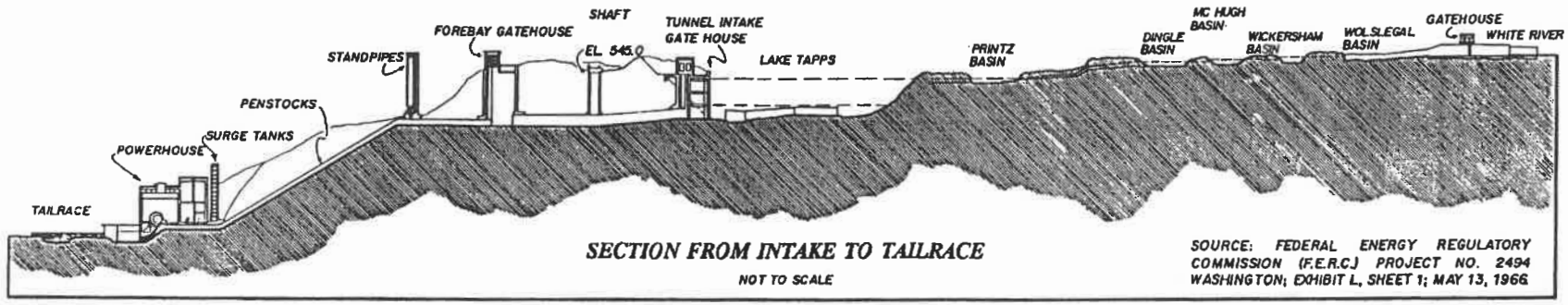


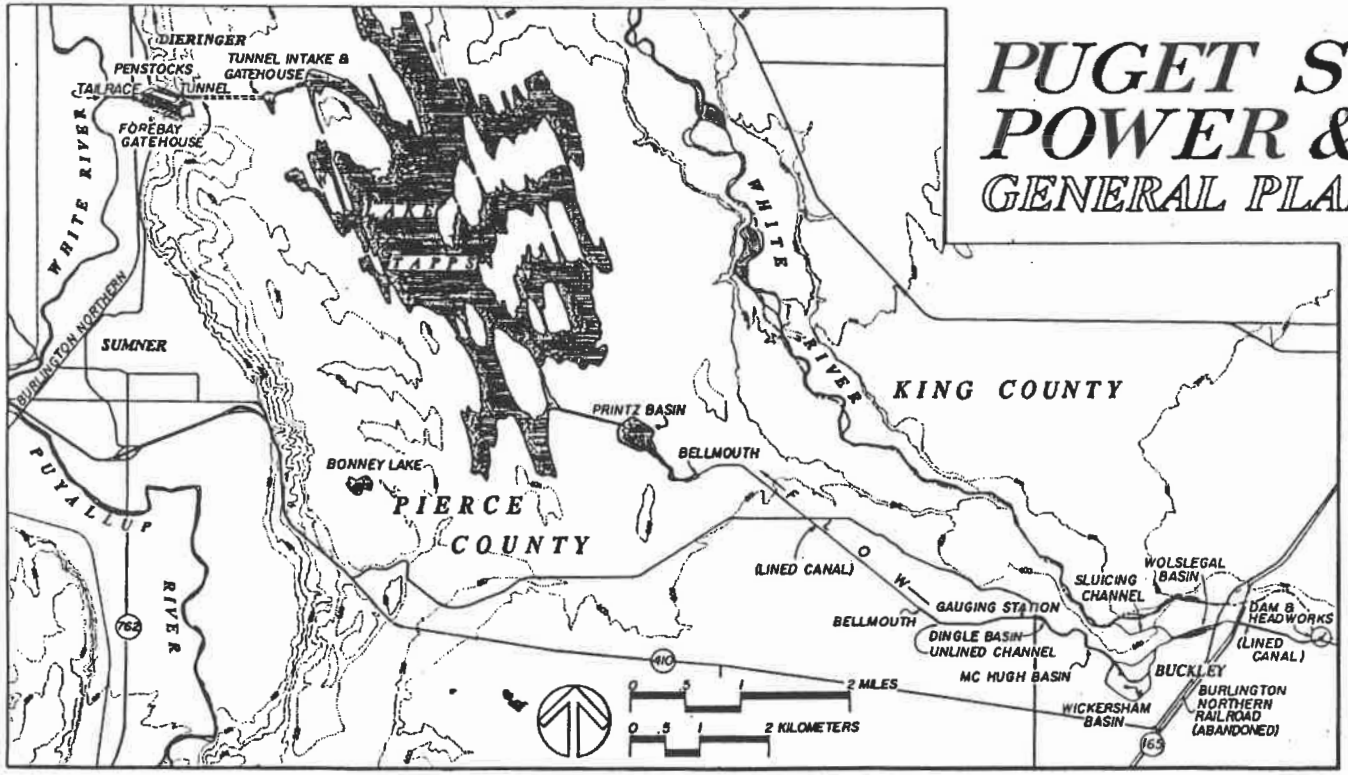
SECTION FROM INTAKE TO TAILRACE

NOT TO SCALE

SOURCE: FEDERAL ENERGY REGULATORY COMMISSION (F.E.R.C.) PROJECT NO. 2494 WASHINGTON; EXHIBIT L, SHEET 1; MAY 13, 1966.

PUGET SOUND POWER & LIGHT

GENERAL PLAN & PROFILE



FLOWLINE

FLUME: 28' WIDE, 9' DEEP, APPROX. 5000' LONG.

SETTLING BASINS: EXTEND FOR 2 MILES; SLUICE GATE AT WOLSLEGAL BASIN IS FOR MAINTENANCE AND SILT REMOVAL. FISH SCREENS AT DINGLE BASIN COMPLETED BY WORKS PROGRESS ADMINISTRATION IN 1939.

UNLINED CANAL: 35' WIDE, ABOUT 8' DEEP.

PRINTZ BASIN: ADJACENT TO LAKE TAPPS, DECREASES VELOCITY OF FLOW INTO THE LAKE.

LAKE TAPPS: STORAGE RESERVOIR, 45 SQUARE MILES; CAPACITY: 46,655 ACRE-FEET.

MAP SOURCE: UNITED STATES GEOLOGICAL SURVEY, 1973 (REVISED).

DELINEATED BY: ALBERT N. DIEHM, 1931. EDITED BY: ERIKA J. GILMORE, 1975.

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

PUGET SOUND POWER AND LIGHT COMPANY: WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)

BUCKLEY TO DIERINGER

PIERCE COUNTY WASHINGTON

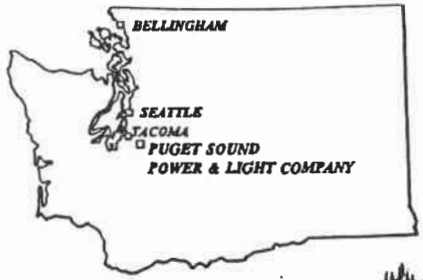
SHEET 3 - 25

HISTORIC AMERICAN ENGINEERING RECORD WA-64

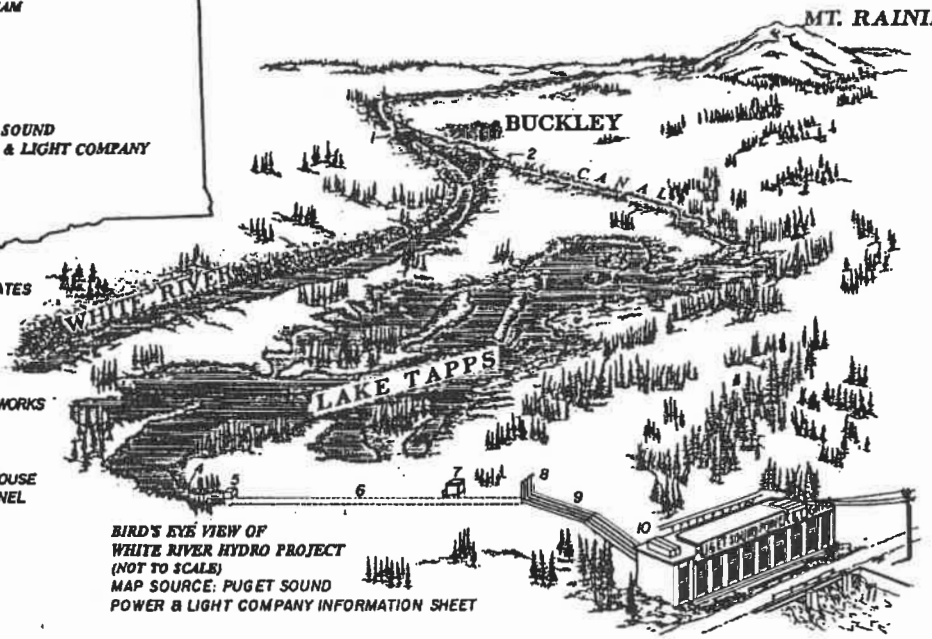
PUGET SOUND POWER & LIGHT CO.

WHITE RIVER HYDRO PROJECT

PARTIAL SERVICE AREA OF PUGET SOUND POWER & LIGHT COMPANY
MAP SOURCE: UNITED STATES GEOLOGICAL SURVEY, WASHINGTON, D.C., 1962
SCALE: 1" = approx. 10.3 miles



WASHINGTON STATE MAP
MAP SOURCE: UNITED STATES GEOLOGICAL SURVEY, WASHINGTON, D.C., 1962



KEY
1. *DIVERSION DAM/HEADWORKS*
2. *FISH SCREENS*
3. *FISH BYPASS*
4. *SUBMERGED FLUME*
5. *TUNNEL INTAKE GATE HOUSE*
6. *CONCRETE LINED TUNNEL*
7. *CIRCULAR FOREBAY*
8. *VALVE HOUSES AND STANDPIPES*
9. *PENSTOCKS*
10. *POWERHOUSE*
11. *TAILRACE*

BIRD'S EYE VIEW OF WHITE RIVER HYDRO PROJECT (NOT TO SCALE)
MAP SOURCE: PUGET SOUND POWER & LIGHT COMPANY INFORMATION SHEET

BY 1925, STONE & WEBSTER'S HYDROELECTRIC SYSTEM IN WESTERN WASHINGTON COMPRISED OVER TWO DOZEN PLANTS. WHITE RIVER SERVED AS THE CONTROLLING PLANT FOR THE COMPANY'S LARGER HYDRO PROJECTS—SNOQUALMIE AND ELECTRON. STONE & WEBSTER'S SUBSIDIARY, THE PUGET SOUND POWER AND LIGHT COMPANY, SERVED THE LARGER CITIES IN WESTERN WASHINGTON—BELLINGHAM, SEATTLE, AND TACOMA—AS WELL AS NUMEROUS TOWNS IN WHATCOM, SKAGIT, SNOHOMISH, KING, PIERCE, THURSTON, LEWIS, AND SEVERAL OTHER COUNTIES. THIS SERVICE AREA WAS SOMEWHAT REDUCED BY THE EARLY 1950s WHEN THE MUNICIPALLY OWNED SEATTLE CITY LIGHT OUSTED THE PRIVATE UTILITY FROM ITS CITY LIMITS. THIS ACTION CAME ON THE HEELS OF THE SEPARATION OF STONE & WEBSTER FROM PUGET SOUND POWER & LIGHT COMPANY. SINCE 1952 PUGET POWER HAS HAD ITS MAIN OFFICES IN BELLEVUE.

ALTHOUGH THE COMPANY UNDERWENT NUMEROUS CHANGES FOLLOWING THE COMPLETION OF THE WHITE RIVER PROJECT IN 1911, THE HYDRAULIC SYSTEM OF WHITE RIVER WAS ONLY SLIGHTLY MODIFIED OVER SEVENTY-FIVE YEARS OF OPERATION. THE HYDRAULIC SYSTEM CONSTRUCTED BY STONE & WEBSTER CONSISTS OF THE HEADWORKS AT BUCKLEY, 8 MILES OF SETTLING BASINS AND CANALS, LAKE TAPPS (WHICH SERVES AS THE STORAGE RESERVOIR FOR THE SYSTEM), A TUNNEL INTAKE AND 12' DIAMETER TUNNEL, A CIRCULAR FOREBAY, PENSTOCKS, SURGE TANKS, TURBINES, AND TAILRACE. ORIGINALLY STONE & WEBSTER BUILT TWO PENSTOCK LINES, WITH A THIRD LINE PLANNED FOR FUTURE EXPANSION. THIS THIRD LINE WAS COMPLETED IN 1918. HOWEVER, WHEN A FOURTH PENSTOCK LINE WAS ADDED IN 1924, STONE & WEBSTER TAPPED INTO THE NO. 1 AND NO. 2 PENSTOCK LINES NEAR THE CIRCULAR FOREBAY. THE MOST SIGNIFICANT CHANGE TO THE WHITE RIVER HYDRAULIC SYSTEM OCCURRED IN THE LATE 1980s WHEN PUGET POWER REPLACED THE WOOD FLUME AND ABOUT 2 MILES OF THE CANAL, BETWEEN THE HEADWORKS AND LAKE TAPPS, WITH A CONCRETE FLUME AND A CONCRETE PIPE. THE WHITE RIVER PLANT RETAINS ITS ORIGINAL TURBINES AND GENERATORS, ALTHOUGH IN RECENT YEARS THE POWERHOUSE HAS BEEN PARTIALLY AUTOMATED.

PUGET SOUND POWER AND LIGHT COMPANY: WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
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SHEET 2 - 25
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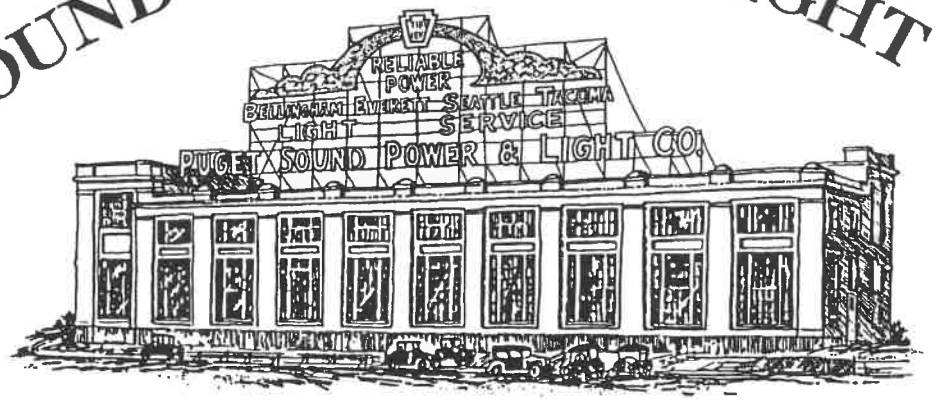
PUGET SOUND POWER & LIGHT COMPANY



WHITE RIVER HYDROELECTRIC POWER PROJECT

BUCKLEY - DIERINGER, WASHINGTON

••• 1912 - 1924 •••

AS EARLY AS 1893 ENGINEERS STUDIED THE WHITE RIVER IN THE AREA OF BUCKLEY, WASHINGTON, FOR THE DEVELOPMENT OF A HYDROELECTRIC FACILITY. THE WHITE RIVER POWER COMPANY, INCORPORATED IN 1895 AND SUBSEQUENTLY LED BY ITS CHIEF ENGINEER CHARLES H. BAKER, PROPOSED TO DIVERT THE WATER OF THE WHITE RIVER AT BUCKLEY, AND CONDUCT IT THROUGH A CANAL, NEARLY FIVE MILES LONG, TO A RESERVOIR CONSTRUCTED ON TOP OF THE ENUMCLAW PLATEAU. FROM THE RESERVOIR THE WATER WAS TO BE CONVEYED THROUGH A SHORT CANAL AND TUNNEL, INTO STEEL PENSTOCKS, DROPPING ABOUT 450 FEET TO THE TURBINES IN THE POWERHOUSE, WHICH WAS TO HAVE A CAPACITY OF 90,000 HORSEPOWER. AN UNLINED TAILRACE WAS TO CONDUCT WATER FROM THE POWERHOUSE INTO THE STUCK RIVER.

