NPS Form 10-900 OMB No. 1024-0018 Expires 5/31/2015) 375

United States Department of the Interior
National Park Service

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Nat. Register of Historic Places
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. **Place additional certification comments, entries, and narrative items on continuation sheets if needed (NPS Form 10-900a).**

1. Name of Property

historic name LEABURG HYDROELECTRIC PROJECT HISTORIC DISTRICT

other names/site number LEABURG POWER PROJECT

Name of Multiple Property Listing N/A

(Enter "N/A" if property is not part of a multiple property listing)

2. Location

street & number 14348 McKenzie River Highway (OR 126) ☐ not for publication

city or town Leaburg vicinity ☐ vicinity

state Oregon code OR county Lane code 039 zip code 97478

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this **X** nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property **X** meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance: ___ **national** **X** **statewide** **X** **local**

Applicable National Register Criteria: **X** **A** ___ **B** **X** **C** ___ **D**

Christine Curran 5-1-15

Signature of certifying official/Title: Deputy State Historic Preservation Officer Date

Oregon State Historic Preservation Office

State or Federal agency/bureau or Tribal Government

In my opinion, the property ___ meets ___ does not meet the National Register criteria.

Signature of commenting official Date

Title State or Federal agency/bureau or Tribal Government

4. National Park Service Certification

I hereby certify that this property is:

X entered in the National Register ___ determined eligible for the National Register

___ determined not eligible for the National Register ___ removed from the National Register

___ other (explain:)

Signature of the Keeper 6/29/2015

Date of Action

LEABURG HYDROELECTRIC PROJECT HISTORIC DISTRICT | LANE, OR
Name of Property | County and State

5. Classification

Ownership of Property
(Check as many boxes as apply.)

	private
X	public - Local
	public - State
	public - Federal

Category of Property
(Check only **one** box.)

	building(s)
X	district
	site
	structure
	object

Number of Resources within Property
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
8	3	buildings
1	1	site
8	5	structure
0	0	object
17	9	**Total**

Number of contributing resources previously listed in the National Register

N/A

6. Function or Use

Historic Functions
(Enter categories from instructions.)

INDUSTRY: Energy Facility (Powerplant)
INDUSTRY: Waterworks (Reservoir)
INDUSTRY: Energy Facility (Hydroelectric Dam)
DOMESTIC: Single Dwelling

Current Functions
(Enter categories from instructions.)

INDUSTRY: Energy Facility (Powerplant)
INDUSTRY: Waterworks (Reservoir)
INDUSTRY: Energy Facility (Hydroelectric Dam)
DOMESTIC: Single Dwelling

7. Description

Architectural Classification
(Enter categories from instructions.)

OTHER: Industrial (Dam & Headworks)
MODERN MOVEMENT: Art Deco (Powerhouse)
LATE 19th AND 20th CENTURY REVIVALS: Tudor Revival
OTHER: Utilitarian (Gates, Water Conveyance)

Materials
(Enter categories from instructions.)

foundation: CONCRETE
walls: OTHER: Mixed
roof: OTHER: Mixed
other: N/A

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity).

Summary Paragraph

The Leaburg Hydroelectric Project Historic District was put into service in January 1930 and continues to generate electric power as part of the Eugene Water & Electric Board (EWEB) system (the Board), a municipally owned utility located in Lane County, Oregon. Located along approximately five miles of the McKenzie River in the vicinity of Leaburg, the multiple built resources of the project, including power generation (dam, powerhouse), water conveyance (reservoir, canal, tailrace), and residential uses (housing), retain very high integrity to their original design, use of materials, workmanship and other aspects and so effectively convey the historical associations that make the district significant.

SETTING

The Leaburg Hydroelectric Project Historic District is located on and is roughly parallel to the McKenzie River, adjacent to Oregon State Highway 126 in eastern Lane County, near the unincorporated community of Leaburg, Oregon. The project lines roughly five miles of the river, beginning upstream at the top of the Leaburg Reservoir, continuing past the dam, through the canal and forebay facilities to the powerhouse and Leaburg residential area, before returning water to the main stem of the McKenzie River. The total project area, as defined by the Federal Energy Regulatory Commission (FERC) license boundary, is approximately 271 acres within T16S-R2E-S31, T17S-R2E, T17S-R2E-S6, T17S-R1E, sections 1, 2, and 9-12, including all built project facilities between the top of the reservoir, as defined by mean water elevation, and the end of the tailrace, the canal-like feature that carries water exiting the turbines to the tailrace barrier, a weir-like structure that prevents fish from entry.

DESCRIPTION

The Leaburg Hydroelectric Project Historic District consists of multiple built resources lining the McKenzie River and the canal between the upriver boundary of the reservoir and continuing in a generally westerly direction to the downstream end of the tailrace, where water exiting the turbines re-enters the river channel and continues to flow downstream. EWEB, a public entity under the direction of elected members, owns and operates the project under FERC License No. 2496. The Leaburg development is a "run of the river" facility, meaning that the amount of water flowing into the project reservoir approximates the amount released from the project downstream.[1]

As a complex facility spanning roughly five miles, the Leaburg Hydroelectric Historic District includes a variety of resources. The individual built elements, both contributing and not, located within the Leaburg Hydroelectric Project Historic District are:

[1] FERC, *Final Environmental Impact Statement, Leaburg–Walterville Hydroelectric Project* (FERC No. 2496). Washington, DC: FERC/ Office of Hydropower Licensing, 1996:xvii, (FERC/EIS-0094).

INDIVIDUAL RESOURCES[2]

1. Leaburg Reservoir (1930): Generally called "Leaburg Lake," the water impoundment above the dam extends approximately 1.5 miles upstream within the main river channel and provides approximately 345 acre feet of water storage, covering an area of approximately 57 acres. Automatic gate operation maintains the lake level at a water surface elevation of 742.5 feet above sea level.

2. Watchman's House (1933): This structure was designed by Eugene contractor E. M. Drew and approved by the Board in May 1933 at a cost not to exceed $2500.[3] The Watchman's House allowed a single guard to have a full view of the dam and all its "appurtenances" and resulted in the elimination of a second attendant position. A single story, wood-frame building with a main gable volume, a small "t" rear wing, and an attached single-car gabled garage, the house is clad with striated wood shingle siding and simple trim. Roofing is three-tab asphalt. The major modification, ca. 1995, is the installation of vinyl windows.

3. *Leaburg Dam Visitor Center (2009)*: An open-sided structure with a metal roof, wood siding and large-timber frame supports, the visitor center was designed by Solarc Architecture of Eugene and opened in 2009 to provide visitor amenities related to recreation at the Leaburg Dam and Lloyd Knox Park. While generally compatible, the Visitor Center was completed after the end of the period of significance and is counted as a Non-Historic/Non-Contributing structure.

4. *Lloyd Knox Park (ca. 1960)*: A 40-acre day-use facility named after a longtime EWEB employee who served as the caretaker at Leaburg, the park offers picnic tables, volleyball, and softball fields, among other amenities, to the public. Although portions of the park, including some original infrastructure, may date to the mid-1930s and the Works Progress Administration (WPA), little evidence of that period remains.[4] Concrete structures dating to the 1960s are provided for restrooms, while a small wood-frame storage building just south of the Watchman's House provides for storage and service needs. Developed in its current form after the end of the original development period, Lloyd Knox Park is counted as a single Non-Historic/Non-Contributing site.

5. Leaburg Dam (1930): A 400'-long, reinforced concrete and steel structure, the Leaburg Dam is 22' high and is equipped with three 100'-long x 9'-diameter riveted steel roller gates.[5] A concrete sluice-way with an operable gate is located on the right (north) side. The three roller gates (identified as 1–3, from the south) were designed and fabricated by the Willamette Iron and Steel Company, of Portland, Oregon. By a considerable factor, they are the largest non-federal roller gates known in the United States and are an early example of roller gate technology in the west. The dam includes three stucco-clad concrete "pier houses," (aka "gate houses"), each of which sits atop the poured concrete piers that support the gate itself. The pier houses are embellished with stepped parapets, embedded tile details, steel-sash industrial

[2] Non-contributing resources as counted in Section 5 are identified by *italicized* names.
[3] Eugene Water Board Minutes, May 8, 1933.
[4] Professor Scott Walton, *Historical Summary of EWEB*, 1961:53.
[5] See Section 8 for a description of roller gate technology.

windows, and other elements. They contain the control motors and lift mechanisms that engage the gates to rise and lower to control water flow. Driven by a large link chain, the drive mechanism moves the gates up or down along steel-toothed gear racks that are attached to incline rails on the sides of the concrete piers. The gates were originally powered by electric motors, but these were replaced with hydraulic powered units in 2004. This was not entirely successful. The hydraulic motor of Gate No. 2 failed on January 19, 2012, causing the gate to fall to the fully closed position where it remains.[6] EWEB has an approved plan to return Gate No. 2 to electric motor operation that should be completed by early 2015. EWEB anticipates returning Gates No. 1 and No. 3 to electric motor operation in the future, re-establishing the original mechanical gear reduction design of the hoist.

The Leaburg Dam is a complex construction that includes multiple components, each counted as an individual feature in Section 5. That includes, in addition to the elements above, the following features:

6. Fender House (1930): Matched in design and materials to the Pier Houses, the small "Fender House" is located upstream at the right (north) side of the reservoir.[7] The Fender House provides for the operation of an underwater screen that deflects logs and other debris from entering the canal, and assists in directing debris to the Sluice Gate, bypassing the dam. The Fender House was in very poor shape and considered for removal in 2004–05, but it was entirely rehabilitated in 2010 and effectively relates its original design.

7. Sluice Gate (1930): A 30'-wide Self-Closing Broome Gate, generally termed a Sluice Gate, is located at the dam's right (north) side and allows for the removal of debris and provides for additional water flow downstream as needed. The Sluice Gate was designed and built by Philips and Davies of Kenton, OH.[8] "A sluice gate is a cast iron, vertically sliding valve…" that raises and lowers in a seating channel on either side to prevent seepage.[9] The Sluice or Broome Gate at Leaburg is an early, and very large, example of sluice gate technology.

8. Control (Pier) House (1930): Matched in design to the Pier and Fender houses, the Control House is located to the right (north) of the sluice gate and provided for on-site operator control of the dam as originally developed. Although no longer regularly staffed, it continues to serve that function.

9. Leaburg Bridge (1930): Consisting of three 14'-wide steel camelback-design pony trusses and several smaller beam-and-girder spans, the Leaburg Dam Bridge creates a publicly accessible roadway across the dam crest, between and above the concrete piers that divide the dam gates

[6] *Eugene [OR] Register Guard*, "When the Dam Jams," January 26, 2014, 1:1–4.
[7] EWEB standard nomenclature for left/right is from the downstream-facing view.
[8] Broome gates were devised and patented by Ernest L. Broome in the early 20th century and subject to a series of subsequent patented modifications from a variety of inventors and manufacturers. The firm of Philips and Davies was established in Kenton, Ohio in 1923 and manufactured a variety of improved Broome gates designed by Erwin B. Philips into the 1960s or later. (See U.S. Patent Office #1,663,406 and *Toledo (Ohio) Blade*, July 7, 1959, 12:1–8).
[9] Rodney Hunt, Seminar Report: Anatomy of a Sluice Gate. (http://www.rodneyhunt.com/pdf/Anatomy_sluicegate.pdf, downloaded May 6, 2014).

and associated features. The bridge, designed by Stevens & Koon as part of the original development of the project, provides the only vehicular access to EWEB facilities, the ODFW Fish Hatchery, Lloyd Knox Park, and the multiple private residences that are located on the left (south) bank of the river along Leaburg Dam Road.

10. *Left Bank Fish Ladder (1988, as modified 2003–04):* Although containing some elements, primarily concrete walls, that predate the current design, the present Left Bank Fish Ladder was almost entirely reconstructed in 1988 and then subsequently modified in 2003-04 to further improve operation. The Left Bank ladder includes a stepped main channel, access decking, and exits at a small, below-ground viewing station or portal that is located in the Visitor Center parking area. Considered a compatible element that is consistent with the historic character of the Leaburg Dam, the Left Bank Fish Ladder is counted as a Non-Historic/Non-Contributing structure.

11. Leaburg Canal Headgates (Power Canal Intake Gates) (1930): Located at the start of the canal and controlling flows into it, these two vertical sluice gates are located at the right side of the Leaburg Dam. An overhead latticework steel framework rises above the original 24'-wide iron sluice gate, as built by Phillips and Davies.

12. Leaburg Canal (1930): Five miles long, about 15'-deep, and of varying width up to 50', the unlined cut-and-fill Leaburg Canal runs from the dam to the forebay of the power plant, which is essentially a wider portion of the canal immediately upstream of the penstock headgates.

13. *Fish Screen (1988):* Located in the canal just downstream of the canal headgates, the fish screen was designed by EWEB staff engineers to prevent fish from entering the canal and to safely pass fish back to the McKenzie River. The Fish Screen structure consists of open-sided, reinforced concrete boxes with steel baffles and an original "wedge wire" screen and backwash system that was patented by EWEB in 1988. The steel-frame superstructure is similar in character to the original gate hoists of the Leaburg Dam. While generally compatible, the Fish Screen was completed after the end of the period of significance and is counted as a Non-Historic/Non-Contributing structure.

14. *Canal Foot Bridge (ca. 2000):* A Corten (pre-rusted) steel span with synthetic decking, this bridge provides for visitor access across the canal just below the Leaburg Fish Screen. It was manufactured by the Continental Bridge Company of Alexandria, Minnesota. The Canal Foot Bridge, built after the period of significance, is counted as a Non-Historic/Non-Contributing structure.

15. Forebay, Penstock Headgates, Intake & Penstocks (1930): Located at the downstream terminus of the canal, the forebay is essentially a widened portion of the canal immediately upstream of the Leaburg Penstock Headgates that functions something like a reservoir. The headgates and other elements are visible on the north side of Oregon 126. This resource identification number includes multiple components; the forebay, penstock headgates, automatic siphon bypass spillway, trashrack, and ice-trash spillway, all of which visibly read as a single unified concrete

and steel assemblage. The penstocks, essentially large pipes, direct water from the forebay into the powerhouse turbines, creating head (drop in elevation) and thus force to turn the turbines at a constant rate. "From the forebay water flows into the powerhouse through two reinforced concrete pipe penstocks each 12 feet in diameter, 82 feet long and 40 feet high, located underground, beneath OR State Hwy 126."[10] The penstock headgate structure consists of two overhead latticework steel frameworks that are used to raise and lower the large vertical sluice gates, both installed as part of the original construction, although Unit No. 2 did not go into operation until 1948. The penstocks, constructed of concrete, form a massive element that rises from the highway roadway, including the spillway, immediately to the east, and other highly visual elements, before continuing underground to the turbine level of the Leaburg Powerhouse, across the highway. The forebay, penstock headgates, and related elements, including the penstocks, are counted as a single contributing historic resource in Section 5.

16. Leaburg Powerhouse (1930, 1950): The Leaburg Powerhouse is constructed of stucco-coated, reinforced concrete and consists of a large vertical volume, 32'-wide, 82'-long and 40'-tall, with a shorter attached shop/office wing to the east. The powerhouse contains two Francis-type turbines connected to generation units rated at 8.4 and 7.5 MW respectively, for total nameplate output of 15.9 MW.[11] The exterior of the powerhouse, designed by Ellis Fuller Lawrence, is highly detailed, with a cast-stone bas-relief panel centered on the upper portion the main, north-facing elevation that was designed and sculpted by Harry Camden Poole. Bronze lettering above identifies the project. Original decorative glass and metal doors dominate the main elevation, with original steel sash industrial windows set in banks in the three exposed elevations of the larger volume. Similar original windows light the shop/office wing. A decorative cast-stone detail band rims the parapet and serves as a cornice. The lower, turbine level of the building is exposed, board-formed concrete, with a concrete-and-steel grid deck area over the draft tubes, where water exits the turbines and enters the tailrace. Originally natural concrete and stucco, the exterior of the Leaburg Powerhouse was painted almost immediately following construction due to condition and construction issues related to the applied stucco surface. EWEB records document multiple efforts at painting over the years, with the current cream/brown scheme replacing an earlier green design. The "original" color of the powerhouse is not clear. The interior of the powerhouse contains the two generation units on the main floor, along with associated operations equipment, buss work and related equipment.[12] Unit No. 1 (on the right, southside, looking downstream) was built by S. Morgan Smith. A Francis-type turbine powering a Westinghouse generator was installed in 1929 and put into operation in January 1930. Unit No. 2 (on the left, northside, looking downstream), also manufactured by S. Morgan Smith, is a Francis turbine powering an Allis-Chalmers generator. Designed as an original element of the project, Unit No. 2 was not installed until 1948–49, when demand for power justified the installation. Unit No. 2 appears to have been put into operation in June 1950.[13] Both units have been maintained, upgraded, and modified to improve performance but remain essentially "as built" and continue to operate as originally

[10] FERC, *Final Environmental Impact Statement, Leaburg-Walterville Hydroelectric Project No.* 2496. (FERC EIS-0094, December 1996).
[11] A Megawatt, abbreviated as MW, is one million watts, or 1000 kilowatts (KV), generally referenced as enough power to serve 1000 homes..
[12] Buss work is a generic term for the electrical equipment, circuit breakers, switches, etc. of an electric installation.
[13] Walton, 1961:64.

intended. Interior surfaces of the powerhouse are entirely industrial in character, with smooth, painted, concrete walls, floors, and ceilings. Exposed utilities and systems have been substantially upgraded to modern equipment but continue the essential industrial character of the facility. The original gantry crane, required for periodic maintenance of the generation units, is an original design element. A bronze plaque, installed in 1930, is located on the exterior, to the west of the main doors, and identifies the powerhouse and commemorates its builders.

17. Tailrace (1930): Water exiting the turbines at the powerhouse is returned to the main channel of the McKenzie River through a 1,100'-long tailrace. The tailrace, located between the dam and the main channel of the McKenzie, is cut through rock and conveys the water downstream though a largely natural-appearing channel. An unpaved access road is located along the southern bank.

18. *Tailrace Barrier (2004):* Built primarily of steel, the tail race barrier prohibits upstream migrant fish from entering the tailrace and turbines and serves as a trashrack barrier into the main channel of the McKenzie River. Of simple industrial materials and design, the Tailrace Barrier was designed by MWH Global. The Leaburg Tailrace Barrier is counted as a Non-Historic/Non-Contributing structure.

NOTE: The following resources, all clustered to the west of the Leaburg Powerhouse and between the tailrace and Oregon Highway 126, primarily including housing and support structures related to the project and the on-site workers, are collectively referred to as "Leaburg Village" or the "Leaburg Housing Area." This area, with direct access from the highway, has mature landscaping and an internal gravel road system, and generally appears as a small residential development comprising four matching units. The four operators' cottages, each essentially a slight variation on a common design, are painted in a pastel palette compatible with their architecture. The original treatments or colors are unknown. A non-historic project identification sign is located at the westernmost end of the village, near Cottage No. 4.

19. *Substation (2004):* After the previous substation was determined outdated and undersized, the present electrical substation was built on the site of the warehouse/shop building that had been developed as part of original Leaburg construction. The current substation, a fenced outdoor facility with multiple internal elements related to its function, is considered a generally compatible feature but is counted as a single Non-Historic/Non-Contributing structure due to its construction outside of the period of significance.

20. *Project Office (2004–2005):*Built following the removal of the earlier warehouse, due to construction of the new substation, this one-story, wood-framed gabled volume was designed to reflect the historic character of the project. It provides for staff offices, shops, equipment storage and other support functions. While generally compatible, the Leaburg Project Offices is counted as a Non-Historic/Non-Contributing structure.

21. Operators Cottage No. 1 (1930): Located immediately west of the substation (near the powerhouse), Operators Cottage No. 1, like all of the cottages, was designed by E. M. Drew in early 1930 and built by Eugene contractor J. R. Ford. Rising from a poured concrete daylight basement, Cottage No. 1 is a wood-framed, one-and-one-half story, multi-gable and hipped-roof volume. Non-original architectural-grade asphalt shingle roofing has replaced the original wood shingles (n.d.). Exterior detailing is of a simplified "Revival" style, with striated wood-shingle siding, slightly bellcast roofing over some entryways, shed dormers, and other elements consistent with styles from this era. Major, front-facing, gable ends have a widely spaced "batten" design, which may or may not be the original treatment. A central parged chimney is located at the center of the building. Original multi-paned, wood-sash windows have been replaced over time with non-historic vinyl, including internal muntins that create a vaguely consistent design.

22. Operators Cottage No. 2 (1930): Of similar design, materials, and history, Operators Cottage No. 2 is located at the east middle of the Leaburg Village. A non-original, shed-roofed carport has been added to the rear of the volume (n.d.), just south of the single-car garage that was constructed as part of the original design. Cottage No. 2 is rotated on the site, with a more modest front entry below a small projecting hip canopy on the front-facing gable end. Gable ends on this volume have horizontal siding, which may or may not be original but is consistent with the style.

23. Operators Cottage No. 3 (1930): Of similar design, materials, and history, Operators Cottage No. 3 is located at the west middle of the Leaburg Village. Again, rotated slightly on-site, Cottage No. 3 has a side-facing entry below the main roof form, with a series of circular steps. Based upon an infilled, shingled panel, this design may have been modified after construction, but that is not documented. Major, front-facing, gable ends on this structure are clad in board and batten on roughly 12" centers. As with Cottage No. 2, a shed-roofed carport has been added to the south of the original single-car garage, facing west.

24. Operators Cottage No. 4 (1930): Of similar design and materials, Operators Cottage No. 4 is located at the western end of the Leaburg Village. This structure has been modified somewhat on the interior to provide necessary meeting space at the Leaburg project. A shed carport has been added to the rear, facing east.

25. Leaburg Village Grounds/Site (1930, as modified): The landscaped setting of the Leaburg Village, with a loop-type internal road system providing access throughout, is considered a character-defining element of the site. Mature plantings, including large trees, well-maintained hedges, and foundation plantings around and between the cottages, and other elements add to the "village" character. While no original landscape plan is known, an available site plan dated 1930 shows the road system and basic layout of the site as it exists today. The Leaburg Village Grounds/Site is counted as a historic contributing site in Section 5.

26. *Leaburg Village Minor Outbuildings (n.d, multiple dates):* To the rear of the village, on the south, a series of small sheds, storage buildings, and other structures provide for utilities and ancillary

storage, both for the project and for the residents. Undated, and not of any historic value, these buildings are collectively counted as a single Non-Historic, Non-Contributing building.

