crabtree Creek along with the cover letter from their attorney. It would appear to be similar to the Winchester-Electro agreement.

Does the agreement still qualify the District for issuance of a permit as a municipal corporation under ORS Chapter 537?

Both the applicant and Renwick have requested priority handling on this project.

lcj

LAW OFFICES

MORLEY, THOMAS, KINGSLEY & REUTER

80 EAST MAPLE STREET
LEBANON, OREGON 97355

TEL. (503) 258-3194

Post Office Box 98

LAURENCE MORLEY
WM. R. THOMAS
RICHARD E. KINGSLEY
THOMAS J. REUTER
KEVIN J. FREEMAN
THOMAS A. McHILL

January 9, 1984

RECEIVED

JAN 10 1984

WATER RESOURCES DEPT.
SALEM, OREGON

Mr. Donald R. Buell
Hydroelectric Licensing Engineer
Water Resources Office
555 - 13th Street N.E.
Salem, OR 97310

Re: Lacombe Irrigation District
File No. 60823

Dear Mr. Buell:

This letter is to confirm our recent telephone conversation and to provide you with a copy of the contract which will be signed, probably this week, with Renwick.

In our opinion, as attorneys for the District, this contract falls within the qualifications of the Attorney General's letter, commonly known as the "Winchester Letter".

Thank you for your courtesy and cooperation.

Very truly yours,

MORLEY, THOMAS, KINGSLEY & REUTER

By:

Richard E. Kingsley
Richard E. Kingsley

REK/djr

Enclosure

cc: Lacombe Irrigation District
Lloyd Lipman

RECEIVED

JAN 10 1984

HYDROELECTRIC PROJECT DEVELOPMENT AGREEMENT WATER RESOURCES DEPT.
SALEM, OREGON

THIS AGREEMENT made and entered into as of the ____ day of December, 1983, between LACOMB IRRIGATION DISTRICT, a municipal irrigation district (hereinafter called "District") and RENWICK ORGANIZATION INC., a Florida corporation (hereinafter called "Renwick"), as nominee for National Resource Group, in consideration of the mutual covenants and agreements set forth below do agree as follows:

RECITALS

The District owns certain irrigation facilities consisting, in part, of a diversion structure on Crabtree Creek, Linn County, Oregon and gate, an irrigation ditch and flume, all located on real property over which the District has easements in its favor, including easements over property on which the projected penstock will be built and the property upon which the proposed structure to house the turbine and generator, and associated facilities, will be located, all as described in Schedule A hereto and made part hereof (such facilities, property, and easements thereon collectively hereinafter referred to as the "irrigation system").

The District desires that a hydroelectric power project be built in connection with its irrigation system. The District currently holds certain governmental permits and approvals necessary for such hydroelectric project. It does not yet have the permit from the Water Resources Department, but application has been made for it.

The District intends to develop its existing irrigation

system, to build a hydroelectric plant, to be called the "Lacomb Hydroelectric Project" hereinafter referred to as "Project", which is expected to have a nameplate capacity of approximately 962 kilowatts and produce approximately 5,560,000,000 kilowatt hours annually based on historical water flow data.

The District believes that the necessary water rights and hydroelectric permits, or exemptions, for the project have been or can be obtained. In this connection, the District has applied for an additional water flow to 65 CFS through the Oregon Water Resources Department and the within contract is conditioned on the completion and the granting of that additional water flow permit.

Renwick Organization has made a proposal to the District under which Renwick, as nominee, would own the hydroelectric facility associated with the project and necessary property rights and would have the use of power generation water rights necessary for the operation of the project. There shall be no assignment of or interference with the basic irrigation easements.

An acceptable power sales contract for sale of power from the project has been signed by the District, with Pacific Power and Light Company, a copy of which is attached hereto as Schedule B, but in order to extend the proposed initial date of delivery of power, a new contract has been presented by Pacific Power and Light Company which is being negotiated by the District but is expected to be signed and will not change the income as set forth in the initial contract with Pacific Power and Light Company dated October 28, 1982. A copy of such user

contract in substantially the form to be signed by the District is attached hereto as Schedule C.

Renwick desires to acquire property rights in the project and the existing and applied for waterflow, to acquire or obtain an interest in the permits obtained by the District in preparation for construction and operation of the project and to develop, construct, own and operate the project, all according to the terms of this agreement and District is willing to convey to Renwick, as nominee, the necessary rights, including property rights and permits, to allow Renwick, as nominee, to develop the project, all in accordance with the terms and conditions of this agreement.

NOW, THEREFORE in consideration of the mutual promises contained herein and as set forth in this agreement, the District and Renwick agree as follows:

PROJECT DEVELOPMENT

1. Renwick, as nominee, shall cause to be acquired such rights with respect to the Lacombe site (including, without limitation, fee interests, leaseholds, easements, excluding the basic irrigation rights, and water rights) as are, in the determination of Renwick, adequate for the development of such site into a power facility. It is understood that no commercial commitment for construction of the project shall be commenced without Renwick or the District first securing the necessary water rights, all other necessary state, federal and county permits, licenses, entitlements and approvals and an acceptable power sales contract. The District shall support Renwick's efforts to obtain all such items. In the event such support

would cause the District any additional charge, such charges should be submitted to Renwick and subject to Renwick's prior written consent which shall not be unreasonably withheld and upon such written consent, Renwick will reimburse such to the District from construction funding.

2. Renwick, as nominee, at its sole cost and expense, shall have responsibility for the orderly development of the site into a power facility, including, but not limited to, determination of (a) the prices to be paid, (b) the engineers to prepare the construction documents and supervise construction on any development site, and (c) the contractors or subcontractors to be used to perform any construction, installation or other services required to develop the site into a power facility. Renwick shall submit preliminary and final designs for the project to the District for review and consultation. Such designs shall be adequate to provide for the projection of power throughout the term of the Agreement and shall safeguard the irrigation system.

3. Renwick, as nominee, shall engage engineers, in addition to the District's engineers, Slotta Engineering Associates, Inc., as consultants, to review all plans and specifications. Renwick is to have final authority as to any dispute between the engineers.

When conditions to the parties' obligations have been met or waived, Renwick shall be obligated to promptly commence construction of the hydro project and such construction shall commence not later than _____, and be completed not later than _____.

CONSTRUCTION MANAGEMENT

Renwick, as nominee, at its sole cost and expense, will be responsible for the performance of all work as Renwick may deem appropriate for the completion of the power project in accordance with the construction documents, including the securing of bids or quotations for materials, prices and subcontracts for the project work, establishing a work project schedule on which the power facility will be expedited consistent with reasonable cost, good workmanship, and safety; arranging for an engineer or engineers to provide the necessary inspections as required including the checking and approval of shop drawings, samples, schedules and other submittals for compliance with the design concept of the construction documents; reviewing all laboratory tests and preparing change orders and issuing certificates of substantial compliance. The District shall have the right to review, inspect and approve the facility construction to assure the designs are compatible with the District's Irrigation system and operations.

OPERATION AND MAINTENANCE

Renwick, as nominee, shall operate and maintain the power facility developed under this Agreement in accordance with such practices and methods as are commonly used in the hydroelectric generating industry, and shall operate and maintain electrical equipment and other project works with safety, dependability, efficiency, and economy in accordance with all applicable laws and regulations. All project property shall be under Renwick's control; all operations, maintenance, repairs and improvements related to the project shall be under Renwick's control.

Major repairs and capital improvements are to be made to the District's Irrigation system as a part of the construction costs. Renwick shall further cause the power facility and all access roads, wires and related facilities that make up the project to be maintained in a good and workmanlike manner for the term of the Agreement. Renwick shall contract the maintenance of the power facility to the District, however, Renwick shall retain the right to review the performance of the maintenance person and to replace such person if it is in the best interest of maintaining and operating the facility.

FINANCING

Renwick shall negotiate and obtain all funds necessary to develop the site into a power facility. Renwick shall be entitled to all tax benefits that may be derived hereunder.

SALE OF ELECTRICAL POWER

It shall be a condition of this agreement that the power purchase contract between the District and Pacific Power and Light Company dated October 28, 1982, shall be amended to revise the date on which delivery of power is provided for, to January 1, 1985, with energy prices not less than those scheduled in said agreement. It is understood that Pacific Power and Light Company has offered an amended contract to the District which provides for the same payment schedule but contains some other amendments which, in the opinion of the District, do not directly effect either the construction of the project or the income to be derived therefrom and a copy of the proposed amended contract has been provided to Renwick for its review. Consultation will be made with Renwick, or its agents, regarding

the revised Pacific Power and Light Company Contract. No funds will be advanced by Renwick until a signed power sales contract has been obtained.

POWER PRODUCTION AND GROSS REVENUE

Renwick shall cause power production and gross revenue statements, in a form satisfactory to the District, for the power facilities, to be prepared at least quarterly, copies of which shall be provided to the District within 10 working days following the end of the quarter. The District reserves, at its expense, the right to review or audit the statement and accounts relating to the power facility.

INSURANCE

Renwick shall cause to be acquired and maintained with respect to the power facility and its operations, insurance of such types and in such amounts as are usual in the industry. The District shall be named as an additional assured to the extent of its insurable interest in the project on each and every such policy of insurance, as shall Pacific Power and Light Company. The District will also obtain appropriate insurance, which may include business interruption and physical damage insurance, involving the irrigation ditch. The insurance to be obtained by Renwick will insure the hydro project, but not the existing irrigation system, and will insure against casualty loss and Renwick obtain appropriate policies of property damage insurance, with extended coverage endorsement, in the amount of the replacement cost of the hydro project. Such policies will provide that such will not be cancelled without at least 30 days advance written notice to the District. The insurance

requirements of Pacific Power and Light, as set forth in the Amended Power Purchase Contract, shall be complied with by Renwick.

INDEMNITY

Renwick, as nominee, shall, at its sole cost, expense and responsibility, defend, indemnify, and hold the District harmless from any damage, claims or construction liens arising from Renwick's activities pursuant to this Agreement, except to the extent due to the negligence, willful acts or omissions by the District.

TREATMENT OF PROPRIETARY INFORMATION

To the extent legally possible, all books, records, reports, accounts, data and other information relating to the business of the project shall be treated as confidential by the District and the District shall take or cause to be taken such reasonable precautions as may be necessary to prevent the disclosure thereof, except with the written consent of Renwick or as otherwise required by applicable laws or regulations.

TAXES

Renwick, as nominee, agrees to pay, after this Agreement is accepted and in effect, when due, all ad valorem taxes or comparable governmental charges levied upon the power house site, the property interests of Renwick in the property rights and hydro project, and its income from the Project, in the year when due and provide the District with evidence of such payments.

TAXES AND LIENS

In addition to all other payments to be made by Renwick

hereunder, Renwick will pay and discharge promptly all taxes, assessments and other governmental charges or levies imposed upon the project property. The District warrants, covenants and represents that the project property is not subject to various types of encumbrances including but not limited to, statutory construction liens, mortgage liens and interests defined in leases and certain other interests created for the purpose of construction and long term financing. The power house site is subject to three mortgages. The District will execute and deliver all documents reasonably requested by Renwick for the purposes of enabling it to perfect and secure mortgage loans, if any, and other security interests, if any, which would enable such lenders to acquire all interest in the project property necessary to enable such lenders to sell the project as an operating project at a foreclosure sale. In addition, the District acknowledges that Renwick's interest in the power sales contract, particularly the revenues to be received thereunder, may be assigned on a long term basis as collateral to secure debt financing from a lending institution and that such security interest in Renwick's interest in the Power Sales Contract will be superior to any interest of the District, Renwick or any other investor in the project. Renwick shall not permit any assignment or encumbrances to impair the ability of the District to deliver irrigation water or to impair the District's share in the proceeds of the Pacific Power and Light Company Contract.

In addition to all other payments herein provided to be made by Renwick, Renwick will pay and discharge promptly all taxes, assessments and other governmental charges or levies imposed

upon it or upon its income or upon any of its property, real, personal, or mixed, upon any other property thereof including the premises and facilities attached as part of the development of the hydropower project pursuant to this Agreement as well as all claims of any kind which, if unpaid, might by law become a lien or charge upon the property. In the event a lien is filed affecting any property interest of the District, with respect to the hydroelectric power project for any obligation incurred after the date of this agreement, Renwick shall, within 10 days after the lien is filed, cause the lien to be removed by bonding over the lien.

BINDING ON SUCCESSORS

The covenants and conditions herein contained shall apply to and bind the heirs, successors, executors, administrators and assigns of the parties hereto.

FINANCIAL OBLIGATIONS

Any and all fees, costs and expenses incurred pursuant to this Agreement shall be the sole responsibility of Renwick. The District shall have no obligation or responsibility to assume any of the financial cost associated with this Agreement. The pre-construction costs identified on Schedule D, which is attached and made a part of this Agreement, shall be reimbursed to the District or paid to the creditor within 20 days, as provided for in paragraph entitled "Project Costs", hereunder.

COMPENSATION

Upon commencement of commercial operation of the Project, Renwick shall pay to the District as full compensation for Renwick's use of the District's water rights for purposes of

power generation and for Renwick's use of the District's associated property and property rights, the percentages of gross revenues as shown on Schedule E of the annual revenues from the sale of power from the hydroelectric project. Interim monthly payments by Renwick to the District shall commence in the month following the first month of the commercial operation of the Project. Such interim monthly payments for sales made during any power year shall be based on monthly gross revenues from power sales and the percentage factors shown in Schedule E.

Any income adjustment to reflect final and full compensation for Renwick's use of the said water and property rights shall be made annually on December 31. Any resulting income adjustment, with interest, shall be payable to the District or Renwick, as the case may be, within thirty (30) days after December 31. Interest on the income adjustment shall accrue from December 31, at the three-month United States Treasury Bill rate in effect on that date.

BUY OUT

Commencing twenty (20) years after commencement of commercial operation of the Project, the District shall have the option to purchase the Project for a sum equal to ten (10) per cent of the construction costs, but not to exceed \$200,000.00. Alternatively, this agreement can be extended on a year by year basis on a 50-50 division of gross revenues, at the sole option of the District. The District may purchase the Project on a deferred basis including interest at the prime rate in effect at the time of purchase. If the District elects to defer payments, payments on the outstanding balance will be paid from electrical

revenues at a rate of 25% of gross revenues until the balance is paid in full. Nothing in this Agreement shall prevent Renwick and the District from negotiating and agreeing to convey the Project to the District upon terms or at any time different from those stated herein.

PROJECT COSTS

Any and all costs actually and reasonably incurred in connection with the Project prior to commencement of its commercial operation shall be charged to the Project as a capital or development cost and shall be subsequently dispersed from construction funding. Such costs include, but are not limited to, the costs of engineering, feasibility and preliminary engineering studies, letting of bids, equipment, labor, attorneys' fees, consultants' fees and such costs and fees as are identified on Schedule D attached hereto and incorporated by reference herein. The District and Renwick shall each provide access to the other, and shall permit the other to audit any books, accounts and records maintained by the other, which account for any and all costs associated with the Project and any and all revenues from the sale of power from the Project. The costs to be paid by Renwick, as herein provided for, are shown on the attached Schedule D. These costs shall be paid within 20 days of the signing of this Agreement or the signing of the Pacific Power and Light Company Amended Contract, whichever is later.

TERMINATION

1. This agreement shall be terminated on the part of the District or Renwick, or between them, if, despite the best

efforts of the District and Renwick;

a. All necessary permits and licenses (or exemptions) for construction and/or operation of the Project have not been obtained by April 1, 1984; or

Provided, however, the District and Renwick may mutually agree to continue joint development of the Project if any of the permits or licenses are forthcoming within 90 days thereafter.

2. If such termination occurs, the District shall have the right to proceed to develop the Project on its own or with another person or company. Upon the request of the District after termination, Renwick shall, within 30 days, assign or transfer to the District such property, permits and licenses as may be desired by the District. Upon termination, neither party shall have any obligation or liability to the other.

EXPENSES

Any fees or repayment for internal expenses incurred by Renwick, or its nominee, in the course of managing and operating the Project, following commencement of commercial operation of the Project, shall not be considered to be operating costs offsetting the revenues to be paid to the District.

NOTICE

All notices required or permitted to be given under this Agreement shall be in writing and shall be personally delivered or mailed, postage prepaid, certified mail, return receipt requested, to the parties at the following addresses:

(i) If to the District:

Lacomb Irrigation District

41358 Lacomb Drive

Lebanon, OR 97355

ATTN: Verle Jensen

(ii) If to Renwick:

Renwick Organization, Inc.

450 Ansin Boulevard

Hallandale, Florida 33009

or at such other address as either party may specify or by written notice given to the other.

ASSIGNMENT

But for the purpose of obtain financing on this project, neither party may assign its interest in this Agreement without the written consent of the other party. Such consent may not be unreasonably withheld.

OWNERSHIP

Ownership of the hydroelectric facilities which are the subject of this Agreement, shall be in the name of Renwick, as nominee, and the District hereby consents to the assignment at any time of Renwick's rights and obligations under this Agreement to the person and/or organizations for whom it serves as nominee, for the term of this Agreement. Upon exercise of the "Buy-Out" option described in paragraph "Buy Out" above, all facilities, rights and privileges shall be conveyed by Renwick or its assignee to the District.

The District shall grant, convey or provide (a) such property interest (including power generation water rights,

easements and leases) and (b) support services (including access to utilities) as are necessary to Renwick for the purpose of construction and operation of the Project under the terms stated herein; provided, however, that said grant, conveyance or provision of said property interests and support services shall not interfere with or encumber the normal operation of the District's irrigation system. Any and all such assignments, grants, or conveyances shall be accomplished in a manner designed to protect and preserve the tax-exempt status of the District; to comply with the regulations set forth by the Federal Energy Regulatory Commission (FERC) and to comply with those conditions established by the Water Policy Review Board of the State of Oregon and with any and all other Federal, State, or local regulations or statutes governing the District and the Project.

MISCELLANEOUS

Conditions may be satisfied or waived individually, and may only be satisfied or waived by written notice given by the party whose obligations are conditioned by such condition.

1. Except as otherwise specifically provided herein, no party hereto shall have the right to obligate any other party for any liabilities arising from any transactions contemplated by the Agreement.

2. This Agreement constitutes the entire Agreement of the parties.

3. The failure of any party to this Agreement to insist upon the strict performance of any provisions hereof or to exercise any right, power or remedy consequent upon a breach

thereof shall not constitute a waiver by said party of any such provision or other provision or breach of any subsequent provision of the same or any other provision.

4. If any provision of this Agreement or any application thereof shall be determined to be invalid or unenforceable, the remainder of this Agreement and any other application of such provision shall not be affected thereof, and shall remain in full force and effect.

5. This Agreement shall be governed by and construed in accordance with the laws of the State of Oregon.

6. District shall provide Renwick with notarized copies of all resolutions of the District Board of Directors necessary to authorize the execution of this Agreement and other actions contemplated hereunder.

7. Renwick shall provide District with notarized copies of all resolutions of the Renwick Board of Directors necessary to authorize the execution of this Agreement and other actions contemplated hereunder.

8. This Agreement may only be modified by a document in writing executed by both parties.

9. This Agreement may be executed in counterparts, each of which shall be identical and shall be deemed an original for all purposes.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed this ____ day of December, 1983.

LACOMB IRRIGATION DISTRICT

By: _____

Chairman

ATTEST:

BY _____

Secretary

RENWICK CORPORATION

BY: _____

President

SCHEDULE E

Schedule of percentages to determine interim monthly payments to the District

<u>Year of Operation</u>	<u>% of Gross Revenues</u>
1 through 10	20%
11 through 15	25%
16 through 20	30%

The District shall be obligated to pay a percentage of operation and maintenance equal to its percentage of gross receipts as set forth above.

Total operation and maintenance shall be computed at 5% of each year's total gross revenues. Monies not used for operation and maintenance shall belong to the party contributing in the amount of its contribution.

378-8507

November 7, 1983

Lacomb Irrigation District
41358 Lacomb Drive
Lebanon, OR 97355

REFERENCE: File 60823

It is my understanding that you are in the process of reaching an agreement for financing for your hydroelectric project under Application 60823.

Before a permit can be issued for the project, plans and specifications for the project must be approved by the Director. The plans should be submitted in the form of one reproducible transparency and one print along with two copies of the specifications.

Also required will be a copy of the financing agreement and an excerpt from the minutes of the Board meeting approving the agreement.

Upon receipt of the required information, your application will be considered for issuance of a permit.

Sincerely,

DONALD R. BUELL
Hydroelectric Licensing Engineer

DRB:wpc

cc: Richard E. Kingsley
Paula Arsenault
9148B

LAW OFFICES
MORLEY, THOMAS, KINGSLEY & REUTER

LAURENCE MORLEY
WM. R. THOMAS
RICHARD E. KINGSLEY
THOMAS J. REUTER
KEVIN J. FREEMAN
THOMAS A. McHILL

80 EAST MAPLE STREET
LEBANON, OREGON 97355

TEL. (503) 258-3194
Post Office Box 98

August 29, 1983

State of Oregon
Water Resources Department
Mill Creek Office Park
555 - 13th Street N.E.
Salem, OR 97310

RECEIVED
AUG 30 1983
WATER RESOURCES DEPT.
SALEM, OREGON

Attention: Mr. Donald R. Buell
Hydro Licensing Engineer

Re: Lacombe Irrigation District

Gentlemen:

As you know, our agreement with Gregory has fallen through by reason of its failure to comply with the contract entered into with Lacombe Irrigation District and consequently we need to withdraw the application filed jointly with Gregory and continue with the original agreement filed in the name of the District only.

In looking through my file it appears our application no. is 60823, filed under ORS Chapter 537.

I placed a call to Mr. Marc^Kxs, representing Gregory, asking that he provide you with a letter withdrawing its application. I have not had a chance to talk to Mr. Marcxs on the telephone but I am assuming that he will call me before much longer or at least will, of course, receive a copy of this letter with the request that he so notify your department.

If there is any question about withdrawing the Gregory application I can provide you with the material showing the breach of his contract with the District and our notification of that breach by the District in May of this year. Our association with Gregory was terminated as of that time.

Very truly yours,

MORLEY, THOMAS, KINGSLEY & REUTER

By:

Richard E. Kingsley
Richard E. Kingsley

REK/djr

cc: Gregory Hydro Resources, Inc.
Larry Slotta
Jim Brazel



RECEIVED

JUL 14 1983

**WATER RESOURCES DEPT.
SALEM, OREGON**

Department of Fish and Wildlife

506 S.W. MILL STREET, P.O. BOX 3503, PORTLAND, OREGON 97208

July 13, 1983

Mr. Larry Slotta
Slotta Engineering Associates
1540 N.W. Dixon Street
Corvallis, Oregon 97330

Re: FERC 6648

Dear Larry:

The Oregon Department of Fish and Wildlife requires the terms and conditions set forth in the July 28, 1982 letter to Slotta Engineering Associates for the specific protection of fish and wildlife and thier habitat in Crabtree Creek. The Department will be reasonable in administering and enforcing the terms and conditions, and it will base its administration and enforcement either on (i) observed and quantifiable fact; or, (ii) reasonable inferences as to project effects.

Sincerely,

Lou Fredd
Water Resource Coordinator
Environmental Management
Section

SW

cc: National Hydro
Richard Kingsley
Department of Justice, Mary Deits
Water Resources Department, Jim Buell

WATER RESOURCES DEPARTMENT

INTEROFFICE MEMO

To: File 60823

Date: 5-9-83

From: Don Buell

Subject: Letters pertaining to file

When letter stating they wish to proceed under this application is received return with letter stating when P.E.'s received ^{& approved} we will be in a position to issue permit.

*If 537, then
since Be has already
reviewed & rec'd approval
we*

*Larry S.
754-0258*

378-2982
or
1-800-452-7813
(message line)

May 6, 1983

Lacomb Irrigation District
41358 Lacomb Drive
Lebanon, OR 97355

REFERENCE: Files 60823 and HE 447

On January 17, 1983, the Director of the Water Resources Department received advice from the Department of Justice which resulted in his January 19, letter to you stating he could not issue a permit under your Application 60823.

Pursuant to that letter you, in cooperation with Gregory Hydro Resources, filed Application HE 447 on March 2 to license the project under Chapter 543, the hydroelectric act. Included in the license application was your request to withdraw 60823.

The Director received further advice from the Department of Justice on March 30 and a copy of that letter was sent to you on April 12 stating that your attorney may wish to review the letter before you proceed with your application.

In following discussions with your engineer, Dr. Larry Slotta, it was stated that you would wish to pursue Application 60823. This may well be possible, however, there are several alternatives which you and your attorney should discuss and respond in writing as to the alternative you wish to follow.

Possible alternatives are:

Continue with the processing of HE 447 and withdrawal of 60823.

Determine that your agreement with Gregory Hydro Resources is acceptable by our latest advice from the Department of Justice and pursue 60823 keeping HE 447 in a pending status until the permit is issued under 60823.

Determine that your agreement with Gregory Hydro Resources is acceptable, pursue 60823 and immediately withdraw HE 447.

There may be other alternatives which I have not considered that you may have in mind. Any other method of pursuing your project would be considered by this office at your request.

Lacomb Irrigation District
May 6, 1983
page two

Whether you decide to go with 60823 or HE 447, your project proposes the use of 65 cubic feet per second of water through your canal and penstock. ORS 540.350 through 540.400 places the responsibility of public safety on the Director for conduits carrying more than 5 cfs. Therefore, prior to issuance of a permit or license you must submit bid plans and specifications for your proposed penstock and power plant and for any significant changes in the existing canal.

If you should determine to pursue Application 60823 under ORS Chapter 537, the permit could be issued upon the Director's approval of the required plans and specifications.

Sincerely,

DONALD R. BUELL
Hydroelectric Licensing Engineer

DRB:wpc

cc: Dallas A. Marckx
Slotta Engineering Associates, Incorporated

6371B

M E M O R A N D U M

TO: JIM SEXSON

Date: April 12, 1983

FROM: DON BUELL *Don*

Subject: Lacombe Irrigation District's Hydroelectric Project
Application 60823

I have reviewed Lacombe Irrigation District's agreement with Gregory Hydro Resources and find it essentially the same type of agreement as that between Winchester and Elektra. I see no problem in processing this application under Chapter 537.

Gregory with Lacombe has already submitted Application HE 447 for a major license under Chapter 543, and Lacombe requested withdrawal of Application 60823.

I have been in contact with Larry Slotta, the project engineer, and Dallas Marckx, attorney for Gregory. They both agree that it would be best to pursue the permit under Chapter 537.

Dr. Slotta has submitted additional information requested by me on April 6, with the exception of plans and specs for the canal and penstock. He questions the need for these prior to issuance of the permit.

Dallas Marckx requested a letter stating that Application 60823 could ~~now~~ be processed under the latest advice so they could officially make a determination and request that Application 60823 not be withdrawn and the permit be issued under that application. I am in the process of preparing a letter to Lacombe with copies to Marckx and Slotta.



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-2982
or
1-800-452-7813
(message line)

April 12, 1983

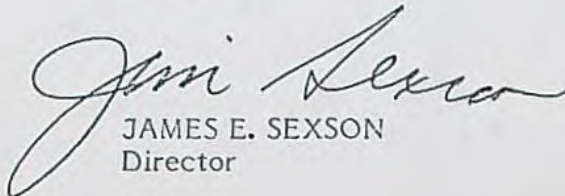
Lacomb Irrigation District
41358 Lacomb Drive
Lebanon, OR 97355

REFERENCE: Application 60823

You were sent a copy of the Assistant Attorney General's letter dated January 17, 1983, concerning agreements with private developers of hydroelectric projects.

Enclosed for your guidance is a copy of a letter from the Assistant Attorney General dated March 30, 1983, giving different guidelines for processing applications for hydroelectric projects by municipal corporations. Your attorney may wish to review this letter before you proceed with your application.

Sincerely,



JAMES E. SEXSON
Director

JES:wpc

5925B

April 8, 1983

Don Buell
Oregon Water Resources Department
555 13th Street NE
Salem, OR 97310

RECEIVED
APR 12 1983
WATER RESOURCES DEPT.
SALEM, OREGON

Subject: Lacombe Hydro Permit

This is in response to your call on April 7 concerning the Lacombe Irrigation District's application for a permit to use 65 cfs from Crabtree Creek for hydro power production. This is to authorize your culling appropriate materials from the joint (Gregory Hydro Ltd. and Lacombe Irrigation District) application for a license (dated March 1, 1983) to develop the Lacombe site to be inserted in the Lacombe Irrigation District's permit application (dated August 5, 1983) for 65 cfs of flow.

Authorizing you to select such materials should facilitate making a more complete permit application to the Oregon Water Resources Department and the Board's consideration of the project. The materials for the filings are for one hydro power site on Crabtree Creek. This authorization has been acknowledged and encouraged by phone discussions with the Lacombe Irrigation District's attorney, Mr. Richard Kingsley.

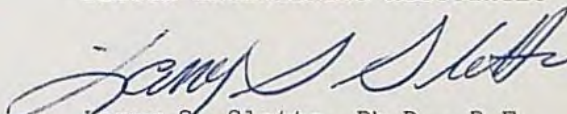
Available in the joint license application are up-to-date easements for the properties involved, including responses from Willamette Industries and Champion International.

Enclosed is a copy of PP&L's power sales purchase agreement with the Lacombe Irrigation District.

If there are additional materials needed for this application, please contact me directly as we are behind schedule due to delays associated with permitting influences on financing.

Best regards.

Sincerely,
SLOTTA ENGINEERING ASSOCIATES


Larry S. Slotta, Ph.D., P.E.

RECEIVED

APR 12 1983

WATER RESOURCES DEPT.
SALEM, OREGON

POWER PURCHASE AGREEMENT

BETWEEN

LACOMB IRRIGATION DISTRICT, TOGETHER WITH LACOMB HYDRO LTD.

AND

PACIFIC POWER & LIGHT COMPANY

THIS AGREEMENT, entered into on this 28th day of October, 1982, is between Lacombe Irrigation District, a quasi-municipal corporation, and Lacombe Hydro Ltd., on the one hand, hereinafter referred to as "Sellers," and Pacific Power & Light Company, a Maine corporation, on the other, hereinafter referred to as "Pacific."

RECITALS:

Sellers will own and operate a 962 kilowatt hydroelectric facility referred to as the Lacombe Hydroelectric Project for the generation of an estimated 5,560,000 kilowatt-hours (kWh) of energy annually to be located on Crabtree Creek near Lacombe, Oregon ("Facility"); and

Seller (Lacombe Irrigation District) has applied to the Federal Energy Regulatory Commission for an exemption from licensing for the Facility; and

Sellers wish to sell, and Pacific wishes to purchase, the Net Metered Output from the Facility.

NOW, THEREFORE, the parties hereto mutually agree as follows:

ARTICLE I: DEFINITIONS

As used in this Agreement, the following terms shall have the following meanings:

(A) "Commercial Operation Date" is the date, after start-up

testing of the Facility is completed, that Pacific receives a written statement from a licensed professional engineer certifying that the Facility is able to generate electric power reliably;

(B) "Contract Year" is a calendar year commencing at 12:01 a.m. on January 1 and ending at 12:00 p.m. on December 31;

(C) "Demonstrated Capacity" is the actual demonstrated ability of the Facility to generate and deliver electric power, expressed in kilowatts (kW), available to Pacific in meeting its capacity requirements, less Facility use and less transmission and transformation losses, if any, to the Point of Delivery. The Demonstrated Capacity shall be determined each month as the lesser of:

$$(1) \frac{\text{kWh of Net Metered Output per month}}{730 \times 0.70}$$

or

(2) the average rate of delivery (kW) during the highest consecutive 24-hour period of kWh deliveries of Net Metered Output in such month.

(D) "Net Metered Output" is all energy and capacity produced by the Facility, less Facility use, as determined at the Point of Delivery;

(E) "Point of Delivery" is the location where Pacific's and Sellers' electrical facilities are connected at the point of metering on the high side of the transformer near the generator on Crabtree Creek;

(F) "Property" is the Facility and all Sellers' Interconnection Equipment;

(G) "Scheduled Maintenance Periods" are those times during which the Facility is shut down for routine maintenance with the advance approval

of Pacific as provided in Article XV(A) hereof;

(H) "Sellers' Interconnection Equipment" is all equipment and facilities not owned by Pacific located on Sellers' side of the Point of Delivery required to be installed solely to interconnect and deliver power from Sellers' Facility to Pacific's system including, but not limited to, connection, transformation, switching, and safety equipment.

ARTICLE II: TERM

(A) Subject to the provisions of Articles XII and XXIV, this Agreement shall become effective when executed by all the parties hereto, and shall end on December 31, 2018.

(B) Sellers may terminate this Agreement within 60 days of execution hereof by giving Pacific written notice thereof in accordance with Article VI. In such event, Sellers shall owe no further obligation to Pacific.

ARTICLE III: DELIVERY OF POWER

Commencing on January 1, 1984, and for the term of this Agreement, Sellers shall make available from the Facility a minimum of 2,500,000 kWh of Net Metered Output during each Contract Year, provided that such minimum for the first Contract Year shall be reduced pro rata to reflect the Commercial Operation Date. Subject to Article XVI, Sellers shall make available and Pacific shall purchase all Net Metered Output from the Facility.

ARTICLE IV: PRICES

The following prices are established for all deliveries of

Net Metered Output hereunder; provided, however, that nothing in this subparagraph shall be construed as affecting or limiting the Sellers' obligation to make deliveries in each Contract Year as established in Article III hereof.

(A) Nonfirm Energy Prices

For all Net Metered Output delivered prior to the Commercial Operation Date, Pacific shall pay Sellers Pacific's then established price for nonfirm energy.

(B) Capacity Prices

Commencing upon the Commercial Operation Date, and ending on December 31, 2018, Pacific shall pay \$6.66 per month for each kW of Demonstrated Capacity; provided, however, in any month during which Sellers' deliveries of Net Metered Output are less than 70,000 kWh, Sellers shall not receive payment for the Demonstrated Capacity.

(C) Energy Prices

Commencing upon the Commercial Operation Date, and ending on December 31, 2018, Pacific shall pay for each kWh of Net Metered Output the energy prices for the Contract Years set forth below:

<u>Contract Year</u>	<u>Energy Price Cents/kWh</u>
1984	5.85
1985	5.92
1986	6.00
1987	6.08
1988	6.17
1989	6.27
1990	6.36
1991	6.47

<u>Contract Year</u>	<u>Energy Price Cents/kWh</u>
1992	6.58
1993	6.70
1994	6.82
1995	6.95
1996	7.10
1997	7.24
1998	7.40
1999	7.57
2000	7.74
2001	7.93
2002	8.13
2003	8.34
2004	8.56
2005	8.80
2006	9.05
2007	9.32
2008	9.60
2009	9.90
2010	10.22
2011	10.55
2012	10.91
2013	11.28
2014	11.68
2015	12.11
2016	12.56
2017	13.03
2018	13.54

ARTICLE V: PAYMENTS AND COMPUTATIONS

(A) Pacific shall provide Sellers with computations of Net Metered Output on a monthly basis and shall concurrently therewith make payments therefor in accordance with the terms and conditions of Article IV, at the address specified in Article VI, below.

(B) Sellers shall pay Pacific for Pacific's costs incurred hereunder, at the address specified in Article VI, below, within thirty (30) days of receipt of Pacific's written statement. Should Sellers fail to

pay in full statement(s) from Pacific within thirty (30) days, Pacific may offset future payment(s) to Sellers hereunder by such amount(s).

ARTICLE VI: NOTICES

All written notices under this Agreement shall be directed as follows, and shall be considered delivered when deposited in the U.S. Mail, return receipt requested:

To Sellers: Secretary
Lacomb Irrigation District
41358 Lacomb Drive
Lebanon, Oregon 97355

To Pacific: Vice President, Power Resources
Pacific Power & Light Company
920 SW Sixth Avenue
Portland, OR 97204

The parties may change their addresses by providing notice thereof as specified in this Article.

ARTICLE VII: FACILITY DESIGN AND CONSTRUCTION

(A) Sellers shall design, construct, install, own, operate, and maintain the Facility. Sellers shall provide Pacific with electrical data concerning its Facility sufficient to allow Pacific to make stability and protection studies. All specifications and changes in specifications, including new or additional equipment, shall be subject to Pacific's acceptance. Pacific's acceptance of Sellers' specifications shall not be construed as confirming nor endorsing the design, nor as a warranty of safety, durability, or reliability of the Facility. Pacific shall not, by reason of any review, acceptance, or failure to review, be responsible for the Facility, including but not limited to the strength, details of design,

adequacy or capacity thereof, nor shall Pacific's acceptance be deemed to be an endorsement of the Facility.

(B) At the request of Pacific, Sellers shall provide Pacific, prior to the initial delivery of Net Metered Output, with a statement from a licensed professional engineer certifying that the Facility can reasonably be expected to generate capacity and energy in the amounts set forth herein for the duration of this Agreement.

ARTICLE VIII: INTERCONNECTION

(A) Sellers shall install all Sellers' Interconnection Equipment. Sellers' Interconnection Equipment shall be of a size to accommodate the delivery of the Net Metered Output under this Agreement. Sellers shall allow Pacific to review the adequacy of all protective devices, and to establish requirements for settings and periodic testing; provided, however, that neither such action nor inaction by Pacific shall be construed as warranting the safety or adequacy of Sellers' Interconnection Equipment. All such equipment installed hereunder shall conform with the Required Equipment Standards established in Schedule A, attached hereto. Sellers shall reimburse Pacific for Pacific's cost associated with such periodic testing.

(B) Connection of Sellers' Interconnection Equipment to Pacific's system shall be by or under the direction of Pacific.

(C) In the event that it is necessary for Pacific to install any facilities and equipment on Pacific's system to accommodate Sellers' deliveries, or to reinforce Pacific's system for purposes of this Agreement, Sellers shall reimburse Pacific for all of Pacific's costs associated

therewith in accordance with the rules for repayment established by the appropriate state regulatory commission having jurisdiction. Sellers shall also reimburse Pacific annually for Pacific's additional operation and maintenance costs associated with Pacific's installation, modification, or reinforcement of facilities under this Paragraph. Such reimbursement shall be paid at a rate of eight percent (8%) annually of the actual cost(s) of such installation, modification, or reinforcement.

ARTICLE IX: SYSTEM EMERGENCY

In the event of a System Emergency, as defined in 18 C.F.R. Part 292, Pacific may require Sellers to curtail its consumption of electricity purchased from Pacific in the same manner and to the same degree as other customers within the same customer class who do not own facilities for generating electricity.

ARTICLE X: OPERATION, PROTECTION, AND CONTROL

(A) Sellers' Property shall meet the requirements of all applicable state and local laws. Prior to commencement of generation, and at completion of any major changes, Sellers' Property shall be inspected and approved by the appropriate state and local officials.

(B) Sellers shall operate and maintain Sellers' Property in a safe manner and in accordance with the National Electric Safety Code currently in effect.

(C) Sellers may operate the Facility in parallel with Pacific's system, but subject at all times to Pacific's operating instructions and any and all other conditions established by Pacific in its sole discretion.

(D) Sellers shall operate the Facility in such a manner as not to affect adversely Pacific's system and to be compatible with Pacific's system voltage level, fluctuating voltage guidelines (Engineering Bulletin No. 02.14), and voltage regulation at the Point of Delivery during all times that Sellers' Facility is connected and operating in parallel with Pacific's system.

(E) Pacific may, upon one hundred eighty (180) days' notice to Sellers, change its nominal operating voltage level at the Point of Delivery, in which case Sellers shall modify Sellers' Interconnection Equipment as necessary to accommodate the modified nominal operating voltage level.

(F) Sellers shall remedy any demonstrated harmonic distortions on Pacific's system attributable to the operation of Sellers' Facility which result in objectionable service to Pacific's other customers. Should Sellers' actions to remedy such harmonic distortions be inadequate, Pacific may without liability disconnect Sellers' Facility from Pacific's system. During such period of disconnection, Pacific's obligation to make payments to Sellers shall be suspended.

(G) Sellers agree that in the event of and during a period of a shortage of energy or capacity on Pacific's system as declared by Pacific in its sole discretion, Sellers shall, at Pacific's request and within the limits of reasonable safety requirements as determined by Sellers, use their best efforts to provide requested energy or capacity, and shall, if necessary, delay any Scheduled Maintenance Periods.

(H) Sellers shall furnish and install on the Sellers' side of

the Point of Delivery a disconnect switch which shall be capable of fully disconnecting the Facility from Pacific's system. The disconnect switch shall be of the visible-break type in a metal enclosure which can be secured by a padlock and shall be accessible to Pacific's personnel at all times. Pacific shall have the right to disconnect the Facility from Pacific's system at the disconnect switch when necessary to maintain safe electrical operating conditions or, if in Pacific's sole judgment, the Facility at any time adversely affects Pacific's operation of its electrical system or the quality of Pacific's service to other customers.

ARTICLE XI: METERING

(A) Flows to Pacific shall be measured by meters to be equipped with detents so that the record of those flows will not be affected by flows to the facility. Flows to Sellers shall continue to be metered separately in accordance with the terms of the service agreement, if any, existing between the parties, and/or otherwise in accordance with tariffs filed and approved by the regulatory authority having jurisdiction.

(B) Pacific shall provide, install, own, and maintain meters to record flows to Pacific. Such meters shall be located at a mutually agreed upon designated location(s) and shall record and indicate the integrated demand for each sixty (60)-minute period, and shall also measure kWh. Pacific shall also provide, install, own, and maintain meters for measurement of reactive volt-ampere hours. Pacific may also, in its sole discretion, install additional metering devices at a location within Sellers' Facility, agreed upon by all parties, to enable Sellers to transmit information and data. All acquisition, installation, maintenance,

inspection, and testing costs relating to all metering devices installed to accommodate Sellers' generation shall be borne by Sellers.

(C) All meters and metering equipment shall be operated and maintained by Pacific at Sellers' expense, and shall be sealed by Pacific. The seal shall be broken only upon occasions when the meters are to be inspected, tested, or adjusted and representatives of both Pacific and Sellers shall be present upon such occasions. The metering equipment shall be inspected and tested periodically by Pacific and at other reasonable times upon request therefor by Sellers. Any metering equipment found to be defective or inaccurate by an error in registration of more than plus or minus two percent (2%), at light load or at heavy load, shall be repaired, readjusted, or replaced.

(D) If any of the inspections or tests provided for herein disclose an error exceeding two percent (2%), either fast or slow, proper correction, based upon the inaccuracy found, shall be made of previous readings for the period of three (3) months immediately preceding the removal of such meter from service for test, or from the time the meter was in service since last tested, but not exceeding three (3) months, in the amount the meter shall have been shown to be in error by such test. Any correction in billing resulting from a correction in the meter records shall be made in the next monthly bill rendered, and such correction, when made, shall constitute full adjustment of any claim between Sellers and Pacific arising out of such inaccuracy of metering equipment.

ARTICLE XII: LIABILITY AND INSURANCE

(A) Sellers agree to protect, indemnify, and hold harmless

Pacific, its directors, officers, employees, agents, and representatives, against and from any and all loss, claims, actions, or suits, including costs and attorneys' fees, for or on account of injury, bodily or otherwise, to, or death of, persons, or for damage to, or destruction of property belonging to Pacific or others, resulting from, or arising out of or in any way connected with the facilities on Sellers' side of the Point of Delivery, or Sellers' operation and/or maintenance, excepting only such injury or harm as may be caused solely by the fault or negligence of Pacific, its directors, officers, employees, agents, or representatives.

(B) Prior to connection of Sellers' generation to Pacific's system, Sellers shall secure and continuously carry, in an insurance company or companies acceptable to Pacific, insurance policies for bodily injury and property damage liability. Such insurance shall include: provisions or endorsements naming Pacific, its directors, officers and employees as additional insureds; provisions that such insurance is primary insurance with respect to the interest of Pacific and that any insurance maintained by Pacific is excess and not contributory insurance with the insurance required hereunder; cross-liability or severability of insurance interest clause; and provisions that such policies shall not be canceled or their limits of liability reduced without thirty (30) days' prior written notice to Pacific. A copy of each such insurance policy, certified as a true copy by an authorized representative of the issuing insurance company or, at the discretion of Pacific, in lieu thereof, a certificate in form satisfactory to Pacific certifying to the issuance of such insurance, shall be furnished to Pacific. Initial limits of liability for all requirements

under this Paragraph (B) shall be \$1,000,000 single limit, which limits may be required to be increased by Pacific's giving Sellers two years' notice. Such increase shall not exceed fifteen percent (15%) per year.

(C) Sellers shall obtain insurance acceptable to Pacific against property damage or destruction in an amount not less than the cost of replacement of the Property. Sellers shall promptly notify Pacific of any loss or damage to the Property. Unless the parties agree otherwise, Sellers shall repair or replace the damaged or destroyed Property. Except as provided in paragraph (A) of this Article XII, Sellers agree to waive its insurers' rights of subrogation against Pacific regarding Facility property losses.

(D) Sellers shall provide Pacific copies of all insurance policies at the address listed in Article VI. This Agreement shall not become valid until all such copies have been received by Pacific.

ARTICLE XIII: LAND RIGHTS

Sellers hereby grant to Pacific for the term of this Agreement all necessary rights of way and easements to install, operate, maintain, replace, and remove Pacific's metering and other facilities necessary or useful to this Agreement, including adequate and continuing access rights on property of Sellers. Sellers shall execute such other grants, deeds or documents as Pacific may require to enable it to record such rights of way and easements. If any part of Pacific's facilities is installed on property owned by other than Sellers, Sellers shall, if Pacific is unable to do so without cost to Pacific, procure from the owners thereof all necessary permanent rights of way and easements for the construction,

operation, maintenance, and replacement of Pacific's facilities upon such property in a form satisfactory to Pacific. At Sellers' request, Pacific shall, to the extent it is legally able, acquire such rights of way at Sellers' cost.

ARTICLE XIV: COMMUNICATIONS

Sellers shall at its expense maintain appropriate communication facilities, as determined by Pacific, with Pacific's dispatcher.

ARTICLE XV: MAINTENANCE

(A) Sellers may shut down the Facility for Scheduled Maintenance Periods not to exceed thirty (30) days each Contract Year at such times as are approved in advance by Pacific. Sellers shall propose to Pacific Scheduled Maintenance Periods for each Contract Year by the preceding February 1, and within sixty (60) days of Pacific's receipt of such proposal, Pacific shall inform Sellers of the acceptability or unacceptability of the proposed periods.

(B) In the event the Facility must be shut down for unscheduled maintenance, Sellers shall notify Pacific immediately of the necessity of such shutdown, the time when such shutdown has occurred, or will occur, and the anticipated duration of such shutdown. Sellers shall take all reasonable measures and exercise its best efforts to avoid unscheduled maintenance and to limit the duration of such shutdowns.

ARTICLE XVI: CONTINUITY OF SERVICE

Pacific may require Sellers to curtail, interrupt, or reduce deliveries of energy or capacity in order to construct, install, maintain,

repair, replace, remove, investigate, or inspect any of Pacific's equipment or any part of its system reasonably related to Sellers' facility or if Pacific determines that curtailment, interruption, or reduction is necessary because of emergencies, operating conditions on its system, or as otherwise required by prudent electrical practices. In such circumstances, Pacific shall not be obligated to accept deliveries of energy or capacity hereunder. Pacific shall use its best efforts to keep all curtailments, interruptions, or reductions to a minimum and shall attempt to coordinate with Sellers all such curtailments, interruptions, or reductions.

ARTICLE XVII: QUALIFYING FACILITY STATUS

Sellers covenant that the Facility is and shall continue to be a "qualifying facility," as that term is used and defined in 18 C.F.R., Part 292, for the term of this Agreement. Pacific may, in its discretion, require certification by the Federal Energy Regulatory Commission of qualifying status under 18 C.F.R. Part 292.207(b) (1981).

ARTICLE XVIII: FORCE MAJEURE

As used in this Agreement, "Force Majeure" means unforeseeable causes beyond the reasonable control of and without the fault or negligence of the party claiming Force Majeure, and specifically excludes non-availability of fuel to operate Sellers' Facility. If either party is rendered wholly or partly unable to perform its obligations under this Agreement because of Force Majeure, that party shall be excused from whatever per-

formance is affected by the Force Majeure to the extent so affected, provided that:

(A) the non-performing party, within two weeks after the occurrence of the Force Majeure, give the other party written notice describing the particulars of the occurrence;

(B) the suspension of performance be of no greater scope and of no longer duration than is required by the Force Majeure;

(C) no obligations of either party which arose before the occurrence causing the suspension of performance be excused as a result of the occurrence, and

(D) the non-performing party use its best efforts to remedy its inability to perform.

ARTICLE XIX: JUDICIAL DISPUTE RESOLUTION

In case judicial suit or action is instituted in response to a breach of this Agreement, the costs, expenses, and attorneys' fees of the prevailing party at trial, on petition for review, and on appeal, shall be paid by the losing party.

ARTICLE XX: LIABILITY; DEDICATION

Nothing in this Agreement shall be construed to create any duty to, any standard of care with reference to, or any liability to any person not a party to this Agreement. No undertaking by one party to the other under any provision of this Agreement shall constitute the dedication of that party's system or any portion thereof to the other party or to the

public, nor affect the status of Pacific as an independent public utility corporation, or Sellers as independent individuals or entities.

ARTICLE XXI: SEVERAL OBLIGATIONS

Except where specifically stated in this Agreement to be otherwise, the duties, obligations, and liabilities of the parties are intended to be several and not joint or collective. Nothing contained in this Agreement shall ever be construed to create an association, trust, partnership, or joint venture or to impose a trust or partnership duty, obligation, or liability on or with regard to any party. Each party shall be individually and severally liable for its own obligations under this Agreement.

ARTICLE XXII: WAIVER

Any waiver at any time by any party of its rights with respect to a default under this Agreement, or with respect to any other matters arising in connection with this Agreement, shall not be deemed a waiver with respect to any subsequent default or other matter.

ARTICLE XXIII: CHOICE OF LAWS

This Agreement shall be construed and interpreted in accordance with the laws of the State of Oregon, excluding any choice of law rules which may direct the application of the laws of another jurisdiction.

ARTICLE XXIV: GOVERNMENTAL JURISDICTION AND AUTHORIZATION

(A) This Agreement is subject to the jurisdiction of those governmental agencies having control over either party or this Agreement.

This Agreement shall not become valid until all required governmental authorizations and permits are first obtained and copies thereof are submitted to Pacific.

(B) This Agreement shall not become effective until the Public Utility Commissioner of the State of Oregon or his delegate approves all terms and provisions hereof without change or condition and declares that all payments to be made hereunder shall be allowed as prudently incurred expenses for ratemaking purposes.

ARTICLE XXV: SUCCESSORS AND ASSIGNS

This Agreement and all of the terms and provisions hereof shall be binding upon and inure to the benefit of the respective successors and assigns of the parties hereto. Excepting assignments by Pacific to Bonneville Power Administration ("BPA") and assignment by Sellers for financing purposes, no assignment hereof by any party hereto shall become effective without the written consent of the others being first obtained and such consent shall not be unreasonably withheld. It is expressly recognized that any assignment by either Seller hereto shall not operate to discharge such Seller from any of its obligations hereunder, and that in the event of such Seller's assignment, Seller shall stand as surety to its assignee's performance. Nothing in this Agreement shall be construed as limiting or restricting Pacific's right to enter into arrangements with BPA whereby BPA acquires the output of the Facility or Pacific takes a billing or energy credit therefrom.

ARTICLE XXVI: MODIFICATION

No modification of this Agreement shall be effective unless it is

in writing and signed by both parties hereto.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed in their respective names as of the date first above written.

LACOMB IRRIGATION DISTRICT, SELLER

PACIFIC POWER & LIGHT COMPANY

By *Sam Bazel*
Title *Chairman*

By *W. L. Wilson*
Vice President

LACOMB HYDRO LTD., SELLER

By *R. Anthony Kugel*
Title *VP-Operations*

Guyon H. B. Rimmer Jr.
6.10.11.12.13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30.31.32.33.34.35.36.37.38.39.40.41.42.43.44.45.46.47.48.49.50.51.52.53.54.55.56.57.58.59.60.61.62.63.64.65.66.67.68.69.70.71.72.73.74.75.76.77.78.79.80.81.82.83.84.85.86.87.88.89.90.91.92.93.94.95.96.97.98.99.100.101.102.103.104.105.106.107.108.109.110.111.112.113.114.115.116.117.118.119.120.121.122.123.124.125.126.127.128.129.130.131.132.133.134.135.136.137.138.139.140.141.142.143.144.145.146.147.148.149.150.151.152.153.154.155.156.157.158.159.160.161.162.163.164.165.166.167.168.169.170.171.172.173.174.175.176.177.178.179.180.181.182.183.184.185.186.187.188.189.190.191.192.193.194.195.196.197.198.199.200.201.202.203.204.205.206.207.208.209.210.211.212.213.214.215.216.217.218.219.220.221.222.223.224.225.226.227.228.229.230.231.232.233.234.235.236.237.238.239.240.241.242.243.244.245.246.247.248.249.250.251.252.253.254.255.256.257.258.259.260.261.262.263.264.265.266.267.268.269.270.271.272.273.274.275.276.277.278.279.280.281.282.283.284.285.286.287.288.289.290.291.292.293.294.295.296.297.298.299.300.301.302.303.304.305.306.307.308.309.310.311.312.313.314.315.316.317.318.319.320.321.322.323.324.325.326.327.328.329.330.331.332.333.334.335.336.337.338.339.340.341.342.343.344.345.346.347.348.349.350.351.352.353.354.355.356.357.358.359.360.361.362.363.364.365.366.367.368.369.370.371.372.373.374.375.376.377.378.379.380.381.382.383.384.385.386.387.388.389.390.391.392.393.394.395.396.397.398.399.400.401.402.403.404.405.406.407.408.409.410.411.412.413.414.415.416.417.418.419.420.421.422.423.424.425.426.427.428.429.430.431.432.433.434.435.436.437.438.439.440.441.442.443.444.445.446.447.448.449.450.451.452.453.454.455.456.457.458.459.460.461.462.463.464.465.466.467.468.469.470.471.472.473.474.475.476.477.478.479.480.481.482.483.484.485.486.487.488.489.490.491.492.493.494.495.496.497.498.499.500.501.502.503.504.505.506.507.508.509.510.511.512.513.514.515.516.517.518.519.520.521.522.523.524.525.526.527.528.529.530.531.532.533.534.535.536.537.538.539.540.541.542.543.544.545.546.547.548.549.550.551.552.553.554.555.556.557.558.559.560.561.562.563.564.565.566.567.568.569.570.571.572.573.574.575.576.577.578.579.580.581.582.583.584.585.586.587.588.589.590.591.592.593.594.595.596.597.598.599.600.601.602.603.604.605.606.607.608.609.610.611.612.613.614.615.616.617.618.619.620.621.622.623.624.625.626.627.628.629.630.631.632.633.634.635.636.637.638.639.640.641.642.643.644.645.646.647.648.649.650.651.652.653.654.655.656.657.658.659.660.661.662.663.664.665.666.667.668.669.670.671.672.673.674.675.676.677.678.679.680.681.682.683.684.685.686.687.688.689.690.691.692.693.694.695.696.697.698.699.700.701.702.703.704.705.706.707.708.709.710.711.712.713.714.715.716.717.718.719.720.721.722.723.724.725.726.727.728.729.730.731.732.733.734.735.736.737.738.739.740.741.742.743.744.745.746.747.748.749.750.751.752.753.754.755.756.757.758.759.760.761.762.763.764.765.766.767.768.769.770.771.772.773.774.775.776.777.778.779.780.781.782.783.784.785.786.787.788.789.790.791.792.793.794.795.796.797.798.799.800.801.802.803.804.805.806.807.808.809.810.811.812.813.814.815.816.817.818.819.820.821.822.823.824.825.826.827.828.829.830.831.832.833.834.835.836.837.838.839.840.841.842.843.844.845.846.847.848.849.850.851.852.853.854.855.856.857.858.859.860.861.862.863.864.865.866.867.868.869.870.871.872.873.874.875.876.877.878.879.880.881.882.883.884.885.886.887.888.889.890.891.892.893.894.895.896.897.898.899.900.901.902.903.904.905.906.907.908.909.910.911.912.913.914.915.916.917.918.919.920.921.922.923.924.925.926.927.928.929.930.931.932.933.934.935.936.937.938.939.940.941.942.943.944.945.946.947.948.949.950.951.952.953.954.955.956.957.958.959.960.961.962.963.964.965.966.967.968.969.970.971.972.973.974.975.976.977.978.979.980.981.982.983.984.985.986.987.988.989.990.991.992.993.994.995.996.997.998.999.1000.1001.1002.1003.1004.1005.1006.1007.1008.1009.1010.1011.1012.1013.1014.1015.1016.1017.1018.1019.1020.1021.1022.1023.1024.1025.1026.1027.1028.1029.1030.1031.1032.1033.1034.1035.1036.1037.1038.1039.1040.1041.1042.1043.1044.1045.1046.1047.1048.1049.1050.1051.1052.1053.1054.1055.1056.1057.1058.1059.1060.1061.1062.1063.1064.1065.1066.1067.1068.1069.1070.1071.1072.1073.1074.1075.1076.1077.1078.1079.1080.1081.1082.1083.1084.1085.1086.1087.1088.1089.1090.1091.1092.1093.1094.1095.1096.1097.1098.1099.1100.1101.1102.1103.1104.1105.1106.1107.1108.1109.1110.1111.1112.1113.1114.1115.1116.1117.1118.1119.1120.1121.1122.1123.1124.1125.1126.1127.1128.1129.1130.1131.1132.1133.1134.1135.1136.1137.1138.1139.1140.1141.1142.1143.1144.1145.1146.1147.1148.1149.1150.1151.1152.1153.1154.1155.1156.1157.1158.1159.1160.1161.1162.1163.1164.1165.1166.1167.1168.1169.1170.1171.1172.1173.1174.1175.1176.1177.1178.1179.1180.1181.1182.1183.1184.1185.1186.1187.1188.1189.1190.1191.1192.1193.1194.1195.1196.1197.1198.1199.1200.1201.1202.1203.1204.1205.1206.1207.1208.1209.1210.1211.1212.1213.1214.1215.1216.1217.1218.1219.1220.1221.1222.1223.1224.122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GREGORY HYDRO RESOURCES, INC.
4800 S.W. Griffith Drive
Beaverton, OR 97005

RECEIVED
MAR 24 1983
WATER RESOURCES DEPT.
SALEM, OREGON

March 22, 1983

Don Buell
Water Resources Department
Mill Creek Office Park
555 13th Street, N.E.
Salem, OR 97310

RE: H-447--LACOMB HYDRO POWER APPLICATION

Dear Don:

Enclosed is a copy of a resolution of Lacombe Irrigation District authorizing the filing of a joint application with Gregory Hydro Resources, Inc. I understand there were previous official actions along these lines by the District, but this one seems the most direct and responsive to the application requirements.

Very truly yours,



Dallas A. Marckx

DAM/rt

Enclosure

RECEIVED

MAR 24 1983

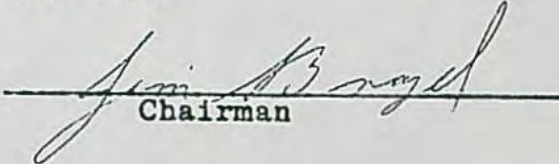
WATER RESOURCES DEPT.
SALEM, OREGON

RESOLUTION

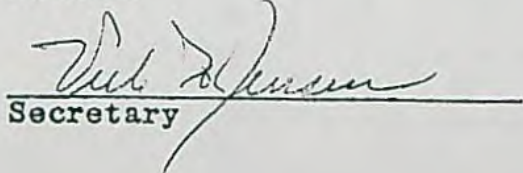
At the regular meeting of the Board of Directors of
Lacomb Irrigation District, a Municipal Corporation, held
on March 8, 1983 at 7:30 p.m. at the Verle Jensen residence,
Lacomb, Oregon, the following Resolution was duly moved,
seconded and passed by unanimous vote:

"BE IT RESOLVED that Lacomb Irrigation District
jointly file with Gregory Hydro Resources, Inc. an
application to the Oregon Water Resources Department
for additional water totaling 65 CFS and for the
immediate financing and development by Gregory of
the hydropower project on Crabtree Creek in accordance
with the contract between the District and Gregory
dated September 2, 1982."

DATED this 8th day of March, 1983.


Chairman

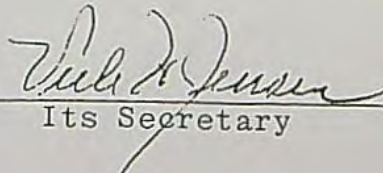
ATTEST:


Secretary

Certified a True Copy

LACOMB IRRIGATION DISTRICT

By:


Its Secretary



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-3671
or
1-800-452-7813
(message line)

February 22, 1983

Dallas A. Marckx
Gregory Hydro Resources, Inc.
4800 SW Griffith Drive
Beaverton, OR 97005

RE: Lacombe Hydroelectric Project - Application 60823

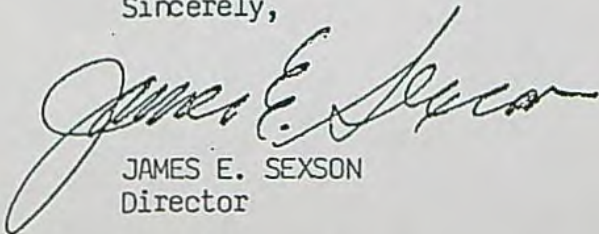
Dear Mr. Marckx,

I concur with your analysis that another hearing on Application 60823 by the Water Policy Review Board would not be warranted by the increased flow rate since the Board addressed the flow to remain in Crabtree Creek at the original hearing.

It is not possible to effect a transfer of priority date from ORS 537 to ORS 543. Therefore, the priority date for the proposed project will be the date we receive an application under 543 from Gregory Hydro Resources. One appropriate step would be for Gregory Hydro Resources to submit a license application under ORS 543 for the project described in Application 60823, wait six months as required by statute and then we could process the application.

I have instructed my staff to begin the process of developing more detailed guidelines to be adopted as hydroelectric administrative rules and I would welcome your participation and comments once draft rules have been developed.

Sincerely,



JAMES E. SEXSON
Director

JES:jt

cc: Nancy Nakata

bcc: Don Buell
51198

GREGORY HYDRO RESOURCES, INC.
4800 S.W. Griffith Drive
Beaverton, OR 97005

February 14, 1983

James E. Sexson, Director
Oregon Water Resources Department
Mill Creek Office Park
555 13th Street, N.E.
Salem, OR 97310

RE: LACOMB HYDROELECTRIC PROJECT -- APPLICATION 60823

Dear Mr. Sexson:

This letter responds to your letter dated January 19, 1983 to Lacombe Irrigation District, the letter dated January 7, 1983 from Assistant Attorney General Nancy Nakata and our meeting on February 4, 1983 in your office.

The Lacombe Irrigation District first applied for water rights in the amount of 45 cfs. The application was followed by a hearing before the Water Policy Review Board which led to approval of the application on May 8, 1981. On August 5, 1982, the application was amended by Lacombe (alone) to increase the amount of water to 65 cfs. All applications, of course, represented current intentions at the time. The development agreement with Gregory Hydro Resources, Inc. was then signed on September 16, 1982.

Lacombe had considered a variety of financing alternatives over the previous year and apparently believed its interests were best served by a proposal from Gregory Hydro Resources, Inc., a local corporation organized for the purpose of financing small Oregon hydroelectric projects. All parties have viewed the Gregory arrangement as a financing. Lacombe shares in the net income for a period of time and would own the project in all respects at the end of that period. For some projects, the reduced cost of a private financing is responsible for their economic viability. Revenues accruing to an irrigation district through such an arrangement can be earmarked for system improvements. I understand this is the intention of Lacombe Irrigation District.

Nancy Nakata's letter raises numerous questions about the effect of private involvement in a public project. An example is the significance of who has title to a project. I have worked on financings, particularly lease financings, where "title" to property is unimportant. Rulings have been given by the Federal Power Commission, the Internal Revenue Service

James E. Sexson
Page Two
February 14, 1983

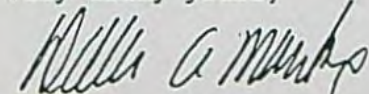
and the Oregon Public Utility Commission to this effect. Those agencies have developed guidelines (quite extensive in some cases) as to the significance in their particular regulatory scheme of title and ownership. Although I would be delighted to work with your staff in drafting guidelines in this area, they will obviously not be available to assist applicants now and in the near future.

However, Lacombe Irrigation District has special circumstances and problems resulting from your January 19, 1983 letter that may be possible to deal with. Timing has become a very severe problem. To reapply under ORS 543 would require the passage of six additional months. See ORS 543.220(2). The cumulative application filed for the project through and including the August 5, 1982 amendment contains far more information about the project than is normally required for an application for a preliminary permit. It seems to me that the August 5, 1982 date can be preserved as the date of filing for the preliminary permit, particularly since the applicant did not have the benefit of any guidelines as to the effect of different types of private involvement. From a substantive point of view, the review of the amended application would probably not have been altered by reference to a different statute.

As for the hearing requirement for the Lacombe project, I refer to the internal memorandum dated October 1, 1982 from Tom Kline to you. While the requested increase in flow rate would appear significant in the abstract, it does not raise issues that have not already been heard. When Gregory Hydro Resources, Inc. was not involved, it was the staff's recommendation not to hold further hearings. The mere change in name of the applicant (under Ms. Nakata's reasoning) would not require a hearing since the objectives of a hearing under ORS 537 are the same as for a hearing under ORS 543.

We ask that you give this matter your earliest consideration. Given very short notice, Dr. Larry Slotka and/or I could meet with you or your staff to provide additional information or analysis on the issues.

Very truly yours,



Dallas A. Marckx
Attorney at Law

DAM/rt

GREGORY HYDRO RESOURCES, INC.
4800 S.W. Griffith Drive
Beaverton, OR 97005

February 14, 1983

James E. Sexson, Director
Oregon Water Resources Department
Mill Creek Office Park
555 13th Street, N.E.
Salem, OR 97310

RE: LACOMB HYDROELECTRIC PROJECT -- APPLICATION 60823

Dear Mr. Sexson:

This letter responds to your letter dated January 19, 1983 to Lacombe Irrigation District, the letter dated January 7, 1983 from Assistant Attorney General Nancy Nakata and our meeting on February 4, 1983 in your office.

The Lacombe Irrigation District first applied for water rights in the amount of 45 cfs. The application was followed by a hearing before the Water Policy Review Board which led to approval of the application on May 8, 1981. On August 5, 1982, the application was amended by Lacombe (alone) to increase the amount of water to 65 cfs. All applications, of course, represented current intentions at the time. The development agreement with Gregory Hydro Resources, Inc. was then signed on September 16, 1982.

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James E. Sexson
Page Two
February 14, 1983

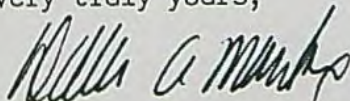
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We ask that you give this matter your earliest consideration. Given very short notice, Dr. Larry Slotta and/or I could meet with you or your staff to provide additional information or analysis on the issues.

