

# Davenport Rim Irrigation Well Project Update

January 10, 2017

# Recap of Well proposal from 2016 Annual Meeting

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- Well project with a estimated cost of ~\$130K presented
- Showed a financing proposal that would cover both the well project and the HOA finances with a ~7 year loan
- Also showed that with or without the well we would still require a \$50 dues increase to rebuild reserves, cover higher City of Austin (CoA) water expenses and other cost inflation
- Water well savings on irrigation expenses would help rebuild reserves
- Eliminated the earlier proposed one-time assessment
- Intention to start the project as soon as possible

# Update on Well Driller

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- After many months of delays our original driller Central Texas Drilling (CTD) “passed on this job”
- CTD wouldn’t arrange the electric or irrigation system hookup - had to be separately arranged
- Concern that any conflicts during project among multiple providers would lead to finger-pointing
- For new driller we want a single provider to complete the full system

# New Drilling Company

## Hydro Resources

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- Hydro Resources comes highly recommended and able to provide (through subcontractors) ALL parts of the irrigation well project
- This provider turnover was a blessing-in-disguise as we learned CTD was not including multiple items necessary to use this well for irrigation within City of Austin (CoA)
- We would have been left with an incomplete system and multiple unexpected high dollar additional expenses

# Additional Well Expenses

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- Good news that we learned of the new expenses before starting the project
- But what now?
- Purpose of this meeting is to explain the additional project costs and discuss our options

# Three items dominate the well project cost increase

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- CoA requires 8" Water Main RPZ backflow preventer - \$77K
- Proper Foundation for 10K gallon water tank on the Canonero Hillside - \$25K
  - Without proper anchored foundation the weight of the water would cause long term problem on that hillside
- Electric Connections require CoA energy service upgrade - \$20K
- Other missing bid items and cost increases - \$33K

# Summary of New Expenses

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- The projected cost is now \$285K
- Doubling of the initial estimate is understandably hard to swallow
- Need to revisit the return-on-investment and review our options



# **RECAP OF THE ARGUMENTS FOR THE WELL**

# Factors in Well Consideration

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- Austin keeping 10hrs/week watering for automatic irrigation systems
- Austin won't provide a waiver for our HOA
- Austin price for water increased 19% from 2014 to 2016
- Austin imposing new regulations for wells
- Likely to impose a ground water control district to limit well usage to “historic” levels
- Reminder that well will ONLY be for irrigation
- Domestic service will stay with city water

# Additional Factors in Well Consideration

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- Both the common areas and individual home owners have lost much landscaping material due to insufficient watering
- Estimated that average homeowner has lost ~\$5K in material over last 10 years
- Total estimated loss in landscaping of ~\$350K
- Additional losses on property values are likely even larger. One percent loss in our house values is a total of ~\$420K (70 units)
- These two items amount to \$77K/year or ~1.1K/year/unit

# Irrigation Well Return on Investment

- Well irrigation at ~9X lower cost than city water
- ROI is very favorable, but the actual saved annual expenses from the well is only \$7K due to desired ~3.4X higher water usage with the well installed

	Annual expense reduction	Comparing against current water usage	Comparing against new water usage
Estimated water bill savings	\$13K	\$13K	\$42K
Estimated waste water savings	\$1K	\$1K	\$1K
Added annual service for well	-\$2K	-\$2K	-\$2K
Electric Cost to pump irrigation water	-\$5K	-\$1.5K	-\$5K
Home & Landscape Value Saving	0	0	\$77K
Net Income from Well/year	\$7K	\$10.5K	\$113K
Estimated Rate of Return	2.4%	3.7%	40%

# Waste-Water Averaging

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- Waste-water more expensive than supplied water
- Waste-water is determined from 3 months of winter averaging
- **Any water usage during 3 winter months ends up being 7.7X more expensive** than any other month due to this waste-water averaging
- HOA turns off irrigation in winter because of this, but it's not good for plants
- Also results in more irrigation system failures when system turned back on 3 months later
- Hose watering during this period is **very** expensive