BAKER'S WHITE RIVER POWER COMPANY ULTIMATELY LOST THE PROJECT TO ITS RIVAL, THE TACOMA INDUSTRIAL COMPANY, A FIRM WHICH HAD TIES TO THE BOSTON BASED STONE AND WEBSTER COMPANY. IN 1909 THE PACIFIC COAST POWER COMPANY, ANOTHER STONE AND WEBSTER SUBSIDIARY, LED BY ENGINEER SAMUEL L. SHUFFLETON, BEGAN CONSTRUCTION WORK ON THE WHITE RIVER PROJECT. IT WAS COMPLETED TWO YEARS LATER, EMPLOYING NEARLY THE SAME DESIGN AS THAT ORIGINALLY PROPOSED BY BAKER.

WHEN THE POWERHOUSE WAS PLACED ON LINE IN 1911 IT BOASTED OF THE LARGEST DOUBLE-DISCHARGE SINGLE-RUNNER HORIZONTAL HIGH-HEAD FRANCIS TURBINES IN EXISTENCE. OPERATING UNDER A HEAD OF 440 FEET, THE TWO TURBINE UNITS WERE DIRECTLY CONNECTED TO GENERAL ELECTRIC THREE PHASE 6,600 VOLT GENERATORS EACH RATED AT 10,000 KILOWATTS. STONE AND WEBSTER'S SUBSIDIARY, PUGET SOUND TRACTION, LIGHT AND POWER COMPANY, EXPANDED THE POWERHOUSE TWICE. IN 1918 AN ADDITIONAL TURBINE GENERATOR UNIT WAS INSTALLED VIRTUALLY IDENTICAL TO THE EXISTING UNITS. THE GREATEST EXPANSION, HOWEVER, OCCURRED IN 1924-25 WHEN PUGET POWER CONSTRUCTED ADDITIONS TO THE NORTH AND SOUTH, INSTALLING A FOURTH PENSTOCK LINE AND TURBINE GENERATOR UNIT, AS WELL AS NEW EXCITERS AND TRANSFORMERS.

THIS RECORDING PROJECT IS PART OF THE HISTORIC AMERICAN ENGINEERING RECORD (HAER), A LONG-RANGE PROGRAM TO DOCUMENT HISTORICALLY SIGNIFICANT ENGINEERING AND INDUSTRIAL WORKS IN THE UNITED STATES. THE HAER PROGRAM IS ADMINISTERED BY THE NATIONAL PARK SERVICE, U.S. DEPARTMENT OF THE INTERIOR. DOCUMENTATION OF THE WHITE RIVER HYDROELECTRIC POWER PROJECT WAS CO-SPONSORED FROM 1988-92 BY HAER AND PUGET SOUND POWER AND LIGHT COMPANY, BELLEVUE, WASHINGTON. THE DOCUMENTATION WAS PREPARED UNDER THE GENERAL DIRECTION OF GRAY FITZSIMONS, HAER HISTORIAN, AND ROBERT J. KAPSCH, CHIEF, HABS/HAER. THE TEAM INCLUDED ARCHITECT ALLAN SOLLER, AND ARCHITECTURAL TECHNICIANS ALEJANDRO L. LAURIA, DOUGLAS PANCOAST, DENNIS McGRATH, ROBERT G. COLOSIMO, AND ALBERT DEBNAM. FORMAL PHOTOGRAPHY WAS DONE BY JET LOWE, HAER, AND PUGET POWER PHOTOGRAPHERS ROBIN TEDDER AND BRIAN MORRIS.

ALSO OF PUGET POWER ASSISTING THE TEAM WAS BARRY LOMBARD, SENIOR ENVIRONMENTAL SCIENTIST, AND GENE GALLAWAY, RON McCABE, PHILLIP FIX, AND CALVIN MARTIN AT THE WHITE RIVER POWERHOUSE.

DELINEATED BY: ROBERT G. COLOSIMO, 1991. EDITED BY: ERIKA J. GLADDE, 1993.

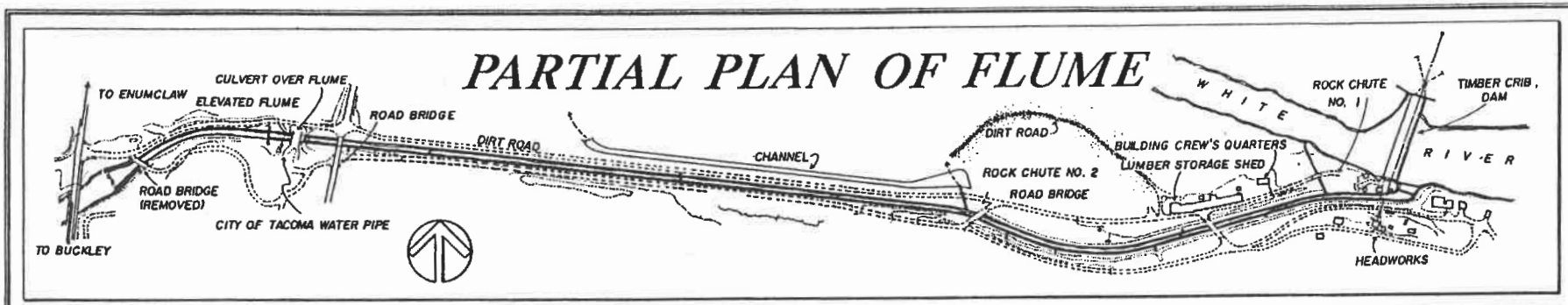
PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
BUCKLEY TO DIERINGER
WASHINGTON

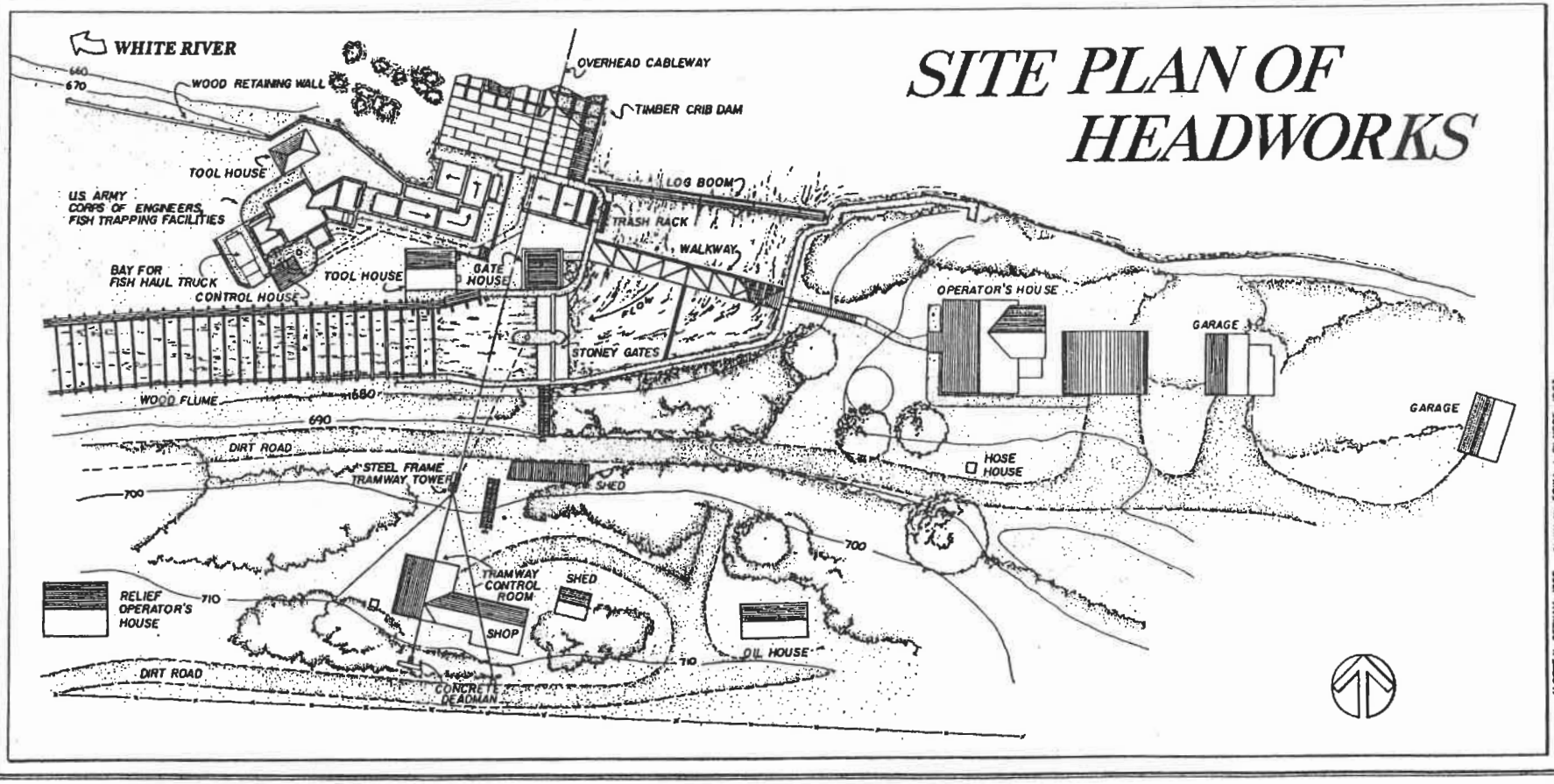
WHITE RIVER HYDROELECTRIC RECORDING PROJECT

SHEET 1 - 25

HISTORIC AMERICAN ENGINEERING RECORD

WA-44





DELINEATED BY: ALBERT H. DEMAIA, 1992.
EDITED BY: ERNA J. GILMORE, 1993.
WHITE RIVER HYDROELECTRIC RECORDING PROJECT

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY

BUCKLEY TO DIERINGER

HISTORIC AMERICAN ENGINEERING RECORD
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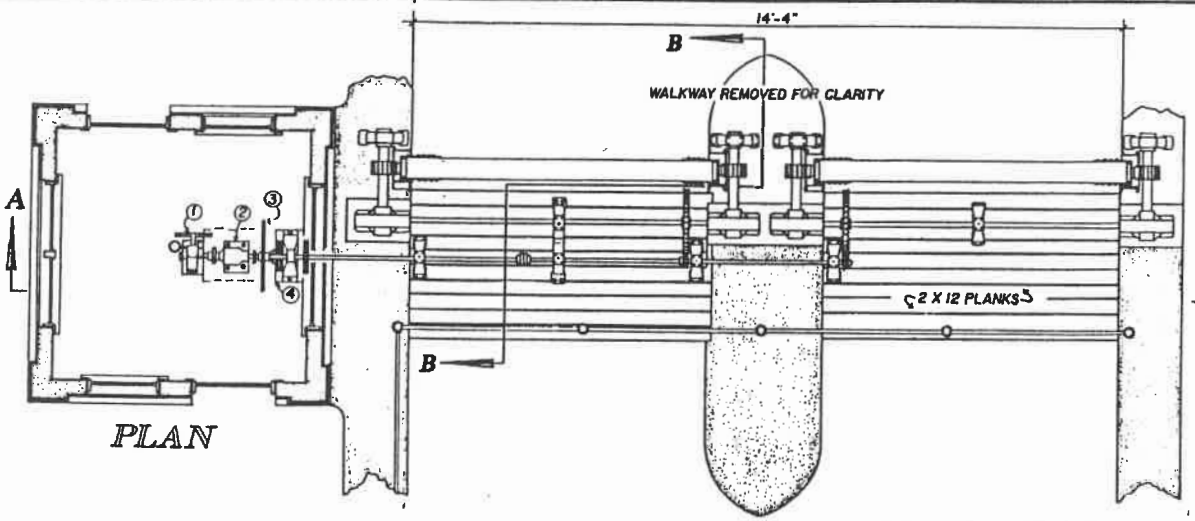
WASHINGTON

HEADGATE HOUSE AND STONEY GATES



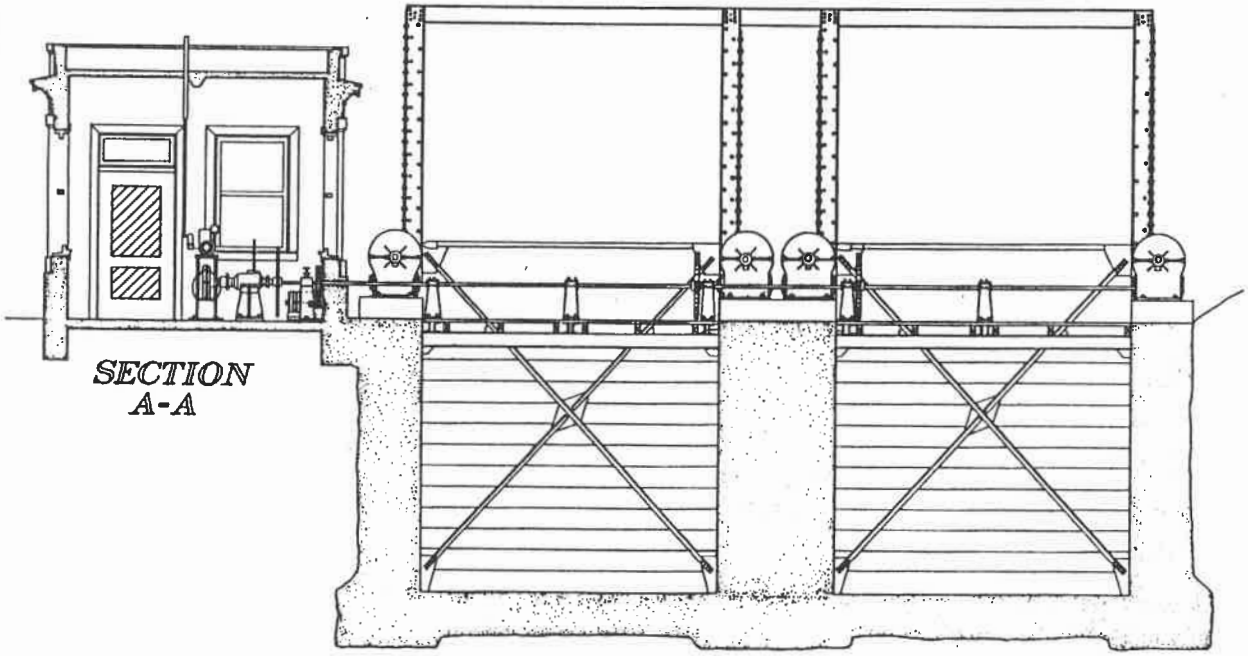
PLAN

1 GASOLINE ENGINE MANUFACTURED BY WISCONSIN MOTOR CORPORATION (REPLACED THE ORIGINAL FAIRBANKS-MORSE GASOLINE ENGINE) USED FOR POWERING STONEY GATES.

