


**City of Dover, New Hampshire
Wastewater Treatment Facility**

**Phase I Upgrade
Workshop on Additional Improvements**

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WRIGHT-PIERCE 
Engineering a Better Environment

Introduction and Background

- Originally Built in 1991
 - Odor control upgrade (1997)
 - Outfall improvements (2003)
 - UV Disinfection Upgrade (2004)
 - Aeration Blower Upgrade (2012)
 - Sludge dewatering upgrade (2012)
- Comprehensive Wastewater Facility Plan (2012)
- Phase I Upgrade (2013)

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Comprehensive Facility Plan

- Detailed evaluation of all equipment and building systems
- Ranked all necessary improvements based on priority
- Triaged immediate needs – Phase I Upgrade

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Phase I Upgrade

- High Priority / Immediate Needs
- Accelerated design to capitalize on bidding climate
- Received very competitive bids

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Phase I Upgrade

- Estimated cost was 8.5 Million
- Low Bid was 6.6 Million
- Opportunity to construct additional improvements

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Additional Improvements

- Considerable additional needs at WWTF
- Additional CIP and SRF Loan funds
- Council approved designing additional improvements as a change order (April 2014)

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Additional Improvements

- Extensive Building Architectural Improvements
- Extensive Mechanical System Improvements
- Additional Process Equipment Upgrades

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Project History – Additional Work Design

- All Facility Plan-identified Phase II – Medium Priority items except:
 - Resurface Cascade Aeration steps
 - Replace generator
- All Facility Plan-identified Phase III –Items except:
 - Replace Primary Sedimentation Basin and Aeration Basin covers
- Nutrient Removal Process Upgrades related to Permit Limit below 8 mg/L TN

Additional Improvements

- Estimate for additional improvements
 - \$2.4 Million (construction cost)
- Solicited pricing from the Contractor
 - \$1.9 Million (construction cost)
- Bid or Award as Change Order?
 - *Council Decision*
- Pros and cons of each approach

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Bid or Change Order – Pros/Cons

Bid Additional Work	
Pros	Cons
-Certainty on Costs	-Potentially higher construction costs
-City preference to bid projects	-Additional Engineering costs
	-Longer overall schedule

Award Additional Work as Change Order	
Pros	Cons
-Engineering Cost Savings	-City Preference to bid projects
-Schedule Advantages	-Large change order
-Less Disruption to Plant Operations	
-Likely lower overall costs	

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Recommended Approach

- Award as Change Order
 - Likely lower construction costs
 - Definitely lower engineering costs
 - Very likely lower total project costs
 - Schedule advantages

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Questions / Discussions
