

30 North Main Street  
West Carthage, N.Y. 13619

1 DEC 16 1981  
DOCKET SECTION  
December 11, 1981

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 North Capitol Street, N.E.  
Washington, D.C. 20426

Re: Ms. Mary Jane Ruderman Hirschey  
Tannery Island Site - Hydroelectric Redevelopment Project: Application for Exemption  
Application: F.E.R.C. Project No. 4908-000 001

Dear Mr. Plumb:

I am respectfully submitting herewith an original and fourteen (14) copies of an application for exemption from license for Project No. 4908-001.

This exemption is sought for a project involving a single development of less than 5 MW installed capacity (total developed capacity at the site) at an existing dam. All real property and riparian rights required to develop this project are under my control.

The submission of this exemption application document culminates a five-year effort on my part to redevelop the Tannery Island site. My efforts dating to 1976 have involved numerous individuals and organizations in a wide range of investigations pertaining to the technical, environmental, economic and financial redevelopment of the site. These specific activities included consultation with the New York State Energy Research and Development Authority, the Polytechnic Institute of New York - Center for Regional Technology, the Federal Energy Regulatory Commission, various equipment manufacturers, and several consulting engineering firms to define both specific and overall aspects of redevelopment. The result of the early investigations were summarized in a reconnaissance level feasibility study issued by the Chicago Regional Office of the FERC in February 1980. This report was endorsed by officials at the USDOE National Small Hydropower Program. In response, an application for Title IV loan support under the USDOE Small Hydro Program was filed in December 1980. This application was reviewed and approved. At this time, a specific development and financial plan has been defined and activated for the Tannery Island proposal. The applicant is now in a position to implement the development of this site as soon as all regulatory clearances have been granted. The applicant asserts that this project will best develop and conserve the water resources of the region.

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Federal Energy Regulatory Commission  
Kenneth F. Plumb, Secretary  
12/11/81

2 of 2

The specific development proposal contained in this application represents the result of all previous study and consultation efforts. This proposal is the only redevelopment concept endorsed by the owner/applicant and has been derived in close coordination with adjacent owners so that overall site potential can be realized efficiently, economically and timely without conflicting with any existing or proposed development plans of adjacent owners on the Black River. Specifically, this Applicant has initiated and maintained a cooperative dialogue with the Crown-Zellerbach Corporation, the Climax Manufacturing Corporation, and the owner and representative of the Long Falls Project (FERC No. 4636).

Please do not hesitate to contact us if additional information or clarification is required.

Respectfully submitted,

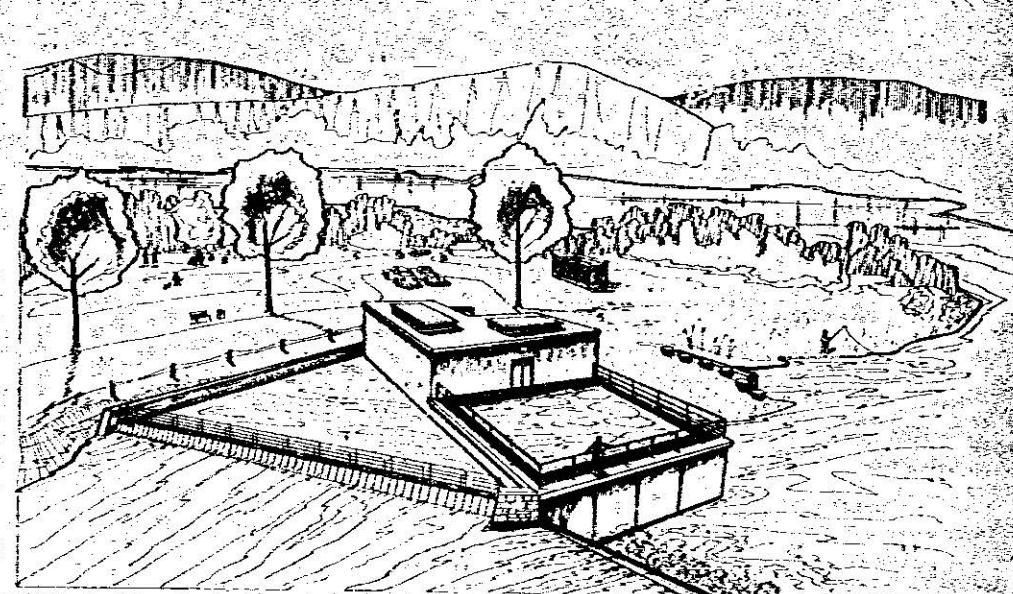
*Mary Jane Hirshey*  
Ms. Mary Jane Hirshey

MJH/kp:encls.

CC: S. Burke  
Carter Strickland, Esq.  
David Ward, Esq.

ORIGINAL

REC'D 18 FEB 1984  
FEDERAL ENERGY  
REGULATORY COMMISSION



FEDERAL ENERGY REGULATORY COMMISSION • APPLICATION FOR EXEMPTION FROM LICENSING

Mary Jane Hirschey, Applicant  
Tannery Island Small Hydroelectric Development Project

REC 10-112-34

FEDERAL ENERGY REGULATORY COMMISSION  
APPLICATION FOR EXEMPTION FROM LICENSING  
FOR PROPOSED HYDROELECTRIC FACILITY  
MS. MARY JANE RUDERMAN HIRSHEY  
TANNERY ISLAND SMALL HYDROELECTRIC REDEVELOPMENT PROJECT

Applicant: Ms. Mary Jane Ruderman Hirshey  
30 North Main Street  
West Carthage, New York, 13619

Date: December 11, 1981

F.E.R.C. PROJECT NO. 4908-001

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Mary Jane Ruderman Hirschey

Project No. 4908-001

APPLICATION FOR EXEMPTION OF SMALL HYDROELECTRIC  
POWER PROJECT FROM LICENSING

TANNERY ISLAND PROJECT  
TOWN OF WILNA, VILLAGE OF CARTHAGE  
JEFFERSON COUNTY, NEW YORK

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I. INTRODUCTORY STATEMENT

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Mary Jane Ruderman Hirschey)

Project No. 4908-001

APPLICATION FOR EXEMPTION OF SMALL HYDROELECTRIC  
POWER PROJECT of 5 MEGAWATTS OR LESS

PURSUANT TO THE FEDERAL POWER ACT AS AMENDED  
FOR THE PROPOSED  
TANNERY ISLAND PROJECT  
ON THE BLACK RIVER IN THE TOWN OF WILNA  
JEFFERSON COUNTY, NEW YORK

(1) Ms. Mary Jane Ruderman Hirschey (Applicant), an individual, residing at 30 North Main Street, West Carthage, New York 13619, herewith applies for an exemption, pursuant to the Federal Power Act, 16 U.S.C. Section 791, et seq., as amended by the Public Utilities Regulatory Policies Act of 1978 and the Energy Security Act of 1980, 16 U.S.C. Section 2705, et seq., and pursuant to the Commission's implementing regulations, 18 C.F.R., Part 4, Subpart K (1980), for a development utilizing the hydroelectric potential created by an existing dam on the Black River in the town of Wilna, Jefferson County, New York, without unduly impeding any existing usage and water rights of this or adjacent sites. Applicant is the owner of or has a guaranteed option for all of the necessary real property interests in the lands involved in this development, including the water rights, flow easements, riparian rights and the real property rights in the dam, conduits, reservoir and mill which are the subject of this application. Applicant seeks an exemption from the requirements of Part I of the Federal Power Act (Power Act) so as to permit applicant to proceed with the repair, reconstruction and redevelopment of the dam and facilities at this site required for the conversion of these facilities to the generation of hydroelectric energy for a development with a proposed capacity of less than 5 megawatts.

The development which is the subject of this application is the project described in the Application for Preliminary Permit heretofore filed by applicant on June 18, 1981 and assigned Project No. 4908-000 by the Commission's Secretary.

(2) The location of the proposed project is:

State or territory:	New York
County:	Jefferson
Township or nearby town:	Wilna
Village	Carthage
Stream or other body of water:	Black River

This project is not currently under FERC license.

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

Ms. Mary Jane Ruderman Hirshey  
30 North Main Street  
West Carthage, New York 13619  
(315) 493-1472.

(4) The exact name and business address and telephone number of the person authorized to act as agent for the applicant in this application is:

Stephen P. Burke  
620 Washington Avenue  
Rensselaer, New York 12144  
(518) 463-4408

David B. Ward, Esq.  
Case & Ward, P.C.  
1050 - 17th Street, N.W.  
Washington, D.C. 20036  
(202) 452-0580

(5) Ms. Mary Jane Ruderman Hirshey is an individual and a citizen of the United States of America. Documentation of all required real property interest and options for the control of flow and required easements on the part of Ms. Hirshey is provided in Exhibit B and the Appendix.

(6) This application for exemption is made pursuant to and in fulfillment of a Notice of Intent to file an application for exemption made by Ms. Hirschev on October 16, 1981.

Project 4908-001 seeks to develop in whole or in part the same water resource which is the subject of a notice of intent to file a major license application filed by the Long Lake Energy Corporation in competition with F.E.R.C. Project No. 4636-000 (Long Falls Project, Carthage, N.Y.) and then subsequently filed on Project No. 4908-000 (Tannery Island Preliminary Permit). Project 4636 does not compete with Project 4908.

The project which the applicant will develop under this Application for Exemption is the best adapted approach to the redevelopment of the "Long Falls Reach" in Carthage and will best develop and conserve the resources of the region. This project respects historical patterns of water power utilization; vested property, water and development rights of other owners; and the environmental constraints associated with the area. Hence, this proposal will in fact better develop, serve and utilize in the public interest the water resources of this reach of the Black River. Specifically, a grant of an Application for Exemption to Ms. Hirschev will ensure the early and timely development of hydroelectric resources herein involved within the timeframes established in the Commission's order granting exemption. Ms. Hirschev is ready, willing and able to proceed forthwith with the repair, reconstruction and redevelopment required for the conversion of these facilities to the generation of hydroelectric energy.

Ms. Hirschev presently possesses or has guaranteed options to purchase all of the requisite property rights, interests and titles necessary to proceed forthwith with the redevelopment of this site and necessary to obtain the requisite permits required for such redevelopment from the State of New York and from the local authorities. In contrast, on information and belief, Long Lake lacks the financial resources to itself proceed with any development in the Long Falls reach and would have to receive the necessary capital from speculative

activities. Since the Tannery Island site is an already improved site, Long Lake would not be eligible to receive the federal powers of eminent domain otherwise available to a licensee under Section 21 of the Power Act. Long Lake therefore is and will be unable to meet the requirements of Section 9(b) of the Power Act, to wit, provide:

Satisfactory evidence that it has complied with the requirements of the laws of the State....within which the proposed project is to be located with respect to bed and banks and to the appropriation, diversion and use of water for power purposes....

Further, Long Lake would be ineligible to receive the requisite permits and licenses to develop the site for hydroelectric purposes under State law because they lack requisite property interests in the site. See McKinney's Consol. Laws, Title 17, Sections 15-0501 3.a., 15-0503 1., 15-1705, 15-1707 5, and 15-1729 2, 3, 4 and 5.

Maximum utilization of the water resources of this reach of the Black River will best be achieved by exempting the Tannery Island project.

Wherefore, applicant respectfully prays for the timely issuance of an order granting exemption in conformance with the terms of this application and the applicable regulations of the Commission.

Respectfully submitted,

*Mary Jane Ruderman Hirshey*

Mary Jane Ruderman Hirshey

Dec 10, 1981  
Date

STATE OF NEW YORK )  
                      ) SS:  
COUNTY OF RENSSELAER)

I, MARY JANE RUDERMAN HIRSHEY, do depose and state that I am a citizen of the United States of America and a person acting as an individual; the contents of this application are true to the best of my knowledge or belief; that I have signed this application this - 10th - day of December 1981; that all material, information and exhibits contained therein are true to the best of my knowledge or belief and that I, MARY JANE RUDERMAN HIRSHEY, fully subscribe to the submission of this application.

*Mary Jane Ruderman Hirshey*  
Mary Jane Ruderman Hirshey  
30 North Main Street  
Carthage, New York 13619

*Kathleen C. Patterson*  
Notary Public

KATHLEEN C. PATTERSON  
Notary Public, State of New York  
Qualified in Rensselaer Co.  
My Commission Expires March 30, 1982  
# 4522478

**CERTIFICATE OF SERVICE**

I hereby certify that I have this date served this exemption application document upon each person designated on the official service list filed by the Secretary in this proceeding in accordance with the requirements of Section 1.17 of the Rules of Practice and Procedure, and upon the individuals designated in the Notice of Intent filed by the Competing Applicants, in Project No. 4908, which project the Commission has declared to be a competing application to the development involved herein, and to the party granted intervention in this proceeding.

Dated at Washington, D.C. this 16 day of December 1981.



David B. Ward, Esq.  
1050 - 17th St., N.W.  
Washington, D. C. 20036

Notary Public

EXHIBIT A

PROJECT DESCRIPTION

1. Site Description
2. Background Information
3. Existing Civil and Mechanical Features
4. Proposed Configuration
5. Description Summary

EXHIBIT A

DESCRIPTION

1. SITE DESCRIPTION

Mary Jane Hirschey is the owner of an existing dam, hydraulic turbines and appurtenant facilities on the Black River in the Village of Carthage, Township of Wilna, Jefferson County, New York. The original facilities, constructed in 1830, historically provided the hydraulic drive for a pulp mill plant.

The proposed project involves a modernization and expansion of an existing inoperative hydropower facility. The Tannery Island Hydro site is one of the oldest and most unusual in the United States. The site is situated at the center of a series of dams, weirs, and industrial operations. An additional drawing has been included to clarify site location and the project boundary (Exhibit B - Sheet 1). Tannery Island, located in the Village of Carthage, 75 miles northeast of Syracuse and 15 miles east of Watertown, is on the Black River.

The island, the abandoned paper mill, and water and access rights thereto are owned by Ms. Mary Jane Hirschey (nee Ruderman) who is the proposed developer for this small hydropower project.

The site is listed in the FERC publication "Staff Report on Retired Hydropower Plants in the United States", December 1980. The FERC river basin code number is 0414200100M and is listed under the site name Copenhagen. This inventory shows the installed capacity of 1988 KW was retired in 1963 and is listed under Ruderman ownership.

The Tannery Island (Island Paper Company) site is also unique in that unlike many other installations on this reach, this site can produce hydroelectric power in isolation. Exhibit B, Sheet 2 shows the location of the subject site and its associated civil works. This project location does not require the existence of the so-called "State" dam to provide either flow or head. Consequently, the project boundary does not include the "State" dam as this structure is not required for project development and operation.

## 2. BACKGROUND INFORMATION

The site of the Tannery Island Paper Company was one of 16 industries located in a complex of hydropower sites known as the "Long Falls" (a reach of river some 3,500 feet in length with a total drop of 50 feet) in the Villages of Carthage and West Carthage. The Black River, providing this hydro resource, is the second largest river in terms of flow in New York State and is highly regulated. At one point in its history, an extension of the New York State Barge Canal of the Erie System paralleled the river. The Black River originates high in the Adirondacks and flows generally southwest until just north of the Utica-Rome area where it changes direction to flow north along the western edge of the Adirondack Mountains. At Carthage it changes direction once again and flows westerly where it empties into Lake Ontario in the St. Lawrence River.

The Black River has been an important navigational route, water supply source, transportation route for the logging industry, and a primary supplier of hydropower to innumerable mills that dot its shores. Many of these mills remain in operation and are engaged primarily in the forest products industry. In almost all cases, these mills have converted from mechanical power to hydroelectric. In the case of the Island Paper Company, a portion of its mechanical power was retained to operate chipping and grinding equipment, the rest was used for hydroelectric production. After the mill closed in 1934, the electric portion continued in operation to supply the entire electric needs of the Village of Copenhagen until 1949. Electric power production continued until 1963. Hence, the paper company derived both mechanical and electrical power from a hydro installation at the site.

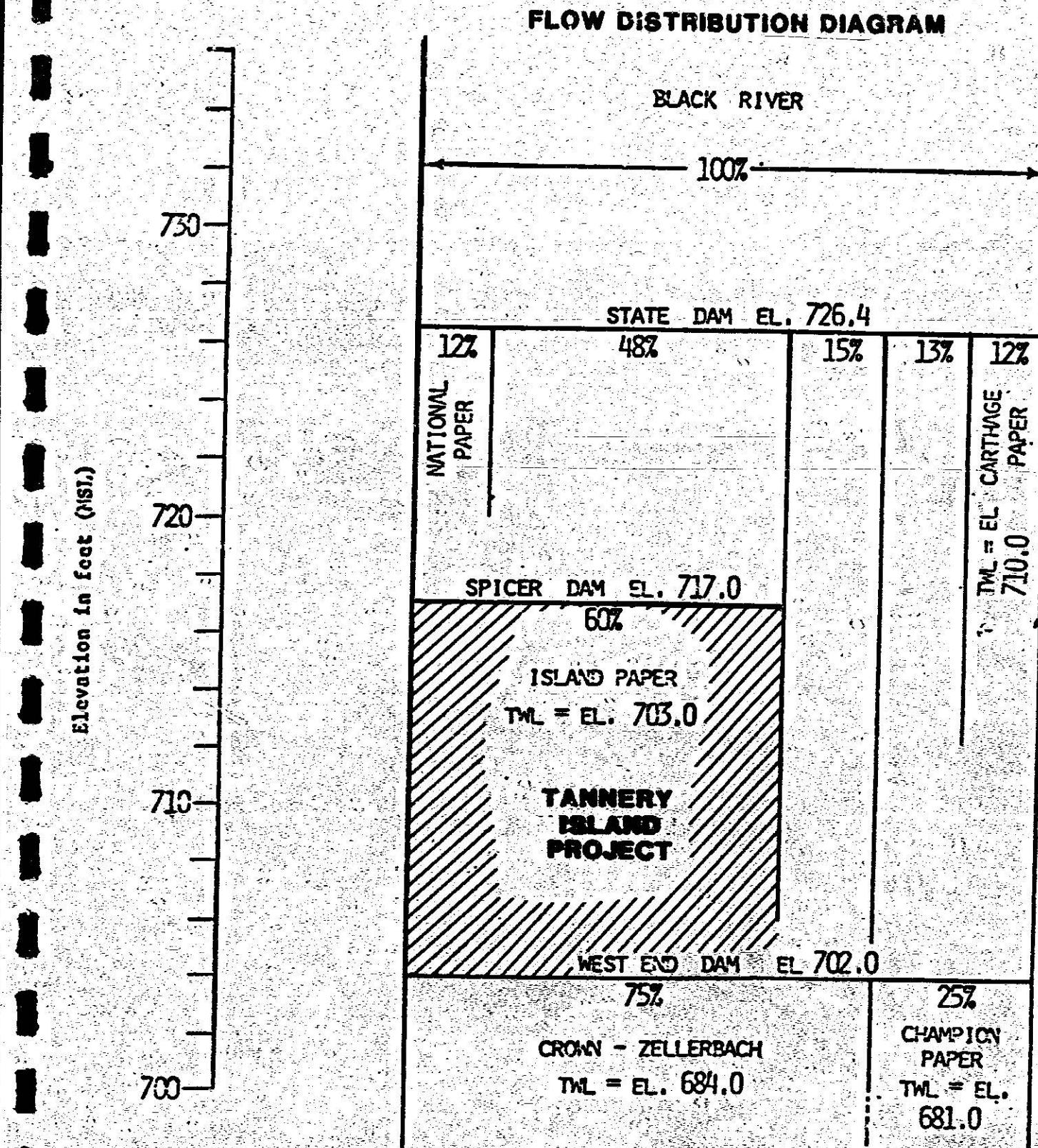
The original dam was constructed in 1830 and the present dam was reconfigured in 1914, developing an average head of 14 feet. The existing "State Dam" at the head of the rapids was constructed in 1854.

The site relates to a complicated overall configuration of sites which have a long history of hydropower application. It is of great importance to note that an agreement dating to 1925 has been the basis for flow allocation among the various owners situated along the Black River in the Villages of Carthage and West Carthage. A recognition of this longstanding agreement between the various owners is a crucial point in this application for exemption from licensing. The following diagram (Exhibit A-Sheet 1) shows the sites along this reach with respect to elevations and the percentage of flow allocated to each.

At this time, the Tannery Island Paper Company is allocated approximately 60% of the flow (see Allocation Diagram Exhibit A-Sheet 1). The drainage area of the "Long Falls" section is comprised of 1,807 square miles and results in an average annual total river flow of 3,800 cfs. The site flow duration curve is depicted in Exhibit A-Sheet 2. The MA7CD10 flow value is 811 cfs for the Black River at Carthage.