Very truly yours,



Dallas A. Marckx
Attorney at Law

DAM/rt

RECEIVED

FEB 8 1983

WATER RESOURCES DEPT.
SALEM, OREGON

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Lacomb Irrigation District) Project No. 6648-000

NOTICE SUSPENDING 120-DAY PERIOD FOR ACTION
ON SMALL HYDRO EXEMPTION

(January 28, 1983)

Lacomb Irrigation District has filed an application for exemption for the proposed Lacomb Hydropower Project No. 6648-000, located on the Crabtree Creek in Linn County, Oregon. The application was filed pursuant to Section 408 of the Energy Security Act of 1980 and Section 4.101 et seq. of the Commission's regulations.

Having determined that additional time is necessary for action on the application in order to insure full consideration of all information and comments that have been received, the 120-day period for Commission action is suspended until March 31, 1983 pursuant to Section 4.105(b)(5) (iv).

By direction of the Commission.

(S E A L)

Kenneth F. Plumb,
Secretary.

DC-A-37

6648
60823

RECEIVED

11/14/88
WATER RESOURCES DEPT.
Salem, OR

FEDERAL ENERGY
REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
FEDERAL ENERGY
REGULATORY COMMISSION
FERC 351



Water Resources Dept.
Mill Creek Office Park
555-13th Street, NE
Salem, OR 97310

P-6648

RECEIVED

JAN 28 1983

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

WATER RESOURCES DEPT.
SALEM, OREGON

Lacomb Irrigation District)

Project No. 6648-000

NOTICE GRANTING LATE INTERVENTION

(January 19, 1983)

An untimely petition to intervene has been filed by the following petitioner:

National Marine Fisheries Service

This petition has been filed with respect to the application set forth below:

Crabtree Creek

Project No. 6648-000

The petitioner has legitimate interests under the law which are not adequately represented by other parties. Granting the intervention will not cause a delay nor prejudice any other party. Good cause exists for granting the late intervention. It appears to be in the public interest to allow the petitioner to appear in this proceeding.

Pursuant to §375.302 of the Commission's regulations (18 C.F.R. §375.302 (1982)), the petitioner is permitted to intervene in this proceeding subject to the Commission's rules and regulations under the Federal Power Act (16 U.S.C. §§791(a) - 825(r)). Participation of the intervenor shall be limited to matters set forth in its petition to intervene. The admission of the intervenor shall not be construed as recognition by the Commission that it might be aggrieved by any order entered in this proceeding.

Kenneth F. Plumb
Secretary

DC-A-29

6648
60823

FEDERAL ENERGY
REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

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REGULATORY COMMISSION
FERC 351



Water Resources Dept. P-6648
Mill Creek Office Park
555-13th Street, NE
Salem, OR 97310



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-2892 or
1-800-452-7813
(message line)

January 19, 1983

Lacomb Irrigation District
41358 Lacomb Drive
Lebanon, Oregon 97355

REFERENCE: Application 60823, Lacomb Hydropower Project

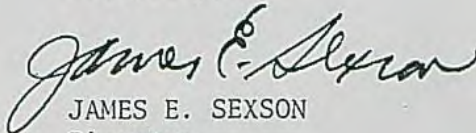
I have been advised by the Department of Justice that I cannot issue a permit for your project under your Application 60823. I am enclosing a copy of the Assistant Attorney General's letter.

To pursue this project, you should request withdrawal of Application 60823 by letter and submit a new application for a major hydroelectric license under ORS Chapter 543 following the Assistant Attorney General's advice. An application form and copy of our administrative rules are enclosed for your convenience.

I have also been advised that a second public hearing must be held as required by ORS 543.225 if the intended project is to be developed as described by Lacomb Irrigation District's amended application for 65 cubic feet per second of water.

Further information on filing the application can be obtained by contacting Don Buell of my staff at 378-8507 or toll free at 1-800-452-7813.

Sincerely,



JAMES E. SEXSON
Director

JES:lcj

cc: Gregory Hydro Resources, Inc.
Dr. Larry Slotta, P.E.

378-2982
or
1-800-452-7813
(message line)

December 7, 1982

Nancy Nakata
Assistant Attorney General
Justice Building
Salem, Oregon 97310

Dear Ms. Nakata:

Two recent hydropower applications have presented questions on which I must seek your counsel.

First, on September 29, 1980, the Lacombe Irrigation District filed Application 60823 for a permit to appropriate 65 cubic feet per second to generate electricity. As an exempt municipal corporation, the district, which planned to contract for the construction of the project and operate it itself, filed the application for a water right permit under ORS Chapter 537. The application was referred to the Water Policy Review Board under ORS 537.170, hearings were held and the Board determined that the proposed project was not detrimental to the public interest.

Prior to issuance of the water right permit, the applicant changed arrangements regarding construction and control of the project. On September 16, 1982, the District entered into an agreement with Gregory Hydro Resources for development of the project. The agreement stipulates that ownership of the hydroelectric facilities shall be in the name of Gregory Hydro Resources and the applicant will have a buy out option at the end of 20 years.

In the second instance, on October 29, 1980, the Winchester Water Control District, as an exempt municipal corporation, filed Application 60952 for a water right permit to appropriate 4700 cubic feet per second to generate electricity. The applicant has not yet fully complied with the rules for completion but is anxious to proceed with public hearings and the Board's consideration. During the course of its investigations and prior to completing plans, the district, on July 1, 1982, entered into an agreement with Elektra Power Corporation to plan and develop the project. According to the agreement, the district grants Elektra use of the dam and all appurtenances for a period of 16 years and assigns all rights necessary to completion of the project. In addition, the district has granted Elektra an easement in gross for the terms of the agreement.

I need your advice as to whether such contractual release of control of their property rights and the projects to private developers allows these two applicants to complete the water right applications under CRS Chapter 537 or should the projects being developed by a non-municipal party be filed for under CRS Chapter 543?

Would you please advise me on the proper procedures on handling these and other such applications for hydroelectric projects. There are likely to be additional applications for projects with similar contractual agreements.

Copies of the applications and agreements are enclosed. These applications require my immediate consideration, so your earliest response would be very much appreciated.

Sincerely,

JAMES E. SEXSON
Director

JES:wp
cc: Water Policy Review Board
Pat Amedeo

3847B



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
570 NW Van Buren Street, P.O. Box 1376, Corvallis, OR 97339

TEL (503) 754-0255

November 2, 1982

Oregon Water Resources Department
Mill Creek Office Park
555 13th Street NE
Salem, OR 97310

Attention: Don Buell

Reference: Lacombe Hydropower Project

Dear Colleagues:

This is to give you some information regarding the progress of the Lacombe Irrigation District's hydropower project.

Financing for this promising project has been arranged through Gregory Hydro Resources, Inc. A copy of the agreement between the Lacombe Irrigation District and Gregory Hydro Resources, Inc. is enclosed for your consideration. During the 20-year term agreement the project will be operated as Lacombe Hydro, Ltd. This cooperative development is essentially the result of the financing opportunity the District elected to accept. After twenty years the project will be operated solely by the Lacombe Irrigation District.

We would be pleased to answer your questions regarding this cooperative project. Also, Mr. R. Anthony Reyneke, Vice President of Operations, Gregory Hydro Resources, Inc., could confirm the working relationship his firm has with the Lacombe Irrigation District. He can be reached by writing to 4800 SW Griffith Drive, Beaverton, OR 97005, or by calling (503) 644-8004.

Overall the project is progressing satisfactorily. The FERC exemption for this project is under consideration. Accordingly, we have had several encouraging meetings with resource agencies concerned with the fish passage aspects of the diversion and powerhouse designs. We believe our most recent designs will satisfactorily meet the agencies' requirements. We have requested turbine equipment bids for review on December 10th, as we expect construction to start in early 1983.

Can we expect the Lacombe Irrigation District to receive the OWRD water permit this month, designating 65 cfs for hydropower development on Crabtree Creek? Your early response will be appreciated.

Sincerely,
SLOTTA ENGINEERING ASSOCIATES, INCORPORATED

A handwritten signature in blue ink, reading "Larry S. Slotta".

Larry S. Slotta, Ph.D., P.E.

AGREEMENT

THIS AGREEMENT is entered into as of September 16, 1982, between the Lacombe Irrigation District, an Oregon Municipal Irrigation District (hereinafter referred to as "District") and Gregory Hydro Resources, Inc., an Oregon Corporation (hereinafter referred to as "Gregory").

WHEREAS, the District intends to develop on its existing irrigation system the Lacombe hydroelectric project (hereinafter referred to as the "Project"), which is expected to have a nameplate capacity of approximately 962 kilowatts and produce approximately 5,560,000 kilowatt-hours annually based on historical waterflow data;

WHEREAS, the District has engaged the services of Slotta Engineering Associates, Incorporated, who has developed a preliminary feasibility study for the Project;

WHEREAS, the District believes that the necessary water rights and hydroelectric permits (or exemptions) for the Project have been or can be obtained;

WHEREAS, Gregory has made a proposal to the District under which Gregory would own the hydroelectric facilities associated with the Project and necessary property rights, and would have the use of power generation water rights, necessary for the operation of the Project, and

WHEREAS, Gregory and the District believe that an acceptable power sales contract for sale of power from the Project can be executed within 60 days with Pacific Power & Light Company on a thirty-five (35) year levelized basis.

THEREFORE, in consideration of the mutual promises contained herein, the District and Gregory agree as follows:

1. Project Development

(a) Gregory shall cause to be acquired such rights with respect to the Lacombe site (including, without limitation, fee interests, leaseholds easements, and water rights) as are, in the determination of Gregory, adequate for the development of such site into a power facility. It is understood that no commercial commitment for construction of the project shall be commenced without Gregory first securing the necessary water rights, all other necessary state, federal and county permits, licenses, entitlements and approvals and an acceptable power sales contract. The District shall support Gregory's efforts to obtain all such items. In the event such support would cause the District any additional charge, Gregory will reimburse such to the District from construction funding.

(b) Gregory, at its sole cost and expense, shall have responsibility for the orderly development of the site into a power facility, including, but not limited to, determination of (a) the prices to be paid, (b) the engineers to prepare the construction documents and supervise construction on any development site, and (c) the contractors or subcontractors to be used to perform any construction, installation or other services required to develop the site into a power facility. Gregory shall submit preliminary and final designs for the

project to the District for review and consultation. Such designs shall be adequate to provide for the production of power throughout the term of the Agreement and shall safeguard the irrigation system.

2. Construction Management

Gregory, at its sole cost and expense, will be responsible for the performance of all work as Gregory may deem appropriate for the completion of the power project in accordance with the construction documents including the securing of bids or quotations for materials, prices and subcontracts for the project work, establishing a work project schedule on which the power facility will be expedited consistent with reasonable cost, good workmanship, and safety; arranging for the engineer to provide the necessary inspections as required including the checking and approval of shop drawings, samples, schedules and other submittals for compliance with the design concept of the construction documents; and reviewing all laboratory tests and preparing change orders and issuing certificates of substantial compliance. The District shall have the right to review and inspect the facility construction to assure the designs are compatible with the District's irrigation system and operations.

3. Operation and Maintenance

Gregory shall operate and maintain the power facility developed under this Agreement in accordance with such practices and methods as are commonly used in the hydroelectric generating industry, and shall operate and maintain electrical equipment and other project works with safety, dependability, efficiency, and economy in accordance with all applicable laws and regulations. Gregory shall further cause the power facility and all access roads, wires and related facilities that make up the project to be maintained in a good and workmanlike manner. Gregory may contract the maintenance of the power facility to the District, however, Gregory shall retain the right to review the performance of the contract and to replace District personnel if it is in the best interest of maintaining the facility.

4. Financing

Gregory shall negotiate for and obtain all funds necessary to develop the site into a power facility.

5. Sale of Electrical Power

A condition of this agreement is the signing of a long term power contract (35 years) with Pacific Power & Light Company within the next 60 days and the necessary property easements have been obtained. No funds will be advanced by Gregory until a signed power sales contract acceptable to Gregory has been obtained.

6. Power Production and Gross Revenue

Gregory shall cause power production and gross revenue statements, in a form satisfactory to the District, for the power facilities to be prepared at least quarterly, copies of which shall be provided to the District within 10 working days following the end of the quarter. The District reserves, at its expense, the right to review or audit the statement and accounts relating to the power facilities.

7. Insurance

(a) Gregory will cause to be acquired and maintained with respect to the power facility and its operations, insurance of such types and in such amounts as are usual in the industry. The District shall be named additional assured to the extent of its insurable interest in the project(s) on each and every such policy of insurance.

8. Indemnity

Gregory shall, at its sole cost, expense and responsibility, defend, indemnify, and hold the District harmless from any damage, claims or construction liens arising from Gregory's activities pursuant to this Agreement, except to the extent due to the negligent or willful acts or omissions by the District.

9. Treatment of Proprietary Information

To the extent legally possible, all books, records, reports, accounts, data and other information relating to the business of the project shall be treated as confidential by the District, and the District shall take or cause to be taken such reasonable precautions as may be necessary to prevent the disclosure thereof, except with the written consent of Gregory or as otherwise required by applicable laws or regulations.

10. Possessory Interest Taxation Notice

The parties acknowledge that this Agreement may create possessory interests subject to property taxation and that Gregory may be subject to payment of property taxes levied on such interests.

11. Taxes and Liens

In addition to all other payments herein provided to be made by Gregory, Gregory will pay and discharge promptly all taxes, assessments and other governmental charges or levies imposed upon it or upon its income or upon any of its property, real, personal, or mixed, upon any other property thereof including the premises and facilities attached as part of the development of the hydropower pursuant to this Agreement as well as all claims of any kind which if unpaid might by law become a lien or charge upon the property.

12. Binding on Successors

The covenants and conditions herein contained shall apply to and bind the heirs, successors, executors, administrators, and assigns of the parties hereto.

13. Financial Obligations

Any and all fees, costs, and expenses incurred pursuant to this Agreement shall be the sole responsibility of Gregory. The District shall have no obligation or responsibility to assume any of the financial cost associated with this Agreement. The pre-construction costs identified on Schedule B, which is attached and made a part of this Agreement, shall be reimbursed to the District within 30 days of the receipt of an acceptable power sales contract from Pacific Power & Light Company.

14. Compensation

Upon commencement of commercial operation of the Project, Gregory shall pay to the District as full compensation for Gregory's use of the District's water rights for purposes

of power generation and for Gregory's use of the District's associated property and property rights, fifty (50) percent of the annual net revenues from the sale of power from the Project. Interim monthly payments by Gregory to the District shall commence in the month following the first month of the commercial operation of the Project. Such interim monthly payments for sales made during any power year shall be based on monthly gross revenues from power sales and the percentage factors shown in Schedule A. Any income adjustment to reflect final and full compensation for Gregory's use of the said water and property rights shall be made annually on October 31. Any resulting income adjustment, with interest, shall be payable to the District or Gregory, as the case may be, within thirty (30) days. Interest on the income adjustment shall accrue from October 31, at the three-month United States Treasury Bill rate in effect on that October 31.

15. Definition of Net Revenues

Net revenues for the power year shall be computed as the difference between all revenues received from the sale of power from the Project, and all operating outlays including, without limitation, total debt service (including principal and interest), costs of operation, maintenance, transmission and wheeling of power, and ad valorem and water taxes, if any, incurred or accrued for that period. Payments to the District shall be made as specified in Paragraph 14.

16. Buy Out

Commencing twenty (20) years after commencement of commercial operation of the Project, the District shall have the option to purchase the Project for three-hundred fifty thousand dollars (\$350,000). Alternatively, this agreement can be extended on a year to year basis. The District may purchase the project on a deferred basis including interest at the prime rate in effect at the time of purchase. If the District elects to defer payments, payments on the outstanding balance will be paid from electrical revenues at a rate of 25% of gross revenues until the balance is paid in full. Nothing in this Agreement shall prevent Gregory and the District from negotiating and agreeing to convey the Project to the District upon terms or at any time different from those stated herein.

17. Project Costs

Any and all costs actually and reasonably incurred in connection with the Project prior to commencement of its commercial operation shall be charged to the Project as a capital or development cost and shall be subsequently dispersed from construction funding. Such costs include, but are not limited to, the costs of engineering, feasibility and preliminary engineering studies, letting of bids, equipment, labor, attorneys' and consultants' fees and such costs and fees as are identified on Schedule B, attached hereto and incorporated by reference herein. The District and Gregory shall each provide access to the other, and shall permit the other to audit any books, accounts and records maintained by the other, which account for any and all costs associated with the Project and any and all revenues from the sale of power from the Project.

18. Termination

(a) This agreement shall be terminated on the part of the District or Gregory, or between them, if, despite the best efforts of the District and Gregory:

(i) All necessary permits and licenses (or exemptions) for construction and/or operation of the Project have not been obtained by February 1, 1983; or

(ii) The Project becomes demonstrably infeasible from an engineering, environmental, legal, tax or economic standpoint before January 1, 1983, provided, however, the District and Gregory may mutually agree to continue joint development of the Project if any of the above conditions occur.

(b) If such termination occurs, the District shall have the right to proceed to develop the project on its own or with another person. Upon the request of the District after termination, Gregory shall assign or transfer to the District such property, permits and licenses as may be desired by the District. Upon termination, neither party shall have any obligation or liability to the other except that should the Project be built in the future, Gregory shall be reimbursed for all its advances plus interest.

19. Financing Fees

Upon completion of Project financing Gregory shall be paid a fee of ten percent of the Project cost, but in no event less than \$150,000 plus printing and legal fees not to exceed \$25,000, which shall be paid from the proceeds of syndication. Such fee shall be paid in addition to any reimbursement of advances mutually agreed upon, including advances described in Schedule B, plus interest at Gregory's actual cost of short-term funds used to provide such advances, made by Gregory for the benefit of the Project. Any fees or repayment for internal expenses incurred by Gregory in the course of managing and operating the Project following commencement of commercial operation of the Project, shall not be considered to be operating costs offsetting the net revenues to be paid to the District, as specified by Paragraph 15 of this Agreement.

20. Notice

All notices required or permitted to be given under this Agreement shall be in writing and shall be personally delivered or mailed, postage prepaid, certified mail, return receipt requested to the parties at the following addresses:

(i) If to the District:
Lacomb Irrigation District
41358 Lacomb Dr.
Lebanon, OR 97355
ATTN: Verle Jensen

(ii) If to Gregory:
Gregory Hydro Resources, Inc.
4800 S. W. Griffith Drive
Beaverton, Oregon 97005
ATTN: R. Anthony Reyneke

or at such other address as either party may specify or by written notice to the other.

21. Assignment

But for the purpose of obtaining financing, including but not limited to debt placement, leverage lease financing, etc., on this project, neither party may assign its interest in this Agreement without the written consent of the other party. Such consent may not be unreasonably withheld.

22. Ownership

Ownership of the hydroelectric facilities which are the subject of this Agreement shall be in the name of Gregory Hydro Resources Inc., or its assignee, for the term of this Agreement. Upon exercise of the buy out option described in paragraph 16 above, all facilities, rights and privileges shall be conveyed by Gregory or its assignee to the District.

The District shall grant, convey or provide (a) such property interest (including power generation water rights, easements and leases) and (b) support services (including access to utilities) as are necessary to Gregory, for the purpose of construction and operation of the Project under the terms stated herein; provided, however, that said grant, conveyance or provision of said property interests and support services shall not interfere with or encumber the normal operation of the District's irrigation system. Any and all such assignments, grants, or conveyances shall be accomplished in a manner designed to protect and preserve the tax-exempt status of the District; to comply with the regulations set forth by the Federal Energy Regulatory Commission (FERC) and to comply with those conditions established by the Water Policy Review Board of the State of Oregon and with any and all other Federal, State, or local regulations or statutes governing the District and the Project.

23. Miscellaneous

(a) Except as otherwise specifically provided herein, no party hereto shall have the right to obligate any other party for any liabilities arising from any transactions contemplated by the Agreement.

(b) This Agreement constitutes the entire Agreement of the party.

(c) The failure of any party to this Agreement to insist upon the strict performance of any provision hereof or to exercise any right, power or remedy consequent upon a breach thereof shall not constitute a waiver by said party of any such provision or other provision or breach of any subsequent breach of the same of any other provision.

(d) If any provision of this Agreement or any application thereof shall be determined to be invalid or unenforceable, the remainder of this Agreement and any other application of such provision shall not be affected thereof, and shall remain in full force and effect.

(e) This Agreement shall be governed by and construed in accordance with the laws of the State of Oregon.

(f) District shall provide Gregory with notarized copies of all resolutions of the District necessary to

authorize the execution of this Agreement and other actions contemplated hereunder.

(g) This Agreement may only be modified by a document in writing executed by both parties.

(h) This Agreement may be executed in counterparts, each of which shall be identical and shall be deemed an original for all purposes.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed this 16th day of September, 1982.

LACOMB IRRIGATION DISTRICT

By [Signature]

Title PRES

ATTEST:

By [Signature]

Title Sec.

GREGORY HYDRO RESOURCES, INC.

By R. Anthony Regal

Title VP - Operations

ATTEST:

By [Signature]

Title Secretary

SCHEDULE A

Schedule of percentages to determine interim monthly payments to the district:

<u>Year of Operation</u>	<u>% of Gross Payment</u>
1	5%
2	7.5%
3-10	10%
11-20	20%

NOTE: As described in Paragraph 14 of the Agreement the difference between 50% of the net revenue and the payments generated from the above schedule will be determined at each October 31 and the difference will be paid to the appropriate party plus interest.

SCHEDULE B

Reimbursable development costs of Project prior to construction funding:

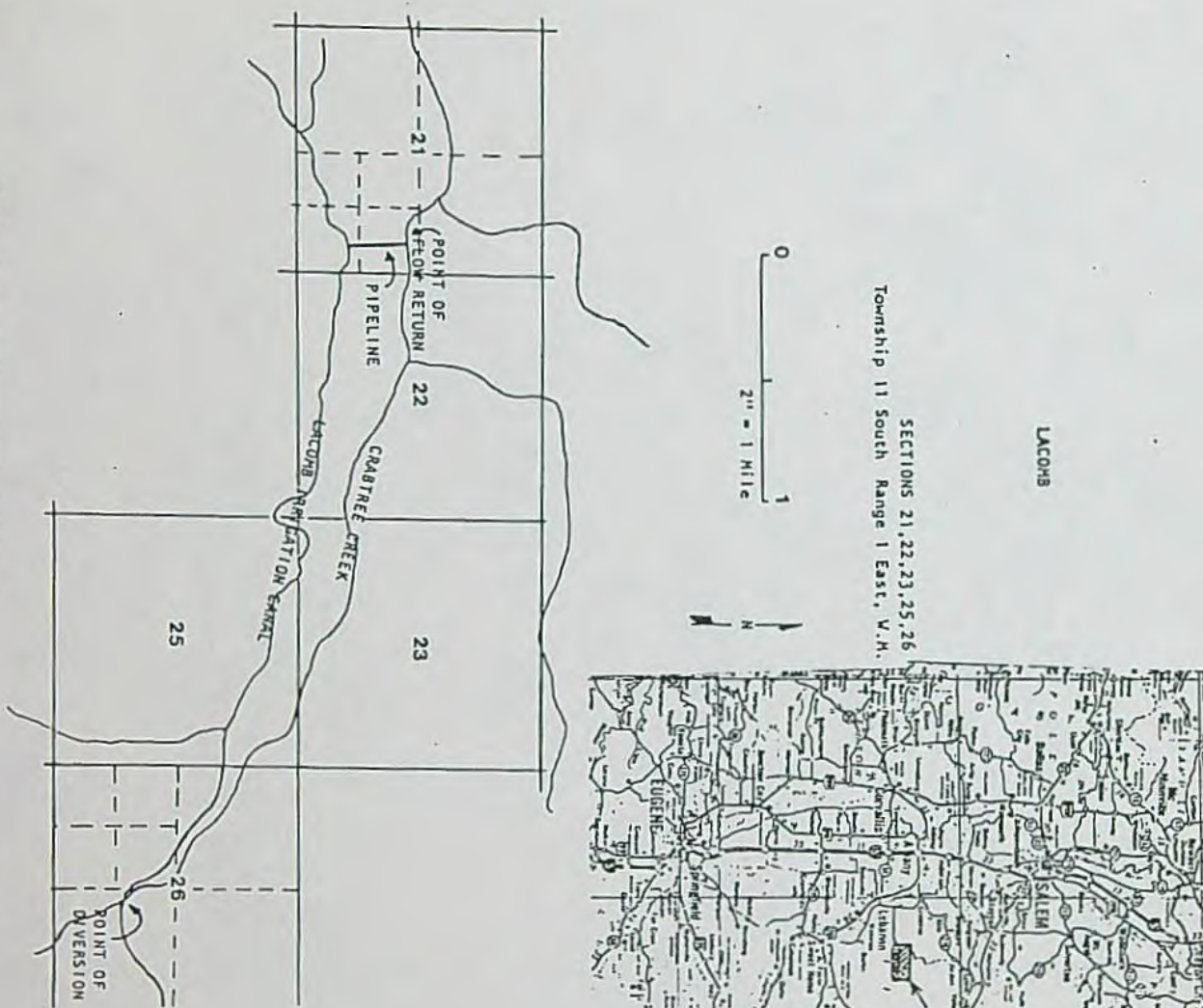
Water Permit fees		\$481	
Conditional Use Permit fee		50	
Timber Cruises		950	
Slotta Engineering:			
	Previously Paid	\$11,000	
	Outstanding	<u>(1)</u>	
			11,000
Purchase of Collins Property:			
	Property Appraisal	600	
	Earnest Money	9,750	
	Personal Notes	<u>50,000</u>	est. (2)
			60,350
Richard Kingsley			15,000 est. (3)
Olsen, Searcy, Schultz & Co.			1,020
Miscellaneous			149
			<hr/>
Total Through September <u>1</u> , 1982			<u>\$89,000</u>

- (1) Gregory will pay the balance of the Slotta Engineering fees in a manner to be negotiated with Slotta Engineering. Slotta Engineering to release the District from any further liability.
- (2) District to provide Gregory copies of personal notes on the property prior to Gregory advancing funds.
- (3) Kingsley to provide detailed billing to substantiate balance.

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330

FERC Project No. 6648-000



FEDERAL ENERGY
REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

POSTAGE AND FEES PAID
FEDERAL ENERGY
REGULATORY COMMISSION
FERC 351



Water Resources Dept.
Mill Creek Office Park
555-13th Street, NE
Salem, OR 97310

P-6648



LACOMB HYDROPOWER PROJECT

LOCATION OF PROPOSED FACILITY

RUN-OF-RIVER DIVERSION:

1300 ft. S and 2600 ft. E from the W 1/4 corner of
Section 21, being within the NE 1/4 of the SE 1/4 of
Section 21, T 11 S, R 1 E, WM in Linn County, Oregon

PENSTOCK:

From:

1296.7 ft. N and 718.6 ft. W of the SE corner of Section
21, being within the SE 1/4 of the SE 1/4 of Section 21,
T 11 S, R 1 E, WM in Linn County, Oregon

To:

2322.0 ft. N and 884.8 ft. W of the SE corner of Section
21, being within the NE 1/4 of the SE 1/4 of Section 21,
T 11 S, R 1 E, WM in Linn County, Oregon
(Same as description of powerhouse below)

POWERHOUSE:

2322.0 ft. N and 884.8 ft. W of the SE corner of Section
21, being within the NE 1/4 of the SE 1/4 of Section 21,
T 11 S, R 1 E, WM in Linn County, Oregon

TRANSMISSION LINES:

Will travel from the powerhouse back some 1200 feet
along the penstock route to the headworks location where
the penstock carries water from the canal to the plant.
At the headworks site, are existing PP&L 3-phase
powerlines.

(Please see maps as listed on the following pages)

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SALEM, OREGON

LACOMB

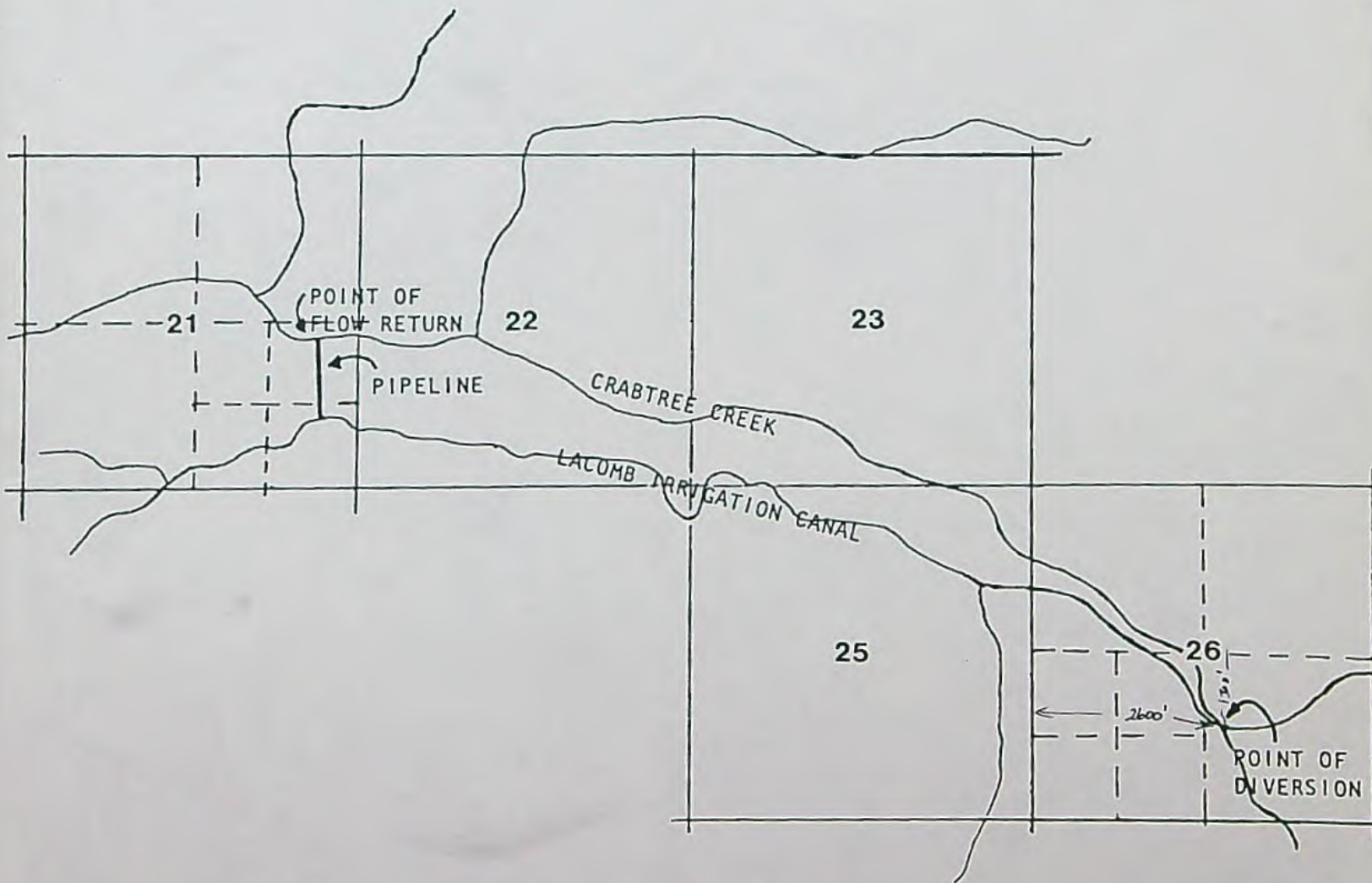
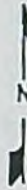
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WATER RESOURCES DEPT.
SALEM, OREGON

SECTIONS 21, 22, 23, 25, 26
Township 11 South Range 1 East, W.M.

0 1
2" = 1 Mile



SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330



PENSTOCK STA. 10+38.7 + 2322.0
-844.8

NORTH

119°12'25"
1013.4'

PENSTOCK STA. 0+00 + 1296.7
-718.6

112R. CANAL

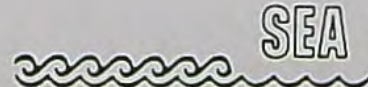
112R. CANAL

115°15'10"
1420.1'

S.E. CORNER
SECTION 21

PLAN - PENSTOCK ROUTE

SCALE: 1"=20'



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330

4. The amount of water which the applicant intends to apply to beneficial use is 45 CFS
cubic feet per second.....
(If water is to be used from more than one source, give quantity from each)

5. The use to which the water is to be applied is THE GENERATION OF ELECTRICITY.....

6. DESCRIPTION OF WORKS

Include dimensions and type of construction of diversion dam and headgate, length and dimensions of supply ditch or pipeline, size and type of pump and motor, type of irrigation system to adequately describe the proposed distribution system.

The present Lacombe Irrigation canal diversion source or headgate is located on Crabtree Creek at approximately 1300 ft. S. 2600 ft. E from the W $\frac{1}{4}$ corner of Section 25 near the confluence of Green Mountain Creek. The canal is operational; irrigation water having been appropriated previously (permit # 41359 for 6 cfs; #19629, certificate #31898 for 24 cfs). The proposed hydro-power development plans to continue using the present diversion source and to convey up to 45 cfs along the ditch to a point having sufficient (235 ft) fall and a short (1060 ft) return to Crabtree Creek.

The flow into the canal's headgate will be manually controlled and eventually radio controlled. Discussion with agencies have brought out the importance of having fish screening facilities which will be fitted into the canal's headgates.

The turnout will be located near Shingle Mill Drive which will provide easy access for facilitating construction, operation and maintenance of the irrigation - power canal. The turnout is shown in concept perspective. A 36 inch steel pipeline will connect the head distribution box to the hydro-generator facility which will accordingly return its discharge into Crabtree Creek at a station located approximately N. 2350 ft and W818 ft from the SE corner of Section 21, T11 R1E.

Considering the 235 ft fall and 45 cfs flow then 1200 HP theoretical could be developed. Considering the efficiency of the plant approximately 750 kw. would be delivered as cogeneration to nearby power lines. A 16 inch Francis turbine has been recommended for use at this site. The power house yard will occupy a space of 50 ft X 50 ft along the snow peak logging road.

If for domestic use state number of families to be supplied..... HYDRO-ELECTRIC POWER WILL BE CO-GENERATION

7. Construction work will begin on or before NOVEMBER 1, 1980

8. Construction work will be completed on or before NOVEMBER 1, 1981

9. The water will be completely applied to the proposed use on or before NOVEMBER 1, 1981

Application No. 60823

Permit No.

The right granted herein is expressly made inferior in right and subsequent in time to any appropriation of water from this source which may hereafter be made for domestic, municipal, irrigation or any other beneficial consumptive use, or for storage for such purposes; provided further that the project shall be constructed under the supervision of a registered professional engineer, provided further that the permittee shall comply with the provisions of the order of the Water Policy Review Board dated May 8, 1981, and by reference herein made part of this permit, provided further that the permittee shall, during the operational lifetime of the project, perform or allow the Water Resources Department to perform, any tests or studies required by the department to evaluate the effectiveness of measures for the protection of fish, provided further that this permit may not be assigned to any nonmunicipal entity so as to result in a loss of ownership of the permit by a municipal corporation or district and that any proposed changes to the agreements between the permittee and TNO Power signed on June 19, 1986, and August 19, 1986, as amended on November 17, 1986, must be reviewed by the ~~Director~~ Water Resources Director to determine whether or not the permittee remains qualified as a municipal applicant.

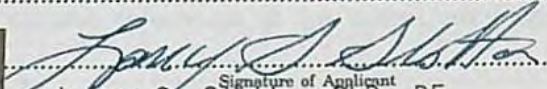
This permit is subject to the installation of a measuring device satisfactory to the Water Resources Director and the Oregon Department of Fish and Wildlife prior to the appropriation of water as described in this permit.

7039D

Remarks: Please see the attached perspective sketch of the proposed development along with site and ownership maps. The enclosed materials were prepared on behalf of the Lacomb Irrigation District in order to seek the HYDRO-POWER permit from the Director of Water Resources of the State of Oregon and to seek support for feasibility engineering studies from the USDOE for retrofitting existing hydraulic structures to co-generate low cost hydro-electric energy. This work was done by SLOTTA ENGINEERING ASSOCIATES, INC. of Corvallis, Oregon (503) 753-9716.

The Lacomb Irrigation District was formed under O.R.S. Chapter 545 by petition of Landowners to the County Court. Water rights were applied for in 1952 with present rights for irrigation water of 30 cfs dated 1965. The primary function of the District is to provide irrigation water to its individual members. This request for 45 cfs would allow the district to co-generate electric power during periods of high flows in Crabtree Creek and provide support to converting to a pressurized irrigation system, thus eventually reducing their need for irrigation water and increasing return flows to Crabtree Creek.

This permit, when issued, is for the beneficial use of water. By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan. It is possible that the land use you propose may not be allowed if it is not in keeping with the goals and the acknowledged plan. Your city or county planning agency can advise you about the land-use plan in your area.


Signature of Applicant
Larry S. Slotta, PhD, PE
Engineering Consultant for the
Lacomb Irrigation District

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for.....

In order to retain its priority, this application must be returned to the Water Resources Director with corrections on or before, 19.....

WITNESS my hand this day of, 19.....

..... Water Resources Director

By

This instrument was first received in the office of the Water Resources Director at Salem, Oregon, on the

29th day of September, 1980, at 3:30 o'clock
P.M.

Application No. 60823

Permit No.

Application No. 60823

Permit No.

Permit to Appropriate the Public Waters of the State of Oregon

This is to certify that I have examined the foregoing application and do hereby grant the same *SUBJECT TO EXISTING RIGHTS INCLUDING THE EXISTING FLOW POLICIES ESTABLISHED BY THE WATER POLICY REVIEW BOARD* and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed 45.0 65.0 cubic feet per second measured at the point of diversion from the

stream, or its equivalent in case of rotation with other water users, from CRABTREE CREEK

tributary to the South Santiam River

The use to which this water is to be applied is.....

Development of 1200 horsepower
HYDRO-ELECTRIC POWER GENERATION

horsepower at the Lacamb Irrigation District hydro-electric project.

If for irrigation, this appropriation shall be limited to of one cubic foot per second or its equivalent for each acre irrigated.....

see attached

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The priority date of this permit is

Actual construction work shall begin on or before..... and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 19.....

Complete application of the water to the proposed use shall be made on or before October 1, 19.....

WITNESS my hand this day of....., 19.....

STATE OF OREGON
WATER RESOURCES DEPARTMENT

Mill Creek Office Park • 555 13th. Street N.E.
 Salem, Oregon 97310

RECEIVED FROM haconis Irrigation District Application ☒ Permit ☐ Transfer ☐ 60823

TOTAL REC'D. \$ 141.00 ☐ CASH ☒ CHECK ☐ MONEY ORDER

By Mooley, Thomas, Kingsley + Reuter

EXAMINATION FEES:

RECORDING FEES:

Surface Water \$ \$ 141.00

Ground Water \$ \$

Transfer \$ \$

MISCELLANEOUS FEES:

Copying ☐ \$

Certification ☐ \$

Misc. Recording ☐ \$

Protest ☐ \$

Extension of time ... ☐ \$

ADJUDICATION FEE \$

POWER LICENSE FEE \$

HYDROELECTRIC LICENSE FEE .. \$

EXAM FEE \$

WATER WELL CONSTRUCTION:

Driller's Exam Fee ☐ Driller's Lic. Fee ☐

Contractor's Exam Fee ☐ \$ Contractor's Lic. Fee ☐ \$

ALL OTHER: \$

SUSPENSE TOTAL \$ 141.00

BASIN MAPS \$

QUADRANGLE ACCOUNT \$

RECEIPT NO.

JANCO BUSINESS FORMS SUPPLY PORTLAND OREGON 315769-0

32268

Dated

8.5.82

By

Don Markisium

Sub (In) September 30, 1980

Application No. 60823
Permit No. 49822

Name Lacombe Irrigation District

Address 41358 Lacombe Dr. Lebanon, OR 97355

Assigned

Address

Beginning construction NOV 25 1987

Completion of construction OCT 1 1988

Extended to

Complete application of water OCT 1 1989

Extended to

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT, CORVALLIS, OREGON 97330

TEL (503) 754-0255

TO

Oregon Department of Water Resources
Mill Creek Office Park
555 13th Street NE
Salem, OR 97310

☐ URGENT
☐ SOON AS POSSIBLE
☐ NO REPLY NEEDED

DATE 10/8/82

FILE NO. Lacombe Hydropower Project

ATTENTION Don Buell

SUBJECT Enclosures for surface
water application for the
Lacombe Irrigation District

RECEIVED

OCT 11 1982

WATER RESOURCES DEPT.
SALEM, OREGON

MESSAGE

Dear Don,

Enclosed is the following information which you requested to complete the
Lacombe Irrigation District's application for use of 65 cfs for the generation
of electricity:

- 1) Vicinity Maps (3), Location Descriptions, Survey Notes
 - 2) Property Maps (2) with Lists of Lot Ownerships (2)
 - 3) Resolutions (3)
 - 4) Lacombe Irrigation District's Organization Charter
 - 5) " " " " Canvas of Votes
- Certification

If you require further information, please do not hesitate to contact us.

REPLY

DATE OF REPLY

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WATER RESOURCES DEPT.
SALEM, OREGON

Sincerely,

SIGNED

Paula M. Arsenault

IN TESTIMONY of its acknowledgement of acceptance of all of the terms and conditions of the foregoing order, the LACOMB IRRIGATION DISTRICT, this 6th day of October, 1982, has caused its corporate (municipality) name to be signed hereto by Jim Brazel, its President, and its corporate seal to be affixed hereto and attested by Verle Jensen, its Secretary, pursuant to a resolution of its Board of Directors duly adopted on the 6th day of October, 1982, a certified copy of the record of which is attached hereto.

BY:

Jim Brazel

Attest:


Verle Jensen
Secretary

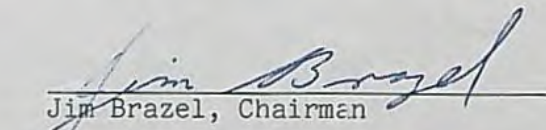
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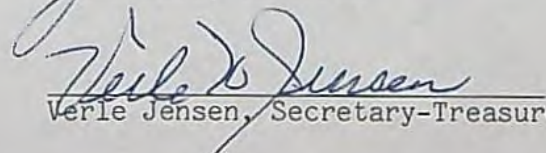
RESOLUTION
of Directors of the
LACOMB IRRIGATION DISTRICT

The Board of Directors of the Lacombe Irrigation District authorized Slotta Engineering Associates on July 8, 1980 to commence with feasibility studies to utilize the Lacombe Irrigation District canal to develop power. In October 1980, a request was made to the Oregon Water Resources Department (OWRD) for a power permit for waters carried in their canal. On July 8, 1981, the Directors confirmed their interest in completing this hydro project, documenting via a resolution requesting a loan for \$1,200,000 from the Oregon Department of Energy. On August 5, 1982, the Directors requested from OWRD additional water (totaling 65 cfs) for their hydropower project.

The Lacombe Irrigation District Directors have closely examined the potential of a hydropower facility on their canal and hereby authorize the following resolution for obtaining a Surface Water Permit for the purpose of producing hydroelectric power.




Jim Brazel, Chairman



Verle Jensen, Secretary-Treasurer

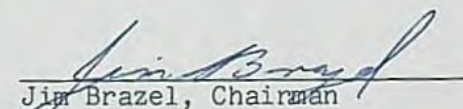
10-5-82
Date

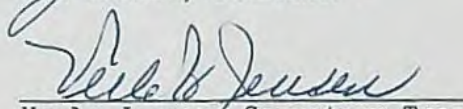
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SALEM, OREGON

BE IT RESOLVED that officers of the Lacombe Irrigation District seek a Federal Regulatory Commission exemption for a hydropower facility located on Crabtree Creek, which will develop less than 5 MWe (approximately 1 MWe).

Dated on this 24th day of August 1982,




Jim Brazel, Chairman


Verle Jensen, Secretary-Treasurer

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SALEM, OREGON



LACOMB HYDROPOWER PROJECT

MAP #1

T 11 S, R 1 E, W.M.

List of relevant tax lot ownerships:

SECTION	TAX LOT NO.	DEED REF.	NAME
25	4000 (50613)	266-465	Willamette Industries, Inc.
26	4100 (50621)	266-465	Willamette Industries, Inc.
26	4200 (50639)	230-128	Willamette Industries, Inc.
23	3700 (50589)	226-465	Willamette Industries, Inc.
27	4300 (50647)	ND	Oregon & California Railroad
22	3500 (50563)	226-465	Willamette Industries, Inc.
22	3200 (50548)	226-465	Willamette Industries, Inc.
22	3100 (50530)	325-331	Willamette Industries, Inc.
22	3000 (50522)	266-465	Willamette Industries, Inc.

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SALEM, OREGON

LACOMB HYDROPOWER PROJECT

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520.004
OCT 11 1982
WATER RESOURCES DEPT.
SALEM, OREGON

See Map

21 21

22

23

24

Snow Peak
Logging Rd.

4802

(4800)

4801

4700

4900

2.8

27

26

५०

IRRIGATION
CANAL

73-1

5800

33

34

3/5

36

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330

MAP no. 1

LACOMB HYDROPOWER PROJECT

MAP #2

T 11 S, R 1 E, W.M.

NE 1/4 and SE 1/4 of the SE 1/4 of Section 21

List of relevant tax lot ownerships:

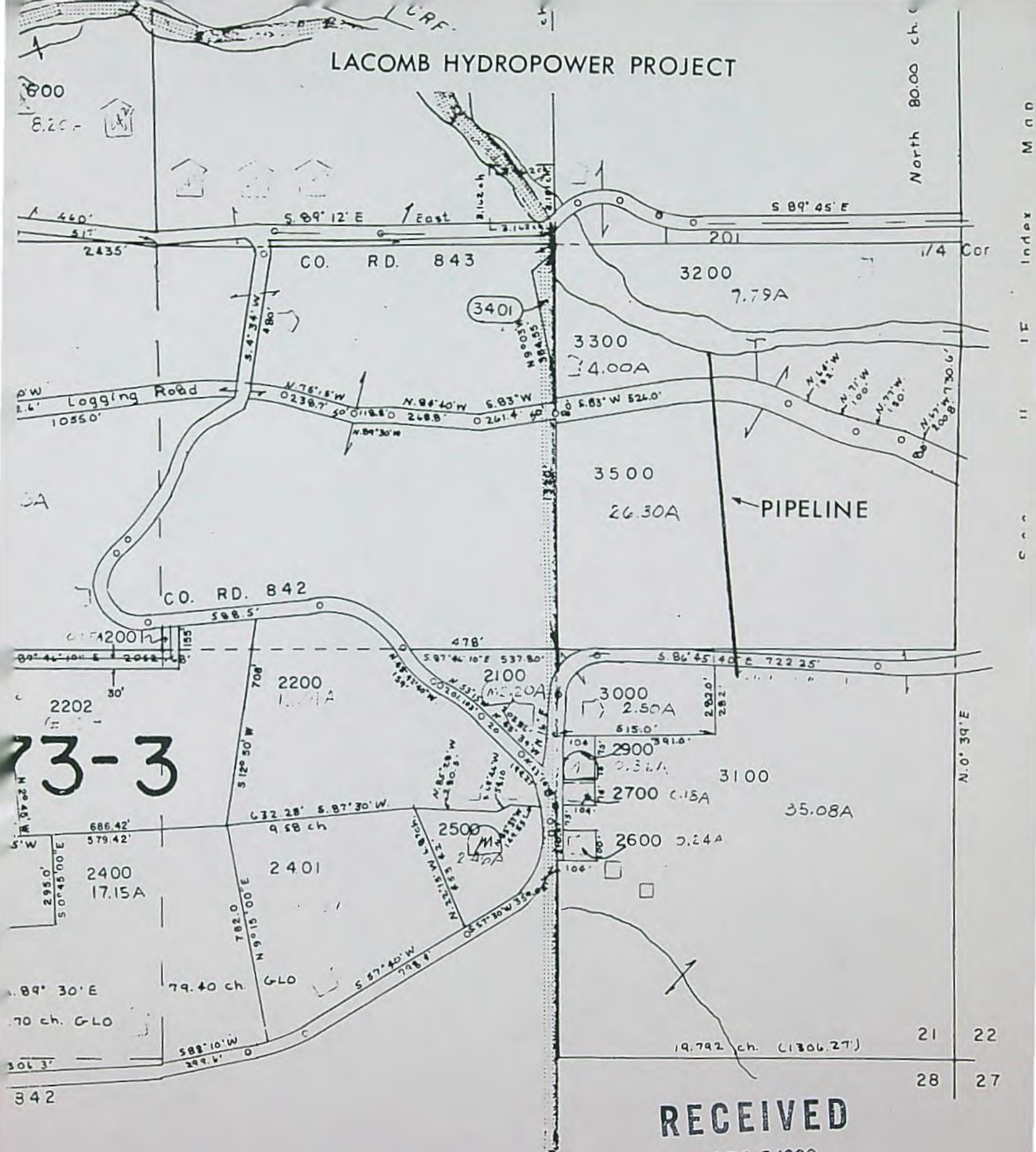
SECTION	TAX LOT NO.	DEED REF.	NAME
21	3100 (50530)	325-331	Willamette Industries, Inc.
21	3000 (52510)	MF229-447	Brown, James & Patricia
21	2900 (52502)	348-794 MF94-782c	Kroll, Ralph W. Grcshong, C.L. & J., Agt.
21	2700 (54286)	MF122-229	McAfee, Kevin E. & Muriel L.
21	2600 (52478)	300-459 MF230-678c	Kroll, Ralph W. Hulburt, W.F. & P.L., Agt.
21	3500 (52569)	326-620	Champion International Corp.
21	3300 (52544)	MF169-374	Collins, Donald R. & Gwen
21	3200 (52536)	MF28-147	Moore, Claude R. & Mary (LE)etal

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OCT 1 1982

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SALEM, OREGON

LACOMB HYDROPOWER PROJECT



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SALEM, OREGON

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330

MAP no. 2



STATE OF OREGON

INTEROFFICE MEMO

TO: Jim Sexson

DATE: October 1, 1982

FROM: Tom Kline

SUBJECT: Permit Application 60823, Lacombe Irrigation District

On May 8, 1981, the Water Policy Review Board approved Permit Application 60823 submitted by the Lacombe Irrigation District to utilize up to 45 cfs of water from Crabtree Creek for hydroelectric power purposes. The Order issued by the Board was conditioned to provide for minimum streamflows at the point of diversion and fish passage and protection measures. The permit has not yet been issued.

On August 5, 1982, the district amended the application to reflect the use of an additional 20 cfs for a total of 65 cfs. The additional water will increase the project theoretical horsepower from 1,200 to 1,600.

The purposed increased use will not change any project facilities and does not appear to affect the issues addressed in the Board's Order. The district will still be required to regulate its diversion to maintain the minimum flows set forth in the Order and comply with the other conditions set by the Board. Flow data prepared by the district's consultant indicates that sufficient water is available in Crabtree Creek to meet the minimum flows and the proposed diversion during a substantial portion of the year.

As the proposed amendment does not appear to alter or negatively affect the elements or concerns in the Board's order, the staff recommends that the district be allowed to amend their application as proposed without additional referral to the Board for hearing.

cc: Water Policy Review Board
Don Buell

2817B

M E M O R A N D U M

TO: TOM KLINE, Policy and Planning Division

FROM: DON BUELL

Date: September 13, 1982

Subject: Amendment to Application 60823, Lacombe Irrigation District

On August 5, 1982 an amended application was received from Dr. Larry Slotta for Lacombe Irrigation District File 60823. The amended application does not change the location of the point of diversion or significantly change the location of the powerhouse.

The amendment proposes the use of an additional 20 cfs from Crabtree Creek and will increase the theoretical horsepower from 1200 to 1600.

The WPRB order dated May 8, 1981 approving the project was based on the original application. Can a permit be issued based on that order or will this require additional action by the WPRB?

A copy of the amended application, supporting exhibits and cover letter are attached.

lcj

IN THE COUNTY COURT OF THE STATE OF OREGON FOR THE COUNTY OF LINN
IN THE MATTER OF THE ORGANIZATION OF THE LACOMB IRRIGATION DISTRICT
CANVASS OF VOTES AND ORDER
DECLARING THE ORGANIZATION
OF THE DISTRICT.

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OCT 11 1982

WATER RESOURCES DEPT.
SALEM, OREGON

This matter coming on regularly before this Court at this time, being the time fixed by law for the canvass of votes cast at the election for the organization of the Lacombe Irrigation District and the election of the members of the board of directors held December 7, 1935, and

It appearing that said election was duly and regularly held on said date, the polls being open between the hours of 10;00 o'clock A. M. and 4;00 o'clock P. M. of said date, and

It further appearing that a petition signed by the requisite number of land owners in said proposed district was presented to this Court on the 15th day of October, 1935, and that a bond as required by law was duly and regularly filed and approved by this Court;

That an order was entered by this Court on the 29th day of October, 1935, pursuant to which said election was called, and notice thereof has been duly and regularly published in the Lebanon Express on the 31st day of October, 1935, and the 7th, 14th, 21st and 28th days of November, 1935.

That a canvass of the votes cast at said election showed said vote to be as follows;

Irrigation District - yes

30 votes

Irrigation District - no

13 votes

RECEIVED

OCT 11 1982

WATER RESOURCES DEPT.
SALEM, OREGON

H. C. Pyle	33 votes
J. E. Johnston	38 votes
R. W. Sylvester	22 votes
F. M. Harrison	2 votes
E. C. Ayers	3 votes
W. J. Bird	12 votes

It appearing that more than three-fifths of the votes cast are irrigation District - yes.

IT IS HEREBY ORDERED, ADJUDGED DECREE AND DECLARED that the Lacombe Irrigation District has been duly and regularly organized as an irrigation district and is now an irrigation District with all the power authority and rights given to an irrigation district by the laws of this state.

That the name by which said district shall be known and designated is the Lacombe Irrigation District;

That all lands included within the following described boundary line are included in said irrigation district. The boundary line of said district is as follows, to-wit;

Beginning at the Northeast corner of the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 28, T. 11, S. R. 1 E. W. M.; thence West 10 chains, thence South 20 chains; thence West 10 chains, thence south 20 chains to the center of section 28, thence West 60 chains, thence south 20 chains; thence west 40 chains; thence south 20 chains to the south line of section 29, thence West 40 chains; thence south 20 chains; thence West 30 chains; thence south 6 chains; thence West 30 chains; thence south 4 chains; thence West 20 chains; thence south 10 chains to the center line of section 36; thence West 100 chains; thence North 40 chains; thence East 60 chains; thence North 20 chains thence East 10 chains; thence North 20 chains; to the center line of section 25; thence West 50 chains; thence North 60 chains; thence East 20 chains; thence North 70 chains; thence East 50 chains; thence south 30 chains; thence East 30 chains to the East line of Section 24, thence north 10 chains; thence east 40 chains to the center line of section 19, thence south 30 chains to the center of said section; thence east 40 chains to the $\frac{1}{4}$ section corner thereof; thence south 20 chains; thence east 140 chains; thence south 20 chains to the place of beginning

That J. E. Johnson, H. C. Pyle and R. W. Sylvester have
been duly elected and are directors of said irrigation district.

Albany, Oregon this 9th day of December, 1935

J. J. Barrett
County Judge

CLERK'S CERTIFICATE

STATE OF OREGON,

COUNTY OF LINN.

} ss.

I, R. M. Russell, County Clerk of Linn County, Oregon, and Ex-Officio Clerk of the
...County... Court of the State of Oregon, for Linn County, do hereby certify that the
foregoing and attached copy of ... Canvass of votes and order declaring the
...organization of the District...

has been by me compared with the original Canvass of votes and order declaring
the organization of the district

now on file and of record in my office and custody and that it is a true, full and correct
copy, and transcript therefrom and of the whole thereof of such original Canvass of
votes and order declaring the organization of the district

In testimony whereof, I have hereunto set my hand and affixed the seal of said
County Court this 12 day of December, 1935

R. M. Russell Clerk

By *Lester Arnold* Deputy.

OWNER'S SALES AGREEMENT
AND EARNST MONEY RECEIPT

12 May, 1981

RECEIVED OF Lacomb Irrigation District

hereinafter called purchaser, \$ 500 and No/100, as earnest money and in part payment for the following described real estate situated in the City of Lacomb, County of Linn State of Oregon, described as follows, to-wit:

43083 Snow Peak Drive
Linn Co. Tax Lot Number 3300 containing 4.0 Acres
Linn Co. Tax Lot Number 3401 containing 0.66 Acres

as described on Warranty Deed No 169 page 374, Parcel I & II, recorded in Linn County Court House

which we have this day sold to the purchaser for the sum of Ninety Five thousand and No/100 Dollars \$ 95,000; on the following terms, to-wit: The earnest money hereinabove receipted for . . . \$ 500; upon acceptance of title and delivery of deed or delivery of contract . . . \$ 95,000; balance of . . . Dollars \$ 94,500; payable as follows:

Dependent on commitments made from loan grantors to the Lacomb Irrigation District.

A title insurance policy from a reliable company insuring marketable title in the seller in an amount equal to said purchase price is to be furnished purchaser in due course at seller's expense; preliminary to closing, seller may furnish a title insurance company's title report showing its willingness to issue title insurance, and such report shall be conclusive evidence as to status of seller's record title.

It is agreed that if the title to the said premises is not marketable, or cannot be made so within thirty days after notice, with a written statement of defects, is delivered to seller, the earnest money herein receipted for shall be refunded. But if the title to the said premises is marketable, and the purchaser neglects or refuses to comply with any of the conditions of this sale within 150 days and to make payments promptly, as hereinabove set forth, then the earnest money herein receipted for shall be forfeited to the seller as liquidated damages, and this contract shall thereupon be of no further binding effect.

The property is to be conveyed by good and sufficient deed free and clear of all liens and encumbrances except zoning ordinances, building restrictions, taxes due and payable for the current tax year, reservations in federal patents and state deeds, easements of record and

All irrigation, ventilating, cooling, plumbing and heating fixtures and equipment (including stoker and oil tanks but excluding fire place fixtures and equipment), water heaters, electric light and bathroom fixtures, light bulbs and fluorescent lamps, venetian blinds, wall-to-wall carpeting, awnings, window and door screens, storm doors and windows, attached floor coverings, attached television antenna, all plants, shrubs and trees and all fixtures except are to be left upon the premises as part of the property purchased.

The following personal property is also included as part of the property sold for said price: NA

Seller and purchaser agree to pro rate the taxes which become due and payable for the current tax fiscal year on a fiscal year basis. Rents, interest, premiums for existing insurance, and other matters shall be pro rated on a calendar year basis. Purchaser agrees to pay for fuel on hand including oil in tank, if any, and, at closing, shall reimburse seller for sums, if any, held in any reserve account relating to any encumbrances on said property. Adjustments are to be made as of the date of the consummation of the sale, herein or delivery of possession, which ever first occurs.

Possession of said premises is to be delivered to purchaser on or before September 30, 1981. Time is of the essence hereof. This contract is binding upon the heirs, executors, administrators, successors and assigns of the purchaser and seller. However, the purchaser's rights herein are not assignable without written consent of seller. In any suit or action brought on this contract, the losing party agrees to pay the prevailing party's reasonable attorney's fees to be fixed by the trial court, and on appeal the prevailing party's reasonable attorney's fees to be fixed by the appellate court.

Further conditions:

Steven Collins Owners

I hereby agree to purchase the above property and to pay the price of Ninety Five Thousand

(\$ 95,000) Dollars as specified above.

Address 41358 Lacomb Drive
Lebanon, Oregon 97355
Phone 451-2796

Purchaser LACOMB IRRIGATION DISTRICT

x Jim Brugel (Chairman)
12 May, 1981

RECEIVED

OCT 11 1982

WATER RESOURCES DEPT.
SALEM, OREGON

IN THE COUNTY COURT OF THE STATE OF OREGON
FOR THE COUNTY OF LINN

In the Matter of the Organization of the LACOMB IRRIGA-
TION DISTRICT.

CANVASS OF VOTES AND ORDER DECLARING
THE ORGANIZATION OF THE DISTRICT

This matter coming on regularly before this Court at this time, being the time fixed by law for the canvass of votes cast at the election for the organization of the Lacombe Irrigation District and the election of the members of the board of directors held December 7, 1935, and,

It appearing that said election was duly and regularly held on said date, the polls being open between the hours of 10:00 o'clock A. M. and 4:00 o'clock P. M. of said date, and,

It further appearing that a petition signed by the requisite number of land owners in said proposed district was presented to this Court on the 15th day of October, 1935, and that a bond as required by law was duly and regularly filed and approved by this Court;

That an order was entered by this Court on the 29th day of October, 1935, pursuant to which said election was called, and notice thereof has been duly and regularly published in the Lebanon Express on the 31st day of October, 1935, and the 7th, 14th, 21st and 28th days of November, 1935;

That a canvass of the votes cast at said election showed said vote to be as follows:

Irrigation District - Yes

31 votes

Irrigation District - No

13 votes

For director:

W. C. Pyle

38 votes

J. E. Johnson

38 votes

R. M. Sylvester

22 votes

L. M. Harrison

2 votes

C. C. Ayers

3 votes

W. J. Birding

12 votes

It appearing that more than three-fifths of the votes cast are Irrigation District - Yes.

IT IS HEREBY ORDERED, ADJUDGED, DECREED AND

DECLARED that the Lacombe Irrigation District has been duly and regularly organized as an irrigation district and is now an irrigation district with all the power, authority and rights given to an irrigation district by the laws of this state;

That the name by which said district shall be known and designated is the Lacombe Irrigation District;

That all lands included within the following described boundary line are included in said irrigation district. The boundary line of said district is as follows, to-wit:

Beginning at the northeast corner of the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 28, T. 11 S. R. 1 E. W. M.; thence West 10 chains; thence South 20 chains; thence West 10 chains; thence South 20 chains to the center of Section 28; thence West 60 chains; thence South 20 chains; thence West 40 chains; thence South 20 chains to the south line of Section 29; thence West 40 chains; thence South 20 chains; thence West 30 chains; thence South 6 chains; thence West 30 chains; thence South 4 chains; thence West 30 chains; thence South 10 chains to the center line of Section 36; thence West 100 chains; thence North 40 chains; thence East 60 chains; thence North 20 chains; thence East 10 chains; thence North 20 chains to the center line of Section 25; thence West 50

(CANVASS AND ORDER 2)

chains; thence North 60 chains; thence East 20
chains; thence North 70 chains; thence East 50
chains; thence South 30 chains; thence East 30
chains to the east line of Section 24; thence
North 10 chains; thence East 40 chains to the
center line of Section 19; thence South 30 chains
to the center of said section; thence East 40
chains to the $\frac{1}{2}$ section corner thereof; thence
South 20 chains; thence East 140 chains; thence
South 20 chains to the place of beginning.

That J. C. Johnson H. C. Pyle
and R. M. Sylvester have been duly elected and are
directors of said irrigation district.

Albany, Oregon, this 9th day of December, 1935.

J. J. Barrett

J. J. BARRETT

County Judge.

(CANVASS AND ORDER 3)

Court convened pursuant to adjournment, the same Judge and Officers being present the same Judge and officers being present as on the last preceding day; Court was duly proclaimed in session as by law required when the following proceedings were then had to-wit:

IN THE COUNTY COURT OF THE STATE OF OREGON FOR THE COUNTY OF LINN

In the Matter of the Organization

of

ORDER

The Lacombe Irrigation District.

This matter came on regularly before the County Court upon petition of the owners of land within the boundaries of said proposed irrigation district on the 15th day of October, 1935 and an order was duly entered on said date in accordance with the prayer of said petition, and it now appears that the description of the boundary line of said district as set forth in said order did not conform to the description of the boundary line as set forth in said petition and that a supplementary and amendatory order is necessary to correct said description to conform to the description contained in said petition and to authorize the publication of notice containing the correct description and fixing a date upon which the election shall be held, and no objections having been made, the court finds:

- (1) That the name of said district shall be Lacombe Irrigation District;
- (2) That greatly in excess of a majority of the owners of land within the boundaries of said proposed irrigation district have signed said petition;
- (3) That all land included within said district is susceptible of irrigation and will be benefited by irrigation from the proposed system of works to be constructed by the district.
- (4) That all of said land is located in Linn County, Oregon.
- (5) That said petition and notice of the time and place of the presentation of said notice at this time and place were duly published as required by law. Proof of such publication and the dates at which said petition and notice were published are set forth in proof of publication duly filed with this court;
- (6) That said district should constitute one election precinct for the purpose of conducting district elections;
- (7) That an election should be held in said district to determine whether or not said district shall be organized; that a proper and suitable time and place for said election is the 30th day of November, 1935, at Lacombe, Oregon, in the Union Hall between the hours of 10:00 o'clock A.M. and 4:00 o'clock P.M. and the County Clerk shall give notice of said election;
- (8) That said proposed district contains no municipality, platted subdivision thereof, or part thereof;
- (9) That a bond has been duly filed and approved herein as provided by law;

IT IS THEREFORE ORDERED AND ADJUDGED, That the name of said district shall be Lacombe Irrigation District, by which name it should be hereafter officially designated and known;

That the boundary lines of said district shall be as follows:

Beginning at the northeast corner of the NW $\frac{1}{4}$ of NE $\frac{1}{4}$ of Section 28, T. 11 S. R. 1 E. W. M.; thence West 10 chains; thence South 20 chains; thence West 10 chains thence South 20 chains; to the center of Section 28; thence West 60 chains; thence South 20 chains; thence West 40 chains; thence South 20 chains to the South line of Section 29; thence West 40 chains; thence South 20 chains; thence West 30 chains; thence South 6 chains; thence West 30 chains; thence South 4 chains; thence West 20 chains; thence South 10 chains to the center line of Section 36; thence West 100 chains; thence North 40 chains; thence East 60 chains; thence North 20 chains; thence East 10 chains; thence North 20 chains to the center line of Section 25; thence West 50 chains; thence North 60 chains; thence East 20 chains; thence North 70 chains;

COUNTY COURT JOURNAL, LINN COUNTY, OREGON

OCTOBER

TERM, 1935 Tuesday Oct 29th & 8th

DAY OF TERM

thence East 50 chains; thence South 30 chains; thence East 30 chains to the east line of Section 24; thence North 10 chains thence East 40 chains to the center line of section 19; thence South 30 chains to the center of said section; thence East 40 chains to the $\frac{1}{4}$ section corner thereof; thence south 20 chains thence East 140 chains; thence South 20 chains to the place of beginning.

The County Clerk is hereby authorized and directed to have published notice of election for organization of said district once a week for four successive weeks in the Lebanon Express, a newspaper published in Linn County, Oregon, in the regular issues thereof on November 7, 14, 21, and 28, 1935.

Albany, Oregon, this 29th day of October, 1935.

J. J. BARRETT,
County Judge,

IT IS ORDERED, That Court stand adjourned sine die.

