

Claiborne Lock and Dam Fish Passage Project

November 14, 2002

Background

- World Wildlife Fund initial sponsor
- Section 1135 of the Water Resources Development Act of 1986, as amended.
- Preliminary Restoration Plan (PRP) prepared in 2000.
- Ecosystem Restoration Report (ERR) in preparation during 2001 and 2002

Claiborne Lock and Dam

Fish Passage

Key Migratory Fish Species

- paddlefish
- blue sucker
- southern walleye
- Alabama shad
- Gulf sturgeon
- Alabama sturgeon
- striped bass
- alligator gar
- striped mullet
- blacktail & river redhorses
- mooneye
- American eel
- blue catfish
- Atlantic needlefish
- skipjack herring
- freshwater drum



Ecosystem Restoration Report

- Study Team visited existing Southeastern fish passage sites to:
 - obtain copies of plans
 - discuss construction, operation and maintenance of facilities
 - develop a list of lessons learned
 - develop additional alternatives







Ecosystem Restoration Report

Plan Formulation

- Lock modification alternatives
 - sluice gates
 - slot in lock wall
 - collapsible ramp
 - field test demonstrated success for several riverine species
 - major issues of attraction and exit flows

Ecosystem Restoration Report

Plan Formulation

- Nature-like bypass channel
 - east bank
 - length of channel
 - position of entrance channel
 - exit channel
 - west bank
 - lack of access for operational personnel
 - massive excavation (and associated disposal area) required
 - concerns for applicability for large rivers and associated migratory fish fauna

Ecosystem Restoration Report

Plan Formulation

- Ben Rizzo, USFWS, Fishway Design Engineer, Newton Corner, MA
- Susquehanna River fish passage sites
 - serpentine vertical slot fishway, York Haven, PA
 - fish lift, Conowingo, Holtwood and Safe Harbor, PA

Ecosystem Restoration Report

Plan Formulation

- Contract with FWS to develop conceptual plans
 - serpentine vertical slot fishway
 - fish lift

