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Company: **City Of Bainbridge Island**
Name: **Patricia Jenkins**
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Phone: **206-780-3746**

Quotation

DATE: 10/16/2017

Quot No.
27179_R3

Quotation valid for 30 days
Prepared by: **Ben Scrace**
Phone: 425-486-9499
FAX: 425-485-7409
bscrace@weci.com

Re: **Bainbridge Island - Village Pump Station**

Comments or Special Instructions: Jaime, below is the DESIGN BUDGET estimate for the pump station, It is conservatively priced above list during this stage of the design process. I have not yet received pricing back form the control panel so I have placed a ballpark number in for the panel, I expect a decrease in what I have shown below. I hope to see that numbe back in the next day or 2. This is a standard pump control panel using the Flygt MultiSmart controller and ABB VFD's. Per our conversation I added the Mix Flush Valve to the pump and Xypex to the agrigate for the pump station for H2S abatment. I do not have the pressure sensor listed yet but have it covered in the price, I am awaiting confirmation of how to install and mounting requiriment for the panel. Again all budget design at this point and I have taken everything into consideration. I will call you later today to discuss. Thank you for the opportunity.

- Rev 3:**
- 1 Changed from 509 to 611 as pump requirement for access hatch is 36x54". This created a larger footpring but shallower
 - 2 Added external mounted Junction Box as optional item
 - 3 Added external damp proofing. Installed at Oldcastle leaving 8" uncoated for field application after installation
 - 4 Added 3rd spare pump
 - 5 Added four (4) 2" conduit for electrical connection
 - 6 Added Mix Flush Valve to pump
 - 7 Removed control panel as will be supplied by S&B. Replaced with 2x mini-CAS relays to be supplied to S&B
 - 8 Added pressure transducer stilling well to station
 - 9 Relocated vent to S side of the station above electricla block
 - 10 Relocate Inlet so it enters station under valve vault (must be 4" away from section joint)
 - 11 NOTE: Internal valve pipe will be 4" along with valves. External 4x8" reducer will be provided for field installation

Quantity	Description
	PUMPS: Sized for 910 GPM @ 70' TDH \$71,819.00
3	Flygt NP 3171.190~455 SH Hard Iron N-Impeller 4" Suction / Discharge FLS (Fluid Leak Sensor)
3	FM Rated Explosion Proof Motor 25-HP 460-Volt 3-Phase 1755-RPM 31/187-Amp
0	Submersible Power/Sensor Cable 4G25+S(2x0.5) 31mm \$/ft
1	Spare 3171.190 HT Adapti Iron N-Impeller (455)
1	Spare 3171.190 HT Adaptive N-Impeller Insert Ring
	MONITOR & CONTROLS \$955.50
2	Flygt mini-CAS Fluid Leak Sensor & Motor Overtemp [Delivered to S&B]
2	mini-CAS Socket [Delivered to S&B]
	STRUCTURAL \$98,998.50
1	OneLift RC611x1710 Wet Well 6'x11' Diameter x 17'1-0" Deep 4x8" SCH 80 DI External Station Discharge Pipe Expansion 4" SCH 80 DI Internal Pipe Aluminum Cover 1/4" Thick w/ Safety Grate 4" CI Weighted Check Valve (Rt & Lf) 4" Val-Matic Isolation/Plug Valve (3x) Discharge Line Pressure Sensor Ladder Extention Xypex H2S Prevention 1000 lb. Thurn Crane w/ Pedistal Exterior Damp Proofing 4x 2" Electrical Conduit Outlets
2	4" CI Discharge Connection
2	316 SS Upper Guide Bar Bracket 2-inch
80	316 SS Guide Rail 2-inch
	ACCESSORIES \$3,781.90
1	Grip Eye (up to 3301) with Sling
2	Slingo Cable Grips 316SS 1.0-1.5"
2	Lifting Assembly Kit
2	15/32" Bow Shackle
2	5/16" Quick Link
1	Mix Flush Valve

Note: Quote does not include installation, anchor bolts, mounting hardware
Quoted price includes 4-Days: installation inspection, start-up & training
OPTIONAL: External Junction Box (not included) is additional \$5,160
Rev_1 per above comments
Rev_2

