ALPINE CITY COUNCIL MEETING

NOTICE is hereby given that the **CITY COUNCIL** of Alpine City, Utah will hold a meeting on **Tuesday, October 11, 2016 at 7:00 p.m.** at Alpine City Hall, 20 North Main, Alpine, Utah as follows:

I. CALL MEETING TO ORDER*

A.	**Roll Call:**	Mayor Sheldon Wimmer
B.	**Prayer:**	Roger Bennett
C.	**Pledge of Allegiance:**	By Invitation

II. PUBLIC COMMENT: The public may comment on items that are not on the agenda.

III. CONSENT CALENDAR

A. Minutes of the September 13, 2016 City Council meeting
B. Minutes of the September 27, 2016 City Council meeting
C. Final Payment Request – Granite Construction for asphalt overlay projects - $137,775.49
D. Bond Release – Three Falls water tank - $150,480.00

IV. REPORTS AND PRESENTATIONS

A. Melanie Ewing, Alpine Days Director – Thank You.

V. ACTION/DISCUSSION ITEMS:

A. Parks Maintenance Building on 300 N. The City Council will decide on whether to formally study and evaluate the proposed Parks Maintenance building on 300 N.
B. Exploratory PI Well. The City Council will decide on whether to approve the drilling of an exploratory PI well on City owned property.
C. Camping at Lambert Park. The City Council will decide on a policy for allowing or not allowing camping at Lambert Park or at a section of the Park.
D. Replacing Sidewalks Damaged by Trees in the Park Strip. The City Council will decide if they wish to adopt a City policy that says that the City will only pay for the sidewalk repair of sidewalks damaged by trees in the park strip if the trees are first removed from the park strip.
E. Changes to Paulson Easement at Moyle Park. The City Council will decide if they will approve the proposed changes to the Paulson easement at Moyle Park.

VI. STAFF REPORTS

VII. COUNCIL COMMUNICATION

VIII. EXECUTIVE SESSION: Discuss litigation, property acquisition or the professional character, conduct or competency of personnel.

ADJOURN

***Council Members may participate electronically by phone.**

Sheldon Wimmer
October 7, 2016

THE PUBLIC IS INVITED TO PARTICIPATE IN ALL CITY COUNCIL MEETINGS. If you need a special accommodation to participate, please call the City Recorder's Office at (801) 756-6347 x 4.

CERTIFICATE OF POSTING. The undersigned duly appointed recorder does hereby certify that the above agenda notice was on the bulletin board located inside City Hall at 20 North Main and sent by e-mail to The Daily Herald located in Provo, UT, a local newspaper circulated in Alpine, UT. This agenda is also available on our web site at www.alpinecity.org and on the Utah Public Meeting Notices website at www.utah.gov/pmn/index.html

PUBLIC MEETING AND PUBLIC HEARING ETIQUETTE

Please remember all public meetings and public hearings are now recorded.

- All comments **must** be recognized by the Chairperson and addressed through the microphone.
- When speaking to the Planning Commission, please stand, speak slowly and clearly into the microphone, and state your name and address for the recorded record.
- Be respectful to others and refrain from disruptions during the meeting. Please refrain from conversation with others in the audience as the microphones are very sensitive and can pick up whispers in the back of the room.
- Keep comments constructive and not disruptive.
- Avoid verbal approval or dissatisfaction of the ongoing discussion (i.e., booing or applauding).
- Exhibits (photos, petitions, etc.) given to the City become the property of the City.
- Please silence all cellular phones, beepers, pagers or other noise making devices.
- Be considerate of others who wish to speak by limiting your comments to a reasonable length, and avoiding repetition of what has already been said. Individuals may be limited to two minutes and group representatives may be limited to five minutes.
- Refrain from congregating near the doors or in the lobby area outside the council room to talk as it can be very noisy and disruptive. If you must carry on conversation in this area, please be as quiet as possible. (The doors must remain open during a public meeting/hearing.)

Public Hearing v. Public Meeting

If the meeting is a **public hearing**, the public may participate during that time and may present opinions and evidence for the issue for which the hearing is being held. In a public hearing there may be some restrictions on participation such as time limits.

Anyone can observe a **public meeting**, but there is no right to speak or be heard there - the public participates in presenting opinions and evidence at the pleasure of the body conducting the meeting.

ALPINE CITY COUNCIL MEETING
Alpine City Hall, 20 North Main, Alpine, UT
September 13, 2016

I. CALL MEETING TO ORDER: Mayor Sheldon Wimmer called the meeting to order at 7:00 pm.

A. Roll Call: The following were present and constituted a quorum:

Mayor Sheldon Wimmer
Council Members: Lon Lott, Kimberly Bryant, Roger Bennett, Ramon Beck, Troy Stout
Staff: Rich Nelson, Charmayne Warnock, David Church, Shane Sorensen, Jason Bond
Others: Chris Dexter, Sullivan Love, Robert Kaelin, Ron Rasmussen, Kathy Rasmussen, Troy Page, Paul Bennett, Susan Paiser, Mike Paiser, Brandon Page, Kristen Shelley, Jeff Vincent, Barry Thorp, Pat Thorp, Marlene Arnold, George Buys, Holly Reynolds, Alice Cosper, Gayle Bangerter, Keven Towle, Robin Towle, Darrell Duty, Brian Peterson, Sylvia Christiansen, Will Jones, Andrew Diaz, Ryan Johnson, Holly Nash, Kian Carlisle, Kevin Carlisle, Constance Goeckeritz, Juanita Nield, David Schetselaar, Kristi Hamilton, Terry Brown, Nancy Brockbank, Wayne Brockbank, Brynna Brockbank, Loraine Lott

B. Prayer: Troy Stout
C. Pledge of Allegiance: Steve Birchall

II. PUBLIC COMMENT

Chris Dexter said he lived in Lindon, Utah but he wanted to address Lambert Park. He'd heard there were plans to pave the road from Moyle Drive to Box Elder. He suggested that they consider paving the watershed road to the south by the LDS stake center. He thought it would be a great alternate route. Mayor Wimmer said there was no proposal on the table to pave the road in Lambert Park.

Terry Brown said he lived at 1856 Fort Canyon Road. He thanked the Council and Mayor for their public service. He said he represented a number of people who would be afflicted by the reconstruction of Fort Canyon Road. They were looking forward to an improved road but they had concerns and wondered what they could expect as far as access to and from their homes. They understood that construction would begin in a week and traffic would be reduced to a single lane. The residents would like communication as to when and what kind of conveniences they would be experiencing. He understood there would be times of complete road closure when they were working on the bridge. He said communication was key.

Shane Sorensen said they'd had a meeting a week and a half ago regarding the road construction and invited all the Fort Canyon residents. About 20 people showed up. The plan was to develop a list of people's contact numbers so they could receive texts with updates and road closures. He stressed that the goal was to get the road built with as little inconvenience as possible. He said some residents felt they'd been left out in receiving information but that was because some of the information was not yet available. They would be starting with retaining walls on the lower end of the canyon. The goal was to widen certain areas so there would be room on the cut side of the road. People who lived at the top of the canyon would be most inconvenienced with the bridge was replaced. They anticipated that the road would be closed for a minimum of three days but there would be a walking path for the residents. The bridge would be a precast structure so it could be lowered into place with a crane which would be a much faster process. For those residents who didn't have texting capability, Will Jones would be contacting them.

There was a question about what would happen if there was an emergency. Shane Sorensen said they would push in the whole trench to let them through. Emergencies would take priority. Troy Stout asked about the putting the project information on the website with contact information for the contractor. Sheldon Wimmer said it could be a problem if it was not updated daily. Staff would have to rely on the contractor to communicate the most current information. The City was replacing the Parlant system with Everbridge which would be effective in notifying residents about road closures, shutoffs or emergencies.

Terry Brown said he would appreciate a rough calendar of events so people who lived in the canyon could plan accordingly. Will Jones said Marla Rogers would be sending out a calendar. Shane Sorensen said one of the

problems with a calendar was that if they didn't meet the dates, the City was the bad guy. Construction was not completely predictable. Rich Nelson advised that the residents not plan a big event if they lived at the top of the canyon.

Terry Brown said they had very poor internet up the canyon and wondered if that would improve. Currently they had Century Link and satellite but it didn't work very good. Shane Sorensen said the City couldn't ensure better internet service since they didn't control the utilities. They worked under their own rules. It took almost four years to get Comcast on the southeast section of town.

Robin Towle said she lived on Elkridge Lane. Her property was subject to a sewer easement for the development that was going in behind them. She didn't think things were being handled correctly or fairly. They came to a planning meeting but they were not personally given notice about the proposed development. She said she was not antidevelopment but they had not been invited to those meetings where the development was discussed and approved. She said that when rights were given to one person, they were taken from another person. She said she had understood that the sewer would run through the property that had been purchased from Myrna Grant and didn't think it would affect them. She said someone emailed her a copy of the state statute on annexations and property owners within 300 feet were supposed to get a letter and a map and they had not received that. In addition, the annexation agreement stated that the city would condemn property for a sewer line if the developer couldn't come to an agreement with the property owner. She said that development agreement took away their ability to negotiate. The developers didn't want to negotiate with them for a sewer easement because they knew it would be cheaper to have the city condemn it. She said there were a significant number of trees on their property that would need to be taken out for the sewer line. All of that would be done for ten lots and she didn't feel like it was it fair to tear up her property for ten lots. She'd received negative feedback from the city who said that the sewer line was in the sewer masterplan. She felt it needed to be changed. They could run the sewer line through on alternate route on the Grant property or put in a lift station. It would protect her home, investment, privacy and serenity.

Kimberly Bryant said that condemnations did not take place without a vote of the council. It wasn't automatic.

Troy Stout said he was frustrated that the developer was bullying a private citizen by telling them the city was going to condemn their property. He asked when condemnation became a part of the development agreement. Rich Nelson said that in any annexation there was always an eminent domain clause. A copy of the agreement was in the council packet. It said the city would prefer to have the developer work it out with the landowner. The city council had to vote for it if it came to eminent domain and they had some discretion The expectation was that every effort would be exhausted to come to a reasonable agreement.

In regard to lift stations, Shane Sorensen said they had problems and the City avoided them. There was one lift station in Alpine located on Ranch Drive. It had issues several weeks ago. He said the lift station had been approved before he started working with the City. No one wanted a personal lift station for their home. He added that the master plan showed a sewer line on the Towle property. When the plan was developed, everything was put at a low point so it could operate with gravity flow.

Robin Towle said the developer had an opportunity to buy her property. She thought the road was going to go through to Elkridge Lane. She and her husband asked the owner of the new development if he wanted to trade the sewer easement for a road out to Elkridge and he said no because his children played there. And yet he wanted to tear up the trees where her kids played. She said she'd receive a letter from a developer in town saying that people in the city had developed a very liberal attitude toward other people's property. That rang true to her. They should have received a notice and a map and been told it would affect their property.

Kevin Towle said he lived at 1360 Elkridge Lane and felt his wife had expressed their concerns very well. Regarding the proposed Alpine Ridge PRD, he said it was his understanding that the purpose of PRDs was to locate homes in more developable areas and put the open space in difficult areas. He suggested that if the developer was considering a PRD and open space, it would be better to redesign the property and relocate the home sites and open space. It would eliminate the need for a sewer. He requested that the Council not vote on the PRD proposal that evening but let the developer work it out and come back with a better plan. They should tell the developer that he couldn't build anything that couldn't operate through gravity flow. It was not the City's responsibility to take on that issue for the developer.

Nancy Brockbank said she lived at the top of Fort Canyon Road. Her family had received a text message the previous week that said the road would be closed at various times for construction on the bridge. She understood that the closure would be absolute, meaning there would be no access for vehicles or foot traffic for a minimum of three days. Six families at the top of the canyon had no access other than this road. She'd called UDOT who said it was in Alpine City's jurisdiction. She contacted an attorney and was asking the city attorney to enact an injunction on the developer until specific issues were addressed. First, the existing road was adequate. The bridge was to be an access to the new development so why was the bridge not on their property? Second, if the bridge was to be closed, there should be a foot path built before the road closure. Third, they'd been told they were supposed to park their cars in the church parking lot before the road closure. Did the developers have permission from the LDS church to do that? Fourth, for those who were not allowed to use the road and had to go to work and school, how would they be compensated if they had to stay in a hotel? Who would take care of the pets? The Dutys had chickens and goats and there were no pet hotels for them. Five, they had been advised to park at the church and walk up the canyon. It was 1.4 miles one way to her home. The construction was to continue through Christmas and there would be no snow plowing. Who would bear the liability for slippage and broken bones? Six, would the utilities be turned off during closure? To conclude, she said that before any construction was begun, a comprehensive plan should be presented with input from the neighbors.

Shane Sorensen said the bridge was completely inadequate. It had plugged several times during flood and flowed over the road. He said he was at the meeting with the residents and no one was told that the residents would have to walk from the church to their homes. There would like be some kind of shuttle service. Mrs. Brockbank said that if a shuttle could get through, why couldn't cars get through?

