ATTACHMENT O: PUBLIC PROCESS AND COMMENTS BEFORE JUNE 2019

PUBLIC COMMENTS AND CONCERNS
Public Utilities attended the Capitol Hill Community Council and the Greater Avenues Community Council to present about the need of a new pump house. Both of these community council presentations occurred prior to the submittal of the HLC applications. After the applications were submitted, Planning Staff sent notice of the applications to both applicable community councils and scheduled an Open House.

The Open House took place on August 17, 2018. Staff received written comments and had conversations with the 27 attendees. Staff received comments both written and verbal about the desire of an alternate proposal.

A second Open House was held on December 13, 2018 at the Marmalade Library Branch. Approximately 40-50 were in attendance. 38 people signed in and approximately 9 people left comments. Public Utilities, as well as the project engineers and the project architects were also in attendance to discuss and answer concerns about the proposal.

A third Open House was held on April 9, 2019. Approximately 40 people were in attendance. Public Utilities, project architects and David Hansen with Hansen, Allen and Luce Engineers. The engineering firm attended to answer questions about the well analysis study, which is attached in Attachment C.

All of the public comments are organized chronologically starting with the most recent.

From: Sharon Franz
To: Lindquist, Kelsey
Subject: 4th Ave Well Non-Historic Building
Date: Wednesday, May 29, 2019 4:51:07 PM

Kelsey,

I am not aware of all the particulars and vast timeline of this project, since my husband and I have just recently purchased a home on Canyon Road, April 25th of this year. We are the proud owners of 212 N. Canyon Road, a triplex in need of **a lot** of help, but we are devoted to bringing this building back to the beauty she once was. Had we known that the city was so easily going to throw away this gem of a park. I don't know that we would have bought this home and been willing to invest our life savings into this property.

This area is an amazing part of Salt Lake City, its historic impact as well as its current appeal and lifestyle it promotes. This area is also important to our personal history and future life. In 1940, my husband's grandfather proposed to his grandmother in Memory Grove. In 1996 my husband proposed to me in Memory Grove with her ring, the ring I wear today. In 1997 we were married at the Memorial House. This small park in the middle of a bustling downtown represents an oasis of time, a place so precious and so few in our City. This area holds precious memories for us and dreams that we hoped to come true. We now bring our daughters and dog down to the park and play! We have always loved this area of Salt Lake City and dreamed of someday owning a historic home on Canyon Road. I do NOT want to have a square "Starbucks building" in the middle of our beautiful park and historic neighborhood.

My brief understanding is that this building must be built in order to bring the well into current safety standards. Sounds like a wonderful idea, but wait.....This is a Historic Neighborhood. That means the building will look like the historic homes around it... but it doesn't. Considerations to the people living in the immediate area and those that use the park on a daily basis have been taken into consideration right? Hmmm, not exactly what I see.

1)**Appearance**: Possibly looking towards Frank Lloyd Wright for inspiration? Not so much, Maybe Starbucks gave your architect a deal on an unused plan? Nothing of that building says historic to me. It does not compliment the styles of any home in the immediate area. The trouble we have to go through to replace windows and doors to maintain the historic integrity of this neighborhood, yet it is just overridden without a second thought for this Monstrosity of a building.

2)I**mpact on Neighborhood**: *Light*: will we be able to sleep with the light coming through our windows. *Sound*: a well/pump is not silent, and a commercial well/pump I am sure is louder. *Traffic*: what impact will that have? *Environment*: Those trees that will have to be removed

have stood there longer than most of us have been alive, I notice all the renderings of the pump house show LARGE Trees- how/where did those come from? Chemicals stored/used in a neighborhood?

3)**Why not move it somewhere else**? Other than an estimate of cost and an argument for the time it would take to restore water rights. Why has the City not looked into this? There is a large park not that far down the road, a building such as this stuck at the southeast corner of that park would not have the negative impact this structure will have in our neighborhood.

Please, please, please reconsider the placement of this structure. This is not a good decision, the beauty of our park will be forever destroyed. This is a life altering decision that will impact not only the neighbors directly, but the hundreds of those that use this park daily.

This structure will not allow us the right to peaceful enjoyment of our property.
Improvements must be made, we all agree on that, but I don't think this proposed plan is the only plan that will work.

Sincerely,

Sharon Franz

From: Linnea Noyes
To: Lindquist, Kelsey
Subject: 4th Ave. Well comment - HLC
Date: Tuesday, May 28, 2019 3:35:48 PM

Dear Kelsey,

The following are my views concerning the 4th Avenue Well Project:

I live directly east of the building proposed by Salt Lake Public Utilities at 204 Canyon Road. I moved to this neighborhood in 1993 and would especially like to describe to you the character of this neighborhood. People who live here are invested and involved. It might be tempting to think that this is a reflection of entitlement, but on the contrary, I believe our community cares a great deal about protecting the soul and unique historical character of this area, not only for themselves but for the considerable numbers of people who walk, ride, and play in this area on a daily basis. There is a **generosity** underlying the choice to live in an area defined by so much public use. This is reflected in the time and energy people put into landscaping and maintenance (including considerable pooper scooper activity associated with so many dog walkers). Great pride is taken in contributing to the overall charm of the area.

The Memory Grove neighborhood and park came fully to life during the extensive renovation of the park in 1986 following the tornado.The park was replanted and restored, sidewalks and walls created out sandstone and other compatible materials, and City Creek itself brought up above ground. All of this was done with impeccable attention paid to building materials and creative design. The bridges, for example, are a combination of concrete, cobblestone, and sandstone. Each is unique and charming. The entire process was done with consideration and input from residents. This quote from the 1986 Master Plan captures the enduring essence of this neighborhood:*The historic homes and quaint residential environment along Canyon Road are unique, being so close to the CBD. Policy for this area is to preserve and enhance these homes, and the low density neighborhood atmosphere. The large trees should also be preserved.*

A deep sense of **stewardship** is tied to living in such a special place. Changes in my own home were done in collaboration with the HLC, with extra money spent on stone walls, for example, that were expensive alternatives, but look like they were here since the home was built in 1904 and blend with the elements in the rest of this historic neighborhood. Over the years I purchased and remodeled two separate apartment buildings on 4th Avenue and Canyon Road respectively. Though previously unattractive with problematic tenants, they are now beautifully landscaped with quiet tenants who contribute. Though I benefitted because of my proximity to these properties, I also felt pride in the contribution this effort made to the neighborhood. Other neighbors has made similar kinds of improvements for which both the immediate area and city have benefitted.

So knowing the care and pride that motivate the residents of the Memory Grove neighborhood, it is very painful to interact with SLCPU. I support the upgrading of the well and infrastructure. It should of course be safe for the individuals who service it. I support safe drinking water for the community at large. What I would really appreciate would be a commitment to making any proposed building appropriate in size and design to the tiny plot of

land it will sit on. This would likely take time, some money, and creativity, in lieu of the “off the shelf” designs that have been presented so far. I would also appreciate a commitment to minimizing sound and finding solutions to protect the beautiful, 100 year old sycamores.

It is also my experience that 'the cart has been before the horse'. Two of my neighbors are engineers and have come up with no less than eight engineering options that would enable the footprint of the building to be reduced. If the engineering was addressed first, an appropriate building might more easily follow.

I hope SLCPU will be held to the same historical standards as the rest of us in the neighborhood. It should be something that is appropriately scaled and, minimally, does not detract from the charm of our dear neighborhood.

Respectfully,

Linnea S. Noyes
Psychologist
204 N. Canyon Road
Salt Lake City , UT 84103

From: James Livingston
To: [redacted]
Subject: 4th Avenue Pump House
Date: Monday, August 27, 2018 4:30:20 PM

To: Salt Lake City Historic Landmark Commission

From: Lisa & James Livingston (236 N Canyon Rd)

Date: 27 August 2018

Re: 4th Avenue Pump House

We appreciate the opportunity to provide comments regarding the proposed 4th Avenue pump house. We are among the residents who will be most affected by the construction and very much appreciate any consideration that can be given to our comments. The front of our home directly faces Canyon Side Park in which the proposed pump house is to be built. The proposed pump house would be visible from our front porch, living room window, bedroom window and a balcony above the front porch. According to the proposed plan we would have a direct sight line of the large diesel generator to the north of the pump house.

We understand that the current pump has been deemed to not be up to code and consequently unsafe for employees and at risk of contamination. It has not been made clear, however, that the only feasible solution is to bring it above ground. We believe additional analysis should be conducted to determine whether it would be plausible to maintain at least some of the equipment below ground. Nevertheless, we support upgrading and protecting the city's water supply.

Our main concerns with the project relate to diminished property values due to an unsightly building that diminishes the historic character of the neighborhood, loss of public space, destruction of valuable tree assets, noise levels and risks related to use and storage of hazardous chemicals in a residential neighborhood. We understand that the Historic Landmark Commission is primarily tasked with consideration of the first few of these concerns and will limit our comment to those topics.

We request that the Commission give consideration to the following requests:

1. Consider (a) decreasing the size of the structures and fenced area somewhat and/or (b) moved or reconfigured slightly (even if it means diverting the current creek course) to avoid destruction of some of the trees. For example, while it is understandable that the pump itself needs to be proximate to the existing well, certainly the backup generator certainly does not. We understand that heavy equipment will need to be placed within the structure and that a crane would be the easiest way to accomplish that and that the tree canopy would interfere with that. However, there are other ways to move and place heavy equipment. The loss of large, mature trees will affect the character of the neighborhood as much as the construction of the pump house itself. Even if the trees needed to be pruned it would be preferable to retain them.

2. Appropriate landscaping, including plants, hardscapes and fences should be placed to shield unsightly elements from view. We are particularly concerned with the placement, appearance and noise level of the large backup diesel generator. We have observed the one adjacent to the pump house north of the State Capitol (corner of 500 N and Cortez St) and that is unacceptable. The generator either needs to be brought inside the building, housed in a separate building or enclosed in a suitable wall and/or evergreen landscaping. Also noted in the proposal is the limited availability of street parking and the proposal for a driveway and parking space. We respectfully request that parking here be limited to occasional vehicles at the location for the purpose of servicing the facility only, and not day-to-day vehicle or equipment storage.

3. The pump house must meet standards of appropriateness to preserve the architectural and cultural character of the historic district. All residents of the district must comply with strict requirements relating to the appearance of their residences and the City should not be excepted from this. The Commission's Standards for New Construction do not seem to grant any special allowances for the construction of public buildings. We believe that with minimal effort and expense, and preferably with consultation of interested neighbors, the structure(s) and landscaping can be done in such a way to reduce the adverse effect on the neighborhood character.

To facilitate determination of structural elements that would be consistent with neighborhood character, we conducted a visual survey of the 13 structures that border (including kitty corner) Canyon Side Park. The pump house should include most if not all of the predominant elements. Most of the residences would probably be considered late Victorian or having many Victorian elements with steeply pitched roofs of irregular shape, textured shingles, porches and asymmetrical facades. Specifically, we found the following:

Exterior surface: 10 brick exterior (five painted brick, five unpainted, one with first floor brick, second floor shakes), 2 wood siding, 1 historic stucco

Foundation: 7 homes have an exposed stone foundation with average height of 4 feet; four have concrete or concrete covered foundation; two not visible

Windows and doors: The average number of openings (windows and doors) facing the park per residence is eight. This ignores the two apartment buildings.

Roofs: All buildings except one have pitched roofs with irregular roof lines, gables, dormers, etc. There are a few roofs that are pyramidal. Only the three story apartment building has a flat roof.

Porches: Most homes have porches (not sure how that could be incorporated into pump house design).

Fences: Of the homes that have fences, the most common type is stone base (sandstone or cobbles in cement) with cast iron top. Modern wrought iron fencing

would not fit the character of the neighborhood. There are also some picket fences.

Trees: The average number of mature trees in the front yard facing the park is 2.5

Other common features observed: Lintels (typically stone) above doors and windows (5), stone/paver sidewalk and/or driveway (4), transom windows (8), leaded glass/stained glass (5), scalloped siding (2), balcony (3), bay windows (3).

Other: The cobbled barriers and lining of the creek should be considered as well. Ottinger Hall, two houses from Canyon Side Park would be an ideal reference for suitable architectural elements. A functional cupola similar to that on Ottinger could help the structure look more like an old carriage house and can be highly effective at improving ventilation.

Notably absent: Large block construction similar to that in the architectural rendering or found on other pump houses such as the one north of the State Capitol.

We have reviewed carefully the Commission's Standards for New Construction and believe that significant care, consideration and planning will need to be brought to bear in order for the City to comply with those standards. We are encouraged by the language of the standard and plead with the Commission to stand its ground with respect to the City's plans. There is only one chance to get this right. We won't quote specific elements of the Standard, with which the Commission is well familiar, but we will be watching closely the development of specific plans to ensure that "the project substantially complies with each" of the standards.

We appreciate the efforts of you, the Historic Landmark Commission, and our fellow residents to ensure that this construction is as good as possible and not only does not detract but actually enhances the character of the neighborhood.

Sincerely, Lisa & James Livingston

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

I live directly east of the proposed H_2S treatment facility. I am extremely concerned about noise & vibration emenating from an above ground location. I am additionally distressed about the chlorination function &

Contact Information (Optional)

Name Linnea Nevers

Address 204 N. Canyon Road

resulting size of the building due to all of these features.

My neighbor, Winston Seiler, is an engineer who has spent his own time considering solutions. Please consider his detailed proposal which would guarantee a silent well & decrease the size of the foot print ~~as~~ as well as the height. I'd like to see my across the street neighbors!

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Keep the motor submerged to keep the height of the building low, to avoid the need for cooling and to suppress the noise.

[redacted]

Contact Information (Optional)

Name Carlton Tolar

Address

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

We are very concerned about our neighborhood for many reasons including: ① public safety (chlorine gas) ② Natural disasters (flooding, tornado both happened) ③ aesthetics + historic character of neighborhood ④ destruction of trees heritage trees. ⑤ size + height of building ⑥ Alternatives — Please look at Winston's idea

Contact Information (Optional)

Name Leslie Russell

Address 252 Canyon Road

Salt Lake City Department of Public Utilities

Resident Comment Card - 4th Avenue Well Project

The idea is fine for a different area, but just does not work for Canyon Road. Esthetically, it is fine for someplace like Sandy or Draper but Canyon Road is very historic and we want to keep it that way! My other concern is the trees - They are over 100 years old - we need to keep them ALIVE - they are HEALTHY and wonderful! We don't need a new chlorine pump in the area where you are planning on putting one in. I grew up on Canyon Road + my parents still live there, so I know how how much this is going to affect me (I will be likely inheriting this house when they pass away so in the future, whenever that may be, this is going to be a big concern for me) I don't want a big eye sore down the street and I don't want to die from cancer developed from the extra chemicals in the water system + less trees (sun from the

Contact Information (Optional)

Name 13 May 7, 2020

Address

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

I UNDERSTAND THE DIRECTION THE HLC WANTS TO GO W/ MODERN DESIGN, BUT I THINK YOU CAN DESIGN A PUMP HOUSE TO LOOK LIKE A PUMP HOUSE WITH FEWER MATERIALS, & KEEP THE ARTICULATED FACADE IF YOU HAVE TO. BUT RIGHT NOW IT LOOKS LIKE A RETAIL BUILDING. FORM FOLLOWS FUNCTION. KEEP THE BRICK, LOSE THE CAGED RIVER ROCK.

Contact Information (Optional)

Name EVAN SMITH

Address 218 CANYON ROAD

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

I really appreciated all the open info given & the respectful way in which my questions were answered. Thank you for listening to our concerns.

Contact Information (Optional)

Name Abigail Jube

Address

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

I WOULD LOVE TO SEE THE CHLORINE COMPONENT INCORPORATED FURTHER & DOWNSTREAM.

Contact Information (Optional)

Name JEFF SORENSEN

Address 217 N CANYON RD SLC UT

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

The new planned bldg is less offensive, but still ugly. It seems to add insult to injury.

Contact Information (Optional)

Name Craig Provost

Address 800 E. 18th. Ave, SLC

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

I'M SORRY TO SEE THAT INSUFFICIENT MEASURES HAVE BEEN TAKEN TO SAVE THIS IMPORTANT PARK. THIS IS ONE OF THE MOST IRREPLACEABLE JEWLS OF THE CITY.

THERE IS A WAY THIS IS NOT IT.!

Contact Information (Optional)

Name LANCE WEEKLEY

Address 280 CANYON RD SLC

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

what is the evacuation plan in case of a chemical spill?

Contact Information (Optional)

Name Lisa Livingston

Address 236 N. Canyon Rd.

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Does the proposed building have to be so big? It doesn't!!

Please conside the area residents who will look at this bldg daily and make design modifications so this bldg isn't such an eyesore. While →

Contact Information (Optional)

Name Meggy Marin

Address 540 N. Wall St.

I appreciate the changes made to date. The current rendering (5/9/19) still shows an eyesore that will do nothing but stand out. A flat roof, really? Please try harder and create something appealing; this is NOT it!

Use a magnetic pump to decrease the foot print needed and use current technologies overall to reduce the size needed for equipment.

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

The change from what is existing and what is proposed is a drastic change to the neighborhood. While I certainly can see the reason for an upgrade, based on our current level of minimal space materials and designs, I can't imagine their

Contact Information (Optional)

Name Mary Ogan

Address 374 6th Ave.

want another less invasive design without having to cut down old and established trees.

Concerns that are not address

* Chlorine Storage/Security
* Noise

Also seems it is becoming a treatment plant

It seems there must be some alternative for lowering the height by moving the base down in the ground.

Changes the neighborhood character forever!

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Much improved design.
I mourn every tree, especially
Sycamores. Please identify type of
tree being removed/retained.
Design could be more in keeping w/
historic neighborhood. Any reduction
of footprint however small would be
appreciated.

Contact Information (Optional)

Name Ray Haines

Address E. 8th Ave.

May 7, 2020

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Better materials, but stone use as gabion walls screams "McMansion" - not historic.

Project feels like it is being rushed through, especially because the pump does not run all year.

Contact Information (Optional)

Name C. CLARK

Address

-25- May 7, 2020

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

As a pregnant woman I feel very uncomfortable with an abundance of chemicals right next to my house.

Contact Information (Optional)

Name Paige Obert

Address

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Why destroy our neighborhood?
Save the trees. Consider the other options
rather than propose 30 year old technology
in a historic district and a war
memorial Park

Contact Information (Optional)

Name JANE ERICKSON

Address 116 E. 4th Ave 84103

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Additional comment!

We Won't get a DO OVER .... so let's GET IT RIGHT

Contact Information (Optional)

Name Megg Morin

Address 640 N. Main St

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

- RECONSIDER THE PUMP SELECTION - ESP WILL ALLOW A LOWER BUILDING HEIGHT
- RE-EVALUATE STATE OF THE ART METERING TECHNOLOGY TO REDUCE FOOTPRINT
- EDUCATE THE PUBLIC ON THE ACTUAL RISKS + SAFETY MEASURES ASSOCIATED WITH CHLORINE - I THINK THERE ARE MISCONCEPTIONS

Contact Information (Optional)

(OVER)

Name DAVE ALDERMAN

Address 1217 4th AVENUE

- I LIKE THE DIFFERENT HEIGHTS OF THE ROOF PROFILE. I WOULD JUST LIKE THEM LOWER
- APPRECIATE ALL THE WORK TO DOWNSIZE THE BUILDING + CHANGE THE APPEARANCE FOR THE BETTER. SMALLER IS BETTER
- SAVE THE TREES OR AT LEAST REPLACE THEM

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

I like the direction the building is heading. In the renderings, the "vintage" lampposts that dot the avenues are still available from the city ~~to~~ surround the buildings. I feel like there is a way to add an older, historic component to the new building design to balance out the glaring modernity of the pump house at this historic well.

Contact Information (Optional)

Name Pete Alderman

Address [redacted]

31

May 7, 2020

I do like the addition of the rocks, although the volume of rock used does seem to make the building stand out more. I'm not sure that the addition of even more glass would do much for noise mitigation

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

I remain unconvinced that this building needs to be above ground. Most of it COULD & SHOULD be sunken. I strongly disagree with the Historic Society or anyone else that says it has to be "modern" in style.

Contact Information (Optional)

SINK THAT WELL!!!

Name Ira Hinckley

Address 621 E 9th Ave

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

I understand the need for pure water but this is a historic park and has a lot of meaning to a large portion of Salt Lake. I think one of the long term consequences of this building is to the people who visit the park. Also with the cost of moving it, it seems that the best option would be to move the building. Option 2c-1

Contact Information (Optional)

Name Nicole Bernard

Address 240 Spencer Court

May 7, 2020

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

This "pump house" will impact this rather fragile neighborhood with increased traffic, including trucks. It's hard enough (at times) to cross the street that goes down the hill & doesn't stop (3rd Ave) w/out additional traffic. The loss of 3 trees is also unacceptable!

Contact Information (Optional)

Name Lynn Durham

Address 121 E. 4th Ave.

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

would it be Feasible to construct a well House that occupies more vertical space - leaving more trees ~~in fact?~~ intact?

Contact Information (Optional)

Name

Address

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

The City should consider State of the art technology, not 30 yr. old technology. Please call Vicki Walker - LA has done the same w/ the State of the Art - No sound, underground pumps chlorine...

Please take time to investigate.

Contact Information (Optional)

Name

Address

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

An intangible with this project is loss of the character of a jewel in the City – Memory Grove – Many housing units are being built – and greenspace is needed.

Contact Information (Optional)

Name Loss of character of Memory Grove would be significant.

Address

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Electric Submersible Pump for
No Noise generated during water lifting
from well. ESP are available at
480 V, from 20" or 18" diameter casing,
300-400' pump depth, and 4800gpm (7 MM gpd)
Xylem Goulds Type VIS submersible turbine pump
NSF61 Certified. Contact Deva Coopamah

Contact Information (Optional)

Name Winston Wheeler CH Spencer LLC [redacted] May

Address 211 N Canyon Rd SLC UT 84103

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Worker Safety - regarding workers routinely & casually entering vault confined space without completing a Job Safety Analysis

Not following Confined Space procedures when entering vault
Job Safety Analysis not completed prior to entering
I have 9 years in oil field experience & would be happy to share oil field Safety forms/procedures

Contact Information (Optional)

Name Winston Seiler

Address 211 N Canyon Rd

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Can RMP 480V Power Transformer be placed right behind the 4th Ave Stone Wall, near the pump to waste piping

Contact Information (Optional)

Name Winston Seiler

Address 211 N Canyon Rd

Salt Lake City Department of Public Utilities
Resident Comment Card - 4th Avenue Well Project

Utilize Magnetic Flow Meter* to remove the upstream & downstream pipe lengths for laminar flow of existing Meter. If interior electrical cannot be shrunk, expand building to west by 1-2ft to provide clearance between pipe & electrical on east wall. IF this will impact the tree then present two alternatives 1) Lose tree w/ smaller building 2) Keep tree w/ larger building

*or other appropriate low profile meter not requiring straight pipe

Contact Information (Optional)

Name Winston Siler

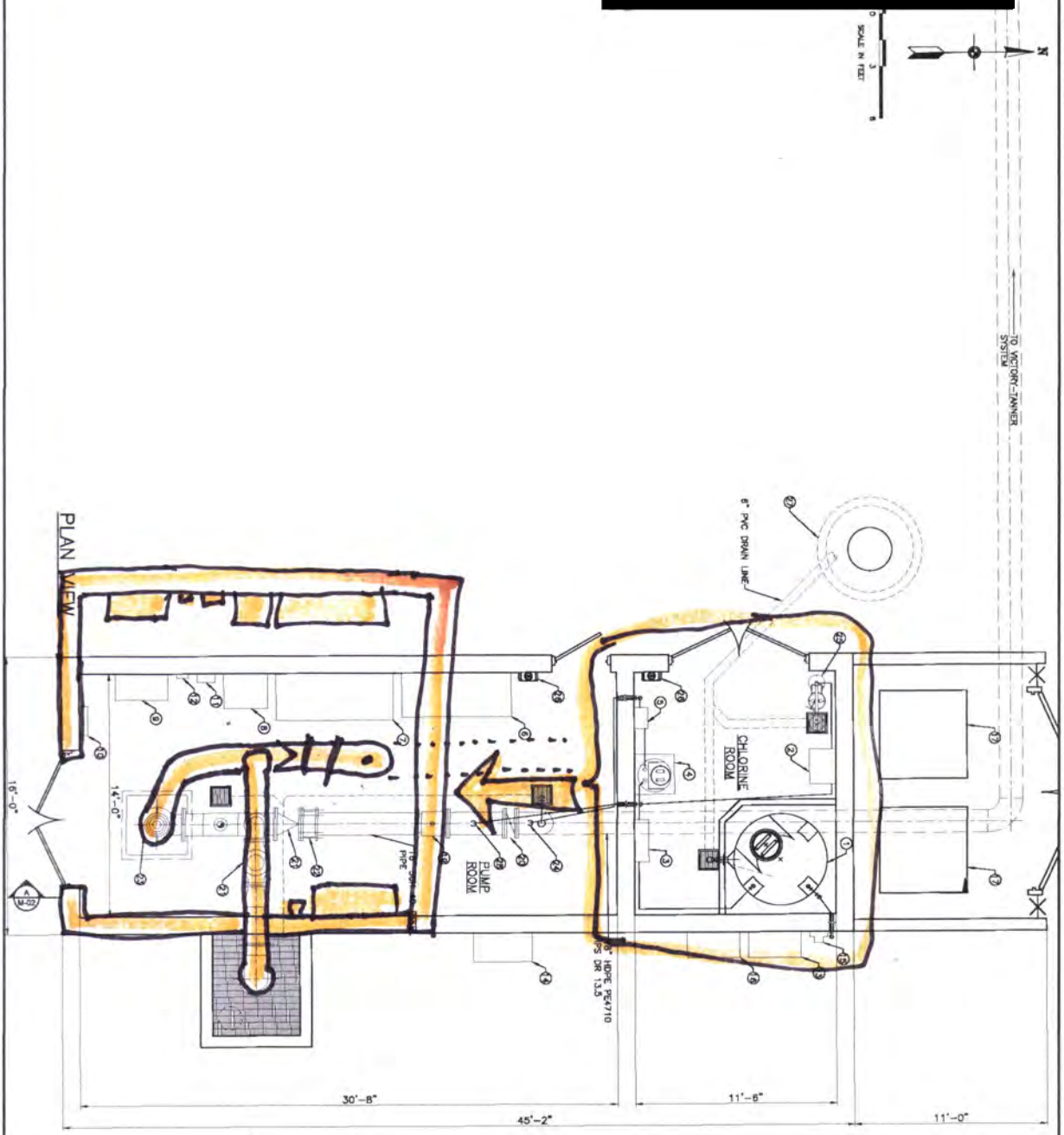
Address 242 211 N Canyon

May 7, 2020

SEE 2-PAGE ATTACHMENT

WINSTON SEILER

[redacted]



KEYED NOTES:

1. CHLORINE TANK
2. TANKLESS WATER HEATER
3. DAY TANK
4. DOSING PUMP
5. ELECTRICAL DISCONNECT/INCOMING POWER
6. VFD
7. LIGHTING TRANSFORMER
8. RTU PANEL
9. LIGHTING PANEL
10. PRESSURE RECORDER
11. WATER METER TRANSMITTER/READOUT
12. MAIN CIRCUIT BREAKER
13. MANUAL TRANSFER SWITCH
14. POWER METER BASE
15. CT ENCLOSURE
16. GROUND MOUNTED HVAC
17. RMP 480Y POWER TRANSFORMER
18. FLOW METER
19. BUTTERFLY VALVE
20. CHECK VALVE
21. RESTRAINED DISMANTLING JOINT
22. 450 HP 3500 GPM VERTICAL TURBINE PUMP
23. INJECTION QUILL W/ INTEGRATED CHECK VALVE
24. EYE WASH AND SHOWER
25. FIRE EXTINGUISHER
26. 5' DIA. CHEMICAL SPILL CONTAINMENT MANHOLE
27. CONNECTION TO TANKLESS WATER HEATER

CIVIL

PUMP HOUSE MECHANICAL PLAN

DATE: FEBRUARY 2019 PROJECT NUMBER 032-16-04

SHEET 8 OF 9 DRAWING NO. M-01

SALT LAKE CITY PUBLIC UTILITIES

4TH AVE WELL AND BRICK TANK

SALT LAKE CITY, UTAH

DESIGN	REVIEW	VERIFY SCALE
DESIGN J. BEAN	CHECKED K. BAGLEY	BAR IS ONE INCH ON ORIGINAL DRAWING
DRAWN J. BEAN	APPROVED K. BAGLEY	

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS

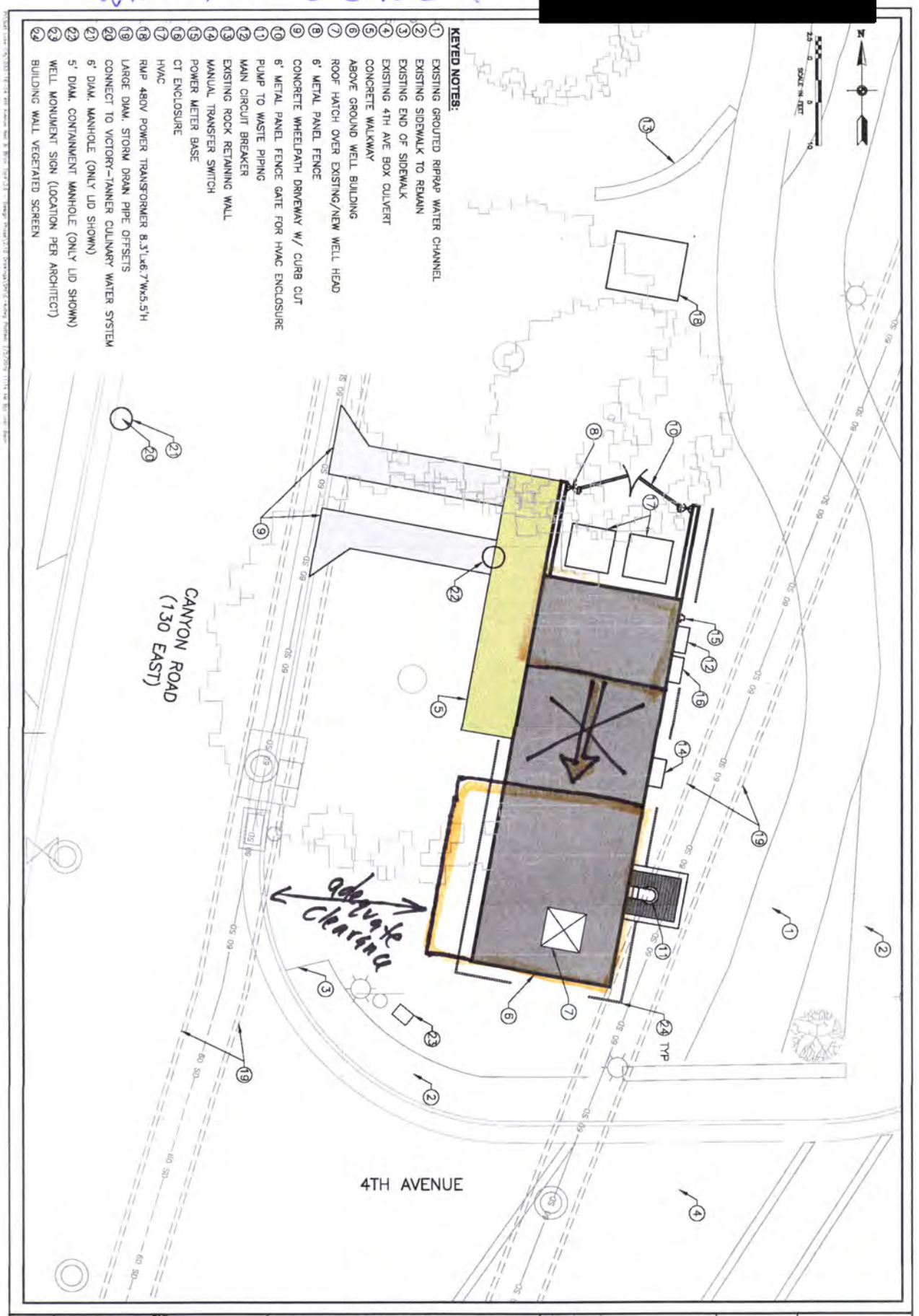
PRELIMINARY

BOWEN COLLINS

May 7, 2020

WINSTON SEILER

[redacted]



CIVIL

SITE PLAN

DATE: FEBRUARY 2019 PROJECT NUMBER 032-16-04

SALT LAKE CITY PUBLIC UTILITIES

4TH AVE WELL AND BRICK TANK

SALT LAKE CITY, UTAH

DESIGN	REVIEW
DESIGN J. BEAN	CHECKED K. BAGLEY
DRAWN J. BEAN	APPROVED K. BAGLEY

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING

NO.	DATE	REV. BY	DESCRIPTION

REVISIONS

PRELIMINARY

BOWEN COLLINS

DRAWING NO. C-04

SHEET 4 OF 9

May 7, 2020

Questions for City Water Officials on
Salt Lake City's Proposed
4th Avenue "Pump House Upgrade"

As the nearest private property owner to the proposed project, I am strongly opposed to the city's placing a full-scale water treatment plant on the sensitive park area in the north section of the city park at 4th Avenue and Canyon Road.

There has been a very productive, and vital, pump on that small mini-park since 1968. It has been providing pristine water to the city's water system without chemical treatment for those *50 years,* and we are not aware of any instances of contamination or injury to a water department worker in that entire time.

As a result of a clean record, the well is apparently "grandfathered in" its present status, that is, providing clean, but untreated,water without any government sanctions.

However, we are now being told that if the well needs any emergency repair work, the well will need to be entirely upgraded with chlorine and fluorine injection included. Furthermore, funding of several million dollars is now available.

So the need for the project going forward at this time is *prospective* in nature.

I believe this upgrade will adversely affect the environment around the facility. I am a property owner directly across the street (west) from the project. I believe that if the driveway to this compound is placed across from my driveway, we will lose the parking availability in front of my house at 207 Canyon Road.

A treatment plant, even if the noise levels are low, will impose an industrial look to the neighborhood, destroying the area's historical value and value as a public park hidden away just blocks from the downtown area.

The wellsite should be moved to a less sensitive location: I believe this particular well location is not the only site in the entire mouth of City Creek Canyon where an abundant amount of water can be pumped. Less sensitive locations should be scouted out both for their sufficiency and lower community impact.

Traffic impacts: Canyon Road, which is the only roadway in and out for dozens of neighbors north of 4th Ave., is very narrow on the west side of the park, not to mention the entire length of the street right up to the gate. I cannot see how a large tanker truck can back up into the proposed compound and not intrude into the street. Even if the visits will be limited to one or two a month, there will be severe traffic holdups. Plus, the driveway is sure to see much activity at many times during month other than for the loading of the chemicals. There will be repeated and always problematic traffic problems. Even if parking is banned on the west side of the street opposite the driveway (a loss to me) I think the road still won't be able to handle it.

Damage to the 'historicity' of the area: This area, going all the way up into the canyon, was claimed by Brigham Young as soon as the pioneers entered the valley. Soon, he "bought" the canyon from the city for $500 with a promise to continue to provide the city with clean and abundant water. He engaged in numerous business endeavors in the canyon but they proved unsuccessful. City Creek provided the settlers with their first water source, and this water grew the first crops in the valley that sustained the settlers and enabled the city to grow.

If chemical injection is unavoidable at this well location, move the storage tanks to a remote location: It seems illogical to claim that chemical treatment *must* happen just as the water comes up out of the ground. I'm sure many water systems are treated with chlorination some distance from where the water is "sourced" or pumped. The tanks and associated

equipment are what drive this project to the size and objectionable nature that we see in the plans. Move the tanks, both of them, leaving just the well and some piping.

Damage to property values in the Memory Grove neighborhood: As I am not contemplating selling my property, this concern I will leave to my neighbors. However, a water treatment plant humming away, and frequently visited by massive trucks with numerous workers, cannot be an attraction to potential tenants for my rentals.

Loss of valuable trees surrounding the wellhouse: In addition to creating a permanent eyesore in the neighborhood, the project may require as many as five or more mature trees to be taken out. They provide the shade, the beauty and the attractive ambiance that make the neighborhood such a treasure. One tree is four feet in diameter. It cannot be sacrificed!

A full-dress water treatment plant by its very nature will produce a structure that cannot be disguised to blend into the neighborhood 'look': Providing a "harmonious" facing to the building would only put a band-aid on the overall look of the compound, even if the stark, black wrought-iron fence aspect is removed. This solution is too little, too late.

The well provides vital water during the summer, yet is idled during the winter. This suggests that the main need for this water is for the lawns and gardens and fountains of the downtown businesses. And the biggest of these must be the LDS Church. Perhaps chlorination equipment could be installed on *their* property.

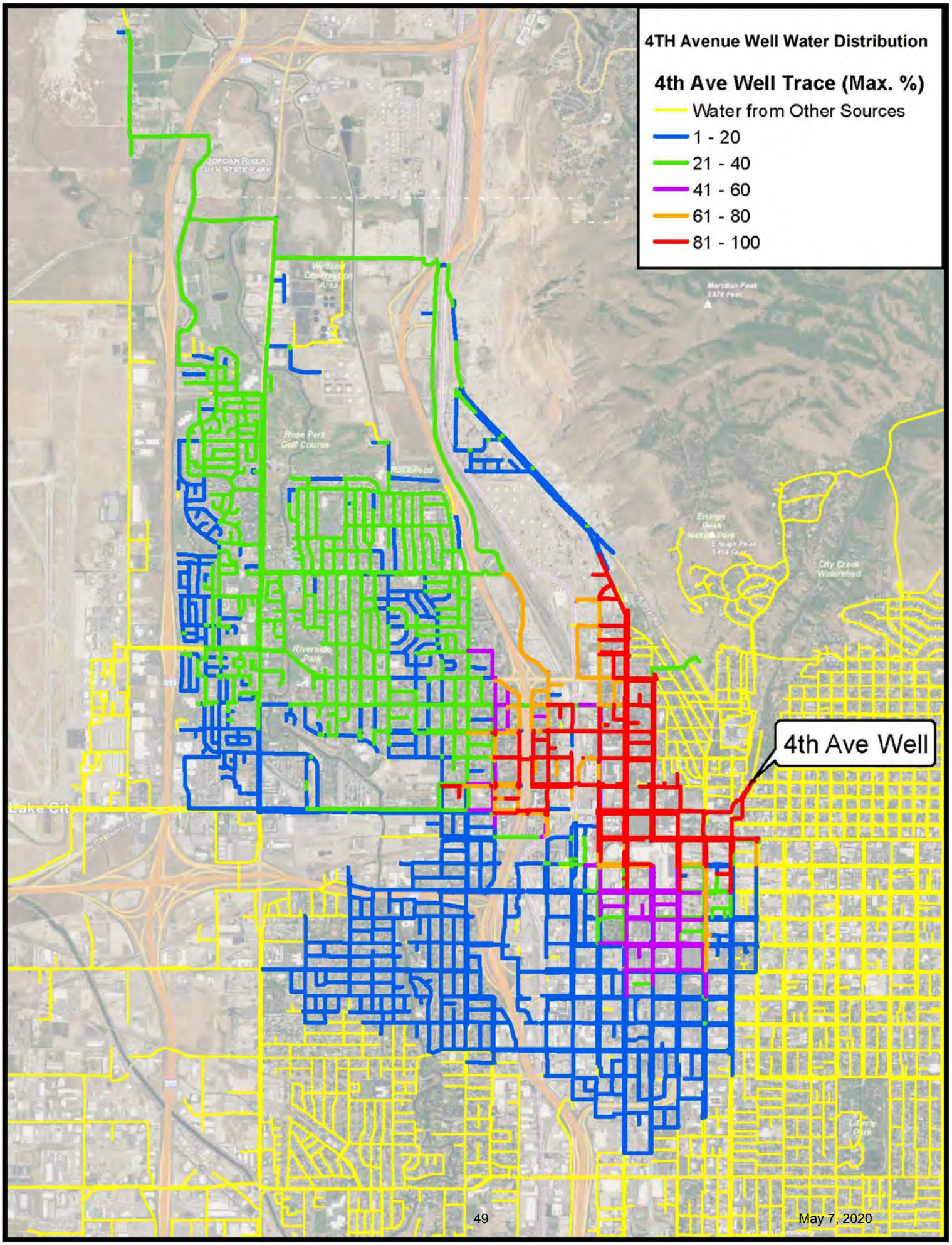
How many customers are served between the well and the spot where the water merges with the *chlorinated* city water system? If there are none, then the 4th Avenue project is redundant. If there are any at all, how is the pressure to these customers regulated as there is no storage between them and the well? Furthermore, how do they get chlorinated water to

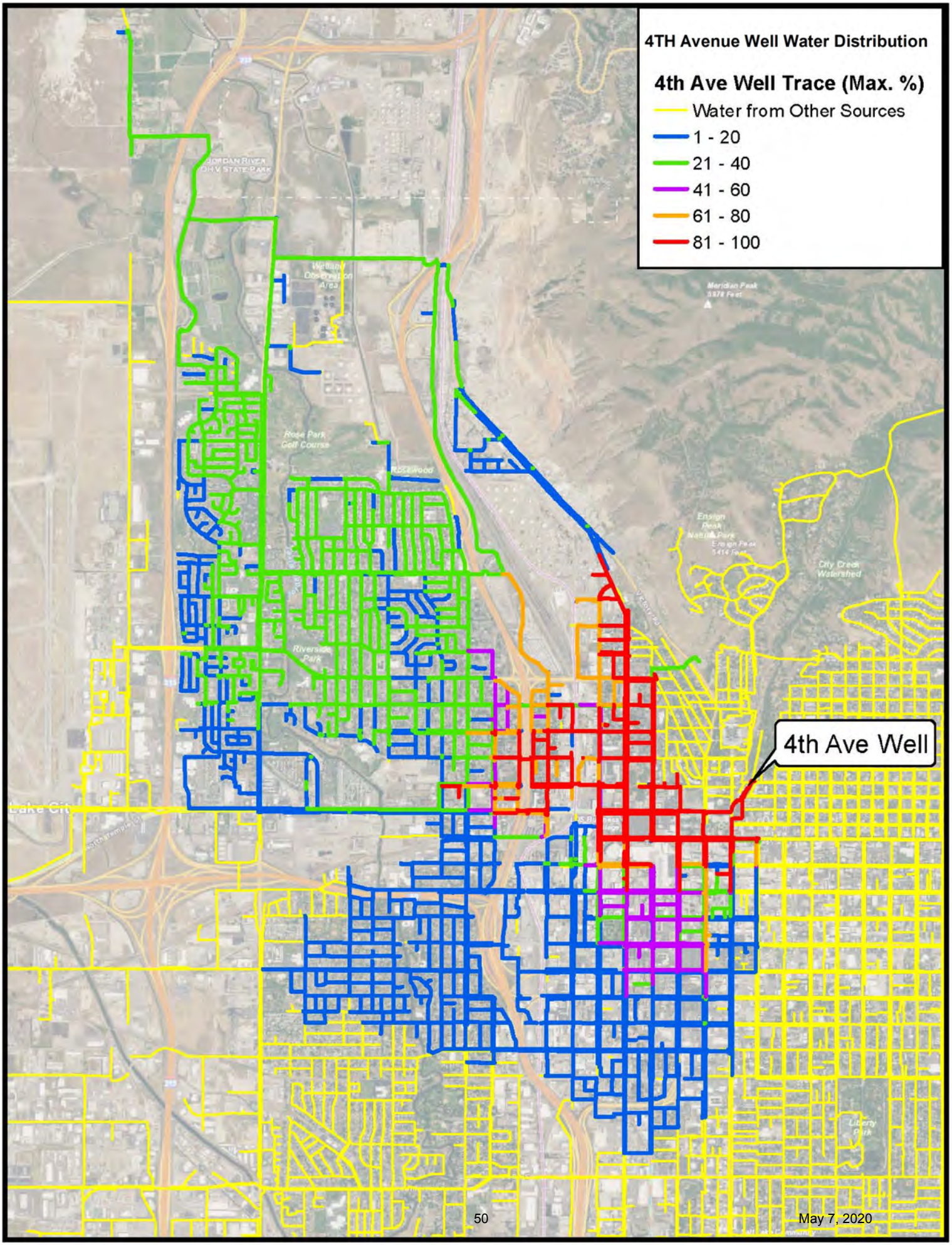
drink during the time the well is idled? And doesn't the city promise *all* residents their water is treated and safe?

Can the spot where the water merges be moved, through re-routing the pipe, so that the addition of chemicals becomes unnecessary? In other words, can the well water be merged into the city system through new piping in a new location in such a way that already-present chlorination handles the additional water the pump would provide?

The city makes the argument that the city could suffer sanctions from some higher authority for balking on upgrading this well. I would like to know how onerous those sanctions would be in terms of dollars, or certifications, or some other kind of 'black marks' against the city.
I submit that the city can probably be given generous extensions on imposition of any sanctions if the city can show it is working in good faith to find a way to provide clean, safe water without wrecking the Memory Grove neighborhood.

Dave Jonsson
[redacted]


4TH Avenue Well Water Distribution
4th Ave Well Trace (Max. %)
Water from Other Sources
1 - 20
21 - 40
41 - 60
61 - 80
81 - 100
4th Ave Well


4TH Avenue Well Water Distribution
4th Ave Well Trace (Max. %)
Water from Other Sources
1 - 20
21 - 40
41 - 60
61 - 80
81 - 100
4th Ave Well

---------- Forwarded message ----------
From: **David** <[redacted]>
Date: Wed, Aug 8, 2018 at 10:57 AM
Subject: blends with surroundings
To: [redacted]

Hi Sydne, Wednesday August 8, 2018

Following up on our telephone conversation this morning regarding the new pump station to be installed on Fourth Avenue & Canyon Road:

At a brief overview I attended, the proposal is for a building with maybe a 1,200 square foot footprint, which is equal to or larger than the footprint of most houses in the neighborhood. Peak elevation will be maybe 12 - 15 feet. It's big.

I start with the assumption that the new plant will be installed more or less as presented. With the assumption that a sizable new plant will be installed, I've started the thought process with contacts as to how to make the appearance as pleasing, or at the least, as non-offensive, as possible.

If built, how to optimize the viewscape? The building will be in the middle of an emphatically historical neighborhood. Initial thoughts: Instead of a plain brick building, looking very much like a pump station, how about an exterior that would mimic the surrounding architecture, so instead of a brick pump house the exterior looked something like a bungalow or small Victorian house? A short list of (again, very initial) ideas: (1) For a facade, could include false windows with closed shutters, (2) maybe entry-door brackets for a nostalgic touch, (3) importantly, a roof line more visually interesting than an unadorned "V" look, or even more dreaded, a just big shed roof.

In neighborhood conversation, another key issue was broached; sound proofing. The possible whine of big electric pumps or other equipment should be muffled, and that could be at very minimal cost with wall insulation.

COST: Thought for discussion: How about a "make it look good" budget of 5% above the baseline? Hence, if the baseline bids centered around $300,000, allow $15,000 for additional features to enhance the viewscape.

Going forward with a "win-win" attitude; the needed infrastructure goes in, but the appearance blends with its surroundings.

cheers, David Garcia
282 Canyon Road [redacted]

"Common sense isn't all that common," was Mayoral Candidate David Ibarra's reaction to Salt Lake City's plan to put an industrial building and dangerous chemicals in the middle of a residential neighborhood.

Canyon Rd. neighbor who lives within 30 feet of the proposed Plant, Catherine and her sons Gresham (in the helmet) and Leroy (bundled in her coat), her dog Chester, my trusted assistant Hank the Terrier and I discuss the proposed Water Treatment Plant at 4th Avenue & Canyon Road with David Ibarra, candidate for Mayor of SLC.

David toured the proposed site on a cold January morning. He came away with a good idea of what is being proposed.

His first words to us were, "As we drove into the canyon I said 'I wonder if the people who live here appreciate what they have'." When we ended our discussion he was well aware of how we value the parks and trees and that the thousands of "non-residents" who come here yearly feel the same way.

David recognized the need for clean water for the city and safe working conditions for city workers. He said he would apply the learning from a very successful business career and would first decide exactly what really needed to be done. then figure out how to do it with a minimal impact on the neighborhood and save the trees. "We need to look at the situation and decide if it really must be done, how can we do it without trampling on nature."

We were very encouraged that he agreed, if possible we should "Just fix the well and leave the trees alone". It's great to see our neighborhood issue is being taken seriously.

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
[redacted]

KURT ALLEN FISHER
P.O.B. 11753
Salt Lake City, Utah 84147-0753
[redacted]

May 21, 2019

VIA EMAIL: holly.mullen@slcgov.com
Holly Mullen, Communications and Engagement Manager
SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES
1530 South West Temple
Salt Lake City, UT 84115

VIA EMAIL: csat@dhs.gov[1]
Chemical Facility Anti-Terrorism Standards (CFATS) Help Desk
DEPARTMENT OF HOMELAND SECURITY
Washington, D.C. 20528

Re: Comment and Request by Kurt A. Fisher ("Applicant") for Determination that the Proposed 4th Avenue Well Chlorination Project at approximately 400 North Canyon Road, Salt Lake City, Utah (the "Well")[2] is a "High Risk Facility" pursuant to Federal Chemical Facility Anti-Terrorism Standards (6 C.F.R. § 27.203 and 205).

Sirs:

First, this letter is a Salt Lake City Corporation (the "City") level comment on the concept design of the proposed Well by the Salt Lake City Department of Public Utilities ("DPU") at approximately 400 North Canyon Road in Salt Lake City.[3] Second, this letter is a request to the United States Department of Homeland Security ("DHS") (a) to conduct a preliminary security risk assessment into whether the DPU and the City have complied with chemical facility anti-terrorism standards for critical infrastructure facilities[4] when designing the Well and (b) to issue a determination on whether the facility, given its overall characteristics as described below, is a presumptively high risk facility.[5]

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[1] From url https://www.dhs.gov/department-white-pages.

[2] Salt Lake City Department of Public Utilities. 2019. Information Website on 4th Avenue Well Project (url: https://www.slc.gov/utilities/fourth-avenue-well-project/, accessed May 2019).

[3] Well location map (url: https://goo.gl/maps/XFZfkuXYPXCPdGgZA).

[4] 6 C.F.R. Part 27 (2019) (url: https://www.govinfo.gov/content/pkg/CFR-2019-title6-vol1/pdf/CFR-2019-title6-vol1-part27.pdf).

[5] 6 C.F.R. § 27.203 (c)(1) (April 9, 2007).

Alternatively, if the proposed Well is not a presumptive high risk facility, your Applicant requests that the DHS make a discretionary determination that the Well chlorination facility is a high risk facility.[6]

The DPU proposes to place an insufficiently secured domestic water supply chlorination plant in a small public park principally on the grounds of cost savings.[7] The proposed chlorination facility is surrounded by residential homes at distances of approximately 150-300 feet. As presently designed, the Well chlorination facility presents a high risk of significant adverse consequences for human life or health, national security and/or critical economic assets if subjected to terrorist attack, compromise, infiltration, or exploitation.

In essence, the DPU proposes to construct one component of a binary chlorine chemical gas weapon, relatively unsecured, in the middle of a densely populated residential neighborhood. If the second component – a relatively inexpensive low-yield truck bomb containing a combination of 1,000 to 1,500 gallons of household vinegar and concentrated ammonia cleaner, available from any janitorial supply house and wholesale food supplier, would create a large chlorine gas cloud. The cloud would be lethal to residents of the immediate neighborhood and could injury the some 48,000 persons who work in Salt Lake City's Central Business District ("CBD") approximately one-quarter mile southwest of the proposed facility.[8]

Your Applicant seeks to have the proposed chlorination facility relocated from a residential neighborhood to a more secure, redesigned chlorination facility. Your Applicant readily admits that this alternative siting proposal will be significantly more expensive than the DPU's current design, but relocation is necessary to protect against reasonable plausible terrorist scenarios. Currently, the DPU has selected lower cost options without consideration of terrorist attack scenarios.

Your Applicant proposes two alternative relocation sites with different levels of anti-terrorist resilience:

Option 5:[9] The proposed chlorine chemical facility would be moved approximately 2,000 feet north to the approximate location of the historical Brigham Young Empire Mill site,[10] or to such other site as the Secretary and the City may in the future determine is otherwise appropriate given federal anti-terrorist constraints. In the Applicant's proposed concept redesign, Well water would be pumped uphill from the existing wellhead for disinfection at a significantly more costly - but with a DHS anti-terrorist compliant - facility.[11] Vehicle access to this portion of City Creek

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[6] 6 C.F.R. § 27.205(a) (April 9, 2007).