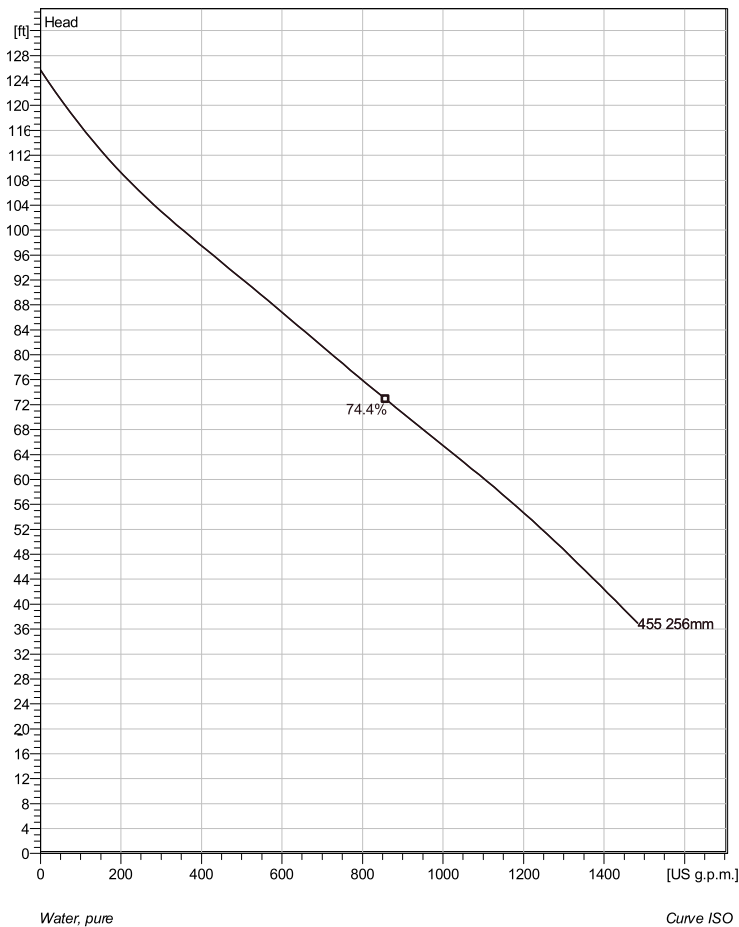
Equipment Total	\$175,554.90
Freight Estimate	\$1,338.75
Startup & Training	\$5,200.00
Sales Tax (9%)	\$16,388.43
TOTAL	\$198,482.07

Please make purchase orders out to: Whitney Equipment Company Inc.

Freight: FOB Factory Estimate Included Above, Actual Pre-Pay & Added To Invoice
Lead Time: 12-16 Weeks After Approved Submittal
Sales Tax: Included Above, If Amount Shown > \$0.00. Please Confirm Tax Percentage Rate Is Accurate
Payment Terms: Net 30 Days Per Below Schedule And Aattached Terms & Conditions.
- 20% Upon Approved Submittals
- 70% Upon Delivery
- 10% Upon Startup & Training

NP 3171 HT 3~ 455

Technical specification



Note: Picture might not correspond to the current configuration.

General

Patented self-cleaning semi-open channel impeller, ideal for pumping in waste water applications. Possible to be upgraded with Guide-pin® for even better clogging resistance. Modular based design with high adaptation grade.

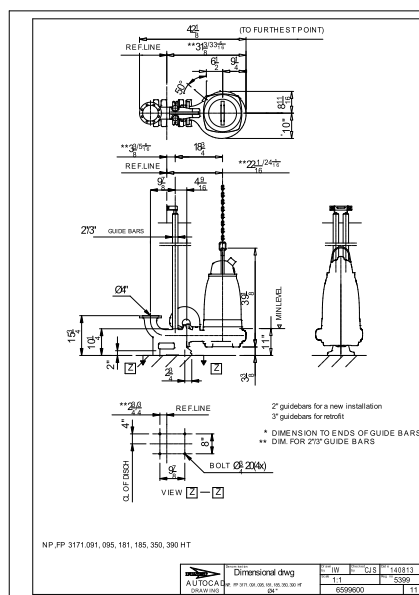
Impeller

Impeller material	Hard-Iron TM
Discharge Flange Diameter	3 15/16 inch
Suction Flange Diameter	3 15/16 inch
Impeller diameter	256 mm
Number of blades	2

