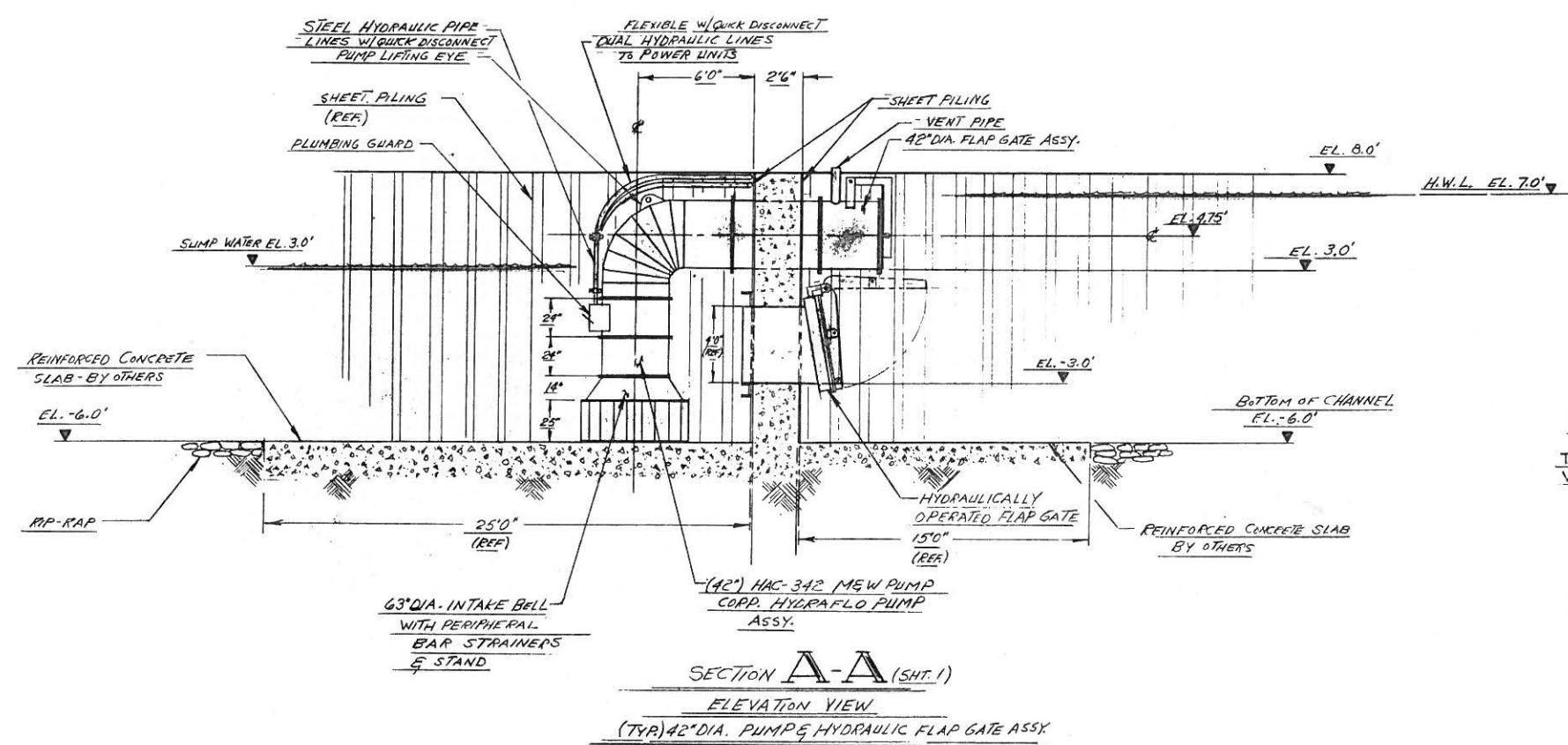


REV.	DESCRIPTION	DATE



SECTION A-A (SHT. 1)
ELEVATION VIEW
(TYP.) 42" DIA. PUMP & HYDRAULIC FLAP GATE ASSY.

NOTES

TOTAL DYNAMIC HEAD (TDH) CALCULATIONS

TDH (FT) = $H_s + H_v + H_f$
 WHERE H_s = STATIC HEAD (FT) = 4'0"
 H_v = VELOCITY HEAD (FT) = 2.62 FT, USING
 56,125 G.P.M., THRU 42" DISCHARGE PIPE
 IN HYDRAULIC TABLES.

TOTAL FRICTION HEAD (H_f) = ELBOW LOSS + PIPE LOSS

+ FLAP GATE LOSS.
 $ELBOW LOSS = K \frac{V^2}{2g} = 0.30 \times 2.62^2 = 0.79'$
 $PIPE LOSS = 0.04' \text{ (FROM FRICTION TABLES)}$
 $FLAP GATE LOSS = \frac{4V^2}{g} \times \left(\frac{1.15V}{V^2} \right) =$
 $1.624 \times 9.98 \times 10^{-2} = 0.16'$

THEREFORE: TOTAL $H_f = 0.79 + 0.04 + 0.16 = 0.99'$

TDH (FT) = $H_s + H_v + H_f = 4' + 2.62' + 0.99' = 7.61'$

PUMP SHALL BE DESIGNED FOR 56,125 G.P.M.
 AT 7.61' T.D.H.

NOTE
 THIS DRAWING IS THE PROPERTY
 OF M & W PUMP WORKS, INC., 33
 N.W. 2nd ST., DEERBIRD BEACH, FL
 33441 AND IS LOANED WITH THE EX-
 PRESSED UNDERSTANDING THAT IT IS
 SUBJECT TO RETURN ON DEMAND.
 THE ENGINEERING KNOW-HOW AND
 DESIGN INFORMATION HEREON ARE
 INCLUDED IN THE PRICE OF OUR
 PROPOSAL AND MAY NOT BE RE-
 VEALED, USED OR TRANSMITTED TO
 OTHERS EXCEPT IN ACCORD WITH
 CONTRACT OR WRITTEN PERMISSION
 OF M & W PUMP WORKS, INC.

MODEL NO. HAC-3-42
 CUSTOMER
 JOB
 CUSTOMER APPROVAL
 SIGNATURE DATE

TITLE WEST RISER DITCH PUMPING STATION
 DWG. NO. 0891-13-07-10
 SHEET 2 OF 2
 SCALE 1/4" = 1'
 DRAWN BY DATE C'D BY DATE APP'D BY DATE
 SIGNATURE DATE

M&W PUMP WORKS INC.
 33 N.W. 2nd St.
 DEERBIRD BEACH, FL 33441

ITEM	PART NUMBER	DESCRIPTION	QUANTITY
PARTS LIST			