Shane Sorensen said there were specific challenges with the road and one was width. Whatever plan they came up with, the foremost goal would be for it to be the least inconvenient. At the very minimum there would be footpath when the road was closed.

Mrs. Brockbank said that not only had they lived with a narrow road, now they would be expected to live with no road. She asked why they didn't build the road over the top of the mountain first? Rich Nelson asked Mrs. Brockbank to email her legal questions so he could send them to the city attorney.

III. CONSENT CALENDAR

A. Approve the minutes August 23, 2016

MOTION: Lon Lott moved to approve the Consent Calendar. Troy Stout seconded. Ayes: 5 Nays: 0. Motion passed.

IV. REPORTS AND PRESENTATIONS: None

V. ACTION/DISCUSSION ITEMS

A. Public Hearing – Urban Deer: Mayor Sheldon Wimmer reviewed the etiquette guidelines for public hearings and said each person would have three minutes to comment. He said there had been a lot of misinformation floating around the community regarding the deer. First, the city was not planning to raise taxes to deal with the deer. Second, the city was not trying to circumvent the deer survey. It had been posted on the city website in its complete form. If anyone would like a copy of it, the city would provide it. The public hearing on the deer had been posted in multiple places and was available for the public to view. He then opened the hearing to public comment.

Kirstin Shelley said she lived on Country Manor Lane. She said the deer committee report was basically what Mr. Higbee had reported the previous year. She said she didn't know if there were members of the committee with differing points of view. They had met for six months and just released their findings and it looked like it was too late to do anything this year. She said 50 years ago the deer were mostly destructive to the orchards and were naturally thinned by the winters. She built her home on the east bench and the deer thought it was a five-star hotel. The deer were no longer dying in the winter and they needed to thin the herds. The City leaders had refused to act on the problem and the deer presented a danger to vehicles. She'd had nine deer run in front of her car. Another deer

ran into her neighbor's car. A few months earlier her daughter was driving and a deer ran into her car and bounced off the windshield. The glass didn't break but her daughter was very shook up. She asked the Council to please thin the deer herd and start at her house.

Kimberly Bryant said she was the one who suggested they form a deer committee and it was made up of people with views from both sides of the issue.

Holly Reynolds said she lived on east Village Way. They didn't have a fence. There was deer poop in their yard from the constant presence of the deer. It was a public safety issue. She had children and they'd found three deer carcasses in their trees. It was dangerous for people and other animals. She had a daughter who found a fawn and touched it which resulted in a severe allergic reaction. She'd been sent a picture of deer sparring in people's backyards. She said these were wild animals but they were becoming comfortable in her space. They needed to thin the herds and let nature take its course.

Troy Page said he lived on High Bench Road and he was becoming very comfortable in the deer's space. His family had built in Alpine 50 years ago and he was a supporter of the deer being left alone. They probably had the largest deer herd on High Bench. Last year he'd see 50 head. He said that if they were going to discriminate against deer, they should also do something about the skunks and raccoons and squirrels. They did more damage than the deer. If they were going to pick on one animal, they should pick on all of them. Or better yet, leave them all alone. He said we had built our homes in their kitchen. He said he didn't care if they ate his shrubs.

Alice Cosper said she lived on Village Way. She said they had built in deer territory but they had multiplied more rapidly than they had in 25 years. They had to replace 95% of their shrubs. They lived in the yards year-round. They used to be in the yards just part of the time.

Holly Nash said she lived on 800 South and didn't think there were tons of deer where she lived. She didn't see the devastation spoken of. She said she was a school teacher and felt a little education would go a long way in learning to live with the deer. She suggested they have an education center about nature and about all the animals. People could become educated about them and learn the best practices of living with them.

Sullivan Love said he lived on Scenic Drive and he wanted to be a voice for the deer. He'd lived there for 17 years and in the winter there was a constant trail across his yard but he hadn't seen that lately. There were fewer deer. He said he loved to have the deer in his yard pruning his shrubs.

Brian Peterson said he lived on Blue Ridge Lane. Last fall he talked to a lady who had hit a deer. It was injured so he put it down and was charged with discharging a firearm in city limits. In spite of that, it felt the deer were a worthwhile inconvenience. It was something for the kids to see. With our busy lives, people wanted to push all the inconveniences aside. He suggested they learn to slow down. He said he hoped the city would protect the deer.

Ryan Johnson said he lived in Alpine Cove and while he wasn't a resident of Alpine, he was voting to be annexed. He said that when they purchased their lot they saw deer and that was why they bought the lot. When his father moved to Alpine 40 years ago, there was a heard of elk that used to come down into the neighborhood but they were gone. He said they didn't see the deer they used to see. They were trying to reclaim their yard and make every effort to find out what was natural and native. He said the deer hadn't touched it but they did eat the things they planted for them to eat. He said their kids loved the deer and they loved Alpine because they could drive through and see the deer. He asked how anyone had purchased a home or lot, and did not see several deer in the parks and streets?

Darrell Duty said he lived on Fort Canyon Road. He moved to Alpine for the deer and the wild turkeys. He was a bow hunter and he used the meat he shot, but he loved the wildlife, too. That was why he moved here. He added that those animals may be their walking food storage.

Brandon Page said he lived on Center Street. He pointed out the panoramic picture of Alpine on the wall behind the councilmembers. He said it was not a picture of downtown Salt Lake City. It was deer country. If people didn't like the deer, they should move back to Salt Lake. The deer didn't live in our country. We lived in their county, and the deer multiplied because that was what God meant for them to do.

Mike Paiser said he lived on 500 East 100 South across from the park. He appreciated the park but he didn't appreciate the deer. He was a gardener and he didn't like the deer in his garden. He said he had lived in Alpine for 37 years and they were eating things they'd never eaten before. He said he was in favor of thinning the herds.

Kay Vincent said she lived on south Scenic Drive and they loved the deer. There were four bucks that spent most of the day underneath her deck. They chewed off the tops of her tomatoes but she found a spray for that.

Vickie Birchall said she lived on Pine View Drive and had been in Alpine for 33 years. They loved the deer. She was sorry for those who had bad experiences with them and sorry people had been hurts. When they moved to Alpine it was total wilderness to the west and south. Now there were more dead deer on the streets than there used to be. She said she had a list of plants that the deer would not touch. She said they moved to Alpine because of the nature and wildlife. They were in their territory. The deer were beautiful sweet animals that did not purposely want to hurt them. Maybe people who didn't like them should move to where they didn't have to worry about the deer. 65% of the people in the survey voted to keep the deer.

Sylvia Christiansen said she lived on High Bench Road. There were a lot of deer up there. She'd seen instances of people speeding. Maybe they needed more signs that said 25 mph and it would help them avoid hitting the deer. She said they bought a house next to five undeveloped acres and they loved the deer, but she had seen an extreme decrease in the number of deer. On the practical side, she said people could put up a fence, but she liked having the deer clean up the apples underneath her trees. Her grandkids loved to come to Alpine and see the deer. It was unique in Alpine to have the deer

Brynna Brockbank said she had lived in a lot of places with wildlife and she loved the deer. She had lived in places with cougars and bears and that was one of the reasons she loved it here. She was a transplant to Utah. Deer were one of the things that got her through a bad day. The world was bigger than what we are going through. The deer reminded her of that.

Steve Birchall said he didn't understand why it was even a discussion when an overwhelming majority loved the deer.

There were no more comments and the Public Hearing was closed.

B. Urban Deer Plan: Kimberly Bryant said she sympathized with people who had a problem with the deer. Fourteen years ago when she started on the Council, it was a problem. She personally loved the deer. They were surrounded by mountains and there were a lot of deer. She said a kid texting while driving was a thousand times more dangerous than the deer. They needed to obey the speed limit. The survey did say that most people do not want the deer killed. But the issue did keep coming back. It was time as a council and a community that they did something. If they killed the deer, they would come back. She suggested they be like Colorado and learn to live with the wildlife. Embrace the situation because they had mountains around them. There were things they could implement. They had a lot of summer deer. They could collar the summer deer and see how many there were. She said there were fewer deer than there were 48 years ago.

Troy Stout said he agreed with Kimberly. He didn't know if there were more deer in Alpine or not but he did know that the deer were more comfortable with humans. When he tried to shoo them out of his yard, they just looked at him. They were not afraid of people. They were acting more like pets. The biggest issue was that they had resident deer that were not migrating. They needed to put something into action that got results. He was not necessarily in favor of killing them. There were humane ways to attract them to the places they needed to be. Some of things they had talked about in an earlier meeting was rehabilitating some areas and providing water sources in the foothills. Thin out the scrub oak so they could have a place to bed down.

Ramon Beck said they would need to work with the deer.

Lon Lott said he felt it was important to look at the sources recommended by the deer committee. He had called Robby Edgell from the Division of Natural Resources (DNR), and met with him and Troy Stout earlier that day. Mr. Edgell was a biologist and felt revegetation was an option. He was working with communities to get more feed into areas where there was less feed and get the deer to move out. The deer were the responsibility of the DNR. The

citizens were the responsibility of the Council. Both needed to be good stewards. Even though 60% of the respondents didn't want to do anything with the deer, there was another portion of the community that had equally strong feelings. He felt wildlife education was central to any plan. He planned to propose a few things that evening and recommended they get moving on it. He was in favor of getting some deer collars. DNR was willing to help with the control process.

Roger Bennett said a lot of citizens wouldn't like his opinion. He said that 150 years ago there were fruit farmers in the valley and when his grandfather came to Alpine, there were no deer but there were elk. In the 20s the deer came. He said they had farmed up Fort Canyon without having to put in fences. People planted orchards in the downtown areas and didn't have to fence them. In the 70s, the deer came into town and had never moved out. There were more deer in the downtown area than there were in the mountains. He said he fenced his yard. He didn't personally care if they killed the deer or let them stay, but for those who wanted to let them stay, they would multiply. Then when they had a hard winter, there would be a lot of dead deer from starvation. In response to a question he said that in the 50s the deer were on the mountains in the summer then migrated down in the winter.

Kimberly Bryant said she had neighbors who had men in camouflage gear come into their backyard and tell her that Alpine City had given them tags to kill deer. They needed to be careful what they said because they didn't want people from out of town thinking they could come into Alpine and start killing deer.

Troy Stout said he thought it would be a good idea to have DNR provide a bullet list of what is legal to do to keep the deer out of yards. Kimberly Bryant suggested they call Midway City and find out what they did. They loved their deer and in some places it was illegal to build a fence that blocked their migratory paths, but the city worked with the citizens to coexist.

Sheldon Wimmer said that in Capital Reef they had orchards. Some were fenced and some were open. The genetic composition of the deer had changed and the deer were smaller. They were seeing beautiful racks but not beautiful bodies. The does were young, and the doe to buck ratio was high. He said the deer population was hitting a peak. Referring to Roger Bennett's comments, he said that when the Mormon pioneers came to the valley, there were no deer but there were antelope and bison. Up until 1964 and '65 there was the Alpine Cattle Company. They turned them up into the mountains for grazing then in 1964 they built terraces to stop the flooding, and took the cows of the hillsides. By the 1950s, they were seeing deer that were starving because the grass was removed by the livestock. Since then there had been a climb in the number of mule deer. It was a closed system in Alpine and the population increased. They saw more deer starving in 1983 and people started feeding them. When they had a hard winter, it naturally culled the deer. He said that Troy Stout had mentioned legal methods of shooing the deer off someone's property. In Highland where they shot the deer and utilized the meat, they'd found the venison had so many pellets in it that it wasn't good. Paintballs were better.

MOTION: Lon Lott moved to create an ordinance that prohibited the willful feeding of deer, elk and moose in Alpine City, which was one of the requirements of the DNR, and propose a plan to revegetate the area above Alpine. Troy Stout seconded. Ayes: 5 Nays: 0. Lon Lott, Troy Stout, Ramon Beck, Roger Bennett, Kimberly Bryant voted aye. Motion passed.

David Church said merely voting on the motion wasn't enough. They would need to draft and pass an ordinance with a penalty.

Lon Lott also recommended moving forward with an education program with support materials and a nature center website. He suggested they give permission to Robby Edgell to trap and collar deer in Alpine. It would be done at the expense of the DNR. He said Mr. Edgell said Alpine was different from other communities and they would like to study the deer in Alpine. They were interested in their migratory movement.

MOTION: Lon Lott moved to begin a proactive education program and inform citizens what could be done legally to minimize the impact of the deer, have a nature website and have volunteers educate the citizens about coexisting with deer, and allow the DNR to collar deer in Alpine as a step in implementing a plan for deer management and begin an application for deer trapping. Troy Stout seconded. Ayes: 5 Nays: 0. Lon Lott, Troy Stout, Ramon Beck, Roger Bennett, Kimberly Bryant voted aye. Motion passed.

C. Alpine Water Report: Shane Sorensen said the report was quite lengthy but the bottom line was that there were water projects that needed to be done regardless of whether or not they annexed more property into the city. What improvements were done would depend on what was annexed. He had prepared a list of things that would be needed which was included in the packet. In addition, they were working on a masterplan update. They would need a new well and they were currently looking at potential sites. Rich Nelson said Mr. Sorensen had come up with a brilliant idea of locating the well on property the City already owned.

