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**VILLAGE COUNCIL WORKSHOP  
DRAFT MINUTES  
EDELWEISS LODGE CLUB ROOM  
106 SUTTON PLACE  
TAOS SKI VALLEY, NEW MEXICO  
TUESDAY, FEBRUARY 12, 2019 12:30 P.M.**

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**1. CALL TO ORDER & NOTICE OF MEETING**

The Council Workshop was called to order by Mayor Brownell at 12:30 p.m. The notice of the meeting was properly posted.

**2. ROLL CALL**

Ann Wooldridge, Village Clerk, called the role and a quorum was present.

**Governing Body Present**

Mayor Christof Brownell  
Councilor Jeff Kern  
Councilor Roger Pattison  
Councilor Chris Stagg (entered during item IV.)  
Councilor Tom Wittman, Mayor Pro Tem

**Village Staff Present**

Administrator John Avila  
Clerk Ann Wooldridge  
Finance Director Nancy Grabowski  
Police Chief Sam Trujillo  
Planning Director Patrick Nicholson  
Building Official Jalmar Bowden  
Administrative Assistant Christina Wilder

**3. APPROVAL OF THE AGENDA**

**MOTION: To approve the agenda**

**Motion: Councilor Wittman      Second: Councilor Kern      Passed: 3-0**

**4. WORK STUDY: KACHINA WATER TANK COST SAVING ALTERNATIVES**

Village Administrator Avila said that the contractor for the Kachina Water Tank project had proposed change orders that were going to increase the cost of building and installing the tank. FEI Engineers had met with the contractor in order to better understand the additional costs proposed.

Administrator Avila said that the Water Trust Board funds that were funding this project had been re-authorized and that the Water Trust Board was expecting the tank to be built and completed.

- Introduction – Kelly Fearney, PE, Project Manager, FEI Engineers, Inc. part of Alan Plummer Associates, Inc.
- Kachina Tank History Overview and Current Status

Ms. Fearney, Project Manager, explained that the project had been in the planning stages for many years. Installation of a Kachina Tank was included in the Village's Water Master Plan in 2007, and in 2011 an easement agreement was finalized for a location, the timing of which was extended in 2015. Ms. Fearney's presentation showed the timeline of the various activities having occurred to design, bid, re-bid, and award the contract to RMCI, the lowest qualified bidder, at the original tank site. In 2018 the contractor began to clear and grub and to install water lines and dry utilities, as well as a drain line, to the tank site. The Geo-Test report was finalized. During excavation large cobbles and boulders were encountered which raised the contractor's original estimate for excavation, hauling of cobbles, and importing of backfill. The engineer's specifications were modified to allow for use of backfill material of up to two-feet in diameter. The contractor now estimates the cost overrun at \$240, 000 on the original bid, at a per-unit basis. The Village asked the engineers for an evaluation of alternatives for cost-saving measures, such as the use of crushed glass as backfill, the use of a rock crusher, the possibility of raising the tank, or of the possibility of installing a steel tank instead of a concrete tank. To implement any of these cost-savings ideas, however, would require a redesign of the project, incurring additional costs. In addition, aesthetics are a concern on the project, and changes may delay the project again, and possibly risk funding.

- Concrete Tank Alternatives

- Option 1: Current Design Buried

The advantages of the current design include the tank being fully buried, minimizing freezing and maximizing revegetation. The design has been completed. The disadvantage is the significant amount of excavation required and the most material export of all of the options. There would be a possible cost overrun of \$240,000.

- Option 2: Redesign Raised and Buried

Advantages of this option are that partial burial still helps to minimize freezing, though disadvantages include a required re-design, additional material support, steeper slopes on sides of the tank exacerbating access, limited revegetation, and a cost overrun of \$300,000.

- Option 3: Redesign Raised and Partially Buried

Option 3 presents the advantages of a \$40,000 construction cost savings, with disadvantages of a required re-design, more opportunities for vandalism and of possible freezing, though snow cover and mixers in the tank would help to prevent against freezing. Additional disadvantages would be a cost overrun of \$210,000, and the tank being above-ground at approximately six-feet higher than surrounding grade.

- Concrete vs. Steel Tank

Advantages of a concrete tank include options for a fully or partially buried tank, installation of two chambers to allow one side to be isolated during low demand periods, custom dimensions to fit the site, the longest life, of up to 80 years, as well as least expensive life-cycle costs, and no fencing required. The disadvantage is that this option requires the most expensive capital construction cost.

For a steel tank, either welded or bolted, advantages include possible less expensive capital costs as well as a shorter construction time once the site is prepped. Disadvantages include a necessary re-design, an above-grade placement to allow for maintenance, susceptibility to freezing and vandalism, an inability to create two chambers, a possible re-bid required for the project, as well as a more expensive construction cost and a risk of losing funding for the project or the construction easement due to delays.

- Advantages and Disadvantages

- Life Cycle Costs

Short-term and long-term costs of concrete, welded steel, and bolted steel tanks were presented.

- Conclusion

Ms. Fearney highlighted the various advantages of certain options, though with re-design costs required, along with concerns on aesthetics, freezing, vandalism, and certain issues with delays in the project, a recommendation to proceed with the current design appears to be the most sensible

- Q & A

**6. ADJOURNMENT**

**MOTION: To Adjourn**

**Motion: Councilor Kern**

**Second: Councilor Wittman**

**Passed: 4-0**

The meeting was adjourned at 1:40 p.m.

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Christof Brownell, Mayor

ATTEST: \_\_\_\_\_  
Ann M. Wooldridge, Village Clerk