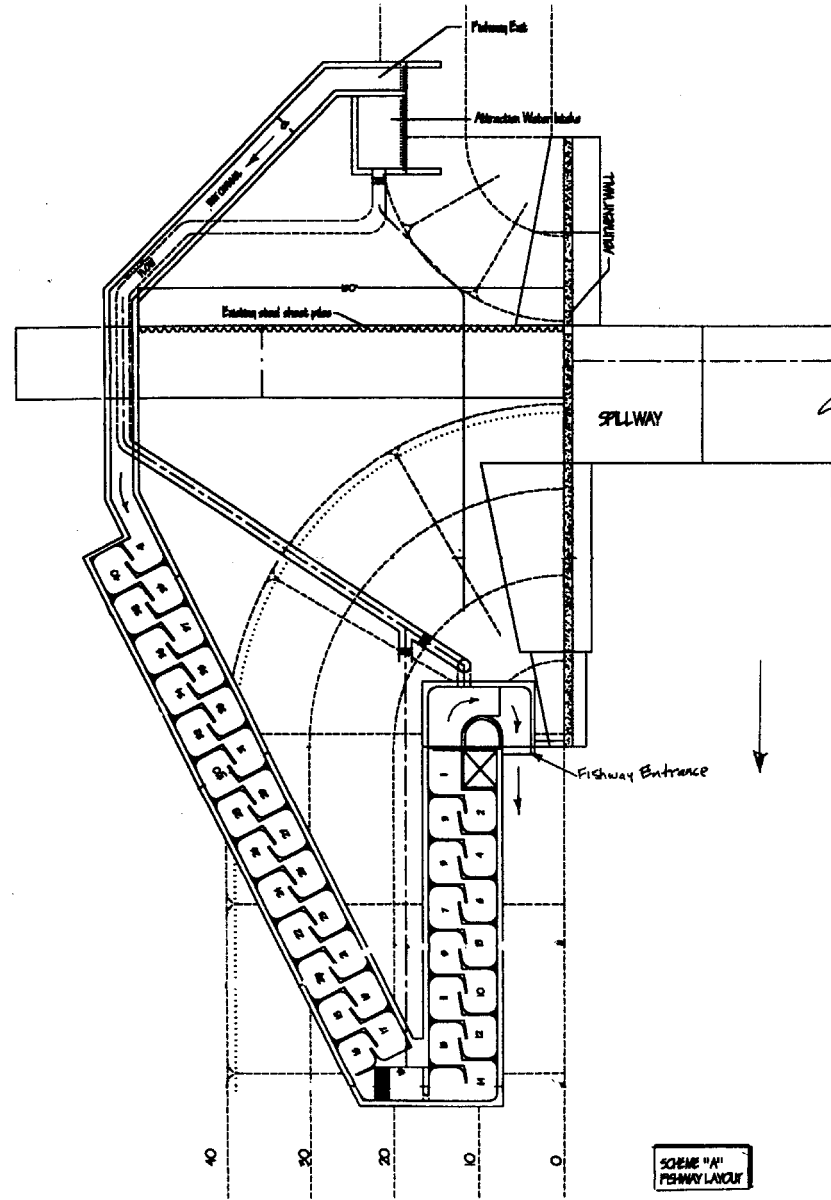




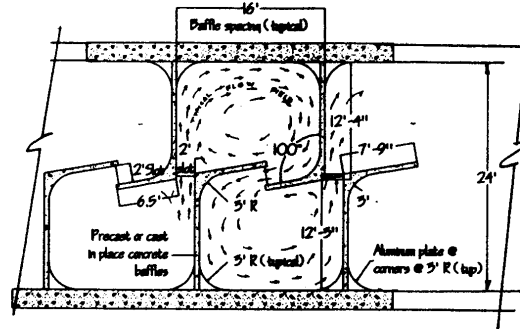
Claiborne Lock and Dam



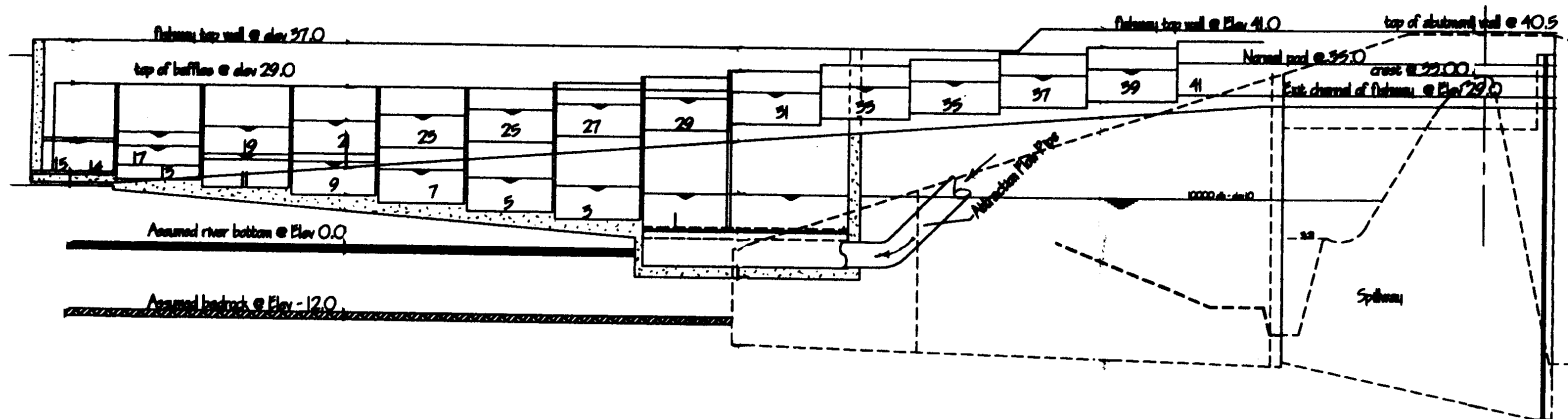
Vertical Slot Fishway – Plan View



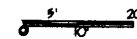