Shane Sorensen said they were looking at the property to see if it would be a good well site. There would need to be a 12-inch transmission line and storm drain. To drill and equip a well took one to two years. They had some money to put toward the well but with the list of other improvements, they may have to bond. There were also some changes in the existing system that they could make. He said the water users in the current system were using more water per acre than they had anticipated which created problems with water pressure. They could put in larger transmission lines but that would be expensive and would involve tearing up the streets. If there was one that made sense, they would come back with that information. They were also looking at the CUP option. There were other smaller projects that could help the pressure situation. One of the big problems they'd had was that they a couple of wells go down. The previous weekend they had a pump go out. It brought attention to the fact that they needed to be proactive in the water projects. One of the things they needed to do was install the meters which were previously approved by the Council.

Mayor Wimmer said it was critical that they begin metering the pressurized irrigation water because people were not complying with the water restrictions.

Shane Sorensen said there was new technology that could be used to troubleshoot wells. They used an infrared camera that went all through the pump houses and detected the heat which created problems They had already rated the problems in the pumps. They would install a cooling system, either a refrigerated unit or an air conditioning unit.

Mayor Wimmer said they had some really dedicated people working for the City. Greg Kmetzsch was in charge of monitoring and taking care of the wells and he was doing a tremendous job, working long hours and weekends.

D. Resolution No. R2016-09, Utah County Crimes Task Force Interlocal Agreement: This item was postponed at the request of the police chief who was out of town.

E. Moyle Park Fence: Rich Nelson said the Diaz family owned property adjacent to Moyle Park. There had been a disagreement about the location of the property line so a survey was done and that issue was resolved. The other issue was the fence itself. Andrew Diaz said that a previous mayor had agreed to have the city pay half the cost of a Trex fence to match other fencing on his property. With the relocation of the parking in Moyle Park, he would have cars and lights next to his property.

Rich Nelson said his understanding was that the City would participate in the cost of a chain link fence. Mr. Diaz had obtained two bids on a Trex fence. One was for $15,016. The other was for $12,667. The cost of a chain link fence was $1,400.

It was explained that there had been some old growth scrub oak between the Diaz property and Moyle Park which provided a screen between the properties. During a city cleanup day, the scrub oak had been taken out. The scrub oak was on the Moyle Park property. Mr. Diaz said his privacy had been lost when the brush was removed and he wanted to city to help pay for the cost of a fence.

Roger Bennett asked if the City had plans to help build fences for all the people whose property bordered city property such as Lambert Park.

Troy Stout said that Moyle Park was city property and they had a right to alter their property. The question was how good of a neighbor they wanted to be. Kimberly Bryant said the Council should decide what they willing to pay toward the fence and Mr. Diaz could pay the rest if he wanted something different.

Roger Bennett asked how much chain link with privacy slats would cost. He said he would be willing to go half of the cost on a chain link fence with privacy slats.

Shane Sorensen said the city had parks and open space all over the city. The city should be able to remove brush from their property without paying to install fencing. He said the City had never paid for a fence before. The closest thing they had done in the past was to install a chain link fence on the city property inside Creekside Park because they didn't want fifteen different kinds of fences bordering the park. They had installed black-coated chain link fencing.

Sheldon Wimmer said he'd met with Hunt Willoughby who said he had talked about a chain link fence. Mr. Diaz said he had taped the conversation on his phone and the mayor said the City would either pay for half of a Trex fence or all of a chain link fence. He said he would play it for them if they wanted.

Shane Sorensen said the issue had never come to the City Council for a vote. Roger Bennett said a mayor could not make decisions for a city council.

Shane Sorensen said there were eight to ten properties that bordered Moyle Park. If they put in a Trex fence for Mr. Diaz, all the neighbors would want one. He said he didn't think it was right that someone should expect the neighboring property owner to provide privacy for him.

MOTION: Troy Stout moved to find the total cost estimate to replace the fence with a powder-coated chain link fence with privacy slats and make that contribution toward the fence. Kimberly Bryant seconded. Ayes: 4 Nays: 1 Troy Stout, Kimberly Bryant, Lon Lott, Ramon Beck voted aye. Roger Bennet voted nay.

F. Canyon Crest Road/Ridge Drive Parcel of City Owned Property: Sheldon Wimmer said this was the piece of property the Council discussed at their meeting of July 26, 2016 when the Council voted to sell the entire parcel at corner of Canyon Crest and Ridge Drive (except for a small portion containing a city sign) to the adjacent property owners. Since that time, staff discovered that a storm drain ran through the parcel. Laura and Tom Lefler were still interested in acquiring a tiny triangular piece of the parcel (about 580 square feet) which was adjacent to their property.

Rich Nelson suggested that the Council approve giving it to them on the condition that the Leflers paid the cost of replatting the subdivision.

Roger Bennett said he would sell it to them at fair market value. He didn't want to set a precedent of giving away public property.

MOTION: Roger Bennett moved to sell the triangular piece consisting of 580 square feet with no street frontage at fair market value to the Leflers if they wanted to buy it. Troy Stout seconded. Ayes: 5 Nays: 0. Roger Bennett, Troy Stout, Ramon Beck, Kimberly Bryant, Lon Lott. Motion passed.

David Church said they would negotiate a price and bring it back to the Council for further action.

G. Encroachment on open space. Rich Nelson so there were places throughout the city where adjacent property owners had encroached on public open space but they would begin with the two that seemed to be the most egregious. One was brought to the attention of the Council by Troy Stout and was located next to a trail. The other one was located at 300 North and Bald Mountain. The first step would be to send the code enforcement officer out to evaluate the encroachment then write a letter to the offending property owners and ask them what they were going to do about it. If they didn't respond, they would turn it over to the prosecuting attorney.

H. Lone Pine Subdivision Concept Plan: Jason Bond said the proposed subdivision consisted of 9 lots in the CR-20,000 zone on 5.68 acres and was located on 300 North on property belonging to Clive Walter. The Planning Commission had approved concept approval. This was for information only.

Troy Stout asked if 300 North would be widened as part of the subdivision development. Shane Sorensen said it would only be widened to the boundary of the property.

I. Three Falls Subdivision Amendment, Plat D – Will Jones: The amended plat would involve 14 lots on 806.35 acres. The overall development consisted of 57 lots on 806.35 acres. Jason Bond said that when the developer began working on the infrastructure for the subdivision, it became clear that the terrain would require some adjustment in the approved layout. One lot would be eliminated and thirteen lots would be reconfigured. The private and public open space would also be reconfigured and would be minimally reduced, but since the developer had already provided more than adequate open space for the entire subdivision, the open space requirement would not be affected. A better road design would reduce the need for retaining walls. According to the review by Jed Muhlestein, the amended lots met the slope requirements and the road and grading portions of the plan were acceptable. The secondary access road was required to have the same design as the other secondary access on the property, which was 20 feet of asphalt with curb and gutter on both sides. Changing the lots would require alteration of the water policy.

Shane Sorensen said staff recommended that lot 57 have driveway access from a full-width public street and not from the second access.

MOTION: Troy Stout moved to approve the Three Falls subdivision amendment, Plat D with the following conditions:

1. The lots be renumbered to reflect the total number of lots;
2. Lots 55 and 56 show the required frontage on public street and lot 57 have driveway access form a full-width public street;
3. The revised water policy be met.

Kimberly Bryant seconded. Ayes: 5 Nays: 0. Troy Stout, Ramon Beck, Roger Bennett, Kimberly Bryant, Lon Lott vote aye. Motion passed.

J. Alpine Ridge PRD Subdivision Concept Plan – Approximately 1425 Grove Drive – Paul Kroff: Jason Bond said the property in question consisted of 10.6 acres. It was not part of the Oberee annexation because it was already located inside Alpine City limits in the CR-40,000 zone. The developer was requesting Council approval to develop the 10.6 acres as a PRD with nine lots and 2.6 acres of private open space. Mr. Bond said that if the same property was developed as a regular subdivision, it would have six lots and no open space. The Planning Commission had reviewed the concept and recommended approval of a PRD with the open space being public rather than private.

Troy Stout said he preferred public open space if it was a PRD, but would prefer to see bigger lots.

Roger Bennett said that if it had open space, they would need to maintain it. Rich Nelson agreed saying the City didn't want to maintain another small park.

Paul Kroff said the PRD would have a blend of acre and half-acre lots with the larger lots higher up. He said they needed to provide retention for the development and would locate the basin in one acre of the open space. He said he was fine if the open space was public or private. If it was private, they would maintain it but the public could use it. The Planning Commission had suggested the open space be a soccer field.

Roger Bennett asked about the topography of the proposed open space. Paul Kroff said it had a slope. There was a climb of 10 to 15 feet. Mr. Bennett asked Paul Kroff if he was opposed to flattening the ground and making it a soccer field.

Kimberly Bryant said she would only be interested in the open space if it was a soccer field.

Lon Lott said the purpose of a PRD was to move larger lots higher up on the hill but he wasn't sure the proposed design accomplished that. Nine lots with unusable open space didn't help the community.

David Church pointed out that Paul Kroff would not be the one running the park. It would be an HOA. He said the Council needed to think carefully about saying it would be a private park that the public would use because the homeowners in the HOA may feel differently about that.

Rich Nelson reiterated that the City did not want to take care of another pocket park.

Regarding the earlier discussion under Public Comment about running a sewer line through the Towle property, Paul Kroff asked if a sewer line would still be if they were half-acre or acre lots. Shane Sorensen said there would need to be a sewer line or a lift station either way.

Ramon Beck noted that the Planning Commission recommended a PRD with public open space. Lon Lott said Bryce Higbee made the motion and he was very pointed that he wanted the open space to be a sports field.

MOTION: Kimberly Bryant moved to make Alpine Ridge a non-PRD. Troy Stout seconded. Ayes: 2 Nays: 3 Troy Stout and Kimberly Bryant voted aye. Ramon Beck, Roger Bennett, Lon Lott voted nay. Motion failed.

MOTION: Roger Bennett moved to make Alpine Ridge a PRD subject to the agreement on the other property. Ramon Beck seconded. A discussion followed about what type of lots would result and the motion was withdrawn.

MOTION: Troy Stout moved to accept Alpine Ridge as a PRD provided the open space was designated as a soccer field with the gradation and preparation of the park to be the responsibility of the developer in the first phase, and apply the wording of the Development Agreement for the Oberee annexation relating to lot size to this property. Lon Lott seconded. Ayes: 4 Nays: 1. Troy Stout, Ramon Beck, Roger Bennett, Lon Lott voted aye. Kimberly Bryant voted nay. Motion passed.

Paul Kroff said that if they applied the wording in the development agreement to the ten acres and the math showed that they wouldn't get any additional lots and they still had to build a park, they would do a regular subdivision.

VI. STAFF REPORTS

Shane Sorensen reported on the following items:

- Paul Kroff was working with Horrocks Engineering for the offsite designs like Grove Drive. Since Horrocks did a lot of work for Alpine City, Horrocks asked if they could submit a proposal to the City for their portion of the road. Based on the Horrock's proposal, the City's portion of the design fee for the road would be about $26,000. Shane asked if that needed to come back as an agenda item. Rich Nelson suggested the Council okay it and they handle it as a budget item.
- Shane Sorensen said the Smooth Canyon signs for soccer parking were installed. They had no agreement with the LDS Church about using their parking lot as yet.
- He said something needed to be about the business PURPLE. They were stopping semis in the middle of the road and blocking access. Rich Nelson said he'd met with homeowners in that area and suggested they plant something on their property to screen them from the business. If the citizens would pay for the water for the trees, the City would buy the trees.
- Shane Sorensen said they had completed the overlay project on Alpine Boulevard.
- He reported that they were working on a sign for City Hall and had an example of what it would look like. It would be five feet wide, three feet high, and two feet off the ground. It could be rusted or powder-coated.
- They had met with a door company for a new door for City Hall. It would cost $10,000 and would be a metal door painted bronze. It would be a single door, 42 inch wide with panels and an automatic door opener to meet ADA requirements. Installation would be 12 weeks out.

David Church reported that the Utah League of Cities and Towns Convention started the next day in Salt Lake City.

Rich Nelson said staff had met with the soccer people. They gave them two weeks to start abiding by the agreements. They also met with Melanie Ewing about Alpine Days. He asked if the Council also wanted a report from the Alpine Days chairman and they said yes. He handed out a list of recommendations from members of the staff for next year's Alpine Days. They were:

Fire Chief – Move the fireworks to Jr. High and have people watch from Burgess Park

City Admin – Have the fire department at the end of the parade
Everyone – Teen dance needs to go
Police – 5K route, no circling the park. Have police approve the route.
Police – bike ride the weekend before, stay in Lambert Park
Police – 600 East – barricade it so it there is parking only on one side of street
Everyone – move pancake breakfast to the fire station
Everyone – pooper picker up'ers after every horse attraction
Public Works – more dumpsters
Public Works – power to the booths goes off after fireworks are over
Finance – hire more finance people
Finance – have a better way to account for rodeo and Alpine Days funds
Finance – better cash handling coordination
Finance – more coordination between director and finance director
Finance – developer a periodic update protocol

Rich Nelson reported that Annette Scott in the front office had decided to retire in November. They had interviewed candidates for the half-time position, then learned about Annette's retirement. There was enough of a workload that he would like to hire another half-time position. It would be 20 hours a week for each position. The City would offer retirement but no healthcare. He said they had two excellent part-time candidates.

