

PLAN VIEW
NOT TO SCALE

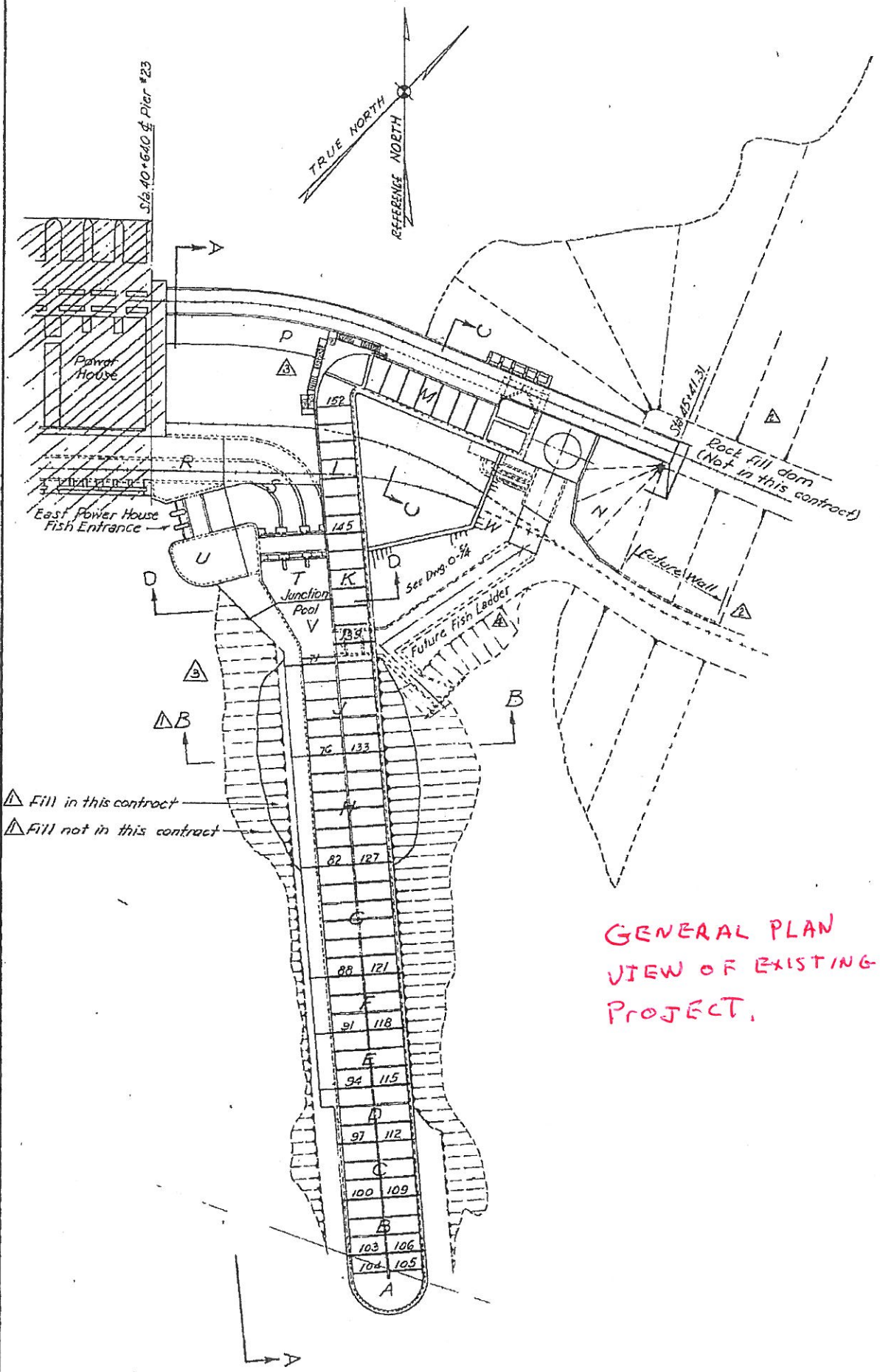


PLAN VIEW
POWER HOUSE

DESIGNED BY: RCM	CHECKED BY: RCM	DATE: December 15th, 2010
U.S. ARMY CORPS OF ENGINEERS PORTLAND DISTRICT PORTLAND, OREGON	SUBMITTED BY: RCM	
PLOT SCALE: 1" = 100'		DRAWING NUMBER: 02
FILE NAME: 147341-S02.DGN		