[7] HAL Report at 5, *infra*.

[8] Point III, *infra*.

[9] These options are numbered 5 and 6 to maintain consistency with options numbered 0 to 4 in the HAL Report, *infra*, at n. 16.

[10] 40°46'58.1"N 111°53'00.1"W (url: https://goo.gl/maps/2t4SWwACnfSk8nE67).

[11] The current Well proposal involves, in part, chlorinating water in a residential neighborhood and then pumping water uphill to a critical infrastructure storage tank at 640 North Victory Road, Salt Lake City, Utah, at approximately 40°47'01.1"N 111°53'29.2"W (url:

Canyon is already restricted by a series of locked gates. The facility design would not require significant hardening against an attack because of the buffer between the facility and populated areas. This alternative will also require a zoning amendment.[12]

Option 6: Your applicant believes that once informed with the potential for a plausible terrorist attack on the DPU proposed Well design, described below, that the Church of Jesus Christ of Latter Day Saints would be willing to donate land at the west end of a vacant lot at the northwest corner of the nearby intersection of State and North Temple Streets[13] for a more terrorist resistant chemical facility. The Church's Worldwide Headquarters that offices over 1,000 persons is across the street and is within one-quarter mile of the DPU's proposed chemical treatment facility. In this option, a water transmission line would be constructed from the existing wellhead to the new site. A utilitarian concrete structure similar in foot print to the DPU's current design, would be surrounded by a 15 feet tall steel re-enforced concrete wall. Street access for sodium hydrochlorite deliveries would be from North Temple Street via an anti-truck bomb resistance entry. A similar anti-truck bomb resistant entry is used at the cash delivery bay at the Federal Reserve Bank at the southwest corner of 100 South and State Street, Salt Lake City. At the Federal Reserve Bank, electrically driven subsurface posts are normally extended upward and are only lowered when armored car deliveries occur. The following figure shows a schematic of this Applicant proposed alternative:

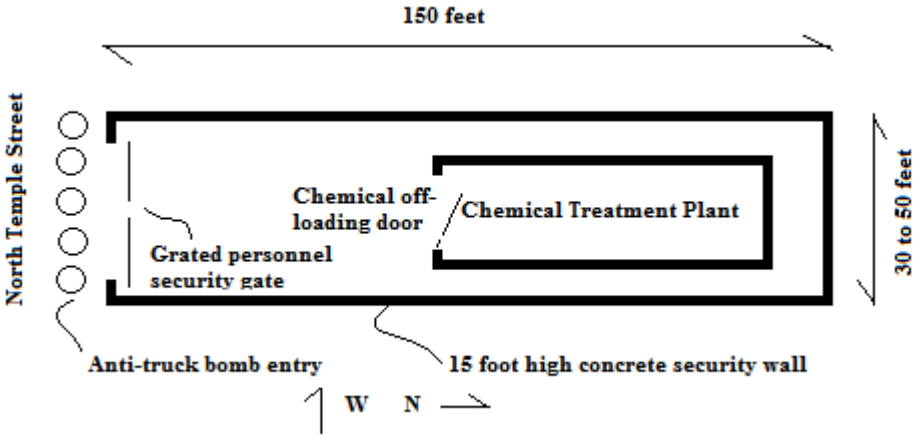

Figure 1 – Schematic of Applicant's Proposed Option B Design near 61 East North Temple. Compare to DPU Architectural Renderings in Figure 3 and Figure 4, below.

https://goo.gl/maps/LNnHGiGBvqJ5P2Cc7) and-or 500 Cortez Street at approximately 40°46'51.7"N 111°53'11.3"W (url: https://goo.gl/maps/VQNQLY257S5f5Ndb7).

[12] Salt Lake City Corporation. (1989, Mar 21). Salt Lake City Ordinance 11-1989 dated March 21, 1989 (establishing portions of City Creek Canyon as a protected natural area). The Well is not within the natural area; the historical Empire Mill site is.

[13] The parking lot at 61 East North Temple, 40°46'18.7"N 111°53'22.0"W(url: https://goo.gl/maps/dox4swxx9Eun4ejX6).

In this option, the chemical treatment facility would also be hardened to survive a an expected magnitude 7.0 earthquake without releasing sodium hypochlorite.

I. BACKGROUND AND FACTS

Between 48,000 and 75,000 people live and work in the CBD to the immediate southwest of the proposed Well chlorination facility.[14] The City anticipates through 2040, that current full-time residents will increase from 5,000 to 20,000 persons and that the population of daily commuting workers will increase from between 54,000 to 88,000 persons.[15] In the last three years, the City engaged in aggressive development of multi-family residential and hotel units and has added about 3,000 new units in the CBD. This has resulted in an increased need for sufficient water pressure to service this new and anticipated growth. As a result of this growth and the need to comply with other health, safety and water drinking requirements,[16] the DPU proposed a new pumping house and chlorination facility at the site of an existing underground Well, that has operated principally during the summer months since 1943 (*id*).

In 1943, the Well was developed to a depth of 484 feet during one of Salt Lake City's cyclical periods of drought.[17] The Well taps an aquifer layer the runs beneath the watershed protected hills to the north of City's center and the City Creek Canyon Natural Area – the primary drinking water source of the City's urban core. Between 80 and 100 percent of the northern City's downtown water comes from this well during the summer months (Bowen Memorandum) at a volume of 3 to 7 million gallons per day.[18] Since 1948, the City has not directly chlorinated water from the Well. The DPU has relied upon disinfecting the well's water by mixing it with chlorine treated water from other parts of the City's distribution system.[19] In

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[14] Salt Lake City Corporation. May 2016. Salt Lake City Central Business District Master Plan (url: http://www.slcdocs.com/Planning/MasterPlansMaps/Downtown.pdf). The 48,000 estimate is based on the 2010 Census and the 78,000 person estimate comes from the local chamber of commerce: the Downtown Alliance.

[15] Ftn. 14 at 5 and 9.

[16] Salt Lake City Dept. of Public Utilities, Undated, Project Notice (hereafter the "Project Notice") (url: https://docs.wixstatic.com/ugd/80b28b_f6fe751ac8f54376970f1e9d5b471440.pdf); Memorandum by B. McIntire to K. Lindquist, Salt Lake City Planning Department dated August 30, 2018, re: Open House Public Comment Responses (hereafter "August 2018 Comments") (url: https://docs.wixstatic.com/ugd/80b28b_0bc4214b1c61450897cfbd5cc5a0e6ee.pdf); Bowen Collins and Associates, circa August 2018, re: Salt Lake City Planning Commission Assessment Memorandum (hereafter the "Bowen Memorandum") (url: https://docs.wixstatic.com/ugd/80b28b_0e07c5f9e8ff4047a4bd9405ee4d95cf.pdf); Memorandum by David E. Hansen, Hansen, Allen and Luce, Inc., to B. Stewart, Salt Lake Department of Public Utilities, re: 4th Avenue Well Assessment (hereafter "HAL Report") (url: https://docs.wixstatic.com/ugd/80b28b_3607f771b2984d63a44ce7a4c3d1c7a9.pdf).

[17] HAL Report.

[18] HAL Report.

[19] Bowen Report at 2; Fisher conversation with DPU Project Manager, May 9, 2019.

1951 as the result of an outbreak of water-borne illnesses at the Union Pacific Station, the City entered into an agreement with United States Public Health Service to construction its current system of water filtration and chlorination plants, including a plant 5 miles north of the Well in City Creek Canyon.[20] The City's practice of disinfection by mixing untreated Well water with the City's general water supply apparently has been done without any adverse health effects to the community since the 1950s.

The proposed facility is within one mile of three secondary geologic faults[21] - the City Cemetery Fault, the Warms Springs Fault and the East Bench Fault - that connect with the 20 mile long segment of the Salt Lake City Segment of the Wasatch Front Fault Zone. It is within one-quarter mile of two fault lines that have been active within the last 15,000 years. [22] The reoccurrence interval for a greater than magnitude 6.75 earthquake on any one of eleven major fault segments, including the Salt Lake City Segment, is between 1,100 and 1,300 years, and the combined probability of a 6.5 magnitude earthquake occurring on one of the eleven Wasatch Front segments is 43 percent in the next 50 years.[23] The facility is located in an area were ground shaking accelerations during an expected 7.0 magnitude are predicted to be between 0.9 and 1.0 horizontal G-force with a Modified Mercalli Intensity of IX.[24] MMI IX ground shaking is described as: "Violent shaking: Considerable damage in specially designed structures; well-

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[20] Hooten, LeRoy, Jr., Director, SLC Dept. of Public Utilities (deceased). 1986. Salt Lake City's First Water Supply. Salt Lake City, Utah at 30-31 (url: http://www.slcdocs.com/utilities/pdf%20files/story.pdf); Salt Lake Telegram. (1951, Dec 27). Water Posers No Nearer S.L. Solution. Salt Lake Telegram. Salt Lake City, Utah (url: http://digitalnewspapers.org); Salt Lake Telegram. (1952, Jan 5). Plan to Purify Water Wins Salt Lake Approval. Salt Lake Telegram. Salt Lake City, Utah (url: http://digitalnewspapers.org).

[21] Personius, S. F. and Scott, W.E. (2009, 2d). Surficial geologic map of the Salt Lake City Segment and parts of adjacent segments of the Wasatch fault zone, Davis, Salt Lake, and Utah Counties. U.S.G.S. Map I-2106. Salt Lake City, Utah. (url: https://pubs.er.usgs.gov/publication/i2106); Van Horn, R. and Crittenden, Jr., M. D. (1987). Map showing surficial units and bedrock geology of the Fort Douglas Quadrangle and parts of the Mountain Dell and Salt Lake City North quadrangles, Davis, Salt Lake, and Morgan counties, Utah. U.S.G.S. Map I-1762. Salt Lake City, Utah. (url: http://pubs.er.usgs.gov/publication/i1762).

[22] Wong, I., Silva, W., Wright, D., Olig, S., Ashland, F., Gregor, N., … Jordan, S. (2002). Ground-shaking Map for Magnitude 7.0 Earthquake on the Wasatch Fault Salt Lake City, Utah Metropolitan Area (Public Information Maps No. P-76). Salt Lake City, Utah. (url: https://geology.utah/hazards/earthquakes-faults/ground-shaking/);

[23] Wong, I., Lund, W., DuRoss, C., Thomas, P., Arabasz, W., Crone, A., … Bowman, S. Earthquake Probabilities for the Wasatch Front Region in Utah, Idaho, and Wyoming, Miscellaneous Publication 1–418 (2016). Salt Lake City, Utah: Utah Geological Survey. (url: https://ussc.utah.gov/pages/view.php?ref=1283).

[24] Wong 2002.

designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse" (*id*). Horizontal displacements are predicted to be between 0.3 and 1.0 meters.[25]

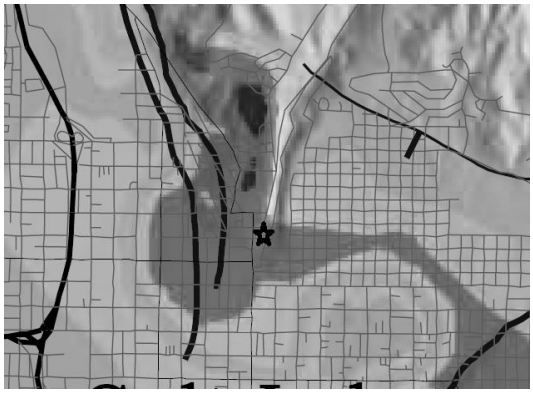

Figure 2 – Excerpt - Ground Shaking Map from Wong 2002. Notes: The proposed DPU facility is marked with a star in an MMI IX predicted shaking region. The faults to the immediate west are extensions of the Warm Springs Fault and have been active in the last 15, 000 years.

The proposed facility is located at the mouth of a 12 mile-long City Creek Canyon that rises to between 7,000 and 9,000 feet above the City at 4,300 feet above MSL. The canyon is subject to morning down-canyon katabatic winds that blow across the Well and into the populated Central Business District. Due to the canyon's unique geographic relationship to the Great Salt Lake, the canyon is also subject to afternoon "anti-winds" in which the wind also blows down-canyon, instead of the normal afternoon anabatic up-canyon direction.[26]

In April and October of each year, the Church of Jesus Christ of Latter Days Saints hold their general conference, and during that conference 26,000 members congregate in the Church's Conference Hall located approximately 2 and one-half blocks (one-third of a mile) from the mouth of City Creek Canyon and the Well. Your Applicant has observed over repeated years that even with City Police providing one-way out-bound traffic flow at the end of a conference session, it takes more than one-half hour to empty the Conference Center of 26,000 persons. Quick evacuation of the Center is impractical.

The neighborhood in which the chlorination facility is proposed to be located is the Memory Grove Area of the Greater Avenues neighborhood. It is in a historic regulated district. A key positive characteristic of these areas is a night they are very quiet. Your Applicant who lives in the Greater Avenues neighborhood about 1.25 miles from the Well has measured night time

[25] Bartlett, S. F., Hinckley, D. W., and Gerber, T. M. (2016). Figure C-1 in: Liquefaction-Induced Ground Displacement Hazard Maps for a M7.0 Scenario Event on the Salt Lake City Segment of the Wasatch Fault Zone, Salt Lake County, Utah. Salt Lake City, Utah. (url: http://www.civil.utah.edu/~bartlett/ULAG/Liquefaction Maps Text.pdf).

[26] Steenburgh, W. J. (2016, April 6). The City Creek Antiwind (Web). Salt Lake City, Utah. Wasatch Weather Weenies (Blog) (url: http://wasatchweatherweenies.blogspot.com/2016/04/the-city-creek-canyon-anti-wind.html). Dr. Steenburgh is the head of the Meteorology Department at the University of Utah.

noise on many occasions using a smart phone application.[27] Early morning nighttime noise levels in this urban environment are between 10db to 20db. Similar noise conditions prevail during the early morning at the Well in the Memory Grove neighborhood. 10db is equivalent to the sound of breathing; 20db is equivalent to the sound of leaves rustling.[28] 40db is considered the lower limit of urban ambient sound (*id*).

An initial meeting for public comment on the proposed Well chlorination facility was held in August 2018.[29] There is one nearby, permitted downstream well, not owned by the City, operated by the Church of Jesus Christ of Latter Day Saints, at their World Office Headquarters within one-quarter mile of the Well.[30] An initial DPU analysis done after the August meeting acknowledged that due to the nature of the proposed site, it was impractical to install security fencing normally required to prevent theft, vandalism or terrorist attacks on the chemical facility:

> Typically, culinary well buildings are completely enclosed with fencing to reduce the threat from potential vandalism, theft, and terrorism. The limited space available significantly prevents the ability to properly secure the location.[31]

The Bowen Memorandum also recognized the infeasibility of erecting security fencing at the site:

> Fencing to restrict access to the well site is normally recommended to prevent vandalism or other unauthorized access. Due to the location of the well and the minimal existing set-backs, fencing does not appear to be feasible (Bowen Memo. at 3).

The proposed design will use sodium hypochlorite liquid batch processing (CAS 7775-09-9 or CAS 7681-52-9) for disinfecting water.[32]

With respect to noise, the August 2018 Memorandum recites the County noise standard of "limited to no more than 5 dB above ambient sound, not to exceed 50 dB between 10:00 PM and 7:00 AM" (at 3). The August analysis then goes on to adopt an inaccurate maximum summer ambient sound level as the baseline of: "similar [to] residential A/C units outside homes in the neighborhood" (*id*). A residential A/C emits 60db of sound at 100 ft.[33] Your applicant agrees that ambient sound levels at the site are higher during the peak summer heating months, but the DPU analysis misstates

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[27] Physics Toolbox Suite (url: https://play.google.com/store/apps/details?id=com.chrystianvieyra.physicstoolboxsuite&hl=en).

[28] Purdue Chemistry Dept. 2000. Noise Sources and Their Effects. Web. (url: https://www.chem.purdue.edu/chemsafety/Training/PPETrain/dblevels.htm).

[29] August 2018 Comments; Bowen Memorandum.

[30] August 2018 Comments at 1.

[31] August 2018 Comment at 4.

[32] Bowen Memo. at 2 ("Due to the City's desire, all three alternatives . . . include a batch liquid chlorine storage and dosing system.").

[33] Purdue, ftn. 28.

that for the other eight months of the year, ambient noise levels are much lower. The proposed facility will exceed ambient nighttime baseline noise by more than 5db for most of the year.

After initial community opposition[34] and a second December 2018 open house, a consulting water engineer was retained.[35] The Well chlorination facility was redesigned with a smaller footprint.[36] No agency reports or documents indicate that the facility is designed to withstand a reasonably expected magnitude 6.75 earthquake.

DPU Architectural Renderings of the exterior of the current design of the facility show that it has typical large metal garage door facing the street and no surrounding security fencing. The metal garage door is the building access through which sodium hypochlorite will be unloaded. This door can be easily breached:

Figure 3 - Excerpt from DPU Architectural Rendering showing garage door for hypochlorite delivery at north west building corner (image left) at night. May 9, 2019.

[34] Semerad, T. May 7, 2019. The fight over pump house pits needs of Salt Lake City's thirsty downtown against a quiet neighborhood in Memory Grove. The Salt Lake City Tribune. (url: https://www.sltrib.com/news/2019/04/30/residents-mouth-memory/).

[35] HAL Report.

[36] Architectural Renderings in "Design Elements" at Salt Lake City Department of Public Utilities, 4th Avenue Well Project Website (url: https://www.slc.gov/utilities/fourth-avenue-well-project/); Salt Lake City Department of Public Utilities, Architectural Rendering dated May 9, 2019 (handout at May 9, 2019 open house, copy in Applicant's possession) (hereafter the "Architectural Renderings").

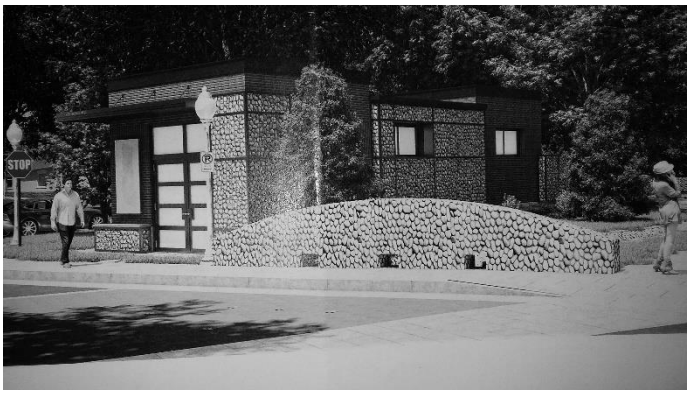

Figure 4 - Excerpt from DPU Architectural Rendering showing daytime view from south east. May 9, 2019.

On May 9, 2019, a third open house was held. The focus of this third public open house was the HAL Report. Exterior architectural Renderings were provided but no information was provided in the internal water treatment facilities. Consulting Professional Engineer David E. Hansen concluded on cost grounds that relocation of the Well facility by extending a transmission line (as suggested by your Applicant) was not optimal from a cost perspective:

> It has been suggested by some local residents that the chlorine facility be moved to another location. To move the chlorine facility off-site a full-size transmission line would need to be extended to the off-site facility where the chlorine would be injected, then tied back into the distribution system. This increases capital cost for the pipeline and secondary facility as well as operation and maintenance on two separate facilities. *It is clear based on the Pro's and Con's listed later in this report that such a move is not optimal.* . . . The estimated cost for this option is $2,688,000 (*id* at 5, emphasis added).

Under another rejected alternative, the HAL Report estimated the cost of moving the "chlorine facility to a new building at a location yet to be determined" at $3,632,000 (*id*. at 6) or complete abandonment of the Well at $ 5,463,256.00 (*id*. at 15).

These key conclusion of the HAL Report are summarized in a table at page 15 titled "4th Avenue Preliminary Well Cost Estimates". The key four options are summarized as follows:

Table 1 - Summary of HAL Report Cost Options

Option	Description	Agency Internal Cost (millions USD)
2b	Rehabilitate Well with new well house and on-site chlorination	2.7
2c	Rehabilitate Well with new well house and off-site chlorination in nearby park	3.3
2d	Rehabilitate Well with new well house and off-site chlorination at undetermined new site	3.6
3	Drill new well and build chlorination facility at new undetermined location	5.5

DPU considers Option 2b as the best lowest-cost option based principally on minimizing agency internal costs.

The reasonably foreseeable external social costs of the facility includes declines in property values given that a nighttime 60db chemical facility will be located nearby to homes. As contended in Point III, below, the facility is a likely target for a terrorist attack. These factors can potentially reduce real estate values, and are external social-economic costs are not considered in the DPU consulting expert analysis. A first-order estimate of the reduced property value external cost is as follows: Reviewing Google Maps, there are approximately 20 single family homes within 300 feet of the Well, two apartment buildings and some the 4th Avenue facing Terrace Falls Condominiums. In May, a Coldwell real estate broker reported average home sale price in the 84103 zip code, in which the Memory Grove neighborhood is located, during April 15 to May 15 at about 612,000 USD over 37 sales.[37] An online source, Neighborhood Scout.com, reports for a median sale price for a narrower 1st-A Street neighborhood, which includes Memory Grove, at about 350,000 USD.[38] Condominiums at the nearby Canyon Road Towers condominium are asking $300,000.

Using a working assumption of 20 homes valued at 500,000 USD each and 8 condominiums at 300,000 USD each (for a total value of 12.4 million) USD, the external social cost by percent point decline in price can be estimated in USD: -1%: 124,000; -2%-248,000, -5%-600,000, -8%-992,000. Although speculative, considering such external costs are useful for making judgment calls about which option will minimize total (agency internal and community external costs). Table 2 adjusts Table 1 for property value losses using the 8% decline property estimate:

[37] Nextdoor Neighbor Post, May 18, 2019.

[38] url: https://www.neighborhoodscout.com/ut/salt-lake-city/a-st .

Table 2 – HAL Options Adjusted for Property Value External Cost

Option	Description	Internal Agency Cost (USD M)	External property value cost (USD M)	Total social costs (USD Millions)
2b	Rehabilitate Well with new well house and on-site chlorination	2.7	1.0	3.7
2c	Rehabilitate Well with new well house and off-site chlorination in nearby park	3.3	0.0	3.3
2d	Rehabilitate Well with new well house and off-site chlorination at undetermined new site	3.6	0.0	3.6
3	Drill new well and build chlorination facility at new undetermined location	5.5	0.0	5.5

Table 2 is not adjusted for the expected cost of the concept, rare probability terrorist attack discussed in Point III. That further adjustment to Table 2 is discussed further in Point V, below.

On June 14, 2019, the DPU plans to seek approval of the redesigned facility from a historic district commission within which the proposed Well facility is located.[39]

II. THE DPU FAILED TO CONSIDER FEDERAL CHEMICAL FACILITY ANTI-TERRORISM STANDARDS IN THEIR ANALYSES OF THE PROPOSED FACILITY.

During the May 9, 2019 open house, your Applicant discussed the redesigned facility with Engineer Hansen, with a DPU system-wide water quality engineer and the DPU Project Construction Manager. Engineer Hansen was unaware of the requirement to design the facility, including site selection, to be resistant to terrorist attacks under 6 C.F.R. Part 27.[40] He did not consider the cost of a potential terrorist attack on the proposed chemical facility when concluding that an alternative site with an extended transmission line was not optimal[41] or when considering the total cost of the four alternative redesign scenarios.[42]

Your Applicant similarly found that the DPU's water process engineer and the Project Construction Manger were unaware of anti-terrorist design requirements imposed by 6 C.F.R. Part 27. Engineer Hansen, the Project Manager and the DPU water process engineer did not know whether the DPU had submitted the proposed design to the Secretary of DHS pursuant Part 27. Holly Mullen, Communications and Engagement Manager, speculated in response to your Applicant's inquiry that since the project was only thirty percent into the design phase, perhaps it was too early for the design to have been submitted to DHS. However, the August 2018

[39] Applicant's recollection of public official statements at May 9, 2018 open house.

[40] Fisher, paraphrasing Hansen: "In the 20 years that I [Hansen] have been doing these wells, no one has ever commented that security issues were a concern."

[41] Applicant recollection of May 9, 2019 meeting.

[42] HAL Report, Summary Table at 15.

Memorandum and the Bowen Memorandum, *quoted above* at page 7, indicates DPU awareness of the federal antiterrorist resilience design constraint.

In response to your Applicant's inquiries at the May 9 open house, Engineer Hansen, the Project Manager and the DPU water process engineer did not know the form of chlorine – liquid or dry sodium hypochlorite – to be delivered to the completed project or the volume of each delivery or the volumes involved. This was also attributed to the project being in an early design phase.[43] (Although liquid sodium hypochlorite is mentioned in the Bowen Memo., *supra*, this could be delivered in a dry form and then hydrated.) Your Applicant, who is not an expert in these matters, understands that sodium hypochlorite is delivered to water treatment plants in one of two forms: a liquid bleach of densities between 10 and 30 percent in volumes between 1,000 to 5,000 gallons or as a concentrated solid in batches of about 400 to 900 pounds. The Project Manger stated that deliveries of sodium hypochlorite would occur once each week.

The significance of liquid verses dry hypochlorite is the relative concentration and reactivity of the compound during a hypothetical, but plausible, terrorist attack, is discussed in the following point.

III. THE PROPOSED WELL CHLORINATION FACILITY PRESENTS A HIGH RISK OF SIGNIFICANT ADVERSE CONSEQUENCES FOR HUMAN LIFE OR HEALTH, NATIONAL SECURITY, AND-OR CRITICAL ECONOMIC ASSETS, IF THE STRUCTURE IS SUBJECTED TO A REASONABLY PLAUSIBLE TERRORIST ATTACK.

As currently proposed, the Well reasonably could be subjected to a plausible terrorist attack. In a working conceptual attack, a would-be domestic terrorist would load a small truck with 500 to 800 gallons of ordinary household cleaning vinegar (acetic acid) costing about 3.60 USD per gallon. This would be supplemented with 100 gallons of industrial strength cleaning ammonia costing 55 USD per gallon that is available at any janitorial supply house. The truck would then be backed up to the delivery door, the door would be breached, and a small high explosive charge would be detonated into order breach the hypochlorite holding tank and plastic gallon containers, causing the chemicals to mix.

It is common knowledge that mixing acetic acid and sodium hypochlorite (liquid bleach) creates toxic chlorine gas. Similarly, in the United States there are approximately 4,400,000 janitors and custodians.[44] Those occupations are routinely trained not to mix ammonia and bleach: mixing ammonia and liquid bleach (sodium hypochlorite) creates an explosive gas mixture containing chlorine and chloramine.[45] Chloramine gas is much more toxic than chlorine gas.

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[43] Oral comment by DPU Communications Manager Holly Mullen to Applicant, May 9, 2019.

[44] Bureau of Labor Statistics. 2019. May 2018 National Occupational Employment and Wage Estimates United States (url: https://www.bls.gov/oes/current/oes_nat.htm).

[45] Science ABCs. 2018. What Happens When You Mix Ammonia and Bleach? Web. (url: https://www.scienceabc.com/pure-sciences/what-happens-when-you-mix-bleach-and-ammonia.html). A disturbing Youtube video posted by irresponsible teenagers shows what

It is reasonable to assume that several hundred janitors and custodians of those 4.4 million persons are members of white supremacist or other domestic terrorist groups. This type of conceptual terrorist attack – using an existing sodium hypochlorite facility as one component of a binary chlorine-chloramine chemical weapon is not a new idea. It is well within the ability of members of domestic terrorist groups who do not have a high-school education to conceive and execute. Your Applicant has omitted chemical molar and reagent volume computations that might lend additional credibility to this concept attack. Those computations are within the skill level of any high school level chemistry class student.

IV. FEDERAL JURISDICTION: IT IS UNCLEAR WHETHER THE PROPOSED WELL FACILITY IS A PRESUMPTIVE HIGH RISK FACILITY. NONETHELESS, THE SECRETARY HAS DISCRETIONARY AUTHORITY OVER THIS MATTER.

Based on the foregoing, the proposed Well chemical treatment facility should be classified as a high risk facility. It is unclear whether the facility has a DHS presumptive high risk facility status.[46] Whether a chemical facility is presumptively high risk depends on whether specific chemicals listed in Appendix A of 6 C.F.R. Part 27 are used at a facility in volumes above specified levels and concentrations. Appendix A refers to "sodium chlorite" and not to "sodium hypochlorite." Appendix A also applies byproducts of industrial processes including "chlorine". As noted above, at the May 9 public information meeting, a DPU representative indicated that the project was in an early design phase, and therefore whether the facility is presumptively high risk cannot be determined with certainty based on currently available information. Nonetheless, DHS Secretary McAleenan or his delegates have the discretionary authority to declare the Well project a high risk facility pursuant to 6 C.F.R. § 27.205(a).

Based on the facts as described above, the Well project should be declared a high risk chemical facility.

V. WHETHER A REVIEWER BELIEVES THAT HAL REPORT DESIGN OPTION 2B IS OPTIMAL DEPENDS ON ONE'S PERCEPTION OF THE EXPECTED PRESENT VALUE OF THE COSTS OF A RARE AND UNLIKELY FUTURE TERRORIST ATTACK.

No United States drinking water chlorination facility has been subjected to the conceptual terrorist attack described in Point III. Legitimate use of sodium hypochlorite in industrial settings is safe if used with appropriate training. The CDC's National Toxic Substance Incidents Program

happens when ammonia and solid sodium hypochlorite (pool disinfectant) are mixed (url: https://youtu.be/56hxLYWIKfs).

[46] 6 C.F.R. § 27.203 (c)(1) (April 9, 2007).

data for 2013-2014 reports 26 hypochlorite incidents.[47] The CDC reports 24 illegal chemical bomb incidents between 1996 and 2003 – all minor - mostly involving teenagers.[48]

Terrorist acts are qualitatively different. Anti-terrorist protection planning should be based on Bayesian probability analysis of extremely remote events. Such analysis in turn informs the boundaries of our reasonable estimation of the present value of a future unlikely terrorist attack on the DPU's proposed Well design. The expected value of a future unlikely events informs decision making on the efficient allocation of public funds.

The lesson of the 9-11 terrorist attack, implemented using box cutters and airliners by relatively uneducated individuals, taught United States citizens an important lesson: it is necessary to anticipate and to spend public monies to make critical infrastructure facilities resistant to remotely probable, but reasonably plausible terrorist attacks. Some may consider the conceptual attack described in the preceding points to be an outlandish, speculative scenario that will never occur. Again, in the United States no such attack has occurred. In this view, it would a waste of public monies to, for example, spend public funds to guard against an unlikely chemical attack on the proposed Well. In part Congress has resolved this dilemma: In 2006, Congress empowered the Secretary of the Department of Homeland Security to "reduce the vulnerability of the United States to terrorism"[49] and pursuant to that authority the Secretary adopted 6 C.F.R Part 27 that requires the hardening of critical public water facilities that use large volumes of toxic chemicals.

How should we evaluate the likelihood that extremely rare, remotely probable events might occur? The answer is Bayesian analysis: a probability process by which our present understanding of the likelihood of rare events occurring is continuously updated with our prior understanding of those events. The 9-11 attacks are illustrative. Prior to 9-11 terrorist attack, two airplanes had crashed into Manhattan's Empire Building and both where accidental. A B-25 bomber struck the building in 1947 and later a small airplane hit the building. Given the millions of airliner flights over Manhattan between 1947 and 2001, a reasonable estimate in the spring of 2001 of the probability that an airliner would be intentionally flown into a skyscraper was 1 in millions. After 9-11 as a culture, we updated our prior estimation of the risk. Statistician Nate Silver of 538.com fame mathematically estimated our updated, current probability estimate of someone intentionally flying an airliner into a skyscraper to 99.99%.[50]

It is the bias of our past experience that make conceptually, simple and obvious terrorist attacks such as the hypothetical attack described in Point III seem unlikely. Now that a simple, conceptual attack has been described to the reader, have you updated your probability estimate of

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[47] CDC. 2019. NTIS Report and Data. (url: https://www.atsdr.cdc.gov/ntsip/reports.html, file NTSIP_Public_Use_Data_2013.xlsx).

[48] CDC. July 18, 2003. Homemade Chemical Bomb Events and Resulting Injuries --- Selected States, January 1996--March 2003. MMWR. 52(28):662-664. (url: https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5228a3.htm).

[49] 6 U.S.C. § 111(b)(1) (2006), Pub. L. 109–295, sec. 550.

[50] Silver, Nate. 2012. The Signal and Noise. Penguin Press at 247-248.

such a domestic terrorist attack on the DPU's proposed well design over the next 25 years to 1-in-millions to 1-in-three or 1-in-four? This is Bayesian statistical reasoning in action.

Whether one believes that public monies should be expended to guard against rare, unlikely terrorist attack scenarios depends on who the present expected value of such a future attack is quantified. There is no guidance for such estimates in the instant matter other than personal judgment, supplemented by expert advice. For example, you may reasonably feel that the future damages of the concept terrorist attack on the DPU proposed facility are 100 million USD with a 1 percent change of occurrence in the next 25 years. The present expected value of such an attack could reasonably be estimate at 1 million USD. An equally reasonable argument could be made that the present expected value at an occurrence probability of 1-in-10,000 is less than 1,000 USD. Others might reasonably argue the present expected value is zero dollars. The point of such thought exercises is that is provides a language to discuss and quantify the risk of a rare, unlikely terrorist attack scenario.

For example, assuming for discussion purposes, the present expected value of the concept scenario described in Point III is 1 million USD. Then the total social costs of proposed DPU chemical treatment facility, adjusted from Table 2, are:

Table 3 – HAL Options Adjusted for Property Value and Terrorist Attack External Costs

Option	Description	Internal Agency Cost (USD M)	External property value cost (USD M)	External terrorist attack present value (USD M)	Total social costs (USD Millions)
2b	Rehabilitate Well with new well house and on-site chlorination	2.7	1.0	1.0	4.7
2c	Rehabilitate Well with new well house and off-site chlorination in nearby park	3.3	0.0	0.0	3.3
2d	Rehabilitate Well with new well house and off-site chlorination at undetermined new site	3.6	0.0	0.0	3.6
3	Drill new well and build chlorination facility at new undetermined location	5.5	0.0	0.0	5.5

If you reasonably believe as in Table 1, above at page 10, that the present expected value of a future terrorist attack on the proposed Well is zero dollars, then Option 2b minimizes total project cost. If you reasonably believe that the present expected value of a future terrorist attack is 1 million USD, then Option 2d minimizes total internal and external project costs.

Such decision-making regarding rare events has previously guided other DPU expenditures. As noted above, it has long been known that the probability of a magnitude 6.75 or greater earthquake on the Salt Lake City Segment of Wasatch Front Fault Zone is 1 every 1,100 years and the combined probability on one of the 11 segments of the Fault Zone is 43% in the next fifty years. In 1999, the DPU began a multi-million program to seismically harden all of its

water treatment plants[51] against this low probability event. The City's primary historical water supply dams in Big Cottonwood and Little Cottonwood, for which the City paid millions in the 1920s, where decommissioned during the 2000s out of fear of failure during an earthquake. The Metropolitan Water District of Salt Lake and Sandy, of which the City is the leading member, recently completed a multi-million dollar replacement with seismic upgrades to the Terminal Reservoir near 3300 South and I-215.[52] That rare, unlikely events guide DPU decision-making is nothing new.

VI. THE PROPOSED WELL CONTROVERSY PRESENTS AN OPPORTUNITY TO SEEK SUPPLEMENTAL PRIVATE AND-OR PUBLIC FUNDING TO FINANCE THE DIFFERENCE BETWEEN THE OPTION 2B DESIGN THAT THE DPU IS WILLING TO PAY AND A MORE ANTI-TERRORIST RELISENT CHEMICAL PLANT DESIGN AT ANOTHER LOCATION.

The stasis of the controversy between DPU and City residents is "Who will pay for the 1 to 2 million USD difference between the agency's preferred Option 2b and a more terrorist resistant chemical treatment at a non-residential location?" The DPU is unwilling to pay the additional expense from its 122 million USD annual operating revenues.[53]

One solution is to seek supplemental revenues. The DPU, the City, and citizens could approach the L.D.S. Church for donation of land and-or monies at the 61 East North Temple parking lot to host a terrorist hardened chemical treatment facility consistent with Option 6, above.

The DPU, the City, and citizens could approach Utah's federal congressional delegation for a federal appropriation to harden the proposed Well facility against a terrorist attack. The availability of grants or loans from DHS is unclear.

Alternatively, citizens can lobby the DPU's Advisory Committee to convince the Department to pay the incremental cost of terrorist security from rate increases.[54]

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[51] Salt Lake City Corporation. (1999b, May 25). Wasatch Front Earthquake Preparedness. Salt Lake City, Utah. (url: http://www.slcdocs.com/utilities/NewsEvents/news1999/news5251999.htm).

[52] MWDSL&S. 2019. Terminal Reservoir Project. Web. (url: http://www.mwdsls.org/terminalresproject.html).

[53] Salt Lake City Department of Public Utilities. 2019. 2018 Annual Report (url: http://www.slcdocs.com/utilities/PDF%20Files/Annual%20Reports/Annual%20PU%202018.pdf).

[54] The members of Advisory Committee of the Salt Lake City Department of Public Utilities are Kent Moore, Sydney Fonnesbeck, Tom Godfrey, Colleen Kuhn, Ted Wilson, Lynn Hemingway, Roger L. Player, and Ted Boyer. DPU. 2019. Public Utilities Advisory Committee. (Web) (url: https://www.slc.gov/boards/boards-commissions/public-utilities-advisory-committee/).

VII. STANDING

Your Applicant has lived in the Greater Avenues Neighborhood about 1.25 miles from the Well for approximately 20 years. I travel on roads within 600 feet of the Well one to three times each day, principally along Third Avenue. I have exercised in City Creek Canyon above Bonneville Drive, about 1.25 miles north of the Well, two to five times per week for the last eight years. I am the author of 2018 book concerning, in part, Salt Lake City residents' one-hundred and twenty year opposition to the development of City Creek Canyon titled "The Natural History of a City Creek Canyon Year."[55]

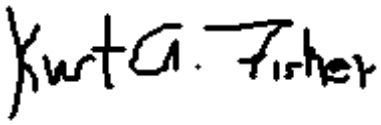
VIII. CONCLUSION

The DPU proposed Well chemical facility design is too vulnerable to a simple, conceptual terrorist attack. The proposed design does not comply with anti-terrorist resistant design principles of 6 C.F.R. Part 27. The DHS Secretary or his delegates should, based on the facts as described above, declare the proposed Well project a high risk chemical facility.

The DPU should defer action on this matter until its obligations to design an antiterrorist resistant chemical treatment facility are better defined. The temporary pause in the project's schedule could be used to search for alternative, supplemental private or public funding to fill the financing gap between the 2.7M USD that the agency is willing to pay and the 3.6M USD for a more terrorist resistant structure built at a more appropriate non-residential location.

I hope the above information contributes positively to the DPUs decision-making process. Please feel free to contact me with respect to this matter by the means listed above. As always your cooperation is appreciated.

Very Truly Yours



Kurt A. Fisher

Kaf

[55] Fisher, K. A. 2018. The Natural History of City Creek Canyon Year (url: https://www.amazon.com/Natural-History-City-Creek-Canyon-ebook/dp/B079RY7CTD).

KURT ALLEN FISHER
P.O.B. 11753
Salt Lake City, Utah 84147-0753
[redacted]

May 28, 2019

VIA EMAIL: Kelsey.lindquist@slcgov.com
Historic Landmark Commission
SALT LAKE CITY CORPORATION
451 South State Street, Room 326
Salt Lake City, Utah 84111

Re: Comment in Opposition by Kurt A. Fisher on 4th Avenue Pump Applications by the Department of Public Utilities at approximately 200 North Canyon Road, Salt Lake City, Utah (the "Well")[1]
PLNHLC2018-00557 and PLNHLC2018-00558

Sirs:

Salt Lake City Department of Public Utilities ("DPU") proposed Well at approximately 200 North Canyon Road in Salt Lake City should be moved to the May 9 open house Option 2c site[2] in the park at State and Canyon Road (Tribune 4-30-2019) in a redesigned anti-terrorist and earthquake hardened structure. The DPU's May 9 concept design is a danger to the community and to first responders.

The Chemical Treatment Plant is proposed to be constructed in the geologic streambed of City Creek Canyon, at grade, and below the level of known prior floodwaters.

The DPU proposes to build the chlorine chemical treatment plant at level of the existing grade in the geologic streambed of City Creek Canyon. The site was underwater during the 1983 high-snowpack runoff of flooding with a peak flow of 331 cubic feet per second. The structure is vulnerable to foundation undermining, structural failure, chemical release and-or a toxic chlorine gas release from a 2,400 cubic feet per second cloudburst flood. In 1945, a cloudburst flood of that size that can down Perry's Hollow and "M" and "N" streets in 1945 and moved 300 lb boulders, grave headstones and eight cars from the cemetery to South Temple (Salt Lake Telegram August 20, 1945). City Creek is at risk of a similar catastrophic cloudburst flood that destroyed downtown Farmington in 1923. During such a cloudburst flood, residents and first responders also will be at risk for electrocution from the ground-level high-voltage, high-power transformers proposed for the north end of the chemical treatment plant. A cloudburst type flood

[1] Salt Lake City Department of Public Utilities. 2019. Information Website on 4th Avenue Well Project (url: https://www.slc.gov/utilities/fourth-avenue-well-project/, accessed May 2019).

[2] Memorandum by David E. Hansen, Hansen, Allen and Luce, Inc., to B. Stewart, Salt Lake Department of Public Utilities, re: 4th Avenue Well Assessment (hereafter "HAL Report") (url: https://docs.wixstatic.com/ugd/80b28b_3607f771b2984d63a44ce7a4c3d1c7a9.pdf).

of 2,400 cubic feet per second is beyond the design abilities of existing flood control measures implemented in the canyon after 1983.

If constructed at the proposed site, the chemical plant is a risk of structural failure from ground liquefaction during an anticipate 6.75 or greater magnitude earthquake.

The soils on which the plant is proposed to be built are susceptible to ground liquefaction and horizontal ground movements of 0.3 to 1 meters during the Wasatch Front's expected to greater than 6.75 magnitude earthquake. The chemical plant's foundation or the outflow connections to its chlorine storage tank could fail during such an earthquake resulting in residents and first responders having to cope with both a 500 to 900 gallon chlorine spill and-or toxic chlorine gas release as they dig their neighbors out from underneath their homes.

The proposed chemical attack is susceptible to a terrorist attack.

Finally, the concept chemical plant design is susceptible to a simple terrorist attack. A would-be terrorist could simply fill a van with several hundred gallons of chemicals easily purchased at a supermarket and janitorial supply stores – household vinegar and concentrated ammonia cleaner. Breaching the chemical plant door and then setting off a hand-grenade sized explosive charge would mix the chemical with the liquid chlorine stored in the structure and release a sizeable cloud of chlorine and chloramine gas. City Creek Canyon's winds would then blow the resulting cloud across the Church Office building and into the central business district that is populated with 48,000 to 70,000 daily residents and visitors.

Supporting backmatter

I have written several comments on the 4th Avenue Chemical Plant that provide back matter for the claims made in this letter in opposition. Those comments are attached as supporting matter.

Rebuttal to DPU Lack-of-Funding Argument

I anticipate that the DPU will claim lack of funds to move the proposed chemical plant. The DPU could move at the Salt Lake City Council the June 4 budget hearing to defer all or part of 1.5 million USD in DPU Reservoir Project 51-01301-2730.06 (about 0.8 percent of the agency's 239 million USD 2019-2020 budget) to the 4th Avenue Well, Project 5132268-2015-0213 in order fund the move and redesign. Alternatively, DPU could apply to the Council to raise DPU rates by 8 mills (about $3 dollars per year or about less than a penny a day for each its 350,000+ customers for one year) to raise the needed funds.

Conclusion

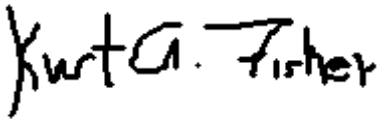
The stasis of this matter is whether the DPU should expend an additional 1 to 1.5 million in public funds to move the proposed chemical treatment plant about 400 feet to a nearby park. This justification for such a move and redesign is that as proposed, the treatment plant is a danger to the community and inconsistent with the neighborhood's historic character. A redesigned facility that provides adequate flood, earthquake, and terrorist resilience would obviously need to be larger and inconsistent with preserving the historic character of the design at the 200 North Canyon Road and 4th Avenue location.

The stasis of this matter *does not* involve balancing the water needs of the downtown which is projected to grow by another 25,000 persons in high-density housing and hotels against a backward-looking home owners. By moving and redesigning the chemical plant both the water

needs of the City and the goals of neighborhood for preserving its historic character can be achieved.

Our able DPU Director Briefer proposes the chemical plant 4th Avenue and Canyon Road out of a desire to conserve public funds. But sometimes engineers get fixated on economic efficiency. That is when citizen oversight, in form of your Commission, is most needed. Your Commission should formally condition the chemical plant's special permit exception request on moving the well to the Option 2c site at the State Street Park in a more flood, earthquake and terrorist resistant design. Please do not approve siting at 200 North Canyon Road. I have proposed a concept schematic, attached, for such a redesigned facility.

Very Truly Yours



Kurt A. Fisher

Kaf

Attachments

A - Schematic Concept Design by Commenter

B - Comment to DPU on Flooding Risk

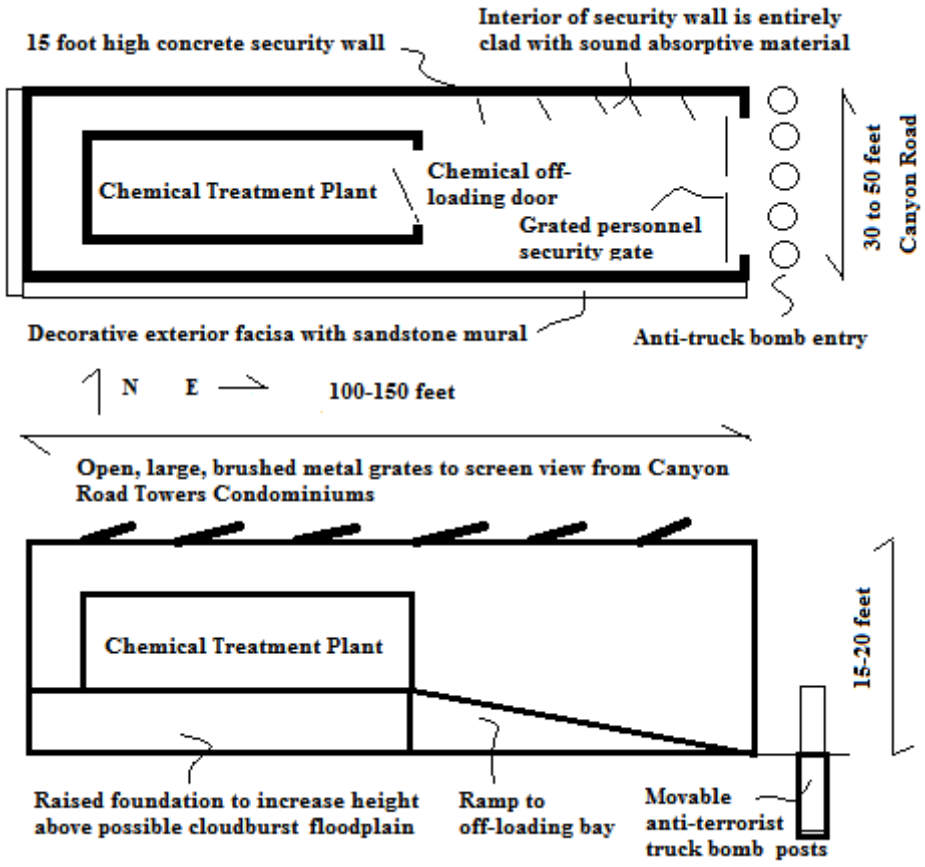
C - Supplemental Comment to DPU on Earthquake Risk and Liquefaction

D – Initial Comment on Earthquake Risk

E – Comment on Terrorist Attack Risk

ATTACHMENT A

SCHEMATIC OF PROPOSED FLOOD, EARTHQUAKE, AND TERRORIST RESILIENT DESIGN



Not shown: Removable stone windows for fire-fighting.

ATTACHMENT B

KURT ALLEN FISHER
P.O.B. 11753
Salt Lake City, Utah 84147-0753
[redacted]
[redacted]

May 25, 2019

VIA EMAIL: holly.mullen@slcgov.com
Holly Mullen, Communications and Engagement Manager
SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES
1530 South West Temple
Salt Lake City, UT 84115

Re: Comment by Kurt A. Fisher ("Applicant") on Proposed 4th Avenue Well Chlorination Project at approximately 400 North Canyon Road, Salt Lake City, Utah (the "Well")[1]
Supplemental Comment Regarding Cloudburst Flooding Risks at the Proposed Site

Sirs:

This letter is a Salt Lake City Corporation (the "City") level comment on the concept design of the proposed Well by the Salt Lake City Department of Public Utilities ("DPU") at approximately 400 North Canyon Road in Salt Lake City. This comment provides background on the geotechnical risk that the foundation of the proposed chemical treatment plant structure might be undermined by a rare, catastrophic cloudburst flooding event, resulting in a building collapse.

The DPU proposes to build a water chlorination plant directly in what geologically has been the stream bed of the City Creek Canyon[2] near the mouth of the 12 mile long canyon that rises to 9,000 feet above MSL. There is a significant historical pattern of floods coming out of City Creek Canyon and across the Well site from two types of events: spring runoff from high snow packs and cloudburst flooding. In rare cloudburst flooding events, 3 or 4 inches of rain can fall on the foothills of the Wasatch Front Mountain Range in less than one-half hour. If this rare rain event coincides with another rare event – a recent large brush fire on the foothills overlooking the City. Foothill brush fires transform northern Utah's ancient lakebed soils into non-porous hardpan. In a subsequent heavy rain fall, the resulting flash flood flows can range between 1,000 and 2,500 cubic square feet per second. This far exceeds the design capacity of the existing conduit and control structures in City Creek Canyon of about 331 cubic feet per second.

City Creek repeatedly flooded the downtown business district before 1900, principally due to spring high stream runoff. Downtown flooding occurred in 1852, 1854, 1864 (flooding North Temple), 1866, 1869, 1870, 1873, 1874 (flooding Main Street and South Temple), 1876

[1] Salt Lake City Department of Public Utilities. 2019. Information Website on 4th Avenue Well Project (url: https://www.slc.gov/utilities/fourth-avenue-well-project/, accessed May 2019).

[2] Well location map (url: https://goo.gl/maps/XFZfkuXYPXCPdGgZA).

(between 600 East and the Jordan River, lands flooded between several inches to several feet), 1882 (possibly flooding downtown), 1884 (flooding North Temple), 1885 (flooding streets), and 1889 (flooding streets).[3].

In 1907, hundreds died in the infamous Heppner, Oregon cloudburst flood, and then City Engineer Kesley noted the impossibility of guarding the City's center from cloudburst floods emanating from City Creek Canyon:

> A part of the city is located at the mouth of City Creek canyon in such a position that a heavy cloudburst in the canyon would send a wall of water into the city that would cause a heavy loss of probably both life and property. . . . . I understand that cloudbursts in former years have done considerable damage, but nothing of that kind has ever happened while I have been here. A cloudburst of any considerable magnitude would do almost incalculable damage, and I cannot see how it could be avoided. There is no possible way to divert such a stream without an enormous expenditure of money. . . . . A wall of water coming down the canyon, similar to that at Heppner, would sweep everything before It. Residences in the canyon's mouth would fall like card houses and the wave would then sweep down North Temple and State streets.[4]

After Kelsey's caution, flooding also occurred in 1907 (flooding North Temple), 1908 (flooding North Temple) and 1909 (flooding North Temple and requiring construction of five foot emergency embankments).[5]

[3] Woolley, R. R. (1946). Cloudburst Floods in Utah: 1850-1938. Washington, D.C. at 96-120 (url: http://pubs.er.usgs.gov/publication/wsp994); Honker, A. M. (1999). "Been Grazed Almost to Extinction": The Environment, Human Action, and Utah Flooding, 1900-1940. Utah Historical Quarterly, 76(1), 23–47 (url: http://heritage.utah.gov/history/quarterly); Boyce, R. R. (1958). A historical geography of Salt Lake City, Utah. Thesis. Masters. Department of Geography, University of Utah at 41 re 1876).