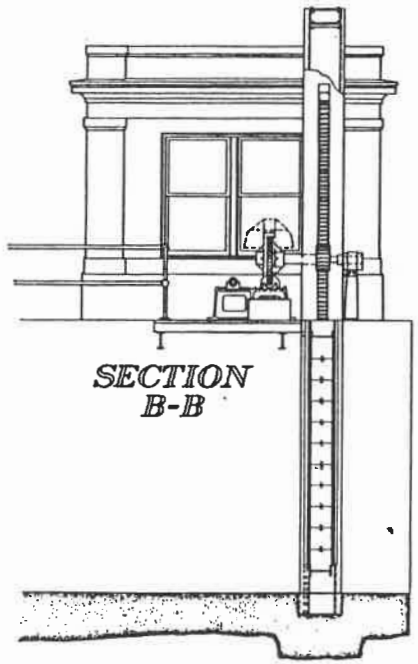
2 CAST IRON REVERSE GEAR AND BRACKET BY BALDRIDGE MACHINE COMPANY

3 CAST IRON HAND WHEEL

4 ELECTRIC MOTOR.



SECTION A-A



SECTION B-B

PUGET SOUND POWER AND LIGHT COMPANY
WHITE RIVER HYDROELECTRIC PROJECT (1912-1941)
PIERCE COUNTY
WASHINGTON

BUCKLEY TO DIERINGER

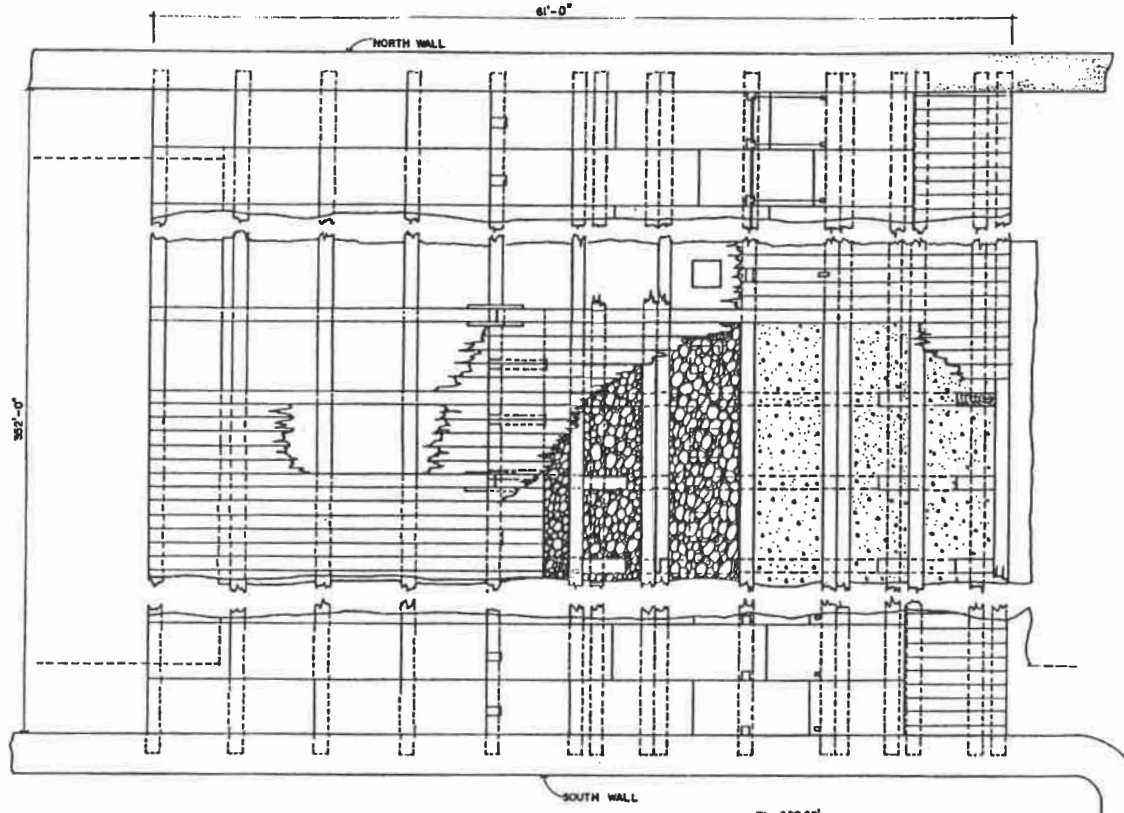
SHEET 5 - 25

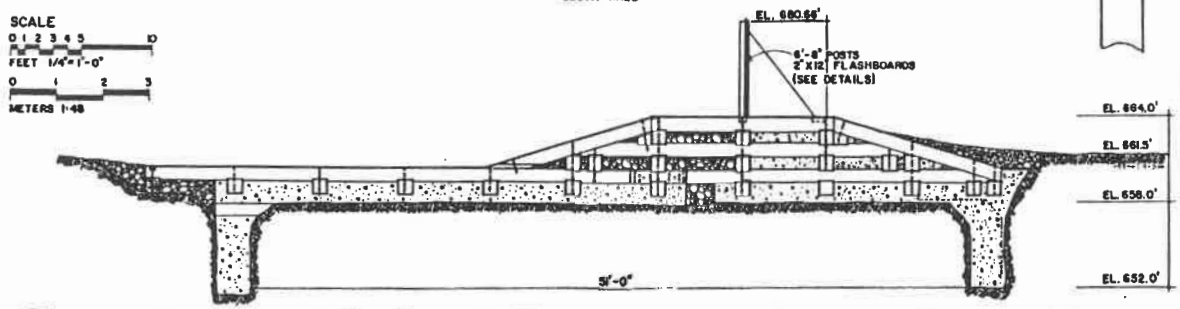
HISTORIC AMERICAN ENGINEERING RECORD

WA-64

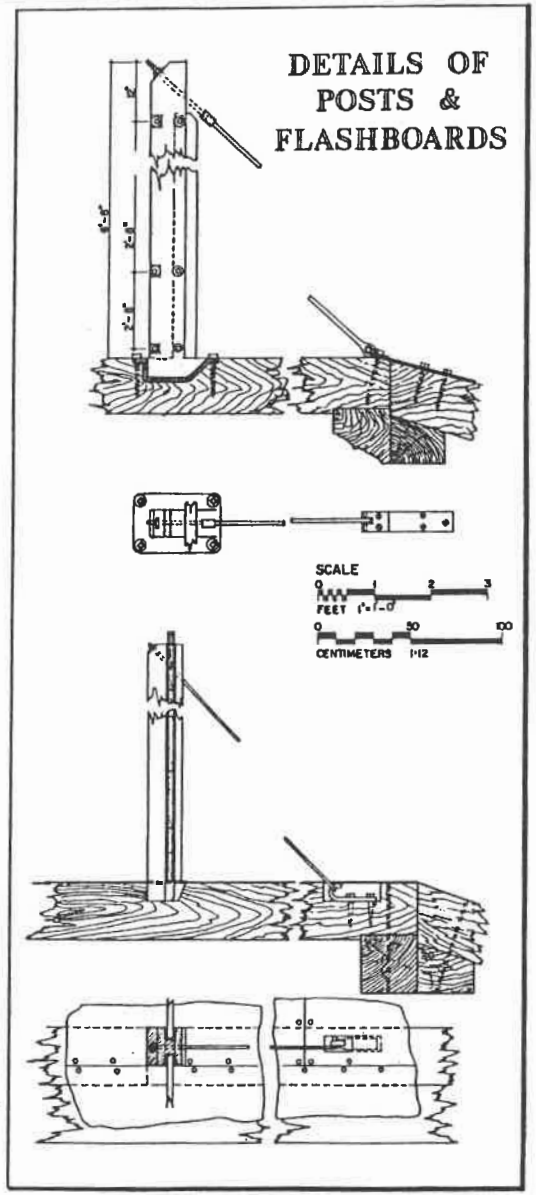
DELINEATED BY: ALAN SOLLER, 1991. EDITED BY ALBERT N. REDMAN, 1992, & ERIKA J. GILMORE, 1993.

WHITE RIVER HYDROELECTRIC RECORDING PROJECT



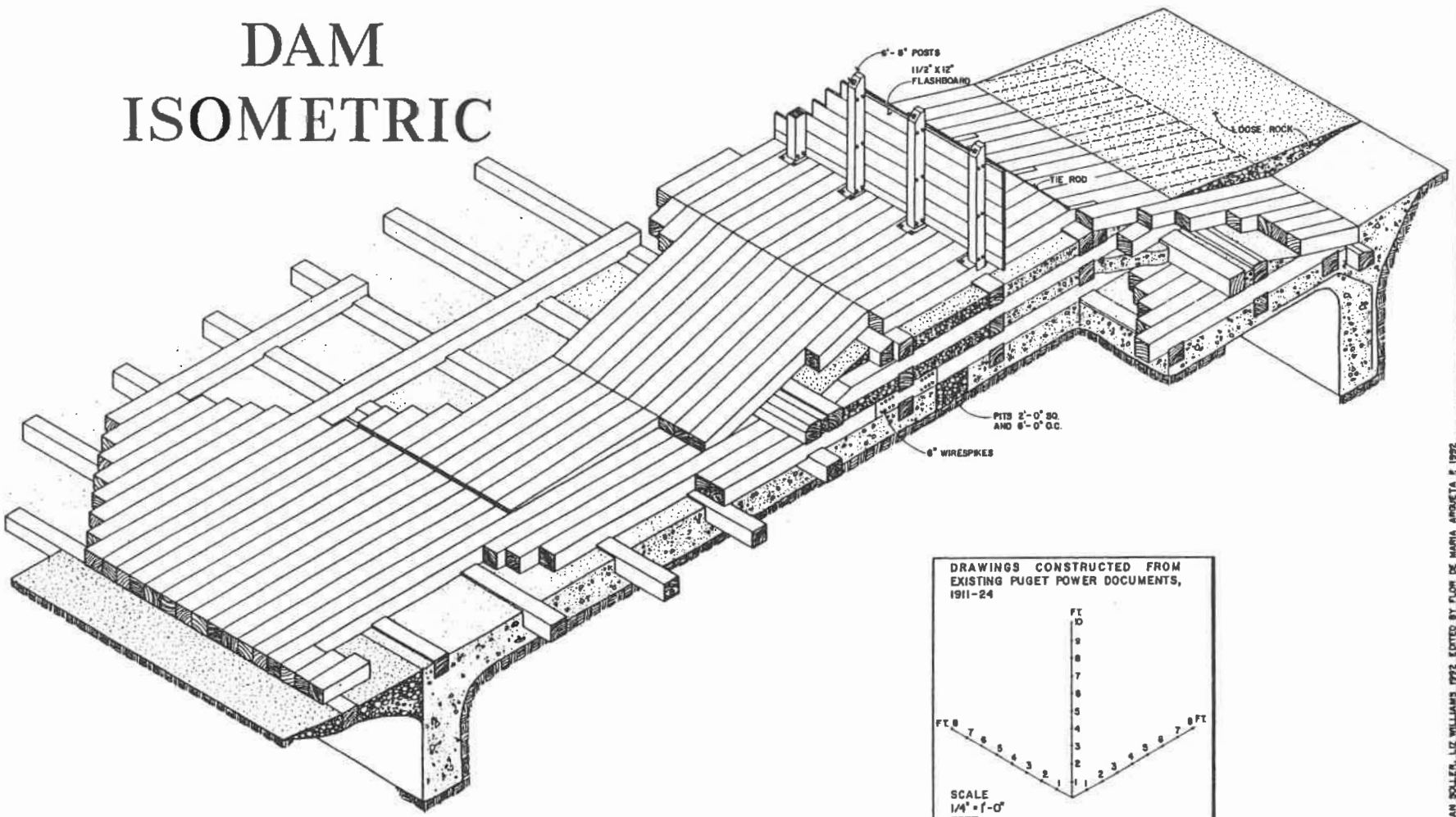


CRIB DAM: PLAN & SECTION



PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY WASHINGTON
BUCKLEY TO DIERINGER
SHEET 6-25
HISTORIC AMERICAN ENGINEERING RECORD WA-64
DELINEATED BY ELIZABETH WILLIAMS, ALIAH J. SOULER 1992
WHITE RIVER HYDROELECTRIC RECORDING PROJECT

TIMBER CRIB DAM ISOMETRIC



DRAWINGS CONSTRUCTED FROM EXISTING PUGET POWER DOCUMENTS, 1911-24

SCALE
1/4" = 1'-0"
FEET
1:46
METERS

DELINEATED BY ALAN SOLLER, LIZ WILLIAMS, 1972. EDITED BY FLOR DE MARIA ARGUETA © 1972

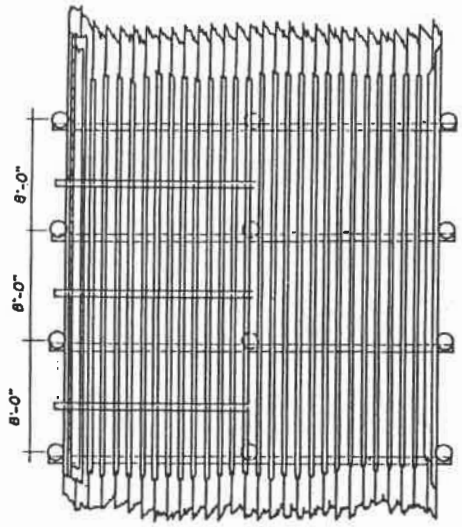
WHITE RIVER HYDROELECTRIC RECORDING PROJECT

BUCKLEY TO DIERINGER

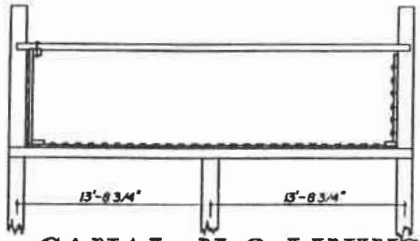
PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON

SHEET 7 - 25

HISTORIC AMERICAN ENGINEERING RECORD
WA-64

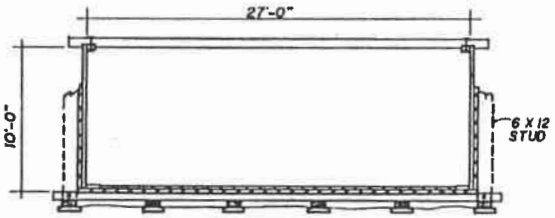


PARTIAL PLAN OF FLUME FOR CANAL No. 2 LINING

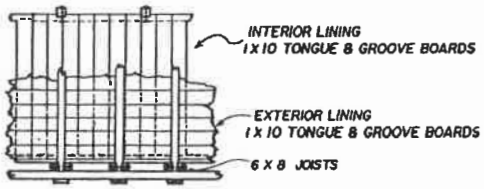


CANAL No. 2 LINING

BETWEEN THE HEADWORKS AT BUCKLEY AND THE RESERVOIR FORMING LAKE TAPPS, THE FLOW LINE COMPRISES A NUMBER OF DIFFERENT FLUME TYPES. THE FIRST 3,000 FEET OF THE FLOW LINES FEATURE THREE OF THE FOUR TYPES OF FLUMES SHOWN ON THIS SHEET. ONLY CANAL NUMBER 2 LINING IS ABSENT -- THIS FLUME TYPE IS LOCATED BELOW DINGLE BASIN.



SECTION No. 1 IN CUT



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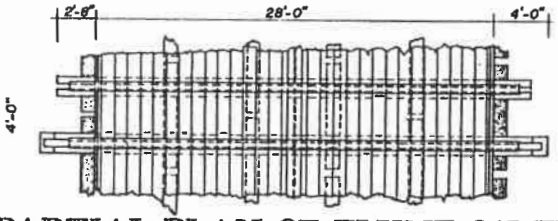
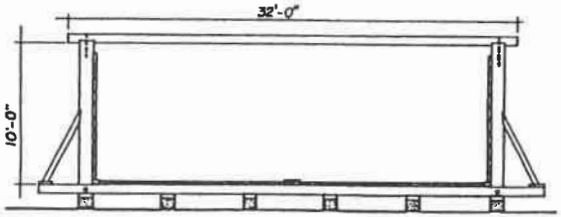
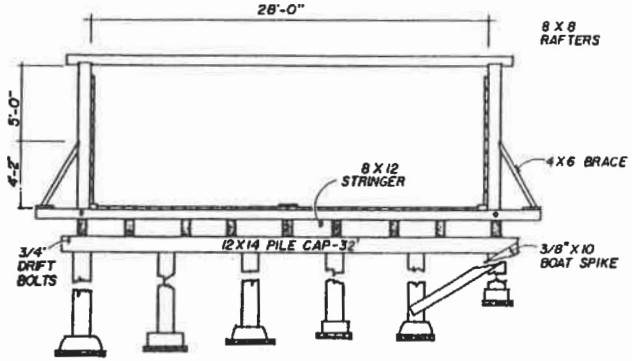


