

STATE OF IDAHO  
DEPARTMENT OF WATER RESOURCES  
**BENEFICIAL USE FIELD REPORT**

## A. GENERAL INFORMATION

**Permit No:** 84-7171  
**Exam Date:** March 3, 2020

1. **Current Owner:** FORD HYDRO LTD PARTNERSHIP  
C/O FORD HYDRO INC  
PO BOX 506 CASHMERE WA 98815

The address highlighted in yellow above is for an engineer who consulted on the penstock reconstruction. It is not the address for Ford Hydro Limited Partnership. I requested that a change of address be completed to correct the records in IDWR's the contact database. The form was received at the state office March 12, 2020.

2. **Accompanied by:** Russell Ford (project operator) and Adam Frederick (IDWR Northern Region personnel)

Phone No: 208-476-9143 (business phone)

Address:

Relationship to permit holder: Russ Ford operates the facility for Ford Hydro Ltd Partnership. His father, Arch Ford, is a managing partner

- ### 3. Source
- JIM FORD CREEK

**Tributary**  
CLEARWATER RIVER

Method of Determination: Comparison of the location of the project's diversion with the U.S. Geological Survey's DRG (Digital Raster Graphic) image available in ArcMap. Quad map, Orofino East shows that the diversion is from Jim Ford Creek and that the confluence of Jim Ford Creek with the Clearwater River is located at NWNE of sec 28, Twp 36N, Rge 02E.

## B. OVERLAP REVIEW

1. Other water rights with the same place of use: No Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments:

2. Other water rights with the same point-of-diversion: No Overlap

Water Right No.	Source	Purpose of Use	Basis

Comments: There are very few water right diversions from Jim Ford Creek below this project's powerhouse and none between the penstock intake and the discharge from the powerhouse.

### C. DIVERSION AND DELIVERY SYSTEM

1. **Location of Point(s) of Diversion:**

JIM FORD CREEK SW¼ SW¼, Sec. 10, Twp 35N, Rge 04E, B.M.

CLEARWATER County

Method of Determination: The diversion dam is visible in aerial photography. GPS coordinates were taken during the field exam. The headworks do not appear to be located on Ford Hydro property.

2. **Place of Use:** POWER

[illegible]

Method of Determination: The powerhouse is visible in select aerial photography. GPS coordinates were taken during the field exam. It is located in the NWNE rather than in the permitted NENE quarter-quarter. An amendment of the permit will be needed to correct the legal address before a license can be issued.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components. See attachment #1: engineering drawings of the conduit route survey and the intake modification.

☒

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

☒

Aerial Photo Attached (required for irrigation of 10+ acres).

☒

Photo of Diversion and System Attached

☒

4.

Diversion ID No.*	Generator Make	Design kW	Serial No. Type	Turbine Make	Turbine Serial No. or Discharge Size
Spatial data pt 421665		515	8752 Pelton-wheel	Canyon Hydro	3 custom fabricated turbines; each turbine has two 6 - inch diameter nozzles

The turbines are identical triplets. The turbine manufacturer, Canyon Hydro, has given the whole project a serial number (S/N 8752) rather than giving serial numbers to the individual turbines. The turbine-generator units are air-cooled.

**Location of Point(s) of Discharge:**

JIM FORD CREEK NW¼ NE¼, Sec. 09, Twp 35N, Rge 04E, B.M. CLEARWATER County

**D. FLOW MEASUREMENTS**

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Not applicable						

**2. Measurements:**

There are no measurements of the power flow either in the penstock or at the turbine discharge back into Jim Ford Creek. The flows through the Ford Power Project are 'measured' by the turbines. An instantaneous reading of power generation was available from the project's instrumentation. According to the gage displays in the powerhouse, the project was generating approximately 1206 kW at the time of the exam. Please refer to the photos of the powerhouse gages and computer screen.

The Federal Energy Regulatory Commission (FERC) required a measuring device for the bypass flow. That device is housed in a free-standing corrugated metal pipe that is located outside of the project's headworks building. Inside the pipe is a horizontal drum water-stage recorder. At the time of the exam, water was spilling over the diversion wall in excess of 3 cfs.

**E. FLOW CALCULATIONS**

☒ Additional Computation Sheets Attached

**Measured Method:**

The general equation to calculate flow from power is:  $(P \times 11.81)/(H \times e) = Q$ ; where Q is flow in cfs, P is power in kW, H is total head in feet, e is efficiency in decimal format and 11.81 is a conversion factor. In this case the equation is:  $(1206 \times 11.81) / (442 \times 0.815) = \sim 39.5$  cfs.



**F. VOLUME CALCULATIONS**

1. **Volume Calculations for irrigation:** Not applicable

$$V_{I,R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{I,R} \text{ and } V_{D,R} =$$

2. **Volume Calculations for Other Uses:**

The Ford Power Project is an off-stream hydroelectric project so a volume limit is required on the license. The max volume is based on available generation data. See attachment #2 spreadsheets and the volume narrative section below.

**G. NARRATIVE/REMARKS/COMMENTS**

The permit holder believed that a field examination by IDWR had already been accomplished and provided evidence that the exam had occurred in 1998. The water right file did not contain any record of that exam.

**Applicant**

On April 30, 1986, Permit #84-7171 was issued to Idaho Hydro, Inc. The permit was assigned to the current owner of the project, Ford Hydro Limited Partnership, in November 1987. Ford Hydro Limited Partnership is registered with the Idaho Secretary of State (IDSOS) as #3710. (The old IDSOS file number is L569).

The Ford Hydro Limited Partnership holds both the FERC license (#7986) and the water right permit (#84-7171) pertinent to the project. The FERC name for the project is the Ford Power Project.

Avista utilities confirmed that the current energy sales agreement for the project was also with Ford Hydro Limited Partnership.

An Affidavit for Water Rights to be Used for Power Purposes was signed in January 1988 by Mr. Archie R. Ford and submitted to IDWR on behalf of the Ford Hydro Limited Partnership. IDSOS shows that Mr. Archie Ford was then and is now an officer of either the Ford Hydro Limited Partnership or of Ford Hydro, Inc., one of the general partners.

**Point-of-Diversion Ownership**

According to available Clearwater County parcel information, the physical address of the project's headworks and point-of-diversion is 620 Rock Pit Rd. It should be within property owned by the Ford Hydro Project whose mailing address is: PO Box 1432, Lewiston, ID 83501. However, the GPS coordinates taken during the visit as well as the previously digitized SpatialData point for the diversion dam, appear in a neighboring parcel. I requested confirmation from the Clearwater County Assessor and received it 3/5/2020.

FERC requires a licensee to have title to or the right to use all the land necessary for the construction, maintenance and operation of their project within a few years after the license is issued. The survey available to the County lacked control points, so the true starting point was unknown. The Ford Power Project's eastern boundary could be further east and include the headworks buildings. But it does not now. I forwarded my findings to Mr. Arch Ford. In response, he provided information which shows how the project boundaries should appear and is working with Clearwater County to correct the County's parcel boundaries.

**Place-of-Use Ownership**

The place-of-use is a powerhouse located within land owned by the State of Idaho. I requested and received a copy of the perpetual easement agreement from the Idaho Department of Lands and additional copies from the permit holder. (See attachment #3)

The actual location of the place-of-use differs from the location authorized by Permit #84-7171. An amendment is needed to correct the public land survey address of the powerhouse before a license can be issued.

No water rights divert from the main channel of Jim Ford Creek between the diversion to the penstock

and the powerhouse. The steep, canyon walls above that reach make other diversions from the creek impractical.

### **Point of Discharge**

The turbines discharge into a short tailrace which conveys the water approximately 10 feet from the powerhouse back into Jim Ford Creek.

### **Water Use**

#### Operation strategy

The Ford Power Project is an off-stream project. Its FERC license requires the licensee to operate the project in an instantaneous run-of-river mode and to continuously pass 3 cfs or the inflow to the headwater pool whichever is less, over the weir in the diversion structure

The bypass stream flow value, listed in Article 21<sup>1</sup> of the FERC license was set in consultation with the Idaho Department of Fish and Game. As a result, Jim Ford Creek is not dewatered by the Ford Power Project.

The combined hydraulic capacity of the 3 turbines is nominally 61 cfs. The turbine performance curves and test data were provided and support beneficial use of 60 cfs, the rate given on the 'proof' statement.

The turbines can utilize flows as low as 10% of their design or approximately 1.5-2 cfs<sup>2</sup>. It's unlikely that this project can generate power when the flow in the creek drops as low as the minimum bypass flow requirement. Specifically, when the flow in Jim Ford Creek is less than 4.5-5 cfs (3 cfs minimum stream flow + 1.5-2 cfs minimum turbine flow) power generation is unlikely and all available water will remain in the main channel of Jim Ford Creek.

#### Storage

A small pool is impounded behind the diversion structure and extends approximately 130 feet upstream. At the permit-authorized diversion rate, the pool contains less than one days-worth of water. Storage use is not authorized by the permit and is not required.

The intake area of the project was modified in 1997<sup>3</sup> (after the development period) with the installation of a set of concrete walls which baffle the flow in front of the penstock intake, deflecting ice and large debris. FERC amended the project's license and approved the modification as it did not change the hydraulic capacity of the project nor adversely impact the natural resources of Jim Ford Creek. Some of the baffle walls are greater than 10 feet in height, but the surface area of the headwater pool remains less than 1 acre.

With less than 50 acre-feet of storage, the project is outside of the jurisdiction of IDWR's Dam Safety section. However information related to reconstruction and repair of the penstock had been provided to the Dam Safety section and was stored in their archive. I benefited from reviewing those documents and have included them as a separate entry in the backfile for this water right.

#### Power Use

The Proof-of-Beneficial-Use statement for this right was received at IDWR's state office on March 30, 1990. I was able to confirm beneficial use of water for power generation during the development period (April 30, 1986 - March 30, 1990) by locating and reviewing power generation records.

An energy sales agreement had been entered into between Ford Hydro Limited Partnership and the Washington Water Power Company (now Avista). The agreement is identified by the Idaho Public Utility Commission as Case Number U-1008-239, Order Number 20620. It has a thirty-five year term and was signed on July 17, 1985 (~35 years ago). Avista personnel confirmed that the agreement was still in

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<sup>1</sup> see Article 21 of the FERC license on p 70 of the backfile for this right  
[\\dwrboifsvp02\DocsData\\$\WATERRIGHTS\84\SMERRITT\4t601\\_.PDF](\\dwrboifsvp02\DocsData$\WATERRIGHTS\84\SMERRITT\4t601_.PDF)

<sup>2</sup> Phone conversation with Eric Melander, Canyon Hydro VP of Sales

<sup>3</sup> The original diversion and intake structure can be seen in a photo located in the Dam Safety Documents of the backfile for this right.

effect and would not expire until 2022.

The record keeping and reporting commonly required by energy sales agreements and those records made it possible to confirm the beneficial use of water at this project. Monthly and annual generation records show that the project was online and generating some electricity, beginning in 1988 (see the email dated July 19, 2019 from Avista). But those records also indicate that significantly less power was produced during the development period than is being produced currently.

#### Rate

##### Power flow

The pipeline which conveys water from Jim Ford Creek to the powerhouse failed in April 1988 and March 1989. Repairs were made and the project resumed power generation in 1990 in time to meet the permit's proof due date without requesting an extension of time.

But because available electricity generation records were monthly averages or annual totals rather than records of peak generation, the maximum rate of water beneficially used by the project remained unclear. I requested and received additional information documenting that 60 cfs had been beneficially used for power production during the development period.

The declaration by Mr. Charles Cuddy and supporting documents provides evidence of kW generation and 60 cfs flow used during the development period. See Response to Request for Additional Information in the backfile for this right.

##### Other required flows

There are no conditions on Permit #84-7171 requiring either minimum stream flows or bypass flows.

The Idaho Water Resource Board holds decreed right #84-12217 which identifies monthly minimum flows to be delivered from Jim Ford Creek at its confluence with the Clearwater River approximately 15 miles downstream. The minimum stream flows are based on mathematics and are significantly different than the combined bypass and turbine flows which are measured in the Ford Power Project.

The project's FERC license requires a minimum flow be maintained in the reach of Jim Ford Creek that is bypassed by this project. The required bypass gage is housed in a free-standing corrugated metal pipe located outside the headworks building. The bypassed flow is measured at a weir constructed as part of the diversion dam.

The bypass requirement satisfies federal and state agency requests for a 3 cfs bypass flow to support riparian vegetation and downstream anadromous fish habitat. There are no naturally occurring fish within the project area. The existence of a 60+ foot high falls between the diversion point and the discharge point precludes fish passage. So no fish pathway is required across the diversion dam.

No water rights divert from the main channel of Jim Ford Creek between the diversion to the penstock and discharge from the powerhouse. The steep canyon walls above the bypassed reach of the creek make other diversions from the creek impractical.

#### Volume

Effective March 29, 2012, the Beneficial Use Examination Rules<sup>4</sup> exempt on-stream, run-of-the-river power generation from the requirement for an annual volume limit. FERC requires that this facility be operated in instantaneous run-of-river mode. But it is an off-stream project and by a strict interpretation of Rule 35 requires a maximum annual volume limit.

I was able to locate power generation data from several years before and after the proof statement for this water right was submitted to IDWR. I found monthly generation data in the Integrated Resource Plans provided to the Idaho Public Utilities Commission (IPUC) by Washington Power and Avista and I concatenated that data into tables for analysis. For this license, I am recommending a volume based on

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<sup>4</sup> <https://adminrules.idaho.gov/rules/current/37/370302.pdf>

calculations applied to generation data from Jan 1990 - April 1990. See attachment #2. I am recommending a maximum volume for the license that is 2775.12 AFA which rounds to three significant figures as 2780.0 AFA.

#### Season of Use

Quad map, Weippe North, L11 is available as a U.S. Geological Survey's DRG (Digital Raster Graphic) image in ArcMap and is current as of 1994. The image shows that Jim Ford Creek is a perennial stream throughout its length. But each year the streamflow drops below a usable flow rate for power generation at this project. The timing of the lowest flows varies and the operator of the Ford Power Project brings the project online whenever there is sufficient water. A year-round season-of-use is appropriate.

#### **Conditions**

I found that the project is being operated in compliance with the conditions of Permit #84-7171. Only a few conditions need additional discussion.

#### Permit conditions f and k

Both FERC and IPUC have authority over this project but condition f of Permit #84-7171 requires that the term for the Director's review be set by the term of the FERC license. FERC issued a minor license to the Ford Power Project (FERC #7986) on January 17, 1986. The term of that FERC license is 50 years. It is set to expire December 31, 2035 and that is the date I use for the required term review condition on the license.

