LS # 5

Roth Professional Solutions

LIFT STATION CONDITION ASSESSMENT FORM

Assessment Date: 25 April 2023

Location: 1100 Cedar Rd Municipality: Village of Kronenwetter LS Type: Duplex Submersible

Engineer: Roth Professional Solutions Technical & Equipment Assistance: B&M Technical Services

House Keeping: ☒ Good ☐ N/A ☐ Poor Lighting ☐ Tripping Hazards Present ☐ No Fall Protection ☐ Exposure to Raw Wastewater in Dry Well ☐ Sump Pump Inoperable ☐ Electric Space Heater Inoperable ☐ Potential for Shock or Electrocution ☐ Other

Health and Safety Issues:

Other Observations: Painted Cabinet, has been replaced

Asset Class	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Field Observations/Comments
Site Improvement (SIM)					
* **Access Driveway**	X				
* **Parking**	X				One driveway
* **Gate and Fencing**					N/A
* **Site Drainage**	X				Okay
* **Grounding System**	X				
* **Site Lighting**					N/A
* **Site Alarm Horn and Strobe Lighting**	X				

General Site Electrical Observations

Access Driveway Details: ☐ Gravel or aggregate basecourse only ☒ Concrete Pavement ☐ Bituminous Pavement

Parking Details: ☐ None ☐ Gravel ☒ Paved

Fence Details: ☐ Chain Link ☐ Other Fencing Height (ft): Fencing Length (ft):

Gate Type: ☐ Single ☐ Double N/A

Traffic: ☐ Other ☐ Site too Close to Traffic

Grounding System Details : ☐ Present ☐ Grounding Rings ☒ Grounding Rods

If applicable, approximate parking area:

If applicable, approximate site area:

Other Notes:

Submersible, 10HP, 30Amp, 2018, 30, Barnes 1999

LS # 5

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Structure and Wetwell (PST)							
* **Building**	N/A	☐					
Building Structures: ☐ None ☐ Concrete Walls ☐ Concrete Floor ☐ Doors Total Floor Area: Plan Floor Area:							
Field Observations: ☐ Good ☐ N/A ☐ Roof Degraded ☐ Doors and Security Failing ☐ Needs Paint ☐ Cracks on the Wall ☐ Cracks on the Floor ☐ Other							
* **Odor Control**		☑					Okay
Odor Details: ■ Vent Pipe ☐ Other ☐ Details							
Field Observations: ■ Operational and in use ☐ On site, but not required ☐ Does not operate, needs repair ☐ Other							
* **Crane/Hoist**		☑					Portable Offsite
Crane Details: Manufacturer: Model: Serial Number:							
Field Observations: ☐ Good operating condition ☐ Does not operate, requires repair ☐ Mounting Hardware intact ☐ Other							
* **Bar Screen or Com minuter**	N/A	☐					
System Description: ☐ No Bar Screen ☐ Manually Raked Bar Screen ☐ Mechanically Raked Bar Screen ☐ Screen Bypass Provided?							
Mechanical Bar Screens: ☐ Manufacturer: Model: Serial Number: Power Requirements (hp):							
Odor Details: ☐ N/A ☐ Screens need frequent cleaning ☐ Short repsonse time ☐ Odor fly nuisance ☐ Screens not in use ☐ Other							
* **Flow Meter**	N/A	☐					
Type: ☐ N/A Type: Manufacturer: Model: Serial Number:							
Flow Meter Field Observations: ☐ Operational ☐ Location ☐ Other							
* **Wet Well**		☑					6' Dia; 150 valve okay; 10GPM +/- Field Comp Pumping
Walls: ■ Concrete ☐ Steel ☐ Fiberglass							
Slab/Cover: ■ Reinforced Concrete ☐ Steel ☐ Pumps, motors and electric panel are mounted on cover/slab directly over wet well							
Pump Control System: ■ Floats ☐ Bubbler System ☐ Ultrasonic & Tansducer							
Measurement (PPM):							
Wet Well Field Observations: ■ Good ☐ PN/A ☐ Hatch Damaged or Difficult to Open ☐ Wet Structure Spalling or Cracked ☐ Evidence of Concrete Corrosion ☐ Wet Well Needs Cleaning - Solids/Grease ☐ Other							
Hatch Field Observations: ■ Good ☐ Fair: Minor Corrosion to Hatches, Hinges, or Latches ■ Poor:Corroded or Broken Hatches, Hinges, or Latches ☐ Other							
Wet Well Ladder Observations: ☐ Good ☐ Fair: Surface Corrosion; Steps Intact and Solid; Minor Anchor Bolt Corrosion ☐ Poor: Corroded or Broken Steps; Corroded or Broken Wall Anchors ■ Other N/A							
Wet Well Wall Observations: ■ Good ☐ Fair: Concrete Sealant Peeled or Cracked; Concrete Soft at Surface ☐ Poor: Exposed/Missing Aggregate; Exposed/Missing Re-bar ☐ Other							
Slab/Cover Observations: ■ Good ☐ Fair: Concrete or Aluminum Grate Slightly Corroded But Safe ☐ Poor: Concrete Aggregate Missing/Exposed; Grate Corroded or Warped; Debris Over Platform ■ Other Surface Valve Port Covered by LS Panel							