THE DALLES DAM
EAST FISH LADDER
AUXILIARY WATER SYSTEM
BACKUP LETTER REPORT

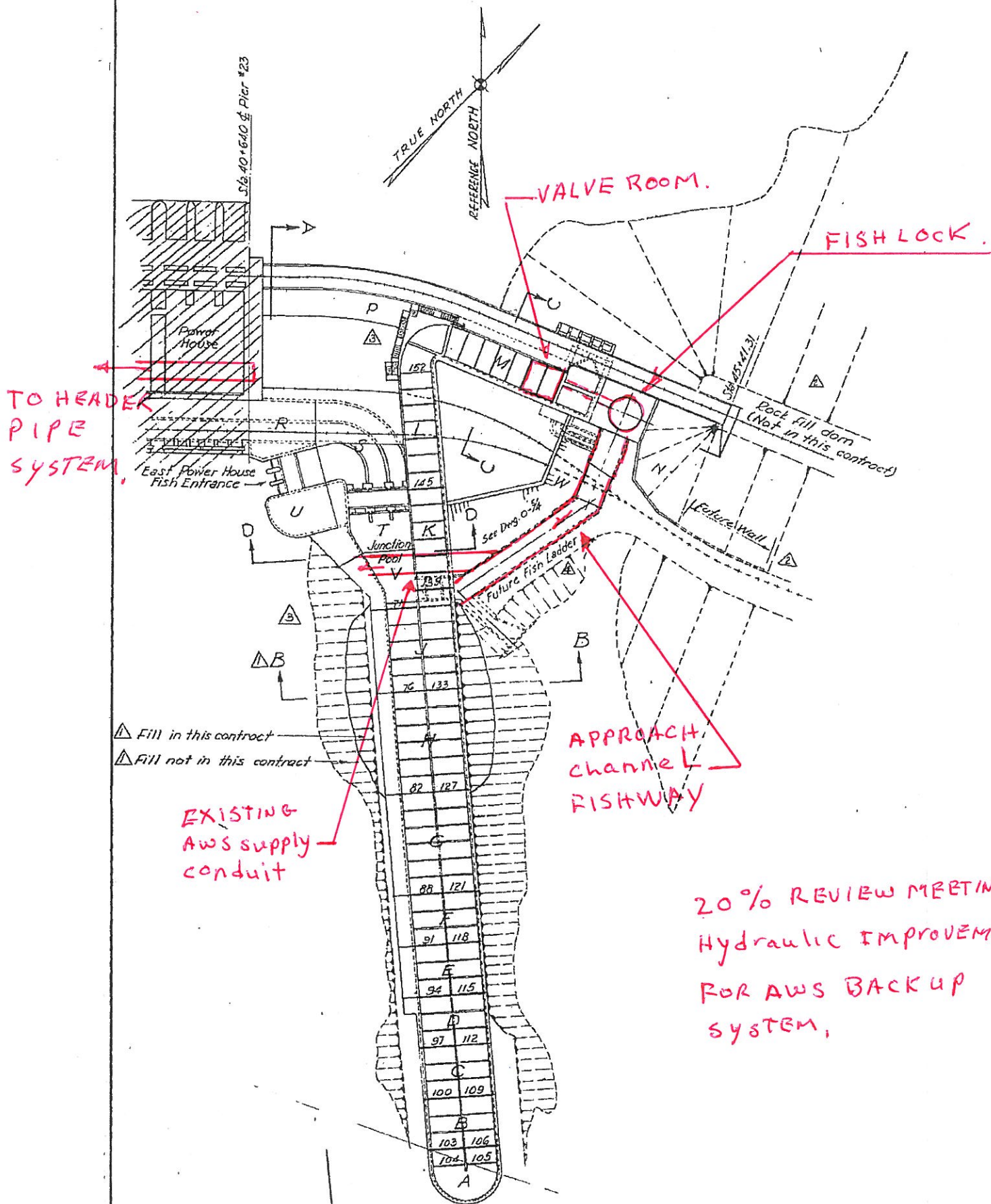
SHEET IDENTIFICATION
02
SHEET 2 OF 2



GENERAL PLAN
VIEW OF EXISTING
PROJECT.