SUMMARY OF BUILT RESOURCES WITHIN THE LEABURG HYDROELECTRIC PROJECT HISTORIC DISTRICT

ID	DESCRIPTION	STRUCTURE Contributing	BUILDING Contributing	SITE Contributing	*NON-Contributing*
1	Leaburg Reservoir (1930)	1			
2	Watchman's House (1933)		1		
3	*Leaburg Dam Visitor Center (2009)*				*1*
4	*Lloyd Knox Park (ca. 1960)*				*1*
5	Leaburg Dam (1930) includes roller gates and pier or gate houses	1			
6	Fender House (1930)		1		
7	Sluice Gate (1930)	1			
8	Control (Pier) House (1930)		1		
9	Leaburg Bridge (1930)	1			
10	*Left Bank Fish Ladder (1988, as modified)*				*1*
11	Leaburg Canal Headgates (1930)	1			
12	Leaburg Canal (1930)	1			
13	*Fish Screen (1988)*				*1*
14	*Canal Foot Bridge (ca. 2000)*				*1*
15	Forebay, Penstock Headgates, Intake, & Penstocks (1930)	1			
16	Leaburg Powerhouse (1930, 1950)		1		
17	Tailrace (1930)	1			
18	*Tailrace Barrier (2004)*				*1*
19	*Substation (2004)*				*1*
20	*Project Office (2004–05)*				*1*
21	Operators Cottage No. 1 (1930)		1		
22	Operators Cottage No. 2 (1930)		1		
23	Operators Cottage No. 3 (1930)		1		
24	Operators Cottage No. 4 (1930)		1		
25	Leaburg Village Grounds/Site (1930, as modified)			1	
26	*Leaburg Village Minor Outbuildings (n.d.)*				*1*
	TOTALS	**8**	**8**	**1**	***9***

LEABURG HYDROELECTRIC PROJECT HISTORIC DISTRICT | LANE, OR
Name of Property | County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [X] A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B Property is associated with the lives of persons significant in our past.
- [X] C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- [ ] A Owned by a religious institution or used for religious purposes.
- [ ] B removed from its original location.
- [ ] C a birthplace or grave.
- [ ] D a cemetery.
- [ ] E a reconstructed building, object, or structure.
- [ ] F a commemorative property.
- [ ] G less than 50 years old or achieving significance within the past 50 years.

Areas of Significance
(Enter categories from instructions.)

Community Development & Planning
Engineering
Architecture

Period of Significance
1930–1950

Significant Dates
January 1930 (Unit No. 1 in operation)
June 1950 (Unit No. 2 in operation)

Significant Person
(Complete only if Criterion B is marked above.)
N/A

Cultural Affiliation (if applicable)
N/A

Architect/Builder
Stevens & Koon, Engineers
Lawrence, Ellis F., Architect
Camden, Henry Poole, Sculptor/Artist
A Guthrie Co., Builder/General Contractor

Period of Significance (justification)

The period of significance, 1930–1950, represents the construction and completion of the Leaburg project as originally designed and modified by the Eugene Water Board, extended to 1950 to include the installation and completion of Unit No. 2, as originally intended as part of the design process.

Criteria Considerations (explanation, if necessary) N/A

Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations).

The Leaburg Hydroelectric Project, built between 1928 and 1930 and completed as originally envisioned in June 1950, is locally significant under Criterion A for its association with the development of Eugene and the impact of the municipally owned utility in that city. Select elements of the project, including the Leaburg Dam, with its three 100'-long roller gates and a very large, and comparatively early, example of a Broome Self-Closing Sluice Gate, are additionally regionally significant under Criterion C. The Leaburg Powerhouse, with an exterior design by architect Ellis Fuller Lawrence and cast-stone panels designed by Harry Camden Poole, is also regionally significant under Criterion C as an important example of Art Deco architecture as used in an industrial setting in Oregon.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Eugene was first platted in 1851 and incorporated as a city in 1862. The city was well-located on the Willamette River, which provided a water transportation route to the northern portion of the state. It also was on the main route of the stage line that connected Oregon with California, spurring development and settlement in the city. Surrounding land claims, in the fertile Willamette Valley, relied upon Eugene for service and the population grew quickly, from 900 in 1864 to 3000 in just twenty years.[14] In 1871, when the Oregon and California Railroad line arrived from Portland, Eugene became a major rail shipping point, supporting development in the surrounding timber and agricultural lands of Lane County. Eugene's early industry relied upon waterpower, which developed along the Eugene Mill Race, a private canal that diverted Willamette River waters to provide motive power for a series of industrial operations during the last half of the 19th century.

THE DEVELOPMENT OF MUNICIPAL POWER IN EUGENE

The city's first electric power franchise was granted to the Eugene Electric Company in February 1887 and relied upon a 100-hp DC generation unit. By 1905, that system had evolved into a 1,000-hp plant located in Springfield, that was owned and operated under city franchise by an "eastern syndicate" as the Willamette Valley Company.[15] A similar private franchise that provided Eugene's water supply was held by the Eugene Water Company.

As early as 1905, voters in Eugene were asked to support a local bond to purchase the local private utilities. The measure passed, but it does not seem to have resulted in acquisition due to opposition from the utilities themselves.[16] The following year, an outbreak of typhoid fever swept through Eugene, causing nearly 100 cases of the disease, and resulting in multiple deaths. The outbreak was traced to contamination near the water company's intake for the domestic water supply resulting, understandably, in considerable public outcry. " One of Eugene's best physicians tells the *Guard* that as long as the water supply is obtained from the present vicinity we will be affected with typhoid."[17] Organizations such as the East Eugene (Fairmount) Improvement Club soon passed resolutions

[14] Moore, et al. *The Story of Eugene*. Eugene, OR: Lane County Historical Society, 1995, p. 38.
[15] Norman F. Stone, *Bountiful McKenzie: The Story of the Eugene Water & Electric Board*. Eugene, OR: Parkstone Company, 1986, p. 4.
[16] Walton, 1961:2. Many cities, recognizing the potential value of municipal utility operation, either purchased the assets of private providers or, when that was unsuccessful, condemned and acquired them through eminent domain.
[17] *Eugene [OR] Weekly Guard*, "City Water Responsible for Typhoid Epidemic," February 3, 1906, 3:1.

demanding that the city improve the water supply and encouraging a public-ownership solution. "No soulless private corporation can be safely trusted with the management of [water] filtration."[18]

In April 1908, as the result of public indignation over the typhoid outbreak and lack of confidence in the private utilities' willingness to improve their services, the City of Eugene voided both their existing utility franchises and purchased the electrical system owned by the Willamette Valley Company and the water system of the Eugene Water Company. The Council placed responsibility for all water and electric power, then still principally needed to power the water pumps that ran the system, under the control of a new public utility, ultimately to be governed by an independently elected commission—the Eugene Water Board.[19]

> These [private] utilities, especially the water system, were not extended and improved with the growth of the city and its many dead-ends and an infected supply taken from near the mouth of the millrace, then a receptacle for sewage, was admittedly responsible for a fearful scourge of typhoid fever…. In this grave crisis in the city's history the people turned to municipal ownership as the only hope held out for a suitable and healthful water supply.[20]

In 1910, voters approved additional funding to expand the municipal system, and by early 1911 the Water Board's new Walterville Power Plant, with two 1,200-hp units, was in operation. Walterville was powered via a canal built roughly parallel to the McKenzie River, east of Eugene. The Walterville plant, primarily intended to power the electric pumps necessary to supply the city's water needs, also had sufficient generation capacity for consumer and industrial demand for electric power, which was quickly replacing gas lighting for residential users and water power for industry.

An open house was held on February 17, 1911, to celebrate Walterville's opening. "The Walterville plant is truly for Eugene the 'Goose that laid the Golden Egg,' [in] laying the basis for good service and low rates."[21] Despite such praise, even at this early date, the fractious politics that would surround municipal ownership of utilities in the Pacific Northwest were already evident in the editorials of Eugene's two competing newspapers, the *Morning Register*, and the evening *Guard.* The *Guard,* which supported municipal power, noted,

> The morning paper says the city power plant has cost $250,000, lying only to the extent of $50,000. Perhaps Engineer Kelsay underestimated the cost because the administration wisely built a larger plant than he figured on, and beside the opposition of the *Register* and its corporation backers added to the cost, at the expense of the people, several thousand dollars [more] than was necessary to fight right-of-way and injunction suits in the courts…. The most convincing argument in favor of the municipal power plant is the plant itself. Every citizen of Eugene should visit it at the first opportunity.[22]

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18 *Eugene [OR] Weekly Guard*, "Want Supply of Mountain Water," February 16, 1906, p. 6:4.

19 A series of elections were held between 1905 and 1909 authorizing the City to issue water and power bonds, condemn, and acquire the existing privately owned plants and related facilities. (Eugene Election History 1896 to present [http://www.eugene-or.gov/DocumentView.aspx?DID=468, visited March 31, 2014]).

20 *Eugene [OR] Daily Guard*, "A Review of Campaign Issues Before Voters," March 29, 1911, p. 1:1–2.

21 J. W. McArthur, "Reminiscences," in *Eugene Municipal Water & Electric Utilities-1946 Annual Report*, 1946:7–8.

22 *Eugene [OR] Daily Guard*, "Great Municipal Work is Completed" [Ed.], February 18, 1911, 4:1–2. See also *Eugene [OR] Daily Guard*, "Splendid Municipal Powerplant Pleases All Who Inspect It," February 18, 1911, 6:1–3.

In the decade between 1910 and 1920, Eugene's population grew slightly, by 1,500 residents or about 17.5 percent,[23] but local demand for power was threatening to outstrip capacity as more industrial and residential users adopted new appliances, electric lighting, and heating. This was the era when electric appliances and lighting became increasingly common in dwellings and industry as electric power became an essential element in American daily life. To address that growing demand, the Eugene Water Board began planning for the development of new electric generation capacity. A temporary solution was to purchase power from other utilities and resell it to Eugene customers. "The issue was resolved for the time being by the approval of a standby power agreement effective January 1, 1923, with the Mountain States Power Company."[24] Looking toward a more cost-effective and long-term solution, in the early 1920s the Water Board authorized funding to investigate potential sites for additional generation.

> The search for potential power sites begun in 1924 eventually led to the construction of new generating facilities near Leaburg. In March 1927 exploratory drillings were conducted….and the results were such that the Board was encouraged to submit the question through the City Council to the people of Eugene…[25]

MUNICIPAL POWER IN OREGON

Locally owned water utilities in the State of Oregon are comparatively common. Numerous communities, especially in western Oregon, rely upon filtered water from local streams and rivers to provide for their water needs. Municipally owned *electric* utilities, while not uncommon, are far fewer; and with the exception of Eugene, Oregon's major population centers, with more than 70 percent of Oregon's total electrical customers, are served by private, investor-owned, utilities.[26] Nineteen rural electric cooperatives and six People's Utility Districts, or PUDs, serve smaller communities and agricultural areas and some of them additionally provide electricity to small incorporated communities within their service areas.[27]

The twelve municipally owned electrical utilities in Oregon, including what is now EWEB, serve a little more than 10 percent of Oregon's residents. Many of these municipal utilities began as small-scale power providers for local street lighting and then gradually grew to meet residential and commercial demand in the late 19th or early 20th century as that demand grew. Others, as is the case with EWEB, are the result of condemnation of early investor-owned concerns in the late 19th and early 20th centuries. And still others were created just before or after World War II, based on the advantages of available wholesale power produced by the federal government. Today, most publically owned utilities in Oregon no longer generate electricity, but instead purchase it wholesale, almost entirely from the Bonneville Power Administration (BPA), and then resell it to their customers.[28]

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23 State of Oregon, *The Oregon Bluebook 1925–1926*. Salem, OR: State Printing Department, 1925, p. 180.

24 Mountain States, an investor-owned utility, was part of what would become the Standard Gas & Electric Company, under the direction of Henry M. Byllesby, a U.S. electrical pioneer who worked with both Thomas Edison and George Westinghouse before setting up his own national engineering and utility concern. Mountain States was eventually merged into what is now PacifiCorp.

25 Stone, 1986:33–34.

26 Oregon Public Utility Commission [OPUC], *2012 Oregon Utility Statistics* (http://www.puc.state.or.us.com, visited April 2, 2014).

27 *Energy Suppliers in Oregon*, http://www.oregon.gov/energy/pages/power.aspx, visited March 31, 2014.

28 BPA is part of the U.S. Department of Energy. It was created by an Act of Congress in 1937 as a temporary agency to market and distribute the power generated by Bonneville and Grand Coulee dams on the Columbia River, operated, respectively, by the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation. BPA now operates a regional system of more than 15,000 circuit

Among Oregon's municipally owned electric utilities, EWEB, which serves more than 88,000 customers on average, is by far the largest and one of only two that generate a portion of their own power.[29] The Leaburg Powerhouse, with a capacity of 15.9 MW, is one of the largest municipally owned generation plants in Oregon, surpassed only by EWEB's Carmen–Smith Project, located upstream on the McKenzie River.[30]

LEABURG AND THE UPPER MCKENZIE RIVER VALLEY

Leaburg is an unincorporated community approximately 22.5 miles east of Eugene on the McKenzie River Highway, designated Oregon State Route 126. Originally settled in the late 1870s and called "Leaburgh," the area's name was changed to Deerborn, still used to refer to an area to the west, and then, finally, returned to Leaburg in September 1907.[31] Prior to the 1920s the community was principally of note as the location of a public school and a state-operated fish hatchery established between Leaburg and Vida in March 1907. In 1920, the *Springfield News* reported, "This is one of the largest fish hatcheries in the state. The grounds are open to visitors and are used by many tourists and picnickers for camping and picnic dinners."[32] The McKenzie River Fish Hatchery was operated at its original location until 1952, when the current facility opened just below the Leaburg Dam. The original hatchery, located on the north side of the river, upstream from the Leaburg Dam, is now a county park, and is known as the "Old" McKenzie Fish Hatchery.[33]

Demographic data on the Leaburg area is sparse; however, approximately seventy-five people lived in the vicinity in 1915, most assumed to have been employed in farming or other agricultural pursuits. While the school had a few small generators for lighting, it was not until the construction of the Leaburg project that reliable electric service arrived in the area. According to Arthur Frazee, a longtime resident, "At the time we arrived [1921] the community had no electricity… Electricity was brought to the neighborhood so that the Eugene Water Board could have it for the construction of their power facilities."[34]

The McKenzie River winds approximately 90 miles in a generally westerly direction from its headwaters at Clear Lake in the Cascade Range, through the McKenzie River Valley, and past a series of small, river-based communities, including Blue River, Rainbow, Belknap Springs, Vida, Leaburg and Walterville, before entering the Willamette Valley at Springfield. The McKenzie River flows into and joins the Willamette River near the Santa Clara district, north of Eugene.

Access to the McKenzie River Valley was difficult well into the 20th century, as the major travel route was largely impassable, especially for autos, for much of the year due to deep mud in winter and deep ruts in the dry months. In 1920, in the July 1 issue, the *Springfield News* took pains to note that

miles of transmission and distribution line serving portions of seven western states.

29 Springfield's electric utility is the second largest in Oregon, serving about 31,000 customers. Several municipal utilities are quite tiny, such as those in Drain and Cascade Locks, both of which serve less than 1,000 customers (OPUC, 2012, p. 9).

30 The Ashland Municipal Powerhouse, in Ashland, is the only non-EWEB-owned municipal generation plant in Oregon. The Ashland powerhouse was built in 1908 and originally generated 300kW. Generation ended in 1962 and then, after some upgrade, the plant went back online in 1984. Today it generates 500kW, or about .002 the capacity of the two units at Leaburg. The Ashland Municipal Powerhouse was listed on the National Register of Historic Places in 1987 (NRIS 87001563).

31 Lewis A. McArthur and Lewis L. McArthur, *Oregon Geographic Names,* 2003, p. 587.

32 *Springfield [OR] News,* "Scenic Wonderland is Traversed by M'Kenzie Highway," July 1, 1920, 1:8.

33 The Old McKenzie Fish Hatchery was listed on the National Register of Historic Places in 1996 (NRIS #96000142).

34 Leaburg Library, *Historic Leaburg and Vicinity*, 1987.

the road to the fish hatchery was "…in good condition now."[35] The vast majority of the route, even after being grandly christened the "McKenzie Highway" by the Oregon State Highway Commission, remained unpaved and in some places ungraded well into the mid-1920s. "The McKenzie highway is not yet a real highway…for much of the long difficult climb over the mountains it is still little more than a trail cut out of the lava…in the summer season any car in good condition can cross the mountains by this route, but in the winter, spring, early summer and late autumn it is closed by snow."[36] Even as late as 1930, the year that the Leaburg Project was completed, the Oregon State Highway Commission reported that the "highway" was predominately just rock and gravel, with the stretch from Eugene to Walterville "oiled." None of the roadbed had been paved.[37]

The Water Board's selection of the Leaburg site would have a huge impact on the surrounding area, both during construction and beyond. The massive investment, and the need for easy access for construction equipment and materials, not to mention operation and maintenance, justified significant improvements to the highway, including several new bridges over the Walterville Canal, downstream. The Board's investment in the area and the improved access drew new residents and, eventually, recreation and tourism, to the area too.

> This plant brought prosperity to the community in more ways than one. Not only does it give employment to a number of men, but more families have come to Leaburg because of it. This has increased patronage of the store and post office, and also increased school attendance.[38]

GOING TO THE VOTERS: THE POWER BOND ELECTION 1927

In January 1926, the Eugene Water Board met "informally" with Mr. R. H. Thomson, a consulting engineer from Seattle, to discuss options for the "development of additional power to meet our needs."[39] "Thomson was one of the great triumvirs of West Coast city engineers" along with Michael O'Shaughnessy of San Francisco and William Mulholland of Los Angeles, according to his biographer William H. Wilson.[40] Thomson, who was familiar with the development of public power through the success of Seattle City Light, was likely positive in his assessment of the Water Board's intent to develop additional power sources, perhaps reviewing preliminary plans developed for various sites on the Mckenzie River. A month later the Water Board instructed Carl McClain, the board's secretary responsible for the day-to-day operation of the utility, to "…request the City Council to pass the necessary resolution calling for an election for the purpose of voting on a proposition to issue bonds for the construction of a new Hydro-Electric power plant, the date of the election and the amount of the proposed bond issue to be determined…"[41] Site investigations along the McKenzie River continued and by mid-March 1927 the project was already being referred to internally as "the Leaburg Power Project." J. C. Stevens, of Stevens & Koon, consulting engineers of Portland, was put in charge of the planning process.[42]

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35 *Springfield [OR] News*, "Scenic Wonderland is Traversed by M'Kenzie Highway," July 1, 1920, 8:2–3.

36 *Oregonian* [Portland, OR], "Scenic Wonderland is Traversed by M'Kenzie Highway," June 27, 1920, Sec. 6, 1:1–6.

37 Oregon Highway Commission, *Ninth Biennial Report*, 1930, p. 155. As late as 1940, there were still unpaved portions of the highway.

38 Leaburg Library, 1987:10

39 Eugene Water Board Minutes, January 11, 1926.

40 See Wilson, Wiliam H. "Shaper of Seattle: Reginald Heber Thomson's Pacific Northwest (Pullman, WA: Washington State University Press, 2009). Thomson (1856-1949) long served as Seattle's City Engineer and, subsequently, enjoyed a successful consulting career throughout the western United States.

41 Eugene Water Board Minutes, December 13, 1926.

42 Eugene Water Board Minutes, March 12, 1927, and March 14, 1926. Stevens & Koon were also responsible for the design of an

Because the Eugene Water Board was a publicly funded enterprise, it was required to secure funding through the sale of bonds for any proposed expansion of its facilities that it could not otherwise pay for. Accordingly, having already asked the Eugene City Council for such a resolution in December 1926, the issue was placed on the ballot for a June 1927 election and Eugene voters were asked to approve $1.5 million in new bonds to fund the construction of the Leaburg Power Project. It was the first time the Board had made such a request, since the funding for the original development had been undertaken by the Council, who asked voters for the funding to purchase the water and power systems in 1908 and 1911. At a time when competing views of public v. private utility development were a major issue in the nation, the local press and business community, despite some ambivalence, were generally supportive of the proposal.

> Beginning sixteen years ago with a capitalization of nearly $220,000, all borrowed, City Power has built up from earnings a system with gross assets of $1,640,000…. The need to do so now arises from the immediate necessity of constructing a new plant, since the capacity of the old plant has been reached.[43]

The need for additional electricity to serve the Water Board's customer base was clear. Power consumption in Eugene had risen dramatically since the completion of the Walterville power plant in 1911, and according to a full page advertisement published in the *Eugene Guard*, the "peak load" on the city's system had risen from less than the 1,000kw capacity of the plant to more than 4,000kw by 1926. This rising demand exceeded the system's capacity by more than 25 percent, requiring the Board to purchase power from the Mountain States Power Company, an investor-owned utility. According to the *Eugene Guard* in June 1927, "The city has a practical problem to solve, that of increasing its supply of hydro-electric power. It is a problem we cannot postpone or evade."[44]

Even while purchasing power to meet demand, and maintaining low rates, the Water Board had managed to put aside $400,000 toward offsetting the costs of construction of a new generation facility—an impressive feat. The Leaburg project, however, was estimated to cost over $2.2 million. Estimated future earnings on power sales, which could be used to further offset construction costs, still left a need for $1.25 million, the amount of the bond sale that the Water Board was asking voters to approve.[45] The Leaburg project was envisioned as the first step in a process to further utilize the McKenzie River for power generation in the future, a concept that was promoted as providing Eugene with assurance for growth. At the time, the Water Board anticipated two additional projects in addition to Walterville and the new one (Leaburg), which was occasionally referred to as "Plant No. 2," within a larger planned four-unit system along the McKenzie River.[46]

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expanded water supply project for the Board that was underway and would be completed in August 1927.

43 *Eugene [OR] Guard*, "A New Power Plant for Eugene is a Good Business Investment," June 25, 1927, Power Section, 1:6–8.

44 *Eugene [OR] Guard*, "Program of the City Water Board," June 25, 1927, Power Section, 2:1–5.

45 According to http://www.measuringworth.com, the comparative cost in modern dollars of a $2 million dollar project undertaken in 1927, as percentage of the GDP, is $383 million dollars.

46 Plant No. 3, dubbed "Bear Creek" was actually in the planning stages at the same time that Leaburg was under construction and the Water Board secured a permit to appropriate public waters and develop that project in May 1928 (State of Oregon Engineer, Permit 8449, FPC Project No. 852). The Board even took the step of purchasing 172 acres of land from John M. Rennie in anticipation of eventual construction (Water Board Minutes, April 13, 1931). The Bear Creek Reservoir concept was eventually dropped for unknown reasons, but the Water Board was still seeking permit extensions into the 1940s and the project may have become part of the ill-fated Beaver Marsh proposal in the mid-1950s. Ultimately EWEB would eventually develop four generation sites on the McKenzie, with the completion of the Trailbridge and Carmen facilities, operated under FERC License No. 2242, a project

Maintaining Eugene's plentiful supply of electric power at low rates was also seen as a key element in the city's manufacturing and industrial development. In an article entitled "Cheap Power is Eugene's Best Industrial Hope," Frank Fay Eddy of the *Morning Register* cataloged the benefits that construction of the Leaburg project would have on the city. Eddy compared Eugene's situation with that of Tacoma, Washington, reported as the only community in the United States with lower electrical costs than Eugene.[47] The *Register* ultimately endorsed the bond, dispensing with its concerns over municipal ownership by referring to the Board's demonstrated success. "The [Walterville] power plant, which was looked upon by many as a public liability, has proved rather to be more like a richly producing gold mine."[48]

Eugene's more conservative evening paper, the *Guard,* also endorsed the Board's bond request for construction of the new plant, despite some reservations about publicly owned utilities in general.