J. J. Barrett Judge
W. L. Barrett Commissioner
W. L. Barrett Commissioner



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

August 25, 1982

RECEIVED

AUG 26 1982

WATER RESOURCES DEPT.
SALEM, OREGON

Secretary
Federal Energy Regulatory Commission
825 North Capitol Street NE
Washington, D.C. 20426

Re: LACOMB HYDROPOWER PROJECT
Application for Exemption from Licensing

Dear Sir,

This is to transmit the enclosed application for exemption from licensing for the Lacombe Irrigation District's LACOMB HYDROPOWER PROJECT, located near Lebanon, Oregon. We would appreciate your favorable consideration of this application.

The LACOMB HYDROPOWER PROJECT is economically feasible and shows great promise for success. The project has received a commitment from the Oregon State Energy Loan Program for \$1,200,000 to fund its construction, and the exemption must be approved before monies can be obtained. Therefore, we would appreciate a prompt evaluation.

The Lacombe Irrigation District received (on May 8, 1981) a permit from the Oregon Water Resources Department to divert 45 cfs from Crabtree Creek for use in hydroelectric power production (OWRD Permit Order No. 60823). At this time, the OWRD set forth minimum streamflow requirements for Crabtree Creek that must bypass the proposed diversion/intake structure to insure there will be sufficient flow for migrating fish. On August 5, 1982, the District submitted to the OWRD an amended application which would allow an additional 20 cfs (for a total of 65 cfs) to be diverted for hydropower purposes. It is expected that this amended application will be approved considering the minimum streamflow standards that the OWRD has already ordered.

Letters of approval of the plans contained herein include recommendations and requirements of representatives from local, county, state and federal agencies.

If you have any questions or concerns about any aspect of the project or this application, please feel free to contact us directly.

Sincerely,
SLOTTA ENGINEERING ASSOCIATES



Larry S. Slotta, PhD, PE



IN TESTIMONY of (its) acknowledgment of acceptance of all of the
terms and conditions of the foregoing order, the Lacombe Irrigation District,
(Name)
this 24th day of August, 1982, has caused his (its corp-
orate) name to be signed hereto (by Jim Brazel
its President, and its corporate seal to
be affixed hereto and attested by Verle Jensen, its
Secretary, pursuant to a resolution
of its Board of Directors duly adopted on the 24th
day of August, 1982, a certified copy of the record
of which is attached hereto).

(By Jim Brazel)

(Attest:

Verle Jensen
Secretary)

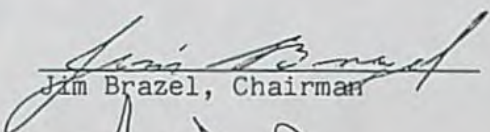
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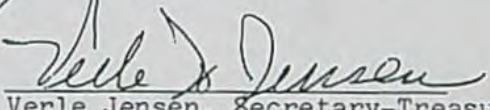
Execute in quadruplicate. Statements within brackets apply only to
corporations, municipalities and associations of citizens.

RESOLUTION
of
Directors
of
Lacomb Irrigation District

The Board of Directors of the Lacomb Irrigation District authorized Slotta Engineering Associates on July 8, 1980 to commence with feasibility studies to utilize the Lacomb Irrigation District canal to develop power. In October 1980 a request was made to the Oregon Water Resources Department (OWRD) for a power permit for waters carried in their canal. On July 8, 1981, the Directors confirmed their interest in completing this hydro project, documenting via a resolution requesting a loan for \$1,200,000 from the Oregon Department of Energy. On August 5, 1982, the Directors requested from OWRD additional water (totaling 65 cfs) for their hydropower project.

The Lacomb Irrigation Directors have closely examined the potential of a hydropower facility on their canal and hereby authorize the following resolution for obtaining a FERC Exemption from licensing for this project.


Jim Brazel, Chairman


Verle Jensen, Secretary-Treasurer


Date

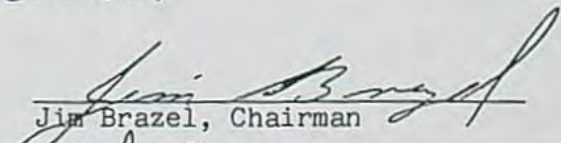


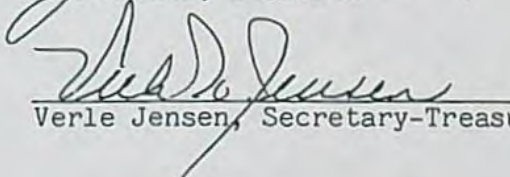
SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

BE IT RESOLVED that officers of the Lacombe Irrigation District seek a Federal Regulatory Commission exemption for a hydropower facility located on Crabtree Creek, which will develop less than 5 MWe (approximately 1 MWe).

Dated on this 24th day of August 1982,


Jim Brazel, Chairman


Verle Jensen, Secretary-Treasurer



Before the Federal Energy Regulatory Commission:

APPLICATION FOR EXEMPTION OF A SMALL HYDROELECTRIC POWER PROJECT FROM
LICENSING

- (1) The Lacombe Irrigation District applies to the Federal Energy Regulatory Commission for an exemption for the Lacombe Hydropower Project, a small hydroelectric power project that is proposed to have an installed capacity of 5 megawatts or less, from licensing under the Federal Power Act.

- (2) The location of the project is:

State or Territory: OREGON

County: LINN

Township or nearby town: LACOMB

Stream or body of water: CRABTREE CREEK

- (3) The exact name and business address of the applicant is:

The Lacombe Irrigation District
41358 Lacombe Dr.
Lebanon, OR 97355

- (4) The exact name and business address of each person authorized to act as agent for the applicant in this application are:

Jim Brazel, Chairman
Verle Jensen, Secretary-Treasurer
Lacombe Irrigation District
41358 Lacombe Dr.
Lebanon, OR 97355

Larry S. Slotta, PE
Slotta Engineering Associates
917 NW Grant St.
Corvallis, OR 97330

- (5) The Lacombe Irrigation District is a municipality formed under the laws of the United States and the State of Oregon



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT A

LACOMB HYDROPOWER PROJECT

EXHIBIT A

Part (1): DESCRIPTION OF PROPOSED FACILITY

DAM OR DIVERSION: An existing diversion will be upgraded as required by the natural resource agencies contacted (the Oregon Department of Fish & Wildlife, the U.S. Fish & Wildlife Service, and the National Marine Fisheries Service), in order to insure fish passage on Crabtree Creek in Linn County, Oregon. The diversion structure or area will include: a rock weir, bypass sluice channel and gate, and fish screen. A stage (water level) gage and gates will be placed at the intake point of the canal so that the flow diverted can be controlled and accurately monitored; this will enable the Lacombe Irrigation District to comply with minimum streamflows set forth by the Oregon Water Resources Department Order allocating water for hydroelectric power for this site. (See Part (4) of EXHIBIT E: OWRD Permit No. 60823).

CANAL: An existing irrigation canal, 2.5 miles long, will be upgraded and lined either with concrete or with a thick impervious polyethylene liner. This modification will improve the canal's hydraulic characteristics and will reduce leakage losses to a minimum. In addition, nearly all of the flow diverted for power use can be returned to Crabtree Creek, whereas presently, some of the water diverted for irrigation is lost due to percolation, and the excess flow is discharged further downstream. The canal will carry 65 cfs from the diversion to the headworks where the water enters a penstock. It is expected that 60 cfs will be used for the generation of electricity while the remaining 5 cfs will serve as a "buffer" flow to account for losses, and to prevent air entry into the penstock.

PENSTOCK: A 1100-foot, 36-inch penstock will be constructed to connect the existing irrigation canal (described above) with the powerhouse. The penstock walls will be 3/16 inches thick, made of steel, and will have a coal tar epoxy coating on the inside and the outside. It will be buried with approximately 2.5 feet of soil cover.

POWERHOUSE: The proposed 20-foot-by-30-foot powerhouse will have an area of 600 sq. ft. and will be placed on and integrated with the south bank of Crabtree Creek at its specified location. A tailrace has been designed in accordance with recommendations made by fish and wildlife agencies, in order to blend the plant flow with the flow of Crabtree Creek, and which will have minimum "attractive" discharge velocities. The powerhouse itself will be constructed of concrete and steel, and coated with a sealant in order to assure the building water-integrity during flood stages. The external architecture of the powerhouse will integrate masonry and wood materials so that the building is aesthetically pleasing and will complement the environment.

LACOMB HYDROPOWER PROJECT

EXHIBIT A (continued)

Part (1) (continued)

TRANSMISSION LINE: 1200 feet of 20.8 kV, 3-phase transmission line will be installed (buried) by Pacific Power & Light (PP&L) in order to connect the proposed power generation equipment with existing nearby lines.

Parts (2) & (3): TURBINES

Type: One (1) Horizontal Francis Turbine

Capacity: 962 kW

** No plans are being made for the retirement or rehabilitation of existing generating units

Part (4): PLANT OPERATION

The powerplant will operate using the 60 cfs of flow diverted from Crabtree Creek, and carried through the irrigation canal and the penstock. This is a "run-of-the-river" project, because there will be no storage of water at any point. The power plant's operation is dependent on available flow (see Part (5) on the next page). For conservative economic analyses, it is expected that the plant will not require flows during the irrigation season, including the months of July, August, September and October, during which the present irrigation demand is for 30 cfs. The power plant is expected to be full on line during the high water months (November through June).

A rock weir to channel irrigation flows (30 cfs) into the canal is sometimes used during low flows; correspondingly, a low rock weir at the intake was recommended by the National Marine Fisheries in order to create a small upstream pool to facilitate easy passage for migrating fish during low flow periods. Minimum streamflow requirements have been set forth by the Oregon Water Resources Department for the power plant operation. (Please see OWRD Permit in Part (4) of EXHIBIT E).

LACOMB HYDROPOWER PROJECT

EXHIBIT A (continued)

Part (5): FLOW DURATION ANALYSIS (CRABTREE CREEK)

(Please see following 3 pages which show streamflow and turbine analyses)

Part (6): TECHNICAL ESTIMATIONS

- (i) Average Annual Generation: 5,560,000 kWh
- (ii) Design Head: 235 feet = gross elevation difference
230 feet = net head considering losses
**These values for hydraulic head will be nearly constant, because the flow at the diversion will be regulated and the discharge pit at the powerhouse will reduce the effect of fluctuations in the tailwater level.
- (iii) Hydraulic Capacity: 60 cfs
- (iv) (NO storage or impoundment facilities)

Part (7): CALENDAR

Begin Construction: January 1983

End Construction (On Line): December 1983

Part (8):

No dam repair or modification will take place. The project is a natural water feature diversion project that does not involve a dam or reservoir, either new or existing.

LACOMB HYDROLOGY
CRABTREE CREEK FLOWS

CALCULATED BY USING AREA-REDUCTION ANALYSIS ON FLOWS MEASURED AT:
GAGING STATION # 14187000 AT CRABTREE, OREGON

AVERAGE MONTHLY FLOWS (CFS) FOR 1964-1970

CRABTREE CREEK AT DIVERSION

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
HIGH	2909	890	783	536	426	318	140	136	115	510	1464	2052
LOW	280	366	185	185	135	64	25	27	25	43	108	229
MEAN	825	436	355	294	229	138	57	40	51	141	380	605

CRABTREE CREEK AT POWERHOUSE

HIGH	3287.17	1005.7	884.79	605.68	481.38	359.34	158.2	153.68	129.95	576.3	1654.32	2318.76
LOW	316.4	413.58	209.05	209.05	152.55	72.32	28.25	30.51	28.25	48.59	122.04	258.77
MEAN	932.25	492.68	401.15	332.22	258.77	155.94	64.41	45.2	57.63	159.33	429.4	683.65

OREGON WATER RESOURCES DEPARTMENT ORDER:

ORDER

It is hereby ordered that application 60823 is approved subject to the following conditions:

1. Use of water for hydroelectric purposes will be subject to passing the following specified flows in Crabtree Creek past the point of diversion in Section 25, Township 11S., Range 1E.

Oct.	110 cfs
Nov.-May.	90 cfs
Jun. 1-15	40 cfs
Jun. 16-30	30 cfs
Jul. 1-15	25 cfs
Jul. 16-31	15 cfs
Aug.	12 cfs
Sep. 1-15	12 cfs
Sep. 16-30	110 cfs

As determined by the Director of the Water Resources Department, the applicant may be required to install and maintain such facilities as may be required to insure compliance with this condition.

2. The applicant shall provide for fish passage at the point of diversion.

CRABTREE CREEK

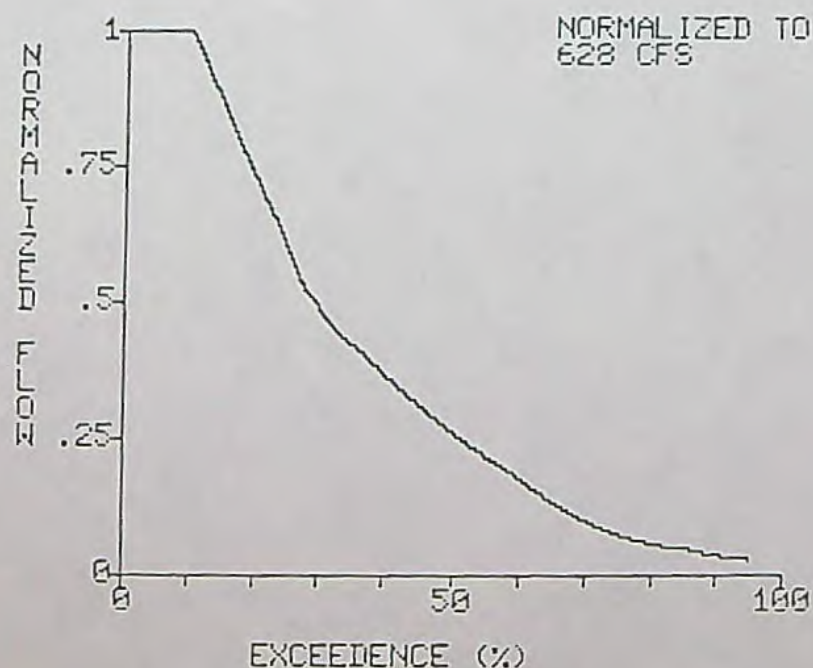
Flow Duration Analysis

EXCEEDENCE CURVE INPUT

PERCENT	FLOW RATE (CFS)
10	628
30	294
50	159
70	56
80	30
95	14.2

THE CALCULATED AVERAGE YEARLY FLOW
RATE IS 229.2 CFS.
---NOT MODIFIED.

EXCEEDENCE		FLOW	
0	%	628	CFS
5	%	628	CFS
10	%	628	CFS
15	%	544.5	CFS
20	%	461	CFS
25	%	377.5	CFS
30	%	305.1	CFS
35	%	260.3	CFS
40	%	226.5	CFS
45	%	192.8	CFS
50	%	159.4	CFS
55	%	133.2	CFS
60	%	107.5	CFS
65	%	81.8	CFS
70	%	58.8	CFS
75	%	43	CFS
80	%	31.6	CFS
85	%	24.7	CFS
90	%	19.5	CFS
95	%	14.2	CFS
100	%	8.9	CFS



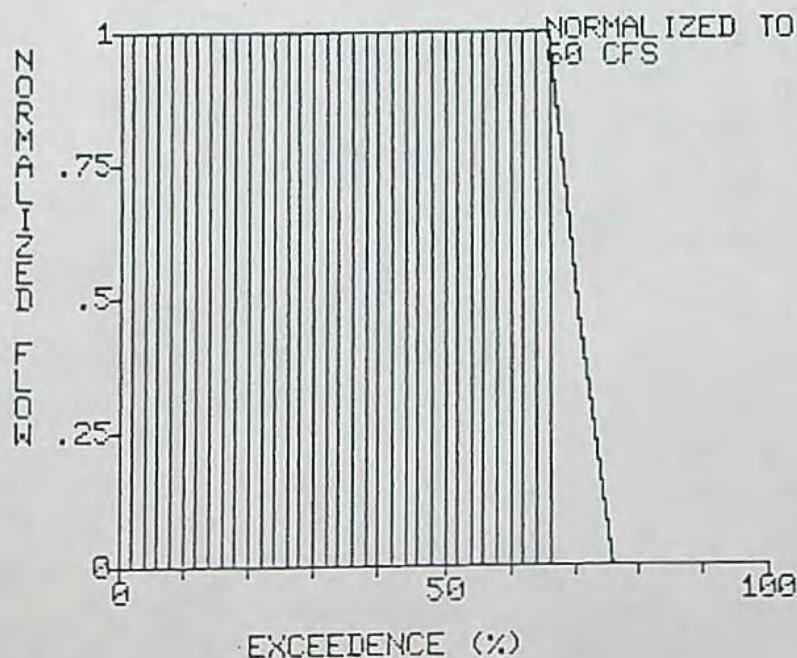
LAÇOMB HYDROPOWER PROJECT

Turbine Analysis

TURBINE #1

FRANCIS

AVAILABLE HEAD	230	FT	
	EXC. %	TURB. CFS	RIVER CFS
RATED	13.3	60	60
CUTOFF	66	60	60
MINIMUM	75.9	---	0
GENERATOR EFF.	95	%	
RATED POWER	961.62	KW	←
ANNUAL ENERGY	5559712	KWH	←
PLANT FACTOR	66	%	



DATA USED:

MONTH	FLOW RATE (CFS)
OCTOBER	0
NOVEMBER	60
DECEMBER	60
JANUARY	60
FEBRUARY	60
MARCH	60
APRIL	60
MAY	60
JUNE	60
JULY	0
AUGUST	0
SEPTEMBER	0

** BASED ON 8 MONTHS OF OPERATION ONLY



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT B

LACOMB HYDROPOWER PROJECT

EXHIBIT B

LOCATION OF PROPOSED FACILITY

RUN-OF-RIVER DIVERSION:

1300 ft. S and 2600 ft. E from the W 1/4 corner of
Section 21, being within the NE 1/4 of the SE 1/4 of
Section 21, T 11 S, R 1 E, WM in Linn County, Oregon

PENSTOCK:

From:

1100 ft. N and 700 ft. W of the SE corner of Section 21,
being within the SE 1/4 of the SE 1/4 of Section 21,
T 11 S, R 1 E, WM in Linn County, Oregon

To:

2323 ft. N and 837 ft. W of the SE corner of Section 21,
being within the NE 1/4 of the SE 1/4 of Section 21,
T 11 S, R 1 E, WM in Linn County, Oregon
(Same as description of powerhouse below)

POWERHOUSE:

2323 ft. N and 837 ft. W of the SE corner of Section 21,
being within the NE 1/4 of the SE 1/4 of Section 21,
T 11 S, R 1 E, WM in Linn County, Oregon

TRANSMISSION LINES:

Will travel from the powerhouse back some 1200 feet
along the penstock route to the headworks location where
the penstock carries water from the canal to the plant.
At the headworks site, are existing PP&L 3-phase
powerlines.

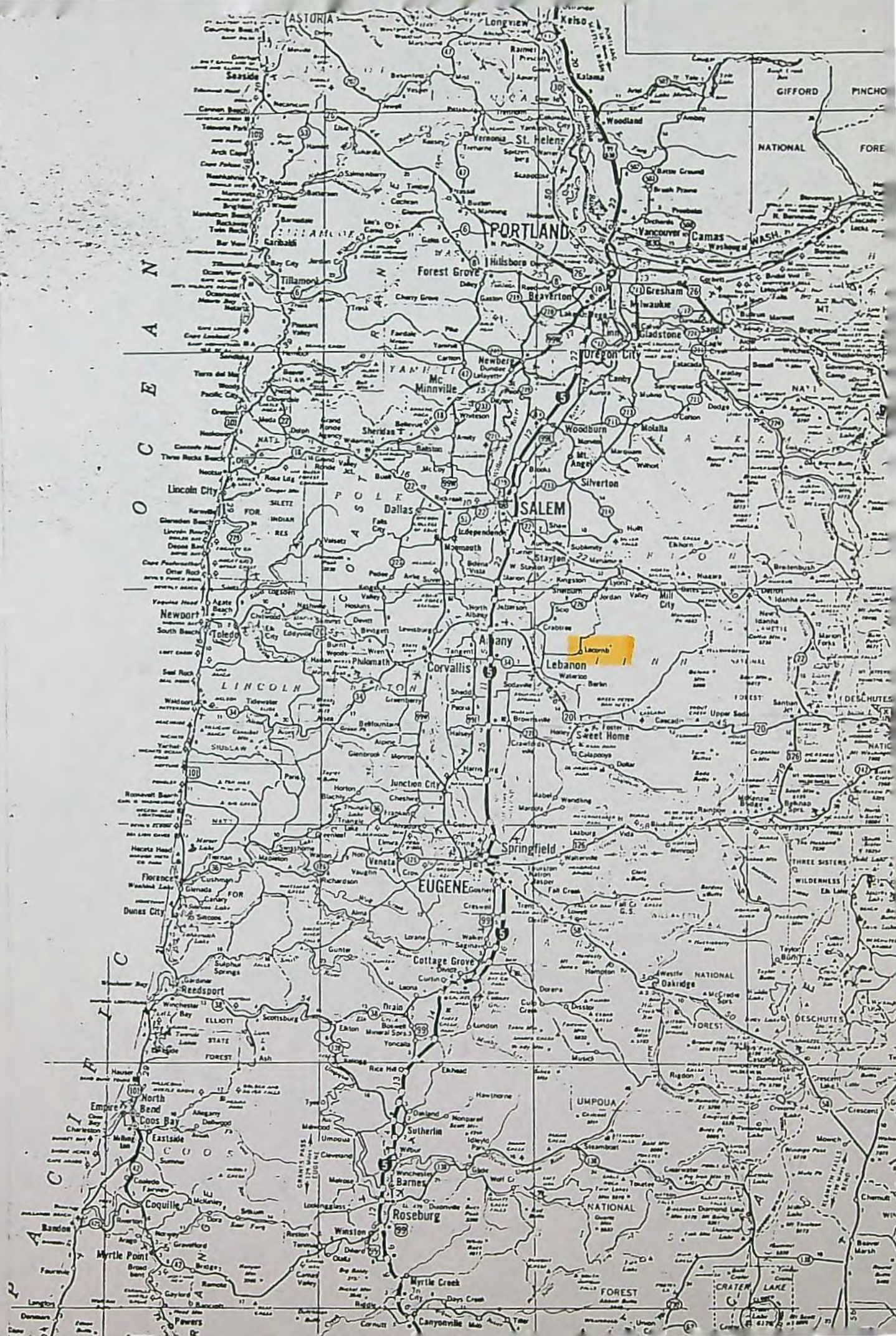
(Please see maps as listed on the following page)

LACOMB HYDROPOWER PROJECT

EXHIBIT B (continued)

INDEX OF MAPS:

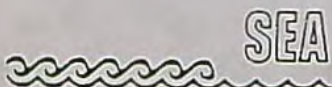
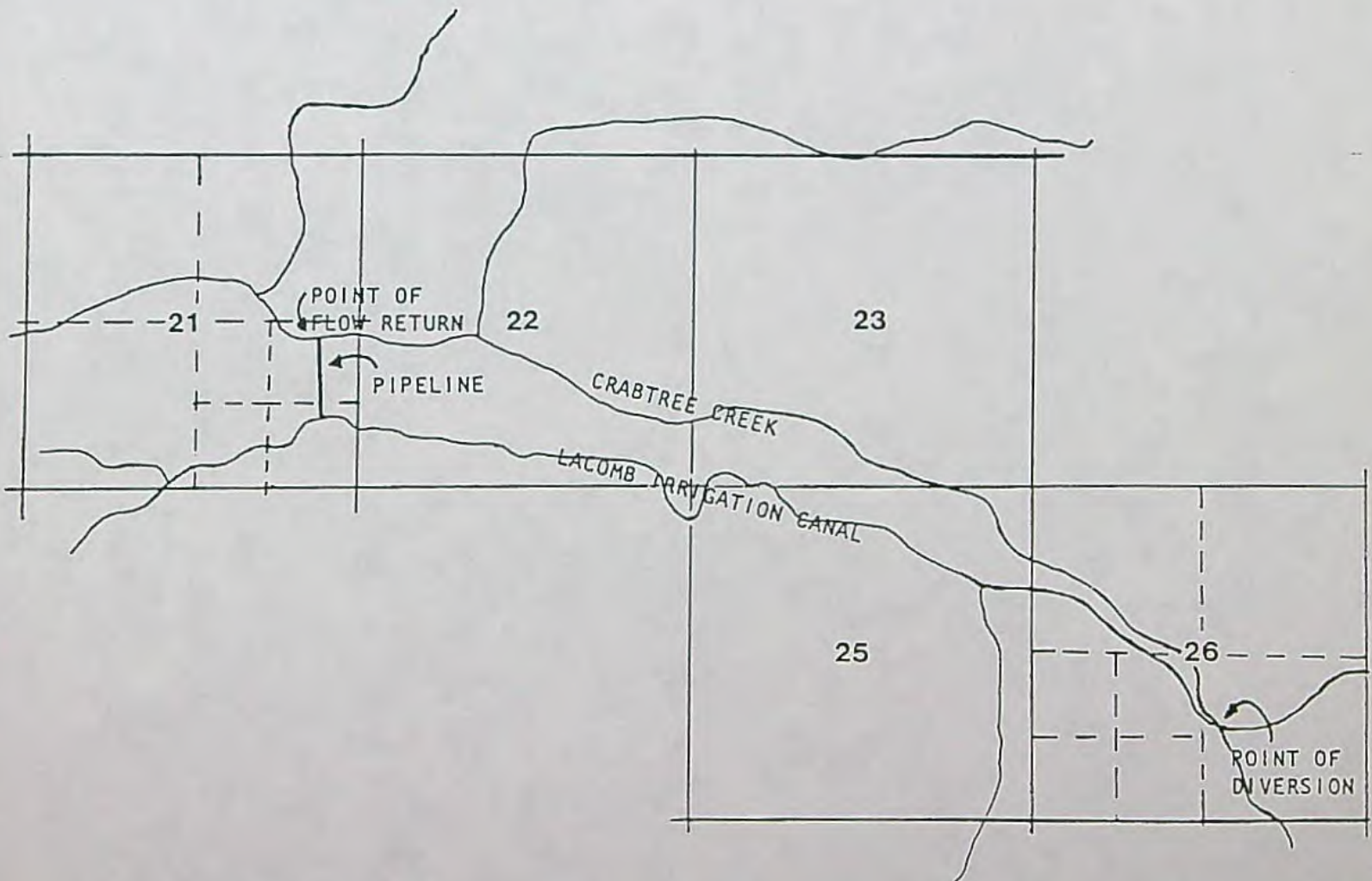
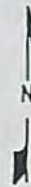
1. Road Map showing relative position of Lacombe to nearby towns and cities
2. Vicinity Map (SCALE: 1:63,360) showing location of major components of the project
3. Vicinity Map (SCALE: 1:12,000) showing area around the "POINT OF DIVERSION", where water is taken into the Lacombe Irrigation Canal from Crabtree Creek
4. Vicinity Map (SCALE: 1:12,000) showing area around the "PIPELINE AND POWERHOUSE", as well as access roads
5. Illustration of the "PERSPECTIVE CONCEPT OF LACOMB, OREGON IRRIGATION HYDROELECTRIC POWER SITE"



LACOMB

SECTIONS 21,22,23,25,26
Township 11 South Range 1 East, W.M.

0 1
2" = 1 Mile

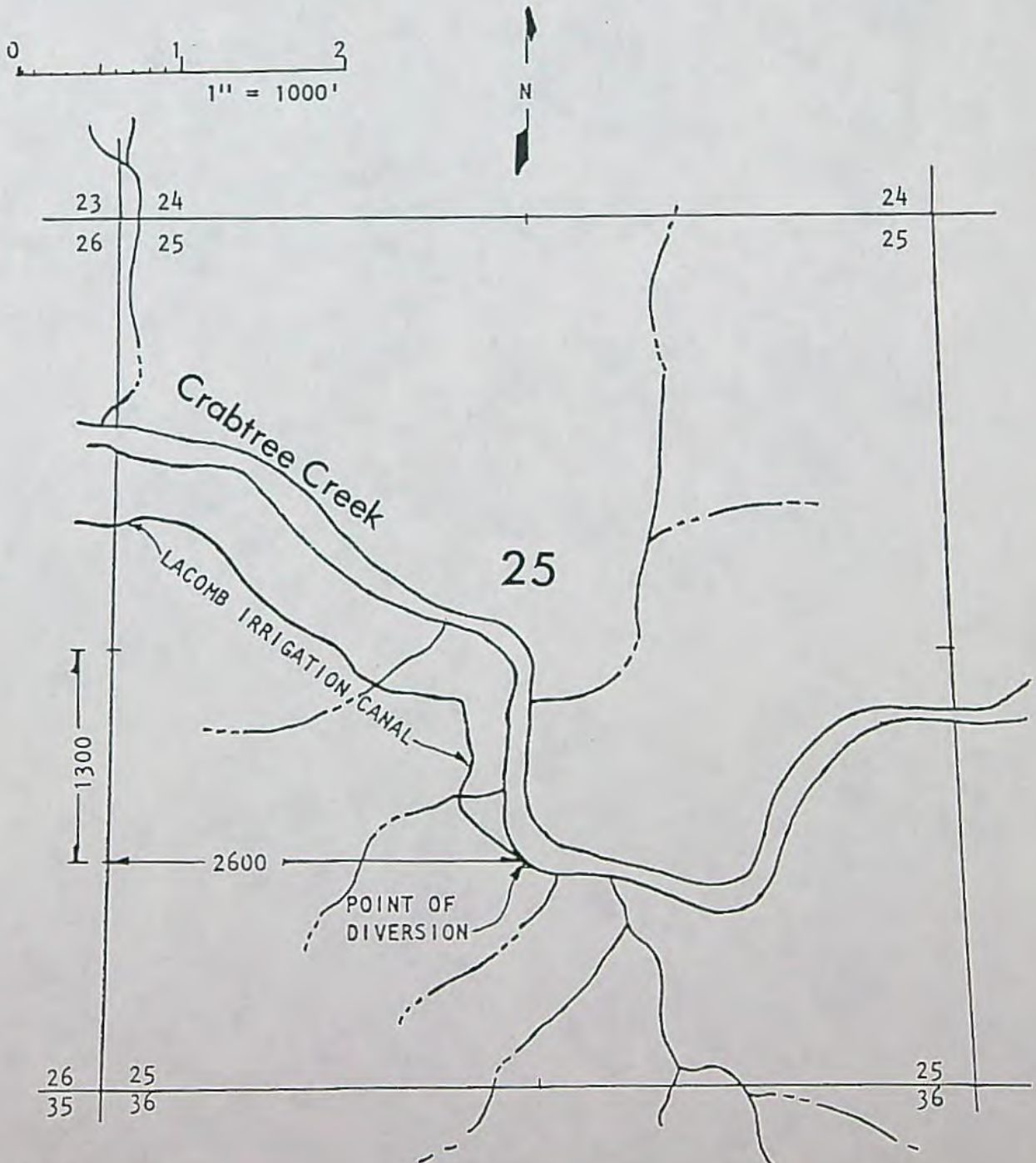


SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330

LACOMB

POINT OF DIVERSION

Section 25
Township 11 South Range 1 East, W.M.



SEA

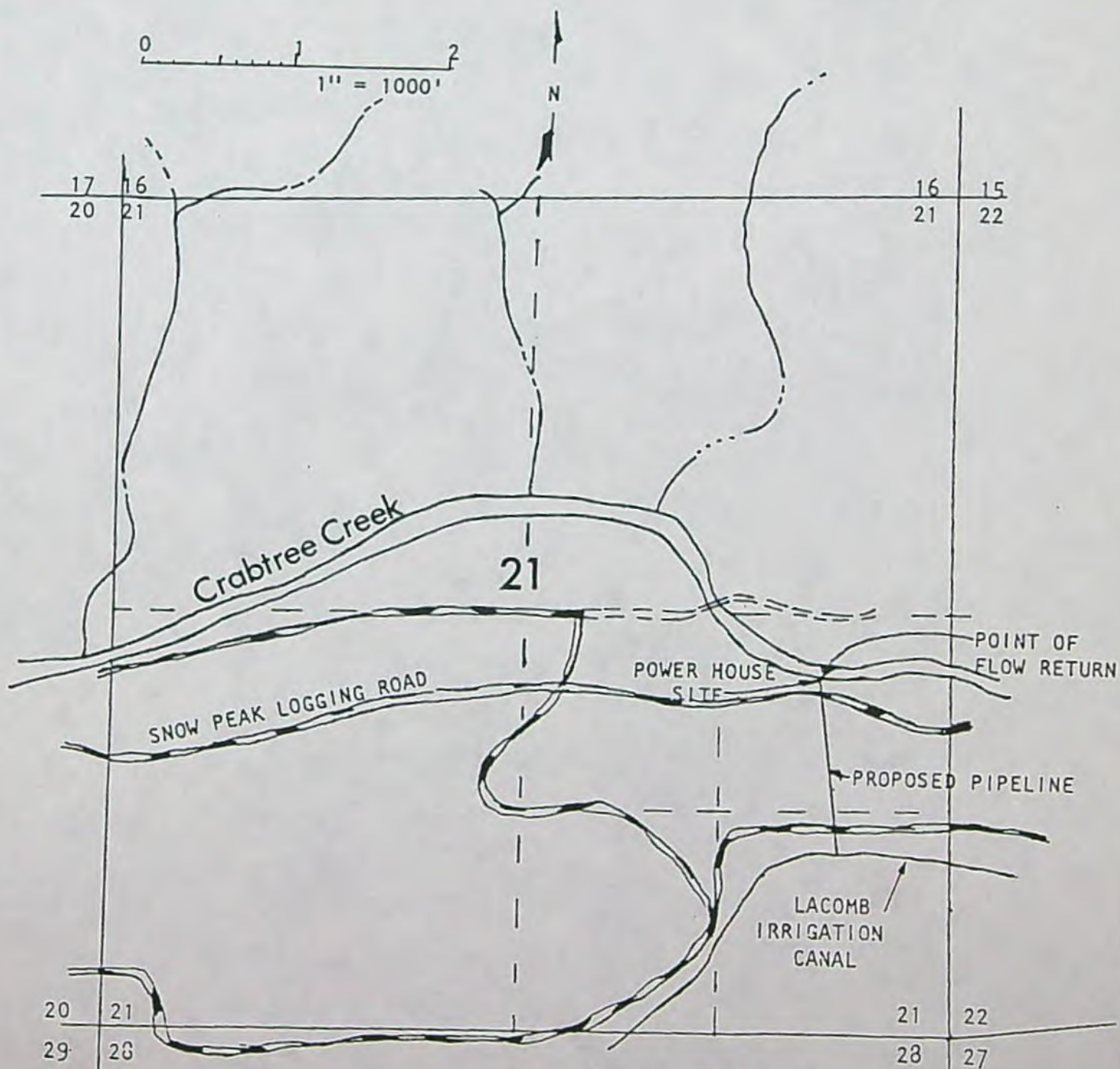
SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330

LACOMB

PIPELINE AND POWERHOUSE SITE

SECTION 21

Township 11 South Range 1 East, W.M.

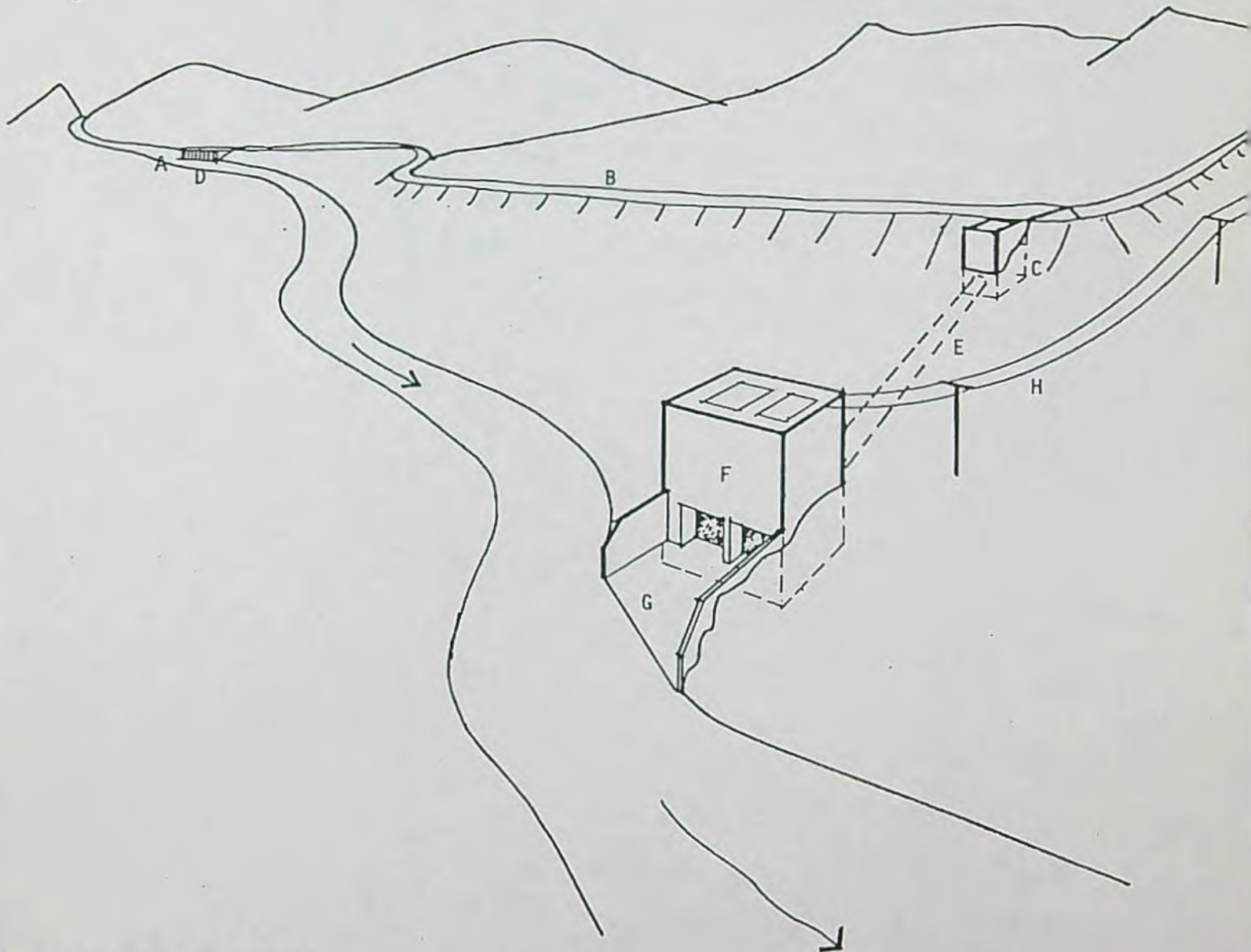


CANAL CORNER N 1294.8 W 718.8
POWERHOUSE SITE: 2323.7 W 837.3

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
OREGON 97330

PERSPECTIVE CONCEPT OF LACOMB HYDROPOWER PROJECT



- A. MAIN STREAM DIVERSION
- B. IRRIGATION DITCH
- C. PENSTOCK HEADWORKS..... Elev. 235 ft. above main stream
- D. FISH SCREEN & SLUICE
- E. PIPELINE CONDUIT (PENSTOCK) .. Length 1100 ft. approximated
- F. POWERHOUSE..... Flood Bank Plateau 12 ft.
- G. TAILRACE..... Elev. Datum ...0...
- H. POWER TRANSMISSION LINE..... No.6 copper wire: Wye System
 12,000 V to ground
 20,800 V phase to phase
 90 to 100 amp rating to primary

LACOMB HYDROPOWER PROJECT

EXHIBIT B (continued)

INDEX FOR EASEMENT AND OWNERSHIP INFORMATION:

1. Willamette Industries' preliminary approval for easement
2. Champion Timberlands' preliminary approval for easement
3. Other property owner easements
4. "Owner's Sales Agreement and Earnest Money Receipt"
for purchasing land on which the powerhouse will be
located



Willamette Industries, Inc.

Building Materials Group
Sales and Operations Office

P.O. Box 907
Albany, Oregon 97321
503/926-7771

May 6, 1981

Larry S. Slotta, Ph.D., P.E.
Slotta Engineering Associates,
Incorporated
1540 N.W. Dixon Street
Corvallis, Oregon 97330

RE: Proposed Lacombe Irrigation District Power Project.
Dear Mr. Slotta:

Your letter to Mr. Bergman dated April 24, 1981, regarding the proposed Lacombe Irrigation District hydroelectric project has been referred to me for reply.

On behalf of Willamette Industries, preliminary approval is hereby given to cross Willamette Industries land and the company's Snow Peak road with a water pipeline. Before final approval is given, we will need to know the exact size of the pipeline, the method of construction and will have to be given assurances that running the pipeline under the Snow Peak road will not interfere with our company's normal operations.

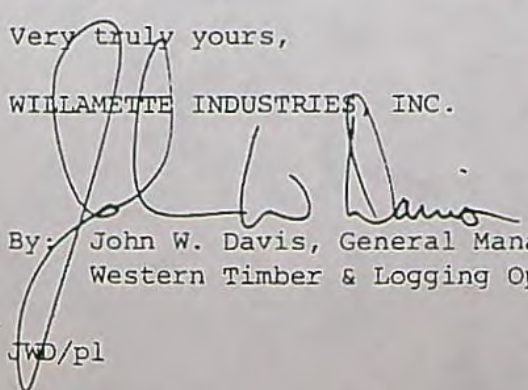
Tentative approval is also given to use the Snow Peak road for access to the proposed hydroelectric project. Final approval will be subject to the execution of an easement or license document approved by the company's legal counsel and specifically limiting the scope of the Irrigation District's use of the Snow Peak right-of-way for ingress and egress to the Collins property for the purposes of maintaining and servicing its hydroelectric project only.

Mr. Bergman informs me that in discussions with you and other representatives of the Irrigation District, he does not foresee any problem in working out the exact details as outlined above.

If anything further is needed at this time from our company, please advise.

Very truly yours,

WILLAMETTE INDUSTRIES, INC.

By:  John W. Davis, General Manager
Western Timber & Logging Operations

JWD/pl

Champion Timberlands
Champion International Corporation

West Coast Operations
P. O. Box 10228
Eugene, Oregon 97440
Telephone 503 687 4690

Lacomb Irrigation District
c/o Slotta Engineering Associates, Inc.
1540 N.W. Dixon Street
Corvallis, OR 97330

January 12, 1981

Attention: Larry S. Slotta

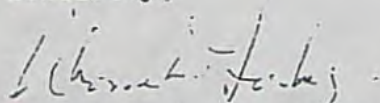
Gentlemen:

We appreciated the opportunity of discussing your proposed hydroelectric project last Friday in Lebanon. The following items are important considerations to our company:

1. Right-of-way width be held to the minimum necessary.
2. The pipeline be buried at an appropriate location for a proposed road crossing.
3. The exact location and acreage needed for the powerhouse, if located on Champion's land.
4. Our continued ability to manage the remainder of our lands for timber production.

You indicated that our concerns were reasonable and could easily be accommodated. With this in mind, we can support your proposal by granting the necessary easements. We would appreciate the opportunity to review your final survey plot and profile.

Sincerely,



Thomas D. Lackey, Manager -
Real Property

TDL:dad

cc: Richard Beeby
Champion International Corporation
P. O. Box 547
Lebanon, OR 97355

#20189/ Easement
E. C. Ayers et ux
to

Filed August 30th, 1940, at 3:00 o'clock P.M.

Lacomb Irrigation District

Stella E. Hoover, Recorder of Conveyances

KNOW ALL MEN BY THESE PRESENTS, That Elmer C. Ayers and Sophia Ayers, his wife for and in consideration of the mutual advantages accruing to the grantors herein in the construction of its irrigation system do hereby give and grant to the Lacomb Irrigation District easement for the construction of a canal or lateral across the following described premises, to-wit:

N.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ Sec. 25 T11 S R1 W.W.M.

E. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.W. $\frac{1}{4}$ Sec. 25 T11 S R1 W.W.M.

As said canal is now or may hereafter be located by the engineers for said district.

The construction of said canal or lateral shall be done in a workman-like manner doing no unnecessary damage to crops or improvements.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 24 day of June, 1940

E. C. Ayers. . .

Sophia A. Ayers . . .

STATE OF OREGON) ss.
County of Linn,)

On this 24 day of June, 1940, personally came before me, a Notary Public in and for said County and State, the within named Elmer C. Ayers and Sophia Ayers, his wife, to me personally known to be the identical persons described in and who executed the within instrument and who personally acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 24 day of June 1940.

(L.S.)

Marion Nagel, Notary Public for Oregon
My Commission Expires Oct. 16, 1940.

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#20190/ Easement
Hilma Peoples et al.
to

Filed August 30th, 1940, at 3:00 o'clock P.M.

Lacomb Irrigation District

Stella E. Hoover, Recorder of Conveyances

LACOMB IRRIGATION DISTRICT
LACOMB, OREGON

WE THE UNDERSIGNED HEREBY GIVE AND GRANT TO THE LACOMB IRRIGATION DISTRICT FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF A CANAL OR LATERAL OVER AND / OUR RESPECTIVE LAND AS FOLLOWS TO WIT: A STRIP OF LAND 25 feet wide

Hilma Peoples

Frank Peoples

E. W. Bartruff

Lonie M. Bartruff

1st National Bank of Lebanon

By J. H. Irving (CORP. SEAL)

J. H. Sylvester

Emma Sylvester

R. W. Sylvester

Margie Sylvester

Oliver P. Powell

Gladys E. Powell

H. C. Pyle

Rebecca Pyle

Ruth Downing

K. P. Sanders

S. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 25-T11S R1 W.

N.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 25 T11S R1 W.

S.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24

N. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 25

Sec. 19-20 -30-31 T11 S.R1 W

E.W. $\frac{1}{4}$ -E.E. $\frac{1}{4}$ -Sec. 35 T11S R1 W

E.E. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -Sec. 36 T11S R1 W

S. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 21 T11S R1 E.

S. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -Sec. 20 T11S R1 E.

S.E. $\frac{1}{4}$ -S.W. $\frac{1}{4}$ and S. W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 21 T11S R1 E.

N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ and W. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 28

S. $\frac{1}{2}$ -E.E. $\frac{1}{4}$ Sec. 29 T11 S R1 E.

S. $\frac{1}{2}$ -E.E. $\frac{1}{4}$ -Sec. 28

N.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24 T11S R1 W.

Hilma Peoples et al.

to

Lacomb Irrigation District

Stella E. Hoover, Recorder of Conveyances

LACOMB IRRIGATION DISTRICT
LACOMB, OREGON

WE THE UNDERSIGNED HEREBY GIVE AND GRANT TO THE LACOMB IRRIGATION DISTRICT AND FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF A CANAL OR LATERAL OVER AND ACROSS OUR RESPECTIVE LAND AS FOLLOWS TO WIT: A STRIP OF LAND 25 feet wide

Hilma Peoples

S. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 25-T11S R1 W.

Frank Peoples

N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 25 T11S R1 W.

E. W. Bartruff

S.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24 " "

Lonie M. Bartruff

N. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 25

1st National Bank of Lebanon

By J. H. Irvine (CORP. SEAL) Sec. 19-20, 30-31 T11 S.R1 W

J. H. Sylvester

N.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 35 T11S R1 W

Emma Sylvester

N.E. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -Sec. 36 T11S R1 W

R. W. Sylvester

S. $\frac{1}{2}$ -S. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 21 T11S R1 E.

Margie Sylvester

Oliver F. Powell

S. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -Sec. 20 T11S R1 E.

Gladys E. Powell

H. C. Pyle

S.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ and S. W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 21 T11S R1 E.

Rebecca Pyle

N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ and W. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 28 " "

Ruth Downing

S. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ Sec. 29 T11 S R1 E.

M. B. Sanders

N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24 T11S R1 W.

J. W. Edwards

N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24 T11S R1 W.

Della Edwards

Ernest Ede

N.W. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -Sec 24 T11S R1 WN.E. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ " and S.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 24 T11S R1N.W. $\frac{1}{4}$ -S.W. $\frac{1}{4}$ Sec. 24 T11S R1 W

State of Oregon) ss.

County of Linn)

On this 22nd day of June 1940 before me a Notary Public for and within said County, personally appeared J. H. Irvine to me personally known, who being by me duly sworn did say that he is the cashier of the First National Bank of Lebanon the corporation named in the foregoing instrument, that the seal affixed to said instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by the authority of its board of Directors and said J. H. Irvine acknowledged said instrument to be the free act and deed of said corporation.

Marion Nagel, Notary Public

My commission expires Oct. 18, 1943.

(L.S.)

State of Oregon) ss.

County of Linn)

On this 22nd day of June 1940 personally came before me a notary public in and for said County and State, Hilma Peoples, Frank Peoples E. W. Bartruff, Lonie Bartruff, J. H. Irvine, J. N. Sylvester, Emma Sylvester, R. W. Sylvester, Margie Sylvester, Oliver F. Powell, Gladys E. Powell, H. C. Pyle, Rebecca Pyle, Ruth Downing, M. B. Sanders, J. W. Edwards, Della Edwards, Ernest Ede, to me personally known to be the identical persons described in and who executed the within instrument and who personally acknowledged to me that they executed same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 22nd day of June 1940.

Marion Nagel, Notary Public

My Commission expires Oct. 18, 1943.

(L.S.)

#18378 Easement
R. W. Downing et al
to
Lacomb Irrigation District

Filed May 2nd, 1940, at 10:25 o'clock A. M.

Stella E. Hoover, Recorder of Conveyances
LACOMB IRRIGATION DISTRICT
LACOMB, OREGON

WE THE UNDERSIGNED HEREBY GIVE AND GRANT TO THE LACOMB IRRIGATION DISTRICT, AN EASEMENT FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF A CANAL OR LATERAL OVER AND ACROSS OUR RESPECTIVE LAND AS FOLLOWS TO WIT: A STRIP OF LAND 25 feet wide

R. W. Downing	S.E. $\frac{1}{4}$ & S.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ Sec. 20 T11 S R 1 E
Nettie Downing	S.W. $\frac{1}{4}$ --S.W. $\frac{1}{4}$ & S.E. $\frac{1}{4}$ -S.W. $\frac{1}{4}$ -Sec. 21 T. 11S. R1 E.
Wayne E. Downing	E. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 29 " "
Rachel Downing	N.W. $\frac{1}{4}$ & W. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -E.W. $\frac{1}{4}$ Sec. 28 " "
A. A. Ayers	S. E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 25 T. 11S R1 W
Kreta Ayers	
Geo. S. Childs	S. E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 35 T11S R1 W
Flora Childs	S.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ - " " "
Dorothy Halverson	S.W. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -Sec. 36 T 11S R1 W.
John Halverson	
J. C. Edwards	S. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24 T11S. R.1 W
Wayne E. Downing	S. $\frac{1}{2}$ -Sec. 20 T11S R1 E
Rachel Downing	N.E. $\frac{1}{4}$ -Sec. 29 " "
	W. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 25 T11S R1 W
	W. $\frac{1}{4}$ -E. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ " " "
J. E. Johnson	N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 26 T11S R1 W
Freda Johnson	S.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ " " "

STATE OF OREGON)
COUNTY OF LINN) SS.

On this 19th day of April, 1940, personally came before me, a Notary Public in and for said County and state, the within named R. W. Downing, Nettie Downing, Rachel Downing, Wayne Downing, A. A. Ayers Kreta Ayers, Geo. Childs, Flora Childs, Dorothy Halverson, John Halverson, J. C. Edwards, John Johnson, Freda Johnson, to me personally known to be the identical persons described in and who executed the within instrument and who acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 19th day of April 1940.

(L.S.)

Marion Nagel, Notary Public for Oregon
My commission expires Oct. 18, 1943.

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#18379 Easement
Pennie Cooper et ux
to
Lacomb Irrigation District

Filed May 2nd, 1940, at 10:25 o'clock A. M.

Stella E. Hoover, Recorder of Conveyances

KNOW ALL MEN BY THESE PRESENTS, That P. Cooper and Arletha Cooper, his wife for and in consideration of the mutual advantages accruing to the grantors herein in the construction of its irrigation system do hereby give and grant to the Lacomb Irrigation District easement for the construction of a canal or lateral across the following described premises, to-wit:

50 Acres	N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ Sec. 30 T. 11 S.R.1 E
	S. $\frac{1}{2}$ -S.E. $\frac{1}{4}$ -E.E. $\frac{1}{4}$ " " "
50 "	Sec. 29 T. 11S. R.1 E.

As said canal is now or may hereafter be located by the engineers for said district.
The construction of said canal or lateral shall be done in a workman-like manner doing n

7903 31

Wayne E. Downing N.W. 1/4 & W 1/2 - N.E. 1/4 - N.W. 1/4 Sec. 28

A. A. Ayers S. E. 1/4 - N.E. 1/4 Sec. 25 T. 11S.R.17

Kreta Ayers

Geo. S. Childs S. E. 1/4 - N.E. 1/4 - Sec. 35 T. 11S.R. 17

Flora Childs S.W. 1/4 - N.E. 1/4 - " " "

Dorothy Halverson S.W. 1/4 - N.W. 1/4 - Sec. 36 T. 11S.R.17.

John Halverson

J. C. Edwards S 1/2 - N.E. 1/4 - S.E. 1/4 - Sec. 24 T. 11S.R.1 W

Wayne E. Downing S 1/2 - Sec. 20 T. 11S.R.1E

Rachel Downing N.E. 1/4 - Sec. 29 " "

W 1/2 - N.E. 1/4 - S.E. 1/4 - Sec. 25 T. 11S.R.1W

W. 1/4 - E 1/2 - N.E. 1/4 - S.E. 1/4 " " "

J. E. Johnson N.E. 1/4 - N.E. 1/4 - Sec. 26 T. 11S.R.1W

Freda Johnson S.E. 1/4 - N.E. 1/4 " " "

STATE OF OREGON)
COUNTY OF LINN) ss.

On this 19th day of April, 1940, personally came before me, a Notary Public in and for said County and state, the within named R. W. Downing, Nettie Downing, Rachel Downing, Wayne Downing, A. A. Ayers Kreta Ayers, Geo. Childs, Flora Childs, Dorothy Halverson, John Halverson, J. C. Edwards, John Johnson, Freda Johnson, to me personally known to be the identical persons described in and who executed the within instrument and who acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 19th day of April 1940.

Marion Nagel, Notary Public for Oregon

(L.S.)

My commission expires Oct. 18, 1943.

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#18379 ✓ Easement

Filed May 2nd, 1940, at 10:25 o'clock A. M.

Fennie Cooper et ux
to

Lacomb Irrigation District

Stella L. Hoover, Recorder of Conveyances

KNOW ALL MEN BY THESE PRESENTS, That F. Cooper and Arletha Cooper, his wife for and in consideration of the mutual advantages accruing to the grantors herein in the construction of its irrigation system do hereby give and grant to the Lacomb Irrigation District easement for the construction of a canal or lateral across the following described premises, to-wit:

50 Acres N.E. 1/4 - S.E. 1/4 Sec. 30 T. 11 S.R.1 E
S. 1/2 - S.E. 1/4 - N.E. 1/4 " " "

50 " Sec. 29 T. 11S.R.1 E.

As said canal is now or may hereafter be located by the engineers for said district.

The construction of said canal or lateral shall be done in a workman-like manner doing no unnecessary damage to crops or improvements.

IN WITNESS WHEREOF, We have hereunto set our hands and seals this 29th day of Jan. 1940.

Fennie Cooper

Arletha Cooper

STATE OF OREGON) ss.
County of Linn)

On this 29 day of January, 1940, personally came before me, a Notary Public in and for said County and State, the within named Fennie Cooper and Arletha Cooper, his wife, to me personally known to be the identical persons described in and who executed the within instrument and who personally acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 29 day of January, 1940.

Marion Nagel, Notary Public for Oregon

My Commission Expires Oct. 18th

(L.S.)

FILE COPY

OWNER'S SALES AGREEMENT
AND EARNST MONEY RECEIPT

RECEIVED OF Lacomb Irrigation District, 12 May, 1981,
hereinafter called purchaser, \$500.00 and 1/2 as earnest
money and in part payment for the following described real estate situated in the City of Lacomb
County of Linn State of Oregon, described as follows, to-wit:
43083 Snow Peak Drive
Linn Co. TAX LOT Number 3300 containing 4.0 Acres
Linn Co. TAX LOT Number 3401 containing 0.46 Acres
as described in Warranty Deed to 167 page 370, Parcel I & II, recorded
in Linn County Court House
which we have this day sold to the purchaser
for the sum of Ninety Five Thousand and 00/100 Dollars \$95,000;
on the following terms, to-wit: The earnest money hereinabove receipted for \$500;
upon acceptance of title and delivery of deed or delivery of contract \$95,000 \$95,500;
balance of 00 Dollars \$95,500;
payable as follows:

Dependent on commitments made from loan
grants to the Lacomb Irrigation District

A title insurance policy from a reliable company insuring marketable title in the seller in an amount equal to said purchase price is to be furnished purchaser in due course at seller's expense; preliminary to closing, seller may furnish a title insurance company's title report showing its fitness to issue title insurance, and such report shall be conclusive evidence as to status of seller's record title.

It is agreed that if the title to the said premises is not marketable, or cannot be made so within thirty days after notice, with a written statement of defects, is delivered to seller, the earnest money herein receipted for shall be refunded. But if the title to the said premises is marketable, and the purchaser neglects or refuses to comply with any of the conditions of this sale within 50 days and to make payments promptly, as hereinabove set forth, then the earnest money herein receipted for shall be forfeited to the seller as liquidated damages, and this contract shall thereupon be of no further binding effect.

The property is to be conveyed by good and sufficient deed free and clear of all liens and encumbrances except zoning ordinances, building restrictions, taxes due and payable for the current tax year, reservations in federal patents and state deeds, easements of record and

All irrigation, ventilating, cooling, plumbing and heating fixtures and equipment (including stoker and oil tanks but excluding fire place fixtures and equipment), water heaters, electric light and bathroom fixtures, light bulbs and fluorescent lamps, venetian blinds, wall-to-wall carpeting, awnings, window and door screens, storm doors and windows, attached floor coverings, attached television antenna, all plants, shrubs and trees and all fixtures except are to be left upon the premises as part of the property purchased.

The following personal property is also included as part of the property sold for said price: 1/2

Seller and purchaser agree to pro rate the taxes which become due and payable for the current tax fiscal year on a fiscal year basis. Rents, interest, premiums for existing insurance, and other matters shall be pro rated on a calendar year basis. Purchaser agrees to pay for fuel on hand including oil in tank, if any, and, at closing, shall reimburse seller for sums, if any, held in any reserve account relating to any encumbrances on said property. Adjustments are to be made as of the date of the consummation of the sale herein or delivery of possession, which ever first occurs.

Possession of said premises is to be delivered to purchaser on or before September 30, 1981. Time is of the essence hereof. This contract is binding upon the heirs, executors, administrators, successors and assigns of the purchaser and seller. However, the purchaser's rights herein are not assignable without written consent of seller. In any suit or action brought on this contract, the losing party agrees to pay the prevailing party's reasonable attorney's fees to be fixed by the trial court, and on appeal the prevailing party's reasonable attorney's fees to be fixed by the appellate court.

Further conditions:

Green Collins Owners

I hereby agree to purchase the above property and to pay the price of Ninety Five Thousand
(\$95,000) Dollars as specified above.

Address 41553 Lacomb Drive
Lacomb, Oregon 97355
Phone 451-2796

Purchaser LACOMB IRRIGATION DISTRICT
Jim Bazel (Chairman)
12 May 1981



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT E

LACOMB HYDROPOWER PROJECT

EXHIBIT E

Part (1) ENVIRONMENTAL SETTING DESCRIPTION

(Commensurate with the scope and environmental impact of the project)

VEGETATIVE COVER: Forest (Douglas Fir, Alder, Maple), and undergrowth shrubbery

FISH & WILDLIFE RESOURCES: Crabtree Creek is a spawning and rearing stream for several species of migrating salmonids (chinook salmon, steelhead, cutthroat trout). The black-tailed deer is the major big game species near the proposed project area. Small game species include ruffed grouse, mountain quail, and band-tailed pigeon. Other species of mammals inhabiting the area include black bear, raccoon, beaver, river otter, mink, coyote, brush rabbit, and grey squirrel. Nongame animals present in the area include songbirds, wading birds, raptors, reptiles and amphibians.

WATER QUALITY & QUANTITY: The area along the creek reach above the diversion is commercial forestland and no industry exists. Thus, the water quality is high, and the Lacombe Hydropower Project will not endanger this present condition. Please see flow duration analysis for a quantitative evaluation of Crabtree Creek in Part (5) of EXHIBIT A.

LAND & WATER USES: Water from Crabtree Creek is presently being diverted into the Lacombe Irrigation Canal for use by the 151 members of the District, and it irrigates 1908 acres. Most of the surrounding land area supports timber and agricultural businesses.

RECREATIONAL USES: These are limited because roads through the area are designated private as they are maintained by the timber companies in the area.

HISTORICAL & ARCHEOLOGICAL RESOURCES: NONE (See Part (3) of EXHIBIT E: Letter from Oregon State Historic Preservation Officer)

ENDANGERED OR THREATENED ANIMAL & PLANT SPECIES: NONE (See Part (3) of EXHIBIT E: Letter from U.S. Fish & Wildlife Service, paragraph 6)

CRITICAL HABITATS: NONE

SITES ELIGIBLE FOR OR INCLUDED ON THE NATIONAL REGISTER OF HISTORIC PLACES:

NONE (See Part (3) of EXHIBIT E: Letter from Oregon State Historic Preservation Officer)

LACOMB HYDROPOWER PROJECT

EXHIBIT E (continued)

Part (2) ENVIRONMENTAL IMPACT REPORT

The project site is not on or adjacent to any federal lands or wilderness areas. Crabtree Creek has not been designated and is not now being considered for either wild or scenic status.

The State of Oregon Water Resources Department (after holding public hearings) issued a permit for the use of 45 cfs from Crabtree Creek for hydroelectric power production, with the conditions that minimum flows are by-passed and that fish passage is provided at the diversion. The Lacombe Irrigation District shall comply with these OWRD requirements. (See OWRD Permit in Part (4) of EXHIBIT E). The Lacombe Irrigation District has requested (on August 5, 1982) an additional 20 cfs as an amendment to the existing OWRD Order, totaling 65 cfs.

The construction phase of the project will not significantly alter the water quality of Crabtree Creek, nor will excessive turbidity be created. All of these potentially harmful environmental factors have been considered and the District believes there will be no problems involved in maintaining the natural integrity of the creek during the completion of the project. Also, the National Marine Fisheries Service has set forth requirements for timing of construction and discharge of suspended solids, by which the District will comply. (Please see Part (4) of this exhibit: NMFS Letter, requirement no. 4)

As the power project shows economic returns, the District proposes to convert their canal-fed irrigation system to one which is pressurized (e.g. a pipeline). Accordingly, irrigation (loss) requirements will drop considerably and increased returns to Crabtree Creek will result.

The proposed upgrading of the existing canal will result in more efficient use of irrigation water. The improved canal, when combined with the proposed power penstock, will cause both an increase in water returned to the stream and a return of the water higher in the stream's reach than now exists because upstream evaporation, transpiration and associated losses will be reduced.

Installation of the penstock will involve clearing a narrow strip of brush and trees along the route of the penstock, and digging a 5.5-foot deep trench in which to bury the pipe. The total area to be de-vegetated will be less than 0.5 acres. The landowners who have given approval for property easement have required that the areas cleared be re-vegetated after construction is completed. The powerhouse design will incorporate building materials and architectural designs so that the resulting structure is aesthetically pleasant. Presently, there are roads that access all major proposed physical structures, which will be improved for construction and maintenance. Thus, a minimal amount of roadbuilding will take place.

LACOMB HYDROPOWER PROJECT

EXHIBIT E (continued)

Part (2) (continued)

Special measures have been incorporated into designs for the intake/diversion and tailrace structures in order to protect migrating fish and to prevent their entry into power facilities. Please note the letters of consultation for conditions outlined by various fish and wildlife agencies in Part (3) of this EXHIBIT E.

The project will have several benefits to the environment to be derived in utilizing the present irrigation canal on Crabtree Creek for a power canal, including: irrigation flows will be substantially screened, possible increases in return flows will result from less use during the irrigation period if the project pays for pressurizing the irrigation network, increased return flow due to lining 2.5 miles of the present canal to reduce losses, and monies derived from power generation will eventually be used within the regional school system after all projects are paid. In addition, this project will mean the creation of many jobs during the construction phase, in an economically depressed area.

Thus, this project will not endanger the surrounding natural resources, but will contribute to better water management on Crabtree Creek. A cautious approach to construction methods will be taken while completing this project to prevent entry of deleterious materials to Crabtree Creek or its surroundings.

LACOMB HYDROPOWER PROJECT

EXHIBIT E (continued)

Part (3) LETTERS OF CONSULTATION & CONDITIONAL CLEARANCE FROM:

1. Oregon Department of Fish & Wildlife
2. U.S. Fish & Wildlife Service
3. National Marine Fisheries Service
4. Oregon State Historic Preservation Officer

****Please note:** Slotta Engineering Associates has worked closely with the natural resource agencies listed above in order to satisfy environmental and fish-migration concerns in the design of the Lacombe Irrigation Hydropower Project on Crabtree Creek. These discussions formed the basis for the designs contained in EXHIBIT G. Also, the agencies listed above have approved the designs contained herein, subject to conditions listed.

LACOMB HYDROPOWER PROJECT

The following is a list of resource agency representatives who are familiar with this project, and who can be contacted for questions or information:

Don Buell
Oregon Water Resources Department
Mill Creek Office Park
555 13th Street NE
Salem, OR 97310

Jim Esch
Steve Rainey
NOAA
National Marine Fisheries Service
Environmental & Technical Services
847 NE 19th Street, 3rd Floor
Portland, OR 97232

Russell D. Peterson
U.S. Fish & Wildlife Service
Division of Ecological Services
Portland Field Office
727 NE 24th Avenue
Portland, OR 97232

Lou Fredd
Oregon Department of Fish & Wildlife
Environmental Management Section
506 SW Mill Street
PO Box 3503
Portland, OR 97208

D. W. Powers
Department of Transportation
State Historic Preservation Office
Parks & Recreation Division
525 Trade Street SE
Salem, OR 97310



rec'd 31 July 82

Department of Fish and Wildlife

506 S.W. MILL STREET, P.O. BOX 3503, PORTLAND, OREGON 97208

July 28, 1982

Larry Slotta, PhD, PE
Slotta Engineering Assoc., Inc.
917 N.W. Grant Street
Corvallis, Oregon 97201

Dear Larry:

This responds to your letter of July 7, 1982 regarding Lacombe Hydro Project. This sets forth terms and conditions required by this agency to satisfy requirements for exemption of this project from Federal Energy Regulatory Commission licensing.

