



## HANNIBAL BOARD OF PUBLIC WORKS

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### ELECTRIC, WATER AND WASTEWATER

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**DATE:** February 14, 2017  
**TO:** Board of Public Works  
**FROM:** Heath N. Hall, Director of Operations

### **Chloramine Alternative Design Options**

Once the Board makes their final decision between Granular Activated Carbon (GAC) and Reverse Osmosis (RO), the next step will be to hire an Engineering firm to design the new treatment system. There are several design options available to use, which I would like to highlight below.

#### **Design-Bid-Build Method**

Remember the design proposal for GAC that Black & Veatch provided us in January for \$1,175,500. It is in the board packet right behind this memo. This proposal is still valid if GAC is chosen and we want to perform the traditional design, bid, and then build method for the project. According to Black & Veatch, this will still give us a good chance of completing the project by the ordinance due date of March 31, 2020.

If RO is chosen, then we could request a design proposal for RO from Black & Veatch. It would look very similar to the GAC proposal, but would include additional cost estimates. This proposal could be reviewed at the regular March Board meeting.

#### **Design-Build Method**

Recently staff had an informational meeting led by Black & Veatch in which we discussed alternate construction methods. We have historically always performed projects with the design bid, and then build method. But in recent years other more progressive methods have been developed. Design build is one that we might consider. This saves time and typically is cost neutral with the more traditional method. It does allow us a better estimate on the true cost of the project sooner, but I am not sure that has a large bearing for our borrowing strategies (bond or lease). After the meeting, staff is comfortable with this delivery method for the project.

In the design build method, we would contract with a design build company who would become the construction managers for the project. These construction managers would design and bid out each step of the project, some of the processes (design, bid, and build) would be occurring at the same time. Here is an example of how it could work:

- Site work design is completed by the design build company.
- Immediately after the site work was designed, they would bid that portion of the project out and award it to the most qualified contractor of our choosing.

- Then while the site work was underway, the design build company would begin the building design.
- Afterwards the building design would be bid out and awarded.
- While the building construction was taking place, they would be designing the RO process piping and electrical work. And so on.

After discussing it with Black & Veatch, if RO is chosen, there may not be enough time to complete the project by the ordinance due date with the traditional method of design, bid, then build. Design build would save us potentially three months and give us a better chance of meeting the ordinance due date.

I brought the subject up to BPW staff and the City Attorney, James Lemon, and the consensus is that if we proceed with design build, it is in our best interest to select a company through a documented qualifications process. That process would include a request for qualifications of qualified companies with likely about 30 days to collect responses. And then we would select the most qualified company to begin negotiating a design build contract with them. This process will likely take a month or two to complete, meaning a contract would not be proposed to the Board until the April meeting.

With that being said, here are my recommendations on how to proceed.

- If GAC is chosen, award Black & Veatch the GAC design proposal and move forward with the traditional design, bid, and then build method. The contract can be modified at a later date if more construction services are needed, for example onsite inspection.
- If RO is chosen, go through the RFQ (Requests for Qualifications) process and select the most qualified design build company to perform design build for the project. RFQ's can begin immediately following the February board meeting. Although we can use the traditional design, bid, build method for RO, but will likely not meet the ordinance due date of March 31, 2020.