[4] Salt Lake Telegram, June 9th, 1903.

[5] Woolley at 96-120, Honker 1999.

Figure 1 - Shipler Commercial Photography. June 2, 1909. Flood at 4th (Fourth) Avenue and Canyon Road. (url: https://collections.lib.utah.edu/ark:/87278/s69c7802). The home shown in the photograph is still standing at approximately 220 North Canyon Road.

In 1910 and in response to this flooding, the City and DPU's predecessor began construction to capture the City Creek stream upstream of the proposed Well into an underground conduit[6] with a design capacity of 120 cubic feet per second squared.

Figure 2 – Entombment of City Creek Canyon Stream circa 1909. U.S. Amy Corp. of Engineers. From Love, ftn 22 *infra*.

[6] Salt Lake Herald, March 21st, 1910.

After construction of this first underground conduit, City Creek again flooded across the proposed Well site and into the downtown in 1912 (flooding South Temple with tons of sand) and in 1918 (silting 200 South with 1 foot of mud).[7]

On August 13th, 1923, Kelsey's 1903 prediction came true in a community to the north of Salt Lake's downtown. An extreme cloudburst event along the Wasatch Front sent torrents down Farmington Canyon, destroyed Farmington City, and killed seven.[8] Salt Lake's downtown also flooded.[9] City Creek again flooded across the proposed Well site and into Salt Lake's downtown also flooded in 1925 (flooding basements), 1931 (12 inches of water in streets), and in 1945 (discussed below).

Cloudburst flooding occurs all along the 200 mile north-south Wasatch Front Range. Destructive cloudburst floods were so frequent and destructive in northern Utah communities that in 1930, the State formed to Utah Flood Commission to conduct a formal investigation.[10] The Flood Commission determined that cloudburst flooding was aggravated by human factors. Excessive grazing, lumbering and lack of fire control in canyon headwaters contributed to the force of floodwaters reaching the valley floors (*id*). In response, the City implemented policies to reduce grazing in City Creek Canyon; its firefighting capabilities improved.

Despite the new practices, in 1945 and at approximately 1.5 miles from the proposed Well site, a classic cloudburst flood came out of Perry's Hollow[11] on the south facing slope of the Salt Lake City Salient. In that flood, a three foot wall of water mixed with 300 pound boulders and grave headstones came through the cemetery and down "M" and "N" Streets.[12] The Salt Lake Telegram reported that 200 to 400 lb. boulders and eight cars were washed down "M" Street.[13] An incredible 2,400 cubic feet per second came out of Perry's Hollow in 1945 (*id*). A separate flood also came down State Street (*id*). Damage to the City was estimated at 300,000 USD in 1945, or about 4 million USD today.

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[7] Woolley at 96-120, Honker 1999.

[8] Honker, 35-36.

[9] Woolley at 96-120, Honker 1999.

[10] Utah Flood Commission. (1931). Torrential floods in Northern Utah, 1930. Logan: Agricultural Experiment Station, Utah State Agricultural College (url:.http://www.lib.utah.edu).

[11] Map - location (url: https://goo.gl/maps/qkv9NkUBMravdkjL9).

[12] Craddock, G. W. (1945). The Salt Lake City Flood, 1945. Proceedings of the Utah Academy of Sciences, Arts and Letters, 23, 51–61; Salt Lake Telegram, August 20 and 27, 1945; *see* Salt Lake Tribune, August 19, 1945.

[13] Salt Lake Telegram, August 20, 1945.

Workers and trucks of Salt Lake City streets department continue work of cleaning mud, trees and huge boulders left in wake of a huge storm which roared into the city from the west Sunday night. Workers here are cleaning at 1st ave. and M st.

Figure 3 - M Street and 1st Avenue after 1954 Perry's Hollow Flood. Salt Lake Telegram, August 20, 1945. The house in the background still exists.

Craddock described causes of the Perry's Hollow flood, citing a historical pattern of overgrazing, grass fires and cloudburst rain:

> Inspection of the flood-producing watersheds revealed the plant cover to be in a seriously deteriorated condition notwithstanding many years of protection from livestock grazing and conscientious attempts to control fires. Three stages of impairment were observed. . . . .
>
> Roughly 10 percent of the watershed - including extensive slopes in the lower portion of the basins and parts of the ridge tops, roads, and mined areas - are virtually devoid of vegetation and litter as a result of grazing abuse in earlier years, old and new mining activity, and both old and recent fires. . . . .
>
> Fully 80 percent of the area, including all but patches of headwater slopes and portions of lower benchlands, was burned last fall. This fire killed many of the native bunchgrasses which had reinvaded the area since its closure to grazing. . . . [14]

Craddock estimated that in 1945, runoff from East and West Valley View Canyons (at the top of North Terrace Drive) did not show any increased runoff because those canyons did not burn. In comparison, to the 2,400 feet per second of flows seen in 1945, the 1983 snowmelt flood of City Creek peaked at 331 cubic feet per second. (In the 1990s, as part of road improvement, the City constructed a flood control dam across lower Perry's Hollow to prevent a reoccurrence.[15])

[14] Craddock at 58.

[15] Along Chandler Drive; Map (url: https://goo.gl/maps/vvkQW7beNdfABTWu5).

A 1946 U.S.G.S. report by Ralf R. Woolley of the Intermountain Forestry Research Station examined cloudburst flooding in northern Utah from 1850 to 1938.[16] Woolley listed numerous cloudbursts floods that have come across the Avenues District and from City Creek and across the proposed Well site and into the downtown: (Woolley 1946). Summer cloudburst floods included: June 13th, 1854 (city streets flooded), September 11th, 1864 (heavy flooding of North Temple from City Creek), August 25th, 1872 (downtown flooded), July 23rd, 1874 (downtown flooded from City Creek), August 1st, 1874 (Lindsey Gardens areas flooded as in 1945), August 8th, 1884 (North Temple flooded from City Creek), July 26th, 1893 (cloudburst flooded basements in city), July 19th, 1912 (1 inch fell in 1 hour filled South Temple with sand and mud from above), July 25th, 1916 (cloudburst sent a 10 foot wall of water into city along with mud, boulders and cattle), July 30th, 1930 (cloudburst over Emigration, Red Butte, and Parley's Canyons washed out highway north of Salt Lake and washed away three homes with damages of 500,000 USD), and August 13th, 1931 (four to 12 inches of water swept through streets and 12 feet of debris washed over road near Beck Hot Springs).

In April 1952, City Creek again flooded the downtown during high spring runoff.[17]

Catastrophic high-spring run-off again occurred in 1983 with ground failures near the proposed Well site. On May 26th, 1983, City officials proclaimed a flood emergency in Salt Lake City after a winter of heavy snowfall followed by a late season warming.[18] The city pre-ordered 250,000 sandbags (*id*). Sandbagging State Street kept City Creek from flooding underground parking at ZCMI Mall (*id*). On May 28th, 1983, Mayor Ted Wilson learned that rock and tree debris from City Creek Canyon were clogging up the 1910 underground culvert down State Street and a second pipe system along North Temple (*id*). The flood waters swept fallen trees that had accumulated in the 12 miles of City Creek stream bed above Memory Grove Park and down into the lower canyon, about 600 feet north of the proposed Well site (Figure 4).

Figure 4 – Tree debris in Memory Grove Park after flood waters receded. Salt Lake City Tribune, July 22, 1983. "Restoration of Memory Grove will be a joint project."

[16] "Cloudburst Floods in Utah: 1850-1938", *supra*, at ftn. 3.

[17] Salt Lake Tribune, April 30, 1952; Salt Lake Tribune, April 29, 2011 (retrospective article in which Salt Lake Councilperson describes sandbagging efforts to control 1952 flood).

[18] Salt Lake Tribune, April 29, 2011.

The first nearby ground failure associated with the 1983 flood was at the clogged culvert about 400 feet south of the proposed Well site. The underground culvert carrying City Creek burst, and a city worker had to be lowered into the pipe full of swirling flood waters to set dynamite charges and to free the blockage.[19]

Nevertheless, flood waters were so great that the creek also flooded above its entry point

Figure 5 – Flood waters passing Ottinger Hall 300 feet north of proposed Well in June 1983. Source: KUTV News. Remembering the Floods of 1983. Web. Accessed May 2019 (url: https://kutv.com/news/local/gallery/photo-gallery-remembering-the-floods-of-1983#photo-28).

into the underground culvert (Figure 5).

A second ground failure associated with the 1983 flood was a 12 foot deep sinkhole that formed north of the proposed Well site, shown in Figure 6:

[19] Salt Lake Tribune, June 3, 1983.

Figure 6 – Twelve Foot Deep Surface Failure North of Ottinger Hall and 400 feet north of proposed Well site, looking south, June 9, 1983. Salt Tribune. 1983. Spirit of Survival: Utah Floods of 1983.

Figure 7 – Ground failures at Memory Grove entrance during 1983 flood about 600 feet from the proposed Well looking north. SLC Fire Tech. 1984. Salt Lake City Flood of 1983. Video. At min. 5:44. (url: https://youtu.be/WCU_AymQ6J0?t=344).

Figure 8 – Ground failures at Memory during the 1983 flood about 600 feet from the proposed Well. Writh, Craig (KUTV News). May 12, 2014. Remembering the flood of '83. KUTV News. At min. 1:35. (url: https://www.abc4.com/wirth/wirth-watching-remembering-the-salt-lake-city-flood-of-83/204262974).

The force of the 1983 waters at a peak of 331 cubic feet per second, the waters had sufficient force to topple stone columns in Memory Grove.

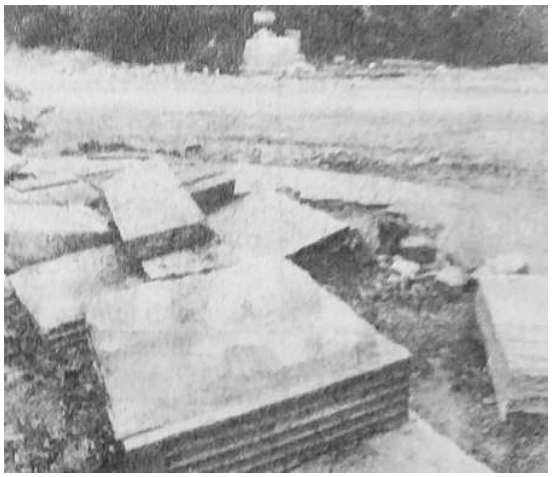

Figure 9 – Stone blocks in columns moved by water flows. Salt Lake City Tribune, July 22, 1983.

A third ground failure occurred along Spencer Court, also about 500 feet northeast of the proposed well project, not shown.[20]

Although the 1983 flood damages were a natural disaster, the severity of the damage was aggravated by human management factors. In the 1983 flood, the flood down State Street started when logs jammed the underground City Creek conduit near North Temple and State Streets about 600 feet south of the proposed Well (*supra*). In the 1890s and 1900s, the predecessor to the

[20] Fisher, personal observation, 1983. Map-location (url: https://goo.gl/maps/EN19iZK1V8bnch6NA).

DPU maintained City Creek by hiring gangs of men to remove the many dead and overhanging trees from the streambed.[21] In the 1910s, that practice ended. Before the 1983 floods and currently, the City only removes dead and fallen trees that might fall on the road, but not from the streambed.

Following catastrophic runoff of 1983, the DPU installed a redesigned conduit sufficient to capture more than the peak 1983 flood flow of 331 cubic feet per second. Two small flood control basins, about one-acre each in size, were installed upstream of the proposed Well facility at the intersection of Bonneville Drive and City Creek Canyon Road. These are designed to catch trees that might be swept downstream in a future flood. But these improvements are in no way designed to deal with a reasonably anticipated 2,400 cubic per second cloudburst flood such as occurred at Perry's Hollow in 1946.

In 2003, the Army Corps of Engineers proposed a permanent, higher capacity solution to carry City Creek storm flows. The Corps envisaged moving City Creek along North Temple from 300 West to the Jordan River on a proposed abandoned railway right-of-way.[22] But the City decided not to pursue that 20 million USD project, and instead used the proposed route for an interurban railway. The 2003 Corps of Engineer's proposal would have reconstructed the geologic City Creek streambed with an outflow connected to the Great Salt Lake.

In addition to the underground conduit and flood basins added after 1983. The City has adopted other practices to reduce the risk of grassland fires in City Creek Canyon that might lead to a severe cloudburst flood event. Fire roads have been constructed along the canyon's ridgelines. A vigorous fire prevention regime for recreation users in the canyon is enforced. The City Fire Department responds to over 900 grass fire calls, principally on the valley floor, and on the foothills.

There are some key lessons from the 1983 floods. First, the rare event where cloudburst flooding would cause a 2,400 cubic feet per second flood is a reasonable geotechnical planning criteria. Second, preventative measures that rely on human management are not fully reliable. Each facility in the flood path must fail safe. Third, the recent Paradise fire in California illustrates who natural forces are sometimes beyond human control. Once a large uncontrolled fire occurs in City Creek, the risk of a cloudburst flood is real.

The risk of cloudburst flooding continues and is not abstract. Flooding, after a large 2008 grass fire in Skull Valley west of Salt Lake City, sent a wall of mud down a canyon that created at 3 foot high alluvial fan on the valley floor.[23]

In May 2019, DPU proposed a concept design for the chemical treatment plant to be located in City Creek Canyon's geologic streambed.

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[21] Salt Lake Tribune, January 4, 1908; Salt Lake Herald, January 31, 1894.

[22] Deseret News, August 1st, 2003; Love, Ron. 2007. Bankside Salt Lake City. Chap. 5 in Rivertown: Rethinking Urban Rivers (at 101); U.S. Army Corps of Engineers. Dec. 2003. Draft City Creek Section 206, Aquatic Ecosystem Restoration Project Report.

[23] Nicoli, K. and Lundeen, Z. J., University of Utah. (2016). A case study: geomorphic effects of the 2009 Big Pole fire, Skull Valley, Utah (Vignettes: Key Concepts in Geomorphology). Northfield, Minnesota. (url: http://serc.carleton.edu/47063).

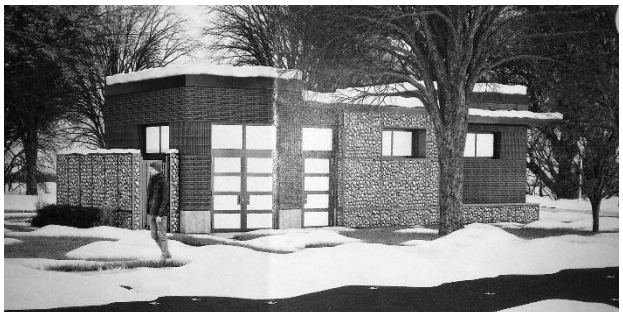


Figure 10 – DPU Architectural Rendering showing that despite known flooding risk power transformers are located at the north-upstream end of building and that proposed structure is built at grade. May 9, 2019.

The concept design (Figure 10) does not consider the flooding history at the 400 North site. The chemical plant is built at grade and not above the last known flood levels. The rectangular north end of the plant includes high-power transformers at ground level. The transformers will put residents and first responders in future floods at risk of accidental electrocution. Because the building is rectangular, the north narrow end will be susceptible to having its foundation undermined and suffering a structural collapse. If a collapse occurs during a flood, the chemical storage tank inside the building may fail and release 500 to 900 lbs. of sodium hypochlorite into floodwaters. Such a spill, in addition to creating a risk for chemical burns, may by simultaneous mixing of large a volume of sodium hypochlorite into water may release a cloud of chlorine that would be a health risk to the surrounding neighborhood.

In conclusion, there are significant flood related risks at that site which indicate that the proposed chemical treatment plant should be relocated, for example as proposed in Option 2c of the DPU-HAL Report.

I hope the above information contributes positively to the DPUs decision-making process. Please feel free to contact me with respect to this matter by the means listed above. As always your cooperation is appreciated.

Very Truly Yours

Kurt A. Fisher

Kurt A. Fisher

Kaf

ATTACHMENT C

KURT ALLEN FISHER
P.O.B. 11753
Salt Lake City, Utah 84147-0753
[redacted]

May 26, 2019

VIA EMAIL: holly.mullen@slcgov.com
Holly Mullen, Communications and Engagement Manager
SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES
1530 South West Temple
Salt Lake City, UT 84115

Re: Fourth Comment by Kurt A. Fisher on 4th Avenue Well Chemical Treatment Plant
Supplemental note on sodium hypochlorite and seismic risk

Ms. Mullen:

It occurs to me that my letter of May 24 regarding seismic risk and the need to design the chemical treatment plant building to resist a 7.0 magnitude earthquake did not properly describe the failure modes. The first seismic risk letter suggested that the connections to storage tanks would fail.

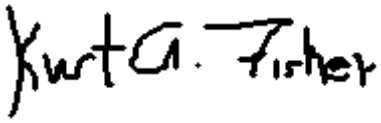
Additionally, the proposed chemical treatment plant is located in area that is at high risk for ground liquefaction during a magnitude 7.0 earthquake. [1] During liquefaction ground water mixes with surface soils resulting in 1) pooling of water on the surface and 2) liquefying the ground so it no longer supports buildings. In a 7.0 magnitude earthquake, the chemical plant building could structurally fail and puncture the sodium hypochlorite tanks. A liquid chemical would then flow and mix with ground water that has pooled at the surface. Whenever a large volume of sodium hypochlorite and water quickly mix, a chlorine gas cloud results. During a catastrophic earthquake event, residents that live within the immediate neighborhood and first responders should not be burdened with also dealing with a toxic chlorine gas cloud as they digging their neighbors out of the rubble of their homes.

The proposed chemical plant building design is intrinsically inconsistent with the surrounding residential neighborhood. A magnitude 7.0 resilient design would have a larger bulk and be even more inappropriate. These factors weigh to moving the chemical building to the April 2019 Hansen, Allen and Luce Option 2c site, making the structure larger and more resilient to terrorist and seismic failure, and spending the increased public monies to do so.

[1] Bartlett, S. F., Hinckley, D. W., and Gerber, T. M. (2016). Figure C-1 in: Liquefaction-Induced Ground Displacement Hazard Maps for a M7.0 Scenario Event on the Salt Lake City Segment of the Wasatch Fault Zone, Salt Lake County, Utah. Salt Lake City, Utah. (url: http://www.civil.utah.edu/~bartlett/ULAG/Liquefaction Maps Text.pdf).

I hope the above information contributes positively to the DPUs decision-making process. Please feel free to contact me with respect to this matter by the means listed above. As always your cooperation is appreciated.

Very Truly Yours



Kurt A. Fisher

Kaf

ATTACHMENT D

KURT ALLEN FISHER
REDACTED
Salt Lake City, Utah 84147-0753
REDACTED
REDACTED
May 24, 2019

VIA EMAIL: holly.mullen@slcgov.com
Holly Mullen, Communications and Engagement Manager
SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES
1530 South West Temple
Salt Lake City, UT 84115

Re: Second Comment by Kurt A. Fisher on 4th Avenue Well Chemical Treatment Plant
Securing the sodium hypochlorite tank against seismic risk; Option 2c location alternative design

Ms. Mullen:

This letter is a comment with respect to the conceptual design phase of the Fourth Avenue Well Chemical Treatment Plant (the "Well").[1] As noted in my first comment dated May 23, 2019, all of the proposed locations for the chemical treatment facility are located in seismic zones that will be subjected to high levels of ground shaking in the event of a greater than magnitude 6.75 earthquake. This comments recommends incorporating special engineering features to secure the Well's proposed sodium hypochlorite tank against that seismic risk. Only complying with existing magnitude 5.0 earthquake standards would be insufficient in these premises. In Point II, I propose a concept design for the Hansen, Allen and Luce Report Option 2c alternative site (Figure 4) at the north end of City Creek Canyon Park..The concept design is of my own making and was done without consultation with or approval by residents in the immediate neighborhood. This siting proposal supplements and does not replace my May 23rd suggestion of approaching the Church of Jesus Christ of Latter Day Saints to locate the facility at the west end of the parking lot at 61 East North Temple.

I. THE WELL CHEMICAL TREATMENT PLANT SODIUM HYPOCHLORITE STORAGE TANK SHOULD BE SECURED AGAINST SEISMIC SHAKING USING THE BEST AVAILABLE TECHNOLOGY.

The proposed well-site and all the conceivable alternative relocation sites are located in an area where earthquake experts predict severe seismic shaking during a catastrophic earthquake.[2] Experts predict that in an anticipated 7.0 mag earthquake, the ground in Memory

[1] This comment has not be circulated to the Chemical Facilities Anti-Terrorism Standards Desk at the Department of Homeland Security ("CFATS-DHS").

[2] Wong, I., Silva, W., Wright, D., Olig, S., Ashland, F., Gregor, N., … Jordan, S. (2002). Ground-shaking Map for Magnitude 7.0 Earthquake on the Wasatch Fault Salt Lake City, Utah Metropolitan Area (Public Information Maps No. P-76). Salt Lake City, Utah. (url:

Grove will move horizontally between 0.3 and 1.0 meters. Horizontal accelerations will be between 0.9 and 1.0 standard gravities (g_n).[3] During such an earthquake event, there will be an estimated 2,000 to 2,500 deaths, and the estimated number of injured persons needing hospital care is between 7,400 and 9,300.[4]

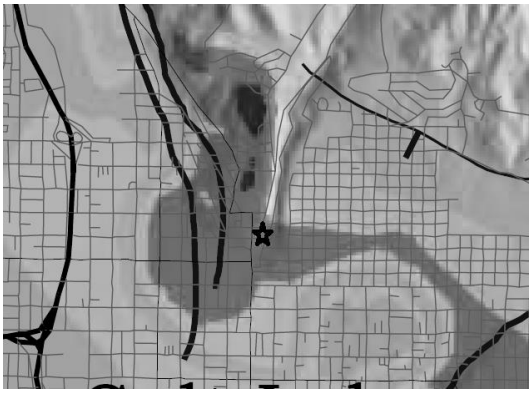


Figure 1 – Excerpt - Ground Shaking Map from Wong 2002. Notes: The proposed DPU facility is marked with a star in an MMI IX predicted shaking region. The faults to the immediate west are extensions of the Warm Springs Fault and have been active in the last 15, 000 years.

Where ever the proposed Well chemical treatment plant is built, the sodium hypochlorite storage tank might incorporate anti-shaking Teflon pads similar to those retrofitted under the City and County Building and the State Capitol or other damping springs.[5] Expert engineers can decide if an additional active-mechanical damping system is needed. The storage tank itself could be set into a concrete tank, so if the tank fails in an earthquake, the sodium hypochlorite will still be contained within the building. The outflow pipes from the storage tank might be fitted with double-redundant automatic earthquake shut off values. While automatic natural gas

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https://geology.utah/hazards/earthquakes-faults/ground-shaking/); Bartlett, S. F., Hinckley, D. W., and Gerber, T. M. (2016). Figure C-1 in: Liquefaction-Induced Ground Displacement Hazard Maps for a M7.0 Scenario Event on the Salt Lake City Segment of the Wasatch Fault Zone, Salt Lake County, Utah. Salt Lake City, Utah. (url: http://www.civil.utah.edu/~bartlett/ULAG/Liquefaction Maps Text.pdf).

[3] For other non-technical general readers of this document, one standard gravity – 1 g_n – is equivalent to 9.8 meters per second squared of acceleration, or about 22 miles per hour squared of acceleration. In an earthquake setting, the structural concern is deceleration from 22 miles per hour back to rest. Think of it in terms of driving a car at 22 miles per hour into a concrete wall and coming to an instantaneous stop.

[4] Earthquake Engineering Research Institute, U. C. (2015). Scenario for a Magnitude 7.0 Earthquake on the Wasatch Fault – Salt Lake City Segment: Hazards and Loss Estimates. Salt Lake City, Utah, at 3 (url: https://dem.utah.gov/wp-content/uploads/sites/18/2015/03/RS1058_EERI_SLC_EQ_Scenario.pdf).

[5] *E.g.* Andre HVAC International Seismic Isolation Springs rated to 2 g_n. (url: http://www.andrehvac.com/seismic-spring-mounts-c-6.php).

cut-off values are common and available for residential purposes,[6] I am unaware of what is available for a similar function for corrosive chemicals in chemical facilities.[7]

Regardless of the regulatory standard of seismic protection – I understand it to be 5.0 magnitudes – the sodium hypochlorite storage tank within the structure should be designed to resist a higher magnitude 7.0 event. This should be done without regard for cost efficiency. During a catastrophic earthquake event, residents that live within the immediate neighborhood and first responders should not be burdened with also dealing with a 500 to 900 gallon chemical spill as they digging their neighbors out of the rubble of their homes.

I assume that the able engineers working under Chief Engineer Brown have already anticipated such a design requirement, but I wanted to make a public record of a request so it is not overlooked in the design phase. I would appreciate a response indicating what special seismic protections for the chemical storage tank that have been already incorporated in the DPUs ongoing concept and preliminary construction drawings for the Well project.

II. A CHEMICAL TREATMENT PLANT RELOCATED TO THE HAL REPORT OPTION 2C SITE COULD BE IMPROVED FROM THE DPU'S MAY 9 CONCEPT USING THE FOLLOWING CONCEPT DESIGN.

The April Hansen, Allen and Luce Report[8] evaluates an alternative site location at the "old City Hall site" in Option 2c. This comment proposes utilizing the north end of City Creek Canyon Park at State and North Canyon Roads[9] except with a design hardened against an anti-terrorist attack as discussed in my May 23rd comment and herein. Other features to make the facility more compatible with the surrounding park and neighborhood are discussed below.

[6] *E.g.* at Home Depot (https://www.homedepot.com/p/Watts-3-4-in-Steel-Earthquake-Valve-AGV-75/202547063).

[7] I have and claim no special engineering knowledge in these matters.

[8] Memorandum by David E. Hansen, Hansen, Allen and Luce, Inc., to B. Stewart, Salt Lake Department of Public Utilities, dated April 12, 2019, re: 4th Avenue Well Assessment (hereafter "HAL Report") (url: https://docs.wixstatic.com/ugd/80b28b_3607f771b2984d63a44ce7a4c3d1c7a9.pdf).

[9] Map at url https://goo.gl/maps/cow8mNYjkHKnWdvJ6 .

Figure 3- Proposed Option 2c Relocation Site within City Creek Park. The "star" marks the proposed re-location site and the white box suggests a facility foot print. The white box is approximately 100 by 50 feet.

Figure 2- Photograph of the proposed relocation site showing no windows on the South facing wall of the Victoria House Apartments.

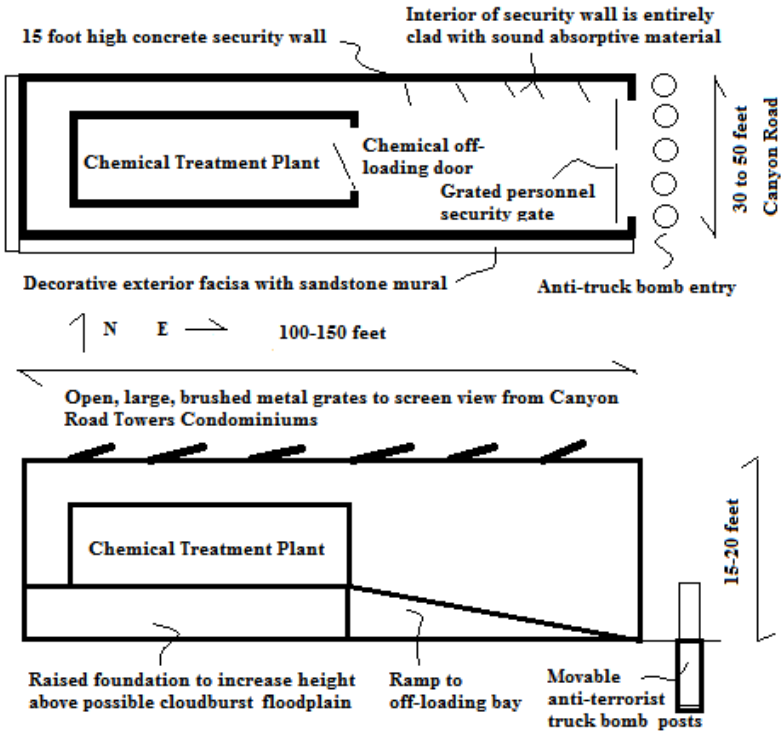


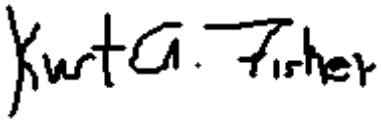
Figure 4- Concept schematic of the proposed facility from above and side.

Figure 4 illustrates an anti-terrorist facility that is more resilient than the DPU's current concept design. Aesthetic features to make the facility better blend in with City Creek Park and the surrounding neighborhood include:

- An exterior decorative fascia on the exterior south and west walls with a sandstone mural depicting animals still commonly seen in City Creek Canyon, *e.g.* – Rocky Mountain elk, moose, eagles, falcons, mountain lions and coyotes.
- The interior would be clad with sound absorptive tiling.
- The top of the security enclosure would consist of wide open grates of brushed metal with the bottoms also clad in a sound absorbing material (not shown in figure). This open roof would screen the interior of the facility from the Canyon Tower Condominiums and summer tourists walking up State Street.
- Not shown in the schematic are removable stone ports around the exterior perimeter to allow firefighters to put water on the facility without having to enter the enclosure.

I hope the above information contributes positively to the DPUs decision-making process. Please feel free to contact me with respect to this matter by the means listed above. As always your cooperation is appreciated.

Very Truly Yours



Kurt A. Fisher

Kaf

ATTACHMENT E

KURT ALLEN FISHER
P.O.B. 11753
Salt Lake City, Utah 84147-0753
[redacted]
[redacted]

May 21, 2019

VIA EMAIL: holly.mullen@slcgov.com
Holly Mullen, Communications and Engagement Manager
SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES
1530 South West Temple
Salt Lake City, UT 84115

VIA EMAIL: csat@dhs.gov[1]
Chemical Facility Anti-Terrorism Standards (CFATS) Help Desk
DEPARTMENT OF HOMELAND SECURITY
Washington, D.C. 20528

Re: Comment and Request by Kurt A. Fisher ("Applicant") for Determination that the Proposed 4th Avenue Well Chlorination Project at approximately 400 North Canyon Road, Salt Lake City, Utah (the "Well")[2] is a "High Risk Facility" pursuant to Federal Chemical Facility Anti-Terrorism Standards (6 C.F.R. § 27.203 and 205).

Sirs:

First, this letter is a Salt Lake City Corporation (the "City") level comment on the concept design of the proposed Well by the Salt Lake City Department of Public Utilities ("DPU") at approximately 400 North Canyon Road in Salt Lake City.[3] Second, this letter is a request to the United States Department of Homeland Security ("DHS") (a) to conduct a preliminary security risk assessment into whether the DPU and the City have complied with chemical facility anti-terrorism standards for critical infrastructure facilities[4] when designing the Well and (b) to issue a determination on whether the facility, given its overall characteristics as described below, is a presumptively high risk facility.[5]

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[1] From url https://www.dhs.gov/department-white-pages.

[2] Salt Lake City Department of Public Utilities. 2019. Information Website on 4th Avenue Well Project (url: https://www.slc.gov/utilities/fourth-avenue-well-project/, accessed May 2019).

[3] Well location map (url: https://goo.gl/maps/XFZfkuXYPXCPdGgZA).

[4] 6 C.F.R. Part 27 (2019) (url: https://www.govinfo.gov/content/pkg/CFR-2019-title6-vol1/pdf/CFR-2019-title6-vol1-part27.pdf).

[5] 6 C.F.R. § 27.203 (c)(1) (April 9, 2007).

Alternatively, if the proposed Well is not a presumptive high risk facility, your Applicant requests that the DHS make a discretionary determination that the Well chlorination facility is a high risk facility.[6]

The DPU proposes to place an insufficiently secured domestic water supply chlorination plant in a small public park principally on the grounds of cost savings.[7] The proposed chlorination facility is surrounded by residential homes at distances of approximately 150-300 feet. As presently designed, the Well chlorination facility presents a high risk of significant adverse consequences for human life or health, national security and/or critical economic assets if subjected to terrorist attack, compromise, infiltration, or exploitation.

In essence, the DPU proposes to construct one component of a binary chlorine chemical gas weapon, relatively unsecured, in the middle of a densely populated residential neighborhood. If the second component – a relatively inexpensive low-yield truck bomb containing a combination of 1,000 to 1,500 gallons of household vinegar and concentrated ammonia cleaner, available from any janitorial supply house and wholesale food supplier, would create a large chlorine gas cloud. The cloud would be lethal to residents of the immediate neighborhood and could injury the some 48,000 persons who work in Salt Lake City's Central Business District ("CBD") approximately one-quarter mile southwest of the proposed facility.[8]

Your Applicant seeks to have the proposed chlorination facility relocated from a residential neighborhood to a more secure, redesigned chlorination facility. Your Applicant readily admits that this alternative siting proposal will be significantly more expensive than the DPU's current design, but relocation is necessary to protect against reasonable plausible terrorist scenarios. Currently, the DPU has selected lower cost options without consideration of terrorist attack scenarios.

Your Applicant proposes two alternative relocation sites with different levels of anti-terrorist resilience:

Option 5:[9] The proposed chlorine chemical facility would be moved approximately 2,000 feet north to the approximate location of the historical Brigham Young Empire Mill site,[10] or to such other site as the Secretary and the City may in the future determine is otherwise appropriate given federal anti-terrorist constraints. In the Applicant's proposed concept redesign, Well water would be pumped uphill from the existing wellhead for disinfection at a significantly more costly - but with a DHS anti-terrorist compliant - facility.[11] Vehicle access to this portion of City Creek

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[6] 6 C.F.R. § 27.205(a) (April 9, 2007).

[7] HAL Report at 5, *infra*.

[8] Point III, *infra*.

[9] These options are numbered 5 and 6 to maintain consistency with options numbered 0 to 4 in the HAL Report, *infra*, at n. 16.

[10] 40°46'58.1"N 111°53'00.1"W (url: https://goo.gl/maps/2t4SWwACnfSk8nE67).

[11] The current Well proposal involves, in part, chlorinating water in a residential neighborhood and then pumping water uphill to a critical infrastructure storage tank at 640 North Victory Road, Salt Lake City, Utah, at approximately 40°47'01.1"N 111°53'29.2"W (url:

Canyon is already restricted by a series of locked gates. The facility design would not require significant hardening against an attack because of the buffer between the facility and populated areas. This alternative will also require a zoning amendment.[12]

Option 6: Your applicant believes that once informed with the potential for a plausible terrorist attack on the DPU proposed Well design, described below, that the Church of Jesus Christ of Latter Day Saints would be willing to donate land at the west end of a vacant lot at the northwest corner of the nearby intersection of State and North Temple Streets[13] for a more terrorist resistant chemical facility. The Church's Worldwide Headquarters that offices over 1,000 persons is across the street and is within one-quarter mile of the DPU's proposed chemical treatment facility. In this option, a water transmission line would be constructed from the existing wellhead to the new site. A utilitarian concrete structure similar in foot print to the DPU's current design, would be surrounded by a 15 feet tall steel re-enforced concrete wall. Street access for sodium hydrochlorite deliveries would be from North Temple Street via an anti-truck bomb resistance entry. A similar anti-truck bomb resistant entry is used at the cash delivery bay at the Federal Reserve Bank at the southwest corner of 100 South and State Street, Salt Lake City. At the Federal Reserve Bank, electrically driven subsurface posts are normally extended upward and are only lowered when armored car deliveries occur. The following figure shows a schematic of this Applicant proposed alternative:

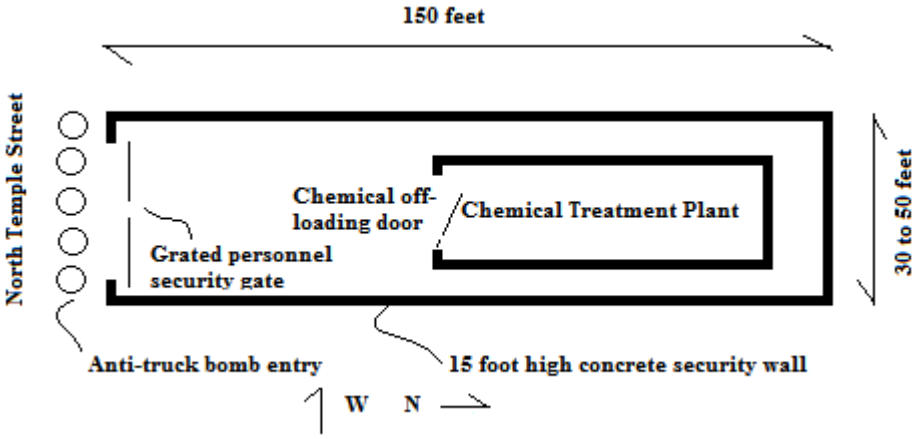

Figure 1 – Schematic of Applicant's Proposed Option B Design near 61 East North Temple. Compare to DPU Architectural Renderings in Figure 3 and Figure 4, below.

https://goo.gl/maps/LNnHGiGBvqJ5P2Cc7) and-or 500 Cortez Street at approximately 40°46'51.7"N 111°53'11.3"W (url: https://goo.gl/maps/VQNQLY257S5f5Ndb7).

[12] Salt Lake City Corporation. (1989, Mar 21). Salt Lake City Ordinance 11-1989 dated March 21, 1989 (establishing portions of City Creek Canyon as a protected natural area). The Well is not within the natural area; the historical Empire Mill site is.

[13] The parking lot at 61 East North Temple, 40°46'18.7"N 111°53'22.0"W(url: https://goo.gl/maps/dox4swxx9Eun4ejX6).

In this option, the chemical treatment facility would also be hardened to survive a an expected magnitude 7.0 earthquake without releasing sodium hypochlorite.

I. BACKGROUND AND FACTS

Between 48,000 and 75,000 people live and work in the CBD to the immediate southwest of the proposed Well chlorination facility.[14] The City anticipates through 2040, that current full-time residents will increase from 5,000 to 20,000 persons and that the population of daily commuting workers will increase from between 54,000 to 88,000 persons.[15] In the last three years, the City engaged in aggressive development of multi-family residential and hotel units and has added about 3,000 new units in the CBD. This has resulted in an increased need for sufficient water pressure to service this new and anticipated growth. As a result of this growth and the need to comply with other health, safety and water drinking requirements,[16] the DPU proposed a new pumping house and chlorination facility at the site of an existing underground Well, that has operated principally during the summer months since 1943 (*id*).

In 1943, the Well was developed to a depth of 484 feet during one of Salt Lake City's cyclical periods of drought.[17] The Well taps an aquifer layer the runs beneath the watershed protected hills to the north of City's center and the City Creek Canyon Natural Area – the primary drinking water source of the City's urban core. Between 80 and 100 percent of the northern City's downtown water comes from this well during the summer months (Bowen Memorandum) at a volume of 3 to 7 million gallons per day.[18] Since 1948, the City has not directly chlorinated water from the Well. The DPU has relied upon disinfecting the well's water by mixing it with chlorine treated water from other parts of the City's distribution system.[19] In

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[14] Salt Lake City Corporation. May 2016. Salt Lake City Central Business District Master Plan (url: http://www.slcdocs.com/Planning/MasterPlansMaps/Downtown.pdf). The 48,000 estimate is based on the 2010 Census and the 78,000 person estimate comes from the local chamber of commerce: the Downtown Alliance.

[15] Ftn. 14 at 5 and 9.

[16] Salt Lake City Dept. of Public Utilities, Undated, Project Notice (hereafter the "Project Notice") (url: https://docs.wixstatic.com/ugd/80b28b_f6fe751ac8f54376970f1e9d5b471440.pdf); Memorandum by B. McIntire to K. Lindquist, Salt Lake City Planning Department dated August 30, 2018, re: Open House Public Comment Responses (hereafter "August 2018 Comments") (url: https://docs.wixstatic.com/ugd/80b28b_0bc4214b1c61450897cfbd5cc5a0e6ee.pdf); Bowen Collins and Associates, circa August 2018, re: Salt Lake City Planning Commission Assessment Memorandum (hereafter the "Bowen Memorandum") (url: https://docs.wixstatic.com/ugd/80b28b_0e07c5f9e8ff4047a4bd9405ee4d95cf.pdf); Memorandum by David E. Hansen, Hansen, Allen and Luce, Inc., to B. Stewart, Salt Lake Department of Public Utilities, re: 4th Avenue Well Assessment (hereafter "HAL Report") (url: https://docs.wixstatic.com/ugd/80b28b_3607f771b2984d63a44ce7a4c3d1c7a9.pdf).

[17] HAL Report.

[18] HAL Report.

[19] Bowen Report at 2; Fisher conversation with DPU Project Manager, May 9, 2019.

1951 as the result of an outbreak of water-borne illnesses at the Union Pacific Station, the City entered into an agreement with United States Public Health Service to construction its current system of water filtration and chlorination plants, including a plant 5 miles north of the Well in City Creek Canyon.[20] The City's practice of disinfection by mixing untreated Well water with the City's general water supply apparently has been done without any adverse health effects to the community since the 1950s.

The proposed facility is within one mile of three secondary geologic faults[21] - the City Cemetery Fault, the Warms Springs Fault and the East Bench Fault - that connect with the 20 mile long segment of the Salt Lake City Segment of the Wasatch Front Fault Zone. It is within one-quarter mile of two fault lines that have been active within the last 15,000 years. [22] The reoccurrence interval for a greater than magnitude 6.75 earthquake on any one of eleven major fault segments, including the Salt Lake City Segment, is between 1,100 and 1,300 years, and the combined probability of a 6.5 magnitude earthquake occurring on one of the eleven Wasatch Front segments is 43 percent in the next 50 years.[23] The facility is located in an area were ground shaking accelerations during an expected 7.0 magnitude are predicted to be between 0.9 and 1.0 horizontal G-force with a Modified Mercalli Intensity of IX.[24] MMI IX ground shaking is described as: "Violent shaking: Considerable damage in specially designed structures; well-

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[20] Hooten, LeRoy, Jr., Director, SLC Dept. of Public Utilities (deceased). 1986. Salt Lake City's First Water Supply. Salt Lake City, Utah at 30-31 (url: http://www.slcdocs.com/utilities/pdf%20files/story.pdf); Salt Lake Telegram. (1951, Dec 27). Water Posers No Nearer S.L. Solution. Salt Lake Telegram. Salt Lake City, Utah (url: http://digitalnewspapers.org); Salt Lake Telegram. (1952, Jan 5). Plan to Purify Water Wins Salt Lake Approval. Salt Lake Telegram. Salt Lake City, Utah (url: http://digitalnewspapers.org).

[21] Personius, S. F. and Scott, W.E. (2009, 2d). Surficial geologic map of the Salt Lake City Segment and parts of adjacent segments of the Wasatch fault zone, Davis, Salt Lake, and Utah Counties. U.S.G.S. Map I-2106. Salt Lake City, Utah. (url: https://pubs.er.usgs.gov/publication/i2106); Van Horn, R. and Crittenden, Jr., M. D. (1987). Map showing surficial units and bedrock geology of the Fort Douglas Quadrangle and parts of the Mountain Dell and Salt Lake City North quadrangles, Davis, Salt Lake, and Morgan counties, Utah. U.S.G.S. Map I-1762. Salt Lake City, Utah. (url: http://pubs.er.usgs.gov/publication/i1762).

[22] Wong, I., Silva, W., Wright, D., Olig, S., Ashland, F., Gregor, N., … Jordan, S. (2002). Ground-shaking Map for Magnitude 7.0 Earthquake on the Wasatch Fault Salt Lake City, Utah Metropolitan Area (Public Information Maps No. P-76). Salt Lake City, Utah. (url: https://geology.utah/hazards/earthquakes-faults/ground-shaking/);

[23] Wong, I., Lund, W., DuRoss, C., Thomas, P., Arabasz, W., Crone, A., … Bowman, S. Earthquake Probabilities for the Wasatch Front Region in Utah, Idaho, and Wyoming, Miscellaneous Publication 1–418 (2016). Salt Lake City, Utah: Utah Geological Survey. (url: https://ussc.utah.gov/pages/view.php?ref=1283).

[24] Wong 2002.

designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse" (*id*). Horizontal displacements are predicted to be between 0.3 and 1.0 meters.[25]

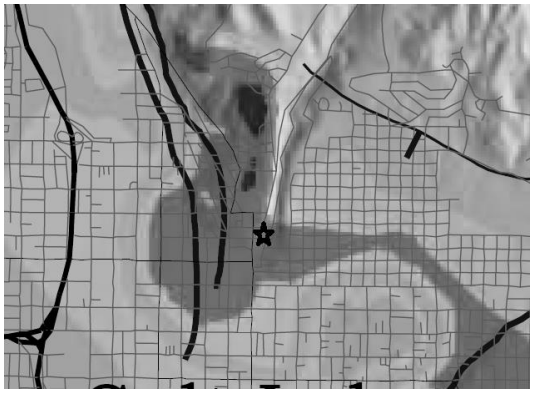

Figure 2 – Excerpt - Ground Shaking Map from Wong 2002. Notes: The proposed DPU facility is marked with a star in an MMI IX predicted shaking region. The faults to the immediate west are extensions of the Warm Springs Fault and have been active in the last 15, 000 years.

The proposed facility is located at the mouth of a 12 mile-long City Creek Canyon that rises to between 7,000 and 9,000 feet above the City at 4,300 feet above MSL. The canyon is subject to morning down-canyon katabatic winds that blow across the Well and into the populated Central Business District. Due to the canyon's unique geographic relationship to the Great Salt Lake, the canyon is also subject to afternoon "anti-winds" in which the wind also blows down-canyon, instead of the normal afternoon anabatic up-canyon direction.[26]

In April and October of each year, the Church of Jesus Christ of Latter Days Saints hold their general conference, and during that conference 26,000 members congregate in the Church's Conference Hall located approximately 2 and one-half blocks (one-third of a mile) from the mouth of City Creek Canyon and the Well. Your Applicant has observed over repeated years that even with City Police providing one-way out-bound traffic flow at the end of a conference session, it takes more than one-half hour to empty the Conference Center of 26,000 persons. Quick evacuation of the Center is impractical.

The neighborhood in which the chlorination facility is proposed to be located is the Memory Grove Area of the Greater Avenues neighborhood. It is in a historic regulated district. A key positive characteristic of these areas is a night they are very quiet. Your Applicant who lives in the Greater Avenues neighborhood about 1.25 miles from the Well has measured night time

[25] Bartlett, S. F., Hinckley, D. W., and Gerber, T. M. (2016). Figure C-1 in: Liquefaction-Induced Ground Displacement Hazard Maps for a M7.0 Scenario Event on the Salt Lake City Segment of the Wasatch Fault Zone, Salt Lake County, Utah. Salt Lake City, Utah. (url: http://www.civil.utah.edu/~bartlett/ULAG/Liquefaction Maps Text.pdf).

[26] Steenburgh, W. J. (2016, April 6). The City Creek Antiwind (Web). Salt Lake City, Utah. Wasatch Weather Weenies (Blog) (url: http://wasatchweatherweenies.blogspot.com/2016/04/the-city-creek-canyon-anti-wind.html). Dr. Steenburgh is the head of the Meteorology Department at the University of Utah.

noise on many occasions using a smart phone application.[27] Early morning nighttime noise levels in this urban environment are between 10db to 20db. Similar noise conditions prevail during the early morning at the Well in the Memory Grove neighborhood. 10db is equivalent to the sound of breathing; 20db is equivalent to the sound of leaves rustling.[28] 40db is considered the lower limit of urban ambient sound (*id*).

An initial meeting for public comment on the proposed Well chlorination facility was held in August 2018.[29] There is one nearby, permitted downstream well, not owned by the City, operated by the Church of Jesus Christ of Latter Day Saints, at their World Office Headquarters within one-quarter mile of the Well.[30] An initial DPU analysis done after the August meeting acknowledged that due to the nature of the proposed site, it was impractical to install security fencing normally required to prevent theft, vandalism or terrorist attacks on the chemical facility:

> Typically, culinary well buildings are completely enclosed with fencing to reduce the threat from potential vandalism, theft, and terrorism. The limited space available significantly prevents the ability to properly secure the location.[31]

The Bowen Memorandum also recognized the infeasibility of erecting security fencing at the site:

> Fencing to restrict access to the well site is normally recommended to prevent vandalism or other unauthorized access. Due to the location of the well and the minimal existing set-backs, fencing does not appear to be feasible (Bowen Memo. at 3).

The proposed design will use sodium hypochlorite liquid batch processing (CAS 7775-09-9 or CAS 7681-52-9) for disinfecting water.[32]

With respect to noise, the August 2018 Memorandum recites the County noise standard of "limited to no more than 5 dB above ambient sound, not to exceed 50 dB between 10:00 PM and 7:00 AM" (at 3). The August analysis then goes on to adopt an inaccurate maximum summer ambient sound level as the baseline of: "similar [to] residential A/C units outside homes in the neighborhood" (*id*). A residential A/C emits 60db of sound at 100 ft.[33] Your applicant agrees that ambient sound levels at the site are higher during the peak summer heating months, but the DPU analysis misstates

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[27] Physics Toolbox Suite (url: https://play.google.com/store/apps/details?id=com.chrystianvieyra.physicstoolboxsuite&hl=en).

[28] Purdue Chemistry Dept. 2000. Noise Sources and Their Effects. Web. (url: https://www.chem.purdue.edu/chemsafety/Training/PPETrain/dblevels.htm).

[29] August 2018 Comments; Bowen Memorandum.

[30] August 2018 Comments at 1.

[31] August 2018 Comment at 4.

[32] Bowen Memo. at 2 ("Due to the City's desire, all three alternatives . . . include a batch liquid chlorine storage and dosing system.").

[33] Purdue, ftn. 28.

that for the other eight months of the year, ambient noise levels are much lower. The proposed facility will exceed ambient nighttime baseline noise by more than 5db for most of the year.

After initial community opposition[34] and a second December 2018 open house, a consulting water engineer was retained.[35] The Well chlorination facility was redesigned with a smaller footprint.[36] No agency reports or documents indicate that the facility is designed to withstand a reasonably expected magnitude 6.75 earthquake.

DPU Architectural Renderings of the exterior of the current design of the facility show that it has typical large metal garage door facing the street and no surrounding security fencing. The metal garage door is the building access through which sodium hypochlorite will be unloaded. This door can be easily breached:

Figure 3 - Excerpt from DPU Architectural Rendering showing garage door for hypochlorite delivery at north west building corner (image left) at night. May 9, 2019.

[34] Semerad, T. May 7, 2019. The fight over pump house pits needs of Salt Lake City's thirsty downtown against a quiet neighborhood in Memory Grove. The Salt Lake City Tribune. (url: https://www.sltrib.com/news/2019/04/30/residents-mouth-memory/).

[35] HAL Report.

[36] Architectural Renderings in "Design Elements" at Salt Lake City Department of Public Utilities, 4th Avenue Well Project Website (url: https://www.slc.gov/utilities/fourth-avenue-well-project/); Salt Lake City Department of Public Utilities, Architectural Rendering dated May 9, 2019 (handout at May 9, 2019 open house, copy in Applicant's possession) (hereafter the "Architectural Renderings").

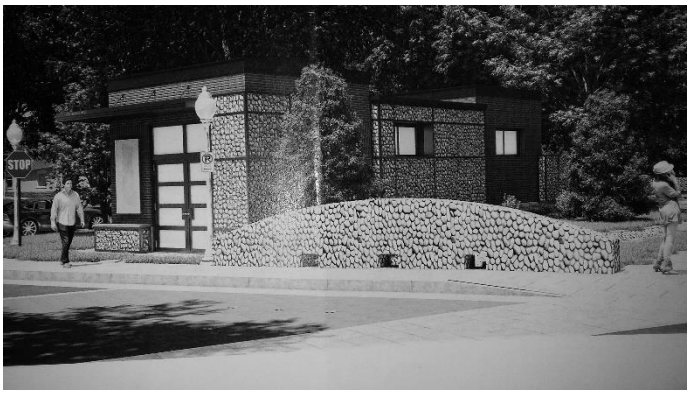

Figure 4 - Excerpt from DPU Architectural Rendering showing daytime view from south east. May 9, 2019.