> The *Guard* is for the $1,250,000 bond issue to expand Eugene's municipal power plant. This is beyond a doubt the most important issue which will come before voters of this city next Tuesday. It concerns our future [and] whether Eugene intends to be great or little.[49]

In the special election on June 28, 1927, Eugene residents apparently agreed with the editors. Voters resoundingly supported the Water Board and the Leaburg project. The $1.25 million bond request passed by a more than four-to-one margin, 2,772 for and 579 against.[50]

> The Eugene water board has been remarkably successful in the operation of its electric plant. Beginning 16 years ago with a capitalization of $220,000, all borrowed money, the city power plant has built up from earnings a system with gross assets of $1,640,000.[51]

ENGINEERS, ARCHITECTS AND CONTRACTORS

Sometime prior to March 1927, as part of the preliminary planning and investigation of possible generation sites on the McKenzie, the board had retained Stevens & Koon, consulting engineers based in Portland, to investigate sites on the McKenzie suitable for a power project. In October 1927, after the bond passage, the firm was contracted to design the various elements of the project and prepare the bid documents.[52] John C. Stevens and Ray E. Koon were both highly regarded engineers when they joined forces to form the firm of Stevens & Koon in 1920. Obviously a project as large and complex as Leaburg required the skill and labor of hundreds of laborers and workers, along with a large group of skilled professional engineers, contractors and others to assure its completion. Joseph W. McArthur led the project for the Water Board. John C. Stevens, of Stevens and Koon, had the primary responsibility for design and construction. The following are the key individuals that were responsible for the design and development of the Leaburg project.

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completed in 1963.

47 Tacoma, with a population of 106,000 in 1930, was and is still served by Tacoma Power, a municipally owned utility formed when the city purchased the assets of the Tacoma Light and Power Company.

48 *Morning Register* [Eugene, OR], "Cheap Power is Eugene's Best Industrial Hope," June 26, 1927, Sect 3, 7:1–6.

49 *Eugene [OR] Guard,* "Vote Up the Power Bonds" (ed.), June 24, 1927, 4:1–2.

50 Eugene Election History 1896 to present (http://www.eugene-or.gov/DocumentView.aspx?DID=468, visited March 31, 2014).

51 *Oregonian* [Portland, OR], "Foreclosing the Future [editorial]." June 30, 1927, 4:1.

52 Eugene Water Board Minutes, October 2, 1927.

John Cyprian Stevens (1876–1970)

J. C. Stevens was born in Moline, Kansas, and graduated from the University of Nebraska in 1905. In 1902, while still a student, he was appointed Assistant State Engineer of Nebraska and later served as an Assistant Engineer for the Bureau of Reclamation. From 1904 to 1910 he worked for the U.S. Geological Survey, and was in charge of their studies of the Columbia River Basin.[53] Stevens entered private practice in 1910. In addition to his on-going and successful engineering practice, Stevens was responsible for the design of a water-level recorder, an automatic measuring device to record water fluctuations in reservoirs. His patented design was manufactured under the name Leupold & Stevens, Inc.[54]

Stevens was nationally recognized for his dam engineering expertise, which included participation in the construction of the Bonneville, McNary, and The Dalles dams, the Willamette Valley Flood Control Project, the Colorado River Basin Project, and many, many others. He served as the President of the American Society of Civil Engineers in 1945 and was made a Fellow of that organization in 1959. In retirement, Stevens was a principal proponent of establishing a technological museum in Oregon and played a key role in the founding of the Oregon Museum of Science and Industry, or OMSI. "It is in large part thanks to the vision of a man named J. C. Stevens that OMSI became a reality."[55]

Raymond Emerson Koon (1882–1963)

Koon was born in Lincoln, Nebraska, and graduated from Union College there in 1903. He worked for engineering firms in the Midwest, gaining experience in the design of sewage and public sanitation systems. Koon came to Oregon about 1912, when he was commissioned to design the original sanitation system in Bend. Koon's involvement with Leaburg itself, given his primary focus on water and sanitation systems, was likely limited; however, he did play a role in the Water Board's development of what would become the McClain Filtration Plant and other projects. Koon is today largely remembered for his role in a project that studied and directed significant improvements to Portland's water and sanitation systems. Koon remained an active partner in Stevens & Koon for the rest of his professional life, retiring in 1952.

Åke Ludvig Alin, Resident Engineer (1890–1976)[56]

Alin, the resident engineer of the dam and forebay at the Leaburg project for Stevens & Koon, was born in Sweden and trained as an engineer there, graduating from the Royal Technical University of

53 American Society of Civil Engineers, *Stevens, John Cyprian ASCE Fellow*. (http://cedb/asce.org, visited March 19, 2014).

54 Leupold & Stevens, located in Beaverton, Oregon, is now operated by the fifth generation and remains family owned. They are a leading manufacturer of telescopic sights and other optical equipment. In 2010, the company had revenues of more than $150 million (http://www.leupold.com, visited April 1, 2014).

55 American Society of Civil Engineers, *Stevens, John Cyprian ASCE Fellow*. (http://cedb/asce.org, visited March 19, 2014). See also "Our History, " http://www.omsi.edu, visited July 15, 2014.

56 Two other resident engineers are known to have contributed to the Leaburg project. L. R. Cooke is credited with overseeing the design and construction of the canal. R(euben) U. Steelquist (1885–1967) was the resident engineer in charge of the powerhouse. No information on Cooke was located; however Steelquist graduated with a degree in engineering from Cornell in 1916 and had previously worked as a manager for the Mountain States and Oregon Power companies in Corvallis, Dallas, and Albany, Oregon. Steelquist later worked in Brazil and retired from the Army Corps in 1961. (*The Nun Traveller*, February 1913; *Electrical World*, July 13, 1918:83. See also *Oregonian* [Portland, OR], January 27, 1919, 12:2, and September 23, 1961, 3rd Section, 1:5–6).

Stockholm in 1915. He worked on hydroelectric projects for the city of Stockholm, as well for the Swedish national government, until 1922. In 1919 the Swedish government sent Alin to the United States to study American dam design. Captivated by the country after a nationwide tour, Alin and his wife emigrated in 1923 and he became a U.S. citizen six years later. In America, Alin worked on projects throughout the western United States, including the Chelan Dam in central Washington in the mid-1920s. "In the next two years he designed for Stevens & Koon of Portland, Oregon, on the Leaburg Hydroelectric Project."[57] In 1930, after the completion of the Leaburg project, Alin left the Pacific Northwest and took a job with the U.S. Army Corps of Engineers, where he would remain either an employee or a consultant for the rest of his life. In 1949, in addition to his work at the Corps, Alin also began to teach civil engineering at the University of Iowa, where he focused on dam design. He continued to teach until he was 80 years old. Alin continued to consult on dam design worldwide until his death.[58]

Joseph W. McArthur, Project Manager/Chief Engineer (1877–1950).

Joseph McArthur, born in Ohio, graduated from the University of Oregon and began his career at the Water Board as a part-time surveyor in 1906. In private practice, McArthur worked on various projects throughout the Willamette Valley. He served as city engineer for Lebanon from 1912 to 1915. McArthur became a member of the Water Board in 1913, and served in that capacity until 1923, when he resigned to become the Board's Chief Engineer, replacing C. A. McClain. As Chief Engineer, McArthur oversaw the Water Board's planning and construction for the Leaburg project. In 1932, he became the General Superintendent-Secretary of the Water Board and held that position until February 1948.[59] "Mr. McArthur proposed power development on the McKenzie and has been more than anyone else identified with the preliminary surveying and other preparatory work connected with the enterprise."[60]

Ellis Fuller Lawrence, Architect (1879–1946)

Ellis Lawrence was born in Massachusetts and educated at MIT. After working in the east, Lawrence arrived in Portland in 1906 and in private practice quickly established himself as one the city's leading, and most prolific, architects. In 1914, Lawrence was appointed the founding Dean of the School of Architecture and Allied Arts at the University of Oregon. He would retain those dual roles—architect as the head of series of influential firms and nationally recognized educator—for the remainder of his life. Lawrence's designs include the Knight Library, McArthur Court, and Women's Memorial Quadrangle, along with much of the campus, at the University of Oregon, the Hope Abbey Mausoleum in Eugene, and literally hundreds of significant residences, churches and commercial buildings in Portland and elsewhere throughout Oregon.[61] In 1928, Lawrence was hired as the consulting architect for the Leaburg project by Stevens & Koon and provided the exterior design for the Leaburg Powerhouse, a cross-professional form of collaboration that Lawrence had long advocated. Lawrence's role in Leaburg's other structures, if any, is unknown. The Leaburg

57 ASCE, *Alin, Ake Ludwig, ASCE Fellow*. (http://cedb/asce.org, visited March 19, 2014).
58 *Omaha [NE] World-Herald*, "Busy Ake L. Alin, 85, Left U.S. With a Legacy of Dams," March 15, 1976, 24:7–8.
59 *Eugene [OR] Register-Guard,* "Utility Pioneer Dies after Long Illness." January 6, 1950, 1:5–6.
60 *Eugene [OR] Guard*, "McArthur Engineer of Long Standing." June 25, 1927, Power Section, 3:6–7.
61 Michael Shellenbarger, *Harmony in Diversity; The Architecture and Teaching of Ellis Fuller Lawrence*, 1989.

Powerhouse is among the earliest examples of Art Deco used in industrial buildings in Oregon.[62] "Ellis F. Lawrence found abundant architectural expression for the theme of power in the Art Deco Style."[63]

Harry Poole Camden, Sculptor (1900–1943)

Camden was born in West Virginia and after military school served in the U.S. Army and taught military science until his discharge in December 1918. He studied engineering at Carnegie Institute of Technology before enrolling at Yale, where he graduated with a B.F.A. in 1924. As a sculptor, Camden received early recognition, including the Prix de Rome, which included three years of study at the American Academy in Rome. Returning to the United States in 1927, Camden was appointed professor of sculpture at the University of Oregon and in that capacity, likely through his connection with Ellis Lawrence, was commissioned to design and sculpt the panels that decorate the Leaburg Powerhouse. In 1929, Camden left Oregon to become Assistant Professor of Sculpture at Cornell University in New York, and he was subsequently responsible for multiple pieces at that institution. In 1938, Camden won a national competition to design a series of figures for the Federal Building at the New York World's Fair, each of which was more than 36 feet tall. At the start of World War II, Camden re-entered the military and he died in a military training accident in 1943.[64]

A. Guthrie & Company, Portland, Contractor

Selected as the general contractor for the Leaburg project, the A. Guthrie Company, of Portland, Oregon, and St. Paul, Minnesota, originated as a railroad contractor in the Midwest. The firm opened a Portland office under the direction of Natt McDougall in 1907, originally to oversee regional railroad work. The company quickly entered the general construction field and was responsible for numerous important projects in the Pacific Northwest, including the Cushman Dam, across Puget Sound from Tacoma, Washington, and the Oregon City Bridge, across the Willamette River. Natt McDougall is given credit for being a prime mover in the formation of what is now the Oregon–Columbia Chapter of the Associated General Contractors of America, a key industry group, and served as its first Vice-President.[65] In 1932, after completing the Leaburg project, the firm was re-organized as the Guthrie-McDougall Company and was one of two contractors responsible for the completion of the famous Going-to-the-Sun Highway in Glacier National Park.[66] Although Natt McDougall died in 1954, the company remained in business until 1960. A successor firm, the Natt McDougall Company, was established in the Portland area in 1988 and is today headed by the family's fifth generation in contracting.[67]

Willamette Iron & Steel Corporation (WISCO), Roller Gate Fabrication

Responsible for the fabrication of the three steel roller gates that control water flows at the Leaburg Dam, the Willamette Iron & Steel Corporation, known as WISCO, was founded in Portland in 1865

62 Gideon Bosker and Lena Lencek, *Frozen Music: A History of Portland Architecture,* 1985, p. 166.
63 Dole, Philip. *Style and Vernacular: A Guide to the Architecture of Lane County*, OR, 1983.
64 "Camden, Harry P. Jr.," http://www.ryeww2.org/camden-harry-p.-jr-3143-prd1.htm, visited April 1, 2014.
65 Maggie Doran, *The Building of the Oregon Country 1880–1980*, 1980.
66 "Going-to-the-Sun Road – An Engineering Feat," http://www.nps.gov/glac/parknews/upload/Going-to-the-Sun-Road-An-Engineering-Feat.pdf, visited March 23, 2014.
67 "Natt McDougall Company History," http://www.nattmcdougallco.com, visited April 2, 2014

and first operated as the Willamette Iron Works, specializing in the manufacture of engines for the region's steamships. Renamed in 1904, WISCO developed the "Shays" engine, a steam locomotive used by the region's logging railroads, and built everything from ships to fire hydrants. As one of the parent companies of what is now Hyster, WISCO is also consider among those responsible for the development of the modern forklift. Historian E. Kimbark MacColl described WISCO as "…one of Portland's oldest and most prestigious enterprises."[68]

CONSTRUCTION PROCESS

Stevens & Koon began to design the Leaburg Project in late 1927, and by mid-February 1928 they had produced "…specifications for the manufacture and delivery of machinery and equipment…for the Leaburg Power Development Hydroelectric Power Plant No. 2," to be approved by the Board.[69] Bid documents were advertised for opening at 7:00 PM on Thursday, March 15, 1928. The project bids were divided into "sections," identified A through E, covering all aspects of the design from Section A, "Turbine, Governor and Accessories," through Section E, "Gates."

Major manufacturers with specific expertise in the various disciplines required, as might be expected, were the successful bidders for most of the specialized generation equipment and water control features. S. Morgan Smith, of York, Pennsylvania, would manufacture the turbine; Westinghouse Electric the generator; Philips and Davies, Inc., of Kenton, Ohio, the sluice, canal, and penstock gates; and Willamette Iron and Steel was given the contract for the three 100'-long roller gates.

The production timelines for such work required that the Board get them into production long before bids for the site work and structures had even been advertised. A second bid process, planning for which began immediately after the first round awards, was advertised in late May 1928 and covered Section F-Headworks, Section G-Canal, and Section H-Forebay, Penstocks, Siphons and Powerhouse. No. 2. Bids were opened at 5:00 pm on June 6, 1928.[70] The Board reviewed multiple bids for each of the three sections. Three days later, on June 9, 1928, they awarded the entire project to A. Guthrie & Company, Inc.[71]

> The firm will build the whole plant, including dam, canal, and powerhouse, for $1,029.230. The entire plant will cost $1,500,000. It is the biggest project ever undertaken by the city.[72]

Guthrie wasted little time mobilizing its work crews and beginning the construction. By late June, crews were already on site clearing the land at the dam, reservoir, and powerhouse sites and building embankments along the canal line. By July, the bunkhouse and mess halls to house and feed Guthrie's workers, along with construction shops and other facilities, were all in place.[73]

Site work continued all through the summer and into late fall and early winter. Low water levels in the McKenzie allowed in-stream work to continue longer than expected, and by early 1929 the

68 E. Kimbark MacColl, *The Growth of a City*. Portland, OR: The Georgian Press, 1979, p. 194.
69 Eugene Water Board Minutes, February 13, 1928.
70 Eugene Water Board Minutes, June 5, 1928.
71 Eugene Water Board Minutes, June 9, 1928.
72 *Oregonian* [Portland, OR], June 11, 1928, 5:6.
73 *Oregonian* [Portland, OR], "Work Begins at Eugene," June 29, 1928, 27:2. See also *Leaburg Daily Reports*, July 21–31, 1928 (EWEB Archives).

foundations for the powerhouse were complete and forms for its poured concrete walls were rising.[74] In October, J. C. Stevens noted in his monthly inspection report that at the request of the board he had agreed to confer with Ellis Lawrence "…regarding the architectural features of power house" and to ask Lawrence to submit some sketches of proposed changes. In November, Stevens discussed the matter with the Board and they agreed to adopt Lawrence's proposed design.[75]

Stevens' monthly inspections, along with the daily and monthly reports filed by Resident Engineer Åke Alin (who lived on-site to supervise the project during much of the construction, along with the other members of the engineering and technical staff),[76] provide an unmatched glimpse of construction progress, detailing daily events, issues with machinery, and all the minor and major challenges of completing a complex project like Leaburg. By July 1929, the exterior of the powerhouse was completed and the generation equipment was being installed. "The cast-stone ornamentation is being cast [fabricated] in Portland."[77] In August the cofferdam in the center of the McKenzie River Channel had been closed and water was being pumped out of the reservoir area. The roller gates were installed by November 1929 and were being tested.[78]

Engineer Stevens documents that beginning January 2, 1930, "The gates of the dam were gradually closed [and] the water built up until it overflowed the roller gates."[79] Soon the penstocks were opened, and the Leaburg Power House began to generate electricity. The first generator, Unit No. 1, went into commercial operation later that month.

On January 12, 1930, outside of the original Guthrie contract, the Water Board authorized its Secretary to arrange for "…any necessary help in preparation of plans and specifications for operators residences at Leaburg…"[80] In June, the Board purchased the land to the west of the power house from Mrs. Evelyn Harrill "…for additional grounds for operators cottages at the Leaburg Power Plant."[81] Earl M. Drew, a Eugene contractor, drew the plans for the four Revival style dwellings, presumably under a design contract with the Board.[82] Finally, in August 1930, the Board granted a contract to J. R. Ford, of Eugene, to furnish materials and labor for the construction of four operators' cottages at Leaburg. The total contracted amount for the four buildings was $14,672.00, reflecting the Board's decision to pay the optional upcharge of $169.64 for oak flooring.[83]

In 1933, during the depths of the Great Depression, the Board approved the construction of a "Watchman's House" not to exceed $2,500 in cost at the Leaburg Dam, to be sited "…at such point that the dam and all its appurtenances will be visible from the house."[84] The construction would

74 *Oregonian* [Portland, OR], "Project Men Laid Off," February 10, 1929, 9:4.
75 J. C. Stevens, Inspection Reports, October 25, 1929, November 9, 1929 (EWEB Archives).
76 The on-site staff included Alin, V. H. Todd, Wm. S. McKay, and A. H. Griesser, the latter of whom would go on to a long career at Portland General Electric (*Leaburg Monthly Report*, October 1928, EWEB Archives).
77 Stevens, July 8, 1929.
78 Ibid., November 9, 1929.
79 Ibid., January 2, 1930.
80 Eugene Water Board Minutes, January 13, 1930.
81 Eugene Water Board Minutes, June 9, 1930.
82 Drew, born in New York, was the contractor responsible for several Eugene-area buildings of note, including the Bijou Theatre and the First Congregational Church.
83 Eugene Water Board Minutes, August 11, 1930.
84 Eugene Water Board Minutes, March 12, 1933, and May 8, 1933.

allow the Board to eliminate one attendant and so save in operation costs; but a month later, in April 1933, they also authorized the Secretary to commission "work on the parks at the dam and powerhouse at Leaburg, in order to create work for laborers who may need it."[85]

Between 1940 and 1950 Eugene saw a significant increase in utility demand. The number of water customers increased nearly 50 percent during that period, while total electrical customers grew from 6,090 to 18,577, an increase of more than 200 percent.[86] In early 1949, along with the approval of several bond measures to fund new construction projects, Eugene voters also passed a measure that changed the name of the utility from the Eugene Water Board to the Eugene Water & Electric Board, or EWEB.[87] In 1947–49, to help meet the growing demand for power, the Board planned for the installation of Unit No. 2 at the Leaburg Powerhouse, increasing capacity to 13.5 MW. Unit No. 2 went online in January 1950, just in time to provide much needed additional power to the region. "Hydro power from the municipal water, electric power system's new generator at Leaburg was put to good use Tuesday in easing emergencies to the south and north of here"[88] The installation of the second unit at the Leaburg Powerhouse, completing the original design project, marks the end of the period of significance.

DESIGN AND TECHNOLOGICAL SIGNIFICANCE

In addition to its significance under Criterion A, as a major element in the development history of Eugene and Lane County, the Leaburg Hydroelectric Project contains several individual structures that are also considered significant for aspects of their design and technology under Criterion C. These are:

Roller Gate Dam

A character-defining element of the Leaburg Dam is the use of roller gate technology to control the flow of water. "Dr. Max Karstajen, director of the Maschinenfabrik Ausburg–Nurnberg, in Germany, had developed roller gates at the turn of the century [and] European engineers, particularly those in the Scandinavian countries, adopted the design almost immediately."[89] While such gates became common in Europe, only a limited number of roller gate dams, ten according to estimates that are assumed to include Leaburg, had been built in the United States prior to 1930. One of the first roller gate dams in the United States was an example with three 65'-long gates built by the Washington Water Power Company (now part of Avista) at Long Lake, near Spokane, Washington.[90] Pacific Power built a small roller gate type dam at Powerdale, near Hood River, Oregon, in 1925–26.[91]

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85 Eugene Water Board Minutes, April 10, 1933.

86 Stone, 1986:75.

87 Ibid., 1986:80.

88 *Oregonian* [Portland, OR], "Power Flows from New Plant," January 18, 1950, 10:7-8.

89 William Patrick O'Brien, Mary Yeater Rathbun, and Patrick O'Bannon. *Gateways to Commerce; The U.S. Army Corps of Engineers' Nine-Foot Channel Project on the Upper Mississippi River* (see Chapter VII: From Rollers to Tainters; The Changing Technology of the Nine-Foot Channel Project), 1992, p. 67.

90 O'Brien et al., 1992, p. 68. There is some confusion about the "first" roller gate in the U.S., with other examples under construction at this time on the Colorado River and in Idaho (see the *Sunday [DC] Star,* "What the Government is Doing," September 26, 1915, Sec. 2, 4:4–5).

91 J. E. Yates, "Roller Gates Make Up the Major Portion of Powerdale Dam," *Engineering News–Record*, March 19, 1925, p. 482–483. The Powerdale dam was decommissioned and fully removed by October 2010 (http://www.pacificorp.com, visited 3-April-2014).