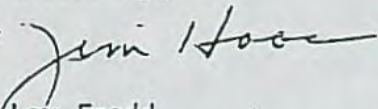
- (1) Plans for intake screening must be approved by this agency prior to construction. Subsequent to construction, intake screening must be maintained and operated at all times to Department specifications. Should the Department determine at any time that the screening system requires modification or repair to save fish from injury, generation shall be terminated until necessary repairs or modifications have been made to the satisfaction of the Department.
- (2) Sufficient flow will be left in the natural channel at all times to satisfy the order of the Water Policy Review Board of Oregon approving Water Resources Department Permit 60823, dated May 8, 1981, pertaining to this project.
- (3) If at any time the Department should determine that project flow regulations, or facilities, impair fish migration, the project will take any corrective measures the Department may require to ensure safe and unimpeded fish passage.
- (4) Plans for construction or improvement of any diversion structure in Crabtree Creek must be approved by the Department prior to construction. Such diversion structure(s) shall be maintained and operated at all times to comply with the approved design specifications. Should the Department determine at any time that diversion structure(s) require modification or repair to facilitate fish passage, the project will make such modification or repair immediately to the satisfaction of the Department.

Mr. Slotta
July 28, 1982
Page 2.

- (5) The project shall compensate the Department for any expenses the Department may incur to restore fish production of Crabtree Creek should unanticipated damage to fish life or fish habitat arise from any project operations.

This also confirms that you are making satisfactory progress on design of fish passage facilities required at the project.

Sincerely,


Lou Fredd
Fish and Wildlife Biologist
Environmental Management Section

dw

cc: NMFS - Esch
USFWS - Yoshinaka
Salem - Wetherbee



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Division of Ecological Services
Portland Field Office
727 N.E. 24th Avenue
Portland, Oregon 97232

Reference: ES

August 5, 1982

Larry S. Slotta, Ph.D., P.E.
Slotta Engineering Associates, Inc.
917 NW Grant St.
Corvallis, OR 97330

Dear Dr. Slotta:

This responds to your July 7, 1982, letter regarding the Lacombe Hydropower Project. This letter will document consultation with the Fish and Wildlife Service to satisfy the Federal Energy Regulatory Commission's 5MW exemption requirement. It also summarizes recommendations of the Service resulting from the July 27 meeting and July 29 field inspection for the Lacombe Project.

According to your description, the project will consist of the following: 1) improvement of an existing rock diversion; 2) an improved 2.5 mile irrigation canal; 3) a 1300-foot, 36 inch diameter penstock; 4) a powerplant rated at 1000 KW; and 5) an 1100-foot long, underground power transmission line. Presently, the Lacombe Irrigation District has a right to divert up to 45 cubic feet per second (cfs) of water from the stream; the district is applying for an additional 20 cfs.

Fish and Wildlife Resources

Crabtree Creek provides spawning, rearing, and feeding habitat for several species of migrating salmonids including chinook salmon and steelhead and cutthroat trout. Juvenile and adult salmonids migrate through the stream reach that would be affected by the project.

The black-tailed deer is the major big game species near the proposed project area. Other species of mammals inhabiting the area include black bear, raccoon, beaver, river otter, mink, coyote, brush rabbit, and grey squirrel. Small game species include ruffed grouse, mountain quail, and band-tailed pigeon. Nongame animals present in the area include songbirds, wading birds, raptors, reptiles, and amphibians.

In accordance with Section 7 of the Endangered Species act of 1973 (16 U.S.C. 1531, et seq.), FERC is required to assure that its actions have taken into consideration impacts to Federally listed or proposed threatened or endangered species for all Federally funded, constructed, permitted, or licensed projects within its jurisdiction.

Through coordination with our Endangered Species staff, we have determined that, to the best of our knowledge, there are no listed or proposed threatened or endangered species occurring within the project area.

Should a species become officially listed or proposed before completion of the subject project, FERC should be aware of its continuing responsibilities as described in Section 7(a) and (c) of the Act. These responsibilities are detailed in Attachment A.

If you have any questions regarding Endangered species or your responsibilities under the Act, please contact:

Mr. Jim Bottorff, Endangered Species Team Leader
U.S. Fish & Wildlife Service
2625 Parkmont Lane, SW Bldg. B-2
Olympia, WA 98502
Phone: (206) 753-9444
FTS 434-9444

Based upon agreements and design changes reached at the meeting and field inspection, it appears that the Lacombe Hydro Project could be constructed according to recommendations provided by the Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS). Recommended changes include:

1. Realignment of the fish screen and trash rack at the diversion site.
2. Construction of a rock diversion weir.
3. Excavation of a hole immediately downstream from the sluice gate.
4. Relocation and realignment of powerplant discharge.

These recommended changes have been incorporated into plans revised by Slotta Engineering Associates dated August 5, 1982. It should be noted that approval of these plans by the Oregon Department of Fish and Wildlife will also be required.

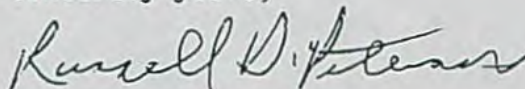
To protect fish and wildlife we have preliminarily determined that the following terms and conditions would be necessary:

1. Diversion, fish screens, powerline and discharge shall be constructed according to plans approved by the FWS, NMFS and ODFW.
2. Facilities shall be operated and maintained by the Lacombe Irrigation District or its successor to assure that fish passage and minimum stream flows are provided.
3. Access to the project site shall be provided to allow for future inspections of facilities by fish and wildlife agency personnel.
4. Stream flows within the bypassed reach of Crabtree Creek shall satisfy the Order of the Oregon Water Policy Review Board approving Water Resources Department Permit 60823 dated May 28, 1981, for this project.
5. The powerplant discharge facility will be constructed to prevent the entry of migratory fish.

Should the FERC accept your application for exemption, we will work with you to set final terms and conditions required to ensure that your project is environmentally acceptable.

Thank you for the opportunity to review and discuss this project.

Sincerely yours,



Russell D. Peterson

cc: AO
RO, AE
ODFW

FEDERAL AGENCIES' RESPONSIBILITIES UNDER SECTIONS 7(a) AND (c)
OF THE ENDANGERED SPECIES ACT

SECTION 7(a) - Consultation/Conference

Requires: 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2) Consultation with FWS when a Federal action may affect a listed, endangered, or threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of Critical Habitat. The process is initiated by the Federal agency after they have determined if their action may affect (adversely or beneficially) a listed species; and

3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed Critical Habitat.

SECTION 7(c) - Biological Assessment for Construction Projects¹

Requires Federal agencies or their designees to prepare Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify any proposed and/or listed species which are/is likely to be affected by a construction project. The process is initiated by a Federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, please verify the accuracy of the list with our Service. No irreversible commitment of resources is to be made during the BA process which would result in violation of the requirements under Section 7(a) of the Act. Planning, design, and administrative actions may be taken; however, no construction may begin.

To Complete the BA, your agency or its designee should: (1) conduct an on-site inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population for potential reintroduction of the species; (2) review literature and scientific data to determine species distribution, habitat needs, and other biological requirements; (3) interview experts including those within FWS, National Marine Fisheries Service, State conservation departments, universities and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; (5) analyze alternative actions that may provide conservation measures; and (6) prepare a report documenting the results, including a discussion of study methods used, any problems encountered, and other relevant information. Upon completion, the report should be forwarded to our Area Manager.

^{1/} "Construction Project" means any major Federal Action which significantly affects the quality of the human environment (requiring an EIS) designed primarily to result in the building or erection of man-made structures such as dams, buildings, roads, pipelines, channels, and the like. This includes Federal actions such as permits, grants, licenses, or other forms of Federal authorization or approval which may result in construction.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
ENVIRONMENTAL & TECHNICAL SERVICES DIVISION
847 NE 19th AVENUE, SUITE 350
PORTLAND, OREGON 97232
(503) 230-5400

August 18, 1982

F/NWR5:JRE

Larry Slotta, PhD, PE
Slotta Engineering Associates, Inc.
917 N.W. Grant Street
Corvallis, Oregon 97330

Re: Lacombe Hydropower Project; Consultation Prior to Application for
Exemption from Licensing

Dear Dr. Slotta:

This letter documents receipt of additional materials requested by National Marine Fisheries Service (NMFS) on the subject proposed hydroelectric project. Based on our consultation with you on July 27 and 29, 1982, and the updated diversion and powerhouse functional designs submitted for our review on August 5, 1982, our preliminary terms and conditions of exemption are as follows:

1. The functional design requirements have been satisfactorily met except for these refinements:
 - a. The steel slide gate at the downstream end of the diversion sluiceway should provide a notched weir large enough to pass all minimum streamflow during June and July (i.e., 20 cfs). This would provide for a more distinct flow along the screen face, and provide better upstream passage through the gate. The main cross framing for the base of the operator rod should be several feet above the notch, such that it does not hinder passage.
 - b. At the powerhouse, the top of the draft outlet must be below the low water surface. Water must discharge below the low tailwater surface so fish will not jump at the discharge outlet. It must pass through a fish barrier rack at a velocity no greater than 1 foot/second.
 - c. The fish barrier rack must have 1-inch maximum openings. It should lean downstream at the top at approximately 15 degrees to minimize the attraction for fish to jump at the barrier.

These changes are illustrated on the attached drawings.

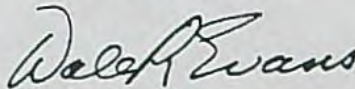
2. Sufficient flow will be left in the natural channel of Crabtree Creek at all times to satisfy the Order of the Water Policy Review Board of Oregon approving Water Resources Department Permit 60823, dated May 8, 1981, pertaining to this project.



3. Diversion structure, screens, and powerhouse tailwater shall be inspected at least weekly to ensure that fish passage is not impaired at any time.
4. Construction shall be timed to minimize impacts on the fishery resources and the Applicant shall ensure that the discharge of suspended solids and other foreign substances is controlled at all times to the maximum extent possible.
5. Access shall be provided for fishery agency personnel to allow them to monitor operation and maintenance of installations for protection and enhancement of fish.
6. Notice shall be provided to NMFS of the start of project construction and of project completion. A yearly compliance report on fisheries requirements shall be submitted to fishery agencies for their review.
7. The project shall compensate the Oregon Department of Fish and Wildlife for any expenses the Department may incur to restore fish production of Crabtree Creek should unanticipated damage to fish life or fish habitat arise from any project operations.

Thank you for your cooperation in our efforts to protect and develop the anadromous fishery resources of Crabtree Creek. NMFS will set any additional final terms or conditions when we have reviewed the final project design as submitted to the Federal Energy Regulatory Commission for your Exemption.

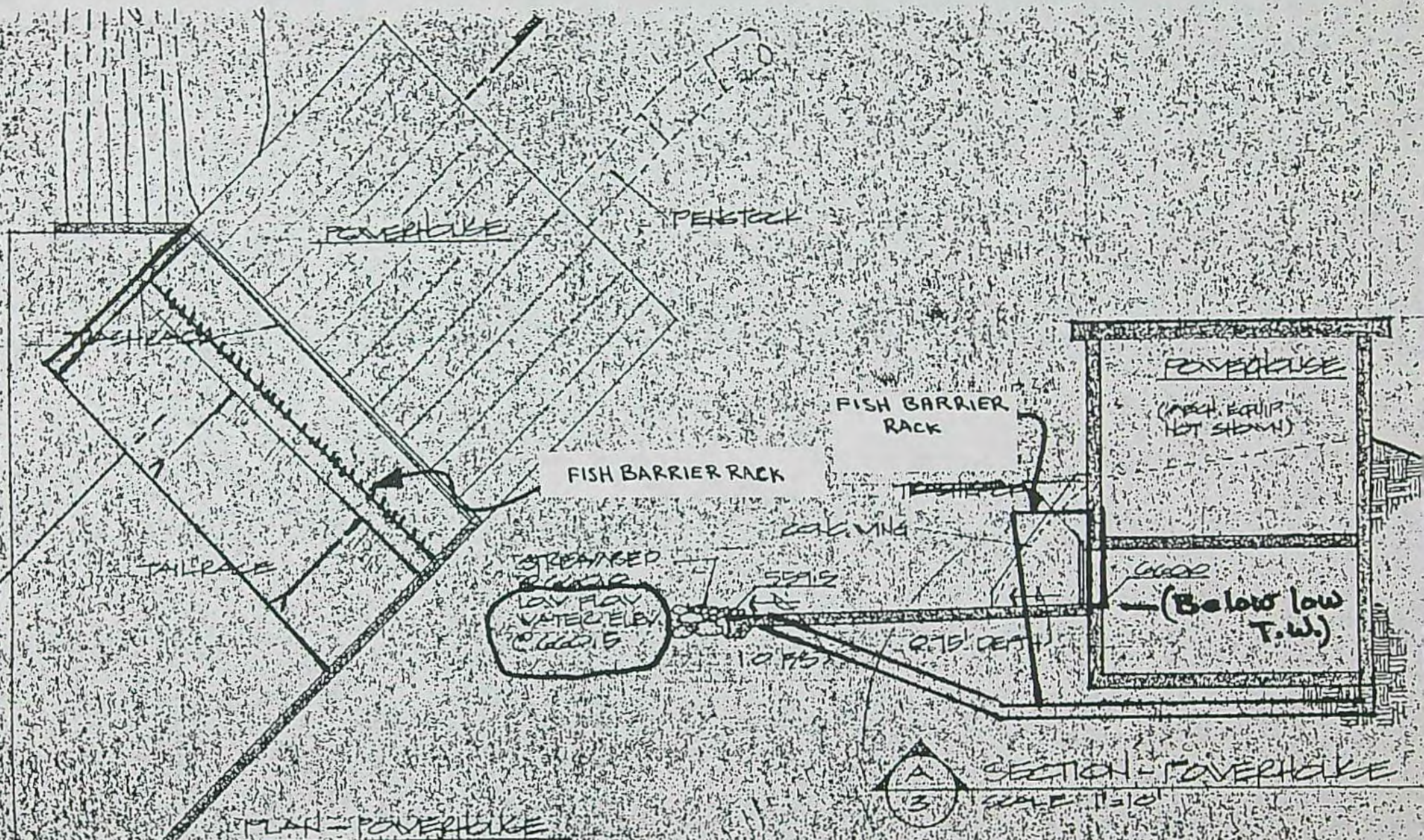
Sincerely yours,



Dale R. Evans
Division Chief

Attachment

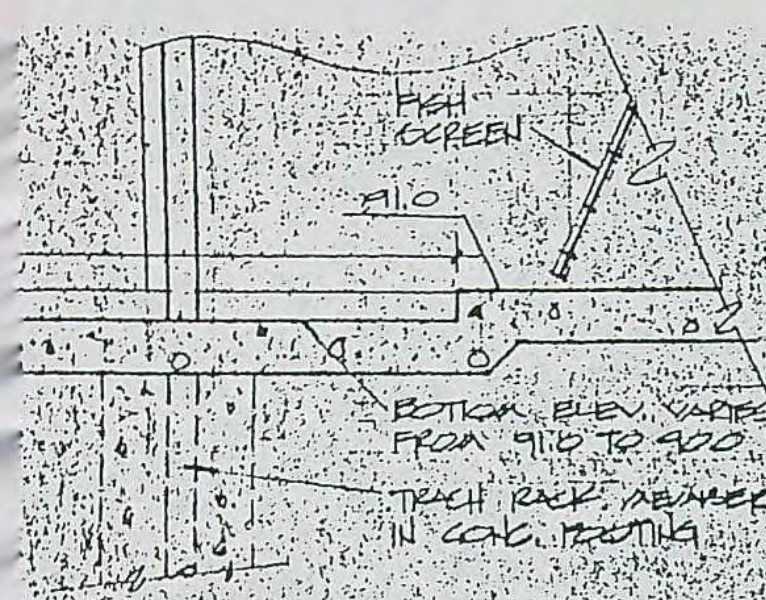
cc: Oregon Department of Fish and Wildlife - Lou Fredd
Fish and Wildlife Service, ES, Portland - Marv Yoshinaka
Federal Energy Regulatory Commission



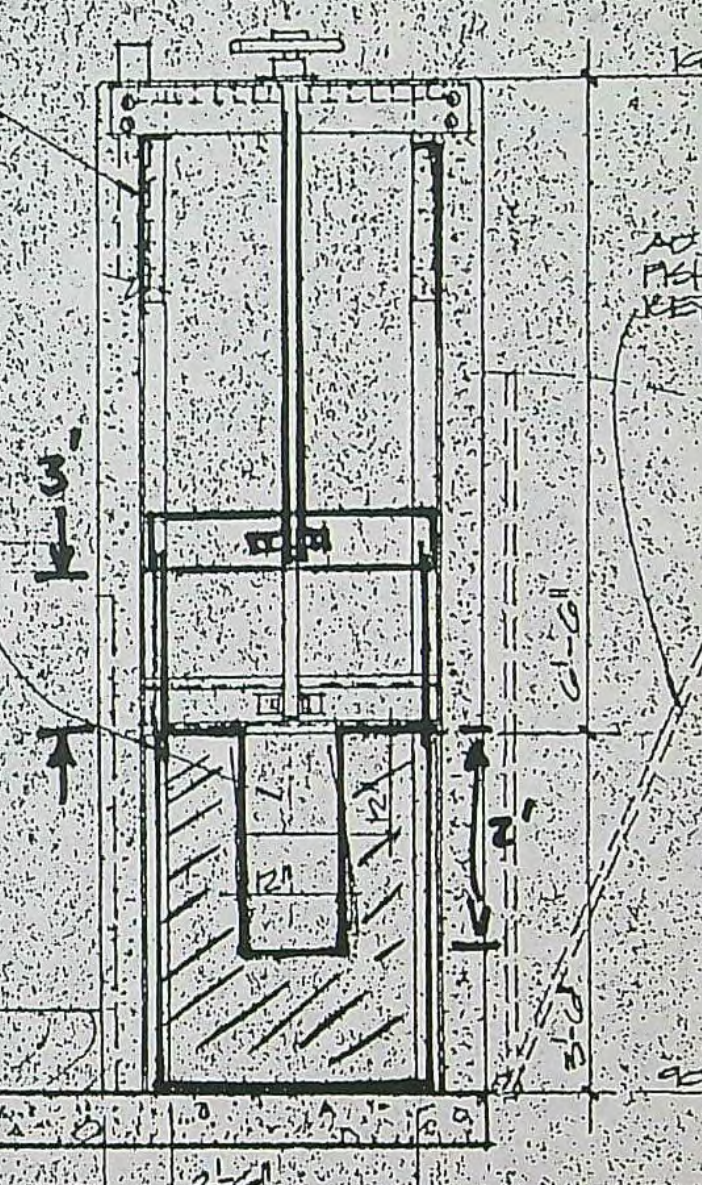
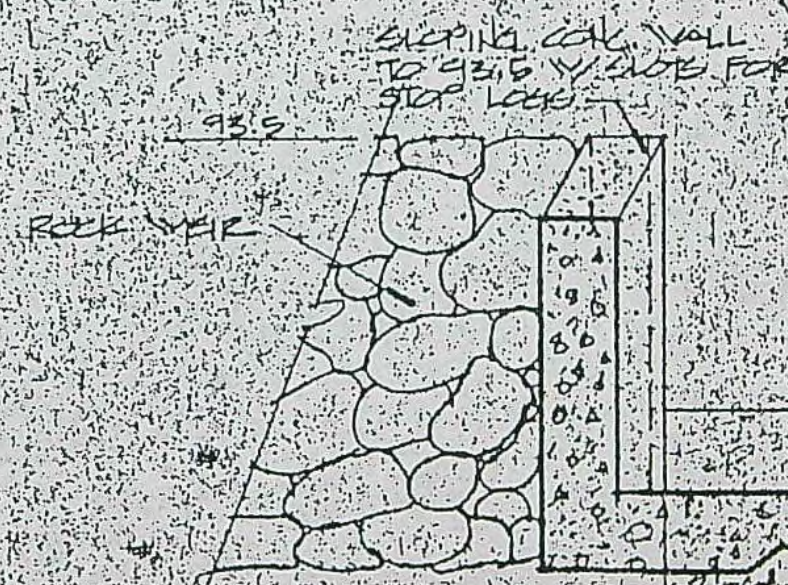
PLAN - POWERHOUSE
SCALE 1"=10'

(OTHER CONTIGUOUS
NOT SHOWN)

DWG.	SEA	SLOTT
3/3		1500
3-5-42		



SECTION THRU SLUICE
SCALE 1/2" = 1'-0"



NOTE: SOUTH RETAINING WALL & FDN. DETAILS NOT SHOWN FOR CLARITY



SECTION THRU SLIDE GATEWAY
SCALE 1/2" = 1'-0"



Department of Transportation

STATE HISTORIC PRESERVATION OFFICE

Parks and Recreation Division

525 TRADE STREET S.E., SALEM, OREGON 97310

July 1, 1982

PAULA M ARSENAULT
SLOTTA ENGINEERING ASSOCIATES INC
917 NW GRANT ST
CORVALLIS OR 97330

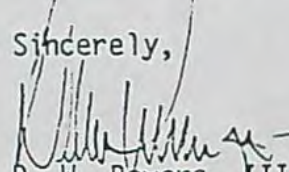
Dear Ms. Arsenault:

RE: Lacombe Hydro Power Project/FERC
Linn County

Our staff has reviewed the proposed small hydro power project under FERC license. We have no record of any historic or archeological sites in or near the proposed project area.

If you have any questions, you can contact Dr. Leland Gilson at 378-5023.

Sincerely,


D. W. Powers, III
Deputy SHPO

DWP:LG/js

LACOMB HYDROPOWER PROJECT

EXHIBIT E (continued)

Part (4) ADDITIONAL INFORMATION

1. Oregon Water Resources Permit for 45 cfs (OWRD Order No. 60823)
**Please note: The Lacombe Irrigation District applied on August 5, 1982 to the OWRD for an additional 20 cfs. A total of 60 cfs will be used to produce hydro-electricity, while the other 5 cfs will serve as "buffer flow" to account for leakage and evaporation. It is expected that this discharge will be administratively allocated considering the endorsements given by the resource agencies herein, and considering the minimum streamflow designation in OWRD Order No. 60823.
2. Oregon Department of Fish & Wildlife listing of "Fish Screening Criteria", which have served as a source of recommendations in project plans.
3. Conditional Use Permit from Linn County, Oregon

BEFORE THE WATER POLICY REVIEW BOARD
OF THE
STATE OF OREGON

In the Matter of the Referral of)	FINDINGS OF FACT,
Permit Application 60823 Involving)	CONCLUSIONS AND
Use of Water from Crabtree Creek)	ORDER
for Hydroelectric Power)	

Permit application 60823 was submitted by the Lacombe Irrigation District for a hydroelectric project exceeding 100 theoretical horsepower.

The application was referred to the Water Policy Review Board by the Director of the Water Resources Department in accordance with the provisions of ORS 537.170.

A public hearing on the matter was held in Lacombe, Oregon, on February 16, 1981. On April 4, 1981, the Water Policy Review Board entered an interim order in accordance with ORS 537.170(1) specifying submission of certain additional information.

On the basis of the record of the proceedings, the Water Policy Review Board makes the following:

FINDINGS OF FACT

1. The applicant proposes to divert up to 45 cubic feet per second of water from Crabtree Creek.
2. The project will utilize existing diversion facilities. During the irrigation season, the quantity of water available for power will be reduced by the amount of the irrigation diversion.
3. The project will utilize 235 feet of head to develop 1,200 theoretical horsepower.
4. Power produced at the project will be sold.
5. The Linn County Comprehensive Plan and Zoning Ordinances do not preclude the project.
6. Crabtree Creek supports aquatic life of value to the State of Oregon.
7. The project will affect flows in the stream over a several mile reach between the point of diversion and point of discharge.
8. Crabtree Creek currently has low to very low flows during the summer months in some years.

9. Protection of aquatic life requires maintenance of some minimum flow in the affected reach.
10. In the existing diversion and distribution system, losses of water in conveyance are significant.
11. The applicant proposes to use revenue from the project to improve diversion and conveyance facilities.

CONCLUSIONS

The proposed use specified in permit application 60823 appears to be consistent with the applicable statutes and does not appear to impair or be detrimental to the public interest. Specific conditions on the proposed use will reduce or minimize potential adverse impacts.

ORDER

It is hereby ordered that application 60823 is approved subject to the following conditions:

1. Use of water for hydroelectric purposes will be subject to passing the following specified flows in Crabtree Creek past the point of diversion in Section 25, Township 11S., Range 1E.

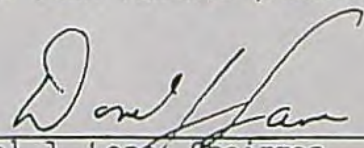
Oct.	110 cfs
Nov.-May.	90 cfs
Jun. 1-15	40 cfs
Jun. 16-30	30 cfs
Jul. 1-15	25 cfs
Jul. 16-31	15 cfs
Aug.	12 cfs
Sep. 1-15	12 cfs
Sep. 16-30	110 cfs

As determined by the Director of the Water Resources Department, the applicant may be required to install and maintain such facilities as may be required to insure compliance with this condition.

2. The applicant shall provide for fish passage at the point of diversion.

It is further ordered that application 60823 be returned to the Director of the Water Resources Department for such further processing as may be required by statute.

Dated this 8th day of May, 1981


Donel J. Lane, Chairman
Water Policy Review Board

Oregon Department of Fish & Wildlife

Fish Screening Criteria

Salmonid Fry

Screening material with clear openings not to exceed .14 inches.

An approach velocity of the intake water not to exceed .5 feet per second immediately in front of the screens.

A bypass flow to lead fish from the face of the screen to the main streamflow. The velocity of the current should be no less than the screen approach velocity.

Salmonid Fingerlings

Screening material with clear openings not to exceed .25 inches.

An approach velocity of the intake water not to exceed 1.0 feet per second immediately in front of the screens.

A bypass flow to lead fish from the face of the screen to the main streamflow. The velocity of the current should be no less than the screen approach velocity.

Bass, Herring, Cyprinids, etc.

Some of these fish have eggs and/or very small fry which are moved with any water current, tides, streamflows, etc. Installations where these species are present sometimes require special type screening and/or bypassing facilities including microscreen, louver installations, bypass pipes or canals and almost always require individual evaluation of the proposed project.

General Considerations

In many instances, detailed and specific evaluation of the plan and design of the proposed project is mandatory. Such factors as local flow patterns, marine weather and hydraulics, total discharge, season of discharge or water intake, location of water intake, whether marine or freshwater species, etc. may require significant evaluation by project sponsors and fishery experts.

Special Considerations

Proposed new (nonconventional) screening methods must include biological basis for the concept, an acceptable plan for evaluating the prototype installation, and an alternate plan should it not prove acceptable.

Marvin E. Gloege
Director

Howard D. Burtchett
Building Official

J. Stefan Gonzalez
Zoning Administrator

Stephen D. Michaels
Advance Planning Adm.

LINN COUNTY

PLANNING AND BUILDING DEPARTMENT

P.O. BOX 100, ALBANY, OREGON 97321 (503)967-3816



July 29, 1982

Larry S. Slotta
Slotta Engineering Assoc., Inc.
917 N. W. Grant Street
Corvallis, OR 97330

RE: Extension of CU-1-81/82; T11S, R1E, Section 21, Tax Lots 3100, 3300, 3401, and 3500

Dear Mr. Slotta:

This correspondence is written regarding your letter received July 13, 1982 requesting an extension of CU-1-81/82 approved by the Linn County Planning Commission on August 20, 1981 to allow construction of a dam and hydropower project.

Based on provisions of Article 20 of the Linn County Zoning Ordinance, an extension of six months may be granted by the planning and building department director. Based on your correspondence, it is the determination of the planning and building department that an extension of CU-1-81/82 is warranted. As such, the conditional use permit approval shall be valid until February 20, 1983. If commencement of authorized activities has not begun by February 20, 1983, no further extensions may be granted by the department, and the previous approval will be rendered null and void.

I hope this information is of assistance to you in planning for the development and use of the property. If you have any questions regarding this information or if we may be of any further assistance, please feel free to contact the planning and building department. Thank you for your patience and cooperation in this matter.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Marvin E. Gloege", is written over a horizontal line.

Marvin E. Gloege
Director

MEG:JSG:jm



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT G

LACOMB HYDROPOWER PROJECT

EXHIBIT G

INDEX OF DRAWINGS:

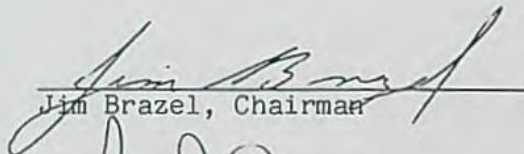
1. Crabtree Creek Diversion: Plan (SCALE: 1in.=10ft.)
2. Crabtree Creek Diversion: Detailed Section
(SCALE: 1/2in.=10ft.)
3. Turbine Site: Plan and Section (SCALE: 1in.=10ft.)

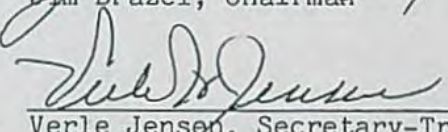


SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

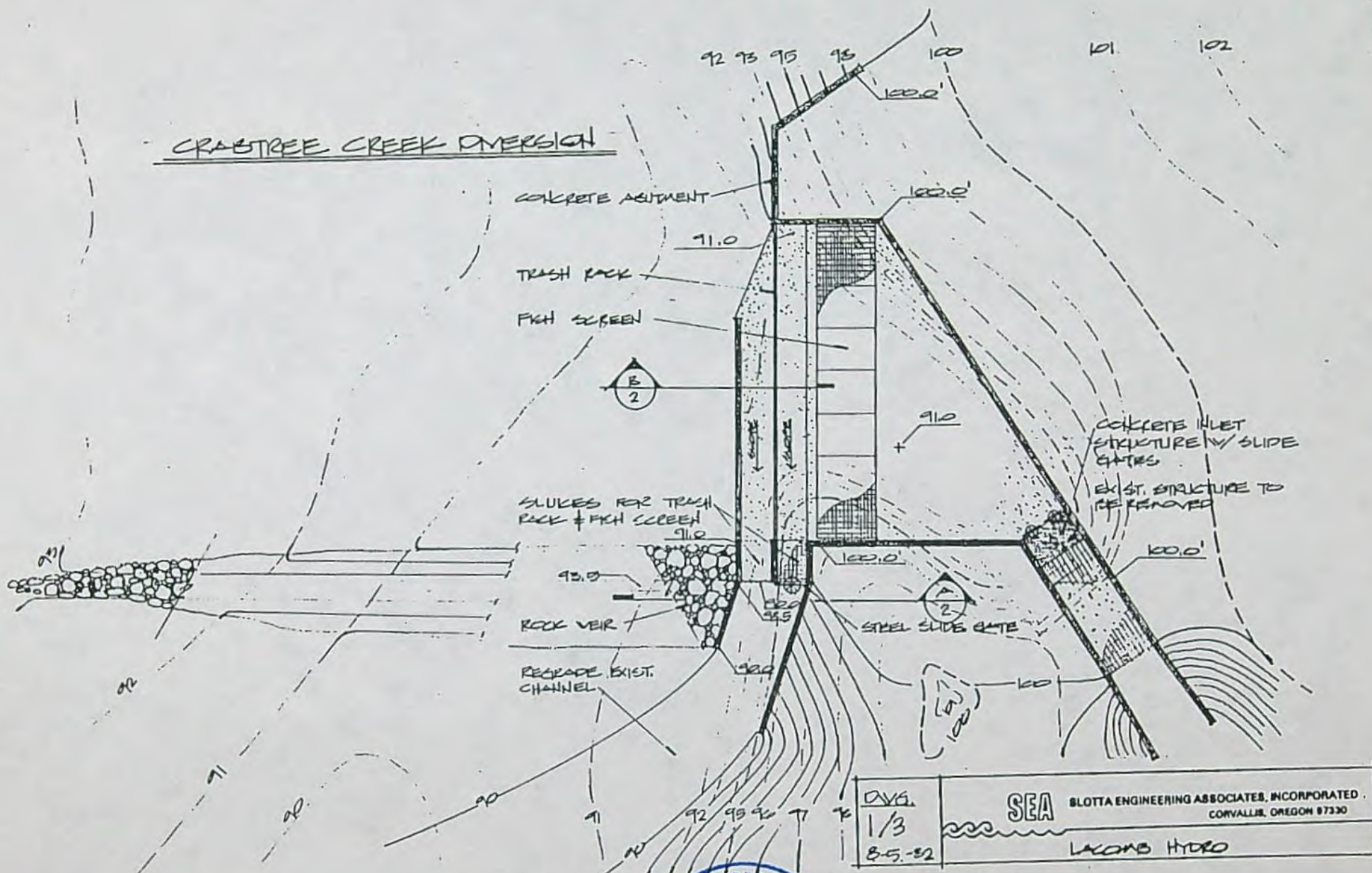
The following design drawings are a part of the Federal Energy
Regulatory Commission application for exemption from licensing made by
the Lacombe Irrigation District.


Jim Brazel, Chairman


Verle Jensen, Secretary-Treasurer

8/24/82
Date

CRABTREE CREEK DIVERSION



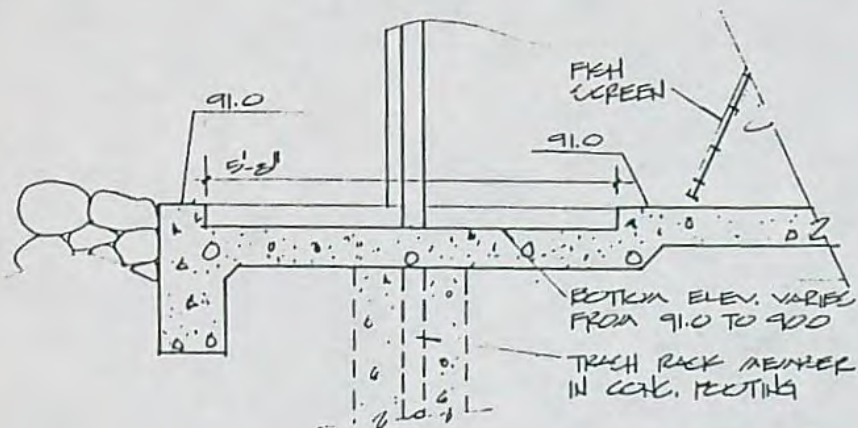
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SEA

BLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330

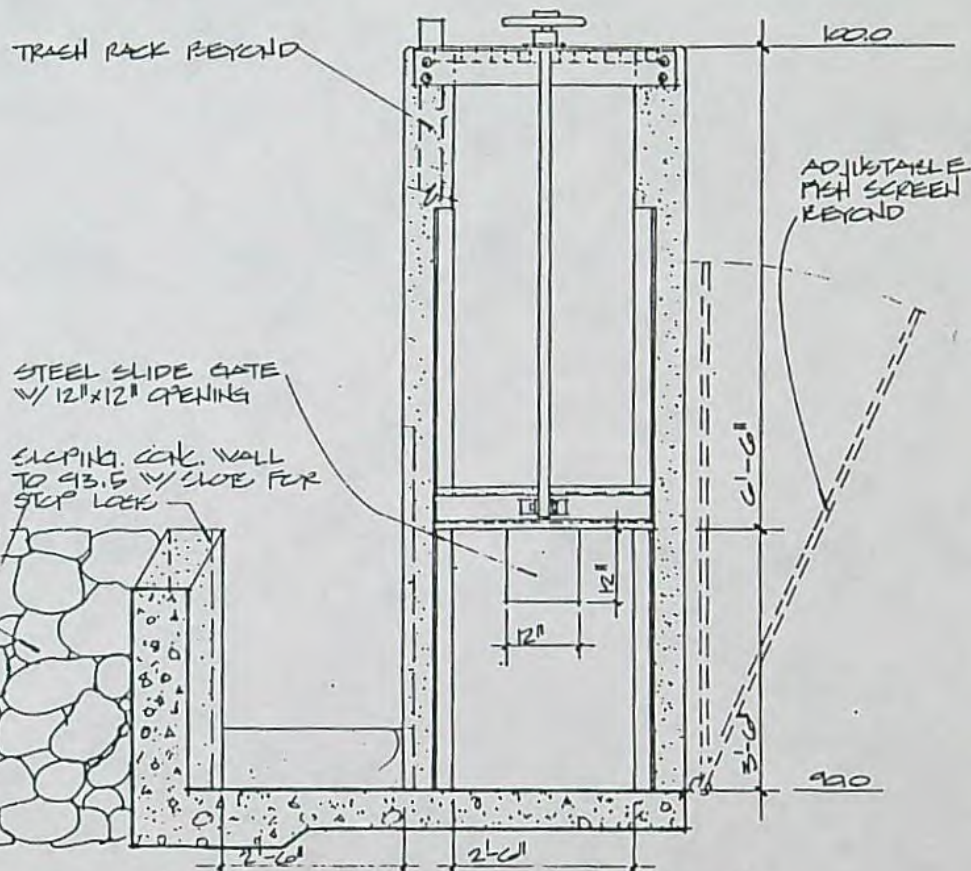
LAKONB HYDRO





SECTION THRU SLUKE
SCALE: 1/2" = 1'-0"

CRABTREE CREEK DIVERSION



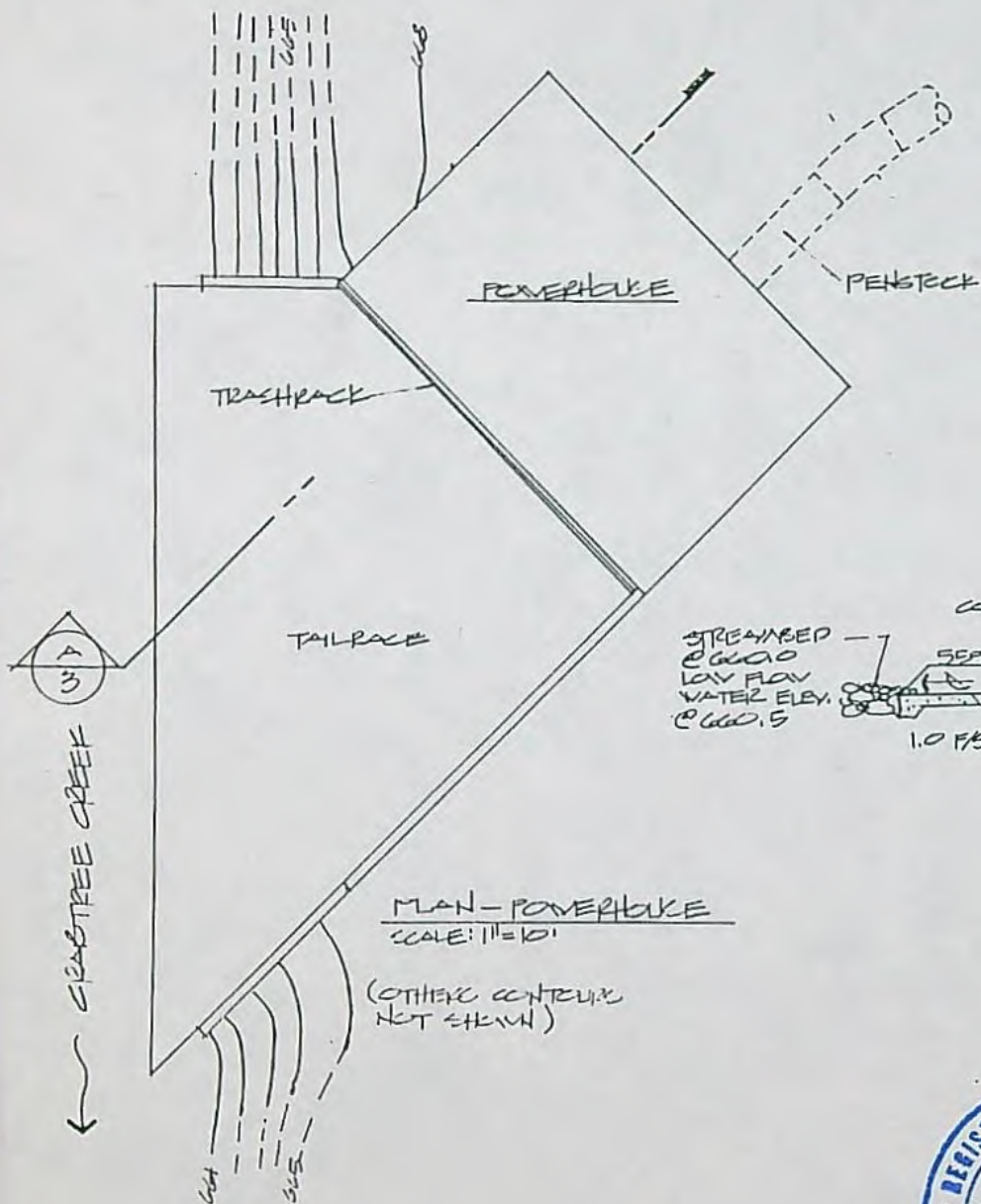
NOTE: SOUTH RETAINING WALL & FDN. DETAILS NOT SHOWN FOR CLARITY

SECTION THRU SLUKE PASSWAY
SCALE: 1/2" = 1'-0"

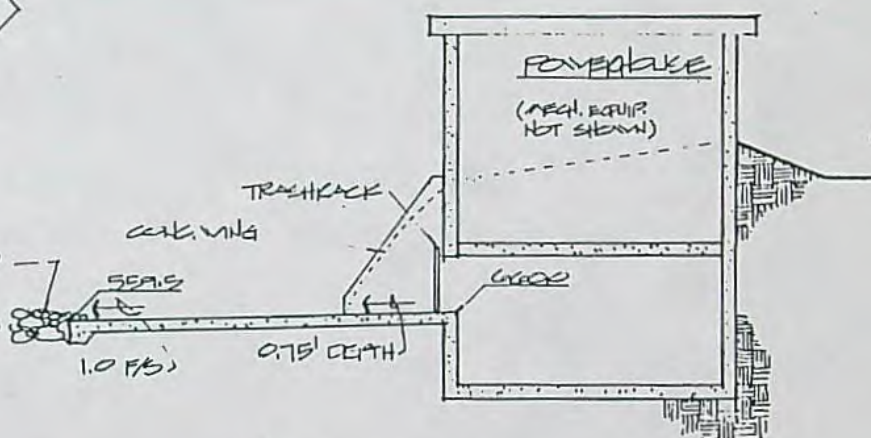


DWG:
2/3
B-5-52

SEA SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330
LACONS HYDRO



TURBINE SITE



DATE: 3/3 6-9-92	<div>SEA</div> <div>SLOTTA ENGINEERING ASSOCIATES, INCORPORATED CORVALLIS, OREGON 97330</div> <div>LACOMB HYDRO</div>
------------------------	---

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT, CORVALLIS, OREGON 97330

TEL (503) 754-0255

☐ URGENT
☐ SOON AS POSSIBLE
☐ NO REPLY NEEDED

DATE 8/25/82

FILE NO Lacomb Hydropower Project

ATTENTION Don Buell

SUBJECT FERC Exemption Application

TO

Oregon Water Resources Dept.
Mill Creek Office Park
555 13th St. NE
Salem, OR 97310

RECEIVED

AUG 26 1982

WATER RESOURCES DEPT.
SALEM, OREGON

MESSAGE

NOTICE OF SERVICE FOR APPLICATION FOR EXEMPTION FROM LICENSING:
LACOMB HYDROPOWER PROJECT

REPLY

DATE OF REPLY

SIGNED

Paula M. Arsenault

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT, CORVALLIS, OREGON 97330

TEL (503) 754-0255

TO

Oregon Water Resources Dept.
Mill Creek Office Park
555 13th St. NE
Salem, OR 97310

☐ URGENT

☐ SOON AS POSSIBLE

☐ NO REPLY NEEDED

DATE 8/25/82

FILE NO. Lacombe Hydropower Project

ATTENTION Don Buell

SUBJECT FERC Exemption Application

MESSAGE

NOTICE OF SERVICE FOR APPLICATION FOR EXEMPTION FROM LICENSING:
LACOMB HYDROPOWER PROJECT

REPLY

DATE OF REPLY

SIGNED

Paula M. Anderson

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT, CORVALLIS, OREGON 97330

TEL (503) 754-0255

TO

Oregon Water Resources Dept.
Mill Creek Office Park
555 13th St. NE
Salem, OR 97310

☐ URGENT
☐ SOON AS POSSIBLE
☐ NO REPLY NEEDED

DATE 8/25/82

FILE NO Lacomb Hydropower Project

ATTENTION Don Buell

SUBJECT FERC Exemption Application

MESSAGE

NOTICE OF SERVICE FOR APPLICATION FOR EXEMPTION FROM LICENSING:
LACOMB HYDROPOWER PROJECT

REPLY

DATE OF REPLY

SIGNED

Paula M. Anderson



5 August, 1982

RECEIVED

AUG 5 - 1982

**WATER RESOURCES DEPT.
SALEM, OREGON**

Don Buell
Applications, Small Hydropower
Water Resources Department
555 13th Street NE
Salem, OR 97310

Re: Amended Application for the Lacombe Irrigation District's
Hydropower Project
(Total of 65 cfs - 20 cfs more than the previous
application)

Dear Don,

Enclosed is an amended application for the Lacombe Irrigation District to obtain surface water rights for 65 cfs, 60 of which will be used in actual hydropower production. As you know, the Water Resources Department granted rights to the District for 45 cfs (permit #60823) on 5/8/81. This amended request for an additional flow of 20 cfs (65 cfs total) will enable the District to utilize their canal/flume system to its capacity during periods of high flow, and will greatly increase the overall benefit/cost ratio of the project.

The District would like to use 60 cfs to produce power and 5 cfs to serve as a "buffer quantity", to account for leakage and evaporation and to prevent air entrapment in the penstock at the canal/penstock collection box. This gives a total of 65 cfs.

We are well aware of the requirements set forth by the Department of Fish & Wildlife, and we plan to carefully abide by these stipulations. However, during much of the year, 65 cfs can be diverted from Crabtree Creek while still meeting minimum flows for fish migration; and in fact, cause almost no disturbance to downstream flow levels.

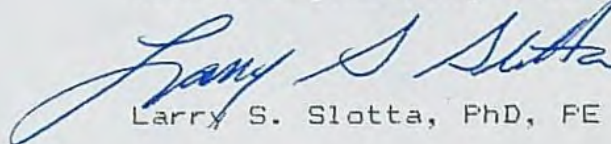
Plans for the Lacombe Irrigation District's Hydropower Project are moving forward. Financing for the project has been secured, and we at Slotta Engineering Associates have been mapping out construction schedules. We are proceeding with surveying and geotechnical work, and starting into some final design stages. Overall, we are very optimistic about the future of the project.

We have also enclosed a check for \$141 (\$40 examination fee plus \$25 for first additional cfs plus \$4 for remaining 19 cfs) to cover the cost of this application.

We hope that you will give your approval to this request for additional surface water rights which serve to increase the successful future of this hydropower project.

Your prompt response would be most appreciated.

Sincerely,
Slotta Engineering Associates, Inc.

A handwritten signature in blue ink, appearing to read "Larry S. Slotta".

Larry S. Slotta, PhD, PE

RECEIVED

AUG 5 - 1982
WATER RESOURCES DEPT
SALEM, OREGON



LINN COUNTY

rec'd
23 April 1981

PLANNING AND BUILDING DEPARTMENT

DAVID E. SCHMIDT
DIRECTOR

April 22, 1981

Water Resources Director
State of Oregon
Mill Creek Office Park
555 13th Street, N.E.
Salem, OR 97310

Dear Sir:

This letter is written regarding the necessary land use planning review associated with the Lacombe Irrigation District's proposal to appropriate waters of Crabtree Creek for the purpose of generating electricity. According to the existing Linn County Comprehensive Plan and Zoning Ordinance application for such a land use may be submitted for conditional use review. No policy or statement exists that would preclude application or consideration. Consideration of the issue would involve public hearing before the Linn County Planning Commission. Decision on the proposal is within the province of that commission, but is subject to appeal to the Linn County Board of Commissioners.

I hope this letter clarifies the proposal's current status at the local planning level. Should there be any questions, please call.

Sincerely,

John deTar
Assistant Planner

JdT:ga

cc: Larry S. Slotta
Slotta Engineering Associates, Inc.
1540 NW Dixon Street, N.E.
Corvallis, OR 97330

STEPHEN D. MICHAELS
ADVANCE PLANNING ADM.

HOWARD D. BURTCHETT
BUILDING OFFICIAL

J. STEFAN GONZALEZ
ZONING ADMINISTRATOR

LACOMB IRRIGATION DISTRICT CONDITIONAL USE
Verle H. Jensen, Secretary-Treasurer
41358 Lacombe Drive NON-RESIDENTIAL USES
Lebanon, OR 97355

SLOTTA ENGINEERING ASSOCIATES, INC.
1540 NW Dixon Street
Corvallis, Oregon 97330

LACOMB IRRIGATION DISTRICT
Crabtree Creek Hydro-Power
APPLICATION CHECK LIST

- 1) Complete application _____
- 2) Site plan with scale, North arrow _____
Location of existing and proposed structures _____
- 3) Copy of required recorded documents _____
- 4) Verification of ownership _____
- 5) Sanitation approval where appropriate _____

Applicant has received a copy of the following:

- 1) Exception criteria when applicable _____
- 2) Fact find sheet _____

Applicant Initial

Larry S. Slotta

FOR OFFICIAL USE ONLY

Accepted by: _____ Date: _____

Refer to:

Staff _____ Hearings Board _____ Planning Commission _____ Board of Commissioners _____

Receipt No: _____

Physical Data

1) Applicants name LACOMB IRRIGATION DISTRICT
Address 41358 Lacombe Drive, Lebanon, OR 97355
Telephone Number 451-2796 (Jensen)
753-9716 (Slotta)

2) Township 11S Range 1E Section 21 Tax Lot 3100 - 35.08
3500 - 26.30
3300 - 4.00
Acreage 3401 - 0.66

3) Current zoning 3100--FCM Comp plan Forest Resource
3500--FCM Forest Resource
3300--F/F F/F
3401--F/F F/F

4) Additional parcels in contiguous ownership
Township _____ Range _____ Section _____ Tax Lot(s) _____

5) What is the current use of the property?
Agricultural X Vacant X Industrial _____
Forest X Residential X Commercial _____
Check more than one if applicable

6) What structural improvements are on the parcel?
A six-Bedroom dwelling (Collins' Property) is on Tax Lot 3300; See attached map & deed.
Snow Peak Logging Road divides Tax Lots 3300 and 3500.
Shingle Mill Road divides Tax Lots 3500 and 3100.

7) What are the surrounding land uses?
Forest Resource and Farm/Forest

8) Approval for a subsurface sewage system by
Environmental Health _____ (Date).

9) What method of fire protection exists for the parcel:
Rural Fire District (Name) _____
Forest Patrol _____



MSS Inc.

P.O. Box 1688
2720 N.W. Glenwood Dr.
Corvallis, Oregon 97330
Phone: (503) 757-0861

ENGINEERING
PLANNING
SURVEYING
CONSTRUCTION MANAGEMENT

Waldport, Oregon
Phone: (503) 563-2294

TREE COUNT OF ALL TREES 6" AND LARGER WITHIN
25 FEET OF THE PIPELINE CENTER LINE.

LACOMB HYDROELECTRIC
SITE H 55
28 APRIL 1981

NORTH OF SNOW PEAK ROAD

ALDER-

12"	1	
13"	1	
16"	1	
17"	3	
18"	1	TOTAL 7

SOUTH OF SHINGLE MILL DRIVE

FIR-

8"	1	
10"	2	
11"	1	
12"	1	
13"	1	
14"	1	
15"	1	
18"	1	TOTAL 9

BETWEEN SHINGLE MILL DR. AND SNOW PEAK RD.

FIR		HEMLOCK		ALDER		MAPLE	
6"	25	8"	1	6"	1	8"	4
7"	24	9"	1	7"	7	9"	1
8"	20	23"	1	8"	6	10"	1
9"	13		3	9"	8	12"	3
10"	13			10"	6	13"	3
11"	11			11"	3	15"	6
12"	3			12"	3	16"	1
13"	3			14"	1	17"	1
14"	1			19"	1	19"	1
15"	3			21"	1	25"	1
18"	1			27"	1		
24"	2						22
32"	1				38		
26"	1						
46"	1						
84"	1						

60823

LINN COUNTY



PLANNING AND BUILDING DEPARTMENT

DAVID E. SCHMIDT
DIRECTOR

April 22, 1981

RECEIVED

APR 24 1981

WATER RESOURCES DEPT
SALEM, OREGON

Water Resources Director
State of Oregon
Mill Creek Office Park
555 13th Street, N.E.
Salem, OR 97310

Dear Sir:

This letter is written regarding the necessary land use planning review associated with the Lacombe Irrigation District's proposal to appropriate waters of Crabtree Creek for the purpose of generating electricity. According to the existing Linn County Comprehensive Plan and Zoning Ordinance application for such a land use may be submitted for conditional use review. No policy or state-ment exists that would preclude application or consideration. Consideration of the issue would involve public hearing before the Linn County Planning Com-mission. Decision on the proposal is within the province of that commission, but is subject to appeal to the Linn County Board of Commissioners.

I hope this letter clarifies the proposal's current status at the local planning level. Should there be any questions, please call.

Sincerely,

John deTar
Assistant Planner

JdT:ga

cc: Larry S. Slotta
Slotta Engineering Associates, Inc.
1540 NW Dixon Street, N.E.
Corvallis, OR 97330

STEPHEN D. MICHAELS
ADVANCE PLANNING ADM.

HOWARD D. BURTCHETT
BUILDING OFFICIAL

J. STEFAN GONZALEZ
ZONING ADMINISTRATOR

CONDITIONAL USE
NON-RESIDENTIAL USES

1. The applicants are requesting a Conditional Use pursuant to Article 20 Section 20.035 in order to return flows to Crabtree Creek through a penstock for the purpose of generating hydro-electric power.

2. What is the property currently used for? Timber production on Tax Lots 3100 & 3500 and farm residential on Tax Lots 3300 & 3401.

3. How many acres are necessary for this request? 4.66 considering Tax Lots 3300 & 3401 and only easements across Tax Lots 3500 (1.14 Acre of 26.3) and 3100 (less than 0.1 Ac)
4. Please describe what additional structures will be required for this use:
A power house having approximately 1500 ft² will be installed at the East end of the Tax Lot 3300. A tailrace from the power house will return flows to Crabtree Creek. A 1300 ft long penstock (30 inch diameter) will connect the Lacombe Irrigation Canal in Tax Lot 3100 to the power house in Tax Lot 3300.
5. Please identify what additional machinery is necessary for this use:
A 760 KWe Francis Type Turbine will be installed within the power house.
The attendant power line will be placed subsurface from the power house to the nearby lines at Shingle Mill Drive.

6. What are the proposed hours of operation and days per week?
The operation will be continuous, 24 hours per day, 7 days per week.

7. Will there be any additional employees? One operator will be hired. It is expected that Tax Lots 3300 and 3401 will be purchased and the existing structures and residence will be utilized by the operator.

8. How much additional road traffic will be generated by this use? Some additional will be expected during construction. However after the facility is installed, no additional traffic is expected since the present residents would be replaced by the operator for the facility.
What impact will occur on the safety and condition of the road serving the property? During construction coordination will be maintained with Willamette Industries, the nearby residents and the Linn County to insure that safe travel is possible past the site. Following construction there will be no difference in the roads' safety conditions.
9. How will the operation of the proposed use be compatible with surrounding land uses? Minimum environmental impact is anticipated. Sections of the pipeline will be buried to allow forest management in the area to continue. Powerlines will be placed underground. An attractive powerhouse will be designed and maintained as well as nearby residences (or better). Stream bank protection will be maintained to protect the power facility and the existing stream banks.

10. If additional structures or heavy machinery are to be sited for the proposed use, will they affect the livability of the surrounding area?

There is need to site a power house as part of this project. By designing the structure of the power house to have quality materials and workmanship there should be limited impact on the aesthetic nature of the area. It is not envisioned there will be any change in the livability of the surrounding area.

11. What public need will be served by this use? (i.e., Is there a shortage of this type of facility in the area?) The facility will be used to generate electricity; the funds gained from the sale of electricity will be used to pay for the project. Since the Lacombe Irrigation District operates as not for profit, their funds will be ploughed back to improving the District's facilities for irrigation and ultimately for the public benefit.
12. Please indicate if any property development standards (i.e., height, setbacks) will need to be adjusted within this request. The tailrace of the hydro power structure will need to connect to Crabtree Creek. Upwards to 45 cfs flow will be utilized. A distance setback will need to be considered by the Linn County Commissioners and Planners.

(Applicant's signature)

6 May, 1981
(Date)

Jim B. ...
(Owner's signature)

4-23-81
(Date)

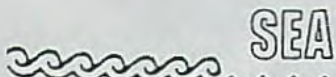
Lacombe Irrig. Dist.

Prepared by:

Larry S. Slotta
Larry S. Slotta, PhD, PE
SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
1540 NW Dixon Street
Corvallis, Oregon 97330



Lacomb I.D. Hydro



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
1540 NW DIXON STREET, CORVALLIS, OREGON 97330

2 April, 1981

Water Resources Department
555 13th Street, NE
Salem, Oregon 97310

ATTENTION: Water Policy Review Board

SUBJECT: Permit Application 60823
For A Hydroelectric Project

Dear Friends:

This letter is written to provide information to the Water Policy Review Board for their consideration at their meeting on April 4, 1981 regarding the Lacomb Irrigation District's application for a hydroelectric permit. Mr. Thomas E. Kline of the Oregon Water Resources Department has been very kind in providing a copy of the staff's preliminary findings and recommendations for an interim order for continuing the hearing period regarding the Lacomb Irrigation District's application. It is hoped that the information presented herein will give answer to the call for additional information as requested by Mr. Kline in his memo addressed to the Water Policy Review Board on 26 March, 1981. Accordingly, it is hoped that the Board will award a conditional permit to the Lacomb Irrigation District for diverting 45 CFS from Crabtree Creek for power production.

The following informational points are to be considered:

PROJECT FEASIBILITY:

The preliminary feasibility studies show this project to have good promise for early payback. The Lacomb Irrigation District proposes to divert up to 45 CFS of water from Crabtree Creek with 235 Ft of head to create over 1200 kWe theoretical and 750 kWe realistically.

If the plant were to operate only during the non-irrigation season (e.g. 9 months) then some 5 million kilo-watt hours of electricity would be produced. Considering a nominal return of \$0.05/kWH then an annual income of \$250,000 would be derived. It is expected the turbine-generator system selected for this site would continue to be operated during the irrigation season but at reduced output because of the quantity of water available for power would be reduced by the amount needed for irrigation in the District. The District has appropriated rights for 30 CFS.

Bids for the hydroelectric equipment for this site were called for in September, 1980 and they came in below \$250,000. Considering that existing diversion and conveyance facilities will be utilized to transport the flow to the junction where a

new headgate-pipeline transtion would be installed will minimize costs as well as environmental impacts associated with establishing the project. The costs for a 1300 ft pipeline to carry the water flow to the turbine and its subsequent return to Crabtree Creek is expected to cost less than \$100,000. Adding the expenses of providing adequate fish screening facilities, canal repair, land purchase, power house construction, electrical and safety components for the intertie to nearby powerlines would bring the total for the proposed project to be under \$1,000,000.

The project appears to have remarkable potential in view of projected annual returns of \$250,000, based on only the dependable flow season, and an estimated maximum capital outlay of \$1,000,000. Detailed cost estimates will be completed in the near future, providing that previously requested funds from the U.S. Department of Energy for conducting a feasibility-design study are forthcoming. However it seems prudent to commence directly with the conduct of a design effort but the Lacombe Irrigation District is without sufficient financial backing to carry off such a study without obtaining a bank loan. Realizing that local banks are generally unwilling to make such loans without the District having the requisite water rights for generating hydroelectric power it places a great need for having the permit application approved and in hand. Having an approved permit for hydroelectric power is needed for negotiating for power sales contracts which also will affect the requested feasibility study outcome.

It would be beneficial to the Lacombe Irrigation District to receive its hydroelectric permit at an early date to facilitate power sales and loan negotiations.

LOCATION OF POWERHOUSE AND PIPELINE:

The proposed location of the canal headgate-pipeline transition is as stated in the application request: N1294.8 W718.8 ft in Section 21, Township 11S, Range 1E, W.M. The proposed location of the powerhouse site and point of flow return to Crabtree Creek continues to be at N2323.7 W837.3 ft in Section 21, Township 11S, Range 1E, W.M. A detailed survey was completed since the Water Policy Review Board hearing on the application on 16 February, 1981 in Lacombe.

Easement for the pipeline to cross Champion Timberlands has been accorded in writing by Mr. Thomas D. Lackey, Real Property Manager of Champion International Corporation on 12 January, 1981. Easement for the pipeline to cross the Snow Peak Logging Road and the Shingle Mill Road has been approved by Willamette Industries. Negotiations for use of a small portion of the Collins' property, north of the Snow Peak Logging Road and south of Crabtree Creek are progressing well. Assurance of notice and coordination of the anticipated construction across the above mentioned properties has been given to the respective parties involved.

Preliminary discussions with county staff indicate no problems with the siting of the proposed facilities. Enclosed is copy of correspondence from the Benton-Linn Council of Governments indicating support for the project. It is realized that additional clearances and permits will need to be obtained from Linn County before construction will be approved.

Before land purchase and feasibility studies can be successfully completed it will require having an approved hydroelectric power permit. The Water Policy Review Board's consideration on this matter will be sincerely appreciated.

REDUCTION OF WATER LOSSES IN CONVEYANCE BETWEEN THE POINT OF DIVERSION AND POWERHOUSE:

Reported measurements between the point of diversion and points along the Lacombe Irrigation Canal indicate a significant loss of water during the canal's operation. This is recognized and it has been proposed that steps be taken to reduce such losses following the installation of the hydroelectric plant.

One measure being considered for reducing canal water losses will be the possibility of lining the canal along its course to the headgate-pipeline with an impervious liner. A second measure which has been proposed to be is to reduce the distributed canal losses by installing a pressurized piping system. The pressurized piping irrigation system concept is estimated to reduce the irrigation demand by perhaps 50% of the 30 CFS, which would accordingly allow more flow to pass through the turbine and return earlier to Crabtree Creek before the Roaring River junction.

EFFECTS OF MINIMUM FLOW REQUESTED BY THE DEPARTMENT OF FISH AND WILDLIFE ON THE PROPOSED PROJECT:

As mentioned above, by permitting the Lacombe Irrigation District to develop a power site along its canal, it will be possible to return additional flows to Crabtree Creek that would normally be lost through evapotranspiration and leakage during irrigation periods for which the Lacombe Irrigation is entitled to take up to 30 CFS. This return would be facilitated by the proposed pressurized irrigation pipeline which would be constructed following the hydroelectric turbine installation. It is envisioned that approximately 15 CFS would be needed to irrigate the present lands if ditch and evapo-transpiration losses were properly reduced. Accordingly up to 15 CFS would be returned to Crabtree Creek above Roaring River of the 30 CFS appropriated by the Lacombe Irrigation District. Thus of the 45 CFS requested for power development then up to 30 CFS would be returned to Crabtree Creek above Roaring River, provided there would be sufficient flows at the point of diversion.

The Lacombe Irrigation District would plan to install fish screens at the intake of the diversion point to prevent downstream migrants from entering the power canal.

AVAILABILITY OF WATER FOR USE:

Hydrologic analyses show that less than five percent of the time do the flows on Crabtree Creek fall below 40 CFS near the point of diversion of the irrigation-power canal. It is acknowledged that there have been times during extreme dry years that the flow in Crabtree Creek may have gone below even 30 CFS and that it would be impossible to irrigate to the limit of the Lacombe Irrigation District's water rights of 30 CFS. Accordingly one would not expect to take 45 CFS from the stream if the quantity of were not available.

The Department of Fish and Wildlife have requested in Mr. Kline's 26 March memo that a minimum flow of 12 CFS be provided Crabtree Creek just above Roaring River during August through 15 September. From the proposed plan of diversion and return of flow, this minimum flow requirement would seem reasonable considering the power project's operation, providing that the Lacombe Irrigation District's pressurized piping system were functional for irrigation and that 27 CFS were available to satisfy the 15 CFS irrigation needs and the 12 CFS Crabtree Creek-Roaring River minimum flows. It is expected that since the intake at the point of diversion doesn't have a dam or significant structure that at least 12 CFS would continue past the point of diversion even during periods of extremely low flows and that the fisheries minimum flow requirement will be met without difficulty.

The Lacombe Irrigation District does share a strong concern for maintaining a viable stream system along Crabtree Creek and with its tributaries. On the other hand, the Lacombe Irrigation District is unwilling to relinquish its rights to its present 30 CFS in order to meet minimum flow requirements along Crabtree Creek's course, from the point of diversion to the point of possible return flow at the power site. As pointed out in Governor McCall's letter (18 June, 1973): "All water rights existing as of the date the Board enters its order take priority, under Oregon laws, over the Board's order." In other words, the Lacombe Irrigation District would not generate power if there were not 30 CFS available for irrigation with its proposed facilities.

NECESSARY EASEMENTS OR RIGHT-OF-WAY FOR THE PROJECT.

As mentioned above regarding the location of the powerhouse and pipeline that requisite negotiations have commenced for obtaining the right-of-ways across the Champion Timberlands, Willamette Industries' roads, and for obtaining Mrs. Collin's property on which the powerhouse and tailrace will be located. Coordinated planning will be carried out with Linn County to meet with the land use plan for the area.

It is understood that legally the Lacombe Irrigation District has the right to easement across lands within the Irrigation District. It is planned however to work cooperatively with the property owners to develop a means for crossing their property with the least significant impact possible.

It is planned for example that several sections of the pipeline will be buried so as to not hinder timber operations in the area. Also it is planned that the powerline for the hydroelectric system will be placed underground paralleling the penstock to join overhead lines at the junction of Shingle Mill Road. Thus we plan to have the project environmentally attractive and acceptable.

CONSISTENCY WITH LAND USE PLANS:

Coordinated planning will be carried out with the Linn County Planners to give assurance that the project is consistent with the land use plans for the area.

It is believed that this area is designated "forest, agricultural." Accordingly the hydroelectric development would fit into this category without need for zone changes, i.e. the area would be retained as EFFU.

The Lacombe Irrigation District will obtain all necessary permits and licenses for construction and operation of its proposed hydroelectric site as required by law. Information on the progress of its development will be shared with appropriate inspectors and with the community in general.

CLOSURE:

As Lacombe Irrigation District's representative, it is my privilege to say thank you to the Oregon Water Resources Department's Water Policy Review Board for this opportunity to provide information at this time relative to approval of the requested permit application for a hydroelectric project on Crabtree Creek.

It is hoped that the Board will give a positive response for approving the requested hydroelectric permit in order to facilitate the progress on applications for feasibility, design and construction loans and in order to advance the dates for construction and purchase commitments.

Sincerely yours,

Larry S. Slotta, PhD,



#7 Wellsher Bldg., 460 S.W. Madison
Corvallis, Oregon 97330
(503) 757-6851

April 1, 1981

81-011

Verle Johnson
Secretary-Treasurer
Lacomb Irrigation District
41358 Lacomb Drive
Lebanon, OR 97355

Dear Mr. Johnson:

The Oregon District 4 Council of Governments has completed a clearinghouse review of the application submitted by your agency. The application is for a federal loan of \$45,000 to conduct a feasibility study for generating electrical power.

The Board reviewed the project during the month of March and recommended that the application be approved.