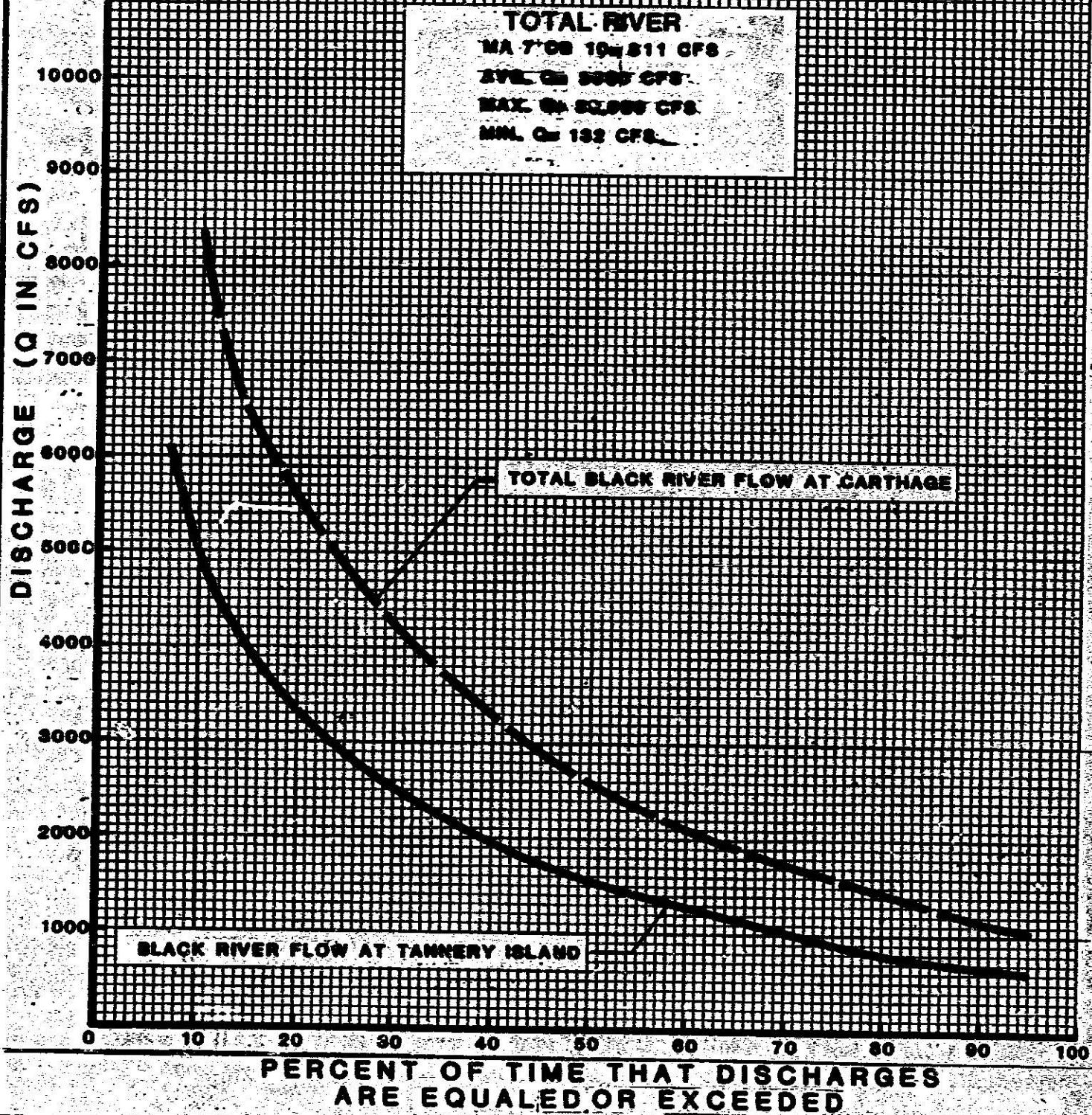
In 1925, following a series of protracted legal disputes, an agreement was entered into by all property owners on this reach of the Black River for purposes of flow apportionment. This agreement remains in force and serves as the basis for the Hudson River-Black River Regulating District's Annual Assessment for maintenance of upstream storage flood control facilities.

# FLOW DISTRIBUTION DIAGRAM



ALLOCATION OF WATER RIGHTS, CARTHAGE, N.Y.

Source: Hudson River-Black River  
Regulating Board



**TANNERY ISLAND SMALL HYDROELECTRIC  
 REDEVELOPMENT PROJECT  
 EXEMPTION APPLICATION**

**FLOW  
 DURATION  
 CURVE**

**EXHIBIT  
 A  
 SHT. 2**

### 3. DESCRIPTION OF EXISTING CIVIL AND MECHANICAL FEATURES

The photo map (Exhibit B-Sheet 1) represents existing features for the Black River flow course through the Villages of Carthage and West Carthage. The plan sketch (Exhibit G-Sheet 1) provides supplementary detail of the civil configuration at the former mill and the configuration of the proposed generation facility.

The 15.8 foot gross head at the site is formed by three retaining walls/dams which direct a portion of the river flow toward the forebay area. The "State" Dam at the head of the rapids is not an essential civil feature for this project. The State Dam varies from about four feet high at the west end to about 15 feet high at the east side and serves to redistribute flow from the natural channel (on the Tannery Island or east side of the river) to both east and west banks. This dam is hence not required for the provision of either head or flow to the site under consideration and has been excluded from the project boundary.

The most significant structure is located at the forebay area. This structure is labelled "A" on Exhibit B-Sheet 1. There is little documentation on this structure although it has been depicted on a series of forebay drawings produced between 1896 and 1902. This dam is thought to have had extensive reconfiguration work completed in 1914. This retaining wall/dam is a concrete gravity structure about 125 feet in length with a 125 foot spillway. The crest has a clear elevation of approximately 717.9 ft. (USGS-MSL datum). The other end is integrated to the forebay via an open flume providing water for a series of existing turbines, several of which will be refurbished and placed in service. The dam is of cyclopean masonry comprised of local gneiss rock with a concrete cap.

The forebay forms the western end of the retaining wall/dam. The former trash rack is integrated into this structure. The impoundment side of the rack is now clogged with accumulated trash, silt and weedy overgrowth.

The open flume (water box or wheel pit) is separated from the forebay area by a line of steel head gates 52 feet in width and 18 feet in height. The metal frames are in good condition with the exception of mild corrosion at the water line. The eight gateboards are in poor condition, however, the rack and pinon equipment is reusable. The flume structure is composed of a steel frame with poured concrete panels and a wooden floor supported on steel beams. This structure is raised above the riverbed and does not evidence any water leakage, however, there is corrosion of the steel frame members. The tailrace appurtenant to the open flume is excavated in the river bed to a depth of 10 feet.

The open flume contains 10 S. Morgan Smith turbines, having a total of 17 runners. Three turbines (two double-runner and one single runner) are ganged together in three groups to turn individual shafts totaling 1,320 horsepower. An isolated double runner turbine powers a fourth shaft. These turbines discharge to the river directly below the open flume. A penstock of 72 inch diameter and 60 feet in length emanates from the rear section of this flume and delivers water to two additional turbines (having a total of three runners) in adjacent buildings. These secondary turbines discharge into the river through a second tailrace beneath the existing building. The discharge elevation is 703.00 feet.

The remaining two structures (so-called "Spicer Dams", labeled "B" and "C" on Exhibit B-Sheet 1, are concrete gravity type structures with full overflow sections. Dam "B" bridges between Tannery Island and Wind Island and is approximately 115 feet in length with a crest elevation of 717.97 feet. Dam "C" spans approximately 290 feet between Wind Island and Devil Island and also has a crest of 717.97 feet. These dams vary between 2 and 6 feet in height. The Black River then cascades over a set of rapids formed by a rock streambed until it enters a pool at elevation 702 formed by the West End Dam downstream of the project limits.

The existing retaining walls, dams, forebays, headgates, and turbines are considered to be reusable with some rehabilitation work required. The paper plant itself is considered to be in very poor condition and will be demolished. At the present time the existence of these structures is considered to be a public hazard. This redevelopment will demolish, remove and reutilize the area formerly used for mechanical pulp grinding operations.

The project will utilize a run-of-river mode of operation with no storage. The area between the State Dam and the structures described above provides negligible impoundment. The surface area is approximately 8.5 acres and has a nominal storage capacity of 60 acre feet. The normal pool elevation of this area is 717.97 feet (USGS-MSL).

An existing Niagara Mohawk Power Corporation transmission line (23 KV) traverses the site and provides the point of grid connection.

#### 4. PROPOSED CONFIGURATION

The proposed configuration calls for the reuse of existing turbines and the addition of a new turbine. The plan for the integration of this equipment is shown in Exhibit G-Sheets 1, 2, 3 and 4.

##### Hydroelectric Equipment

The existing open flume configuration will be retained and will service the existing horizontal Francis units (Units A-1, A-2, A-3 and B - see Exhibit G-Sheet 2).

The new capacity to be installed will be adjacent to the existing flume in the present location of the paper mill ruins. It will consist of the following: A single full Kaplan unit.

Nominal unit capacities are shown in Table A-1.

##### Electrical Equipment:

"A" generating units (turbine units A-1, A-2 & A-3) will feed through individual 500 KVA, 4,160 volt circuit breakers to a 4,160 volt station bus.

"B" generating unit (turbine unit B) will feed through 300 KVA, 4,160 volt circuit breaker to a 4,160 volt station bus.

"C" generating unit (turbine unit C) will feed through a 3,000 KVA, 4,160 volt circuit breaker with synchronizing relays to the 4,160 volt station bus.

The station bus will feed a 10 KVA, 4,160 volt/480-120 volt station transformer.

EXHIBIT ATABLE A-1

UNIT	LOCATION	DESCRIPTION	RATED Q	RATED H	TURBINE SPEED (RPM)	RATED HP	NOMINAL RATED KW	PROPOSED GEN. RATING & TYPE	INSTALLED
<u>Existing Units:</u>									
A-1	Open Flume	2-DR.-30" SMS Horiz. Francis Turbines and 1-SR.-30" SMS Horiz. Turbine Ganged on Common Shaft	334 cfs	14.0'	162	424	320	400 KVA-Induction - 4160 volt, 3 $\phi$ , 60 Hz.	
A-2	Open Flume	2-DR.-30" SMS Horiz. Francis Turbines and 1-SR. -30" SMS Horiz. Turbine Ganged on Common Shaft	334 cfs	14.0'	162	424	320	400 KVA-Induction - 4160 volt, 3 $\phi$ , 60 Hz.	
A-3	Open Flume	2-DR.-30" SMS Horiz. Francis Turbines and 1-SR.-30" SMS Horiz. Turbine Ganged on Common Shaft	334 cfs	14.0'	162	424	320	400 KVA-Induction - 4160 volt, 3 $\phi$ , 60 Hz.	
B	Open Flume	1-DR.-30" SMS Horiz. Turbine 1-SR.-30" SMS Horiz. Francis Ganged on Common Shaft	200 cfs	14.0'	162	318	240	300 KVA - Induction 4160 volt, 3 $\phi$ , 60 Hz.	
<u>Proposed New Unit:</u>									
C	New Powerhouse	3,400 MM Horiz. full Kaplan by L-T	2,330	14.0'	115	3,150	2,450	3000 KVA, Synchronous, 4160 volt, 3 $\phi$ , 60 Hz.	
<u>Plant Total</u>									
			3,532	14.0'	N.A.	4,740	3,650	4500 KVA	

Legend:

SMS = S. Morgan Smith Co. (McCormack Runner)  
 DR = Double Runner  
 SR = Single Runner  
 L-T = Leffel-Tampella Corp.

Main transformer will be 5,000 KVA, 4.2/23 KV assembly comprised of 3 single-phase unit transformers suitably interconnected with appropriate isolating breakers and protective relays.

All generating units, transformers and switchgear will have appropriate protective relaying.

Summary

Total average annual energy production is estimated to be 16,900,000 KWH.

### Other Aspects

The project would reactivate a former hydropower installation with the intention of maximizing the potential of the river for the particular channel under consideration within the constraints resulting from a historical scheme of flow allocation (i.e., legally binding distribution of water rights), present day demands for competing use of water, and environmental considerations (which support the case for maintenance of historic flow patterns). The development scheme for this proposal would not effect flows at any other sites on this reach of the Black River. The project boundary does not include water or project works required for the potential future utilization of any of the other head drops on this segment of the Black River.

The project will not involve the construction of any new roads. The Tannery Island and the adjoining lands are well serviced by existing roads which are adequate for the construction and operation of a hydro generating facility at the site.

The project will use existing dams. No new dam construction will be required.

## 5. DESCRIPTION SUMMARY

### DAMS

- Name : Tannery Island Dam - "A" Dam  
Height : Varies from 12 to 14 feet  
Length : 125 feet  
Type : Masonry, Concrete Cap  
Spillway: Full width - uncontrolled
- Name : Spicer Dams (2) - "B" & "C" Dam  
Height : Varies from 2 to 6 feet  
Length : "B" = 115 feet  
"C" = 290 feet  
Type : Gravity Concrete  
Spillway: Full width, Ogee - uncontrolled

### PENSTOCKS None.

### POWER PLANT

Installed capacity (total) 3,650 KW (5 units)

Resultant site operational range  
Minimum flow = 200 cfs (B unit) to  
Maximum flow = 3,530 cfs (5 units)

Turbine Operational Range\*  
A units - Min. flow = 334 cfs  
Max. flow = 334 cfs  
B unit - Min. flow = 200 cfs  
Max. flow = 200 cfs  
C unit - Min. flow = 700 cfs  
Max. flow = 2,330 cfs

Turbine speed  
A & B units (exist.) = 162 RPM  
C unit (proposed) = 115 RPM

Generator speed  
All units = 600 RPM

Estimated annual energy	
annual energy	16,900,000 KWH
Average head(gross)	15.77 feet
Design head	14.00 feet
Turbine type/manufacturer	A & B units - Existing Horiz. S. Morgan Smith Co. C unit - Horiz. Full Kaplan - Leffel-Tampella Co.

\*Note: A & B units will operate at full gate only.

#### IMPOUNDMENT

Normal maximum surface	El. 717.97 (USGS)
Gross storage	60 acre feet
Usable storage	None: Run-of-River operation
Normal surface area	8.5 Acres

#### PLANNED DEVELOPMENT SCHEDULE

Start	May 1982
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Complete	January 1984
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#### POWER MARKET

Electrical energy generated will be sold to the public utility, Niagara Mohawk Power Corporation.

#### TRANSMISSION

The utility intertie will require 400 feet of 23 KV line from the switchyard to the nearest Niagara Mohawk Power Corporation transmission main.

#### FLOW DURATION CURVE (see attached)

A. Gauging Stations	USGS #04260500 (Black River at Watertown, N.Y.)
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B. Period of Record	1920-1980
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C. Design Flow	3,530 cfs (60% of total flow) at 17% exceedance
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**EXHIBIT B**

**III. GENERAL LOCATION MAP**

EXHIBIT B

GENERAL LOCATION MAP

Mary Jane Ruderman Hirschey is the owner or has all the necessary real property interests in the lands involved in this development, including the ownership of the water rights, flow easements, riparian rights and of the real property rights in the dam, reservoir and mill which are the subject of this application.





EXHIBIT B

SHEET 1

JKF DRAWING NO. 5283

DATE : NOV. 1981

REV: 2

BY : DMc

SCALE : AS NOTED  
IF THIS IS NOT 22"x34"  
IT IS A REDUCED PRINT  
SCALE ACCORDINGLY

REDEVELOPMENT PLAN

TANNERY ISLAND  
HYDROELECTRIC PROJECT  
FERC NO. 4808-000

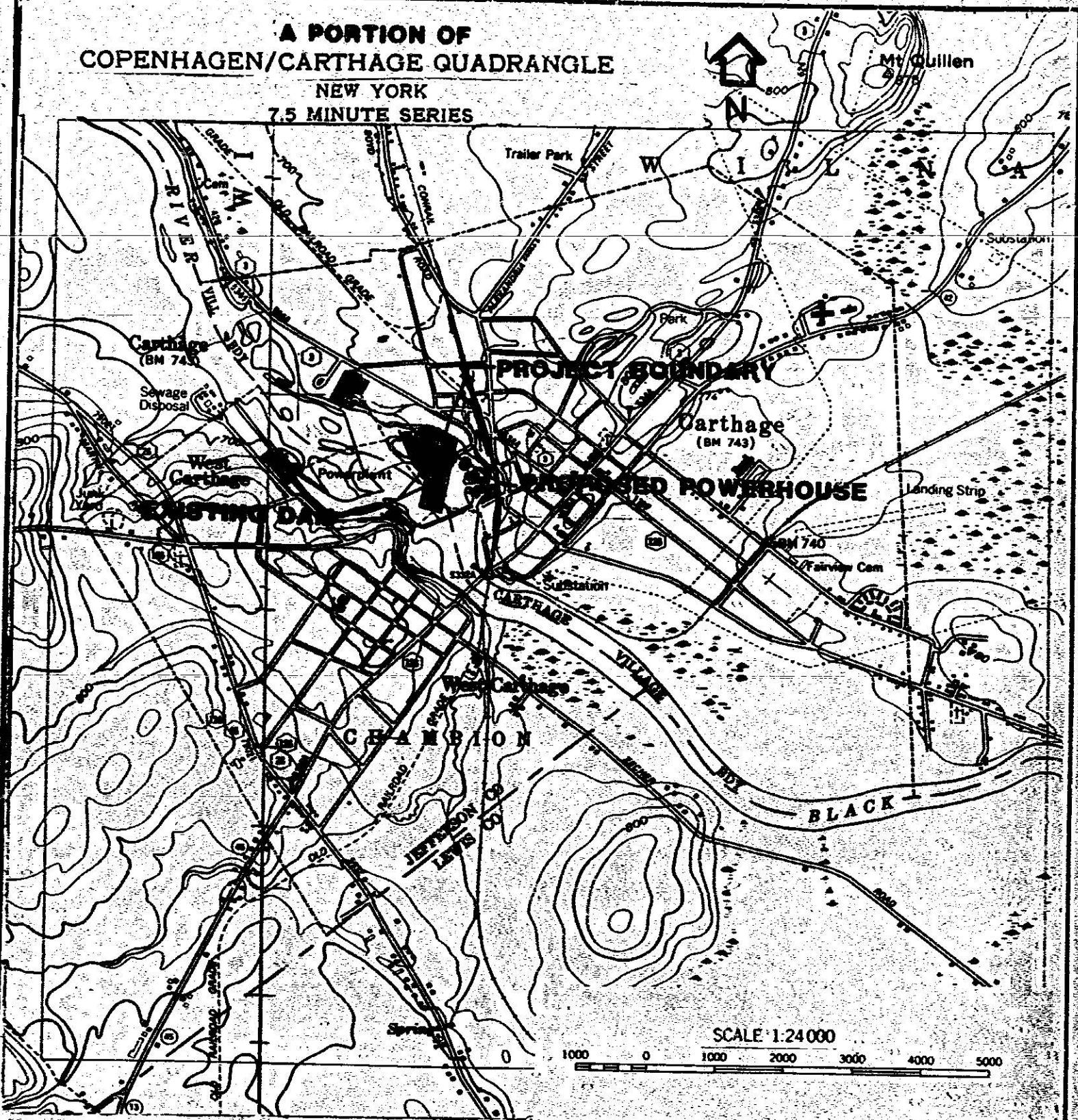
CARTHAGE, NEW YORK

J. Kenneth Fraser and Associates, P.C., Consulting Engineers

THIS DRAWING IS A PART  
OF THE APPLICATION FOR  
THE EXEMPTION MADE BY  
THE UNDERSIGNED THIS  
10<sup>th</sup> DAY OF DEC. 1981

By *Mag. James W. Murphy*  
Title OWNER

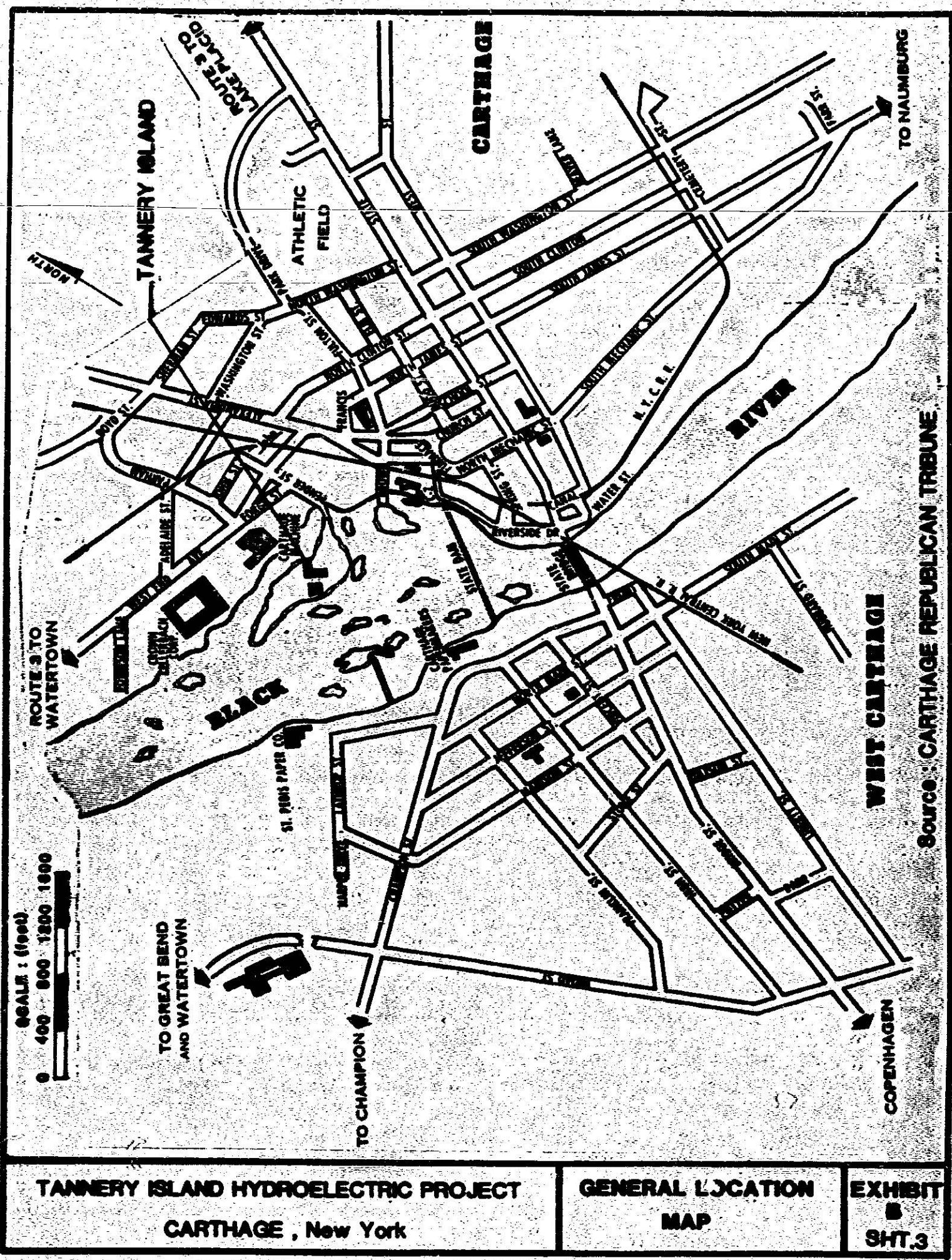
**A PORTION OF  
COPENHAGEN/CARTHAGE QUADRANGLE  
NEW YORK  
7.5 MINUTE SERIES**

