

# MEMORANDUM



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**DATE:** 6 July 2018

**TO:** T. Glasco, B. Westervelt, J. Alarid

**FROM:** J. Richardson

**CC:** D. Segura

**RE:** WR WWTP Cost Estimate Escalation Due to Tariffs

Dennis Segura did some excellent detailed work on background for this memo. His work has been incorporated into the analysis and recommendations contained within this memo.

## Engineering News Record (ENR) Cost Index Report Information

The data and quotes included in this memo are from the March 19/26, 2018 ENR 1<sup>st</sup> Quarter Cost Report. ENR has a database of construction cost indexing going back to 1929 and is a widely used standard for estimating construction costs in the utilities infrastructure industry. Various sections of the above referenced report indicate varying impacts of the tariffs (and other economic conditions) that are currently affecting construction costs. Current steel and cement price indices are listed in the following table.

Calendar Year	2017	2018	2019	2020	2021
Cement Increase	4.4%	4.0%	3.9%	2.7%	1.2%
Structural Steel Increase	4.6%	11.6%	5.0%	-0.7%	0.4%

In addition to the data published in the table, there are other variable estimates of price fluctuations from various sources stated throughout the report.

“... prices are already on the rise ... predicting that domestic structural steel prices will increase 13% in the first quarter of this year ... to be followed by a 10% hike in the second quarter ... These are significant price increases that could threaten budgets for steel-intensive projects...”.  
“Already, costs for many materials are spiking ... 38.7% for diesel fuel ... 17.1% for plywood ... 10.1% for aluminum ... copper products...8.9% ... rebar prices up 9% in the first quarter and another 20% in the next ...”  
“... aluminum ... annual price hikes are set to average 9.2% ...”  
“... wages would rise 2.7% overall in 2018, following a 2.6% increase in 2017.”

#### Anecdotal Information

A wwtp improvement project in Hobbs, New Mexico was bid 31 May 2018. The engineer's estimate was \$ 7,648,410. The low bid was \$ 8,982,000. The engineering consultant analyzed why there was a significant discrepancy between their estimate and the actual low bid; including detailed conversations with the project low bidder. The result of that investigation was that the 17.4% increase was due to a variety of factors.

- a) Metals quote was double what (the low bidder) estimated.
- b) Rebar cost has increased 25% in the last 4 months.
- c) Valves & pipe materials increased significantly. DIP fittings doubled in price.
- d) Equipment suppliers have been affected by the tariff issues.
- e) Suppliers are sometimes stating their quotes are only good for one day.
- f) AIS & Steel tariffs added a 5% total project cost increase to an (earlier) project in Gallup.
- g) Impact of Limited Subcontractors. 4 no bid and 5 single bid subcontractors for various portions of the project.

#### Analysis on the White Rock WWTP Project

The estimated price increases in the ENR data table above were incorporated into the original engineer's estimate for the White Rock wwtp completed in 2016. The wwtp cost estimates increased an average of 6% per year (2017 thru 2019) when these cost increase factors were incorporated into the original estimate. The original estimate had been inflated at an annual rate of approximately 4.5%, based on the ENR at the time, to be \$14.5 million when bidding was anticipated in 2020. Adding an additional annual inflation factor of 5% (anecdotal) or 6% (ENR) to the original WR wwtp estimate would bring the revised estimate to \$17.5 to \$18.2 million.

An additional 5% to 6% increase every year would be an extreme worst case scenario. The County is currently approved for a Clean Water State Revolving Loan Fund (CWSRF) loan package of up to \$17.774 million. To avoid a possible loan limit problem in any of the required authorizing documentation, the County could approve a loan limit for up to and not to exceed \$17.774 million in all loan documents. The current 20-year forecast model used in the development of the FY19 & FY20 budgets, and the projected sewer rates associated with that model, provide sufficient revenue for necessary O&M plus debt service repayment up to a potential \$17.774 million loan package plus improvement in the cash balance reserves of the system. With the FY19 & FY20 budget deferral and subsequent reduction in scope of the proposed LA wwtp project loan funding, it is anticipated that the final loan package for the WR wwtp will be within the recommended \$17.00 million not to exceed value even with the current volatile economic conditions.

It must be understood that the actual amount of the loan will only match what the actual construction cost of the WR wwtp will be based on the competitive bidding process. If the bids come in at something over the original \$14.5 million estimate, but the County decides that the additional costs are still competitive and completion of the project is still in the best interests of the citizens, then the project could move forward without any delays for loan documentation revisions. In a situation like this, similar to the situations that occurred in the mid 1990's and in the mid 2000's when utility infrastructure economic conditions were also very volatile, time is money is a very real consideration. Any lengthy delay, whether it be to redesign the project or to revise loan documentation, adds significant costs to the project. Therefore, our recommendation is to execute the loan documentation for a not to exceed value of \$17.00 million knowing that the County will have the flexibility to approve (or not) the project construction contract and loan package at the future time after bids have been received.