#### Permit condition g

This condition states "The permit holder shall either install a measuring device or a flow measurement port or provide a certified measurement or computation of the flow based upon system design to be prepared by a professional engineer." Robert Donald King, (registered professional engineer, Idaho #6123), provided a calculation of the maximum theoretical flowrate in 1990. The calculation accompanied the 'proof' statement and indicated that the system would be able to beneficially use 60 cfs. But no evidence was provided to show that 60 cfs had ever actually been used.

I consider the turbines to be measuring devices and that this condition has been met.

Have conditions of permit approval been met? ☒ Yes ☐ No

#### **H. RECOMMENDATIONS**

##### **1. Recommended Amounts**

<u>Beneficial Use</u>	<u>Period of Use</u>	<u>Rate of Diversion</u>	<u>Annual Volume</u>
POWER	1/01 to 12/31	60.00 CFS	2780.0 AF
<b>Totals:</b>		60.00 CFS	2780.0 AF

The hydraulic capacity of the turbines may be as much as 61 cfs but the license is limited to 60.0 cfs by the proof statement.

##### **2. Recommended Amendments**

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

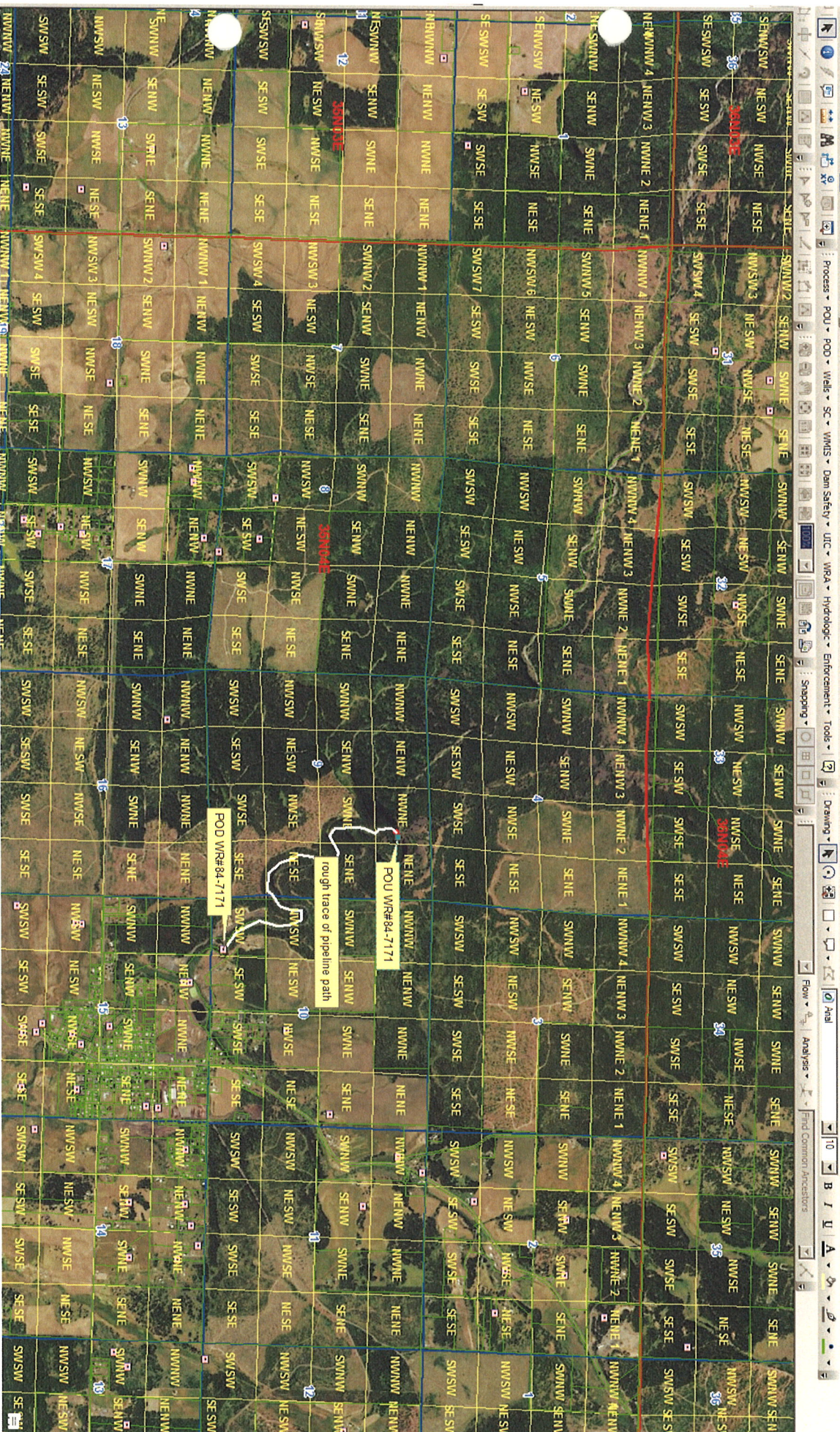
☒ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ None

#### **I. AUTHENTICATION**

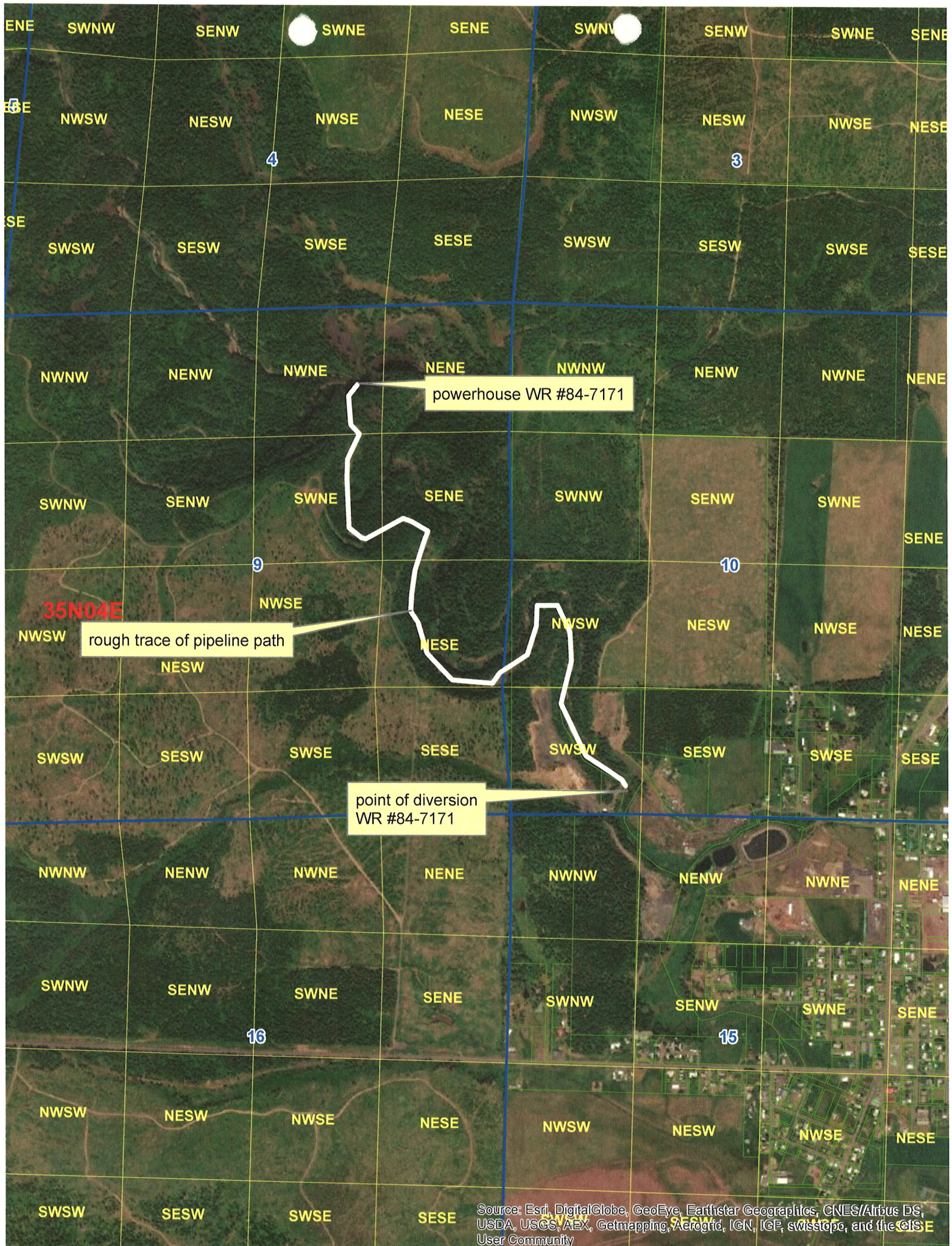
Field Examiner's Name Michele D. Ed Date 8/20/2020

Reviewer \_\_\_\_\_ Date \_\_\_\_\_












# Untitled Map

Jim Ford Hydro  
permit 84-7171  
FERC 7986

46.38383 -115.94934

## Legend

 46.38383 -115.94934

Google Earth

100 ft







WR#84-7171  
exterior of headworks building  
bypass recorder  
in this pipe

03/03/2020





intake

WR#84-7171  
headwater pool

03/03/2020



Jim Ford Creek

from headworks building

WR# 84-7171

bypass water  
exiting the headworks

03/03/2020



A photograph of a creek with snow patches and dry grass. The creek is in the foreground, with snow patches visible along its banks and in the water. The background shows a steep, rocky bank with dry grass and some evergreen trees. The text "WR# 84-7171" is printed in the center of the image.

WR# 84-7171

Jim Ford Creek below the diversion

03/03/2020





Jim Ford Creek

WR#84-7171  
powerhouse exterior

switchyard

03/03/2020



WR#84-7171

penstock

03/03/2020





penstock flow division  
to each unit

WR#84-7171

03/03/2020





WR#84-7171  
powerhouse interior  
units 2 and 3

03/03/2020



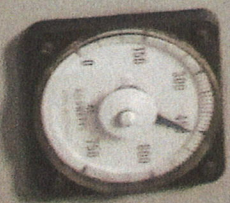
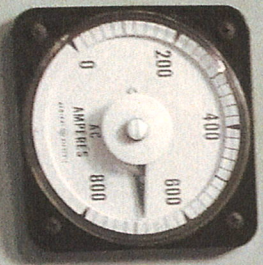


GEN. 3 SECTION

WR#84-7171 powerhouse interior  
unit 3 gages

- |                      |                         |
|----------------------|-------------------------|
| 51 OVERCURRENT       | TURBINE VIBRATION       |
| 80 LOCKOUT TRIP      | TURB. BEARING OVERTEMP. |
| 12 OVERSPEED         | GEN. BEARING OVERTEMP.  |
| 32 REVERSE POWER     | GEN. STATOR OVERTEMP.   |
| P.F. BREAKER PROBLEM | AUTO RESTART FAULT      |

TEST POINT



03/03/2020



NOZZLE 2 CONTROL



WR#84-7171  
instantaneous power readings  
as seen in the powerhouse

LEVEL: 77.0 IN

PLANT: 1206 kW

U1: 398 kW

U2: 397 kW

U3: 421 kW

STATUS

LEVEL

GRAPH

03/03/2020





Jim Ford Creek

WR#84-7171  
turbine discharge

03/03/2020



**84-7171**

**Attachment #1 to Beneficial Use Field Report**

**Engineering drawings of the penstock route and the intake modification**

**FORD HYDRO LIMITED PARTNERSHIP**

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701 Fieldston Road  
Bellingham, WA 98225  
360-588-6954 Telephone  
360-588-6921 Facsimile

November 17, 2010

Mr. Patrick Regan  
Regional Engineer, Portland Regional Office  
Federal Energy Regulatory Commission  
805 SW Broadway  
Fox Tower - Suite 550  
Portland, OR 97205

FEDERAL ENERGY  
REGULATORY COMMISSION  
*DEC 02. 2010*  
DEC 02 2010  
PORTLAND  
REGIONAL OFFICE

**Re: Ford Hydro Limited Partnership, FERC Project No. 7986-000  
Low Pressure Conduit Repair**

Dear Mr. Regan:

This correspondence is to provide design information for the planned rehabilitation of the Low Pressure Conduit ("Conduit") for the Fords Creek Hydroelectric Project ("Project").

The existing Conduit is 48" CMP and a portion is deteriorating due to corrosion. Approximately 3,500 feet of the Conduit will be sliplined with HDPE 1000mm DR32.5 pipe in accordance with the attached design drawing. This work is planned to commence in June/July 2011 timeframe when the Project is not operating due to insufficient water. Typically in a normal water year Fords Creek dries up during the summer months.

As the Conduit rehabilitation is being performed in the summer months and not in or adjacent to Fords Creek, with only minimal earth disturbance to short Conduit sections (required for insertion of the new HDPE pipe), after review of our FERC License we do not believe any permits or regulatory approvals are required.

Should you have any questions regarding this matter or require additional information, please do not hesitate to contact the undersigned.

Respectfully Submitted,



Arch Ford, Manager  
Ford Hydro Limited Partnership



# PROJECT DESCRIPTION

## BACKGROUND:

Project is located in Sec. 9, T35, R4E, Boise Meridian roughly (2) miles Northwest of Weippe, Idaho. The diversion structure, powerhouse, and gravity flow line were originally constructed in 1987 and 1988.

## EXISTING FLOW LINE CONDITIONS:

The existing flow line consists of a 48" CMP extending from the diversion structure at Station 10+00 to Station 76+40. At Station 76+40 the flow line becomes 42"x42" solid steel walled pipe. The 1/4" thick steel pipe continues to Station 86+18.25 at which point the pipe becomes 42"x36" solid steel walled pipe, which continues to the Powerhouse at Station 90+45.55.

The existing 48" CMP has corroded and deteriorated between Station 42+21 to Station 76+40. This portion of flow line will be rehabilitated by slip lining with 1000 mm  $\phi$  I.P.S. DR 32.5 HDPE Pipe.

The existing steel pipe is in good condition, and no rehabilitation will be conducted on this section of flow line.