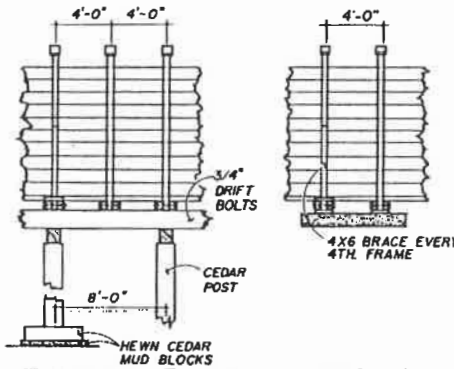
PARTIAL PLAN OF FLUME ON FILL



FLUME No. 1 ON FILL



SECTION OF FLUME No. 1 ON TRESTLE



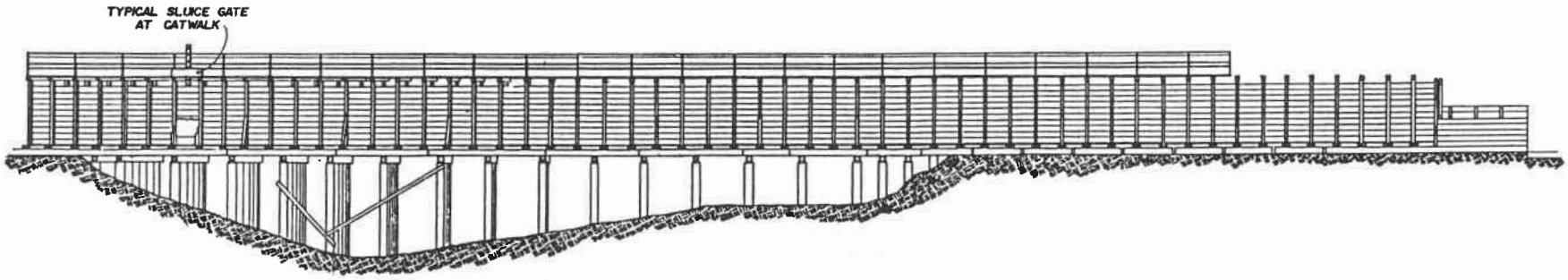
PARTIAL ELEVATIONS FLUME ON TRESTLE

FLUME PLANS, SECTIONS, ELEVATIONS

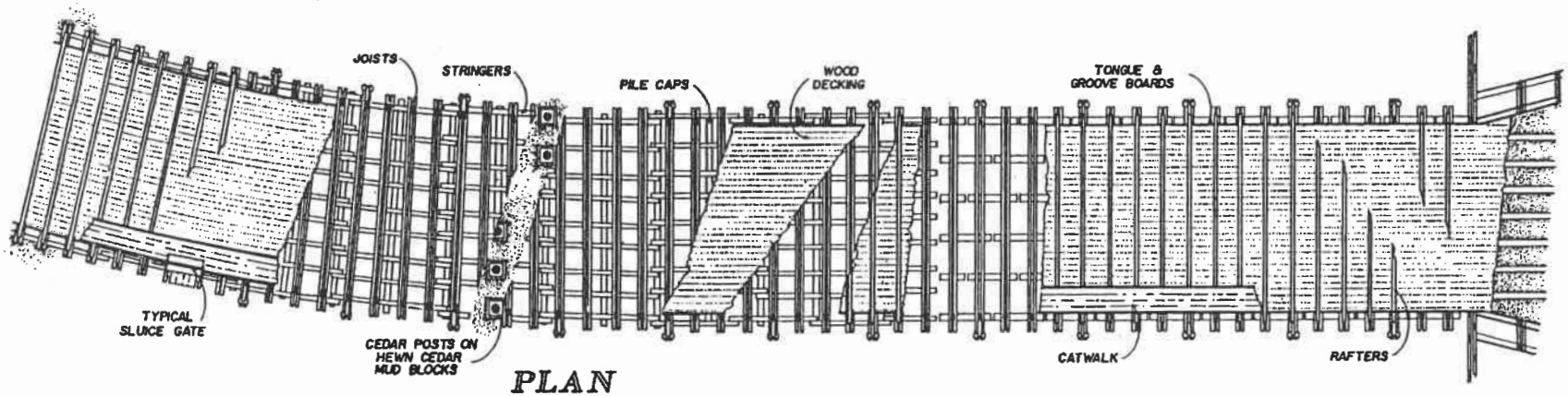
NOT TO SCALE

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON
BUCKLEY TO DIERINGER
WHITE RIVER HYDROELECTRIC RECORDING PROJECT
HISTORIC AMERICAN ENGINEERING RECORD
WA-64
SHEET 8-25

DELINEATED BY: ALAN J. SOLLER, 1932. EDITED BY FLOR DE MARIA ARGUETA, P. 1992 & ERNA J. GILMORE, 1993.



ELEVATION



PLAN

FLUME PLAN & ELEVATION AT TRESTLE

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON

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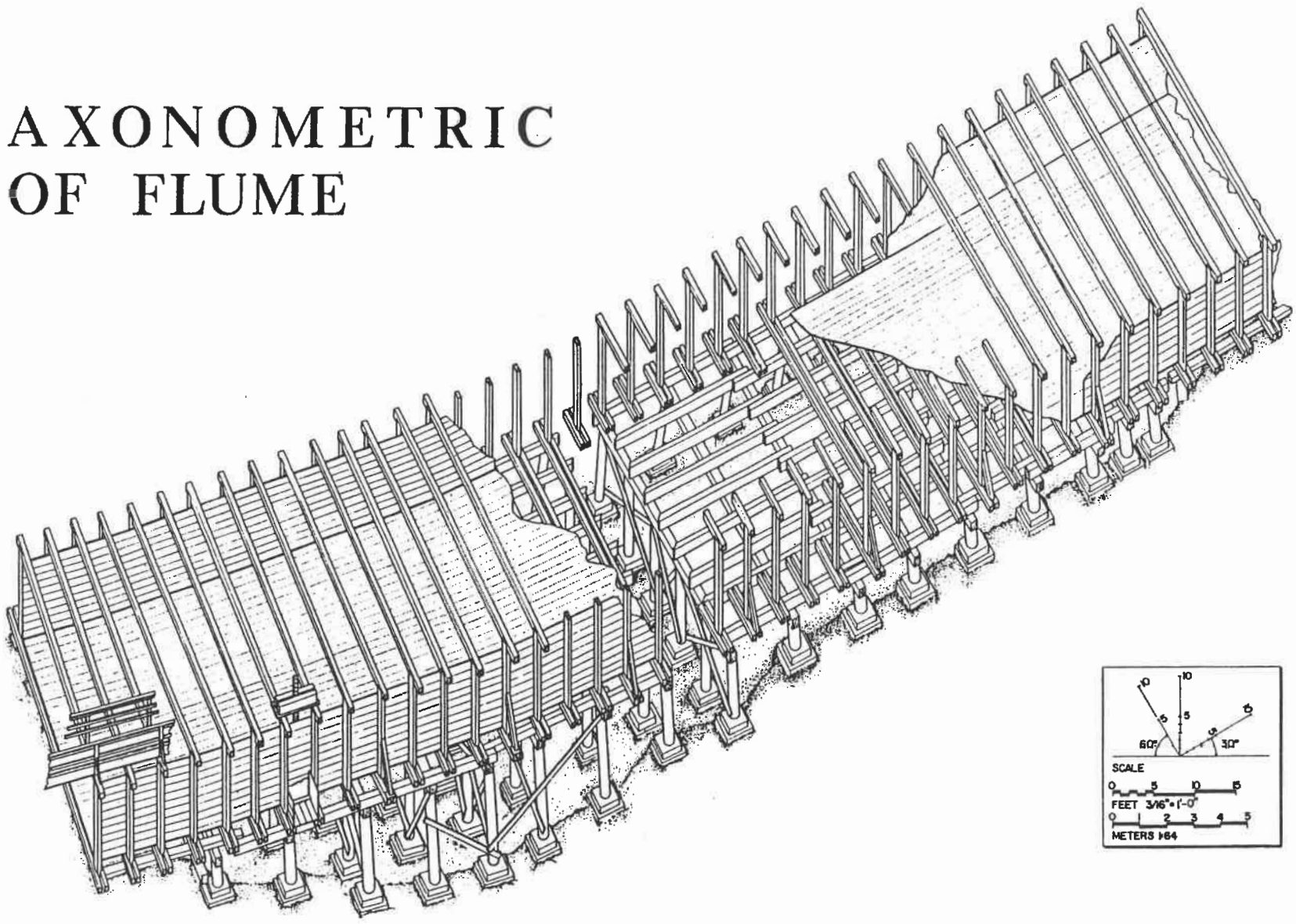
WHITE RIVER HYDROELECTRIC RECORDING PROJECT

BUCKLEY TO DIERINGER

DELINEATED BY: ALBERT DEBHAM, 1992

AXONOMETRIC OF FLUME



PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY

BUCKLEY TO DIERINGER

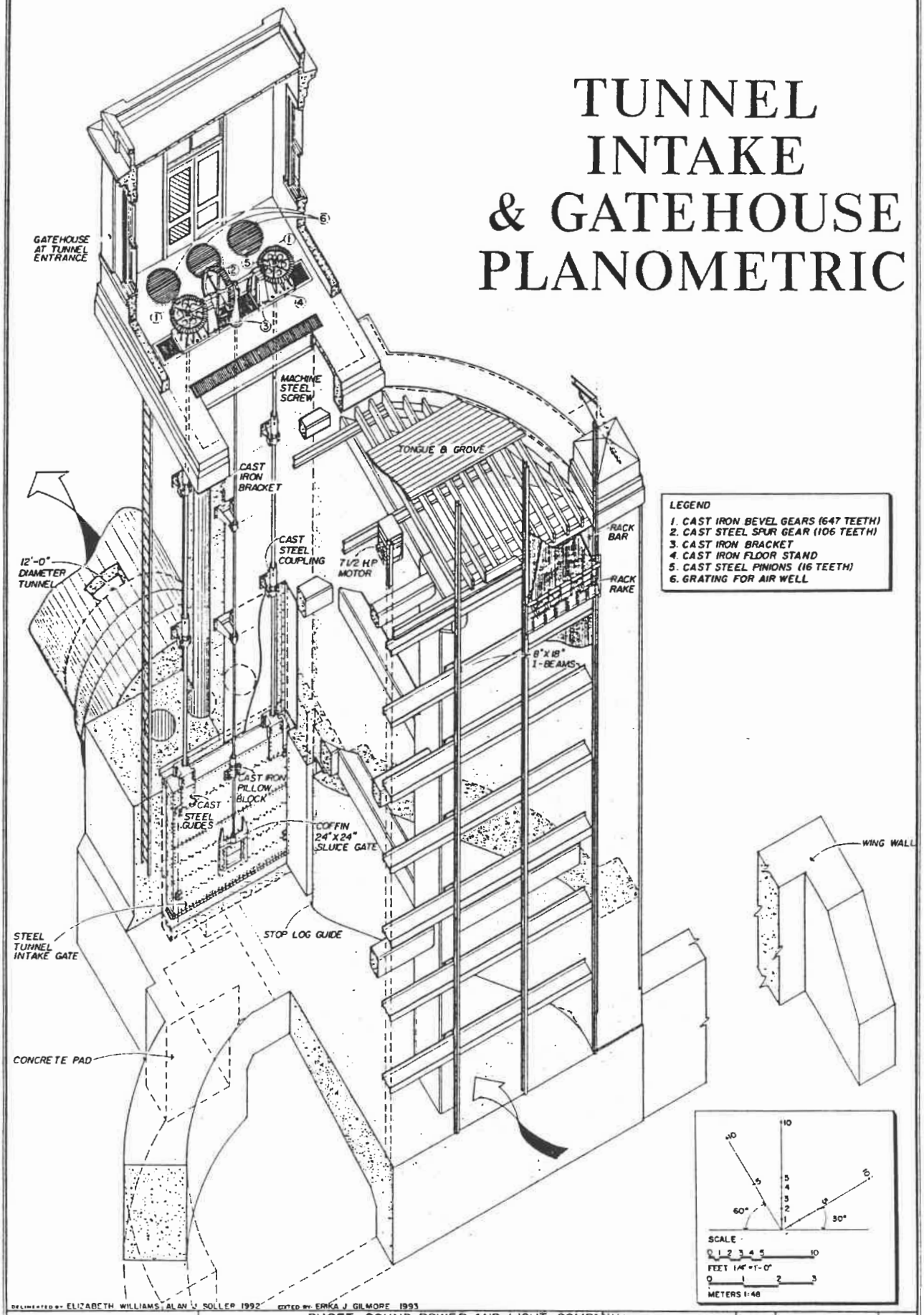
WASH WHITOM 10-25

HISTORIC AMERICAN ENGINEERING RECORD WA-44

DELINEATED BY: ALLAN SOLLER, JEFF. ALBERT, DENNA M. 1992. EDITED BY: ERIKA J. GLADEK, 1993.

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

TUNNEL INTAKE & GATEHOUSE PLANOMETRIC



DELINEATED BY: ELIZABETH WILLIAMS, ALAN J. SOLLER 1992 EDITED BY: ERIKA J. GILMORE 1993

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912 - 1924)
BUCKLEY TO DIERINGER
PIERCE COUNTY
WASHINGTON

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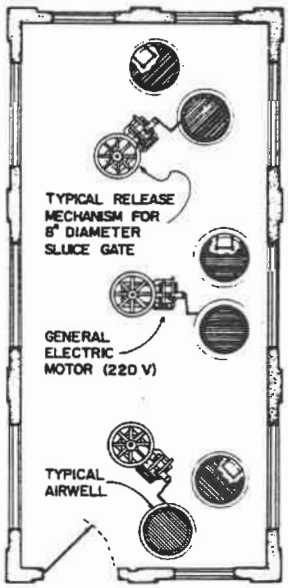
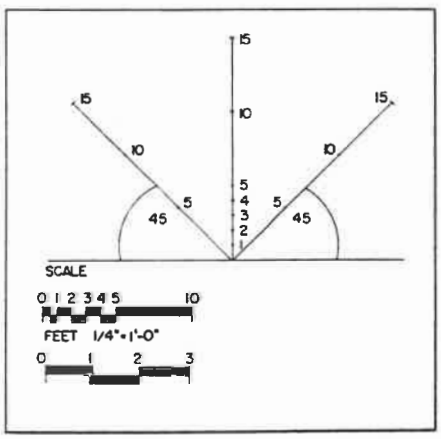
HISTORIC AMERICAN ENGINEERING RECORD