# **UPDATE ON THE WELL AND TANK LOCATION**

# Well, Water Tank, and RPZ Location

- Well drilling site (yellow arrow) moved for better drilling rig access
- One tree removed and one tree trimmed at well site
- 8" RPZ box replaces large shrub (pink arrow)
- 10K gallon storage tank (red arrow) placed behind trees to not be visible from road or any unit



# 8" RPZ and Enclosure

- This is the biggest item missed in earlier bid
- Will be next to parking pad at Canonero entrance
- Add shrubbery to partially hide box



# Details on Drill Site and Tanks

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- Cut-and-fill excavation will be needed for the storage tank location to create a flat area
- Need a properly anchored foundation for tank and secondary pump housing (not in earlier bid)
- Steep drop-off on side of Canonero doesn't allow well to be placed in same location as water tank due to drilling equipment access requirements

# Secondary pump housing



- Secondary, booster pump housing placed with the water storage tank
- Needs to provide 120gpm at 70psi
- Placed on foundation with water storage tank

# Small Chance for Worst-Case Well Result

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- The vast majority of the wells in this area produce good irrigation water
- Always some chance of hitting pocket of bad (salty) well water
- In worst case situation we may have to fill and abandon the well
- The estimated cost for this scenario is \$30K
- Also possible that we'll need to mix city water with well water to make it usable

# Estimated Breakdown of Well Costs

Item	Original Estimate	New Estimate
Drilling 900' well and finishing	26.4	32.7
Frac Tank	-	6.5
Added cost of well casing for variance	5.8	5.1
Well Pump and controller	8.4	8.4
Pump Cable, Drop pipe, and Labor for pump	-	16.6
Tailings collection/disposal	7	6.4
Water Tank	15.2	9.3
Foundation for Tank & secondary pump	-	24.6
Secondary pump, controller, & housing	21	25.3
8" RPZ and associated costs	-	77.3
Misc Additional Items	-	16.3
Cutting Canonero Entrance to run W&E	15.6	1.6
Other Connection costs (routing W&E)	12.3	12
Irrigation Hookup and 2" backflow valve	2	1.6
Electric Connections for pumps	20.4	20.4
tax	-	21
<b>Total</b>	<b>134.1</b>	<b>285.1</b>

# Well Project Team

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- Contractors/Consultants
  - Drilling Contractor: Hydro Resources
  - Subcontractor for Water : Joe Bartley
  - Subcontractor for Electric : Wimberley Electric
  - Project Financing: Alliance Association Bank
  - The Wattinger Company: Installation of RPZ, etc
  - Myers Concrete: Tank Pad
  - Well Spec, Joe Vickers: Hydrogeologist
  - GICON: Booster station pump company
  - Rain for Rent: Frac Tank Company

# Estimated Well Project Work Schedule

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- Well Drilling: 4-7 days
- Well Completion: Flow rate & water quality testing- 2-4 weeks
- Tank Installation: 1-2 weeks
- Filter/booster pump installation: 2-3 weeks
- Final testing/inspection/operation: 1-2 weeks



**NON-WELL RELATED  
INCREASED HOA EXPENSES**

# Increased CoA Drainage Expense

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- In Oct of 2015 CoA moved the \$9.8/unit street drainage fee from your individual bill to the HOA and increased the total fee to by 54% (\$1057/month new HoA fee)
- HOA is now paying an additional \$15/month fee to CoA
- This is 30% of our recent \$50/month increase
- <https://www4.austintexas.gov/duf2howcalculated/>
- VERY interesting presentation
- <http://www.austintexas.gov/GIS/DrainageCharge/>
- Can see full calculation of our charge here
- Well project will not reduce this fee



## Drainage Charge Revision Map

2800 WAYMAKER WAY

Property Size: 776,317

Impervious Cover: 281,173

Percentage of Impervious Cover: 36.22

Adjustment Factor: 0.75

Estimated Monthly Charge: \$1,057.18

Until October 2016, there is a single-family discount for a drainage charge over \$9.80. If this property is single-family residential, the Estimated Monthly Charge is \$533.49

Exempt Status: None

Appraisal District: TCAD

The drainage charges shown by this viewer are estimates made available by the City of Austin as a service to drainage charge ratepayers. The estimates are subject to change. The map is for visual reference only.