Roller gates are classified as a type of "movable" dam, meaning that the water level behind the dam can be controlled by manipulating gates in the dam itself. More typically, dams are *fixed* barriers that hold back water, built of concrete, rock, or even wood. Fixed dams control water floor with a spillway, a gated or operable (i.e., openable) element that allows water to flow past the dam when the impoundment behind it is at capacity or for other purposes.[92] Roller gate technology, as opposed to other forms of movable dams, allowed for larger gate spans between concrete piers or abutments, along with more ability to control water flows through the use of multiple, operable, water channels.[93]

> Simply defined, a roller gate is a cylindrical metal tube that lays across the water between two concrete piers….When lowered a non-submersible roller gate rests directly on the dam's concrete sill, holding back the water. When raised, the roller gate allows water to flow freely beneath it....Each gate raises and lowers by means of a multiple side-bar chain mechanism, similar to an enormous bicycle chain. The solid ends of each roller gate are fitted with sprockets, which engage inclined racks attached to the piers.[94]

Roller gates are traditionally raised and lowered via an electric motor connected to a chain drive that is mounted on one side of the gate. Roller gate dams were particularly appropriate for the McKenzie and similar mountain streams in that they allowed for rapid response to winter flood events, while also allowing the flow of the stream itself to be utilized to flush gravel bars and silt deposits that form behind a dam. The Eugene Water Board's choice of a roller gate design was rare, as evidenced by the limited number of such dams in the United States at the time. "The roller gate or dam selected as the type which will best serve the purposes [at Leaburg] is still something of a novelty in America."[95]

While it cannot be conclusively documented, it is logical to assume that Åke Alin, trained in Sweden, was familiar with roller gate technology and that fact alone may have resulted in his association with Stevens & Koon during the planning of the Leaburg Dam. There is no evidence that Stevens, the primary dam designer at the firm, had ever worked with a roller gate design prior to Leaburg. Alin's knowledge of the design, buttressed in large part by his Swedish training, is further reinforced by his subsequent work. In 1930, as the Leaburg project was completed, Alin left the Pacific Northwest and went to work for the U.S. Army Corps of Engineers, who were then in the middle of planning the Nine-Foot Channel across the Mississippi River. The Nine-Foot Channel remains one of the largest roller gate dams ever built.[96]

Today there are probably fewer than fifty roller gate dams in the United States, and the vast majority (thirty) are owned and operated by the U.S. Army Corps of Engineers and were built after 1930.[97]

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92 Spillways also allow dam operators to maintain required downstream flows for recreation, irrigation, and fish passage.

93 There is a long history of "movable dam" technology, including needle dams, Boule Gates, Curtain Gates, Shutter Dams and others, often used to create a navigable passage where a lock is not required or needed to raise elevation. Roller Gates apparently represent an evolution of an earlier form—the Drum Dam. See "Part III: Movable Dams," in Edward Wegmann, *The Design and Construction of Dams*, 1907.

94 Yates, 1925, p. 67–68. See also Christine Macy, *Dams*, 2010, p. 186–87.

95 *Eugene [OR] Guard*, "Newspaper Story of Plans Given; Work Extensive," June 25, 1927, Power Section, p. 6:1–2.

96 With eleven 109'-long roller gates varying between 16' and 19.4' in diameter, the Corps' No. 15 dam on the Nine-Foot Channel Project is still generally thought to be the largest roller gate in operation. The Gallipolis Dam, at Eureka, Ohio (completed in 1937 and since renamed the Robert C. Byrd Locks and Dam) has eight roller gates, each 125' long and 29.5' in diameter, but a smaller overall length than at the Nine Channel Project. The three roller gates at Leaburg are each 100' long and 9' in diameter.

97 The National Dam Inventory (2010), maintained by the USACOE is somewhat incomplete on this issue, and lists just thirty

While used extensively by the Corps, eventually in combination with Tainter gates, mechanical issues surrounding roller gates led to their decline in popularity. Tainter gates are a form of movable dam control, in which a lightweight, steel-framed segment of an arc (as in a piece of pie) can be pivoted up or down to allow water flow. Tainter Gates became the preferred form of movable gate for large scale dams. They are less expensive to build, easier to maintain, and generally permit higher water passage beneath them when in the raised position.[98]

> Ironically, the Upper Mississippi Nine-Foot Channel Project also resulted in the obsolescence, by the project's end, of combination roller and Tainter gate dams. Technological advances…enabled the U.S. Army Corps of Engineers to develop both submersible and non-submersible Tainter gates which nearly matched the capabilities of the roller gates.[99]

With the decommissioning and removal of the Powerdale Dam, the Leaburg Dam appears to be the only roller gate dam remaining in Oregon, and it is one of few identified, and by far the largest of this type, in the Pacific Northwest. Given the scarcity of roller gate documentation in the National Dam Inventory, and the relatively large size of Leaburg's three 100' gates, Leaburg may well be the largest non-federal Roller Gate Dam ever built in the United States.

As a comparatively large and early example of roller gate technology built just prior to the U.S. Army Corps' adoption and popularization of the type for its own use, the Leaburg Dam is something of a direct antecedent to the Corps' use of that technology through the designer Åke Ludwig Alin. The roller gate design at Leaburg Dam is considered a technologically significant and rare example of the form as used for dam construction in the pre-1930 period. ***The Leaburg Dam, a large and early example of roller gate design, is a key element of the Leaburg Hydroelectric Project and is considered to have technological significance under Criterion C.***

Broome Self-Closing Sluice Gate

The large, vertical-panel Broome Self-Closing Sluice Gate that controls water flow into the Leaburg Canal was designed and fabricated by Philips and Davies, of Kenton, Ohio, relying upon their own patented improvements to the basic Broome Gate as first devised by Ernest Broome. Established in 1923, Philips and Davies was responsible for more than 500 sluice gates installed throughout the world over the next fifty years.[100] The Leaburg Sluice Gate is of special note due to its large size (30') and early construction; in addition, it appears to be not only the largest single such gate constructed by industry leader Philips and Davies up to that time, but may well be the among the largest such structures ever built.[101]

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individual dams with roller gate technology, all owned by the federal government. The Leaburg Dam is not so characterized in the NID and, it is assumed, there are other dams similarly mis-entered. The NID is a web-based only, limited-access data base.

98 Tainter gates were first developed by Jerimiah Burham Taintor, a Wisconsin-based structural engineering in 1886, and remain in production today. There is a Tainter Gate at EWEB' s Trailbridge Powerhouse, a part of the Carmen–Smith Hydroelectric Project.

99 Mary Yeater Rathburn, *HAER IL-27, Upper Mississippi River Nine-Foot Channel Project Lock and Dam Complex No. 15.*, 1988.

100 Philips and Davies were also responsible for the design and construction of the headgates and penstock gates at the Leaburg Project. See Eugene Water Board Minutes, March 29, 1928.

101 An inventory of Philips and Davies' designs published in 1931 documents the size of the Leaburg gate as compared to others produced by the company. The second largest gate built by them, at 24', is found at the Leaburg Headgate, above the powerhouse (Philips & Davies, Inc., *Hydro-Power Plant Equipment, Catalog No. 28*, 1931). Most of their other sluice gates are of 10' wide or less.

The complexity of the Broome Gate, exacerbated in no small part by its large size, was a cause of some concern in Leaburg's original development. In March 1929, Åke Alin, Resident Engineer at the project, reported on the installation. "As nobody connected with this work ever had erected a Broome gate before, some concern was caused at first to the capability of the engineering crew and the contractor's forces to make a success of the sluicegate erection."[102] Despite a failed effort to hire an unnamed Portland engineer with experience in this area, Alin proudly reported that the Guthrie Company and Water Board staff installed the gate without outside help and experienced no difficulty. In January 1930, however, when the Leaburg Project was put into operation and began to generate electricity, J. C. Stevens noted that while the roller gates seemed to work satisfactorily, "…the Broome gate, showed a rather violent vibration under small openings."[103] Stevens communicated his concerns over the installation directly to Philips and Davies, who agreed to send a specialist, Mr. Kennell, to Oregon to review and repair the installation if necessary.

> I have just come from Eugene where I examined the work done by your Mr. Kennell, and now realize how exacting this work is and I am really surprised that you would offer to have these installed without one of your own erectors on the job. The fitting of these gates is a piece of precision work that should not be left to any ordinary engineer or contractor.[104]

Fine-tuned under the direction of the manufacturer, and maintained and repaired as needed by the EWEB, the Broome Gate at the head of the Leaburg Power Canal continues to operate as designed more than eighty years ago. ***The Leaburg Canal Sluice Gate, a large and early example of Broome Gate or vertical sluice gate technology, is an important element of the Leaburg Hydroelectric Project and is considered to have technological significance under Criterion C.***

Art Deco and Industrial Buildings

Ellis Lawrence's design for the exterior of the Leaburg Powerhouse is regularly cited as one of the earliest and best examples of Art Deco motifs incorporated into industrial architecture in Oregon.

> Lawrence's Leaburg Power Station…[is] a stunning synthesis of geometrical Deco motifs with classical detailing. This crystalline composition exemplified Lawrence's skill in combining modern and traditional elements in industrial structures.[105]

The Leaburg Powerhouse is a strong composition of two adjacent rectangular volumes with the larger, power floor accented by a zig-zag band of molded terra cotta tiles above flat, stuccoed, concrete walls. Below the decorative frieze with cast-stone figures, cast-stone engaged columns flank the decorative glass and metal doorway, large enough to allow access to the huge generation units. The smaller shop and office volume attached to the east side of the power house is more simply detailed, but the overall effect is highly effective and, given its siting, highly visible from Oregon State Highway 126. As noted earlier, Lawrence's involvement and the final design treatment of the Leaburg Powerhouse does not appear to have been original elements of the Stevens & Koon plan as

102 *Leaburg Monthly Report*, March 1929 (EWEB Archive).
103 Stevens, *Inspection Report*, January 2, 1930 (EWEB Archive).
104 Stevens, Letter to Erwin B. Philips, 1930 (EWEB Archive)
105 Bosker and Lencek, op cit., p. 166.

approved by the Water Board. From the sparse commentary on Lawrence's involvement recorded in J. C. Steven's inspection reports, it appears likely that as the project progressed and the bare concrete walls of the powerhouse rose beside the McKenzie Highway, someone, possibly the Water Board itself, recognized an opportunity, or perhaps an obligation, to trumpet the project and add some decorative character to this largest civic investment in Eugene's history. Michael Shellenbarger writes that, "Lawrence had long advocated that engineers employ architects for architectural features of engineering projects."[106] As the long-time Dean of the School of Architecture and Allied Arts at the University of Oregon, Lawrence would logically have been well-known to the Water Board and its staff. As a long-prominent Portland-based architect, he may well have had previous association with Stevens & Koon.

At the time, Lawrence's decorative design for the powerhouse, particularly the use of the inset cast sculptural panel, was seen as an evolution of an earlier powerhouse built at the University of Oregon. "[T]he project is a pioneer effort in the public utility field in this part of the state."[107] "It is a simple, utilitarian, structure given unusual presence by its careful massing, fluted entranceway, and monumental metal doors…"[108]

A key element of Lawrence's design, and the one that distinguishes the Leaburg Powerhouse from similar works, is the bas relief sculpture grouping located above the entry, facing the highway. The relief consists of three stylized figures designed by then University of Oregon professor of sculpture Harry Poole Camden.

> "Power," a massive figure symbolic of the new plant, has been chosen by Mr. Camden as the central theme of the panel, which will be 20 feet long and six feet high. Electrical segments dynamically representing the use of the project, are grasped in either hand, while on each side are other objects portraying heat and light, symbolic of the uses of power.[109]

The model for "Power" was Philip Overmayer, a "…virile young champion wrestler at the University of Oregon." He sat for Camden as the artist molded clay on a "rack" to form the model for the frieze. "When he would put that clay on the armature…life flowed right from his fingers into that clay."[110] Camden's frieze and Lawrence's decorative design have made the Leaburg Powerhouse something of an icon on the McKenzie River Highway.

> In power plant dimensions, the Leaburg plant is smaller than a breadbox….There is nothing humble, however, about its stature. Above the great glass and iron grillwork of the doors, graceful Roman letters proclaim — LEABURG POWER PLANT, CITY OF EUGENE.[111]

There are ten Art Deco buildings designed by Ellis Fuller Lawrence listed in the Oregon Historic Sites Database, including the Leaburg Hydroelectric Project Powerhouse. None are similar, however, to the powerhouse, which is unique for its setting and building form and represents a collaboration between the engineer who designed the building envelope; Lawrence, who designed the

106 Shellenbarger, op cit., p. 58.
107 *Oregonian* [Portland, OR], "Effect to Be Artistic," June 2, 1929, 6:2–4.
108 Shellenbarger, op cit., p 58.
109 *Oregonian* [Portland, OR], "Effect to Be Artistic," June 2, 1929, 6:2–4.
110 *Eugene [OR] Register-Guard*, "Of Power and Utility," September 3, 1981, Sec. 3, 3:1–8.
111 Ibid.

embellishments to the building; and the artist Poole, who designed and executed the bas relief "Power" sculpture that highlights the façade. The Leaburg Powerhouse is singular among Lawrence's other industrial buildings for the fact that the building's form expresses the interior functions of the building, whose purpose is to house the two turbines for the Leaburg Hydroelectric Project and the necessary support spaces and features, including the gantry crane. These functions are expressed in a large, singular volume with tall doors, and a smaller, attached volume that houses the ancillary uses. The setting for the building is dramatic, in that it is on a curve of the highway, with no other buildings around it, against a backdrop of greenery. It is an unexpectedly sophisticated, finely proportioned, almost urban building, in a rural setting.

The Leaburg Powerhouse is unique among the four buildings, including the Powerhouse, that represents Lawrence's industrial buildings (the remainder are hospitals and institutional buildings) designed in the Art Deco style. Two of the buildings are on the University of Oregon campus, in a dense, urban environment. The third, the Holman Fuel Company, is on a major arterial in East Portland, also an urban environment. The Leaburg Powerhouse is an rare and unusual example of the style, by a renowned designer, in a rural setting.

Within Ellis Lawrence's body of work, the Holman Fuel Company building is the closest in form and expression to the Leaburg Powerhouse. It is much larger, however, with a shallow-arched roof on the stable portion of the building and an attached, two-story, slightly projecting volume with a shallow gable roof. Although this building shares some elements with the Leaburg Powerhouse, such as the engaged columns, the Fuel Company building displays an almost monumental formality. In contrast, the Leaburg Powerhouse has an almost scale-less quality, due in large part to its setting. The Leaburg Powerhouse also displays nearly perfect integrity, while the Holman Fuel Company building has seen some changes over time, including alterations to the entry and removal of the chevron-shaped decorative details on the secondary volume. The Leaburg Powerhouse retains excellent integrity in its location, design, setting, materials, workmanship, feeling and association.

Associated with the notable architect Ellis Fuller Lawrence and recognized as an early example of the Industrial Art Deco style in Oregon, the Leaburg Powerhouse is significant for its exterior design as well as being an example of a partnership between engineering and architectural design. The cast-stone frieze that highlights the north-facing elevation, designed by Harry Poole Camden, is a significant example of Camden's work and has become an iconic element in Lane County design history. ***The Leaburg Powerhouse is a key element of the Leaburg Hydroelectric Project and is considered to have architectural significance under Criterion C.***

SUMMARY

The Leaburg Hydroelectric Project, designed by Stevens & Koon of Portland, with participation by Aki Alin, was placed into service in January 1930. The project plays a significant role in the history and development of Eugene, Oregon, and represents the single largest public expenditure by that community up to that time. The Leaburg Hydroelectric Project Historic District is significant under Criterion A under the areas of Community Development and Planning at the local level.

The roller gates of the Leaburg Dam and the Broome Self-Closing Sluice Gate at the head of the Leaburg Canal each represent early, exceptionally large, and technologically significant examples of

type on a regional, if not national, level. The Art Deco-inspired design of the Leaburg Powerhouse, by Ellis Fuller Lawrence, is considered a significant regional example of the style as applied in an industrial setting. The significance of the Powerhouse is bolstered by the bas relief panel designed by Harry Poole Camden as an element of the original construction process. These elements of the project are considered significant under Criterion C, in the areas of Engineering and Architecture, respectively.

The Leaburg Hydroelectric Project retains very high integrity in design, workmanship, and use of materials, effectively relating its original appearance and the associations for which it is considered significant.

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Previous documentation on file (NPS):

____preliminary determination of individual listing (36 CFR 67 has been requested)
____previously listed in the National Register
____previously determined eligible by the National Register
____designated a National Historic Landmark
____recorded by Historic American Buildings Survey # _____
____recorded by Historic American Engineering Record # _____
____recorded by Historic American Landscape Survey # _____

Primary location of additional data:

____State Historic Preservation Office
____Other State agency
____Federal agency
__X__Local government
____University
____Other
Name of repository: EWEB Archive

Historic Resources Survey Number (if assigned): N/A

LEABURG HYDROELECTRIC PROJECT HISTORIC DISTRICT | LANE, OR
Name of Property | County and State

10. Geographical Data

Acreage of Property 271 Acres
(Do not include previously listed resource acreage; enter "Less than one" if the acreage is .99 or less)

Latitude/Longitude Coordinates
Datum if other than WGS84:
(enter coordinates to 6 decimal places)

1	44.1008531 Latitude	-122.6888770 Longitude		3	44.1478801 Latitude	-122.5864263 Longitude	
2	44.120234 Latitude	-122.6396890 Longitude		4	Latitude	Longitude	

Verbal Boundary Description (Describe the boundaries of the property.)
The district boundary begins at the upstream FERC boundary as defined in the license as Elevation 745 feet and following the river channel downstream, through Leaburg Lake and the Leaburg Dam, continuing along the Leaburg Canal until the Leaburg forebay and penstock where it passes across OR Highway 126 to the Leaburg Powerhouse, ending at the downstream property line that defines the western boundary of Leaburg Village.

Boundary Justification (Explain why the boundaries were selected.)

The district boundaries are consistent with the FERC licensed area and contain all of the land historically and currently associated with the development and operation of the Leaburg Hydroelectric Project.

11. Form Prepared By

name/title George Kramer, M.S., HP (for EWEB) date Nov. 2014
organization Heritage Research Associates, Eugene telephone 541-482-9504
street & number 386 North Laurel email george@preserveoregon.com
city or town Ashland state OR zip code 97520

Additional Documentation

Submit the following items with the completed form:

- **Regional Location Map**
- **Local Location Map**
- **Tax Lot Map**
- **Site Plan**
- **Floor Plans (As Applicable)**
- **Photo Location Map** (Include for historic districts and properties having large acreage or numerous resources. Key all photographs to this map and insert immediately after the photo log and before the list of figures).

Photographs:

Submit clear and descriptive photographs. The size of each image must be 3000x2000 pixels, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: LEABURG HYDROELECTRIC PROJECT

City or Vicinity: Leaburg vicinity

County: Lane **State**: OR

Photographer: George Kramer, Heritage Research Associates, Inc.

Date Photographed: July 2014

Description of Photograph(s) and number, include description of view indicating direction of camera:

Photo 1 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict_0001
Leaburg Reservoir and Dam, camera facing downstream (southwest) from Hwy 126; Fender House in right foreground, Canal Headgates, Sluice Gate at right of bridge

Photo 2 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0002
Leaburg Reservoir and Dam, camera facing downstream (northwest), from visitor area

Photo 3 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0003
Leaburg Dam, camera facing north, from Fish Hatchery Road toward OR 126

Photo 4 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0004
Leaburg Dam, detail of lift mechanism, Roller Gate No. 1

Photo 5 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0005
Leaburg Dam, camera facing north, looking across Leaburg Dam Bridge; Pier House No. 1 in left foreground

Photo 6 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0006
Leaburg Dam, camera facing northwest, over Roller Gate No 3, toward Sluice Gate and fish ladder

Photo 7 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0007
Leaburg Dam, Sluice Gate, overhead framework, camera facing west (Control House at right)

Photo 8 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0008
Leaburg Canal, camera facing downstream (west) from Footbridge below Fish Screen

Photo 9 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0009
Leaburg Forebay, camera facing south, toward Intake and Headgates

Photo 10 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0010
Leaburg Penstocks and Headgates, camera facing north from OR 126, Spillway at the right

Photo 11 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0011
Leaburg Spillway (right) and Penstocks, camera facing northwest, across OR 126

Photo 12 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0012
Leaburg Powerhouse and Substation, camera facing southeast from below Forebay, across OR 126

Photo 13 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0013
Leaburg Powerhouse, primary elevation, camera facing south

Photo 14 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0014
Leaburg Powerhouse, downstream elevation, camera facing northeast from Tailrace Service Road, Substation to right

Photo 15 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0015
Interior view of Leaburg Powerhouse, camera facing south, from Unit No. 2 looking toward Unit No. 1

Photo 16 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0016
Interior view of Leaburg Powerhouse, camera facing north, from Unit No. 2

Photo 17 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0017
Leaburg Village, camera facing southwest from Forebay, looking across OR 126

Photo 18 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0018
Leaburg Operators Cottage No. 4, camera facing southwest

Photo 19 of 19: OR_LaneCounty _LeaburgHydroelectricProjectHistoricDistrict _0019
Leaburg Operators Cottage No. 3, camera facing southwest

Photo Location Map 1: Leaburg Dam Area (as indicated by dash line boundary)

