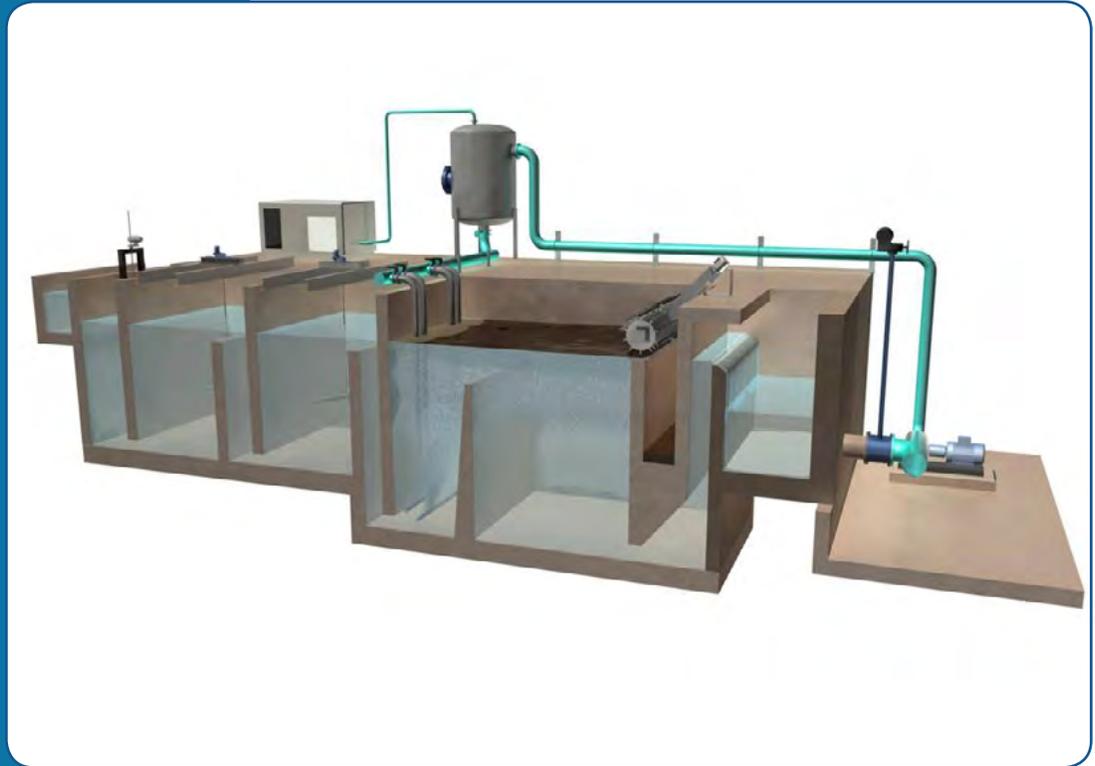




Roberts Services, Inc.
Serving the Water Community



Enflo-DAF™

High Rate Dissolved Air Flotation



**Pilot Plant
Technical Information**

TECHNOLOGIES



ENVIRONMENTAL



PUERTO RICO



LEOTECH



SERVICES



INTERNATIONAL





Roberts Services, Inc.
214 North Jackson Ave.
Media, PA 19063

Technical Data Sheet 3003.78.0
DAF Pilot System
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Dissolved Air Flotation Pilot System Technical Data Sheet Roberts EnfloDAF w/ EnfloVite Technology

Operating Parameter:

- Production rates of 16-80 gpm at DAF loading rates of 4-20 gpm/sf
- Recycle rates up to 20%
- Flocculation times from 5-20 mins
- Flocculation time and DAF loading rate can be adjusted independently

Overall Dimensions:

- Fully assembled site footprint: 25' long x 8' wide
- DAF tank: 4'-6" long x 2'-8" wide x 15'-11" high
- Flocculators: 5'-6" long x 3'-6" wide x 4'-0" high

Weights:

- DAF Tank: Weight empty - Approx. 4,000 lbs; Operating weight - Approx. 9,000 lbs
- Pilot Container: Shipping Weight - Approx. 8,000 lbs; Operating weight - Approx. 16,000 lbs

Electrical Requirement:

- 460VAC, 3-phase, 60Hz, 60 amp service

System Connections:

- Influent: 3" diameter flanged
- Effluent: 6" diameter Victaulic grooved
- DAF System Waste: 4" diameter flanged
- Instrument Waste: 3" diameter flanged
- Electrical: UL-rated disconnect box w/knife switch

Instrumentation:

- Flow rate
 - Magnetic flow meters for system influent, DAF influent, and recycle flows
- Turbidity
 - Raw water and Clarified water
- pH (following chemical addition)
- Organics
 - Raw water and Clarified water
- Streaming current (following chemical addition)
- Temperature
- Saturator Operation
 - Electronic level-sensing
 - Electronic pressure sensing
 - VFD-controlled supply pump