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Influent Pipe Observations: ■ Good ☐ Fair: Slight Corrosion; Pipe Intact ☐ Poor: Severe Pipe Corrosion ☐ Other							
Alarm Float Observations: ☐ Good ■ Fair: Some Grease But Operating Properly ☐ Poor: Covered in Grease or Broken ☐ Other Grease							
Pump Vent Line Observations: ☐ Good ☐ Fair: Slight Corrosion But Operates Properly; Needs Sealant Around Opening ☐ Poor: Any One Vent Does Not Operate; Corroded or Broken Off at Wall ☐ Other							
* **Dry Well**		☑					Valve Vault
Location Type: ☐ None ☐ Underground pump vault with access tube and ladder ■ Located below grade							
Lighting: ☐ Yes ■ No							
Cathodic Protection ■ Not Required ☐ None ☐ Yes							
Access Tube and Ladder Field Observations: ☐ N/A ■ Good ☐ Fair: Surface Corrosion; Steps Intact and Solid; Minor Anchor Bolt Corrosion ☐ Poor: Corroded or Broken Steps; Corroded or Broken Wall Anchors ☐ Other							
Underground Vault Observations: ☐ N/A ■ Good ☐ Fair: Surface Corrosion ☐ Poor: Corrosion ☐ Other							
Building Floor Slabs: ☐ N/A ■ Good ☐ Fair: Concrete Sealant Peeled or Cracked; Concrete Soft at Surface ☐ Poor: Exposed/Missing Aggregate; Exposed/Missing Re-bar ☐ Other							
Staircases/Stairwells: ☐ N/A ☐ Good ☐ Fair: Concrete Cracked; Concrete Soft at Surface ☐ Poor: Exposed/Missing Aggregate; Exposed/Missing Re-bar ■ Other N/A							
Building Walls: ☐ N/A ■ Good ☐ Fair: Concrete Sealant Peeled or Cracked; Concrete Soft at Surface ☐ Poor: Exposed/Missing Aggregate; Exposed/Missing Re-bar ☐ Other							
Sump Pump: ■ No ☐ Yes Type Model: Power (hp): TDH: Serial:							
Field Observations: ☐ Not Operational ☐ Poor Floor Drainage ☐ Other							
* **Cathodic Protection**	N/A	☐					
Field Observations: ☐ Disconnected ☐ Other							
HVAC (HVA)							
* **Dry Well HVAC**	N/A	☐					
Asset Size:							
Field Observations: ☐ Good ☐ N/A ☐ Old ☐ Ventilation Inoperable ☐ Makes Noise ☐ Fans Vibrate ☐ Ventilation Duct Work Corroded ☐ Belts Loose or Torn ☐ Louvers ☐ Roof Vents ☐ Other							
* **Wet Well HVAC**	N/A	☐					
Asset Size:							
Field Observations: ☐ Good ☐ N/A ☐ Old ☐ Ventilation Inoperable ☐ Makes Noise ☐ Fans Vibrate ☐ Belts Loose or Torn ☐ Ventilation Duct Work Corroded ☐ Louvers ☐ Roof Vents ☐ Other							
Electrical Systems (ELE)							
* **Control Panel**		☑					100 AMP
Asset Size (Volts) 208 (VAC) ☐ Single phase ■ Three Phase Manufacturer: Model: Serial Number: Power Supply Manufacturer: GE Model: Type:							