## HDPE PIPE NOTES

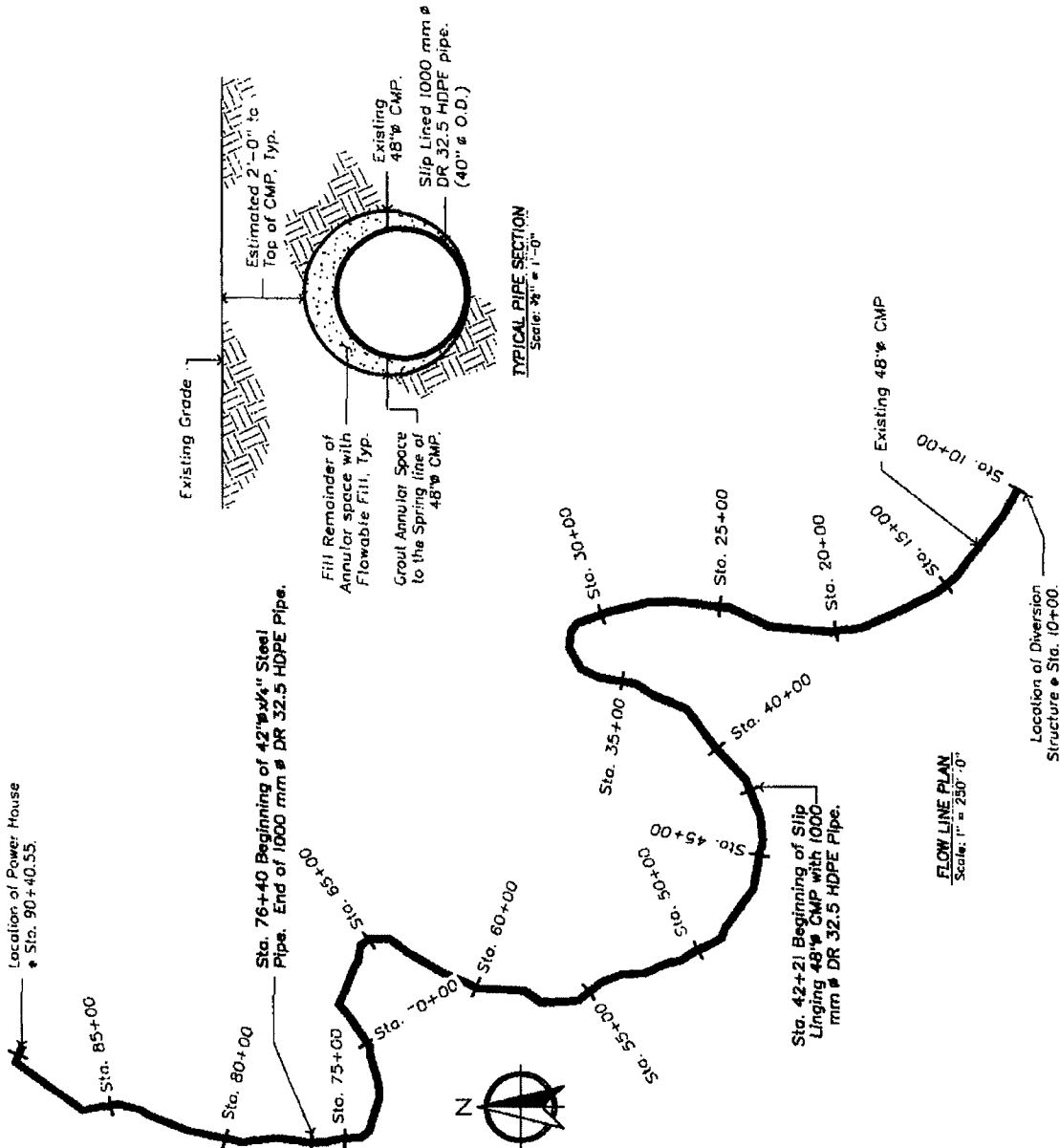
1. HDPE pipe shall be I.P.S. 1000 mm  $\phi$  with DR 32.5
2. HDPE pipe shall be made from polyethylene resin compound with a minimum cell classification of PE 44574C for PE 4710 materials in accordance with ASTM D3350.
3. The final compounded material shall contain a minimum of 2% carbon black.
4. The pipe shall contain no recycled material except that generated by the pipe manufacturer in their own plant from resin compound of the same specification and raw material supplier.
5. Butt fusion shall be done in accordance with ASTM D-3264.

## EROSION CONTROL PLAN

1. Silt fences shall be provided at excavation locations in order to prevent sediment from flowing into Ford Creek.
2. Excess water from grouting operations shall be directed to convenient locations where it can be dispersed in a controlled manner or reused if possible.
3. All installed temporary erosion control materials in or adjacent to waters of the U.S. must be composed and constructed of 100% biodegradable fibers, netting and stitching.
4. Additional erosion control measures shall be installed as deemed necessary by the Engineer.



Date	Revised
12/02/2010	1
Engineer's Project No.	12-0184
Sheet	1 of 3
Project Title	Flow Line Rehabilitation
Client	Clearwater Community College
Location	Idaho, ID
General Layout	

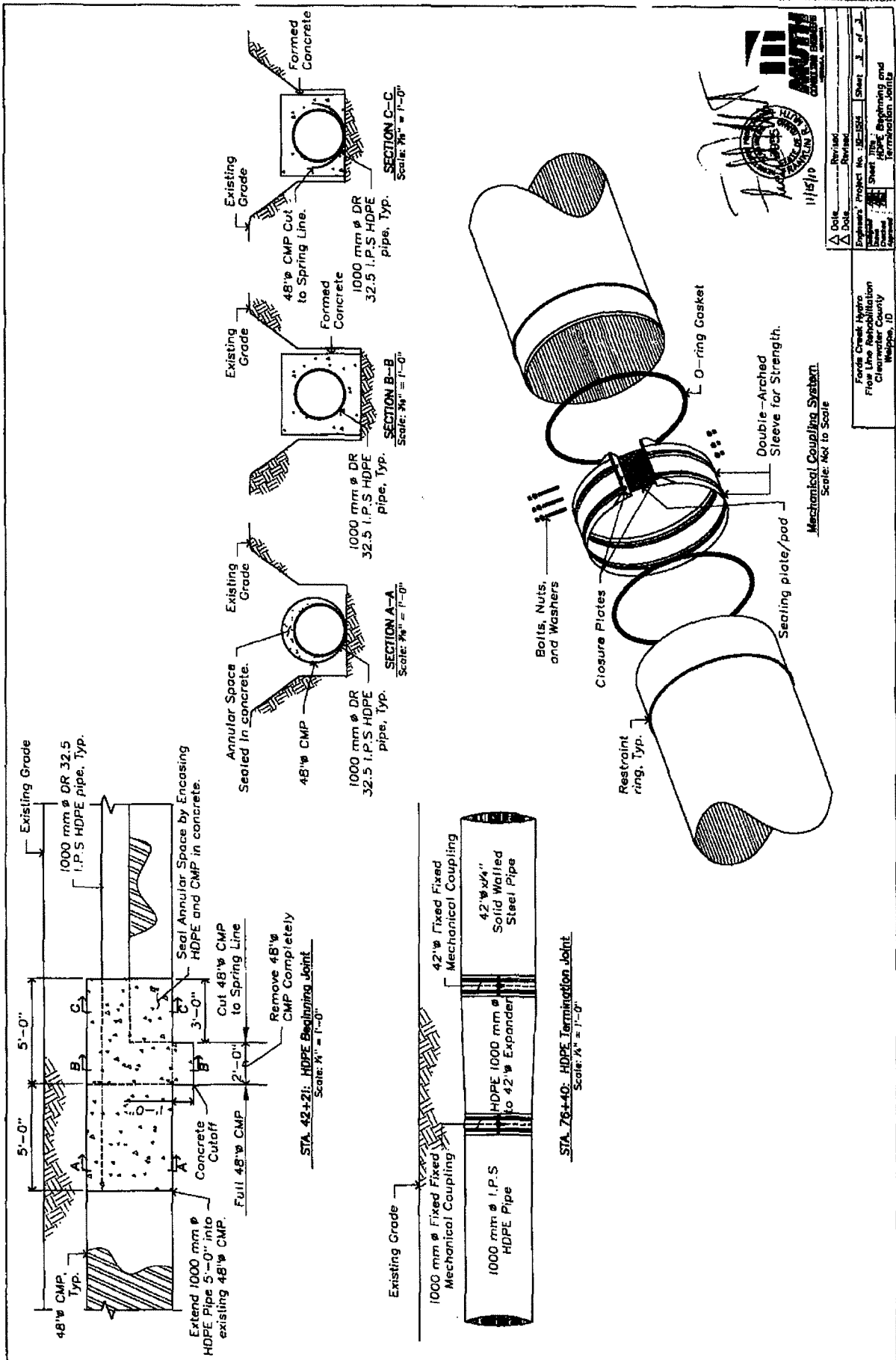


FLOW LINE PLAN  
Scale: 1" = 250'-0"

TYPICAL PIPE SECTION  
Scale: 1" = 1'-0"







84 FERC 162,270

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Ford Hydro Limited Partnership )

Project No. 7986-019

ORDER APPROVING AS-BUILT EXHIBIT F DRAWINGS

SEP 28 1998

On December 30, 1997, Ford Hydro Limited Partnership, licensee for the Ford Power Project, FERC No. 7986, filed as-built exhibit F drawings for approval. The drawings were filed in accordance with article 304 of the Order Amending License and Approving Revised Exhibits, 1/ issued on November 9, 1992. The project is located on the Jim Ford Creek, near Weippe, in Clearwater County, Idaho.

The as-built exhibit F drawings adequately show the modifications to the intake structure. The exhibit drawings conform to the Commission's rules and regulations and are approved by this order.

The Director orders:

(A) The following as-built exhibit F drawings are approved and made part of the license:

<u>Exhibit</u>	<u>FERC No.</u>	<u>Title</u>	<u>Superseding</u>
F-4	7986-10	Grit Chamber	7986-8
F-5	7986-11	Intake, Section A-A	7986-9
F-6	7986-12	Intake, Section B-B	7986-9
F-7	7986-13	Intake, Section C-C & Section D-D	7986-9

(B) The superseded drawings are eliminated from the license.

(C) Within 90 days of the date of issuance of this order, the licensee shall file three aperture card copies of the approved drawings. The drawings should be reproduced on silver or gelatin 35mm microfilm and mounted on type D (3 1/4" x 7 3/8") aperture cards.

1/ 61 FERC 162,116

980929-0229-3

FERC - DOCKETED  
SEP 28 1998

Project No. 7986-019

-2-

Prior to microfilming, the FERC Drawing Number (i.e. 7986-10 through 7986-13) shall be shown in the margin below the title block of the approved drawing. After mounting, the FERC Drawing Number should be typed on the upper right corner of each aperture card. Additionally, the Project Number, FERC exhibit (i.e. F-4 through F-7), Drawing Title, and date of this order should be typed on the upper left corner of each aperture card. See Figure 1.

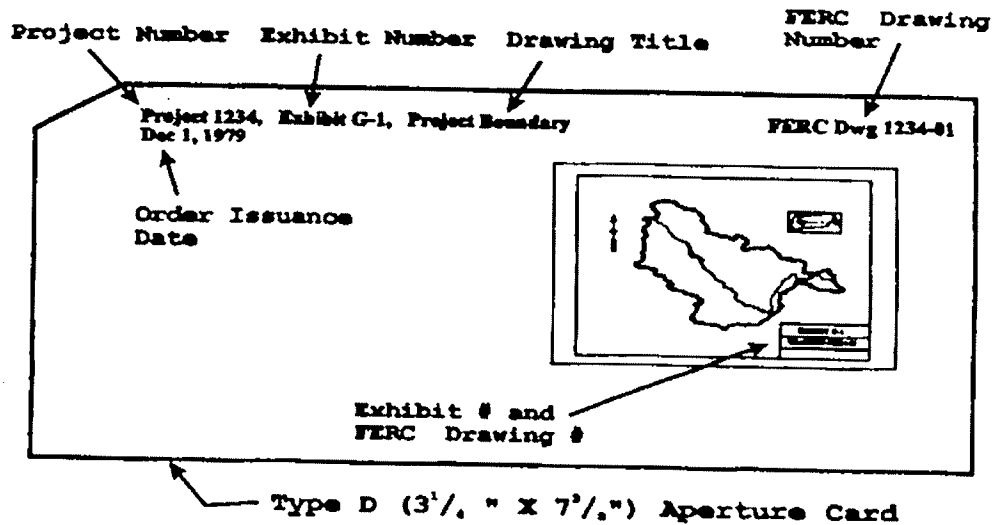


Figure 1. Sample Aperture Card Format

Two aperture card copies of the drawing should be filed with the Secretary of the Commission. The third aperture card copy of the drawing should be filed with the Commission's Portland Regional Office.

(D) The licensee shall notify the Commission of any future proposed changes in the project prior to implementing them.

(E) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

*Joseph A. Morgan*  
Carol L. Sampson  
Director  
Office of Hydropower Licensing



**FORD HYDRO LIMITED PARTNERSHIP**

Rt. 2 Box 65 (Jacks Canyon Road)  
Lenore, Idaho 83541 USA  
Telephone 208-836-5500  
Facsimile 208-836-5492

OFFICE OF THE SECRETARY  
97 DEC 30 AM 10:10  
FEDERAL ENERGY  
REGULATORY COMMISSION

ORIGINAL

December 23, 1997

Secretary  
Federal Energy Regulatory Commission  
Mail Code: DPCA, HL-21.1  
825 North Capital Street, NE.  
Washington, DC 20426

RE: Project No. 7986-000  
Idaho

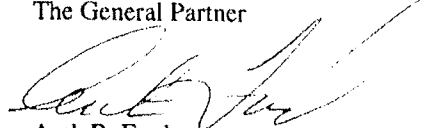
Dear Secretary:

Please accept for filing an original and seven copies of revised Exhibit F drawings representing the as-built condition of the above referenced project in accordance with Article 304 of the order amending FERC License No. 7986 issued November 9, 1992.