On May 9, 2019, a third open house was held. The focus of this third public open house was the HAL Report. Exterior architectural Renderings were provided but no information was provided in the internal water treatment facilities. Consulting Professional Engineer David E. Hansen concluded on cost grounds that relocation of the Well facility by extending a transmission line (as suggested by your Applicant) was not optimal from a cost perspective:

> It has been suggested by some local residents that the chlorine facility be moved to another location. To move the chlorine facility off-site a full-size transmission line would need to be extended to the off-site facility where the chlorine would be injected, then tied back into the distribution system. This increases capital cost for the pipeline and secondary facility as well as operation and maintenance on two separate facilities. *It is clear based on the Pro's and Con's listed later in this report that such a move is not optimal.* . . . The estimated cost for this option is $2,688,000 (*id* at 5, emphasis added).

Under another rejected alternative, the HAL Report estimated the cost of moving the "chlorine facility to a new building at a location yet to be determined" at $3,632,000 (*id*. at 6) or complete abandonment of the Well at $ 5,463,256.00 (*id*. at 15).

These key conclusion of the HAL Report are summarized in a table at page 15 titled "4th Avenue Preliminary Well Cost Estimates". The key four options are summarized as follows:

Table 1 - Summary of HAL Report Cost Options

Option	Description	Agency Internal Cost (millions USD)
2b	Rehabilitate Well with new well house and on-site chlorination	2.7
2c	Rehabilitate Well with new well house and off-site chlorination in nearby park	3.3
2d	Rehabilitate Well with new well house and off-site chlorination at undetermined new site	3.6
3	Drill new well and build chlorination facility at new undetermined location	5.5

DPU considers Option 2b as the best lowest-cost option based principally on minimizing agency internal costs.

The reasonably foreseeable external social costs of the facility includes declines in property values given that a nighttime 60db chemical facility will be located nearby to homes. As contended in Point III, below, the facility is a likely target for a terrorist attack. These factors can potentially reduce real estate values, and are external social-economic costs are not considered in the DPU consulting expert analysis. A first-order estimate of the reduced property value external cost is as follows: Reviewing Google Maps, there are approximately 20 single family homes within 300 feet of the Well, two apartment buildings and some the 4th Avenue facing Terrace Falls Condominiums. In May, a Coldwell real estate broker reported average home sale price in the 84103 zip code, in which the Memory Grove neighborhood is located, during April 15 to May 15 at about 612,000 USD over 37 sales.[37] An online source, Neighborhood Scout.com, reports for a median sale price for a narrower 1st-A Street neighborhood, which includes Memory Grove, at about 350,000 USD.[38] Condominiums at the nearby Canyon Road Towers condominium are asking $300,000.

Using a working assumption of 20 homes valued at 500,000 USD each and 8 condominiums at 300,000 USD each (for a total value of 12.4 million) USD, the external social cost by percent point decline in price can be estimated in USD: -1%: 124,000; -2%-248,000, -5%-600,000, -8%-992,000. Although speculative, considering such external costs are useful for making judgment calls about which option will minimize total (agency internal and community external costs). Table 2 adjusts Table 1 for property value losses using the 8% decline property estimate:

[37] Nextdoor Neighbor Post, May 18, 2019.

[38] url: https://www.neighborhoodscout.com/ut/salt-lake-city/a-st .

Table 2 – HAL Options Adjusted for Property Value External Cost

Option	Description	Internal Agency Cost (USD M)	External property value cost (USD M)	Total social costs (USD Millions)
2b	Rehabilitate Well with new well house and on-site chlorination	2.7	1.0	3.7
2c	Rehabilitate Well with new well house and off-site chlorination in nearby park	3.3	0.0	3.3
2d	Rehabilitate Well with new well house and off-site chlorination at undetermined new site	3.6	0.0	3.6
3	Drill new well and build chlorination facility at new undetermined location	5.5	0.0	5.5

Table 2 is not adjusted for the expected cost of the concept, rare probability terrorist attack discussed in Point III. That further adjustment to Table 2 is discussed further in Point V, below.

On June 14, 2019, the DPU plans to seek approval of the redesigned facility from a historic district commission within which the proposed Well facility is located.[39]

II. THE DPU FAILED TO CONSIDER FEDERAL CHEMICAL FACILITY ANTI-TERRORISM STANDARDS IN THEIR ANALYSES OF THE PROPOSED FACILITY.

During the May 9, 2019 open house, your Applicant discussed the redesigned facility with Engineer Hansen, with a DPU system-wide water quality engineer and the DPU Project Construction Manager. Engineer Hansen was unaware of the requirement to design the facility, including site selection, to be resistant to terrorist attacks under 6 C.F.R. Part 27.[40] He did not consider the cost of a potential terrorist attack on the proposed chemical facility when concluding that an alternative site with an extended transmission line was not optimal[41] or when considering the total cost of the four alternative redesign scenarios.[42]

Your Applicant similarly found that the DPU's water process engineer and the Project Construction Manger were unaware of anti-terrorist design requirements imposed by 6 C.F.R. Part 27. Engineer Hansen, the Project Manager and the DPU water process engineer did not know whether the DPU had submitted the proposed design to the Secretary of DHS pursuant Part 27. Holly Mullen, Communications and Engagement Manager, speculated in response to your Applicant's inquiry that since the project was only thirty percent into the design phase, perhaps it was too early for the design to have been submitted to DHS. However, the August 2018

[39] Applicant's recollection of public official statements at May 9, 2018 open house.

[40] Fisher, paraphrasing Hansen: "In the 20 years that I [Hansen] have been doing these wells, no one has ever commented that security issues were a concern."

[41] Applicant recollection of May 9, 2019 meeting.

[42] HAL Report, Summary Table at 15.

Memorandum and the Bowen Memorandum, *quoted above* at page 7, indicates DPU awareness of the federal antiterrorist resilience design constraint.

In response to your Applicant's inquiries at the May 9 open house, Engineer Hansen, the Project Manager and the DPU water process engineer did not know the form of chlorine – liquid or dry sodium hypochlorite – to be delivered to the completed project or the volume of each delivery or the volumes involved. This was also attributed to the project being in an early design phase.[43] (Although liquid sodium hypochlorite is mentioned in the Bowen Memo., *supra*, this could be delivered in a dry form and then hydrated.) Your Applicant, who is not an expert in these matters, understands that sodium hypochlorite is delivered to water treatment plants in one of two forms: a liquid bleach of densities between 10 and 30 percent in volumes between 1,000 to 5,000 gallons or as a concentrated solid in batches of about 400 to 900 pounds. The Project Manger stated that deliveries of sodium hypochlorite would occur once each week.

The significance of liquid verses dry hypochlorite is the relative concentration and reactivity of the compound during a hypothetical, but plausible, terrorist attack, is discussed in the following point.

III. THE PROPOSED WELL CHLORINATION FACILITY PRESENTS A HIGH RISK OF SIGNIFICANT ADVERSE CONSEQUENCES FOR HUMAN LIFE OR HEALTH, NATIONAL SECURITY, AND-OR CRITICAL ECONOMIC ASSETS, IF THE STRUCTURE IS SUBJECTED TO A REASONABLY PLAUSIBLE TERRORIST ATTACK.

As currently proposed, the Well reasonably could be subjected to a plausible terrorist attack. In a working conceptual attack, a would-be domestic terrorist would load a small truck with 500 to 800 gallons of ordinary household cleaning vinegar (acetic acid) costing about 3.60 USD per gallon. This would be supplemented with 100 gallons of industrial strength cleaning ammonia costing 55 USD per gallon that is available at any janitorial supply house. The truck would then be backed up to the delivery door, the door would be breached, and a small high explosive charge would be detonated into order breach the hypochlorite holding tank and plastic gallon containers, causing the chemicals to mix.

It is common knowledge that mixing acetic acid and sodium hypochlorite (liquid bleach) creates toxic chlorine gas. Similarly, in the United States there are approximately 4,400,000 janitors and custodians.[44] Those occupations are routinely trained not to mix ammonia and bleach: mixing ammonia and liquid bleach (sodium hypochlorite) creates an explosive gas mixture containing chlorine and chloramine.[45] Chloramine gas is much more toxic than chlorine gas.

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[43] Oral comment by DPU Communications Manager Holly Mullen to Applicant, May 9, 2019.

[44] Bureau of Labor Statistics. 2019. May 2018 National Occupational Employment and Wage Estimates United States (url: https://www.bls.gov/oes/current/oes_nat.htm).

[45] Science ABCs. 2018. What Happens When You Mix Ammonia and Bleach? Web. (url: https://www.scienceabc.com/pure-sciences/what-happens-when-you-mix-bleach-and-ammonia.html). A disturbing Youtube video posted by irresponsible teenagers shows what

It is reasonable to assume that several hundred janitors and custodians of those 4.4 million persons are members of white supremacist or other domestic terrorist groups. This type of conceptual terrorist attack – using an existing sodium hypochlorite facility as one component of a binary chlorine-chloramine chemical weapon is not a new idea. It is well within the ability of members of domestic terrorist groups who do not have a high-school education to conceive and execute. Your Applicant has omitted chemical molar and reagent volume computations that might lend additional credibility to this concept attack. Those computations are within the skill level of any high school level chemistry class student.

IV. FEDERAL JURISDICTION: IT IS UNCLEAR WHETHER THE PROPOSED WELL FACILITY IS A PRESUMPTIVE HIGH RISK FACILITY. NONETHELESS, THE SECRETARY HAS DISCRETIONARY AUTHORITY OVER THIS MATTER.

Based on the foregoing, the proposed Well chemical treatment facility should be classified as a high risk facility. It is unclear whether the facility has a DHS presumptive high risk facility status.[46] Whether a chemical facility is presumptively high risk depends on whether specific chemicals listed in Appendix A of 6 C.F.R. Part 27 are used at a facility in volumes above specified levels and concentrations. Appendix A refers to "sodium chlorite" and not to "sodium hypochlorite." Appendix A also applies byproducts of industrial processes including "chlorine". As noted above, at the May 9 public information meeting, a DPU representative indicated that the project was in an early design phase, and therefore whether the facility is presumptively high risk cannot be determined with certainty based on currently available information. Nonetheless, DHS Secretary McAleenan or his delegates have the discretionary authority to declare the Well project a high risk facility pursuant to 6 C.F.R. § 27.205(a).

Based on the facts as described above, the Well project should be declared a high risk chemical facility.

V. WHETHER A REVIEWER BELIEVES THAT HAL REPORT DESIGN OPTION 2B IS OPTIMAL DEPENDS ON ONE'S PERCEPTION OF THE EXPECTED PRESENT VALUE OF THE COSTS OF A RARE AND UNLIKELY FUTURE TERRORIST ATTACK.

No United States drinking water chlorination facility has been subjected to the conceptual terrorist attack described in Point III. Legitimate use of sodium hypochlorite in industrial settings is safe if used with appropriate training. The CDC's National Toxic Substance Incidents Program

happens when ammonia and solid sodium hypochlorite (pool disinfectant) are mixed (url: https://youtu.be/56hxLYWIKfs).

[46] 6 C.F.R. § 27.203 (c)(1) (April 9, 2007).

data for 2013-2014 reports 26 hypochlorite incidents.[47] The CDC reports 24 illegal chemical bomb incidents between 1996 and 2003 – all minor - mostly involving teenagers.[48]

Terrorist acts are qualitatively different. Anti-terrorist protection planning should be based on Bayesian probability analysis of extremely remote events. Such analysis in turn informs the boundaries of our reasonable estimation of the present value of a future unlikely terrorist attack on the DPU's proposed Well design. The expected value of a future unlikely events informs decision making on the efficient allocation of public funds.

The lesson of the 9-11 terrorist attack, implemented using box cutters and airliners by relatively uneducated individuals, taught United States citizens an important lesson: it is necessary to anticipate and to spend public monies to make critical infrastructure facilities resistant to remotely probable, but reasonably plausible terrorist attacks. Some may consider the conceptual attack described in the preceding points to be an outlandish, speculative scenario that will never occur. Again, in the United States no such attack has occurred. In this view, it would a waste of public monies to, for example, spend public funds to guard against an unlikely chemical attack on the proposed Well. In part Congress has resolved this dilemma: In 2006, Congress empowered the Secretary of the Department of Homeland Security to "reduce the vulnerability of the United States to terrorism"[49] and pursuant to that authority the Secretary adopted 6 C.F.R Part 27 that requires the hardening of critical public water facilities that use large volumes of toxic chemicals.

How should we evaluate the likelihood that extremely rare, remotely probable events might occur? The answer is Bayesian analysis: a probability process by which our present understanding of the likelihood of rare events occurring is continuously updated with our prior understanding of those events. The 9-11 attacks are illustrative. Prior to 9-11 terrorist attack, two airplanes had crashed into Manhattan's Empire Building and both where accidental. A B-25 bomber struck the building in 1947 and later a small airplane hit the building. Given the millions of airliner flights over Manhattan between 1947 and 2001, a reasonable estimate in the spring of 2001 of the probability that an airliner would be intentionally flown into a skyscraper was 1 in millions. After 9-11 as a culture, we updated our prior estimation of the risk. Statistician Nate Silver of 538.com fame mathematically estimated our updated, current probability estimate of someone intentionally flying an airliner into a skyscraper to 99.99%.[50]

It is the bias of our past experience that make conceptually, simple and obvious terrorist attacks such as the hypothetical attack described in Point III seem unlikely. Now that a simple, conceptual attack has been described to the reader, have you updated your probability estimate of

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[47] CDC. 2019. NTIS Report and Data. (url: https://www.atsdr.cdc.gov/ntsip/reports.html, file NTSIP_Public_Use_Data_2013.xlsx).

[48] CDC. July 18, 2003. Homemade Chemical Bomb Events and Resulting Injuries --- Selected States, January 1996--March 2003. MMWR. 52(28):662-664. (url: https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5228a3.htm).

[49] 6 U.S.C. § 111(b)(1) (2006), Pub. L. 109–295, sec. 550.

[50] Silver, Nate. 2012. The Signal and Noise. Penguin Press at 247-248.

such a domestic terrorist attack on the DPU's proposed well design over the next 25 years to 1-in-millions to 1-in-three or 1-in-four? This is Bayesian statistical reasoning in action.

Whether one believes that public monies should be expended to guard against rare, unlikely terrorist attack scenarios depends on who the present expected value of such a future attack is quantified. There is no guidance for such estimates in the instant matter other than personal judgment, supplemented by expert advice. For example, you may reasonably feel that the future damages of the concept terrorist attack on the DPU proposed facility are 100 million USD with a 1 percent change of occurrence in the next 25 years. The present expected value of such an attack could reasonably be estimate at 1 million USD. An equally reasonable argument could be made that the present expected value at an occurrence probability of 1-in-10,000 is less than 1,000 USD. Others might reasonably argue the present expected value is zero dollars. The point of such thought exercises is that is provides a language to discuss and quantify the risk of a rare, unlikely terrorist attack scenario.

For example, assuming for discussion purposes, the present expected value of the concept scenario described in Point III is 1 million USD. Then the total social costs of proposed DPU chemical treatment facility, adjusted from Table 2, are:

Table 3 – HAL Options Adjusted for Property Value and Terrorist Attack External Costs

Option	Description	Internal Agency Cost (USD M)	External property value cost (USD M)	External terrorist attack present value (USD M)	Total social costs (USD Millions)
2b	Rehabilitate Well with new well house and on-site chlorination	2.7	1.0	1.0	4.7
2c	Rehabilitate Well with new well house and off-site chlorination in nearby park	3.3	0.0	0.0	3.3
2d	Rehabilitate Well with new well house and off-site chlorination at undetermined new site	3.6	0.0	0.0	3.6
3	Drill new well and build chlorination facility at new undetermined location	5.5	0.0	0.0	5.5

If you reasonably believe as in Table 1, above at page 10, that the present expected value of a future terrorist attack on the proposed Well is zero dollars, then Option 2b minimizes total project cost. If you reasonably believe that the present expected value of a future terrorist attack is 1 million USD, then Option 2d minimizes total internal and external project costs.

Such decision-making regarding rare events has previously guided other DPU expenditures. As noted above, it has long been known that the probability of a magnitude 6.75 or greater earthquake on the Salt Lake City Segment of Wasatch Front Fault Zone is 1 every 1,100 years and the combined probability on one of the 11 segments of the Fault Zone is 43% in the next fifty years. In 1999, the DPU began a multi-million program to seismically harden all of its

water treatment plants[51] against this low probability event. The City's primary historical water supply dams in Big Cottonwood and Little Cottonwood, for which the City paid millions in the 1920s, where decommissioned during the 2000s out of fear of failure during an earthquake. The Metropolitan Water District of Salt Lake and Sandy, of which the City is the leading member, recently completed a multi-million dollar replacement with seismic upgrades to the Terminal Reservoir near 3300 South and I-215.[52] That rare, unlikely events guide DPU decision-making is nothing new.

VI. THE PROPOSED WELL CONTROVERSY PRESENTS AN OPPORTUNITY TO SEEK SUPPLEMENTAL PRIVATE AND-OR PUBLIC FUNDING TO FINANCE THE DIFFERENCE BETWEEN THE OPTION 2B DESIGN THAT THE DPU IS WILLING TO PAY AND A MORE ANTI-TERRORIST RELISENT CHEMICAL PLANT DESIGN AT ANOTHER LOCATION.

The stasis of the controversy between DPU and City residents is "Who will pay for the 1 to 2 million USD difference between the agency's preferred Option 2b and a more terrorist resistant chemical treatment at a non-residential location?" The DPU is unwilling to pay the additional expense from its 122 million USD annual operating revenues.[53]

One solution is to seek supplemental revenues. The DPU, the City, and citizens could approach the L.D.S. Church for donation of land and-or monies at the 61 East North Temple parking lot to host a terrorist hardened chemical treatment facility consistent with Option 6, above.

The DPU, the City, and citizens could approach Utah's federal congressional delegation for a federal appropriation to harden the proposed Well facility against a terrorist attack. The availability of grants or loans from DHS is unclear.

Alternatively, citizens can lobby the DPU's Advisory Committee to convince the Department to pay the incremental cost of terrorist security from rate increases.[54]

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[51] Salt Lake City Corporation. (1999b, May 25). Wasatch Front Earthquake Preparedness. Salt Lake City, Utah. (url: http://www.slcdocs.com/utilities/NewsEvents/news1999/news5251999.htm).

[52] MWDSL&S. 2019. Terminal Reservoir Project. Web. (url: http://www.mwdsls.org/terminalresproject.html).

[53] Salt Lake City Department of Public Utilities. 2019. 2018 Annual Report (url: http://www.slcdocs.com/utilities/PDF%20Files/Annual%20Reports/Annual%20PU%202018.pdf).

[54] The members of Advisory Committee of the Salt Lake City Department of Public Utilities are Kent Moore, Sydney Fonnesbeck, Tom Godfrey, Colleen Kuhn, Ted Wilson, Lynn Hemingway, Roger L. Player, and Ted Boyer. DPU. 2019. Public Utilities Advisory Committee. (Web) (url: https://www.slc.gov/boards/boards-commissions/public-utilities-advisory-committee/).

VII. STANDING

Your Applicant has lived in the Greater Avenues Neighborhood about 1.25 miles from the Well for approximately 20 years. I travel on roads within 600 feet of the Well one to three times each day, principally along Third Avenue. I have exercised in City Creek Canyon above Bonneville Drive, about 1.25 miles north of the Well, two to five times per week for the last eight years. I am the author of 2018 book concerning, in part, Salt Lake City residents' one-hundred and twenty year opposition to the development of City Creek Canyon titled "The Natural History of a City Creek Canyon Year."[55]

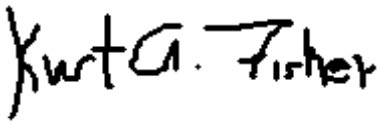
VIII. CONCLUSION

The DPU proposed Well chemical facility design is too vulnerable to a simple, conceptual terrorist attack. The proposed design does not comply with anti-terrorist resistant design principles of 6 C.F.R. Part 27. The DHS Secretary or his delegates should, based on the facts as described above, declare the proposed Well project a high risk chemical facility.

The DPU should defer action on this matter until its obligations to design an antiterrorist resistant chemical treatment facility are better defined. The temporary pause in the project's schedule could be used to search for alternative, supplemental private or public funding to fill the financing gap between the 2.7M USD that the agency is willing to pay and the 3.6M USD for a more terrorist resistant structure built at a more appropriate non-residential location.

I hope the above information contributes positively to the DPUs decision-making process. Please feel free to contact me with respect to this matter by the means listed above. As always your cooperation is appreciated.

Very Truly Yours



Kurt A. Fisher

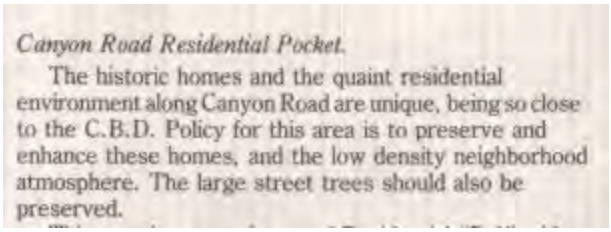
Kaf

[55] Fisher, K. A. 2018. The Natural History of City Creek Canyon Year (url: https://www.amazon.com/Natural-History-City-Creek-Canyon-ebook/dp/B079RY7CTD).

From:	Craig Ogan
To:	Lindquist, Kelsey; Wharton, Chris
Cc:	cindy cromer; Alan Walker; Vickey Walker; Lisa Livingston; Weaver, Lehua; Mayor; Litvack, David; Winston Seiler; John Jansen
Subject:	Canyon Road Master Plan
Date:	Wednesday, May 8, 2019 3:20:28 PM

Here is a link to the SLC Planning Archive- City Creek Master Plan adopted in 1986 http://www.slcdocs.com/Planning/MasterPlansMaps/CC.pdf
I don't see any amendment or up dates.

The "Canyon Road Residential Pocke"t is describe on page two and beyond. Here's the money quote:



Canyon Road Residential Pocket.

The historic homes and the quaint residential environment along Canyon Road are unique, being so close to the C.B.D. Policy for this area is to preserve and enhance these homes, and the low density neighborhood atmosphere. The large street trees should also be preserved.

It's hard to see how a square, tall, homely utility building housing a water treatment plan fits into the 1986 vision.

Has this question been developed with Planning and Historic Landmarks Commission?

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
[redacted]

From: Winston Seiler
To: [redacted]
Canyon Road Pumphouse
Date: Saturday, September 1, 2018 3:58:53 PM

Hello Kelsey,

I have read through the Historic Landmark Commission Work Session Memorandum and have a few questions that I am hoping that you can address:

Item 1: At the session at the City-County Building, it was mentioned that the flow meter #19 in the diagrams, requires straight pipe (oriented N-S in the diagrams) before and after the meter for accurate readings, thus extending the length of the room containing the pump.
A: can the pipe before and after the #19 flow meter be removed to shrink the footprint of this room, with a different flow meter utilized, or a correction factor applied to the flow meter to account for any discrepancy created by having shorter pipe before and after the meter. This is a fluid dynamics equation, where the effects of removing linear pipe before and after the meter could easily be modeled and understood at different flow regimes to provide a calculated but accurate enough flow calculation.
B: can a different flow meter be used to shorten the pipe and associated building?
C: if the flow meter and linear piping is required, can it be installed in the East- West oriented linear pipe flowing to the Victory Tanner system at the northern portion of the facility, with an access hatch provided for replacement/inspection?

Item 2: Alternative 3, #13 and #18 480V Generator and Transformer add significant footprint to the location (an approximate 30' x 30' green space area, and two trees). The necessity of this power generator and transformer on site seems to be related to "the City's existing portable power generators are insufficient to power and pump the motor during an outage."
A: The necessity of the generator and transformer seem only necessitated by the City's current inventory.
B: Portable generators that would meet the well needs do exist, even if not in the City's current inventory. What efforts have been made to investigate purchasing or rental of this equipment, and what are the costs? Such generators are regularly used in oil and gas, mining, and agricultural uses (resources that are available for consultation within the Salt Lake City area).
C. Portable, temporary generators can be staged on the short segment of 4th Ave. immediately to the south of the well location.
D. The locations of generator and transformer on the current drawings do not appear to best utilize available space for the smallest footprint.

Item 3: Alternative 1, "a 2300 volt portable backup power generator was deemed unfeasible because of the large generator footprint." Was locating of a portable generator, when needed, on the short section of 4th Ave, immediately adjacent and to the south of the well considered? As a temporary location, this would have minimal traffic impact, and would take up no park space.

Item 4. What efforts has the City made to investigate the purchase of the back up 2300 V power to avoid the potential 12 week outage?

Item 5. Bowen Collins notes that "noise issues from the pump motor and possible heating/AC units will likely be a sensitive issue for nearby residences and park visitors."
A. What efforts have been made to minimize this noise impact, as the sound from 3 HVAC units will be a constant addition to the location?
B. What are the expected noise levels that will be heard from each of the surrounding residences?

Item 6. "Further investigation of the potential to add a designated parking area inside the park for well maintenance vehicles, chlorine, and fluoride delivery vehicles," sounds as though the footprint could be further expanded. Please elaborate on the need for any additional parking, given that current maintenance activities make use of the existing available space, and the chemical delivery is planned to be infrequent?

Item 7. "water obtained…is sufficiently high quality as to not require direct disinfection or other treatment." Since chlorine is not required for the water quality of this well, can chlorine be added at another location in the system, or separated from the well location?

Item 8. Can the well be exempted again from the fluoride treatment? I am interested to know why or why not.

Item 9. Are both fluoride and chlorine treatment required? It would appear that if one was not needed, the tanks made of a smaller volume, or the footprint reduced, the building could be situated as to keep at least one of the large sycamore trees on location.

Item 10. Can fluoride and chlorine tanks be installed in the subsurface (like gas station tanks) to minimize the surface footprint?

Item 11. This is somewhat subjective, but I would be curious as to what each of the project staff would like to see as design features or creative solutions to the challenges of this site, if the well pump house was to be situated directly across the street from their house.

It was a pleasure to meet you at the City-County building, and I appreciate you taking the time to answer my questions.

Sincerely,

Winston Seiler
[redacted]

“Think Globally, act Locally.” Most of us have heard that phrase. Today, I am acting as locally as I can, to preserve a premier green space in Salt Lake City, from my bedroom window.

While my son naps next to me, I count the number of people passing the location of the proposed 4th Avenue Well Pump House. It is a typical, busy Saturday afternoon on a beautiful spring day. City Creek Park defines “verdant” from the wet winter we had. The leaves of the 110 year old sycamores are that bright neon green you see only in spring, before summer toughens them. People are walking, with friends and family, dogs, one bird. They pass on scooters, both electric and foot powered, bicycles, skateboards. Some run. Some stop by the creek in the shade.

174 people in one hour. Multiply that by 10 hours, 9:00 AM to 7:00 PM, 1740 people. That’s a good guess for the day, though the early runners are out before 6:00 am, and the party goers and couples on dates wander through the park into the wee hours of the night.

This year there are thirty weekends from April through October, prime visitation to the City Creek/Memory Grove area. Multiply 1740 by 60, to account for both Saturday and Sunday, to reach 104,400 people on the weekends. Half of 174 is 87, an approximation for those passing the well on a weekday during these months. Multiply that by the days of the week (5) then 30 weeks, and that is another 130,500 people visiting on weekdays. Together, that is an estimated 234,900 visitors in six months. The population of Salt Lake City is estimated at 200,544 people, so this could mean visitation to this pump house site exceeds the entire population of Salt Lake City in a six-month period.

I find my voice in this argument in response to Council Woman Erin Mendenhall’s comments from the Salt Lake Tribune Article “Plans to modernize a well don’t flow well with residents” on April 30th.

Her concern is over equity, and whether other public utilities projects in other districts would receive the same amount of money to create attractive buildings. I hope Public Utilities listens to all residents in all Salt Lake City districts, and tailors projects to what neighbors want and expect. Moreover, I hope this letter makes the point that the 4th Avenue proposed pump house is not just another project in any neighborhood; its presence would forever alter an extremely popular, high profile and historic recreation area. Therefore, the proposed 4th Ave. Well Pump House project deserves more thought and investment than most public utility projects.

I have only lived here two years, and countless times passers by have told us how fortunate we are to reside on this street; even marathon runners express their adoration of the neighborhood as the zoom past in early April. With this great fortune comes the responsibility to “act locally”, by taking action to preserve this green treasure at the heart of our beautiful city. I urge Public Utilities and our elected officials to a) move the well to a lower profile area and b) consider how the current plans affect all of Salt Lake City residents, not just those who live in the neighborhood. Please do not make a mistake that will outlive all of us; let’s do this the right way, for all the visitors of City Creek Canyon now and in the future.

From: Jera
To: Zoning
Subject: Comment regarding 4th avenue well project
Date: Monday, December 31, 2018 11:22:46 AM

Hello!

I am writing in regards to the proposed fourth avenue well project. I live about 10 blocks from the site, and walk through the area frequently. City creek canyon is an integral part of Utah as a whole, and I see the nature in our city continually compromised for construction projects. This is not sustainable in the long run. I have read over the concerns and reasons for the project, and while I absolute agree the city should protect and maintain our ability to control a healthy water supply, *I am particularly concerned about the need to remove trees from the area.* Given the state of our planet, and the first distressing signs of climate catastrophe, *I hope the city will agree that in all future infrastructure, the maintenance of vegetation and habitat is no longer optional.* Instead of minimization, I would support any efforts to move the project to a place where tree and vegetation removal is unnecessary, or else adapting project to meet needs without tree alteration of the park.

I welcome questions regarding my comment, as well as additional information that may better inform it.
Best wishes and Happy New Year,
Jera

From: Leslie Russell
To: Lindquist, Kelsey; Mayor; Chris Wharton; [redacted]
Subject: Comments on 4th Avenue and Canyon Road Well
Date: Tuesday, May 28, 2019 4:50:59 PM

Please consider this email as a request to reconsider Salt Lake City's plan to build a chemical water plant with a pump inside on the island in the median on 4th Avenue and Canyon Road/Memory Grove Park. My family has many grave concerns about this treatment plant in our neighborhood, but the main concerns are for public safety and the historic nature of City Creek Park and the City Creek Historic District.

Our family has lived at the residence at 252 North Canyon Road since 1970, raising three daughters here and enjoying the historic setting and beauty of the area. We are able to access both downtown Salt Lake City and City Creek Canyon within a few minutes and appreciate the natural beauty of the street. We have wildlife, such as robins. scrub jays, goldfinches, hummingbirds, rabbits, squirrels, deer and raccoons here as well as many historic buildings and sites. Several of the homes are on the National Register of Historic Places and the entire area has been designated as its own historic district, the City Creek Historic District, along with the Avenues and Capitol Hill Historic Districts. These are areas of importance to the history of Utah and Salt Lake, with many prominent former property owners, including the Spencers, Kimballs, Pratts, and Snows who were among the first settlers in the Salt Lake Valley. Some of the buildings were among the first early pioneer dwellings in Utah, and the original Ottinger Hall, home of the first volunteer fire department in Salt Lake City is located here. In the 1970's the Utah Legislature designated the trees at the Capitol Building and adjoining areas, including local parks as Heritage Trees in an effort to preserve the trees. We are very concerned about the destruction of the 110 year-old sycamore trees and their contribution to the feeling of nature in the park.

In the 1920's the Gold Star Mothers raised funds for trees and the land was dedicated to Veterans of Foreign Wars as Memory Grove Memorial Park in honor of the Veterans. This area must be preserved as the monument to history that it is and kept for future generations to enjoy. For Salt Lake City to look at this area as a water treatment plant is an insult to the spirit of the park and the history of our city and is a travesty to all. It is my hope that you will recognize this area as the landmark that it is and listen to the concerns of the neighbors who have worked so hard for so many years to preserve and take care of it. The peace, quiet and serenity of the creek as it meanders down the street is irreplaceable and the two medians leading to the park provide a safe green space for picnics, nature watchers, after school programs for children, joggers, bikers, dog walkers and many others as a beautiful and safe walk to Memory Grove Park and the former horse stable which now houses Preservation Utah and its offices, community events, and weddings. There is no other place like it in Salt Lake City.

We are also concerned about the size, scale, setback requirements, and design of the building

to house the pump because from the plans, it looks like a Starbucks, as one neighbor has so correctly pointed out. It still is 15 feet high and 50 feet long and will contain chlorine tanks, an injection system and HVAC. We have had meetings with Public Utilities and they still haven't answered our questions about the size and scale of the building and they still plan to cut down the trees. The neighbors have asked questions about alternative locations and have not been given any information about examination of other sites or chemical injection further downstream. Further downstream injection has been adequate for the city's needs, 15 feet high and 50 feet long are out of place for a small park and will destroy the historical intent of the park and be a visual disturbance to residents and visitors to Memory Grove and City Creek Canyon.

There are concerns about the public safety of this system. Since the current well has worked very satisfactorily since 1943, why is there such a sudden need to inject chlorine into the system? The water is pure at the sources and has been serving the community for 60 years without incident. The downstream injection has been adequate for the city's needs. There are questions about the flow meter because the equipment specified is outdated engineering and better smaller equipment is now in common use.

We are concerned about the health effects of the chlorine gas to our neighbors should there be a leak. Chlorine causes coughing from the fumes, delirium, irritation, blistering and burning, stomach and abdominal pain and long term effects of chlorine gas. There have been natural disasters that could affect the well and cause a catastrophe and escape of the gas. For example, during the flood of 1983, City Creek overflowed and ran through Memory Grove, Canyon Road, and State Street all the way down to 1300 South, into the Jordan River and to the Great Salt Lake. During that time, there was no water available from the taps, but water and sewage leaked into the system and into the basements of some of the homes on Canyon Road. If that were to happen again with a new pump system. what would happen? In August, 1999, the first tornado in Salt Lake City in recent memory, went from downtown, the State Capitol, Memory Grove and Canyon Road and the Avenues and took the roofs of some homes and destroyed many of the trees in Memory Grove, including Heritage Trees. The neighborhood held fundraisers and helped to buy and replace the trees in the Park and along the parking strips on Canyon Road. Fortunately, the trees on the medians, including the 110 year-old sycamores now threatened with destruction, were spared. We would like to see these trees survive this bad idea.

We request your consideration of other alternatives to this special area of historical importance and beauty being devastated because Salt Lake City has funding to do the project. Why not use the funding to improve the infrastructure in Memory Grove Park? The water line in Memory Grove broke in August, 2018 at 3:00 a.m., sending a river down Canyon Road for several hours. Salt Lake City Water Department responded quickly and resolved the problem, but there are other needs that also could be addressed. We appreciate your

attention to our concerns.

Respectfully,

Leslie Russell
[redacted]

March 8, 2019

Jesse Stewart
Deputy Director of Water Quality and Treatment

Dear Mr. Jessie Stewart,

I want to thank you and the Public Utilities Department for being so open and willing to listen to all who love and use City Creek Park. I know when you came in January to the GACC Meeting there was a very good dialog. Your group has tried hard to reduce the scale and impact on the park. For many, no matter what you do, it will never be enough. We know that there will be a pump house on that spot eventually but what will it be like? Will it be an eyesore or will it enhance the park experience?

I attended the Landmark Commission meeting last night and thought, that although it was closing, there is still a fairly wide gap and was wondering how we'd ever get together. Then as one of the architects was commenting about how this was a utility building and was "designed to look like a utility building because form follows function." I said to myself, "STOP."

> In 1896 Louis Sullivan (1856–1924) coined his famous axiom, **form ever follows function**, in an article and it became the touchstone for many architects -- the purpose of a building should be the starting point for its design. Later it was shortened to **form follows function** and In the 1930s it became the mantra of the modern architects.
>
> Sullivan attributed the core idea to the Roman architect, engineer, and author Marcus Vitruvius Pollio, who first asserted in his book *De architectura* that a structure must exhibit the three qualities of firmitas, utilitas, venustas – that is, it must be **solid, useful, beautiful.**
>
> As architects, Louis Sullivan, his student, Frank Lloyd Wright, as well as many others, were very aware of *where* they were putting their designs. The piece of land where the building was to be built was very important aspect in the creation of the design for the building itself.
>
> Three things they considered before beginning their design work:.
> 1. The ***purpose*** of a building should be the ***starting point for its design.***
> 2. Then add ***solid, beautiful.***
> 3. ***The environment.***

I may be wrong in my assessment, but it appears to me that the architects have forgotten an important part of their planning – ***the environment***. They are designing a utility building for a City Park. How will it become an integrated part of the Park?

Granted, the building **is** a utility building no question, but it **is** also going to be part of a City Park; no question there either. There are certain heights and lengths you need. Could you have a slanted roof so you have the height in the area that needs that height? Do you need the equal width throughout the building? Are the corners needed or wasted? Could you have a hexagon with a tail? Could it be made "playful" because this is a City Park?

Sometime a change in mindset can make all the difference.

Thank you for listening. I appreciate that very much,

Jill Van Langeveld,
2019 GACC Chair

GREATER AVENUES
COMMUNITY COUNCIL

P.O. Box 1679 ✷ Salt Lake City, UT 84110 ✷ www.slc-avenues.org

August 24, 2018

Salt Lake City Corporation

451 S State Street

Salt Lake City, UT 84111

Community and Neighborhoods Planning Division

Attn: Kelsey Lindquist

Dear Kelsey,

I am writing on behalf of the Greater Avenues Community Council Board members in regards to the 4th Avenue Pump House New Construction project. The property address is 300 North Canyon Road, which lies within the Avenues Historic District.

The presentations, memorandums, and renderings related to the project that have been provided to our community suggest significant efforts to improve and restore the existing water pump. The byproduct of this project is the potential desecration of the gateway to City Creek and Memory Grove. This part of the city is a place of reverence, with long history and incredible character. It is important that we preserve the historical and cultural connection between the city center and City Creek, which gave life to the city in its earliest day and continues to this day as a reverent and peaceful place.

To so greatly alter this environment is to permanently alter the very nature of the canyon and the city. We would never alter Temple Square to such an extent, so why would we do it here?

An alternate site or underground solution must be found. We cannot so radically alter such a fundamentally important site in our beautiful city.

Sincerely,

Brian Berkelbach

Brian Berkelbach

2018 Chair, Greater Avenues Community Council

From: [redacted]
To: Lindquist, Kelsey
Subject: Early Reviews on New Water Treatment Plant Renderings
Date: Thursday, May 9, 2019 2:16:36 PM
Attachments: ii_jvgt5el07
ii_jvgt1ues5
ii_jvfmfy2r0
ii_jvfmfybz2
ii_jvfmfy8n1
ii_jvfn3lg83
ii_jvgt5ei66

The Early Reviews on the Water Treatment Plant designs are, well, not good:

> A retired scribe, living in the Avenues issued a pithy opinion, "As ugly as usual."
>
> "This looks like it should have a men's and woman's entrance." opined a well known member of the arts scene, sometime SLC adviser and Avenues resident.
>
> One of our pro bono engineers wrote. "Three more iterations and they may have it acceptable. I like the cobble, hate the flat roof, and distrust renderings. As an engineer, I need the sketches. This is not a pump house, it is a chemical treatment plant with a pump inside."
>
> Noted arts educator and Canyon Road denizen sent something graphic and hilarious:

From: Redacted
Date: Wed, May 8, 2019 at 6:53 PM
Subject: Re: New Water Treatment Plant Renderings
To: [redacted]

Awesome! Can we get an espresso there?

Tonight, May 9, from 5:30 to 7;00 PM is your chance to see the plan and talk to SLC PU officials and the designers. Lowell School (Open Class Room), 134 D St. Multi purpose Room.

Come and get one of these stickers:

Here are the renderings to be unveiled to the public, tomorrow May 9, 5:30 to 7:00 PM at Lowell School (Open Class Room), 134 D Street.

There are no elevations or schematics found at www.fourthavenuewell.com/project-updates , but from the perspective of cars and people it looks like:

- Still a 15' high building, 50+ feet x 12+ feet
- Will contain chlorine tanks, injection system and HVAC
- Will use a noise making above ground pump

- Still lose 3 Historic trees

We have time to do our work:

- May 21 is City Council Public Hearing on the budget for this construction
  - Public Comments Allowed
- June 6 is Historic Landmarks Commission on Certification of above designs
  - Public Comments Allowed

Now is the time to contact the Mayor and City Council:
mayor@slcgov.com
chris.wharton@slcgov.com

At last night's City Council four of our neighbors made good use of the Public Comment Time.

See and listen to their comments, here:
https://www.facebook.com/slcCouncil/videos/2309948665945490/?t=2326

- Cecile told the council of the history of the parks and the responsibility to protect it.
- Vickey discussed the ill health affects of the Chlorine (sodium hydrochlorite) to be used in the Treatment Plant.
- Winston read a letter from his wife about her observations of the use of the park by thousands of people from around the world and what impression an industrial building will leave with them.
- David made positive suggestion as to making the footprint smaller and saving the trees

We need you in the room, tomorrow, May 9 at Lowell School. A big crowd sends a big message

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
[redacted]

Tue 8/21/2018 10:37 AM

Sean McKenna [redacted]

Re: Case PLNHL2018-00557 and 558

To Lindquist, Kelsey

You replied to this message on 8/21/2018 12:45 PM.

Action Items + Get more apps

Hi Kelsey, I was unable to attend the open house because I was out of town. I would like to submit a public comment though. I think this proposed project would be extremely detrimental to the historic neighborhood of memory grove. The area is beautiful right now with the center open space with City Creek running through the middle. The open space acts as a nice natural pathway from Temple Square and Brigham park through Memory Grove to Memory Grove Park and on to City Creek Canyon. It is very common to see families picnicking and playing in the open space where this building is proposed. The location of the proposed building is on the corner of Canyon Drive and 4th Ave and would completely ruin the natural and peaceful feeling of our historic neighborhood. The location of the building would eliminate valuable and beautiful public open space and the design of the building does not fit in with the neighborhood at all. I would urge SLC to find a different solution. Keeping everything underground as it currently is would be much preferred or building the structure somewhere else that does not ruin a very peaceful and serene oasis of nature within a historic neighborhood in downtown Salt Lake City.

Please let me know that these comments will be submitted and please let me know what the next steps are.

Thank you,
J. Sean McKenna
114 E. 4th Avenue

Wed 8/15/2018 12:44 PM

Craig Ogan <[redacted]>

Fwd: Pump House, 4h Avenue and Canyon road

To Lindquist, Kelsey; McIntire, Blayde; Brad.Steward@slcgov.com

If there are problems with how this message is displayed, click here to view it in a web browser.

Message Pumphouse (148 KB)

Bing Maps

As you may be aware SL Public Utilities proposes to build a pump house on 4th Ave and Canyon Road.

The preliminary drawings are attached.

There is an Open House with SLC Planning Division at City Hall, 451 S Sate Street 4th Floor, August 16 from 5 to 7 which is open to all. Below is the post card you should have received. This will be the neighborhoods first opportunity to effect design, size and other executions.

The neighbors plan a get together in the near future to discuss the steps we need to take to have further meaningful influence on the construction, design and mitigation of impacts.

To help us to know we have the right address to keep you in the loop for meetings, will you please reply to this email. That way we'll know this email got to you and through your spam filter.

Thanks.

Salt Lake Planning Division
451 S State Street Room 406, PO Box 145480, Salt Lake City, Utah 84114-5480

Open House on August 16, 2018 at 5:00 to 7:00 p.m.
City & County Building
451 S State Street, 4th Floor Hallway
Salt Lake City, Utah 84111

4th Avenue Pump House at approximately 300 N Canyon Road - Salt Lake City Public Utilities is proposing to construct a new pump house on the property listed above. The pump house is necessary to continue to provide drinking water to the community and protect the well that is on the site. The pump house will contain equipment necessary to operate the well and required chemicals to treat the water. The subject property is located in the OS (Open Space) zoning district and is located in Council District 3, represented by Chris Warton. (Staff Contact - Kelsey Lindquist at 801-535-7930 or kelsey.lindquist@slcgov.com) **Case Numbers PLNHLC2018-00557**

Mon 8/13/2018 12:15 PM

Craig Ogan [redacted]

Re: 4th Avenue Pump House

To Lindquist, Kelsey

Thanks for this. That's a pretty stark Change for that little park

On Aug 13, 2018, at 11:56 AM, Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com> wrote:

> Craig,
>
> Thank you for the phone call. The applicable plans are attached. Please note, the engineers are currently revising the elevations and the renderings – which I can forward, as soon as I receive them. The Open House is on Thursday from 5-7. If you have any questions or concerns, please let me know.
>
> Sincerely,
>
> Kelsey Lindquist
> Principal Planner
>
> COMMUNITY AND NEIGHBORHOODS
> PLANNING DIVISION
> SALT LAKE CITY CORPORATION
>
> TEL 801-535-7930
> FAX 801-535-6174
>
> WWW.SLC.GOV/PLANNING
>
> <Street Renderings - 4th Ave Well.pdf>
>
> <Site Plans - 4th Ave Well.pdf>

From:	Lindquist, Kelsey
To:	"Winston Seiler"
Cc:	Catherine Williams; McIntire, Blayde; Stewart, Brad
Subject:	RE: PLNHLC2018-00557 & PLNHLC2018-00558
Date:	Friday, August 10, 2018 3:22:48 PM
Attachments:	Site Plans - 4th Ave Well.pdf Street Renderings - 4th Ave Well.pdf

Winston,

I would first like to say congratulations on the upcoming baby. I hope all goes as planned!

I had Public Utilities address a few of the technical questions, specifically 1, 2,3 ,4, 6, 7 and 8. If you happen to have additional technical questions or need any clarification on the answers provided, I cc'd Public Utilities on this email.

1. Could you please provide details and specifications of the current pump and facilities?
   The current pump house has been in service since 1968. The well is one of the biggest producers in all of Salt Lake City. It is 20" in diameter and 464 ft deep. On average during the summer months it produces 5.5-7.0 million gallons per day (MGD). For reference, that is more than the City Creek Water Treatment Plant produces during the summer. It supplies downtown Salt Lake City with a majority of its water. The current facility has a below-ground vault, approximately 10'Wx20'Lx12'D, which houses all electrical equipment, the well head, and pipe. There is an above-ground transformer.

   The issue with the current vault is that it does not meet current state code. Periodically, SLCDPU facilities are inspected with state officials in what is called the "State Sanitary Survey." Past inspections have found several deficiencies at the site that should be corrected. SLCDPU has not yet been required to correct the deficiencies because the site is "grandfathered." However, if any work is done at the site, it loses its "grandfathered" status and the whole site must be brought up to current standards.

   The safety of our workers is paramount on every SLCDPU project, and there is no question they are in jeopardy if we do not make this change. This update will also provide greater resiliency and safety for the neighborhood and entire community.

   The main driver for this project is the electrical system. Currently the site is supplied by a 2300V transformer. Rocky Mountain Power has informed the project team that parts are no longer available for that transformer, and that 480V transformers are now used. If the old transformer were to need repair, there is no easy fix, and the well would be placed out of service for an extended period of time. Obviously this poses a significant problem for the water distribution system because of the well's importance. Rather than hope that doesn't happen, SLCDPU has proposed a proactive approach in which we upgrade to a 480V transformer. To accommodate the 480V transformer, all electrical equipment must be replaced. Therefore, the site loses its "grandfathered" status and must be brought up to current standards. Current standards include putting the equipment in an above-ground structure and adding disinfection and fluoride injection.

2. Could please provide details and specifications for the envisioned pump facilities and chemical?

The proposed pump house is an above-ground structure, 46'Wx34'Lx12'H. It houses the wellhead, electrical equipment, piping, and chemicals. The chemicals will be entirely contained within the structure and will be transferred directly into the water pipes so there will very little to no smell. There is an above-ground generator and transformer located outside of the building to provide backup power in case of a power system outage.

3. Could you please provide the list of considered alternatives, and details on the selected alternative?

Thank you for asking about the alternatives. Our project team spent significant time analyzing and discussing alternatives because we knew the challenges the project would face.

The first alternative considered was to abandon this well and drill a new well in a new location. The advantage of this alternative is the minimal impact to the existing site. The greatest disadvantage is to find a location that would produce the same volume of water.

There are two key components to finding a location: the surface location and the sub-surface hydrogeological make-up. The surface location needs to be close enough to the existing water distribution system and end users—in this case, the downtown area. If the well were relocated, large diameter pipes would need to be extended to the new location. This would be tremendously expensive and disruptive to the neighborhoods. The second key component is that the existing well was drilled into a near-perfect aquifer. It reliably provides large amounts of pristine water. This aquifer is limited in size and it is unlikely that another aquifer would be found to match its production capability in the immediate vicinity.

The design team evaluated the water distribution system for another existing source that rerouted to provide water to the area. They also looked at the operation of the system to see if changes could be made to provide the same water service without the well. The project team concluded that updating the current site makes the most operational and economic sense, but recognizes this choice has a high social impact, as do most of the alternatives.

Once the team evaluated the site location, they examined alternatives to the layout of the new building and transformer. They worked to reduce the footprint of the building as much as possible, while still meeting electrical, noise, drinking water, building and safety codes. Due to the importance of this well, the team decided to include a generator on-site. In the event of a power outage, this well needs to function to provide the surrounding area with water. A portable generator was not feasible because of the large pump motors.

4. Is an underground pump house as currently in place an alternative under consideration?

An underground structure is not possible because state code requires that any well structure must be free draining. This means in the event of a water main break, flood or other event the water will flow away from the well by gravity (non-mechanical means). An underground vault does not have this capability. In addition, electrical equipment is extremely sensitive to water and creates potentially dangerous environment for operational staff in underground vaults. Without a free-draining site during an event the possibility exists for contaminated water to enter the well itself. Contaminating the aquifer could shut down the well for a very long time.

5. Will any new pump house be held to the same historic aesthetic that our home is held to? Are there plans that could be provided?
   The new construction of the pump house is subject to review and approval by the Historic Landmark Commission. The review and approval is slightly different from what you may have experienced with any design or application review of an existing historic structure with the Historic Landmark Commission. The difference occurs with the request. Since Public utilities is proposing the new construction of the pump house, the design will need to comply with the adopted standards for new construction (21A.36.020.H). Public Utilities is planning on attending a Work Session with the Historic Landmark Commission in September, to discuss design concerns and the proposal. I attached the current set of plans. Public Utilities is currently modifying these plans by adding more detail. I can forward the revised plans, as soon as I receive them.

6. What are the noise levels of above ground pump house?
   Sound attenuation is included in the design of the structure. The sound of the pump should not be noticed. The generator must run once per month to ensure it is in good working order and noise will be noticeable during that process. Duration would be one hour, during regular, weekday business hours. In another effort to minimize the impacts to the neighborhood, part of the selection criteria for the generator will be noise levels. We have extensive experience with noise attenuation and have very rigorous and detailed standards.

7. How will the chemicals be delivered to the pump house?
   A truck delivers the required chemicals. A gate and driveway would be included in the design for this purpose. Hoses are used to transfer the chemicals from the trucks to the tanks. We have established safety protocols for chemical transfer here and at other locations.

8. Will activities at a new pump house be significantly greater than at the current facility?
   SLCDPU crew activities will be the same as at the current facility. For the most part, the facility is operated remotely.
   SLCDPU appreciates this opportunity to explain our methodology and will remain transparent and attentive during the public engagement, design, construction and maintenance of this project. More communication will be forthcoming as we go forward. Thank you.

I would encourage you to come to next week's Open House, which is scheduled for Thursday, August 16 at 5:00-7:00. The Open House is located on the fourth floor of the City and County Building (451 S. State Street). The Open House will provide an opportunity to ask questions and provide comments about sound proofing for the building, budget and design. If you cannot make the Open House, please feel free to forward comments or concerns. Please don't hesitate to contact me with any questions or to voice any comments or concerns.

Sincerely,

Kelsey Lindquist
Principal Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

TEL 801-535-7930
FAX 801-535-6174

WWW.SLC.GOV/PLANNING

From: Winston Seiler [redacted]
Sent: Wednesday, August 8, 2018 4:44 PM
To: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Cc: Catherine Williams [redacted]
Subject: PLNHLC2018-00557 & PLNHLC2018-00558

Hello Kelsey,

I am writing regarding the proposed new construction of the pump house on Canyon Rd.

We live at 211 Canyon Rd, almost directly across from the proposed construction.