Criteria for Ranking:				
¹ General Scoring:	² Est. Construction Time:	³ Implement/ Switchback Time:	⁴ Cost:	⁵ Total Scores:
N/A = 0	< 6 months = 4	hours = 4	high = 0	Poor = 8
Poor = 1	6-12 months = 3	days = 3	medium-high = 1	Fair = 16
Fair = 2	12-18 months = 2	weeks = 2	medium = 2	Good = 24
Good = 3	18-24 months = 1	months = 1	low-medium = 3	Excellent = 32
Excellent = 4	24+ months = 0		low = 4	

Alternatives		Fish Passage Requirements	Rated Item	Rated Item	Rated Item	Rated Item	Rated Item	Rated Item	Rated Item	Rated Item	Miscellaneous Concerns	Total Score ⁵	Ranking
No.	Description		Fish Agency/ Biological Concerns ¹	Estimated Construction Time ²	Implement/ Switchback Time ³	Cost ⁴	Constructability ¹	Disruption to Project Operations ¹	Reliability ¹	Maintenance Aspects ¹			
1	Siphon for Additional Water to the Fish Lock (pipe or use existing adit)	Fish screens need to be considered for siphon intakes	3	2	4	4	3	4	3	3	- Rehab fish lock - Priming pump - Exercise valves	26	3
2	River Wet Tap (boring tunnels under dam to increase water to Fish Lock)	Fish screens need to be considered for siphon intakes	3	1	4	0	2	4	4	4	- Deep water intake (lamprey) - Construction - mining under dam into water, dam safety	22	8
3	Ice Trash Sluice Water Tap (either below or along side)										- Not rated due to biological and physical constraints		
4	Fish Lock Direct Tap to Reservoir Forebay	Fish screens required	3	2	4	2	3	4	4	4	- Dam safety - mining through dam - Underwater construction	26	5
5	Install Concrete Lid on Open Channel Fishway										- Not rated - use as a potential component with Alternatives 1, 2, and 4.		
6	Tainter Gate # 23 (modify stoplogs with a pipe to AWS culvert)	Fish screens required	3	2	2	2	3	2	3	3	- Assumes screen is part of fabricated unit.	20	9
7	New Third Fish Turbine (with maximum flow of 5,000 cfs ; federally owned and operated)	Fish screens or mitigation may be required depending on depth of intake	3	0	4	0	0	4	3	1	- Time to construct - Major disruption to overall operations during construction - Buy in from NW Power Council	15	11
8	Pipe(s) to AWS Culvert (using existing 8' x 8' opening; full length pipe)	Fish screens	3	1	4	3	3	4	4	4	- Energy dissipation - Isolate east entrance - Exercise valves	26	4
9	Remove Flow Restrictions on Current System (at fish lock and downstream)										- Not rated - use as a potential component for Alternatives 1, 2, 4, and 5.		
10	Single Pump/Pumphouse on East Side (cul de sac area)	Fish screens will be required based on depth variables	2	0	4	0	3	4	1	0	- Sturgeon in cul de sac (spawning or congregation area?) predator issues - Constructed in the wet - Some minimal power use - High maintenance	14	12
11	Upstream Intake Tower with Siphon	Assumes no screens needed	2	1	4	2	3	4	3	3	- 'Predator habitat	22	7



TO HEADER
PIPE
SYSTEM.

VALVE ROOM.

FISH LOCK.

APPROACH
channel
FISHWAY

EXISTING
AWS supply
conduit

20% REVIEW MEETING.
Hydraulic IMPROVEMENTS
FOR AWS BACKUP
SYSTEM.