This letter indicates that the Council of Governments has completed its investigation and represents the clearinghouse comments on the application.

Sincerely,

William R. Hagman
Executive Director

WRH/tp

cc: Slotta Engineering

LINCOLN SUB-DISTRICT

Lincoln County
Lincoln City
Newport
Clatsop

LINN-BENTON SUB-DISTRICT

Benton County
Corvallis
Philomath
Monroe

Linn County
Sweet Home
Lebanon
Astoria

Warrenton
Millersburg

10) What type of access does the property have?

County Road, name _____

Public Road, name Snow Peak Road (private); Shingle Mill Drive

Easement Snow Peak Road (Willamette Industries, Inc.)

If there is a maintenance agreement, please attach a copy.

Please attach a copy of the recorded document.

11) What is the forest site class? Douglas Fir, Second growth timber

What are the soil types? rocky, gravelly, progressing to humus cover over clayey loam.

12) What is the nearest urban center? Lacomb 3.5 miles

How many miles? Lebanon 11 miles

VERIFICATION OF OWNERSHIP:

The Linn County Assessor's Office verifies that T 11 S, R 1E, Section 21, Tax Lot(s) 3300, 3401, is owned or is being purchased by Mrs. Donald Collins. If more than one owner is included on your records, please list all persons involved.

Other Owners:

Tax Lot #3100 Willamette Industries

Tax Lot #3500 Champton Industries

Signature of Assessor's Representative
or stamp.

Date _____

13) I hereby certify that;

a) The above request does not violate any recorded codes, covenants and/or restrictions that are attached to the subject property.

b) That all the statements, attachments, exhibits, plot plan submitted and additional oral testimony submitted are true and any approval granted based on this information may be revoked if it is found that such statements are false.

c) That I have the following legal interest in the property, owner of record _____, contract purchaser _____, lessee _____, holder of a recorded exclusive option to purchase X, duly authorized to act for the person who has the following legal interest _____, and that the owner of record is knowledgeable of this application.

Applicants Signature

Address 5292 1/2 N. 3rd St. Lebanon Ariz. Telephone No. 258-3088

Physical Date

Page 1

If different,

Owners Signature

Telephone No.

Address

Signature of other owners:

4-23-81 Steven Collins 73083 Snow Peak Drive

Date

Names

Addresses

RECEIVED

DEC 15 1980

WATER RESOURCES DEPT
SALEM, OREGON

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
1540 NW DIXON STREET, CORVALLIS, OREGON 97330

TEL (503) 753-9716

TO

STATE OF OREGON
WATER RESOURCES DEPARTMENT
Mill Creek Office Park
555 13th Street N.E.
Salem, Oregon 97310

☐ URGENT

☒ SOON AS POSSIBLE

☐ NO REPLY NEEDED

DATE 10 December, 1980

FILE NO. 60823

ATTENTION _____

SUBJECT LACOMB IRRIGATION DISTRICT

Application for a permit for
appropriating surface waters of
Crabtree Creek for generation of
electricity.

MESSAGE

~~I was informed during my visit to your offices yesterday that there will be need~~
~~for extra payment for the LACOMB IRRIGATION DISTRICT to pay prior to receipt of~~
~~a permit for appropriating Crabtree Creek waters for the generation of electricity.~~

~~Enclosed, please find a check for two hundred seventeen and 40/100 dollars to~~
~~cover the filing costs and charges for this permit.~~

~~We look forward to early and favorable consideration with our application request.~~

SIGNED

Larry S. Slotta
Larry S. Slotta, Consultant

REPLY

DATE OF REPLY _____

SIGNED _____

STATE OF OREGON WATER RESOURCES DEPARTMENT

Mill Creek Office Park • 555 13th. Street N.E.
Salem, Oregon 97310

RECEIVED FROM Lacomb I.O. Application ☒ 60823
Permit ☐
Transfer ☐

TOTAL REC'D. \$ 217.40 ☐ CASH ☒ CHECK ☐ MONEY ORDER

By _____

EXAMINATION FEES:

RECORDING FEES:

Surface Water \$ _____ \$ 217.40

Ground Water \$ _____ \$ _____

Transfer \$ _____ \$ _____

MISCELLANEOUS FEES:

Copying ☐ \$ _____

Certification ☐ \$ _____

Misc. Recording ☐ \$ _____

Protest ☐ \$ _____

Extension of time ... ☐ \$ _____

ADJUDICATION FEE \$ _____

POWER LICENSE FEE \$ _____

HYDROELECTRIC LICENSE FEE .. \$ _____

EXAM FEE \$ _____

WATER WELL CONSTRUCTION:

Driller's Exam Fee ☐ Driller's Lic. Fee ☐

Contractor's Exam Fee ☐ \$ _____ Contractor's Lic. Fee ☐ \$ _____

ALL OTHER: _____ \$ _____

SUSPENSE TOTAL \$ 217.40

BASIN MAPS \$ _____

QUADRANGLE ACCOUNT \$ _____

RECEIPT NO.

JANCO BUSINESS FORMS SUPPLY PORTLAND OREGON 315769-0

21953

Dated 12-15-80 By J. Day



8 December, 1980

Water Resources Director
State of Oregon
Mill Creek Office Park
555 13th Street NE
Salem, OR 97310

RECEIVED

DEC 09 1980
WATER RESOURCES DEPT.
SALEM, OREGON

Gentlemen:

This is written to provide further information regarding the Lacombe Irrigation District's recent application for a permit to appropriate waters from Crabtree Creek for the purpose of generating electricity. A revised application was submitted on 28 October, 1980 and was placed under File Number 60823.

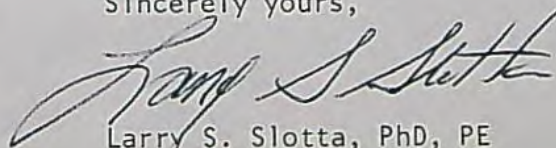
In speaking with the staff of the State of Oregon's Water Resources Department regarding this application, it was called to our attention that items 4 and 5 had not been typed in although the information was given within the narrative of section 6. The enclosed copy has this requisite information regarding the request for 45 CFS and to indicate the use of the water to be the generation of electricity. Also corrected under section 6 was that 1200 HP theoretical could be developed at this site and that approximately 750 KW would be delivered as cogeneration power. The corrections to the application copy are noted here by the heavy underlining. I hope that the enclosed copy will adequately serve for clarifying the application copy.

Attached for your information is a copy of a plan and profile of the area being considered for bringing the pipeline for the power project from the Lacombe Irrigation District canal to the site of the proposed powerhouse location.

We are presently negotiating for a power sales contract from several utility companies for this project, and the Lacombe Irrigation District is actively engaged on obtaining financing for the equipment purchases. It would be most helpful if our application could be processed shortly because negotiations are being delayed until our permit request has been favorably approved and in hand.

Your early attention to the Lacombe Irrigation application for a permit to appropriate up to 45 CFS from Crabtree Creek for electric power generation would be sincerely appreciated.

Sincerely yours,



Larry S. Slotta, PhD, PE

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED

Application No.....

Permit No.

Revised 27 October 1980

STATE OF OREGON WATER RESOURCES DEPARTMENT

Application for Permit to Appropriate Surface Water

I. LACOMB IRRIGATION DISTRICT

(Name of Applicant)

of.....41358 Lacombe Drive

(Mailing Address)

Lebanon

(Cites

State of...Oregon

97355

(Zip Code)

Phone No. (503) 451-2796

do hereby

make application for a permit to appropriate the following described waters of the State of Oregon:

1. The source of the proposed appropriation is... CRABTREE CREEK

....., a tributary of SOUTH SANTIAM RIVER.

2. The point of diversion is to be located 1300 ft. S and 2600 ft. E
(N or S) (E or W)

N. or S.

(E. or W

from the W $\frac{1}{4}$ corner of Section 25

(Public Land Survey Corner)

(If there is more than one point of diversion, each must be described)

..... being within the NE ¼ of the SW ¼ of

Sec. 25 Tp. 11 S. R. 1 E., W. M., in the county of LINN

(N. or S.)

(E. or W.)

3. Location of area to be irrigated, or place of use if other than irrigation.

[illegible]

4. The amount of water which the applicant intends to apply to beneficial use is 45 CFS
cubic feet per second.....
(If water is to be used from more than one source, give quantity from each)

5. The use to which the water is to be applied is THE GENERATION OF ELECTRICITY

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WATER RESOURCES DEPT.
SALEM, OREGON

6. DESCRIPTION OF WORKS

Include dimensions and type of construction of diversion dam and headgate, length and dimensions of supply ditch or pipeline, size and type of pump and motor, type of irrigation system to adequately describe the proposed distribution system.

The present Lacombe Irrigation canal diversion source or headgate is located on Crabtree Creek at approximately 1300 ft. S 2600 ft. E from the W $\frac{1}{4}$ corner of Section 25 near the confluence of Green Mountain Creek. The canal is operational; irrigation water having been appropriated previously (permit # 41359 for 6 cfs; #19629, certificate #31898 for 24 cfs). The proposed hydro-power development plans to continue using the present diversion source and to convey up to 45 cfs along the ditch to a point having sufficient (235 ft) fall and a short (1060 ft) return to Crabtree Creek.

The flow into the canal's headgate will be manually controlled and eventually radio controlled. Discussion with agencies have brought out the importance of having fish screening facilities which will be fitted into the canal's headgates.

The turnout will be located near Shingle Mill Drive which will provide easy access for facilitating construction, operation and maintenance of the irrigation - power canal. The turnout is shown in concept perspective. A 36 inch steel pipeline will connect the head distribution box to the hydro-generator facility which will accordingly return its discharge into Crabtree Creek at a station located approximately N. 2350 ft and W818 ft from the SE corner of Section 21, T11 R1E.

Considering the 235 ft fall and 45 cfs flow then 1200 HP theoretical could be developed. Considering the efficiency of the plant approximately 750 kw. would be delivered as cogeneration to nearby power lines. A 16 inch Francis turbine has been recommended for use at this site. The power house yard will occupy a space of 50 ft X 50 ft along the snow peak logging road.

If for domestic use state number of families to be supplied HYDRO-ELECTRIC POWER WILL BE CO-GENERATION

7. Construction work will begin on or before NOVEMBER 1, 1980

8. Construction work will be completed on or before NOVEMBER 1, 1981

9. The water will be completely applied to the proposed use on or before NOVEMBER 1, 1981

Application No.

Permit No.

Remarks: Please see the attached perspective sketch of the proposed development along with site and ownership maps. The enclosed materials were prepared on behalf of the Lacombe Irrigation District in order to seek the HYDRO-POWER permit from the Director of Water Resources of the State of Oregon and to seek support for feasibility engineering studies from the USDOE for retrofitting existing hydraulic structures to co-generate low cost hydro-electric energy. This work was done by SLOTTA ENGINEERING ASSOCIATES, INC. of Corvallis, Oregon (503) 753-9716.

The Lacombe Irrigation District was formed under O.R.S. Chapter 545 by petition of Landowners to the County Court. Water rights were applied for in 1952 with present rights for irrigation water of 30 cfs dated 1965. The primary function of the District is to provide irrigation water to its individual members. This request for 45 cfs would allow the district to co-generate electric power during periods of high flows in Crabtree Creek and provide support to converting to a pressurized irrigation system, thus eventually reducing their need for irrigation water and increasing return flows to Crabtree Creek.

This permit, when issued, is for the beneficial use of water. By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan. It is possible that the land use you propose may not be allowed if it is not in keeping with the goals and the acknowledged plan. Your city or county planning agency can advise you about the land-use plan in your area.

Signature of Applicant
Larry S. Slotta, PhD, PE
Engineering Consultant for the.....
Lacombe Irrigation District

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for.....

In order to retain its priority, this application must be returned to the Water Resources Director with corrections on or before, 19.....

WITNESS my hand this day of, 19.....

Water Resources Director

By

RECEIVED
DEC 9 1980
WATER RESOURCES DEPT.
SALEM, OREGON

This instrument was first received in the office of the Water Resources Director at Salem, Oregon, on the day of, 19....., at o'clockM.

Application No.....

Permit No.....

Application No.....

Permit No.....

Permit to Appropriate the Public Waters of the State of Oregon

This is to certify that I have examined the foregoing application and do hereby grant the same SUBJECT TO EXISTING RIGHTS INCLUDING THE EXISTING FLOW POLICIES ESTABLISHED BY THE WATER POLICY REVIEW BOARD and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed ...45.0..... cubic feet per second measured at the point of diversion from the stream, or its equivalent in case of rotation with other water users, fromCRABTREE CREEK.....

The use to which this water is to be applied is.....HYDRO-ELECTRIC POWER GENERATION.....

If for irrigation, this appropriation shall be limited to of one cubic foot per second or its equivalent for each acre irrigated.....

RECEIVED
DEC 9 1980
WATER RESOURCES DEPT.
SALEM, OREGON

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The priority date of this permit is.....

Actual construction work shall begin on or before..... and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 19.....

Complete application of the water to the proposed use shall be made on or before October 1, 19.....

WITNESS my hand this day of....., 19.....



October 28, 1980

60823
Water Resources Director
State of Oregon
Mill Creek Office Park
555 13th Street NE
Salem, OR 97310

RECEIVED

OCT 29 1980

WATER RESOURCES DEPT
SALEM, OREGON

Gentlemen:

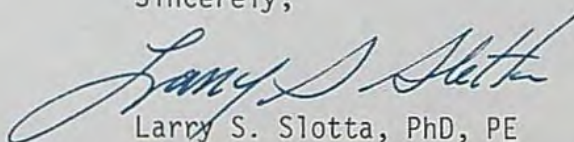
This is to submit a revised application for appropriating water from Crabtree Creek of the North Santiam River for the purpose of hydro-electric power generation. SLOTTA ENGINEERING ASSOCIATES is representing the Lacombe Irrigation District in making this application.

Our earlier request was dated 26 September, 1980. The enclosed revised form reflects a change of the point of flow return to Crabtree Creek. Also an increased head is indicated.

In discussions with your staff regarding the 26 September application it was recommended that larger-sized maps detailing the point of diversion and return site be submitted to satisfactorily complete our application package. We are accordingly forwarding such information in hopes this meets your requirements.

If additional materials are needed, please be in contact with me. Presumably the check submitted with the earlier application will cover review of the enclosed materials.

Sincerely,



Larry S. Slotta, PhD, PE

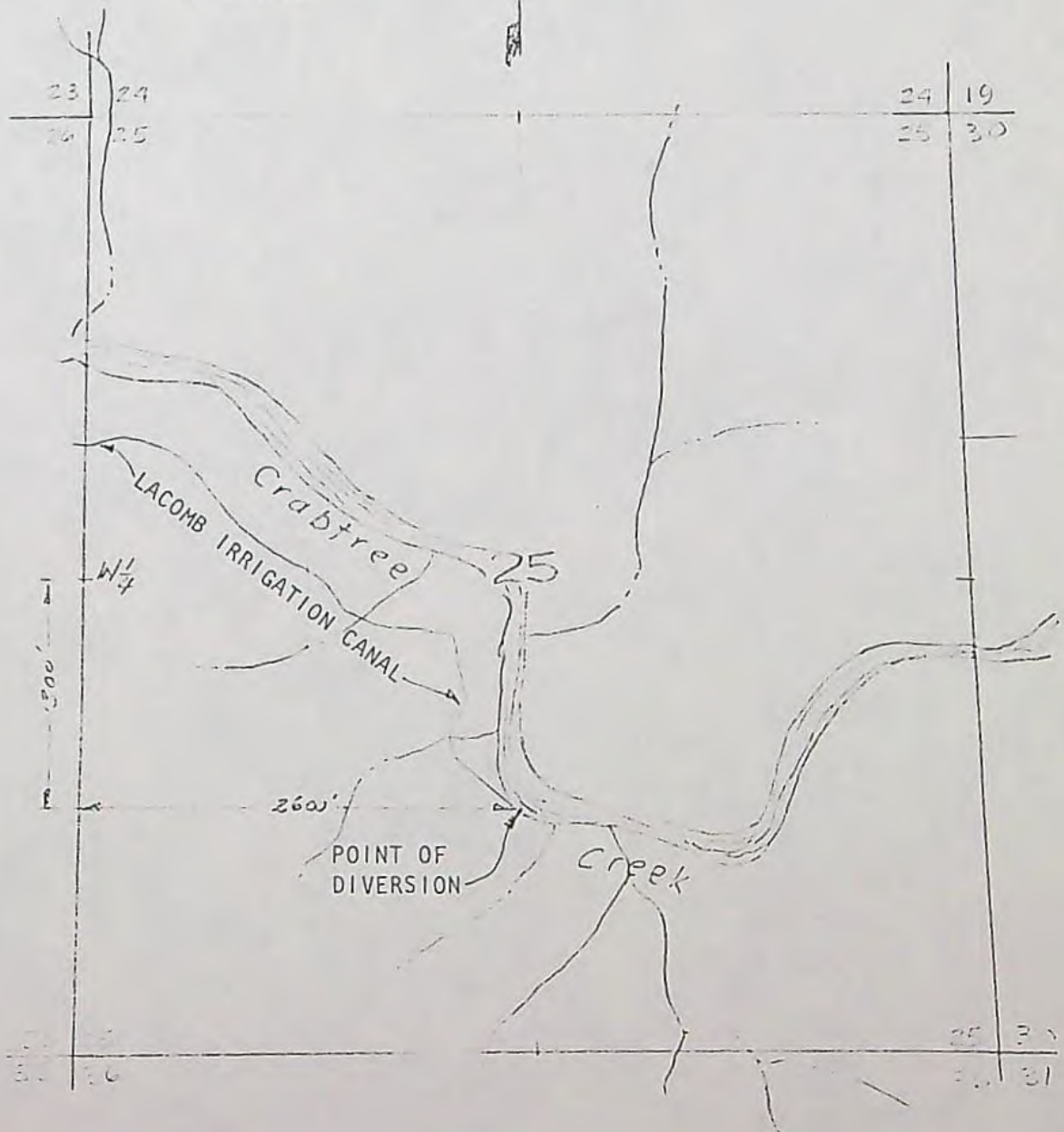
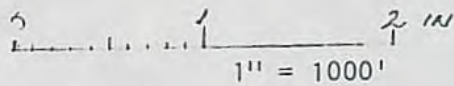
Enclosures

LSS/wf

RECEIVED
001291980
WATER RESOURCES DEPT
SALEM, OREGON

OCTOBER, 1980

Application No. 60823
Permit No.



MAP TO ACCOMPANY APPLICATION

FOR HYDROELECTRIC LICENSE

LACOMB IRRIGATION DISTRICT

RECEIVED

OCT 29 1980

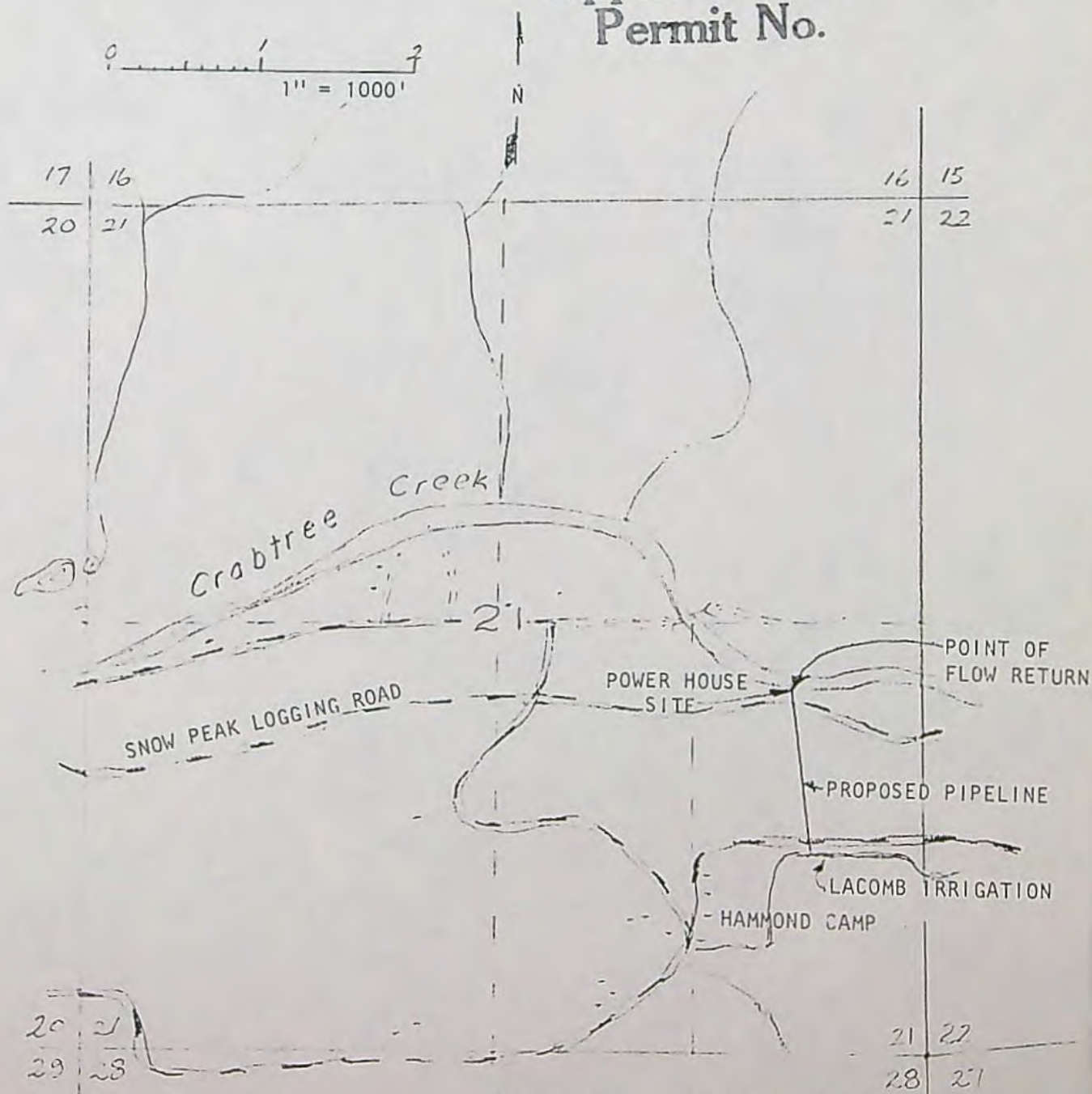
WATER RESOURCES DEPT
SALEM, OREGON

OCTOBER, 1980

SECTION 21

Township 11 South Range 1 East, W.M.

Application No. 60823
Permit No.



CANAL CORNER N 1294.8 W 718.8
POWERHOUSE SITE 2323.7 W 837.3

The following site details regarding the Lacombe Irrigation District are provided for your consideration:

Project Site:	Lacombe Irrigation District
Water Supply:	irrigation canal, diversion of Crabtree Creek
Present Appropriation:	30 cfs
Expected Availability:	100 % mid-September to mid-June 50 % mid-June to mid-September
Canal Flow Potential:	45 cfs
Expected Availability:	100 % mid-September to mid-June 50 % mid-June to mid-September
Smallest Capacity:	15 cfs
Gross Head (expressed as vertical distance between head-water level in the intake canal to the tail-water level in the stream)	235 ft
Flood Plain Bank Height (above tail-water level)	6 ft
Head-Water Level to Flood Plain Bank	230 ft
Proposed Intake Works:	canal-culvert type drop structure, 90 to present canal alignment
Storage Available:	none, continuous flow in canal
Canal Fluctuations:	\pm 1.5 ft
Water Conveyance:	1060 ft length of penstock, exposed or covered, dimensions to be specified following turbine selection
Power Line Interface:	# 6 copper wire: Wye System 12,000 V to ground 20,800 V phase to phase 90 to 100 amp rating to primary distance to powerline 2600 ft

RECEIVED

OCT 29 1980

WATER RESOURCES DEPT
SALEM, OREGON

We expect that the power developed by the turbine will be utilized by direct connection to an existing power line. At a later date it is possible that the turbine's output would be used to supply 15 cfs through a pumping system as a pressurized irrigation network.

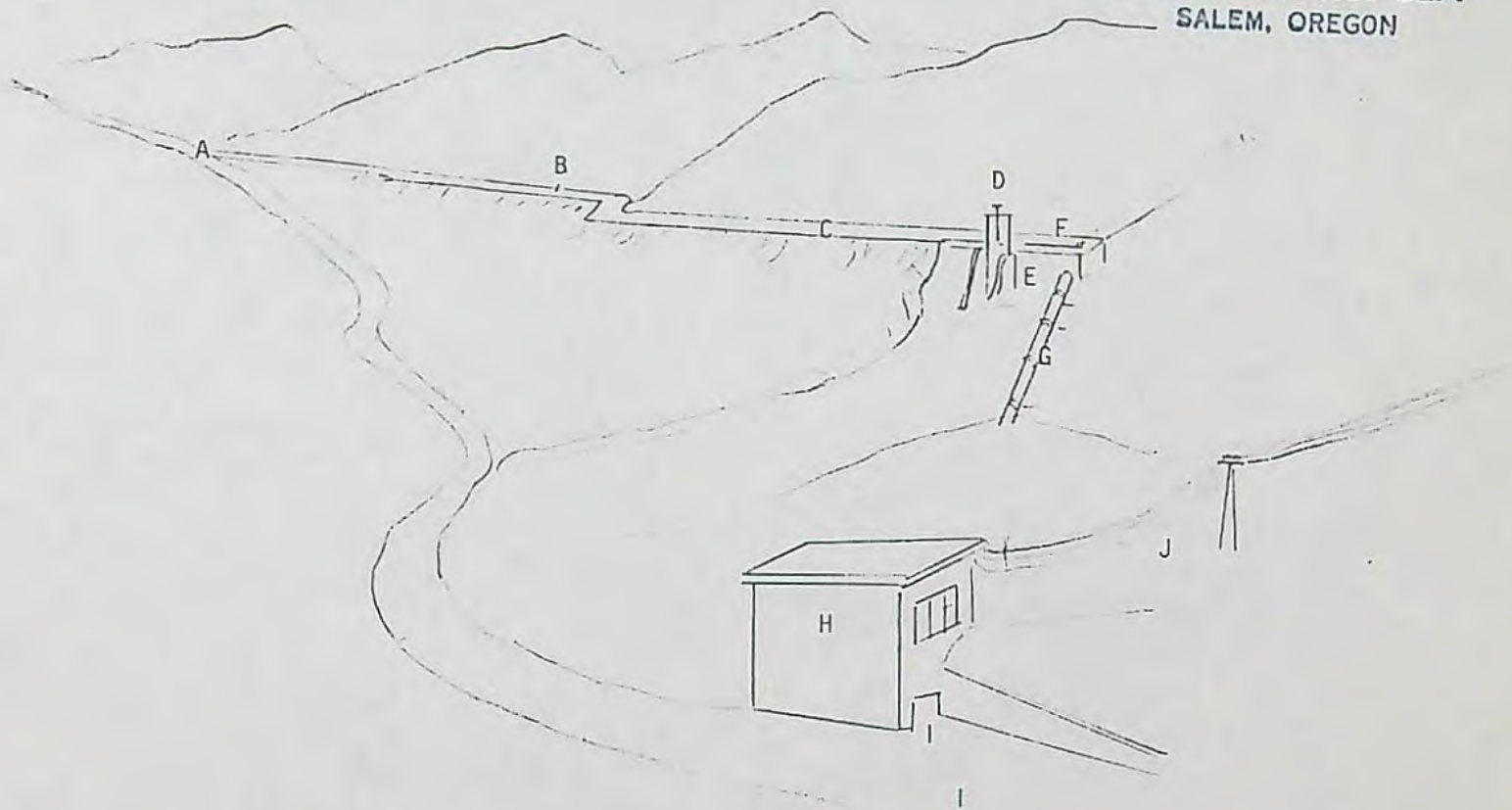
PERSPECTIVE CONCEPT OF
LACOMB, OREGON IRRIGATION HYDRO-ELECTRIC POWER SITE

LID 80-01

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OCT 29 1980

WATER RESOURCES DEPT
SALEM, OREGON



- A. main stream diversion
- B. irrigation ditch
- C. headwater
- D. by-pass sluice gate
- E. sluice and surge tank
- F. screen
- G. pipeline conduit
- H. power station
- I. tail water, main stream
- J. power line

Elevation ~~20~~ ft. above main stream

Length 1600 ft. approximated
Flood Bank Plateau Elevation ~~6~~ ft.
Elevation datum 0
#6 copper wire: Wye System
12,000 V to ground
20,000 V phase to phase
90 to 100 amp rating to primary

MAP TO ACCOMPANY APPLICATION
FOR HYDROELECTRIC LICENSE

LACOMB IRRIGATION DISTRICT

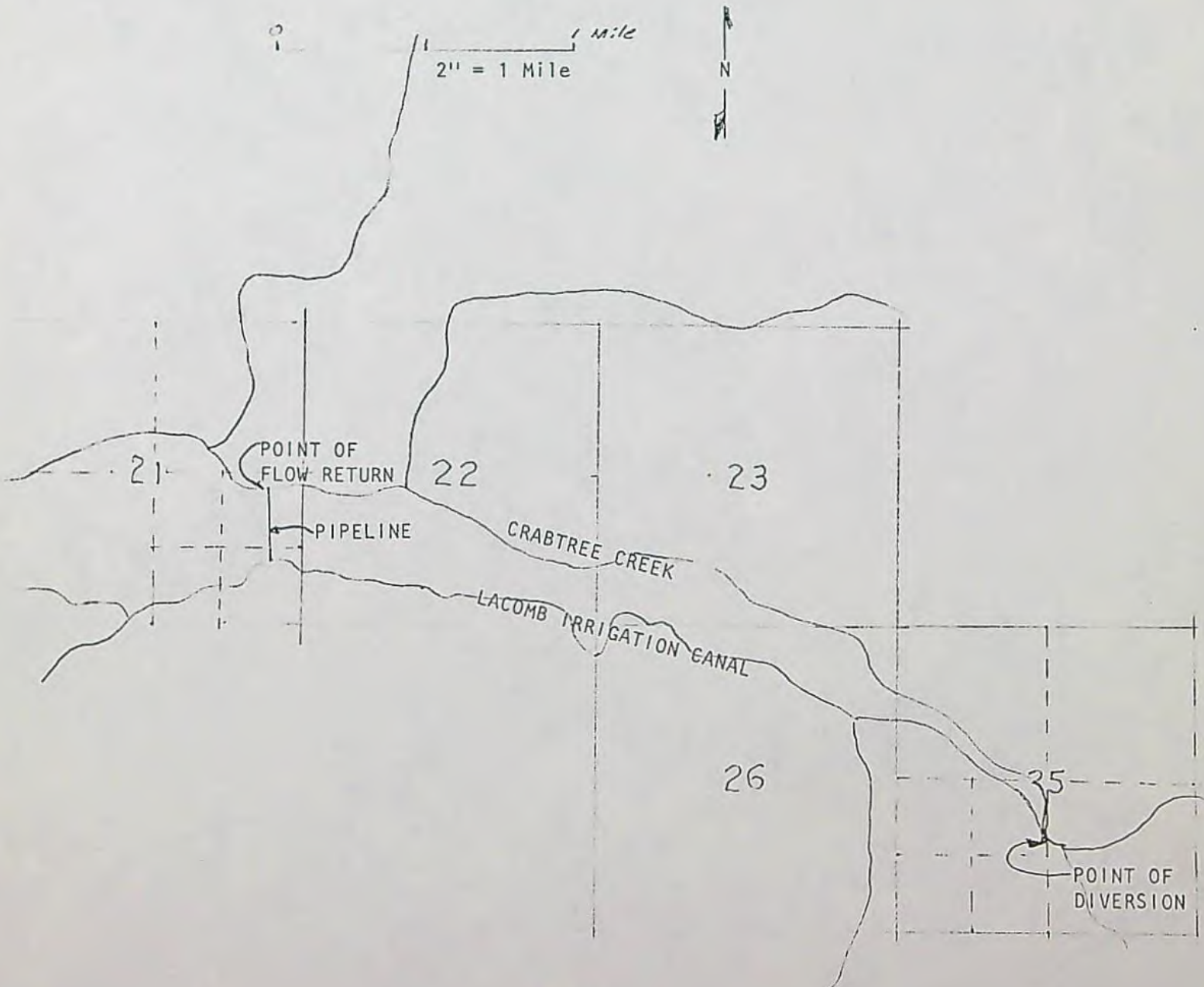
SECTIONS 21, 22, 23, 25, 26
Township 11 South Range 1 East, W.M.

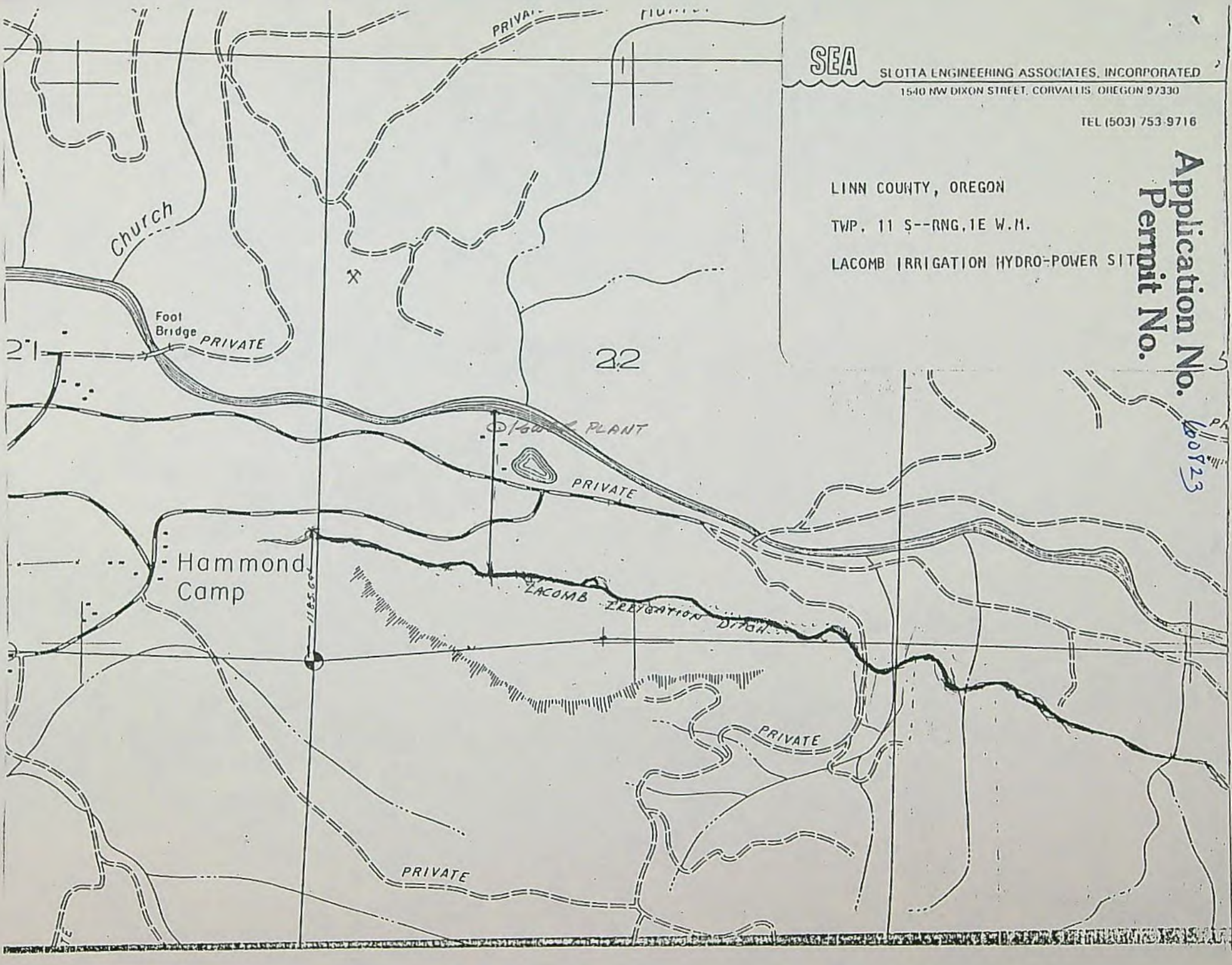
RECEIVED

OCT 29 1980

WATER RESOURCES DEPT
SALEM, OREGON

OCTOBER, 1980





SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
1540 NW DIXON STREET, CORVALLIS, OREGON 97330

TEL (503) 753-9716

LINN COUNTY, OREGON

TWP. 11 S--RNG. 1E W.M.

LACOMB IRRIGATION HYDRO-POWER SITE

Application No. 160823
Permit No.

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED

1540 NW DIXON STREET, CORVALLIS, OREGON 97330

TEL (503) 753-9716

LINN COUNTY, OREGON

TWP. 11 S--RNG. 1E W.M.

LACOMB IRRIGATION HYDRO-POWER SITE

Permit No. _____

402

Hammond
Camp

LACOMB PRETATION DITCH

PRIVATE

PRIVATE

PRIVATE

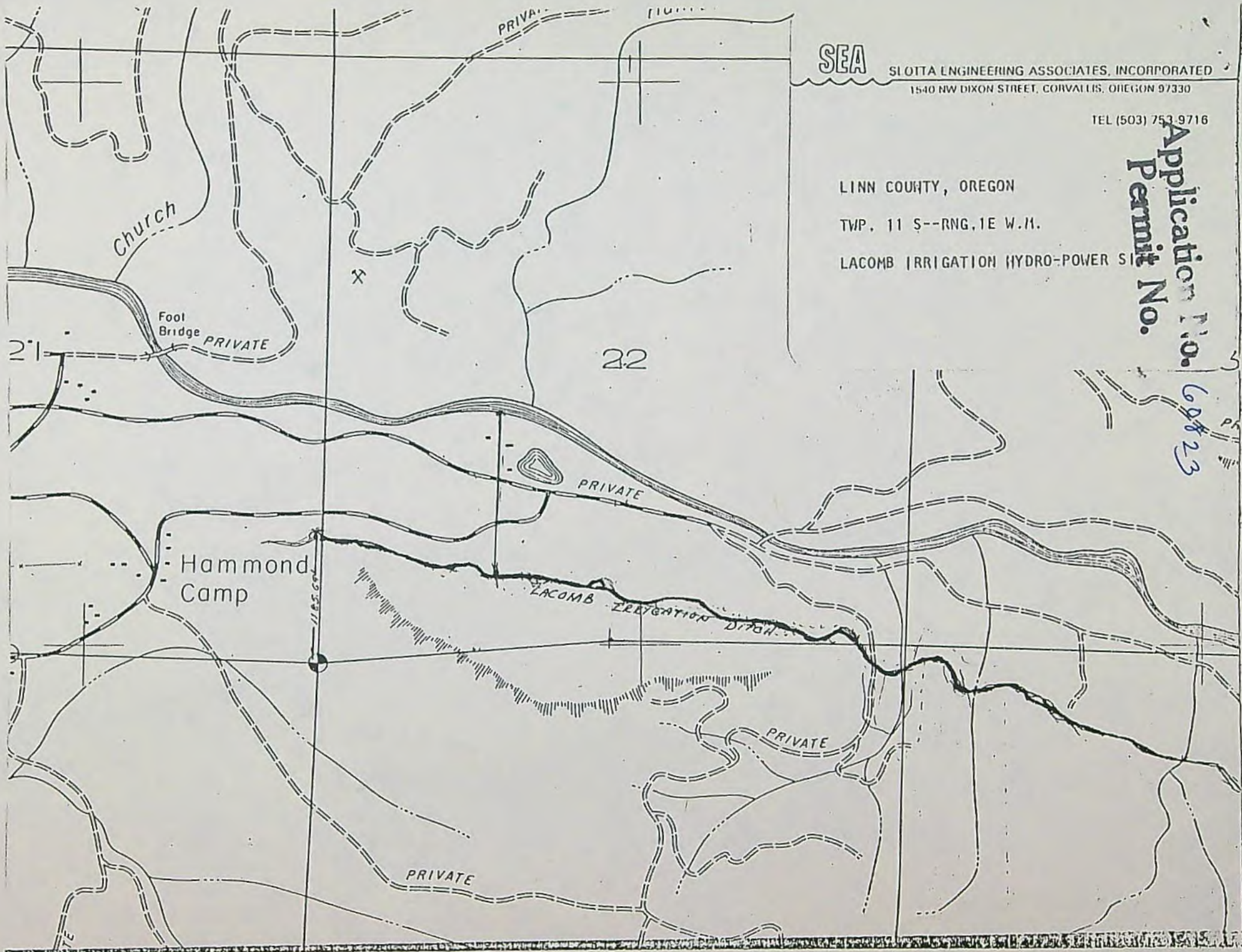
church---

PRIVATE

НУПНУ

2.2





SEA

SILOTTA ENGINEERING ASSOCIATES, INCORPORATED
1540 NW DIXON STREET, CORVALLIS, OREGON 97330

TEL (503) 753-9716

LINN COUNTY, OREGON

TWP. 11 S--RNG. 1E W.11.

LACOMB IRRIGATION HYDRO-POWER SITE

Application No.
Permit No.

60823

No.

SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED

1540 NW DIXON STREET, CORVALLIS, OREGON 97330

TEL 503-53-9716

LINN COUNTY, OREGON

TWP. 11 S--RNG. 1E W.M.

LACOMB IRRIGATION HYDRO-POWER SITE

Application No. 60823
Permit No.

Church

Fool
Bridge

PRIVATE

PRIVATE

MURDER

22

PRIVATE

Hammond
Camp

LACOMB IRRIGATION DITCH

PRIVATE

PRIVATE

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Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-3066 or
1-800-452-7813

October 2, 1980

Lacomb Irrigation District
413 Lacomb Drive
Lebanon, OR 97355

REFERENCE: File number 60823

We have received your application for use of water for Hydro-electric power generation along with the supporting data and fees. Our receipt number 20736 is enclosed. Your application has been filed and assigned number 60823.

Because of the many applications which have been filed in recent months, we are temporarily behind in our processing. Your application will be examined in detail as soon as possible. We will contact you if we need any additional information. If a permit is required to satisfy the conditions of a loan or land sale or if other emergency conditions exist, please let us know and we will attempt to process your application in the shortest possible time.

The permit approving your application will be issued without further correspondence if no additional information is required. The proposed appropriation will be subject to existing minimum flows and demands of prior rights during periods of low water.

Thank you for your patience.

Sincerely,

RALPH H. JACKSON
Supervisor, Application/Permit Section
Water Rights Division

RHJ:wpc
Enclosure
0427A
2483A

COPY



26 September 1980

Application No. 60823
Permit No.

Water Resources Director
State of Oregon
1178 Chemeketa Street N.E.
Salem, Oregon 97310

Gentlemen:

Enclosed please find a check for \$123.00 as part of the Lacombe Irrigation District's application for a permit to appropriate surface water from Crabtree Creek of the North Santiam for the purpose of hydro-electric power generation.

With the opportunity for economic return on co-generation of hydro-electric power, the Lacombe Irrigation District feels it is prudent to utilize its present irrigation canal system, that provides over 200 ft of head above Crabtree Creek, for hydro power. History points out that one of the founders of the irrigation district originally appropriated water from Crabtree Creek with a prime goal of power generation; In either 1934 or 1936, Mr. H.C. Pyle had a power permit for establishing a power base at Lacombe. Apparently when the Lacombe Irrigation District was formed by petition of the land owners to the County Court the intent for continuing the earlier power permit was lost. Presently, water rights for 30 cfs for irrigation is held by the Lacombe Irrigation District (#413559 for 6 cfs; #19629, Certificate #31898 for 24 cfs). It is felt that by establishing a 550 kWe power station, using 45 cfs from higher period flows in Crabtree Creek and the 200+ ft of head, will benefit the Lacombe Irrigation District as it will eventually allow them to justify a pressurized irrigation system. With a pressurized irrigation system it is anticipated that less irrigation waters would be required and the additional flows in the canal could be used to continuously generate electricity with the return flow directly to Crabtree Creek.

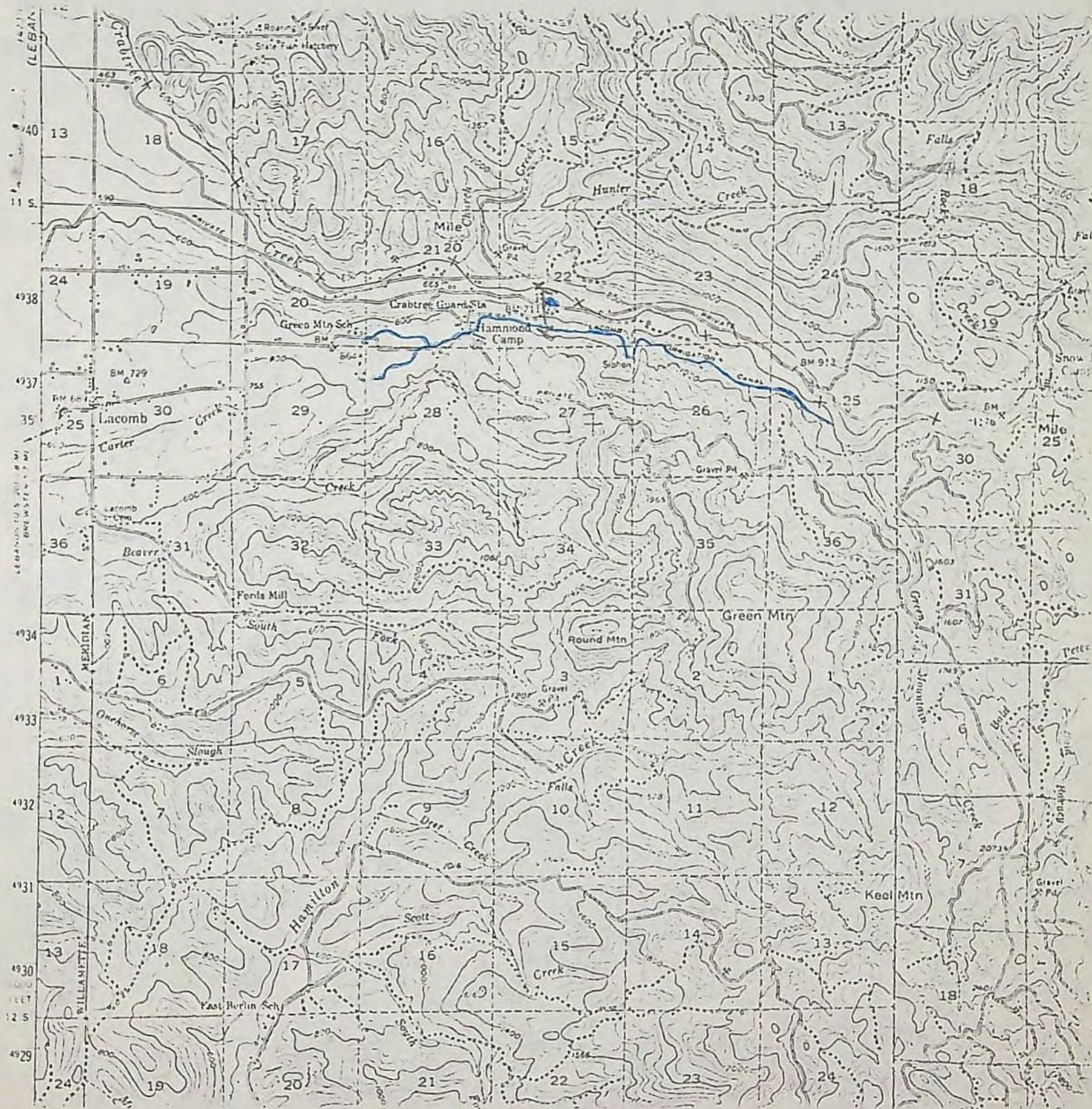
We have discussed this plan with several agencies, including the State Department of Fish and Wildlife. Screening device plans are being reviewed for ultimate application on the headgate of the Lacombe Irrigation canal to prevent fish entry to the canal and the power station. In discussing the wildlife aspects of the project with State biologists they felt there were no endangered species which would be threatened by the construction of the pipeline from the canal and connecting to Crabtree Creek through the property managed by the C & C Cedar Products, Inc. plant on Snowpeak Drive. We feel the plan meets the State's land-use goals and will be a viable project in a positive use of water as a natural resource and in turn, reducing our energy dependence on fossil fuels. We hope you agree.

Your consideration of this request for appropriating 45 cfs to the Lacombe Irrigation District will be sincerely appreciated.

Sincerely yours,

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED

Larry S. Slotta, PhD, PE



SEA

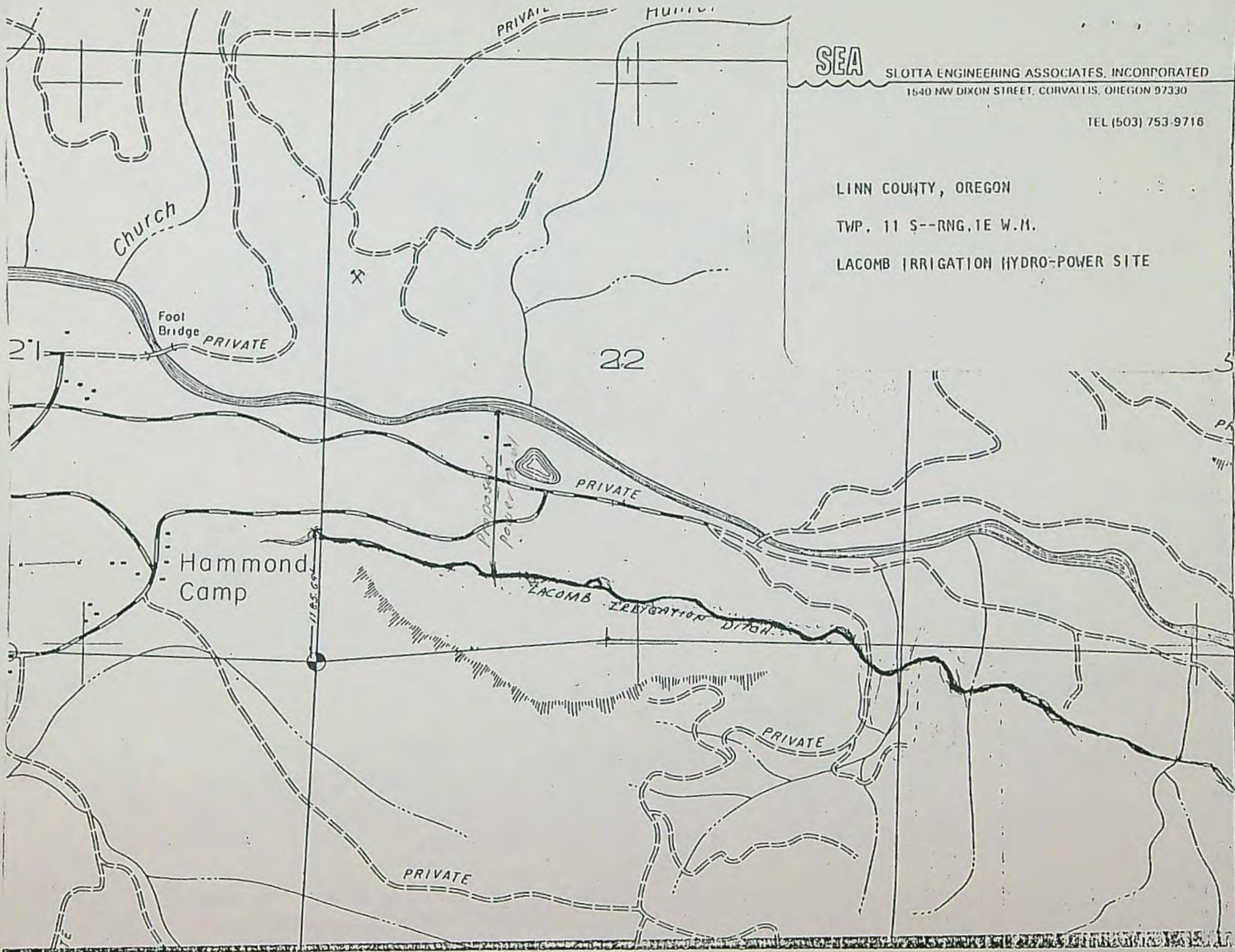
SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
1540 NW DIXON STREET, CORVALLIS, OREGON 97330

TEL (503) 753-9716

LINN COUNTY, OREGON

TWP. 11 S--RNG. 1E W.M.

LACOMB IRRIGATION HYDRO-POWER SITE



8-74

C-W11-SP-74

C100-4-20

THS, IE

Sec 22

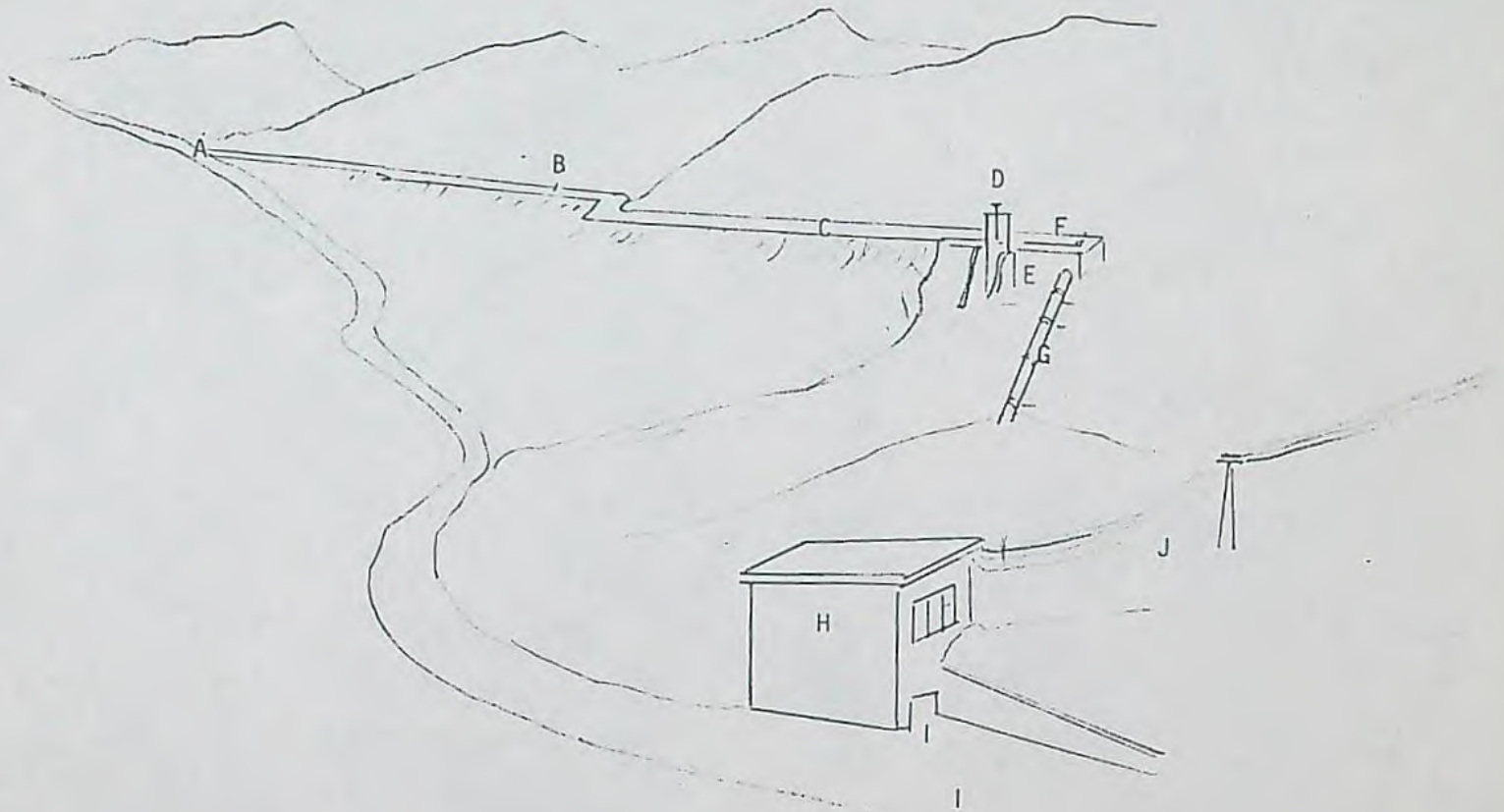
27

27

27

PERSPECTIVE CONCEPT OF
LACOMB, OREGON IRRIGATION HYDRO-ELECTRIC POWER SITE

LID 80-01



- A. main stream diversion
- B. irrigation ditch
- C. headwater
- D. by-pass sluice gate
- E. sluice and surge tank
- F. screen
- G. pipeline conduit
- H. power station
- I. tail water, main stream
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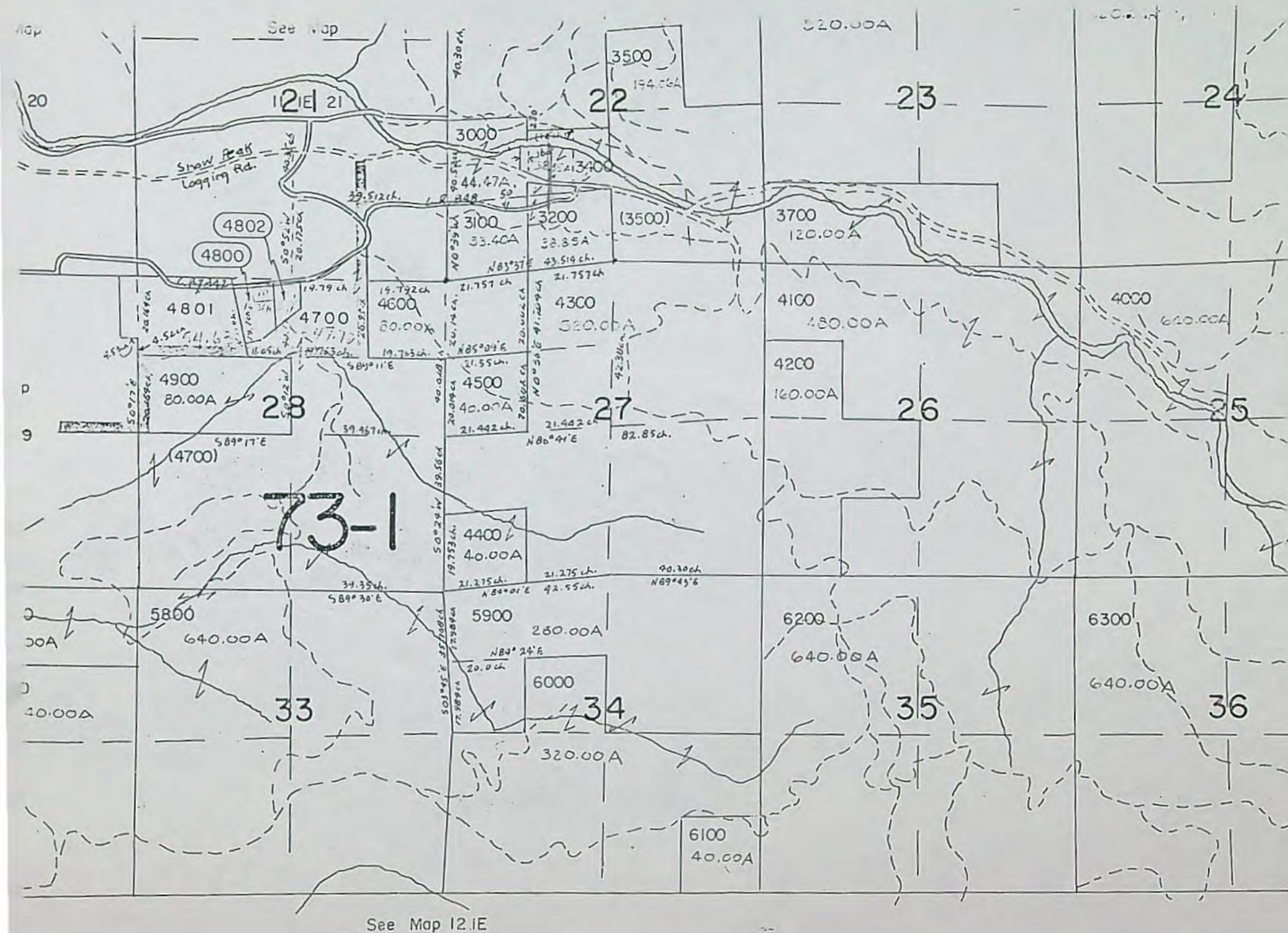
Elevation 202 ft. above main stream

Length 1600 ft. approximated
Flood Bank Plateau Elevation 12 ft.
Elevation datum 0
#6 copper wire: Wye System
12,000 V to ground
20,000 V phase to phase
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Project Site:	Lacomb Irrigation District
Water Supply:	irrigation canal; diversion of Crabtree Creek
Present Appropriation:	30 cfs
Expected Availability:	100 % mid-September to mid-June 50 % mid-June to mid-September
Canal Flow Potential:	40 cfs
Expected Availability:	100 % mid-September to mid-June 62.5 % mid-June to mid-September
Smallest Capacity:	15 cfs
Gross Head (expressed as vertical distance between head water level in the intake canal to the tail-water level in the stream)	202 ft
Flood Plain Bank Height (above tail-water level)	12 ft
Head Water Level to Flood Plain Bank	190 ft
Proposed Intake Works:	canal-culvert type drop structure, 90° to present canal alignment
Storage Available:	none, continuous flow in canal
Canal Fluctuations:	± 1.5 ft
Water Conveyance:	1600 ft length of penstock, exposed or covered, dimensions to be specified following turbine selection
Power Line Interface:	# 6 copper wire: Wye System 12,000 V to ground 20,800 V phase to phase 90 to 100 amp rating to primary

We expect that the power developed by the turbine will be utilized by direct connection to an existing power line. At a later date it is possible that the turbine's output would be used to supply 15 cfs through a pumping system as a pressurized irrigation network.



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-060-110-020-R0009

I. LOCATION

A. State	Oregon
B. County	Linn
C. Township, Range	T10S, R2W, Sec. 27
D. Latitude, Longitude	44°30'N, 122°55'W
E. Stream Name	Crabtree Creek
F. Major Basin Name	Mid Willamette
G. River Mile	0.0 to 5.7

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

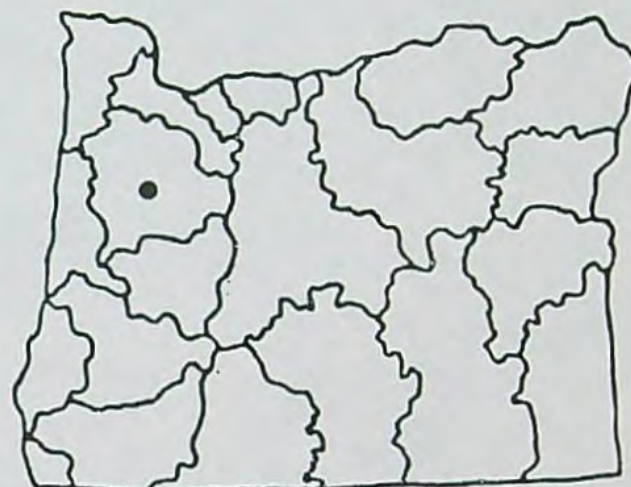
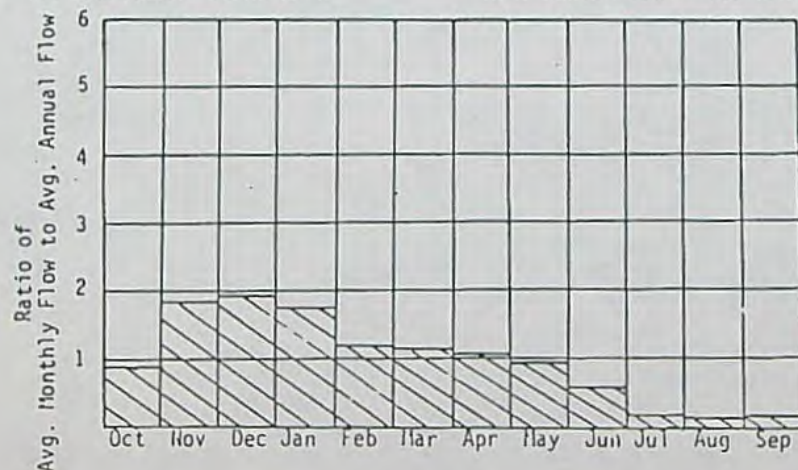
A. Upstream Elevation of Reach	267	Ft. MSL
B. Downstream Elevation of Reach	235	Ft. MSL
C. Total Available Head in Reach	32	Ft.
D. Average Slope in Reach	5.6	Ft./Mi.
E. Drainage Area above Reach Mouth	149	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I DISCHARGE I THEORETICAL I ANNUAL ENERGY I PLANT I	I PERCENTAGE I CFS I PLANT SIZE I AVAILABLE I FACTOR I	I I I I I I
I I I I I I I	I I I I I I I	I I I I I I I
I 95 I 39.4 I .11 I .94 I 1.000 I		
I 80 I 81.4 I .22 I 1.81 I .935 I		
I 50 I 335.8 I .91 I 5.74 I .719 I		
I 30 I 614.3 I 1.67 I 8.38 I .574 I		
I 10 I 1304.0 I 3.54 I 11.66 I .376 I		

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 562 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: SALEM



Permit No. 20450

Superseded

(Name of Applicant)

(Mailing Address)

(Zip Code)

Phone No....(503)...451...2796

..CRABTREE..CREEK

SOUTH: SANTIAM RIVER

(N. or S.)

(E. or W.)

(Public Land Survey Corner)

(If there is more than one point of diversion, each must be described.)

(N. or S.)

(E. or W.

., *W. M.*, in the county of.....LINN

irigation.

List use and/or number of acres to be irrigated

~~power canal diversion from
irrigation ditch, 45 cfs.~~

return flow to Crabtree Cr. AT
POWER PLANT

53

2 OCT 1980

4. The amount of water which the applicant intends to apply to beneficial use is45 cfs.....
cubic feet per second.....
(If water is to be used from more than one source, give quantity from each)

5. The use to which the water is to be applied is ..HYDRO-ELECTRIC POWER GENERATION.....

6. DESCRIPTION OF WORKS

Include dimensions and type of construction of diversion dam and headgate, length and dimensions of supply ditch or pipeline, size and type of pump and motor, type of irrigation system to adequately describe the proposed distribution system.

.....The present Lacombe Irrigation canal's headgate is located on Crabtree Creek.....
at approximately 1300 ft S, 2600 ft E from the W $\frac{1}{4}$ Corner of Section 25 near the
confluence of Green Mountain Creek.....This facility will be used as the headgate and
canal for the Lacombe Irrigation hydro-electric power project. Modifications of the
existing canal will be required in the form of a head distribution box located in.....
Section 22 and as shown in the concept perspective and site maps. A 36 inch pipeline
will connect the head distribution box to the hydro-generator facility which will.....
subsequently discharge into Crabtree Creek in the vicinity of the C & C Cedar Products
plant at 43355 Snow Peak Drive.....The length of the pipeline will be approximately 1700 ft
long down the slope (approximately 1450 ft long in plan view).
.....The facility is to develop 550 kWe based on a flow of 45 cfs and a head of 200+ ft.
The turbine will be of the Francis type. The flow into the canal's headgate will be
manually controlled and ultimately radio controlled.....Discussions with agencies have
brought out the importance of having fish screening facilities which will be planned
into the canal's headgate.....The power house will occupy an area of 100 ft x 100 ft.
The discharge from the turbine will be into a sluice and pool within Crabtree Creek.