Vertical Slot Fishway – Profile View



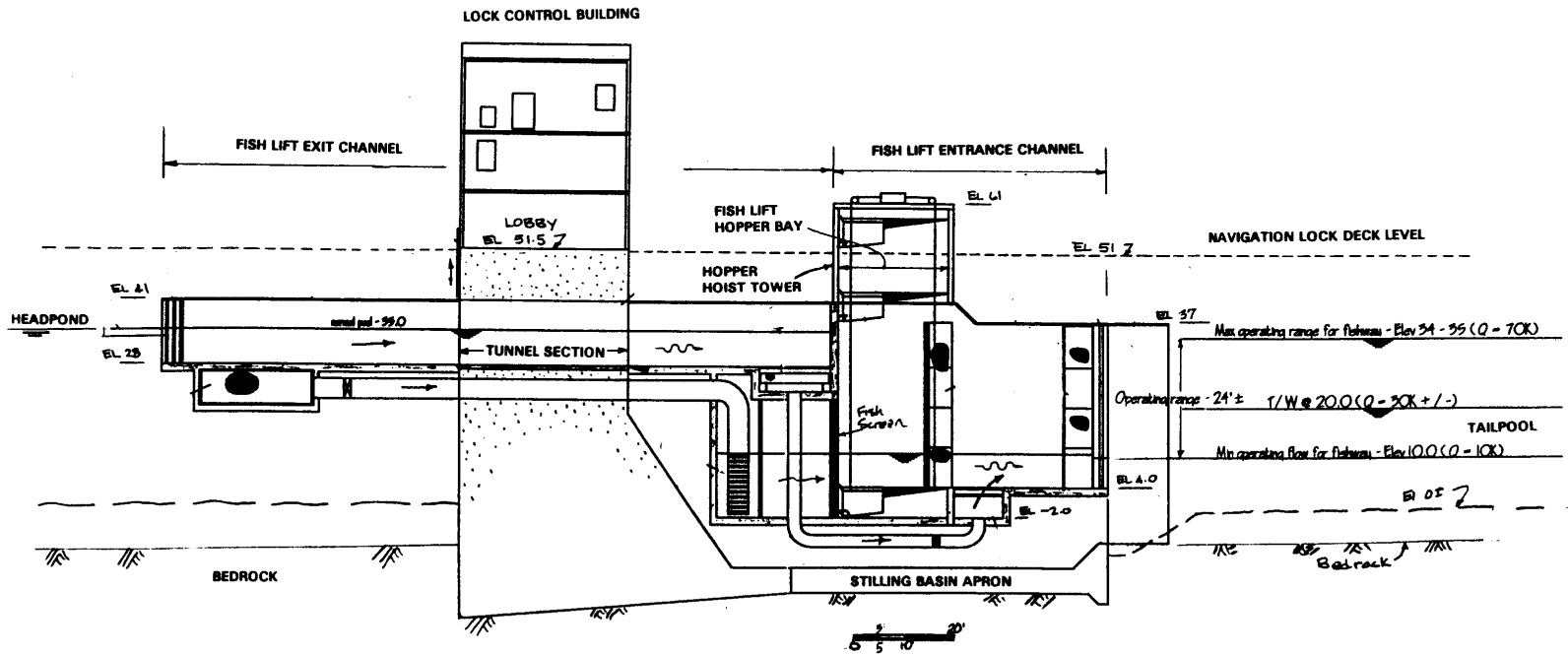
PLAN VIEW TYPICAL SERPENTINE FISHWAY POOL AND FISHWAY BAFFLE LAYOUT



SECTION THRU PROPOSED FISHWAY



Fish Lift – Profile View



CONCEPTUAL PROFILE OF FISH ELEVATOR SCHEME "A"