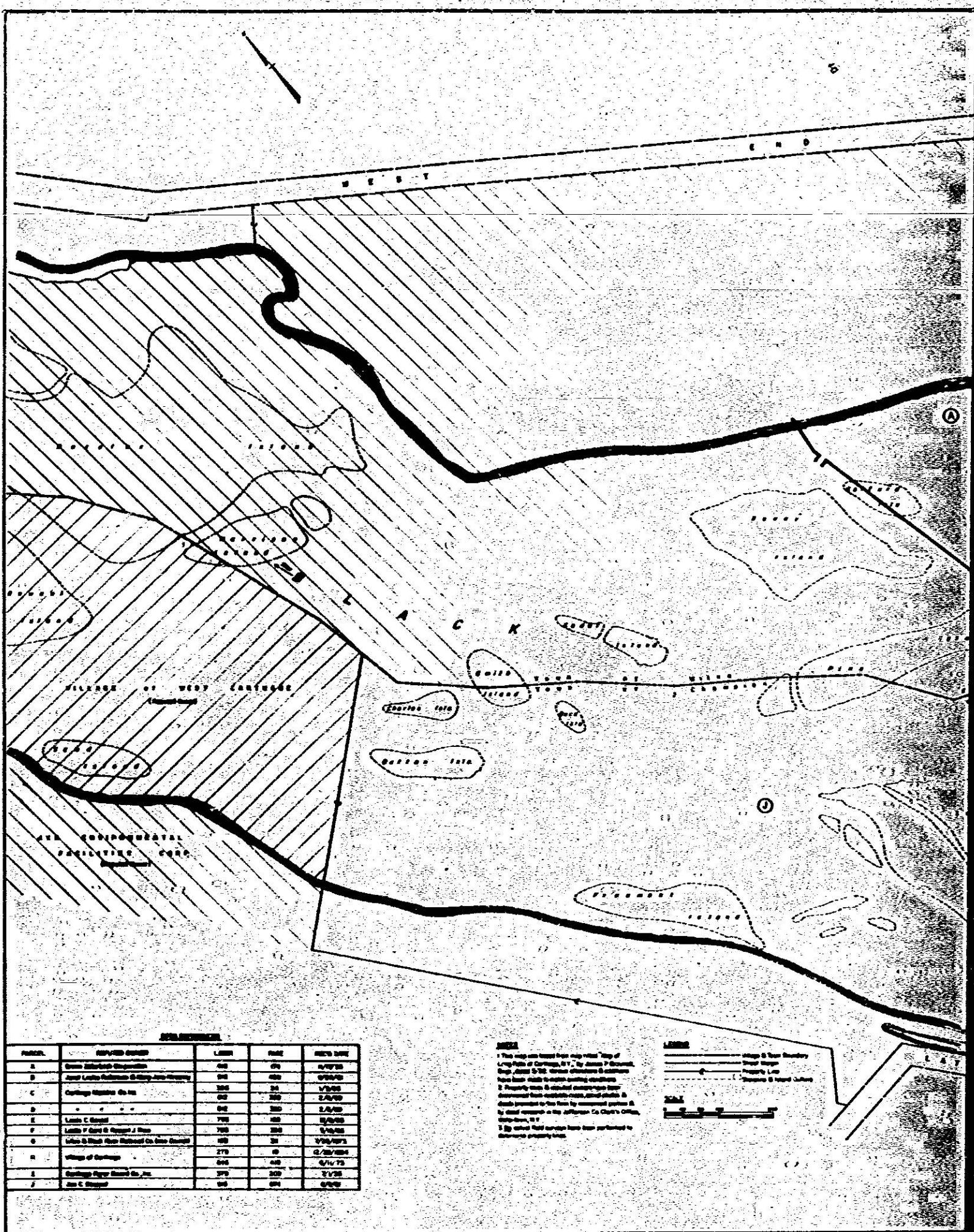


**MARY JANE MIRSCHY, APPLICANT**

**TARMENT ISLAND  
SMALL HYDROELECTRIC PROJECT  
CARTHAGE, NEW YORK**

**EXHIBIT  
B**  
**SHT.2**





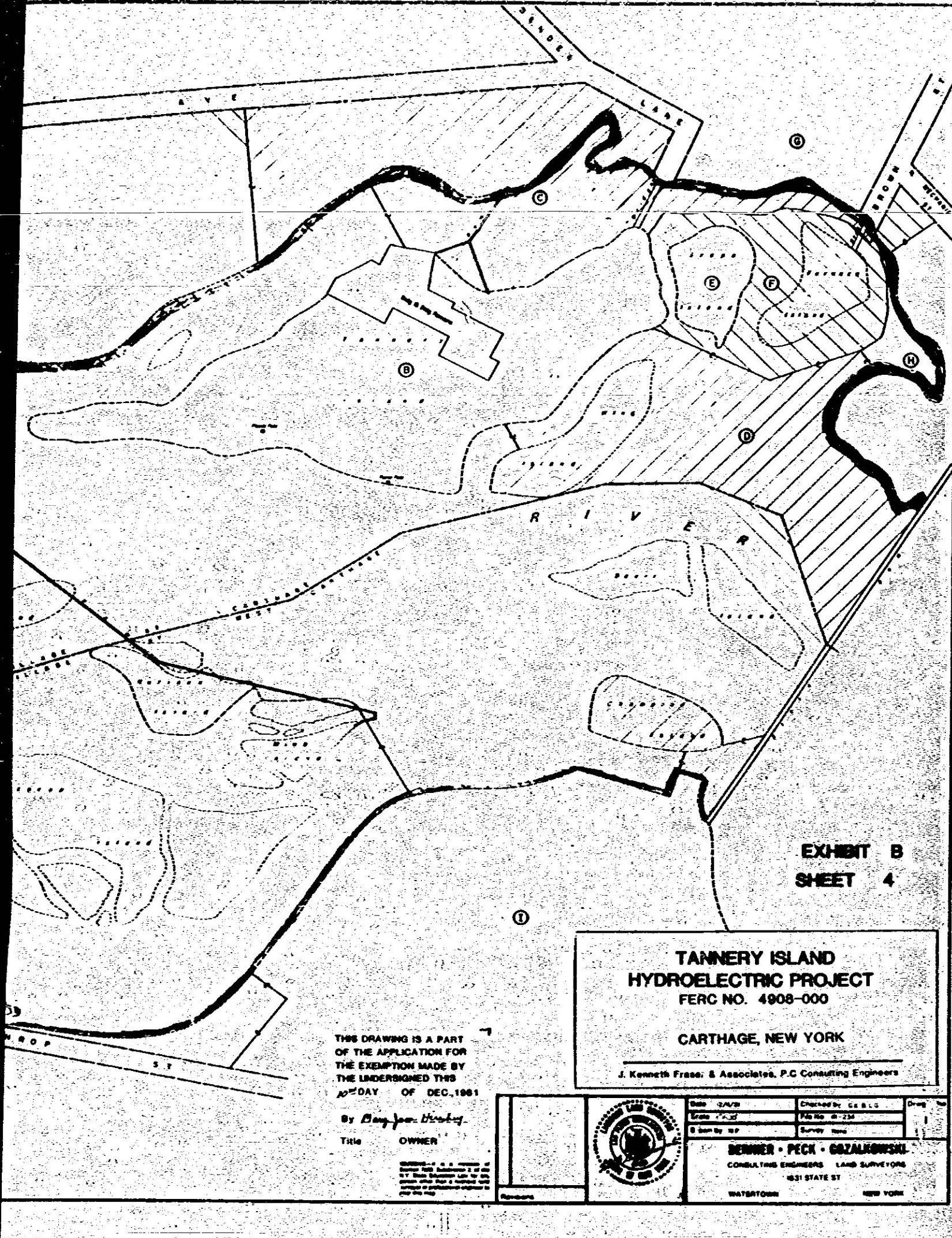


EXHIBIT E

4. ENVIRONMENTAL REPORT

EXHIBIT E  
ENVIRONMENTAL REPORT

1. DESCRIPTION OF PROPOSED PROJECT

1.0 General Description

2. DESCRIPTION OF ENVIRONMENTAL SETTING

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EXHIBIT E  
ENVIRONMENTAL REPORT

1. DESCRIPTION OF PROPOSED PROJECT

1.0 General Description

The proposed development involves both the rehabilitation of existing hydroelectric facilities and construction of new hydroelectric facilities on Tannery Island (formerly Island Paper Co.). Rehabilitation work includes minor repair to the dam at the forebay, renovation of the existing flume and turbines and dredging an area upstream of the dam of accumulated silt and debris. Construction of new hydroelectric facilities would include excavation, construction of an open flume and tailrace adjacent to the existing flume and construction of a new powerhouse. The Tannery Island project will be operated as a run-of-river facility.

2. DESCRIPTION OF ENVIRONMENTAL SETTING

2.0 Project Location

The Tannery Island site is located on the Black River in the Village of Carthage, Town of Wilna, Jefferson County, New York. (See Exhibit B-2 - USGS Quadrangle "Carthage".)

Latitude : N 43° 58' 48"  
Longitude: W 75° 36' 47"

The Village of Carthage on the east side of the Black River and the Village of West Carthage to the west were developed around the hydro industrial area at Long Falls. The population of both villages is over 50% of the Towns in which they are located, indicating the importance of the industries of Long Falls to the development of the community.

Population figures for the area are:

	1 9 7 0	1 9 8 0*
Champion (Town)	4,371	4,056
West Carthage (Village)	2,047	1,824
Wilna (Town)	6,538	6,227
Carthage (Village)	3,889	3,643

(Town totals include Villages)

Currently several industries in the area are operating successfully, however many have been abandoned. Typical of similar economic situations in the northeast, unemployment is high throughout the County and the population is on the decline.

County Unemployment Rate:

September, 1981 : 8.6%  
Average Annual 1980: 10.8%

The projected unemployment for the Village of Carthage (N.Y.S. Unemployment Office) is only 3.6%.

The Black River, the "Long Falls" reach in particular, offers excellent opportunities for generation of hydro power. Because of inoperative or obsolete industries, the resource is not being utilized to its full capacity. Tannery Island (formerly Island Paper Company) is one such abandoned hydro site.

\*Source: Jefferson County Department of Planning, Robert McNary, Director, Watertown, N. Y. 18601.

## 2.1 Surrounding Land Use

Tannery Island is situated in the center of the "Long Falls" section of the Black River which has been utilized for hydropower for over a hundred years. The island is surrounded by industrial operations including Crown Zellerbach Paper Company to the northeast, Carthage Machine Co. to the east, National paper Products to the southeast, Climax Paper Co. to the southwest, and Champion Paper Co. to the northwest. The land use surrounding this industrial area is predominately residential. (See Drawing E-1). The major commercial areas are located approximately one-half mile above the site on State Street in Carthage and across the bridge on Bridge Street in West Carthage.

These Land Use Areas are anticipated to remain virtually unchanged in the future. The hydro sites of "Long Falls" will continue to be utilized both as industrial sites because of existing rail access and water and power sources and hydroelectric generating facilities. The development will be consistent with existing local zoning.

## 2.2 Vegetative Cover

The Tannery Island site has been an active industrial site for many decades. Consequently the soil characteristics have been altered severely. The existing soils are covered or mixed with cinders, gravel and crushed rock. Bedrock is very shallow and rock outcrops and boulders are common.

The vegetative cover on the site can best be categorized into three zones: A. Shoreline Zone; B. the Inland Zone; and C. the Wet Zone (the sediment deposits above the dam). (See Drawing E-2.). These zones are described below.

A. The shoreline vegetative cover is well established on the site. Most of the shoreline is exposed rock and boulders in areas where the river current is swift. The predominant plants in these areas are: poplar (*Populus* spp.), red maple (*Acer rubrum*), American elm (*Ulmus americana*), black cherry (*Prunus serotina*), white ash (*Fraxinus americana*), dogwood (*Cornus* spp.), willow (*Salix* spp.) and staghorn sumac (*Rhus typhina*). In areas of slower current where sedimentation occurs, black willow (*Salix nigra*) and alders (*Alnus* spp.) are also common. The shoreline is well established by vegetation and rock and erosion is minimal.

B. The inland portion of the island is a mixture of pioneer species which have become established since the site was last abandoned in 1963. These species include white pine (*Pinus strobus*), grey birch (*Betula populifolia*), poplar (*Populus* spp.), American elm (*Ulmus americana*), alders (*Alnus* spp.), box elder (*Acer negundo*), red maple (*Acer rubrum*), apple - fruit trees, planted when the site was used actively (*Malus* spp.), northern red oak (*Quercus borealis*), black cherry (*Prunus serotina*), dogwood (*Cornus* spp.), american hornbeam (*Carpinus caroliniana*), silver maple (*Acer saccharinum*) and staghorn sumac (*Rhus typhina*).

C. Some wetland species have established themselves above the dam on an island created by sedimentation deposits. This area is approximately 0.4 acres. The wetland plants include black willow (*Salix nigra*) and a variety of emergent grasses.

### 2.3 Fish and Wildlife Resources

The Wildlife resources on the site is limited because of the industrial development both on the island and along the surrounding shorelines. Some evidence of past beaver activity (felled trees and gnawed stumps) exists, however no recent activity is apparent and no huts were observed. The limited wildlife using the site is expected to be species commonly found in this area - mostly small mammals and birds.

The resident fishes expected<sup>1</sup> in this section of the Black River include smallmouth and largemouth bass, walleye pike, brown trout, carp, bullhead, suckers, and a wide variety of shiners and other minnows. Additional information has been requested from both NYSDEC and the U. S. Fish and Wildlife Service.

No anadromous fishes exist in the Black River at the site. Passage of anadromous species present in Lake Ontario (salmon and rainbow trout) is blocked by dams below Tannery Island. The island and the dams associated with this project do not block the entire channel and the spicer dams themselves are less than 3 feet high at many points. If passage of anadromous fishes was provided downstream, the Tannery Island project would not severely restrict fish movement. The applicant would comply with measures to mitigate any impact. Further additional information has been requested from both NYSDEC Division of Fish and Wildlife and the U. S. Fish and Wildlife Service.

1 Telephone conversation with the NYSDEC Black River Conservation officer, 11/20/81.

## 2.4 Rare and Endangered Species

Neither unique habitats nor rare and endangered species exist on the site.

Limestone caves approximately 20-25 miles downstream have been identified as one of the four nursing colonies in New York State for the Indiana Bat (an endangered specie). Although the Black River provides a feeding corridor, the Tannery Island project will have no impact on the activity of the Indiana Bat<sup>2</sup>. Additional information has been requested from NYSDEC.

## 2.5 Water Quality

The New York State Department of Environmental Conservation has classified this section of the Black River as Class "C" water. This classification is used for waters which are suitable for fishing and all other uses except as a source of water supply for drinking, culinary or food processing purposes and primary contact recreation.

The New York State Environmental Conservation Law Section 701, establishes the minimum dissolved oxygen level for Class "C" water at 4 mg/l with a 5 mg/l average.

Dissolved oxygen tests were commissioned by the applicant with the following results: D.O. levels of 9.7 mg/l to 10.0 mg/l below the "Long Falls" section (As tested on 11/17/82 and 11/18/81). These results indicate that no D.O. problem exists at this time. However, flow was moderate and water temperature relatively low at the time of the test.

2 Telephone conversations with Eugene McCafferty, New York State Endangered Species Unit, Albany, N.Y. and Al Hicks, New York State Department of Environmental Conservation, Endangered Species Unit, Delmar, N.Y.

The most recent data available for the Black River was prepared by the NYSDEC Division of Pure Waters in 1973. This report indicated that an increase in dissolved oxygen occurred below Carthage, as a result of aeration at Long Falls. This report also indicated a very low dissolved level above Carthage caused by discharge from upstream industries, especially Georgia Pacific at the Lyons Falls Plant.

This information is not up to date nor does it accurately indicate to what extent the Tannery Island site contributes to the total aeration at Long Falls. Discharge from Georgia Pacific has been greatly reduced from 24,000 pounds per day in 1976 to 3,000 pounds per day in 1981 due to revised operating schedules and addition of pollution abatement facilities.\* This decrease in B.O.D. will reduce the extent of aeration required at Long Falls.

The Applicant will cooperate with DEC to obtain accurate and detailed testing for dissolved oxygen content in an effort to define and mitigate impacts, if any, imposed by the proposed hydroelectric facility once operation is commenced.

Additional information and communication has been requested from the NYSDEC Division of Pure Waters.

\* Conversation with Terry Olmsted, Senior Sanitary Engineer, New York State Department of Environmental Conservation, Division of Pure Waters, November 24, 1981.

## 2.6 Hydrological Information

The mean annual flow of the Black River at Carthage is 3850 cubic feet per second. The drainage area at the Tannery Island site is approximately 1804 square miles. Average monthly flows are:

January	5299 cfs
February	2505
March	9246
April	9212
May	4827
June	1933
July	1072
August	1370
September	3212
October	2476
November	2221
December	2794

The maximum flow at Carthage for the period of record is estimated at 38,080 cfs. The minimum flow estimate for the same period is 132 cfs.

The 7-day low flow with a return period of 10 years at Watertown is 811 cfs.

A flow duration curve is provided in Exhibit "A".

This abstract is based on a USGS gage located at Watertown, New York (# 04260500). This gage has a period of record from 1920 to 1980 and an associated drainage area of 1876 square miles.

## 2.7 Recreational Utilization

There is evidence that Tannery Island is used by fishermen although no parking or access area is provided. No hunting occurs on the site. See Section 3.2.4 for proposed recreation access plan.

The Black River is used extensively for boating and canoeing; however, this section of "Long Falls" with its rapids, dams and industrial development is not significant. Portage routes around Long Falls would not include Tannery Island.

## 2.8 Historic and Archaeological Resources

The existing Island Paper Company buildings have been abandoned and currently pose a safety hazard to the community. The buildings cannot be reactivated. Because the development of industry on the Black River has directly influenced the history of the community, the applicant will prepare a report documenting the history of Tannery Island and provide a copy of this document to the local library and historical groups.

Additional information has been requested from the New York State Historic Preservation Officer.

## 2.9 Scenic and Aesthetic Resources

A section of the Black River between Cayuga Lake and North Lake is listed on the Federal National River Inventory. The Tannery Island site is neither on the New York State Classification of Wild and Scenic Rivers nor on the Federal Inventory.<sup>3</sup> Additional information has been requested from the National Park Service and NYSDEC.

The topography of the surrounding river valley does not offer vistas or major views. Tannery Island is only visible from the bridge one half mile above the site, from a local public housing project and the surrounding industrial sites.

- 3 Telephone conversations with Charles Morrison (NYSDEC, Albany, NY, Wild & Scenic Rivers) and J. Glenn Eugster (National Park Service, Philadelphia, PA),

### 3. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATING MEASURES

#### 3.0 General

The environmental impacts related to the renovation and construction of the Tannery Island hydroelectric facility will be minor. All major structures are existing, including three dams, road and bridge access to the site and the existing headrace, flume and tailrace. All construction and operation procedures will be performed and scheduled to minimize potential environmental impacts.

#### 3.1 Construction Impacts

Construction of the Tannery Island project will require two years from ground breaking until completion. The major construction phases include dredging sediment above the dam, renovation of the existing dam, headrace and trashracks, excavation of a new flume and tail race, construction of the powerhouses, and installation of new equipment and switchgear.

Precautions will be taken during construction to prevent accidental spillage of oil, fuel and other hazardous substances. These substances will be properly stored and protected at the construction site.

##### 3.1.1 Clearing of Vegetation

All shoreline vegetation will be protected to maintain the stability of the river bank and prevent erosion. The existing access bridge and gravel road will be utilized during construction. No clearing on the island will be required. All vegetation will be cleared in the area above the dam where sediment has accumulated. All brush and debris will be removed from the site and disposed of.

Areas disturbed during construction will be graded and seeded as soon as possible to minimize possible loss of sediment into the river.