Sheldon Wimmer said it was his experience that there were issues with job sharing. Sometimes it worked but too often they ended up with one person who worked hard and one who didn't, and it created problems. He said he would prefer hiring one fulltime person. Troy Stout agree, saying there was a loyalty factor with a fulltime person. Part-time people were frequently looking for another job.

Rich Nelson said they were implementing a new procedure on overdue bill, which would increase the workload for a while but would work better in the long run. Sheldon Wimmer said the ordinance stated that a water user had 30 days to come current on their bill or they'd be shut off in five days.

Rich Nelson said he had talked to Mayor Wimmer about his personal situation and was turning in his resignation. He would be retiring in the middle of November. He said Alpine was the best city to work for. He'd worked with a number of other cities and when he came to work for Alpine, it was like dying and going to heaven.

VII. COUNCIL COMMUNICATION

Roger Bennett said he'd heard the splash pad was running on Sunday. Did they want it operating on Sundays and after hours? Kimberly Bryant said there were issues of church and state that they had to consider. David Church said that if people were using it on Sunday, they should leave it on.

Troy Stout said they needed to make it easier for the public to access city information. He had tried to look up the Council agenda on his mobile device and couldn't find it. David Church said Kayville streamed their council meetings on youtube and had a surprising number of viewers.

Troy Stout said he would like to take a look at the monetary compensation for councilmembers. He wouldn't be running again but there was enough time required for the position that there were good people who wouldn't run because they didn't want to take time away from earning money elsewhere. Sheldon Wimmer asked Rich Nelson to look at what other cities paid their council.

VIII. EXECUTIVE SESSION: None held

MOTION: Ramon Beck moved to adjourn. Lon Lott seconded. Ayes: 4 Nays: 0. Ramon Beck, Lon Lott, Roger Bennett, Troy Stout voted aye. Motion passed. Kimberly Bryant was not present at the time of the motion.

The meeting was adjourned at 11:05 pm.

ALPINE CITY COUNCIL MEETING
Alpine City Hall, 20 N. Main
September 27, 2016

I. CALL MEETING TO ORDER: The meeting was called to order at 7:05 pm.

A. Roll Call: The following Councilmembers were present and constituted a quorum:

Mayor Sheldon Wimmer
Council Members: Troy Stout, Ramon Beck, Roger Bennett, Kimberly Bryant, Lon Lott
Staff: Rich Nelson, Charmayne Warnock, David Church, Shane Sorensen, Jason Bond, Chief Brian Gwilliam
Others: Mark Goodsell, Loraine Lott, Chief Brian Gwilliam – Lone Peak Police Department, Denise Cummings, Joan McMillan, Karl Wild, Blyth Larrabee, Laura Lefler, Rebecca Covey, Melanie Ewing, Jeff hillips, Adam Phillips, Will Jones, Katie McArthur, Cory McArthur, Dana Beck, Ross Beck, Ken Betcher, Carla Merrill, Forrest Burnet, Ross Welch

B. Prayer: Ramon Beck
C. Pledge of Allegiance: Adam Phillips

II. PUBLIC COMMENT

Mark Goodsell on 200 North 318 West said that traffic from Grove Drive, Main Street, Alpine Boulevard all dumped on to 200 North on their way out of town. He did not dare back out on the street because of the speed of the cars. The posted speed limit was 25 mph but people traveled well over that. He said it was not only a safety issue but a property value issue. No one would want to live on that busy street. He said that when he first moved to Alpine, people waved to each other. He suggested the City form a committee to study the problem and ask people to drive the speed limit. He suggested that Alpine could be known as a courteous city that observed the speed limit. He said that when he drove the speed limit, people got irritated and honked, but they also had to drive the speed limit because the road was too narrow to pass. He suggested that if 25% of the people drove the speed limit, it would curb the speed. It may not work very everyone but he was committed to doing it.

Next, Mr. Goodsell suggested they stop designing roads that looked like freeways. Hopefully they were designed for pedestrians and bikers but the road looked as if you could go 40 to 50 mph. He suggested more enforcement on 200 North. It was an issue that needed to be studied and he would be willing to participate on a committee. Finally, he asked about reinstalling the stop sign at the bottom of 400 West at the intersection of Westfield Road and 200 North. He was uncertain of the political reasons for removing it but suggested that it be replaced.

Mayor Wimmer agreed there was a speeding problem through Alpine and Highland. The Mayor's Message in the October Newsline addressed that issue.

Chief Brian Gwilliam said he would direct his officers to do more enforcement on 200 North. In addition, they would put up the speed trailer on that road so people were aware of their speed.

Troy Stout said he remembered when the stop sign on 400 West was removed and he had voted for it. The rationale was that when one was coming down an icy road in the winter, it was almost impossible to stop. It was thought it would be safer if motorists on 200 North and Westfield Road were not expecting the cars coming down the hill to stop. He asked Chief Gwilliam if they had tracked accidents at the intersection since the stop sign was removed.

Chief Gwilliam said they had not tracked it but at the time it was removed, neither he nor the fire chief agreed with the decision to remove it. Mr. Stout said his decision was based on a personal experience when driving in snowy conditions made it difficult to stop and he hit a stopped car that was having car trouble.

Roger Bennett said he would support putting the sign back and asked how they did that. Chief Gwilliam said it would take a vote of the Council. Sheldon Wimmer said they would put it on a future agenda.

Rhonda Bromley, principal at Lone Peak High School along with assistant principals Dan Bilio and Jared Huff, presented the annual report and thanked the Council and Mayor for their cooperation and service saying they worked with the same students and families She said school had been in session for six weeks and they'd just held their 20th Homecoming. They had 2600 students and over 80 clubs. Their goal was to make everyone feel like they belonged. She was excited because Lone Peak was voted the best school of all the schools in the state. They had won an award for 5A sports and had a graduation rate of 94.6 percent which was one of the highest rates in the district and state. They hadn't had any suicides in over a year and were working hard on suicide prevention and awareness. They thanked Chief Gwilliam and Officers Atwood, Alvers, and Freeman for their work. They had an amazing police department. She said they would be holding an Appreciation Night for the police and fire departments at their next football game.

Blyth Larrabee said Lambert Park was a wonderful place to recreate. She had gone on many scout hikes and young woman hikes in the park and learned about nature. She was a grandparent and she and her husband were in the park three or four times a week with their grandchildren. They snowshoed and mountain biked and ran in the area. It was a tremendous asset that the community needed to safeguard. She said they couldn't put a monetary value on the park and urged the Council to take measure to protect it.

Karl Wild said he had a comment about the Smooth Canyon soccer fields. Since it was an agenda item, he would comment later.

III. CONSENT CALENDAR

A. Minutes of the City Council meeting of September 13, 2016

Lon Lott said he would like to postpone voting on the Consent Calendar until they could invite certain people to a meeting to discuss an item that was voted on at the previous meeting. Troy Stout asked if they couldn't discuss it that evening under the Consent Calendar. Rich Nelson said he would put it on the next agenda.

IV. REPORTS AND PRESENTATIONS: None

V. ACTION/DISCUSSION ITEMS

Mayor Wimmer said he would like to move item D up on the agenda since some people had to leave early.

D. Bridle UP Hope Foundation: Rebecca Covey represented the Bridle Up Foundation, explaining that they would provide equestrian experiences for young woman 12 to 25 that may be struggling with various issues. The Council had approved the equestrian site in 2014 and during that two-year period, they had been in the process of raising money to build it. They had a location in Highland and were in the process of taking that down and moving it to the approved site in Alpine. Currently they were excavating and building gravel roads, an outdoor arena, and some pasture area. They would be installing a cedar rail fence and in the spring they would landscape. The trail that ran all around the property was being groomed.

Mrs. Covey said that when the site was approved two years ago, they were concerned about the road going through. The Council had agreed not to put the road through. The Foundation would provide an east/west trail for the public to access the Bonneville Shoreline trail that ran along the east bench. It would be a better, less-steep access to the trail. She said they loved the trail and wanted other people to be able to enjoy it even though they were under no obligation to build it.

The Foundation was requesting permission to use approximately 0.25 acre of city property for a pasture area. Since the existing barbwire fencing on the property was old and presented a hazard to equestrians and pedestrians, they proposed removing the old fencing and building new fences around the pastures. The remaining city property would be used for a trail and would be approximately 20 feet in width. They would like to push the fence back a bit and plants trees and poppies.

Shane Sorensen said the City had a 54-foot waterline easement on the property and they did have a waterline in it. The road had been on the masterplan for a long time but it was one that would be built when development occurred.

It was not a road the City would build. He said there were other properties in the area and if they were developed, they would be subject to the Urban Wildland Interface Ordinance which required two accesses. He wasn't sure what would happen with the road.

Troy Stout said he remembered the discussion about the road two years ago. He felt it was a fair swap to give them access to the City property if they were going to build a trail across their property to access the Bonneville Shoreline Trail. He said he would like to see a document that supported the Bonneville Shoreline Trail access indefinitely.

Roger Bennett suggested the City lease the property to the Foundation for a dollar a year so they retained control.

Shane Sorensen said the trail alignment that Mrs. Covey was proposing was a better trail alignment. As far as the City right-of-way, they had a 10-inch waterline that ran through there. They may need to put in a pressurized irrigation line, as well. He said planting trees on top of a water line was not a good idea. Maybe they could put the trees somewhere else. Shane Sorensen said that any use of the City's property would require more water and this was in an area of town that was already struggling with adequate water pressure.

Mrs. Covey asked if pastureland wouldn't use less water than houses. Lon Lott said that irrigated open space typically used more water than home. Shane Sorensen said it was the water pressure that was the concern, not the amount of water.

David Church said the difference between developing a residential area and irrigating open space was that when a development came in, they had to put in new water lines and pumps. The pastures would be watered from existing lines and since water pressure was already a problem, it would further reduce it.

Troy Stout suggested that maybe they could schedule the watering so the equestrian center watered the pastures during the day rather than at night so they didn't compete with the residences. Shane Sorensen said they already had that arrangement with churches and other larger water users.

Troy Stout asked if they could have fly control because of the horses and hoped they would be good neighbors.

Lon Lott said he had met with the Coveys regarding irrigating and landscaping the project and would recuse himself from the vote.

MOTION: Troy Stout moved to approve a renewable annual lease of City-owned property to the Bridle Up Hope Foundation for one dollar a year to enable the City to control it as needed, and enter an agreement with the Foundation that they would water only at certain times. The approval was contingent on a document insuring public access across private property to the Bonneville Shoreline Trail as shown by the blue line on the exhibit. Kimberly Bryant seconded. Ayes: 4 Nays: 0. Troy Stout, Ramon Beck, Roger Bennett, Kimberly Bryant voted aye. Lon Lott abstained. Motion passed.

A. Alpine Days Review – Melanie Ewing, Alpine Days Chairman: Rich Nelson passed out the itemized breakdown for revenue and expense for the Alpine Days Rodeo and for the Alpine Days events.

Sheldon Wimmer said he'd heard nothing but positive comments about Alpine Days and thanked Melanie Ewing for the great job she did in chairing the event.

Mayor Wimmer said the only issues had been with the teen dance and the carnival rides. Ticket sales had been moved to the back of City Hall and that worked well. Former City Recorder Janis Williams had worked many hours selling tickets and tee shirts for Alpine Days and would be greatly missed. It was noted that she had unexpectedly passed away about a month after Alpine Days.

Ramon Beck said he had heard they needed more restrooms in the park and bigger dumpsters. Melanie Ewing said they had four portable restrooms on each end of the park plus the regular park restrooms. She said the supplier who serviced the portable restrooms usually let them know if they needed more.

Melanie Ewing said the fire department suggested the fireworks be moved to Burgess Park next year but she didn't think that was a good solution either. The problem was that people wouldn't follow the rules and stay behind the lines. She felt like they'd have the same problem at Burgess Park.

Kimberly Bryant asked how long it had been since they'd raised the budget for Alpine Days. Things cost more and there were more people and more events. She said they needed to decide what kind of party they wanted to have and then fund it. She said she didn't want to eliminate children from participating in Alpine Days when their families couldn't pay the cost of the wristbands. Sometimes in Alpine they thought everyone could afford it but there were some who couldn't.

Rich Nelson said it was a fallacy to think they would ever break even with Alpine Days, and the City had to plan to fund a certain amount. Roger Bennett agreed they should set a budget, then stay within it. He said he would like to see specifically what events were making money and which ones were losing money.

Melanie Ewing said none of the events made money. The mountain bike race and the 5K broke even. The concert was a loss.