A few questions come immediately to mind:
1. Could you please provide details and specifications of the current pump and facilities
2. Could you please provide details and specifications for the envisioned pump facilities and chemicals
3. Could you please provide the list of considered alternatives, and details on the selected alternative?
4. Is an underground pump house as currently in place an alternative under consideration?
5. Will any new pump house be held to the same historic aesthetic that our home is held to? Are there plans that could be provided?
6. What are the noise levels of above ground pump house?
7. How will chemicals be delivered to the pump house?
8. Will activities at a new pump house be significantly greater than at the current facility?

I will try to attend the meetings this month, but may be unable to due to upcoming birth of a child.

Thank you for taking the time to provide information on the questions above?

Sincerely,

Winston Seiler
211 Canyon Rd.
Salt Lake City, UT 84103

[redacted]

From: David
To: Lindquist, Kelsey
Subject: Re: blends with surroundings
Date: Thursday, August 9, 2018 12:10:42 PM

Hi Kelsey,

Thank you so much for taking the time and making the effort to send the overview. I will indeed make the upcoming meeting on August 16. It is comforting to note that Historic Preservation applications have been made. Bottom line: try to make this (necessary) thing as visually acceptable as possible.

Again, thanks for your reply.

cheers, David Garcia

From: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Sent: Thursday, August 9, 2018 11:49:49 AM
To: [redacted]
Cc: 'Sydne Jacques'; McIntire, Blayde; Stewart, Brad; Mullen, Holly; Kirk Bagley; Josh Bean; Robinson, Molly
Subject: blends with surroundings

Dear David Garcia,

My name is Kelsey Lindquist and I am the project planner working with Public Utilities on processing the two Historic Preservation Applications for the pump house located at 300 N. Canyon Road. I would like to say thank you for the comments and concerns. I would also like to address a couple of the comments within this email to hopefully provide additional information and clarification.

The proposed footprint of the new pump house is approximately 993 square feet in size and approximately 13'4" in height. The size has been reduced to the minimum size necessary to accommodate the specifications and need to house the equipment for the pump house. With that said, the location of the proposed pump house is set and unfortunately cannot not be modified. The subject property is located in the Avenues Local Historic District, and the new construction is subject to review and approval by the Historic Landmark Commission. The review and approval is slightly different from what you may have experienced with any design or application review of an existing historic structure with the Historic Landmark Commission. The difference occurs with the request. Since Public Utilities is proposing the new construction of the pump house, the design will need to comply with the adopted standards for new construction (21A.34.020.H). Generally, any faux representation of historic structures or styles is not encouraged or supported in local historic districts. Public Utilities has been working with Planning to achieve a sympathetic solution to the need and the established standards of review. Everyone involved would like to achieve a "win-win" for the neighborhood and park users, as well as the public need for the pump house. I would encourage you to come to next week's Open House, which is scheduled for Thursday, August 16 at 5:00-7:00. The Open House is located on the fourth floor of the City and County Building (451 S. State Street). The Open House will provide an opportunity to ask questions and provide comments about sound proofing for the building, budget and design. Additionally, if you cannot make the Open House, please feel free to forward comments or concerns. Please don't hesitate to contact me with any questions or to voice any comments

or concerns.

Sincerely,

Kelsey Lindquist
Principal Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

TEL 801-535-7930
FAX 801-535-6174

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From:	Brian J Berkelbach
To:	Lindquist, Kelsey
Cc:	McIntire, Blayde; Stewart, Brad
Subject:	RE: Notice of Planning Petition
Date:	Thursday, August 9, 2018 8:39:55 AM

Kelsey,

Our board is working on a formal letter that will be submitted next week, which will illustrate all of our concerns. We will make sure that you receive a copy of the letter.

Thanks,

Brian Berkelbach
Financial Services Professional
New York Life Insurance Company
150 W Civic Center Drive, Suite 600
Sandy, UT 84070
[redacted]

From: Lindquist, Kelsey [Kelsey.Lindquist@slcgov.com]
Sent: Thursday, August 09, 2018 8:35 AM
To: Brian J Berkelbach
Cc: McIntire, Blayde; Stewart, Brad
Subject: RE: Notice of Planning Petition

Brian,

Of course. I will forward updated information, as I receive it. The Open House, which is scheduled for next Thursday, is a great opportunity to gather additional information. Could you offer a little more information about the frustrations? I am happy to try to address any and all of the voiced frustrations.

I understand that this has been an open space enjoyed by the public, but I would like to stress that Public Utilities has decreased the size of the pump house to the minimal size required. This is to ensure that the pump house does not encroach into additional open space. If you have any questions, concerns or comments, please don't hesitate to contact me.

Sincerely,

Kelsey Lindquist
Principal Planner

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PLANNING DIVISION
SALT LAKE CITY CORPORATION

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FAX 801-535-6174

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From: Brian J Berkelbach [redacted]
Sent: Thursday, August 9, 2018 8:28 AM
To: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Subject: RE: Notice of Planning Petition

Thank you for following up. Our board met last night and talked at length about this project. We are deeply frustrated with what might happen to such a beautiful area of our city. We are spreading the word as fast as we can. We want to be on the front end of this.

Any additional insights would be greatly appreciated.

Thanks,

Brian Berkelbach
[redacted]

From: Lindquist, Kelsey [Kelsey.Lindquist@slcgov.com]
Sent: Wednesday, August 08, 2018 2:17 PM
To: 'council@chnc-slc.org'; Greater Avenues CC Chair
Cc: McIntire, Blayde; Robinson, Molly
Subject: FW: Notice of Planning Petition

Dear Laura Arellano and Brian Berklebach,

I am just following-up on the notice of a planning application, which was emailed on July 19th. As the notice discusses, there is an upcoming Open House on August 16, 2018. The Open House is scheduled from 5-7 and is located on the fourth floor of the City and County

Building, which is located at 451 S. State Street. If you could post about the upcoming Open House or send an email to constituents, it might reach more individuals and park users. A notice was mailed to property owners and tenants within 300 feet of the subject property. I will also be posting a sign on the property for park users to be informed. I am hoping that you can reach additional members of the public through an email or a website post about the Open House. If you have any questions, concerns or would like additional information, please let me know.

Sincerely,

Kelsey Lindquist
Principal Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

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FAX 801-535-6174

www.SLC.GOV/PLANNING

From: Lindquist, Kelsey
Sent: Thursday, July 19, 2018 3:56 PM
To: 'council@chnc-slc.org' <council@chnc-slc.org>; Greater Avenues CC Chair <gaccchair@slc-avenues.org>
Cc: McIntire, Blayde <Blayde.McIntire@slcgov.com>; Mullen, Holly <Holly.Mullen@slcgov.com>; Stewart, Brad <Brad.Stewart@slcgov.com>
Subject: Notice of Planning Petition

Dear Laura Arellano and Brian Berklebach,

The Planning Division has received a petition for the new construction of a pump house located at 300 N Canyon Road. The proposed new construction includes a pump house that will enclose the required equipment and chemicals. I have attached:

1. The petitioner's application materials
2. An illustration of where the pump house will be located
3. A formal letter requesting your community council's input

As a recognized community organization you have 45 days from the date of this e-mail to provide comments on the proposed petition. The 45 day period ends on September 10, 2018. Please let me know if you intend to have the petitioner present at one of your community council meetings, including the date and time of the meeting, and I will coordinate with them.

This project is also scheduled for an Open House at the following time/date (place TBD):

Thursday, August 16, 2018

5:00PM – 7:00 PM

If you have any questions about the petition please feel free to contact me.

Thanks,

Kelsey Lindquist
Principal Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

TEL 801-535-7930
FAX 801-535-6174

WWW.SLCGOV.COM

From: [redacted]
To: Lindquist, Kelsey
Cc: [redacted]
Subject: Email to Historic Landmarks Commission re: Fourth Avenue Well Project
Date: Wednesday, May 29, 2019 1:55:13 PM
Attachments: SECTION VIEW and GRAMA Denial.pdf

Dear Kelsey, please forward this email to Commission members with the attached PDF of the SECTION VIEW and the letter from Director Briefer. I would appreciate a confirmation that this information was received and will be included in the digital packet provided to HLC members.

Thank you, Alan Walker

Dear Landmarks Commission,

My home is 200 feet from the proposed 4th Avenue pump house and I urge the Commission to delay issuance of a Certificate of Appropriateness until the design is appropriate for City Creek. The designers have used shortcuts and a proposal from an off the shelf design from elsewhere that was not appropriate. In the attached SECTION VIEW from the project web site, the well is labeled '14" DIA WELL CASING (12" DIA EXISTING)'. According to Dr. Hansen's report, the City Creek well currently has a 20-inch diameter double wall casing. The well performance (flow rate) is proportional to the cross sectional area of the casing interior of the flow path and a 14-inch casing would have a 0.99 square foot flow path while a 20-inch casing would have 2.04 square foot. This error exceeds 100% in a critical design feature.

This indicates at least two flaws:

First, the designers have taken shortcuts to rush an inappropriate design, without sufficient consideration for the unique City Creek setting. This has led to a design that is not appropriate in size and has other potential impacts due to noise and odors. Cost estimates would also be unreliable.

Second, if the designers failed to start with the correct well dimensions and well performance, how many other design flaws are buried in the proposal? One cannot know, as the public has been denied appropriate oversight because GRAMA requests are denied based upon "The Project is in preliminary design. No Record" as can be seen in the attached letter dated April 25, 2019, from Director Briefer to me. The GRAMA request denial indicates there is no record of pump vendors or alternatives considered, no water meter vendors or measurement alternatives considered, no construction schedule, or risk analysis regarding chemical bulk storage. It is not appropriate to proceed without evaluating appropriate alternatives.

If this is truly preliminary, the neighbors recommend that the Commission withhold the Certificate of Appropriateness until an appropriate and specific design that addresses worker and community safety, then reduces the impact of the size, turbine noise, and bleach odor to appropriate levels. The neighbors would like to partner with SLC Public Utilities in this effort instead of the adversarial situation created by putting on a public showing, then requiring GRAMA requests for fundamental information, and then denying the request. If this interaction is done appropriately, that could add several months. If not done appropriately, this will place a permanent monument to poor governance in this historic park. I have a meeting with Public Utilities at 11:00 am on Friday, June 7 and hope to make progress toward that.

Thank you,

Al Walker

--

Alan J. Walker
Supervising Senior Petroleum Engineer, California Department of Conservation, Division of Oil & Gas
Affiliate Scientist, Energy & Geoscience Institute (EGI), University of Utah
[redacted]

From: Craig Ogan
To: Lindquist, Kelsey
Subject: For 4th ave staff memo to HLC
Date: Friday, August 31, 2018 10:03:07 PM
Attachments: ATT00001.txt

This is a pic of the house on the North East corner of 4th avenue and Canyon road . It did not appear in your appendix. It's a million dollar property which will be very effected by the proposed installation.

From: cindy cromer
To: Lindquist, Kelsey
Subject: Fw: gatehouse from 1998 proposal
Date: Monday, April 1, 2019 7:34:47 PM
Attachments: City Creek Entry Station01.pdf

Kelsey-I pulled this drawing out of a larger proposal involving the demolition of a residence further up the Canyon. It should have been a proposal from SLCPU. The drawings were marked 40%, not for construction. I don't know if the gatehouse was ever built. c

(p.s. The neighbors do not want a water fountain or a bathroom.)

From:	cindy cromer
To:	Lindquist, Kelsey
Subject:	Fw: history of landscaped medians: Canyon Road
Date:	Monday, April 1, 2019 7:30:33 PM
Attachments:	4th Ave and Canyon Road.PDF 1913.pdf 1914.pdf 1944.pdf 1906-a.pdf 1906-b.pdf

---

Kelsey-There is some redundancy but I don't want to delete anything until I've printed all the documents and looked at them closely.

#1 2 islands as currently with instructions about installing turf (1944) The staff person named Bollwinkel is related to Lee.

#2 south end of the larger island (1913)

#3 north end of the larger island (1914)

#4 redundant with #1 (?)

#5 and #6 island between 3th and 4th Ave. (1906)

More to come, c

From: cindy cromer
To: Lindquist, Kelsey
Cc: Mills, Wayne; Leith, Carl; Oktay, Michaela
Subject: Fw: 4th Ave. well site: Potential for "green walls"
Date: Wednesday, March 20, 2019 9:18:01 PM

Rats, the message was too large. I'm deleting the pictures and will send them two at a time, which will stretch my technical skills but I think it will work. c

---

From: cindy cromer[redacted]
Sent: Wednesday, March 20, 2019 8:35 PM
To: Lindquist, Kelsey
Cc: michaela.oktay@slcgov.com; carl leith; wayne.mills@slcgov.com
Subject: 4th Ave. well site: Potential for "green walls"

Kelsey-The second proposal for the design of the 4th Ave. facility includes a "green wall." I am very familiar with the pump house in Liberty Park (images 1 and 2). The "green walls" at the current Public Safety Building (images 3 and 4) were mentioned in the last HLC meeting. I was not familiar with that application. These two locations are the only "green walls" that I know of on public buildings. Both have deciduous vines. The contrast in the images from the two locations is striking.
-The pump house in Liberty Park would not fit with the manicured look of City Creek Park. As the view from the living rooms of the surrounding houses, this one isn't going to work. And there is no question in my mind that the pump house appears bigger because of the fluffy vines. I am not criticizing the pump house, only saying that something similar won't work in City Creek Park. (I like imagining that gnome could walk out the door.)
-The skeletal tracings on the concrete wall at the Public Safety Building (image 3) are visually interesting but the wall is still huge in my opinion. The lines make the wall more interesting. If I had to live with one of the images above in the winter months, the skeletal tracings would be my choice.
-The metal frame on the south facing wall at Public Safety (image 4) is just about as monotonous in the winter as the blank wall would be. (I think the walls at Public Safety were designed to deflect attacks by terrorists.)

So my conclusion is that the two examples that we have do not offer a potential solution in City Creek. The possibility of using ivy came up at the March HLC meeting. What about using ivy? This vine is engulfing portions of the park space in Memory Grove and damaging historic features and mature trees. At the meeting, I wanted to object, "Not another tendril of the stuff." But is the specific plant really the issue? I think not.

With the continuity of building materials from 2nd Ave. north, one might assume that there would be continuity in the landscaping materials, but there isn't. While I was looking at the

scarcity of evergreens in the 2 landscaped islands, I noticed that evergreens are much more prevalent between 2nd and 3rd Aves. and along the road north of Memorial House. I have listed all of the species of evergreens occurring on the 2 islands.

I did an inventory of plant material on the two islands which are visible from the houses between 3rd Avenue and the northern connector linking the 2 sides of Canyon Road.
-The larger southern island has 2 evergreen trees, the larger one, a pine, is just north of 3rd Avenue. It dominates the view as one travels north. The smaller one, a fir, appears to have some health issues. I am going to send a report to Parks. I think it is a goner. There are some evergreen ground covers in the elliptical beds, mostly Oregon Grape which turns mahogany in the winter plus some evergreen cotoneaster and juniper. There is a shrub form of Oregon Grape in an elliptical bed and 2 red-twig dogwood shrubs on the south side of the bridge at 4th Avenue. Nothing is evergreen above eye level except the 2 trees.
-The smaller northern island has no evergreen trees. The evergreen ground covers include small amounts of vinca minor, ivy, a low growing juniper, and a bunch grass, fescue. The 2 evergreen shrubs are an Oregon Grape and a juniper.

My point is that these two islands between 3rd Avenue and the connector are predominately grey in the winter months, with few splotches of red, mahogany, or green. Installing an evergreen vine such as ivy on a "green wall" would actually attract more attention to the building during the colder months because the ivy would contrast with the surrounding subdued colors. I also believe that the frame for a vine of any kind will make the building appear even larger, and the size of the building is one of the big unresolved issues.

Please pass these comments directly to the staff in Public Utilities and to the design consultants. Apologies for the stream of conscious thought.

Sincerely, cindy cromer

From: Winston Seiler
To: Lindquist, Kelsey
Subject: Fw: 4th Avenue Well Comment
Date: Friday, April 19, 2019 9:47:03 PM
Attachments: SEILER Flow Meter Comments 20190308.pdf

Kelsey,

I hope that all is well for you and appreciate you fielding all these comments. I sent the following on March 8 and have not received a response or seen it added to the Fourth Avenue Well PU website. I also made a number of submission on 3/8 or 3/9 to the PU website and have not seen those included in the register. If they were not received, I can compose and send again.

I hope that you are well and enjoying a pleasant Easter weekend.

Winston

[redacted]

----- Forwarded Message -----
From: Winston Seiler [redacted]
To: Kelsey Lindquist <kelsey.lindquist@slcgov.com>; Craig Ogan [redacted]>; Catherine Williams [redacted] Brad Stewart <brad.stewart@slcgov.com>; michaela.oktay@slcgov.com <michaela.oktay@slcgov.com>
Sent: Friday, March 8, 2019, 1:32:37 PM MST
Subject: 4th Avenue Well Comment

Hello Kelsey,

Attached to this email is a pdf attachment for inclusion for public comment. At the HLC working session last night there was some discussion on whether the footprint can be further reduced. I understand that statement made that the flowmeter requires a length of 5 pipe diameter lengths upstream of the flowmeter and 3 pipe diameter length downstream of the flowmeter. What I am not clear on is why this needs to be accomplished inside the pumphouse.

There is a suitably long section of straight, buried pipe between the pumphouse and the water main under canyon road. Why can the flowmeter not be placed on that length of pipe and accessible by a manhole/vault/similar potentially in the street? With electrical units rearranged inside the pumphouse, my estimation would be that this would decrease the overall length of the pump room (and total pumphouse) by 10-15 feet.

Please see attached.

Thank you for your review and consideration.

Winston Seiler

[redacted]

From: cindy cromer
To: Lindquist, Kelsey
Subject: Fw: aerial photo
Date: Monday, April 1, 2019 7:38:13 PM
Attachments: No date.pdf

Kelsey-No date on this photo but the garage on the house north of the north island was built by Dee Edmunds when she owned the house. The improvements on the island appear to be post flood of 1983 by Landmark Design. Doug Dansie would probably know. c

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From:	Winston Seiler
To:	Lindquist, Kelsey; Briefer, Laura; Mullen, Holly; Stewart, Brad
Subject:	Fw: Flowmeters
Date:	Tuesday, May 14, 2019 10:07:38 PM
Attachments:	30107-01.pdf Siemens-SITRANS-MAG-Zero-up-Zero-down-PIFL-00093-0115-HR-2015-05.pdf

Hello, If you all were interested, I failed to cc you on my original reply to Blayde, please see below. I appreciate Public Utilities investigating options to reduce the footprint of the pumphouse.

Sincerely,

Winston Seiler

[redacted]

----- Forwarded Message -----
From: Winston Seiler <[redacted]
To: Blayde McIntire <blayde.mcintire@slcgov.com>; [redacted]
Sent: Tuesday, May 14, 2019, 7:47:32 AM MDT
Subject: Fw: Flowmeters

Blayde, thank you for your email.

Regarding the Siemens Magmeter, Siemens states that in this zero upstream zero downstream configuration they have certified their magmeter to 2% accuracy. The flyer also states that these sensors “stand up to direct burial” which would allow for placement downstream of the pumphouse, before the water main, allowing for straight pipe.

I have also attached a flyer for the McCrometer Ultramag. This company states 0.5% accuracy with this product which they say only requires one pipe diameter upstream of the sensor.

https://www.mccrometer.com/ultra-mag/product?id=52003823655

Is 2% accuracy sufficient for the Siemens?

Is the Ultramag suitable for this application?

Are there other sensors available that do not require the upstream/downstream straight pipe lengths?

Thank you for continuing to look into this further

Winston

[redacted]

From: cindy cromer
To: Oktay, Michaela; Mills, Wayne; Wharton, Chris; Weaver, Lehua
Cc: Lindquist, Kelsey
Subject: Fw: Fox 13 at 4th Avenue well
Date: Wednesday, April 24, 2019 11:59:16 AM

Photo from one of my tenants. Fox 13 has interviews lined up with the residents in the houses in the photos. The resident in the house on the left produced the art installation. The resident in the house on the right is a brainy geologist who has challenged SLCPU claims. I suspect that Fox 13 will go to SLCPU for any additional info and not Planning or the City Council, but just in case. c

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From: cindy cromer
To: Lindquist, Kelsey
Subject: Fw: FW: Fw: islands on Canyon Road
Date: Thursday, April 4, 2019 9:47:39 AM
Attachments: 2019 Canyon Road Park sm.pdf

Kelsey-With the dumbed down version, the text in the Master Plan is challenging to read. Please let me know if you receive this attachment. Thanks, cindy

Kelsey-Please forward this attachment and the following chronology to members of the Landmarks Commission for the meeting tomorrow. They provide the supporting documentation for my remarks planned during the citizen comment section. Thanks so much. Sincerely, cindy cromer

Chronology for the images in the attachment:
1898 Sanborn Map City Creek is above ground, accounting for the wide public right of way in the Canyon.
1911 Sanborn Map City Creek is underground.
1912 City Creek Master Plan, adopted 1986, indicates that the former stream bed became a park at the request of residents.
Photos of the 2 newly landscaped islands.
1937 Aerial views of the mature trees on the landscaped islands.
1944 Engineering and landscaping plan for the islands.

From: Stephanie Souvall
To: Lindquist, Kelsey
Subject: Fw: Proposed Chlorine Dispenser "Water Treatment Facility" Memory Grove
Date: Tuesday, May 21, 2019 3:53:32 PM

Sent from Outlook

From: Stephanie Souvall
Sent: Tuesday, May 21, 2019 9:26 AM
To: council.comments@slcgov.com; [redacted]
Subject: Proposed Chlorine Dispenser "Water Treatment Facility"

Thank you for giving this opportunity to me speak against this proposed Water Treatment -- Chlorine Dispenser Facility. I have direct, personal experience with one of these MENACES. I call it a Menace due to the fact that in every respect, it an assault on the Sensory-Nervous System.

I lived in a small Traditional Greek historic mountain village in Crete -- Tsikalaria. There, located was a Water Treatment Plant.

Upon arrival to the village, I noticed a big, incompatible (with the Traditional white washed architecture) eye-sore building that was emitting a substance into the air. I smelled an annoying permeating stench that, after days staying there, irritated my eyes, nostrils and burned my lungs when I took deep breaths.

It became stressful to be in the out of doors. I had to psychologically prepare myself to go outside, to sit outside, to walk on the mountain paths where the stench and buzzing were perceptible. Rather than enjoying nature and the beauty that it offered: The sound of the creek, the warbling of the birds, the aroma of the blossoms and flowers and the beautiful mountain scenery, I became anxious, annoyed and finally very ANGRY. It broke and still breaks my heart.

I became angry at the fact that this Industrial polluting building was located in a traditional, historic village -- my maternal grandmother's home.

The same applies with Memory Grove. The buzzing, the stench will be evident, and of course, during the months, i.e. April through October, when we spend most of our time outside to enjoy the beauty that nature offers.

I vote to overturn this proposal for, not only the reasons I have stated, but also for the following facts (as per Craig Ogan e-mail)

1. "Water is pure at the sources, been serving the community for 60 years without incident. Down stream injection has been adequate for the city needs."
2. "Above Ground Pump: Noise affects the height of the building, submersible pump is preferable for those reasons. Pump noise will be 24 7 April to Oct. annually."
3. "The 1986 Master Plan: The historic homes and quaint residential environment along

Canyon Road are unique, being so close to the CBD. Policy for this area is to preserve and enhance these homes and the low density neighborhood atmosphere. The large street trees should also be preserved."

4. John, 50 year resident statements of the residents' years of "work to bring the park and surrounding area to the Gem that is today... nothing short of an atrocity... regardless of short term costs before you do permanent damage to this wonderful area."

Upon learning of this plan, I felt and still feel those exact things: Permanent damage to a beautiful area that for me is a sanctuary. It disturbed me so greatly that I could not sleep. That was the Saturday before Mothers' Day. I was so distraught that I went to Memory Grove on Mothers' Day and spoke to each and every person I saw entering the park; narrating to them my experience with a Water Treatment Facility. At least 1/3 of these people were either from different states or different countries. Most of these people responded with "NO." And that is exactly what I said when I learned of this plan through reading the signs posted at Katherin and Winston's home.

Please do not allow this Menace to materialize. In my eyes, it will be a desecration. Please respect and honor this beautiful, unique place.

Respectfully,

Stephanie Souvall

Sent from Outlook

From: Oktay, Michaela
To: Lindquist, Kelsey
Subject: Fwd: 4th Avenue Well project
Date: Tuesday, December 4, 2018 10:30:02 AM

For you.

Begin forwarded message:

From: Ivan Weber [redacted]>
Date: December 4, 2018 at 10:23:18 AM MST
To: <michaela.oktay@slcgov.com>
Subject: 4th Avenue Well project

Dear Ms. Oktay:

Despite truly ridiculous obstacles, I managed a moment ago to send in these comments on the proposed 4th Avenue Well project. I apologize for the inherent awkwardness, which I hope we can overcome in upcoming months. From our Family's point of view, this is a horrible project. It does not improve when assessed from the City and the Regional point of view.

Best regards,
Ivan Weber & Linda C. Smith

Ivan Weber, LEED-AP
Principal/Owner
Weber Sustainability Consulting
953 1st Avenue
Salt Lake City, Utah 84103
[redacted]
[redacted]
[redacted] *through industrial ecology*

(Submitted on the incredibly awkward comments form on-line for the 4th Ave Well project)

December 4, 2018
Dear SLC Public Utilities Department, Mayor and City Council:

It's nearly impossible to dispute the need for code-compliant, health protective (including worker health, as well as public) City-aware planning and design, and neighborhood-respecting sense of Value. Of these four categories of

concerns, however, the current plan/design for the 4th Avenue well upgrade only approaches the first two, falling drastically short on the third and fourth.

Let's cut to the chase: My Wife, Linda C. Smith, has spoken up about her concerns previously, "live" at public meetings --- which appear from here to have been successfully suppressed by Public Utilities and City administrative authorities. It is through Linda that I have established a rather deep (if I say so myself) connection to this specific block of City Creek Canyon/Canyon Road:
1. Linda grew up living in the house at 211 Canyon Road, where her parents settled around the time of WWII. Her Father was Chauncey Call, and her Mother, Ardell Call. Linda, the extremely long-time Executive/Artistic Director of Repertory Dance Theatre (RDT) and her brother sold 211 Canyon Road during the past year to the civic-minded Winsness family, who live there.

2. Linda and I own 217 Canyon Road and, across the street, 218 Canyon Road, which is mostly inhabited by our Son, Evan Smith, and his family, with a rental unit in the lower floor. 217 Canyon Road consists of three rental floors divided into two units. I spent about twelve years of my life in the 1970s and 1980s remodeling these two houses to the best of my craftmanship standards, which some recognize as significant. They were the best that I could do with the funds we could muster, supported wonderfully by Linda's parents at 211. ***All of these family properties would be eclipsed by the 4th Avenue Well facilities!***

We are, and have been for time out of mind, utterly committed to the civic beauty and integrity of this block of the best that Downtown Salt Lake City has to offer. It is patently beautiful, peaceful, and calm, representing arguably the best that Salt Lake City has to offer.

To cut to the chase, may we ask ***what value*** the City attaches to this set of properties? We hold it to be in the range of multiple millions of dollars, when reduced to strictly monetary valuation, but much, much more than that when valued in URBAN value terms. All the expressions of objections to the plan that have appeared in press and City publications state facets of these values, but there is an entire category that is missing: Best Planning and Design.

Were the City Public Utilities Department to apply the very best standards and expectations possible, the entire facility would be put below street level, with rigorous ventilation and uncompromising access built to allow avoidance of tree destruction, avoidance of compromise of sight lines, avoidance of impairment of well piping functions, and avoidance of loss of functionality --- even if the well must be divided into multiple facilities and scattered beneath the streets, beneath the stairs at each transverse axis terminus (where pedestrians ascend to each 4th Avenue connection), and utterly anything else that decreases the values for which residents aspired so profoundly as they improved properties over the decades --- as we and others did facing the park

that makes up the collective front yard.

You have the opportunity to commit a terrible crime against the City and against the Regional Culture by building this over-engineered, completely insensitive facility as proposed; ALTERNATIVELY, you have the opportunity to elicit and to collect the best ideas and sensitive comments, plans and designs that the residents of this Community can produce --- and THEN consolidate, plan and design a solution to the problem. Maybe it's not a "problem" worth solving as stated; maybe the problem can be re-stated, and addressed in these more sane terms.

The one thing we can assure the City Public Utilities Department is that, if you proceed, it will be necessary for us to engage a very competent attorney in order for us to proceed alongside you.

Please be in touch. We are resolved to do all we can to help, as long as Salt Lake City does not hold the City Center and the Canyon Road Neighborhood in contempt, as it appears to be doing at present.

Ivan Weber and Linda C. Smith

Weber Sustainability Consulting / Principal-Owner (retired)
LEED-Accredited (former Founding Chair, US Green Building Council/Utah; Project Manager Kennecott "Daybreak" Development in 1990s; Construction Manager on many large regional projects)
[redacted]

From:	Craig Ogan
To:	Lindquist, Kelsey; McIntire, Blayde; Brad.Steward@slcgov.com
Subject:	Fwd: Pump House, 4h Avenue and Canyon road
Date:	Wednesday, August 15, 2018 12:44:38 PM
Attachments:	ii_jkve7gvl2_1653e91fb2cb665b ii_jkveqh8e6_1653e9f84be596aa Pumphouse

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Hi all, I'm a Citizen on Canyon Road. This e mail was sent to all the property owners on the road. Thought you like to see how I'm propagandizing the issue. See you tomorrow.

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
[redacted]

---------- Forwarded message [redacted]
Date: Wed, Aug 15, 2018 at 12:16 PM
Subject: Pump House, 4h Avenue and Canyon road
To: david@preservationutah.org

As you may be aware SL Public Utilities proposes to build a pump house on 4th Ave and Canyon Road.

The preliminary drawings are attached.

There is an Open House with SLC Planning Division at City Hall, 451 S Sate Street 4th Floor, August 16 from 5 to 7 which is open to all. Below is the post card you should have received. This will be the neighborhoods first opportunity to effect design, size and other executions.

The neighbors plan a get together in the near future to discuss the steps we need to take to have further meaningful influence on the construction, design and mitigation of impacts.

To help us to know we have the right address to keep you in the loop for meetings, will you please reply to this email. That way we'll know this email got to you and through your spam filter.

Thanks.

Open House on August 16, 2018 at 5:00 to 7:00 p.m.
City & County Building
451 S State Street, 4th Floor Hallway
Salt Lake City, Utah 84111

4th Avenue Pump House at approximately 300 N Canyon Road - Salt Lake City Public Utilities is proposing to construct a new pump house on the property listed above. The pump house is necessary to continue to provide drinking water to the community and protect the well that is on the site. The pump house will contain equipment necessary to operate the well and required chemicals to treat the water. The subject property is located in the OS (Open Space) zoning district and is located in Council District 3, represented by Chris Warton. (Staff Contact - Kelsey Lindquist at 801-535-7930 or kelsey.lindquist@slcgov.com) **Case Numbers PLNHLC2018-00557**

Salt Lake City Corporation complies with all ADA guidelines. People with disabilities may make requests for reasonable accommodations no later than 48 hours in advance in order to attend this meeting. Accommodations may include: alternative formats, interpreters, and other auxiliary aids. This is an accessible facility.

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
[redacted]

From: [redacted]
To: Lindquist, Kelsey
Subject: Heart Attack, We survived, thrived
Date: Sunday, February 17, 2019 12:39:46 PM
Attachments: ii_js9b59cv5
ii_js9b59bf4
ii_js9b599d3

You missed a good party, I have a cookie for you if you want one.

We had a great day February 16 at the the Proposed Water Treatment Plant site. Lisa's cookies and warming libations were fantastic--thanks you Lisa and James for all you did to make the event fun and hospitable.

A Photo Gallery and Video are posted on Facebook
at: www.facebook.com/MemoryGroveSLC/

Mark your calendars for March 7 at city hall. SLC Public Utilities will be briefing the Historic Landmarks Commission on progress on the Water Treatment Plant.. Meeting is at 5:30 PM, Documents on the meeting will be as sent soon as they are released.

Thanks for your support.

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
[redacted]

North Island - Sept. 16 1912 - Shipler Commercial Photographers Collection

To: Historic Landmark Commission
From: James Livingston (Canyon Rd resident)
Date: 28 May 2019
Re: Design Expectations

First, I wish to recognize the skill of the architect. The proposal conforms well with the design *expectations* that are understood by the architect. It is the design *expectations* about which I will comment. I wish to present an alternative view regarding the interpretation of the City's published historic district design guidelines.

I have heard repeated in at Historic Landmark Commission meetings and at Public Utility open houses that a building should not be constructed in a historic district that looks faux historic. I reviewed the City's guidelines for historic districts and found what might be the source of this sentiment:

> "While it is important that new development reinforce the basic character-defining features in an area, it is not necessary that it replicate or echo historic architectural styles. Stylistic distinctions between new buildings and historic buildings are preferred, when the design of the new building is sensitive and complementary to the context…At the same time, they respect the patterns and characteristics of the historic districts."

Discussion of this topic follows, including:

> "An interpretation of a historic style may be considered if it is *subtly* distinguishable as being new." (emphasis added)

In discussion with park neighbors and visitors, the previous statement describes what the community wants – an interpretation of a historic style that is subtly distinguishable as being new. The proposed design is distinctly contemporary and lacks any relation to the historic character of the neighborhood. There is a large distance between "subtly distinguishable as being new" and "contemporary" and the guidelines leave plenty of leeway for a design that is more subtly new than obviously contemporary.

As noted, I appreciate the quality of the proposed design. However, in my view and in the opinion of my neighbors and other visitors to the park with which I have discussed the proposal, it just doesn't fit in the neighborhood. In a previous session, I witnessed this Commission require the removal of a retaining wall on South Temple because it was more appropriate for Park City. That is how I feel about this design; it is more appropriate for Park City, and not the quaint, historic district.

I respectfully request that the Commission not issue a certificate of appropriateness, and if the Commission sees fit, and as noted on the Commission's website, "convene an Architectural Subcommittee to work with the applicant to achieve a [more] sensitive design solution" that fits within this historic district, and not Park City.

Thank you for representing us. We only have one chance to get this right.

From: cindy cromer
To: Lindquist, Kelsey
Cc: Oktay, Michaela; Mills, Wayne
Subject: inventory of building materials in City Creek
Date: Sunday, March 17, 2019 6:04:44 PM

Kelsey-I am going to lay out the argument logically even though you know where I'm headed and the bases for my argument. It is very clear that members of the Landmark Commission do not have an appreciation of this park space and that Public Utilities has never been concerned about how the proposed site fits into the historic landscape.

From Chapter 21A.34.020 *LOCAL HISTORIC DISTRICT: A geographically or thematically definable area within the H Historic Preservation Overlay District designated by the City Council pursuant to the provisions of this section, which contains buildings, structures, sites, objects, landscape features, archaeological sites and works of art, or a combination thereof, that contributes to the historic preservation goals of Salt Lake City.*

City Creek Park which begins at State Street and 2nd Ave. is a segment of a linear park space extending from the area identified as City Creek Park through Memory Grove and further up the Canyon. I am including the linear park space from 2nd Ave. to the end of the Freedom Trail in the written and photographic inventory. I contend that this linear park space is geographically and thematically defined by topography, historical uses, and references to culture and materials. The park spaces are owned by Salt Lake City Public Utilities or by Salt Lake City Corporation. The residential structures are all owned privately. There is no overlap, making the park spaces clearly a separate part of the historic district as an historic landscape, with features dating from the late 19th century and memorials to events which span from the mid-19th century to more recent conflict in the Middle East. There can be no question that the proposed site qualifies under the definition of a local historic district in the zoning ordinance.

The conceptual error, which keeps getting repeated over the past 9 months, is that introducing something which resembles a residence in some way is compatible with the historic landscape of the park. More specifically, that the use of brick as an exterior building material would contribute to the compatibility of the structure. I am sending an inventory of the materials used in the park spaces starting at 2nd Avenue separately. Overwhelmingly, the materials are concrete and stone. I eventually found some bricks used in the details on Memorial House. They are not treated to look like individual bricks but painted to create a continuous line. They could not possibly be original to the structure which dates from the 1890's.

In summary, the park spaces are unquestionably part of the historic district. The materials used in these spaces have a clear thematic identity and the cultural associations with the park spaces are documented within the spaces. The residences adjacent to the park spaces are not part of that identity and have their own stories to tell, separate from the park spaces.

The most incompatible structure that Public Utilities could build is one which does not recognize the thematic use of materials in the existing park space. To modify a phrase, the proposed structure is not a product of its own space, which is clearly defined by public investments which have occurred over more than 100 years.

There are some caveats at the beginning of the inventory in the attachment. The photographs are in a separate disc. The materials for the proposed structure have to be ones which dominate the inventory. Otherwise, the building cannot possibly fit into the historic context of the park space. It has to be a product of its own space. I will deal with "product of its own time" if I can make some

progress on the issue of appropriate materials.

Sincerely,

cindy cromer

(Slide 1): We, the residents of Memory Grove, believe that the proposed pump house design is not compatible with the historic character of the surrounding neighborhood. We believe the building's materials and forms are distractingly modern and give the public a false impression of the buildings' purpose as a functioning pump house.

(Slide 2): Though we understand that there could be stylistic distinctions between new and old buildings, we believe the pump house design is not a creative solution bridging the gap between contemporary and traditional forms. None of the early 20th century architectural elements that define the Canyon Road-Memory Grove area are reflected in the facade of the building.

(Slide 3): Because the new pump house will encroach on open green space in the park, we believe it should be as small as possible and maintain a low profile among the few remaining trees left in the park. Unfortunately, the pump house's pattern of contrasting light and dark colors, along with smooth and rough surfaces, create an attention-getting effect that is more desirable of a retail store on a commercial property than a city park. The overly modern pump house design is inappropriate given its location and gives no clues as to its purpose. Nowhere on neighboring structures do you find rock filled gabion cages, steel marquees, or fenestration patterns found in the proposed pump house design. These materials and design elements do not reinforce or compliment the surrounding area, and consequently draw unneeded attention to a structure we believe should be small and discrete.

(Slide 4): Historically, pump houses expressed their utility through basic massing and a limited number of materials. They often incorporated a row of tall narrow windows that wrapped around a simple brick or stone facade. Any ornamentation was expressed through arched windows and doors and subtle brick or stone patterning. The current pump house design completely ignores these character-defining features.

(Slide 5): We believe that a new structure erected at the mouth of a historic neighborhood should reference design elements from existing buildings that reflect the historical context of the neighborhood. The architectural materials and motifs of the historic landmark, Ottinger Hall, would be a logical structure to emulate as it is the closest non-residential building to the well site, and represents the areas charm and history. We believe it is possible to create a small simple pump house that combines contemporary forms together with more historic architectural elements.

(Slide 6): We, the residents of Memory Grove feel a responsibility to the people of Salt Lake and its visitors to protect the legacy and vital green space of Memory Grove. We hope you, the Historic Landmarks Commission, will recommend changes to the currently proposed pump house consistent with the historic nature of the Memory Grove-City Creek neighborhood.

Evan Smith
218 Canyon Road

May 29, 2019

Salt Lake Historic Landmarks Commission
C/O Kelsie Lindquist
Salt Lake City Office
Room 326

RE: 4th Avenue Pump House proposed New Construction
Approximately 300 North Canyon Road
Located in the Historic Canyon Side Road Park

Dear Landmarks Commission:

Thank you for hearing us – it is appreciated. Our home has only had three owners and we have owned it since 1987. We live directly across from Ottinger Hall (Exhibit A – circa 1902) My husband, having grown up in the old forests of upstate New York, was drawn to the area because of City Creek Canyon and the surrounding greenspace of the area. As an active duty special forces soldier, he has a reverence for Memory Grove. The historic nature of the home, Ottinger Hall outside our front window, and the neighborhood are reminiscent of Boston and the Northeast.

The affected park, known as Side Canyon Park, is even older than Memory Grove. Attached as Exhibit "B" is a photo of the home at the North End of the Side Canyon Park, when the creek was still above ground - circa 1890's. In 1908, after the creek has been diverted into a culvert, Side Canyon Park was created (Exhibit "C"). Today, the park is used by the neighbors who surround the park, as we all have little yard space. There are children who play tag, Frisbee and bad mitten, and parents who have picnic dinners in the park. If the Water Department is allowed to continue with its plan, by 2020 nearly one-third of the park is slated to be lost to a 56' X 16' building and the 26' X 12' drive.

The Water Department's drawing shows that the building should only be small pie shaped building in the center of the park if they are held to the same 30' set backs they should honor (Exhibit "D"). But mostly, we ask you to help us maintain the open space of Side Canyon Park and honor the area's heritage by keeping the well in its current under ground vault. The city will still have the water it needs, as it has been used since 1943, and as the Water Department's own report shows, they can obtain 70 to 100 years of additional use by simply re-sleeving the well and at a nearly $2.5M savings.

Further, we do not think it appropriate for this "pump-house" to contain a 450 hp above-ground pump, with a chlorine room, and chlorine containment tank (note: the size of the chlorine tank has been omitted in the published plans). The neighborhood has engineered an alternative design, which as of today, the Water Department has been unwilling to hear or consider. We therefore ask you to turn down the plan so the city's general population can maintain this piece of history and maintain this park's peace.

Vickey Walker
238 N Canyon Road
Salt Lake City, UT 84103
[redacted]

Exhibit ''A''

Exhibit ''B''

Exhibit ''C''

Citizen Comment re: 4th Avenue Pump House Project

Cecile Paskett, Ph.D.

My comment relates to Salt Lake Public Utilities' plans for the 4th Avenue/Canyon Road pump house and the park block it sits on. The surrounding median blocks are historic structures (built in 1909) and help cement the 'walkability' of the area. Why isn't the public utilities office pursuing better design alternatives?

Many proposed facility components, such as industrial metal doors, concrete masonry, and "green walls" don't fit the residential area or are difficult to maintain. The project plans should take better cues from the existing park, like the cobble-and-stucco bridges and scale of block installations.

We also need to better discuss this project because we've previously debated whether the facility fits with surrounding historic homes (depicted in **items 1, 2, 3a,** and **3b**), but haven't touched on how the park blocks are themselves historic. They were erected as landscaped green spaces without large facilities, as seen in **items 4** and **5**. This hasn't been addressed meaningfully yet.

Further, thoughtful planning is warranted because the Canyon Road park blocks are examples of city features that have been a priority for decades. I recently completed my dissertation about the Gateway district redevelopment newspaper coverage between 1996 to 2001. From this research, I have two observations applicable to this project:

1. Since at least the mid-1990s, residents and planners have been excited about bringing City Creek above ground. In fact, the 1998 Gateway redevelopment master plan documents depicted the precise block we're debating as an example of how to execute this beautifully (see **item 6**).
2. During this time period, people were enthused about installing park blocks in the Gateway district, which were eventually built along 500 West (see **items 7** and **8**). However, that area still struggles today.

How much, then, should the city disrupt Canyon Road, which has downtown's most successful median parks?

I know this is one of many city projects, there are valid concerns about the current well, and that I'm commenting because I live on Canyon Road. But these park blocks are historic and host steady traffic: people walking dogs, jogging, and taking wedding and quinceañera photos. It has a long history and is enjoyed by many city residents, not just those who live there. This project *needs* to be done correctly.

ITEM 1: 232 N. Canyon Rd. and City Creek

Photograph showing City Creek flooding at 232 N. Canyon Road.
(05 June 1909)

Creator: Shipler Commercial Photographers
Image courtesy of Utah Department of Heritage & Arts / Mountain West Digital Library
Available at: https://collections.lib.utah.edu/ark:/87278/s6j691qs

ITEM 2: 4th Avenue & Canyon Road

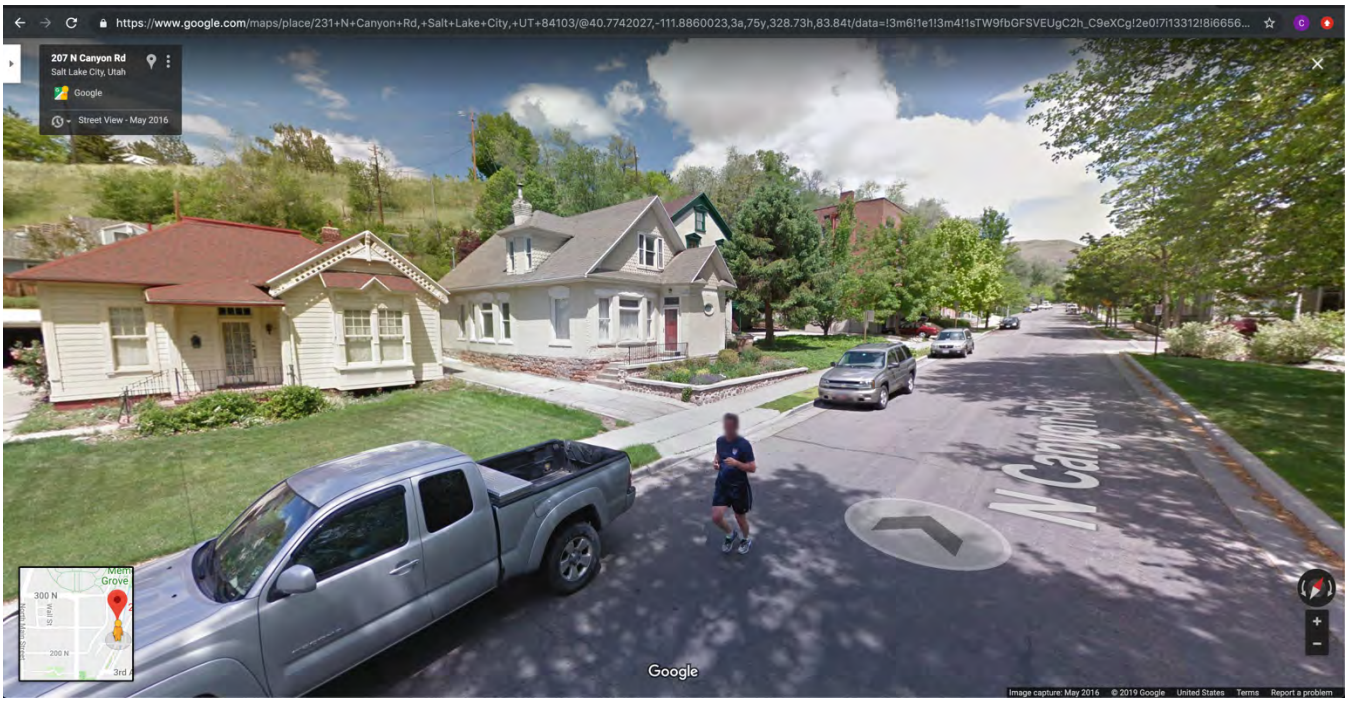
Intersection of 4th Avenue and Canyon Road (looking east-southeast) – the homes in the northeast corner of the intersection are still standing, and are typical of those that surround the park block today (approx. 1910)

Collection: Utah State Historical Society Classified Photo Collection
Image courtesy of Utah Department of Heritage & Arts / Mountain West Digital Library
Available at: https://collections.lib.utah.edu/ark:/87278/s6v13pnj

ITEMS 3a/3b: Houses and Buildings West of Memory Grove/Canyon Road Park Block

a)

b)



Buildings located immediately west-northwest of Memory Grove/Canyon Road park block (items a & b) (item 3a: 1925 / item 3b: 2016)

Collection: Utah State Historical Society Classified Photo Collection (item 3a)
Image courtesy of Utah Department of Heritage & Arts / Mountain West Digital Library (item 3a)
Image from Google Maps (item 3b)
Item 3a available at: https://collections.lib.utah.edu/ark:/87278/s6z33ghw

ITEM 4: Memory Grove/Canyon Road Park Block

View of Memory Grove/Canyon Road park block looking north/northeast (232 N. Canyon Road is first house on the left) – block was originally conceived as an open green space
(16 September 1916)

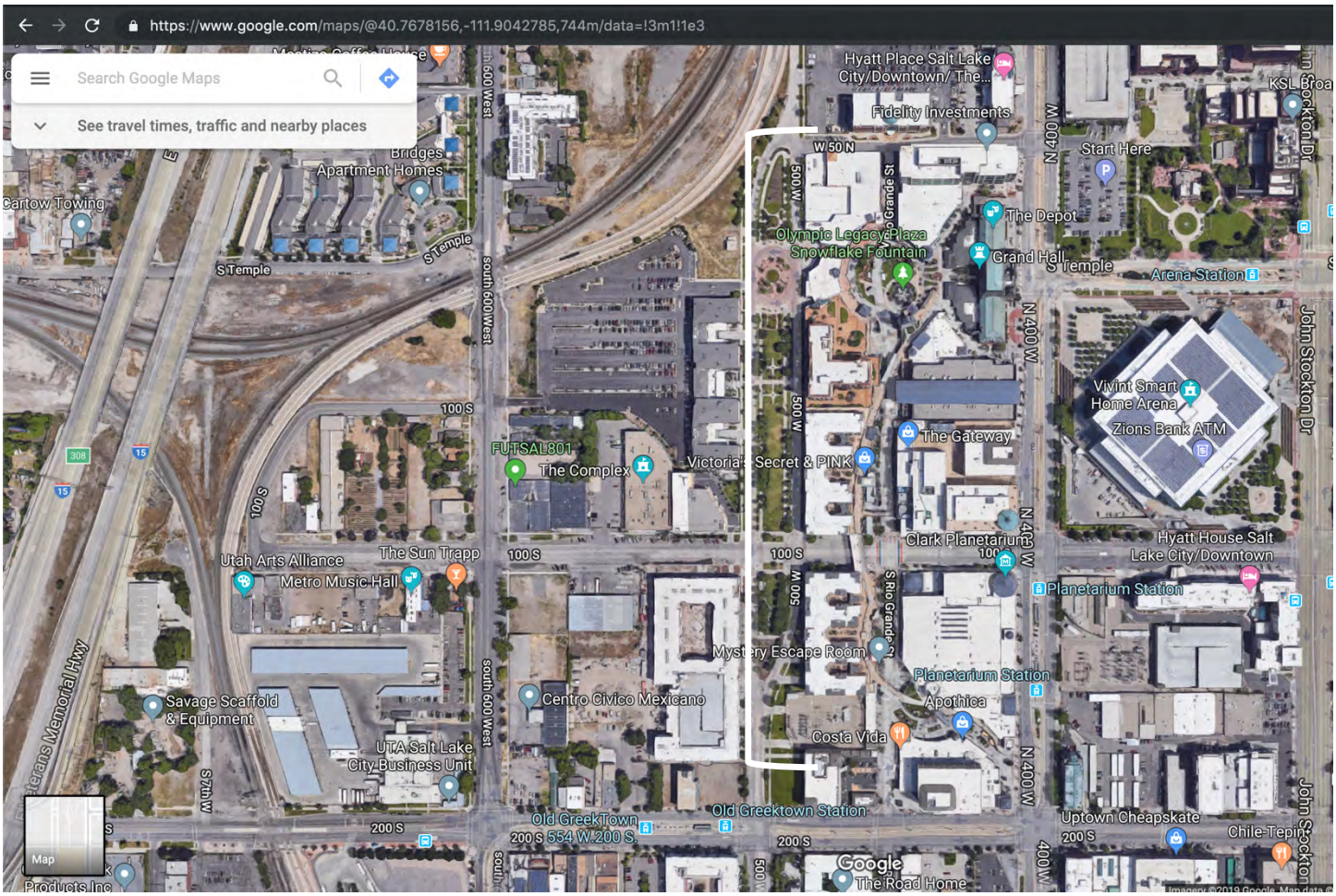
Creator: Shipler Commercial Photographers
Image courtesy of Utah Department of Heritage & Arts / Mountain West Digital Library
Available at: https://collections.lib.utah.edu/ark:/87278/s6fr1fd8

ITEM 5: 4th Avenue & Canyon Road (Park Block)

Intersection of 4th Avenue and Canyon Road from approx. 4th Avenue & Canyon Side Road (looking east/northeast) – arrow points to south end of Memory Grove/Canyon Road park block, which demonstrates how the original design did not include large facilities or structures
(7 April 1913)

Collection: Utah State Historical Society Classified Photo Collection
Image courtesy of Utah Department of Heritage & Arts / Mountain West Digital Library
Available at: https://collections.lib.utah.edu/ark:/87278/s6nz9sft

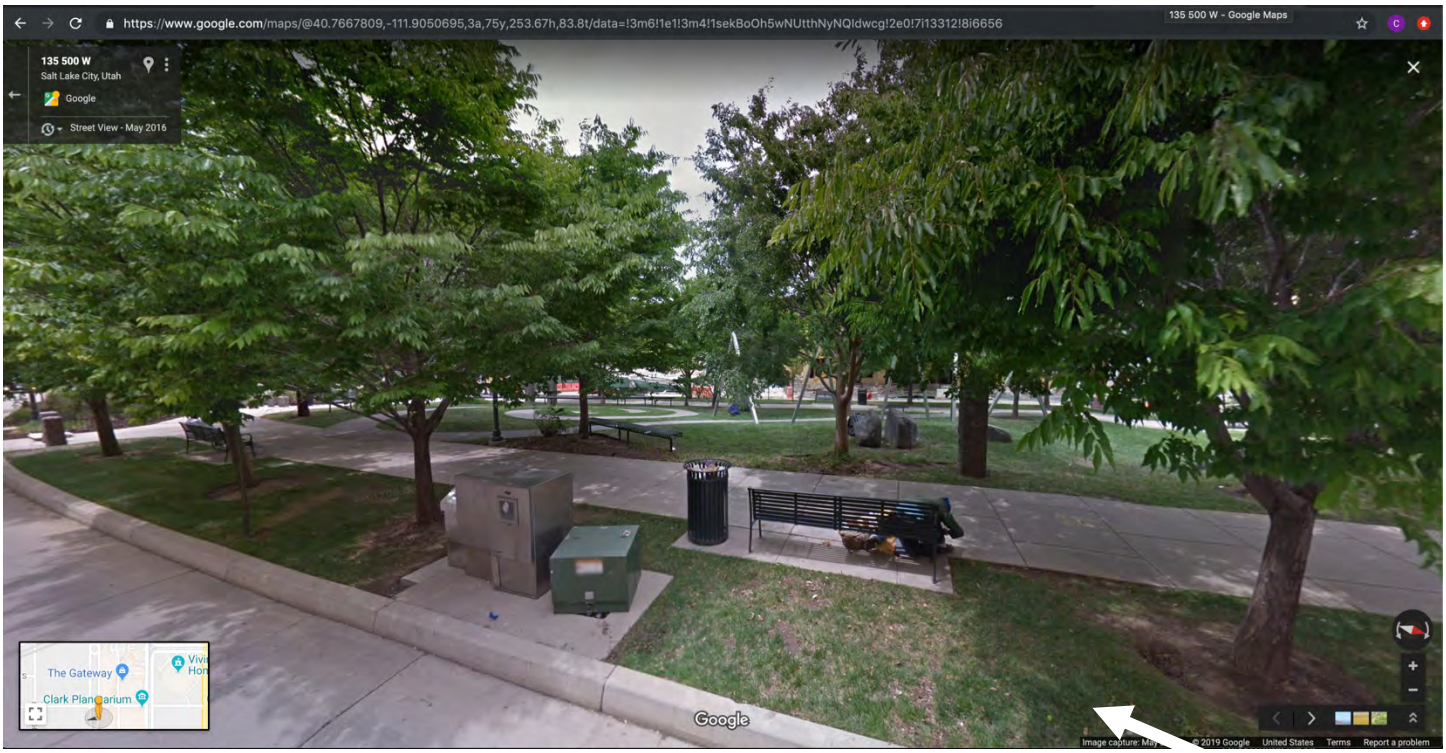
ITEM 7: Park Blocks West of The Gateway Mall (Google Maps)



500 West park blocks (indicated by white bracket)

Image from Google Maps

ITEM 8: Park Blocks West of The Gateway Mall (Google Street View)



Park block at approx. 135 S. 500 W. (view looking west)
(2016)

Image from Google Maps

Cecile G. Paskett, Ph.D.