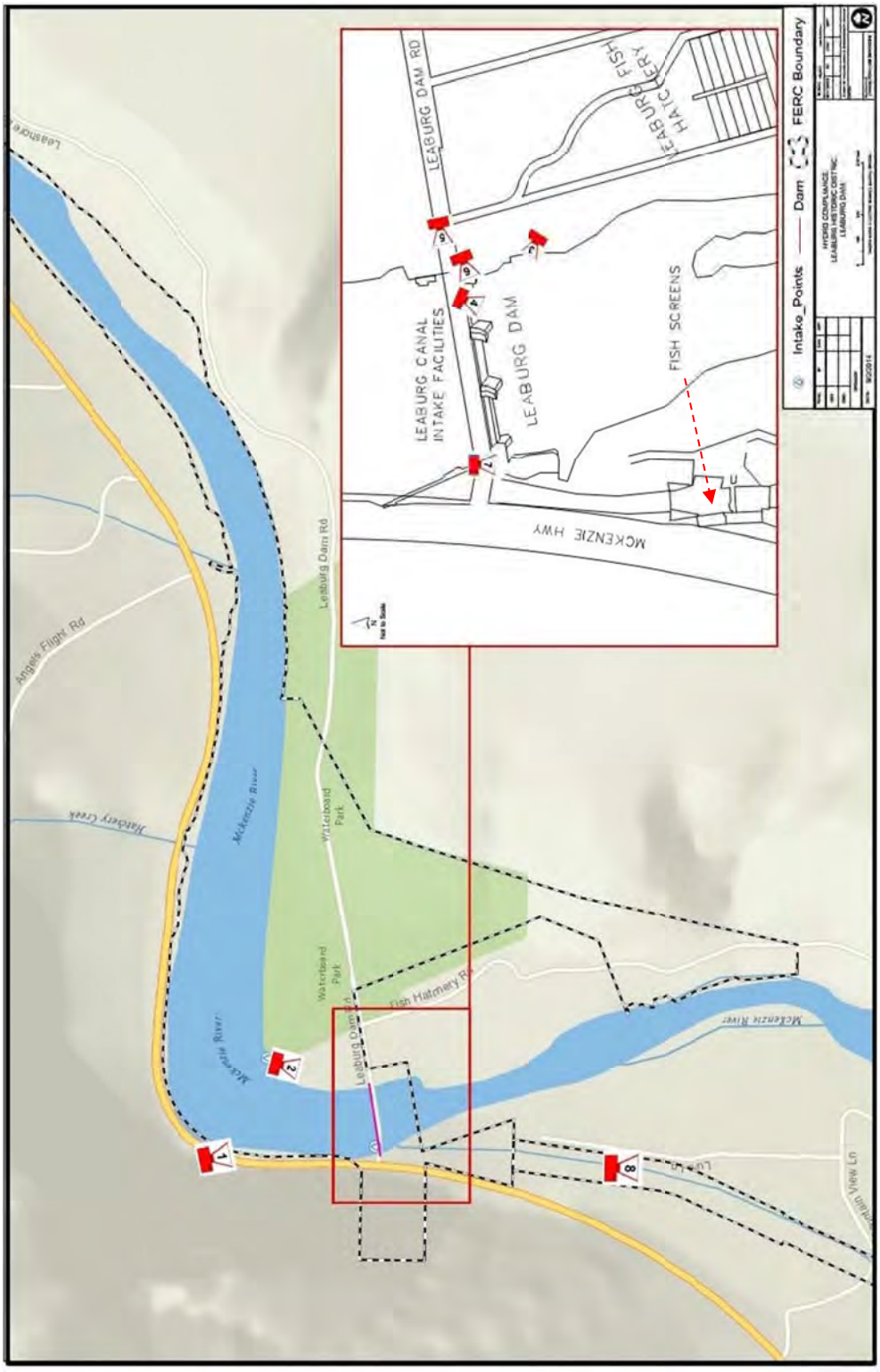
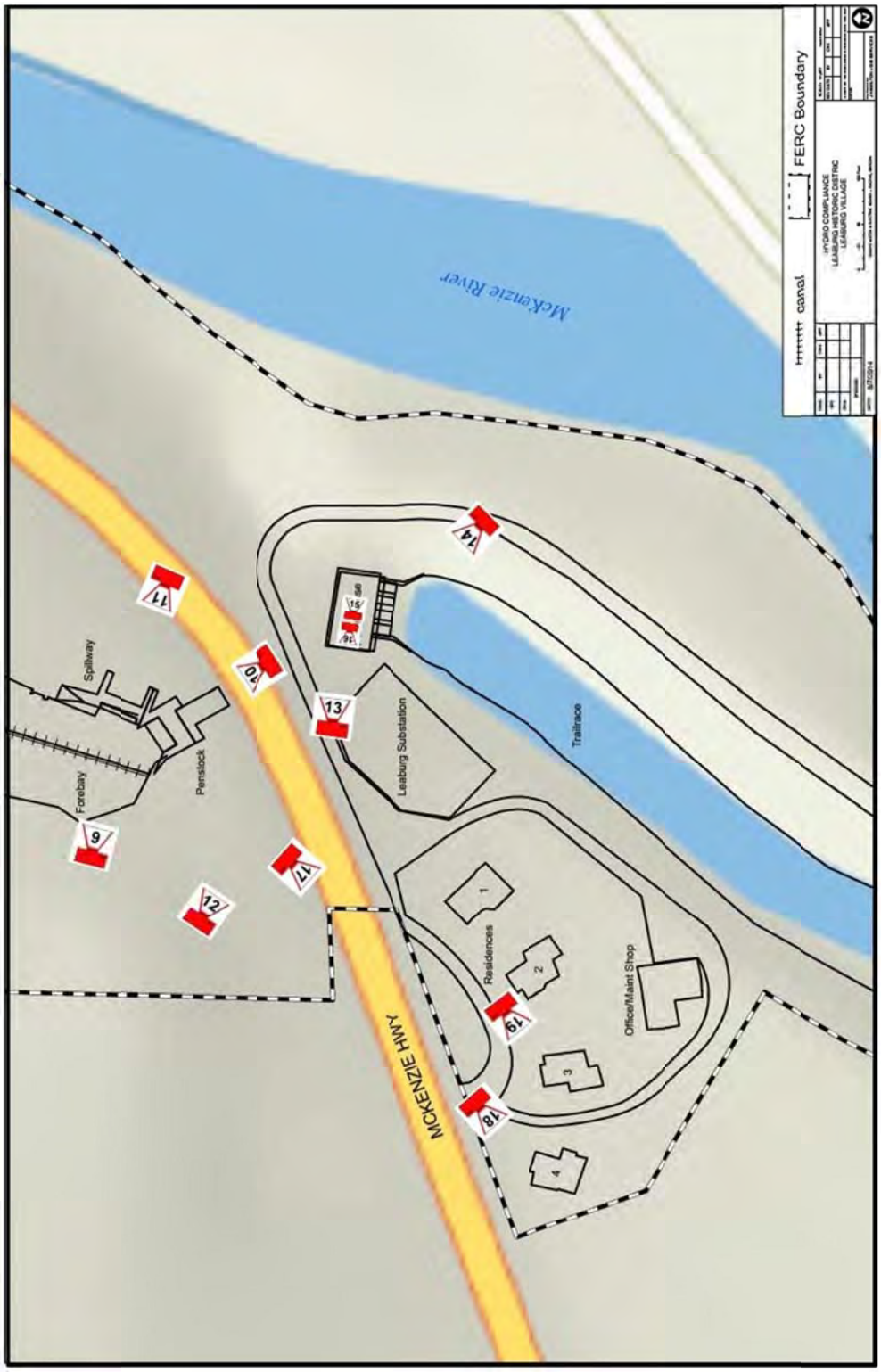


Photo Location Map 2: Leaburg Village Area (as indicated by dash line boundary)



List of Figures
(Resize, compact, and paste images of maps and historic documents in this section. Place captions, with figure numbers above each image. Orient maps so that north is at the top of the page, all document should be inserted with the top toward the top of the page.

Figure 1: General and Specific Location Map, Leaburg Hydroelectric Project Historic District (ODOT State Highway Map)

Figure 2: Leaburg Hydroelectric Project Historic District Index Sheet and Latitude/Longitude Coordinates (EWEB, 2015)

Figure 3: Leaburg Hydroelectric Project Historic District, Map Section 1 (EWEB, 2015)

Figure 4: Leaburg Hydroelectric Project Historic District, Map Section 2 (EWEB, 2015)

Figure 5: Leaburg Hydroelectric Project Historic District, Map Section 3 (EWEB, 2015)

Figure 6: Leaburg Hydroelectric Project Historic District, Map Section 4 (EWEB, 2015)

Figure 7: Leaburg Hydroelectric Project Historic District, Map Section 5 (EWEB, 2015)

Figure 8: Leaburg Hydroelectric Project Historic District, Map Section 6 (EWEB, 2015)

Figure 9: Leaburg Hydroelectric Project Historic District, Leaburg Dam Detail (EWEB, 2015)

Figure 10: Leaburg Hydroelectric Project HD, Leaburg Village Detail (EWEB, 2015)

Figure 11: *Eugene Guard* article, June 25, 1927, Power Section

Figure 12: *Eugene Guard* article, May 25, 1929, Power Section

Figure 13: Pier 6 and Spillway during dam construction, looking upstream, January 30, 1929 (EWEB Archive No. 421)

Figure 14: Upstream Face of Roller Gate No. 3 during dam construction, January 30, 1929 (EWEB Archive No. 419)

Figure 15: Leaburg Dam, looking downstream, ca. 1935 (author collection)

Figure 16: Leaburg Dam, looking upstream; Sluice Gate, Fishway at left, ca. 1937 (EWEB Archive No. 21661)

Figure 17: Turbine Liner Speed Ring and Penstock Forms in Powerhouse floor during construction, November 2, 1928 (EWEB Archive No. 339)

Figure 18: Powerhouse east and north elevations, looking southwest, April 17, 1929 (EWEB Archive No. 527)

Figure 19: Powerhouse exterior study, Ellis F. Lawrence, 1929 (EWEB Archive)

Figure 20: Powerhouse primary elevation, looking south, November 25, 1929 (EWEB Archive No. 741)

Figure 21: Powerhouse, Tailrace, Substation, and Penstocks, looking northeast, ca. 1930 (author collection)

Figure 22: Leaburg Powerhouse, ca. 1985 (University of Oregon Special Collections Image PNA-14732, Michael Shellenbarger)

Figure 23: Leaburg Powerhouse and Leaburg Village aerial view, 1937; Canal and Headgates at left, Tailrace exiting the Powerhouse to the right, south of the housing area (EWEB Archive)

Figure 24: Leaburg Village Cottages, 1933 (EWEB Archive)

Figure 25: *Register Guard*, Sept 3, 1981

Figure 1: General and Specific Location Map
Leaburg Hydroelectric Project Historic District (ODOT State Highway Map)

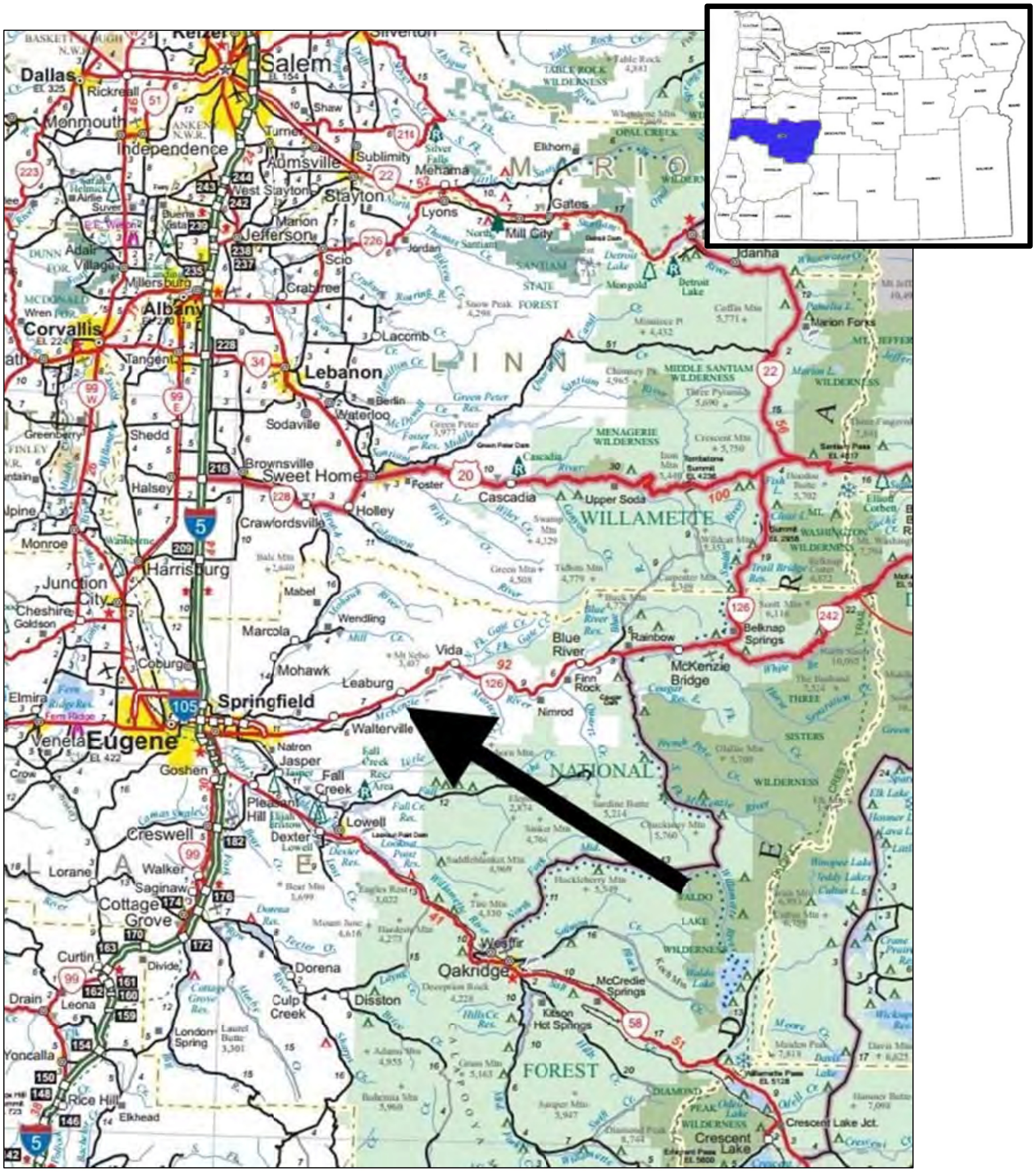


Figure 2: Leaburg Hydroelectric Project Historic District Index Sheet and Latitude/Longitude Coordinates (EWEB, 2015)

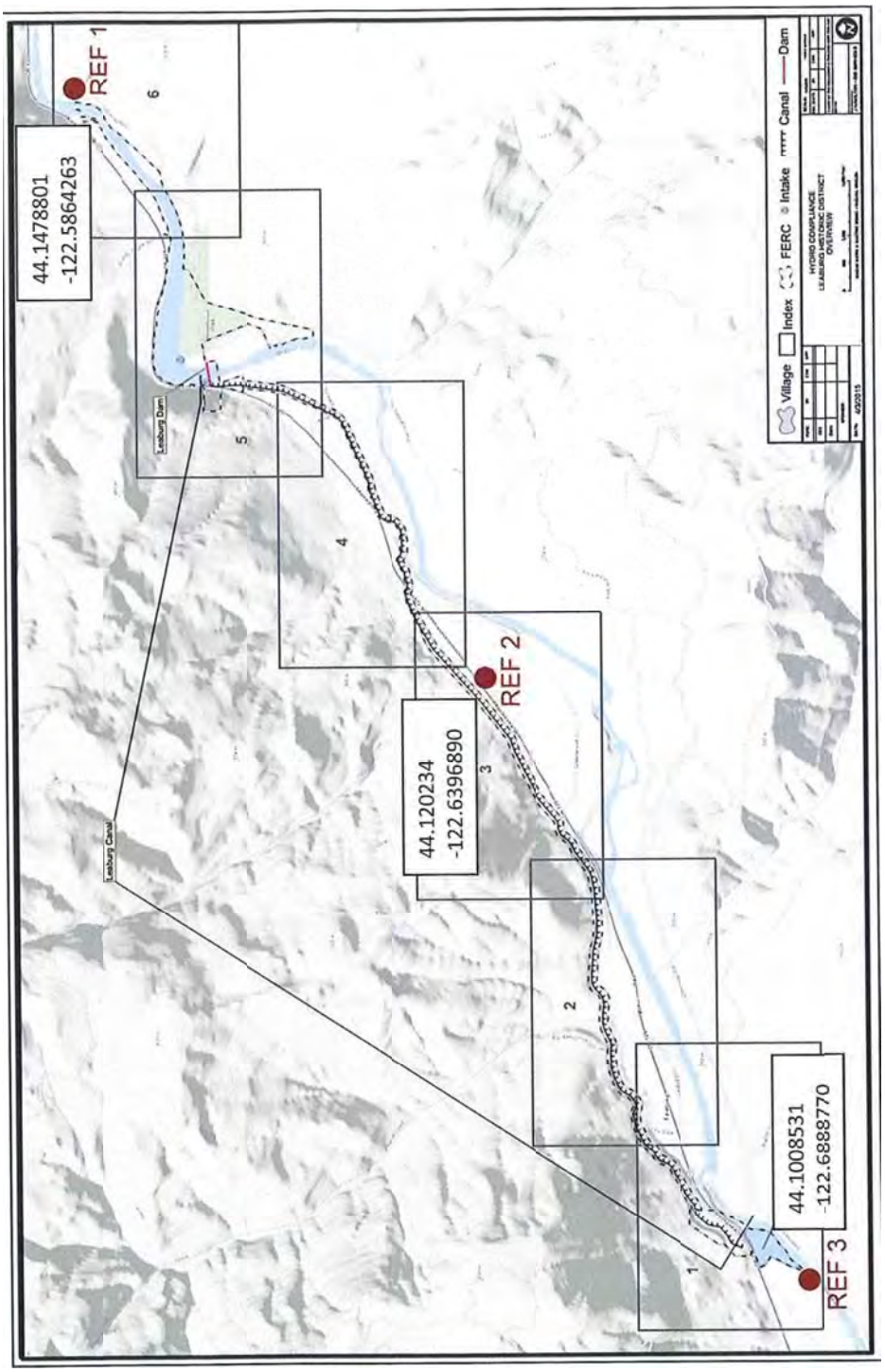


Figure 3: Leaburg Hydroelectric Project Historic District, Map Section 1 (EWEB, 2015)

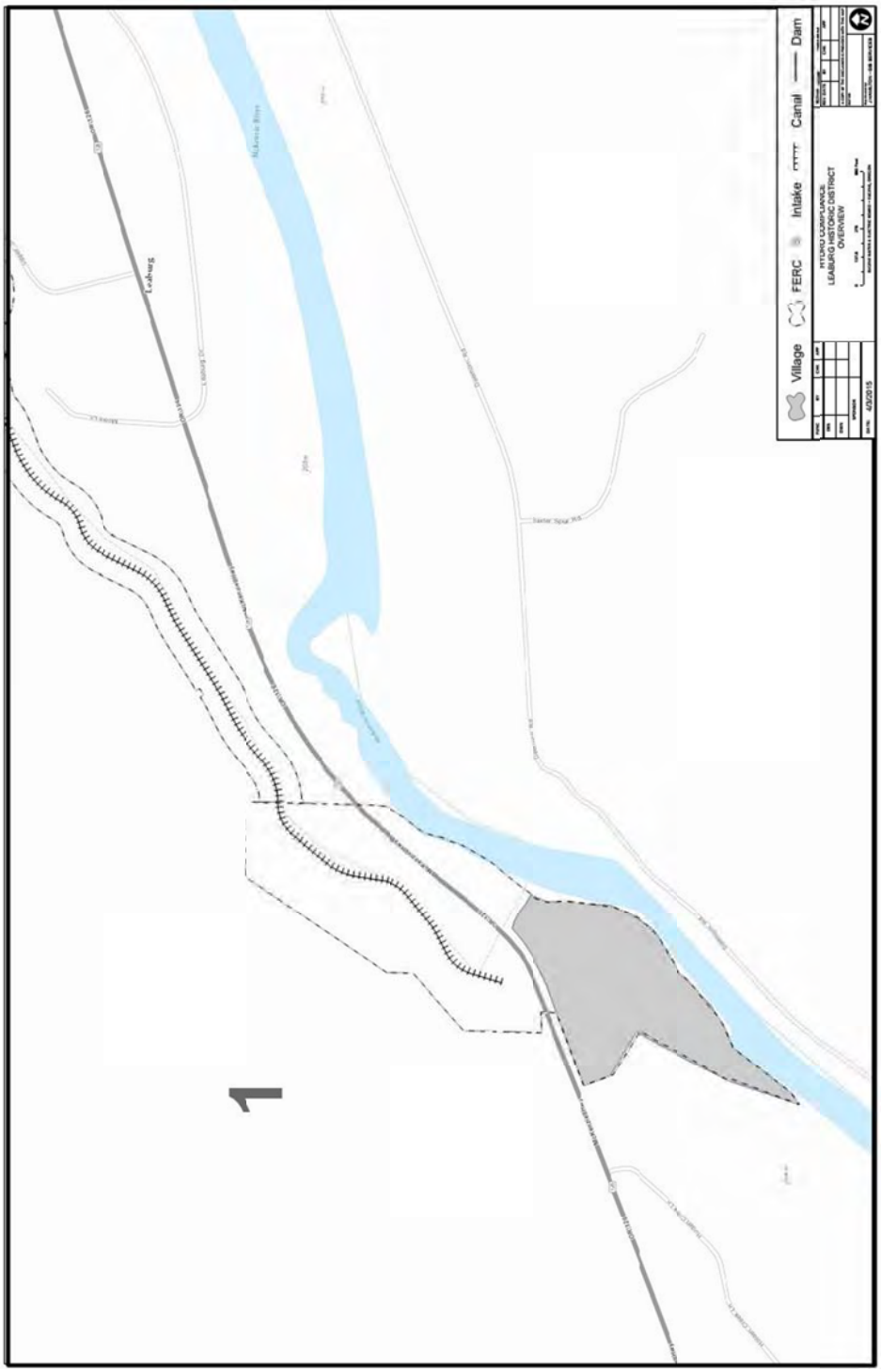


Figure 4: Leaburg Hydroelectric Project Historic District, Map Section 2 (EWEB, 2015)

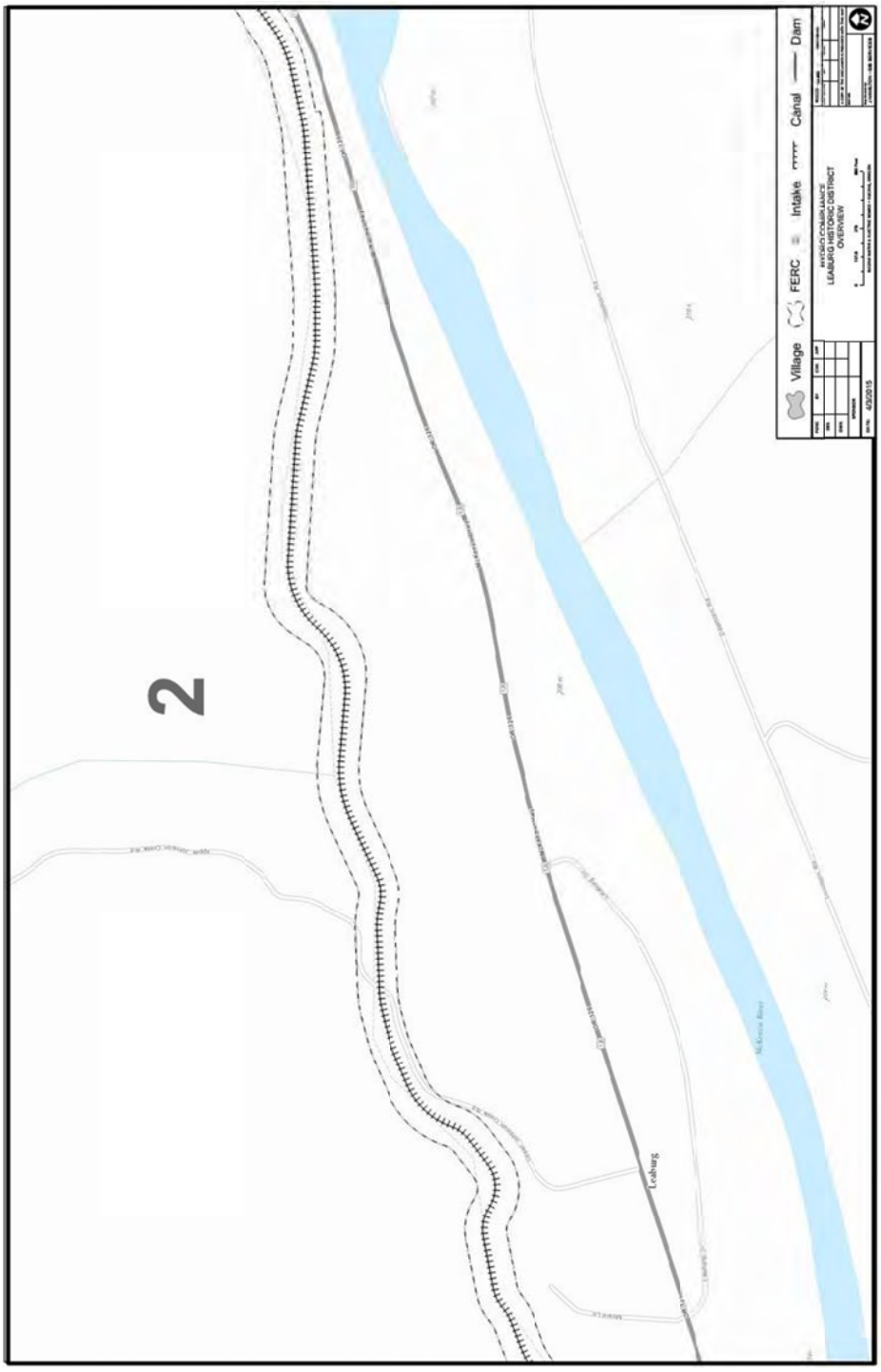


Figure 5: Leaburg Hydroelectric Project Historic District, Map Section 3 (EWEB, 2015)