### 3.1.2 Dredging of Sediment

An estimated quantity of 2,000-3,000 cubic yards of sediment will be dredged above the dam. Cofferdams will be constructed around the sediment deposit to minimize the loss of sediment into the river. Dredging will be scheduled during low flow periods to minimize potential risk. The sediment will be excavated to a depth of 2-4 feet to the original rock channel bottom. The applicant will comply with all agency regulations throughout the dredging operation.

Excavated sediment will be tested for heavy metal content in cooperation with New York State Department of Environmental Conservation. All material will be properly disposed of off the site.

Additional information and communication has been requested from NYSDEC.

### 3.1.3 Renovation of Existing Dam

Repair of the existing dam at the forebay area involves replacing the coping. The efficient replacement of the coping will require lowering the water level at the dam a maximum depth of two feet. The reduction in water level will be achieved by directing flow through the new flume. The time period required for this operation is 2-4 weeks.

The impact of lowering the water level at the dam will be minor. The water area affected will be less than an acre and because of the steep banks in this area, very little channel will be exposed. The area below the dam around which water will be diverted is approximately 200 feet long. It is expected that this pool and channel will hold water during the operation, however the current will be eliminated. All fish, amphibians and invertebrates will survive until flow resumes. Most species present will be inactive during the winter scheduling of this operation.

This operation will be scheduled during the winter low flow periods when fluctuation in stream flow is minimal.

The new flume and tailrace which will be used to divert flow will be excavated in rock and any man-made portion will be concrete. No erosion or sediment loss is expected.

The applicant will comply with agency regulations through the dam renovation operation.

Additional information and communication has been requested from NYSDEC. The Applicant requested that all applicable State permits be identified at the time of initial conference. All requirements for permit application and compliance will be met by the Applicant.

### 3.1.4 Excavation

Construction of the headrace, flume and tailrace for the new powerhouse will require excavation of earth and rock.

A cofferdam will be constructed above the headrace to avoid loss of sediment to the river and maintain the existing channel flow during construction.

Runoff from the construction site will be diverted into a sedimentation basin at the tailrace. This basin will be periodically cleaned and maintained during construction to prevent loss of sediment into the river.

Blasting during rock excavation will be required. This work will be performed during daylight working hours and in compliance with governing regulations. All rock will be drilled to provide accurate excavations.

All excess excavated material will be removed from the site and disposed of properly. Some excavated rock will be used for erosion control and channel protection as required.

### 3.1.5 Socioeconomic

The Tannery Island project will employ 30-50 workers throughout the construction operation. It is anticipated that this workforce will be supplied by the local community.

### 3.1.6 Fish and Wildlife

No major impact is expected to fish and wildlife. The area affected by the construction is about an acre and mitigating measures taken during dredging, excavation and dam renovation work greatly reduce potential impacts. No rare and endangered species are affected.

### 3.1.7 Water Quality

No pollutants or discharge of any kind is expected during construction. Loss of sediment will be controlled during dredging, excavation and dam renovation operations.

Information and communication has been requested from the New York State Department of Environmental Conservation on this issue.

### 3.1.8 Recreational Utilization

Provision for recreation access along the shoreline of the island will be provided for fishing, picnicking and passive activities. The small segment of the island involved in the hydropower redevelopment proposal will be isolated and protected from access for safety reasons.

## 3.2 Operation Impacts

As evidenced by the cooperation of the industrial operations at "Long Falls" throughout the history of the area, the operation of the Tannery Island facility will neither pose a threat nor reduce the hydropower potential at the other sites.

The owners in the "Long Falls" reach of the Black River at Carthage will continue the historic flow allocation. All planned developments are being coordinated at the local level so that overall site potential can be maximized and review agencies have been presented with a cohesive overall site rehabilitation and expansion program.

The run-of-river operation of the Tannery Island hydroelectric facility will have little or no impact on the Black River or the surrounding area.

### 3.2.1 Vegetative Cover

The existing vegetation on the island will be protected and allowed to return to a natural wooded condition.

### 3.2.2 Fish and Wildlife (see also water quality)

No impact to fish and wildlife is expected. Flow through trashracks will be low enough to prevent fish entrapment.

No major tailrace fishery is expected.

### 3.2.3 Water Quality/Quantity

No impoundment or reduction of flow will occur. No pollutants or other discharge will occur.

No reduction of flow and no change in the water levels will be required during maintenance operations.

### 3.2.4 Recreational Utilization

Access will be provided for fishing, picnicking and other passive activities. The area around the headrace, trashracks, dam, powerhouse and switchyard, will be fenced for safety.

### 3.2.5 Socioeconomic

The operation of the Tannery Island project will employ 1-2 full-time persons from the local community for maintenance and security.

The project will displace 31,500 barrels of imported oil per year.

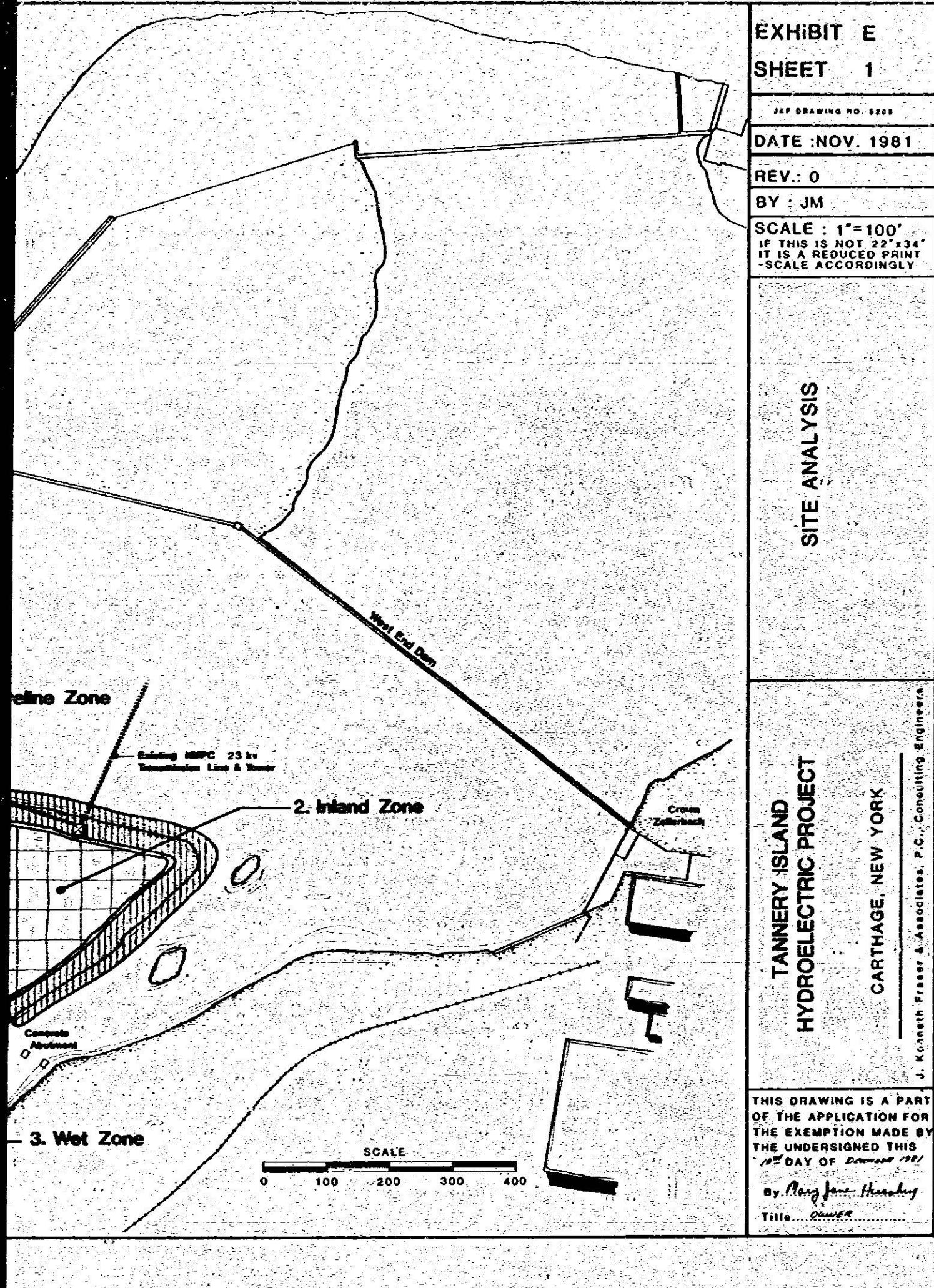
### 3.1.6 Aesthetic Impact

Views to Tannery Island will be improved. The existing vegetation will be allowed to mature which will screen the facility from most views. The debris and ruins on the site will be removed. The new construction will be a low concrete structure with minimal visual intrusion.

### 3.1.7 Transmission Corridors

An existing Niagara Mohawk Power Corporation transmission line (23 KV) crosses the site (See drawing E-2). A new medium voltage utility connection approximately 500 feet long is required. Some support structures will be required. (See Exhibit G. - Sheet 1 for details of the electrical transmission interconnection.).





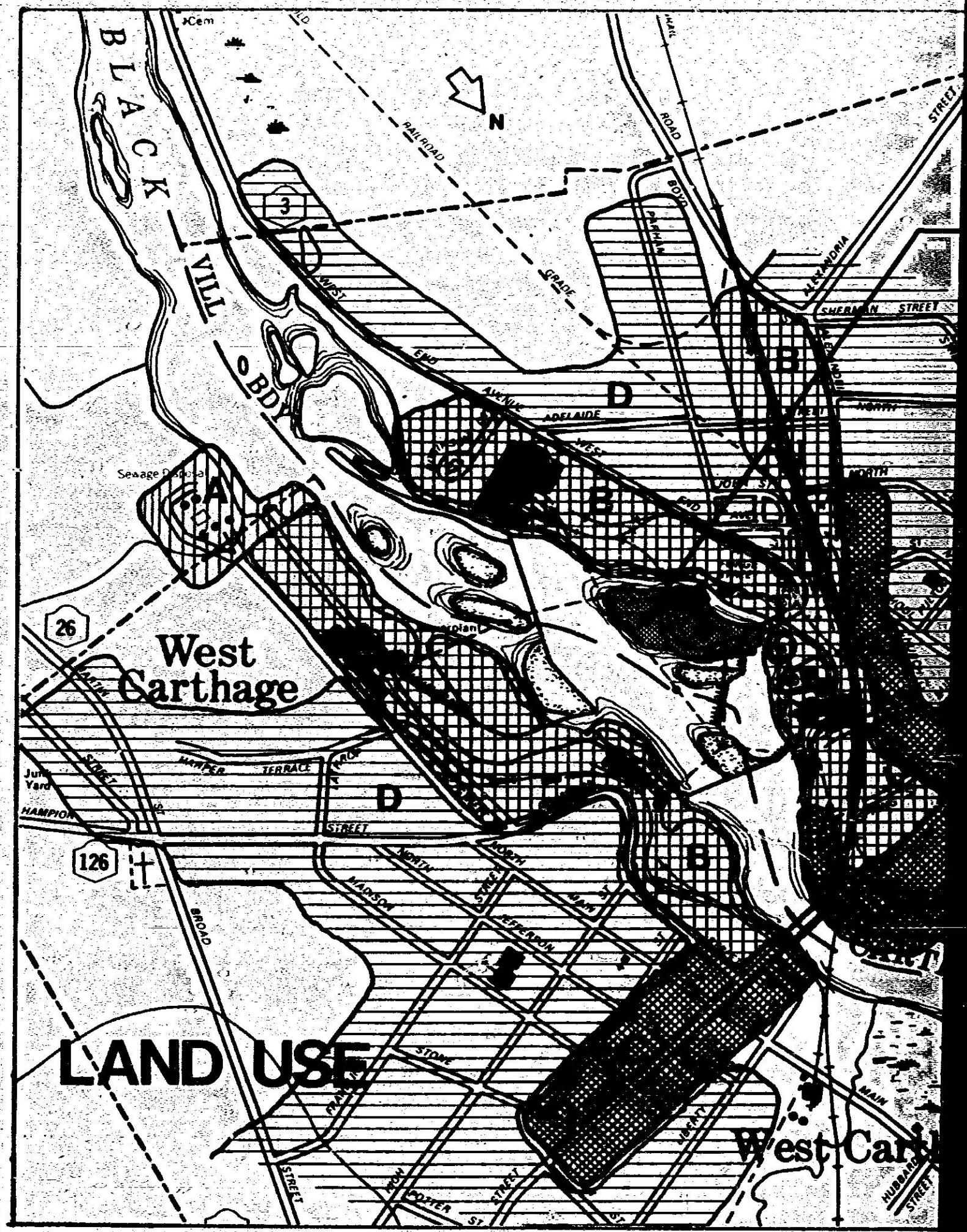


EXHIBIT E  
SHEET 2

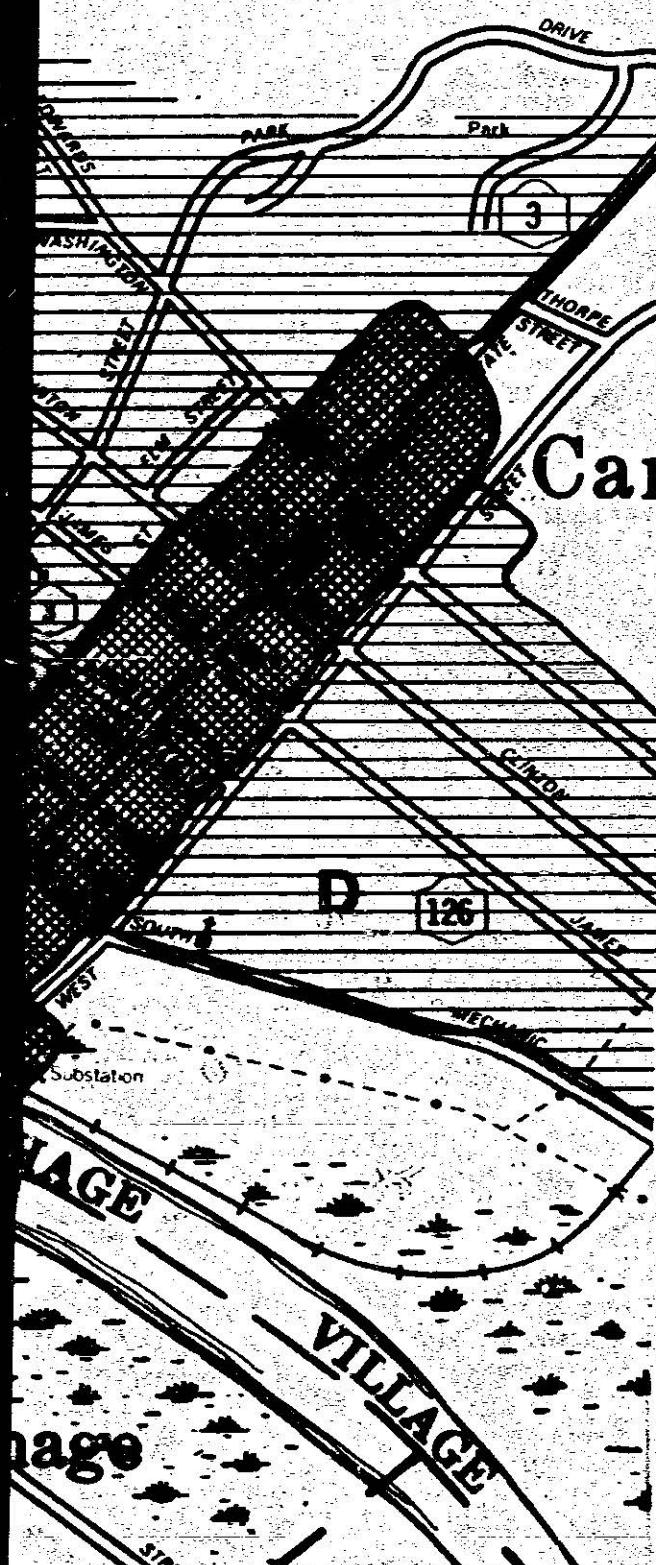
DRY Drawing No. 1000  
REV.: 0  
DWY: 00  
SCALE: 1" = 300'

CURRENT LAND USE MAP

TANNERY ISLAND  
HYDRO-ELECTRIC PROJECT  
CARTHAGE, NEW YORK

J. Kenneth Fraser & Associates, P.C. Consulting Engineers

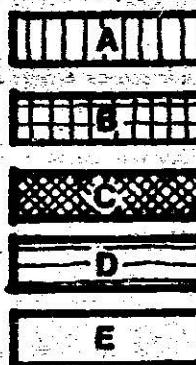
Tannery Island



Carthage

ORIGINAL

LEGEND:



AGRICULTURE/FOREST

UTILITIES

INDUSTRIAL

COMMERCIAL

RESIDENTIAL



DATA COMPILED FROM LIDAR MAPPING AND  
UPDATED WITH FIELD INVESTIGATION

May 2002  
Hinchey

#### 4. AGENCY CONTACTS AND COMMENTS

##### 4.1 Description of Procedures

It is the policy of the applicant to coordinate with agencies and individuals that have an interest in the proposed project. These agencies have been made aware of the applicant's proposed project and were asked to make preliminary comments concerning known resources and environmental concerns. Personal conversations and group meetings took place to completely explain the project intent. The applicant believes these early interactions with concerned agencies satisfy the Commission's requirements for consultation under Order 106.

##### 4.2 Agencies that have been contacted:

Mr. Norman R. Chupp  
Area Manager  
U.S. Fish & Wildlife Service  
100 Chestnut Street  
Harrisburg, Pa. 17101

Regional Director  
National Park Service  
143 South Third Street  
Philadelphia, Pa. 19106

District Director  
U. S. Geological Survey  
P. O. Box 1350  
Albany, New York 12201

Regional Administrator  
Region II  
U. S. Environmental Protection Agency  
Room 1009  
26 Federal Plaza  
New York, New York 10007

U. S. Army Corps of Engineers  
New York District Office  
26 Federal Plaza  
New York, New York 10078  
Attn: NANOP-E

Director, Northeastern Region  
National Marine Fisheries  
Service, NOAA  
14 Elm Street  
Federal Building  
Gloucester, Massachusetts 01930

Mr. William S. Patterson  
Regional Environmental Officer  
U. S. Department of Interior  
15 State Street  
Boston, Massachusetts 02109

Regional Director, N.E. Region  
Heritage Conservation and  
Recreation Service  
Federal Office Building  
Room 9310  
600 Arch Street  
Philadelphia, Pa. 19106

Mr. Murdock M. MacKenzie  
New York State Department  
of Environmental Conservation  
50 Wolf Road  
Albany, New York 12232

U. S. Army Corps of Engineers  
Buffalo District  
1776 Niagara Street  
Buffalo, New York 14207

Mr. Paul Hamilton  
Field Supervisor  
U. S. Department of Interior  
Fish and Wildlife Service  
100 Grange Place - Room 202  
Cortland, New York 13045

Mr. Bruce Goodale  
New York State Public Service Commission  
Agency Building No. 3  
Rockefeller Plaza  
Albany, New York 12223

Ms. Lenore R. Kuwik  
Historic Preservation Field Services  
New York State Office of Parks & Recreation  
Agency Building No. 1  
Rockefeller Plaza  
Albany, New York 12223

Mr. Roy Roberts  
Recreation Services  
New York State Office of Parks & Recreation  
Agency Building No. One  
Rockefeller Plaza  
Albany, New York 12223

#### 4.3 Agency Comments

All regulatory responses to the applicant regarding the Tannery Island project are attached.

A project chronology and listing of pertinent communications has been prepared to document the extensive prior involvement of the Applicant regarding redevelopment of the Tannery Island site for hydroelectric purposes.

Various agencies of the local, state and federal governments have assisted, advised, and consulted the Applicant since 1977 in formulating a viable development plan for the site.

The Applicant is unequivocal in her intent to continue development of this hydroelectric resource.