Motor

Motor #	N3171.095 25-14-4AA-W 25hp
	FM
Stator variant	7
Frequency	60 Hz
Rated voltage	460 V
Number of poles	4
Phases	3~
Rated power	25 hp
Rated current	31 A
Starting current	187 A
Rated speed	1755 rpm
Power factor	
1/1 Load	0.87
3/4 Load	0.82
1/2 Load	0.73
Motor efficiency	
1/1 Load	88.0 %
3/4 Load	89.0 %
1/2 Load	89.0 %

Configuration



Project	Project ID	Created by	Created on	Last update
			7/28/2017	

NP 3171 HT 3~ 455

Performance curve



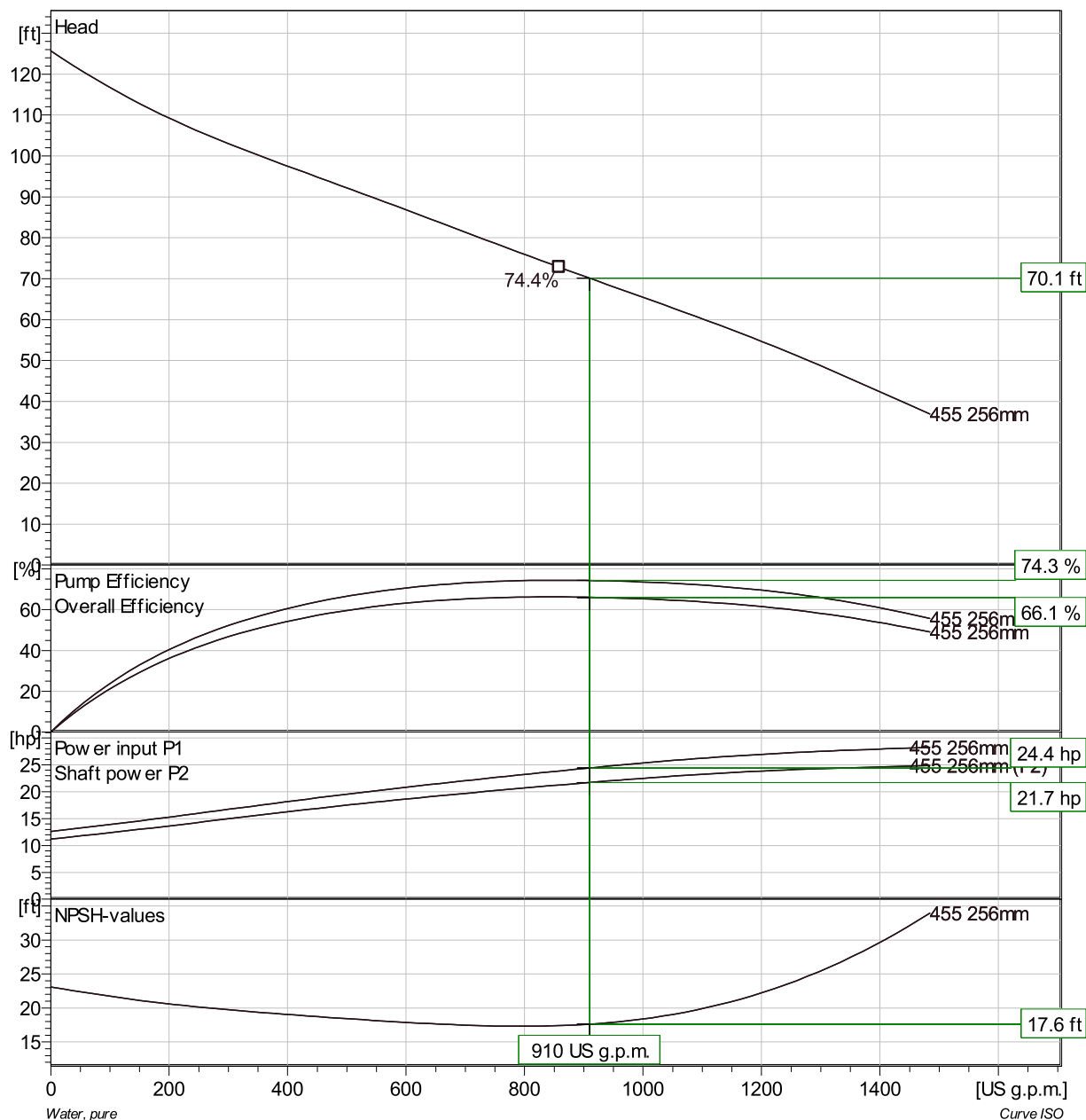
Pump

Discharge Flange Diameter 3 15/16 inch
Suction Flange Diameter 100 mm
Impeller diameter 10 1/16"
Number of blades 2

