

## Draft

### Pump Station S-531 Summary of Hydraulic Design Data

#### Revisions:

- 25 October 2000 – Comments and concurrence on design incorporated, capacity criteria revised.
- 2 October 2000 – Original submission.

XY Coordinate<sup>1</sup> – 899980 827105

Location: On Acme B C-25 Canal at the confluence of Acme B C-6 Canal off of South Road.

Purpose/Operational Intent: Flood Control and Water Supply

- Pumps Acme B Basin runoff into impoundment for flood control.

Design Condition:	Flood Control	350 cfs
	Seepage Control	Required

#### Pump Station Capacity Criteria:

- Acme B is currently permitted for 500 cfs discharge into WCA-1. Pump capacity of 350 cfs is found by subtracting the Acme B STA pre-treatment capacity of 150 cfs from total permitted discharge of 500 cfs.

Number of Pumps	4	
Pump Mix Type and Size		
	Diesel	2 @ 125 cfs
	Electric	2 @ 50 cfs

#### Mix Criteria:

- The pump size matches the design capacity of impoundment capture rate.
- The pump station will be 4 bays with 2 sets of matching pumps.
- The pump mix allows for seepage control when necessary.

Control	Remote by SCADA or Local
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#### Design Heads

Normal (13.00 HW to 24.30 TW)	11.30	feet
Maximum (11.50 HW to 24.30 TW)	12.80	feet

#### Intake Water Surface Elevations

Maximum Non-Pumping	16.50	ft-NGVD
Maximum Pumping	16.50	ft-NGVD
Start Pumping	13.50	ft-NGVD
Normal Drawdown	12.0 to 13.0	ft-NGVD
Minimum Drawdown	11.50	ft-NGVD
Minimum Non-Pumping	11.50	ft-NGVD
Channel Invert	+5.00 <sup>2</sup>	ft-NGVD

#### Discharge Water Surface Elevations

Maximum Non-Pumping	27.30	ft-NGVD
Maximum Pumping	24.30	ft-NGVD
Normal Pumping	24.30	ft-NGVD
Minimum Pumping	12.00	ft-NGVD
Minimum Non-Pumping	12.00	ft-NGVD
Channel Invert	10.00	ft-NGVD

#### Notes:

- <sup>1</sup> XY coordinates system used is NAD 83, Florida east, state plane.
- <sup>2</sup> Canal invert assumed based on culvert invert of +6.00 at nearby canal junction.
- All elevations are in feet, NGVD (National Geodetic Vertical Datum of 1929)
- Diesel generator is required for control station and electric pumps operation in cases of power outage.

#### Data Compiled from:

- Acme Improvement District Water Management Facilities Plan by Mock and Roos.
- Selected Plan Features