TANNERY ISLAND HYDROELECTRIC PROJECTPROJECT CHRONOLOGY AND COMMUNICATIONS  
(1964 through November 1981)

DATE	ITEM	FROM	TO	REFERENCE
--1964--				Property acquired by Ruderman family
--1976--				Project inception
12/23/77	L	M. J. Hirschey	Richard F. Napoli Project Manager NYSERDA	Tannery Island Hydro-Power Development - USDOE PRDA Application Information
01/78	A	M. J. Hirschey/ NYSERDA	USDOE	Application for Low Head Hydro PRDA - Feasibility Study
02/01/78	L	M. J. Hirschey	Kenneth Steblen Jefferson County Development Agency	Tannery Island Hydro-electric Project Information
02/10/78	L	L. A. Morrison Carthage Machine Company	M. J. Hirschey	Sale of Carthage Machine Water Rights to M. J. Hirschey
02/13/78	L	James A. Merritt Jefferson County Industrial Development Agency	M. J. Hirschey	Tannery Island Hydro-electric Project
08/18/78	L	Richard Wood USDOE	Hon. Robert C. McEwen, House of Representatives	Tannery Island Hydro-electric Project PRDA Application Results
11/01/78	L	K. H. Mayhew Hudson-Black River Regional District	M. J. Hirschey	HBRRD File Info re Tannery Island Project
11/08/78	L	Edward Applebaum NYS Dept. Commerce	M. J. Hirschey	State Incentives to Tannery Island Redevelopment
01/15/79	L	William Shaffer NYS Public Service Commission	Arthur C. Mengel Economic Development Commission, Black River-St. Lawrence Area	Tannery Island Redevelopment Project Power Use Regulations

TANNERY ISLAND HYDROELECTRIC PROJECTPROJECT CHRONOLOGY AND COMMUNICATIONS  
(1964 through November 1981)

DATE	ITEM	FROM	TO	REFERENCE
02/26/79	L	Rudolph Wiley NYS Energy Research & Develop. Authority	M. J. Hirschey	Capital Financing for Tannery Island Project
03/06/79	L	Rudolph Wiley NYS Energy Research & Develop. Authority	M. J. Hirschey	Demonstration Project at Carthage, N.Y.
08/20/79	L	Tom James Crown-Zellerbach Corporation	M. J. Hirschey	Proposed Cooperative Hydroelectric Develop- ment Project
10/16/79	L	James L. King Economic Develop- ment & Technical Assistance Ctr.	M. J. Hirschey	Carthage/Black River Cooperative Hydropower Development
02/1980	R	Federal Energy Regulatory Commission	M. J. Hirschey	Reconnaissance Study for Reactivation or Expansion of the Retired Power Plant at Tannery Island Dam prepared by Chicago Office of FERC
04/01/80	L	Lawrence Coffill Regional Engineer FERC	M. J. Hirschey	Reconnaissance Study Update
05/26/80	L	Charles Gilmore USDOE	Ed Fedak, USDOE for funding under Rural Energy Initiative Program	Recommendation for Tannery Island Project
12/23/80	L	F.J.G. Aufschlaeger	Robert A. McNary Jefferson County Dept. of Planning	Review of Proposed Hydroelectric Project
12/31/80	L	A. E. Hymer USDOE	M. J. Hirschey	Application for Title 4 Feasibility Study Loan
01/05/81	L	F.J.G. Aufschlaeger	Black River-St. Lawrence Regional Planning Board	Tannery Island Project Review

TANNERY ISLAND HYDROELECTRIC PROJECTPROJECT CHRONOLOGY AND COMMUNICATIONS  
(1964 through November 1981)

DATE	ITEM	FROM	TO	REFERENCE
08/15/80	L	R. L. Rhorbaugh Allis-Chalmers Corp.	M. J. Hirschey	Tannery Island Paper Company, Listing of Existing Equipment and Recommendations for Re-use
11/06/80	L	S. Burke	Regional Economic Development Board (Jefferson & Lewis Counties)	Proposed Tannery Island Redevelopment Project Information
11/19/80	L	William Wilson Energy Law Institute	M. J. Hirschey Financing Methods	Tannery Island Hydro- electric Project
12/07/80	L	M. J. Hirschey	Robert A. Low USDOE Application	Tannery Island Hydro- electric Development Project Title 4 Loan
12/09/80	L	S. Burke	Black River-St. Lawrence Regional Planning Board	Clearinghouse Review Tannery Island Hydro- electric Project
12/09/80	L	S. Burke	NYS Division of Budget, State Clearinghouse	Clearinghouse Review Tannery Island Hydro- electric Project
01/08/81	L	Thomas J. McDowell State Clearinghouse Administrator	Stephen Burke	State Clearinghouse Review, Tannery Island Redevelopment Project
01/18/81	T	S. Burke	US Fish & Wildlife Service, Cortland, New York	Tannery Island Redevelopment Project Environmental Concerns
01/19/81	L	S. Burke	Merrill King EG&G, Idaho Falls (USDOE)	Proposed Tannery Island Redevelopment Project
02/20/81	L	M. J. Hirschey	James L. King Economic Develop- ment & Technical Center	Cooperative Study - Carthage/Black River Hydro Project

TANNERY ISLAND HYDROELECTRIC PROJECTPROJECT CHRONOLOGY AND COMMUNICATIONS  
(1964 through November 1981)

DATE	ITEM	FROM	TO	REFERENCE
06/01/81	L	K. H. Mayhew Hudson-Black River Regulating District	J. Kenneth Fraser & Associates, P.C.	HBRRD File Info re Tannery Island Project
06/16/81	A	S. Burke	Kenneth F. Plumb, Secretary, FERC	Tannery Island Hydro- electric Redevelopment Project, Application for Preliminary Permit
08/06/81	L	William W. Lindsay FERC	S. Burke	Acceptance of Filing Tannery Island Project No. 4908
11/19/81	C	Conference	--	Tannery Island Small Hydroelectric Redevelopment Project, Conference Meeting participants: Richard England(NYSDEC), Michael Stronaky(NSYDEC), James Miller(Saratoga Assocs.) Stephen F. Burke (J. Kenneth Fraser and Associates, P.C.)
11/19/81	L	J. Kenneth Fraser & Assocs., P.C., representing M. J. Hirschey	Various agencies (See Exhibit E-4.2 for list.)	Additional Agency consultation
12/01/81	L	J. Kenneth Fraser & Assocs., P.C.	W. Patterson USDOI	Response to USFWS Letters of 10/28/81 and 12/07/81.

Item Legend:

- L Letter correspondence
- T Telephone conversation
- P Personal communication
- R Report
- A Application submitted
- C Conference

J. KENNETH PRASER AND ASSOCIATES, P.C.

Consulting Engineers

620 WASHINGTON AVENUE  
RENSSELAER, N. Y. 12144

TELEPHONE 463-4400

November 25, 1981

Mr. Murdock M. MacKenzie  
Division of Regulatory Affairs  
New York State Department  
of Environmental Conservation  
50 Wolf Road  
Albany, New York 12233

Re: Tannery Island Small Hydroelectric  
Redevelopment Project, Carthage, N. Y.  
Conference Notes - November 19, 1981  
Applicant - Ms. Mary Jane Hirshey

Dear Mr. MacKenzie:

The enclosed notes on the referenced conference are forwarded for your review and comment. Our intention is to make these notes an item of proof of consultation in the environmental exhibit of the FERC exemption application, which we are currently preparing for our client. Ms. Hirshey is the owner of the site which will utilize an existing set of dams once used for hydropower applications and are now the subject of a redevelopment proposal of less than 5 megawatts.

Your corrections and/or comments to these notes are therefore solicited now so that appropriate modification can be made to the content of these minutes prior to their insertion into the application document which will be forwarded to the FERC in the near future.

The efforts of your staff to expedite our request for review of this project are most appreciated. Please do not hesitate to contact us at once if questions arise.

Respectfully submitted,

*Stephen F. Burke*  
Stephen F. Burke

SPB/kp:encl.

CC: Ms. Mary Jane Hirshey  
Mr. J. Miller  
Mr. M. Stronosky

CONFERENCE NOTES

PROJECT: TANNERY ISLAND SMALL HYDROELECTRIC REDEVELOPMENT  
PROJECT (FERC Project No. 4908)

APPLICANT: MARY JANE HIRSHEY  
30 North Main Street  
West Carthage, New York 13619

DATE OF MEETING: November 19, 1981

SUBJECT: Presentation and explanation of project intent and scope, definition of existing conditions, and brief synopsis of results of field inventory of wildlife and biota.

ATTENDANCE: Richard England, NYSDEC - Division of Regulatory Affairs  
Michael Storonsky, NYSDEC - Division of Fish and Wildlife  
James Miller, Saratoga Associates for M.J. Hirshey  
Stephen Burke, J. Kenneth Fraser and Associates, P.C. for M.J. Hirshey

NOTES

PREPARED BY: Stephen Burke

ITEMS:

1. The project intent and prior development history were described. The emphasis was placed on the relationship of the Tannery Island site (formerly the Island Paper Company) to various other operative and inoperative hydro sites on the "Long Falls" reach of the Black River in the Villages of Carthage and West Carthage. Ms. Hirshey has activly pursued the development of her site since 1976. Throughout this period she has sought an orderly and rational development approach by the adjacent owners.

The proposed project has an FERC preliminary permit application pending and the applicant has filed an intent to apply for an exemption for a project of less than 5 MW. The service of a notice of intent to file a major project application by the Long Lake Energy Corporation on this project as well as on other unrelated projects on the west bank of the river was discussed. In this light, the technical feasibility of an overall redevelopment scheme involving a set of individual redevelopments (historic use pattern) was asserted.

2. The history of the Island Paper Company installation and the purpose and function of the "State Dam" were reviewed in light of this proposal and the surrounding potential for hydro development.

3. The specifics of the rehabilitation of existing on-site turbines and the addition of a new fully regulated Kaplan unit were described. The civil works were identified on an aerial site photo along with the proposed project boundary. The details of this presentation are contained in the descriptive information provided to the DEC and other regulatory agencies on November 19, 1981.

4. NYSDEC personnel posed questions concerning flow; head; machine size, placement, and ratings; adjacent land use; recreational opportunities; reaeration opportunities; proximity to wetlands; animal habitat; extent of dredging required; fish passage (DEC indication that future passage requirements may be imposed - but that no requirement will be forwarded at this time); and the presence of toxic materials in riverbed sediment. No apparent problems were highlighted as a result of the discussion. However, it is recognized that more detailed qualification on selected issues will be required to complete required NYSDEC reviews. These subjects will be addressed in the applicant's environmental statement and support field work. The Indiana bat is known to inhabit the Glen Park area which is some 20 miles distant down river. There is no know population of these bats in the Carthage area although the River may represent a feeding corridor. The proposal was agreed to have no impact on such activity if indeed it exists.

5. The NYSDEC was not able at this time to define the classification of the Black River at the Tannery Island/Carthage area. Qualification of this aspect will have ramifications on the number and type of NYSDEC permits ultimately required for development of the project.

However, it was stated that the project may require a series of NYS Environmental Conservation Law based permits to protect the streambed (ECL Article 15). Specifically, a permit may be required for dam modification (Art. 15-0503), dredging (Art. 15-0505), and streambed disturbance (Art. 15-0501). The applicant's willingness to obtain these permits prior to construction was ascertained.

6. Applicant's request for environmental data:

The NYSDEC indicated that related water quality and fisheries data for the Village of "Great Bend", which is proximal and downstream on the Black River, would be made available in two weeks. This data is believed to be the best available information for the applicant to base the environmental statement in the application. The NYSDEC indicated that all requests for this type of information will be handled and coordinated through the headquarters office in Albany. In addition, the data package addressing the fisheries inventories is to be a uniform set material issued to all hydropower project applicants in this reach of the Black River.

Water quality data may also be made available through the Survey and Analysis Branch of the NYSDEC Water Quality Group. It was left incumbent upon the applicant to pursue this source. The requirement for chemical analysis of the sediment in the former forebay area was a decision deferred to this group.



NEW YORK STATE PARKS & RECREATION Agency Building 1, Empire State Plaza, Albany, New York 12238, Information 518 474-0456  
Orin Lehman, Commissioner

November 24, 1981

J. Kenneth Fraser  
620 Washington Avenue  
Rensselaer, New York 12144

Attn: Mr. Stephen Burke

RE: Hydroelectric Re-development Project  
Tannery Island, Carthage, New York  
FERC #4908-000

Dear Sir:

We have completed our review of the captioned application document. The New York Statewide Comprehensive Outdoor Recreation Plan indicates relatively little need for additional recreational facilities in Jefferson County other than provision for cross-country skiing.

It is our opinion the character of this specific site is such that it would not be practicable to request any recreational facilities be provided at this time.

Thank you for providing us the opportunity to review and to comment on this proposal.

Sincerely,

*Roy J. Roberts*  
Roy Roberts  
Sr. Marine Services Representative

RR/eh

CC: M. MacKenzie, DEC



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
100 Grange Place  
Room 202  
Cortland, New York 13045

November 25, 1981

Mr. Stephen F. Burke  
J. Kenneth Fraser and Associates, P.C.  
Consulting Engineers  
620 Washington Avenue  
Rensselaer, New York 12144

Dear Mr. Burke:

Thank you for your letter of November 19, 1981, requesting preapplication consultation with the U. S. Fish and Wildlife Service in regard to Ms. Hirschey's Tannery Island hydroelectric redevelopment project, FERC No. 4909-000, in Carthage, New York.

As you know, the Federal Energy Regulatory Commission (FERC) requires you to coordinate with the Fish and Wildlife Service for technical assistance in assessing the impacts of your proposed project on fish and wildlife habitats and resources. The Service also has a legal mandate under the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) to evaluate, and comment to the FERC, on proposals for hydroelectric development.

The following questions will serve to identify our major concerns regarding hydroelectric development in general, and to assist you in determining the environmental feasibility of your project and preparing your environmental report (Exhibit E). Detailed analysis and/or studies are not necessarily required to respond to these questions. Depending on your specific project plans, many of them could be addressed with a brief statement.

This letter provides technical assistance only and as such does not constitute the report of the Secretary of the Interior within the meaning of Section 2(b) of the Fish and Wildlife Coordination Act. Nor should our input at this stage in your planning process be construed as sufficient to accompany any request for license, renewal of license, amendment of license, or exemption from license that you may submit for this project to the FERC.

1. What is the nature of the environmental setting of the project area? What kinds of vegetative cover are commonly found there? What are the more common species of birds, fish and other animals and their relative abundance in the area?
2. Are there any Federally listed threatened or endangered species within your project area? Requests for information on the presence of threatened or endangered species (including those proposed for listing) in your project area may be directed to the Area Manager, U. S. Fish and Wildlife Service, 100 Chestnut Street, Room 310, Harrisburg, Pennsylvania 17101.
3. Are there any anadromous fishes in the project area? Are there any plans to restore historic runs of anadromous fish through the project area? The New York State Department of Environmental Conservation should be contacted about such restoration plans. What will be the impact of the project on fish movements through the project area? In addition to considering impacts on anadromous fish, are there important populations of resident fish species that should be provided free movement, both upstream and downstream, through the project area? The FWS can provide engineering and technical guidance regarding the planning of fish passage facilities, if deemed necessary for your project. However, the actual design and construction are the responsibility of the applicant. Requests for assistance with the planning of fish passage facilities may be directed to the Regional Director, U. S. Fish and Wildlife Service, One Gateway Center, Suite 700, Newton Corner, Massachusetts 02158.
4. What is the existing water quality in the project area? What is the status of pollution abatement efforts in the river? Is the river expected to achieve Class B Standards (fishable/swimmable) by 1983, as directed by the Clean Water Act?
5. What is the existing streamflow regime through the project area? Hydrological information, including average monthly discharge, average annual flow, and 7Q10 flow (average 7-day low flow that can be expected to occur every 10 years) should be incorporated into your environmental report. On a monthly basis, what will be the specific impact of project operation on streamflow (both at the dam and at the tailrace if a penstock or diversion canal is to be used)? Will the project store water for peaking power production or will it operate as a run-of-the-river facility? If deemed necessary, we will request that the FERC require a program of minimum flow releases at the dam to mitigate impacts on downstream fish and wildlife resources. The magnitude of these releases would be contingent upon further study of the project area, existing hydrology, consultation with State fishery biologists, and assessment of detailed information on existing fish and wildlife resources and project operation.

You should also consider other water withdrawals both up and downstream from your project area. Not only could these affect your operating capacity, but they may also have a cumulative impact on downstream fish and wildlife habitat, greater than that which would result from the operation of your project by itself.

6. What is the extent of the impoundment above the dam? Area-capacity data for elevations between the expected minimum and maximum pool levels should be incorporated into your environmental report. Describe the fish and wildlife habitat within the impoundment area, giving particular attention to any wetlands found in this area. The predominant kinds of wetland vegetation and their utilization by wildlife should be indicated. What will be the impact of project operation on fish and wildlife habitat within the impoundment? Will there be significant water level fluctuations (drawdowns), and if so, when and to what extent will these occur? Will the project include modification to an existing dam so as to increase the water elevation within the impoundment? How will this affect fish and wildlife habitat?

7. What is the extent of recreational utilization of fish and wildlife resources within the project area? What species of fish are commonly sought by anglers in the project area? Is there a tailrace fishery? What are the current and future fishery management plans for the project area? Are wildlife populations currently exploited commercially within the project area? What is the extent of consumptive (e.g., fishing and hunting) and non-consumptive (e.g., wildlife observation and photography) utilization of wildlife? How will the project affect public utilization of fish and wildlife resources? Will access to the waterway be open to the public for recreational purposes?

8. What construction activities will be undertaken in connection with this project? What new structures will be required? What steps will be taken to ensure protection of fish and wildlife habitat during construction? When will most of the construction activities take place? Appropriate preventative measures should be incorporated into the project design to minimize damage to habitat and resources during project construction. Potential problem areas include erosion, excessive turbidity, and pollutant discharges from heavy equipment. The District Engineer, Buffalo District Corps of Engineers, should be contacted to determine if the proposed construction activities will affect waters of the United States and if Department of the Army authorization is required.

9. What routine maintenance is anticipated during the life of the project? Will periodic drawdowns be required for maintenance of the dam and associated structures? If so, what will be the impacts of these water level fluctuations on fish and wildlife resources? Are there alternatives for routine maintenance other than periodic drawdown?

10. What is the location and scope of power-transmission facilities? Right-of-way maintenance should follow latest state-of-the-art methods which protect the natural environment.

We appreciate the opportunity to provide preliminary input at this stage in your planning process. We look forward to the opportunity to review your draft and final environmental reports prior to submission to the FERC. It is our understanding that the FERC wants Fish and Wildlife Service comments on the final report attached to your application for exemption.

Should you have any questions, please do not hesitate to contact Mr. Stephen Patch of this office (607/753-9334) for further assistance.

Sincerely yours,



Paul P. Hamilton  
Field Supervisor

cc: NYSDEC, Albany, NY  
NYSDEC, Watertown, NY



DEPARTMENT OF THE ARMY  
NEW YORK DISTRICT, CORPS OF ENGINEERS  
26 FEDERAL PLAZA  
NEW YORK, N.Y. 10278

REPLY TO  
ATTENTION OF:

NANOP-E

25 November 1981

SUBJECT: Transmittal of Correspondence

U. S. Army Corps of Engineers  
District Engineer, Buffalo  
1776 Niagara Street  
Buffalo, NY 14207

The inclosed is forwarded as a matter of your jurisdiction.

FOR THE DISTRICT ENGINEER:

Incl:  
Ltr dtd 19 Nov 81  
by Stephen F. Burke  
w/report and plans

JOHN ZAMMIT  
Chief, Operations Division

RECEIVED  
A. Kenneth Frantz & Associates, P.C.

NOV 30 1981

# The Saratoga Associates

## CONFERENCE REPORT

RE: Tannery Island Hydroelectric Facility  
DATE: November 24, 1981  
PLACE: Department of Environmental Conservation  
50 Wolf Road, Albany  
PRESENT: Terry Olmsted, P.E.  
Senior Sanitary Engineer, Division of Pure Waters  
James Miller, The Saratoga Associates

### ITEMS:

1. Jim Miller reviewed the Tannery Island Project. Mr. Olmsted had received a copy of the project fact sheet.
2. Mr. Olmsted stated the Division of Pure Water's primary concern was any impact to dissolved oxygen content in the river.
  - o Jim Miller stated that no discharge will occur at the facility, and the applicant will take precautions (cofferdams, etc.) during dredging to minimize loss of sediment to the river.
  - o Mr. Olmsted referred to a study completed in 1973 of the Black River by the Department of Environmental Conservation which reported an increase in oxygen levels below Carthage, indicating the Long Falls areas provided substantial aeration. The study also reported a major decrease in oxygen levels upstream at a Georgia Pacific plant. In 1976, Georgia Pacific was discharging 24,000 pounds per day; currently they discharge 3,000 pounds per day (5,000 p.p.d. is allowed by D.E.C.).

Although Long Falls does aerate the river, it is impossible to say to what extent, and what extent the Tannery Island site contributes without detailed testing.

Bristol, Litwski, Wojcik, P.C.  
Landscape Architects, Architects, Planners, Engineers, Land Surveyors  
Old Saratoga Square, Saratoga Springs, New York 12866 (518) 587-2550  
Buffalo, N.Y. East Greenbush, N.Y. New York, N.Y.

Robert F. Bristol, R.I.A.; John G. Litwski, R.I.A.; J. Daniel Wojcik, R.I.A.; James F. Miller, R.I.A.; Richard R. Butler, A.I.A.;  
Daniel R. Brown, R.A.; Arthur F. Brod, Jr., A.I.C.P.; Neill E. Anderson, P.E.; Kevin M. Brady, P.I.S.; Michael S. Rudden, A.I.A.

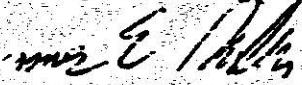
# The Saratoga Associates

CONFERENCE REPORT - Tannery Island Hydroelectric Facility  
November 24, 1981  
Page 2

3. A two-mile section of Class A water exists in the Black River at Watertown. However, since there is no discharge involved in the Tannery Island Project, the project will not affect this area.
4. Mr. Olmsted will review the project and prepare a report for the Department of Environmental Conservation Division of Regulatory Affairs.

If any of the statements in this report are inaccurate or incorrect, please bring it to our immediate attention.

Respectfully submitted,



James E. Miller

JEM/bc

Jefferson County Department of Planning

Robert A. McNary, Director

JPM -  
Tannery Island DICO

176 Arsenal Street  
Watertown, NY 13601  
Telephone 315-786-3144

November 20, 1981

Jeffrey Piro  
Saratoga Associates  
Old Saratoga Square  
Saratoga Springs, New York 12866

Dear Mr. Piro:

Enclosed is information you requested concerning Tannery Island and surrounding area.

The L.U.N.R. information, while not current, remains fairly accurate. There have been no major developments or land use changes in the area since the L.U.N.R. data was compiled.

The mesographic soils information is the most detailed we have on file. The United States Soil Conservation Service is in the process of completing a detailed soil survey for the County and may be able to provide you with more detailed soils data for the Carthage area, (SCS Office is in Watertown, their phone number is 782-2671).

