

STRUCTURE 174

This structure is a reinforced concrete, gated spillway, with discharge controlled by a cable operated, vertical lift gate. Operation of the gate is automatically or manually controlled so that the gate hydraulic operated system opens or closes the gate in accordance with the seasonal operational criteria. The structure is located on the L-31W borrow canal near its junction with Canal 111, about 5 miles west of Homestead.

PURPOSE

This structure is closed under IOP.

OPERATION

This structure will be operated as directed by the Corps of Engineers.

FLOOD DISCHARGE CHARACTERISTICS

	Design	Standard Project Flood
Discharge Rate	<u>500</u> cfs	<u>850</u> cfs
	<u>40</u> % SPF	<u>100</u> % SPF
Headwater Elevation	<u>6.0*</u> feet	<u>7.5*</u> feet
Tailwater Elevation	<u>5.5*</u> feet	<u>6.5*</u> feet
Type Discharge	uncontrolled <u>submerged</u>	uncontrolled <u>submerged</u>

*Some question of stages because later Corps' studies of C-111 raised the stage below S-18C 0.7 feet above stage from studies which gave stages shown for S-174.

DESCRIPTION OF STRUCTURE

Type Fixed crest, reinforced concrete gated spillway

Weir Crest

Net Length 16.0 feet

Elevation -1.5 feet

Service bridge elevation 11.0 feet

Water level elevation which will by-pass structure 11.0 feet

Gates

Revised 4/07/03

Number 1

Size 8.0 ft. high X 16.8 ft. wide

Type Vertical lift gate

Bottom elevation of gates full open 10.7 feet

Top elevation of gates full closed 6.5 feet

Control: automatic, on-site upstream control, remote control by
Communications and Control System

Lifting Mechanism

Normal power source commercial electricity

Emergency power source L.P. gas driven generator

Type Hoist hydraulic cylinder actuated by electric motor
driven pump, with emergency hand pump; connected
to gate by steel cables.

ACCESS: from Loveland Road via about one mile access road to structure

HYDRAULIC & HYDROLOGIC MEASUREMENTS

Water Level On-site, digital recorder at upstream and downstream

Gate Position Recorder On-site digital recorder

DEWATERING FACILITIES

Storage Homestead Field Station

Type stop logs

Size & number (per bay)

Upstream and Downstream

Number 24

Size 12" X 12" X 17'-8" long