LS # 5

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Asset Class	CMMS Code	Asset Present	Year Installed	Cond. Rank	Perf. Rank	Utiliz. (%)	Field Observations/Comments

Field Observations: ■ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked
☐ Dust Inside Panel ☐ Exposed Wires ☐ Shop Drawings Available ☐ UL Listed ☐ Uncovered Holes
☐ Surge Protection ■ Grounded ☐ Wiring Labelled ☐ Panel Labelled ☐ Other

* **Lighting Panel**	N/A	☐					

Asset Size (Volts)
Manufacturer: Model: Serial Number:

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked
☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Bus and.or lugs corroded ☐ Spare Spaces Available
☐ Breakers Labelled ☐ Panel Grounded ☐ Panel Labelled ☐ Other

* **Main Switch**		☑					

Asset Size (Volts) 208 VAC
Manufacturer: GE Model: 10HP Serial Number: 500224-F

Field Observations: ■ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked
☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded
☐ Panel Labelled ☐ Other

* **Transfer Switch**	Manual	☑					

Asset Size (Volts
Manufacturer: Model: 31 Serial Number: 50002214-F

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked
☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded
☐ Panel Labelled ☐ Other

* **Motor Control Center**	N/A	☐					

Asset Size (Volts)
Manufacturer: Model: Serial Number:

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked
☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Labelled
☐ Other

* **Junction Box**	N/A	☐					

Asset Size (Volts)
Manufacturer: Model: Serial Number:

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked
☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded
☐ Panel Labelled ☐ Other

* **Miscellaneous Panel 1**	N/A	☐					

Asset Size
Manufacturer: Model: Serial Number:

Field Observations: ☐ Good ☐ Panel Corroded ☐ Old / Outdated / Obsolete ☐ Contacts Loose ☐ Cables Fatigued Checked
☐ Dust Inside Panel ☐ Exposed Wires ☐ Switch Gear Worn ☐ Lugs Corroded ☐ Panel Grounded
☐ Panel Labelled ☐ Other

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Generator (GEN)							
* **Emergency Generator**		☐					
* **Emer. Gen. Connector**		☑					Manual Hook-up
Asset Size: 10 HP Manufacturer: Model: Serial: Generator Type:							
Field Observations: ■ Good ☐ N/A ☐ Contacts Loose ☐ Cables Fatigued Checked ☐ Engine Fluids Low ☐ Poor Housekeeping ☐ Poor Accessibility ☐ Panel Grounded ☐ Panel Labelled ☐ Diesel Containment ☐ Other							
Instrumentation (INS)							
* **Auto Dialer**		☑					Sensaphone 400
Manufacturer: Model: Phone Number:							
Alarms: ■ High Level ■ Low Level ☐ Generator Running ■ Power Fail ☐ Other							
* **Float Controls**		☑					
* **Bubbler Controls**		☐					
Manufacturer: Model:							
* **Ultrasonic Controls**		☐					Transducer 0-5 PSI Recent Adjustment to 3.5'
Field Observations: ■ Good ☐ N/A ☐ Bubbler Compressor Failing ☐ Air Lines Clogged / Full of Moisture ☐ Drain Condensate Traps in Air System ☐ Floats Tangled ☐ Controls Obsolete ☐ Other							
SCADA (SCA)							
Field Observations: ☐ Good ■ N/A ☐ Obsolete ☐ Other							
Variable Frequency Drive							
* **Control Panel - VFD**	N/A	☐					
* **Harmonic Filter**	N/A	☐					
* **Output Filter**	N/A	☐					
Asset Size: Manufacturer: Model: Observed RPM:							
Field Observations: ☐ Good ☐ N/A ☐ Makes Noise ☐ Obsolete ☐ Panel Corroded / Dusty / Leaky ☐ Other							
Motors (MTR)							
* **Motor 1**		☑					
Asset Size (HP) 10 Manufacturer: Barnes Model: Serial Number:							
Field Observations: ■ Good ☐ N/A ☐ Makes Noise ☐ Vibrates ☐ Shaft Bearing Noise ☐ Opposite End Bearing Noise ☐ Overheating ☐ Needs Lubrication ☐ Over Lubricated ☐ Mount Failing ☐ Leaking ☐ Emergency Stop Button in Dry Well Inoperable ☐ Other							
* **Motor 2**		☑					
Asset Size (HP): 10 Manufacturer: Barnes Model: Serial Number:							
Field Observations: ■ Good ☐ N/A ☐ Makes Noise ☐ Vibrates ☐ Shaft Bearing Noise ☐ Opposite End Bearing Noise ☐ Overheating ☐ Needs Lubrication ☐ Over Lubricated ☐ Mount Failing ☐ Leaking ☐ Emergency Stop Button in Dry Well Inoperable ☐ Other							