Motor

Motor # N3171.095 25-14-4AA-W 25hp
Stator variant 7
Frequency 60 Hz
Rated voltage 460 V
Number of poles 4
Phases 3~
Rated power 25 hp
Rated current 31 A
Starting current 187 A
Rated speed 1755 rpm

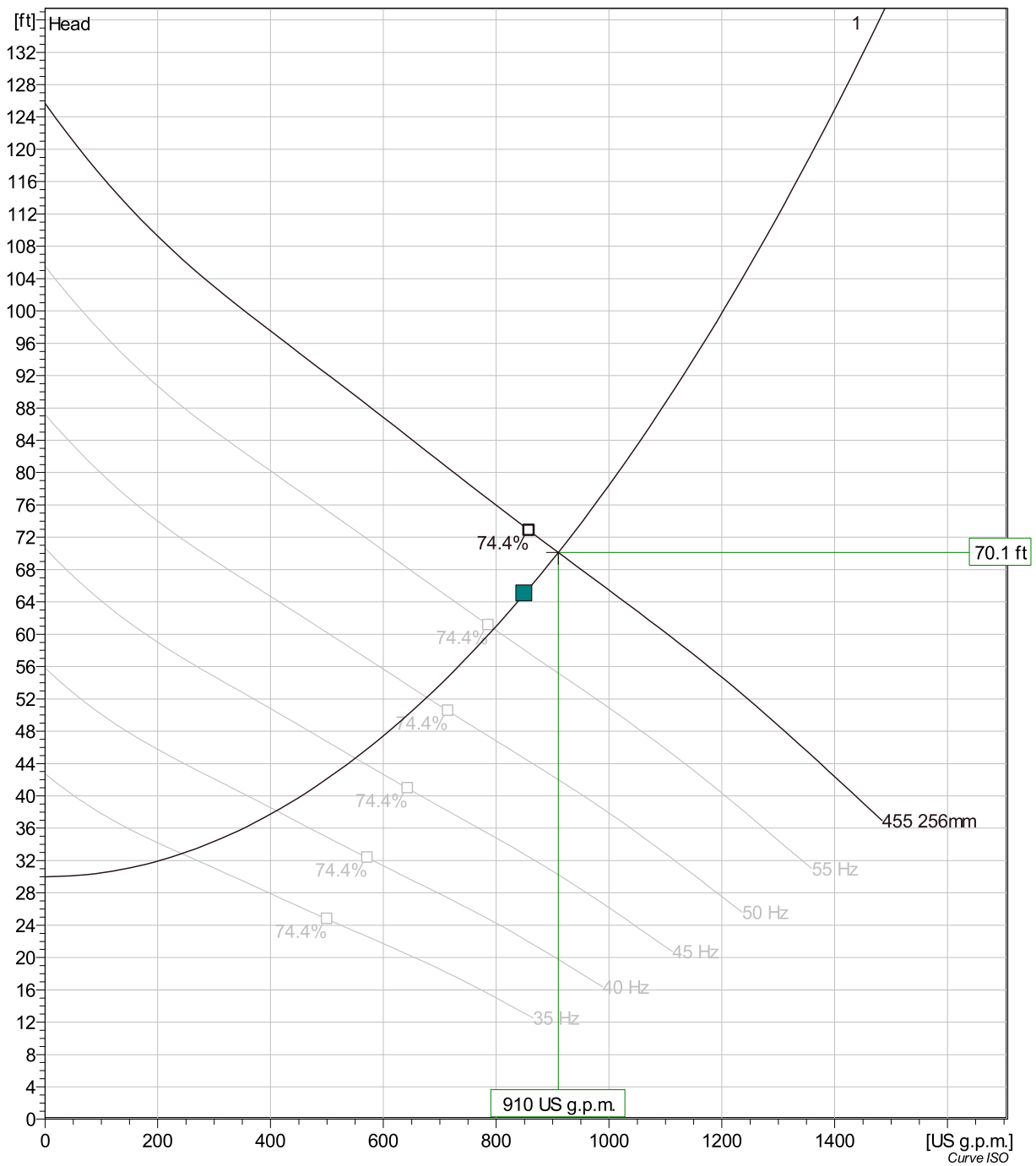
Power factor
1/1 Load 0.87
3/4 Load 0.82
1/2 Load 0.73
Motor efficiency
1/1 Load 88.0 %
3/4 Load 89.0 %
1/2 Load 89.0 %