Respectfully Submitted,

Ford Hydro Limited Partnership

By: Ford Hydro, Inc.  
The General Partner

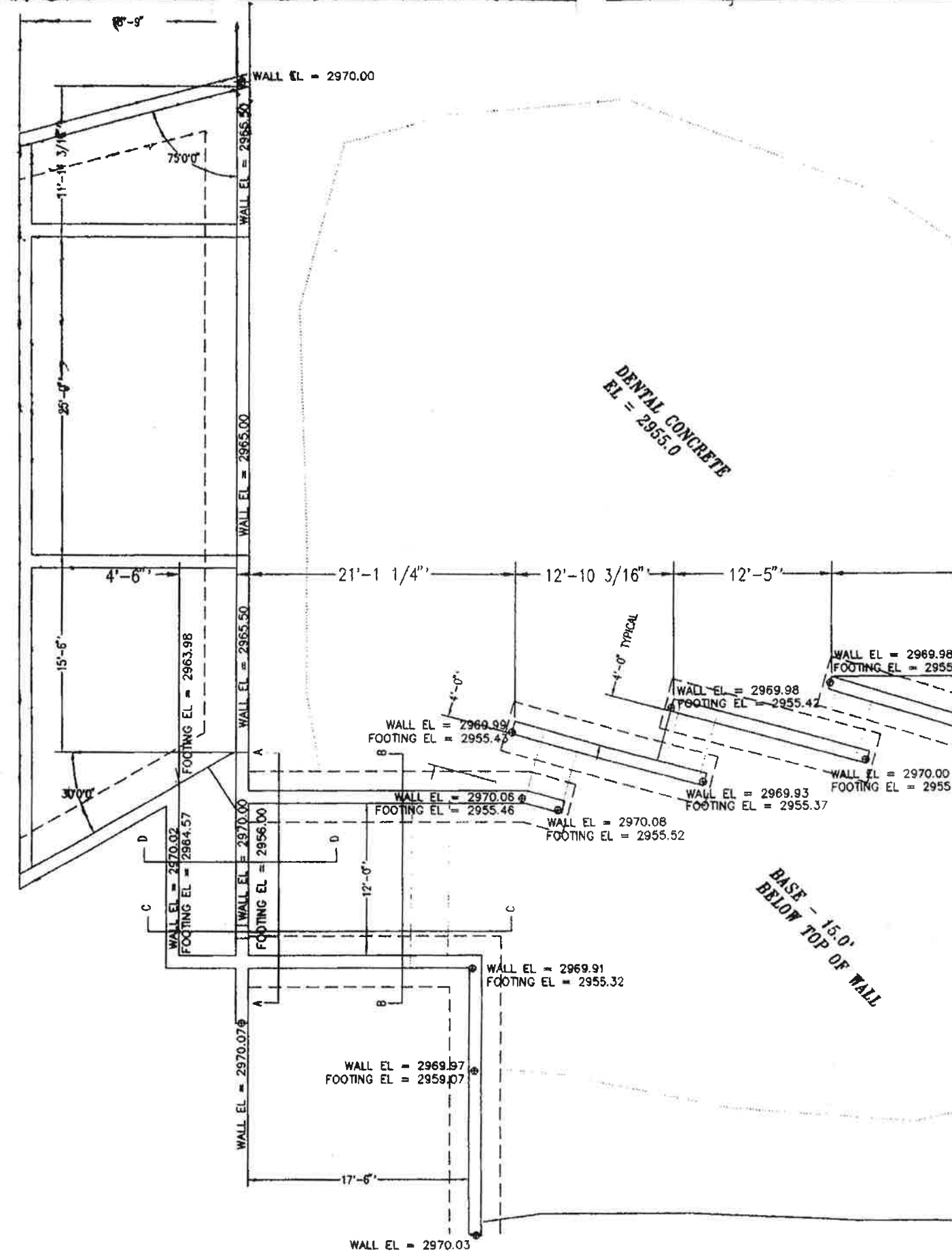
  
Arch R. Ford  
It's President

cc: Portland Regional Office  
w/enclosures

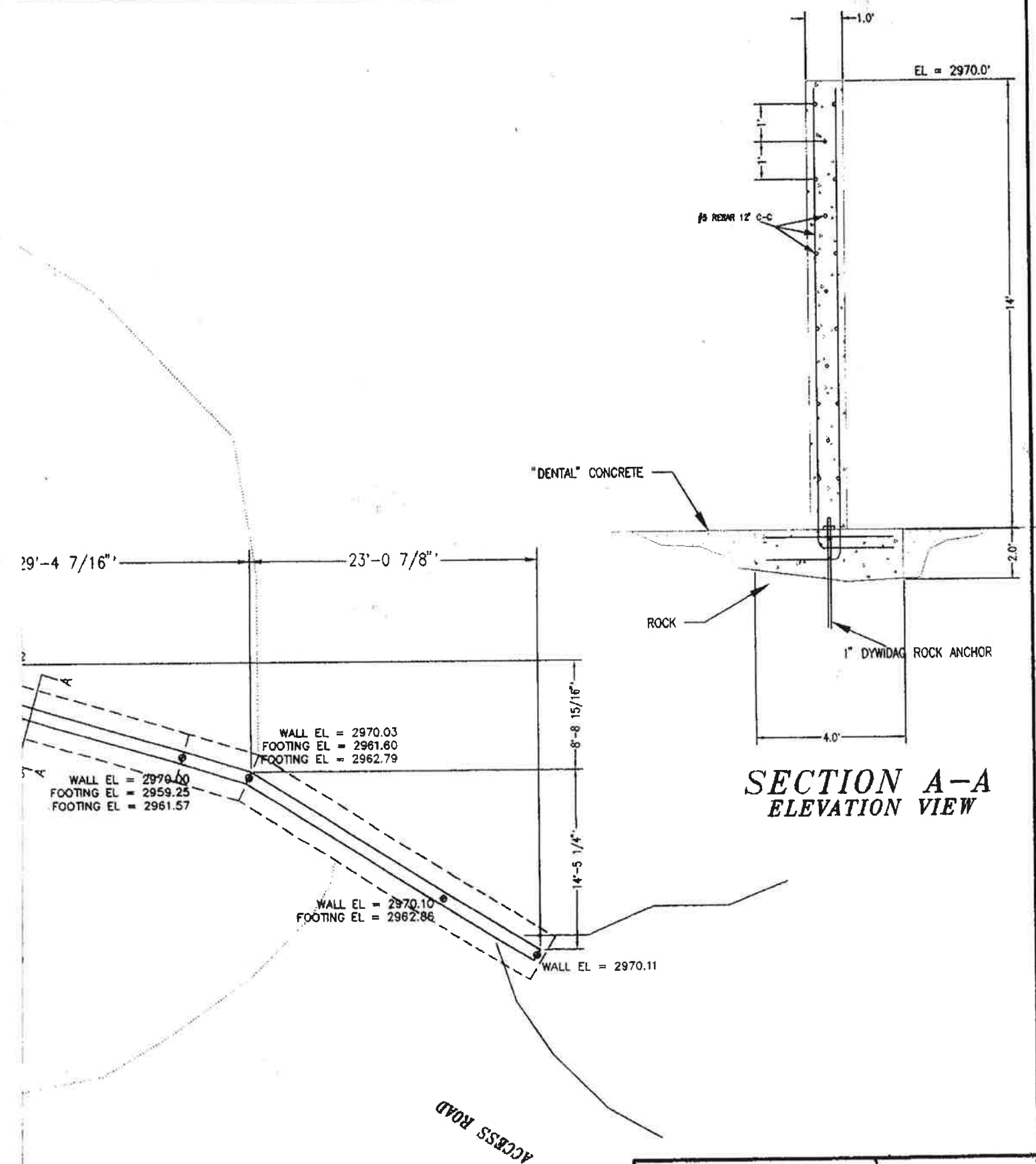
9801060584-3

FERC - DOCKETED

DEC 30 1997

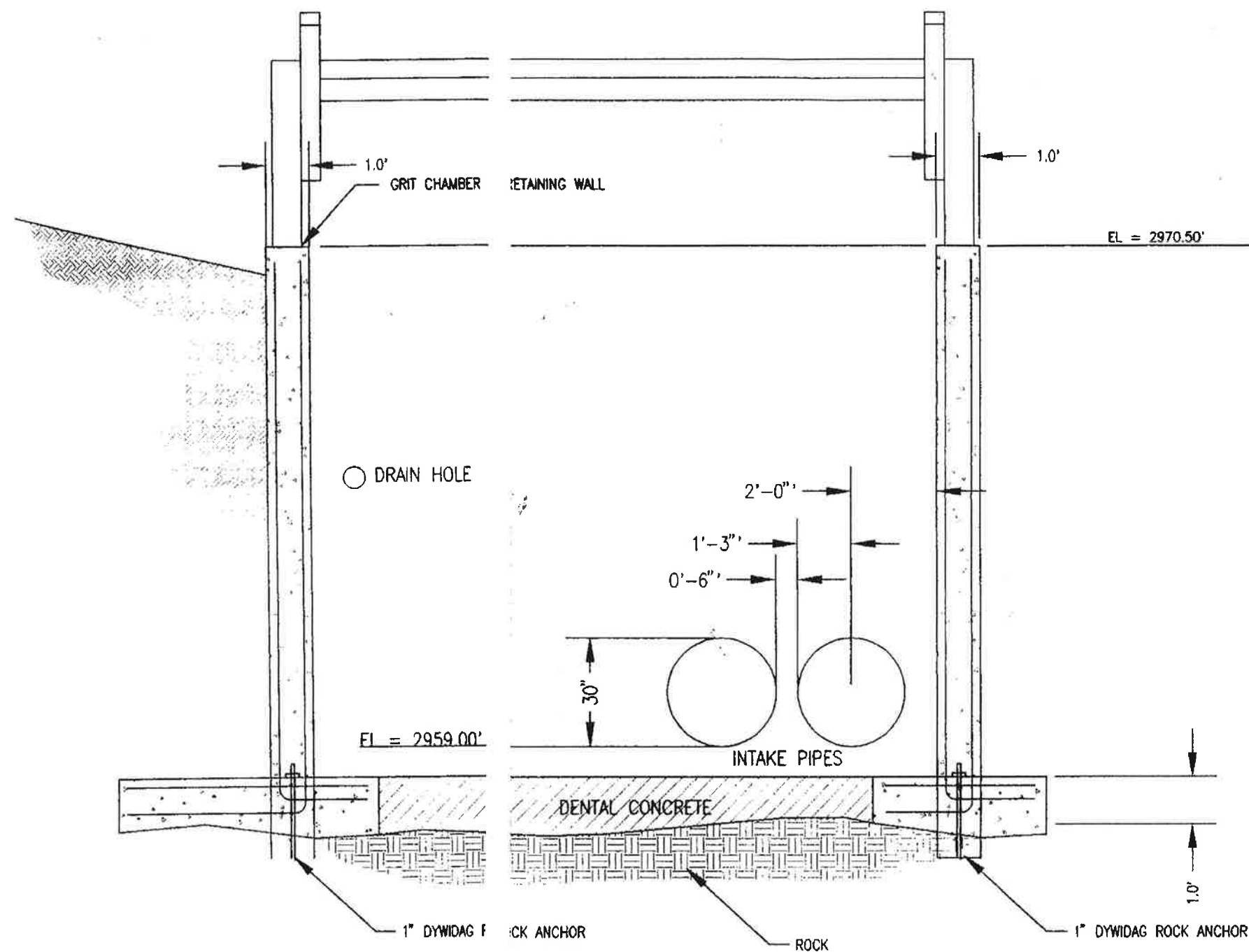


SCALE 1" = 10'



FORD CREEK HYDROELECTRIC PROJECT	
FERC NO. 7986	
EXHIBIT F	
Drawn by: JHG	Sheet Title: GRIT CHAMBER
Engineer's Project Number:	Sheet 1A of 2

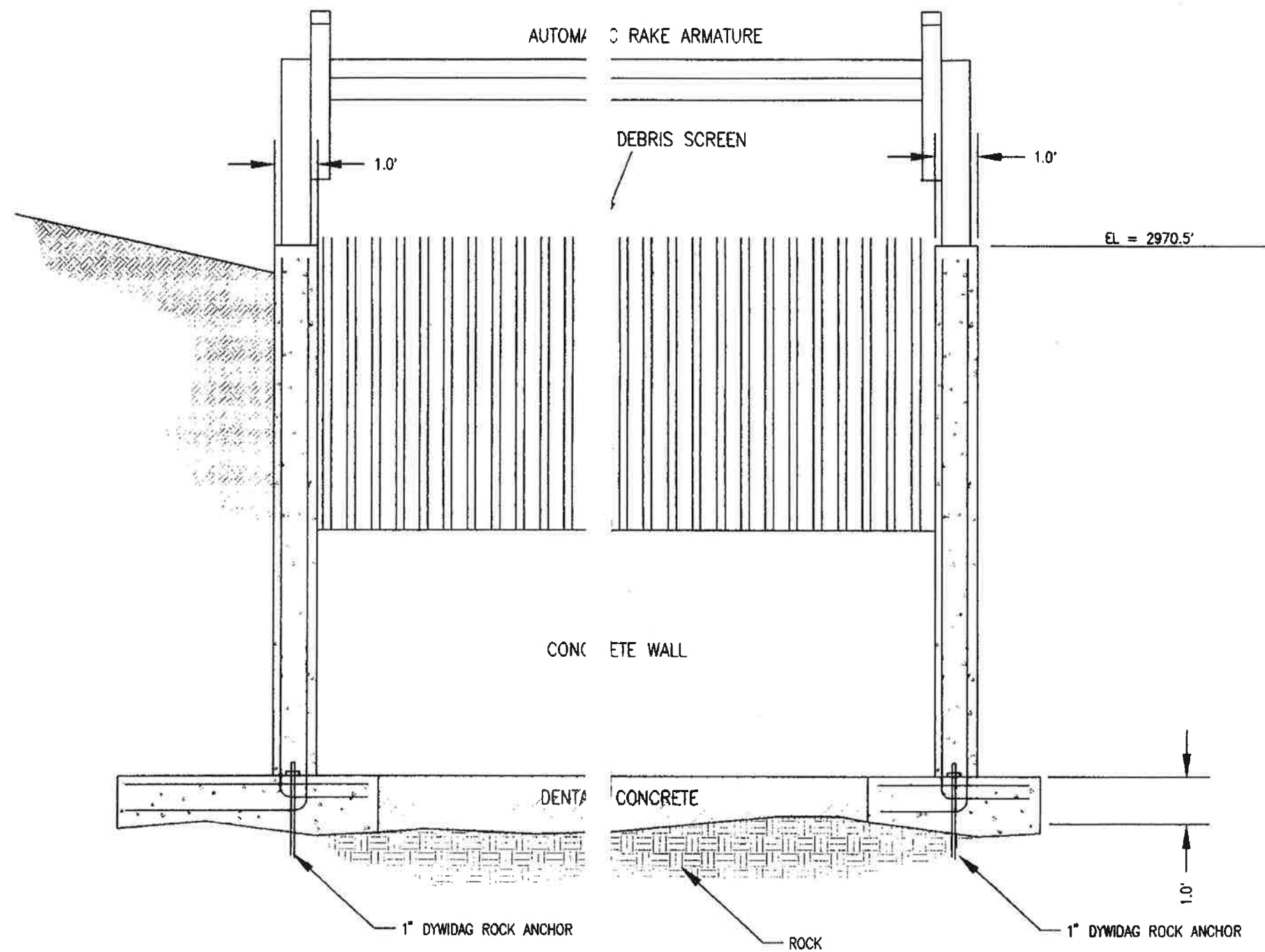




SECTION A-A

SCALE 1" = 3'

FORD CREEK HYDROELECTRIC PROJECT	
FERC NO. 7986	
EXHIBIT F	
Drawn by: JHG	Sheet Title: INTAKE
Engineer's Project Number:	Sheet 1B of 2