Rich Nelson said that one of the problems was the wristbands. They covered multiple events so they couldn't track the revenue from individual events. Melanie Ewing said they charged $13 for wristbands ordered online and $15 for wristbands the day of the event. The revenue from the wristbands didn't come close to the cost of the attractions. In other cities, a regular carnival tickets was $25 to $30, and that was just for carnival rides. For Alpine Days, the wristbands allowed entry into more events than just the carnival rides.

Roger Bennett asked if the Luau made money. Melanie Ewing said it cost the city money because the entertainment was free to the public. It replaced the Movie Night in the Park they'd held in past years, which had also been free. The food was $8 a plate but the city paid for the drinks.

Kimberly Bryant said the Luau was a nice gathering of the citizens and a great community night. She felt it was fine to put city funds toward the Luau entertainment.

Melanie Ewing said they lost $5,000 on the teen party. Only 200 kids paid but they had over 800 teenagers attend. They were climbing over the fence to get in and not paying. At a staff meeting, they had discussed getting rid of the teen party.

Roger Bennett said he thought the teen party should continue because it fit the needs of a group of people, but it needed to be managed better. Sheldon Wimmer said that even when they had the dance at the stake center years ago, there were still issues. It came down to supervision and control. Melanie Ewing said they needed to pay for enforcers, and asked if the City Council had considered raising the budget for Alpine Days. The number of people who attended warranted it. They were under budget the previous year and suggested that when that happened they be able to roll it over to the next year.

Melanie Ewing said there were people who were very generous donors for Alpine Days. Wayne Patterson had donated $10,000. Others had also made donations. Roger Bennett had previously stated that the City needed to thank the many volunteers and donors for Alpine Days. It was pointed out that Melanie's Ewing's position was primarily a volunteer position. Even though she was compensated $5,000 for running Alpine Days, based on the amount of time and work she'd put into it, it ended up being about thirty cents an hour. It really was volunteer work.

Lon Lott asked why the rodeo was financed separately from the rest of Alpine Days. Rich Nelson said they had separated them when Annalisa Beck worked for the City and the Becks put on the rodeo. Any profit from the rodeo was to go toward financing improvements at the rodeo grounds including the lighting, which was paid off several years earlier. Rich Nelson said they were having issues with the wooden bleachers and needed to look at getting better bleachers.

Cody Smith who had chaired the rodeo this year and the previous year said they were in the process of getting bids for bleachers.

The City Council thanked Melanie Ewing for all her work and for organizing and overseeing a very successful Alpine Days, and Cody Smith for running the rodeo.

Kimberly Bryant left the meeting.

B. Box Elder Plat E Easement: Shane Sorensen said that when Box Elder Plat E was recorded, it included a 50-foot wide easement for flood control along the rear lots. The original proposal was to put a four-foot high rock wall along the easement. Since that time, the City got a better set of contours of the area from the state and it was found that one of the channels that carried water during floods went outside the easement. There was a concern that the wall would cut off the channel and block the flow. Staff determined that it would be better to leave the existing channel intact to allow flood waters to pass in the event of flooding.

The issue was that constructing the berm and rock wall on the south side of the existing channel would require an additional easement. Staff discussed it with Patterson who agreed to deed the back portion of the lots to the City in order to build the wall in a better location. Lots 41 through 46 would be smaller than one-acre and would be existing, non-conforming lots of record. The developer would donate the easement to the City and build the wall and berm along the south bank. The developers would build the wall with the city overseeing it to make sure it was done according to plan.

Roger Bennett said the additional easement to the City would be a donation. David Church said the City would accept it as a donation and sign the tax form, but the City didn't set the value on it.

Troy Stout asked if they could commit the easement as Lambert Park open space and build a trail along there. Shane Sorensen said it was being donated as a mitigation channel, not as space.

MOTION: Roger Bennett moved to accept the donation of ground in Box Elder Plat E for flood control measure and thank them for their generosity and approve the nonconforming lots of record in Box Elder Plat E. Ramon Beck seconded. Ayes: 4 Nays: 0. Roger Bennett, Ramon Beck, Lon Lott, Troy Stout voted aye. Motion passed. Kimberly Bryant was not present at the time of the motion.

David Church said the motion assumed the City Council would sign the amended plat when it came in.

C. Resolution No. R2016-09, Utah County Major Crimes Task Force Interlocal Agreement: Police Chief Brian Gwilliam said the Task Force had been created by agencies to assist each other in dealing with major crimes. Each agency agreed to supply funds or personnel to the Task Force which provided backup to the communities that needed assistance in the event of a major crime. He said the Lone Peak Public Safety District was too small to provide much in the way of personnel but they had contributed funds. He said he was a huge asset to have the task force available to them and there were lots of benefits. It was good to have them for backup when they had a major incident. The cost was split between the three cities in the Lone Peak District. Lon Lott asked if they billed the cities for their time. Chief Gwilliam said that was paid for by the assessment.

MOTION: Ramon Beck moved to approve Resolution No. R2016-09 approving the Utah County Major Crimes Task Force Interlocal Agreement. Troy Stout seconded. Ayes: 4 Nays: 0. Ramon Beck, Troy Stout, Roger Bennett, Lon Lott voted aye. Motion passed. Kimberly Bryant was not present at the time of the motion.

D. This item was handled earlier on the agenda.

E. Sale of Canyon Crest Road Property: At the City Council meetings of July 26, 2016 and September 13, 2016, the Council had discussed the proposed sale of a triangular piece of city owned ground to Laura and Tom Lefler at 304 Maple Drive. The piece consisted of 580 square feet of open space in the Silverleaf subdivision and was adjacent to the Lefler property. The Leflers wanted to build a deer fence around their property but the fence would be partially obstructed by a large tree growing on the property line. Rather than cut down the tree, they petitioned the City to sell them the piece of ground on which it stood. The Council had agreed to sell it to them at fair market value.

Rich Nelson said the price they had come up with was $1,500. There was no access to the property.

MOTION: Ramon Beck moved to accept the proposal to sell the city-owned ground on Canyon Crest Road to the Leflers for the price of $1,500 provided they would take care of watering it and maintaining it. Lon Lott seconded. Ayes: 4 Nays: 0. Ramon Beck, Troy Stout, Roger Bennett, Lon Lott voted aye. Motion passed. Kimberly Bryant was not present at the time of the motion.

F. Tree Buffer Between Purple Factory and Residents North of the Factory: Rich Nelson said the mattress manufactured by Purple was a very successful product for the Pearce brothers but the adjacent residents were complaining about the storage sheds and all the activity, especially at night. Semi-trucks were coming in and loading and unloading all hours of the day. He said he had met with the owners of the business and the neighboring residents and proposed they plant trees along the property boundary. Purple had agreed to let them plant the trees along their boundary line. The City would purchase the trees and the residents would pay to keep them watered.

Shane Sorensen said they were looking at arbor vitae which were $50 a tree shipped from Oregon. They would be spaced every three feet.

Katie McArthur was one of the affected residents. She said they planned to plant the trees along her back yard which was about 155 feet long. Their main concern was the 24-hour activity over there. They were hoping that the trees would buffer the all-night noise. She recognized that deer loved that particular kind of tree but with the activity at night, she didn't think they would go there. But if they did, it would be okay if they ate the bottom since they were more interested in the top for screening.

Roger Bennett asked if the company was coming to give them an easement to plant the trees. David Church said Rich Nelson had spoken with them and they would get a written agreement.

MOTION: Ramon Beck moved to authorize the expenditure of up to $5,000 for the purchase of trees to be planted behind the Purple factory. Troy Stout seconded. Ayes: 4 Nays: 0. Ramon Beck, Troy Stout, Roger Bennett, Lon Lott voted aye. Motion passed.

G. Lambert Park – Management of Mountain Bike Teams. Rich Nelson said that at a previous meeting (August 23, 2016) the mountain biking team from the Lone Peak high school addressed the City Council under public comment regarding their use of Lambert Park. He said the Lone Peak team was just one of three teams that used the park several times a week. He asked the Council if they wanted to consider managing the mountain biking teams use of the park.

Bryan Burr said he was a mountain biker and an avid user of Lambert Park. It was great that the teams had the park to ride in but the terrain was paying the price. The trails were degrading and becoming treacherous. There needed to be some kind of commitment, not necessarily financial, from the teams that used the park to do some restoration work in the park. He said he'd done a lot of riding in Draper. They had multiple teams riding there with an average of 350 kids from 7 am till noon. He was running into a pack of 35 riders and another pack. He didn't think they wanted to see that happened in Lambert Park. There should be some management but they should also manage how many teams could use it.

Ramon Beck pointed out that there were other folks up there than wanted to walk. How did they make it safe for them?

Troy Stout said he was in Lambert Park multiple times a week on his bike. He'd seen more traffic in the park this year than in the last five years combined. The trails were becoming hazardous. There were deep ruts and he worried about less experienced riders. He said he strongly supported the mountain bike teams, but Lambert Park was taking more than its fair share of the sport. He said it was reasonable to say that high schools from American Fork, Pleasant Grove, Lehi, and the new Sky Ridge school in Lehi were feeding into the park along with the team from Lone Peak high school. There was not enough room for more than one team in the park at a time. They were putting wear and tear on the trails. They also had equestrians and walkers using the park, and many bikers were not keen on etiquette. He suggested that each high school have one day a week designated for their team. Saturday would be excluded to team events. There should be one day in the spring and one day in the fall when each team would have a restoration event. That should start immediately. He said they also needed to revisit the issue of motorized vehicles in the park.

Lon Lott asked if they needed to talk about mass gatherings in the park in conjunction with this. The mountain biking team exceeded the number of participants which required a mass gathering permit. The charter school wanted to have a race in Lambert Park and they were required to get a mass gathering permit.

Troy Stout said he was up by the Bowery and there was a large group of campers building fires. He asked if camping was permitted. Jason Bond said they didn't allow camping at the Bowery anymore and if he saw someone camping, he should call the police.

Sheldon Wimmer asked Rich Nelson to organize a meeting between the City and the mountain biking coaches of the different schools to discuss management of the park.

Will Jones said the trail committee would like to be involved and could help with that. He said Draper had added 20 miles of trails with more coming. Highland was also working on a trail that they hoped to have done by the end of winter.

Rich Nelson said this would an agenda item at the next meeting.

H. Smooth Canyon Park Signs and Fence: Rich Nelson said residents in the Smooth Canyon subdivision had complained about the families of soccer teams parking in front of their homes for the soccer games. The City had put up some no parking signs but the residents said they weren't aggressive enough. Chief Brian Gwilliam had looked into and had a couple of suggestions.

Chief Gwilliam said the signs that were up there were not adequate for them to enforce anything. Verbiage needed to be added to the signs that violators would be ticketed or towed. He suggested the best solution would be to put up fencing at certain locations around the park. One of the big problems was that people were accessing the park through a vacant lot. If they removed that access, it would discourage people from parking in the neighborhood. There were two lots that were not fenced; one was vacant.

Rich Nelson said he had received emails from the Slightings about their concerns. They had one of the unfenced lots. They didn't want a fence between their lot and the park.

Karl Wild said he lived by the park. He said he and the Slightings provided parking for all the soccer players. He said the signs the City put up were not adequate. The police would not cite people who parked along the streets because no ordinance was posted on the signs.

David Church said that if the City were going to prosecute people who parked illegally, the language needed to be on the sign. The issue was, a parking violation would apply to anyone. The police had no way of knowing which cars were soccer cars and which cars belong to the residents or their visitors. He said that if the City put up a fence and made it no longer convenient to cross a vacant lot to get to the park, people would be less likely to park in the neighborhood.

Karl Wild said he knew the Slightings didn't want to have a fence. They would like to put up more aggressive signs and see if that worked. If one or two tickets were given out, it would curb the problem.

Chief Gwilliam said the fence would be the best solution. The City could spend money on signs and spend money on enforcement, but a fence would be a one-time cost. Shane Sorensen agreed that there needed to be a fence.

David Church said that it was an issue of risk management. As the owner of the park, the City needed to make a decision about the access points into their property.

MOTION: Roger Bennett moved to fence the Smooth Canyon Park and if the Slightings wanted to put in a gate, they would do it at their expense, and increase the number of signs. Ramon Beck seconded. Ayes: 4 Nays: 0. Roger Bennett, Troy Stout, Lon Lott, Ramon Beck voted aye. Motion passed. Kimberly Bryant was not present at the time of the motion.

I. Beck Pines Subdivision, Final Plats A, B and C – Dana Beck: Jason Bond said the Planning Commission had reviewed and recommended final approval with several conditions for all three plats of the 19-lot subdivision located off Westfield Road in the CR-20,000 zone. Access from Canyon Crest Road would be restricted for lots with double frontages. There were two existing buildings on lots 7,10,11, and 12 which would need to be removed in order to comply with setback requirements. The developer planned to record plat A before the end of 2016, and record plats B and C the following year.

Roger Bennett said he would like to see a plan showing the irrigation ditch. It should be left open. Shane Sorensen said he had the plan and would show it to him.

MOTION: Lon Lott moved to grant final approval to the Beck Pines Subdivision, Plats A, B and C with the following conditions as recommended by the Planning Commission:

1. The developer deeds to the City all road rights-of-way for the entire development at the same time the first phase of the development is recorded.
2. The developer address redlines on the plats.
3. The developer meet the water policies for each plat prior to recordation.
4. The developer remove or provide a bond for the removal of two existing buildings prior to recordation of the affected plats.