If for domestic use state number of families to be suppliedHYDRO-ELECTRIC POWER WILL BE CO-GENERATION

7. Construction work will begin on or beforeNOVEMBER 1, 1980.....

8. Construction work will be completed on or beforeNOVEMBER 1, 1981.....

9. The water will be completely applied to the proposed use on or before.....NOVEMBER 1, 1981.....

Application No. 60823

Permit No.

Remarks: Please see the attached perspective sketch of the proposed development along with site and ownership maps. The enclosed materials were prepared on behalf of the Lacomb Irrigation District in order to seek the HYDRO-POWER permit from the Director of Water Resources of the State of Oregon and to seek support for feasibility engineering studies from the USDOE for retrofitting existing hydraulic structures to co-generate low cost hydro-electric energy. This work was done by SLOTTA ENGINEERING ASSOCIATES, INC. of Corvallis, Oregon (503) 753-9716.

The Lacomb Irrigation District was formed under O.R.S. Chapter 545 by petition of Landowners to the County Court. Water rights were applied for in 1952 with present rights for irrigation water of 30 cfs dated 1965. The primary function of the District is to provide irrigation water to its individual members. This request for 45cfs would allow the district to co-generate electric power during periods of high flows in Crabtree Creek and provide support to converting to a pressurized irrigation system, thus eventually reducing their need for irrigation water and increasing return flows to Crabtree Creek.

This permit, when issued, is for the beneficial use of water. By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan. It is possible that the land use you propose may not be allowed if it is not in keeping with the goals and the acknowledged plan. Your city or county planning agency can advise you about the land-use plan in your area.

Signature of Applicant
Larry S. Slotta, PhD, PE

Engineering Consultant for the
Lacomb Irrigation District



This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for.....

In order to retain its priority, this application must be returned to the Water Resources Director with corrections on or before, 19.....

WITNESS my hand this day of, 19.....

..... Water Resources Director

By

This instrument was first received in the office of the Water Resources Director at Salem, Oregon, on the

29 day of September, 1980, at 3:30 o'clock
P.M.

Application No. 60823

Permit No.

Superseded

Application No.

60823

Permit No.

Superseded
Oct. 29, 1980

Permit to Appropriate the Public Waters of the State of Oregon

This is to certify that I have examined the foregoing application and do hereby grant the same SUBJECT TO EXISTING RIGHTS INCLUDING THE EXISTING FLOW POLICIES ESTABLISHED BY THE WATER POLICY REVIEW BOARD and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed45.0..... cubic feet per second measured at the point of diversion from the stream, or its equivalent in case of rotation with other water users, fromCRABTREE CREEK.....

The use to which this water is to be applied is ..HYDRO-ELECTRIC POWER GENERATION.....

If for irrigation, this appropriation shall be limited to of one cubic foot per second or its equivalent for each acre irrigated.....

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The priority date of this permit is

Actual construction work shall begin on or before..... and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 19.....

Complete application of the water to the proposed use shall be made on or before October 1, 19.....

WITNESS my hand this day of....., 19.....

4. The amount of water which the applicant intends to apply to beneficial use is65.....
cubic feet per second.....
(If water is to be used from more than one source, give quantity from each)

5. The use to which the water is to be applied isthe generation of electricity from.....
.....hydropower.....

6.

DESCRIPTION OF WORKS

The present Lacombe Irrigation Canal diversion source or headgate is located on Crabtree Creek approximately 1300 ft S and 2600 ft E from the W1/4 corner of Section 25 near the confluence of Green Mountain Creek. The canal is operational; irrigation water having been appropriated previously (permit #41359 for 6 cfs; permit #19629, certificate #31898 for 24 cfs). The proposed hydropower development plans to continue using the present diversion source and to convey up to 60 cfs along the ditch to a point having sufficient (235 feet) fall and with a short (1060 feet) return to Crabtree Creek. The District received an appropriation on 6/8/81 (permit #60823) to divert and use 45 cfs for the purpose of hydroelectric power production. Feasibility studies conducted by Slotta Engineering Associates (SEA) indicate that an additional 20 cfs would greatly increase the economic returns and benefit/cost ratio for the project, while using the canal/flume structure to its fullest capacity.

~~Of the additional 20 cfs requested in this amended application, 18 cfs will be used in actual power production and 2 cfs will be used as a "buffer", to account for leakage and prevent air entrapment at the canal to penstock intake.~~

4 Nov 1982
F.S.

The flow into the canal's headgate will be closely monitored by rainfall/streamlevel instrumentation, and will be manually controlled by a gate. SEA has been in close contact with the U.S. Fish & Wildlife Service and the Oregon Department of Fish & Wildlife concerning the design of a suitable fish screening facility at the headgate. The installation of screens acceptable to environmental agencies, along with careful observation of intake flows will enable the District to comply with minimum flow requirements set forth by the Water Resources Department, as well as protect populations of migrating fish.

The turnout will be located near Shingle Mill Drive, which will provide easy access for facilitating construction, operation and maintenance of the irrigation/power canal. A 36-inch steel pipeline will connect the canal head distribution box to the hydro-generator facility, which will accordingly return its discharge into Crabtree Creek at the powerplant tailrace (located approximately 2350 ft N and 818 ft W from the SE corner of Section 21, T11S R1E).

With a useful flow of 60 cfs and a fall of 235 ft, then 1600 hp (1200 kW) could theoretically be generated. This is an increase of 400 hp over the suggested output of 1200 hp from permit application #60823 for 45 cfs. Accounting for the efficiency of the plant machinery, approximately 950 kW (total) would be delivered as cogeneration to nearby powerlines. Two reversible centrifugal pumps (270 kW and 720 kW) have been recommended for use as turbines at this site. The powerhouse yard will occupy a space of about 50 ft by 50 ft.

If for domestic use state number of families to be supplied.....(hydroelectric power will be co-generation)

7. Construction work will begin on or before.....2/83.....

8. Construction work will be completed on or before.....11/83.....

9. The water will be completely applied to the proposed use on or before.....11/83.....

Application No. 60823.....

Permit No.

Remarks:.....

This permit, when issued, is for the beneficial use of water. By law, the land use associated with this water use must be in compliance with statewide land-use goals and any local acknowledged land-use plan. It is possible that the land use you propose may not be allowed if it is not in keeping with the goals and the acknowledged plan. Your city or county planning agency can advise you about the land-use plan in your area.

Signature of Applicant

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for.....

In order to retain its priority, this application must be returned to the Water Resources Director with corrections on or before, 19.....

WITNESS my hand this day of....., 19.....

Water Resources Director

By

This instrument was first received in the office of the Water Resources Director at Salem, Oregon, on the

..... day of, 19....., at o'clock

.....M.

Application No.....

Permit No.....

Permit to appropriate the Public Waters of the State of Oregon

This is to certify that I have examined the foregoing application and do hereby grant the same SUBJECT TO EXISTING RIGHTS INCLUDING THE EXISTING FLOW POLICIES ESTABLISHED BY THE WATER POLICY REVIEW BOARD and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed cubic feet per second measured at the point of diversion from the stream, or its equivalent in case of rotation with other water users, from

.....

.....

The use to which this water is to be applied is

.....

.....

If for irrigation, this appropriation shall be limited to of one cubic foot per second or its equivalent for each acre irrigated

.....

.....

.....

.....

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.....

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The priority date of this permit is

Actual construction work shall begin on or before and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 19.....

Complete application of the water to the proposed use shall be made on or before October 1, 19.....

WITNESS my hand this day of, 19.....



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT I

EXHIBIT 1

The Lacombe Irrigation District was formed under D.R.S. Chapter 545 by petition of Landowners to the County Court. The District is now registered as a municipality and the membership numbers 151 members. On 6/8/80, the District received an appropriation (permit #60823) to divert and use 45 cfs from Crabtree Creek for hydroelectric power generation. (Conditions concerning minimum streamflow for fish migration were attached.) Thus, the District would like to amend their permit allocation to 65 cfs; an additional 20 cfs over their previously accepted permit. The District would like to increase the proposed plant flow capacity by 20 cfs, for a total of 65 cfs.

If official articles of incorporation for the District are required by the WRD, please contact Slotta Engineering Associates, Inc.



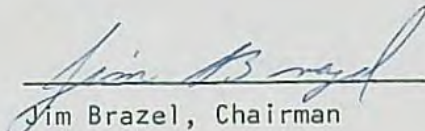
SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

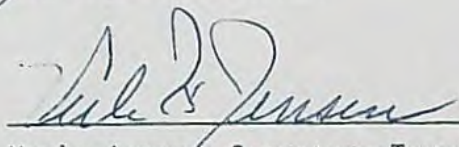
TEL (503) 754-0255

EXHIBIT 2

26 July, 1982

We, the officers of the Lacombe Irrigation District, do hereby authorize the filling of a Surface Water Application for 65 cfs, to be used for the purpose of generating electricity from hydropower along Crabtree Creek.


Jim Brazel, Chairman

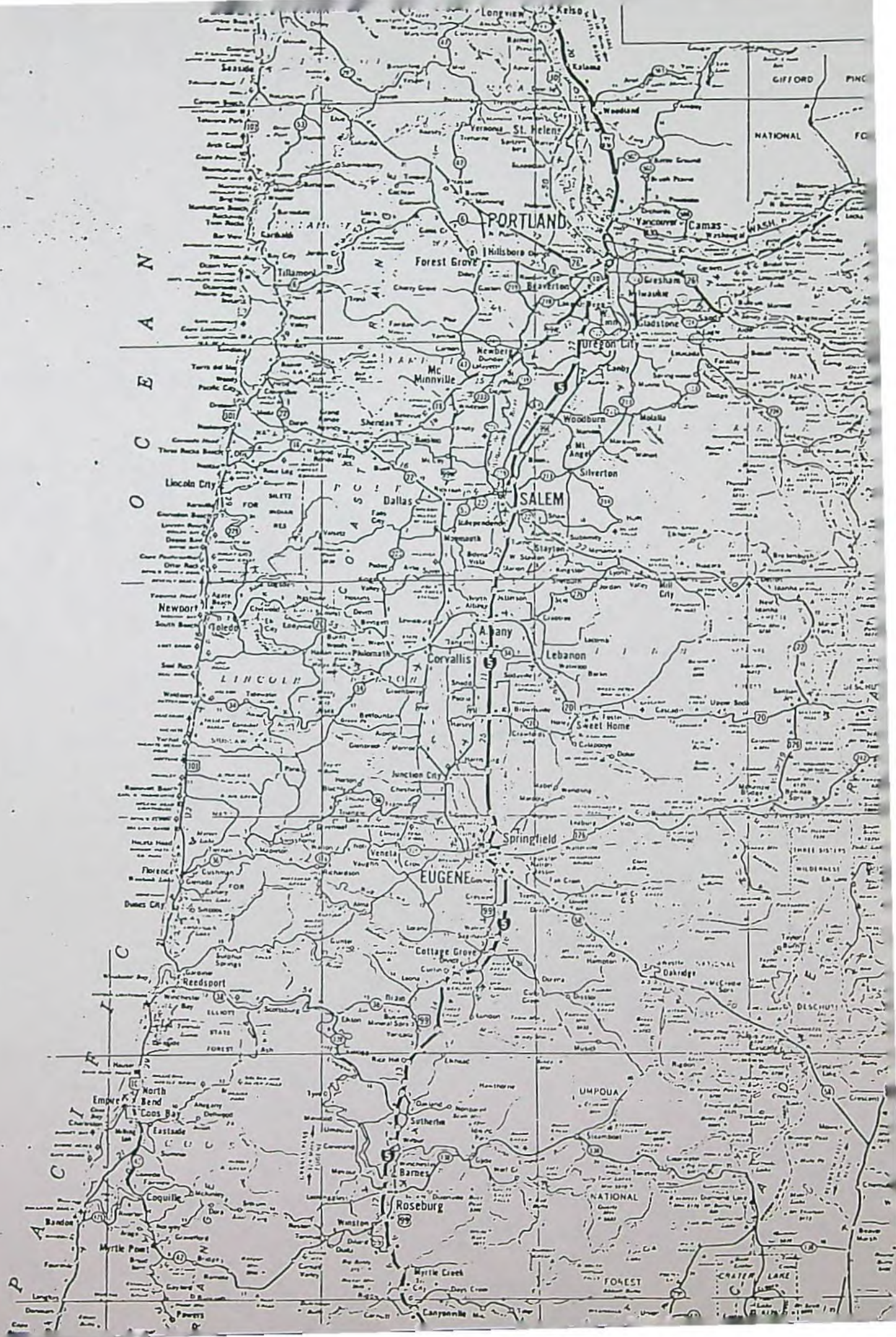

Verle Jensen, Secretary-Treasurer &
Registered Agent



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

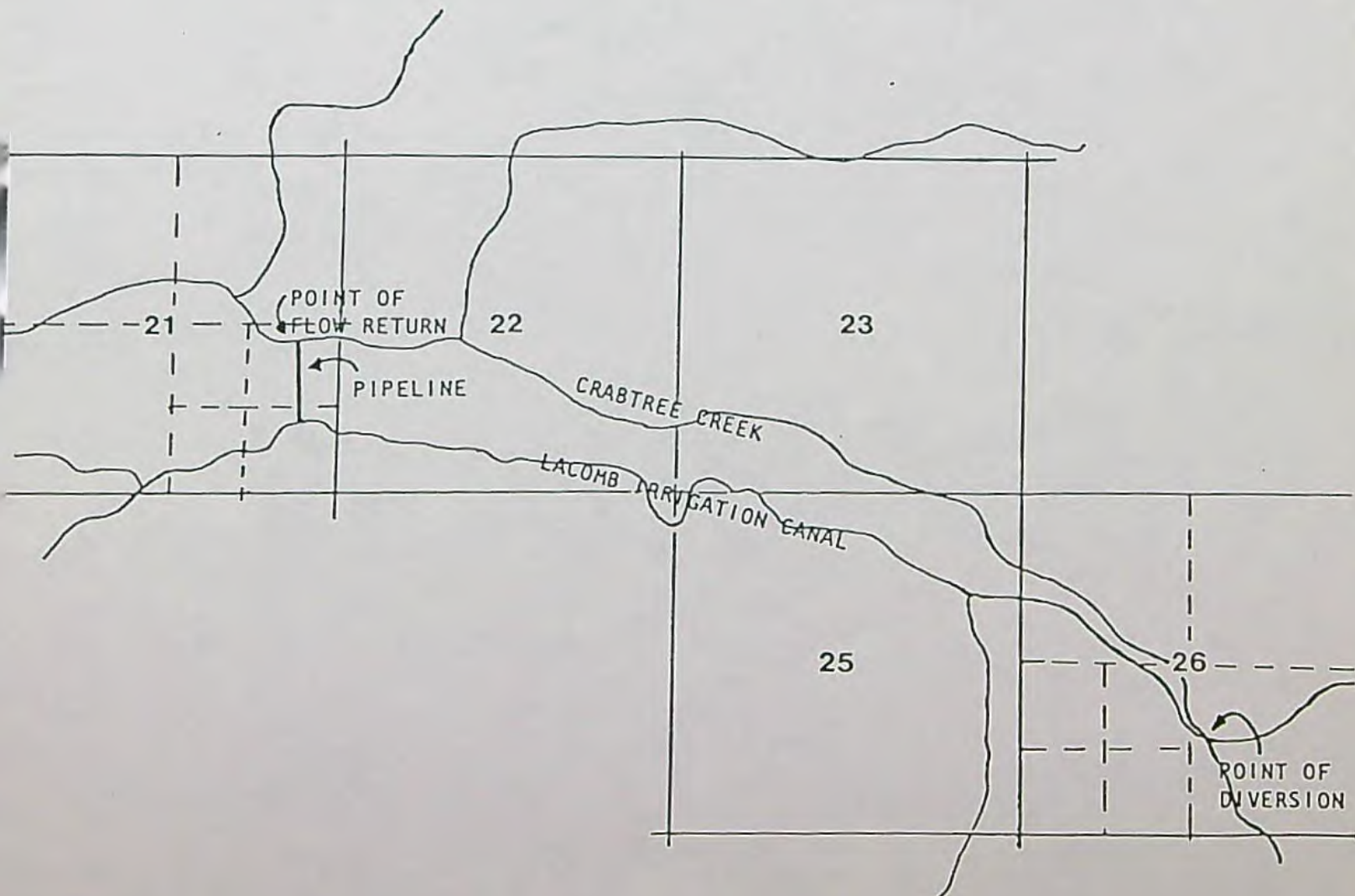
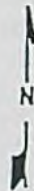
EXHIBIT 3



LACOMB

SECTIONS 21,22,23,25,26
Township 11 South Range 1 East, W.M.

0 1
2" = 1 Mile



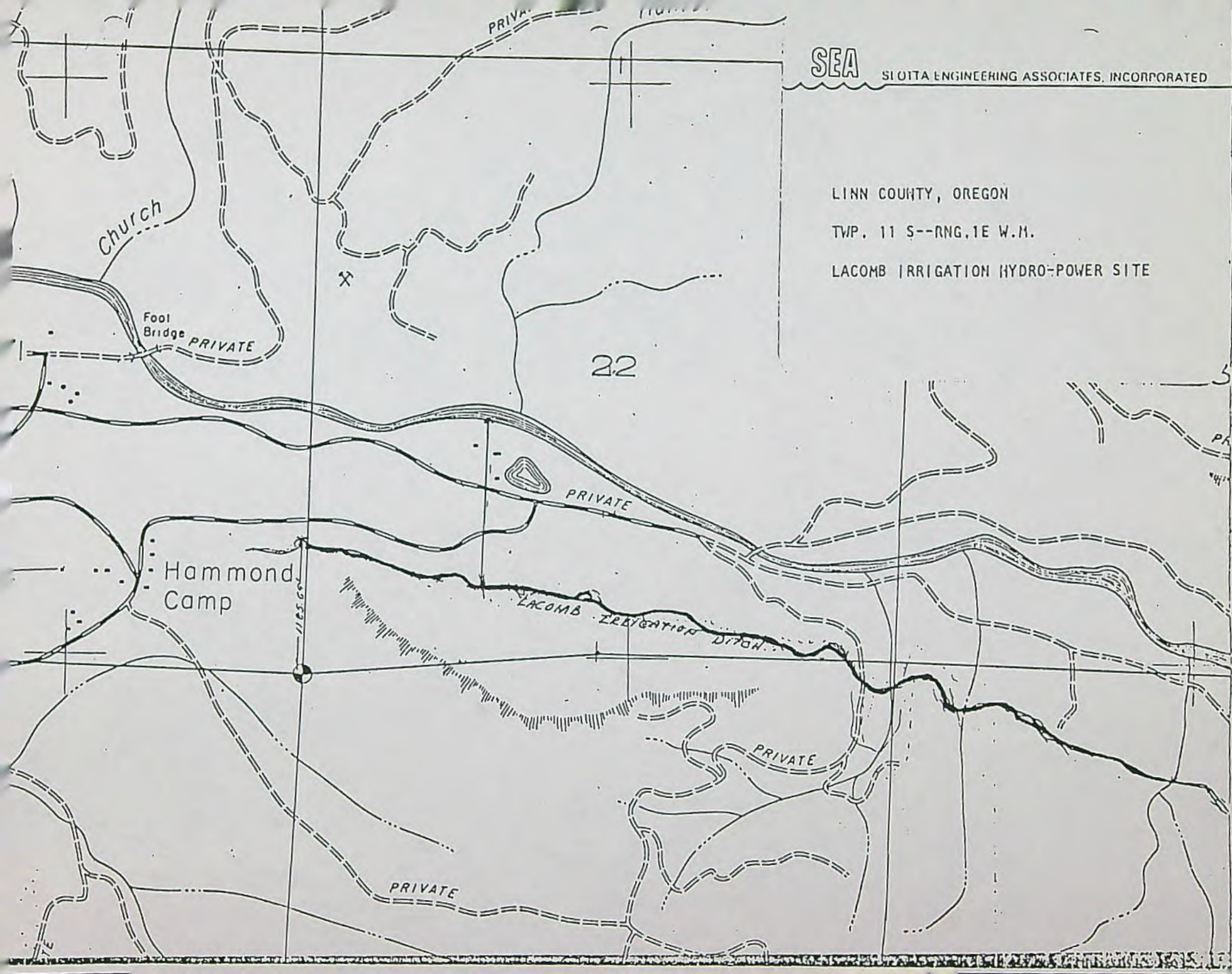
SEA

SLIOTA ENGINEERING ASSOCIATES, INCORPORATED

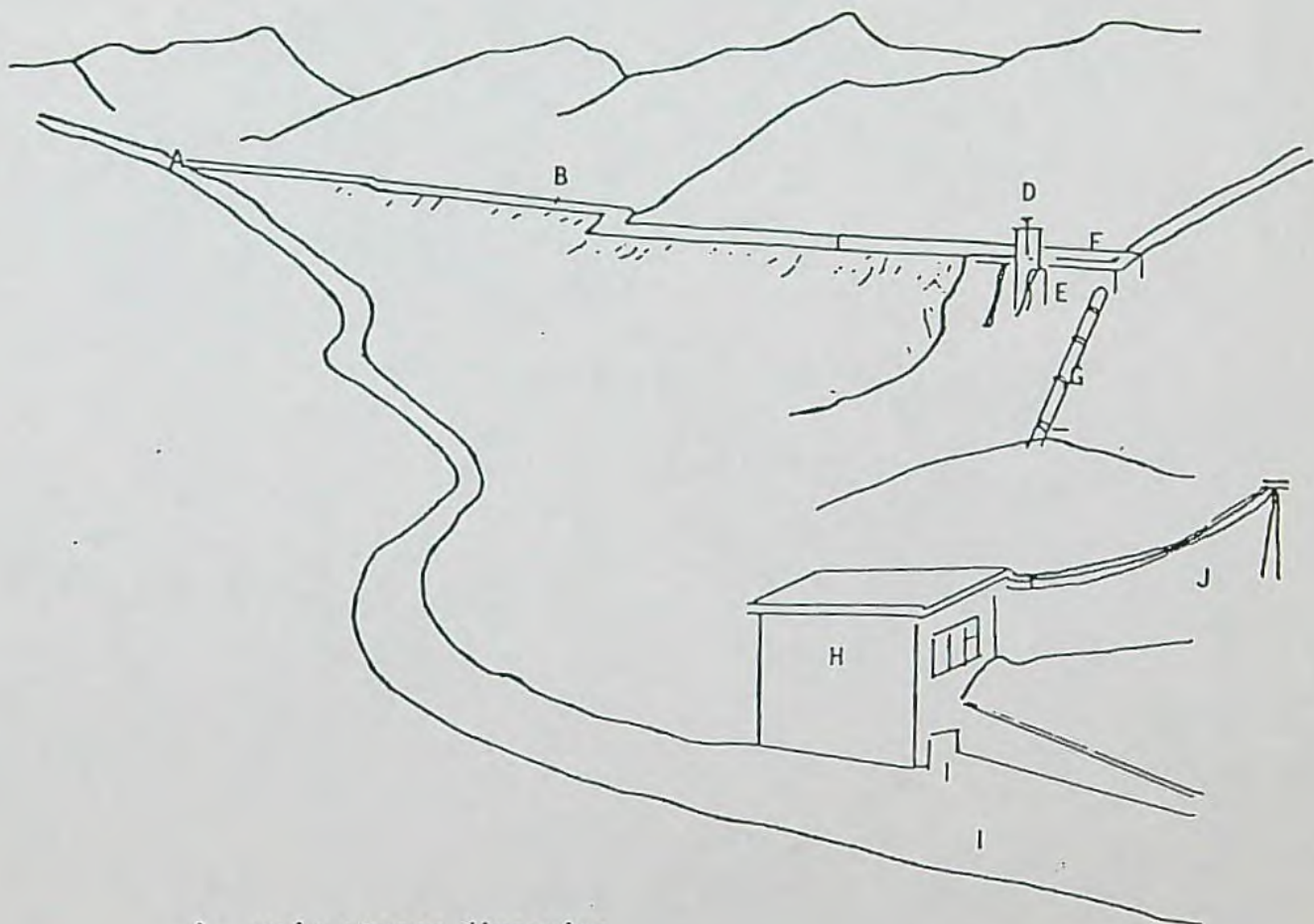
LINN COUNTY, OREGON

TWP. 11 S--RNG. 1E W.M.

LACOMB IRRIGATION HYDRO-POWER SITE



PERSPECTIVE CONCEPT OF
LACOMB, OREGON IRRIGATION HYDRO-ELECTRIC POWER SITE



- A. main stream diversion
- B. irrigation ditch
- C. headwater
- D. by-pass sluice gate
- E. sluice and surge tank
- F. screen
- G. pipeline conduit
- H. power station
- I. tail water, main stream
- J. power line

Elevation 235 ft. above main stream

Length 1300 ft. approximated
Flood Bank Plateau Elevation 12 ft.
Elevation datum 0
#6 copper wire: Wye System
12,000 V to ground
20,200 V phase to phase
90 to 100 amp rating to primary



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT 4

EXHIBIT 4

The following sheets contain letters of clearance or easement for the District from the various property-owners who's land will be affected. Also enclosed is a copy of an "Owner's Sales Agreement and Earnest Money Receipt" for the purchase of the property where the powerhouse will be built. If further documentation is required, please contact Slotta Engineering Associates, Inc.



Willamette Industries, Inc.

Building Materials Group
Sales and Operations Office

P.O. Box 907
Albany, Oregon 97321
503/926-7771

May 6, 1981

Larry S. Slotta, Ph.D., P.E.
Slotta Engineering Associates,
Incorporated
1540 N.W. Dixon Street
Corvallis, Oregon 97330

RE: Proposed Lacombe Irrigation District Power Project.

Dear Mr. Slotta:

Your letter to Mr. Bergman dated April 24, 1981, regarding the proposed Lacombe Irrigation District hydroelectric project has been referred to me for reply.

On behalf of Willamette Industries, preliminary approval is hereby given to cross Willamette Industries land and the company's Snow Peak road with a water pipeline. Before final approval is given, we will need to know the exact size of the pipeline, the method of construction and will have to be given assurances that running the pipeline under the Snow Peak road will not interfere with our company's normal operations.

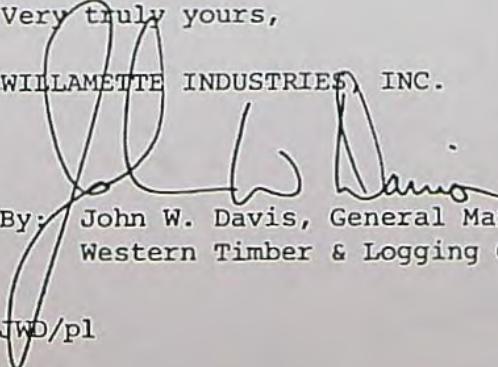
Tentative approval is also given to use the Snow Peak road for access to the proposed hydroelectric project. Final approval will be subject to the execution of an easement or license document approved by the company's legal counsel and specifically limiting the scope of the Irrigation District's use of the Snow Peak right-of-way for ingress and egress to the Collins property for the purposes of maintaining and servicing its hydroelectric project only.

Mr. Bergman informs me that in discussions with you and other representatives of the Irrigation District, he does not foresee any problem in working out the exact details as outlined above.

If anything further is needed at this time from our company, please advise.

Very truly yours,

WILLAMETTE INDUSTRIES, INC.

By:  John W. Davis, General Manager
Western Timber & Logging Operations

JWD/pl

Champion Timberlands
Champion International Corporation

West Coast Operations
P. O. Box 10228
Eugene, Oregon 97440
Telephone 503 687 4690

Lacomb Irrigation District
c/o Slotta Engineering Associates, Inc.
1540 N.W. Dixon Street
Corvallis, OR 97330

January 12, 1981

Attention: Larry S. Slotta

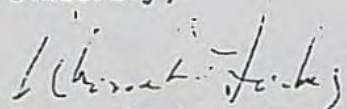
Gentlemen:

We appreciated the opportunity of discussing your proposed hydroelectric project last Friday in Lebanon. The following items are important considerations to our company:

1. Right-of-way width be held to the minimum necessary.
2. The pipeline be buried at an appropriate location for a proposed road crossing.
3. The exact location and acreage needed for the powerhouse, if located on Champion's land.
4. Our continued ability to manage the remainder of our lands for timber production.

You indicated that our concerns were reasonable and could easily be accommodated. With this in mind, we can support your proposal by granting the necessary easements. We would appreciate the opportunity to review your final survey plot and profile.

Sincerely,


Thomas D. Lackey, Manager -
Real Property

TDL:dad

cc: Richard Beeby
Champion International Corporation
P. O. Box 547
Lebanon, OR 97355

OWNER'S SALES AGREEMENT
AND EARNST MONEY RECEIPTRECEIVED OF Lacomb Irrigation District, 12 May, 1981hereinafter called purchaser, \$500 and by, as earnest money and in part payment for the following described real estate situated in the City of Lacomb County of Linn State of Oregon, described as follows, to-wit:43083 Snow Peak Drive
Linn Co. TAX LOT Number 3300 containing 4.0 Acres
Linn Co. TAX LOT Number 3401 containing 0.66 Acresas described on Warranty Deed to 167 page 370, Parcel T & U, recorded in Linn County Court Housewhich we have this day sold to the purchaser for the sum of Ninety Five Thousand and No/100 Dollars \$95,000; on the following terms, to-wit: The earnest money hereinabove received for \$500; upon acceptance of title and delivery of deed or delivery of contract \$95,000 \$ 95,000; balance of \$95,000 Dollars \$95,000; payable as follows:Dependent on commitments made from loan grants to the Lacomb Irrigation District

A title insurance policy from a reliable company insuring marketable title in the seller in an amount equal to said purchase price is to be furnished purchaser in due course at seller's expense; preliminary to closing, seller may furnish a title insurance company's title report showing its ingness to issue title insurance, and such report shall be conclusive evidence as to status of seller's record title.

It is agreed that if the title to the said premises is not marketable, or cannot be made so within thirty days after notice, with a written statement of defects, is delivered to seller, the earnest money herein received for shall be refunded. But if the title to the said premises is marketable, and the purchaser neglects or refuses to comply with any of the conditions of this sale within 150 days and to make payments promptly, as hereinabove set forth, then the earnest money herein received for shall be forfeited to the seller as liquidated damages, and this contract shall thereupon be of no further binding effect.

The property is to be conveyed by good and sufficient deed free and clear of all liens and encumbrances except zoning ordinances, building restrictions, taxes due and payable for the current tax year, reservations in federal patents and state deeds, easements of record and

All irrigation, ventilating, cooling, plumbing and heating fixtures and equipment (including stoker and oil tanks but excluding fire place fixtures and equipment), water heaters, electric light and bathroom fixtures, light bulbs and fluorescent lamps, venetian blinds, wall-to-wall carpeting, awnings, window and door screens, storm doors and windows, attached floor coverings, attached television antenna, all plants, shrubs and trees and all fixtures except are to be left upon the premises as part of the property purchased.

The following personal property is also included as part of the property sold for said price: — 611 —

Seller and purchaser agree to pro rate the taxes which become due and payable for the current tax fiscal year on a fiscal year basis. Rents interest, premiums for existing insurance, and other matters shall be pro rated on a calendar year basis. Purchaser agrees to pay for fuel on hand including oil in tank, if any, and, at closing, shall reimburse seller for sums, if any, held in any reserve account relating to any encumbrances on said property. Adjustments are to be made as of the date of the consummation of the sale herein or delivery of possession, which ever first occurs.

Possession of said premises is to be delivered to purchaser on or before September 30, 1981. Time is of the essence hereof. This contract is binding upon the heirs, executors, administrators, successors and assigns of the purchaser and seller. However, the purchaser's rights herein are not assignable without written consent of seller. In any suit or action brought on this contract, the losing party agrees to pay the prevailing party's reasonable attorney's fees to be fixed by the trial court, and on appeal the prevailing party's reasonable attorney's fees to be fixed by the appellate court.

Further conditions:

Gavin Collins OwnersI hereby agree to purchase the above property and to pay the price of Ninety Five Thousand (\$ 95,000) Dollars as specified aboveAddress 41538 Lacomb Drive
Lacomb, Oregon 97355
Phone 451-2796Purchaser LACOMB IRRIGATION DISTRICT
x Gavin Collins (Chairman)
12 May 1981

152-281
#20189/ Easement
E. C. Ayers et ux
to

Filed August 30th, 1940, at 3:00 o'clock P.M.

Lacomb Irrigation District

Stella E. Hoover, Recorder of Conveyances

KNOW ALL MEN BY THESE PRESENTS, That Elmer C. Ayers and Sophia Ayers, his wife for a in consideration of the mutual advantages accruing to the grantors herein in the construct of its irrigation system do hereby give and grant to the Lacomb Irrigation District easeme for the construction of a canal or lateral across the following described premises, to-wit

N.W. $\frac{1}{2}$ -S.E. $\frac{1}{2}$ Sec. 25 T11 S R1 W.W.M.

E. $\frac{1}{2}$ -N.E. $\frac{1}{2}$ -S.W. $\frac{1}{2}$ Sec. 25 T11 S R1 W.W.M.

As said canal is now or may hereafter be located by the engineers for said district. The construction of said canal or lateral shall be done in a workman-like manner doi no unnassy damage to crops or improvements.

IN WITNESS WHEREOF, We have hereunto set our hands and seals this 24 day of June, 19

E. C. Ayers. . .

Sophie A. Ayers . . .

STATE OF OREGON) ss.
County of Linn,)

On this 24 day of June, 1940, personally came before me, a Notary Public in and for said County and State, the within named Elmer C. Ayers and for Ayers, his wife, to me personally known to be the identical persons described in and executed the within instrument and who personally acknowledged to me that they execut the same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 24 day of June 1940.

Marion Nagel, Notary Public for Oregon

My Commission Expires Oct. 16, 1941.

(L.S.)

-----00000000000000-----

#20190/ Easement
Hilma Peoples et al.
to

Filed August 30th, 1940, at 3:00 o'clock P.M.

Lacomb Irrigation District

Stella E. Hoover, Recorder of Convey

LACOMB IRRIGATION DISTRICT
LACOMB, OREGON

WE THE UNDERSIGNED HEREBY GIVE AND GRANT TO THE LACOMB IRRIGATION DISTRICT FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF A CANAL OR LATERAL OVER AND OUR RESPECTIVE LAND AS FOLLOWS TO WIT: A STRIP OF LAND 25 feet wide

Hilma Peoples

Frank Peoples

E. W. Bartruff

Lonie M. Bartruff

1st National Bank of Lebanon
By J. H. Irving (CORP. SEAL)

J. N. Sylvester

Emma Sylvester

R. W. Sylvester

Margie Sylvester

Oliver P. Powell

Gladys E. Powell

H. C. Pyle

Rebecca Pyle

Ruth Downing

S. $\frac{1}{2}$ - S.W. $\frac{1}{2}$ -N.E. $\frac{1}{2}$ Sec. 25-T11S R1 W.

N.E. $\frac{1}{2}$ -N.E. $\frac{1}{2}$ -Sec. 25 T11S R1 W.

S.W. $\frac{1}{2}$ -S.E. $\frac{1}{2}$ -Sec. 24 " " "

N. $\frac{1}{2}$ -S.W. $\frac{1}{2}$ -N.E. $\frac{1}{2}$ -Sec. 25

Sec. 19-20 -30-31 T11 S.R1 W

E.W. $\frac{1}{2}$ -E.E. $\frac{1}{2}$ -Sec. 35 T11S R1 W

E. $\frac{1}{2}$ -N.W. $\frac{1}{2}$ -Sec. 36 T11S R1 W

S. $\frac{1}{2}$ -S. $\frac{1}{2}$ -N.E. $\frac{1}{2}$ -S.E. $\frac{1}{2}$ -Sec. 21 T11S R1 E.

S. $\frac{1}{2}$ -S.W. $\frac{1}{2}$ -Sec. 20 T11S R1 E.

S.E. $\frac{1}{2}$ -S.W. $\frac{1}{2}$ and S. W. $\frac{1}{2}$ -S.E. $\frac{1}{2}$ -Sec. 21 T11S R1 E.

N.E. $\frac{1}{2}$ -N.E. $\frac{1}{2}$ and W. $\frac{1}{2}$ -N.W. $\frac{1}{2}$ -N.E. $\frac{1}{2}$ Sec. 28

S. $\frac{1}{2}$ -N.E. $\frac{1}{2}$ Sec. 29 T11 S R1 E.

S. $\frac{1}{2}$ -E.W. $\frac{1}{2}$ -Sec. 28

Hilma Peoples et al.

to

Lacomb Irrigation District

Stella E. Hoover, Recorder of Conveyances

LACOMB IRRIGATION DISTRICT
LACOMB, OREGON

WE THE UNDERSIGNED HEREBY GIVE AND GRANT TO THE LACOMB IRRIGATION DISTRICT AN
FOR THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF A CANAL OR LATERAL OVER AND AC
OUR RESPECTIVE LAND AS FOLLOWS TO WIT: A STRIP OF LAND 25 feet wide

Hilma Peoples

S. $\frac{1}{2}$ - S.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 25-T11S R1 W.

Frank Peoples

N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 25 T11S R1 W.

E. W. Bartruff

S.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24 " "

Lonie M. Bartruff

N. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 25

1st National Bank of Lebanon

By J. H. Irvine, (CORP. SEAL) Sec. 19-20 -30-31 T11 S.R1 W

J. H. Sylvester

N.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 35 T11S R1 W

Emma Sylvester

N.E. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -Sec. 36 T11S R1 W

R. W. Sylvester

S. $\frac{1}{2}$ -S. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 21 T11S R1 E.

Margie Sylvester

Oliver P. Powell

S. $\frac{1}{2}$ -S.W. $\frac{1}{4}$ -Sec. 20 T11S R1 E.

Gladys E. Powell

H. C. Pyle

S.E. $\frac{1}{4}$ -S.W. $\frac{1}{4}$ and S. W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 21 T11S R1 E.

Rebecca Pyle

N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ and W. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 28 " "

Ruth Downing

S. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ Sec. 29 T11 S R1 E.

M. B. Sanders

S. $\frac{1}{2}$ -N.W. $\frac{1}{4}$ -Sec. 28

J. W. Edwards

N.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24 T11S R1 W.

Della Edwards

N. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24-T11S R1 W.

Ernest Ede

N.W. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -Sec 24 T11S R1 W

N.E. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ " and S.E. $\frac{1}{4}$ -S.W. $\frac{1}{4}$ Sec. 24 T11S R1

N.W. $\frac{1}{4}$ -S.W. $\frac{1}{4}$ Sec. 24 T11S R1 W

State of Oregon) ss.

County of Linn)

On this 22nd day of June 1940 before me a Notary Public for and
within said County, personally appeared J. H. Irvine to me personally known, who being by
me duly sworn did say that he is the cashier of the First National Bank of Lebanon the
corporation named in the forgoing instrument, that the seal affixed to said instrument
is the corporate seal of said corporation and that said instrument was signed and sealed
in behalf of said corporation by the authority of its board of Directors and said J. H.
Irvine acknowledged said instrument to be the free act and deed of said corporation.

Marion Nagel, Notary Public

My commission expires Oct. 18, 1943.

(L.S.)

State of Oregon) ss.

County of Linn)

On this 22nd day of June 1940 personally came before me a notary
public in and for said County and State, Hilma Peoples, Frank Peoples E. W. Bartruff,
Lonie Bartruff, J. H. Irvine, J. N. Sylvester, Emma Sylvester, R. W. Sylvester, Margie Sylvester,
Oliver P. Powell, Gladys E. Powell, H. C. Pyle, Rebecca Pyle, Ruth Downing, M. B. Sanders,
J. W. Edwards, Della Edwards, Ernest Ede, to me personally known to be the identical persons
described in and who executed the within instrument and who personally acknowledged to me
that they executed same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 22nd day of June 1940.

Marion Nagel, Notary Public

My Commission expires Oct. 18, 1943.

(L.S.)

#18378 Easement
R. W. Downing et al
to
Lacomb Irrigation District

Filed May 2nd, 1940, at 10:25 o'clock A. M.

Stella E. Hoover, Recorder of Conveyances
LACOMB IRRIGATION DISTRICT
LACOMB, OREGON

WE THE UNDERSIGNED HEREBY GIVE AND GRANT TO THE LACOMB IRRIGATION DISTRICT, AN EASEMENT

THE CONSTRUCTION AND OPERATION AND MAINTENANCE OF A CANAL OR LATERAL OVER AND ACROSS OUR RESPECTIVE LAND AS FOLLOWS TO WIT: A STRIP OF LAND 25 feet wide

R. W. Downing	S.E. $\frac{1}{4}$ & S.W. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ Sec. 20 T11 S R 1 E
Nettie Downing	S.W. $\frac{1}{4}$ --S.W. $\frac{1}{4}$ & S.E. $\frac{1}{4}$ -S.W. $\frac{1}{4}$ -Sec. 21 T. 11S. R1 E.
Wayne E. Downing	E. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 29 " "
Rachel Downing	N.W. $\frac{1}{4}$ & W. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ Sec. 28 " "
A. A. Ayers	S. E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ Sec. 25 T. 11S R1 W
Kreta Ayers	
Geo. S. Childs	S. E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 35 T11SR 1W
Flora Childs	S.W. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ - " " "
Dorothy Halverson	S.W. $\frac{1}{4}$ -N.W. $\frac{1}{4}$ -Sec. 36 T 11SR1W.
John Halverson	
J. C. Edwards	S. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 24 T11S.R.1 W
Wayne E. Downing	S. $\frac{1}{2}$ -Sec. 20 T11SR1E
Rachel Downing	N.E. $\frac{1}{4}$ -Sec. 29 " "
	W. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ -Sec. 25 T11SR1W
	W. $\frac{1}{4}$ -E. $\frac{1}{2}$ -N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ " " "
J. E. Johnson	N.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ -Sec. 26 T11SR1W
Freda Johnson	S.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ " " "

STATE OF OREGON)
COUNTY OF LINN) SS.

On this 19th day of April, 1940, personally came before me, a Notary Public in and for said County and state, the within named R. W. Downing, Nettie Downing, Rachel Downing, Wayne Downing, A. A. Ayers, Kreta Ayers, Geo. Childs, Flora Childs, Dorothy Halverson, John Halverson, J. C. Edwards, John Johnson, Freda Johnson, to me personally known to be the identical persons described in and who executed the within instrument and who acknowledged to that they executed the same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 19th day of April 1940.

(L.S.)

Marion Nagel, Notary Public for Oregon
My commission expires Oct. 18, 1943.

0000000000000000

#18379 Easement
Pennie Cooper et ux
to

Filed May 2nd, 1940, at 10:25 o'clock A. M.

Lacomb Irrigation District

Stella E. Hoover, Recorder of Conveyances

KNOW ALL MEN BY THESE PRESENTS, That P. Cooper and Arletha Cooper, his wife for and in consideration of the mutual advantages accruing to the grantors herein in the construction of its irrigation system do hereby give and grant to the Lacomb Irrigation District easement for the construction of a canal or lateral across the following described premises, to-wit:

50 Acres	N.E. $\frac{1}{4}$ -S.E. $\frac{1}{4}$ Sec. 30 T. 11 S.R.1 E
	S. $\frac{1}{2}$ -S.E. $\frac{1}{4}$ -N.E. $\frac{1}{4}$ " " "
50 "	Sec. 29 T. 11S.R.1 E.

As said canal is now or may hereafter be located by the engineers for said district.

The construction of said canal shall be done in a workman-like manner doing

7903 31

Rachel Downing N.E. 1/4 & 1/2 - N.E. 1/4 - A.W. 1/4 Sec. 25
A. A. Ayers S. E. 1/4 - N.E. 1/4 Sec. 25 T. 11S R. 1W
Kreta Ayers
Geo. S. Childs S. E. 1/4 - N.E. 1/4 - Sec. 35 T11SR 1W
Flora Childs S.W. 1/4 - N.E. 1/4 - " " "
Dorothy Halverson S.W. 1/4 - N.W. 1/4 - Sec. 36 T 11SR 1W.
John Halverson
J. C. Edwards S 1/2 - N.E. 1/4 - S.E. 1/4 - Sec. 24 T11S.R.1 W
Wayne E. Downing S 1/2 - Sec. 20 T11SR 1E
Rachel Downing N.E. 1/4 - Sec. 29 " "
W 1/2 - N.E. 1/4 - S.E. 1/4 - Sec. 25 T11SR 1W
W. 1/2 - E 1/2 - N.E. 1/4 - S.E. 1/4 " " "
J. E. Johnson N.E. 1/4 - N.E. 1/4 - Sec. 26 T11SR 1W
Freda Johnson S.E. 1/4 - N.E. 1/4 " " "

STATE OF OREGON)
COUNTY OF LINN) ss.

On this 19th day of April, 1940, personally came before me, a Notary Public in and for said County and state, the within named R. W. Downing, Nettie Downing, Rachel Downing, Wayne Downing, A. A. Ayers, Kreta Ayers, Geo. Childs, Flora Childs, Dorothy Halverson, John Halverson, J. C. Edwards, John Johnson, Freda Johnson, to me personally known to be the identical persons described in and who executed the within instrument and who acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 19th day of April 1940.

Marion Nagel, Notary Public for Oregon
My commission expires Oct. 18, 1943.

(L.S.)

-----0000000000000000-----

#18379 ✓ Easement

Filed May 2nd, 1940, at 10:25 o'clock A. M.

Fennie Cooper et ux
to

Lacomb Irrigation District

Stella E. Hoover, Recorder of Conveyances

KNOW ALL MEN BY THESE PRESENTS, That F. Cooper and Arletha Cooper, his wife for and in consideration of the mutual advantages accruing to the grantors herein in the construction of its irrigation system do hereby give and grant to the Lacomb Irrigation District easement for the construction of a canal or lateral across the following described premises, to-wit:

50 Acres N.E. 1/4 - S.E. 1/4 Sec. 30 T. 11 S.R.1 E
S. 1/2 - S.E. 1/4 - N.E. 1/4 " " "

50 " Sec. 29 T. 11S.R.1 E.

As said canal is now or may hereafter be located by the engineers for said district.

The construction of said canal or lateral shall be done in a workman-like manner doing no unnecessary damage to crops or improvements.

IN WITNESS WHEREOF, We have hereunto set our hands and seals this 29th day of Jan. 1940.

Fennie Cooper
Arletha Cooper

STATE OF OREGON) ss.
County of Linn)

On this 29 day of January, 1940, personally came before me, a Notary Public in and for said County and State, the within named Fennie Cooper and Arletha Cooper, his wife, to me personally known to be the identical persons described in and who executed the within instrument and who personally acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein named.

Witness my hand and notarial seal this 29 day of January, 1940.

Marion Nagel, Notary Public for Oregon
My Commission Expires Oct. 18th 1943

(L.S.)

FILE COPY

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SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT 5

EXHIBIT 5

During times of normal and flood flows in Crabtree Creek, a total of 65 cfs will be diverted, 60 of which will be used to produce hydroelectric power. (Please see "Description of Works" on application for details.) The Lacombe Irrigation District's permit #60823 from the Water Resources Department set forth the following minimum streamflows:

Oct.	110 cfs
Nov.-May.	90 cfs
Jun. 1-15	40 cfs
Jun. 16-30	30 cfs
Jul. 1-15	25 cfs
Jul. 16-30	15 cfs
Aug.	12 cfs
Sep. 1-15	12 cfs
Sep. 16-30	110 cfs

The above requirements will be met by monitoring and controlling the amount of water taken in by the diverting structure.

No pondage or daming of Crabtree Creek will take place. The diversion will rely on gravity flow in order to comply with WRD standards. A fish screen will provide adequate protection for populations of migrating fish in order to prevent entrapment at the intake.



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT 6

EXHIBIT 6

The following hydrologic and turbine analyses summarize the flows available in Crabtree Creek and the potential annual energy production. A detailed study was made by SEA which used streamflow data (USGS gaging station #14188700) on Crabtree Creek, and precipitation data for Lacombe, Oregon. A mathematical area-reduction analysis was used to obtain flows at the diversion and proposed tailrace locations.

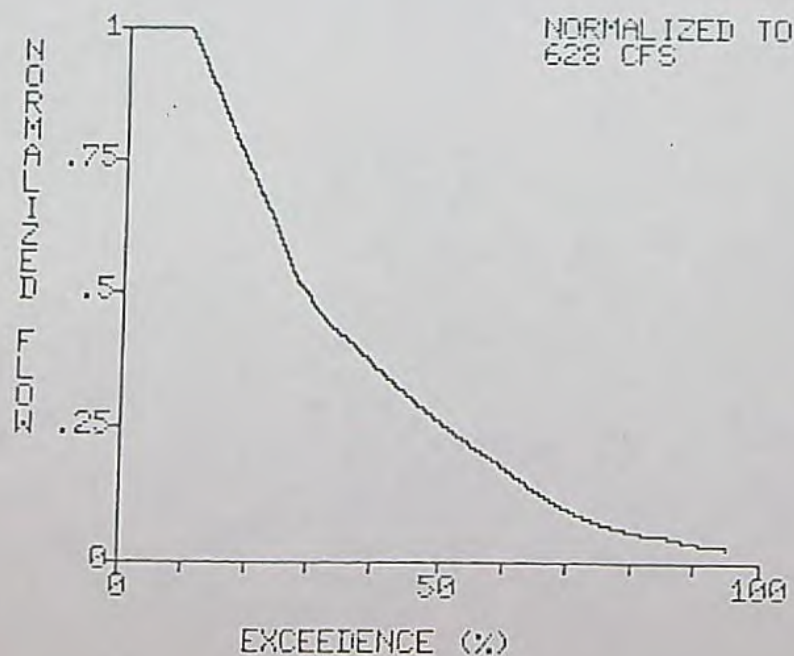
Lacomb CRABTREE CREEK

EXCEEDENCE CURVE INPUT

PERCENT	FLOW RATE (CFS)
10	628
30	294
50	159
70	56
80	30
95	14.2

THE CALCULATED AVERAGE YEARLY FLOW
RATE IS 229.2 CFS.
---NOT MODIFIED.

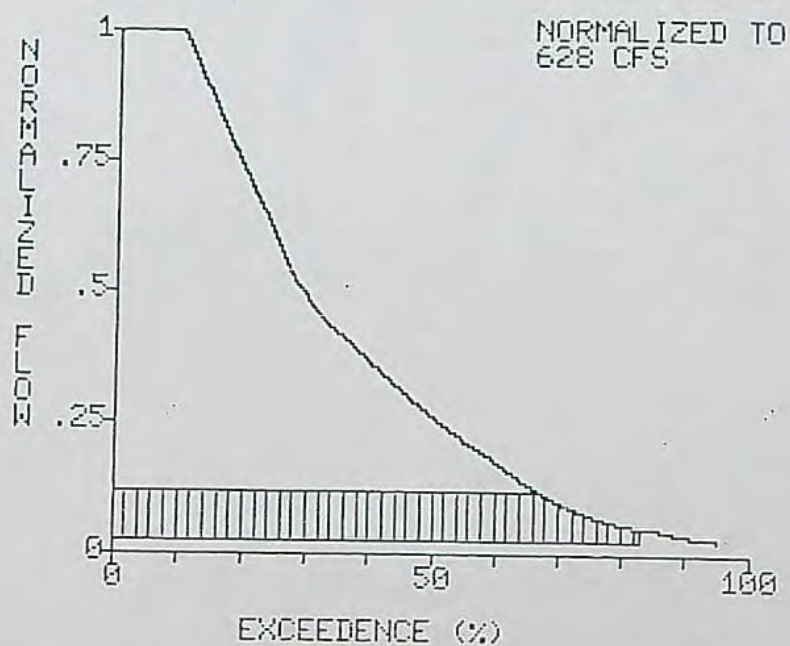
EXCEEDENCE		FLOW	
0	%	628	CFS
5	%	628	CFS
10	%	628	CFS
15	%	544.5	CFS
20	%	461	CFS
25	%	377.5	CFS
30	%	305.1	CFS
35	%	260.3	CFS
40	%	226.5	CFS
45	%	192.8	CFS
50	%	159.4	CFS
55	%	133.2	CFS
60	%	107.5	CFS
65	%	81.8	CFS
70	%	58.8	CFS
75	%	43	CFS
80	%	31.6	CFS
85	%	24.7	CFS
90	%	19.5	CFS
95	%	14.2	CFS
100	%	8.9	CFS



TURBINE #1

FRANCIS

AVAILABLE HEAD	227	FT	
	EXC. %	TURB. CFS	RIVER CFS
RATED	66.9	60	72
CUTOFF	82.8	15	27
MINIMUM	97.1	---	12
GENERATOR EFF.	95	%	
RATED POWER	949.08	KW	
ANNUAL ENERGY	6233407	KWH	
PLANT FACTOR	75	%	



FLOW DURATION CURVE ANALYSES

Chart 1.

Reflected in this figure is the additional streamflow originating the the seven square mile area below the Lacombe diversion, tributary to the point where the tailrace will return flows to Crabtree Creek.

On an average annual basis (which generally corresponds to the 30% exceedance flow) this area contributes approximately 30 CFS.

During dry-weather months, Hunter Creek (upstream of the tailrace) is the only significant tributary stream to Crabtree Creek below the point of diversion. As a consequence, the high exceedance flows (e.g. 95%) will not reflect a significant increase from the additional drainage area.

Chart 2.

Shown in this figure is the flow duration curve for Crabtree Creek near the town of Crabtree, some 15 miles downstream of the Lacombe Irrigation District diversion point.

Thesedata were compiled by the USGS during the water years 1964 through 1969. Statistically, this short period of record reflects only short-term variations in long-term flow patterns. Hence, below (or above) normal water years will dramatically effect a short record such as this whereas a long record (20+ years) will have compensating short-term variations that tend to moderate the overall trend of flow.

This curve reflects diversion of the Crabtree Creek waters into the Lacombe Irrigation Canal and various other withdrawal practices in the 15-mile reach between the Lacombe diversion and the USGS gaging station.

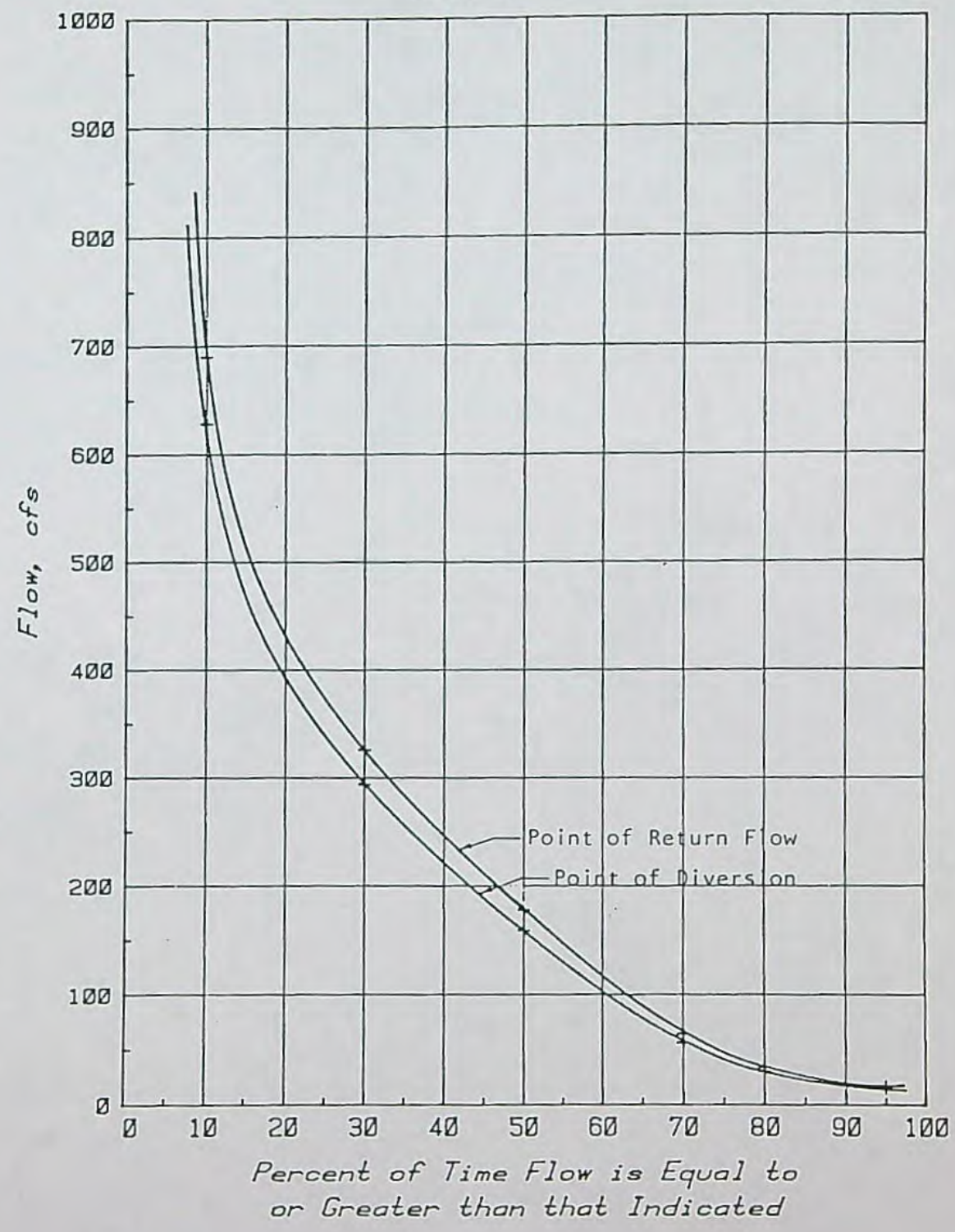
Chart 3.

Chart 3 shows the comparison of a mathematical approach for generating a flow duration curve at an un-gaged site versus area adjustment of observed streamflows to derive the flow duration curve at a particular site.

The simple area reduction of observed hydrologic data has many associated problems. Probably the most dominant of these is that to proportion stream flow by area assumes that the watershed is climatically and geomorphologically homogeneous (i.e. uniform precipitation and runoff characteristics). For example, the Lacombe diversion is roughly 70 inches per year. Less than three miles downstream the NAP is about 60 inches per year.

The "Idaho A" mathematical method is dependent on orographic variations in precipitation and its effect on actual streamflows, and is generally more sensitive than the area reduction method. The mathematical analysis done for the Lacombe project was statistically very good with the exception of the high exceedance flows (e.g. 95%). This is to be expected, however, as stream baseflow are augmented in a variety of ways, (e.g. snowfields, lakes, springs, etc.), many of which may not be present from stream to stream. It is felt that our sanalsis may be slightly conservative as all tributary streams to Crabtree Creek appear to have year-round flow, whereas other basins analyzed had some intermittent streams.

CHART 1.



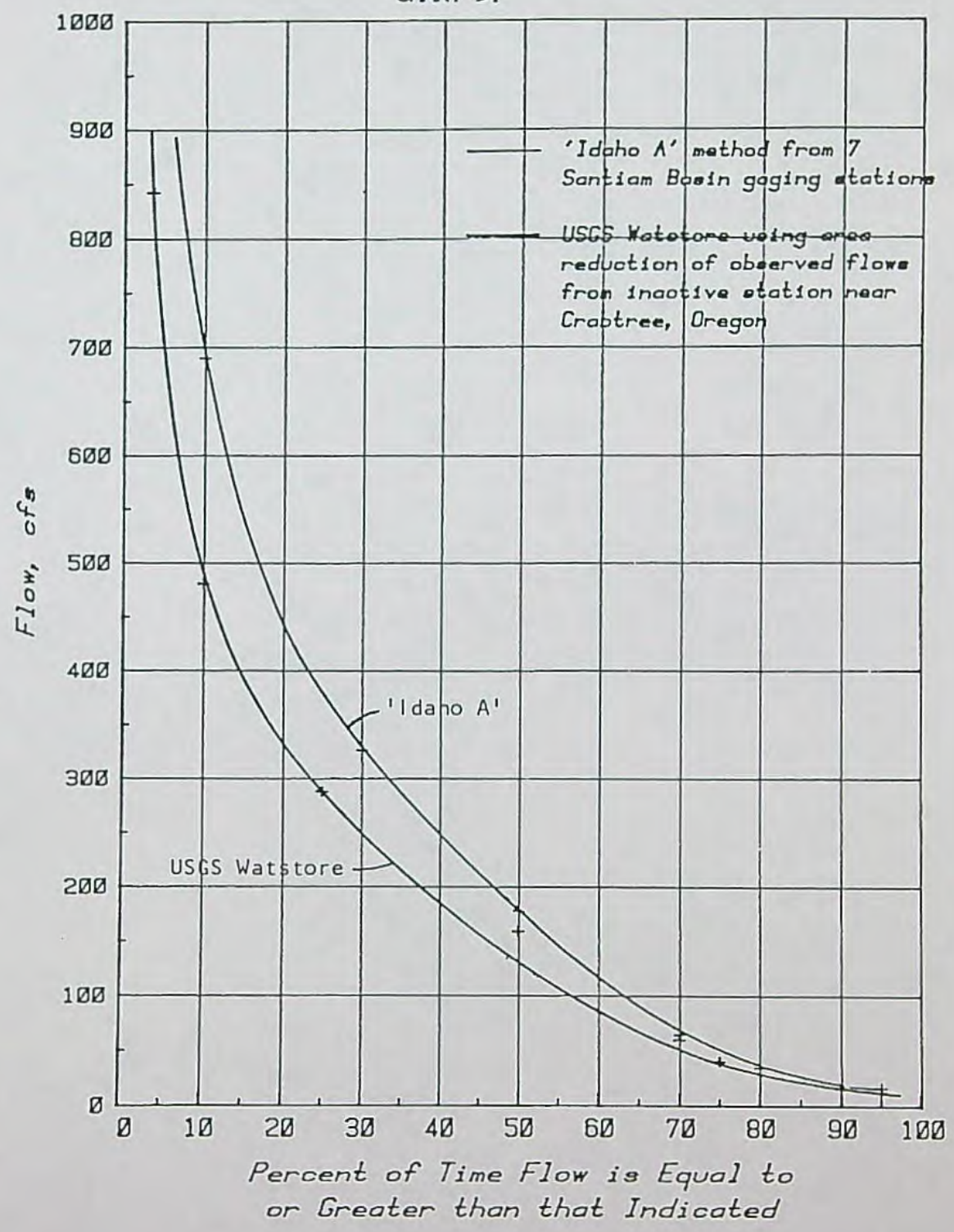
CRABTREE CREEK AT LACOMB DIVERSION POINT
AND PROPOSED DOWNSTREAM RETURN FLOW POINT
(Unregulated Streamflow)

CHART 2.



CRABTREE CREEK NEAR CRABTREE, OREGON
 (Source: USGS Watstore, WY 1964-69)

CHART 3.



CALCULATED FLOW DURATION CURVE FOR
CRABTREE CREEK BELOW LACOMB DIVERSION



SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
917 NW GRANT STREET, CORVALLIS, OREGON 97330

TEL (503) 754-0255

EXHIBIT 7

LACOMB HYDROPOWER PROJECT

CASH FLOW

20 MAY 82

MWH TOTAL	5560	(BASED ON 60 CFS FOR ONLY 8 MONTHS OF OPERATION)
MWH PEAK	2648	
PEAK MULTIPLIER	1.212	
MWH OFF-PEAK	2912	
OFFPEAK MULTIPLIER	.808	
VARIABLE ESCALATOR	0.06	
PORTION ESCALATED	1.45	
CAPACITY KW	962	
CAP. PRICE \$/KW-MO	6.18	
LOAN REPAYMENTS	0	
	0	

YEAR	LOAN	LOAN	O&M	ENERGY	CAPACITY	NET
	(-)	(-)	(-)	(+)	(+)	
	\$	\$	\$	\$	\$	\$
1983	0	0	20000	295456	71342	346798
1984	0	0	21200	299322	71342	349464
1985	0	0	22472	302631	71342	351501
1986	0	0	23820	306470	71342	353992
1987	0	0	25250	310336	71342	356428
1988	0	0	26765	314731	71342	359309
1989	0	0	28370	319418	71342	362389
1990	0	0	30073	324104	71342	365373
1991	0	0	31877	329055	71342	368520
1992	0	0	33790	334562	71342	372115
1993	0	0	35817	340334	71342	375859
1994	0	0	37966	346398	71342	379774
1995	0	0	40244	353017	71342	384115
1996	0	0	42659	359901	71342	388584
1997	0	0	45218	367050	71342	393173
1998	0	0	47931	375046	71342	398456
1999	0	0	50807	383306	71342	403841
2000	0	0	53855	391832	71342	409318
2001	0	0	57087	401205	71342	415460
2002	0	0	60512	410551	71342	421381
2003	0	0	64143	421036	71342	428235
2004	0	0	67991	432050	71342	435401
2005			72071	443330	71342	442601
2006			76395	455721	71342	450668
2007			80979	468933	71342	459296

Application No. 60823
Permit No. 49822

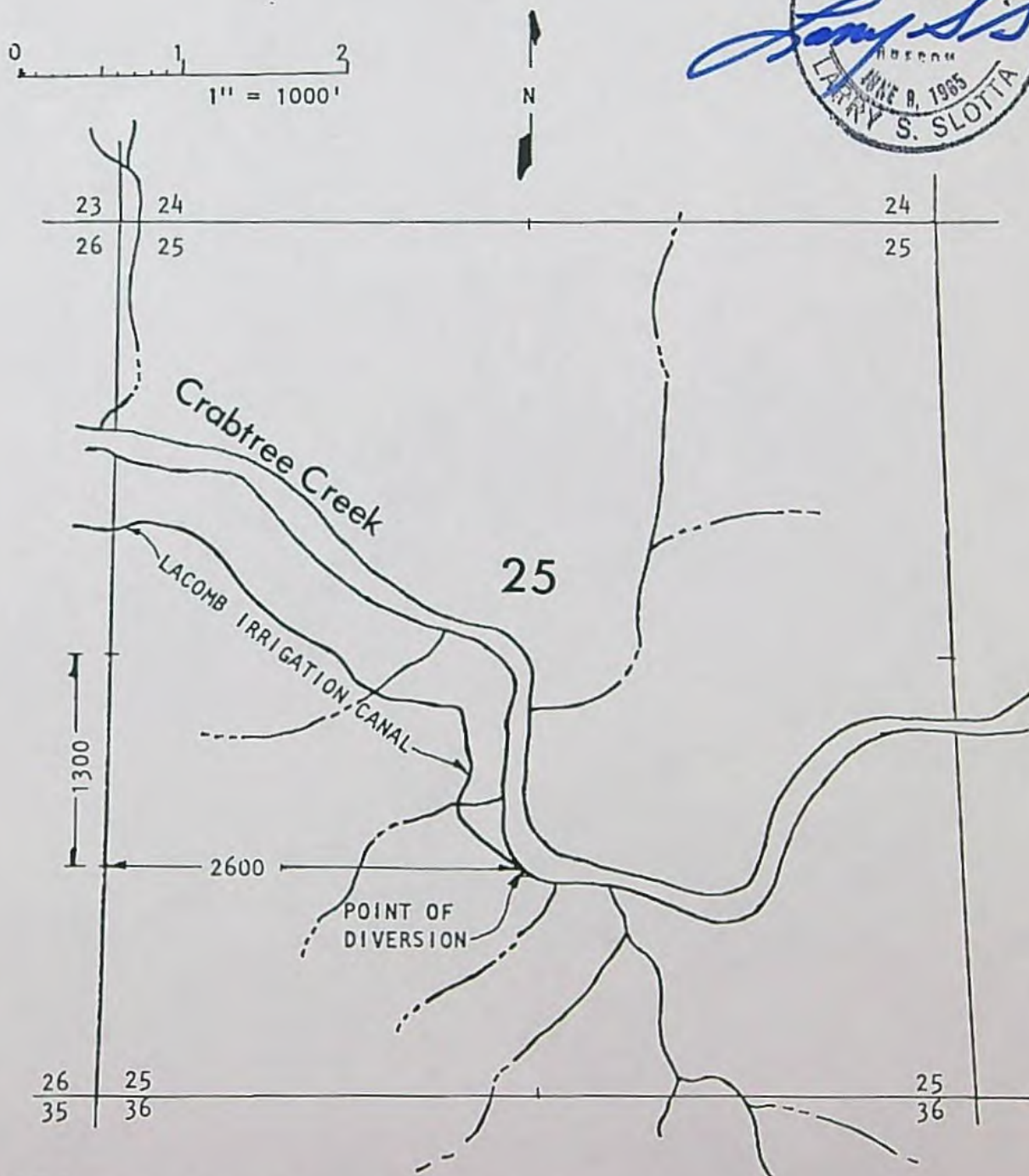
LACOMB

POINT OF DIVERSION

Section 25
Township 11 South Range 1 East, W.M.

