

WASTEWATER TREATMENT FACILITY REFURBISHMENT

April 2011



Essex Junction, VT WWTF



Essex Jct WWTF Refurbishment

PURPOSE AND NEEDS

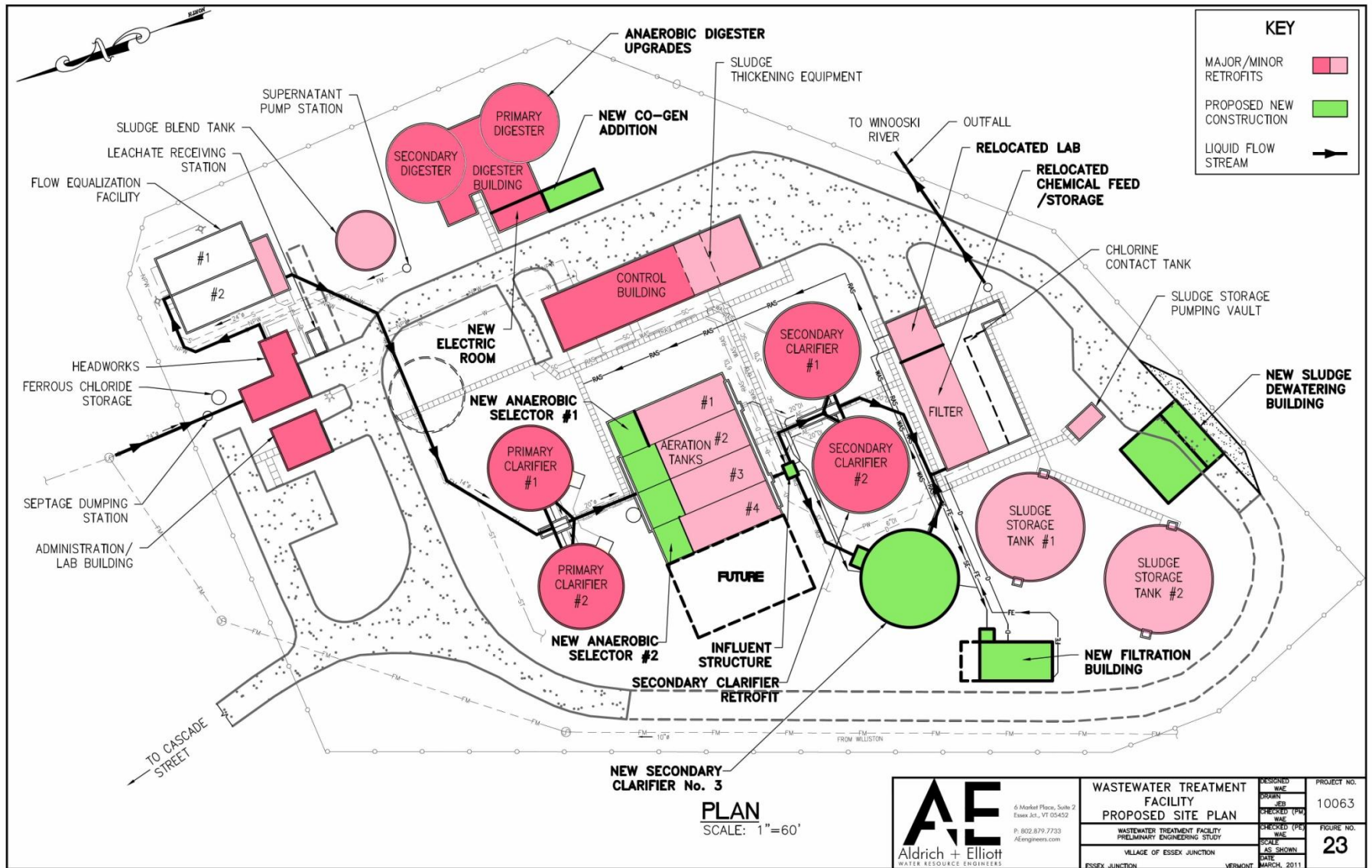
- Facility constructed in 1964 and upgraded in 1984. Designed for 20 year life with major equipment approximately 26 years old, requiring increased repairs and reduced reliability
- Identify capital improvement projects and upgrades to extend the useful life of the facility another 20+ years
- Assess potential expansion opportunities and site layout for future planning
- Assess the impact of potential regulatory changes to the Lake Champlain TMDL for phosphorus
- Improve the performance and management of the biosolids handling and treatment
- Incorporate Green Project Elements and other sustainability measures into upgrades

MAJOR DEFICIENCIES

- Secondary clarifiers
 - Sizing is inadequate
- Filter
 - Only 1 unit is provided (no back-up)
- Anaerobic digestion
 - Age and condition of equipment
 - Compliance with current life safety codes

WWTF REFURBISHMENT RECOMMENDED PROJECT

- Liquid Stream
 - Headworks
 - Primary Clarifiers
 - Aeration Tanks
 - Secondary Clarifiers
 - Filtration
- Buildings
 - Admin/Lab Building
 - Control Building
- Solids Train
 - Sludge Thickening
 - Anaerobic Digestion
 - Sludge Storage Tanks
 - Sludge Dewatering



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WWTF REFURBISHMENT

ESTIMATED COSTS & BOND AMOUNT

- Estimated Construction Cost: \$11,902,500
- Total Project Cost: \$15,398,000
- Recommended Bond Amount: \$15,230,000

WWTF REFURBISHMENT PROJECT COST SHARING

Municipality	% Allocation	% of Bond Amount
Village of Essex Jct	36.97%	\$5,630,531
Town of Essex	33.33%	\$5,076,159
Town of Williston	29.70%	\$4,523,310
Total	100.0%	\$15,230,000

WWTF REFURBISHMENT PROJECT IMPACT ON VILLAGE SEWER RATES

- Potential Funding Sources
 - State SRF Loan: \$ 8,000,000
 - VMBB: \$ 7,230,000
- First Year Annual Loan Payment (Est.):
 - Village \$417,441
- Village Sewer Rate Impacts:
 - Increase of approximately \$115 to \$130 per year

WWTF REFURBISHMENT PROJECT TIMELINE

Date		Task
2011	March	Complete preliminary engineering study
	April 12	Conduct Village bond vote
	May	Begin final design and permitting
2012	February	Finalize construction documents
	March	Advertise for bids
	April	Open bids
	July	Begin construction
2014	July	Complete construction