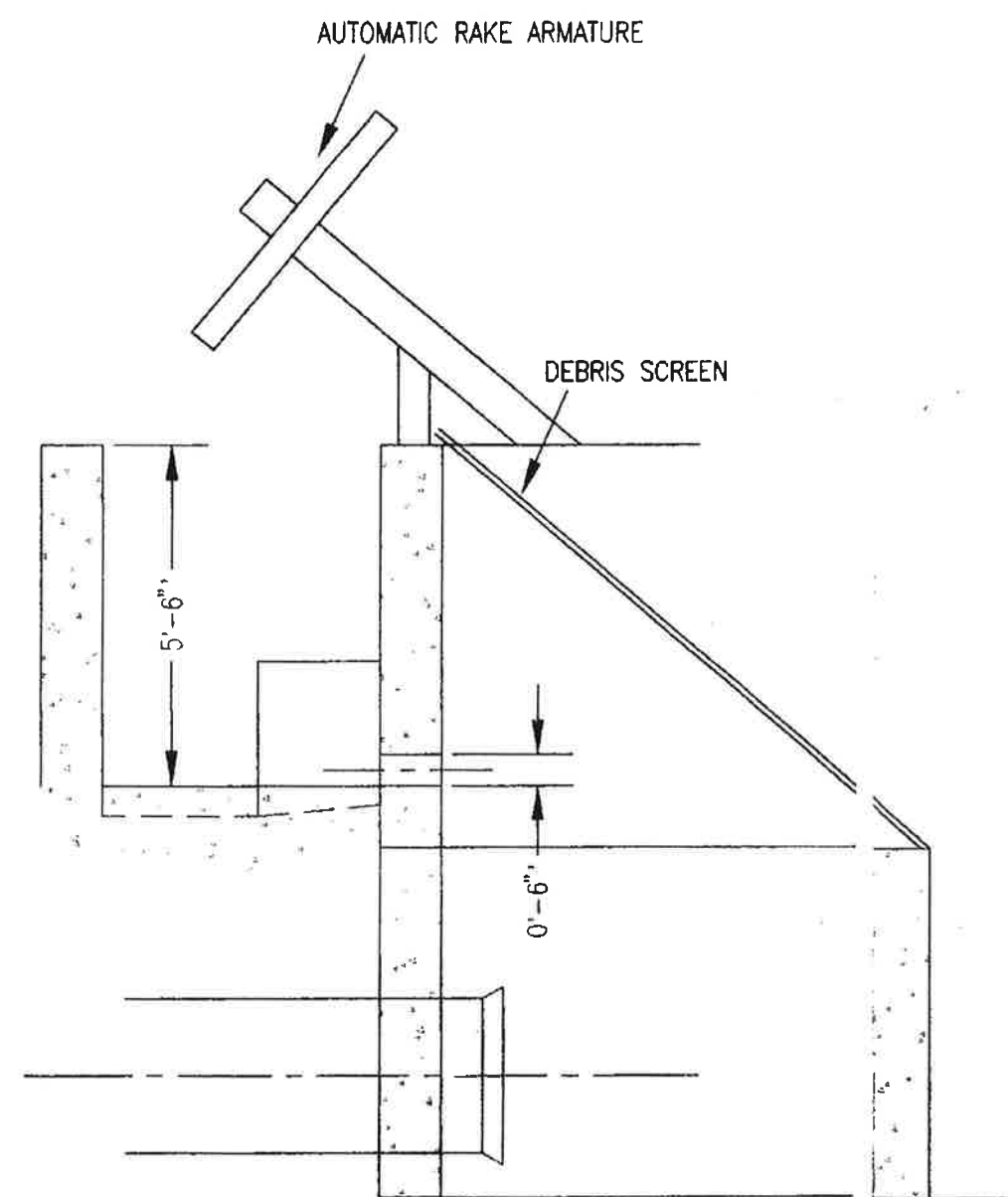


SECTION B-B

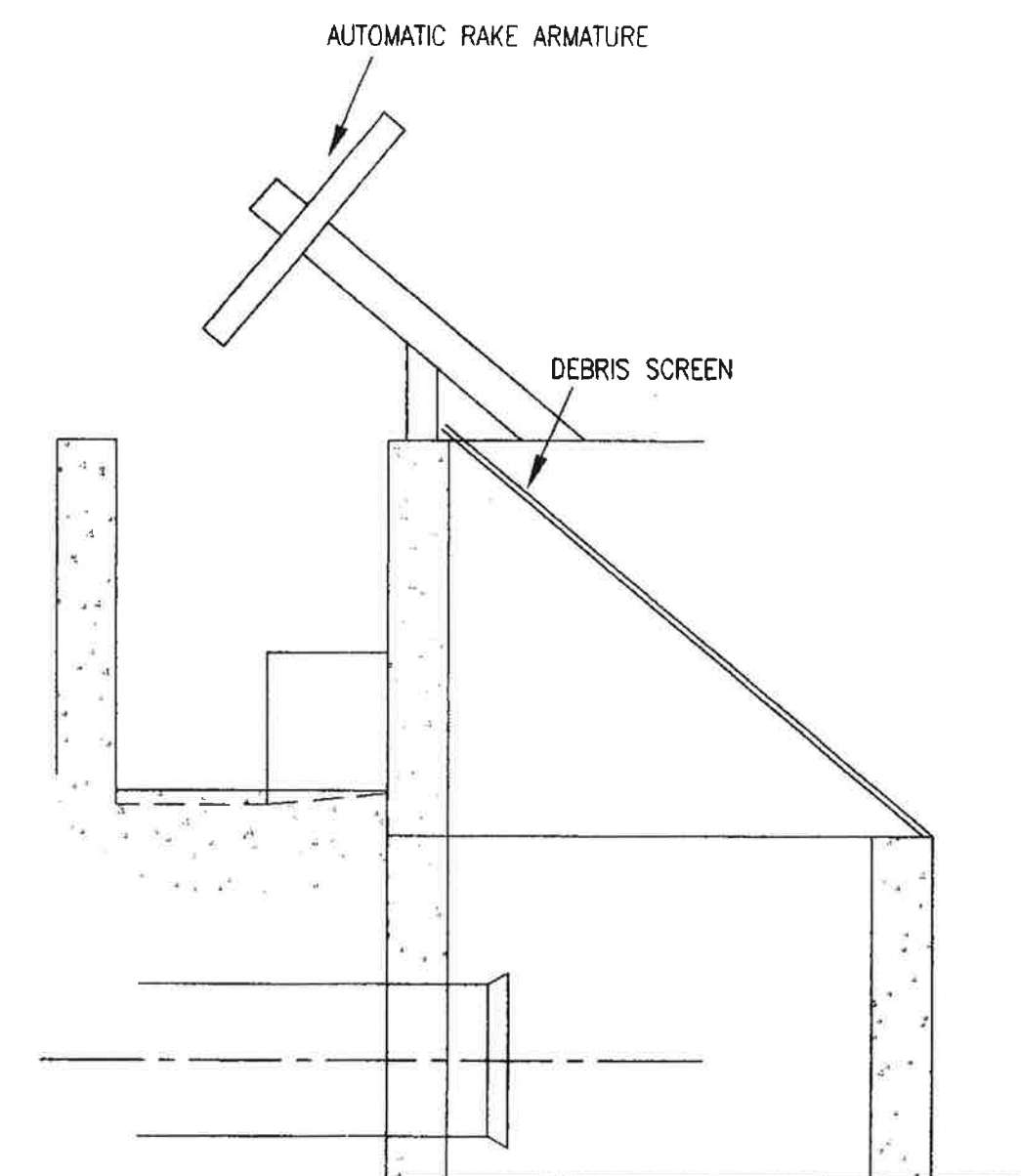
SCALE 1" = 3'

FORD CREEK HYDROELECTRIC PROJECT	
FERC NO. 7986	
EXHIBIT F	
Drawn by: JHG	Sheet Title: INTAKE
Engineer's Project Number:	Sheet 1C of 2





SECTION C-C



SECTION D-D

SCALE 1" = 3'

FORD CREEK HYDROELECTRIC PROJECT	
FERC NO. 7986	
EXHIBIT F	
Drawn by: JHG	Sheet Title: INTAKE
Engineer's Project Number:	Sheet 10 of 2



**84-7171**

**Attachment #2 to Beneficial Use Field Report**

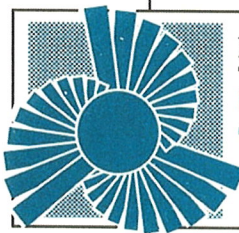
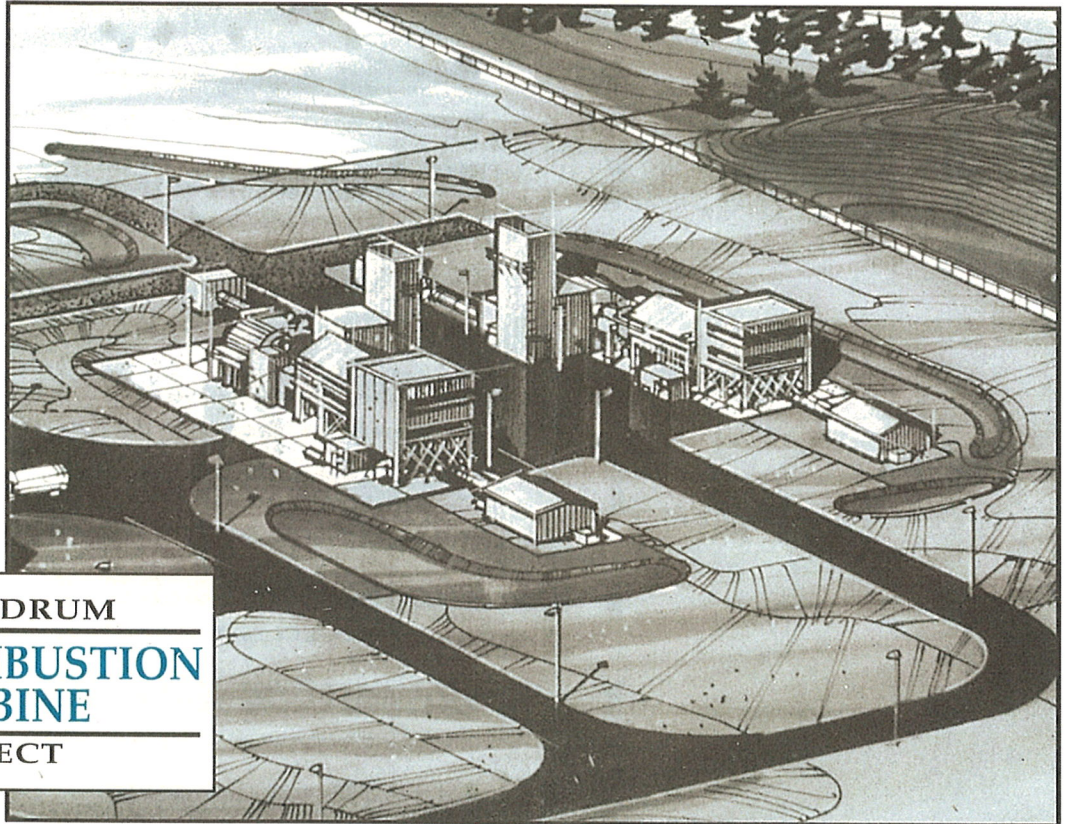
**Generation data sources and the resulting spreadsheet for the volume calculations**



11/20/95

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## The Washington Water Power Company's 1995 Electric Integrated Resource Plan



RATHDRUM  
COMBUSTION  
TURBINE  
PROJECT

*WWP's 176-megawatt simple-cycle combustion turbine project, completed December 1994*

# APPENDICES

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# **Jim Ford Creek Power Project/Ford Hydro Limited Partnership**

Rated Capacity = 1,500 kW  
Hours Connected to System = Not Available  
Level of Dispatchability = None  
Expiration Date = 4/14/2023

<u>Year</u>	<u>Month</u>	<u>Generation - kWh</u>	<u>Year</u>	<u>Month</u>	<u>Generation - kWh</u>
1990	Jan	236,411	1993	Jan	67,622
	Feb	244,710		Feb	180,887
	Mar	221,666		Mar	529,719
	Apr	321,427		Apr	855,071
	May	0		May	494,367
	Jun	0		Jun	216,467
	Jul	0		Jul	150,380
	Aug	0		Aug	12,394
	Sep	0		Sep	0
	Oct	0		Oct	0
	Nov	0		Nov	0
	Dec	0		Dec	27,487
1991	Jan	47,686	1994	Jan	418,341
	Feb	599,450		Feb	61,727
	Mar	791,142		Mar	916,850
	Apr	651,392		Apr	719,671
	May	514,397		May	211,038
	Jun	520,018		Jun	292,244
	Jul	15,120		Jul	289
	Aug	0		Aug	0
	Sep	0		Sep	0
	Oct	0		Oct	0
	Nov	0		Nov	15,667
	Dec	240,557		Dec	251,395
1992	Jan	145,958			
	Feb	728,647			
	Mar	382,064			
	Apr	496,072			
	May	24,156			
	Jun	0			
	Jul	0			
	Aug	0			
	Sep	0			
	Oct	745			
	Nov	94,488			
	Dec	12,352			





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AND PUBLIC  
UTILITIES COMMISSION

**Corp.**

# 2001 Electric Integrated Resource Plan



COYOTE SPRINGS II SITE



Table G-13

## PURPA Hydroelectric Plants

Jim Ford Creek Power Project/Ford Hydro Limited Partnership

Rated Capacity = 1,500 kW

Hours Connected to System = Not Available

Level of Dispatchability = none

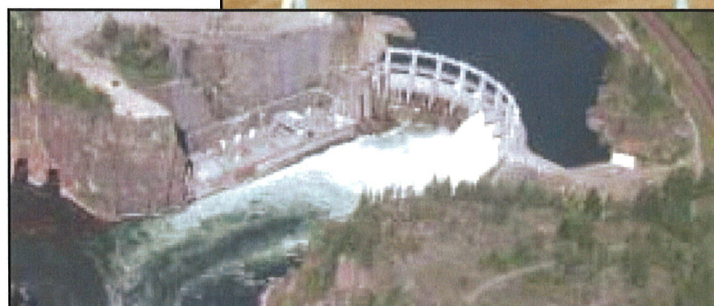
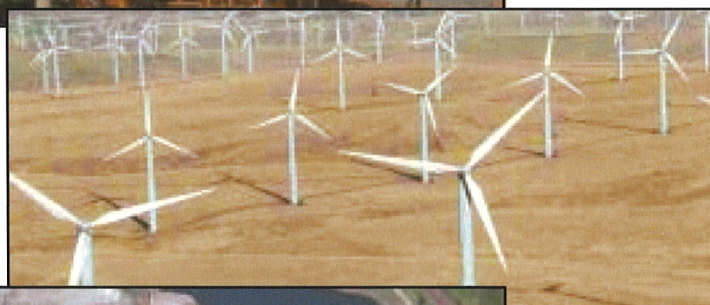
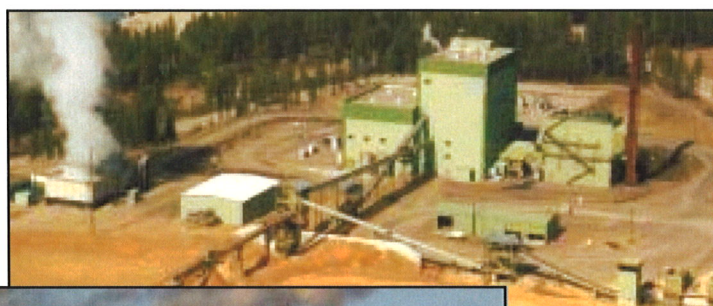
Expiration Date = 4/14/2023