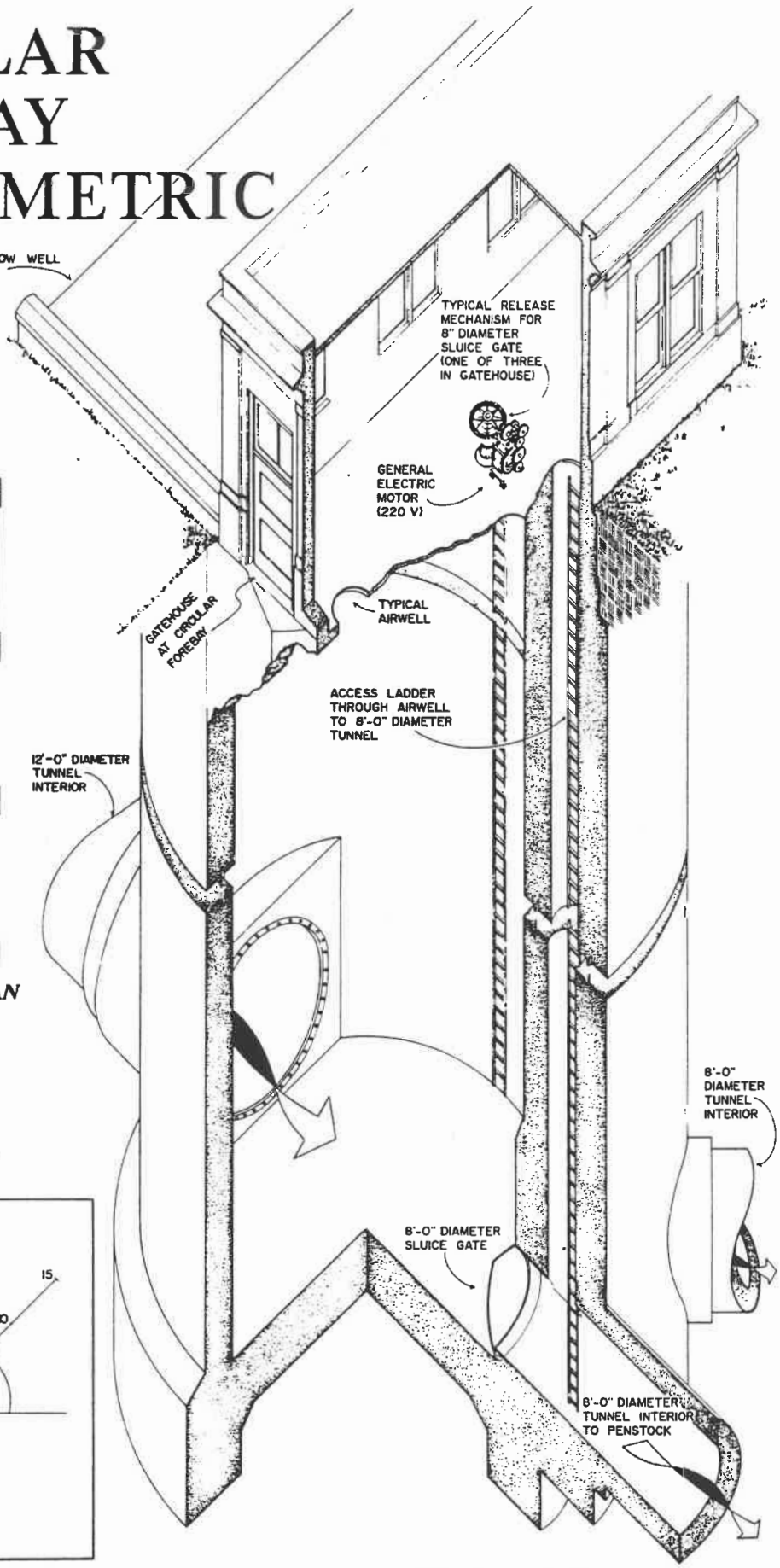
WA-64

CIRCULAR FOREBAY AXONOMETRIC



GATEHOUSE FLOOR PLAN

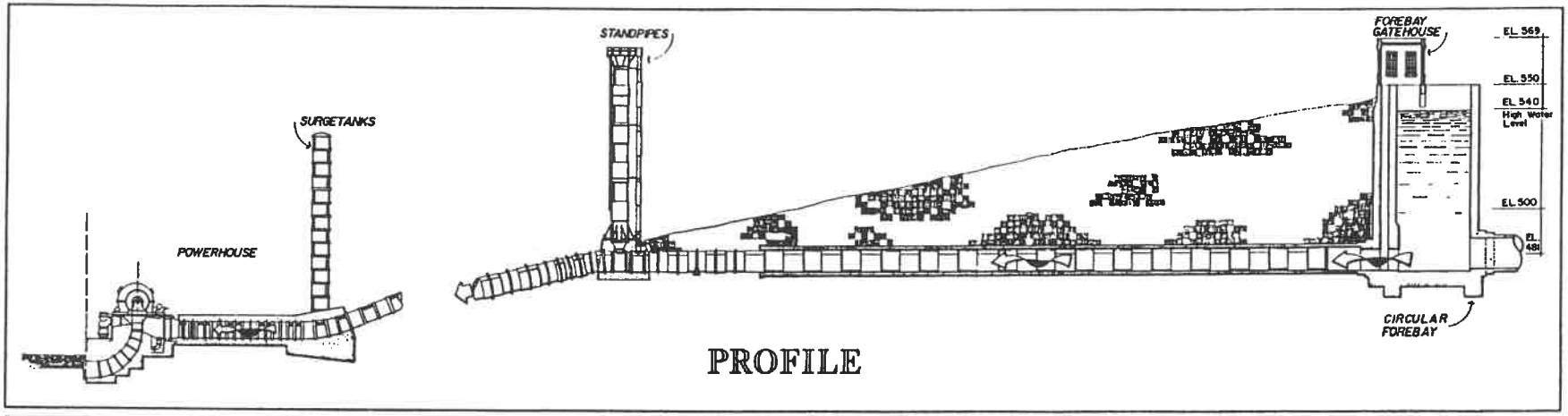




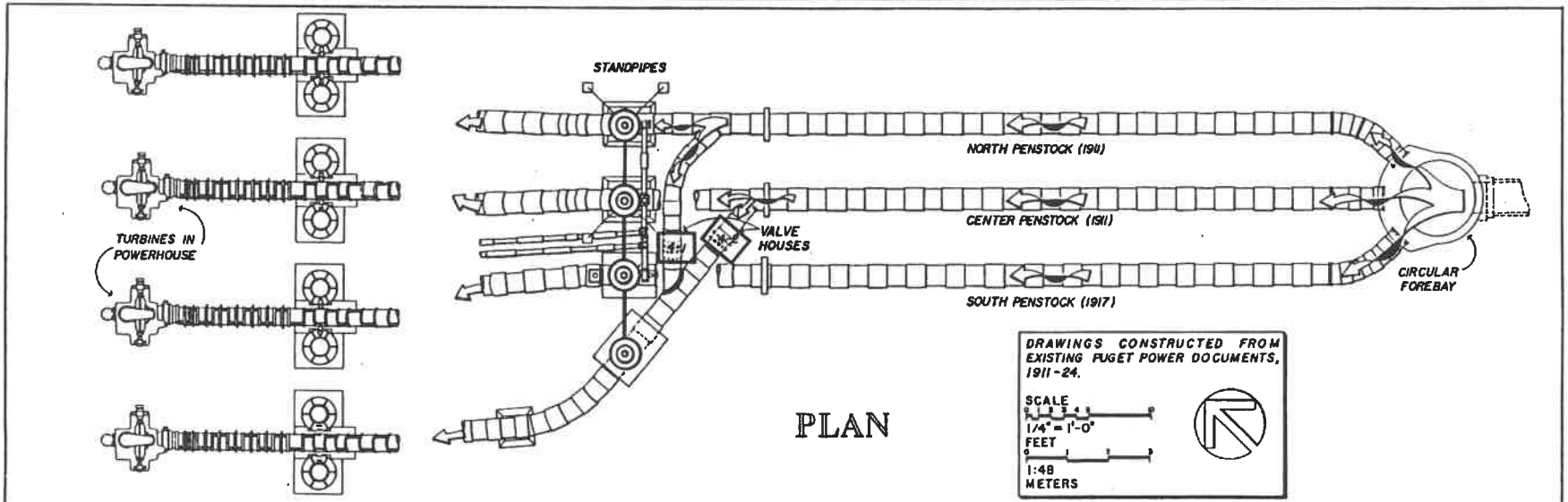
DELINEATED BY ALBERT DEBNAM, 1992. EDITED BY ERIKA J. GILMORE, 1993.

WHITE RIVER HYDROELECTRIC RECORDING PROJECT NATIONAL PARK SERVICE MINTER BY & FOR DEPARTMENT OF THE INTERIOR	PUGET SOUND POWER AND LIGHT COMPANY: WHITE RIVER HYDROELECTRIC PROJECT (1912-1914) BUCKLEY TO DIERINGER WASHINGTON	SHEET 12 - 25	HISTORIC AMERICAN ENGINEERING RECORD	WA-64

PENSTOCKS, STANDPIPES & VALVE HOUSES



PROFILE



PLAN

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON

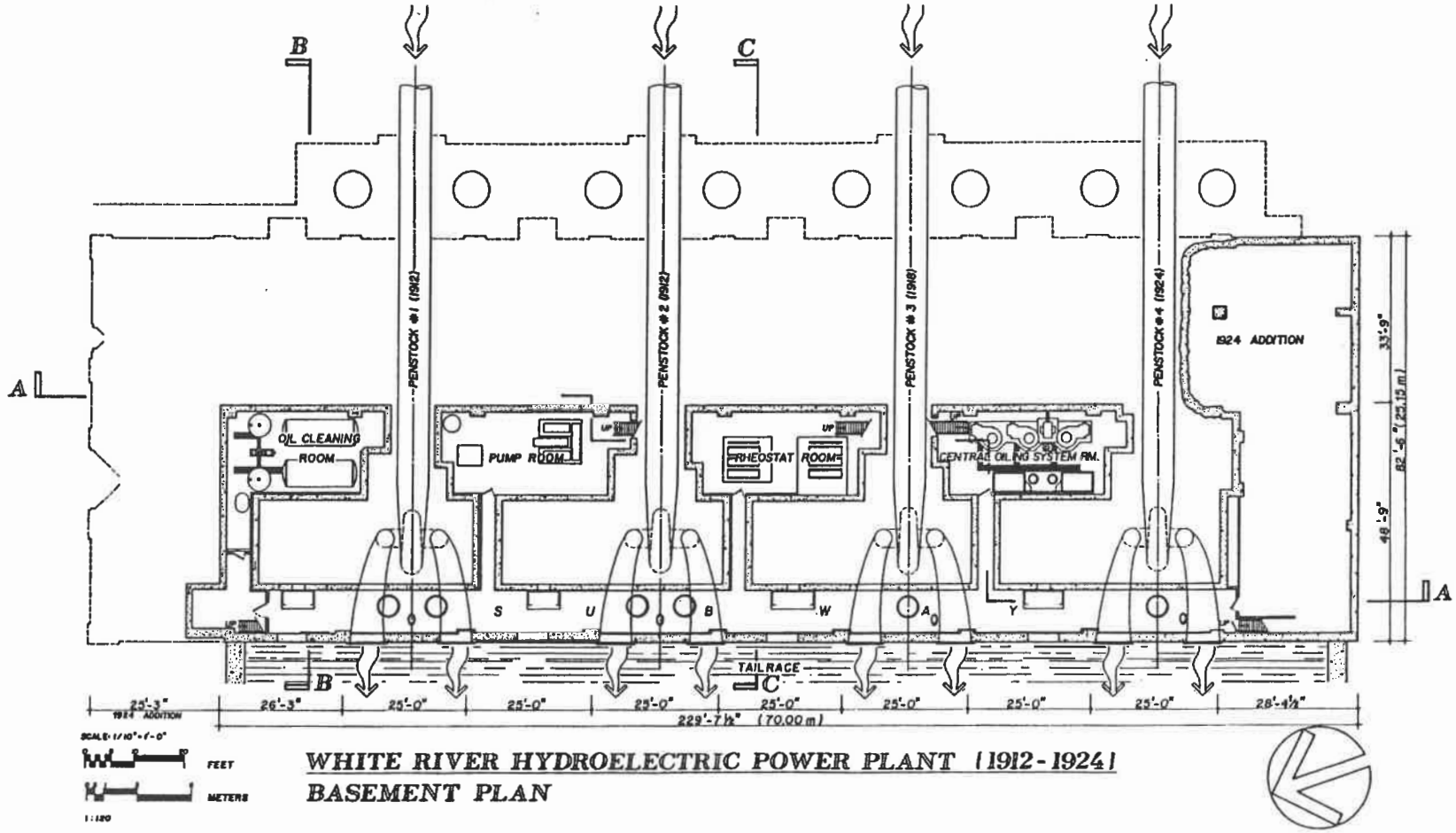
SHEET 13 OF 25

HISTORIC AMERICAN ENGINEERING RECORD
WA-64

DELINEATED BY: ALBERT N. DEBNAM, FLOR DE MARIA ARGUETA P. 1992

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

BUCKLEY TO DIERINGER



WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)

BASEMENT PLAN

SUBMITTED BY: OOLO PANCOAST, 1989; ROSE ET AL, COLOSIMO, CHANTELLE SUTTER, LEP, 1991

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

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BUCKLEY TO ENUMCLAW

Generator Unit # 1 (1911)

- 1A G.E. 10,000 kW, 6600 volts, 3 phase generator
- 1B Allis Chalmers double discharge, single runner, high head, 18,000 hp. Francis Type turbine
- 1C Main bearing
- 1D Thrust bearing
- 1E Emergency Brake
- 1F Coupling
- 1G Relief valve
- 1H Allis Chalmers oil-operated governor
- 1J Butterfly valve control
- 1K Insulated bearing

Generator Unit # 2 (1911)

- 2A G.E. 10,000 kW, 6600 volts, 3 phase generator
- 2B Allis Chalmers double discharge, single runner, high head, 18,000 hp. Francis Type turbine
- 2C Main bearing
- 2D Thrust bearing
- 2E Emergency Brake
- 2F Coupling
- 2G Relief valve
- 2H Allis Chalmers oil-operated governor
- 2J Butterfly valve control
- 2K Insulated bearing

Generator Unit # 3 (1918)

- 3A G.E. 16,000 kW, 6600 volts, 3 phase generator
- 3B Allis Chalmers double discharge, single runner, high head, 23,000 hp. Francis Type turbine
- 3C Main bearing
- 3D Thrust bearing
- 3E Emergency Brake
- 3F Coupling
- 3G Relief valve
- 3H Allis Chalmers oil-operated governor
- 3J Butterfly valve control
- 3K Insulated bearing

Generator Unit # 4 (1924)

- 4A G.E. 20,000 kW, 6600 volts, 3 phase generator
- 4B Allis Chalmers double discharge, single runner, high head, 23,000 hp. Francis Type turbine
- 4C Main bearing
- 4D Thrust bearing
- 4E Emergency Brake
- 4F Coupling
- 4G Relief valve
- 4H Allis Chalmers oil-operated governor
- 4J Butterfly valve control
- 4K Insulated bearing

Exciter Unit # 1 & 2 (1911 replaced 1924)

- 5A Allis Chalmers single nozzle, 500 hp. impulse wheel
- 5B G.E. 340 kW DC generator
- 5C Governor
- 5D Needle valve
- 5E Gate valve

Surge Tanks & Penstocks # 's 1-4

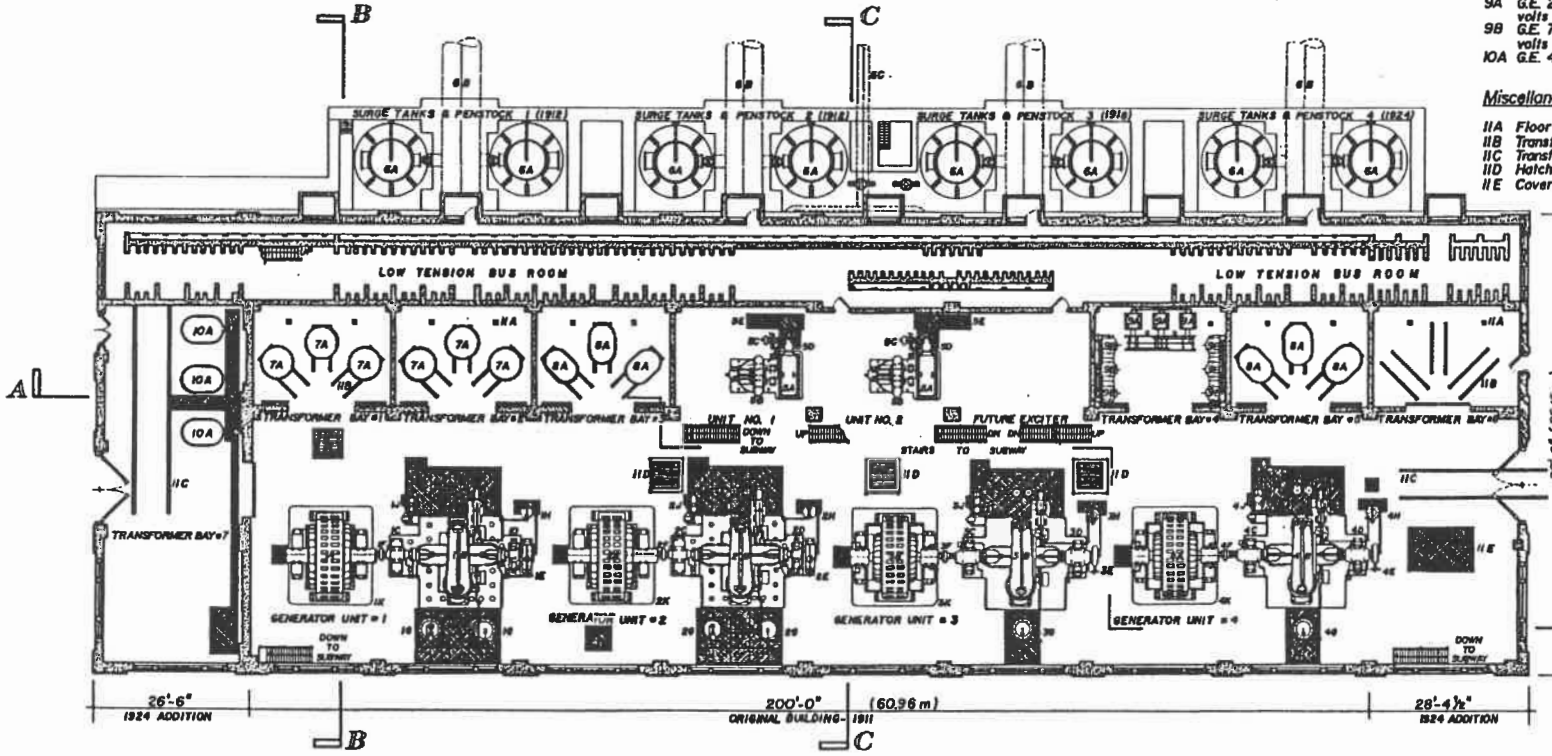
- 6A 7'-0" dia. surge tank
- 6B 6'-6" dia. riveted steel penstock
- 6C Exciter penstock

Transformer Bay # 's 1-7

- 7A G.E. 3300kW, 3 phase, oil insulated, water cooled, 55,000/6600 volts transformers. Current stepped up to 55,000 volts for transmisson (1911)
- 8A G.E. 9000 kVA, 3 phase, oil insulated, water cooled, 55,000/6600 volts transformers. Current stepped up to 55,000 volts for transmission (Bay # 2 1918, Bay # 5 1924)
- 9A G.E. 200 kW, 6600/23,000 volts transformers
- 9B G.E. 75 kW, 6600/220 volts transformers
- 10A G.E. 4500 kVA transformers

Miscellaneous

- 11A Floor drain, typical
- 11B Transformer rails, typical
- 11C Transfer car tracks
- 11D Hatchway & railing
- 11E Covered hatchway



SCALE : 1/10" = 1'-0"

0 5 10 20 FEET

0.5 1 3 6 METERS

1:120

WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)

FIRST FLOOR PLAN

DELINEATED BY: ALEJANDRO, LUCIO LAURIA, 1969; ROBERT G. COLOSIMO, CHANTELLE BUTZNER, 1991

EDITED BY: ERIKA J. GILMORE, 1993.