RECEIVED

OCT 11 1982
WATER RESOURCES DEPT.
SALEM, OREGON



SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
CORVALLIS, OREGON 97330

Application No. 60823

Permit No. 49822

LACOMB

PIPELINE AND POWERHOUSE SITE

SECTION 21

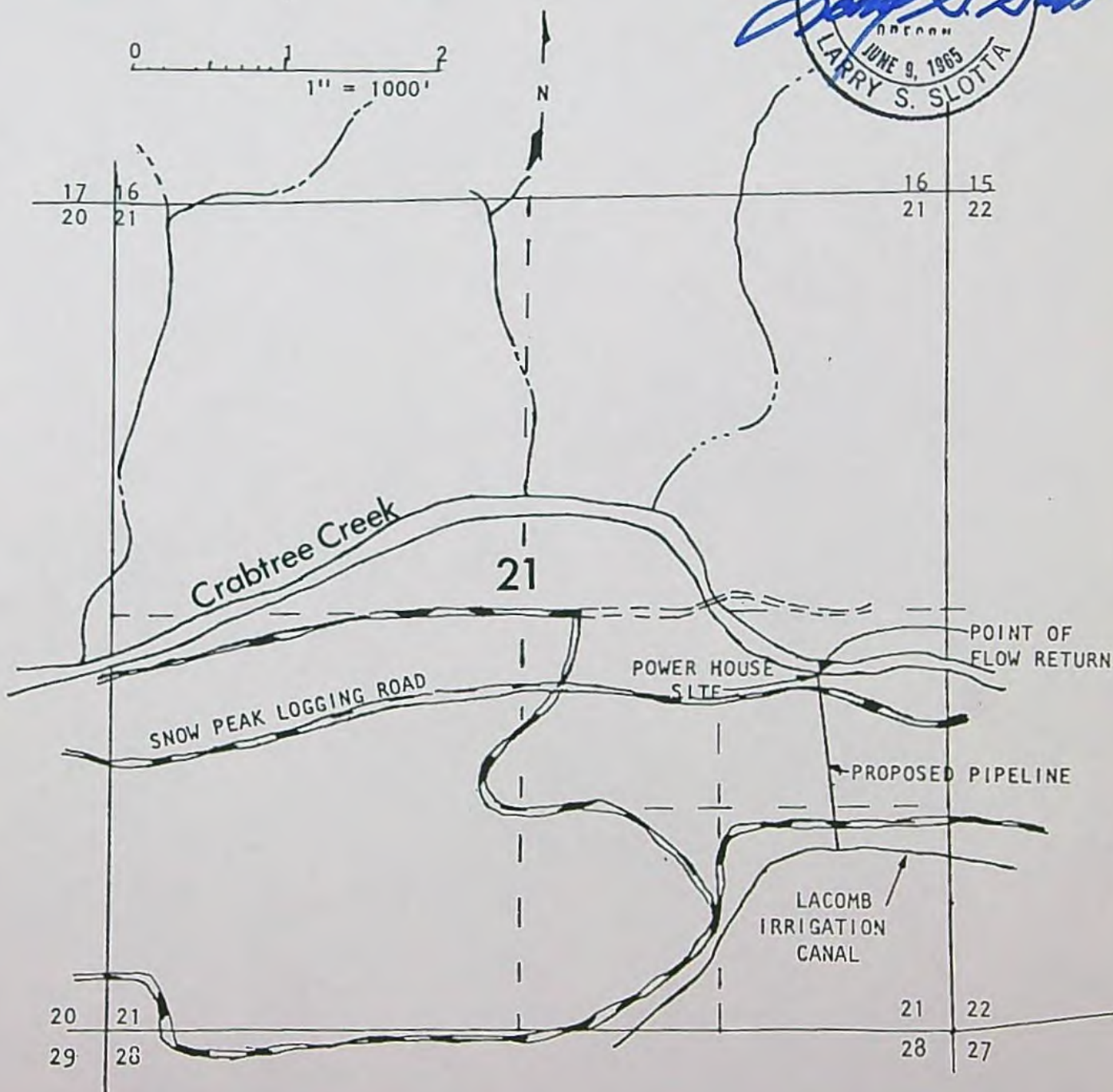
Township 11 South Range 1 East, W.M.

RECEIVED

OCT 1 1982

WATER RESOURCES DEPT.

SALEM, OREGON



SEA

SLOTTA ENGINEERING ASSOCIATES, INCORPORATED
OREGON 97330



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

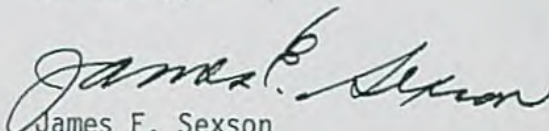
PHONE 378-3671

May 27, 1981

Lacomb Irrigation District
41358 Lacomb Drive
Lebanon, OR 97355

Enclosed is the order adopted by the Water Policy Review
Board on permit application 60823.

Sincerely,


James E. Sexson
Director

JES:bw

cc: Larry Jebousek ✓
Larry S. Slotta
Lou Fredd

Certified-Return Receipt Requested

BEFORE THE WATER POLICY REVIEW BOARD

OF THE

STATE OF OREGON

In the Matter of the Referral of)	FINDINGS OF FACT,
Permit Application 60823 Involving)	CONCLUSIONS AND
Use of Water from Crabtree Creek)	ORDER
for Hydroelectric Power)	

Permit application 60823 was submitted by the Lacombe Irrigation District for a hydroelectric project exceeding 100 theoretical horsepower.

The application was referred to the Water Policy Review Board by the Director of the Water Resources Department in accordance with the provisions of ORS 537.170.

A public hearing on the matter was held in Lacombe, Oregon, on February 16, 1981. On April 4, 1981, the Water Policy Review Board entered an interim order in accordance with ORS 537.170(1) specifying submission of certain additional information.

On the basis of the record of the proceedings, the Water Policy Review Board makes the following:

FINDINGS OF FACT

1. The applicant proposes to divert up to 45 cubic feet per second of water from Crabtree Creek.
2. The project will utilize existing diversion facilities. During the irrigation season, the quantity of water available for power will be reduced by the amount of the irrigation diversion.
3. The project will utilize 235 feet of head to develop 1,200 theoretical horsepower.
4. Power produced at the project will be sold.
5. The Linn County Comprehensive Plan and Zoning Ordinances do not preclude the project.
6. Crabtree Creek supports aquatic life of value to the State of Oregon.
7. The project will affect flows in the stream over a several mile reach between the point of diversion and point of discharge.
8. Crabtree Creek currently has low to very low flows during the summer months in some years.

9. Protection of aquatic life requires maintenance of some minimum flow in the affected reach.
10. In the existing diversion and distribution system, losses of water in conveyance are significant.
11. The applicant proposes to use revenue from the project to improve diversion and conveyance facilities.

CONCLUSIONS

The proposed use specified in permit application 60823 appears to be consistent with the applicable statutes and does not appear to impair or be detrimental to the public interest. Specific conditions on the proposed use will reduce or minimize potential adverse impacts.

ORDER

It is hereby ordered that application 60823 is approved subject to the following conditions:

1. Use of water for hydroelectric purposes will be subject to passing the following specified flows in Crabtree Creek past the point of diversion in Section 25, Township 11S., Range 1E.

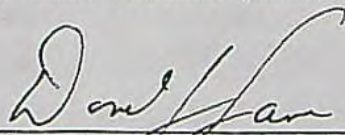
Oct.	110 cfs
Nov.-May.	90 cfs
Jun. 1-15	40 cfs
Jun. 16-30	30 cfs
Jul. 1-15	25 cfs
Jul. 16-31	15 cfs
Aug.	12 cfs
Sep. 1-15	12 cfs
Sep. 16-30	110 cfs

As determined by the Director of the Water Resources Department, the applicant may be required to install and maintain such facilities as may be required to insure compliance with this condition.

2. The applicant shall provide for fish passage at the point of diversion.

It is further ordered that application 60823 be returned to the Director of the Water Resources Department for such further processing as may be required by statute.

Dated this 8th day of May, 1981


Donel J. Lane, Chairman
Water Policy Review Board

APPEALS AND JUDICIAL REVIEW

ORS 536.560 provides any order, rule or regulation of the Water Policy Review Board may be appealed to the circuit court of the county in which the property affected by such order, rule or regulation or any part of such property is situated.

ORS 183.482(1) provides that judicial review of contested cases is conferred upon the Court of Appeals. Judicial review may be obtained by filling out a petition for review within sixty days from the service of this order. Judicial review is pursuant to the provisions of ORS 183.482. Until this conflict is judicially resolved, and an appeal is desired, it may be advisable to commence appeal or review procedures in the circuit court and Court of Appeals simultaneously.



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

78-2907 ~~OP~~

~~800 452-7813~~

DI

NAM
ADD

Dear

REFER

The plans and specifications for the _____ have been reviewed and approved. The applications and supporting documents have been returned to our Water Rights Division for processing and issuance of permits. You will be notified when the permits, which are required prior to the beginning of construction, have been issued.

Sincerely,

_____:wpc

cc:

2616A

Don Buell

OK TO
SIGN

(BR)

*about 20 min
in back about
5:00 PM*

*to day
9/15/86*

[Signature]



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-2907
~~1-800-452-7813~~

DATE _____

NAME _____

ADDRESS _____

Dear Sir:

REFERENCE: File(s) number(ed) _____

The plans and specifications for the _____ have been reviewed and approved. The applications and supporting documents have been returned to our Water Rights Division for processing and issuance of permits. You will be notified when the permits, which are required prior to the beginning of construction, have been issued.

Sincerely,

_____:wpc

cc: _____

2616A

Don Buell

*Bill does a
not see for
need Phil's
be sent
today
9/15/86
JLB*

JAMES F. UDELL

ENGINEER 8072

ENGINEERING & SURVEYING

32388 Berlin Road

LEBANON, OREGON 97355

Phone (503) 451-5125

SURVEYOR 1366

RECEIVED

SEP 16 1986

**WATER RESOURCES DEPT
SALEM, OREGON**

Barry Norris
Oregon Dept. Water Resources
3850 Portland Rd. N.E.
Salem, OR 97310

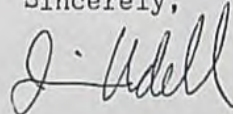
Sept. 15, 1986

Dear Mr. Norris,

Per our conversation, please consider this letter an addendum to the Lacombe Hydroelectric Project plans.

Please add: 1/2" x 12" steel straps over the slide bypass pipe at the support saddles, over the creek. There will be 3 such straps secured by 4, 3/4" bolts, for each strap.

Sincerely,



Jim Udell, P.E.

JU/bn

JAMES F. UDELL
ENGINEERING & SURVEYING
32388 BERLIN ROAD
LEBANON, OREGON 97355
PH. (503) 451-5125



Barry Norris
Oregon Dept. Water Resources
3850 Portland Rd. N.E.
Salem, OR 97310

9-9-86

Talked to Well - Sadler

- ① hold down straps
- ② locate flex coupler @ 5M=0
- ③ pipe well thickness?

378-8453

On August 12, 1986, Water Resources Commission reviewed your proposed hydroelectric project under Application 60823 and found construction to be under way.

The Water Policy Review Board approved your project on May 8, 1981, and returned the application to the Director for further proceedings consistent with the order. At that time, final plans and specifications were requested before a permit could be issued. ORS 540.350(1) states that "no person, firm or private or municipal corporation shall construct any dam, dike or other hydraulic structure or works, the failure of which the Water Resources Commission finds would result in damage to life or property, unless the Commission has made an examination of the site and of the plans and specifications and other features involved in the construction of such works, and has approved them in writing." The plans and specifications for the project were received in this office on August 27, 1986, and are presently under review.

Also of concern are the Hydroelectric Project Development Agreement between the district and TKO Power received in this office on August 20, 1986 and the Ground Lease Agreement between the same parties received on September 4, 1986. We have reviewed both agreements and are unable to conclude that it is a municipal project and meets the standards of benefit, control and proprietary interest. Chapters 392 and 561, Oregon Laws, 1985, both require the Commission to establish rules which shall include the amount of control and interest in a joint project as necessary for the project to be considered a municipal project under ORS Chapter 537. The Commission cannot make that determination until the rules are adopted. Those rules will come before the Commission at its September 26 meeting and may or may not be adopted at that time.

Considering that plans and specifications have not been approved and there is some doubt whether a permit can be issued under ORS Chapter 537, I strongly recommend that all construction on the project stop immediately and that the District comply with all appropriate statutes.

Sincerely,

WILLIAM H. YOUNG
Director

WHY:wpc

cc: TKO Power
Stephen T. Janik
Richard E. Kinsley

cc Barry
cc Gene McGinnis

September 12, 1986

Lacomb Irrigation District
41358 Lacomb Drive
Lebanon, OR 97355

REFERENCE: File 60823

On August 15, 1986, Water Resources staff visited the site of your proposed hydroelectric project under Application 60823 and found construction to be under way.

The Water Policy Review Board approved your project on May 8, 1981, and returned the application to the Director for further proceedings consistent with the order. At that time, final plans and specifications were requested before a permit could be issued. ORS 540.350(1) states that "no person, firm or private or municipal corporation shall construct any dam, dike or other hydraulic structure or works, the failure of which the Water Resources Commission finds would result in damage to life or property, unless the Commission has made an examination of the site and of the plans and specifications and other features involved in the construction of such works, and has approved them in writing." The plans and specifications for the project were received in this office on August 27, 1986, and are presently under review.

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Sincerely,

WILLIAM H. YOUNG
Director

WHY:wpc
cc: TKO Power
Stephen T. Janik
Richard E. Kinosley

cc Barry
cc Gene McGinnis

① Vicinity maps

② Pipe - AWWA C200-75?

Item 4

joint - lap - welded
slip-joint?
laps? Spec

is this all pipe?

(a) Penstock - spec? (tl)

(b) Flume - spec? (tl)

(c) Slide Bypass - Spec? (tl)

pillars?
expansion joints design
(dresser couplings or spec lap joints)

Tieback blocks?

Air Relief? or stilling
expansion - dresser couplings - 400' long - @ 600' (spec lap joints)
COSTING - AWWA C203-78 - cost for material

Emergency shutdown - 1 minute? (design)
interference & surge design

③ Item 10

Performance Testing

pressure test pipeline - 150% of working

24 hr

NO LEAKAGE

METHOD OF BACKFILL

WHY UNCOMPLETED? OK

* METHOD OF PLACEMENT

INLET 89.4

OUTLET 66.8

TOTAL $h_f = 22.6$

USE 100 psc

Assume yield is 33,000 psi

$$t = \frac{pd}{23} = \frac{100(39)}{2(33,000)} = .06" \approx \frac{1}{16}"$$

1 minute emergency stream

when:

$$h_o = 22.6$$

$$V = \frac{Q}{A} = \frac{65}{8.3} = 7.8 \text{ ft/sec}$$

$$g = 32.2 \text{ ft/sec}$$

$$N = 60$$

$$\frac{2L}{a} = 60$$

$$a = \frac{2(1000)}{60} = 33\frac{1}{3} \text{ fps}$$

Thrust ring @ plant OK



RAY TONEY AND ASSOCIATES
PROFESSIONAL ENGINEERS/CONSTRUCTORS

C.A. LIC. 391436

MEMO

To: Louis Fredd, Oregon Department of Fish and Wildlife
From: Ray E. Toney
Date: June 16, 1986
Subject: Lacombe Hydroelectric Project. Preliminary design review meeting.

Attendance: Louis Fredd, ODFW
Dave Nichols, ODFW
Kathie Larson, USFWS
Jim Esch, NMFS
Norm Kamp, TKO (Developer)
Norman Braithwaite, TKO
Keith Stewart, RTA (Engineer/Contractor)
Ray E. Toney, RTA

TKO has a development agreement with the Lacombe Irrigation District to build the project and they plan to have the project substantially constructed this year.

Two areas of the project were discussed, the power house tail race fish barrier and canal intake from Crabtree Creek.

Power House Fish Barrier

The terms and conditions of the FERC exemption will be complied with, and two alternative locations of the powerhouse were discussed.

- 1) Powerhouse located immediately adjacent to the normal stream bank.
- 2) Powerhouse located in the flood plain approximately 40 feet from the normal stream bank.

The second location was preferred by the agencies with the fish barrier (a 1" trash rack) located as close as possible to the normal stream bank as shown on the attached sketches. The fish barrier should be parallel to the flow of Crabtree Creek. Uniform flow and maximum velocity of 1 fps were stressed by the agency.

The channel will be unlined between the powerhouse and the fish barrier. The corners of the channel entrance need to be protected with riprap. We discussed the powerhouse flow and decided it was relatively small (60 CFS) compared to the 150 CFS stream flow during the potential irrigation season.

Intake

The proposed intake will be a side channel type without any dam across the creek and no fish ladder as shown on the attached sketches. The fish screen will be rotating drums parallel to the bypass flow (angle rotating drums). The agencies agreed the proposal was better because it significantly reduced any restriction to fish passage. The developer pursued the concept because it is similar to the existing irrigation intake and is at the same location which has historically worked.

Memo: Louis Fredd, ODFW
Page Three

Anticipated maintenance of the intake was discussed. Dredging of the entrance and settling pond are anticipated.

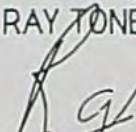
The rotating drum screen was discussed. Having close clearances was urged by the agencies. Brushes in lieu of rubber seals were suggested by the agencies. The agencies suggested discussing our final design details with the Washington Fish Screen people in Yakima, Washington. The screen would be powered by a down stream water wheel. The screen approach velocity of 1 fps was discussed and approved by the agencies which is the standard for smelt. The minimum instream flows would have to bypass the intake. The screen cleaning flow would be in addition to stream flows.

General

RTA would send a memo to all participants on the discussion of the meeting for their review.

Detailed drawings will be sent to the agencies in 2 to 3 weeks for review prior to a review meeting. The detail drawings will be based on approvals discussed in this meeting.

Sincerely,
RAY TONEY & ASSOCIATES


Ray E. Toney

HEAD GATE AREA
LACOMB IRRIGATION DITCH PROJECT
MAY 30, 1986

REGISTERED
PROFESSIONAL
LAND SURVEYOR

J. Udell

OREGON
5/21/77
JIM UDELL
1366

SCALE: 1" = 50'

WATER LINE
5-28-86

HEADGATE
TOP CONCRETE
1021.09

Log-pump

EL. 1020

EL. 1020

EL. 1024

EL. 1024

1024

1022

1020

1018

1016

1014

1012

1034

1048

1050

1052

1054

1056

1040

1042

1044

1046

1034

1036

1038

1030

1032

1016

1014

1012

1012

1014

1016

1018

1020

1022

1024

1026

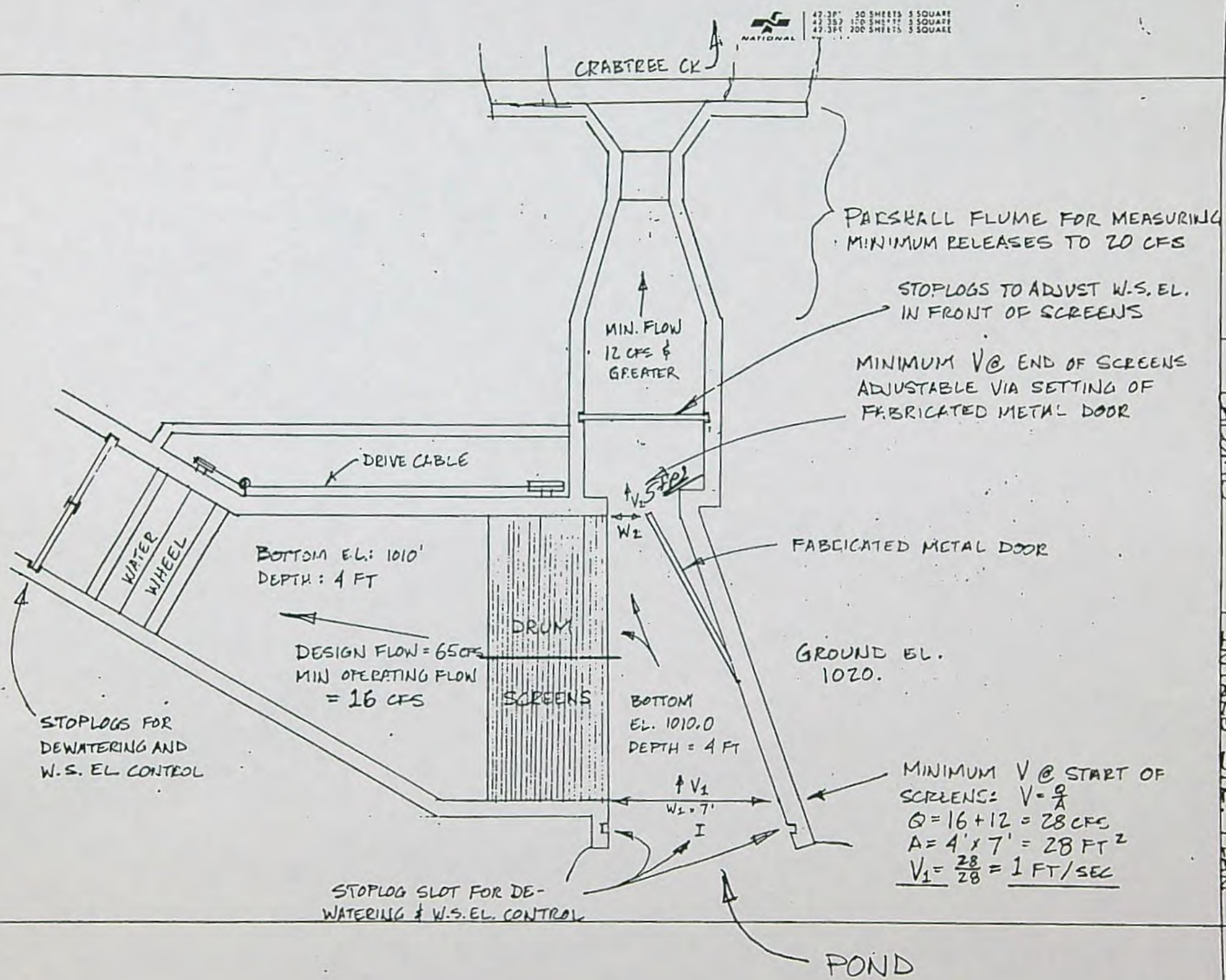
1028

1029

JAMES F. UDELL
ENGINEERING & SURVEYING
32338 BERLIN ROAD
LEBANON, OREGON 97355
PH. (503) 451-5125



47.3P 50 SHEETS 5 SQUARE
 47.3P 100 SHEETS 10 SQUARE
 47.3P 200 SHEETS 20 SQUARE



MINIMUM V @ START OF SCREENS: $V = \frac{Q}{A}$
 $Q = 16 + 12 = 28 \text{ CFS}$
 $A = 4' \times 7' = 28 \text{ FT}^2$
 $V_1 = \frac{28}{28} = 1 \text{ FT/SEC}$

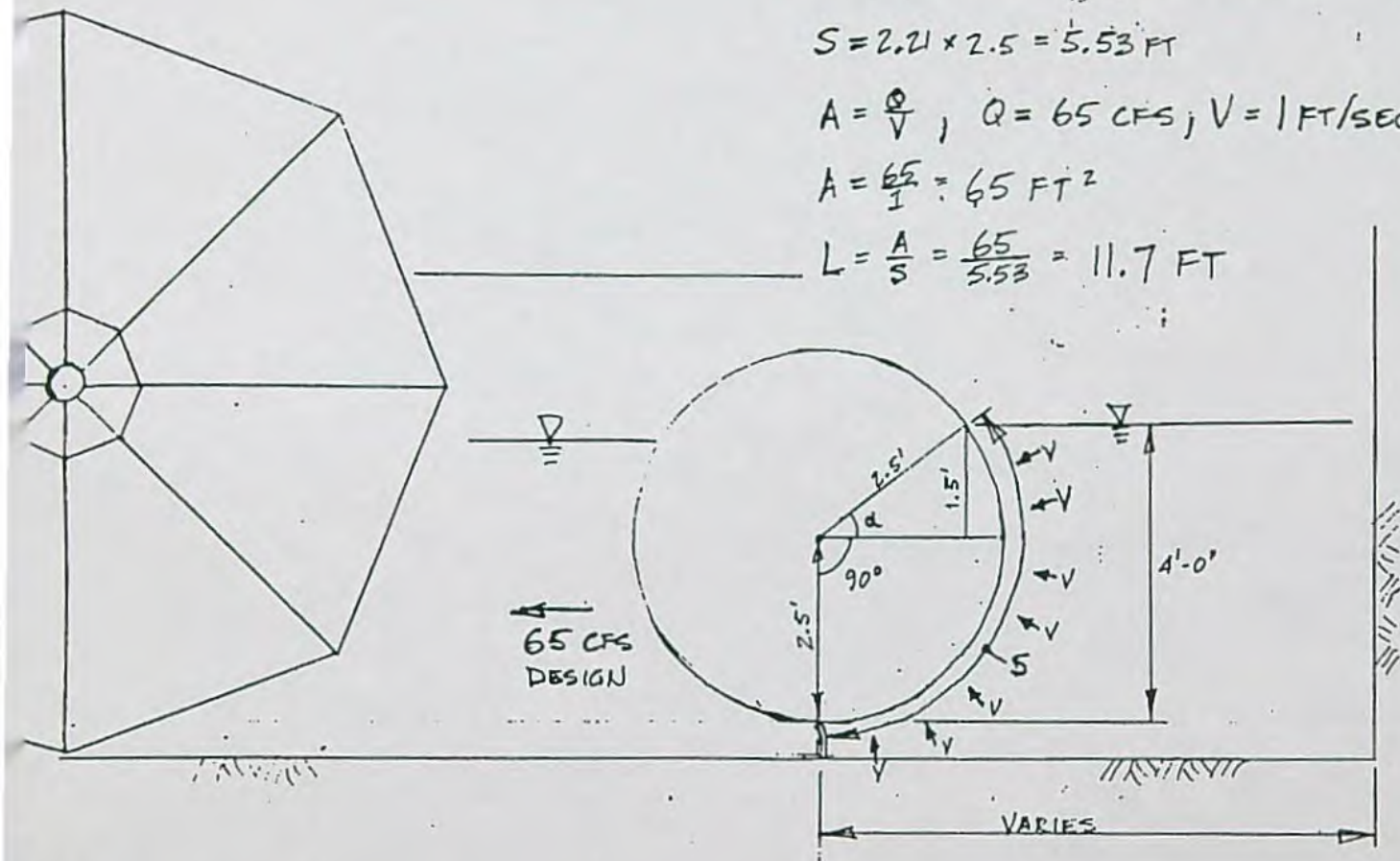
CONCEPTUAL
 INTAKE STR. PLAN

$$\text{TOTAL } \Delta = 36.9 + 90 = 126.9^\circ = 2.21R$$

Rotation Speed is critical
per Dose N.

$$A = \frac{65}{1} = 65 \text{ FT}^2$$

$$L = \frac{A}{S} = \frac{65}{5.53} = 11.7 \text{ FT}$$



Robert Drury
partner to Eliza

LACOMB

CONCEPTUAL



47.381 50 SHEETS 5 SQUARE
47.382 100 SHEETS 5 SQUARE
47.389 200 SHEETS 5 SQUARE

LACOMB DIVERSION WATER SURFACE
DURING NORMAL & LOW FLOWS.
NOT CALCULATED

1020

1010

1000

0
¢
STREAM

APPROACH

POND

FISHSCREENS

STOPLOGS

WATERWHEEL

PARSHALL FLUME

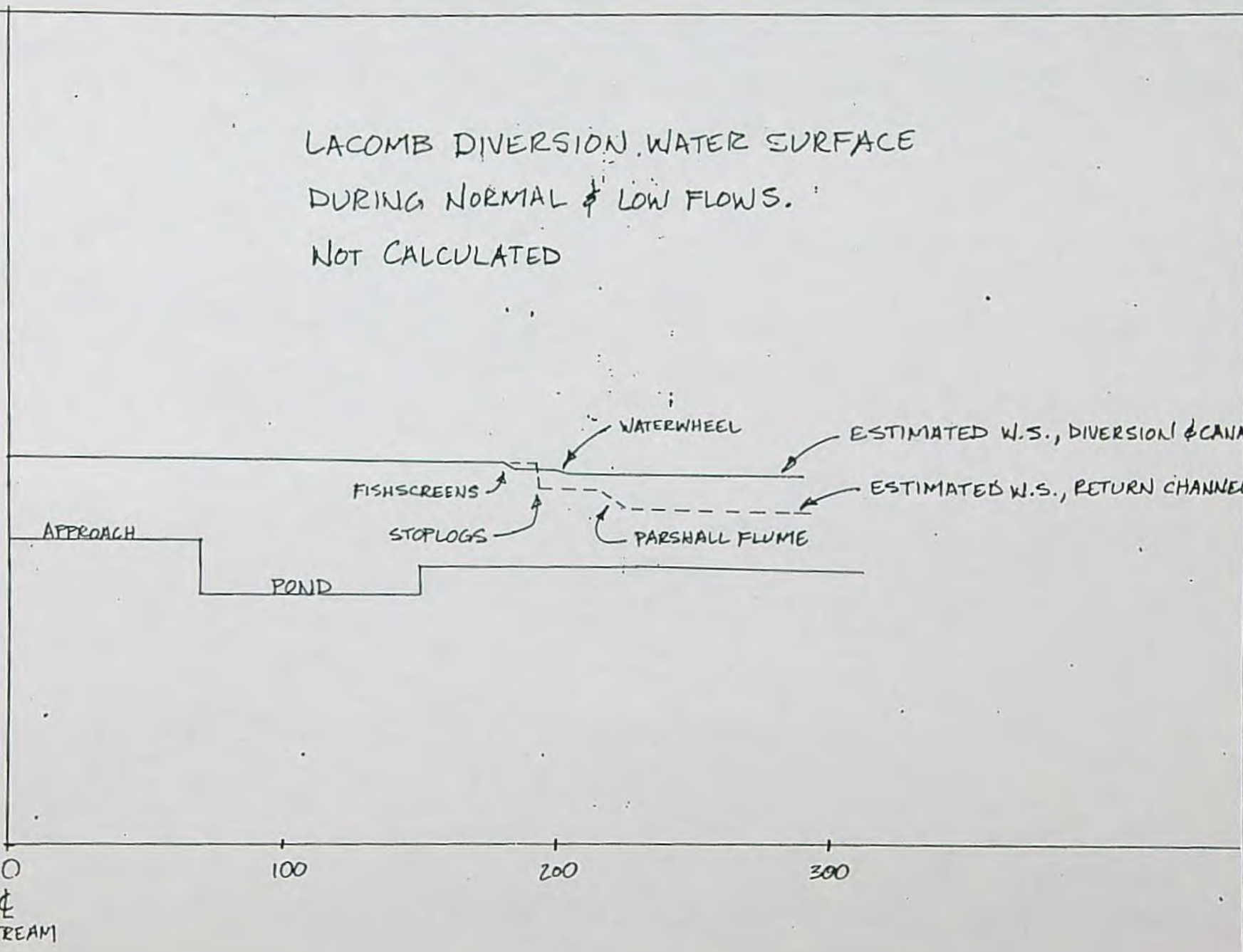
ESTIMATED W.S., DIVERSION & CANAL

ESTIMATED W.S., RETURN CHANNEL

100

200

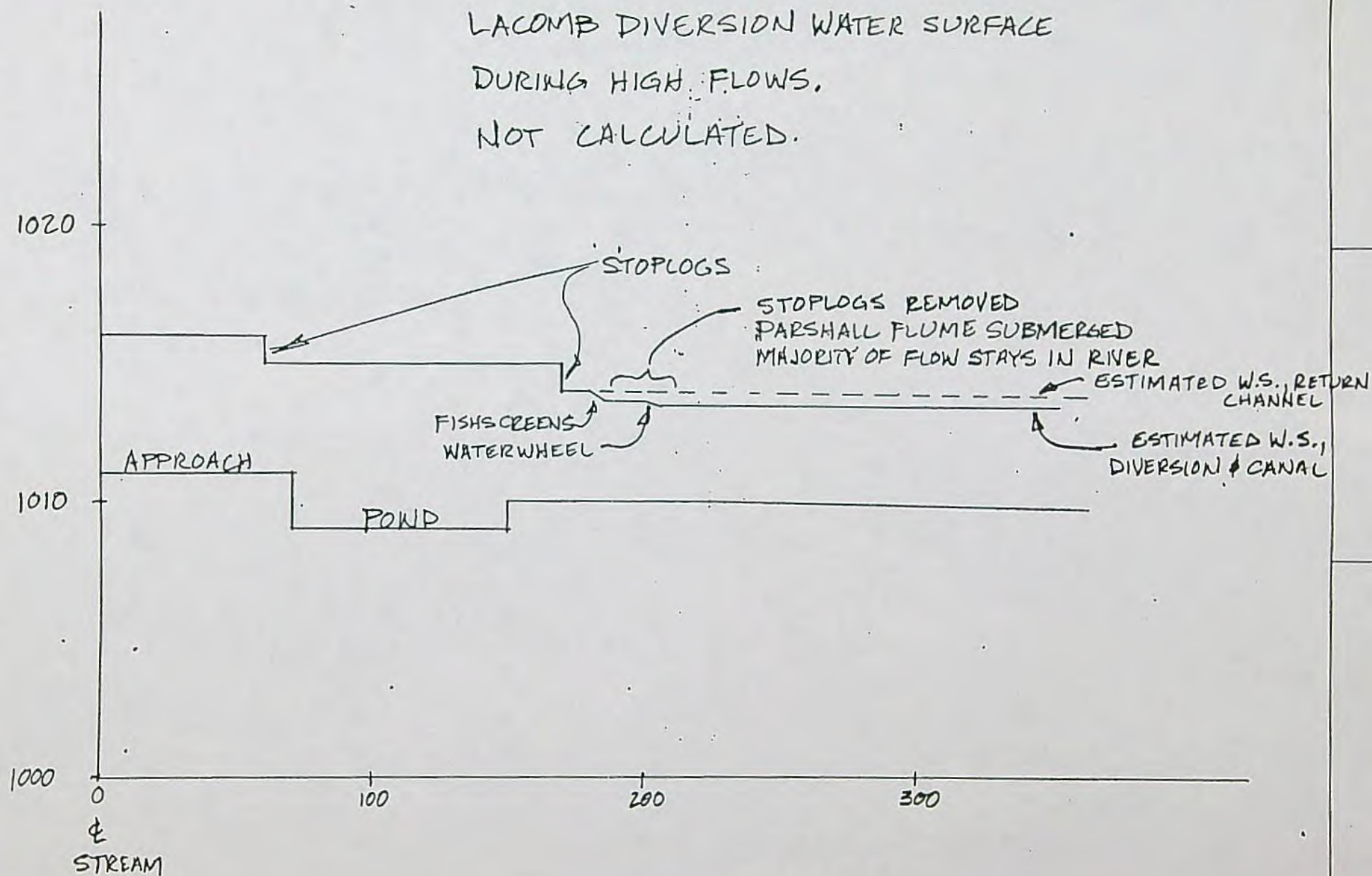
300





42.381 50 SHEETS 5 SQUARE
42.382 100 SHEETS 5 SQUARE
42.389 200 SHEETS 5 SQUARE

LACOMB DIVERSION WATER SURFACE DURING HIGH FLOWS. NOT CALCULATED.





SUBJECT LACOMB

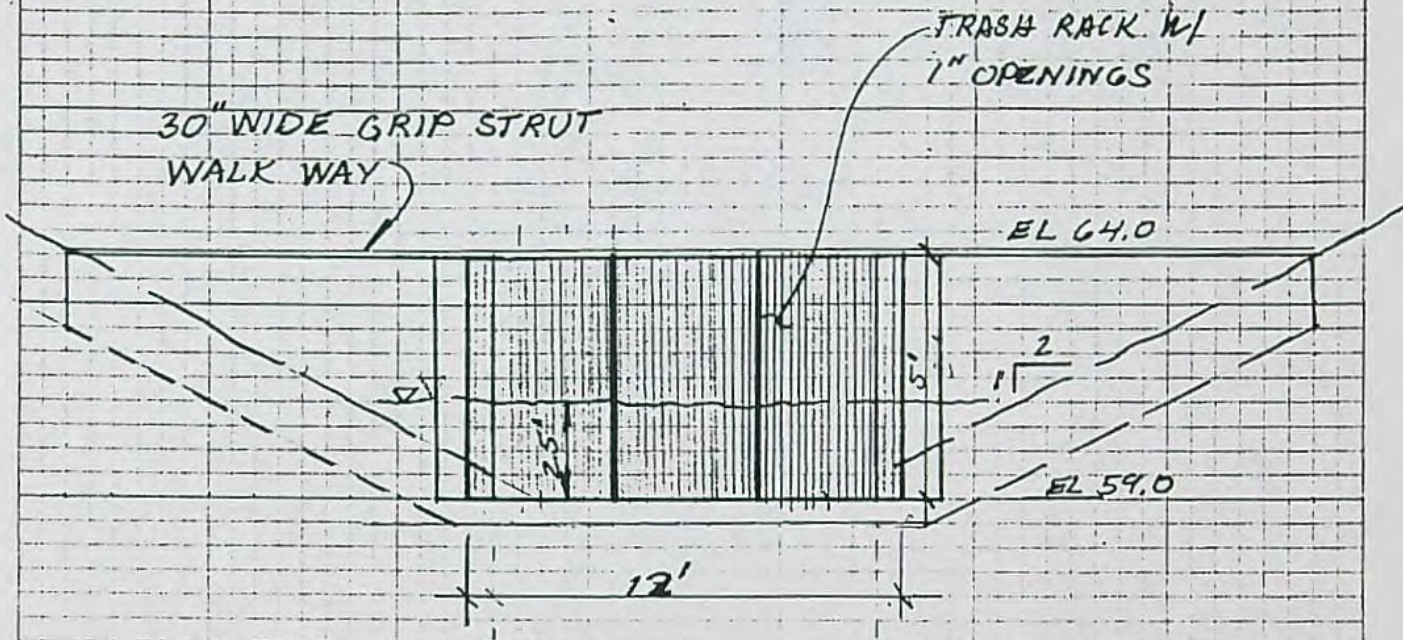
BY RET

DATE 6/9

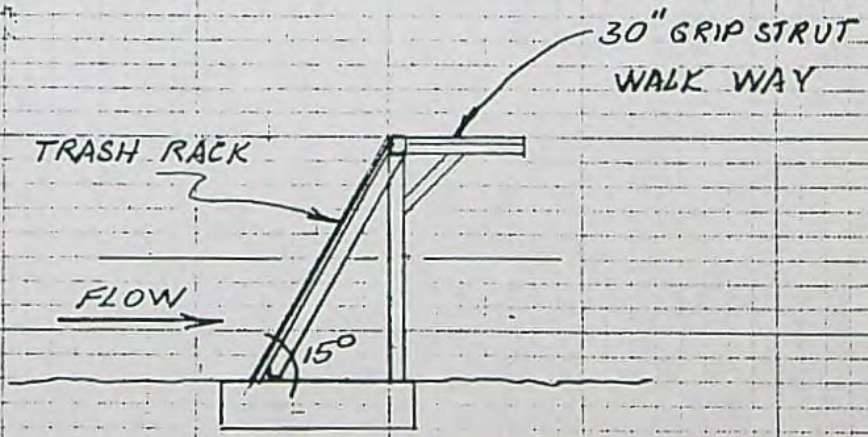
FISH BARRIER

SHEET NO. _____ OF _____

PROJECT NO. _____



$\frac{1}{4}" = 1'-0"$



PROF II
 1" = 20'
 1" = 20' V

850-

830-

810-

790-

770-

750-

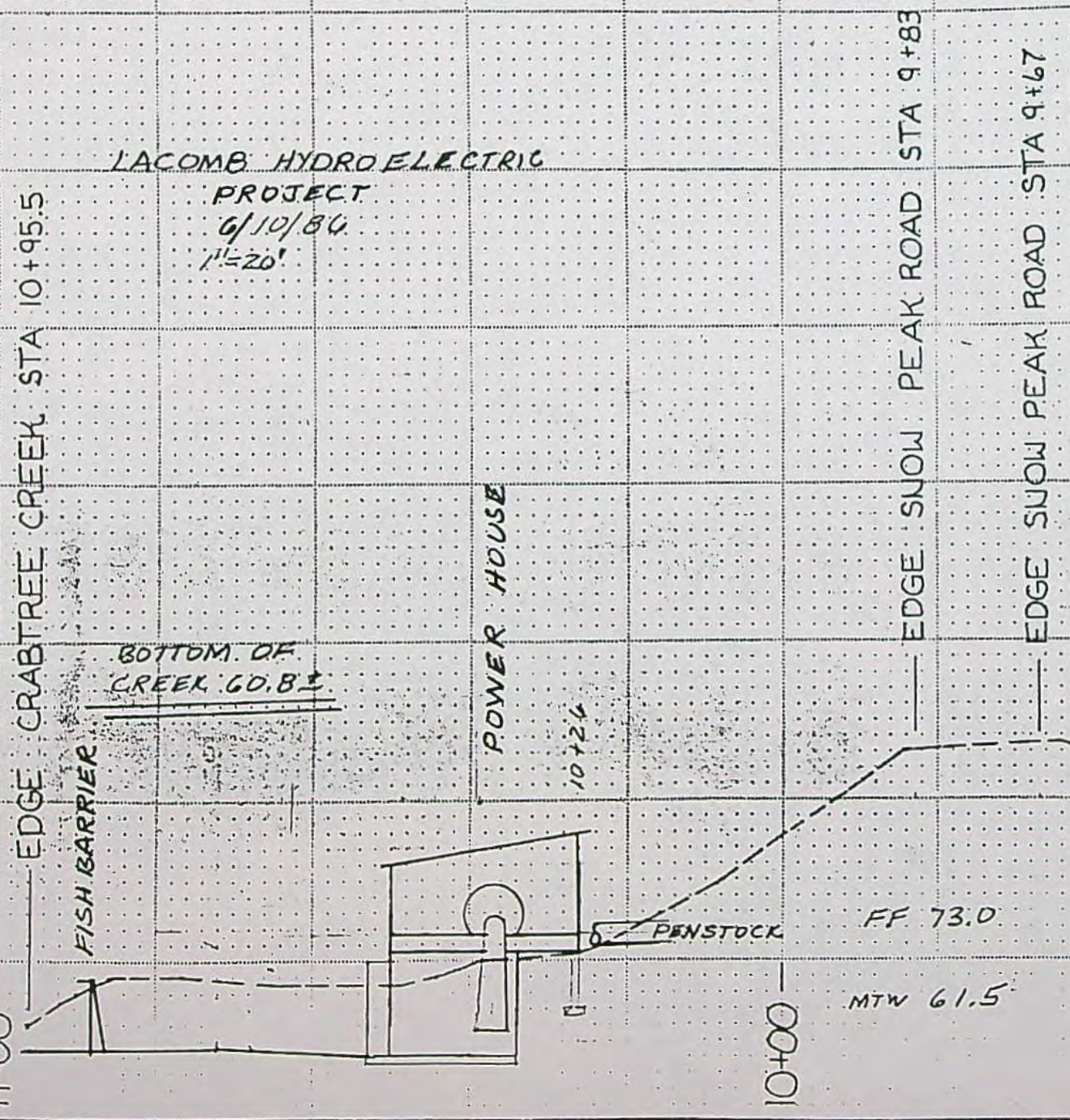
730-

710-

690-

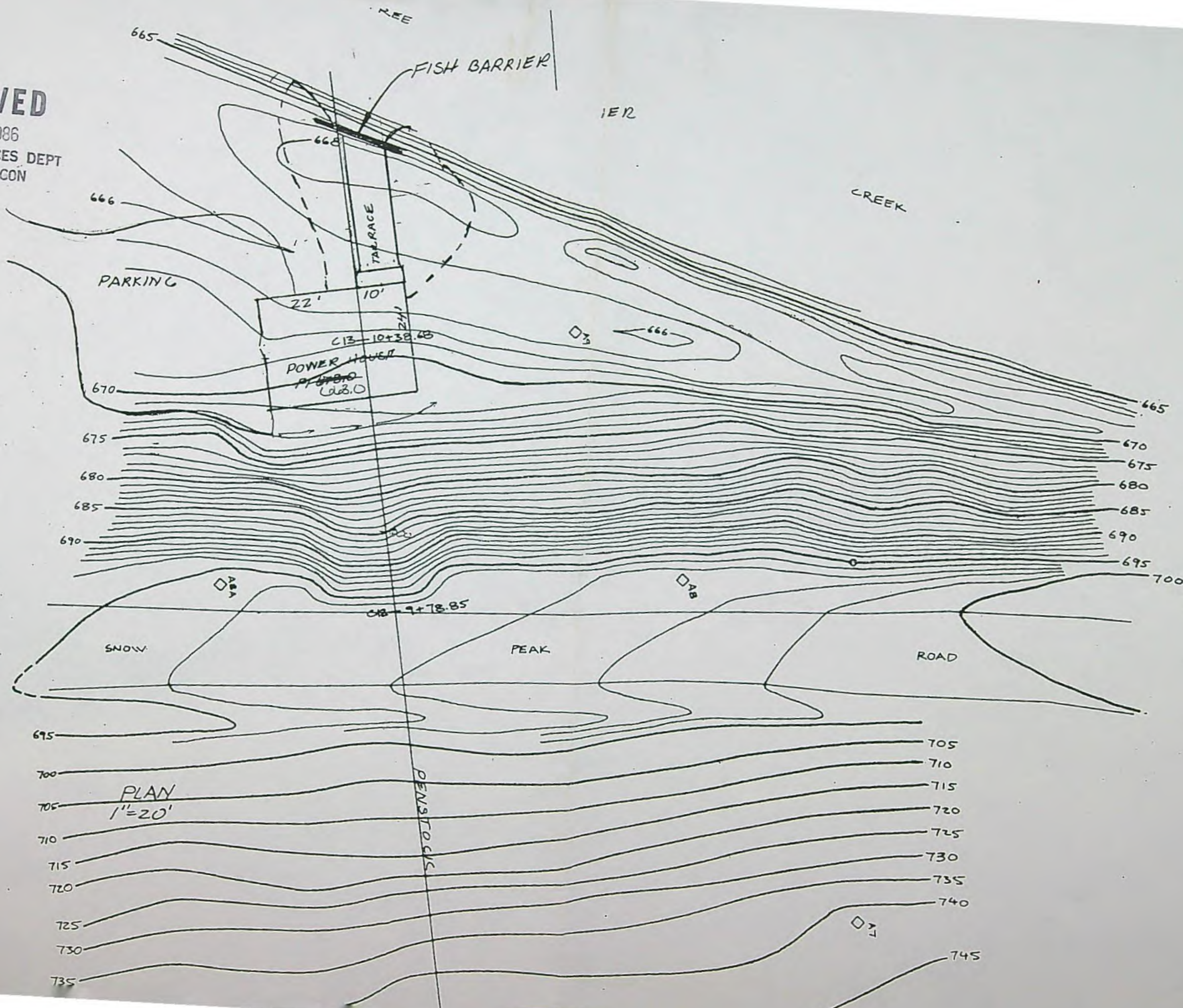
670-

VWS 61.0
 INV 59.0



RECEIVED

AUG 7 1986
WATER RESOURCES DEPT
SALEM, OREGON





United States
Department of
Agriculture

Soil
Conservation
Service

1220 S. W. Third Avenue
Room 1640
Portland, Oregon 97204

AUG 4

Subject: ENG - Lacombe Irrigation Canal
Delivery System Stability

Date: July 31, 1986

To: Billie G. Forrest, DC, SCS, Tangent

File code: 210-7

I have reviewed the trip report I wrote on the above subject dated June 26, 1984; the geologic hazard map of the area; as well as the provisional 7½-minute quadrangle map and the profiles and schematic of the proposed works of improvement for the canal.

My conclusion is that this proposal would substantially reduce the element of risk from slide failure, which has been a problem in this area.

Leonard L. Myers
LEONARD L. MYERS
State Geologist

Enclosure

cc: (w/enc.)

Roy E. Bright, STCE, SCS, Portland

Gary R. Gross, AC, SCS, Albany AO

William J. Perry, AE, SCS, Albany AO

RECEIVED

AUG 5 1986

WATER RESOURCES DEPT
SALEM, OREGON



The Soil Conservation Service
is an agency of the
United States Department of Agriculture



☆ U.S. Government Printing Office: 1985-529-568/30577



United States
Department of
Agriculture

Soil
Conservation
Service

1220 S.W. Third Avenue
16th Floor
Portland, Oregon 97204

~~FOY~~
RECEIVED

AUG 7 1986

WATER RESOURCES DEPT.
SALEM, OREGON

Subject: ENG - Trip Report - Irrigation Canal Failure,
Landslide Problem Area, Linn County, Oregon

Date: June 26, 1984

To: William J. Perry, Area Engineer, SCS,
Albany, Oregon

File code: 210-7-5

Purpose: To provide assistance in evaluating the geologic history and setting of the problem area.

Participants: Jim Brazel, Chairman, Lacombe Irrigation District
William J. Perry, Area Engineer, Albany
Billie Forrest, District Conservationist, Tangent
Earl D. James, Civil Engineering Technician, Albany
Leonard Myers, State Geologist, Portland

All of the participants met at the site and conducted a field review of the problems on June 21, 1984. The area in question is located in the NE $\frac{1}{4}$ of Section 27, T. 11 S., R. 1 E. in Linn County, Oregon.

Background: The irrigation canal crosses an area of old slides. It was constructed in the early 1940's and reportedly had not encountered any problems with slide failure until the past two years. The area immediately upslope of the problem area was harvested for timber (clear cut) about two years ago. This area has also received above normal precipitation for the last two years. Some repairs were required on the canal due to slide failure last year. The canal failed again on June 14, 1984, again due to slide failure of the supporting slope.

The area of failure extends approximately from the siphon to about 750 feet down the canal. There is about a 200 foot section (550 to 750 feet down canal of the siphon) that is extremely unstable and has developed several failure planes. It would be prudent to abandon this segment of the canal. Seepage losses from the canal into these failure planes could set up conditions to trigger further sliding in this area.

This segment of 750 feet is thought to be the most critical area, however the canal is located on materials mapped as unstable geologic conditions for several hundreds of feet going down canal and should be thoroughly studied and evaluated before attempting enlargement or repairs of the canal system.



The Soil Conservation Service
is an agency of the
United States Department of Agriculture



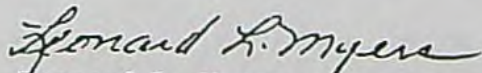
Geologic Setting: The area in which the canal is located is an unstable area as evidenced by the hummocky terrain, old slip faces, bowed and jack-strawed trees, all classic examples of an unstable area. A geologic map has been prepared for this area by the Department of Geology and Mineral Industries, State of Oregon (Bulletin No. 84). The area in question is located in the Snow Peak Quadrangle. Both a geologic stratigraphic map and a geologic hazards map are included as a part of the report.

The area of failure is situated on the Little Butte Formation. Pyroclastic rocks and basalt flows make up most of this formation. These rocks tend to weather deeply and rather rapidly under the region climatic conditions. The soils developed from this process are generally high in clay content. They also are formed on moderate to steep slopes.

Needs: The irrigation canal serve some 150 plus users. This service has been disrupted by the failure. Also, the irrigation district is interested in combining this canal into a delivery system for the development of a hydro-electric plant. The present system was designed to carry about 30 second-feet of water while the proposed combination system would require about 60 second-feet of water. Water delivery would be required the year around for the hydro-electric plant.

Conclusions: The area is geologically unstable.
Redistribution of loads on the slopes could be critical in triggering new slides.
The developed failure planes, both old and new, are susceptible to water infiltration.
The hummocky topography traps water causing saturation of the soil and rock mass.
There is a limited amount of vegetation in the immediate area that uses water.
This area will remain a high risk area even with the best principles of technology applied to solving the problem.
There is no apparent easy and simple solution for the problems encountered.

Recommendations: Determine the ground elevation of any proposed new alignment for relocation cost evaluation. Do a detailed investigation of surface and subsurface conditions to determine the specific geologic properties and problems at the site. Provide for positive surface and subsurface drainage. The excess water should be carried down off the hillside into the creek. Obtain engineering assistance in investigation, planning and design of the repaired problem.


Leonard L. Myers
State Geologist

cc: Roy Bright, SCS, Portland, Oregon



RAY TONEY AND ASSOCIATES
PROFESSIONAL ENGINEERS/CONSTRUCTORS CA. LIC. 391436

RECEIVED

AUG 7 1986

WATER RESOURCES DEPT
SALEM, OREGON

July 21, 1986

Mr. Louis Fredd
Water Resource Coordinator
Oregon Dept. of Fish and Wildlife
P.O. Box 3503
Portland, OR 97208

Subject: Lacombe Hydroelectric Project

Re: Meeting in United States Fish and Wildlife Office in Portland
on July 18, 1986.

Attendance: ODFW Louis Fredd
Dave Nichlos
NMFS Jim Esch
Randy Lee
USF&W Kathie Larson

We appreciate the opportunity to review the plans for the powerhouse and canal intake with you. We understand we have your approval of the plans based on the modifications you requested which are:

Powerhouse:

- 1) The tail race fish barrier and channel banks must be raised to elevation 665 to protect fish from entering the tail race during the high water of a 100 year flood event.
- 2) The length of the fish barrier bar rack must be increased to approximately 27 feet to provide flow rate through the rack of 1 fps.
- 3) The flow through the rack must be reasonably evenly distributed. After construction, if local velocities through the rack exceed 1.25 fps, baffling or other facilities will be installed to provide for uniform flow through the rack.

Subject: Lacombe Hydroelectric Project
Page two

Canal Intake:

- 1) The wall opposite the drum screen will be straightened to minimize potential for eddys.
- 2) The drum rotation will be 4 to 5 feet per minute.
- 3) The screen will be manufactured similar to those made by the Washington Fisheries Screen Shop in Yakima Screen Shop.
- 4) Final approval will be based on the presented criteria and demonstration that it works.
- 5) The return flow channel will be constructed as shown but may need to be modified by widening or installation of a pipe at the direction of ODFW after the project is in operation.

The plans with these revisions are attached. We are proceeding with other agencies' approval of plans and construction based on your approval with the above conditions.

If I have omitted any items, please advise.

Sincerely,

RAY TONEY & ASSOCIATES

Ray E. Toney

RET:cw

cc: NMFS Jim Esch
 USF&W Kathie Larson
 TKO Power Norman Kamp



RECEIVED JUL 31 1986

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

ENVIRONMENTAL & TECHNICAL SERVICES DIVISION
847 NE 19TH AVENUE SUITE 350
PORTLAND, OREGON 97232-2279
(503) 230 5400

JUL 29 1986

F/NWR5-326

Mr. Ray Toney
Ray Toney and Associates
P.O. Box 1342
Redding, CA 96099

RECEIVED

AUG 7 1986

WATER RESOURCES DEPT
SALEM, OREGON

Dear Mr. Toney:

We wish to summarize our comments on your design discussed at the July 18, 1986 meeting in regard to fish facilities for the LaComb Hydroelectric Project, Crabtree Creek, Oregon.

Powerhouse Diffuser Rack

The rack should be designed to provide a one foot per second water velocity. A discharge of 60 cubic feet per second and water depth of approximately 2.5 feet, results in a rack length of approximately 24 feet. Additionally, the elevation of the top of the rack should accommodate the 100 year flood event. Provisions for flow distribution baffling should also be included in this plan. Uniform flow through the rack minimizes the possibility of false attraction of adult fish.

Fish Screen

We are pleased to see the proposed use of a rotating drum screen for diverting juvenile fish away from the powerhouse intake. The training wall opposite the fish screen should be of a constant angle rather than including the change in angle shown. Doing so should minimize the possibility of eddy formation ahead of the screen. At our meeting you expressed interest in obtaining examples of engineering drawings for a rotating drum screen. Our office has example drawings and can provide them to you upon your request.

Pond Between the Headgate and Screen Structure

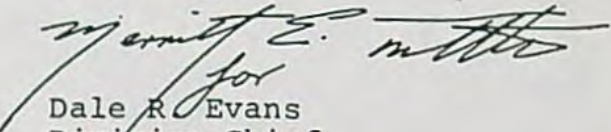
We are concerned about the possibility of adult fish utilizing the juvenile fishway. Although we feel these fish can negotiate the fishway, delay may result in the pond above the fish screen because of apparent low water velocities. In place of a pond, we suggest an open channel be constructed between the headgates and screen with velocities suitable for adult transportation. Designed correctly, an open channel is favorable because uniform



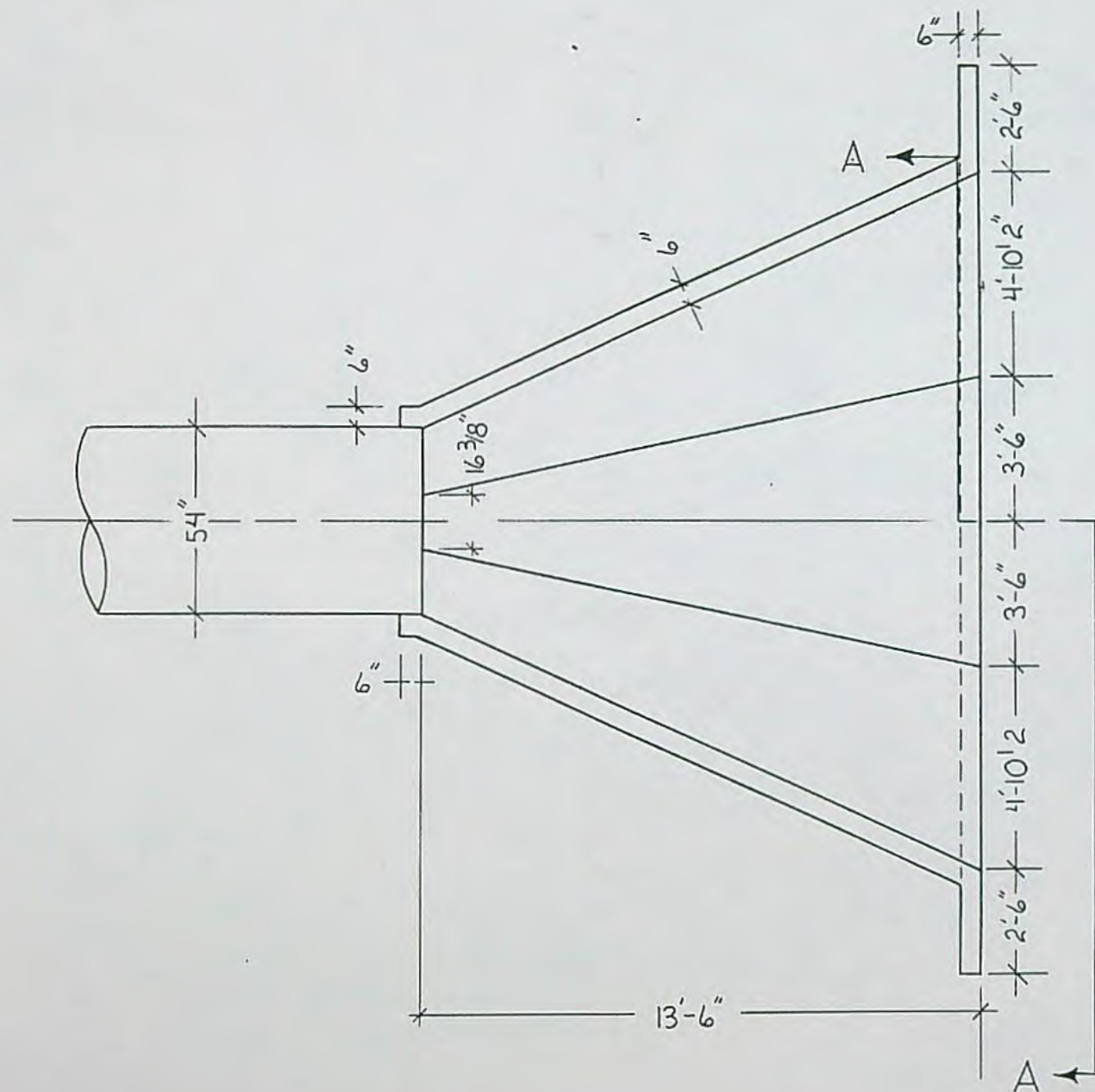
approach flows can be developed. Uniform approach flows are desirable for maximum screen efficiency. Problems with sediment accumulation at the screen could be minimized if the water velocity component parallel to the screen face (sweeping velocity) is great enough to provide a self sluicing action. This may require the screen face be angled to the flow. However, for proper sediment transport past the structure, the channel water velocity and sweeping velocity should be equal. Additionally, sediment quantities from the channel may be reduced if it is lined with concrete.

Thank you for the opportunity to comment on this project. Further information or questions may be directed to Randy Lee at (503) 230-5411.