The City of Austin makes no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the information provided.

Note: Aerial photography used in this web map is from January 2012. Impervious cover for properties built or modified since then has been estimated and may not display, or may display incorrectly. For an explanation of how the impervious cover was estimated for properties developed since January 2012, visit the FAQs at [www.austintexas.gov/drainagecharge](http://www.austintexas.gov/drainagecharge).



# More Work Need on Retention Pond

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- Repairs a year ago addressed large void under the Weir dam and leaks in the walls
- CoA notice says that we also need to rebuild the sand filter in the bottom of the pond
- First bid for this fix is \$12.3K
- Seeking additional bids

# Irrigation Controller

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- Old Tucor Irrigation controller is now unreliable and not adequately supported by Tucor
- Cannot get expected zone-based water usage reports to help monitor system problems
- Gathering multiple bids to replace the controller and potential modify the zones for usage with the well irrigation
- Controller replacement needs to happen regardless of well project
- Estimated Cost from 2 bids is \$35k

# Recap of Recent Big Ticket Items in last 2 yrs affecting our reserves

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- First phase fixes to retention pond - \$25k
- Greenbelt Runoff improvements - \$5k
- Street Reseal and Repaint - \$16.4k
- Water Leak in Street - \$7.4k
- Front Entrance Landscaping Update - \$15.4
- Signage Replaced - \$3.6k
- Boundary Wall Crack Repair - \$2.5k
- Remulched boundry beds \$5k
- Ongoing Irrigation Fixes \$9.2k
- Total = \$90K

# Reserve Fund Study Result

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- Currently \$78K considered a “good” position
- “Strong” position is \$121K
- “Ideal” position is \$143K
- Budget includes \$10K for reserves
- Propose adding additional ~\$10K to fund for next few years
- Current low reserve level has caused at least one home owner difficulty with construction loan



**HOW CAN WE FUND ALL OF  
THESE EXPENSES AND KEEP  
RESERVES HEALTHY?**

# Option #1 No Well

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- Rebuild Reserve and pay for new large items **over next five years**
- Detention pond sand filter replacement - \$13K
- Irrigation Controller Replacement - \$35K
- Rebuild Reserve Fund - \$32K
- Total= \$80K in 4 years
- Total of \$20/unit/month
- Additional \$15/month for new drainage fee
- Additional \$15/month for cost inflation
- Already raised \$50/unit/month... no new fee needed
- Remember that \$10 of that increase came off your CoA bill in Oct 2015

# But without the well...

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- Without well we'll continue to suffer large landscaping and property value losses
- Dominant value of the well is improved property values with a quick expected ROI
- Also allows better maintenance of irrigation system with more frequent watering as it is easier to tell when a zone isn't running
- Allows winter-time watering without impacting our year-round waste water charges

# Option #2 with Well

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- Need \$285K for Well and \$48K for irrigation controller and detention pond
- Well estimated to save \$7K/year in expenses
- \$333K loan repayment at 6% for 10 years requires \$53/month/unit
- Need another \$7 for reserves, \$15 for drainage, and \$15 for inflation. Total of \$90
- Need additional dues increase of \$40/month on top of the \$50 already increased

# Impact on Owner Finances

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- The HOA board recognizes that some owners have restricted income or limited ability to absorb increased fees
- We would not recommend the well if we didn't believe that ALL residents will benefit financially in the long term
- Yes \$40 more per month is significant, but continually replacing landscaping and the loss in home value is a larger long-term financial cost
- The well is also the best alternative to avoid continued, rapid CoA water delivery fee increases
- Long term well financing is allowing us the minimize the short-term impact as much as possible