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

BUCKLEY TO DIETRICH

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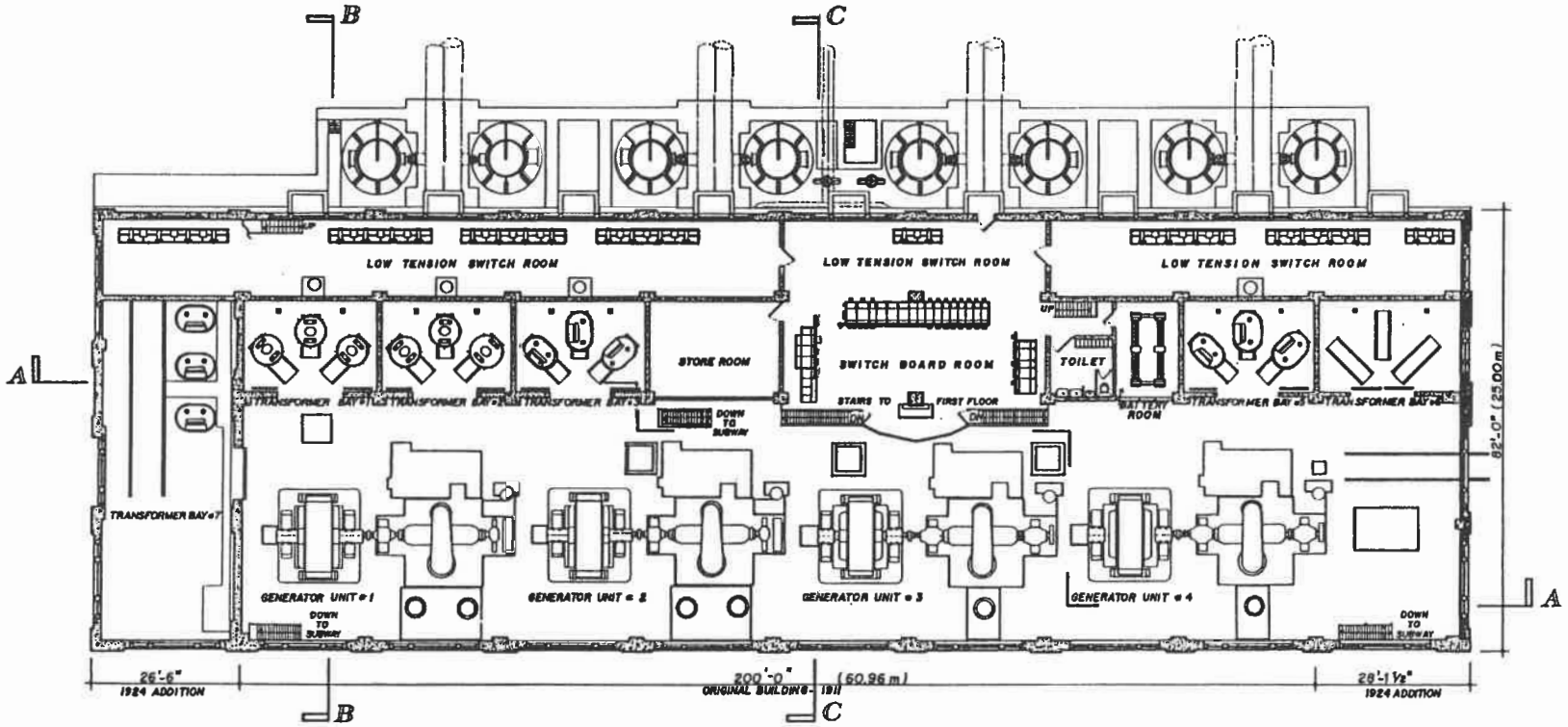

SCALE: 1/10" = 1'-0"

FEET

METERS

1:120

WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)

SECOND FLOOR PLAN

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

DELINEATED BY ALEJANDRO LUCIO LAURIA, 1989; ROBERT G. COLOSIMO, CHANTELLE GUTZWILLER, 1991.

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY

BUCKLEY TO DIERINGER

WASHINGTON

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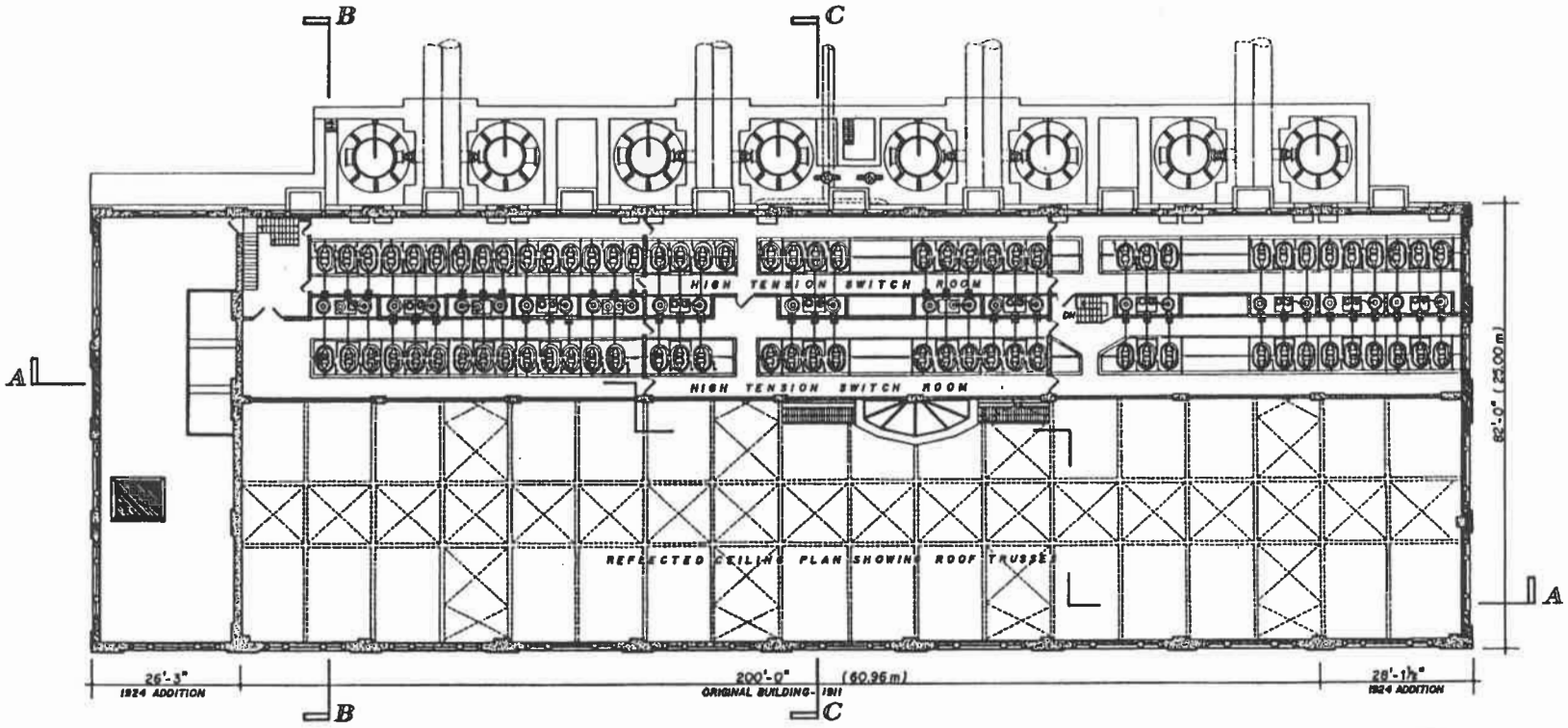

SCALE : 1/10"=1'0"

FEET

METERS

1:120

WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)

THIRD FLOOR PLAN

DELINEATED BY: ALEJANDRO LUCIO LAURIA, 1989; ROBERT S. COLOSIMO, CHANTELLE GUTZWILLER, 1991

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON

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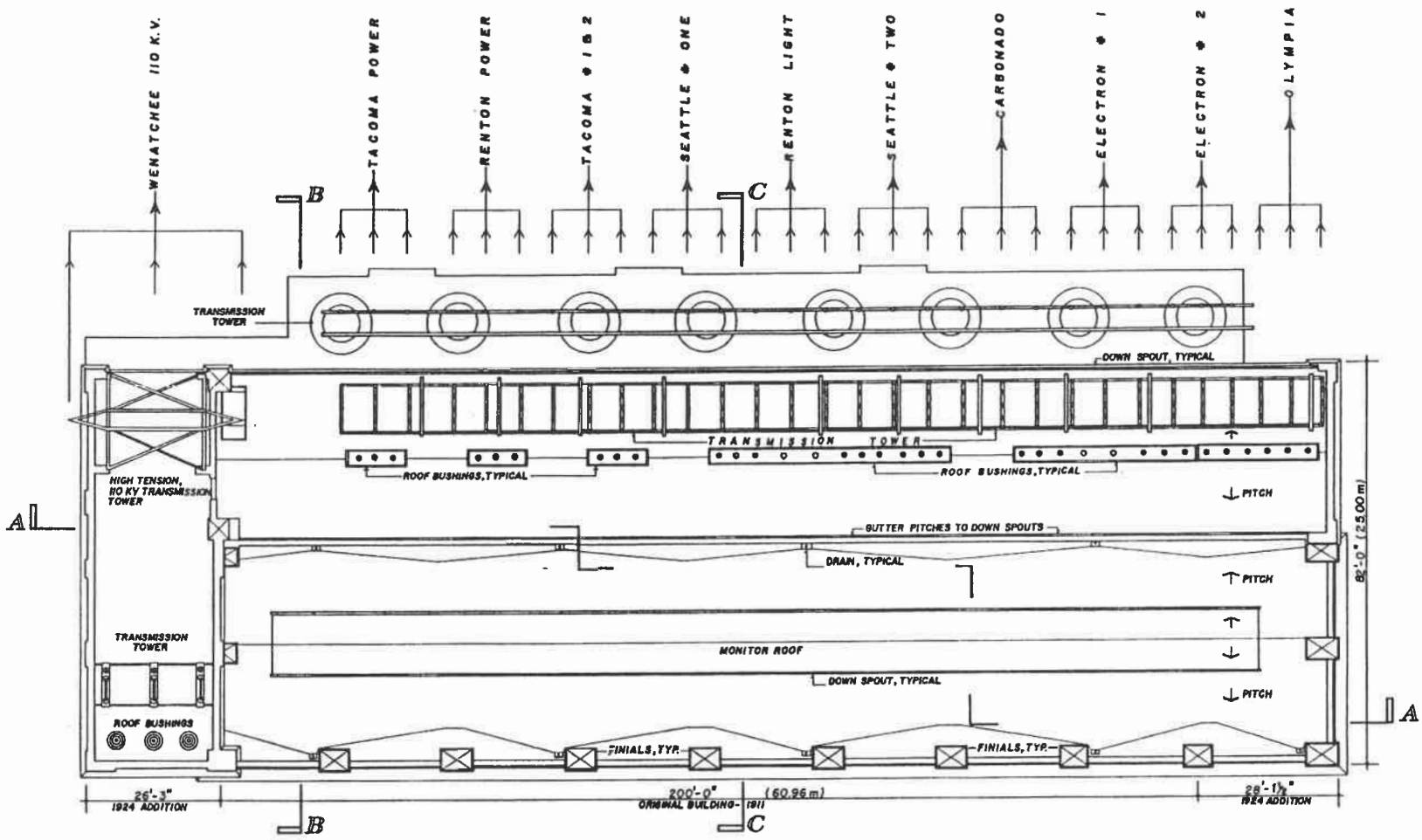
PURSUANT TO DETERMINER



WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)

ROOF PLAN

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON

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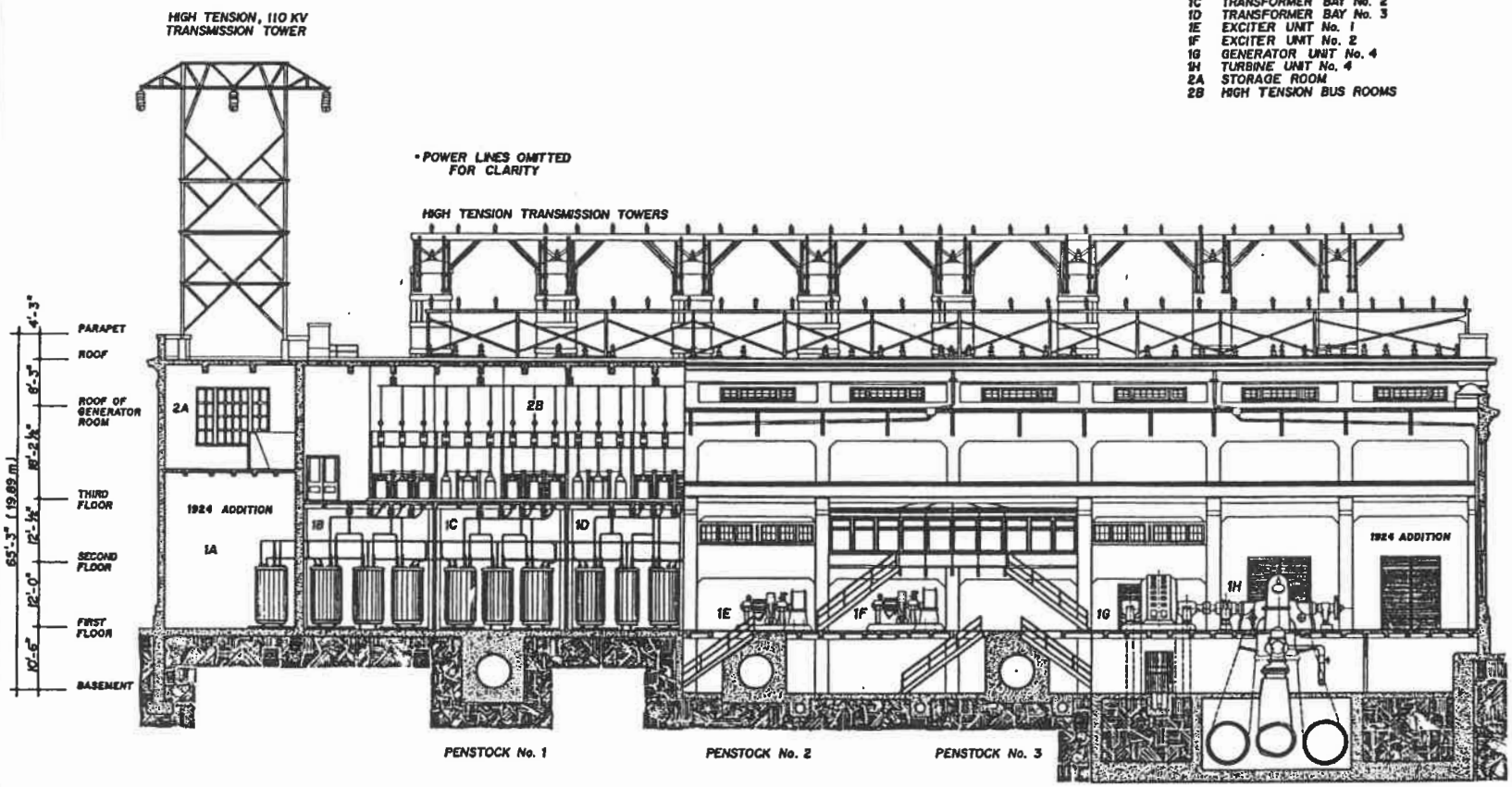
WHITE RIVER HYDROELECTRIC RECORDING PROJECT

RELOCATED BY: DENNIS McGRATH, 1989; ROBERT G. COLOSIMO, CHANTELLE DUTTWILER, 1991.