Instructional Designer, Instructor, and Researcher

[redacted]

EDUCATION

Ph.D. Communication (University of Utah) **2018**
Dissertation: *Collective Memory, Collective Imagination, Place-Making, and the Discursive (Re)Construction of the Gateway District*

M.A. Communication (University of Utah) **2010**

B.A. Honours Latin American and Caribbean Studies (McGill University) **2004**

PROFESSIONAL EXPERIENCE

Senior Instructional Designer (University of Utah) **July 2018–Present**

Adjunct & Community Instructor **August 2014–Present**

Instructional Designer (University of Utah) **November 2014–June 2018**

Graduate Teaching Fellow (University of Utah) **August 2008–August 2014**

Technical Writer (Envision Engineering) **January 2006–January 2010**

RESEARCH AREAS

- Critical/Cultural Studies
- Media Theory
- Visual Communication
- Interdisciplinary Urban Studies (primary foci: urban redevelopment, spatiality, and surveillance)

SELECT CONFERENCE PRESENTATIONS, PUBLICATIONS, & MEDIA COVERAGE

OLC Accelerate 2018 **November 2018**
Workshop Presentation: *Not Just Busy Work: Creative Uses of Course Development Documents*

Warchol, G. (2011). Capturing–and fracturing–urban stereotypes. *The Salt Lake Tribune*. Available at: http://archive.sltrib.com/article.php?id=53060348&itype=cmsid

National Communication Association 96th Annual Convention **November 2010**
Presentation: *Google Latitude and Performance Space: Paranoia and Schizophrenia within Lateral Surveillance*

Hawaii International Conference of Arts and Humanities **January 2010**
Presentation: *Surveillance, Spatiality, and Pioneer Park: Crises within the Modern City*

Whitton, D. & Paskett, C.G. (2008). Mixed-use: Risk or reward? *Intermountain Contractor*, May Issue.

From: [redacted]
To: Lindquist, Kelsey
Subject: Meeting at the Water Treatment Plant Site, 12-18-2018
Date: Thursday, December 20, 2018 12:42:24 PM
Attachments: ii_jpwxst9q1
ii_jpwvqmli0

Thanks to council member Chris Wharton for facilitating a meeting at the proposed Water Treatment Plant site at 4th Ave and Canyon Road.

Salt Lake City Council Member Chris Wharton at 4th Ave & Canyon Rd Water Treatment Plant

He brought two council staff people who were very engaged in the meeting and invited Holley Mullen, Community and Engagement Manager for SLC Public Utilities, who attended and contributed greatly.

Neighbors, lead by Winston Selier, staked and taped the construction footprint before the meeting. You can still see the outline if you act fast.

Key Takeaways:

- Both Legislative and Executive Branch saw the human cost of the proposal
- The Legislative branch was engaged and had very smart staff people on hand to follow up
- The Executive Branch responded well and will take our concerns back to planners and engineers. It was inferred they are already looking at other alternatives to the well site and/or chemical injection

Next Mile Stones:

- SLC Public works on GACC Community Council Meeting Agenda for update, January 9, 2019
- SLC Historic Landmarks working session, February 7, 2019 to review revised designs (may be postponed pending SLC PU alternatives study)

Progress to downsize the treatment plant and save the trees is being made.

Remember the City Council doesn't have power of the purse on this decision, we need to let the Mayor and executive branch know of our concerns.

Our new mantra: **Just Fix the Well and Forget the Rest**.

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
[redacted]

powered by GSM. Free mail merge and email marketing software for Gmail.

Alan J. Walker
238 North Canyon Road
Salt Lake City, Utah 84103

February 27, 2019

Dear Mayor Biskupski,

I am writing at the urging of many Memory Grove residents that are concerned about the proposed water well upgrade at 197 North Canyon Road in Canyon Side Park. This project is approximately 150 feet from my home which I bought in 1986. The well is encased in a concrete cellar and several utility boxes are nearby. The current facilities are unobtrusive, and we understand they should be modernized; secure; and safe, but the proposed upgrade adds functions such as chlorination; storage; measurement; power control; and access that are currently not undertaken in this residential and recreational area.

I appreciate the opportunity to again comment on the proposed City Creek well project. I am a mechanical and petroleum engineer with 38 years of practice in the energy industry. I have a B.S. in Engineering from West Point, an MBA from Rensselaer Polytechnic Institute (RPI), and an M.S. in Petroleum Engineering from the University of Utah. Currently, I am a Supervising Engineer for the California Department of Conservation, Division of Oil and Gas and in the last three years I have worked on three hydrocarbon well blowouts in California and overseen the rehabilitation of over 400 underground natural gas storage (UGS) wells. I am an authority on oil and gas well construction and mechanical integrity, which includes complex hydraulics, materials and equipment, and ground water (USDW) protection.

On December 16, 2018, I made an inquiry about the use of an electrical submersible pump (ESP) on the "Comments" site. The response by the City was rote and evasive. The answers moderately addressed the footprint and aesthetics and was supposed to appease the commenters by stating they had hired two architect. That is great for design, but architects generally are not subject matter experts on ground water, hydraulics, pump selection, and other mechanical systems. The answer completely avoided a response as to why an ESP was not considered. That question still deserves an appropriate response.

The proposed building is 45 feet in length, which is longer than most homes in the neighborhood and we would urge Planning and Zoning to take that under consideration. The building is an industrial building in both scope and purpose that has been plucked down in a residential neighborhood. The building will house large amounts of chlorine and handling equipment which according to city professionals is needed to treat the large amount of water the well produces. The current well's water is not chlorinated until it blends with other chlorinated water downstream. It is presumed there will be no ill-affects with chlorination, but in large quantities or with a system failure chlorine can pose health-safety issues. We live and play in this Canyon; we raise our families in this Canyon, and this is a facility better suited to where there are no homes. Health-safety issue are reasons cities have zoning requirements and this type of building use would NEVER receive a permit if a user or

developer posed putting this facility in the middle of a historic neighborhood. There are also serious concerns about property devaluations due to having such a facility in the neighborhood.

There are numerous other sites up the Canyon that would be suitable and would not infringe on the neighborhood. City Creek Canyon is a linear watershed fed by meteoric precipitation and the aquifer is continuous up the canyon. There is a suitable site available just past the access to the City Creek Gate. The suggested site previously housed the City Creek caretaker's home and by choosing this site, needed worker safety would be satisfied with a specific build and could easily accommodate a structure larger than the size of the proposed facility. The lot is flat and no trees would need to be removed. It is adjacent to the water system infrastructure, and the city owns the land.

Nowhere on the website has the cost of the project been disclosed. What is the estimated cost of this project? Please do not say, "Cost does not matter" as there are always safe alternatives that are also cost effective. Additionally, my review of the plans posted on Feb 21, is that the project appears to be **over-engineered**. What alternatives were considered and dismissed and why? These things should be disclosed to the public. After reviewing your plans, it appears your structure's footprint could be reduced by 30% based on the following:

a) Inside the structure there appears to be an 8 to 10-foot pipe section after the check valve and before the flow meter which does not purport any use; and

b) Another 5 to 7-foot section after the flow meter and before the butterfly valve does not have a purported use.

If these sections were eliminated or reduced, the structure could be 30 percent shorter. From the limited information available, this appears to be someone's over-engineered "gold-plated" pet-project, and one that should be reevaluated by a third party or dismissed. The neighborhood should not be expected to endure this impact without a full evaluation of alternatives.

Respectfully,

Alan J. Walker

From: Michael Stewart
To: Lindquist, Kelsey
Subject: Memory Grove water station
Date: Monday, May 27, 2019 8:27:32 AM

Please do not chop down trees and put up an unsightly chemical water treatment plant at the proposed site.
Thank you

Sent from my iPhone

From:	cindy cromer
To:	Lindquist, Kelsey
Cc:	McIntire, Blayde; Stewart, Brad; Bollwinkel, Lee; Baker, Troy
Subject:	mitigation for the Pump House in City Creek
Date:	Saturday, August 25, 2018 8:42:17 PM

To members of the Historic Landmark Commission
From Cindy Cromer
Re briefing on the Pump House proposed for City Creek Park

The Park is owned by Salt Lake City Public Utilities and maintained by Salt Lake City Parks, from what I have been able to learn. That is exactly the situation for **Reservoir Park in the University Historic District**, which makes the rehabilitation of the space formerly containing the reservoir very relevant to the current proposal in City Creek Park.

The project in Reservoir Park began in 2009 when the "lid" on the reservoir collapsed and concluded in 2012. Prior to the collapse of the "lid," the space was not safe for any recreational use, although there had been tennis courts above the reservoir until the mid-'90's. Here's what Salt Lake Public Utilities did during the course of the project, none of which was required to create a safer space.
-returned the space within the boundaries of the reservoir to recreational use,
-significantly increased the green space in the Park,
-installed a seating area where there hadn't been one previously,
-constructed public sidewalks where none had existed,
-cleaned and treated the historic concrete wall,
-replaced the historic lamp fixtures on top of the wall,
-installed xeric landscaping at the intersection, and
-planted Hawthorne trees consistent with the perimeter planting in the northern end of the Park.

So far, the discussion about the proposed Pump House in City Creek has not included any conversation about enhancements to the Park or mitigation for the loss of trees, viewshed, and green space.

I am requesting at a minimum that the City
-estimate the value of the individual trees proposed for removal,
-place a separate value on the disruption of the formal line of mature Sycamores on the west side of Canyon Road,
-identify equal or greater green space to mitigate the loss of access to the current well site,
-mitigate the impacts on the viewshed in this park design characteristic of Frederick Law Olmsted's work.

The modifications necessary in Reservoir Park were not associated with the management of

water. Dealing with the collapsed reservoir provided no economic benefit to Public Utilities as an enterprise fund. There will clearly be long term benefits in managing water for the proposal in City Creek. The contrast is striking.

From:	cindy cromer
To:	McIntire, Blayde
Cc:	Stewart, Brad; Bollwinkel, Lee; Baker, Troy; Lindquist, Kelsey
Subject:	Open House for Pump House-City Creek Park
Date:	Saturday, August 25, 2018 6:51:55 PM

Blayde-Thanks for your attendance at the Open House for the Pump House in City Creek Park on August 16. I want to summarize our conversation as I remember it over the "din" of the lousy acoustics in the hallway.

1 I am not convinced by the technical information provided so far that the needed functions cannot be **housed in two separate, smaller buildings.** There is no question that the construction of two smaller buildings would be more expensive. There is also no question that smaller buildings in the tight quarters of the Canyon would have less impact.

2 I do not understand based on the information provided so far **why all of the needs have to be met in the current well site** at the intersection of Canyon Road and 4th Avenue. At the Open House, I heard about a previous discussion which involved locating a Public Utilities facility just north of Ottinger Hall in what is currently "dead" space. Even the kids at Youth City do not use this slope. The City owns extensive property in the area on both sides of the Canyon which is underutilized because of its location and slope. The entrance to the Canyon between 2nd and 3rd Avenues is much less tightly constrained than the area around 4th Avenue.

3 The City has **established appropriate materials for the Park** with the extensive use of cobbles in the retaining walls. The surrounding historic residences and Ottinger Hall are made of brick, wood, and stucco over adobe. Those materials appear to me to give Public Utilities plenty of options for new construction.

4 The City's Parks and Open Lands designed a **pump house for irrigation water recently in Liberty Park**. It is immediately south of the Concessions Building and was approved by the Landmarks Commission. Nothing about this successful design shows up in the proposal for City Creek....no trellises, no vines, no arbor linking the pump house to another building, no human-scale fenestration....nothing. It is as if the successful project in Liberty Park is irrelevant. I understand that Public Utilities and Parks have different processes for awarding contracts, but the outcome is highly inefficient. There is a good example on the ground. Granted it is for irrigation water, not drinking water, but it is a pump house, approved by Landmarks, and functioning as intended.

5 At the Open House, we talked about **the expanse of asphalt in the proposal.** The neighborhood has restricted residential parking because of its proximity to Downtown. Public Utilities can have cut-back parking without providing a pad for turning around. The restrictions on parking are followed in this part of the City. It should even be possible to

design a parking pad within a secure enclosure with far less asphalt than the proposed site plan. This is a park space in an urban environment, not the suburbs.

Again, thanks for the opportunity to talk with you at the Open House.

Sincerely, cindy cromer

(This is a public comment.)

From:	Winston Seiler
To:	Lindquist, Kelsey
Cc:	Catherine Williams
Subject:	PLNHLC2018-00557 & PLNHLC2018-00558
Date:	Wednesday, August 8, 2018 4:43:58 PM

Hello Kelsey,

I am writing regarding the proposed new construction of the pump house on Canyon Rd.

We live at 211 Canyon Rd, almost directly across from the proposed construction.

A few questions come immediately to mind:
1. Could you please provide details and specifications of the current pump and facilities
2. Could you please provide details and specifications for the envisioned pump facilities and chemicals
3. Could you please provide the list of considered alternatives, and details on the selected alternative?
4. Is an underground pump house as currently in place an alternative under consideration?
5. Will any new pump house be held to the same historic aesthetic that our home is held to? Are there plans that could be provided?
6. What are the noise levels of above ground pump house?
7. How will chemicals be delivered to the pump house?
8. Will activities at a new pump house be significantly greater than at the current facility?

I will try to attend the meetings this month, but may be unable to due to upcoming birth of a child.

Thank you for taking the time to provide information on the questions above?

Sincerely,

Winston Seiler
211 Canyon Rd.
Salt Lake City, UT 84103

[redacted]

OPEN HOUSE
PUBLIC COMMENT FORM
December 13, 2018

Planning Division
Department of Community and Neighborhoods

4th Avenue Pump House
Petition Numbers:
PLNHLC2018-00557 & PLNHLC2018-00558

Name: Cindy Cromer

Address: [redacted]

Zip Code 84102

Phone: [redacted] E-mail [redacted]

Comments: (1) Less bad than the previous proposal.

(2) The building is too long in a tight space.

(3) The structure disrupts the historic landscape.

(4) We still do not have information on alternatives, costs, or engineering. The message continues to be "This is what we're going to do and this is where we're going to do it."

(5) The trees and blocking the light are the unsolved issues.

Please provide your contact information so we can notify you of other meetings or hearings on this issue. You may submit this sheet before the end of the Open House, or you can provide your comments via e-mail at kelsey.lindquist@slcgov.com or via mail at the following address: Kelsey Lindquist, Salt Lake City Planning Division, PO Box 145480, Salt Lake City, UT 84114-5480.

OPEN HOUSE
PUBLIC COMMENT FORM
December 13, 2018

Planning Division
Department of Community and Neighborhoods

4th Avenue Pump House
Petition Numbers:
PLNHLC2018-00557 & PLNHLC2018-00558

Name: Brian Bertelbach

Address: [redacted]

SLC, UT Zip Code 84103

Phone: [redacted] E-mail [redacted]

Comments: I served as Chair this past year for the GACC. Just wanted to thank you for pumping the breaks on this project, and working with our community on such an important project. I think we are definitely moving in the right direction, and feel the new renderings are a drastic improvement over what was first presented to us.

Please provide your contact information so we can notify you of other meetings or hearings on this issue. You may submit this sheet before the end of the Open House, or you can provide your comments via e-mail at kelsey.lindquist@slcgov.com or via mail at the following address: Kelsey Lindquist, Salt Lake City Planning Division, PO Box 145480, Salt Lake City, UT 84114-5480.

We look forward to further enhancements to the project. Please continue to plug into our GACC meetings to get our neighbors' thoughts.

OPEN HOUSE
PUBLIC COMMENT FORM
December 13, 2018

Planning Division
Department of Community and Neighborhoods

4th Avenue Pump House
Petition Numbers:
PLNHLC2018-00557 & PLNHLC2018-00558

Name: Les. Alderman

Address: [redacted]

Zip Code 84103

Phone: [redacted] E-mail [redacted]

Comments: I'm impressed with the progress made for the pump house, however, even with the ivy, the building still looks a tad too industrial for the area.... maybe some river rock or ~~[redacted]~~ sandstone bricks? I hate seeing any trees removed, but am impressed that there is consideration in preserving some of them. All in all ... a step in the right direction.

Please provide your contact information so we can notify you of other meetings or hearings on this issue. You may submit this sheet before the end of the Open House, or you can provide your comments via e-mail at kelsey.lindquist@slcgov.com or via mail at the following address: Kelsey Lindquist, Salt Lake City Planning Division, PO Box 145480, Salt Lake City, UT 84114-5480.

Also - is the Chlorine storage in a residential area a good idea?

OPEN HOUSE
PUBLIC COMMENT FORM
December 13, 2018

Planning Division
Department of Community and Neighborhoods

4th Avenue Pump House
Petition Numbers:
PLNHLC2018-00557 & PLNHLC2018-00558

Name: Georg Stutzmacher

Address: [redacted]

SLC Zip Code 84103

Phone: [redacted] E-mail [redacted]

Comments: Make rounded corners on building instead of sharp / design building to fit in the area of historic building / landscape in a way to make building less visible coming into area

Please provide your contact information so we can notify you of other meetings or hearings on this issue. You may submit this sheet before the end of the Open House, or you can provide your comments via e-mail at kelsey.lindquist@slcgov.com or via mail at the following address: Kelsey Lindquist, Salt Lake City Planning Division, PO Box 145480, Salt Lake City, UT 84114-5480.

OPEN HOUSE
PUBLIC COMMENT FORM
December 13, 2018

Planning Division
Department of Community and Neighborhoods

4th Avenue Pump House
Petition Numbers:
PLNHLC2018-00557 & PLNHLC2018-00558

Name: EVAN SMITH

Address: [redacted]

SLC Zip Code 84103

Phone: [redacted] E-mail [redacted]

Comments: 'A JIFFY LUBE COVERED IN IVY.' IT SADDENS ME TO HEAR THAT THIS STRUCTURE SHOULD NOT LOOK AS IF IT WAS PLACE THERE 100 YEARS AGO. I SHAKE MY HEAD WHEN I DRIVE THROUGH THE AVENUES AND SEE SOME 1970'S CREATION THAT 'REFLECTED THE TIME' AT THE TIME. MY GRANDCHILDREN WILL LOOK AT THIS AND SHAKE THEIR HEADS AT THIS HORRIBLE BOX THAT IS SO OUT OF PLACE.

Please provide your contact information so we can notify you of other meetings or hearings on this issue. You may submit this sheet before the end of the Open House, or you can provide your comments via e-mail at kelsey.lindquist@slcgov.com or via mail at the following address: Kelsey Lindquist, Salt Lake City Planning Division, PO Box 145480, Salt Lake City, UT 84114-5480.

YOU CAN DO BETTER.

OPEN HOUSE
PUBLIC COMMENT FORM
December 13, 2018

Planning Division
Department of Community and Neighborhoods

4th Avenue Pump House
Petition Numbers:
PLNHLC2018-00557 & PLNHLC2018-00558

Name: DAVE ALDERMAN

Address: [redacted]

Zip Code 84103

Phone: [redacted] E-mail [redacted]

Comments: I APPRECIATE THE WORK TO DOWNSIZE THE BUILDING, ATTEMPT TO SAVE TREES & SHRUBS, & REMOVE THE FENCE. HOWEVER THE BUILDING STILL SEEMS TOO INDUSTRIAL FOR THE SETTING. IT LOOKS LIKE IT COULD FIT INTO THE POSTER OF 'TIPICAL PUMP HOUSES'. I'D RATHER IT BE SOMETHING THAT FITS INTO THE PARK/NEIGHBORHOOD ENVIRONMENT. MAYBE TIE THE EXTERIOR TO THE RIVEROCK IN THE BRIDGE & RECONFIGURE THE WINDOWS.

Please provide your contact information so we can notify you of other meetings or hearings on this issue. You may submit this sheet before the end of the Open House, or you can provide your comments via e-mail at kelsey.lindquist@slcgov.com or via mail at the following address: Kelsey Lindquist, Salt Lake City Planning Division, PO Box 145480, Salt Lake City, UT 84114-5480.

OPEN HOUSE
PUBLIC COMMENT FORM
December 13, 2018

Planning Division
Department of Community and Neighborhoods

4th Avenue Pump House
Petition Numbers:
PLNHLC2018-00557 & PLNHLC2018-00558

Name: MARK BARONE

Address: [redacted]

Zip Code 84103

Phone: [redacted] E-mail _____

Comments: HOPE THAT THE BUILDING CAN BE AS SMALL AS POSSIBLE IF IT HAS TO BE IN THIS LOCATION. VERY DISAPPOINTED THAT THE PARK WOULD BE COMPROMISED SUCH A BEATIFUL OPEN PLACE TO RUIN.

Please provide your contact information so we can notify you of other meetings or hearings on this issue. You may submit this sheet before the end of the Open House, or you can provide your comments via e-mail at kelsey.lindquist@slcgov.com or via mail at the following address: Kelsey Lindquist, Salt Lake City Planning Division, PO Box 145480, Salt Lake City, UT 84114-5480.

OPEN HOUSE
PUBLIC COMMENT FORM
December 13, 2018

Planning Division
Department of Community and Neighborhoods

4th Avenue Pump House
Petition Numbers:
PLNHLC2018-00557 & PLNHLC2018-00558

Name: Sydney & Chris Fonnesbeck

Address: [redacted]

Zip Code 84103

Phone: [redacted] E-mail [redacted]

Comments:

Please provide your contact information so we can notify you of other meetings or hearings on this issue. You may submit this sheet before the end of the Open House, or you can provide your comments via e-mail at kelsey.lindquist@slcgov.com or via mail at the following address: Kelsey Lindquist, Salt Lake City Planning Division, PO Box 145480, Salt Lake City, UT 84114-5480.

Sydney & Christian Fonnesbeck
[redacted]
Salt Lake City, Utah 84103
13 December, 2018

Questions concerning the Fourth Avenue Pump House:

What is the purpose of the Pump House?
What changes will be made at the wellhead?
Will the Pump House change the use of the well?
Is there a pump in operation at the wellhead now?
Will a heavy industrial pump be installed or used at this wellhead?
Why should a change in operation be made now?
Why is a new structure necessary?
Is the intended use the most limited necessary use?
Is the proposed structure as small as possible to serve that use?
Will the intended use involve hazardous chemicals?
What chemicals are involved?
Have possible risks been properly assessed?
(What could possibly go wrong?)
Does the city have similar operations in such close proximity to residents?
Why is this "industrial use" planned for:

- a city park?
- an historic district?
- a nature preserve?
- a densely populated neighborhood?
- a seismic area?
- a flood zone?
- an urban forest?

Could these uses be more appropriate at a different location?

From: Stephen Spencer
To: Lindquist, Kelsey
Subject: Pump House Canyon Road
Date: Wednesday, September 5, 2018 9:01:39 AM

I am the owner of the house at 212 N. Canyon Road and will be affected.

If this pump house is approved, where exactly will it be? How big? What will the outside look like? Will the ground around it be altered, too? What chemicals will be stored? How much? Are they dangerous? What security and safety measures would be taken?

What would happen if the pump house wasn't built? Public Utilities hasn't had a Pump House before, and did OK, what has changed that makes it necessary?

PLNHLC2018-00557
PLNHLC2018-00558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STARBUCKS
COFFEE


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HALL
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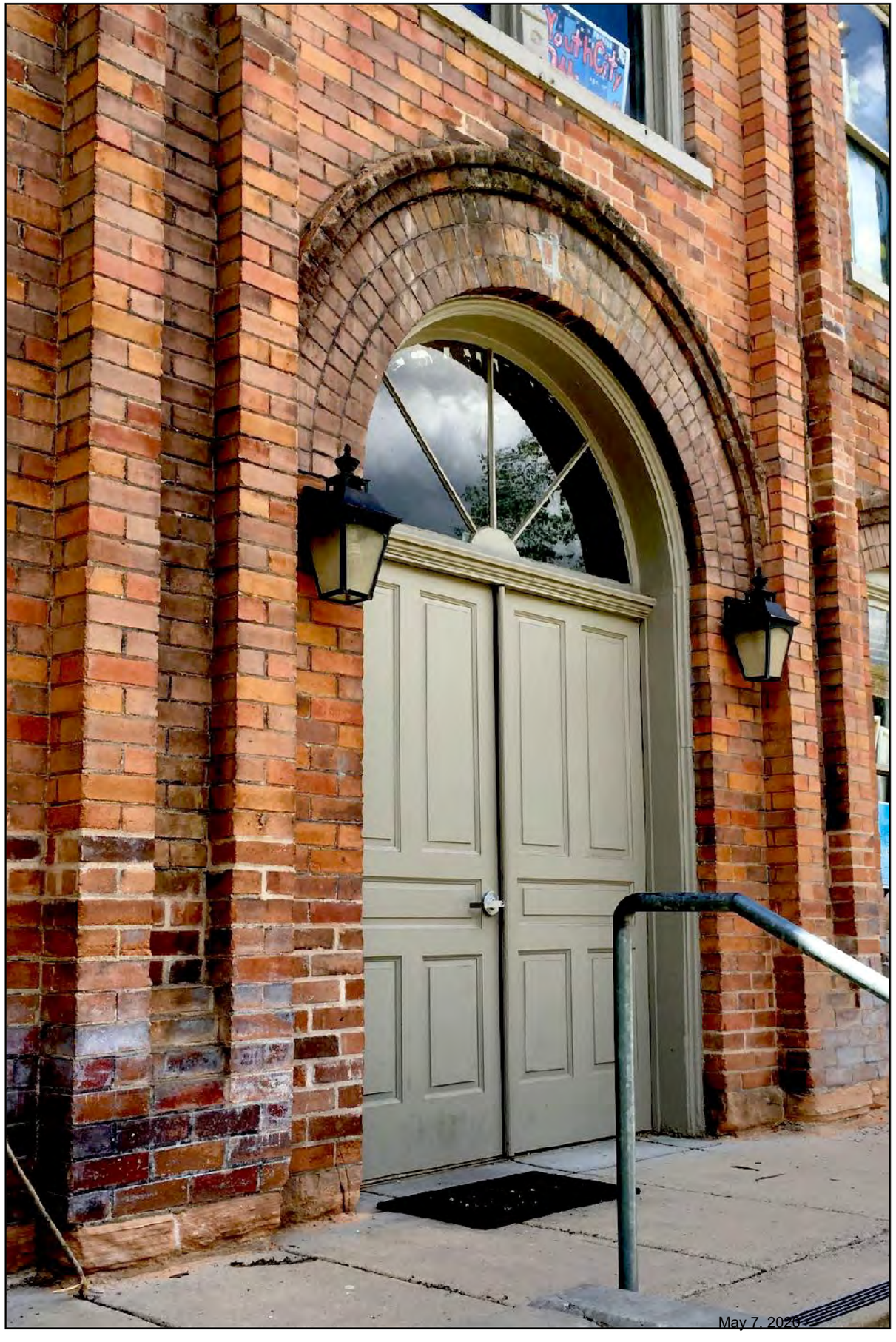


MEMORY PARK

Example of Architecture Used in Salt Lake Pump Houses
Pump House on Cortez Rd (Above the Utah Capitol)

Imagery from Google Maps Street View (not current), but provides an example of architectural style likely planned for Canyon Rd.

Various Examples of Pump Houses found Online

To: Kelsey Lindquist
Principal Planner
Salt Lake Planning Division
kelsey.lindquist@slcgov.com

From: David Garcia
282 Canyon Road
Salt Lake City, UT 84103
[redacted]

Date: January 2, 2019

Topic: 4th Avenue Pump House
Petition numbers PLNHLC2018-0057 and PLNHLC2018-0058

Comments regarding information presented at the OPEN HOUSE held on December 13:

Much good work is evident from the following plan changes:

+ A large old sycamore tree, at a visual junction of the approach to Memory Grove Park, has been retained by slightly reworking the site plan. Excellent!

+ The on-site generator has been deleted. Excellent! Footprint of the site is substantially reduced. A large, visually void mass is eliminated.

+ The chlorine room in the initial plan has been eliminated, further reducing the footprint.

+ The perimeter fence has been deleted; its absence is a meaningful visual upgrade.

BUT one horrifying aspect remains; the building design as presented on December 13 remains abysmal. It is offensively industrial, a squat unlovely eyesore not remotely harmonic with the homes in the SR-1A area facing the site. Architectural imagination involved? None.

Architects, David Triplett and John Ewanowski of CRSA Architects, were retained to address the appearance of the pump house building. The sense was that the initial design would be strongly revamped, perhaps with more than one version for consideration. The December 13 design was hardly more than an ivy-covered version of the August ugly. Is this the best the retained architects can do? How about some ideas, some imagination? The engineers at Public Utilities have worked hard come up with positive contributions; the architects need to respond likewise.

file: 282 / Projects / PumpHouse-A

To: Kelsey Lindquist
Principal Planner
Salt Lake Planning Division
kelsey.lindquist@slcgov.com

From: David Garcia
282 Canyon Road
Salt Lake City, UT 84103
[redacted]

Date: May 28, 2019

Topic: 4th Avenue Pump House
Petition numbers PLNHLC2018-0057 and PLNHLC2018-0058

Comments regarding information presented at the OPEN HOUSE held on May 9:

(a) Compliments
(b) Quick thought
(c) Overview
(d) Size matters

COMPLIMENTS

The architects have put time and effort into the exterior design of the pump house. Details:

- river rock stone fascia tying into adjacent 4th Avenue bridge
- application of river rock cages of varying sizes => visual interest
- south-side door overhang and southwest side overhang => visual interest
- intersperse of horizontal and vertical brick patterns => visual interest
- low horizontal band at base pulls the eye down to distract from the building's height
- multi-level roof line visually segments the mass of the building
- vertically of south side and plaque, sympathetic to the vertical nature of neighborhood architecture
- dark-colored decorative roofline trim

QUICK THOUGHT

For the deep-set windows, "C" shaped flanges at the corners to soften the visual impact?

continued..

OVERVIEW

Weighing the factors, a new installation is needed. Worker safety, updated standards, and water supply are dominant factors. From a totally understandable perspective, major disruption of a beautiful little park is abhorrent. Allowing for the necessity of a new installation, efforts are being made to minimize the footprint and the height of the building. Architecturally, efforts are being made to maximize the building's visual appeal, or at the least to visually minimize its unwelcome presence.

SIZE MATTERS

Public Utilities has done much work to reduce the footprint of the building; appreciated. However, two items still seem to bear scrutiny. (1) The FLOW METER, requiring approximately a 15-foot run. Current technology could be used and require less than a 3-foot run. (2) The VERTICAL AXIS PUMP, which is a significant contributor to the overall height of the building. The existing configuration is a submersible pump, which has been in place for decades. Public Utilities primary reason for going away from the submersible configuration is that the high voltage necessary will no longer be supplied by Rocky Mountain Power. OK, but according to Winston Seiler, an engineer professionally versed in pipeline mechanics, a 240-volt 450 hp submersible motor is readily available. Why not continue the submersible configuration and lower the building height by three to five feet??

Size matters; smaller and lower is better.

file: 282 / Projects / Pump-House-E

From: [redacted]
[redacted] Lindquist, Kelsey
Subject: Re: 4th Ave Pump House Questions
Date: Thursday, August 23, 2018 7:36:39 PM
Attachments: ii_jl7bk7vi2
ii_jl787fon0

We have heard from a few of you with questions for the Public Utilities Planners. We will send the questions to the City Tomorrow, August 24, so if you have something you want to know about the Pump House on 4th Ave and Canyon Road, reply to this email today.

When the answers are returned, we will send them out to the mailing list.

Thanks for your interest.

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103

[redacted]

From:	Mullen, Holly
To:	"Ivan Weber"
Cc:	"craig ogan"; "Alan Walker"; winstonseiler@yahoo.com; "Catherine Williams"; "James Livingston"; lmhliv@gmail.com; "VICTORIA WALKER"; "Dave Jonsson"; "Jill Van Langeveld"; mcgoughk2403@gmail.com; "Evan Smith"; "Linda Smith"; "cindy cromer"; "Sharon Franz"; Lindquist, Kelsey
Subject:	RE: 4th Ave Well: Comments to City Council Budget process
Date:	Wednesday, May 29, 2019 4:12:26 PM

Thank you, Mr. Weber, for your correspondence. I have added Senior Planner Kelsey Lindquist to the Cc list for inclusion into the public record and packet for the June 6 Historic Landmarks Commission meeting.

With respect,
Holly Mullen

From: Ivan Weber[redacted]
Sent: Wednesday, May 29, 2019 4:07 PM
To: Mullen, Holly <Holly.Mullen@slcgov.com>
Cc: 'c[redacted] to City Council Budget process

Dear Ms. Mullen,

Knowing that you are wrapping up your package to the Historical Society for the 4th Avenue Well/Building project, may I please interject these comments:

- In my 76 years on this earth, at least 40 of them after my architecture/urban planning history degrees; and after the subsequent 30 years in architectural/urban/engineering/environmental design work (more about that later, if you like), it is without pleasure that I tell you that this is the WORST URBAN PLAN AND DESIGN IN AN HISTORICAL PARK THAT I HAVE EVER SEEN.
- Setting aside the fact that my Wife and I (and our Son and his family, by extension, and by legal fact) own two properties facing this monstrosity, this is OUTRAGEOUS!!
- Historically, there is no way to justify this concrete-block enclosure of a well that, apparently, is marginal, and that therefore needs to be replaced.
- But where to replace it?? The HAL engineers' guidance document article 3.b, under "Options", provides directions, ***BUT THESE DIRECTIONS HAVE BEEN SUMMARILY IGNORED***! 3.b has been brushed aside, ignored, apparently due to the engineers' consensus that "They'll get over it," or "These are trivial issues," or "The history of the area is nothing compared to the imperative for a little more water in the City's grid." **This is the ultimate TRAVESTY!!**
- If the SLC City Council and PUC believes that the Well/Building is of no importance to Neighbors, then you need to look before you to see us standing soldly, staring into your eyes,

ready to react to the least command. If you believe that the Well/Building is of no importance to the thousands --- hundreds of thousands, probably --- of visitors who walk, jog, cycle and tour up the Canyon, then who knows how to reach you? Who knows how to reach you, indeed??

- Only two blocks from the LDS Church Office Building, which has emphasized **history** throughout its redevelopment, you propose to devastate the ***sense of history of the PLACE*** as never before.

Personally, I am beyond tolerance. I can only urge you to get the well out of this place, however many millions it costs you, and find an alternative location to drill more efficiently, less obtrusively, and with greater targeted value per objective water demand-objective than this pathetic well can ever provide, however many historical "units" of disturbance it may inflict!!

> **OH! *You haven't studied that set of variables, the alternative locations* (item 3.b in the H.A.L. guidance document)?? THEN LET'S GET GOING, WITHOUT DELAY!!! Meanwhile, suspend the study of this horrible building design, and the hideous community anthropologies and economics embodied within it.**

We look forward to hearing from you about your choice: **political suicide, or a chance at political/resource survival. Historical devastation, or historical preservation.**

Sincerely yours,
Ivan Weber

Ivan Weber, LEED-AP
Principal/Owner
Weber Sustainability Consulting
953 1st Avenue
Salt Lake City, Utah 84103
[redacted]
through industrial ecology

From: Ivan Weber [redacted]
Sent: Thursday, May 23, 2019 4:25 PM
To: 'holly.mullen@slcgov.com'
Cc: [redacted]
Subject: Comments to City Council Budget process

Dear City Council Members:

With deepest apologies, it appears that compounded health challenges will prevent my presenting oral comments to the May 28 City Council Budget meeting, delayed from the originally scheduled date of May 21, 2019.

Please consider the following case, along with the attached letter-to-editor of the Tribune in late April (not published).

- **The City has failed to analyze the alternative Option 3b for 'Move to an alternate Location > 300' of the Existing Well,' as stated in the April 12, 2019, Hansen Allen & Luce, consultants, report to Brad Stewart, Director of SLC Department of Public Utilities. While we understand the budgetary implications of the estimate ">$5,463,000" cost for Option 3b, this cost estimate must be tempered by two key observations:**
    1. **The cost estimate is predicated on abandonment of the existing well, re-piping of supply to the existing water-client neighborhood, and provision of chlorine treated water to replace the present supply, viewed (we contend) *erroneously* as inadequately treated by Public Utilities. In point of fact, the present system could be left in place, and *supplemented by* another well at a more favorable, productive, easily drilled, and less costly location! The philosophy of neglecting to consider alternative locations is utterly in error, even ethically wrong in the face of destruction of this historical park (see attachment, please), and abjectly against standard environmental administrative practice. This latter point is so glaring that, we believe, this makes the case vulnerable to lawsuit.**
    2. **Review of projected *regional water demand* cannot possibly be met by the well under debate --- including downtown housing/population growth and peripheral growth in such areas as the infamous 'Inland Port,' and industrial growth areas of that sort within City boundaries --- compelling the City to think much more broadly and imaginatively, while utilizing the 4th Ave Well substantially as-is. The 4th Avenue Well, even if expanded, is dwarfed by the near-term future of water demand in the region. The City Public Utilities budget, if it fails to include "Option 3b," will forever be regarded as negligent in the extreme. Long-term/macro-scale planning is a basic requirement of City departments, particularly Public Utilities. Shirking this requirement in the name of large numbers in substantially irrelevant analytical reports, like that for the 4th-Ave Well, is NEGLIGENT! It is likely that the water supply from the aquifer in question can be tapped for much less cost per unit of production than is possible from the 4th Avenue Well, however modified and however hideously housed in architectural monstrosities that so drastically violate the basic character of the Memory Grove Neighborhood as the proposed design. "Insensitivity" is hereby redefined in this terrible design concept.**

Salt Lake City government must not neglect its duty to perform due diligence!

Respectfully yours,
Ivan Weber

Ivan Weber, LEED-AP

Principal/Owner
Weber Sustainability Consulting (retired)
953 1st Avenue
Salt Lake City, Utah 84103
[redacted]
[redacted] *through industrial ecology*

From: McIntire, Blayde
To: "Winston Seiler"
Cc: Lindquist, Kelsey; Stewart, Jesse; Briefer, Laura; Mullen, Holly; Stewart, Brad
Subject: RE: 4th Avenue Well Comment
Date: Monday, May 13, 2019 2:05:50 PM
Attachments: SFIDKPI024D152.pdf

Winston,

After talking with our designer, it appears that the 5x pipe diameter upstream and 3x pipe diameter downstream straight pipe segments are a requirement for mag meters. They have looked into 3 manufacturers in depth: Siemens, ABB, and Endres Hauser. All have similar requirements. Attached is the meter installation submittal from Siemens. I highlighted the section that discusses straight pipe on page 4. I hope that helps.

Best,

BLAYDE MCINTIRE, PE
Engineer IV

DEPARTMENT *of* PUBLIC UTILITIES
SALT LAKE CITY CORPORATION

TEL 801-483-6783
FAX 801-483-6855

WWW.SLCH2O.COM

From: Winston Seiler <[redacted]
Sent: Wednesday, May 01, 2019 1:37 PM
To: McIntire, Blayde <Blayde.McIntire@slcgov.com>
Subject: Re: 4th Avenue Well Comment

Blayde,

Thanks for the email, as I do not think that I received it on March 11. I appreciate the time that you put into the response.

It is unclear to me why a 15 ft long vault would be required for access to the short section of a pipe with the meter, but we can leave that to a conversation in person. I am confident that there has got to be a reasonable solution to shorten the building further to limit the footprint—and one that is possible without a large external vault or the 15 feet of pipe internal to the building.

Thanks for passing along your original email

Winston Seiler
[redacted]

On May 1, 2019, at 12:18 PM, McIntire, Blayde <Blayde.McIntire@slcgov.com> wrote:

Forwarding this email again.

BLAYDE MCINTIRE, PE
Engineer IV

DEPARTMENT *of* PUBLIC UTILITIES
SALT LAKE CITY CORPORATION

TEL 801-483-6783
FAX 801-483-6855

WWW.SLCH2O.COM

From: McIntire, Blayde
Sent: Monday, March 11, 2019 9:26 AM
To: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>; Stewart, Brad <Brad.Stewart@slcgov.com>; Mullen, Holly <Holly.Mullen@slcgov.com>; Kirk Bagley <KBagley@bowencollins.com>
Cc: Briefer, Laura <Laura.Briefer@slcgov.com>; Stewart, Jesse <Jesse.Stewart@slcgov.com>
Subject: RE: 4th Avenue Well Comment

Kelsey,

I have attached a site utility plan showing our constraints at the site of the 4th Avenue Well. The simple answer to Mr. Seiler's question regarding a subsurface meter vault is that it will not fit on the west side of the building. Such a vault would likely be in excess of 15ft long. There are several utilities on that side of the building that make it impossible to bury a large vault there. Although there are no utility constraints to the north of the proposed well house, we feel that it is not in anyone's best interest to bury a large vault. A deep excavation (>10ft) would negatively impact the tree roots of the trees we are attempting to save. A buried meter vault would also compromise workers' safety and create operational/maintenance challenges. For these reasons we feel that a subsurface vault is not the best design option.

Mr. Seiler mentioned rearranging the electrical boxes in the building. Stacking the boxes creates several issues. I believe stacking the boxes is against electrical code (I am not completely sure of that, but that is what I was told). Regardless, we would not want to create a hazard to our workers by requiring them to access the electrical gear on ladders. Workers' safety is a primary driver of this project. Stacked boxes may also increase the height of the structure. Some of the boxes could be placed on the east wall, but this would require the building width to be increased to maintain required clearances between the pipe and electrical gear. Our current design has pushed the east wall as far east as we are comfortable with. There is a 60" County Flood Control Storm Drain (City Creek) immediately adjacent to the east wall. Widening the building would place the structure over top of the storm drain. The design team feels that this

is not a good option.

Thanks,

BLAYDE MCINTIRE, PE
Engineer IV

DEPARTMENT *of* PUBLIC UTILITIES
SALT LAKE CITY CORPORATION

TEL 801-483-6783
FAX 801-483-6855

WWW.SLCH2O.COM

From: Lindquist, Kelsey
Sent: Monday, March 11, 2019 8:22 AM
To: McIntire, Blayde <Blayde.McIntire@slcgov.com>; Stewart, Brad <Brad.Stewart@slcgov.com>; Mullen, Holly <Holly.Mullen@slcgov.com>; Kirk Bagley <KBagley@bowencollins.com>
Subject: FW: 4th Avenue Well Comment

All,

Could you please respond to this email?

Sincerely,

Kelsey Lindquist
Senior Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

TEL 801-535-7930
FAX 801-535-6174

WWW.SLC.GOV/PLANNING

From: Winston Seiler [redacted]
Sent: Friday, March 8, 2019 1:33 PM
To: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>; Craig Ogan [redacted] Williams [redacted]tewart, Brad <Brad.Stewart@slcgov.com>; Oktay, Michaela <Michaela.Oktay@slcgov.com>
Subject: 4th Avenue Well Comment

Hello Kelsey,

Attached to this email is a pdf attachment for inclusion for public comment. At the HLC working session last night there was some discussion on whether the footprint can be further reduced. I understand that statement made that the flowmeter requires a length of 5 pipe diameter lengths upstream of the flowmeter and 3 pipe diameter length downstream of the flowmeter. What I am not clear on is why this needs to be accomplished inside the pumphouse.

There is a suitably long section of straight, buried pipe between the pumphouse and the water main under canyon road. Why can the flowmeter not be placed on that length of pipe and accessible by a manhole/vault/similar potentially in the street? With electrical units rearranged inside the pumphouse, my estimation would be that this would decrease the overall length of the pump room (and total pumphouse) by 10-15 feet.

Please see attached.

Thank you for your review and consideration.

Winston Seiler

[redacted]
<4th Ave Utility Plan.pdf>

From: David
To: Lindquist, Kelsey
Subject: Re: blends with surroundings
Date: Thursday, August 9, 2018 12:10:42 PM

Hi Kelsey,

Thank you so much for taking the time and making the effort to send the overview. I will indeed make the upcoming meeting on August 16. It is comforting to note that Historic Preservation applications have been made. Bottom line: try to make this (necessary) thing as visually acceptable as possible.

Again, thanks for your reply.

cheers, David Garcia

From: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Sent: Thursday, August 9, 2018 11:49:49 AM
To: [redacted] Stewart, Brad; Mullen, Holly; Kirk Bagley; Josh Bean; Robinson, Molly
Subject: blends with surroundings

Dear David Garcia,

My name is Kelsey Lindquist and I am the project planner working with Public Utilities on processing the two Historic Preservation Applications for the pump house located at 300 N. Canyon Road. I would like to say thank you for the comments and concerns. I would also like to address a couple of the comments within this email to hopefully provide additional information and clarification.

The proposed footprint of the new pump house is approximately 993 square feet in size and approximately 13'4" in height. The size has been reduced to the minimum size necessary to accommodate the specifications and need to house the equipment for the pump house. With that said, the location of the proposed pump house is set and unfortunately cannot not be modified. The subject property is located in the Avenues Local Historic District, and the new construction is subject to review and approval by the Historic Landmark Commission. The review and approval is slightly different from what you may have experienced with any design or application review of an existing historic structure with the Historic Landmark Commission. The difference occurs with the request. Since Public Utilities is proposing the new construction of the pump house, the design will need to comply with the adopted standards for new construction (21A.34.020.H). Generally, any faux representation of historic structures or styles is not encouraged or supported in local historic districts. Public Utilities has been working with Planning to achieve a sympathetic solution to the need and the established standards of review. Everyone involved would like to achieve a "win-win" for the neighborhood and park users, as well as the public need for the pump house. I would encourage you to come to next week's Open House, which is scheduled for Thursday, August 16 at 5:00-7:00. The Open House is located on the fourth floor of the City and County Building (451 S. State Street). The Open House will provide an opportunity to ask questions and provide comments about sound proofing for the building, budget and design. Additionally, if you cannot make the Open House, please feel free to forward comments or concerns. Please don't hesitate to contact me with any questions or to voice any comments

or concerns.

Sincerely,

Kelsey Lindquist
Principal Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

TEL 801-535-7930
FAX 801-535-6174

WWW.SLC.GOV/PLANNING

From: Lindquist, Kelsey
To: "Winston Seiler"
Cc: [redacted]
Subject: RE: Canyon Road Pumphouse
Date: Wednesday, September 5, 2018 2:21:44 PM

Winston,

Public Utilities was able to address the additional questions forwarded earlier today.

2) Yes, the integrity of the well will be investigated prior to construction. It is not anticipated to be an issue because the production has not changed. Relocated the well a short distance to another part of the park is not considered an option because it is more costly and the project will face all of the same challenges.
3) Water features and other elements could be added if deemed appropriate by Planning and Historic Landmarks. However, any added features would increase the footprint and disturbance on the site.

Public Utilities and Bowen Collins has provided answers to the previous emailed questions.

Item 1: Bowen Collins has extensive experience in designing pump/valve/meter houses. They have considered many different options and arrived at the current meter configuration. They have worked to reduce the footprint as much as possible. We cannot sacrifice meter reading accuracy to shorten the pipe. The East-west configuration is not possible due to space limitations. See the open house response memo for more information.

There are two main factors that impact the size of the well and electrical room. The primary factor is the size of the electrical gear required for the project. The electrical gear is located on the west wall and is governing the length of the room. The secondary factor is the discharge piping and meter for the well. As a general rule of thumb the meter needs to be located 5 pipe diameters from any upstream interferences and 2-3 pipe diameters from any downstream interferences. Each mag meter manufacturer will have their specific requirements which may slightly increase or decrease the up and downstream distance requirements. The mag meter manufacturers have already determined upstream and downstream length requirements through modeling to provide the desired accuracy for their specific meters. The use of another type of meter would require the space/length inside the room to increase. The mag meter is the most accurate and requires the smallest footprint of available meters.

Maximum accuracy of the mag meter is important because the dosing of the fluoride and chlorine into the system will be based on the flow reading from the mag meter. Again as stated above, the electrical equipment is governing the length of the pump room.

Item 2: A backup generator on site is necessary in emergency situations. It is not likely that a large, portable generator could be transported to the site in a timely manner. It is essential that water is available immediately in an emergency.

During the preliminary design phase of the project portable generators were discussed. A portable generator was dismissed as an alternative in lieu of a permanent generator. The reason being that in an emergency situation it may not be possible or practical to transport a large portable generator to the site. Also, the generator must be exercised monthly to make sure everything at the well house operates correctly and that the power transfers from the Rocky mountain system to the generator system. This monthly exercise is not practical

with a portable generator.

The transformer sizing is directly related to the required electrical demand for the well house and cannot be reduced.

Item 3: Again, a large portable generator is not feasible during an emergency. SLCDPU has a responsibility to reliably deliver water in these situations.

A 2300 volt power source was not selected due to safety concerns, the voltage not being supported in the future by Rocky Mountain Power, and the long lead time for replacement parts. The portable generator option was also dismissed as described above. In addition to the 2300 volt power there would also need to be a temporary power transformer that would require a crane to place. For these reasons, a 2300 volt portable backup generator is not practical in an emergency situation.