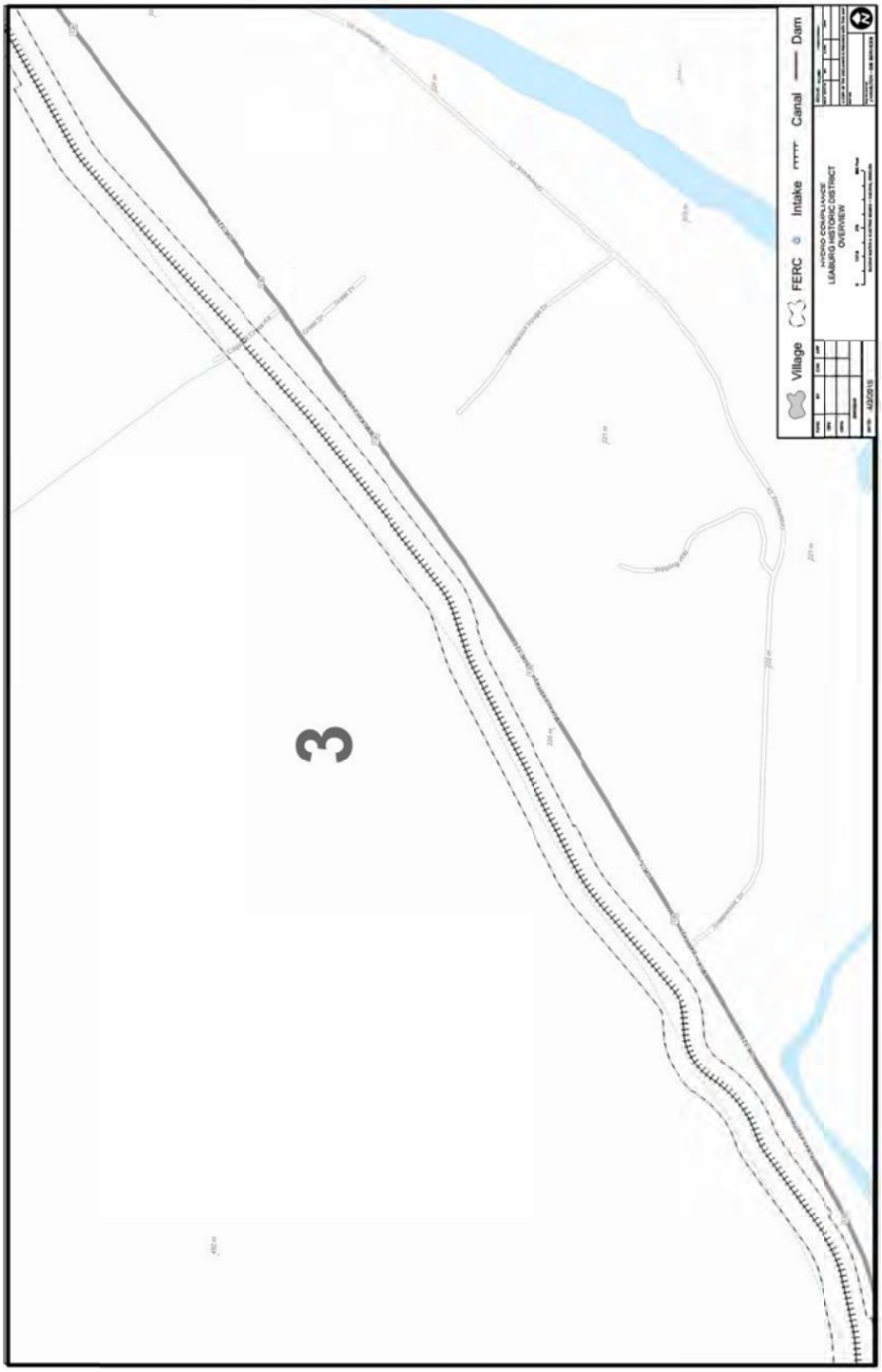


Figure 6: Leaburg Hydroelectric Project Historic District, Map Section 4 (EWEB, 2015)

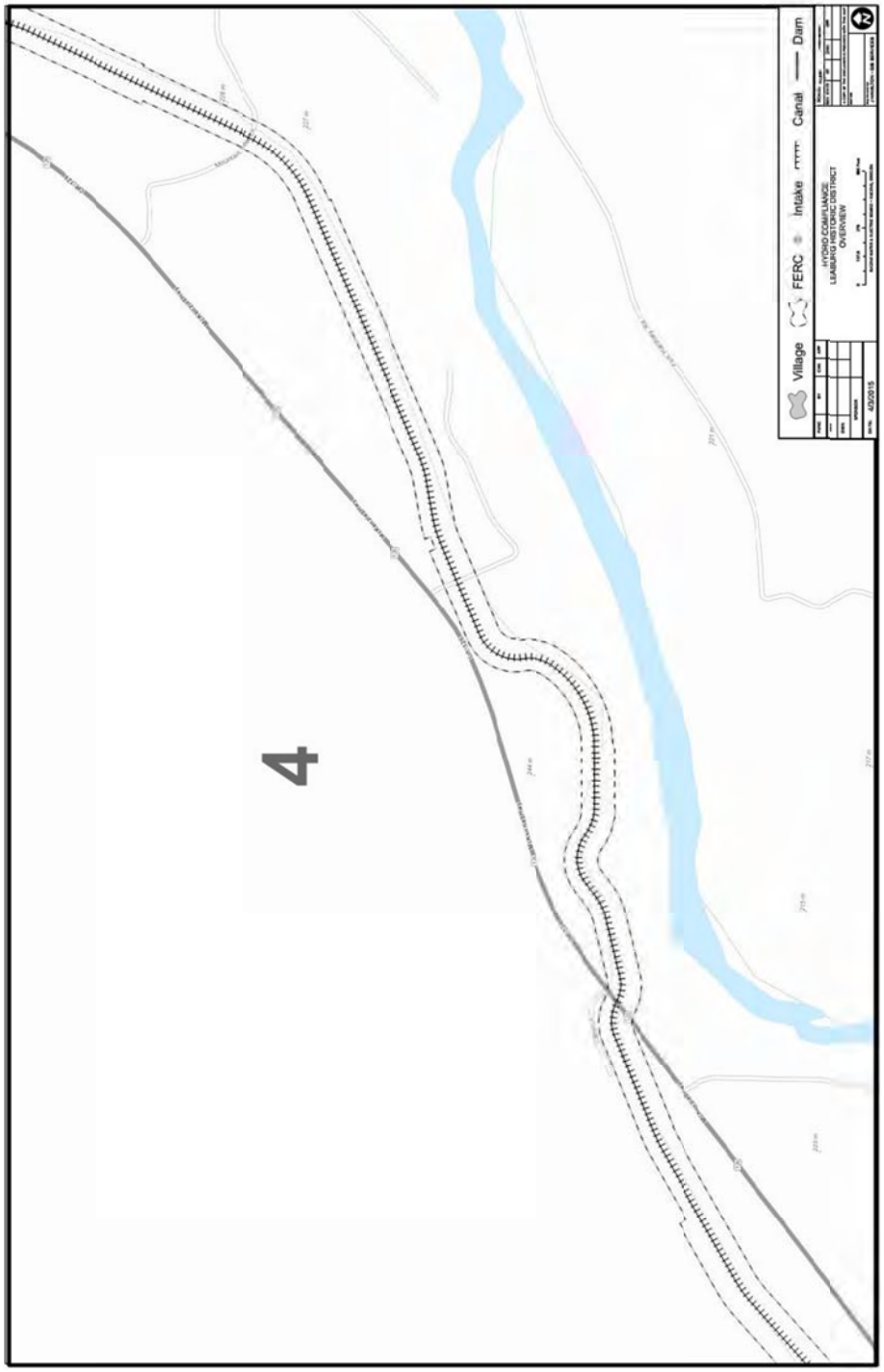


Figure 7: Leaburg Hydroelectric Project Historic District, Map Section 5 (EWEB, 2015)

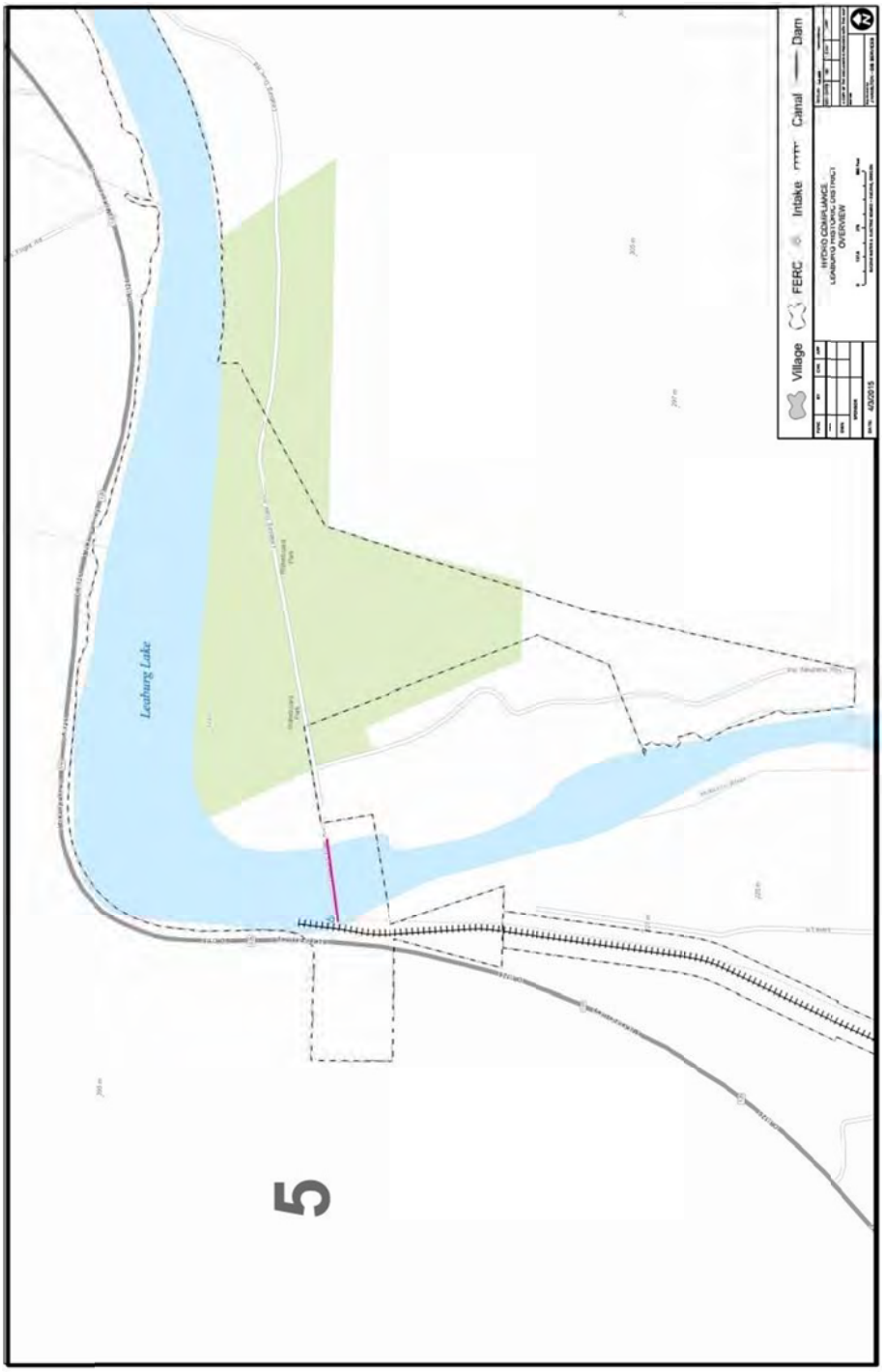


Figure 8: Leaburg Hydroelectric Project Historic District, Map Section 6 (EWEB, 2015)

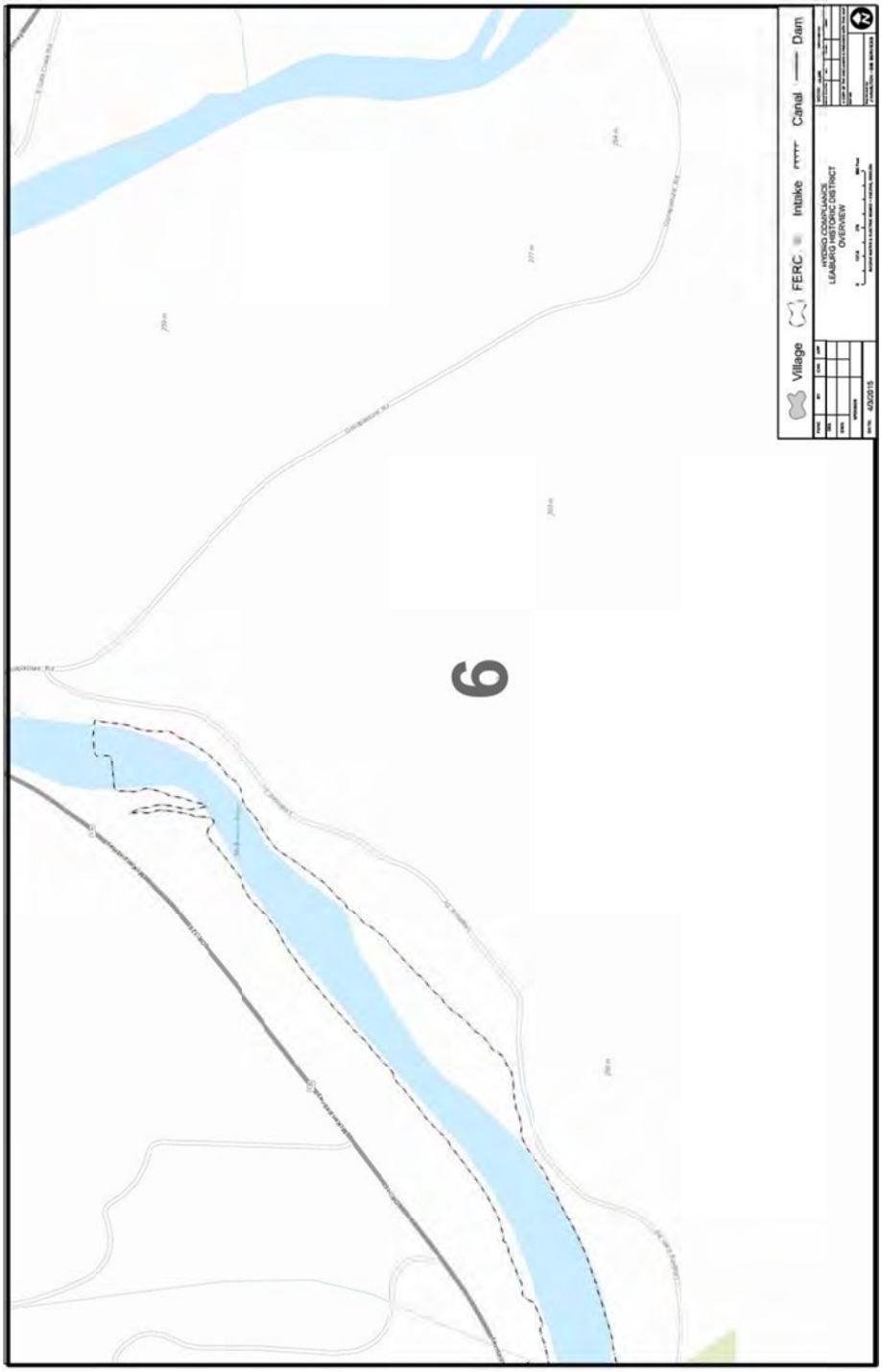


Figure 9: Leaburg Hydroelectric Project Historic District, Leaburg Dam Detail (EWEB, 2015)

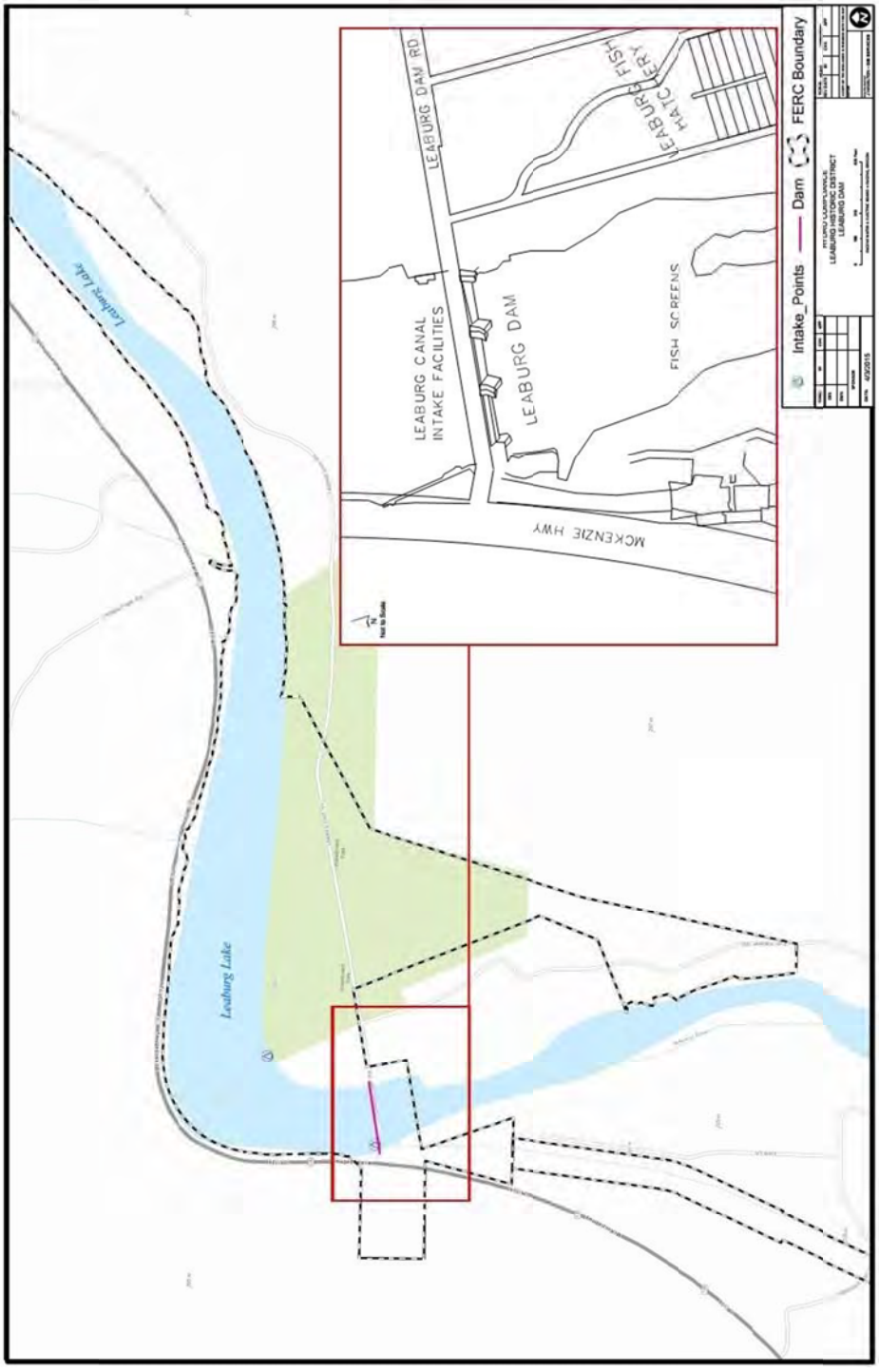


Figure 10: Leaburg Hydroelectric Project Historic District, Leaburg Village Detail (EWEB, 2015)

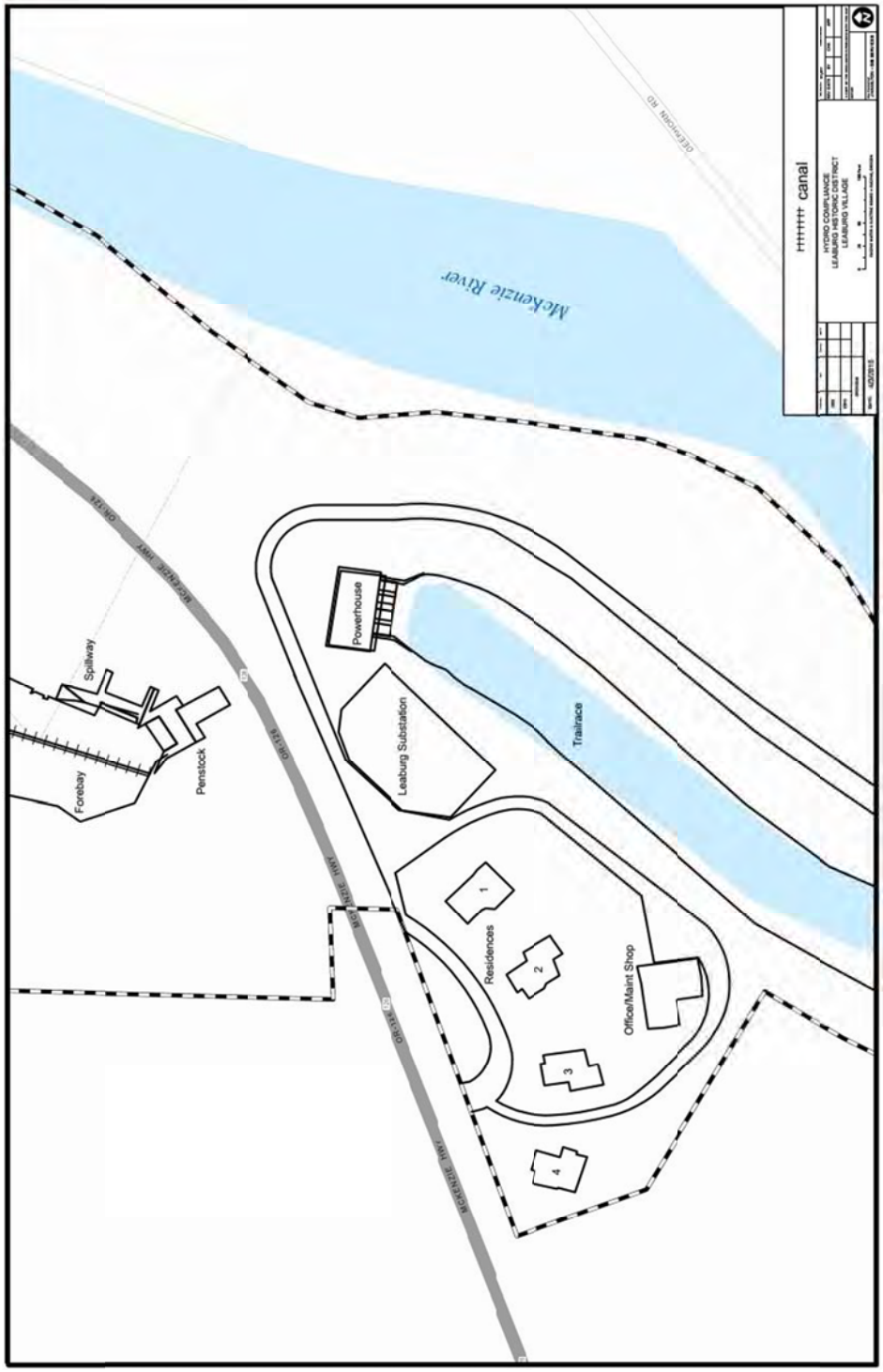


Figure 11: *Eugene Guard* article, June 25, 1927, Power Section

Power Section

The Eugene Guard

Power Section

VOL. 71 EUGENE, OREGON, SATURDAY, JUNE 25, 1927. NO. 14

HERE IS PROPOSED NEW POWER PLANT FOR EUGENE

This is an artist's view of the first new unit in the Greater Eugene power system as it will actually appear when constructed. Tourists on the McKenzie highway will see the rushing waters turning the great turbines to move industry in Eugene.