BUCKLEY TO DIERINGER

REPRODUCED, PLEASE CREDIT HISTORIC AMERICAN ENGINEERING RECORD, NATIONAL PARK SERVICE, NAME OF SEL/MISATION, DATE OF THE DRAWING



SCALE : 1/10=1'-0"

FEET

METERS

1:120

WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)

LONGITUDINAL SECTION - AA

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON

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HISTORIC AMERICAN ENGINEERING RECORD

WA-64

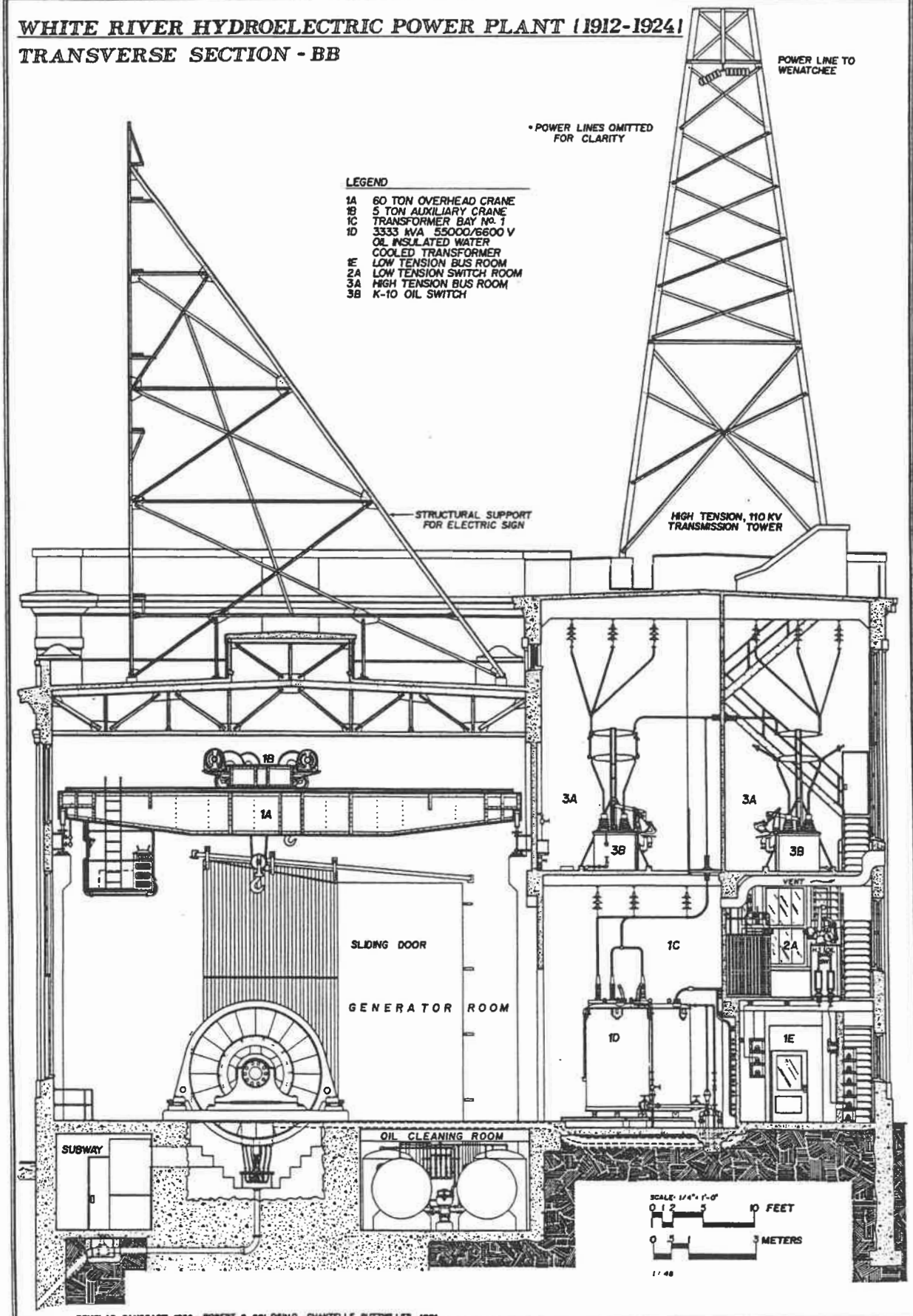
DELINEATED BY: ALEJANDRO LUCIO LAURIA, 1993; ROBERT G. COLCORD, CHANTELLE BUTTRILL, 1994

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

BUCKLEY TO DIERINGER

WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)

TRANSVERSE SECTION - BB



DELINEATED BY: DOUGLAS PANCOAST, 1989; ROBERT B. COLOSIMO, CHANTELLE BUTZWELLER, 1991.

WHITE RIVER HYDROELECTRIC RECORDING PROJECT
NATIONAL PARK SERVICE
HISTORIC AMERICAN ENGINEERING RECORD

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
BUCKLEY TO DIERINGER
PIERCE COUNTY
WASHINGTON

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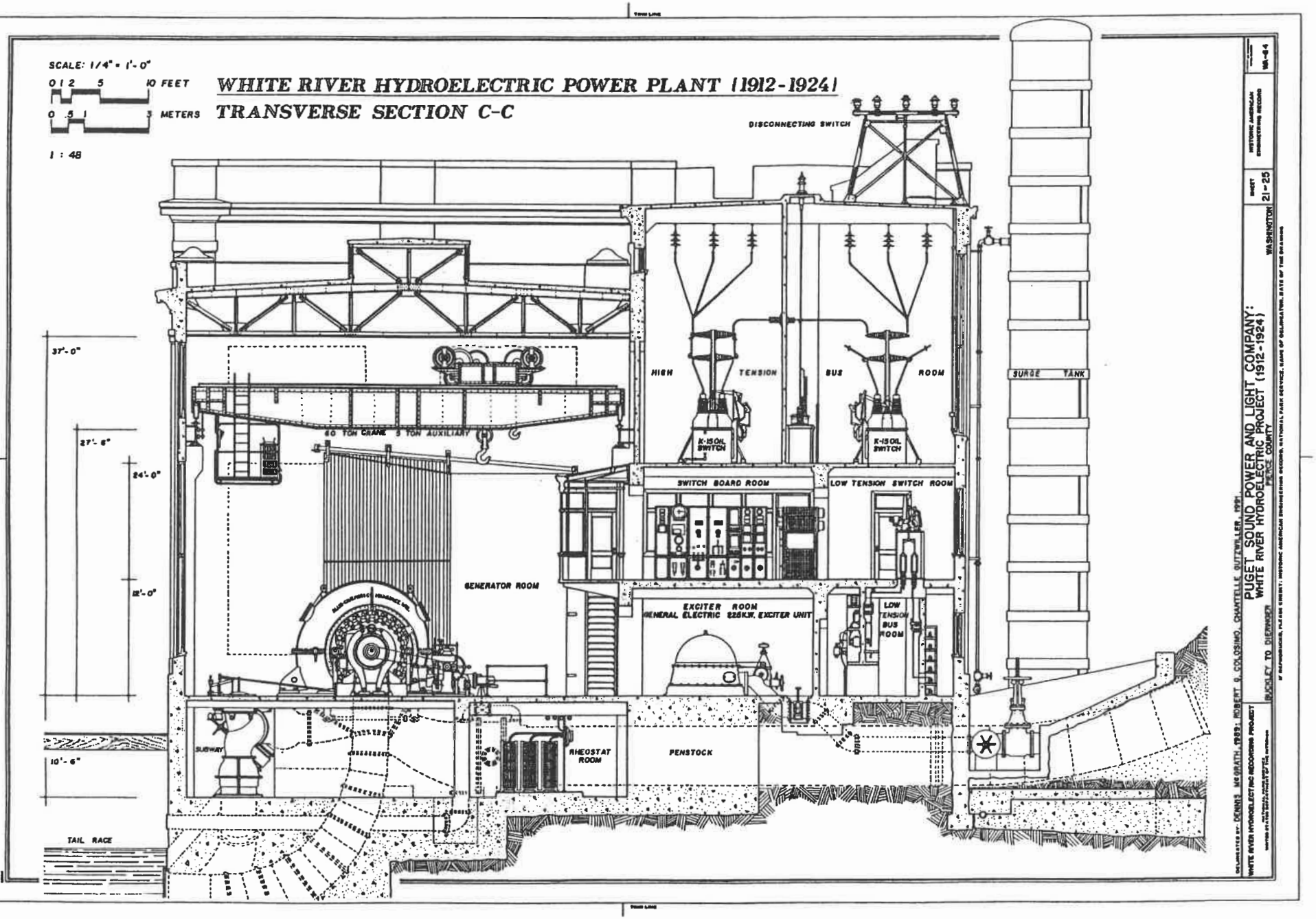
SCALE: 1/4" = 1'-0"
0 1 2 5 10 FEET
0 .5 1 3 METERS
1 : 48
WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)
TRANSVERSE SECTION C-C
DISCONNECTING SWITCH
HIGH TENSION BUS ROOM
SURGE TANK
60 TON CRANE 5 TON AUXILIARY
K-150L SWITCH
K-150L SWITCH
SWITCH BOARD ROOM
LOW TENSION SWITCH ROOM
GENERATOR ROOM
EXCITER ROOM
GENERAL ELECTRIC 225KW. EXCITER UNIT
LOW TENSION BUS ROOM
37'-0"
27'-6"
24'-0"
12'-0"
10'-6"
SUBWAY
RHEOSTAT ROOM
PENSTOCK
TAIL RACE
PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON
SHEET 21-25
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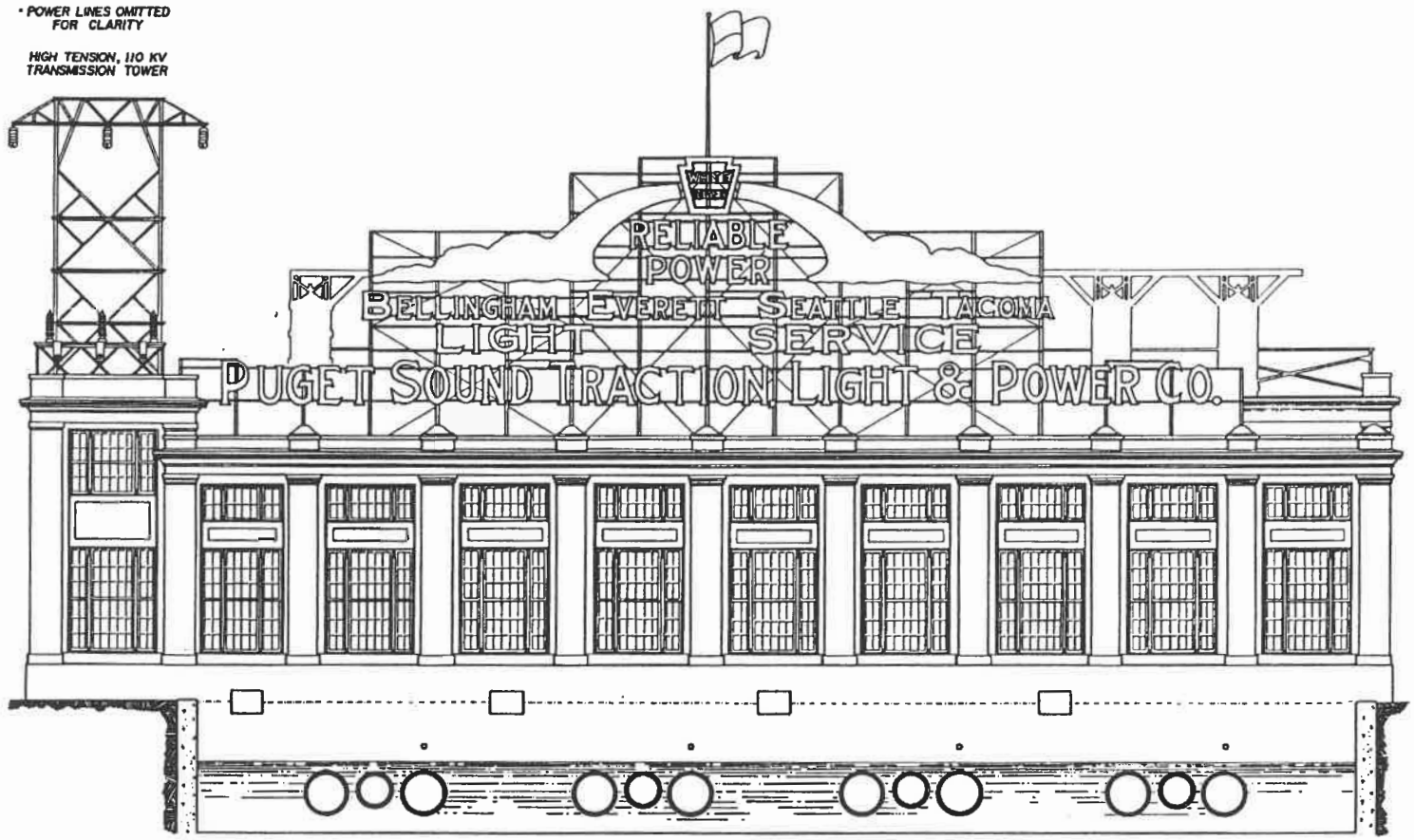
WA-44
WHITE RIVER HYDROELECTRIC RECORDING PROJECT
SUBJECT TO DIETRICH



SCALE: 1/10" = 1'-0"

FEET

METERS

1:120

WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)

WEST ELEVATION

DELINEATED BY DENNIS McGRATH, 1993; ROBERT G. COLOSIMO, CHANTELLE GUTZMILLER, 1991.

WHITE RIVER HYDROELECTRIC RECONNAISSANCE PROJECT

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
BUCKLEY TO DIERINGER
WASHINGTON

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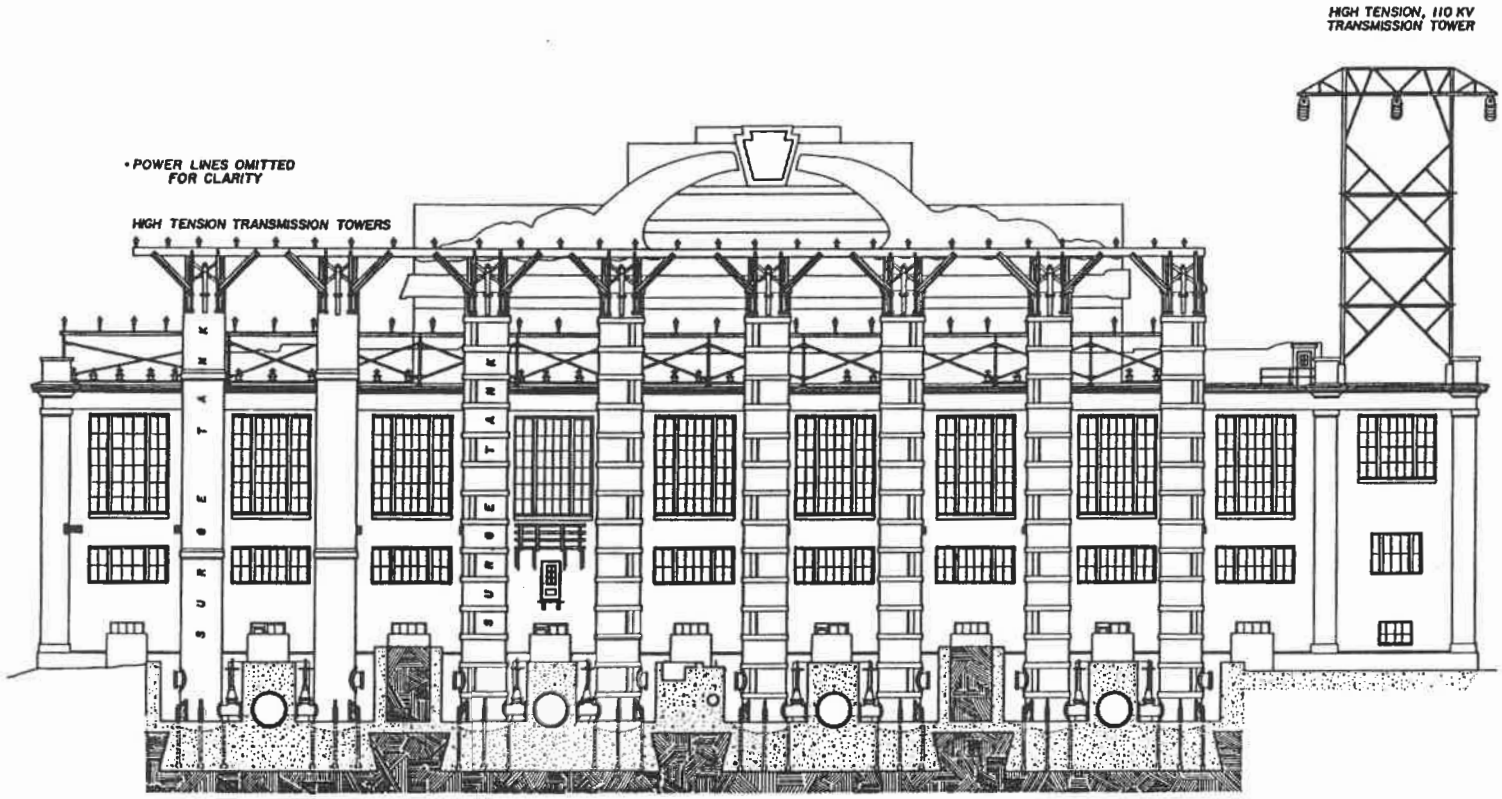


SCALE: 1/10" = 1'-0"
0 5 10 20 FEET
METERS
1:120

WHITE RIVER HYDROELECTRIC POWER PLANT (1912-1924)
EAST ELEVATION

PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912-1924)
PIERCE COUNTY
WASHINGTON

SHEET 23-25

HISTORIC AMERICAN ENGINEERING RECORD WA-64

DELINEATED BY DOUGLAS MACOAST, 1992; ROBERT B. COLOSIMO, CHANTELLE GUTZELLER, 1991.