Roger Bennett seconded. Ayes: 4 Nays: 0. Lon Lott, Roger Bennett, Ramon Beck, Troy Stout voted aye. Motion passed.

J. River Meadow Assisted Living Center - Setback Exception: Jason Bond said the owners of the River Meadows Assisted Living Center wanted to build a vestibule at the entrance to the assisted living center to keep drafts from blowing in. He said the building was already only 24 feet from the front property line. The addition of the vestibule would make it 16 feet from the road. He said the Historic Guidelines for that area allowed the City Council to grant exceptions to the setbacks. They were looking at a glassed entry with timbers at the corners.

MOTION: Ramon Beck moved to approve the exception to the front setback for the River Meadows Assisted Living Center to keep the people warmer. Troy Stout seconded. Ayes: 4 Nays: 0. Ramon Beck, Troy Stout, Lon Lott, Roger Bennett voted aye. Motion passed.

K. Ground Water Modeling for Alpine – RFP: Shane Sorensen said the attorneys had been involved with the issue of reduced filtration in the Dry Creek channel due to the floods and debris flows. He believed that it would be a long-term problem that could affect the aquifer. He proposed sending out an RFP for groundwater modeling to look at the long-term effect of the buildup of silt in the Dry Creek channel. The cost was unknown so it would be coming back to the Council.

MOTION: Lon Lott moved to have the City engineer get an RFP for ground water modeling. Ramon Beck seconded. Ayes: 4 Nays: 0. Lon Lott, Roger Bennett, Ramon Beck, Troy Stout voted aye. Motion passed.

Councilman Troy Stout left the meeting.

L. Ordinance No. 2016-20, Prohibiting the Feeding of Deer and other Wild Animals. David Church said the ordinance would prohibit the feeding of wild deer, elk, moose or turkeys. It was adapted from the ordinance used by other cities as a precondition to adopting a deer control program.

MOTION: Roger Bennett moved to adopt Ordinance No. 2016-20, prohibiting the feeding of deer and other wild animals. Lon Lott seconded. Ayes: 3 Nays: 0. Roger Bennett, Ramon Beck, Lon Lott voted aye. Motion passed. Troy Stout and Kimberly Bryant were not present at the time of the motion.

VI. STAFF REPORTS

Jason Bond said he had sent out the letters to start the enforcement of open space encroachment.

Shane Sorensen said people had a lot of questions about the Fort Canyon road construction. They wanted answers right now but the plans had not been finalized. They were upset that the retaining wall was slated for Wednesday but they didn't start until Friday. He said that was the drawback of having a calendar for the residents because construction was not always predictable. He said the whole goal was to lessen inconvenience as much as possible but there would still be inconvenience. He said the retaining walls had changed so they were regrouping on that. He hadn't yet seen the design.

David Church said work was moving forward on the Patterson and Box Elder South lawsuits.

Rich Nelson said he had created a job description to replace himself. They would begin the process of advertising for the position later in the week. He also reported that they would be recarpeting the part of City Hall previously used by the police department. The football team would have to move their equipment upstairs which was where it was supposed to be according to the original agreement. That part of City Hall would house an office for the mayor and city councilmen and be used for elections. The estimated cost was around $7,500.

VII. COUNCIL COMMUNICATION

Lon Lott said that as part of the MAG training on open meetings, there was a discussion about councilmembers talking to planning commission members. David Church said it wasn't a good practice, but it wasn't against the law. Councilman Lott said they had also addressed texting during a meeting. David Church said the law stated that councilmembers couldn't text each other during the meeting. Texts to other people were not a violation but it was rude. He said discussions between councilmembers that were off the record were against the law.

Sheldon Wimmer asked if the Alpine City Planning Commission had been trained. Jason Bond said Brent Bateman had conducted a training in January 2016.

Ramon Beck said someone had complained to him about the city watering during a rainstorm. David Church said North Salt Lake had a presentation on meters that automatically shut off when it rained.

VIII. EXECUTIVE SESSION

MOTION: Lon Lott moved to go into executive session for the purpose of discussing the professional character, conduct or competency of an individual. Roger Bennett seconded. Ayes: 3 Nays: 0. Lon Lott, Roger Bennett, Ramon Beck voted aye. Motion passed.

The City Council went into closed session at 9:30 pm.

The City Council came back into open session and adjourned at 10 pm.

FINAL PAYMENT REQUEST

Name of Contractor:		Granite Construction			
Name of Owner:		Alpine City			
Date of Completion:		Amount of Contract:		Dates of Estimate:	
Original:	15-Sep-16	Original:	$157,894.60	From:	15-Aug-16
Revised:		Revised:	$137,775.49	To:	15-Sep-16
Description of Job:	**Alpine City - 2016 Asphalt Overlay Projects**				
		Original Contract Amount			

Amount	This Period	Total To Date
Amount Earned	$0.00	$137,775.49
Amount Retained	$0.00	$0.00
Retainage Paid	$0.00	$0.00
Previous Payments		$137,775.49
Amount Due	$0.00	$0.00

Days Remaining	0	of	83	Percent Time Used:	100.0%
Estimated Percentage of Job Completed			1.00%		
Contractor's Construction Progress IS on schedule					

I hereby certify that I have carefully inspected the work and as a result of my inspection and to the best of my knowledge and belief, the quantities shown in this estimate are correct and have not been on previous estimates and the work has been performed in accordance with the Contract Documents

Recommended by: Alpine City Engineering Dept.

Date: 10/3/2016

Shane L. Sorensen, P.E.
City Engineer

Accepted by: Granite Construction

Date: _____

_____
- Owner

Approved By: Alpine City

Date: _____

_____
Sheldon Wimmer
Mayor

Project Owner: Alpine City
Project: Alpine City - 2016 Asphalt Overlay Projects

Date: 3-Oct-14

Contractor: Granite Construction

Original Contract Amount: **$157,894.60**
Revised Contract Amount:

Item	Description	Quantity	Units	Unit Price	Amount	Final Payest: Quantity this Month	Final Payest: Earnings this Month	Total Billing: Quantity to Date	Total Billing: Earnings to Date	Percent Complete
BID SCHEDULE										
1	Mobilization (not greater than 5% of total bid)	1	LS	$5,000.00	$ 5,000.00	1.00	$5,000.00	1.0	$5,000.00	100%
2	Lane Leveling (more or less quantity)	650	Ton	$53.50	$ 34,775.00	251.07	$13,432.25	251.07	$13,432.25	39%
3	2-inch Asphalt Overlay (including edge milling, geotextile fabric and traffic control)	93,885	SF	$0.96	$ 90,129.60	93,954	$90,195.84	93,954	$90,195.84	100%
4	2-inch Asphalt Overlay (including edge milling and traffic control)	31,100	SF	$0.90	$ 27,990.00	32,386	$29,147.40	32,386	$29,147.40	104%
	Total Bid/Contract				**$157,894.60**					
	Partial Payment Sub-Total						**$137,775.49**		**$137,775.49**	
Additive Alternates										
Change Orders										
	Change Order Sub-Total				**$0.00**		**$0.00**		**$0.00**	
	Total Revised				**$157,894.60**		**$137,775.49**		**$137,775.49**	
	5% Retainage				~					
	Add Retainage									
	Total				**$157,894.60**		**$137,775.49**		**$137,775.49**	

INVOICE

GRANITE™

OFFICE: SALT LAKE CITY, UTAH
PHONE: 801-526-6000
CONTACT: KELSIE GOODWIN

DATE: 9/15/2016
BILL TO: ALPINE CITY CORPORATION
20 NORTH MAIN
ALPINE, UT 84004-1416
ATTN: SHANE SORENSEN, PE

INVOICE: 1048150
APPLICATION: 1
ADJUSTMENT: 0
GRANITE JOB: 646182
CUSTOMER: 648908

FOR SERVICES RENDERED ON : 2016 ALPINE CITY STREETS
ALPINE BLVD, ALPINE

PERIOD THROUGH: 9/15/2016

PAYMENT SUMMARY

1. CONTRACT	$157,894.60
2. APPROVED CHANGE ORDERS	$0.00
3. CONTRACT TOTAL TO DATE	$157,894.60
4. WORK COMPLETED TO DATE	$137,775.49
5. LESS RETENTION @ 0.00 %	$0.00
6. TOTAL AMOUNT DUE TO DATE	$137,775.49
7. LESS PREVIOUSLY INVOICED	$0.00
8. CURRENT AMOUNT DUE	**$137,775.49**

PLEASE MAIL REMITTANCE TO:
GRANITE CONSTRUCTION COMPANY
Granite Construction Company
PO Box 742478
Los Angeles, CA 90074-2478

TERMS: A/R Net 30 Days
LATE PAYMENT PENALTY OF 1.5% WILL BE ADDED TO PAST DUE AMOUNTS MONTHLY.

GRANITE™

DATE: 9/15/2016

TO : ALPINE CITY CORPORATION
20 NORTH MAIN
ALPINE, UT 84004-1416
ATTN: SHANE SORENSEN, PE

INVOICE	1048150
APPLICATION	1
ADJUSTMENT	0
CUSTOMER CONTRACT	
PERIOD THROUGH	9/15/2016

CHANGE ORDER	BID ITEM	DESCRIPTION	ORIGINAL CONTRACT				THIS PERIOD			TOTAL TO DATE		
			Unit	Quantity	Unit Price	Contract Amount	Quantity	Amount	Retainage	Quantity	Amount	Retainage
000	01	MILL AND PAVE		0.00	0.0000	157,894.60	0.00	137,775.49	0.00	0.00	137,775.49	0.00
					TOTAL	157,894.60	0.00	137,775.49	0.00	0.00	137,775.49	0.00

GRANITE

Project Name: Alpine City Overlays 2016
Project #:
Contract To: Alpine City
Address: 20 N Main St
Alpine, UT 84004
Attn: Shane Soresen, P.E.

Granite Job No: 646182
Application No: 1
Period Through: 9/30/2016

1000 N Warm Springs Rd
Salt Lake City, UT 84116
(801) 526-6000
(801) 526-6091 - fax

							PREVIOUS		CURRENT		TOTAL		
BID ITEM	DESCRIPTION	BID UNIT	BID QUANTITY	Revised QUANTITY	UNIT PRICE	CONTRACT AMOUNT	COMPLETED QUANTITIES	BILLINGS TO DATE	COMPLETED QUANTITIES	DUE THIS BILLING	COMPLETED QUANTITIES	BILLINGS TO DATE	PERCENT COMPLETE
1	Mobilization	1	LS	1	$ 5,000.00	$5,000.00	0.00	$0.00	1.00	$5,000.00	1.00	$5,000.00	100%
2	Lane Lveling	650	TON	650.00	$ 53.50	$34,775.00	0.00	$0.00	251.07	$13,432.25	251.07	$13,432.25	39%
3	2" Asphalt Overlay w/ Fabric	93885	SF	93885	$ 0.96	$90,129.60	0.00	$0.00	93,954.00	$90,195.84	93,954.00	$90,195.84	100%
4	2" Asphalt Overlay	31100	SF	31100	$ 0.90	$27,990.00	0.00	$0.00	32,386.00	$29,147.40	32,386.00	$29,147.40	104%
	TOTALS:					$157,894.60		$0.00		$137,775.49		$137,775.49	87%
	LESS RETENTION:	0%						$ -		$ -		$ -	
	TOTAL BILLINGS:							$ -		$ 137,775.49		$ 137,775.49	
							CURRENT PAYMENT NOW DUE:			$ 137,775.49			

ALPINE CITY
ESCROW BOND RELEASE FORM
Bond Release No. 1

BOND HOLDER

Thru Period Ending: October 7, 2016

Three Falls Phase 1 Water Tank
Location: Fort Canyon Road
Original Bond

Item	Quantity	Units	Unit Cost	120% Unit Cost	Total Cost	% Completed This Period	% Completed To Date	Total
500,000 Gallon Water Tank	1	L.S.	$ 458,333.33	$550,000.00	$550,000.00	27%	27%	$150,480.00
TOTAL BOND AMOUNT					*$ 550,000.00*		Amount Released to Date:	$150,480.00

** At the discretion of the City, up to 80% of the total bond amount may be released as partial payments and 90% of the total will be released at final. The remainder will be held for the two year warranty period.