<u>Year</u>	<u>Month</u>	<u>Generation - MWh</u>	<u>Year</u>	<u>Month</u>	<u>Generation - MWh</u>
1995	Jan	702	1998	Jan	730
	Feb	826		Feb	639
	Mar	950		Mar	894
	Apr	679		Apr	774
	May	429		May	516
	Jun	227		Jun	554
	Jul	34		Jul	433
	Aug	1		Aug	254
	Sep	0		Sep	51
	Oct	147		Oct	0
	Nov	591		Nov	0
	Dec	613		Dec	360
1996	Jan	857	1999	Jan	587
	Feb	690		Feb	1,040
	Mar	696		Mar	665
	Apr	1,041		Apr	973
	May	881		May	942
	Jun	109		Jun	463
	Jul	0		Jul	84
	Aug	0		Aug	0
	Sep	0		Sep	0
	Oct	0		Oct	0
	Nov	68		Nov	3
	Dec	464		Dec	57
1997	Jan	464			
	Feb	858			
	Mar	870			
	Apr	1,018			
	May	983			
	Jun	553			
	Jul	183			
	Aug	254			
	Sep	0			
	Oct	0			
	Nov	0			
	Dec	0			



# **AVISTA<sup>®</sup>**

## ***Corp.***



**2003 IRP  
Technical  
Appendices**



**Jim Ford Creek Power Project/Ford Hydro Limited Partnership**

Rated Capacity = 1,500 kW

Hours Connected to System = Not Available

Level of Dispatchability = none

Expiration Date = 4.14.2023

<u>Year</u>	<u>Month</u>	<u>Generation-MWh</u>	<u>Year</u>	<u>Month</u>	<u>Generation-MWh</u>
1998	Jan	730	2001	Jan	48
	Feb	639		Feb	67
	Mar	894		Mar	267
	Apr	774		Apr	863
	May	516		May	850
	Jun	554		Jun	393
	Jul	433		Jul	315
	Aug	254		Aug	0
	Sep	51		Sep	0
	Oct	0		Oct	0
	Nov	0		Nov	15
	Dec	360		Dec	126
1999	Jan	587	2002	Jan	230
	Feb	1040		Feb	627
	Mar	665		Mar	650
	Apr	973		Apr	937
	May	942		May	888
	Jun	463		Jun	336
	Jul	84		Jul	149
	Aug	0		Aug	0
	Sep	0		Sep	0
	Oct	0		Oct	0
	Nov	3		Nov	0
	Dec	57		Dec	9
2000	Jan	418			
	Feb	360			
	Mar	892			
	Apr	994			
	May	719			
	Jun	438			
	Jul	73			
	Aug	0			
	Sep	0			
	Oct	0			
	Nov	25			
	Dec	7			



WR# 84-7171		Generation Data									
Jim Ford Creek Power Project/Ford Hydro Limited Partnership											
Year	1987	1988	1989	1990	1991	1992	1993	1994	generation in kWh		
Jan		317		236411	47686	145958	67622	418341			
Feb		0		244710	599450	728647	180887	61727			
Mar		0		221666	791142	382064	529719	916850			
Apr		164910		321427	651392	496072	855071	719671			
May		0		0	514397	24156	494367	211038			
Jun				0	520018	0	216467	292244			
Jul				0	15120	0	150380	289			
Aug				0	0	0	12394	0			
Sep				0	0	0	0	0			
Oct				0	0	745	0	0			
Nov				0	0	94488	0	15667			
Dec	148			0	240557	12352	27487	251395			
sum	148	165,227	-	1,024,214	3,379,762	1,884,482	2,534,394	2,887,222			
proof submitted		165,000	455,000	1,085,000	Washington Water Power annual values provided by email						
1988 -1990											
1987 -1988 data from Ford Power Project records											
1990-1994 data from The Washington Water Power Company's 1995 Electric Integrated Resource Plan											



WR# 84-7171						Volume Limit Calculations													
	The equation for calculating a flow rate from generation data is a variation of the power equation																		
	$P = Q \times H \times e / 11.81$																		
	$Q = (P \times 11.81) / (H \times e)$																		
11.81	conversion factor for flow results in cfs																		
24	hr/day converts kWh to kW																		
442	H net head (ft)																		
0.815	e efficiency (decimal form)																		
	The parameters given by Canyon Hydro																		
	In this case the P is available in energy units, (kWh) instead of power units (kW) so a unit conversion is needed for kWh to kW																		
	And because the energy units are kWh/month, the resulting Q will be total cfs/month.																		
	Generation (MWh)	Generation (kWh)	Calculated total flow (cfs/month)	Calculated daily avg flow (cfs)															
1/30/1990	236.411	236411	322.94	10.76															
2/28/1990	244.71	244710	334.28	10.78															
3/31/1990	221.666	221666	302.80	9.77															
4/30/1990	321.427	321427	439.08	14.64															
5/31/1990	0	0	0.00	0.00															
6/30/1990	0	0	0.00	0.00															
7/31/1990	0	0	0.00	0.00															
8/31/1990	0	0	0.00	0.00															
9/30/1990	0	0	0.00	0.00															
10/31/1990	0	0	0.00	0.00															
11/30/1990	0	0	0.00	0.00															
12/31/1990	0	0	0.00	0.00															
	1024.214	1,024,214.00	1399.10																
			1399.10	double check sum															
			2775.12	AFA															
spreadsheet created by Michele Edl																			
generation data obtained from Washington Water Power's 1995 Integrated Resource Plan																			



**Instrument # 216345**

CLEARWATER COUNTY, OROFINO, IDAHO

3-3-2011 03:20:00 No. of Pages: 16

Recorded for : IDAHO DEPARTMENT OF LANDS

CARRIE BIRD

Fee: 0.00

Ex-Officio Recorder Deputy

Index to: EASEMENT, CORRECTION OF

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216345

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IDAHO DEPARTMENT OF LANDS

300 N.6th St., Suite 103

PO Box 83720

Boise, Idaho 83720-0050

Phone (208) 334-0200 Fax (208) 334-3698

This certifies that this is a true and correct copy of this document, the original of which is on file with the Idaho Department of Lands (IDL).

-1VK1JMD

3- ]- 11

IDL Representative

Date

STATE OF IDAHO  
SECOND AMENDED & RESTATED  
EASEMENT NO. 5253

THIS INDENTURE is made this 2-11 ay of 2011, by and between the STATE OF IDAHO, Department of Lands, 300 North Street, Suite 103, P.O. Box 83720, Boise, Idaho 83720-0050, acting by and through the State Board of Land Commissioners ("Grantor"), and FORD HYDRO LIMITED PARTNERSHIP, Route 2, Box 65, Lenore, Idaho 83541 ("Grantee").

In consideration of the mutual covenants and agreements of the parties hereto, the Grantor hereby grants to the Grantee, their assign(s) and successor(s) in interest, forever, an easement upon, over, and across the lands hereinafter described and for the purposes and in accord with the provisions hereinafter set forth.

I. **DURATION:** This easement shall be effective upon execution and shall continue in perpetuity, subject only to the terms and provisions of this easement and the requirements of Grantee's license with the Federal Energy Regulatory Commission ("FERC") as granted or later amended.

II. **PROPERTY DESCRIPTION:** The Grantor grants this easement upon, over and across the following described lands situated in CLEARWAER COUNTY, to wit:

Parcel 1 (penstock, buried transmission lines, powerhouse and penstock access road).

A variable width easement for the purpose of construction and maintenance of a hydroelectric facility located in Section 9 and Section 10, Township 35 North, Range 4 East, Boise Meridian, Clearwater County, State of Idaho, more particularly described as follows:

An easement in said Sections 9 and 10 centered along the following described line: Beginning at a brass cap monument marking the Southeast Corner of said Section 10; thence South 89°38'13" West 2,655.27 feet, along the North boundary of said Section 10, to a brass cap monument marking the Southwest Corner of the Southeast Quarter of said Section 10; thence North 58°54' 08" West 2,489.38 feet to a point on the South boundary of the Northwest Quarter of the Southwest Quarter of said Section 10 and the TRUE POINT OF BEGINNING; said easement being 25.00 feet either side of the following described lines unless noted otherwise; thence North 19°41'41" East 198.68 feet; thence North 08° 02'06" West 340.91 feet; thence North 22°15'45" West 295.35 feet; thence North 54° 38'10" West 38.98 feet; thence North 88°39'45" West 61.34 feet; thence South 56° 26'41" West 92.08 feet; thence South 19°



**84-7171**

**Attachment #3 to Beneficial Use Field Report**  
**Easement Agreement**



**Instrument # 216345**

CLEARWATER COUNTY, OROFINO, IDAHO

3-3-2011 03:20:00 No. of Pages: 16

Recorded for : IDAHO DEPARTMENT OF LANDS

CARRIE BIRD

Fee: 0.00

Ex-Officio Recorder Deputy

Index to: EASEMENT, CORRECTION OF

*Diane Bupce*  
*Rever TO: \**

216345

TL

IDAHO DEPARTMENT OF LANDS

300 N. 6th St., Suite 103

PO Box 83720

Boise, Idaho 83720-0050

Phone (208) 334-0200 Fax (208) 334-3698

This certifies that this is a true and correct copy  
of this document, the original of which is on file  
with the Idaho Department of Lands (IDL).

*mkDean* 3-7-11  
IDL Representative Date

**STATE OF IDAHO  
SECOND AMENDED & RESTATED  
EASEMENT NO. 5253**

THIS INDENTURE is made this 24<sup>th</sup> day of February, 2011, by and between the **STATE OF IDAHO, Department of Lands**, 300 North 6th Street, Suite 103, P.O. Box 83720, Boise, Idaho 83720-0050, acting by and through the State Board of Land Commissioners ("Grantor"), and **FORD HYDRO LIMITED PARTNERSHIP, Route 2, Box 65, Lenore, Idaho 83541** ("Grantee").

In consideration of the mutual covenants and agreements of the parties hereto, the Grantor hereby grants to the Grantee, their assign(s) and successor(s) in interest, forever, an easement upon, over, and across the lands hereinafter described and for the purposes and in accord with the provisions hereinafter set forth.

- I. **DURATION:** This easement shall be effective upon execution and shall continue in perpetuity, subject only to the terms and provisions of this easement and the requirements of Grantee's license with the Federal Energy Regulatory Commission ("FERC") as granted or later amended.
- II. **PROPERTY DESCRIPTION:** The Grantor grants this easement upon, over and across the following described lands situated in CLEARWAER COUNTY, to wit:

Parcel 1 (penstock, buried transmission lines, powerhouse and penstock access road).

A variable width easement for the purpose of construction and maintenance of a hydroelectric facility located in Section 9 and Section 10, Township 35 North, Range 4 East, Boise Meridian, Clearwater County, State of Idaho, more particularly described as follows:

An easement in said Sections 9 and 10 centered along the following described line: Beginning at a brass cap monument marking the Southeast Corner of said Section 10; thence South 89°38'13" West 2,655.27 feet, along the North boundary of said Section 10, to a brass cap monument marking the Southwest Corner of the Southeast Quarter of said Section 10; thence North 58°54' 08" West 2,489.38 feet to a point on the South boundary of the Northwest Quarter of the Southwest Quarter of said Section 10 and the TRUE POINT OF BEGINNING; said easement being 25.00 feet either side of the following described lines unless noted otherwise; thence North 19°41'41" East 198.68 feet; thence North 08° 02'06" West 340.91 feet; thence North 22°15'45" West 295.35 feet; thence North 54° 38'10" West 38.98 feet; thence North 88°39'45" West 61.34 feet; thence South 56° 26'41" West 92.08 feet; thence South 19°



52°14" West 76.11 feet; thence South 03° 42'16" West 143.77 feet; thence South 20° 32'38" West 252.46 feet; thence South 46° 27'02" West 439.43 feet; thence South 62° 02'38" West 100.72 feet; thence South 79° 19'23" West 104.02 feet; thence North 85° 24'39" West 201.69 feet; thence North 59° 53'12" West 292.10 feet; thence North 32° 52'00" W 157.37 feet; thence North 23° 29'12" West 163.48 feet; thence North 17° 31'32" West 180.31 feet; thence North 39° 28'52" West 121.44 feet; thence North 13° 59'18" West 149.78 feet; thence North 21° 49'04" East 80.72 feet; thence North 03° 05'17" West 188.93 feet; thence North 17° 47'14" East 163.79 feet; thence North 22°43'44" East 142.64 feet; thence North 32° 53'06" East 118.72 feet; thence North 04° 48'02" West 83.89 feet; thence North 41° 57'17" West 34.34 feet; thence North 72° 45'24" West 288.86 feet; thence South 49° 22'13" West 215.32 feet; thence South 65° 02'08" West 102.57 feet; thence South 79° 53'31" West 86.08 feet; thence North 70° 21'03" West 177.89 feet; thence North 42° 28'50" West 20.02 feet; thence North 11° 11'11" West 233.07 feet; thence North 02° 50'33" East 102.52 feet; thence North 12° 41'17" West 159.17 feet; thence North 05° 59'03" East 211.10 feet; thence North 16° 15'23" East 143.65 feet; thence North 21° 09'53" East 139.81 feet; at this point said easement increases to 50.00 feet West of the Centerline and 100.00 feet East of the Centerline; thence North 21° 09'53" East 40 feet; thence North 30° 03'30" West 165.78 feet; thence North 10° 34'32" West 60 feet, at this point said easement decreases to 25.00 feet either side of Centerline; thence North 10° 34'32" West 287.40 feet; thence North 61° 30'16" East 70.77 feet; at this point said easement increases to 80.00 feet North of the Centerline and 50.00 feet South of the Centerline; thence North 61° 30'16" East 136 feet to the terminus of this easement, said TERMINUS POINT being North 44°41'12" West of and 6,187.34 feet from the Southwest Corner of the Southeast Quarter of said Section 10.

PARCEL 2 (buried transmission line shortcut).

Along with an Easement 10.00 feet wide, for the purpose of a buried transmission line, all lying on the North side of the following described centerline except as noted otherwise:

Commencing at a brass cap monument marking the Southeast corner of Section 10, Township 35 North, Range 4 East, Boise Meridian; thence South 89°38'13" West a distance of 2,655.27 feet along the South boundary of said Section 10 to a brass cap monument marking the South one quarter corner of said Section 10; thence North 58°54'08" West a distance of 2,489.38 feet to a point on the South boundary of the Northwest Quarter of the Southwest Quarter of said Section 10 and being the REAL POINT OF BEGINNING; thence South 89°09'52" West 543.35 feet; At this point, said easement increases to 20 feet wide, being 10 feet on each side of the centerline; thence North 89°35'48" West 183.96 feet to a point on the centerline of the easement described under "Parcel 1" above, said point being the TERMINUS of this easement.