▲ Fill in this contract
▲ Fill not in this contract

TRUE NORTH
REFERENCE NORTH

S.G. 40+640 of Pier #23

Power House

East Power House
Fish Entrance

Junction
Pool

Future Fish Ladder

Rock fill dam
(Not in this contract)

Estrel Wall

See Draw 0-34

152

145

133

127

121

118

115

112

109

106

105

A

B

C

D

E

F

G

H

I

J

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AB

AC

AD

AE

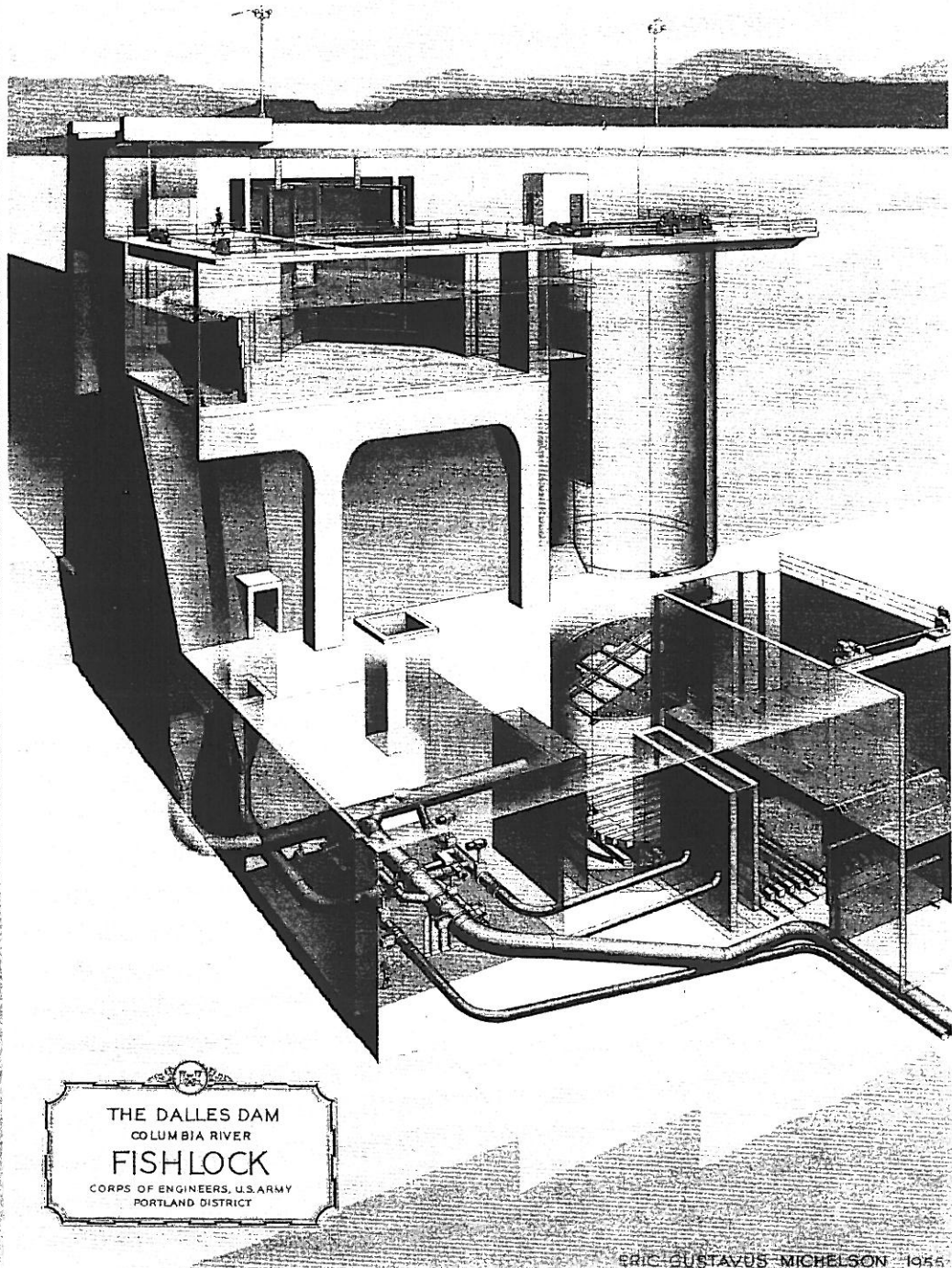
AF

AG

AH

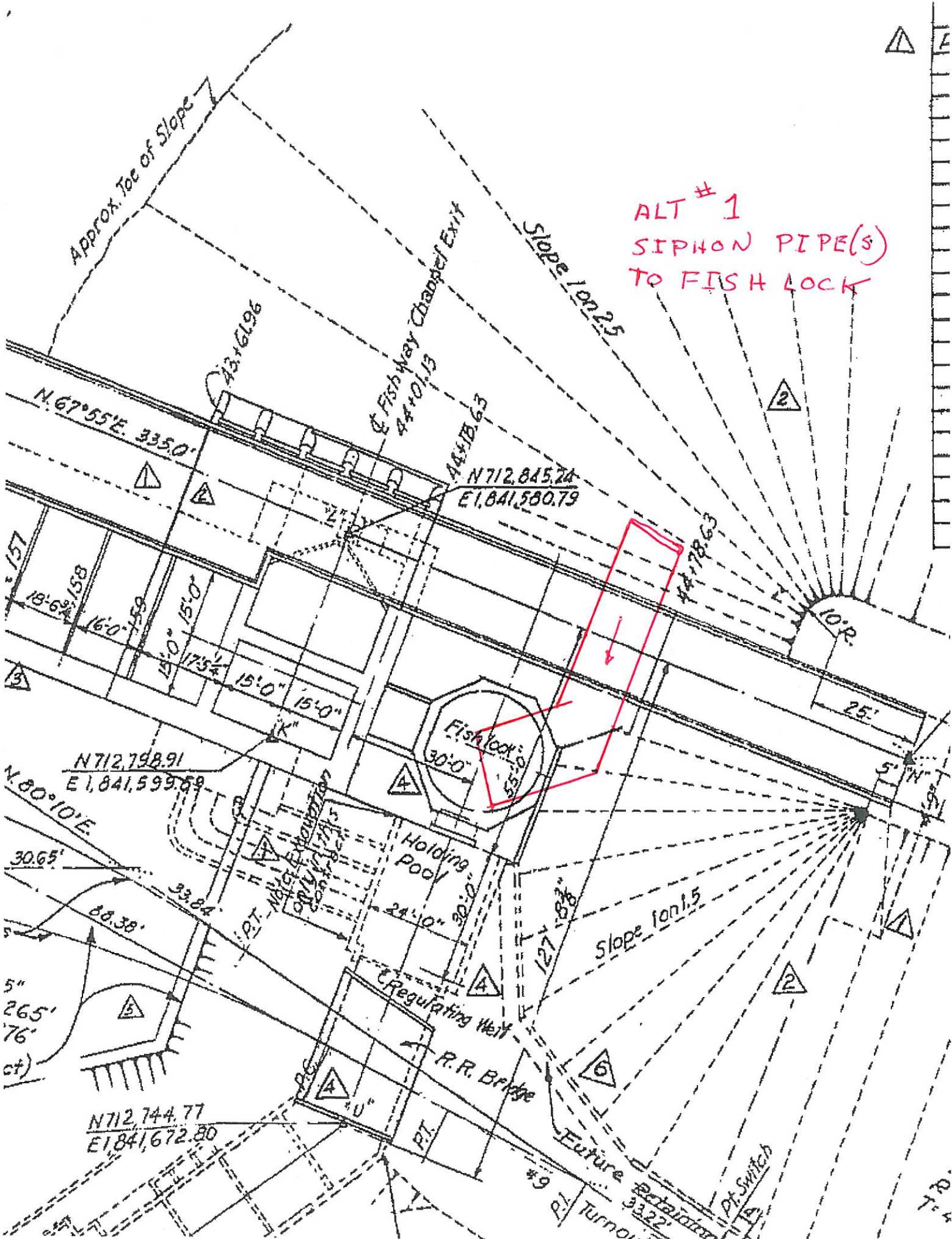
THE DALLES DAM - FISH LOCK

Corps of Engineers, Portland District



THE DALLES DAM
COLUMBIA RIVER
FISHLOCK
CORPS OF ENGINEERS, U.S. ARMY
PORTLAND DISTRICT

ERIC GUSTAVUS MICHELSON 1955



ALT # 1
SIPHON PIPE(S)
TO FISH LOCK

Fish Lock
30'-0"
5'-0"

Holding Pool
24'-0"
30'-0"