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Hor/Vert Centrifugal Pumps

* **Pump 1**		✔					

Manufacturer: Barnes Model: Serial Number:

Discharge Size (in) 6" Suction Diameter (in) Pump Size (GPM) TDH

Priming Pump ☐ Manufacturer: Model: Serial No.: Size (hp):

Pressure Gauge ☐ Manufacturer: Pressure Range: PressureReading:

Field Observations: ■ Good ☐ N/A ☐ Seals Leaking ☐ Vibrating ☐ Shaft Deflection ☐ Cavitating ☐ Belts Loose ☐ Bearing Noise ☐ Mount Failing ☐ Evidence of Pipe Strain ☐ Other

* **Pump 2**		✔					

Discharge Size (in) 6" Suction Diameter (in) Pump Size (GPM) 210 TDH

Priming Pump ☐ Manufacturer: Model: Serial No.: Size (hp):

Pressure Gauge ☐ Manufacturer: Pressure Range: PressureReading:

Field Observations: ■ Good ☐ N/A ☐ Seals Leaking ☐ Vibrating ☐ Shaft Deflection ☐ Cavitating ☐ Belts Loose ☐ Bearing Noise ☐ Mount Failing ☐ Evidence of Pipe Strain ☐ Other

Submersible Pumps (SUB)

* **Pump 1**		✔					

Manufacturer: Barnes Model: Serial:

Discharge Size (in) 6" Suction Diameter (in) Pump Size (GPM) 210 TDH

Field Observations: ■ Good ☐ N/A ☐ Rail System Corroded ☐ Does Not Seat Well ☐ Cables Corroded or Failing ☐ Other

* **Pump 2**		✔					

Manufacturer: Barnes Model: Serial:

Discharge Size (in) 6" Suction Diameter (in) Pump Size (GPM) 210 TDH

Field Observations: ■ Good ☐ N/A ☐ Rail System Corroded ☐ Does Not Seat Well ☐ Cables Corroded or Failing ☐ Other

Check Valves

* **Pump 1**		✔					

Size (in): 6" Manufacturer: Model: Serial No:

Field Observations: ■ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other

* **Pump 2**		✔					

Size (in): 6" Manufacturer: Model: Serial No:

Field Observations: ■ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Other ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain

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Piping and Valves Suction Isolation Valves							
* **Pump 1**		☑					
Size (in): 6"	Manufacturer:		Model:			Serial No:	
Field Observations:	■ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other						
* **Pump 2**		☑					
Size (in): 6"	Manufacturer:		Model:			Serial No:	
Field Observations:	■ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other						
Discharge Isolation Valves							
* **Pump 1**		☑					
Size (in): 6"	Manufacturer:		Model:			Serial No:	
Field Observations:	■ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other						
* **Pump 2**	N/A	☐					
Size (in):	Manufacturer:		Model:			Serial No:	
Field Observations:	☐ Good ☐ N/A ☐ Valve Operator Stuck ☐ Valve Seat Leaking ☐ Flanges Leaking ☐ Check Valve Not Seating ☐ Check Valve Not Operating ☐ Evidence of Pipe Strain ☐ Other						