PARCEL 3 (access road from rock pit to powerhouse).

A strip of land 50 feet wide, being 25 feet on each side of the following described centerline (it is the intent of this easement to follow the centerline of the existing road):

Beginning at the South one-quarter (1/4) corner of said Section 10, thence North 57°20'13" West a distance of 5,297.50 feet to a point, said point being the REAL POINT OF BEGINNING; thence South 01°07'36" East 76.14 feet; thence South 19°04'05" East 25.42 feet; thence South 58°12'07" East 29.58 feet; thence South 68°08'01" East 37.83 feet; thence South 64°13'36" East 38.33 feet; thence South 89°33'17" East 50.80 feet; thence South 49°16'30" East 35.60 feet; thence South 04°57'19" East 26.42 feet; thence South 37°21'07" West 24.88 feet; thence South 66°15'36" West 24.19 feet; thence North 58°32'48" West 33.20 feet; thence North 83°24'11" West 34.95 feet; thence North 57°42'35" West 35.85 feet; thence North 78°25'59" West 42.60 feet; thence North 74°23'31" West 40.13 feet; thence North 48°54'02" West 175.85 feet; thence North 29°12'06" West 137.59 feet; thence North 18°23'38" West 76.36 feet; thence North 15°50'26" West 52.36 feet; thence North 11°14'47" West 52.93 feet; thence North 09°56'56" West 50.16 feet; thence North 07°47'31" West 90.44 feet; thence North 18°35'04" West 80.50 feet; thence North 40°33'16" West 32.29 feet; thence North 68°14'33" West 37.24 feet; thence South 73°09'07" West 29.67 feet; thence South 69° 29'31" West 29.76 feet; thence South 19°14'36" West 59.04 feet; thence South 11° 34'42" East 54.84 feet; thence South 46° 32'29" East 85.22 feet; from this point, the Centerline is un-surveyed, but follows along the existing road centerline on the following approximate description; thence Southwesterly a distance of 1,300.00 feet to a road junction; thence Northwesterly a distance of 1,700.00 feet to a switchback; thence Easterly a distance of 2,808.00 feet to a point being the Northwest corner of the powerhouse, said point being the TERMINUS of said easement.

PARCEL 4 (access road from State Highway 11 to the rock pit).

Along with an Easement, 50.00 feet wide, for the purpose of ingress and egress, centered along the following described line (it is the intent of this easement to follow the centerline of the existing road);

Commencing at a brass cap monument marking the Southeast corner of the Southwest Quarter of Section 10, Township 35 North, Range 4 East, Boise Meridian; thence North 56°46'39" West a distance of 5,784.88 feet to the REAL POINT OF BEGINNING of the hereinafter described easement; thence South 06°04'43" East 223.14 feet; thence South 26°09'28" East 243.91 feet; thence South 37°51'18" East 232.22 feet; thence South 78°22'31" East 326.91 feet; thence South 50°37'19" East 228.37 feet; thence South 30°52'35" East 136.94 feet; thence South 02°40'05" West 266.32 feet; thence South 21° 57'50" East



217.37 feet; thence South 33°46'21" East 201.88 feet; thence South 23° 01'04" East 312.65 feet; thence South 01°44'19" West 2,554.58 feet; thence South 02° 32'14" West 1,356.10 feet more or less to the North Right of Way of State Highway 11 and the TERMINUS of this easement.

The total acres contained within this easement being 24.69 acres, more or less

If the project and access road are located substantially as described herein, the centerline of said project and access road as constructed is hereby deemed accepted by the parties as the true centerline of the premises granted. If any subsequent survey of the project and access road shows that any portion of the same, although located substantially as described, crosses lands of the Grantor not described herein, the easement shall be amended to include the additional lands traversed; if any lands described herein are not traversed by the project and access road as constructed, the easement traversing the same shall be terminated.

Attachment No. 1 is a summary of the acreage involved in this easement.

III. PURPOSE: This amended and restated easement is entered into in order to correct the legal description in that certain "Amended State of Idaho Easement No. 5253" dated March 6, 1998, recorded December 27, 2010 as instrument No. 215874 ("First Amended Easement 5253"). These corrections are based on a revised legal description provided by Ford Hydro Power Project (the Project) for which this easement is granted. The Project consists of the construction, operation, and maintenance of a hydroelectric facility. The Amended State of Idaho Easement No. 5253 of March 6, 1998 was itself an amendment and restatement of that certain "State of Idaho Easement No. 5253" originally entered between the parties dated November 24, 1987 ("Original Easement 5253").

IV. FEES: A one-time fee of FOUR THOUSAND EIGHT HUNDRED AND NO/100ths DOLLARS (\$4,800.00), lawful money of the United State of America, was provided in Original Easement 5253 based on 12 acres at \$400.00 per acre. Grantee also paid to the Grantor an additional fee of TWO THOUSAND ONE HUNDRED EIGHTY and NO/100ths DOLLARS (\$2,180.00), lawful money of the United States of America, for an additional 5.45 acres included in the First Amended Easement 5253, based on the rate of \$400.00 per acre. Grantee also paid an additional fee pursuant to the terms of the First Amended Easement 5253 in the amount of \$5,076 for an additional 12.69 acres included in the First Amended Easement 5253 based on the rate of \$400.00 per acre.

The Grantee shall pay to the Grantor an annual fee for the easement based on the following formula:

Annual fee = ANG (annual net generation) X 2 mills (2/10 of a cent) X 62% (percentage of hydroelectric project acreage on state land).

WHERE



"Annual net generation" means the energy output in kilowatt hours that the Grantee received payment for in the previous calendar year,

AND

"Hydroelectric project" means the dam, diversion, penstock, transmission lines, water storage area, powerhouse, and other related facilities but does not include any access roads. Attachment #2 shows the project acreage figures used in determining the percentage of project on state land for the royalty formula.

The fee formula shall remain in effect for the term of the power purchase contract that the Grantee has with a power utility or for the term of the FERC license, whichever expires first. At the expiration of said contract or license or if, under the power purchase contract, the amount paid to the Grantee is increased before the expiration of the contract, the Grantor reserves the right to alter the fee formula, with due and proper notice to the Grantee (would not apply to any built in increase for maintenance or cost of living adjustments). Any new formula shall be based on the then current Land Board policy governing hydroelectric projects.

V. REPORTING: The Grantee shall submit to the Grantor, a verified copy of the annual net generation along with the annual fee, both of which shall be due and payable on or before February 1<sup>ST</sup> of the following year. If the annual fee is not paid on or before February 1<sup>ST</sup>, the Grantor shall give written notice to the Grantee that if the payment of the annual fee and interest thereon, accruing from February 1<sup>ST</sup> at the prevailing interest rate of the Grantor's transactions is not received within sixty (60) days of notice thereof, then the Grantor may cancel the easement without further notice.

VI. ADDITIONAL RIGHTS RESERVED TO THE GRANTOR: It is understood and acknowledged that all rights are contingent upon their failure to conflict with any provision of the Federal Energy Regulatory Commission license for Project No. 7986 issued to Grantee on January 17, 1986, as such license may be amended (the "FERC license"); and that all individuals or entities authorized by the Grantor to enter upon or cross this easement shall insure against damage to the easement of Grantee's property in the sum of Five Hundred Thousand Dollars (\$500,000.00).

The Grantor expressly reserves the following rights:

- A. Oil and gas, geothermal, and all other mineral rights.
- B. To grant easements over or leases, permits or licenses upon the easement area, provided that such easement, lease, license, or other use shall not unreasonably interfere with the Grantee's use of its easement.
- C. The Grantor, its agents, contractors, lessees, permittees, and other authorized individuals and entities may enter upon and across the easement area to inspect the improvements, to harvest timber, and for other lawful uses, so long as such use does not unreasonably interfere with Grantee's use of this easement. In



addition to the insurance provided above, all those authorized by the Grantor to use the easement area to harvest timber shall be bonded in an amount sufficient to insure that access roads shall be maintained in and restored to the condition they were in prior to commencement of timber operations.

D. To sell the lands subject to the terms of this easement.

VII. MAINTENANCE: Grantee shall bear the sole and complete responsibility for all improvements constructed upon the easement area, including without limitation, the pipelines, the transmission lines, the powerhouse, and all other improvements. Additionally, all access roads shall be maintained by the Grantee to acceptable standards as determined by the Grantor. Grantee shall also cooperate with Grantor to maintain the integrity of all road closures on the easement area.

VIII. RESPONSIBILITY - HOLD HARMLESS CLAUSE: Both parties shall indemnify and hold harmless the other against any and all liability, claims, and expenses of any kind, including reasonable attorney fees for any damage to any person or property caused by any negligent or other wrongful act of the other party, or its officers, employees, agents, or invitees in connection with the activities of the easement. The party seeking indemnification under this provision shall give the other party written notice of the claim for indemnification within ten (10) days after it receives notice or has knowledge of the claim and shall give the other party a reasonable opportunity to defend against the claim including cooperation in the defense of the claim. Grantee shall not be considered an agent of the Grantor in the construction, operation, maintenance, or use of the easement area or the facilities, structures or improvements situated thereon.

IX. ASSIGNMENT: The Grantee shall not sublet all or any part of the easement or assign or transfer this easement or any interest therein, without the prior written consent of Grantor. Subject to the approval of the Grantor which shall not be unreasonably delayed or denied, the Grantee may assign this easement to an assignee who agrees to perform all of the Grantee's obligations under this agreement.

X. MORTGAGES: Subject to the Grantor's consent, which consent shall not be unreasonably withheld, the Grantee may mortgage or otherwise create a security interest in the Grantee's interest in this easement to secure indebtedness incurred by the Grantee to finance the construction of the Project, or to secure the Grantee's obligations to a third party under a lease to the Grantee of the improvements constituting the Project in the event that any or all of the improvements are constructed or acquired by the third party and leased by it to the Grantee. In the event that the Grantee mortgages or otherwise creates a security interest in its interest in the easement, the holder of the mortgage or security interest (the "Secured Party") shall notify the Grantor of the creation of such mortgage or security interest and the name and address for the service of notice upon the Secured Party. The Grantor hereby agrees for the benefit of the Secured Party that:



A. Upon serving the Grantee with any notice of default, Grantor will simultaneously serve a copy of such notice upon the Secured Party. No notice to the Grantee shall be effective upon the Secured Party unless a copy is also served upon the Secured Party.

B. In the event of any default by the Grantee hereunder or under the terms of the mortgage or other security interest, the Secured Party shall, at its option, have the right to perform any of the Grantee's covenants, to cure any default by the Grantee, and/or to exercise any election, option, or right conferred upon the Grantee by the terms of this easement.

C. The Grantor will not terminate this easement or the Grantee's right of possession for any default of the Grantee if within a period of thirty (30) days after the expiration of the period of time within which the Grantee might cure said default under the provisions of this easement, the Secured Party cures the default or causes the default to be cured, or if within a period of thirty (30) days after the expiration of the period of time within which the Grantee might commence to eliminate the cause of such default under the provisions of this easement, the Secured Party commences to eliminate the cause of such default and proceeds therewith diligently and with reasonable dispatch.

D. The Grantor will not terminate this easement if the Secured Party takes possession of the easement upon default by the Grantee under the terms of the mortgage, provided that the fees due and payable under this easement shall continue to be paid and the other covenants, conditions and agreements of this easement on the Grantee's part to be kept and performed shall continue to be kept and performed. Secured Party shall have a period of thirty (30) days after taking possession within which to commence performance.

E. No right, privilege or option available to the Grantee to cancel or terminate this easement shall have been exercised effectively unless joined in by the Secured Party.

F. No modification or amendment to this easement shall be effective without the written consent of the Secured Party.

G. Notwithstanding anything to the contrary upon the occurrence of an event of default, other than a default in the payment of money, the Grantor shall take no action to effect a termination of this easement without first giving to the Secured Party a reasonable time within which either (1) to obtain possession of the easement (including possession by a receiver), or (2) to institute, prosecute and complete foreclosure proceedings or otherwise acquire the Grantee's interest under this easement with diligence. The Secured Party, upon obtaining possession or acquiring the Grantee's interest under this easement, shall be required promptly to cure all defaults then reasonably susceptible of being cured by the Secured Party.



H. In the event of the termination of this easement as a result of the bankruptcy or insolvency of the Grantee, the Grantor shall serve upon the Secured Party written notice that the easement has been terminated. The notice shall include a statement of any and all sums which would be due under this easement but for such termination and of all other defaults, if any, under this easement then known to the Grantor. If within thirty (30) days after the Grantor's notice, the Secured Party shall request a new easement, the Grantor shall enter into a new easement with the Secured Party, or its designee, in accordance with and upon the following terms and conditions: (1) the new easement shall be at the reasonable cost of the Grantee, (2) the new easement shall be effective as of the date of termination of this easement, (3) the new easement shall be for the same term of this easement and at its same rent, agreements, terms, covenants and conditions, and (4) the new easement shall require the Grantee to perform any unfulfilled obligation of the Grantee under this easement which is reasonably susceptible of being performed by such Grantee. Upon the execution of such new easement, the Grantee named therein shall pay any and all sums which would at the time of its execution be due under this easement but for such termination and shall pay all expenses, including reasonable counsel fees, court costs and disbursements incurred by the Grantor in connection with such default and termination, the recovery of possession of the easement, and the preparation, execution and delivery of the new easement.

XI. BONDS: Grantee shall secure and maintain during the entire term of this easement, a performance bond or an irrevocable letter of credit in the amount of SEVENTEEN THOUSAND EIGHT HUNDRED EIGHTY and NO/100ths DOLLARS (\$17,880.00), lawful money of the United States of American, based on 8.94 acres (total easement acreage minus access road acreage) at TWO THOUSAND and NO100/thS DOLLARS (\$2,000.00), lawful money of the United States of America, per acre to guarantee compliance with the terms of this easement, including without limitation, construction, safety, performance, maintenance, reclamation, and, if required by the Grantor, the prompt removal of all equipment and improvements from the easement area upon Grantee's default or extinguishment of the easement for any reason.

XII. INSURANCE: Grantee shall secure and maintain during the term of this easement, public liability, property damage, and products liability insurance at least in the sum of FIVE HUNDRED THOUSAND and NO/100ths DOLLARS (\$500,000.00), lawful money of the United States of America, for injury or death for each occurrence; and the aggregate sum of ONE MILLION and NO/100ths DOLLARS (\$1,000,000.00), lawful money of the United States of America, for injury or death; and in the sum of FIVE HUNDRED THOUSAND and NO/100ths DOLLARS (\$500,000.00), legal and lawful money of the United States of America, for damages to property and products damage caused by any occupancy, use, operations or any other activity upon the easement area carried on by the Grantee, its assigns, agents, operators or contractors. The Grantor shall be named insured in all instances. A current certificate of insurance shall be maintained with the Director of the Department of Lands by Grantee for the duration of this easement as proof of insurance.