Duty point	Guarantee
Flow Head	ISO:1999 Grade
850 US g.p.m. 65 ft	No

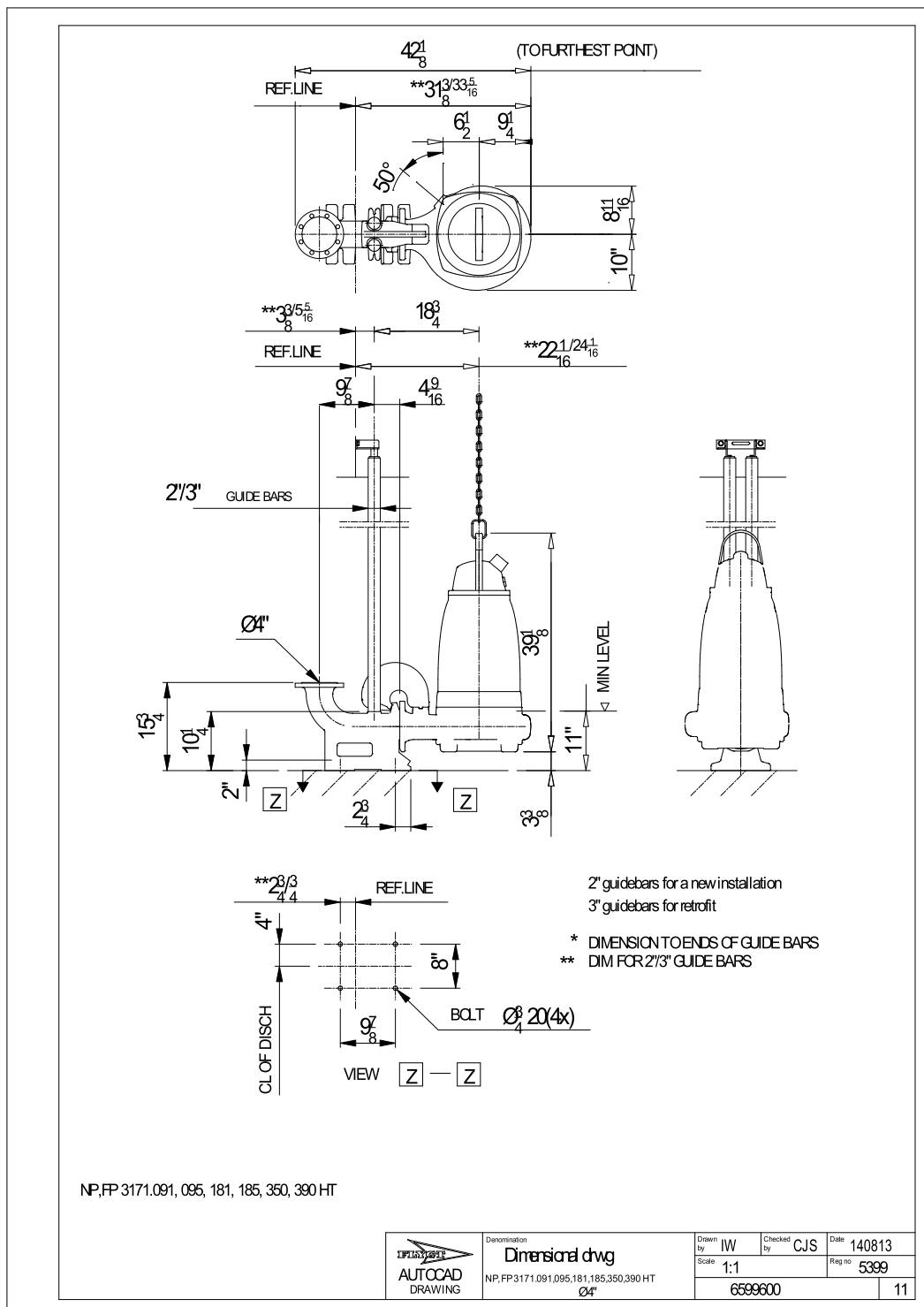
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			7/28/2017	