WHITE RIVER HYDROELECTRIC RECORDING PROJECT

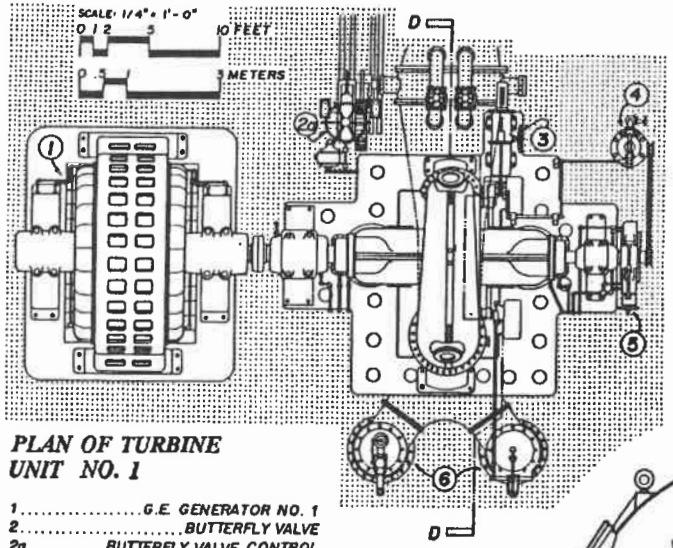
BUCKLEY, TO D. ERINGER

WHITE RIVER POWERHOUSE: TURBINE UNIT NO. 1

PUGET SOUND TRACTION POWER & LIGHT CO. WHITE RIVER HYDRO ELECTRIC PLANT TURBINE UNIT NO. 1 INSTALLED AUGUST 31, 1911.
ENGINEERED BY STONE & WEBSTER BOSTON, MASSACHUSETTS.
MANUFACTURED BY ALLIS CHALMERS CO. MILWAUKEE, WISC.
SINGLE RUNNER - DOUBLE DISCHARGE
FRANCIS TYPE - HIGH HEAD TURBINE

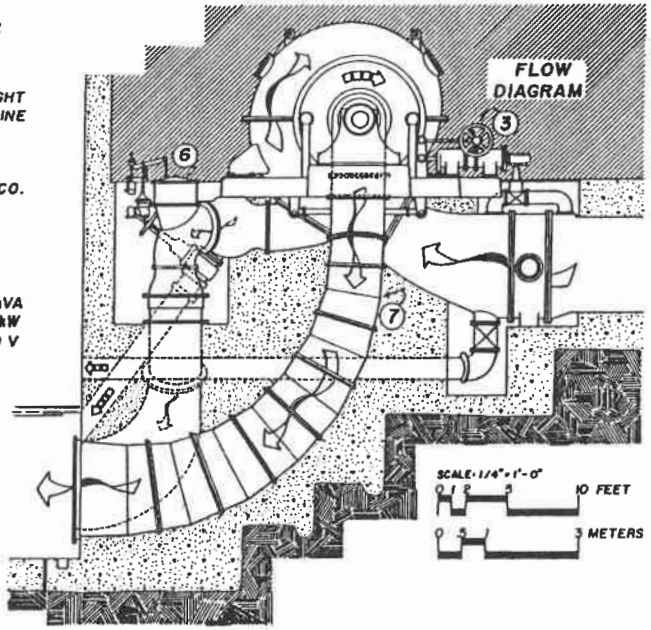
GENERAL ELECTRIC GENERATOR NO. 1

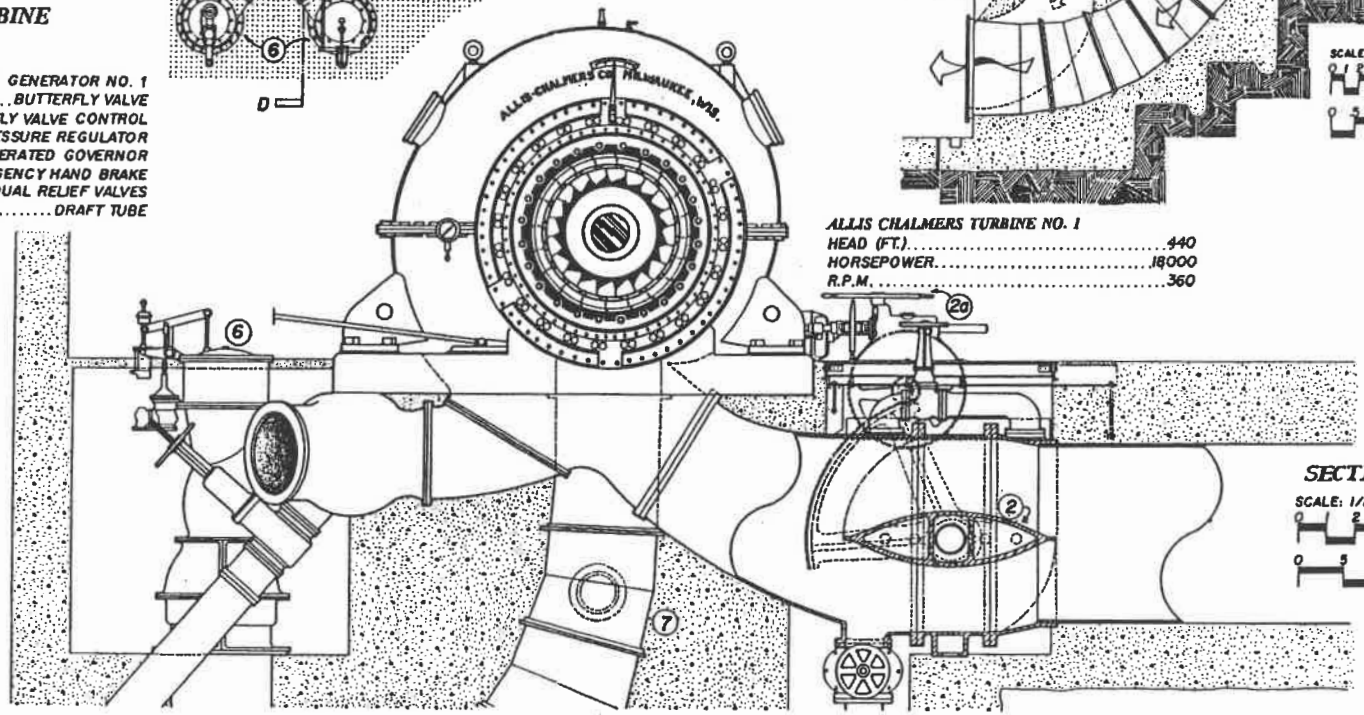
CAPACITY	14200 kVA
RATING	10000 kW
FULL LOAD VOLTAGE	6600 V



PLAN OF TURBINE UNIT NO. 1

1 ..... G.E. GENERATOR NO. 1
2 ..... BUTTERFLY VALVE
2a ..... BUTTERFLY VALVE CONTROL
3 ..... PRESSURE REGULATOR
4 ..... OIL-OPERATED GOVERNOR
5 ..... EMERGENCY HAND BRAKE
6 ..... DUAL RELIEF VALVES
7 ..... DRAFT TUBE





ALLIS CHALMERS TURBINE NO. 1

HEAD (FT.)	440
HORSEPOWER	18000
R.P.M.	360

SECTION D-D

SCALE: 1/2" = 1'-0"
0 2 5 FEET
0 5 10 20 METERS

DELINEATED BY: DOUGLAS PANCOAST, 1991; ROBERT G. COLOSIMO, CHANTELLE BUTTELLER, 1991.
WHITE RIVER HYDROELECTRIC RECORDING PROJECT
PUGET SOUND POWER AND LIGHT COMPANY: WHITE RIVER HYDROELECTRIC PROJECT (1912 - 1924)
PIERCE COUNTY
WASHINGTON
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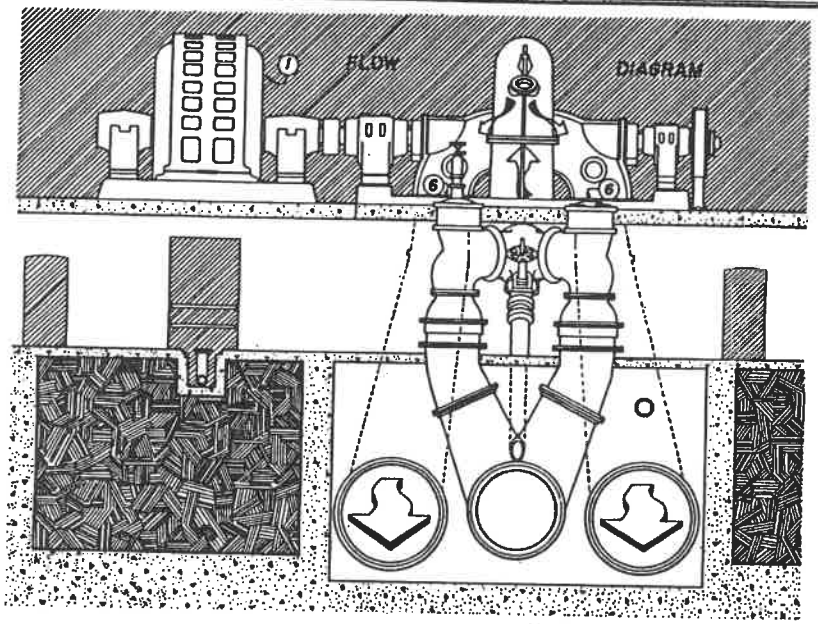


WHITE RIVER POWERHOUSE: TURBINE UNIT NO. 1

1. ..... G.E. GENERATOR NO. 1
2. ..... BUTTERFLY VALVE
2a ..... BUTTERFLY VALVE CONTROL
3 ..... PRESSURE REGULATOR
4 ..... OIL-OPERATED GOVERNOR
5 ..... EMERGENCY HAND BRAKE
6 ..... DUAL RELIEF VALVES
7 ..... DRAFT TUBE

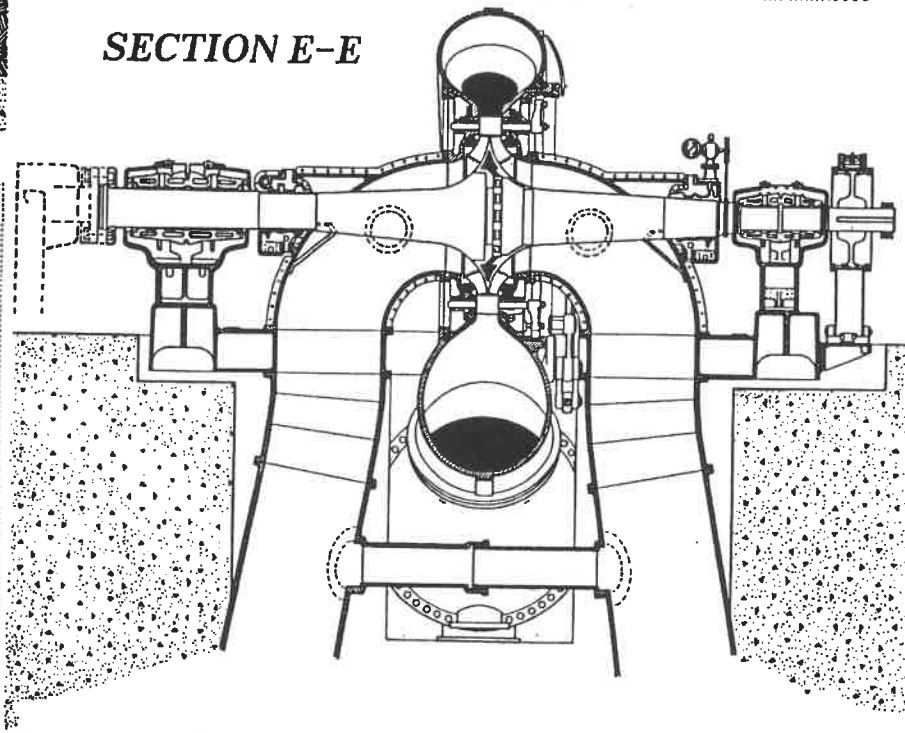
PUGET SOUND TRACTION POWER & LIGHT CO. WHITE RIVER HYDROELECTRIC PLANT TURBINE UNIT NO. 1 INSTALLED AUGUST 31, 1911.
ENGINEERED BY STONE & WEBSTER
BOSTON, MASSACHUSETTS.
MANUFACTURED BY ALLIS CHALMERS CO.
MILWAUKEE, WISC.
SINGLE RUNNER - DOUBLE DISCHARGE
FRANCIS TYPE - HIGH HEAD TURBINE

SCALE: 1/4" = 1'-0"
0 1 2 5 10 FEET
0 1 3 METERS

GENERAL ELECTRIC GENERATOR NO. 1
CAPACITY ..... 14000 kVA
RATING ..... 10000 kW
FULL LOAD VOLTAGE ..... 6600 V

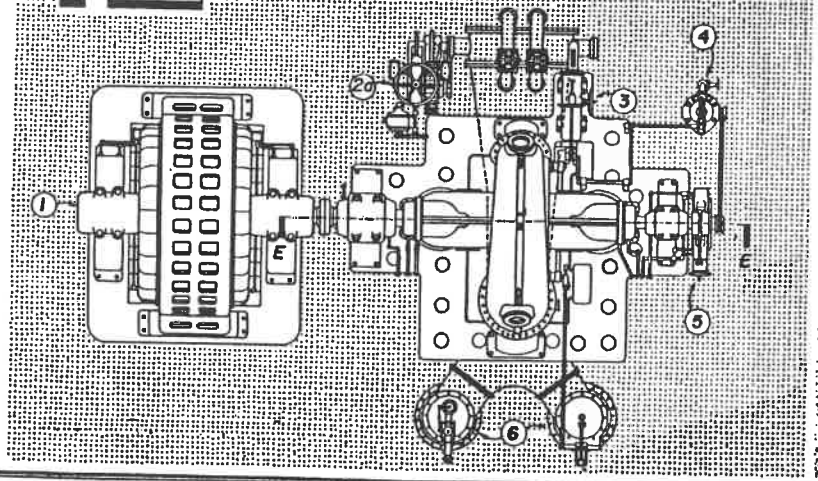
ALLIS CHALMERS TURBINE NO. 1
HEAD (FT.) 440
R.P.M. 360
HORSEPOWER 18000

SECTION E-E



SCALE: 1/4" = 1'-0"
0 1 2 5 10 FEET
0 1 3 METERS

PLAN OF TURBINE UNIT NO. 1



PUGET SOUND POWER AND LIGHT COMPANY:
WHITE RIVER HYDROELECTRIC PROJECT (1912 - 1924)
PIERCE COUNTY
WASHINGTON
SHEET 23-25
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HISTORIC AMERICAN ENGINEERING RECORD