Item 4: Rocky Mountain Power no long has the capability to support 2300 V power. They would own and maintain the transformer.
Purchasing a backup 2300 volt transformer is possible, however Rocky Mountain power is no longer supporting 2300 volt power and is in the process of converting the remaining 2300 volt power to a more common and safe voltage. The power company has strongly encouraged the change to 480 volt power as 2300 volt power is becoming obsolete. It has been determined to not be a wise long-term decision to stay with 2300 volt power.

Item 5: The noise levels from the AC units are within Health Department standards and will be the same as any other house in the neighborhood. There are no proposed mitigation measures. The sound levels will be below 50 dBa at each residence per Health Department standards.

The noise from the AC units at the well house will not provide as much sound as each homeowners existing individual AC unit or the sound from their neighbors existing AC unit. The sound from the pump motors will be dampened to meet code requirements by the use of acoustical sound louvers inside the building.

Item 6: There is no other parking proposed, only the driveway. The analysis of these alternatives was written some time ago, before the final footprint had been established.

Item 7: A level of chlorine residual is required at every part of the water system. When a high volume of non-chlorinated water is added, it violates this standard, thus we must correct the current deficiency.

Item 8: Salt Lake County requires that fluoride concentrations be kept everywhere in the system. Again, adding a large volume of water without fluoride would violate this requirement.

The existing well was exempted due primarily because it was an existing well. It is our understanding that reconstructing the well would be required to compliance with existing Salt Lake County fluoridation regulations.

Item 9: Both are needed. See above.

Item 10: See the open house response memo for the answer to this questions and many others concerning the building footprint.

Item 11: At this point we will await comments from Planning and the Historic Landmark Commission. The design will be revised accordingly.

Sincerely,

Kelsey Lindquist
Principal Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

TEL 801-535-7930
FAX 801-535-6174

WWW.SLC.GOV/PLANNING

From: Winston Seiler [mailto:winstonseiler@yahoo.com]
Sent: Wednesday, September 5, 2018 9:54 AM
To: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Cc: [redacted]
Subject: Re: Canyon Road Pumphouse

Kelsey,

A few additional questions:

1) Can the layout of the proposed pump house be rotated by 180 degrees so that it is oriented from the current well position southward onto the short existing portion of 4th avenue between the two Canyon Rds? This orientation may provide an opportunity to increase greenspace, by converting one or both of the currently road lanes.

2) Has any thought been given to relocating the well to the city park at Canyon between 2nd and 3rd Ave? The northern edge of this park is a bit more out of the way, and a well and associated facilities in this location may be a bit more subtle, and still within the same aquifer fed out of the City Creek Canyon. I hope that the current well is evaluated for wellbore integrity, and that if damage is found, alternative locations will be considered.

And a comment: has any consideration been given to making this structure as a unique art piece or monument. I was walking with my kiddo past the LDS Conference Center today and then past the water fountains at the City Creek Mall and it occurred to me that having a water feature/waterfall incorporated into the structure could be an interesting way of masking the sound of the proposed HVAC systems.

Thanks

Winston Seiler
[redacted]

On Sep 1, 2018, at 3:58 PM, Winston Seiler <winstonseiler@yahoo.com> wrote:

Hello Kelsey,

I have read through the Historic Landmark Commission Work Session Memorandum and have a few questions that I am hoping that you can address:

Item 1: At the session at the City-County Building, it was mentioned that the flow meter #19 in the diagrams, requires straight pipe (oriented N-S in the diagrams) before and after the meter for accurate readings, thus extending the length of the room containing the pump.

A: can the pipe before and after the #19 flow meter be removed to shrink the footprint of this room, with a different flow meter utilized, or a correction factor applied to the flow meter to account for any discrepancy created by having shorter pipe before and after the meter. This is a fluid dynamics equation, where the effects of removing linear pipe before and after the meter could easily be modeled and understood at different flow regimes to provide a calculated but accurate enough flow calculation.

B: can a different flow meter be used to shorten the pipe and associated building?

C: if the flow meter and linear piping is required, can it be installed in the East- West oriented linear pipe flowing to the Victory Tanner system at the northern portion of the facility, with an access hatch provided for replacement/inspection?

Item 2: Alternative 3, #13 and #18 480V Generator and Transformer add significant footprint to the location (an approximate 30' x 30' green space area, and two trees). The necessity of this power generator and transformer on site seems to be related to "the City's existing portable power generators are insufficient to power and pump the motor during an outage."

A: The necessity of the generator and transformer seem only necessitated by the City's current inventory.

B: Portable generators that would meet the well needs do exist, even if not in the City's current inventory. What efforts have been made to investigate purchasing or rental of this equipment, and what are the costs? Such generators are regularly used in oil and gas, mining, and agricultural uses (resources that are available for consultation within the Salt Lake City area).

C. Portable, temporary generators can be staged on the short segment of 4th Ave. immediately to the south of the well location.

D. The locations of generator and transformer on the current drawings do not appear to best utilize available space for the smallest footprint.

Item 3: Alternative 1, "a 2300 volt portable backup power generator was deemed unfeasible because of the large generator footprint." Was locating of a portable generator, when needed, on the short section of 4th Ave, immediately adjacent and to the south of the well considered? As a temporary location, this would have

minimal traffic impact, and would take up no park space.

Item 4. What efforts has the City made to investigate the purchase of the back up 2300 V power to avoid the potential 12 week outage?

Item 5. Bowen Collins notes that "noise issues from the pump motor and possible heating/AC units will likely be a sensitive issue for nearby residences and park visitors."

A. What efforts have been made to minimize this noise impact, as the sound from 3 HVAC units will be a constant addition to the location?

B. What are the expected noise levels that will be heard from each of the surrounding residences?

Item 6. "Further investigation of the potential to add a designated parking area inside the park for well maintenance vehicles, chlorine, and fluoride delivery vehicles," sounds as though the footprint could be further expanded. Please elaborate on the need for any additional parking, given that current maintenance activities make use of the existing available space, and the chemical delivery is planned to be infrequent?

Item 7. "water obtained…is sufficiently high quality as to not require direct disinfection or other treatment." Since chlorine is not required for the water quality of this well, can chlorine be added at another location in the system, or separated from the well location?

Item 8. Can the well be exempted again from the fluoride treatment? I am interested to know why or why not.

Item 9. Are <u>both</u> fluoride and chlorine treatment required? It would appear that if one was not needed, the tanks made of a smaller volume, or the footprint reduced, the building could be situated as to keep at least one of the large sycamore trees on location.

Item 10. Can fluoride and chlorine tanks be installed in the subsurface (like gas station tanks) to minimize the surface footprint?

Item 11. This is somewhat subjective, but I would be curious as to what each of the project staff would like to see as design features or creative solutions to the challenges of this site, if the well pump house was to be situated directly across the street from their house.

It was a pleasure to meet you at the City-County building, and I appreciate you taking the time to answer my questions.

Sincerely,

Winston Seiler
[redacted]

From: Sean McKenna
To: Lindquist, Kelsey
Subject: Re: Case PLNHL2018-00557 and 558
Date: Tuesday, August 21, 2018 10:36:49 AM

Hi Kelsey, I was unable to attend the open house because I was out of town. I would like to submit a public comment though. I think this proposed project would be extremely detrimental to the historic neighborhood of memory grove. The area is beautiful right now with the center open space with City Creek running through the middle. The open space acts as a nice natural pathway from Temple Square and Brigham park through Memory Grove to Memory Grove Park and on to City Creek Canyon. It is very common to see families picnicking and playing in the open space where this building is proposed. The location of the proposed building is on the corner of Canyon Drive and 4th Ave and would completely ruin the natural and peaceful feeling of our historic neighborhood. The location of the building would eliminate valuable and beautiful public open space and the design of the building does not fit in with the neighborhood at all. I would urge SLC to find a different solution. Keeping everything underground as it currently is would be much preferred or building the structure somewhere else that does not ruin a very peaceful and serene oasis of nature within a historic neighborhood in downtown Salt Lake City.

Please let me know that these comments will be submitted and please let me know what the next steps are.

Thank you,
J. Sean McKenna
114 E. 4th Avenue

On Tue, Aug 7, 2018 at 10:06 AM Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com> wrote:

> Hi Sean,
>
> Of course. I attached a brief information sheet and the proposed plans. There is a scheduled Open House for next Thursday at 5-7 on the fourth floor of the City and County Building. If you have additional questions or would like to submit a public comment, please don't hesitate to contact me.
>
> Sincerely,
>
> Kelsey Lindquist
>
> Principal Planner
>
> COMMUNITY AND NEIGHBORHOODS
>
> PLANNING DIVISION

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From: Sean McKenna [redacted]
Sent: Monday, August 6, 2018 8:14 PM
To: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Subject: Case PLNHL2018-00557 and 558

Hello, can you send me more information on the pump house project? I am a nearby resident and received notice in the mail of the project.

Thanks,

Sean

From: Dave Jonsson
To: cindy cromer
Cc: [redacted] Lindquist, Kelsey; McIntire, Blayde; Mullen, Holly
Subject: Re: chain link fence around well area in the park
Date: Saturday, February 16, 2019 8:17:47 AM

I apologize for the all-caps but I was feeling kind of panicked over the fencing. It does make some sense I guess to keep the public from falling into the well.
This promises to be a really disrupting thing, and just a mere preview of what will happen when/if they build the full water treatment plant.

On February 15, 2019, at 8:03 PM, cindy cromer <3cinslc@live.com> wrote:

Dave-I think all is well (what a pun). I've copied everybody on the message below. In order to get the big equipment to the well, Public Utilities had to prune the trees. That happened yesterday, as I think most of the people on the cc list know. I spotted someone standing on the bridge at 4th Ave. this afternoon. At a distance I thought the person might be Jesse Stewart, but it was the subcontractor who is evaluating the well. He was extremely knowledgeable about the site and its history. I typed up some notes which I will circulate.

The fencing is to keep people away from the well and the equipment. Starting Monday morning the fencing will extend across 4th Ave. and the bridge will be blocked all week. (Craig said that the fencing was actually across the bridge this morning.) We got a heads up about the tree pruning, but the fencing and road closure didn't get included in the message. We plan to tell everyone about the road closure tomorrow when we gather.

Drivers will have to cross to the east side of Canyon Road in front of the Livingstons' from Monday to Friday. cindy

---------- Forwarded message ---------
From: **Dave Jonsson** [redacted]
Date: Fri, Feb 15, 2019 at 7:37 PM
Subject: There's now a chain link fence around our well area in the park. WHY!!!!
[redacted], Kelsey <kelsey.lindquist@slcgov.com>, McIntire, Blayde <Blayde.McIntire@slcgov.com>

A CHAIN LINK FENCE HAS BEEN PUT UP AROUND THE WELL AREA AT THE PARK. NO REACHING ANY OF THE TREES AT THIS POINT.

WHY WHY WHY!!!!

From:	Winston Seiler
To:	McIntire, Blayde; [redacted] Stewart, Jesse
Subject:	Re: Flowmeters
Date:	Friday, May 24, 2019 3:01:38 PM
Attachments:	Pumphouse Footprint Reduction.pdf

Hello all,

First, let me thank you for taking the time to listen to neighbors and community members, and specifically taking our ideas seriously regarding the pumphouse. I know that this may be a distraction to what you think is value adding work, but at least personally, I hope that this results in the best design possible for the pump house, minimizing the impact to the City Creek Park.

My primary critique of the SLCPU pump design process is my distinct impression that an existing, off the shelf well and pumphouse design was utilized for the historic and unique park, rather than recognizing the park and designing a pump house that was appropriate to it. I think that the approach – placing a pumphouse in a park vs. having a park where you have to design a pumphouse – can reach two drastically different results (even when containing the same design elements).

To that end, I believe that there are creative engineering opportunities to shrink the footprint of the pumphouse while maintaining all required equipment (chlorine, flowmeter, electrical, etc.) and find myself musing on these ideas. Please see the attachment to this email.

I would think that getting the pumphouse down to the approximate size of the existing vault and electrical facility (28' x 24' or there-about) would be difficult for folks to reject – since there is already equipment there – what is the difference? To that end, I have taken time to sketch out various alternatives where there may be the opportunity to shrink the footprint further, but maintain all of the design elements required by the SLCPU. Each drawing incorporates all of the elements of the Bowen Collins design, and I have tried to keep at an accurate scale. While I can envision that there may legitimate objections to one idea over another, I hope that these can at least spur some serious thought and consideration into creative ways in which the pumphouse can be made smaller, as I am confident that there are still opportunities to minimize the pumphouse design, yet still meet your stated project goals.

For reference, the Liberty Park pumphouse is 22' x 26' in the drawings submitted to HLC on 9/5/2013. This size is the approximate footprint of the existing 4th Avenue Well Site. It may be possible to shrink the footprint further to 16' x 24' if the existing vault is utilized to house the flowmeter (or smaller still, see slide 8).

What opportunities are there to shrink the pumphouse further while still meet the needs and goals of SLCPU?

Thank you again for your continued time and consideration of this project. I look forward to speaking with you next week.

Sincerely,

Winston Seiler

[redacted]

On Friday, May 24, 2019, 11:42:02 AM MDT, Stewart, Jesse <Jesse.Stewart@slcgov.com> wrote:

Good Morning Winston,

I hope that you are doing well and staying dry. With all the rain, I feel like I am in Seattle instead of Salt Lake City.

I propose to that you and I meet with the design engineers to discuss your thoughts and proposals. I have availability next Wednesday, please let me know if Wednesday afternoon (5/29/19) is a possibility for you.

Thanks,

Jesse

From: Ivan Weber
To: "Craig Ogan"; Rankins, Marlene; Lindquist, Kelsey
Cc: Wharton, Chris; Weaver, Lehua; "Lisa Livingston"; "Winston Seiler"
Subject: RE: May 2, HLC Meeting Packet
Date: Wednesday, May 1, 2019 1:23:23 PM

Craig and Friends,

I regret that I, too, will be unable to attend. I know you are paying special attention to Winston's comments: His guidance is priceless, as is that of others among you. Chlorine, especially, must be injected far downstream, nearer to points where it may be needed.

For what it's worth, I can't help but visualize that extensive hillside behind 217 and 211 when I think of open ground needed for the alleged facility --- though that does nothing to address the industrial-attribute concerns Winston raises. It's flatly not acceptable to blanket the entire valley, particularly those 'Zen' portions of the streambed system and associated parklands, with distinctly industrial facilities!

Ivan

From: Craig Ogan [redacted]
Sent: Wednesday, May 01, 2019 8:45 AM
To: Marlene.Rankins@slcgov.com; Lindquist, Kelsey
Cc: Chris Wharton; lehua.weaver@slcgov.com; [redacted]
Subject: May 2, HLC Meeting Packet

Here is a document for inclusion in the HLC May 2 Meeting Packet. It you need a different format, please let me know. Thanks for facilitating this and Cecile Pasket's information to the HLC.

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
801.651.5001

From:	Dave Jonsson
To:	cindy cromer; Lindquist, Kelsey
Cc:	McIntire, Blayde; Stewart, Brad; Bollwinkel, Lee; Baker, Troy
Subject:	Re: mitigation for the Pump House in City Creek
Date:	Sunday, August 26, 2018 1:10:39 PM

While I recognize the importance of making our desires known on the look of this "pumphouse" if they ever build it, I want to focus firstly on alternatives to the building being here in the first place. So any and all suggestions about remote injection of chlorine and fluorine are welcome. Also, if this project can be delayed a construction season (i.e. a year) for more discussion, that would be great, too.

On August 25, 2018, at 8:42 PM, cindy cromer <3cinslc@live.com> wrote:

To members of the Historic Landmark Commission
From Cindy Cromer
Re briefing on the Pump House proposed for City Creek Park

The Park is owned by Salt Lake City Public Utilities and maintained by Salt Lake City Parks, from what I have been able to learn. That is exactly the situation for **Reservoir Park in the University Historic District**, which makes the rehabilitation of the space formerly containing the reservoir very relevant to the current proposal in City Creek Park.

The project in Reservoir Park began in 2009 when the "lid" on the reservoir collapsed and concluded in 2012. Prior to the collapse of the "lid," the space was not safe for any recreational use, although there had been tennis courts above the reservoir until the mid-'90's. Here's what Salt Lake Public Utilities did during the course of the project, none of which was required to create a safer space.
-returned the space within the boundaries of the reservoir to recreational use,
-significantly increased the green space in the Park,
-installed a seating area where there hadn't been one previously,
-constructed public sidewalks where none had existed,
-cleaned and treated the historic concrete wall,
-replaced the historic lamp fixtures on top of the wall,
-installed xeric landscaping at the intersection, and
-planted Hawthorne trees consistent with the perimeter planting in the northern end of the Park.

So far, the discussion about the proposed Pump House in City Creek has not included any conversation about enhancements to the Park or mitigation for the loss of trees, viewshed, and green space.

I am requesting at a minimum that the City
-estimate the value of the individual trees proposed for removal,
-place a separate value on the disruption of the formal line of mature Sycamores on the west side of Canyon Road,
-identify equal or greater green space to mitigate the loss of access to the current well site,
-mitigate the impacts on the viewshed in this park design characteristic of Frederick Law Olmsted's work.

The modifications necessary in Reservoir Park were not associated with the management of water. Dealing with the collapsed reservoir provided no economic benefit to Public Utilities as an enterprise fund. There will clearly be long term benefits in managing water for the proposal in City Creek. The contrast is striking.

From: Brian J Berkelbach
To: Lindquist, Kelsey
Subject: RE: Notice of Planning Petition
Date: Thursday, August 9, 2018 8:28:26 AM

Thank you for following up. Our board met last night and talked at length about this project. We are deeply frustrated with what might happen to such a beautiful area of our city. We are spreading the word as fast as we can. We want to be on the front end of this.

Any additional insights would be greatly appreciated.

Thanks,

Brian Berkelbach
Financial Services Professional
New York Life Insurance Company
150 W Civic Center Drive, Suite 600
[redacted]
[redacted]
[redacted]

[redacted] securities through NYLIFE Securities LLC (member FINRA/SIPC), a Licensed Insurance Agency.

From: Lindquist, Kelsey [Kelsey.Lindquist@slcgov.com]
Sent: Wednesday, August 08, 2018 2:17 PM
To: 'council@chnc-slc.org'; Greater Avenues CC Chair
Cc: McIntire, Blayde; Robinson, Molly
Subject: FW: Notice of Planning Petition

Dear Laura Arellano and Brian Berklebach,

I am just following-up on the notice of a planning application, which was emailed on July 19th. As the notice discusses, there is an upcoming Open House on August 16, 2018. The Open House is scheduled from 5-7 and is located on the fourth floor of the City and County Building, which is located at 451 S. State Street. If you could post about the upcoming Open House or send an email to constituents, it might reach more individuals and park users. A notice was mailed to property owners and tenants within 300 feet of the subject property. I will also be posting a sign on the property for park users to be informed. I am hoping that you can reach additional members of the public through an email or a website post about the Open House. If you have any questions, concerns or would like additional information, please let me know.

Sincerely,

Kelsey Lindquist
Principal Planner

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From: Lindquist, Kelsey
Sent: Thursday, July 19, 2018 3:56 PM
To: 'council@chnc-slc.org' <council@chnc-slc.org>; Greater Avenues CC Chair <gaccchair@slc-avenues.org>
Cc: McIntire, Blayde <Blayde.McIntire@slcgov.com>; Mullen, Holly <Holly.Mullen@slcgov.com>; Stewart, Brad <Brad.Stewart@slcgov.com>
Subject: Notice of Planning Petition

Dear Laura Arellano and Brian Berklebach,

The Planning Division has received a petition for the new construction of a pump house located at 300 N Canyon Road. The proposed new construction includes a pump house that will enclose the required equipment and chemicals. I have attached:

1. The petitioner's application materials
2. An illustration of where the pump house will be located
3. A formal letter requesting your community council's input

As a recognized community organization you have 45 days from the date of this e-mail to provide comments on the proposed petition. The 45 day period ends on September 10, 2018. Please let me know if you intend to have the petitioner present at one of your community council meetings, including the date and time of the meeting, and I will coordinate with them.

This project is also scheduled for an Open House at the following time/date (place TBD):

Thursday, August 16, 2018
5:00PM – 7:00 PM

If you have any questions about the petition please feel free to contact me.

Thanks,

Kelsey Lindquist
Principal Planner

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From:	Lindquist, Kelsey
To:	"Winston Seiler"
Cc:	Catherine Williams; McIntire, Blayde; Stewart, Brad
Subject:	RE: PLNHLC2018-00557 & PLNHLC2018-00558
Date:	Friday, August 10, 2018 3:22:48 PM
Attachments:	Site Plans - 4th Ave Well.pdf Street Renderings - 4th Ave Well.pdf

Winston,

I would first like to say congratulations on the upcoming baby. I hope all goes as planned!

I had Public Utilities address a few of the technical questions, specifically 1, 2,3 ,4, 6, 7 and 8. If you happen to have additional technical questions or need any clarification on the answers provided, I cc'd Public Utilities on this email.

1. Could you please provide details and specifications of the current pump and facilities?
   The current pump house has been in service since 1968. The well is one of the biggest producers in all of Salt Lake City. It is 20" in diameter and 464 ft deep. On average during the summer months it produces 5.5-7.0 million gallons per day (MGD). For reference, that is more than the City Creek Water Treatment Plant produces during the summer. It supplies downtown Salt Lake City with a majority of its water. The current facility has a below-ground vault, approximately 10'Wx20'Lx12'D, which houses all electrical equipment, the well head, and pipe. There is an above-ground transformer.

   The issue with the current vault is that it does not meet current state code. Periodically, SLCDPU facilities are inspected with state officials in what is called the "State Sanitary Survey." Past inspections have found several deficiencies at the site that should be corrected. SLCDPU has not yet been required to correct the deficiencies because the site is "grandfathered." However, if any work is done at the site, it loses its "grandfathered" status and the whole site must be brought up to current standards.

   The safety of our workers is paramount on every SLCDPU project, and there is no question they are in jeopardy if we do not make this change. This update will also provide greater resiliency and safety for the neighborhood and entire community.

   The main driver for this project is the electrical system. Currently the site is supplied by a 2300V transformer. Rocky Mountain Power has informed the project team that parts are no longer available for that transformer, and that 480V transformers are now used. If the old transformer were to need repair, there is no easy fix, and the well would be placed out of service for an extended period of time. Obviously this poses a significant problem for the water distribution system because of the well's importance. Rather than hope that doesn't happen, SLCDPU has proposed a proactive approach in which we upgrade to a 480V transformer. To accommodate the 480V transformer, all electrical equipment must be replaced. Therefore, the site loses its "grandfathered" status and must be brought up to current standards. Current standards include putting the equipment in an above-ground structure and adding disinfection and fluoride injection.

2. Could please provide details and specifications for the envisioned pump facilities and chemical?

The proposed pump house is an above-ground structure, 46'Wx34'Lx12'H. It houses the wellhead, electrical equipment, piping, and chemicals. The chemicals will be entirely contained within the structure and will be transferred directly into the water pipes so there will very little to no smell. There is an above-ground generator and transformer located outside of the building to provide backup power in case of a power system outage.

3. Could you please provide the list of considered alternatives, and details on the selected alternative?

Thank you for asking about the alternatives. Our project team spent significant time analyzing and discussing alternatives because we knew the challenges the project would face.

The first alternative considered was to abandon this well and drill a new well in a new location. The advantage of this alternative is the minimal impact to the existing site. The greatest disadvantage is to find a location that would produce the same volume of water.

There are two key components to finding a location: the surface location and the sub-surface hydrogeological make-up. The surface location needs to be close enough to the existing water distribution system and end users—in this case, the downtown area. If the well were relocated, large diameter pipes would need to be extended to the new location. This would be tremendously expensive and disruptive to the neighborhoods. The second key component is that the existing well was drilled into a near-perfect aquifer. It reliably provides large amounts of pristine water. This aquifer is limited in size and it is unlikely that another aquifer would be found to match its production capability in the immediate vicinity.

The design team evaluated the water distribution system for another existing source that rerouted to provide water to the area. They also looked at the operation of the system to see if changes could be made to provide the same water service without the well. The project team concluded that updating the current site makes the most operational and economic sense, but recognizes this choice has a high social impact, as do most of the alternatives.

Once the team evaluated the site location, they examined alternatives to the layout of the new building and transformer. They worked to reduce the footprint of the building as much as possible, while still meeting electrical, noise, drinking water, building and safety codes. Due to the importance of this well, the team decided to include a generator on-site. In the event of a power outage, this well needs to function to provide the surrounding area with water. A portable generator was not feasible because of the large pump motors.

4. Is an underground pump house as currently in place an alternative under consideration?

An underground structure is not possible because state code requires that any well structure must be free draining. This means in the event of a water main break, flood or other event the water will flow away from the well by gravity (non-mechanical means). An underground vault does not have this capability. In addition, electrical equipment is extremely sensitive to water and creates potentially dangerous environment for operational staff in underground vaults. Without a free-draining site during an event the possibility exists for contaminated water to enter the well itself. Contaminating the aquifer could shut down the well for a very long time.

5. Will any new pump house be held to the same historic aesthetic that our home is held to? Are there plans that could be provided?
   The new construction of the pump house is subject to review and approval by the Historic Landmark Commission. The review and approval is slightly different from what you may have experienced with any design or application review of an existing historic structure with the Historic Landmark Commission. The difference occurs with the request. Since Public utilities is proposing the new construction of the pump house, the design will need to comply with the adopted standards for new construction (21A.36.020.H). Public Utilities is planning on attending a Work Session with the Historic Landmark Commission in September, to discuss design concerns and the proposal. I attached the current set of plans. Public Utilities is currently modifying these plans by adding more detail. I can forward the revised plans, as soon as I receive them.

6. What are the noise levels of above ground pump house?
   Sound attenuation is included in the design of the structure. The sound of the pump should not be noticed. The generator must run once per month to ensure it is in good working order and noise will be noticeable during that process. Duration would be one hour, during regular, weekday business hours. In another effort to minimize the impacts to the neighborhood, part of the selection criteria for the generator will be noise levels. We have extensive experience with noise attenuation and have very rigorous and detailed standards.

7. How will the chemicals be delivered to the pump house?
   A truck delivers the required chemicals. A gate and driveway would be included in the design for this purpose. Hoses are used to transfer the chemicals from the trucks to the tanks. We have established safety protocols for chemical transfer here and at other locations.

8. Will activities at a new pump house be significantly greater than at the current facility?
   SLCDPU crew activities will be the same as at the current facility. For the most part, the facility is operated remotely.
   SLCDPU appreciates this opportunity to explain our methodology and will remain transparent and attentive during the public engagement, design, construction and maintenance of this project. More communication will be forthcoming as we go forward. Thank you.

I would encourage you to come to next week's Open House, which is scheduled for Thursday, August 16 at 5:00-7:00. The Open House is located on the fourth floor of the City and County Building (451 S. State Street). The Open House will provide an opportunity to ask questions and provide comments about sound proofing for the building, budget and design. If you cannot make the Open House, please feel free to forward comments or concerns. Please don't hesitate to contact me with any questions or to voice any comments or concerns.

Sincerely,

Kelsey Lindquist
Principal Planner

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From: Winston Seiler [redacted]
Sent: Wednesday, August 8, 2018 4:44 PM
To: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Cc: Catherine Williams [redacted]
Subject: PLNHLC2018-00557 & PLNHLC2018-00558

[redacted]

I am writing regarding the proposed new construction of the pump house on Canyon Rd.

We live at 211 Canyon Rd, almost directly across from the proposed construction.

A few questions come immediately to mind:
1. Could you please provide details and specifications of the current pump and facilities
2. Could you please provide details and specifications for the envisioned pump facilities and chemicals
3. Could you please provide the list of considered alternatives, and details on the selected alternative?
4. Is an underground pump house as currently in place an alternative under consideration?
5. Will any new pump house be held to the same historic aesthetic that our home is held to? Are there plans that could be provided?
6. What are the noise levels of above ground pump house?
7. How will chemicals be delivered to the pump house?
8. Will activities at a new pump house be significantly greater than at the current facility?

I will try to attend the meetings this month, but may be unable to due to upcoming birth of a child.

Thank you for taking the time to provide information on the questions above?

Sincerely,

Winston Seiler
211 Canyon Rd.
Salt Lake City, UT 84103

[redacted]

From: cindy cromer
To: Lindquist, Kelsey
Cc: McIntire, Blayde; Stewart, Brad
Subject: Re: project in City Creek Park
Date: Thursday, August 2, 2018 4:46:20 PM

Kelsey, Blayde, and Brad-Before I forget to mention, I own the triplex at 196 N Canyon Road, directly across from the well, on the southeast corner of Canyon Road and 4th Ave. I did not receive a notice about the project. I will check with my tenants. My notice, if mailed, should have gone to 816 E 100 S.

You have certainly covered the requirements regarding the community councils but the people who haven't been informed at all are the park users who do not live or own property there. I also do not think 300 feet is enough, but I have said that many times before. There needs to be some signage at the site (not one of those itty-bitty pieces of yellow paper) ahead of the open house. The open houses are almost always poorly attended and for that reason I suggested a meeting in the park, possibly at Ottinger Hall.

I can distribute flyers to the neighbors ahead of the open house if you do not want to have a meeting in the neighborhood. Summertime is a very difficult time to inform people. My neighbor across the street on 4th Ave. will probably be gone until Labor Day. She owns 3 properties.

One of my neighbors suggested that my response is NIMBYism. Of course it is not. The project would be in front of my property, not in my backyard. More significantly, I have been challenging the City's initial proposals on water-related projects for 25 years at locations which were not close to any of my properties. This proposal just happens to be very near one of my properties....was bound to happen.

Back to with a summary of those 25 years asap. Sincerely, cindy 801 209-9225

From: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Sent: Thursday, August 2, 2018 2:46 PM
To: 'cindy cromer'
Cc: McIntire, Blayde; Stewart, Brad
Subject: RE: project in City Creek Park

Cindy,

I wanted to reach out and discuss the potential neighborhood meeting you mentioned. I routed the pump house proposal to both applicable community councils and notified property owners and tenants within 300 feet of the subject property. Additionally, this item is scheduled for the upcoming August Open House on August 16th. I discussed the proposed meeting with Public Utilities, and we would be happy to

attend an additional meeting. Let me know of a day and time or how I can be of assistance. I think holding the meeting onsite or in the neighborhood would essential.

In regards to the individuals from Public Utilities that I am working with, Blayde McIntyre and Brad Stewart. I cc'd both of them on this email. If you have additional questions, please let me know.

Sincerely,

Kelsey Lindquist
Principal Planner

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From: cindy cromer [redacted]
Sent: Wednesday, August 1, 2018 3:41 PM
To: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Subject: project in City Creek Park

Kelsey-I owe you a summary of the relevant projects done by Parks and SLCPU in the last 25 or so years. I haven't forgotten.

From the neighborhood, David Garcia attended the GACC presentation. He lives in the second house south of the gates to Memory Grove. Craig Ogan who also lives south of the gates already had the beginnings of an e mail list and has now added almost all of the property owners who were not already on the list.

When I send the summary to you, I will copy Kristin, Lee, and Kyle in Parks. **Could you send the name of the contact in SLCPU?** Because of my relationship with Metro Water District, I need to let Laura Briefer know that I am a nearby property owner. I will ask you to copy anyone who should have the summary when I send it to you. I will also share it with neighbors because the short version after 25 years is that both Parks and SLCPU have argued that there wasn't another way to solve problems involving water, and over and over again, there have been.

Sincerely, cindy c. [redacted]

From: David
To: Lindquist, Kelsey
Subject: Re: regarding 4th Avenue Pump House
Date: Wednesday, May 8, 2019 10:02:41 AM

OK, will do. Thank you for your continued involvement.

From: Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com>
Sent: Wednesday, May 8, 2019 9:35 AM
To: d[redacted]
Subject: RE: regarding 4th Avenue Pump House

Dave,

Thank you for your comments. I will include them in the staff report. If you have additional comments, please let me know.

Sincerely,

Kelsey Lindquist
Senior Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

TEL 801-535-7930
FAX 801-535-6174

WWW.SLC.GOV/PLANNING

From: David [redacted]
Sent: Tuesday, May 7, 2019 12:11 PM
To: Rankins, Marlene <Marlene.Rankins@slcgov.com>
Subject: regarding 4th Avenue Pump House

From: David Garcia
resident on Canyon Road
May 7, 2019

Regarding the Public Utilities Pump House project on Canyon Road:

"...Canyon Road, which has downtown's most successful median park..."
"...a unique place. A resource that can never be replaced."
"...easily accessible, special place."
"...gateway to City Creek and Memory Grove..."

“...a reverent and peaceful place...”

The above quotes are from Canyon Road observers, residents and home owners. I totally agree.

Point: If the current location at 4th Avenue is retained, a substantial issue is the SIZE of the structure to be built. While Public Utilities has been cooperative with diminishing the footprint from original plans, attention to two items could further diminish the footprint.

(1) Mechanical Flow Meter. The inflow and outflow pipe lengths associated with the planned mechanical flow meter adds 15 feet to the size of the building. Winston Seiler, a neighborhood property owner and professionally versed in pipeline dynamics, indicates that a modern Coriolis Effect Meter, Magnetic Flow meter, or Ultrasonic Flow meter would fulfill requirements and need less than 3 feet of space. On net, the length of the building could be decreased by approximately 12 feet, about 30%. Smaller is better. Much smaller is much better.

(2) Above-ground pump. The current installation features a submersible pump, some 270 feet below ground. Plans are to place a new vertical axis pump above grade, which would be a major contributor to the 14-foot height of the proposed structure. Why not keep the submersible pump configuration? It has worked for decades. One reason cited by Public Utilities is that Rocky Mountain power will no longer feed high voltage to the site. OK; how about the possibilities of installing a step-up transformer, and continue with the submersible configuration. A diminished height of the building would result. Lower is better.

If a pump house is to be built on the existing site, a sharp focus on MINIMIZING ITS SIZE and mass should be made to help preserve the integrity of the park. For the residents and hundreds of visitors to the park, maximize the green and minimize the concrete. Further work can be done.

From:	Ivan Weber
To:	"Dave Jonsson"; "Craig Ogan"; winstonseiler@yahoo.com; "Lisa Livingston"; Lindquist, Kelsey; "cindy cromer"; "Alan Walker"
Subject:	RE: That dang well project
Date:	Thursday, March 28, 2019 11:45:56 AM

Thanks, Dave, for your candid --- and probably accurate --- reflections on this relatively small contributor to the City water system. I worked for about ten years on Kennecott's water pollution contributions on the West Side of the Valley; and then have spent much of the intervening 15+ years examining mining contamination in water systems all over the world. To spend this kind of money on a very minor contamination source, and to do it in such a way that it makes all around it hideously ugly, is outrageous. The City engineers have been too isolated for too long, and the only visible solution is a public hearing --- as you say so, so clearly!!

Best,
Ivan

Ivan Weber, LEED-AP
Principal/Owner
Weber Sustainability Consulting
953 1st Avenue
Salt Lake City, Utah 84103
[redacted]
Regenerative economic development through industrial ecology

From: Dave Jonsson [redacted]
Sent: Wednesday, March 27, 2019 5:18 PM
To: Craig Ogan; winstonseiler@yahoo.com; Lisa Livingston; Lindquist, Kelsey; cindy cromer; Ivan Weber; Alan Walker
Subject: That dang well project

You know from my posts that I oppose the chlorination plant at the 4th Ave. and Canyon Road well site not only because it will look bad, but because I adamantly believe it is not needed. I contend that the well has functioned perfectly fine in the 70 years it has been in operation (without chlorination) and moreover, it must have some kind of secondary utility for the city's water system because it operates only in the summertime.

I've been googling "salt lake valley water supply" and have

found some interesting documents that seem to knock down the city's contention that this well must be treated to make the water safe.

Go to https://www.epicwaterfilters.com/blogs/news/salt-lake-city-water-quality-report-lead-fluoride and http://www.slcdocs.com/utilities/CCR.pdf and read down to where *well water is declared to almost never need treatment.*

Also interesting: this document from the Utah Department of Environmental Quality, https://deq.utah.gov/legacy/topics/fact-sheet/drinking-water.htm.

The city's plan to dump a water purification plant in our midst suffers under several major deficiencies.

First, the city has already developed and designed a $3 million full-on facility (which one of our neighbors aptly described as 'over-engineered') without any advance notice whatsoever to the residents who will be drastically impacted by the construction and then the operation; second, the historical value of this location cannot be overstated as the Pioneers' discovery of City Creek was the trigger that caused them to put down roots and build a city; and third, there has been no proffer of any kind that this is the moment in time when the chlorination of the well must begin.

Here I will repeat the question I have asked previously without getting an answer: How many people drink water straight from the untreated 4th Ave. well? My belief is *no one*, because the water merges with the city's system before it goes to any kitchen taps.

GIVE US A PUBLIC HEARING!

From:	McIntire, Blayde
To:	"Dave Jonsson"; Craig Ogan; [redacted] cindy cromer; Ivan Weber; Alan Walker
Cc:	Mills, Wayne; Norris, Nick; Briefer, Laura; Lindquist, Kelsey; Stewart, Jesse; Stewart, Brad; Mullen, Holly
Subject:	RE: That dang well project
Date:	Friday, March 29, 2019 3:04:30 PM
Attachments:	4th ave well water distribution (003).jpg

Dear Mr. Jonsson,

Thank you for your interest in the 4th Avenue Well project and for the passion you have for the neighborhood. In order to address your comments and questions regarding the project, I would like to direct you to the frequently asked questions (FAQs) section of the website (https://www.slc.gov/utilities/fourth-avenue-well-project/). We update the website as needed, based on comments and questions from the public, after applicable meetings, and/or with introduction of new information. We updated the website following the Historic Landmarks Commission meeting held on 3/7/19; since then no new information has been finalized for posting to the website. However, given your questions regarding chlorination, we have added a FAQ pertaining to chlorination at the site.

In summary to your questions:

- You "*contend that the well has functioned perfectly fine in the 70 years it has been in operation (without chlorination).*"
  - Chlorine is used for two primary purposes in our water system: 1) to disinfect the water and 2) to maintain a residual amount of chlorine throughout the water distribution system. We are designing chlorination at the site for the second purpose, maintaining a chlorine residual throughout the distribution system. The residual chlorination protects the users throughout the distribution system that is served by the well.
  - Your concern addresses the first purpose, to disinfect the water. It is true that the 4th Avenue Well water is of sufficient quality that it does not require disinfection. However, as mentioned, we are designing chlorination to provide a chlorine residual throughout a significant portion of our distribution system.

- *You continue, "it (the well) must have some kind of secondary utility for the city's water system because it operates only in the summertime."*
  - The 4th Avenue Well is typically used in the summer months (April through October) to meet higher demand and to maintain pressures in the distribution system. However, in the future, the well could be used year-round to meet greater demand and for emergency operations.

- You "*have found some interesting documents that seem to knock down the city's contention that this well must be treated to make the water safe.*"
  - The websites cited (Salt Lake City Public Utilities Consumer Confidence Report and Utah Division of Drinking Water) address that well water often is pure enough for consumption. However, as previously stated, the chlorination designed for the 4th Avenue Well is to provide a chlorine residual throughout the distribution system.
  - The other website you sited is for a private water filtration company.

- You state, *"the city has already developed and designed a $3 million full-on facility*

(which one of our neighbors aptly described as 'over-engineered') without any advance notice whatsoever to the residents who will be drastically impacted by the construction and then the operation."

- SLCDPU has engaged with the public on numerous occasions and continues to do so. We have hosted site visits, meetings with individual community stakeholders, visited community council meetings, held open houses, and have presented design plans twice to the Historic Landmarks Commission, with a room filled with area residents. We began robust public outreach more than a year in advance of initially proposed construction and prior to finalizing design. We continue to answer individual emails and to maintain a website devoted exclusively to this project.

- You state, *"the historical value of this location cannot be overstated as the Pioneers' discovery of City Creek was the trigger that caused them to put down roots and build a city;"*
  - As the water provider for Salt Lake City since 1876, Salt Lake City Public Utilities shares your sentiment and respect for the historical and cultural significance of this area.
- You state, *"there has been no proffer of any kind that this is the moment in time when the chlorination of the well must begin."*
  - As previously stated, the designed chlorination is to provide residual chlorination to protect the users throughout the distribution system served by the well. As the public water supplier for all of Salt Lake City, as well as several cities in Salt Lake County, protecting public health the environment are key priorities. Therefore, we will have chlorination at the well as part of this project.
- You ask, *"How many people drink water straight from the untreated 4th Ave. well"*
  - The 4th avenue well services 12,000 connections. When the well is in service, much of downtown Salt Lake City receives between 80 and 100 percent of their water from the well. As the water co-mingles with water from other sources the percentage of well water declines. This well is typically used from April through October of each year; however, it may be used year-round in the future, or during an emergency. Please see the attached map of the area served by the 4th Avenue well.

Please contact me or visit the website frequently asked questions https://www.slc.gov/utilities/fourth-avenue-well-project/ if you have additional questions concerns.

Regards,

Jesse

Jesse A. Stewart
Salt Lake City
Department of Public Utilities
Deputy Director
801-483-6864
jesse.stewart@slcgov.com

From: Lindquist, Kelsey
Sent: Thursday, March 28, 2019 8:54 AM
To: Stewart, Jesse <Jesse.Stewart@slcgov.com>; McIntire, Blayde <Blayde.McIntire@slcgov.com>; Stewart, Brad <Brad.Stewart@slcgov.com>; Mullen, Holly <Holly.Mullen@slcgov.com>
Cc: Mills, Wayne <wayne.mills@slcgov.com>; Norris, Nick <Nick.Norris@slcgov.com>
Subject: FW: That dang well project

Blayde,

Could you please provide a response to Mr. Jonsson's question about the service of the well? I am also not entirely familiar with the provided links.

Sincerely,

Kelsey Lindquist
Senior Planner

COMMUNITY AND NEIGHBORHOODS
PLANNING DIVISION
SALT LAKE CITY CORPORATION

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FAX 801-535-6174

www.SLC.GOV/PLANNING

From: Dave Jonsson [redacted]
Sent: Wednesday, March 27, 2019 5:18 PM
To: [redacted]
Subject: That dang well project

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Here I will repeat the question I have asked previously without getting an answer: How many people drink water straight from the untreated 4th Ave. well? My belief is *no one*, because the water merges with the city's system before it goes to any kitchen taps.

GIVE US A PUBLIC HEARING!

From:	Brian J Berkelbach
To:	Lindquist, Kelsey
Cc:	Greater Avenues CC Chair; Mullen, Holly; McIntire, Blayde; Stewart, Brad; Robinson, Molly
Subject:	Re: Upcoming Open House
Date:	Wednesday, December 5, 2018 3:44:50 PM

Kelsey,

Thanks for sending. We have our final community meeting of the year tonight, and I will make everyone aware of the Open House on the 13th.

Thanks,

Brian Berkelbach
Financial Services Professional
New York Life Insurance Company
150 W Civic Center Drive, Suite 600
Sandy, UT 84070
[redacted]

> On Nov 29, 2018, at 1:33 PM, Lindquist, Kelsey <Kelsey.Lindquist@slcgov.com> wrote:
>
> Brian,
>
> I hope you had a wonderful Thanksgiving. Public Utilities and Planning have scheduled an Open House on December 13, 2018 at the Marmalade Library from 6-8. Notices of the Open House were mailed yesterday. Please feel free to post the notice on your website or in your publication.
>
> A copy of your most recent agenda and publication was forwarded to Planning and Public Utilities Staff. Blayde McIntyre, the project manager for the 4th Avenue Well, provided the following response to the suggestions and comments within the article:
>
> > My name is Blayde McIntire, I am the Project Manager for the 4th Avenue Well Project. First I would like to thank everyone for their interest and involvement on the project. We are working hard to ensure that the project team listens and responds to comments from the community. As you will see, many of your comments have assisted in developing the new concept. Please submit any additional questions and comments on our new website: https://www.slc.gov/utilities/fourth-avenue-well-project/.

I would like to respond to a couple items in the 4th Avenue Well article in the December issue of the Greater Avenues Community Council newsletter. First, thank you for the feedback concerning our website. That is a great idea to make previous questions and answers viewable. I will pass this instruction along to the web developers. You may already know that we plan to present a new design concept at an open house on December 13th. We hope this design addresses many of the community's concerns. The perimeter fence has been removed and the concept has changed significantly. The permanent generator and the fluoride room have been removed. Although this presents our operators with significant difficulties, we felt that this was a necessary concession to make in order to reduce the footprint of the site. The chloride room remains, however, because it is necessary to protect public health. There is a misconception that the facility will be a water treatment plant. The addition of chloride is a very small, simple process compared to what is done at a water treatment plant. For comparison, the City Creek Water Treatment Plant covers several acres of ground in order to accomplish coagulation, sedimentation, filtration, and then chlorination. Also, it is not only the addition of chloride that leads to the requirement to house the well equipment above ground. Workers' safety is the primary reason for this project. It is simply not safe for our operators to work in the underground vault with potential for standing water and such high electrical voltages nearby. Various other electrical, building, and State drinking water codes have also contributed to this decision.

Thank you for your continued participation. I hope to talk with many of you at the Open House.

If you have any questions about the Open House, please don't hesitate to contact me. Additionally, if any other comments or suggestions for the website come to mind, please feel free to forward them.

Sincerely,

Kelsey Lindquist
Principal Planner

COMMUNITY AND NEIGHBORHOODS
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SALT LAKE CITY CORPORATION

TEL 801-535-7930
FAX 801-535-6174

www.SLC.GOV/PLANNING

From: [redacted]
To: Lindquist, Kelsey
Subject: Report: City Council Formal Meeting, A Lion Roars
Date: Friday, May 17, 2019 11:37:32 AM

We have sent this notification the the 4th Avenue & Canyon Road Action Group, thought you'd be interested in the note I got from an long time neighborhood activist, which is below.

#####

A Formal City Council meeting is May 21 and is a public hearing allowing comments on the Over-all Budget, which includes the SLC Public Utilities budget containing the 4th Avenue & Canyon Road water treatment plant.

Need some folks to show up and comment. If you need help with idea or data for a comment, let me know and I'll email you stuff.

Here's a link to "OPEN CITY HALL" where you can look at the budget and send comments: https://stories.opengov.com/saltlakecity/published/XD8i_guT3

One of the Lions in battles to preserve and improve Memory Grove copied an email he sent to Council Member Wharton and Mayor Biskupski.

John provides an important long term and poignant perspective on how his and the work of countless others can be destroyed in one unthinking stoke.

> *Regarding the proposed pump and water treatment facility near Memory Grove Park.*
>
> *I moved into my home on Canyon Road almost 50 years ago. At that time Memory Grove was a "mow and water" park and a haven for the Hell's Angels motorcycle gangs. Nothing else! The City had abandoned it entirely.*
>
> *For most of the 50 years living in MG, I and others have work very hard to to bring the park and surrounding area to the gem it is today. We seized upon opportunities the flood and tornado presented to make great strides to this end. The sale of Main Street made possible City Creek Park and bringing the stream to the surface where possible.*
>
> *This plan for the well improvements is heartbreaking! Nothing short of an atrocity and an affront to all we have striven for all these years. MG is a sanctuary from everything downtown and in just a couple of blocks. Now you want to bring ugliness and noise here. You should be mindful of of the legacy of what harm you are inflicting on this area. Great care must be taken to reconsider all other options, regardless of short term costs, before you do permanent damage to this wonderful area.*
>
> *Sent from AOL Mobile Mail*

He want's this shared widely so feel free to forward to your friends:

Fix the well, make it safe, leave the Parks alone

Craig S. Ogan
272 Canyon Road
[redacted]

From: [redacted]
To: Lindquist, Kelsey
Subject: Report: SLC PU at Community Council January 9
Date: Thursday, January 10, 2019 6:21:28 PM

Representatives from SLC Public Utilities attended the January 9 Greater Avenues Community Council Meeting. They were there to discuss the 4th Avenue Water Treatment Plant and 3 other projects in the Avenues. **Their remarks about the 4th Avenue project reflected some progress and some continuing sticking points.**

PROGRESS:

- Project was delayed one year from original start of October 2018, **They are still talking about construction start in Fall of 2019.**
- A second engineering firm, Hansen, Allen and Luce, has been hired to evaluate the integrity of the current well and examine other options (drilling a new well, chemical injection at another site, well repairs for integrity and worker safety only)
- The design revealed at the Dec 13 open house is getting substantial revision
    - Maybe reduced height of the building
    - Maybe different material, shape and foot print and perhaps more than one option
- There will be a landscape architectural plan with an eye to preservation of trees
- SLCPU agreed to the observation its not desirable for the "business end" of the building to face residential housing
- On-site Fluoridation has been "waived" and emergency electrical generator has been dropped

STICKING POINTS

- On-site Chlorination is high on their functionality list
- We still lose some of the trees
- Size and design of the building up in the air
- Loss of open space

The room wasn't full but the neighbors **who** were there participated in very **informed** and **constructive** ways. SLC PU seemed receptive to what we had to say and much more attune to the aesthetic and people issues with this plan.

> After the meeting both SLC Planning and PU agreed to take ideas we have for design and engineering and get them to the architect and new consulting engineers.
>
> A process to get your ideas to them in an efficient manner is being worked out and will be communicated to you as soon possible

A work session on new building designs with Historical Landmarks Commission is anticipated in March. HLC generally meets first Thursday but reserve the third Thursday as an option. Stay tuned.

Here's a look at GACC Chair, Jill Van Langeveld's, interview on KUTV about saving the trees. Take and look and let her know we appreciate her speaking out:

https://bit.ly/2SKkmNS

FYI: There will be come maintenance on the well coming up. You'll get a notice from SLC PU before it starts. It's not part of the water treatment plans.

TTYL*

Craig S. Ogan
272 Canyon Road
Salt Lake City, Utah 84103
[redacted]

Teen speak for Talk To You Later

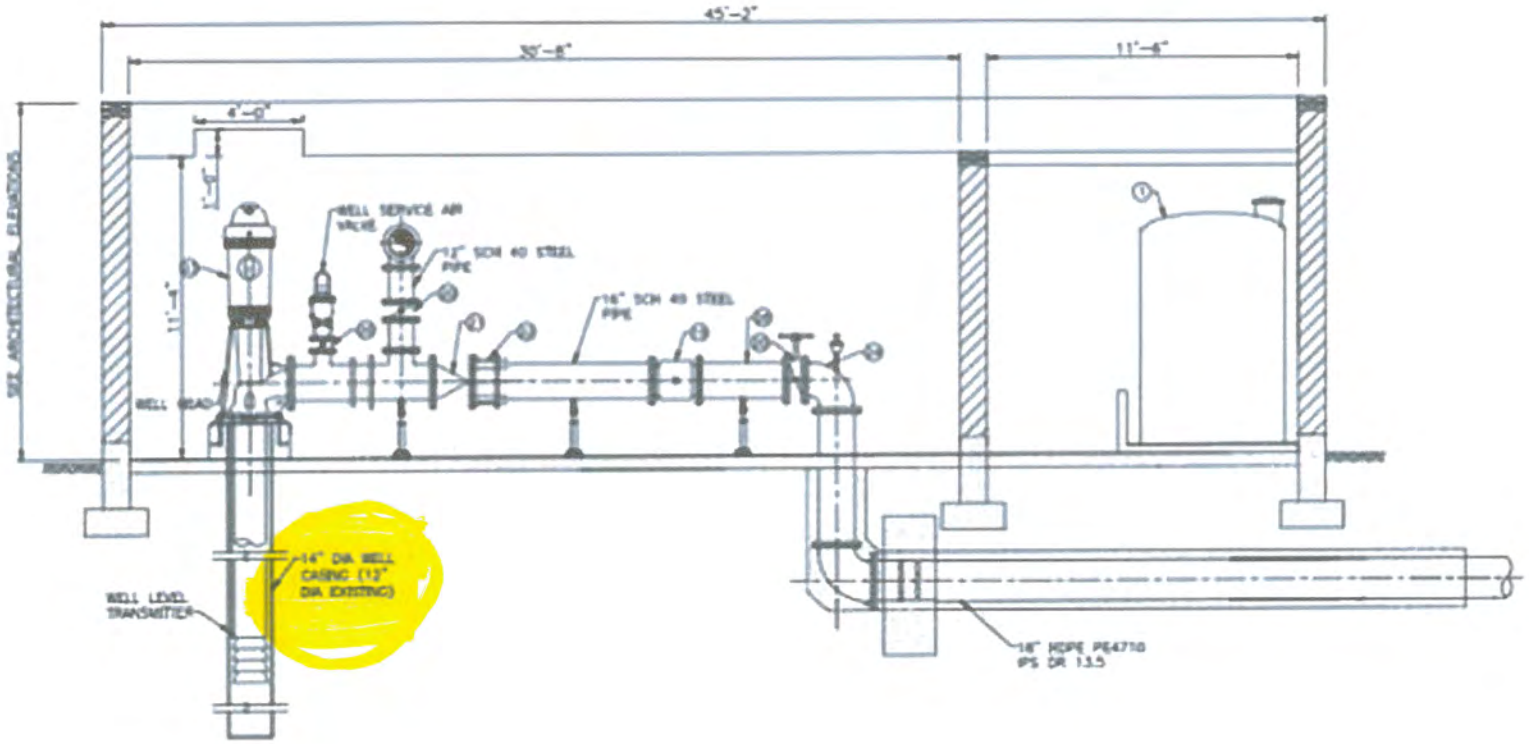
ER HEATER

SCONNECT/INCOMING POWER

SFORMER

CORDER
TRANSMITTER/READOUT
BREAKER
PER SWITCH
BASE
TED HVAC
MER TRANSFORMER

SMANTLING JOINT
GPM VERTICAL TURBINE PUMP
L W/ INTEGRATED CHECK VALVE
SHOWER
HER
AL SPILL CONTAINMENT MANHOLE
TANKLESS WATER HEATER



SECTION VIEW

May 7, 2020

JACQUELINE M. BISKUPSKI
Mayor

DEPARTMENT OF
PUBLIC UTILITIES

April 25, 2019

Alan Walker
alanjwalker1974@gmail.com

Re: Request for records C061976-041019

Dear Mr. Walker:

You have requested the following records from Salt Lake City Corporation:

"I submitted a GRAMA request regarding the Fourth Avenue Pump Project on April 3, 2019. To date that request has not been acknowledged. Therefore, this is a second submission.
1. Please provide the list of pump vendors contacted to develop the artificial lift (pump) alternatives.