Regulating Weir

R.R. Bridge

Future Retaining Wall

Pt. Switch

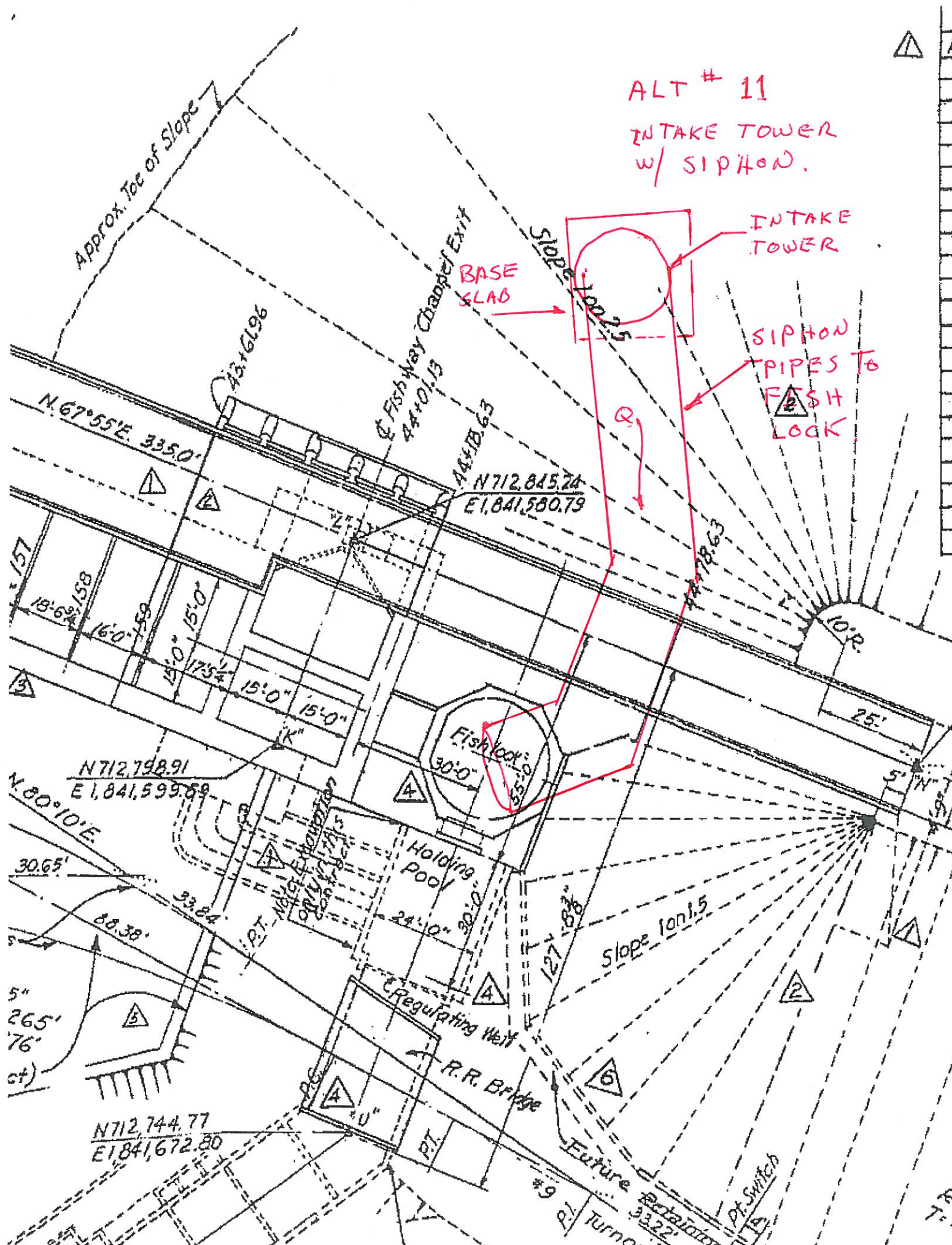
Turnout

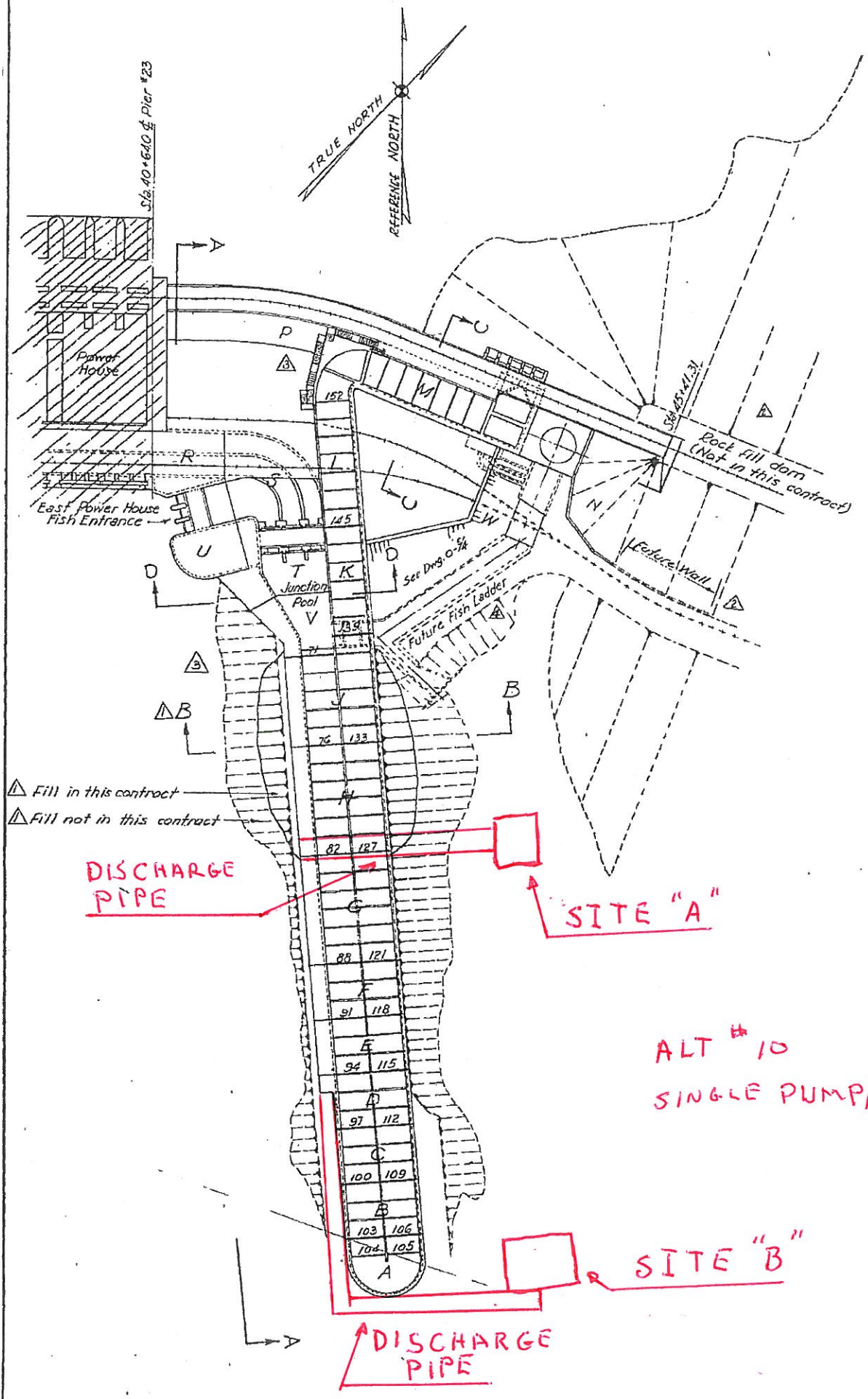


5"
265'
76'
(ct)

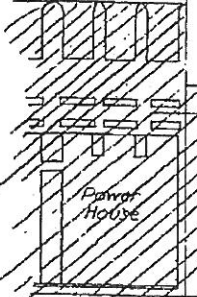
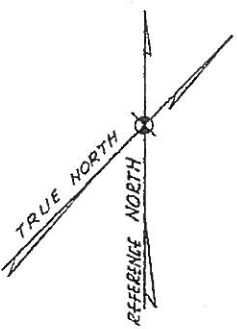
7'-0"

ALT # 11
INTAKE TOWER
w/ SIPHON.





S/S 40x640 of Pier #23



East Power House Fish Entrance

Rock fill dam (Not in this contract)

- △ Fill in this contract
- ▽ Fill not in this contract

DISCHARGE PIPE

SITE "A"

ALT # 10
SINGLE PUMP/PUMP HOUSE.

SITE "B"

DISCHARGE PIPE

ALT #2
RIVER WET TAP