Population figures for the area are:

	<u>1970</u>	<u>1980</u>
Champion (Town)	4,371	4,056
West Carthage (Village)	2,047	1,824
Wilna (Town)	6,538	6,227
Carthage (Village)	3,889	3,643

(Town totals include Villages)

County Unemployment Rate:

September, 1981 : 8.6 %  
Average Annual 1980: 10.8 %

As far as any recreation plan for the area, there was a Jefferson County Open Space and Recreation Study done in the early 70's which included inventories of existing facilities, a needs analysis and recommendations for potential areas. The Study does not include any specific plans for the Carthage/West Carthage area.

If this information is not satisfactory or if you need additional items, please let me know.

Sincerely,

*Bruce Armstrong*

Bruce Armstrong  
Planner

BA:ljc

Enclosure



LUNR INVENTORY CLASSIFICATION & COLOR CODE

- (A) Agriculture
- (F) Forest
- (W) Water Resource
- (R) Residential Land Use
- (C) Commercial Land Use
- (I) Industrial Land Use
- (OR) Outdoor Recreation Land Use
- (E) Extractive Industry Land Use
- (P) Public & Semi-Public Land Use
- (T) Transportation & Utilities Land Use
- (N) Non-Productive Land



## MESOGRAPHIC SOIL ASSOCIATIONS

1. CHARLTON SUTTON
3. BERKSHIRE - DIXMONT
5. CHARLTON
24. WORTH - EMPEYVILLE
40. LIVINGSTON\*
49. WAYLAND
50. PALMS - CARLISLE

\* TANNERY IS. IN THIS  
SOIL ASSOCIATION

Slope Rate & Aspect	Soil Profile	Soil Depth	Soil Type	Soil Water Availability	Soil Water Availability		Soil Depth	Soil Type	Soil Water Availability	Soil Depth	Soil Type	Soil Water Availability
					Very Low	Low						
39° - 45° - N	33	22	Soil: Wind Soil: Shallow Soil: Shallow	Very Low	Very Low	Low	33	22	Very Low	Very Low	Very Low	Very Low
Kirkwood	45°	22	Soil: Wind Soil: Shallow Soil: Shallow	Very Low	Very Low	Low	45°	22	Very Low	Very Low	Very Low	Very Low
40° - Shallow Soil: Shallow	33	22	Soil: Wind Soil: Shallow Soil: Shallow	Very Low	Very Low	Low	33	22	Very Low	Very Low	Very Low	Very Low
Limestone	45°	22	Soil: Wind Soil: Shallow Soil: Shallow	Very Low	Very Low	Low	45°	22	Very Low	Very Low	Very Low	Very Low
44° - Shallow Soil: Shallow	33	22	Soil: Wind Soil: Shallow Soil: Shallow	Very Low	Very Low	Low	33	22	Very Low	Very Low	Very Low	Very Low
Madison	45°	22	Soil: Wind Soil: Shallow Soil: Shallow	Very Low	Very Low	Low	45°	22	Very Low	Very Low	Very Low	Very Low

The Saratoga Associates

telecom

DATE: November 19, 1981

PROJECT: Tannery Island - Exception from License Application  
315 - 785-3144

TO: Bob McNeary, Jefferson County Planning Director  
175 Arsenal Street, Watertown, N.Y.

FROM: Jeffrey Piro

CONTENTS:

1. Requested the following information:

- :Lunar
- :Soils
- :Bedrock characteristics
- :Recreational land use
- :Any other pertinent information he might have

He is sending out today! A.S.A.P.

2. Presently recreational uses in the area include fishing and canoeing. To the best of his knowledge, there are no formal provisions for these activities, but he is going to check.

DATE: November 20, 1981

PROJECT: Tannery Island - TSA 81100

TO: *Eugster*  
Glenn ~~Yooster~~  
National Park Service - 215 597-7386  
FROM: Philadelphia, Pa.  
Jeffrey Piro

CONTENTS:

1. Does our site fall within inventory limits?
  - Between Cayota Lake and North Lake  
(find on map)
2. Since the facility is to be constructed on an existing dam and there is no change in either water flow or condition, than this area is not impacted and does not become affected by the inventory.
3. He is sending a copy of their environmental report done for that area.

DATE: November 20, 1981

PROJECT: Tannery Island

TO: Charlie Morrison - 457-7433  
D.E.C., Wild and Scenic Rivers  
50 Wolf Road, Colonie

FROM: Jeffrey Piro

CONTENTS:

1. A section of the Black River (35 miles) between Carthage and Lions Falls is on the Federal Natural River Inventory. Need to check with Glenn Derster (National Park Service) to see if our site falls within limits.
2. Not authorized/designated in the state classification system. Is not on the state wild and scenic river management list.
3. Any formal protection of this river would have to result from Congressional study. NOT LIKELY TO HAPPEN!
4. Implications to private owner for intended use is little.

The Saratoga Associates

telecom

DATE: November 20, 1981

PROJECT: Tannery Island

TO: Eugene McCafferty  
D.E.C. Endangered Species - 457-5782  
50 Wolf Road, Colonie

FROM: Jeffrey Piro

CONTENTS:

1. Indiana bat - potential feeding area, although not likely to impact.
2. Any limestone caves in area may be potential habitat, but presently there are none known.
3. Al Hicks - 457-7484 - has specific information on the bat.

DATE: November 20, 1981

PROJECT: Tannery Island

TO: Al Hickes  
D.E.C. Endangered Species - 457-7484  
FROM: 50 Wolf Road, Colonie  
Jeffrey Piro

CONTENTS:

1. Requested any written information on the Indiana Bat, particularly on summer habitat. He is sending out.
2. Only four known nursing colonies in the state.
3. Very little known about the bat.
4. Any kind of modification to an existing hydroelectric facility would not impact the bats.

DATE: November 20, 1981

PROJECT: Tannery Island

TO: Black Lake Conservation Officer  
315 - 788-2020  
Carthage, New York

FROM: Jeffrey Piro

CONTENTS:

1. Fish population: bass, walleyes, brown trout
  - there is a great hatchery nearby, which provides good fishing around existing area
  - area is fished frequently
2. Native wildlife species:

deer  
rabbit  
fox  
etc.

} typical forest animals

Indiana bat is 20-25 miles from the site, and would not be affected by project.

DATE: November 30, 1981

PROJECT: Tannery Island - T.S.A. 81100

TO: Roger Evans, Director - (315) 479-3388  
Division of Statistics & Research  
New York State Unemployment Office  
Syracuse, New York

FROM: Jeffrey W. Piro

CONTENTS:

1. Unemployment rate for Village of Carthage:
  - :Based upon a projection formula from the 1970 census, updated to the 1980 census, and using October, 1980 unemployment figures.
  - :Unemployment 3.6%
  - :This figure is likely to be off by ±1%.

# RECORD OF TELEPHONE CONTACT

FROM: J. KENNETH FRASER & ASSOCIATES, P.C.  
620 WASHINGTON AVENUE, RENSSELAER, NEW YORK 12144  
BY S.BURKE *S.Burke*

CLIENT M.J. HASCHKE DATE 12-03-81  
JOB NO. TANNERY ISLAND TIME 3:45  
CONTACT NAME BRUCE GOODALE PHONE   
CONTACT ADDRESS PSC  
ALBANY

COMMENTS B. Goodale stated he res'ed the 1/19/81 package on  
THE PROJECT.  
I indicated 10% of the electricity would be sold to  
NIMPC.  
HE FELT WE COULD ISSUE A SGD FORM LETTER (THAT  
PSC HAS NO INVOLVEMENT) BY THE END OF THIS WEEK.

ACTION NONE REQUIRED



# United States Department of the Interior

## OFFICE OF THE SECRETARY

Office of Environmental Project Review  
15 State Street  
Boston, Massachusetts 02109

ER-81/1924

October 28, 1981

Mr. Kenneth F. Plumb, Secretary  
Federal Energy Regulatory Commission  
825 N. Capitol Street, N.E.  
Washington, D.C. 20426

Dear Mr. Plumb:

The Department of the Interior has reviewed the August 25, 1981, Notice of Application by Mary Jane Hirshey for a preliminary permit for the proposed Tannery Island Project (Project No. 4908) located on the Black River in the Village of Carthage, Jefferson County, New York.

We have no objection to the issuance of a preliminary permit for this hydroelectric project provided that studies under the permit give adequate consideration to the following concerns.

### Possible Involvement with Potential National Wild and Scenic River

The applicant should be made aware that a 35 mile segment of the Black River from Carthage upstream of Lyons Falls has been identified as a potential National Wild and Scenic River and is included in the Nationwide Rivers Inventory, which was conducted under the authority of the National Wild and Scenic Rivers Act (Public Law 90-542, as amended). The inventory is an evaluation and identification of rivers and river segments that meet the minimum criteria for further study and/or potential inclusion into the National Wild and Scenic Rivers System.

This hydroelectric project, which would utilize the existing dams and redevelop the other existing facilities, is located at the lower end of this 35 mile river segment and would not adversely impact identified natural values of the river corridor, provided the level of the dams is not raised and there are no major construction activities or changes in flow patterns.

Requests for information regarding the Nationwide Rivers Inventory may be sent to the Regional Director, Mid-Atlantic Region, National Park Service, 143 South Third Street, Philadelphia, Pennsylvania 19106.

RECEIVED  
L. Kenneth Fraser & Assoc., P.C.

DEC 10 1981

### Recreational Resources

An assessment of the recreation potential of the project should be undertaken during the preliminary permit period in consultation with the State Liaison Officer (SLO), county officials, and local community groups and agencies concerned with providing opportunities for public recreation. The assessment should include consideration of recreation needs and priorities identified in the Statewide Comprehensive Outdoor Recreation Plan as well as the enhancement and upgrading of any existing facilities that may have been developed earlier in conjunction with the project. The SLO for New York is Mr. Orin Lehman, Commissioner, Parks and Recreation, Agency Building #1, Empire State Plaza, Albany, New York 12238.

### Cultural Resources

The State Historic Preservation Officer (SHPO) should be consulted concerning the project to insure compliance by the applicant and the Federal Energy Regulatory Commission (FERC) with all preservation legislation. Consideration of project effects on any existing or potential cultural resources should take place as part of the environmental evaluation during the preliminary permit period. We suggest that Article 7 in Order No. 54 Final Rule, FERC, October 22, 1979, be included in the preliminary permit. For New York, the SHPO is also Mr. Lehman.

### Fish and Wildlife Resources

The Black River in this area supports a good quality fishery for walleye, northern pike, smallmouth bass, rock bass and other sunfish.

Except for occasional transient species, no federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required with the U.S. Fish and Wildlife Service. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of federally listed endangered and threatened species in New York is enclosed for your information.

The following comments and recommendations are submitted pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The proposed hydroelectric facility at Carthage, New York, could adversely impact existing fishery resources in the Black River. The Department of the Interior would be opposed to any hydroelectric operation that would destroy or seriously degrade fish and wildlife resources in the Black River. We suggest that the Permittee be required to coordinate with the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service throughout the 3-year study period to consider development and operations that would be compatible with existing fish and wildlife resources.

We recommend that the following be stipulated in any preliminary permit issued by the Federal Energy Regulatory Commission regarding FERC No. 4908:

"That the Permittee shall design and conduct at project cost, as soon as practicable after issuance of the preliminary permit, preparatory studies in cooperation with the New York State Department of Environmental Conservation and the U.S. Fish and Wildlife Service. These studies shall address, but not be limited to, the effects of hydroelectric operations on fish passage and migration, spawning success and fish survival in the reservoir, water quality in the reservoir, minimum continuous water releases downstream, and effects of cyclic water level fluctuations on aquatic and riparian vegetation. The studies shall also identify and evaluate general measures to avoid, offset, and/or reduce adverse project-caused impacts on fish and wildlife resources."

Sincerely



William Patterson  
Regional Environmental Officer

Enclosure

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES  
IN NEW YORK

Common Name	Scientific Name	Status	Distribution
<b>FISHES:</b>			
Cisco, longjaw	<u>Coregonus alpens</u>	E	Lake Erie-probably extinct
Pike, blue	<u>Stizostedion vitreum</u> <u>glaucum</u>	E	Deep water of Lake Erie
Sturgeon, shortnose*	<u>Acipenser brevirostrum</u>	E	Lake Ontario - probably extinct
			Hudson River and other Atlantic Coastal rivers
<b>REPTILES:</b>			
Turtle, green*	<u>Chelonia mydas</u>	T	Oceanic summer visitor coastal waters
Turtle, hawksbill*	<u>Eretmochelys imbricata</u>	E	Oceanic summer visitor coastal waters
Turtle, leatherback*	<u>Dermochelys coriacea</u>	E	Oceanic summer resident coastal waters
Turtle, loggerhead*	<u>Caretta caretta</u>	T	Oceanic summer resident coastal waters
Turtle, Atlantic ridley*	<u>Lepidochelys kempii</u>	E	Oceanic summer resident coastal waters
<b>BIRDS:</b>			
Eagle, bald	<u>Haliaeetus leucocephalus</u>	E	Entire state
Falcon, American peregrine	<u>Falco peregrinus anatum</u>	E	Entire state - re-establishment to former breeding range in progress
Falcon, Arctic	<u>Falco peregrinus tundrius</u>	E	Entire state migratory - no nesting
<b>MAMMALS:</b>			
Bat, Indiana	<u>Myotis sodalis</u>	E	Entire state
Cougar, eastern	<u>Felis concolor cougar</u>	E	Entire state - probably extinct
Whale, blue*	<u>Balaenoptera musculus</u>	E	Oceanic
Whale, finback*	<u>Balaenoptera physalus</u>	E	Oceanic
Whale, humpback*	<u>Megaptera novaeangliae</u>	E	Oceanic
Whale, right*	<u>Eubalaena</u> spp. (all species)	E	Oceanic
Whale, sei*	<u>Balaenoptera borealis</u>	E	Oceanic
Whale, sperm*	<u>Physeter catodon</u>	E	Oceanic

\* Except for sea turtle nesting habitat, principal responsibility for these species is vested with the National Marine Fisheries Service.

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES  
IN NEW YORK (Cont'd)

Common Name	Scientific Name	Status	Distribution
<u>MOLLUSKS:</u> Snail, chittenango ovata amber	<u>Siccinea ovalis</u> <u>chittenangoensis</u>	T	Madison County
<u>PLANTS:</u> Milkweed, northern wild	<u>Aconitum noveboracense</u>	T	Ulster County

J. KENNETH FRASER AND ASSOCIATES, P.C.

Consulting Engineers

620 WASHINGTON AVENUE  
RENNSELAER, N.Y. 12144

TELEPHONE 463-6408

December 11, 1981

Mr. William Patterson  
Regional Environmental Officer  
U.S. Department of Interior  
Office of the Secretary  
Office of Environmental Project Review  
15 State Street  
Boston, Massachusetts 02109

Re: Tannery Island Project  
FERC project No. 4908

Dear Mr. Patterson:

This is in reply to your letter of December 7, 1981 regarding the Application for Exemption from Licensing for the Tannery Island Project, Carthage, New York.

Your letter of December 7 makes reference to your earlier letter of October 28, 1981. However, the copy of your letter of October 28 attached to your letter of December 7 is the first we have seen of your concerns. It should be noted that your letter of October 28 is in relation to the Application by Mary Jane Hirschey for a Preliminary Permit for the proposed Tannery Island Project. However, the project itself remains the same.

We have reviewed your most recent letter in light of your reference to earlier items of correspondence from your agency. It appears that on October 28, 1981, the U.S. Fish and Wildlife Service issued comments to the Federal Energy Regulatory Commission on areas of agency concern which are addressed by the Applicant. This item apparently was made in response to the application for preliminary permit for this project. A copy of this letter was not received by the Applicant or her representatives, but evidently is a matter of record in the FERC docket for this project. Your letter of December brought this item to our attention for the first time.

We are, however, in receipt of a U.S. Fish and Wildlife Service Regional Office letter of comment on this project dated November 25, 1981 by Mr. Paul Hamilton, Cortland Regional Office. The aspects, subjects, and issues contained in this letter have been used as a guidance and incorporated into the exemption application.

U.S. Dept. of Interior  
Mr. William Patterson

2 of 2

We are enclosing, under separate cover, a copy of the Application for Exemption. A copy will also be forwarded to Mr. Hamilton. We believe that the Environmental Report Section of this document mainly addresses your concerns. Should you have further questions, please advise.

Very truly yours,

*Stephen F. Burke*  
Stephen F. Burke

JAB/hl

cc: Ms. Mary Jane Hirschey

New York State Department of Environmental Conservation  
50 Wolf Road, Albany, New York 12233-0001  
Division of Regulatory Affairs, Room 514



Robert F. Flacke  
Commissioner

RECEIVED  
J. Kenneth Fraser & Associates, P.C.

December 14, 1981

DEC 14 1981

Mr. Stephen F. Burke  
J. Kenneth Fraser & Associates, P.C.  
Consulting Engineers  
620 Washington Avenue  
Rensselaer, NY 12144

Re: Tannery Island Hydroelectric  
Development - Carthage, NY -  
FERC #4908.

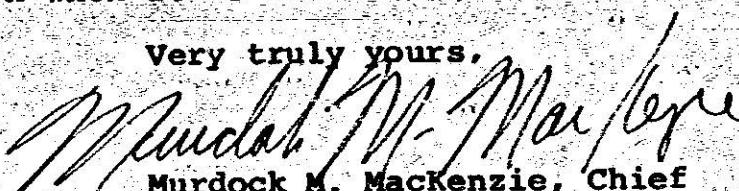
Dear Mr. Burke:

This is to advise you that I have reviewed the conference notes prepared by you for our November 19, 1981 meeting and that the DEC has no objection to their inclusion in your FERC application.

I would like to add that the 303(e) plan completed in 1977 identified a significant dissolved oxygen sag downstream from Lyons Falls. The series of waterfalls at Carthage re-aerates the Black River out of the danger zone. The DEC is concerned over this situation and will require additional studies to evaluate the possible loss of aeration due to the cumulative effect of competing hydroelectric developments in the Carthage area.

The DEC reserves the right to review and comment upon your final FERC application when it is made available.

Very truly yours,

  
Murdock M. MacKenzie, Chief  
Bureau of General Project Review

MMK/saf

cc: J. Corr, J. Wilson, J. Kenna w/attachment, E. Horn (Attn:  
D. Sheppard) w/attachment, W. Berner w/attachment.

J. KENNETH FRASER AND ASSOCIATES, P.C.

Consulting Engineers

620 WASHINGTON AVENUE  
RENSSELAER, N.Y. 12144

TELEPHONE 463-4408

December 14, 1981

Mr. Murdock M. MacKenzie  
Division of Regulatory Affairs  
New York State Department  
of Environmental Conservation  
50 Wolf Road  
Albany, New York 12233

Re: Tannery Island Small Hydroelectric  
Redevelopment Project, Carthage, N.Y.  
FERC Project No. 4908  
Applicant - Ms. Mary Jane Hirshey

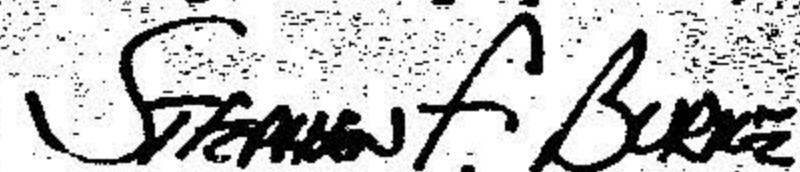
Dear Mr. MacKenzie:

We would like to acknowledge receipt of your letter of December 14, 1981. As per your letter, we will include the Minutes of the November 19, 1981 meeting at DEC, in the exemption application for the referenced project, as proof of consultation with your agency.

Your letter expresses concern over potential water quality problems in the Black River as a result of multisite hydro redevelopment in the "Long Falls" reach of the river, which may result from loss of reaeration opportunities. Exhibit "E" of the referenced application has included a discussion of dissolved oxygen in the Black River at the location as well as the BOD loading at Lyons Falls by the Georgia Pacific Paper Company. A copy of this application will be forwarded to your office for review in the near future. Attention is called to Sections 2.5, 3.1.6, 3.1.2, and 3.2 of Exhibit "E" of this application for a discussion of this subject.

Please do not hesitate to contact us at once if we may be of additional assistance to your office on this project.