Previously Released: $ -

This Release: **$150,480.00**

Requested by Developer:

Will Jones — Date

Approved by Alpine City:

Sheldon Wimmer, Mayor — Date

Shane L. Sorensen, P.E., City Engineer — Date 10/7/2016

City Council (by Charmayne Warnock - City Recorder) — Date

ALPINE CITY COUNCIL AGENDA

SUBJECT: Parks Maintenance Building at 300 North

FOR CONSIDERATION ON: October 11, 2016

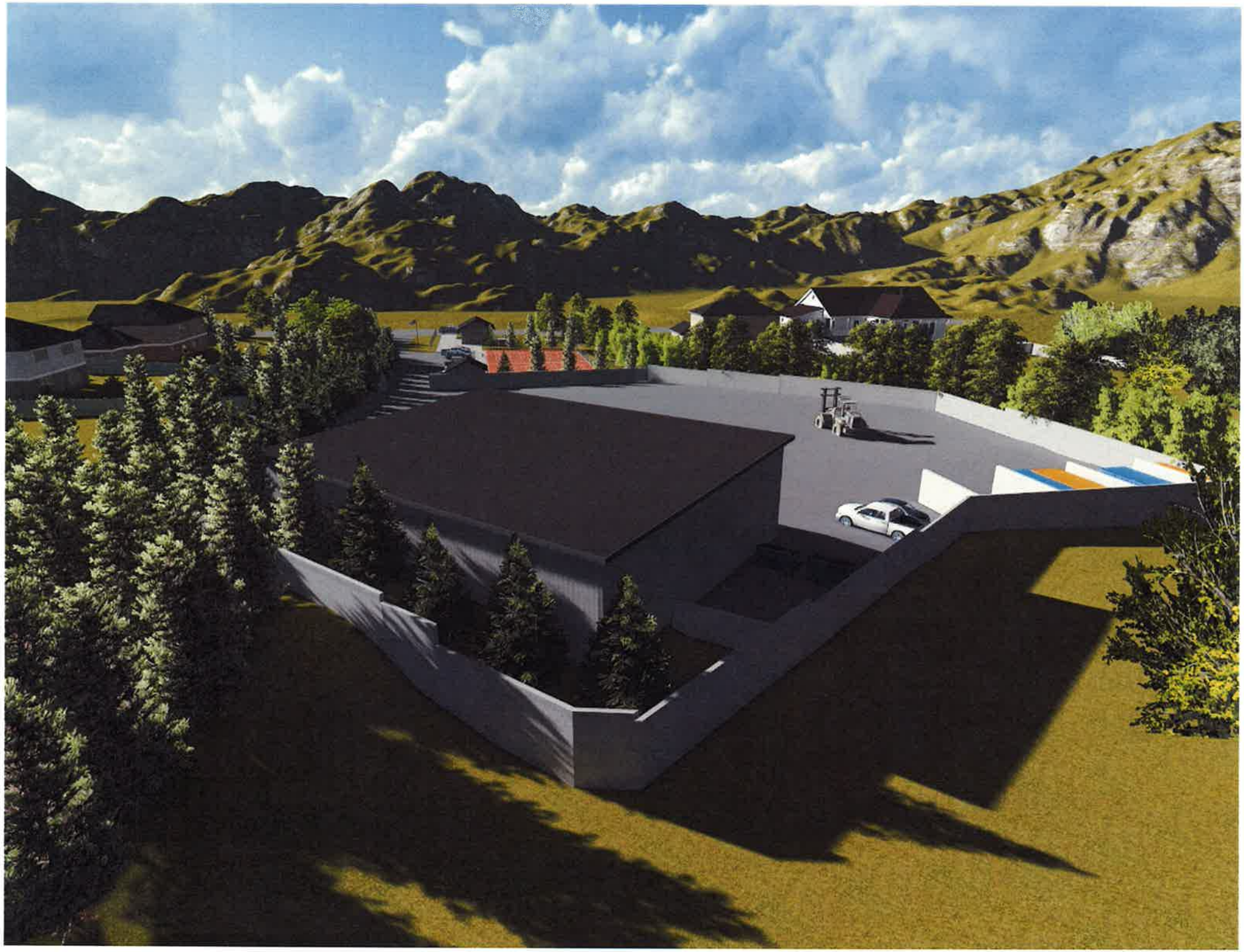
PETITIONEER: City Staff

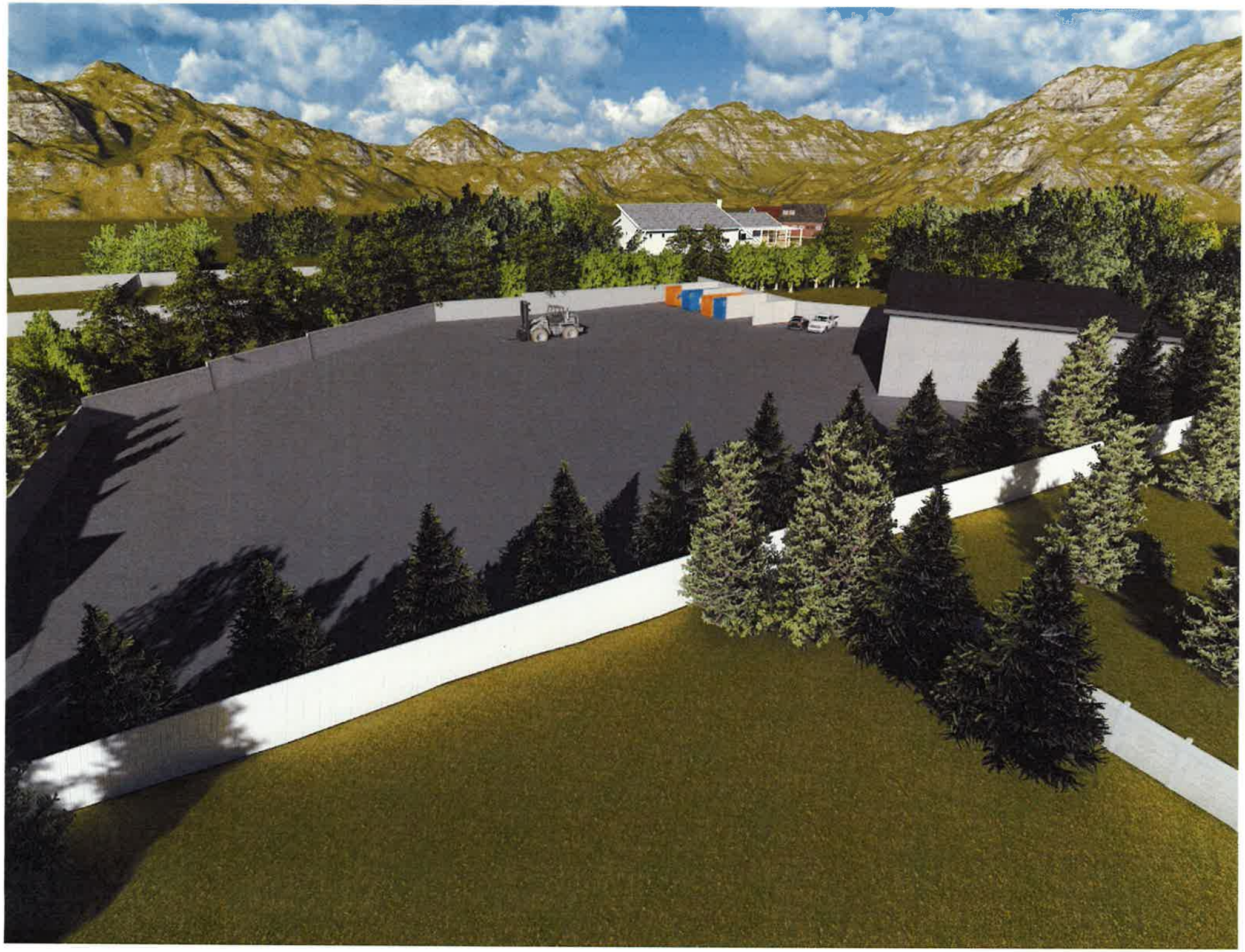
ACTION REQUESTED BY PETITIONER: To have the City Council determine if they want to study and evaluate the feasibility of constructing a parks maintenance building at the 300 North site.