NP 3171 HT 3~ 455 VFD Analysis

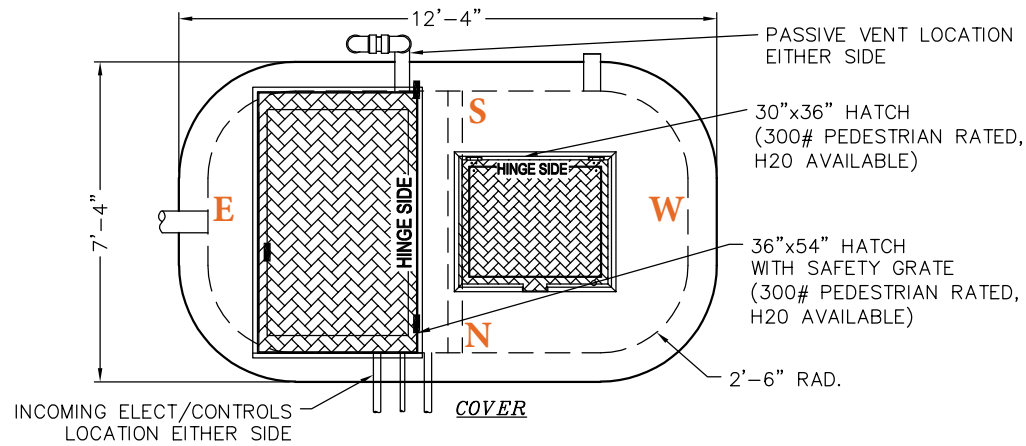


Pumps running /System	Frequency	Flow	Head	Shaft power	Flow	Head	Shaft power	Hyd eff.	Specific energy	NPSHre
1	60 Hz	910 US g.p.m.	70.1 ft	21.7 hp	910 US g.p.m.	70.1 ft	21.7 hp	74.3 %	334 kWh/US MG	17.6 ft
1	54.9 Hz	793 US g.p.m.	60.5 ft	16.3 hp	793 US g.p.m.	60.5 ft	16.3 hp	74.4 %	285 kWh/US MG	15.1 ft
1	49.9 Hz	675 US g.p.m.	52.1 ft	12 hp	675 US g.p.m.	52.1 ft	12 hp	74.3 %	247 kWh/US MG	12.9 ft
1	44.9 Hz	548 US g.p.m.	44.6 ft	8.39 hp	548 US g.p.m.	44.6 ft	8.39 hp	73.6 %	217 kWh/US MG	10.9 ft
1	39.9 Hz	408 US g.p.m.	38.1 ft	5.53 hp	408 US g.p.m.	38.1 ft	5.53 hp	71.1 %	200 kWh/US MG	9.28 ft
1	34.9 Hz	240 US g.p.m.	32.8 ft	3.24 hp	240 US g.p.m.	32.8 ft	3.24 hp	61.5 %	220 kWh/US MG	7.98 ft

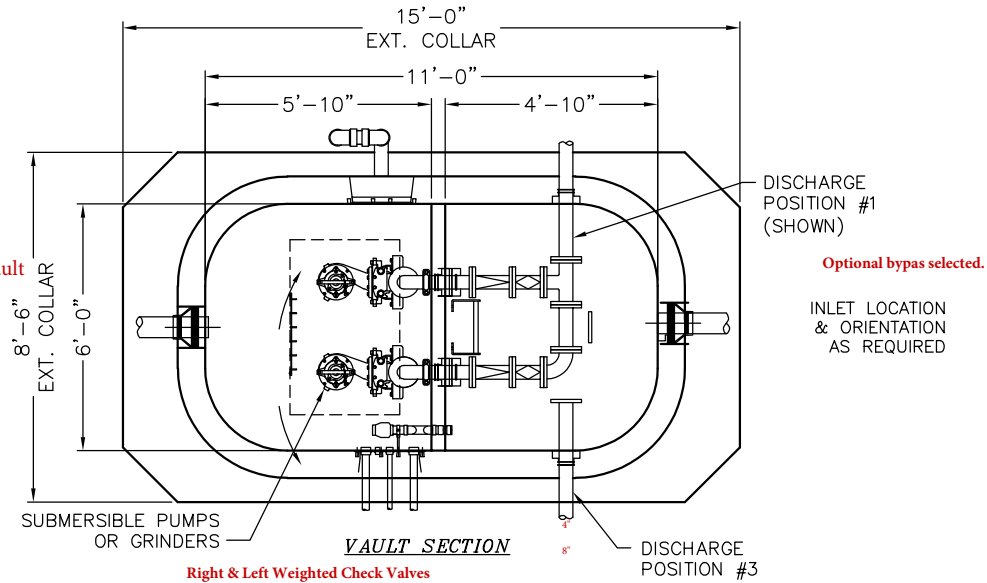
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Station inlet shall be on W side of station under valve vault