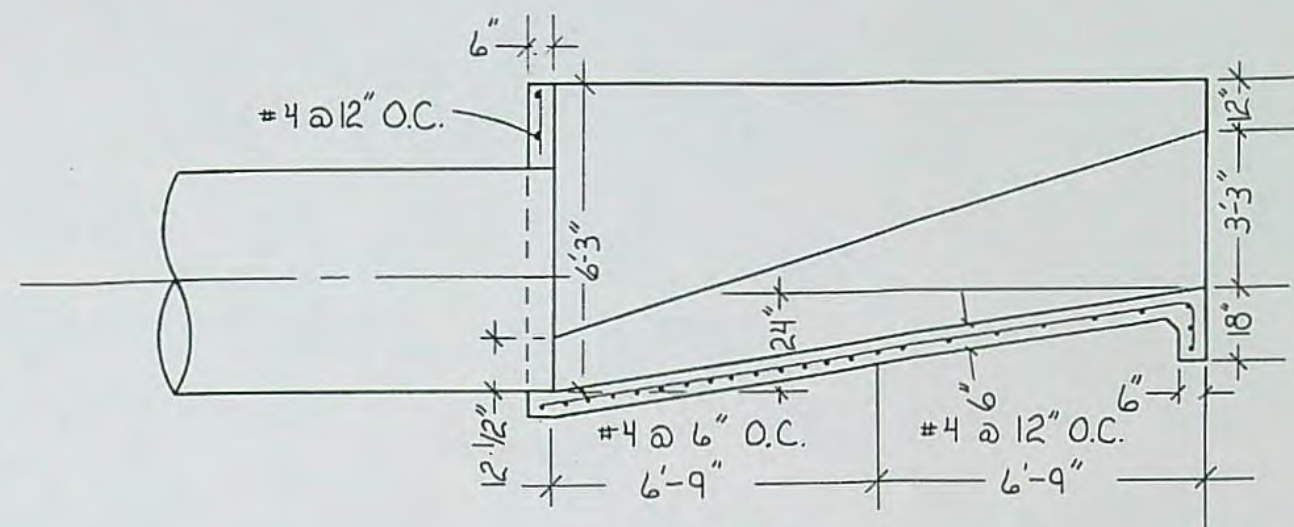
Sincerely,


for
Dale R. Evans
Division Chief

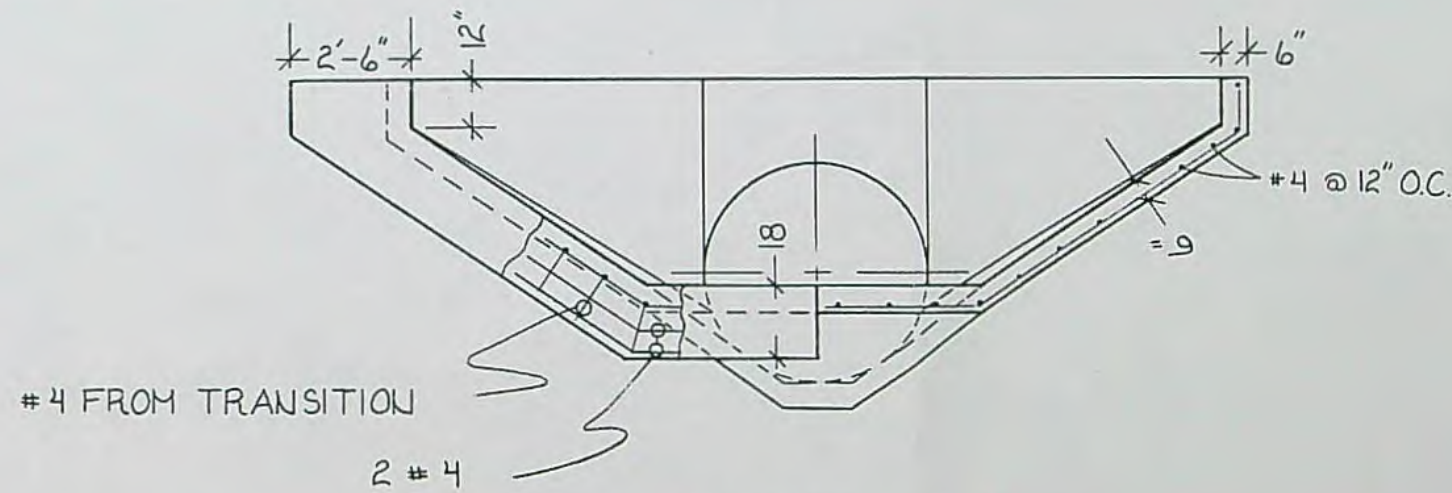
cc: Kathi Larson - USFWS ES
Dave Nichols - ODFW
FERC - Portland, OR
FERC - San Francisco, CA



PLAN
1/4" = 1'-0"

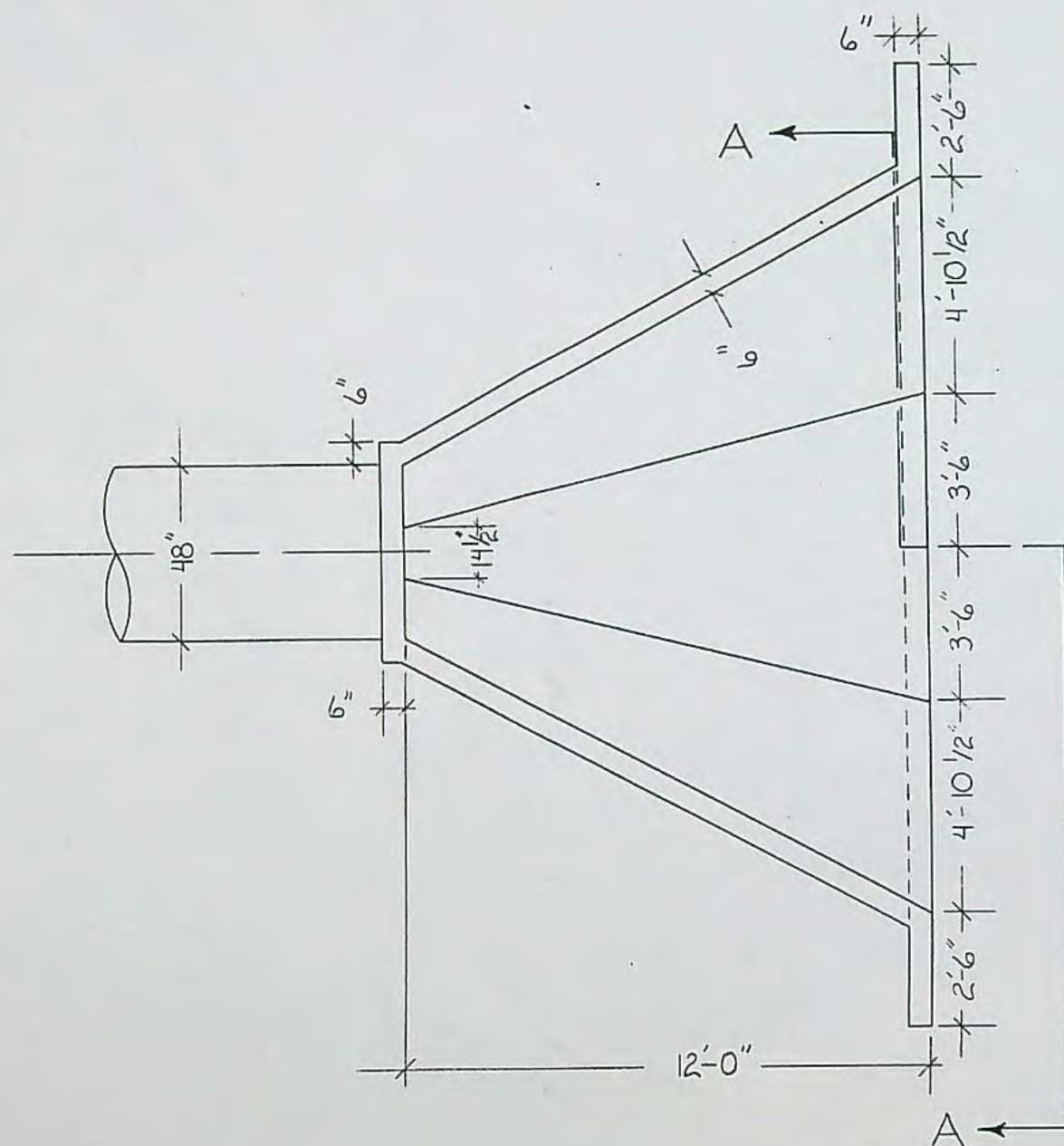


PROFILE (SECTION)
1/4" = 1'-0"

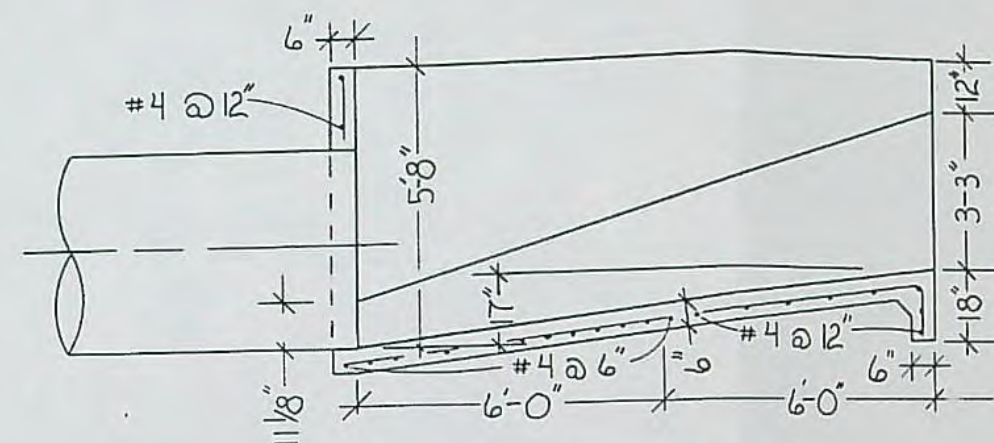


SECTION A-A
1/4" = 1'-0"

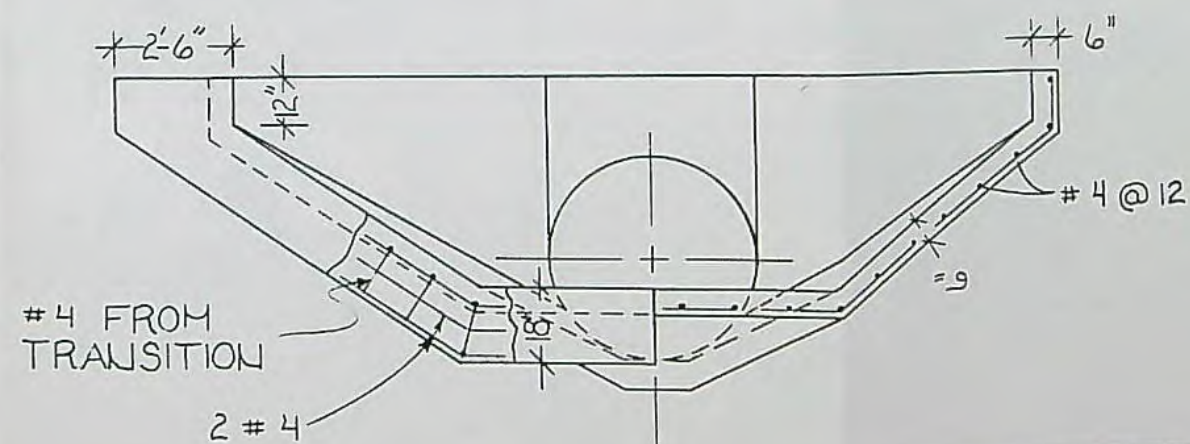
LACOMB HYDROELECTRIC PROJECT	
FLUME REPLACEMENT PIPE TRANSITION STRUCTURES	
JUNE 11 1986	SHEET 1 OF 1
K. <i>Stewart</i>	



PLAN
1/4" = 1'-0"



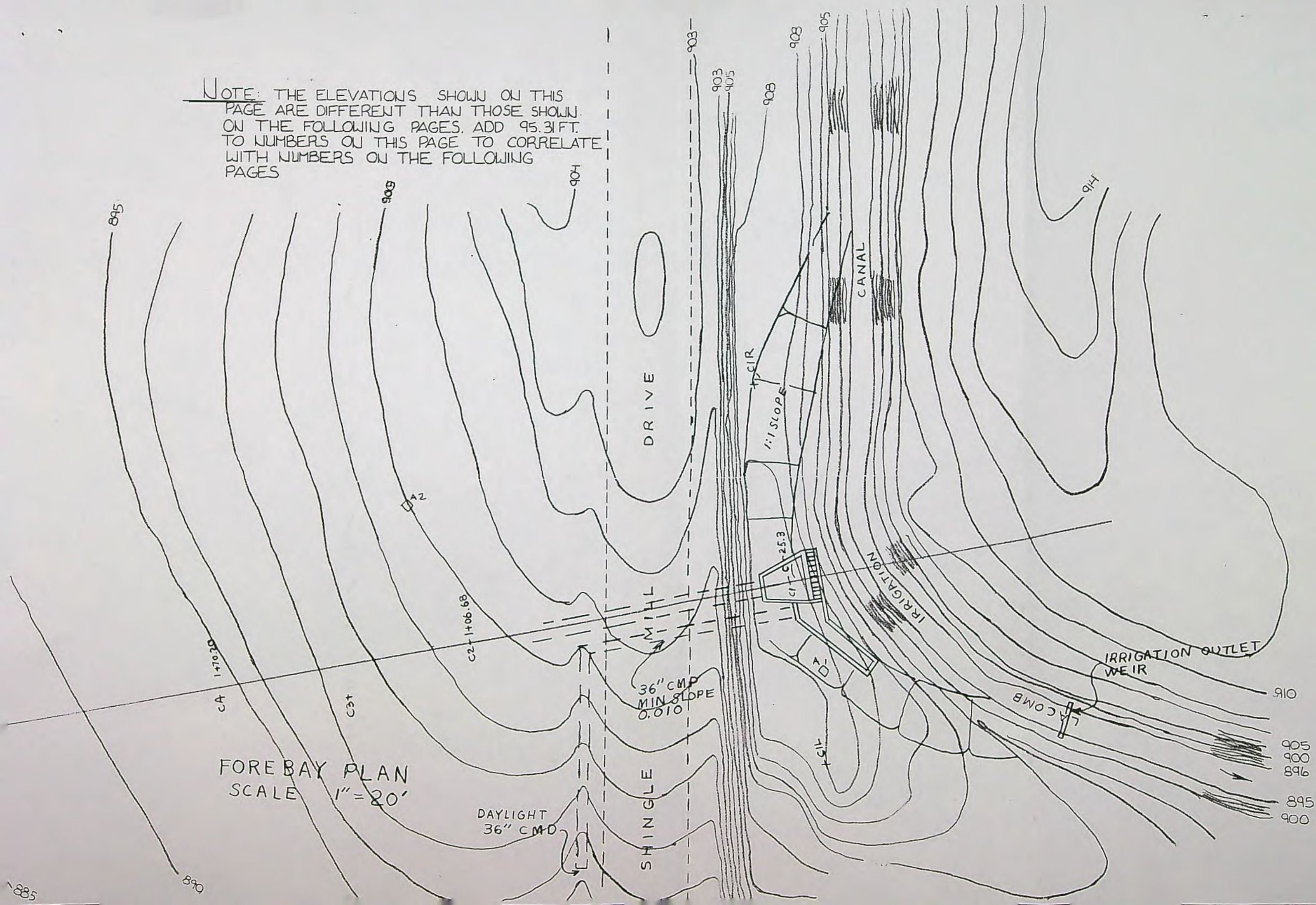
PROFILE (SECTION)
1/4" = 1'-0"



SECTION A-A
1/4" = 1'-0"

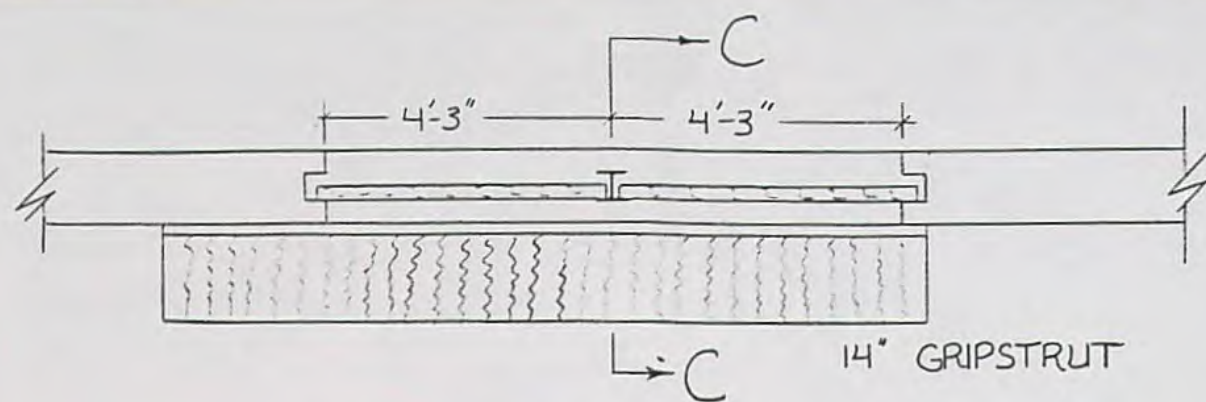
LACOMB HYDROELECTRIC PROJECT	
SLIDE BYPASS PIPE TRANSITION STRUCTURES	
JUNE 2 1986	SHEET 1 OF 1
Kurt Stewart	

NOTE: THE ELEVATIONS SHOWN ON THIS PAGE ARE DIFFERENT THAN THOSE SHOWN ON THE FOLLOWING PAGES. ADD 95.31 FT. TO NUMBERS ON THIS PAGE TO CORRELATE WITH NUMBERS ON THE FOLLOWING PAGES

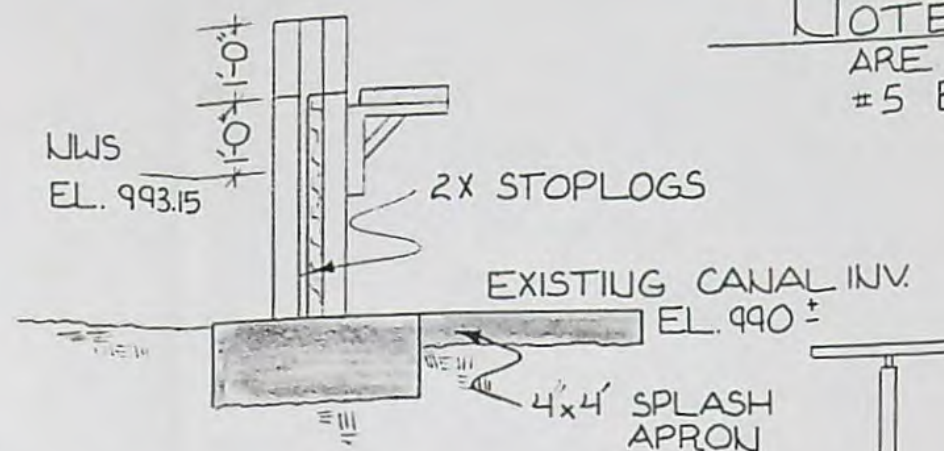


FOREBAY PLAN
SCALE 1" = 20'

905
900
896
895
900

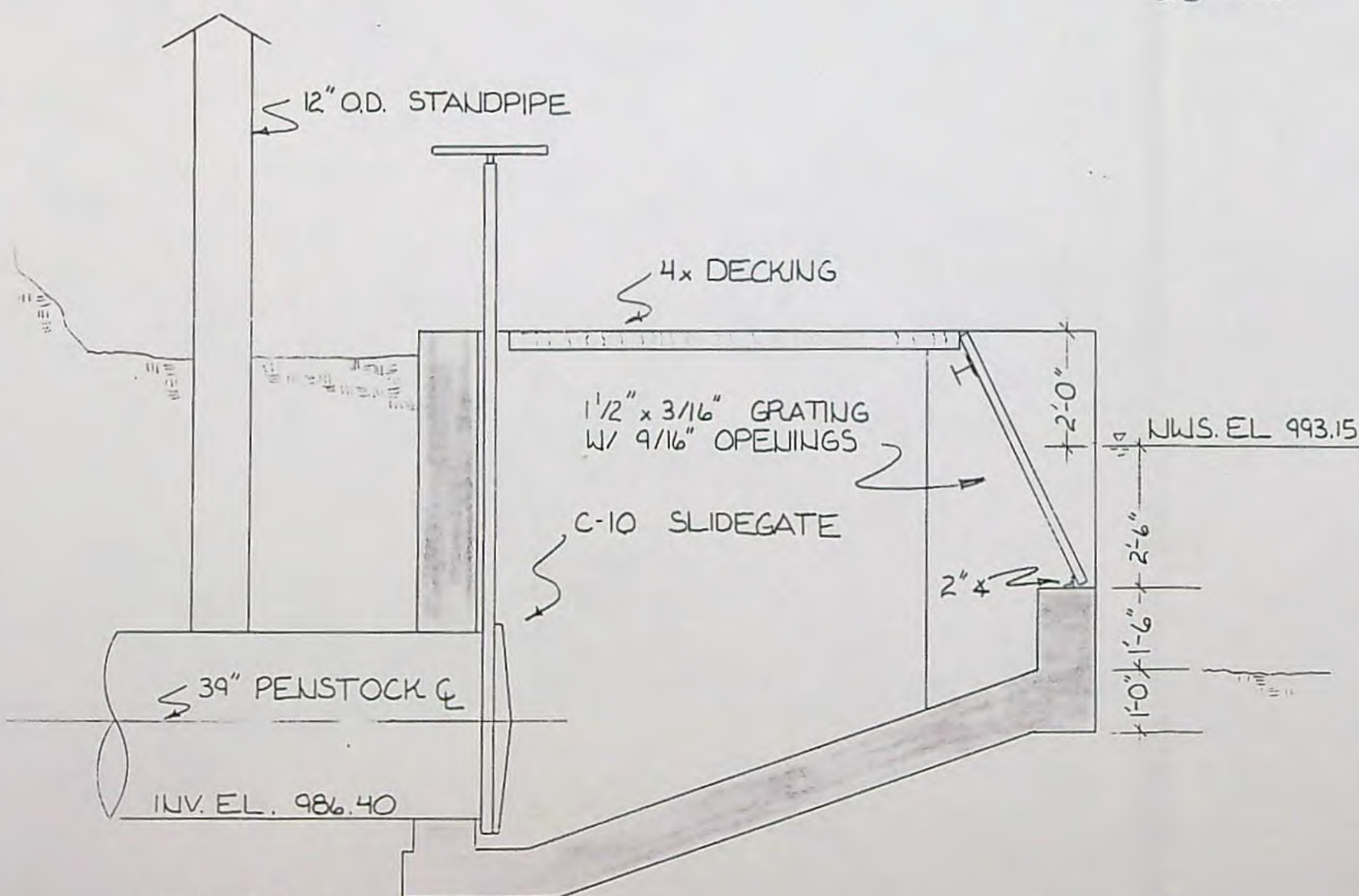


IRRIGATION OUTLET WEIR
3/8" = 1'-0" (PLAN)

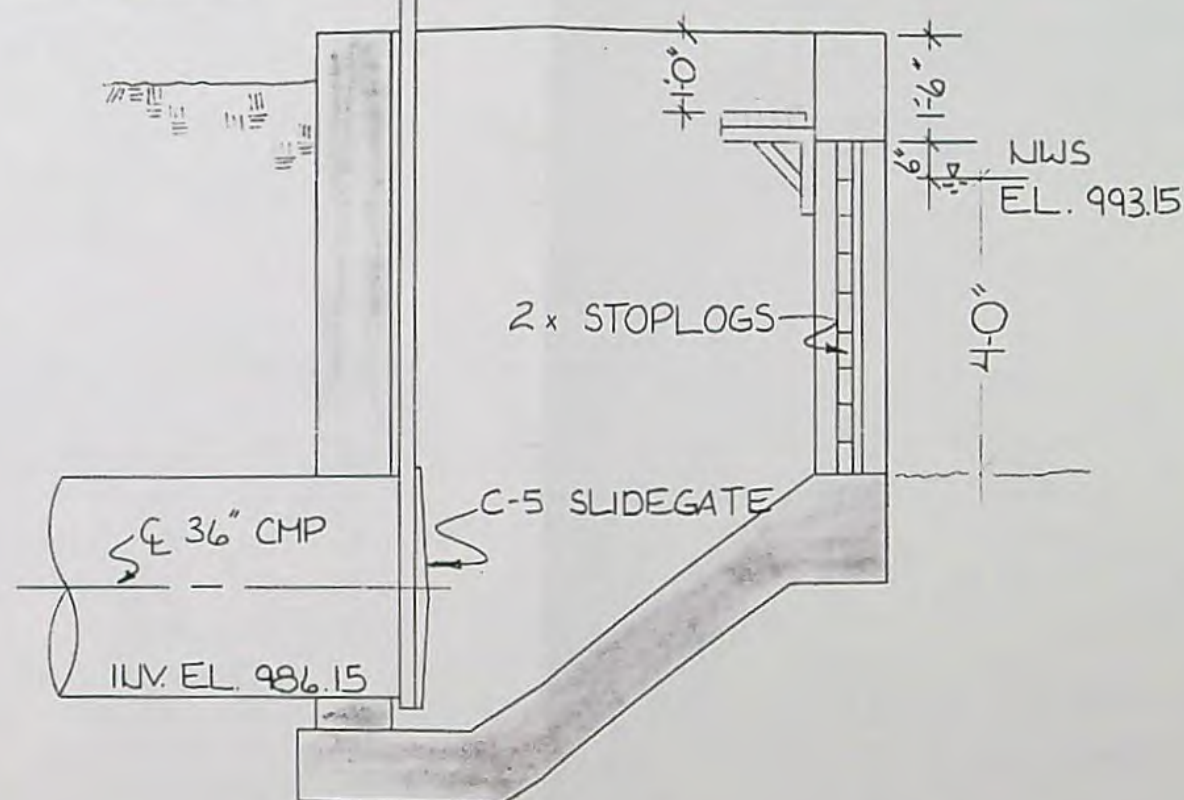


SECTION C-C
3/8" = 1'-0"

NOTE: ALL WALLS AND FLOORS ARE 12" THICK W/ SINGLE MAT OF #5 BAR @ 12" O.C. BOTH WAYS.



SECTION A-A
3/8" = 1'-0"



SECTION B-B
3/8" = 1'-0"

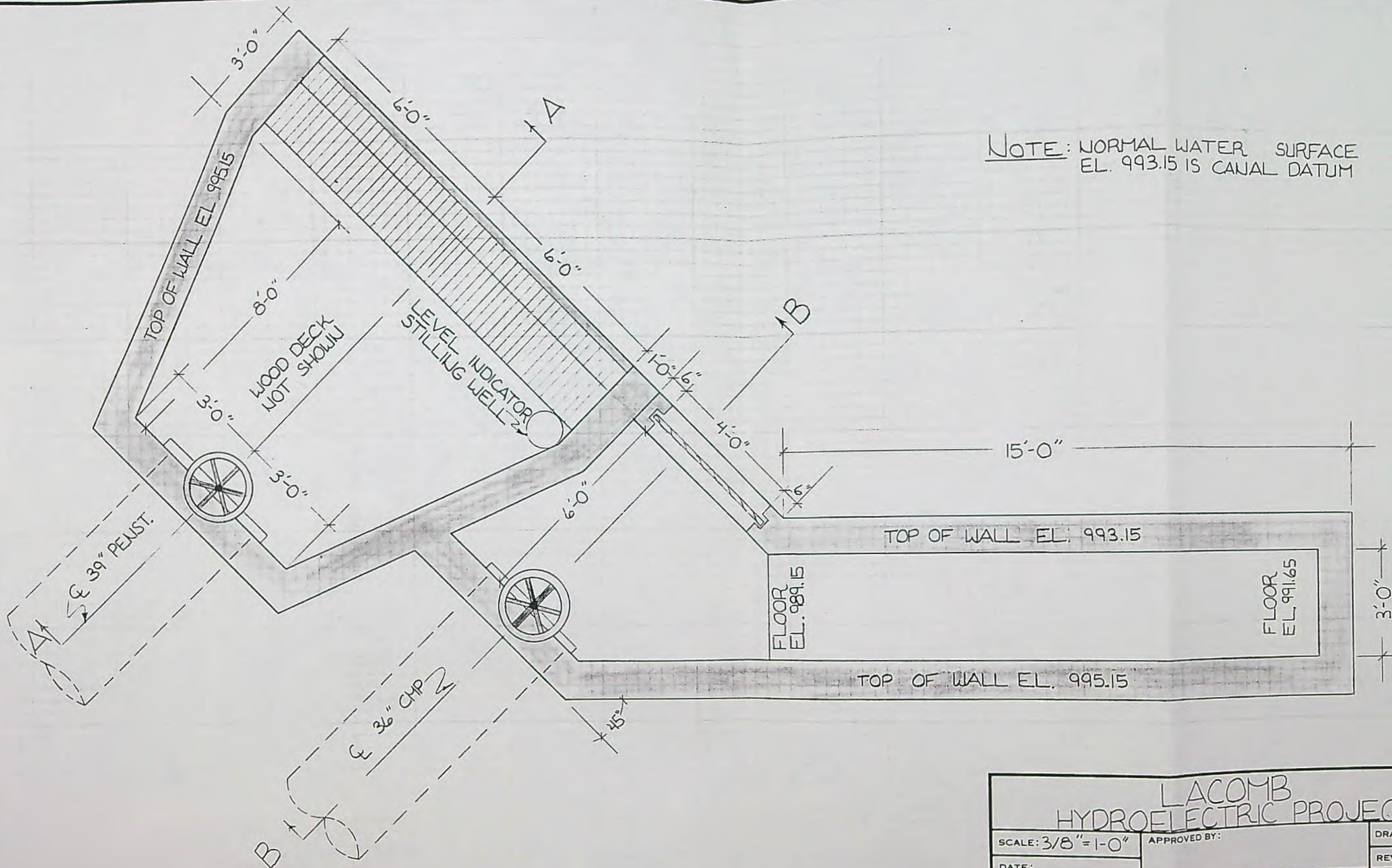


RAY TONEY AND ASSOCIATES
PROFESSIONAL ENGINEERS/CONSTRUCTORS

LACOMB HYDROELECTRIC PROJECT

SCALE:	APPROVED BY:	DRAWN BY <i>Heuser</i>
DATE: JULY 25-86		REVISED
PENSTOCK INTAKE FOREBAY OVERFLOW (SECTIONS)		
		DRAWING NUMBER

CA. LIC. 391436



NOTE: NORMAL WATER SURFACE
EL. 993.15 IS CANAL DATUM



RAY TONEY AND ASSOCIATES
PROFESSIONAL ENGINEERS/CONSTRUCTORS

LACOMB
HYDROELECTRIC PROJECT

SCALE: 3/8" = 1'-0"

APPROVED BY:

DRAWN BY *steward*

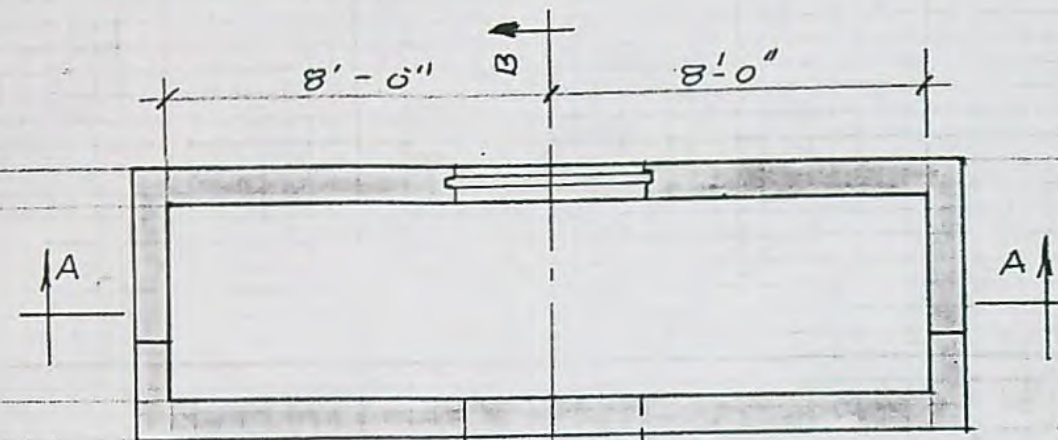
DATE:

REVISED

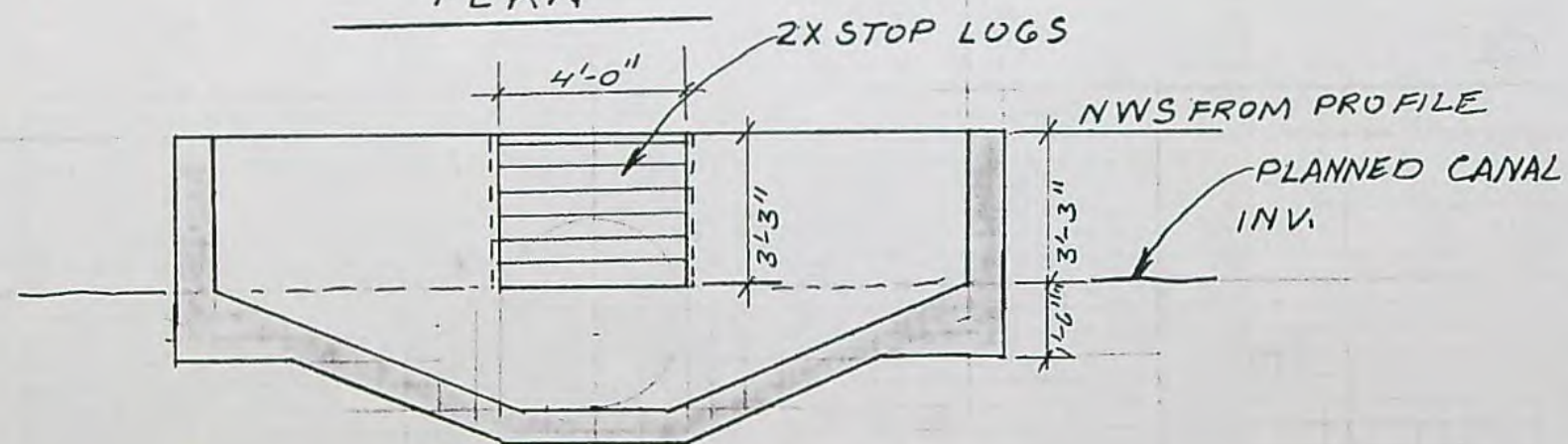
PENSTOCK INTAKE
FOREBAY OVERFLOW (PLAN)

DRAWING NUMBER

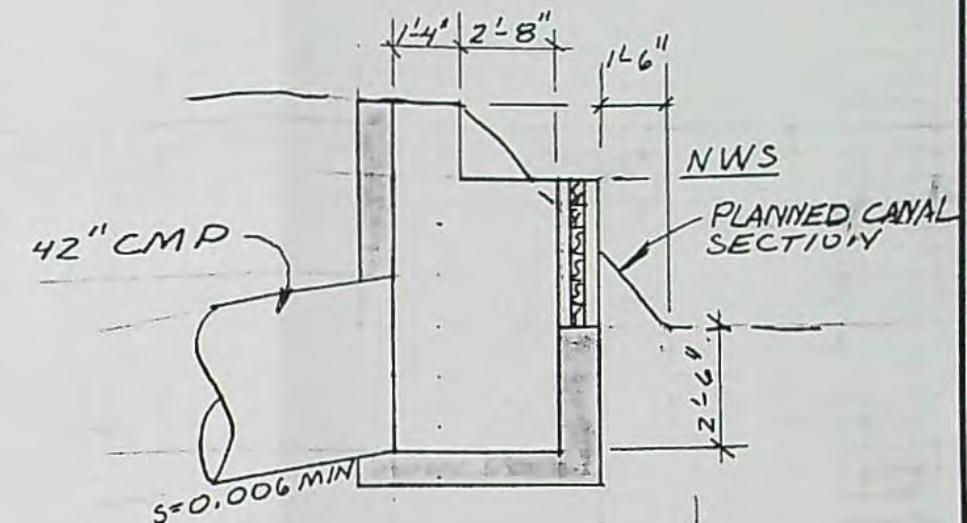
CA. LIC. 391436



PLAN



SECTION AA



SECTION B-B

NOTES:

- 1- NWS TO BE TAKEN FROM CANAL PROFILE
- 2- CONCRETE WALLS AND BOTTOM TO BE 8" THICK
- 3- REINFORCING STEEL TO BE #4 12" OC BOTH WAYS
- 4- COMPACT-NATIVE BACKFILL TO 95% RELATIVE DENSITY AROUND STRUCTURE

CANAL OVERFLOW WEIR

SCALE: 1/4" = 1'-0"

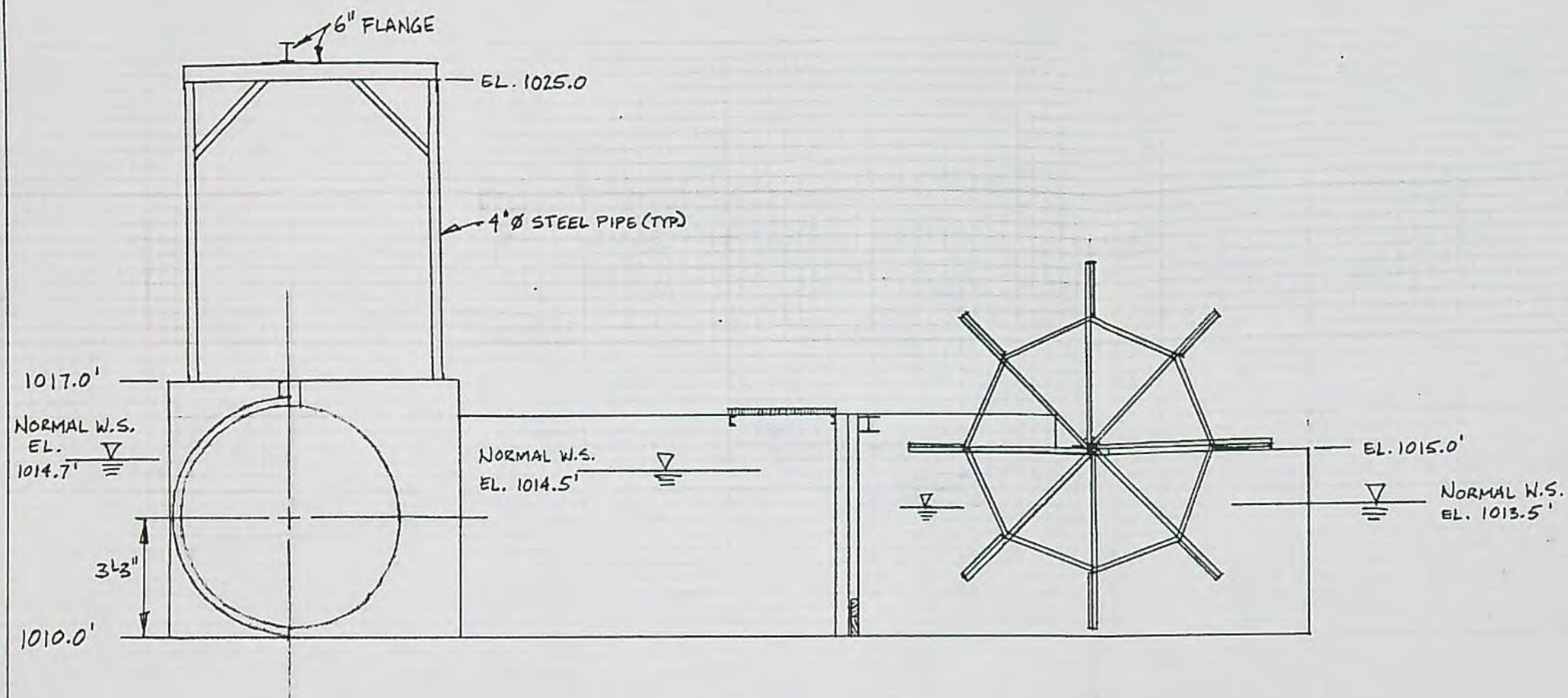
APPROVED BY:

DRAWN BY RET

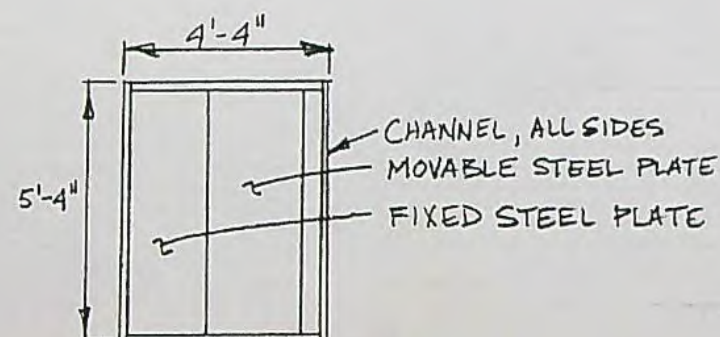
DATE: 7/14/86

REVISED

DRAWING NUMBER



SECTION A-A
SCALE: $\frac{1}{4}" = 1'-0"$



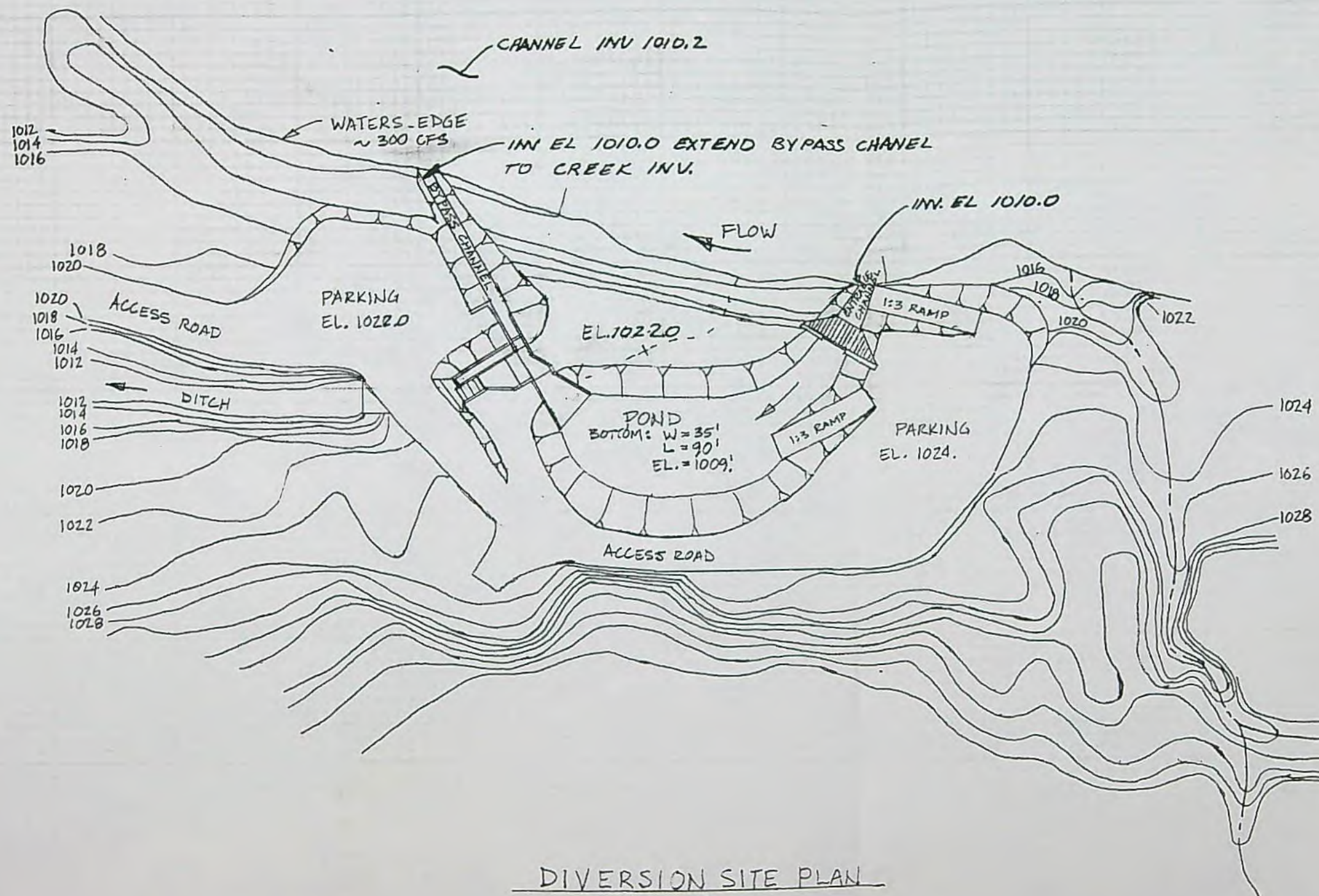
SLIDING DOOR
SCALE: $\frac{1}{4}" = 1'-0"$



CA. LIC. 391436

RAY TONEY AND ASSOCIATES
PROFESSIONAL ENGINEERS/CONSTRUCTORS

LACOMB IRRIGATION DISTRICT
DIVERSION STRUCTURE SECTION & DETAIL
10 JULY 1986



DIVERSION SITE PLAN
1" = 50'



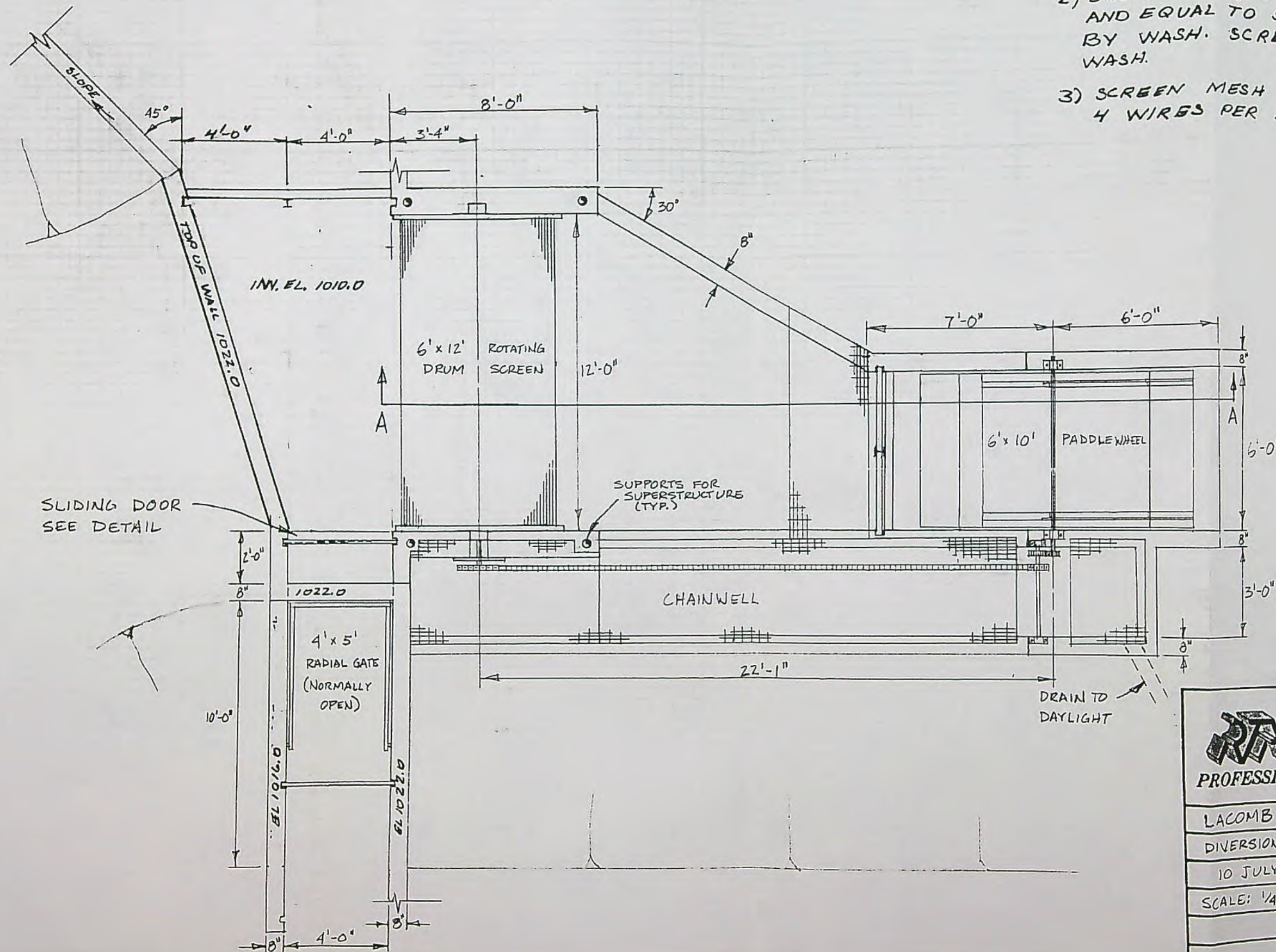
CA. LIC. 39143

RAY TONEY AND ASSOCIATES
PROFESSIONAL ENGINEERS/CONSTRUCTORS

LACOMB IRRIGATION DISTRICT	
DIVERSION STRUCTURE, GENERAL PLAN	
10 JULY 1986	
SCALE: 1" = 50'	

NOTES:

- 1) DRUM SCREEN SURFACE ROTATION OF 4 TO 5 FEET PER MINUTE
- 2) DRUM SCREEN, SEALS & DRIVE TO BE SIMILAR AND EQUAL TO SCREENS MANUFACTURED BY WASH. SCREEN SHOP IN YAKIMA WASH.
- 3) SCREEN MESH TO BE 14 GA WIRE W/ 4 WIRES PER INCH, GALVANIZED



RAY TONEY AND ASSOCIATES
PROFESSIONAL ENGINEERS/CONSTRUCTORS

CA. LIC. 391436

LACOMB IRRIGATION DISTRICT
 DIVERSION STRUCTURE PLAN

10 JULY 1986

SCALE: 1/4" = 1'-0"

BY	DATE	BY	DATE	BY	DATE
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EXHIBIT "A"

LACOMB HYDROELECTRIC PROJECT

SCOPE OF WORK

ITEM 1 - MOBILIZATION

Mobilize men and equipment to the job site. Establish a field office to be used through the course of construction.

ITEM 2 - INTAKE

Furnish and install complete; including all labor, materials and equipment to construct the intake structure as shown on the attached plans.

ITEM 3 - CANAL RECONSTRUCTION

Furnish all labor, materials and equipment to increase the capacity of the canal to 65 cfs. Refer to the attached canal profile and details.

Station 0+00 to 21+50.

Reconstruct the canal by lowering and re-shaping as shown on drawings as well as lining the invert with 2 1/2 inches of unreinforced air blown mortar.

Station 31+20 to 107+50

Reconstruct canal by raising the canal bank. Embankment material will be excavated from borrow pits adjacent to the canal. Hand trim the vegetation from the canal section. The embankment material will be compacted to 90% density.

Station 117+50 to 176+50

Reconstruct the canal by excavating and reshaping the existing section.

The work on the canal is a reconstruction of the existing canal. The Contractor does not warrant the integrity of the existing or finished canal or leakage from the canal. The contractor is limited to performing the reconstruction in a good workmanship manner in accordance with the attached plans.

Clearing the canal banks and borrow areas will be cleared as required for construction. The brush will be piled for burning and the merchantable timber will be decked for the owner. Any stumpage costs to the land owner will be paid by the owner.

OVERFLOW WEIR:

Furnish and install complete; in accordance with the attached plans, two overflow weirs, one each upstream of the pipe intake structures.

ITEM 4 - PIPELINES

PIPE:

The pipe will be coal tar enamel lined, steel manufactured, in accordance with AWWA C201. The joints will be weld bell and spigot welded on only the inside or outside. The interior lining will not be repaired at the field welds. Angle fittings will be mitered with 22 1/2 degrees maximum per miter. Thrust blocks will be installed where necessary and will be sized based on soil pressure and safety factors of 1.5. *? spec*

TRENCH:

Excavate whatever material amounted to provide a minimum of 18 inches of cover over the pipe unless specified otherwise. Bedding and backfill will be native material selected to maximum size of six inches and placed uncompacted, except when pipe is in traveled areas. In traveled areas the bedding and backfill shall be aggregate base and compacted to 95% of normal consolidation pressure.

PENSTOCK:

Furnish and install approximately 1,200 feet of 39 inch OD pipe from the forebay to the powerhouse. The Shingle Mill Road crossing will be in accordance with the Linn County encroachment permit and the Snow Peak Road crossing will be in accordance with the requirements of Willamette Industries.

FLUME PIPE:

Furnish and install approximately 1000 feet of 54 inch OD pipe to replace the existing flume. The flume will be pushed to the side of the pipe alignment and abandoned. The pipe will be installed along the toe of the existing bench, buried from 1/3 to 1/2 of its diameter. The top portion will be exposed. The entrance to the flume pipe will have a transition from the canal to the pipe including a trash rack with 4 inch spacing. At the option of the contractor the transitions will be fabricated, painted metal or reinforced concrete. Metal transitions will be fabricated 3/16" steel.

SLIDE BYPASS PIPE:

Furnish and install approximately 300 feet of 39 inch pipe and approximately 780 feet of 48 inch pipe. The pipe will be buried with a minimum of two feet of cover except for approximately 50 feet across the draw. The 50 feet across the draw will be supported on reinforced concrete pillars with a maximum clear span of 40 feet between pillars. A 12 inch gate valve will be located adjacent to one of the pillars. The concrete pillars will be designed for support and thrust with a minimum safety factor of 1.5. The entrance and exits to and from the pipe will have a transition structure from the canal to the pipe. The entrance transition structure will have a trash rack with a maximum of 4 inch spacings. At the option of the contractor the transitions will be either reinforced concrete or fabricated painted metal.

ITEM 5 - FOREBAY

Furnish all labor, equipment and materials to construct the forebay as shown on the attached plans. The forebay will include a stoplog controlled irrigation outlet, overflow weir and drainage system, trash rack covered penstock intake.

ITEM 6 - POWERHOUSE

The powerhouse will be as shown in the attached preliminary drawings. The foundation and substructure will be reinforced concrete, the walls will be split-faced masonry block. All surfaces of the interior of the powerhouse will be painted in a color selected by the Owner. The roof will be metal construction and will be removable for the installation and removal of equipment.

The powerhouse will include a ventilation system as required, powerhouse lighting and electrical outlets. A work bench and storage cabinet for spare parts will be provided. The doors will be hollow-core metal with a dead bolt lock and weather stripping. The air intake louvers will be provided with filters to minimize dust in the powerhouse.

The tailrace will be constructed from the powerhouse to the existing creek channel and will be rock lined to minimize erosion. The powerhouse parking area will be surfaced with a minimum of 6" of gravel.

The grounding grid in the foundation of the powehouse will be provided as required by the generator and switchyard fault currents.

ITEM 7 - TURBINE/GENERATOR/SWITCHGEAR

TURBINE:

Francis turbine supplied by Gilkes of Kendal, England (turbine order is attached)

GENERATOR:

The generator will be a 1055KVA, 4160 volt manufactured by KATO. The generator specifications and order is attached.

TURBINE/GENERATOR CONNECTION

The connection will be a solid coupling without a flywheel. Turbine is overhung off of generator shaft.

BEARING LUBRICATION

All of the bearings will be sleeve type. The generator bearing which carries the thrust will have an oil circulating and cooling system. The oil circulating pump is required during overspeed which requires battery back-up. There are two oil pumps. One is a mechanical pump mounted on the generator shaft, the other is an electrical pump mounted on the main oil sump. The cooling system will feed oil through the heat exchange which is part of the penstock casing.

SPARE PARTS

The RTA contract allows for a total of \$7,500 for spare parts.

INSURANCES

- 1) Turbine
Gilkes is providing a CIF delivery to Port of Seattle.
- 2) Generator
KATO is providing insurance for their equipment to the Project.

SINGLE LINE DIAGRAM

Single line diagram is attached

UTILITY REQUIREMENTS

- 1) Protective relays
 - a) Current relays
 - b) Over and undervoltage relays
 - c) Overcurrent/undervoltage relays
 - d) Frequency relays
 - e) Ground fault relay
 - f) Line impedance relays
- 2) All protective relays are required to be utility grade.

METERING

- 1) Kilowatt 3Ø
- 2) Generator Voltage 3Ø
- 3) Line Voltage 3Ø
- 4) Generator Current 3Ø
- 5) Power Factor
- 6) Vars
- 7) Diversion Water Level
- 8) Speed
- 9) Bearing Temperatures
- 10) Stator Temperature
- 11) Generator Neutral Current
- 12) Nozzel Position
- 13) Battery Voltage

NORMAL SHUT DOWN SEQUENCE

- 1) Power will be reduced by closing the wicket gates (approximately one minute).
- 2) Main breaker will be opened by reverse power relay.
- 3) Conditions for normal shutdown.
 - a) hot bearing level 2
 - b) hot generator winding
 - c) oil pump failure
 - d) DC system low voltage
 - e) manual/normal stop push button
 - f) governor low oil pressure
 - g) reverse power (motoring)
- 4) Emergency Shut Down Sequence
 1. Main breaker opens
 2. Generator/overspeeds
 3. Wicket gates begin to close
 4. Bearing oil pumps will have battery backup to continue lubrication during overspeed until the unit stops rotating.
 5. Conditions for emergency shutdown.
 - a) protective relay signal
 - b) grid failure
 - c) manual emergency stop push button
 - d) contactor opens while running
 - e) generator fault level 2
 - f) transformer neutral overcurrent
 - g) generator neutral overcurrent
 - h) generator differential overcurrent
(acutally a sum of the currents not equal to zero method)

- i) undervoltage
- j) overvoltage
- k) voltage controlled overcurrent
- m) overfrequency
- n) turbine overspeed

5. Starting Sequence

1. Starting sequence will be both manual and automatic with one button.
2. Clearance signal from all protection and alarms.
3. Synchronize with governor and auto-synch by incrementally adjusting the wicket gate.
4. Close breaker.
5. Increase power by opening wicket gates which are controlled by diversion water level.

The contractor will make a substantial effort, but not guarantee to successfully develop an auto restart. The proposed plan at this time is:

- a) An emergency stop would be performed
- b) The computer would check the cause of fault.
- c) If the faults were certain line faults, the computer would restart the system and close the breaker if the faults cleared.
- d) The control would then return to water level.
- e) If the faults did not clear after 5 to 10 minutes or if unacceptable faults tripped the unit, or if more than three trips are received in one hour, it would shut down.

Alarms

- 1) Alarm only signals will be sent under the following conditions:
 - a) Hot bearing level 1
 - b) Generator fault level 1
 - c) Bearing oil high or low

Telemetry System

1. The telemetry system will be centered around a computer similar to Scotts Flat project. The system will have the following features:
 - a) Video monitoring presentation of alarms and analog signals.
 - b) Automatic telephone dialing to operators and others of alarms and shut downs.

2. The computer will monitor:
 - a) All emergency stop signals
 - b) All normal stop signals
 - c) All alarm signals
 - d) Status of turbine isolation valve.
 - e) Wicket gate position.
 - f) Water level
 - g) Bearing temperature
 - h) Kilowatts 0 to 1000
 - i) Kilovars 1000 to 0 to +1000
 - j) Speed RPM 0-2000
 - k) Power Factor 50% to 0 to +50%
3. The computer may be accessed over the telephone by another computer or by remote telephone.
 - a) If by computer all computered monitored information can be accessed by the remote computer.
 - b) If by voice the computer will audibly state alarm conditions and kilowatt production.

Other Miscellaneous Signals

1. Initial conditions
 - a) Emergency stop - not active
 - b) Normal stop - not active
 - c) Low bearing oil flow and turbine spinning
 - d) Turbine isolation valve open.
2. Turbine isolation valve closed.
3. Oil pump running.
4. Apply field.
5. Contactor open.
6. Auto/manual sync.
7. Auto water level control.

Motor DC System

1. The DC system will provide emergency back-up power to the following:
 - a) computer and telemetry controls
 - b) turbine isolation valves
 - c) oil pump
 2. The valve motors shall be 240 volt single phase. AC power through an automatic transfer switched inverter shall be supplied.
- (May change to a DC system)

3. The DC system shall have sufficient capacity to operate the valve through two cycles and the oil pump for two hours.
4. The DC system will be 120 volts.
5. The batteries shall be a deep cycle type suitable for the service.
6. The status of the DC system will be monitored and alarmed.

Control DC System

1. Isolated from motor system to prevent motors from interfering with computer controls.
2. Automatic transfer switch from line to inverter in less than 11 milliseconds to insure proper and continuous computer operation.
3. Sufficient DC power to run computer and telemetering for two hours or more.
4. Computer grade non-interruptable power system.

Diversion Control Cables

1. The control cables for the water level signal from the diversion to the powerhouse will be two twisted pairs installed in 1 1/2 PVC buried conduit.
2. Pull boxes will be installed at maximum intervals of 500 feet.
3. If any of the conduit must be installed exposed, the conduit will be schedule 40 galvanized metal.

ITEM 8 - ACCESS ROADS

Description:

There is approximately 2.5 miles of access road to the diversion and 1100 feet to the powerhouse. Permanent, all-weather gravel access roads will be developed to the diversion and powerhouse. The roads will be approximately 10 feet wide, with the gravel layer six inches thick.

Drainage:

Culverts will be installed where necessary.

Road Grade:

The centerline road grade will not exceed 20%.

Encroachment Permits:

The contractor will acquire encroachment permits for access roads from Linn County for the forebay area and from Willamette Industries for the powerhouse area.

Gravel:

The cost for the access roads is based on acquiring the gravel from a nearby pit from Willamette Industries at no cost to the contractor.

ITEM 9 - SWITCHYARD/POWERLINE

Main Power Transformer:

1. Size 1000 KVA
2. 4160 VAC, 6 Delta to 20,784 VAC Wye phase to phase
3. Neutral on 20,784 side will be low Z grounded
4. Outdoor type, pad mounted, oil filled
5. Underground entrance of 20KV
6. Underground entrance of 4KV
7. Four taps will be provided, two above and two below on 2 1/2% increments.
8. Oil level indicator.
9. Automatic pressure release
10. Temperature indicator with an alarm and a trip contact.
11. Oil drain valve with a sampling device.
12. Non PCB type oil.
13. Manufacturer shall test transformer and furnish a copy of the test results.

Station Power:

1. The station power will be provided through either a single 10KVA 3Ø or three 5KVA 1Ø 120/240V to 4160V pole mounted transformers.

Switch & Surge Arrestors

The switchyard will include pole mount 20 air switch and surge arrestors.

Transformer Pad

The transformer pad will be concrete with a ground grid.

Grounding

The yard inside the fence and the fence will be grounded.

Utility Metering

PP & L cabinet and related transformers are not included in the RTA contract.

High Voltage Switch

1. Three phase, 60Hz, AC
2. 20,784 VAC phase to phase
3. Switch will be pole mounted

The powerline from the switchyard to the County Road (approximately 1200 feet) will be designed for 20,000 volts in accordance with the Government Order 95, National Electric Code and applicable State of Oregon codes. The powerline will also be constructed in accordance with the latest Raptor Proof requirements and follow the penstock route.

The powerline will be as approved by the utility company. An air-disconnect switch will be furnished at the terminous pole near the County Road.

ITEM 10 - INSTALLATION & COMMISSIONING

All equipment will be installed in accordance with the manufacturers' recommendations and standards. Prior to starting the plant all manufacturers recommended tolerances will be verified in order to validate warranties.

All pre-parallel testing will be performed in order to assure the utility that the adequate protective relays and devices have been installed. After the utility has approved the pre-parallel testing the system will be brought on line to generate power.

PERFORMANCE TESTING:

The performance test of the generating unit and each other portion of the project shall be designed so as to ensure that the work meets the equipment guarantees including the power output guarantees. The power output testing performed by the Contractor will be limited to the test described herein. The Owner may perform any additional tests he determines necessary.

Complete start-up, shutdown, load pick up and load inspection tests will be carried out to verify the regulation performance guarantees.

The above test will be carried out in addition to the standard mechanical and electrical checks and tests and the mechanical run and commissioning tests for this type of generating equipment.

Complete operational tests will be carried out on all mechanical and electrical service auxiliaries.

The tests will be carried out in accordance with requirements of the following standards and any other standards customarily followed in accordance with the highest standards generally prevailing in the industry:

IEC	AGMA
ASME	ASTM
NEMA	IEEE
CMA	ANSI

Water flow measurements will be made based on a measurement at the intake structure and standard weir formulas, or by Ott Water. Ott Water costs will be paid by the Owner.

Pressure or head measurements will be made with commercially available three inch diameter pressure gages, with the smallest scale available, located at the intake to the turbine.

Turbine efficiencies will be calculated based on flow measurements, pressure measurements, kilowatt meter readings and stated or calculated losses of the generator and other equipment between the meter and the turbine. Turbine efficiency tests will be made at the highest flow rate possible depending on the available water and at two lower flow rates as determined by the Owner.

Utility protective relays will be tested as required by PP & L. All equipment will be demonstrated to be in full operating condition.

OPERATOR TRAINING:

Operators as provided by the Owner will be trained to operate and maintain the plant. The plant will be designed and constructed with the intention of the project being operated by unskilled personnel. The main qualifications of the operator that will be required is that he is reliable and can take directions.

OPERATIONS AND MAINTENANCE MANUALS:

The Contractor will provide O & M Manuals. The O & M Manuals will include:

- a) As-Built Drawings of the entire project.
- b) O & M Manuals from the turbine and generator manufacturers', including maintenance instructions.
- c) Manufacturers' catalog and technical information for each device used in the project.

- d) Operator's instructions for all starting and shut down procedures.
- e) Daily, weekly, monthly and annual maintenance procedures.
- f) Outline for data to be collected.
- g) Normal and abnormal limits on monitoring devices.

GENERAL

CLEARING AND PIONEERING

The clearing and pioneering work will include all work necessary for the subsequent phase of work. Merchantable timber will be cut, trimmed and decked for handling by the Owner. Brush will be pushed to the site of the alignment of the canal or pipeline. Where brush is piled it will be burned.

REINFORCED CONCRETE

CONCRETE:

1. Concrete design, mixing and placing will meet the codes and standards set forth by the American Concrete Institute (ACI) and the American Society for Testing and Materials (ASTM).
2. All concrete test samples and concrete testing will be in accordance with ASTM C 172, ASTM C31 and ASTM C 39.
3. Compressive field strength will be no less than 3000 psi after 28 days (unless noted otherwise).
4. Concrete slump will be between 2 to 4 inches.
5. Horizontal construction joints will be prepared to expose clean, solidly embedded aggregate over the entire joint surface to an amplitude of 1/4 inch. All laitance and standing water will be removed.

REINFORCEMENT:

1. Reinforcing steel will be deformed bars and conform to ASTM A-615 Grade 40 less than #5; Grade 60 #5 or larger (unless noted otherwise).
2. All detailing fabrication and erection of reinforcing steel, unless noted otherwise will follow the ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (the latest edition).

3. All dimensions shown for location of main reinforcing steel and noted "clear" (or clr.) are to the face of the bar and denote clear coverage.
4. Walls will be reinforced at tops, bottoms, corners, edges, intersections and intermediately, so as to form a continuous grid work tying all parts of the concrete or block structure together.
5. Splices in continuous reinforcing will have laps of 40 bar diameters (5 X bar #) minimum in masonry construction and 32 bar diameters (4 X bar #) minimum in concrete construction. Except where shown otherwise, horizontal laps in adjacent bars will be staggered 5'-0" minimum.
6. Provide reinforcing steel dowels at construction joints. Dowels will be same size and spacing as reinforcing steel. See concrete note #5.
7. Unless specifically noted otherwise, concrete coverage will be:

Concrete cast against ground (except slabs) 3"	
Concrete to be in contact with ground weather or water, but is placed against forms:	
#5 or larger	2"
less than #5	1 1/2"
Concrete not to be exposed to ground, weather or water	
Beams and Columns	1 1/2"
Slabs, Joists, Walls	3/4"

FORMWORK/FALSEWORK:

1. All formwork will meet the safety requirements set forth by the Division of Occupational Safety and Health (OSHA).
2. Formwork will be removed only after the concrete has sufficient strength to support its own weight and the weight of loads placed upon it.

STRUCTURAL STEEL:

STEEL

1. Unless otherwise noted, structural steel will conform to ASTM A-36 and bolts will conform to ASTM A-307 (cadmium plated, unless noted as stainless steel).
2. Bolt holes will be 1/16" maximum larger than bolts.
3. Shop drawings will be submitted before fabrication.
4. Structural steel will be fabricated and erected in accordance with the latest AISC Specifications and Code of Standard Practice.
5. Welding will be electric arc in accordance with AWS Standards, using only certified welders.
6. Painting
 - a) Cleaning, removing all dirt, grease, oil, loose rust or other loose material. Light sanding, sand blasting or an acid wash may be necessary.
 - b) Prime - One coat of Rust-Oleum 2169 red primer.
 - c) Finish Coats - Two coats of Rust-Oleum Industrial Coatings.

COMPACTION DENSITY STANDARD:

Standard Proctor ASHTO T-99 or ASTM D698

APPENDIX 1

Gilke's Contract Including RTA Letters

A P P E N D I X 2

GENERATOR SPECIFICATIONS

60823 - LACOND I.D. - PHOTOS

- 1- Main Canal Diversion
- 2- d/s from Diversion
- 3- Headgate
- 4- flume
- 5- Penstock under snowpeak road.
- 6- Crabtree Cr. d/s from snowpeak Bridge
- 7- under snowpeak bridge
- 8- Gage site
- 9- Slide Siphon
- 10- Siphon expansion joint
- 11- Power Diversion (1)
- 12- Power Diversion (2)
- 13- Power Diversion (3)



2

NOV. 1985

NOV. 1985

NOV. 1985

2. Crabtree Creek upstream from
Diversion

3

NOV. 1985

NOV. 1985

3. Lacombe I.D. headgate

4

NOV. 1985

NOV. 1985

4. Lacombe ID flume in main canal

5

NOV. 1985

NOV. 1985

NOV. 1985

5. Penstock across Willamette
Industries Snowpeak Road



6

NOV. 1986

NOV. 1986

6. Crabtree Creek looking downstream
from Snowpeak Bridge

7

NOV. 1986

NOV. 1986

NOV. 1986

7. Crabtree Creek under Snowpeak
Bridge

8

NOV. 1986

NOV. 1986

8. Crabtree Creek - possible gauge site
- 1.4 miles upstream from Snowpeak
Bridge



9
NOV. 1986

NOV. 1986

9. Inverted siphon - slide area main canal Lacombe I.D.

12
NOV. 1986

NOV. 1986

10. Siphon expansion joint and thrust blocks. Left block needs strap.

11
NOV. 1986

NOV. 1986

11. Lacombe Power Diversion #1

11
NOV. 1986

NOV. 1986

NOV. 1986

12. Lacombe Power Diversion #2



NOV. 1986

NOV. 1986

13. Lacombe Power Diversion #3

NOV. 1986

NOV. 1986

1. Lacombe I.D. diversion on
Crabtree Creek