Very truly yours,

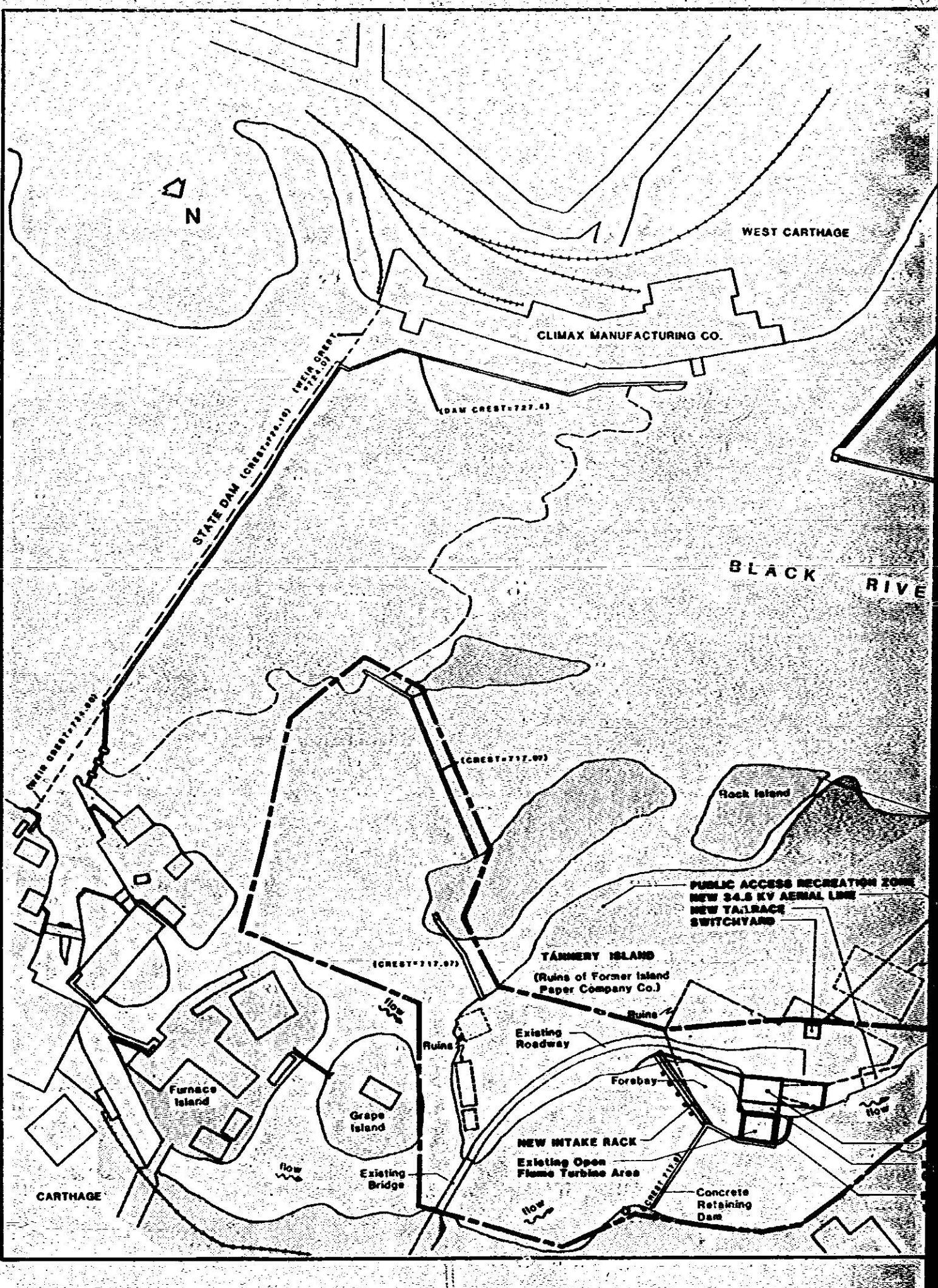


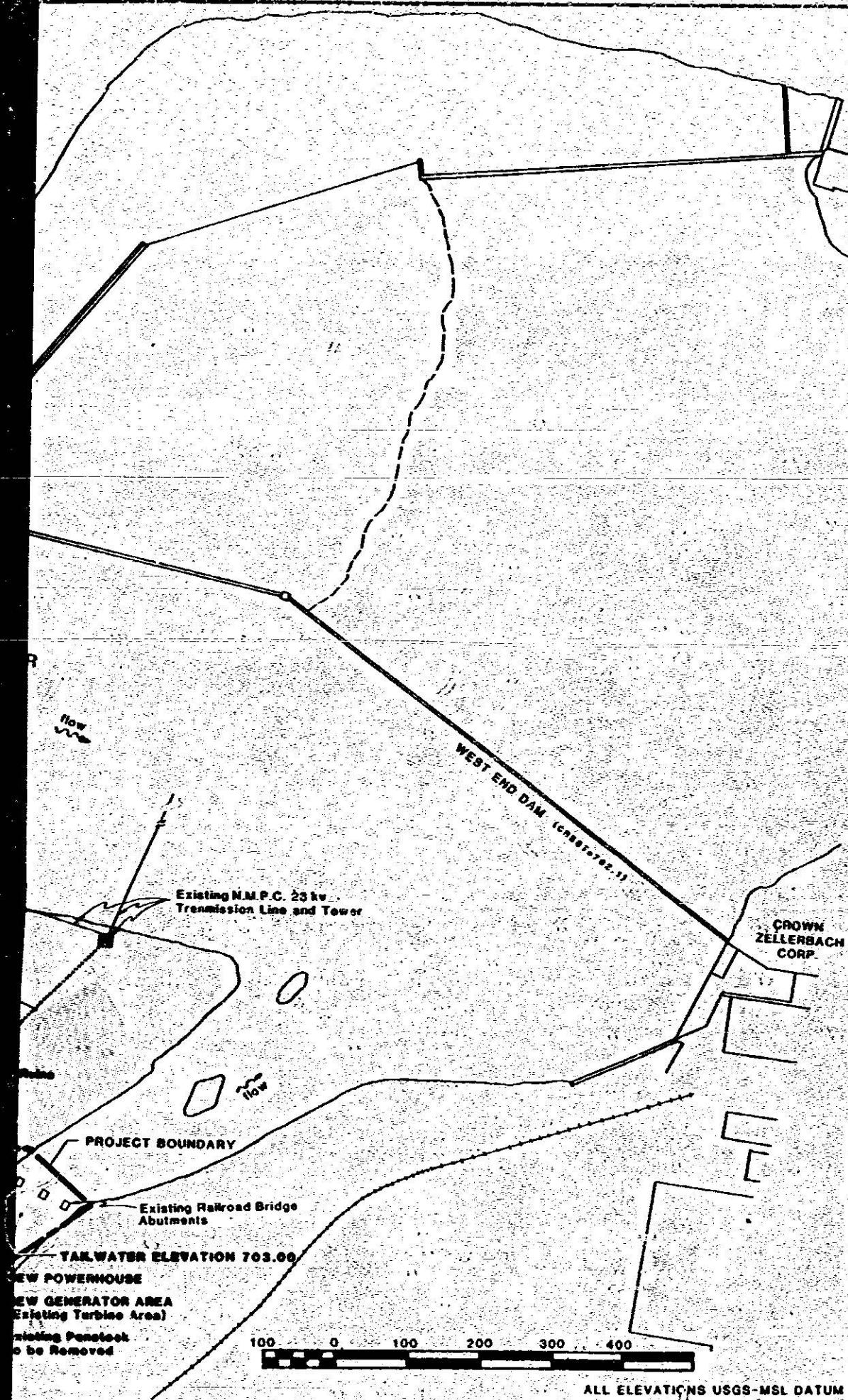
Stephen F. Burke

CC: Ms. Mary Jane Hirshey

EXHIBIT G

V. EXISTING AND PROPOSED PROJECT WORKS





**EXHIBIT G**

SHEET 1

THE DRAWING NO. 3266

DATE : NOV. 1981

REV.: 0

BY : DMc

**SCALE : 1" = 100'**  
**IF THIS IS NOT 22" x 34"**  
**IT IS A REDUCED PRINT**  
**-SCALE ACCORDINGLY**

**MILL SITE PLAN  
EXISTING CONDITIONS  
AND  
PROPOSED DEVELOPMENT  
CARTHAGE-BLACK RIVER COMPLEX**

# TANNERY ISLAND HYDROELECTRIC PROJECT

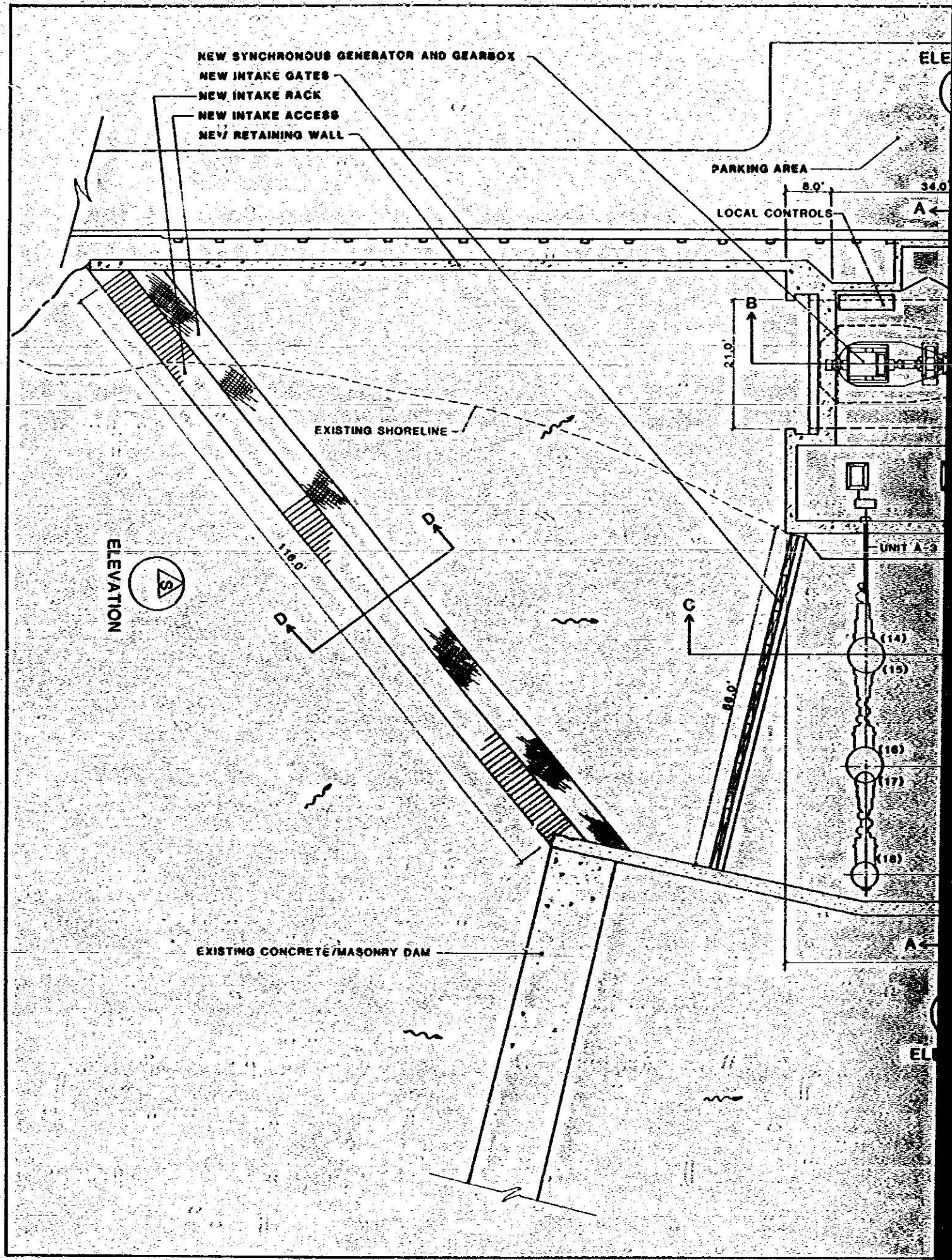
FERC NO. 4908-000

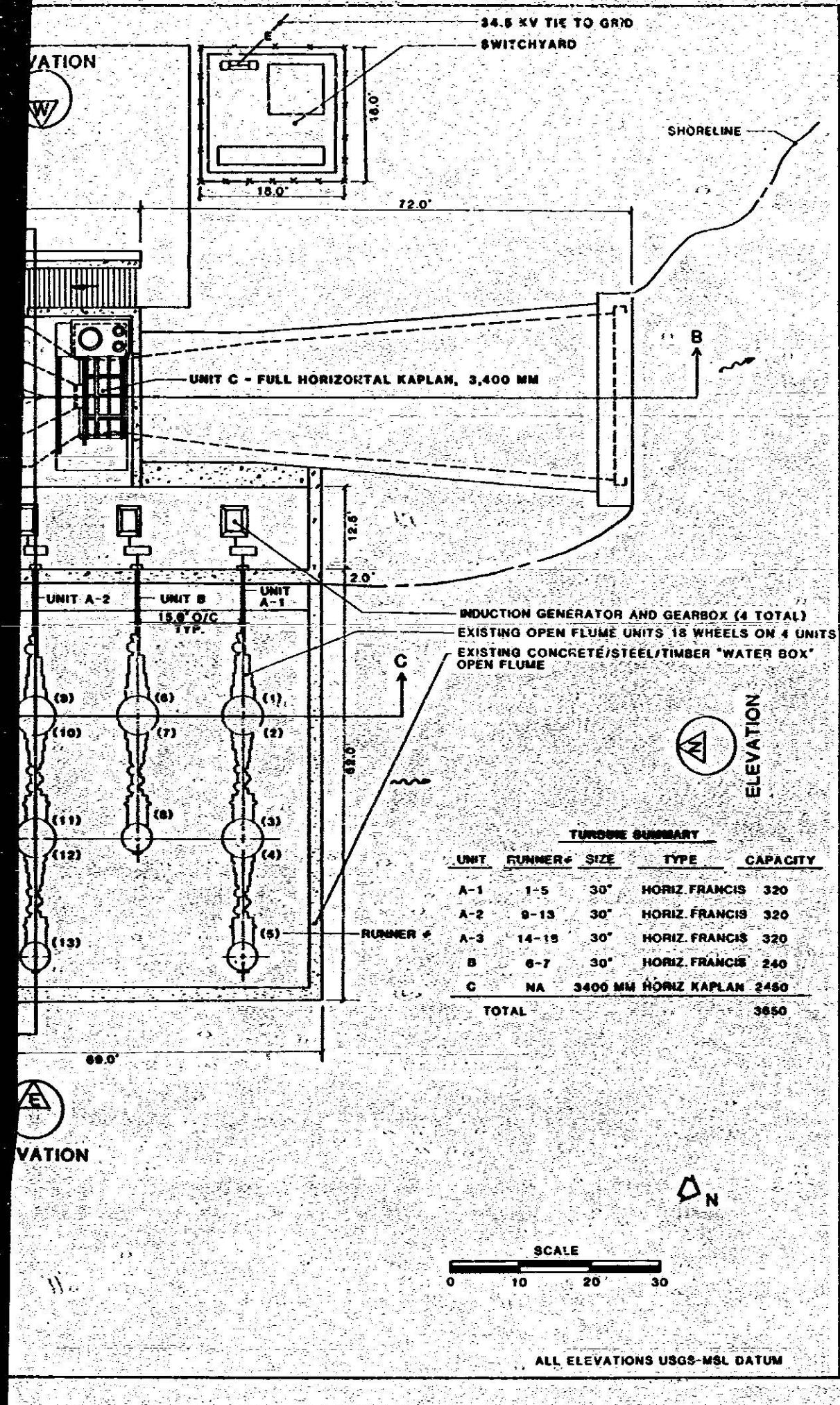
CARTHAGE, NEW YORK

J. Kenneth Fraser & Associates, P.C., Consulting Engineers

THIS DRAWING IS A PART  
OF THE APPLICATION FOR  
THE EXEMPTION MADE BY  
THE UNDERSIGNED THIS  
10<sup>th</sup> DAY OF DECEMBER 1991.

By Mary Jane Hinckley  
Title *Ourself?*





## EXHIBIT G

### SHEET 2

JKF DRAWING NO. 8266

DATE : NOV. 1981

REV.: 0

BY : DMC

SCALE : 1" = 10'  
IF THIS IS NOT 22" x 34"  
IT IS A REDUCED PRINT  
SCALE ACCORDINGLY

### EXISTING POWERHOUSE PLAN

TANNERY ISLAND  
HYDROELECTRIC PROJECT  
FERC NO. 4908-000

CARTHAGE, NEW YORK

J. Kenneth Fraser and Associates, P.C., Consulting Engineers

THIS DRAWING IS A PART  
OF THE APPLICATION FOR  
THE EXEMPTION MADE BY  
THE UNDERSIGNED THIS  
12<sup>th</sup> DAY OF DEC. 1981

By *Mary Jane Hinsley*  
Title OWNER

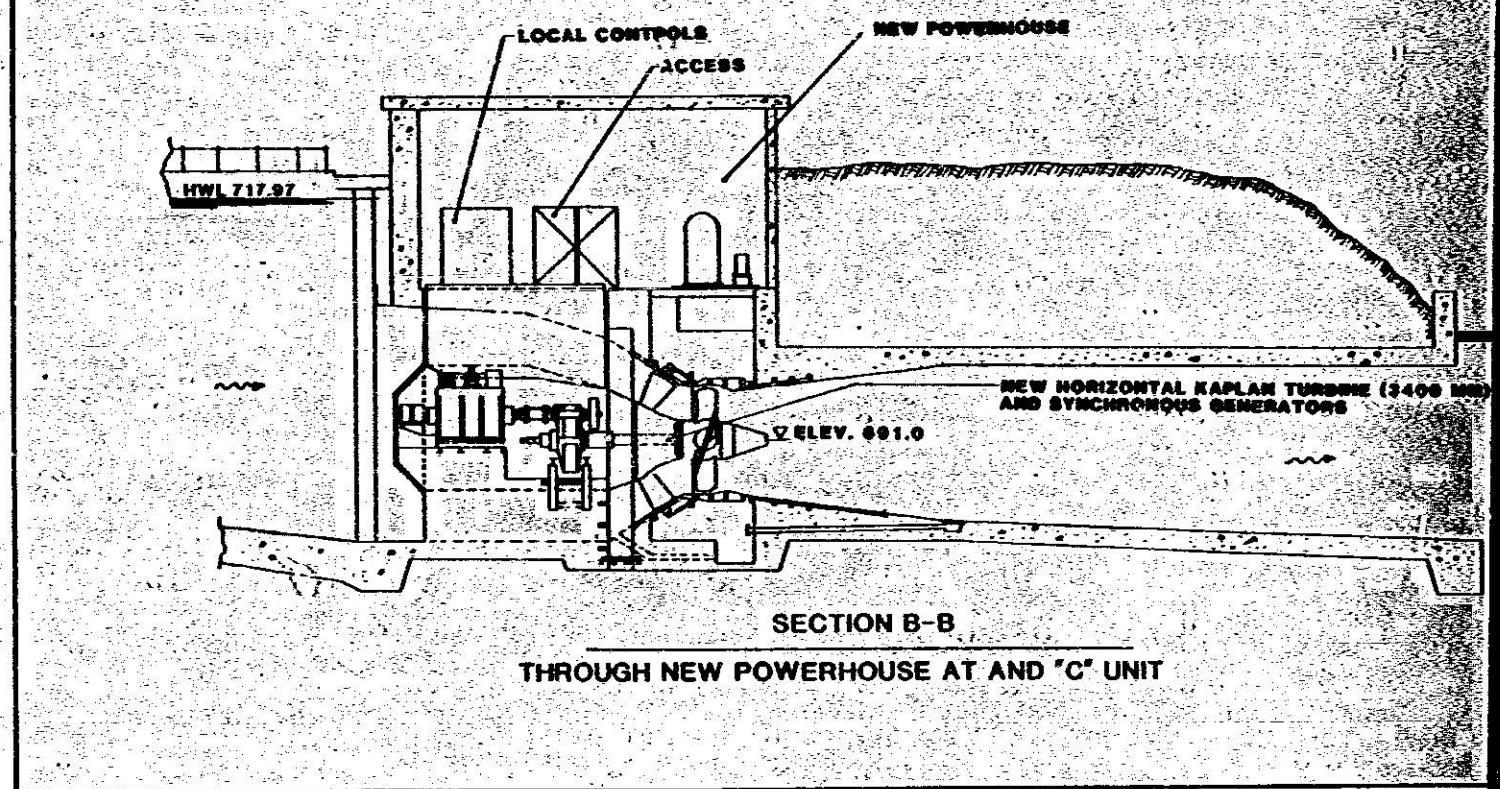
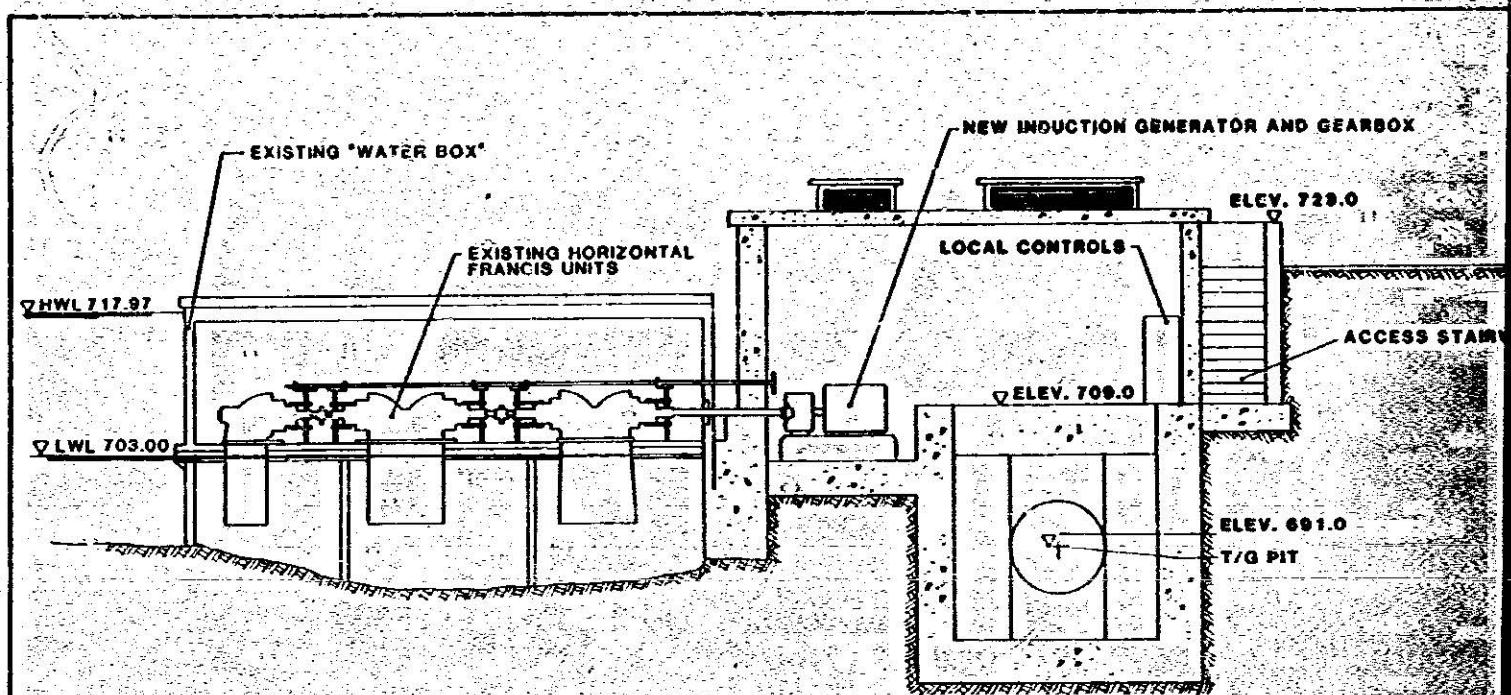