WHYS OF POWER BOND PROGRAM

Present plant already outgrown n that one-third of present peak loads has to be purchased.

Amount of bonds asked is $1,220,000 or only 57 per cent of total of approximately $2,220,000 needed for extension program.

Remaining money amounting to nearly one million dollars to be provided out of reserve earnings of present plant.

First new plant to give city a production capacity of 18,000 horsepower, enough for the immediate addition of new industries.

Construction of new plant will make it possible to hold water rights on McKenzie river for two subsequent units to be used as needed which would bring city's production to 75,000 horsepower, competing with any cities on the coast.

No tax levies involved in proposed bond issue because all sinking fund and debt charge are met out of earnings on present plant.

Lower domestic rates in Eugene sure to follow development of industry because industries move running throughout the day and night would equalize the heavy morning and evening peak loads now experienced with the domestic group the largest users.

Cash reserves to be used first in construction of new units and issuance of bonds held up till necessary, thus minimizing interest charges throughout.

Development of city enterprise necessary as private interests will take over McKenzie water rights isolating present city plant.

Program of City Water Board

A New Power Plant for Eugene is a Good Business Investment

Beginning sixteen years ago with a capitalization of nearly $220,000, all borrowed, City Power has built up from earnings a system with gross assets of $1,640,000. City power has never before asked for authorization from the voters to borrow funds. The need to do so now arises from the immediate necessity of constructing a new plant, since the capacity of the old plant has been reached. The present plant can furnish almost a million dollars towards the building of the new plant —and City Power will pay the bonds.

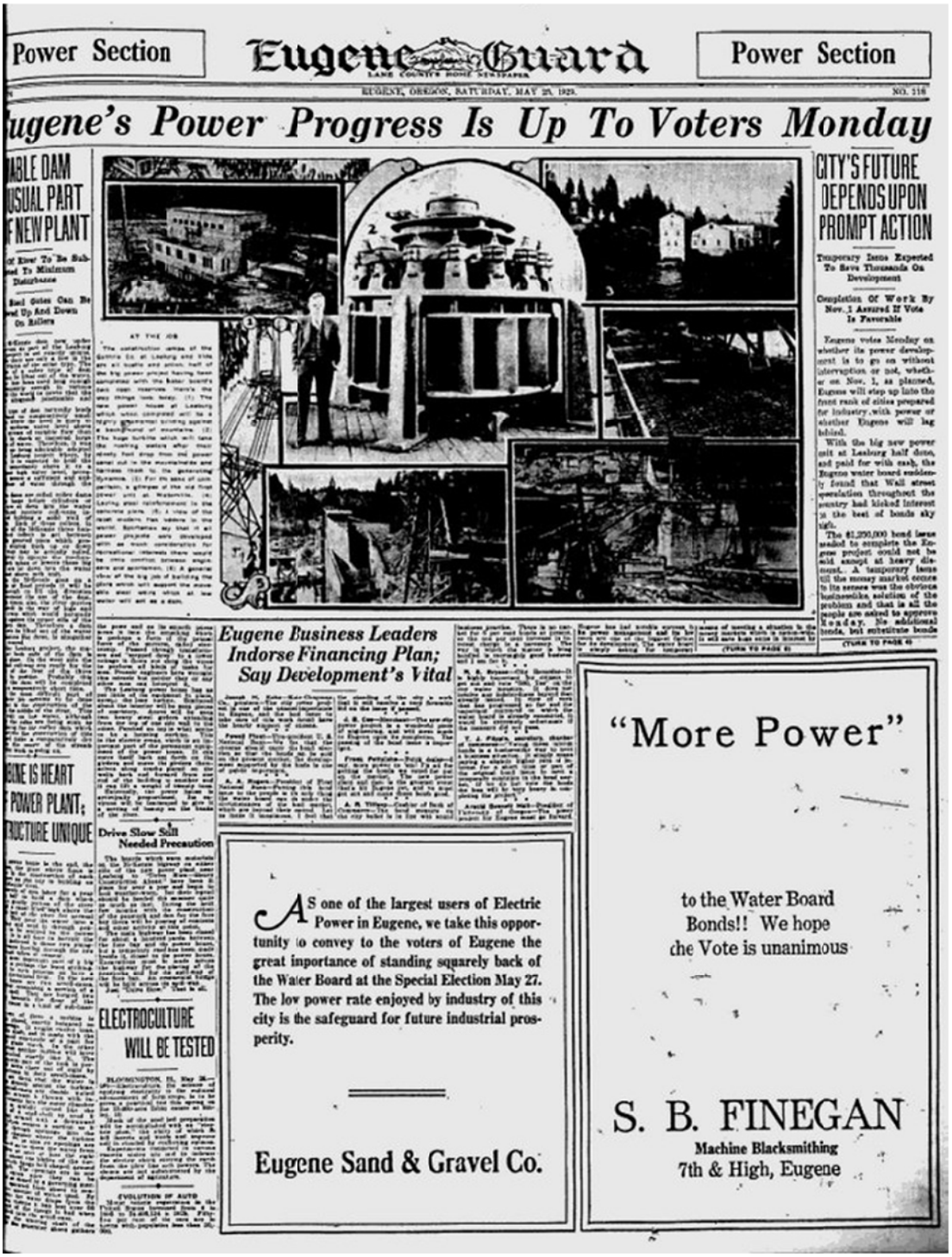
The filings made on the McKenzie cover power rights invaluable to Eugene, since it protects its future for an indefinite period. The building of the new plant will keep these rights alive. Eugene, by following out the progressive Power program proposed by the Water Board, will be insured abundant power for industries, for home use, and every other purpose, until our population passes the hundred thousand mark.

In the last seven years the consumption of electricity in Eugene has increased at the rate of 23%. It has doubled in the last three years. Eugene uses far more electricity per capita than the average city because our rates are the lowest in the state, among the lowest in the United States.

To protect these rates and continue the great advantages cheap electric current brings us, we must build a new power plant.

Eugene Clearing House Association

Figure 12: *Eugene Guard* article, May 25, 1929, Power Section



Power Section

Eugene Guard

LANE COUNTY'S HOME NEWSPAPER

Power Section

EUGENE, OREGON, SATURDAY, MAY 25, 1929. NO. 218

ugene's Power Progress Is Up To Voters Monday

ABLE DAM USUAL PART F NEW PLANT

of River To Be Sub- ed To Minimum Disturbance

Steel Gates Can Be ised Up And Down On Rollers

INE IS HEART POWER PLANT; RUCTURE UNIQUE

CITY'S FUTURE DEPENDS UPON PROMPT ACTION

Temporary Issue Expected To Save Thousands On Development

Completion Of Work By Nov. 1 Assured If Vote Is Favorable

Eugene votes Monday on whether its power develop- ment is to go on without interruption or not, wheth- er on Nov. 1, as planned, Eugene will step up into the front rank of cities prepared for industry, with power or whether Eugene will lag behind.

With the big new power unit at Leaburg half done, and paid for with cash, the Eugene water board sudden- ly found that Wall street speculation throughout the country had kicked interest to the best of bonds sky high.

The $1,250,000 bond issue sealed to complete the Eu- gene project could not be sold except at heavy dis- count. A temporary issue till the money market recov- ers its senses was the obvious businesslike solution of the problem and that is all the people are asked to approve Monday. No additional bonds, but substitute bonds

(TURN TO PAGE 8)

Eugene Business Leaders Indorse Financing Plan; Say Development's Vital

Drive Slow Salt Needed Precaution

ELECTROCULTURE WILL BE TESTED

AS one of the largest users of Electric Power in Eugene, we take this opportunity to convey to the voters of Eugene the great importance of standing squarely back of the Water Board at the Special Election May 27. The low power rate enjoyed by industry of this city is the safeguard for future industrial prosperity.

Eugene Sand & Gravel Co.

"More Power"

to the Water Board Bonds!! We hope the Vote is unanimous

S. B. FINEGAN

Machine Blacksmithing
7th & High, Eugene

Figure 13: Pier 6 and Spillway during dam construction, looking upstream, January 30, 1929 (EWEB Archive No. 421)

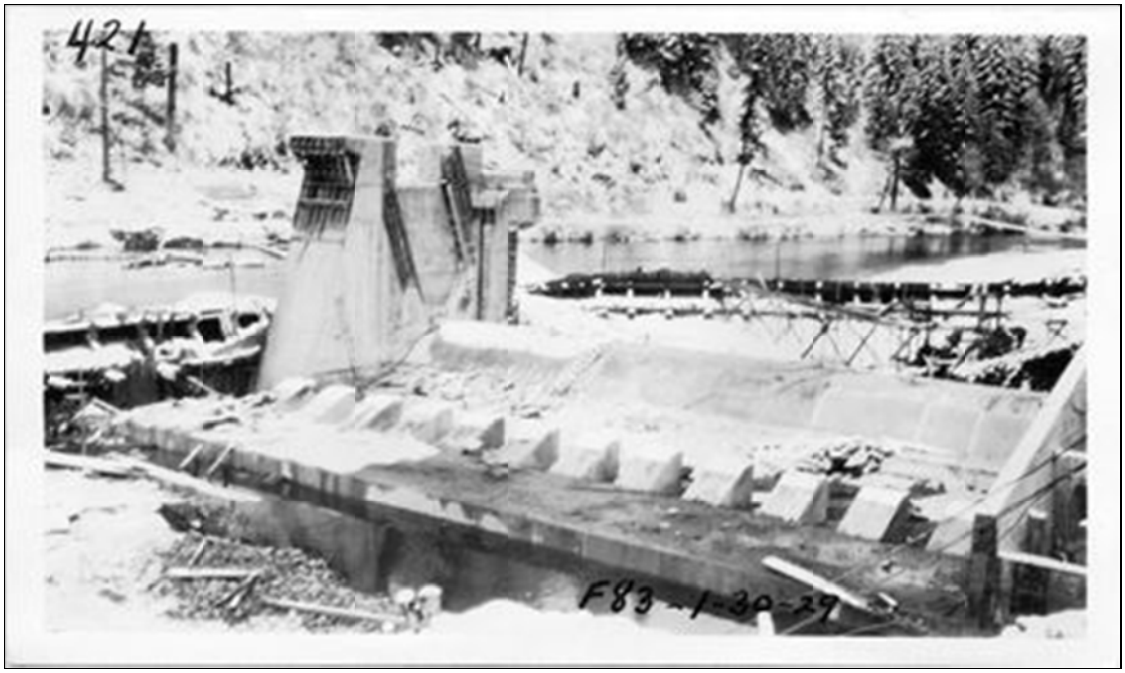


Figure 14: Upstream Face of Roller Gate No. 3 during dam construction, January 30, 1929 (EWEB Archive No. 419)

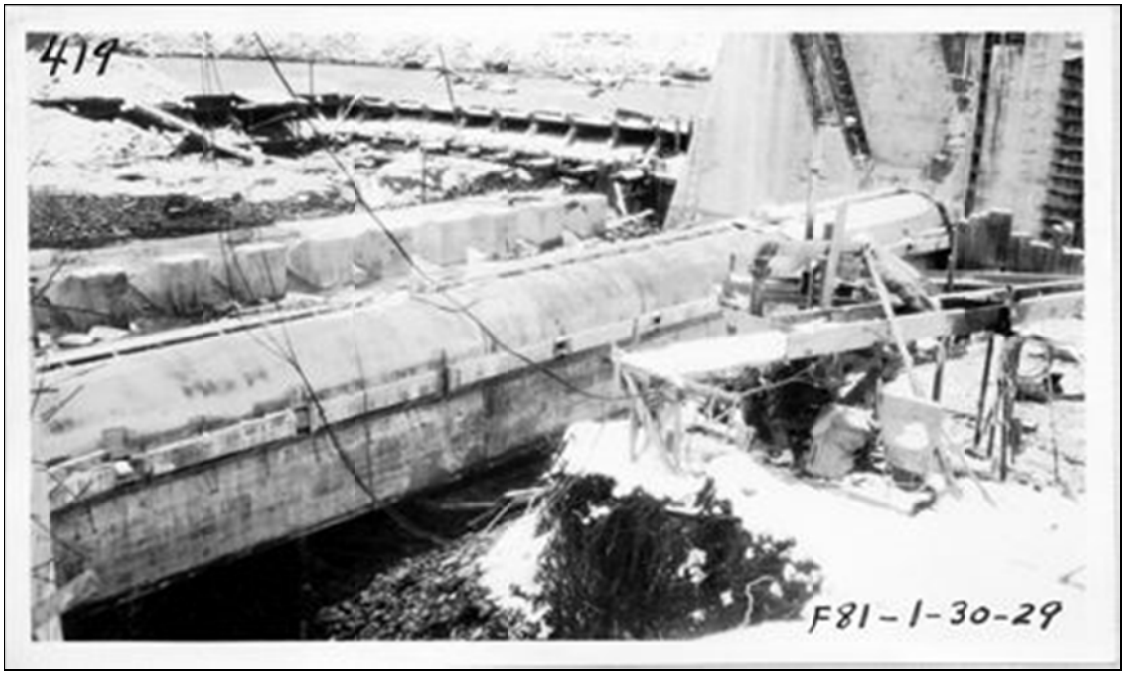


Figure 15: Leaburg Dam, looking downstream, Fishway at left, ca. 1935 (author collection)

Figure 16: Leaburg Dam, looking upstream; Sluice Gate at image left, ca. 1937 (EWEB Archive No. 21661)

Figure 17: Turbine Liner Speed Ring and Penstock Forms in Powerhouse floor during construction, November 2, 1928 (EWEB Archive No. 339)

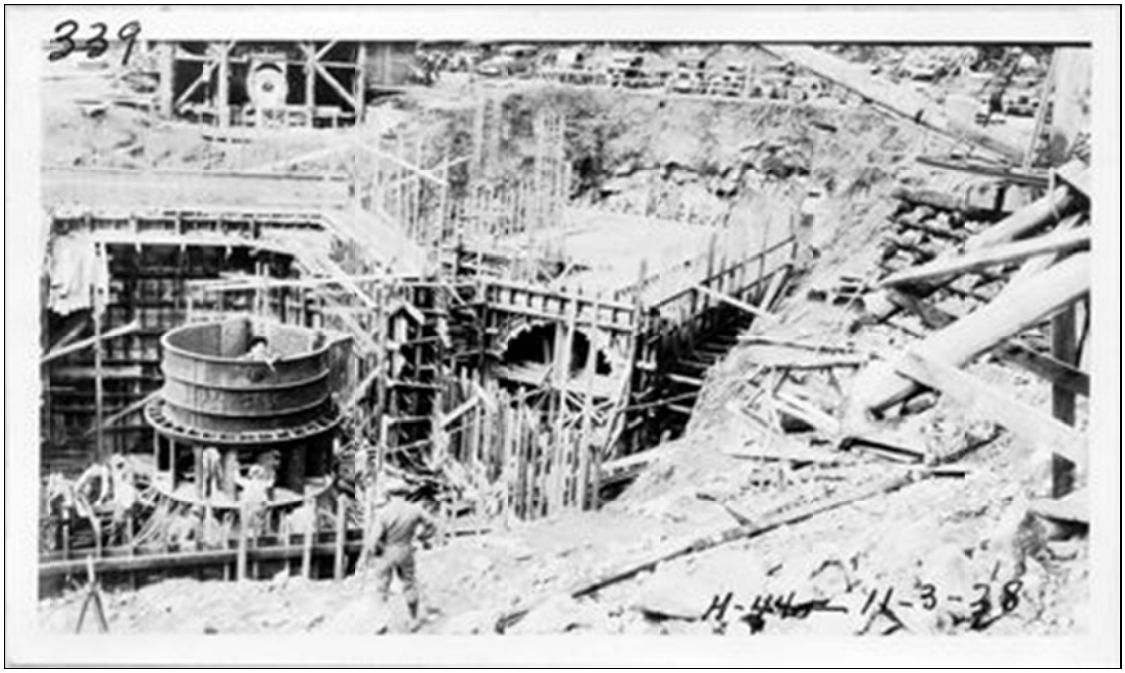


Figure 18: Powerhouse east and north elevations, looking southwest, April 17, 1929 (EWEB Archive No. 527)

Figure 19: Powerhouse exterior study, Ellis F. Lawrence, 1929 (EWEB Archive)

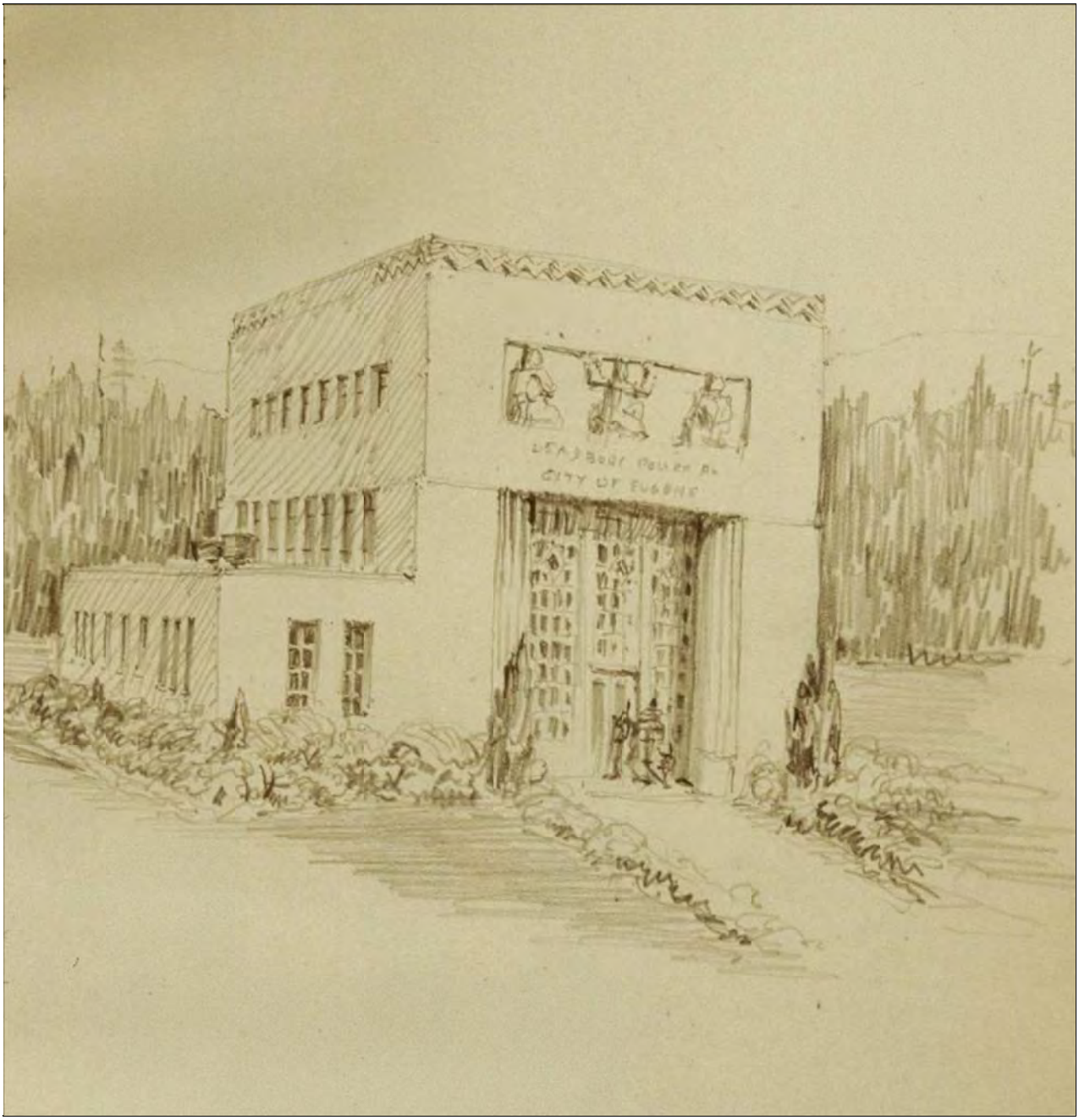


Figure 20: Powerhouse primary elevation, looking south, November 25, 1929 (EWEB Archive, No. 741)

Figure 21: Powerhouse, Tailrace, Substation, and Penstocks, looking northeast, ca. 1930 (author collection)