XIII. WASTE: Grantee shall not allow waste to be committed upon the easement area. Grantee shall at all times keep the premises free from abandoned machinery, motor vehicles, refuse and other unsightly materials.

XIV. RECLAMATION: Upon relinquishment, termination or extinguishment or any reason, Grantee shall reclaim all lands disturbed by its construction by reseeding and revegetating with seed to the extent necessary to minimize erosion. The amount and species of seed shall be determined by Grantor. The seed bed area suitable for disking shall be disked to a depth of 1/2 inch to 1 inch before seeding.

In the event the Grantee fails to commence and continue reclamation within thirty (30) days after relinquishment, termination or extinguishment, the Grantor may declare the performance bond forfeited and use the bond monies to reclaim the land, and may exercise all other remedies at law and in this easement. The Grantor may extend the thirty (30) day period to allow for optimum weather and planting conditions.

XV. REVERSION FOR NON-USE: In the event that the easement is not used for the purpose for which it was granted for any five (5) year period, the easement is presumed abandoned and shall automatically terminate. The Grantor shall notify the Grantee and the Secured Party in writing of the termination. The Grantee and the Secured Party shall have thirty (30) days from the date of notification to reply in writing to the Grantor to show cause why the easement should be reinstated. Within sixty (60) days of receipt of the statement to show cause, the Grantor shall notify the Grantee and the Secured Party in writing as to the Grantor's decision concerning reinstatement. The Grantee or the Secured Party shall have thirty (30) days of receipt of the Grantor's decision to appeal an adverse decision to the State Board of Land Commissioners.

XVI. RELINQUISHMENT: Unless otherwise prevented from doing so by failure to acquire the consent of a Secured Party or as otherwise provided herein, the Grantee may relinquish this easement by filing a written relinquishment with the Grantor. Thirty (30) days thereafter, the Grantee shall be relieved of liability under this easement except for the continued obligation to make payments of all accrued fees, timely removal of equipment and improvements and/or the release of the performance bond for the removal of equipment and improvements if required by the Grantor, the reclamation of the premises, and compliance with all other duties and payments of all liabilities required by this easement or by law or regulation which accrued prior to the filing of the relinquishment.

XVII. COVENANT: It is mutually understood and agreed by the parties that all of the terms, covenants, conditions and obligations in this easement are of the essence and shall be binding upon the heirs, executors and assigns of this easement.

XVIII. COMPLIANCE WITH APPLICABLE LAWS: All applicable laws and regulations of the United States and the State of Idaho and its political subdivisions are incorporated herein by reference, except as lawfully varied by the contractual terms of this easement. Grantee shall comply with all such applicable laws and regulations.

XIX. TERMINATION: Except as provided in paragraph V, X, and XV above, the Grantor may terminate this easement for any material breach of its terms ninety (90) days after written notice of default has been given to the Grantee and Secured Party, unless the breach has been cured to the Grantor's satisfaction before the ninety (90) day period has expired.

In the event that Grantor declares a termination of the easement, thereafter the easement shall be completely and finally extinguished and all right and title thereto shall automatically revert to the Grantor or to the record owner of the Grantor's interest in the lands subject to this easement; provided that the Grantee shall remain bound to comply with all duties and liabilities required by this easement or by law, which accrued prior to the date of extinguishment; the Grantee shall quietly and peaceably surrender possession of the easement to the Grantor; and the Grantor may pursue all other remedies at law and in this easement.

XX. FORCE MAJEURE: In the event that any performance required of either party by this easement is delayed by any reason beyond its control, including but not limited to fire, flood, storms, strikes, labor disputes, riots, insurrection or the inability to procure materials, the affected party shall notify the other party of the delay and the reasons for it. The time for which the affected performance is required shall be excused and/or extended for the amount of time the performance is delayed. Nothing in this paragraph shall excuse the Grantee from making timely payment of the fees due under this easement.

XXI. NOTICE: All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given when delivered in hand to such party or mailed by certified or registered mail, postage prepaid, return receipt requested and addressed:

If to the Grantee: Ford Hydro Limited Partnership  
Route 2, Box 65  
Lenore, Idaho 83541

If to the Grantor: Director  
Idaho Department of Lands  
300 N. 6<sup>TH</sup> Street, Ste. 103  
P.O. Box 83720  
Boise, ID 83720-0050

Or, in each case to such other address as may be specified in a written notice delivered in compliance with the foregoing requirements.

XXII. FEDERAL REGULATION: Both parties recognize that the Project, and therefore this easement, are subject to the regulatory jurisdiction of FERC. Any performance required under this easement is expressly conditioned on it being in compliance with FERC rules, regulations and orders. If any performance under this easement requires



FERC approval, that performance is conditioned upon the receipt of that approval. Both parties shall take all reasonable and appropriate steps to insure that the performance required under this contract are within FERC rules, regulations and orders and that applications for required approvals are filed in a timely manner.

XXIII. ACCEPTANCE:

Use of this easement by Grantee constitutes acceptance of the easement and agreement to be bound by the terms hereof.

IN WITNESS WHEREOF, the Grantee has caused these presents to be duly executed the day and year first above written.

**FORD HYDRO LIMITED PARTNERSHIP**

Dated: 2-11-11

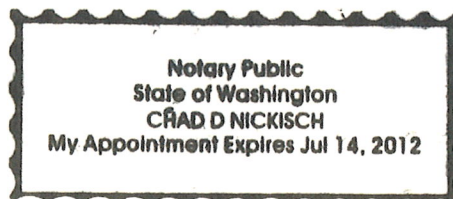
Archie Ford

By: [Signature]

Its: Manager

STATE OF <sup>Washington</sup> IDAHO )  
 ) ss.  
COUNTY OF Whitman )


On this 11 day of February, 2011, before me, a Notary Public in and for said county and state, personally appeared Archie Ford, known to me to be the Manager of FORD HYDRO LIMITED PARTNERSHIP, that executed the same instrument and acknowledged to me that they executed the same for and on behalf of said limited partnership.



NOTARY PUBLIC for Idaho  
Residing at Bellingham WA, Idaho  
My Commission expires: July 14 2012

IN WITNESS WHEREOF, the State Board of Land Commissioners has caused these presents to be executed by its President, the Governor of the State of Idaho, and countersigned by the Secretary of State and the Director, Idaho Department of Lands.

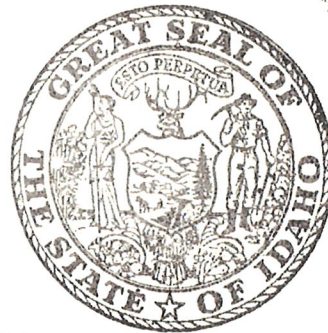
STATE BOARD OF LAND COMMISSIONERS

  
Governor of the State of Idaho and President  
of the State Board of Land Commissioners

Countersigned:

Ben Ysursa  
Secretary of State

  
Director, Idaho Department of Lands



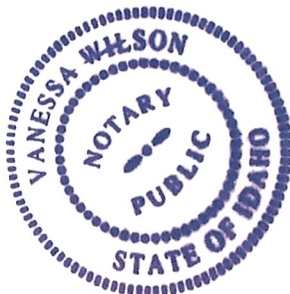
\* \* \* \* \*

STATE OF IDAHO )  
 ) ss.  
COUNTY OF ADA )

On this 24<sup>th</sup> day of February, 2011, before me, a Notary Public in and for said State, personally appeared **C.L. "BUTCH" OTTER**, known to me to be the Governor of the State of Idaho and President of the State Board of Land Commissioners; **BEN YSURSA**, known to me to be the Secretary of State for the State of Idaho; and **GEORGE B. BACON**, known to me to be the Director of Department of Lands of the State of Idaho, that executed the same instrument and acknowledged to me that such State of Idaho and State Board of Land Commissioners executed same.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year written above.

Vanessa Walker  
NOTARY PUBLIC for Idaho  
Residing at Boise, Idaho  
My Commission expires: 8-11-2014





ATTACHMENT NO. 1

FORD HYDRO PROJECT ACREAGE

AMENDED  
STATE OF IDAHO  
EASEMENT NO. 5253

Figures shown here reflect the total acreage on state land affected by construction of the project and are used to determine the one-time easement compensation fee and performance bond.

1. Penstock - (50.00 foot wide right-of-way) approximately from Station 22+90.67 to Station 83+86.61\* as determined from metes and bounds description, dated April 7, 1988 (Attachment 1A), and plat sheets 5, 6, and 7, dated December 13, 1988 \*\*:

$$6,099.65 \text{ feet} \times 50.00 \text{ feet} \div 43,560.00 \text{ square feet} = 7.00 \text{ acres}$$

2. Penstock / Flume Transition - (50.00 feet and 100.00 feet centerline right-of-way) - approximately from Station 83+86.61 to Station 86+77.80 as determined from metes and bounds description, dated April 7, 1988:

$$265.78 \text{ feet} \times 150.00 \text{ feet} \div 43,560.00 \text{ square feet} = 0.92 \text{ acres}$$

3. Flume - (50.00 foot wide right-of-way) - approximately from Station 86+77.80 to Station 90+36.42 as determined from metes and bounds description, dated April 7, 1988:

$$358.17 \text{ feet} \times 50.00 \text{ feet} \div 43,560.00 \text{ square feet} = 0.41 \text{ acres}$$

4. Powerhouse Site - approximately from Station 90+36.42 to Station 91+72.42 as determined from metes and bounds description, dated April 7, 1988:

$$136.00 \text{ feet} \times 130.00 \text{ feet} \div 43,560.00 \text{ square feet} = 0.41 \text{ acres}$$

5. Transmission Line "Shortcut" - as determined from plat sheets 5 and 6, dated December 12, 1988:

NE $\frac{1}{4}$ SE $\frac{1}{4}$ , Section 9:

$$183.96 \text{ feet} \times 20.00 \text{ feet} \div 43,560.00 \text{ square feet} = 0.08 \text{ acres}$$

NW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 10:

$$543.35 \text{ feet} \times 10.00 \text{ feet} \div 43,560.00 \text{ square feet} = 0.12 \text{ acres}$$

6. Access road from pipeline road junction - (Station 74+70.51) - to existing road (near rock pit) as determined from plat sheet 9, dated December 13, 1988:

$$1,600.72 \text{ feet} \times 50.00 \text{ feet} \div 43,560.00 \text{ square feet} = 1.84 \text{ acres}$$

7. Access road from rock pit junction - to powerhouse as determined from aerial photos (Attachment 1-B) and on-site measurement (string machine):

$$5,808.00 \text{ feet} \times 50.00 \text{ feet} \div 43,560.00 \text{ square feet} = 6.67 \text{ acres}$$

8. Access road from State Highway 11 - to the rock pit junction as determined from metes and bounds description, dated April 7, 1988 (Attachment 2-A):

$$6,304.54 \text{ feet} \times 50.00 \text{ feet} \div 43,560.00 \text{ square feet} = \underline{7.24 \text{ acres}}$$

**TOTAL PROJECT ACREAGE COVERED BY  
STATE OF IDAHO AMENDED EASEMENT NO. 5253: = 24.69 acres**

Easement Compensation Fee: = 24.69 acres x \$400.00 / acre  
= \$9,876.00

Initial Easement Compensation Fee: = \$4,800.00

Compensation Fee Balance Due: = \$9,876.00 - \$4,800.00  
= \$5,076.00

Performance Bond: = 24.69 acres - 15.75 acres (access roads)  
= 8.94 acres x \$2,000.00 / acre  
= \$17,880.00

\* Referenced survey stations are approximations only and were not used to calculate easement length, as they do not lie exactly on ownership boundaries and/or on easement width transition points.

\*\* Plats available at Clearwater Area office.



ATTACHMENT NO. 2

FORD HYDRO PROJECT ACREAGE  
FOR ROYALTY CALCULATIONS

AMENDED  
STATE OF IDAHO  
EASEMENT NO. 5253

Figures shown here reflect total acreages encumbered by project structures used for power production on both state land and private land and are used for annual royalty payment calculations. These acreages are less than those reflected in state and private easements purchased by Ford Hydro since widths for the penstock and transmission lines have been standardized at 40 feet and 20 feet, respectively, across all ownerships.

A. STATE LAND PORTION

1. Penstock - (40.00 foot wide right-of-way) - Station 22+90.67\* to approximately Station 90+36.42 as determined from metes and bounds description, dated April 7, 1988 (Attachment 2-A), and plat sheets 5, 6, and 7, dated December 13, 1988\*\*:

$$6,723.60 \text{ feet} \times 40 \text{ feet} \div 43,560.00 \text{ square feet} = 6.17 \text{ acres}$$

2. Powerhouse Site - approximately from Station 90+36.42 to Station 91+72.42 as determined from plat sheet 8, dated December 13, 1988:

$$130.00 \text{ feet} \times 100.00 \text{ feet} \div 43,560.00 \text{ square feet} = 0.31 \text{ acres}$$

3. Powerline - as determined from plat sheets 5 and 6, dated December 13, 1988:

NE¼SE¼, Section 9:

$$183.96 \text{ feet} \times 20 \text{ feet} \div 43,560.00 \text{ square feet} = 0.08 \text{ acres}$$

NW¼SW¼, Section 10:

$$543.35 \text{ feet} \times 10 \text{ feet} \div 43,560.00 \text{ square feet} = \underline{0.12 \text{ acres}}$$

**Total Acres on State  
(62% of Project) = 6.68 acres**

**B. PRIVATE LAND PORTION**

1. Dam and Reservoir Site - as determined from attached metes and bounds description, dated April 11, 1995 (Attachment 2-B): = 1.43 acres
2. Penstock - (20.00 feet wide centerline right-of-way) - approximately from Station 9+88.21 to Station 22+90.67 as determined from plat sheet 5, dated December 13, 1988:

$$1,302.46 \text{ feet} \times 40 \text{ feet} \div 43,560.00 \text{ square feet} = 1.20 \text{ acres}$$

3. Transmission Line "Shortcut" - as determined from plat sheet 5, dated December 13, 1988:

SW¼SW¼, Section 10:

$$543.35 \text{ feet} \times 10 \text{ feet} \div 43,560.00 \text{ square feet} = 0.12 \text{ acres}$$

4. Transmission line - (Dam to Highway 11) - from project plat dated April 11, 1995 (Attachment 2-C):

$$3,057.20 \text{ feet} \times 20 \text{ feet} \div 43,560.00 \text{ square feet} = 1.40 \text{ acres}$$

**Total Acres on Private  
(38% of Project) = 4.15 acres**

**TOTAL PROJECT ACREAGE FOR ROYALTY FORMULA = 10.83 ACRES**

\* Referenced survey stations are approximations only and were not used to calculate easement length, as they do not lie exactly on ownership boundaries and/or on easement width transition points.

\*\* Plats available at Clearwater Area office.