

STRUCTURE 118

This structure is a reinforced concrete, gated spillway with discharge controlled by a cable operated, vertical lift gate. Operation of the gate is automatically controlled so that the gate operating system opens or closes the gate in accordance with the operational criteria. The structure is located on Canal 100 about 200 feet east of U.S. Highway 1.

PURPOSE

This structure maintains optimum upstream water control stages in Canal 100; it passes the design flood (40% of the Standard Project Flood) without exceeding the upstream flood design stage, and restricts downstream flood stages and channel velocities to non-damaging levels.

OPERATING CRITERIA

This structure is operated under automatic control as follows:

When the headwater elevation rises to 4.9 feet, the gate begins to open;

When the headwater elevation rises or falls to elevation 3.7, the gate becomes stationary;

When the headwater elevation falls to 3.5, the gate begins to close.

FLOOD DISCHARGE CHARACTERISTICS

	Design	Standard Project Flood
Discharge Rate	<u>860</u> cfs	<u>1700</u> cfs
	<u>40%</u> SPF	<u>100%</u> SPF
Headwater Elevation	<u>3.6</u> feet	<u>7.0</u> feet
Tailwater Elevation	<u>3.1</u> feet	<u>6.0</u> feet
Type Discharge	uncontrolled <u>submerged</u>	uncontrolled <u>submerged</u>

DESCRIPTION OF STRUCTURE

Type reinforced concrete, gated spillway

Weir Crest

Net length 20.0 feet

Elevation -5.0 feet

Service Bridge Elevation 10.0 feet

Water level which will by-pass structure 10.0 feet

Gates

Number 1

Size 10.0 ft. high by 20.8 ft. wide

Type vertical slide gate

Bottom elevation of gate, full open 8.0 ft. Normal

Top elevation of gate, full closed 5.0 ft.

Control On-site automatic

Lifting Mechanism

Normal power source commercial electricity

Emergency power source gasoline engine driven generator

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

ACCESS from U.S. Highway 1 via access road or south bank of C-100

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level Dual - upstream and downstream recorder on-site and remote

Gate Position Recorder on-site and remote

DEWATERING FACILITIES

Storage Needles - Miami Field Station

Beams - West Palm Beach Field Station

Type Steel needle beam and aluminum needles

Size and Number (per bay)

Upstream and downstream

Beam 24WF145, 21' -10"

Needles 4 each, 5' wide