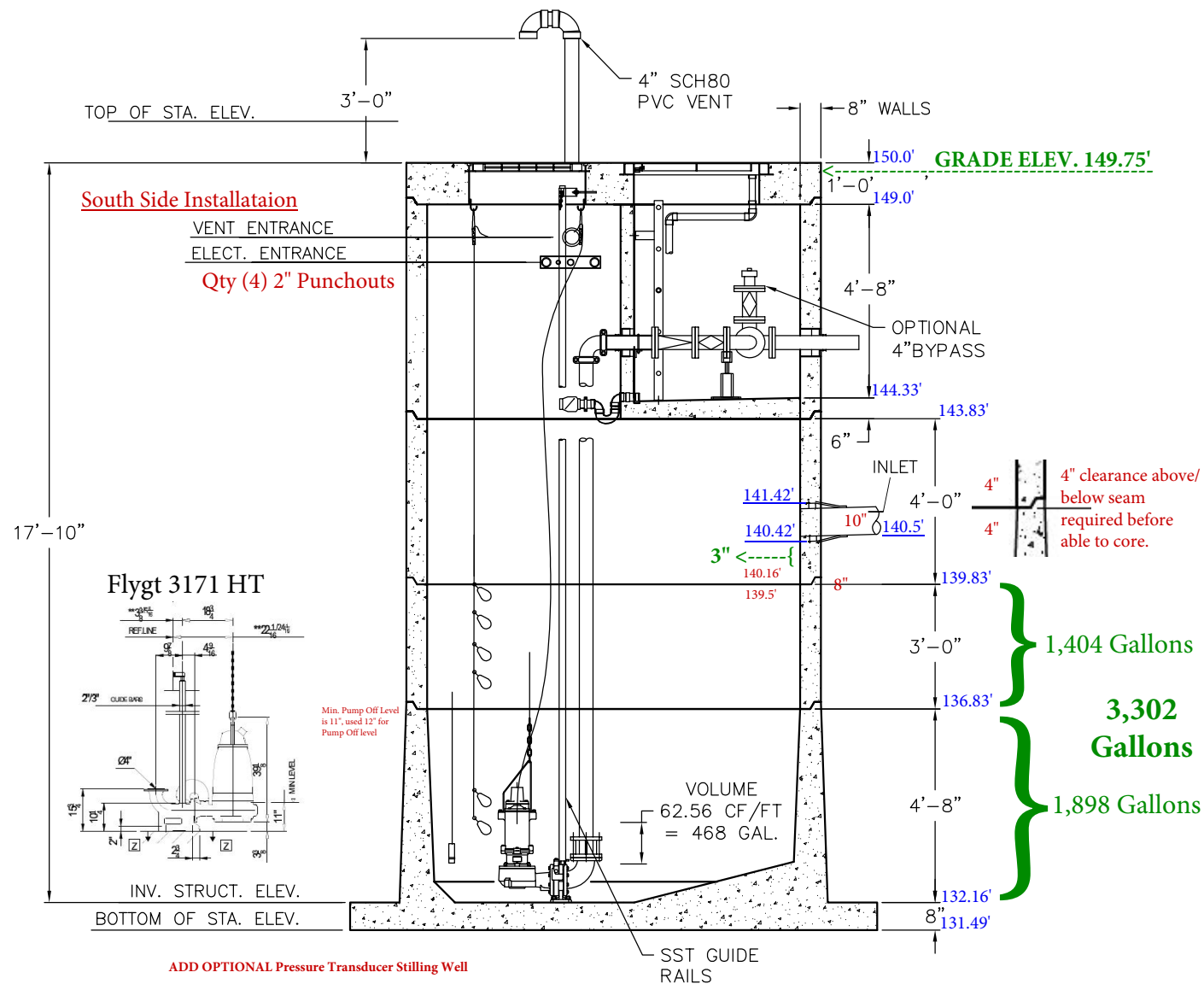
COMMONLY SELECTED OPTIONS LIST:

- £ H2O LOAD RATING ON HATCHES
- £ SAFETY GRATING FOR VALVE VAULT HATCH
- £ LADDER EXTENSION FOR VALVE VAULT ACCESS
- £ ADMIXTURE FOR HYDROGEN SULFIDE PROTECTION
- £ NON-FIBRATED EXTERIOR DAMPPROOFING
- £ VALVES, (2) additional 4" isolation (plug) valves will be included with this
- option £ BYPASS W/ISOLATION VALVE AND QUICK CONNECT
- £ DISCHARGE PRESSURE GAUGES
- £ VENTING WITH ODOR CONTROL
- £ TRANSDUCER W/FLOAT LEVEL CONTROL
- £ INTERIOR JUNCTION BOX
- £ EXTERIOR JUNCTION BOX Will provide as optional pricing selection
- £ ALUMINUM OR STAINLESS STEEL TRASH BASKETS
- £ STAINLESS STEEL PORTABLE HOIST (300#, 1000#)
- £ 2' OR 4' VALVE VAULT EXTENSION RISERS TO INCREASE HEADROOM OR FORCE MAIN COVER WHEN REQUIRED.

COMPLETE LIST OF OPTIONS AVAILABLE IN THE ONELIFT SPECIFICATION GUIDE.

APPROX. WEIGHTS:

- BASE SECTION W/FLOAT COLLAR & FILLETS = 16.3 TONS
- TOP SLAB & VALVE VAULT ARE FACTORY SEALED, AND SHIP AS 1-PIECE = 14.5 TONS
- 2' RISER SECTION = 3.3 TONS
- 4' RISER SECTION = 6.5 TONS



INTERIOR ELEVATION VIEW
RC611 x 17'-10"

REF:
6'ø=28.27 CF/FT
8'ø=50.26 CF/FT
RC611=62.56 CF/FT
468 Gal/Vert. FT

PUMP INFO	
DESIGN FLOW (GPM)	
DESIGN HEAD (TDH)	
HORSEPOWER (HP)	
VOLTAGE/PHASE	
RPM	
MANUFACTURER	
MODEL #	
IMPELLER DIA.	
PUMP DISCHARGE, in.	
STATION PIPING SIZE, in.	
SYSTEM INFO	
AVERAGE DAILY FLOW (ADF)	
OPERATING HOURS	
PEAKING FACTOR	
FORCE MAIN VELOCITY (ft/s)	
FORCE MAIN SIZE, in.	
FORCE MAIN HIGH ELEV.	
LENGTH OF FORCE MAIN, ft.	
TIE IN PRESSURE, psi	
REQ'D STORAGE (min.)	
OneLift STATION SCHEDULE	
100 yr FLOOD ELEV.	
TOP OF STATION ELEV.	
INLET 1 ELEV./SIZE (in.)	
INLET 2 ELEV./SIZE (in.)	
INLET 3 ELEV./SIZE (in.)	
HHWA (FLOAT)	
HIGH WATER ALARM	
LAG PUMP ON	
LEAD PUMP ON	
PUMP(S) OFF	
BACKUP OFF LEVEL (FLOAT)	
STRUCTURE INVERT ELEV.	
BOTTOM OF STA. ELEV.	
DISCHARGE PIPING SIZE	£2" £3" £4" £6"
DICHARGE PIPING MATERIAL	£PVC £DIP £Other
DISCHARGE POSITION	£#1 £#2 £#3
DISCHARGE PIPE ELEV.	

ONELIFT IS PROTECTED UNDER AT LEAST ONE OF U.S. PATENT NUMBERS U9,587,392; D736,834; D736,835; D737,333 AND HAS OTHER PATENTS PENDING.

Oldcastle Precast®
WATER

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ONELIFT PUMP STATION
17'-10" RC611 TYPICAL LAYOUT DRAWING

OWNER/ENGINEER

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER

DRAWING NUMBER
RC611 - 17-10.dwg

REVISION
REV DATE
4/2017

SHEET
1 OF 1