The Project is in preliminary design. No Record.

2. Please list and explain the pump or artificial lift alternatives considered.

The Project is in preliminary design. No Record.

3. Please provide the list of measurement or water meter vendors contacted to develop measurement alternatives.

The Project is in preliminary design. No Record.

4. Please list and explain the measurement alternatives considered.

The Project is in preliminary design. No Record.

5. Please provide the preliminary and most recent cost estimate for the project.

The 4th Avenue Well Assessment Memorandum prepared by Dr. David Hansen of Hansen, Allen, and Luce Engineers was emailed to you on 04/16/20119 by Laura Briefer, Director of Salt Lake City Department of Public Utilities.

6. Please provide the preliminary and most recent construction schedule for the project.

The Project is in preliminary design. No Record.

7. Please provide the risk analysis or risk matrix done regarding bulk storage or plume propagation of chlorine and fluorine.

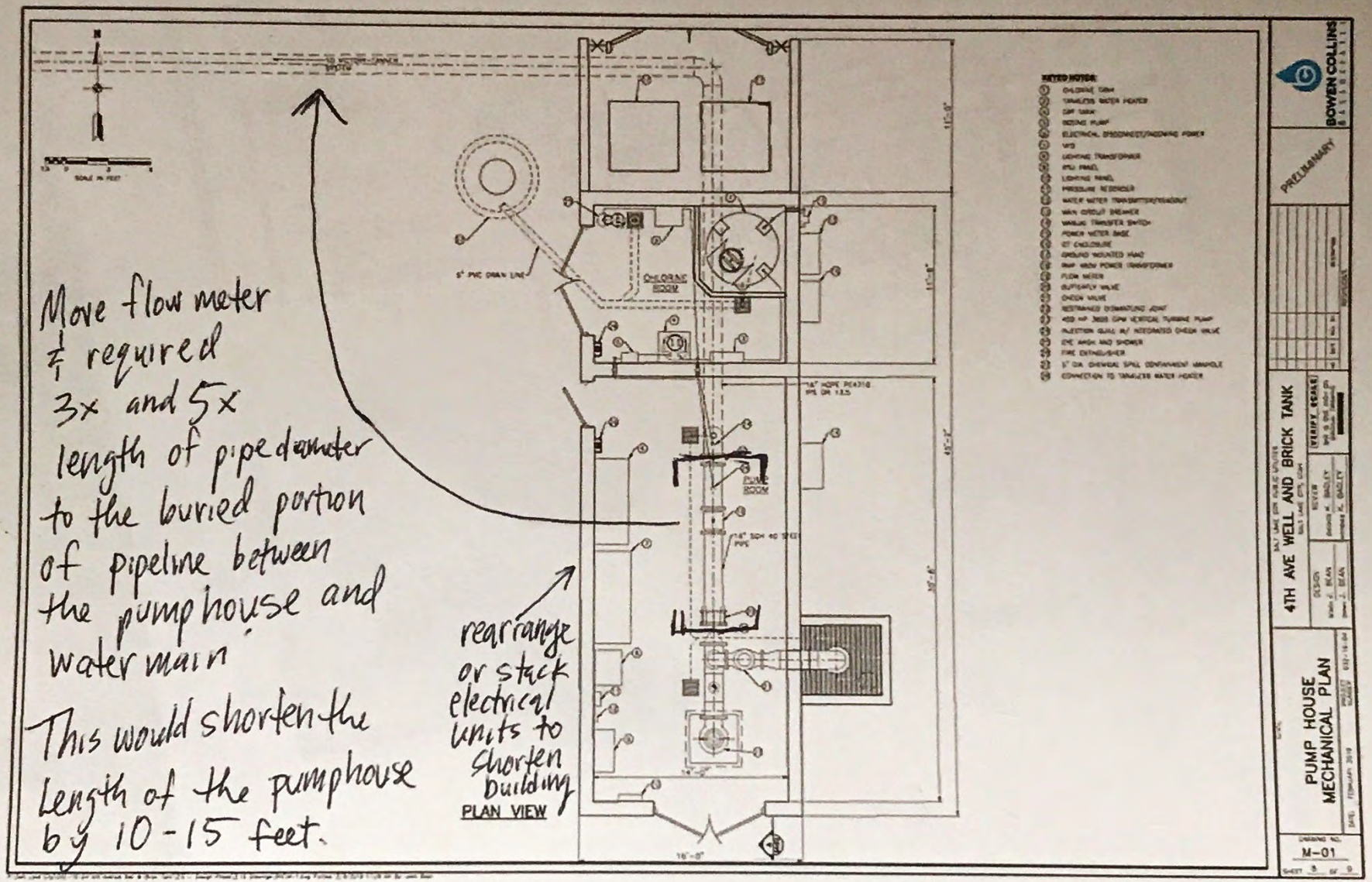
No Record, the project is not proposing fluoride or as you referenced fluorine. The chlorination proposed is liquid sodium hypochlorite (liquid bleach) and not gaseous chlorine.

If you are dissatisfied with Salt Lake City's response to your request, you may appeal to the City's Chief Administrative Officer by filing a written notice with the City Recorder within 30 calendar days after the date of this letter, pursuant to Utah Code § 63G-2-401. The notice of appeal must state your name, mailing address, and daytime telephone number and the relief you seek. The City requests that you also include a copy of your GRAMA request, if applicable. You may include a short statement of facts, reasons, and legal authority in support of your appeal. The address of the City Recorder is P.O. Box 145515, Salt Lake City, Utah 84114-5515.

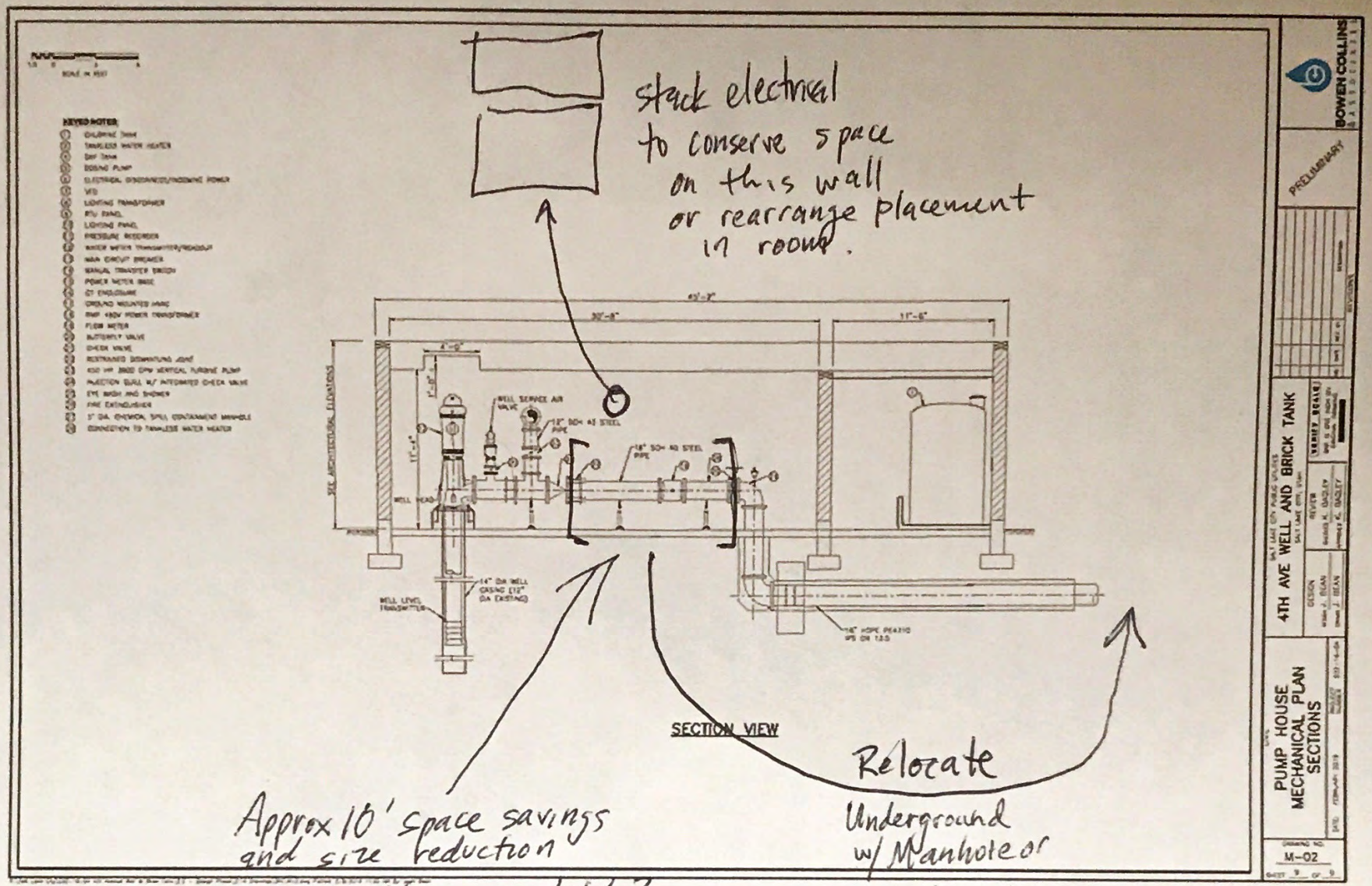
Sincerely,

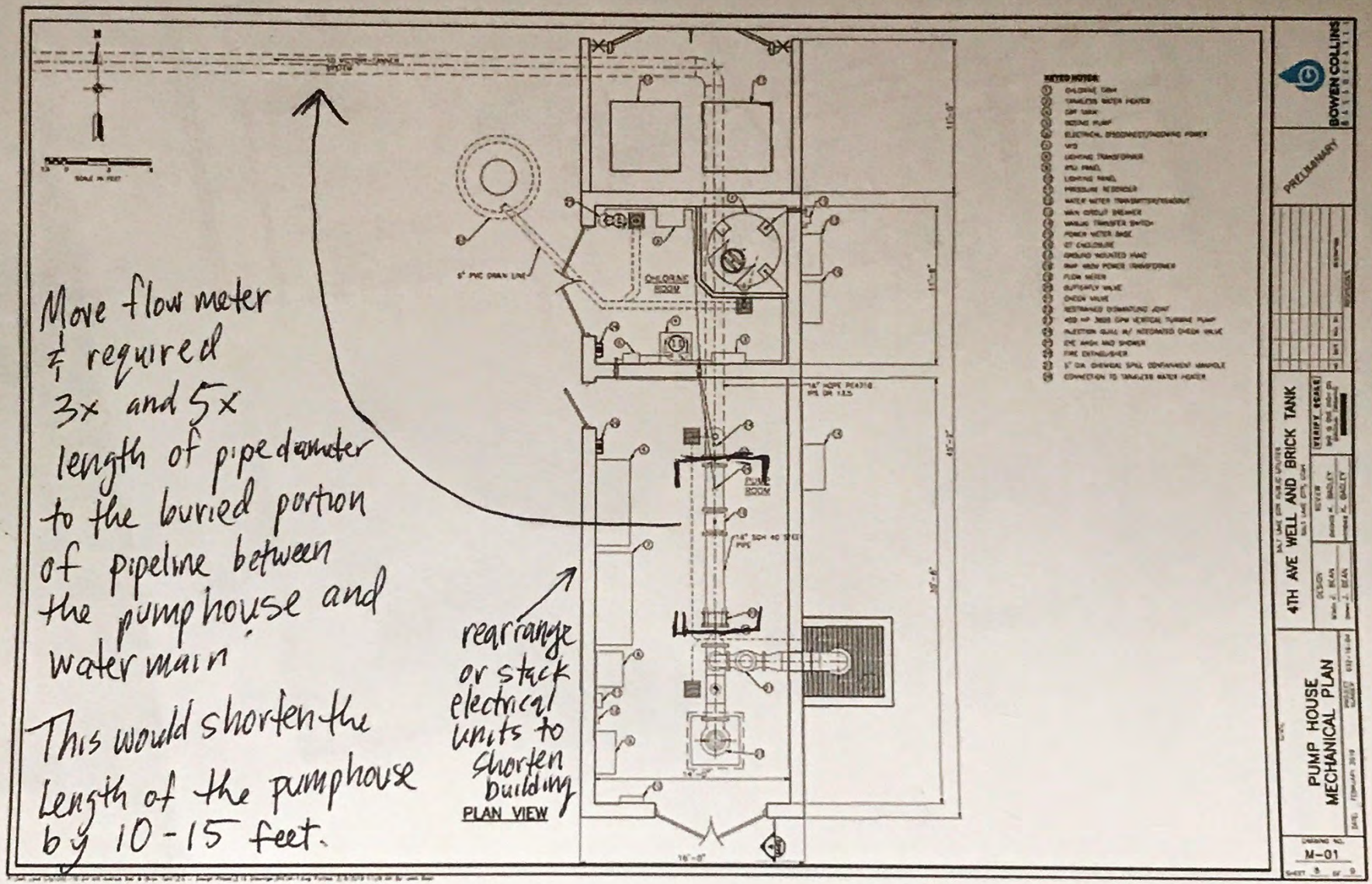
Laura Briefer
Director

cc: Rusty Vetter



Access the flow meter by manhole or similar in the street if ever needed for inspection / replacement / maintenance


stack electrical
to conserve space
on this wall
or rearrange placement
in room.
SECTION VIEW
Relocate
Underground
w/ Manhole or
similar Access
Approx 10' space savings
and size reduction
of building available?
4TH AVE WELL AND BRICK TANK
PUMP HOUSE
MECHANICAL PLAN
SECTIONS
M-02
PRELIMINARY
BOWEN COLLINS



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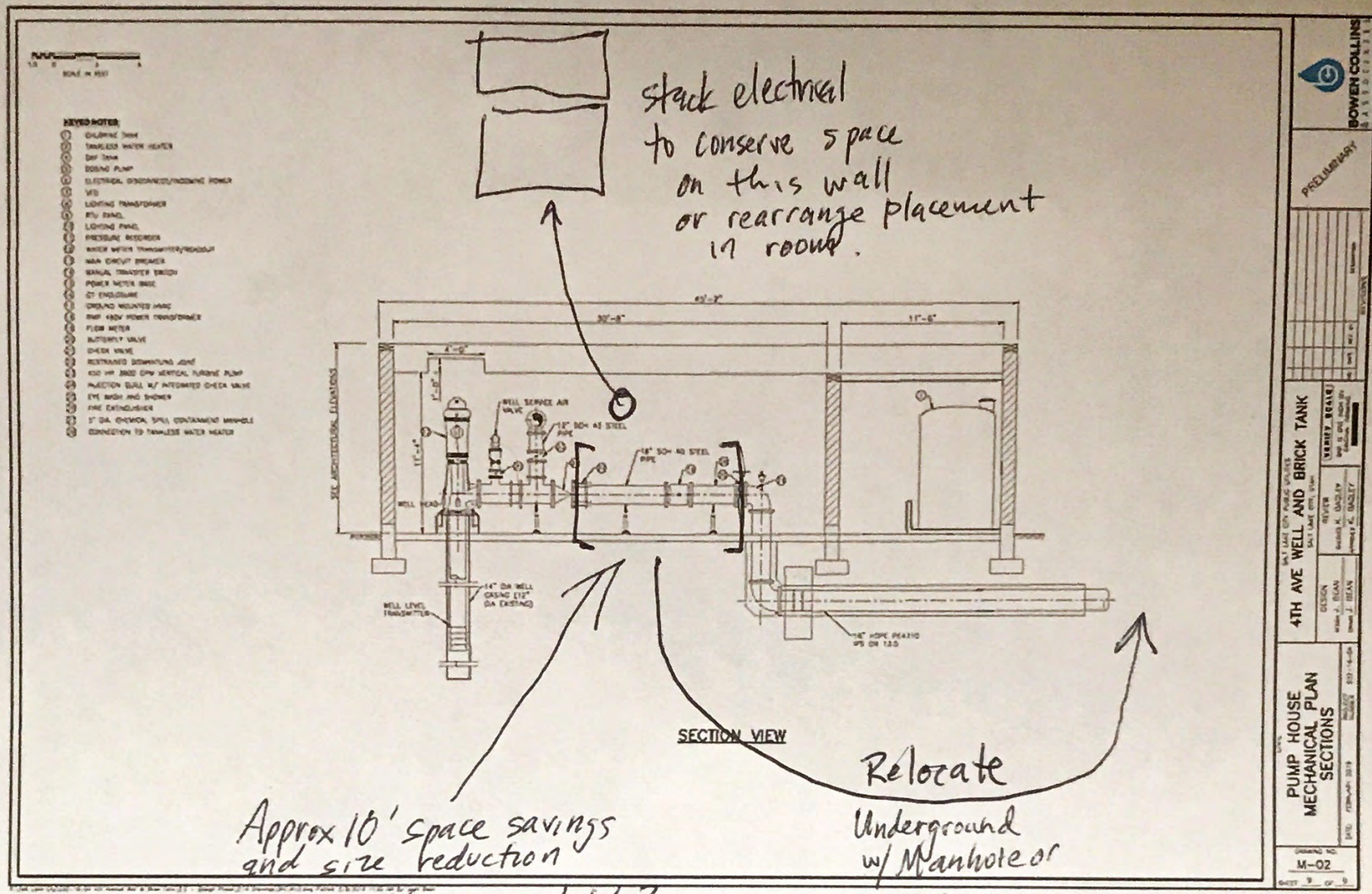
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4TH AVE WELL AND BRICK TANK
PUMP HOUSE
MECHANICAL PLAN
SECTIONS
M-02
PRELIMINARY
BOWEN COLLINS

Inventory of materials: City Creek, Memory Grove, Freedom Trail open spaces

compiled March 12-17, 2019 by Cindy Cromer

The linear park spaces are divided by block initially and then by features. Photographs are generally in the order listed except that photographs of the Freedom Trail precede ones from the west side of City Creek along the paved road. As the photographs indicate, the materials are overwhelmingly stone and concrete/aggregate/composite. I did not list metal park benches, metal containers for waste/recycling, or concrete sidewalks.

2nd to 3rd Avenue

Cobbles
-stream bed
-access ramp on the State St. side
-retaining walls (2 places)
-wall at intersection with 3rd Ave.

Sandstone
-both bridges
-edging for the stream bed
-seating tuffets (2 places)
-decorative pavers (not holding up well)
-bike racks

Aggregate/Composite
lamp posts

Granite
City Creek Park signs (2)

3rd to 4th Avenue

Cobbles '
-protective wall
-stream bed
-2 bridges, 1 with sandstone.
-curbing on west side

Aggregate/Composite
-lamp posts

Granite
-Crismon Mill marker

Sandstone
-Catherine Hofmann memorial

4th Avenue to Connector at 236 N Canyon Road

Cobbles
-bridge

-stream bed
Aggregate/Composite
-lamp posts

Connector to Memory Grove Gate

Sandstone
-wall along water feature
Aggregate/Composite
-entry designed by Slack Winburn
-lamp posts

Memory Grove Gate to the Austin Stairs

Concrete
-mid-century fountain
-Liberty Bell supports
-base of flagpole with metal plaques
Cobbles
-Rotary stairs
-stream bed
-bridge at the north end
Marble
-Korean memorial
-WW I Memorial with bronze plaque
-Beason Chapel and benches
Granite
-Medal of Honor memorial with concrete bench
-Field Artillery memorial
-bike racks (at the end of the photographs)
-marker at Rotary Stairs
-Pearl Harbor survivors
-top of the Dorothy Alexander podium#
Sandstone
-Afganistan memorial
-stairs to Beason Chapel
-bench at Beason Chapel
-stairs north of Memorial House
-drinking fountain across from Memorial House
-sidewalk on the east side of Canyon Road
-curbing
Aggregate/Composite
-lamp posts
-base of the Dorothy Alexander podium# with metal plaque
Stucco
-Memorial House
Brick
-the details on Memorial House The brick is a raked-faced unit and has been painted white along with the mortar so that the bricks and mortar appear to be

one material. A raked-faced brick would not have been original to the structure constructed in the 1890's as a stable.

Austin Stairs to the steel bridge (Freedom Trail) returning by the road

Concrete
-casing around drain with metal railing
-bridge
-bridge with arch*
-sitting area
-bridge with concrete arch (camouflaging utility pipe)
-base for granite sundial^

Cobbles
-stream walls
-retaining walls
-"gambion" retention structures (cobbles in wire)-extensive use
-pillars
-historic "patio"+
-curbing just above Memorial House on the paved road west of City Creek

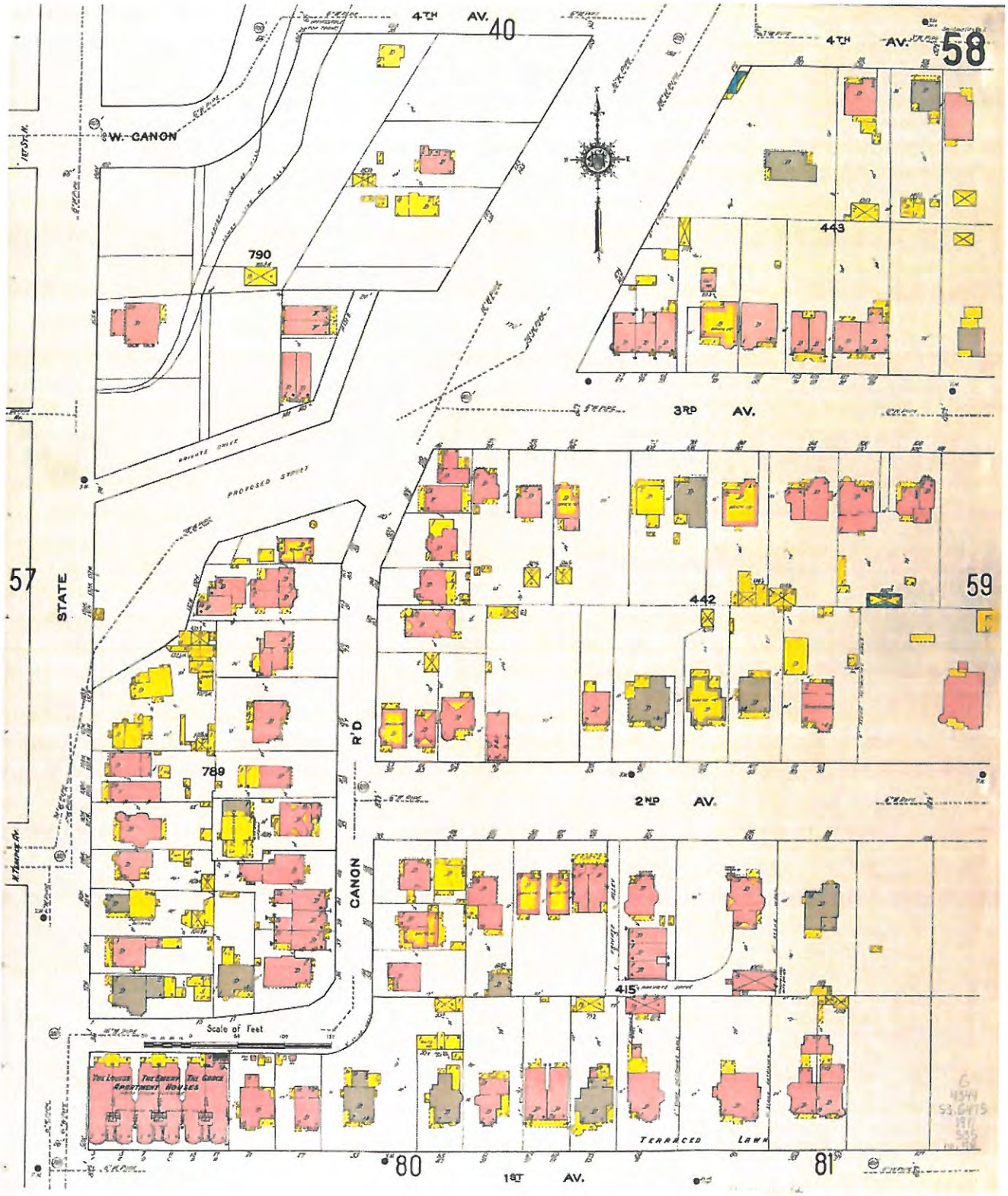
Sandstone
-detailing on arch mentioned* under "concrete"
-historic "patio"+ on the foundation

Wood
-pressure treated wood foot bridge
-slats on concrete benches
-stairs made of railroad ties
-fencing hiding Chevron's facility on the west side of the paved road west of City Creek

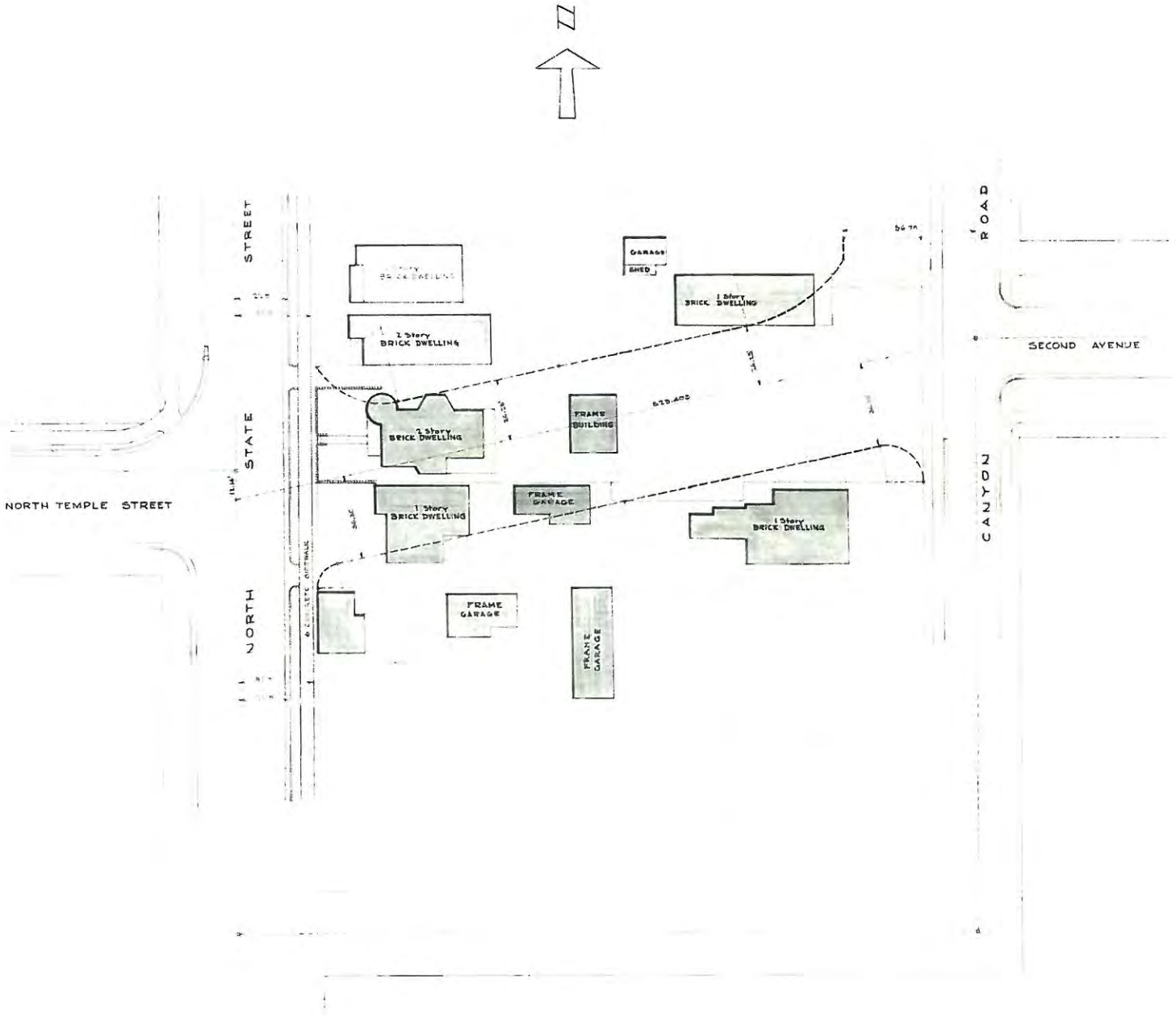
Mixed Stone
-curved bench
-boulders in sitting areas
-granite and concrete sundial ^ with stone pavers

Metal
-steles
-conduit resting on concrete
-oil pipeline
-metal bridges (2)

1911


4TH AV.
40
58
W. CANON
790
443
3RD AV.
PROPOSED STREET
57
STATE
59
442
789
2ND AV.
CANON
415
Scale of Feet
THE LOUISE
THE SHERRY
THE GRACE
APARTMENT HOUSES
TERRACED LAWN
80
1ST AV.
81


FOURTH NORTH ST.
SECOND NORTH ST.
CAPITOL
FIRST NORTH ST.
NORTH TEMPLE ST.
STATE
ST.
EAST
CAPITOL
CITY
ROAD
CANYON
1ST AVE.
2ND AVE.
3RD AVE.
4TH AVE.
5TH AVE.
6TH AVE.
CONTOUR MAP
OF
CITY CREEK PARK
SCALE: 1" = 200'
CITY ENGINEER'S OFFICE
SALT LAKE CITY
SYLVESTER Q. C
CITY ENG
FEBRUARY 1, 1921.
February 1, 1921



SALT LAKE CITY CORPORATION

PLAN SHOWING PROPERTY LINES AND LOCATIONS OF BUILDINGS IN VICINITY OF PROPOSED EXTENSION OF SECOND AVENUE FROM CANYON ROAD TO STATE STREET

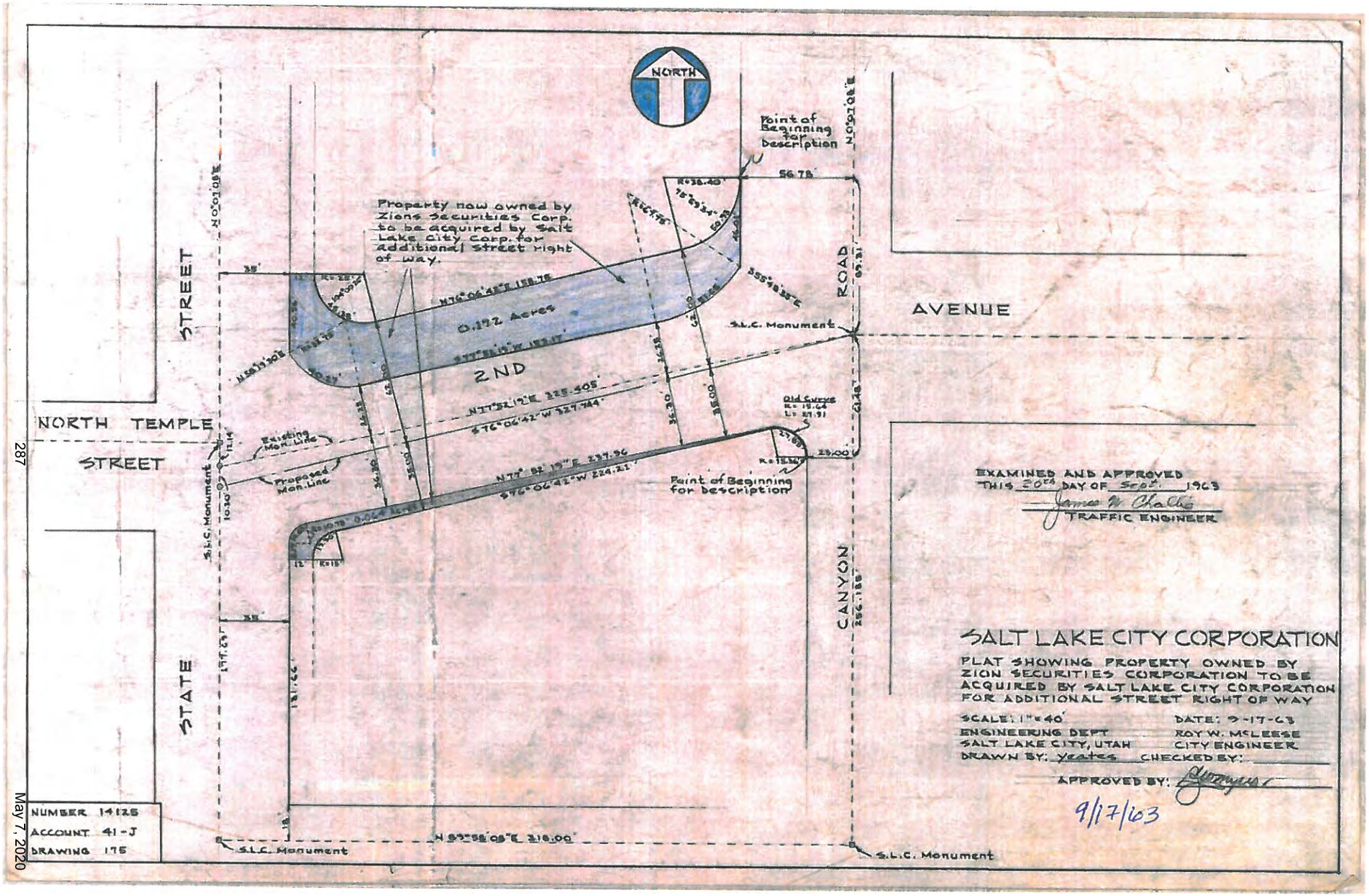
Scale 1" = 7a
Engineering Department
Salt Lake City

January 1955
Roy W. McLeese
City Engineer

Drawn by Lerron
Checked by

Approved by

January 1955



EXAMINED AND APPROVED
THIS 20th DAY OF Sept. 1963
James M. Challis
TRAFFIC ENGINEER

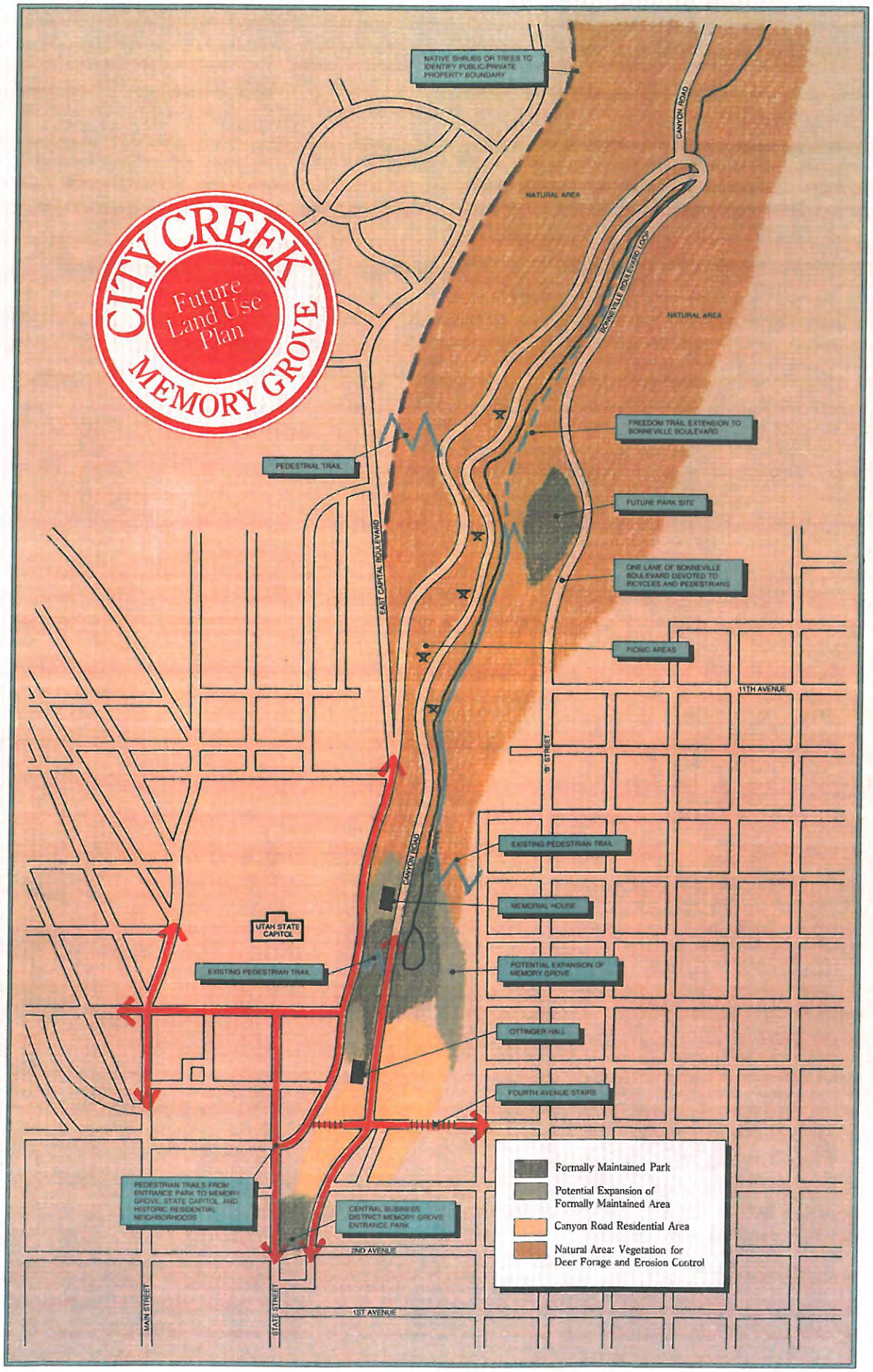
SALT LAKE CITY CORPORATION

PLAT SHOWING PROPERTY OWNED BY ZION SECURITIES CORPORATION TO BE ACQUIRED BY SALT LAKE CITY CORPORATION FOR ADDITIONAL STREET RIGHT OF WAY

SCALE: 1" = 40' DATE: 9-17-63
ENGINEERING DEPT ROY W. McLEESE
SALT LAKE CITY, UTAH CITY ENGINEER
DRAWN BY: Yeates CHECKED BY:
APPROVED BY:

9/17/63

NUMBER 14126
ACCOUNT 41-J
DRAWING 176



City Creek Master Plan
April 1986 p.3

From:	Dave Jonsson
To:	Craig Ogan; [redacted]; Lisa Livingston; Lindquist, Kelsey; cindy cromer; Ivan Weber; Alan Walker
Subject:	That dang well project
Date:	Wednesday, March 27, 2019 5:18:42 PM

You know from my posts that I oppose the chlorination plant at the 4th Ave. and Canyon Road well site not only because it will look bad, but because I adamantly believe it is not needed. I contend that the well has functioned perfectly fine in the 70 years it has been in operation (without chlorination) and moreover, it must have some kind of secondary utility for the city's water system because it operates only in the summertime.

I've been googling "salt lake valley water supply" and have found some interesting documents that seem to knock down the city's contention that this well must be treated to make the water safe.

Go to https://www.epicwaterfilters.com/blogs/news/salt-lake-city-water-quality-report-lead-fluoride and http://www.slcdocs.com/utilities/CCR.pdf and read down to where *well water is declared to almost never need treatment.*

Also interesting: this document from the Utah Department of Environmental Quality, https://deq.utah.gov/legacy/topics/fact-sheet/drinking-water.htm.

The city's plan to dump a water purification plant in our midst suffers under several major deficiencies.

First, the city has already developed and designed a $3 million full-on facility (which one of our neighbors aptly described as 'over-engineered') without any advance notice whatsoever to the residents who will be drastically impacted by the construction and then the operation; second, the historical value of this location cannot be overstated as the Pioneers' discovery of City Creek was the trigger that caused them to put down roots and build a city; and third, there has been no proffer of any kind that this is the moment in time when the chlorination of the well must begin.

Here I will repeat the question I have asked previously without getting an answer: How many people drink water straight from the untreated 4th Ave. well? My belief is *no one*, because the water merges with the city's system before it goes to any kitchen taps.

GIVE US A PUBLIC HEARING!

From: Dave Jonsson
To: Craig Ogan; Laura Cushman; Ivan Weber; [redacted] Lindquist, Kelsey; McIntire, Blayde
Subject: There"s now a chain link fence around our well area in the park. WHY!!!!
Date: Friday, February 15, 2019 7:38:06 PM

A CHAIN LINK FENCE HAS BEEN PUT UP AROUND THE WELL AREA AT THE PARK. NO REACHING ANY OF THE TREES AT THIS POINT.
WHY WHY WHY!!!!

MARCH 2018 LESSON, ARTIFACT, AND MUSIC

MARCH 2018 DUP Lesson

PIONEER MILLS AND MILLWRIGHTS

Ellen Taylor Jeppson

Chase Gristmill designed by Frederick Kesler (DUP Photo Collection)

One of the most important goals of Brigham Young in settling the Saints in the Utah Territory was self-sufficiency. Before leaving for the West, Brigham Young encouraged and admonished the Saints "to take along the best tools of every description; machinery for spinning and weaving and the dressing of wool, cotton, flax and silk, or models and descriptions of the same in relation to all kinds of farming utensils and husbandry, such as corn shellers, grain threshers and cleaners, smut machines, mills and every implement and article within their knowledge that shall tend to promote the health, happiness or prosperity of the people."

A flour mill was a critical need for a new community, making it possible to grind the grain grown by the settlers for use in their homes and to feed their animals. Converts to The Church of Jesus Christ of Latter-day Saints were highly skilled and had been trained in a variety of professions. This situation was certainly the case in the milling industry. The millwrights who would come to Utah were trained in great American milling centers such as New York, Baltimore, and St. Louis, and were prepared to use their talents to build and operate Utah mills.

East Millcreek Gristmill built by John Neff (DUP Photo Collection)

Allen D. Roberts, former Architectural Historian for the Utah State Historical Society, wrote:

Coming as they did from leading milling areas, the builders of Utah's mills had become acquainted with the most advanced technology the flour-making industry could offer. Also, as Mormons, they had a predilection for searching out and employing the finest systems available. Not surprisingly, Kesler, Chase, Neff, Crismon, Gardner and others brought milling machinery with them to Utah, or that after they arrived they made several trips east to obtain the latest improvements in gearing, wheat-cleaning machinery, and other equipment.

Brigham Young arranged for millwrights to be among the first to arrive in the Salt Lake Valley. Millwrights Isaac Chase, William Weeks, Archibald Gardner, John Neff, and Charles Crismon all traveled west in various companies with their families in 1847.

Although these millers were familiar with and trained to build highly efficient mills, there were several factors that limited their ability to build them. Foremost among these limitations was transportation. Before the coming of the railroad, the pioneers relied on animal-drawn wagons which could carry limited amounts of machinery. The new mills needed equipment that was cumbersome and heavy, and most of the available wagons were used to transport human passengers and other necessary domestic goods. Another limiting factor was the lack of capital, and milling equipment was expensive. Limited natural resources, particularly water and wood, which were needed in abundance to build and operate mills, made it difficult to find a place to build a mill even if the equipment could be obtained.

East Millcreek Gristmill
(DUP Photo Collection)

Empire Mill built by Frederick Kesler
(DUP Photo Collection)

Between the years of 1847 and 1849, four primitive, small-capacity mills were built. Charles Crimson built a chopping mill in the mouth of City Creek Canyon which was ready to produce rough meal during the first winter in the Valley. John Neff, a miller in Winters Quarters, brought his machinery to the territory in late 1847, with which he built a gristmill. More sophisticated than Crismon's, Neff's mill became the first white flour mill in Utah. In time for the wheat harvest of 1848, Isaac Chase built a gristmill, which was the predecessor of his adobe mill of 1852. Archibald Gardner built a mill on Mill Creek, just two miles below Neff's mill. It had millstones cut out of the mountain rock.

By 1869 there were nearly one hundred millers and millwrights in the Utah Territory. However, the accomplishments of three men including John Neff. Archibald Gardner, and Frederick Kesler cause them to stand out. They were responsible for the design and construction of about one hundred mills in the Utah Territory.

Winter Quarters Gristmill
(DUP Photo Collection)

Heber C. Kimball Gristmill
Bountiful, Utah
(DUP Photo Collection)

HEBER C. KIMBALL GRISTMILL

Heber C. Kimball Gristmill marker site consists of a gristmill replica, two original burr-type grist stones, and three pillars dedicated to three men involved in the building and operation of the mill. It is located in Bountiful, Utah, on the corner of Orchard Drive and Mill Street.

The Heber C. Kimball Gristmill replica was constructed in September 1937 by the Kimball Camp of Daughters of Utah Pioneers. The replica sits 30 yards east of the original burr mill. The mill is a 1:3 scale replica and measures nine feet six inches high with a depth of eight feet six inches and a width of six feet.

Daughters of Utah Pioneers Marker #25 is located on the front of the gristmill replica. This marker reads:

The site was surveyed August 1, 1852, and the mill (larger [largest] of it's [sic] time in Utah) was dedicated May 6, 1853. Built on rock foundation with solid adobe walls trimmed with red sandstone. This burr mill operated until 1892, when roller mills replaced this type.

George Quinn McNeil, a local trapper, assisted in the building of the mill. McNeil trapped black bears from the nearby Wasatch Mountains and brought them to the mill site where he trained them to work at the mill. When the work was completed, McNeil left the area to travel the United States and show his trained bears. However, the trip was cut short, as the bears misbehaved not too far into the journey.

For many years Bountiful Ward baptisms took place in the pond south of the mill. Millers, Daniel Davis, George Lincoln, George Winn, Richmond Louder, Charles Adcock, Wm. Adcock, Wm. D. Major.

In 1984, Davis County and Bountiful began construction of a debris catch site for Mill Creek which would sit in the same place that the gristmill stood one hundred years earlier. During excavation, two original gristmill stones were found. Although out of use and buried for nearly one hundred years, the stones were in remarkably good condition. Under the direction of the Sons of Utah Pioneers, the stones were put on display ten yards to the north of the gristmill replica created about half a century previously by Daughters of Utah Pioneers.

Heber C. Kimball Gristmill
Bountiful, Utah
(DUP Photo Collection)

Heber C. Kimball Gristmill stones
(Ellen Jeppson photo)

Kimball Gristmill
Farmington, Utah
Designed by Frederick Kesler
(DUP Photo Collection)

MARCH 2018 DUP Artifact

"RIDING/DRIVING GLOVES"

Where: **Grantsville DUP Museum**
378 West Clark Street
Grantsville, UT 84029

These white kid leather riding/driving gloves belonged to Hilda Anderson Erickson. They were probably made for her by the Goshute Indians in Ibapah, Utah where she and her husband had a ranch and she served as a midwife. Hilda came to Utah in 1866 from Sweden when she was seven years old, and was the last remaining pioneer immigrant when she died at the age of 108.

She was living in Grantsville at the time of her death. She gave these gloves to Dennis McBride, a Grantsville resident, when he was a young boy as he helped her with her yard work. Mr. McBride donated them to the Grantsville DUP Museum.

MARCH 2018 DUP Song

"The Way We Crossed the Plains"

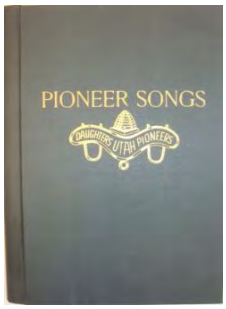
Pioneer Songs Music Book #299
Sung by T. Coral Mair on the 2017-2018 Music CD

In the early settlement of Utah men were called to take their ox teams and go to Omaha to bring back Saints who had emigrated from foreign lands. The trek was long and monotonous. So to pass the time away many of the drivers composed songs which told the story of their trip. This song by John Murdock's company was set to the tune of one of their familiar hymns, "When Shall We Meet Again?" The immigrants caught their valiant spirit, sang the songs, and grew to love them. "The Way We Crossed the Plains" is still sung at celebrations and pioneer meetings by the descendants of the Murdock company.

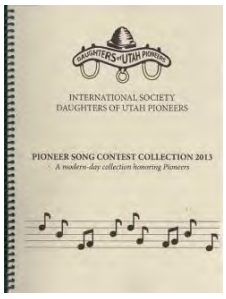
LeeAnn Nelson, Music Chairperson, ISDUP
Dr. Morris F. Lee, Instrumental Accompaniment

Front cover: The painting of pioneer women huddled near the handcart is by artist Julie Rogers. She has said, "I paint the stories for people to enjoy. I especially love the women of the trail." Her permission was graciously given to use this picture.

Songs include: Oh! Willie We Have Missed You; Rosy Neil; The Vacant Chair; I Heard The Bells On Christmas Day; Oh Dear! What Can The Matter Be?; Grandpapa; The Way We Crossed The Plains; Echo Canyon; Grandmother's Old Arm Chair; Salute To Our Utah Pioneers.



Pioneer Songs music book: compiled by Daughters of Utah Pioneers and arranged by Alfred M. Durham, was first published in 1932. Music for the pioneers served as a source of enjoyment as well as inspiration. The songs have a legacy, each one with a story that could be told about life's trials, hardship, and joy.



Pioneer Song Contest Collection: To commemorate Pioneer Day of July 24, 2013, ISDUP had a song writing contest of modern-day composers and lyricists. They wrote in honor of a rich pioneer legacy of faith, fortitude, courage, freedom and industry.

Eighty-nine entries, representing over eleven-hundred DUP Camps, were divided into six categories for assessment. The songs of all the winners and twenty "close contenders" entries are published in this collection.

This volume represents the first modern-day song collection ever printed in the history of DUP other than the original book of Pioneer Songs published in 1932.

The CD, Pioneer Song Contest Collection, and hardbound Pioneer Songs music book, are available for purchase at the Pioneer Memorial Museum in Salt Lake City or from our online shop at isdup.org.

From: Janice I Miller
To: Lindquist, Kelsey
Subject: Water treatment plant
Date: Friday, November 2, 2018 4:30:27 PM

Below is the email I sent 2 weeks ago to Chris Wharton, my Council rep. He says you are the appropriate person to contact.
Please notify me when a public hearing will be held, or a public comment period.
Thank you!

I've heard that the City plans to build a water treatment plant along Canyon Road just outside Memory Grove. I oppose this. Here's why:

1. As the City grows more and more dense, we are losing green space. I'm not sure what's happening in Pioneer Park, but soon it will not be a park any longer. The Canyon Road area is a park, and should remain so.

2. The building will be too big and too tall, for the site.

3. It will include a generator. Generators are noisy, and the last thing we need is more noise in the city.

I understand that the water treatment method the City wants to use cannot be built underground. But there must be alternatives, both as to treatment method and to location. No doubt the alternatives are more expensive. But we need to preserve the city's ambience.

I've not met you, but I look forward to doing so at some point.

I live at 211 Fifth Ave, #306. This is a condo building between A and B Streets. I love being able to walk down the hill and along City Creek, in Memory Grove and above. I appreciate that this is a relatively quiet area.

Thank you!