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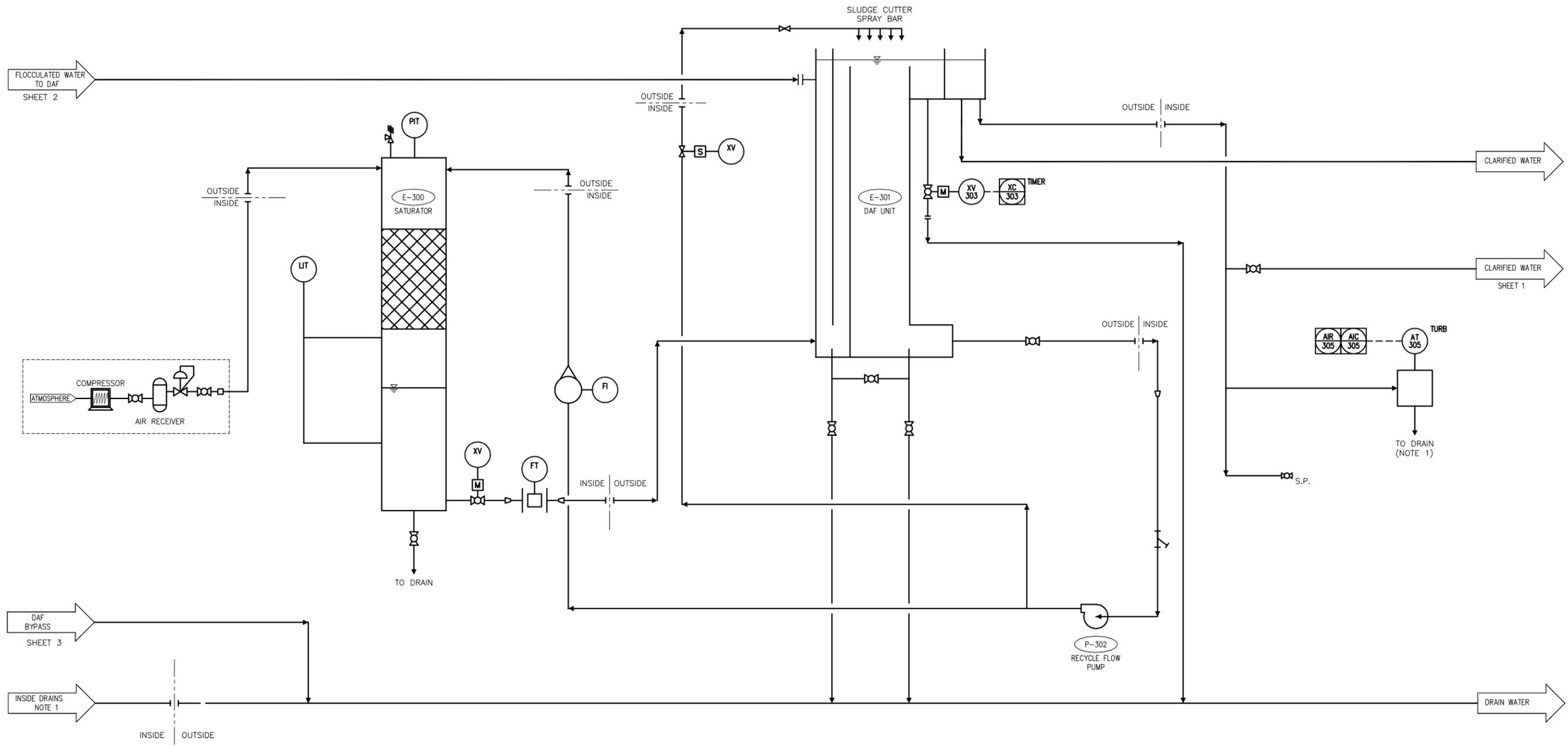
Controls:

- Touchscreen OIT
- Pilot plant SCADA program with extensive data logging of instruments and operating parameters
- Fully automated plant operations with operator setpoints:
 - Saturator level
 - Flow rate control to flocculators (for retention time control)
 - Flow rate control to DAF tank (for DAF surface loading rate)
 - Hydraulic desludge regime including spray bar operation
 - Coagulant dosing by streaming current or organics
 - pH adjustment chemical dosing

Process Chemical Management:

- 52" x 27" spill containment pallet
- Three (3) diaphragm-style chemical metering pumps, fully integrated with the pilot system controls, and associated tubing and fittings
- Three (3) HDPE day tanks w/lids
- Electronically paced dosing of coagulants and pH adjustment chemicals
- Laboratory and safety equipment

NOTES:
1.



E-300 SATURATOR	E-301 DAF UNIT
OPERATING PRESS. = 65 PSIG PACKING MAT'L = JAEGER TRIPAK TANK MAT'L = 304 SS	SURFACE AREA = 4 SF DE-SLUDGE = HYDRAULIC MAT'L = 304 SS NOZZLES = 3

NO.	REVISION		CHECKED MKA	BY
	DATE	DATE		
	10/31/11	10/31/11		

ROBERTS WATER TECHNOLOGIES, INC.
DARBY PENNSYLVANIA 19023

PROCESS FLOW DIAGRAM
DAF PILOT PLANT

SCALE	SHEET 3
CONTRACT	51283S
SECTION	A
DWG NO.	10583-F3

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