EXHIBIT G  
SHEET 3

J'S DRAWING NO. 6207

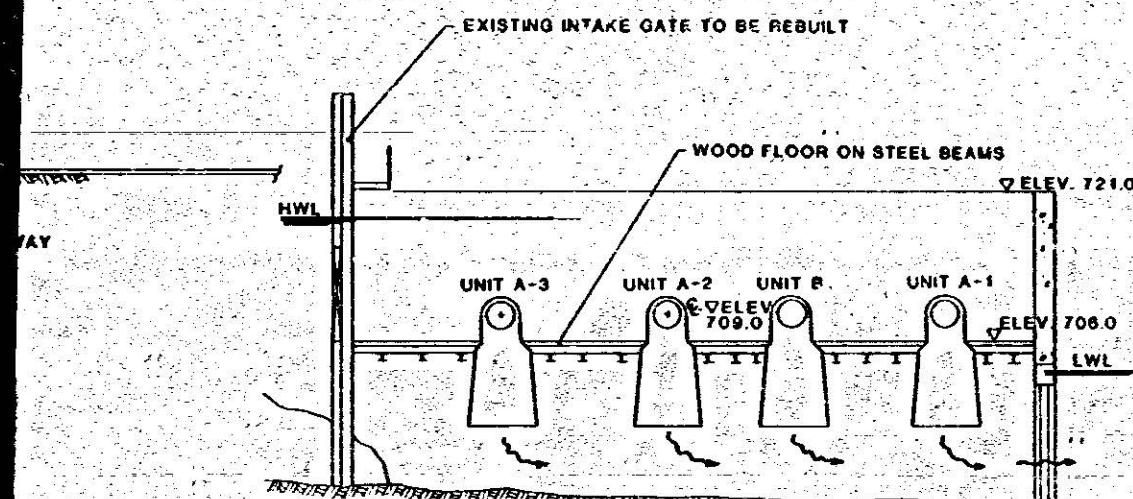
DATE : NOV. 1981

REV.: 0

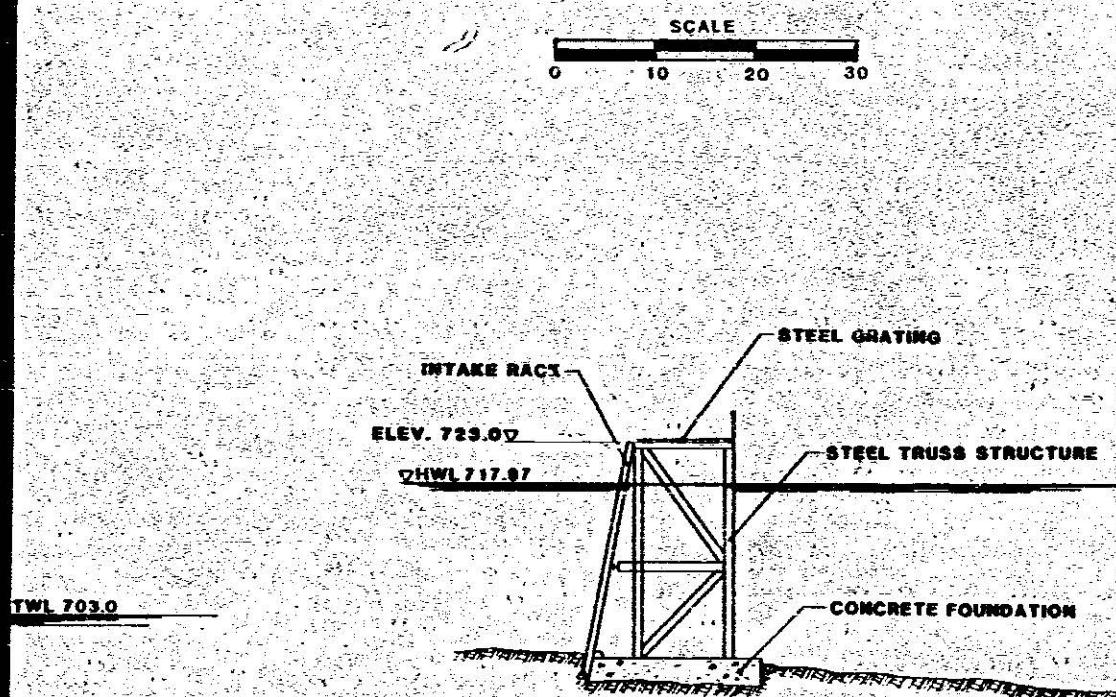
BY : DMc

SCALE : 1" = 10'  
IF THIS IS NOT 22" x 34"  
IT IS A REDUCED PRINT  
SCALE ACCORDINGLY

SECTIONS



SECTION C-C  
THROUGH OPEN FLUME



THROUGH NEW TRASHRACK

TANNERY ISLAND  
HYDROELECTRIC PROJECT  
FERC NO. 4308-000

CARTHAGE, NEW YORK

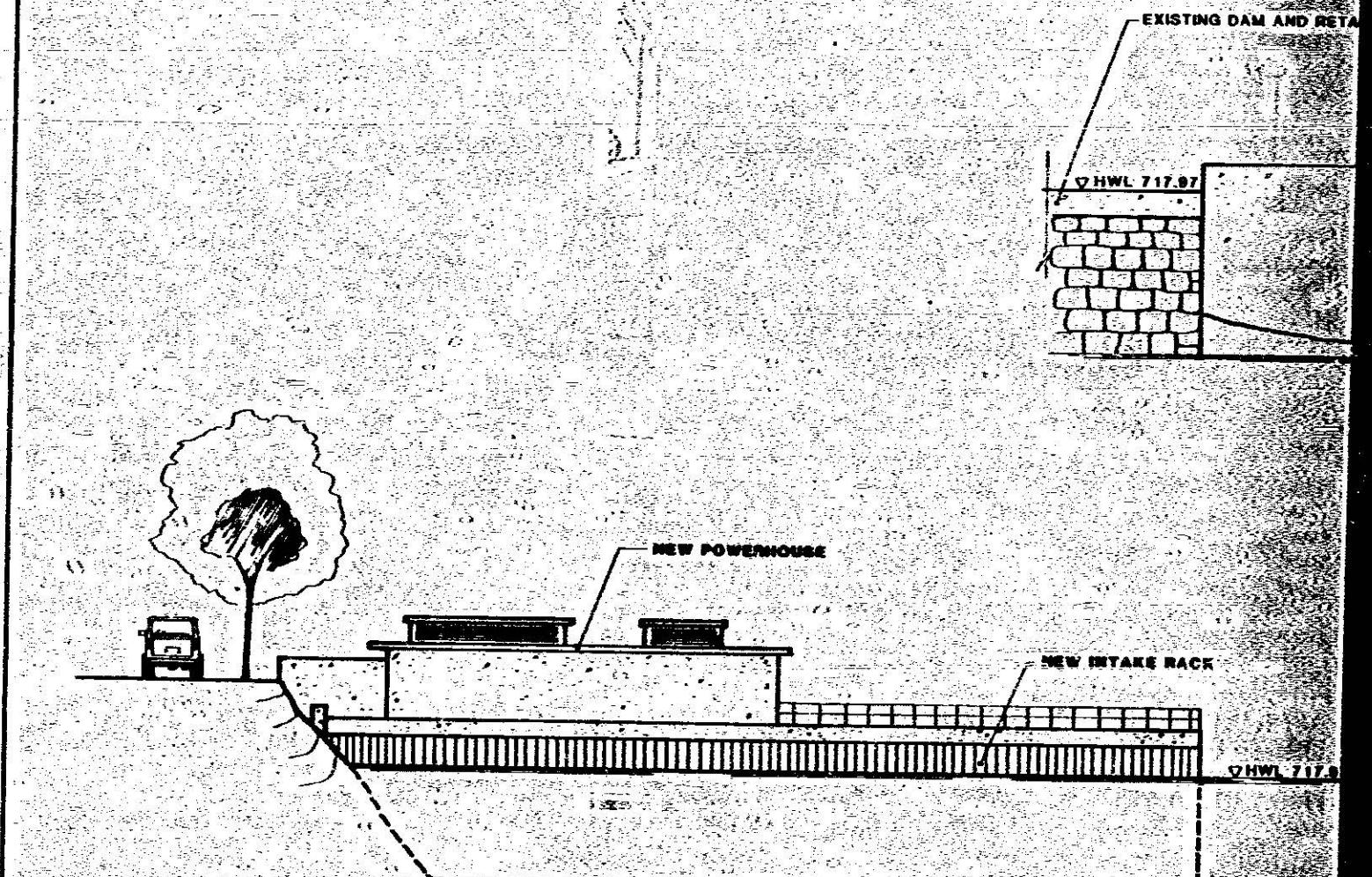
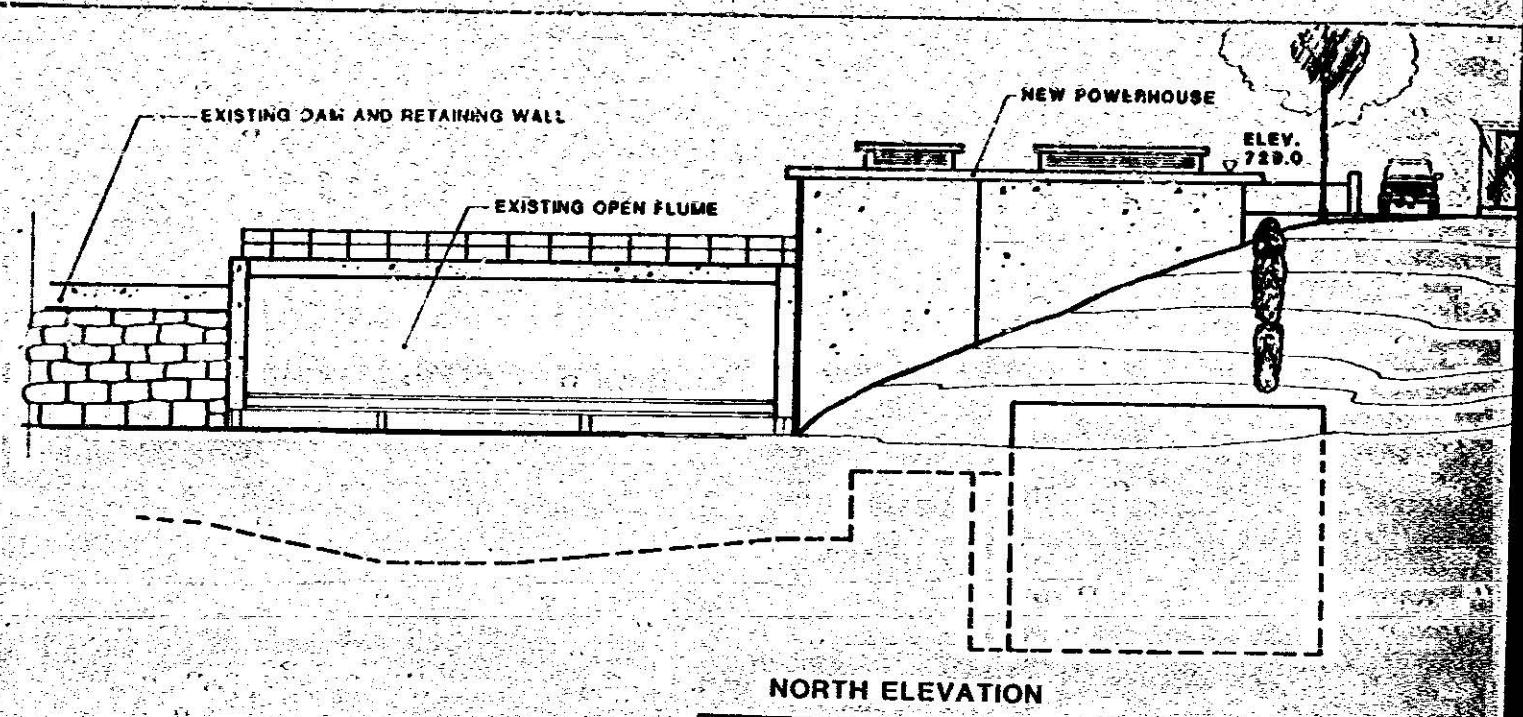
J. Kenneth Fraser and Associates, P.C., Consulting Engineers

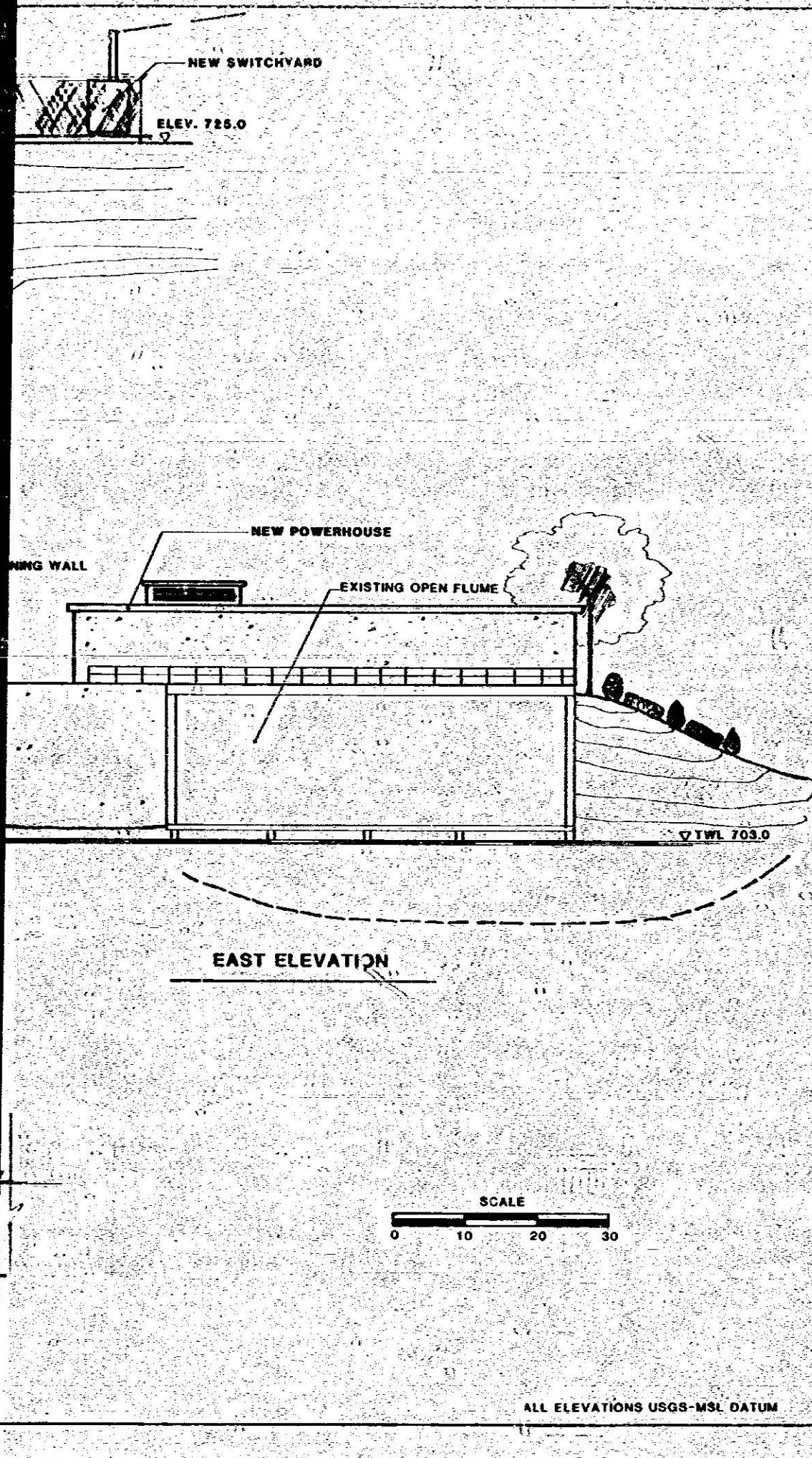
THIS DRAWING IS A PART  
OF THE APPLICATION FOR  
THE EXEMPTION MADE BY  
THE UNDERSIGNED THIS  
20<sup>th</sup> DAY OF DEC. 1981

By *Mary Jean Hendres*

Title OWNER

ALL ELEVATIONS USGS-MLS DATUM





THIS DRAWING IS A PART  
OF THE APPLICATION FOR  
THE EXEMPTION MADE BY  
THE UNDERSIGNED THIS  
10<sup>th</sup> DAY OF DEC. 1981  
By *Mary Jane Shuey*  
Title OWNER

**APPENDIX**

**A. DOCUMENTATION OF SUFFICIENT PROPERTY INTEREST TO DEVELOP**

# MACKENZIE SMITH LEWIS MICHELL & HUGHES

## LAW OFFICES

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CHARLES J. CROMIN

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WILLIS B. LEMON

CARTER H. STRICKLAR, JR.

DENNIS S. BALDWIN

JAY M. POMEROY\*

KEVIN M. REILLY

EDWARD J. ROBES

GEORGE B. WOLFF

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KENNETH E. ACKERMAN

\* ALSO ADMITTED  
TO FLORIDA BAR

\*\* ALSO ADMITTED  
TO D.C. BAR

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WILLIS A. BROWN  
T. FRANK BOLAN, JR.  
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ARTHUR A. CHALEMBKE, JR.  
CATHERINE A. GALE  
ARTHUR W. WENTLANDT  
MICHAEL P. DALY  
NANCY L. PONTIUS  
EDWARD J. SPENCER, III

December 14, 1981

Mary Jane Hirschey  
30 North Main Street  
Carthage, New York 13619

RE: Application of Mary Jane Hirschey before the  
Federal Energy Regulatory Commission

Dear Ms Hirschey:

You have requested a Title Report concerning property owned by you in the Village of Carthage, New York which is the subject of an application for exemption before the Federal Energy Regulatory Commission.

Please be advised that by Deed dated June 30, 1981 and recorded in the Jefferson County Clerk's Office on September 30, 1981 in Liber 918, page 430 Janet Louise Ruderman conveyed to Janet Louise Ruderman and Mary Jane Hirschey, as Tenants in Common, the premises which are known as Tannery Island in the Village of Carthage, New York. Janet Louise Ruderman is the mother of Mary Jane Hirschey and the conveyance above described is pursuant to a long standing agreement between the two.

On January 17, 1964 Charles I. Ruderman obtained title to Tannery Island by a Deed which was subsequently recorded on the 23rd of January 1964 from the distributees and administrators of the Pratt Estate which succeeded to all rights owned by Island Paper Company to Tannery Island.

Janet Louise Ruderman is the wife of Charles I. Ruderman and the distributee of the real property known as Tannery Island pursuant to his last known Will and Testament thereafter admitted in probate.

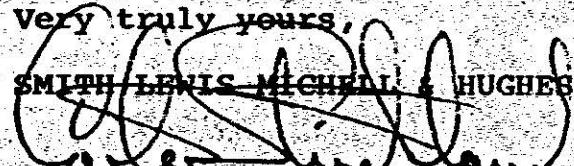
The water rights that were acquired with Tannery Island were interpreted by a referee's decision in the case Carthage Machine Company vs. Island Paper Company decided in a referee's decision dated June 13, 1914 and subsequently affirmed by the Appellate Division of the Fourth Judicial Department of the State of New York and the New York State Court of Appeals.

In addition Carthage Machine Company has granted to Mary Jane Hirshey an option to any right, title and interest which Carthage Machine Company may have in the bed of the Black River in the Village of Carthage, New York and any rights to the waterflow and other rights appurtenant thereto.

In view of the above it is my opinion that Ms. Hirshey holds the property rights necessary to develop Tannery Island as proposed in her application for exemption before the Federal Energy Regulatory Commission.

Very truly yours,

MACKENZIE SMITH LEWIS MICHELL & HUGHES

  
Carter H. Strickland

CHS/sc

cc: David Ward  
James A. Besha