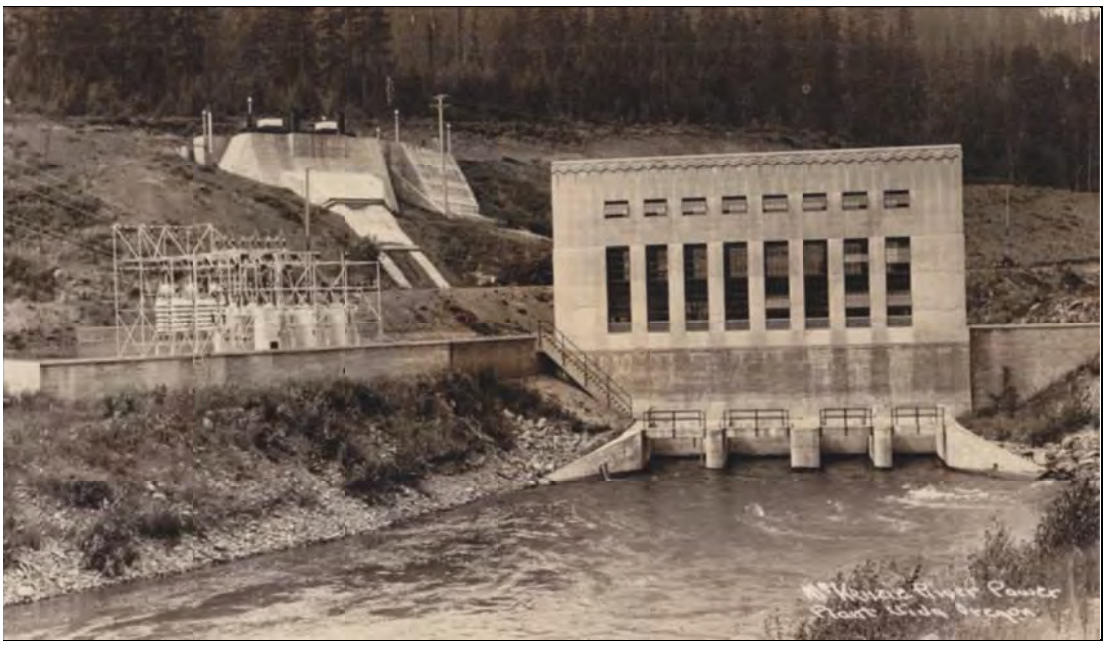


Figure 22: Leaburg Powerhouse, ca. 1985 (University of Oregon Special Collections Image, PNA-14732, Michael Shellenbarger)

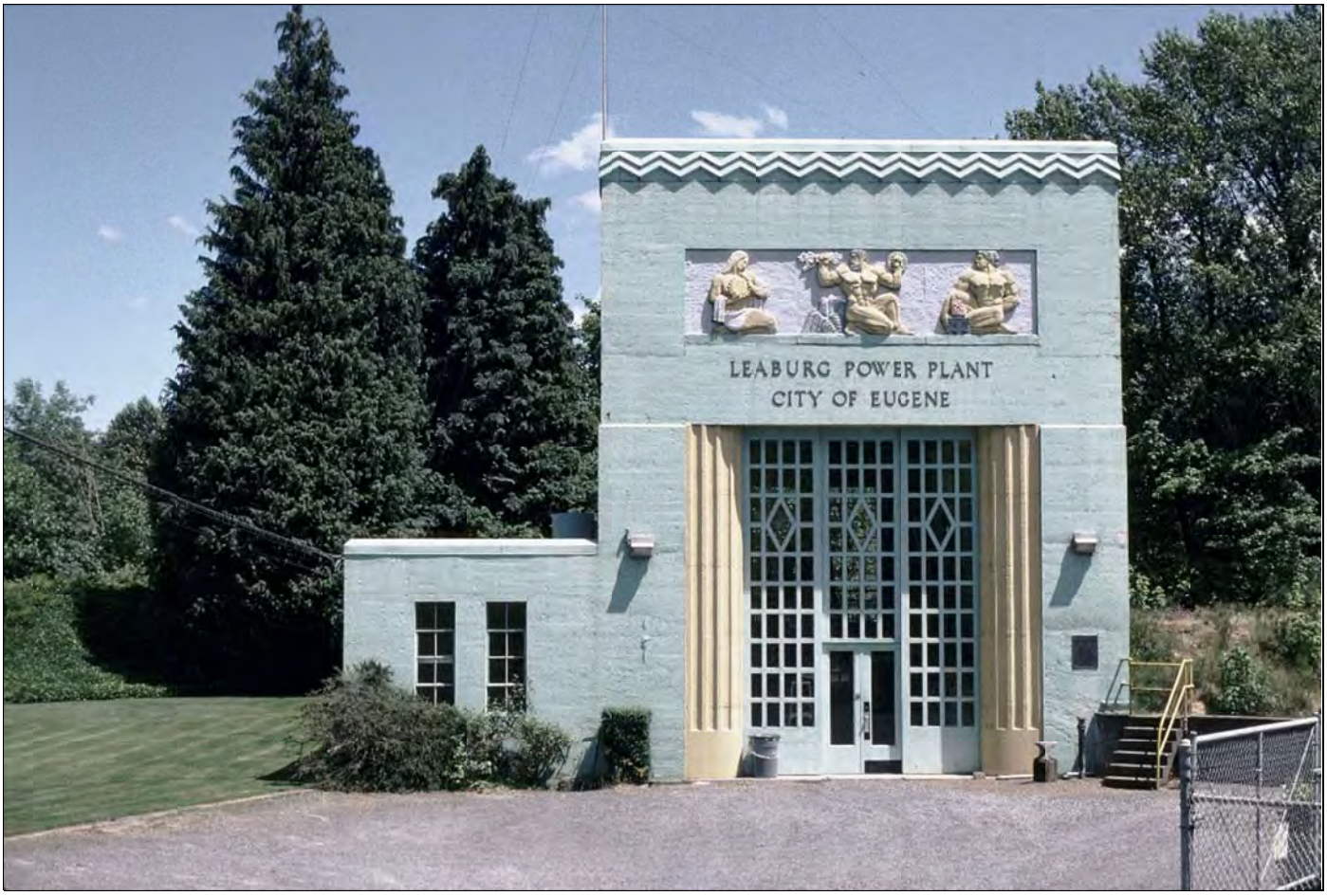


Figure 23: Leaburg Powerhouse and Leaburg Village aerial view, 1937; Canal and Penstock Headgates at left, Tailrace exiting the Powerhouse to the right, south of the housing area (EWEB Archive)

Figure 24: Leaburg Village Cottages, 1933 (EWEB Archive)

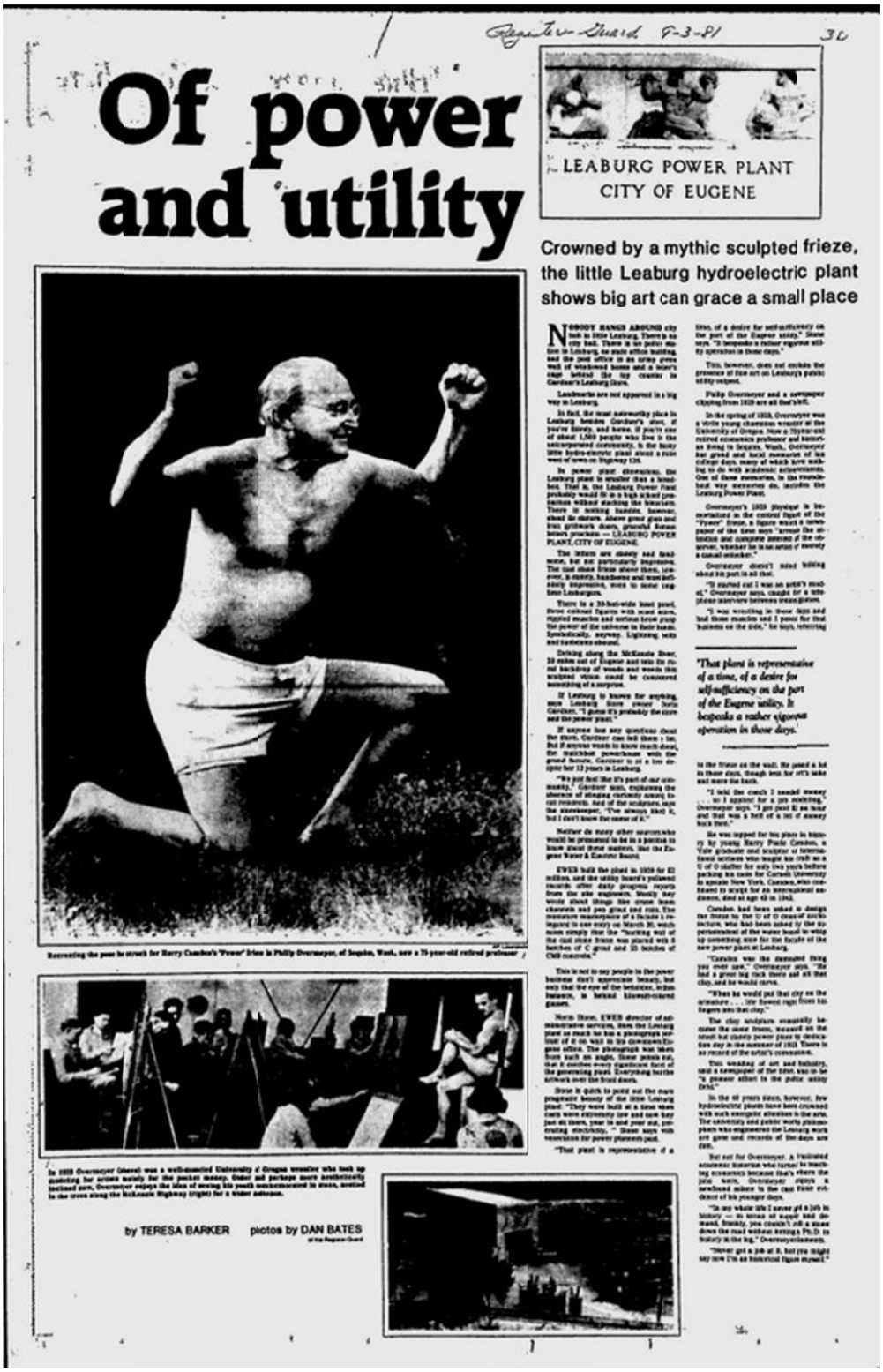
United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Section number Additional Documentation Page 61

Leaburg Hydroelectric Project Historic District
Name of Property
Lane Co., OR
County and State
N/A
Name of multiple listing (if applicable)

Figure 25: Register Guard, Sept 3, 1981



Register-Guard 9-3-81 3C

Of power and utility

LEABURG POWER PLANT
CITY OF EUGENE

Crowned by a mythic sculpted frieze, the little Leaburg hydroelectric plant shows big art can grace a small place

Recreating the pose he struck for Harry Camden's 'Power' frieze in Philly Overmeyer, of Sequim, Wash., are a 75-year-old retired professor

In 1929 Overmeyer (above) was a well-muscled University of Oregon wrestler who took up modeling for artists mainly for the pocket money. Older and perhaps more aesthetically inclined now, Overmeyer enjoys the idea of reviving his youth commemorated in stone, seated in the river along the McKenzie Highway (right) for a wider audience.

by TERESA BARKER photos by DAN BATES

NOBODY HANGS AROUND city hall in little Leaburg. There is no city hall. There is no police station in Leaburg, no state office building, and the post office is an army green shed of whitewood boards and a miser's cage behind the tiny counter in Gardner's Leaburg Store.

Landmarks are not apparent in a big way in Leaburg.

In fact, the most noteworthy place in Leaburg besides Gardner's store, if you're literary, and below, if you're one of about 1,500 people who live in the unincorporated community, is the lanky little hydro-electric plant about a mile west of town on Highway 126.

Its power plant distinction, the Leaburg plant is smaller than a breadbox. That is, the Leaburg Power Plant probably would fit in a high school gymnasium without stacking the bleachers. There is nothing humble, however, about its stature. Above great glass and iron gridwork doors, graceful Roman letters proclaim — LEABURG POWER PLANT, CITY OF EUGENE.

The letters are stately and handsome, but not particularly impressive. The real show frame above them, however, is stately, handsome and most definitely impressive, even to some regular Leaburgers.

There is a 30-foot-wide bas-relief panel, three colossal figures with scant attire, rippled muscles and serious brow grasp the power of the universe in their hands. Symbolically, anyway. Lightning bolts and lightwaves abound.

Driving along the McKenzie River, 10 miles east of Eugene and into its rural backdrop of woods and woods, this sculpted vision could be considered something of a surprise.

If Leaburg is known for anything, says Leaburg store owner Doris Gardner, "I guess it's probably the store and the power plant."

If anyone has any questions about the plant, Gardner can tell them a lot. But if anyone wants to know much about the brick-and-stone powerhouse with the grand facade, Gardner is at a loss despite her 13 years in Leaburg.

"It's just feel like it's part of our community," Gardner says, explaining the absence of stinging curiosity among local residents. And of the sculpture, says the storekeeper, "I've always liked it, but I don't know the name of it."

Neither do many other sources who would be presumed to be in a position to know about these matters, like the Eugene Water & Electric Board.

EWEB built the plant in 1929 for $2 million, and the utility board's yellowed records offer daily progress reports from the site engineers. Mostly they wrote about things like stream beam channels and pen grout and rain. The immature masterpiece of a facade is required to rate worry on March 30, which notes simply that the "backing wall of the east stone frame was placed with 5 batches of C grout and 25 batches of CM3 concrete."

This is not to say people in the power business don't appreciate beauty, but only that the eye of the beholder, in this instance, is behind kilowatt-colored glasses.

Norm Hunt, EWEB director of administrative services, likes the Leaburg plant as much as has a photograph portrait of it on wall in his downtown Eugene office. The photograph was taken from such an angle, Hunt points out, that it catches every significant facet of the penetrating pond. Everything but the artwork over the front doors.

Hunt is quick to point out the main progenitor beauty of the little Leaburg plant. "They were built at a time when costs were extremely low and now they just do them, year to year year out, generating electricity, " Hunt says with veneration for power planners past.

"That plant is representative of a time, of a desire for self-sufficiency on the part of the Eugene utility," Hunt says. "It bespeaks a rather vigorous utility operation in those days."

This, however, does not exclude the presence of fine art on Leaburg's public utility output.

Philip Overmeyer and a newspaper clipping from 1929 are all that's left.

In the spring of 1929, Overmeyer was a virile young champion wrestler at the University of Oregon. Now a 75-year-old retired economics professor and historian living in Sequim, Wash., Overmeyer has grand and lucid memories of his college days, many of which have nothing to do with academic achievements. One of those memories, in the roundabout way memories do, includes the Leaburg Power Plant.

Overmeyer's 1929 physique is immortalized in the central figure of the "Power" frieze, a figure which a newspaper of the time says "arrests the attention and compels interest if the observer, whether he is an artist or merely a casual onlooker."

Overmeyer doesn't mind bilking about his part in all that.

"It started out I was an artist's model," Overmeyer says, caught for a telephone interview between mean guitars.

"I was wrestling in those days and had those muscles and I posed for final buttons on the side," he says, referring

"That plant is representative of a time, of a desire for self-sufficiency on the part of the Eugene utility. It bespeaks a rather vigorous operation in those days."

to the frieze on the wall. He posed a lot in those days, though less for art's sake and more the buck.

"I told the coach I needed money . . . so I suppose for a pro modeling," Overmeyer says. "I got paid $2 an hour and that was a hell of a lot of money back then."

He was tapped for his place in history by young Harry Poole Camden, a Yale graduate and sculptor of international acclaim who taught his craft as a U of O staffer for only two years before packing his tools for Carnell University in upstate New York. Camden, who continued to sculpt for an international audience, died at age 63 in 1963.

Camden had been asked to design the frieze by the U of O dean of architecture, who had been asked by the perpetrators of the water board to whip up something nice for the facade of the new power plant at Leaburg.

"Camden was the damnedest thing you ever saw," Overmeyer says. "He had a great big rock there and he'd shot clay, and he would carve.

"When he would put that clay on the armature . . . the flowers rage from his fingers and that clay."

The clay sculpture eventually became the stone frieze, weighed on the inside but plenty power plant to dedication day in the summer of 1929. There is no record of the artist's consternation.

This wedding of art and industry, and a newspaper of the time, was to be "a pioneer effort in the public utility field."

In the 52 years since, however, few hydroelectric plants have been crowned with such energetic attention to the arts. The university and public works professors who engineered the Leaburg work are gone and records of the days are dim.

But not for Overmeyer. A frustrated economic historian who turned to teaching economics because that's where the jobs were, Overmeyer enjoys a newfound esteem in the eyes those evidence of his younger days.

"In my whole life I never got a job in history — in terms of supply and demand, frankly, you couldn't roll a stone down the road without hitting Ph.D.'s in history in the leg," Overmeyer laments.

"Never got a job at it, but you might say now I'm an historical figure myself."


SPEED
LIMIT
10


LEABURG POWER PLANT
CITY OF EUGENE


42472

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY NAME: Leaburg Hydroelectric Project Historic District

MULTIPLE NAME:

STATE & COUNTY: OREGON, Lane

DATE RECEIVED: 5/15/15 DATE OF PENDING LIST: 6/09/15
DATE OF 16TH DAY: 6/24/15 DATE OF 45TH DAY: 6/30/15
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 15000375

REASONS FOR REVIEW:

APPEAL:	N	DATA PROBLEM:	N	LANDSCAPE:	N	LESS THAN 50 YEARS:	N
OTHER:	N	PDIL:	N	PERIOD:	N	PROGRAM UNAPPROVED:	N
REQUEST:	Y	SAMPLE:	N	SLR DRAFT:	Y	NATIONAL:	N

COMMENT WAIVER: N

___ACCEPT ___RETURN ___REJECT _____DATE

ABSTRACT/SUMMARY COMMENTS:

The Leaburg Hydroelectric Project Historic District is of state and local significance under National Register Criteria A and C, in the areas of Community Planning & Development, Engineering and Architecture. One of the largest municipally owned generating plants in Oregon, the facilities of the Leaburg Hydroelectric project played a significant role in the economic growth and development of Eugene, Oregon during the early twentieth century. Securing a steady and reliable source of power at economical rates allowed the community to significantly prosper and develop the necessary infrastructure to meet modern patterns of city growth. From an engineering perspective, the construction of the Leaburg project reflected significant advances in engineering design and construction, including the early use of advanced roller gate technology and the installation of sizable Broome (self-closing) sluice gates. Architecturally, the system power house represented a particularly fine example of Art Deco style design in an industrial setting. The public face of the utility, the power house's features and design forms represented the work of highly respected Portland architect Ellis Lawrence in close collaboration with project engineers.

RECOM./CRITERIA Accept Criteria A & C

REVIEWER Paul R. Lusignan DISCIPLINE Historian

TELEPHONE _____ DATE 6/29/15

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.

Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org

Nature HISTORY Discovery

May 1, 2015

J. Paul Loether
National Register of Historic Places
USDOI National Park Service - Cultural Resources
1201 Eye Street NW, 8th Floor
Washington, D.C. 20005

Re: National Register Nomination

Dear Mr. Loether:

At the recommendation of the Oregon State Advisory Committee on Historic Preservation, I hereby nominate the following historic property to the National Register of Historic Places:

LEABURG HYDROELECTRIC PROJECT HISTORIC DISTRICT
14348 MCKENZIE RIVER HWY
LEABURG VCTY, LANE COUNTY

The enclosed disk contains the true and correct copy of the nomination listed above to the National Register of Historic Places.

We appreciate your consideration of this nomination. If questions arise, please contact Diana Painter, Architectural Historian, at (503) 986-0668.

Sincerely,

Christine Curran
Interim Deputy State Historic Preservation Officer

Encl.

Lusignan, Paul <paul_lusignan@nps.gov>

Leaburg Hydro Project HD

Lusignan, Paul <paul_lusignan@nps.gov> Thu, Jun 25, 2015 at 2:24 PM
To: PAINTER Diana * OPRD <Diana.Painter@oregon.gov>
Cc: "george@preserveoregon.com" <george@preserveoregon.com>

Hi Diana,

Those are exactly the answers I needed. Thanks for getting back so quickly. If you are going to revise the form and map and send a new electronic version of the nomination then I will go ahead with the listing and forget about creating any SLR. That will lead to a cleaner nomination. A new CD will be great. Please note that in translating the word document version of the form to a pdf, (or burning it to the disk), the original submission did something to the quality of the Figures. Several of the maps developed jagged lines and the images (newspaper articles, historic images, etc) were unreadable. Make sure to send both Word and pdf versions on the new disk, and take a look at the pdf to see if there are any quality issues. (The Word document was fine, so we could have generated our own pdf if necessary.)

I'll look for the update information to complete the file.

Thanks again. Great nomination.

Paul

On Thu, Jun 25, 2015 at 1:59 PM, PAINTER Diana * OPRD <Diana.Painter@oregon.gov> wrote:

> Hi Paul,
>
> Here's George's response on the DOE:
>
> "He is also correct that the prior DOE was a consensus one between EWEB/SHPO and FERC and so I gather he can "uncheck" the box that I included in error."
>
> We have added Lat/Longs to Figure 2, the map that is also the key map for the detail maps, and changed the title of the figure and the list of figures. In the course of doing that I noticed that we had neglected to edit the list of figures when we added the detail maps, so I did that.
>
> I can send the revised PDF to you on Dropbox or our FTP site (it's 30 mb) and then drop a new CD in the mail. Which do you prefer?
>
> Thanks for catching this.

Diana

From: Lusignan, Paul [mailto:paul_lusignan@nps.gov]
Sent: Wednesday, June 24, 2015 4:29 PM
To: PAINTER Diana * OPRD
Subject: Leaburg Hydro Project HD

Hi Diana,

I left a brief telephone message on your line, but here are the specifics of my questions. I'm looking over Lisa De Line's nominations while she is out.

Under Bibliographical References on page 33, you have checked off "Previously determined eligible by the National Register." I could not find this determination of eligibility in a quick scan of our database. Was it under a different name or for just one portion of the district? Or was it actually a consensus determination by the SHPO and FERC or another federal agency, in which case the National Register office and the Keeper never actually saw the documentation. If it was the later then the box should not have been checked. If that is the case I'll fix that with a quick SLR. Let me know.

The other item concerned the UTM/Long. Lat points. The current nomination provides a single point. For properties of more than 10 acres, whether large districts or linear features, at least three coordinates are required. In addition, these need to be shown on a map. For this project you can probably just use three points--one at the top of the reservoir area, one at the termination of the complex (tail race or village area), and one somewhere in between (maybe at the dam). The three points will need to be given on page 34 and then on some form of map. You can either amend something like Figure 2 to include the points or create a simple new map/figure from GoogleEarth or another GIS system.

- *For **linear properties of 10 or more acres** , such as a railroad, canal, highway, or trail, enter three or more UTM references. The references should correspond to points along a line drawn on the USGS map according to the following steps: Draw a line on the USGS map indicating the course of the property. Mark and label numerically points along the line that correspond to the beginning, end, and each major shift in direction. Order numbers in sequence from beginning to end.*

I thought the narrative of the nomination was excellent. Perhaps a bit lengthy, but that's what I remember happens when Mr. Kramer gets his hands on an engineering/industrial property.

Let me know if you have any questions. I still have a few days before I need to make a decision on the nomination, but I may be able to go ahead with the listing if you can get me the corrections relatively quickly.

Thanks.

--

Paul R. Lusignan

Historian

National Register of Historic Places

National Park Service

202-354-2229, fax 202-371-2229

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Paul R. Lusignan
Historian
National Register of Historic Places
National Park Service
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