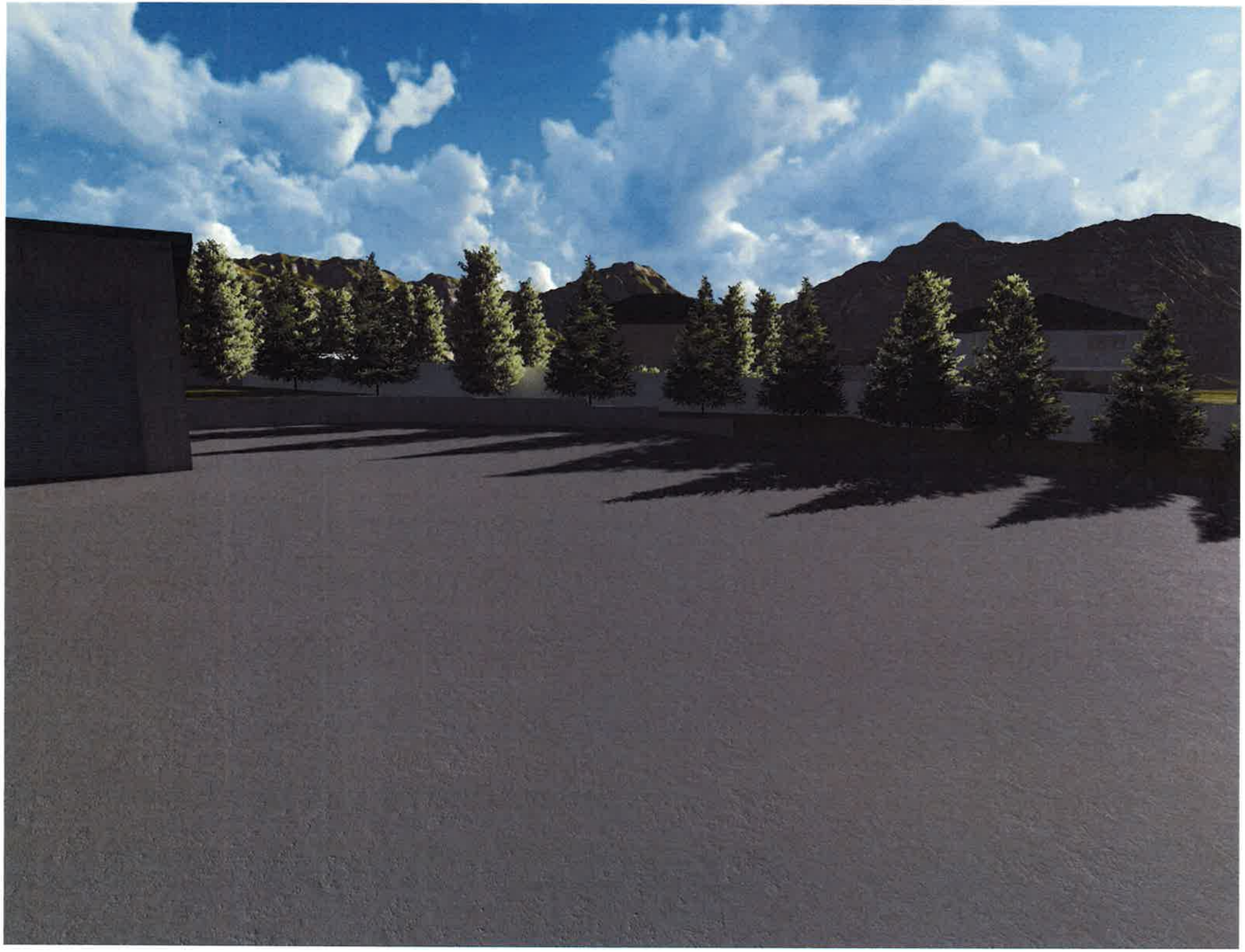
APPLICABLE STATUTE OR ORDINANCE: N/A

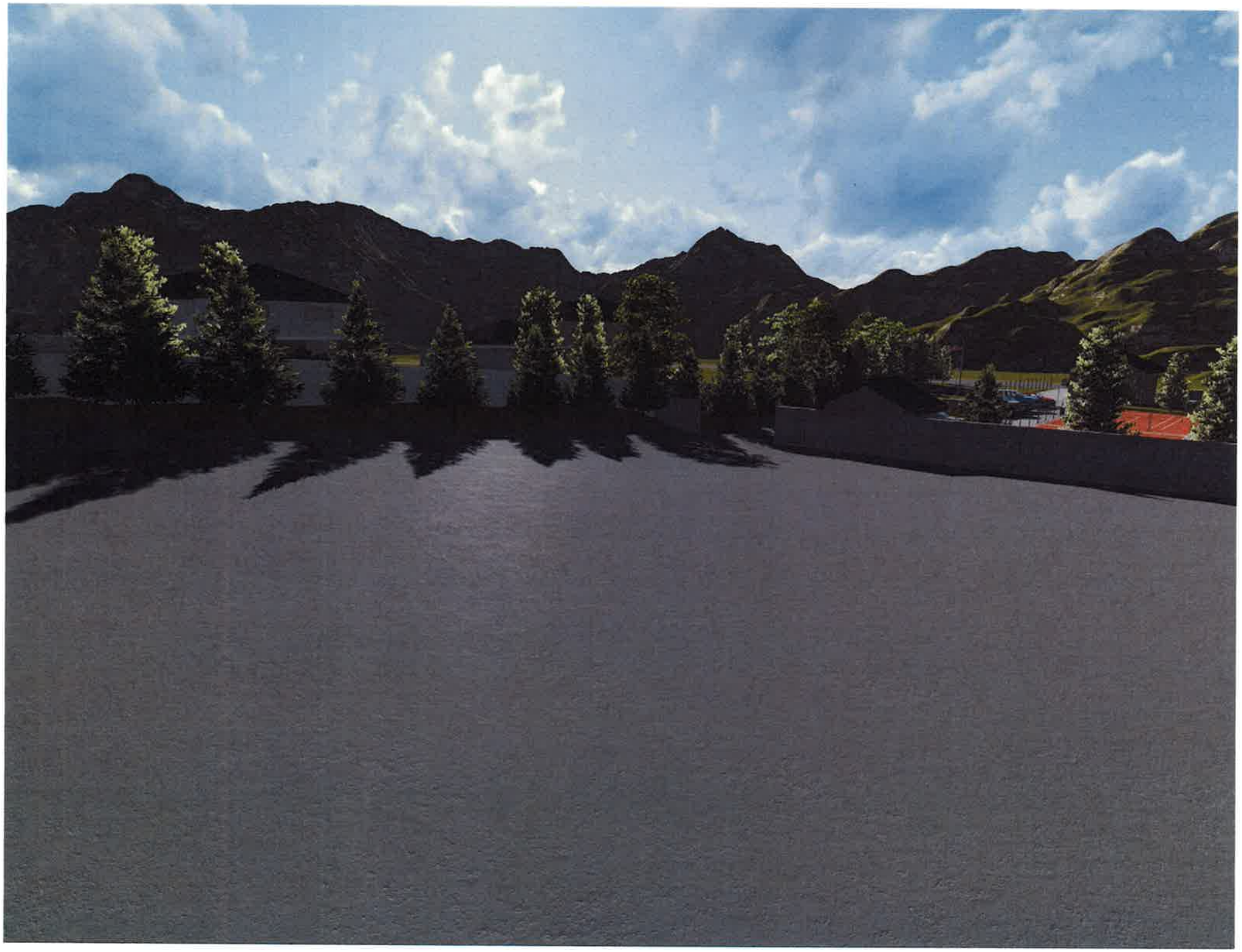
INFORMATION: City staff has proposed constructing a parks maintenance building at approximately 300 North on City owned property. It is estimated that the building would cost $500,000. Attached are some drawings of the proposed building. Please note, the pickle ball courts are not being proposed. Also please note, this item is being presented on a "whether to move forward in considering it" basis. It is not a vote on whether to actually build the parks maintenance building at the 300 North location. That vote would only come if the Council votes to formally consider this, after design work on the building and site, after consideration by the Planning Council, and after a public hearing.

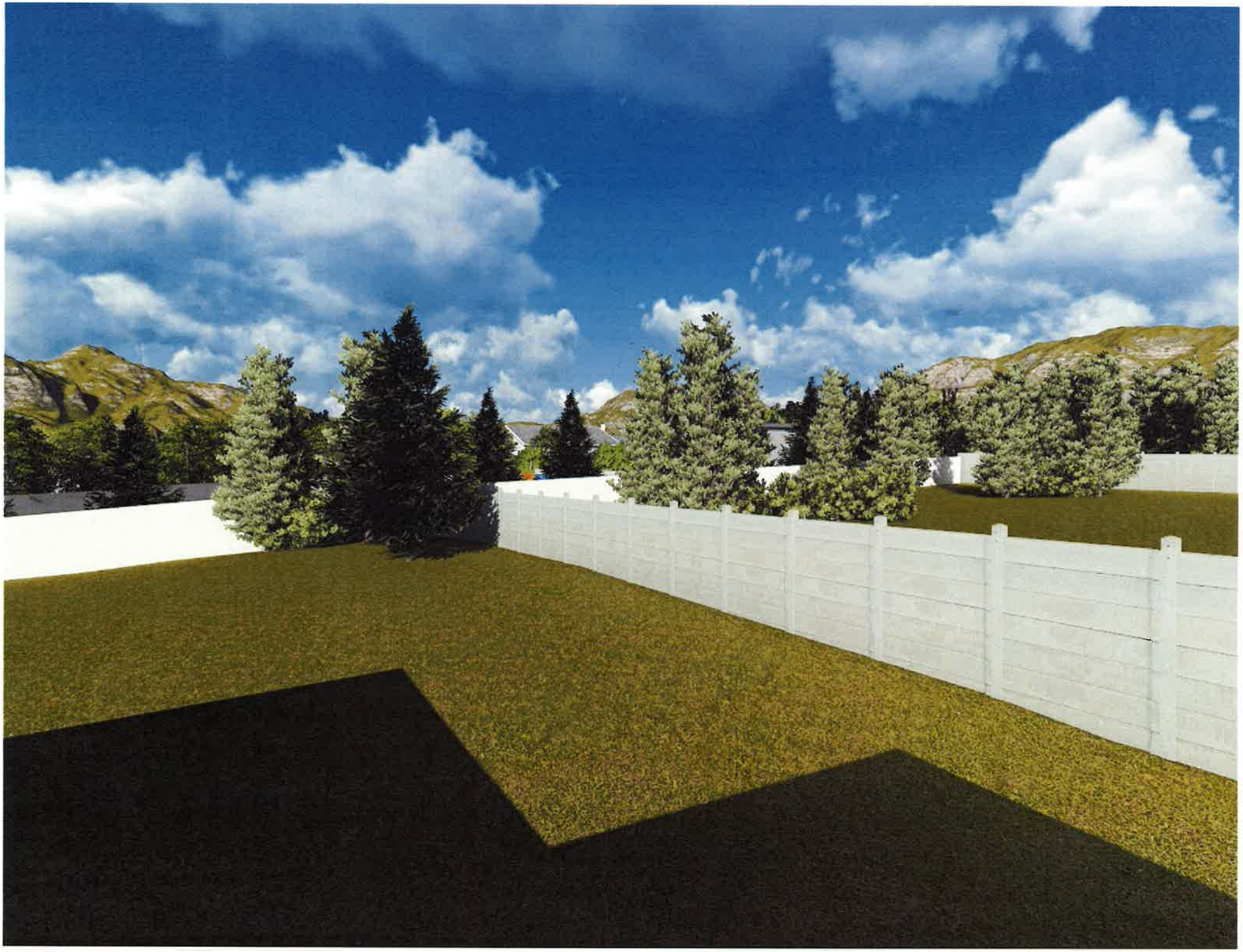
RECOMMENDATION: That the City Council consider whether they want to move forward in studying and evaluating the proposed parks maintenance building at the 300 North location.











ALPINE CITY COUNCIL AGENDA

SUBJECT: Report on Assessment of New Well Location for Alpine City

FOR CONSIDERATION ON: October 11, 2016

PETITIONEER: City Staff

ACTION REQUESTED BY PETITIONER: Consider drilling an exploration well to investigate the feasibility of drilling a production well in the future.

APPLICABLE STATUTE OR ORDINANCE: N/A

PETITION IN COMPLIANCE WITH ORDINANCE: N/A

INFORMATION: Late last year the City hired Loughlin Water Associates, LLC, (LWA) to investigate some potential sites for drilling a new production well. The intent was to find a location where water could be pumped directly into the high pressure zone of the City's pressurized irrigation system. Several things were considered when looking at potential sites including properties currently owned by the City, proximity to PI transmission lines in the high pressure zone, power availability and storm drain availability. Proximity of storm drain facilities is important since pump testing the new well will require a point of discharge for the water and a means of getting it away from the site. Also, in the long term, a permanent point of discharge will be required to allow the well to be pumped to waste prior to the water being turned into the PI system. We also indicated that we would like to be able to drill a well capable of producing 3,000 gpm if we could. This would equal the City's largest producing well, which is the Healey Well.

LWA was given a map of City owned properties with properties highlighted that had the items available that were discussed above. LWA completed their study and produced a letter report dated April 21, 2016, which addressed the feasibility of drilling a well at three different locations. See attached. Two of the locations were on City property, with the third being a site that is not owned by the City which was assessed after the two City-owned sites were initially investigated and found to not meet our expectations. The site has some challenges, but could work. We had some preliminary discussions with the property owner of the third site to see if obtaining a piece of property to drill the new well was possible. During a review of that site, we identified a fourth option that met our criteria and is currently owned by the City. This site is located where the detention basin is on the south end of the Heritage Hills development. We asked LWA to review this site and obtained an addendum to the original letter report, which is dated September 21, 2016. See attached.

In consideration of drilling a new production well, we believe that a phased approach is warranted, including an assessment of potential well locations, groundwater exploration and groundwater development. We feel that we have adequately completed the first phase. Drilling a 3,000 gpm well in the high zone of our pressurized irrigation system was a desire but is not realistic. A lower yielding well would be sufficient as an additional source to supply the needs of this area. LWA prefers the third site for reasons outlined in the addendum. The fourth site is located about 1,740 feet northeast of the third site. With all things considered, we feel that the fourth site should be considered for drilling an exploration

well. The exploration well will accurately determine what material we have beneath the surface, at what depth the material is and assess the possible yield of a production well. Drilling this 1,000-1,500 foot deep well will come at a cost of $250,000 to $350,000 for the well and an additional $30,000 to $40,000 for engineering and construction management.

RECOMMENDATION: Consider drilling an exploration well at the Heritage Hills detention basin site.

April 21, 2016

Horrocks Engineers
Attn: John Schiess, P.E.
2162 West Grove Parkway, #400
Pleasant Grove, Utah 84062

Subject: **Letter Report – Assessment of Asay, Lambert Park, & Jones Locations**
Feasibility of Groundwater Development for Secondary Water Supply Well
Alpine City, Utah County, Utah
for Horrocks Engineers

Dear John:

This report presents our assessment of the feasibility of groundwater development at three proposed locations for a new secondary water supply well for Alpine City (the City) in Utah County, Utah. We prepared our report in accordance with our proposal to Horrocks Engineers (Horrocks) dated October 23, 2015.

BACKGROUND

Figure 1 shows the location of Alpine City. We understand that Horrocks Engineers is helping the City site, permit, and construct a new secondary water supply well (proposed new well) capable of producing about 3,000 gallons per minute (gpm). Figures 2, 3, and 4 show the following locations for the proposed new well that the City prefers based on site access and proximity to existing infrastructure:

- Asay, located in the Northwest Quarter (NW¼) of the Northeast Quarter (NE¼) of the NE¼ of Section 24, Township 4 South, Range 1 East, Salt Lake Base & Meridian (SLB&M)

- Lambert Park, located in the NW¼ of the Southeast Quarter (SE¼) of the NE¼ of Section 18, Township 4 South, Range 2 East, SLB&M; and

- Jones, located in the NE¼ of the NE¼ of the NE¼ of Section 24, Township 4 South, Range 1 East, SLB&M.

OBJECTIVE AND SCOPE OF SERVICES

We proposed the following phased approach to help site, permit, and construct a new secondary water supply well capable of producing the desired yield of about 3,000 gpm:

- Phase 1 – Assessment of the Three Preferred Well Locations

3100 W. Pinebrook Road, Ste. 1100 ▲ Park City, Utah 84098
Phone: 435.649.4005 ▲ Fax: 435.649.4085 ▲ Mobile: 435.659.1752 ▲ www.LoughlinWater.com

- Phase 2 – Groundwater Exploration
- Phase 3 – Groundwater Development

This letter report summarizes the results of Phase 1 in which we:

- Obtained and reviewed readily available existing information;
- Identified and characterized potential target aquifers;
- Conducted a reconnaissance-level site visit; and
- Prepared this letter report.

SITE SETTING

Figure 1 shows the location of Alpine City and regional features. Figures 2, 3, and 4 show the locations three preferred well sites, selected wells (including the Alpine City wells), and other local features.

Alpine City is located in north-central Utah, at the north end of Northern Utah Valley. Hunt and others (1953) and Clark and Appel (1985) define the Northern Utah Valley as lying between the Wasatch Mountains to the east, Traverse Mountains to the north, the Lake Mountains to the west. Northern Utah Valley is separated from South Utah Valley by an imaginary east-west line that bisects Provo Bay and Utah Lake. Northern Utah Valley is about 20 miles long (north to south), about 16 miles wide (east to west) at its southern boundary, and narrows from about 2.5 to less than 0.5 miles at the north end where Alpine City is located.

As indicated on Figure 2, the principal surface water drainage is Dry Creek, which flows to the southwest to Utah Lake. Utah Lake drains northward, via the Jordan River, to the Great Salt Lake, located about 35 miles to the north.

GEOLOGIC SETTING

Figures 4 through 6 illustrate the geology of the area. Both the geologic map on Figure 4 and stratigraphic column on Figure 5 are modified from Biek (2005). Figure 6 is a block diagram that illustrates the conceptual groundwater model of the area modified from Cederberg and others (2009).

Northern Utah Valley is bounded by normal faults. In general, consolidated bedrock is exposed on the upthrown side and unconsolidated and cemented valley-fill deposits are present on the downthrown side of the valley-bounding faults; see Figure 6. Displacement along these faults occurred during Tertiary and Quaternary time and continues today (Cederberg and others, 2009).

As indicated on Figure 4, Alpine City lies in a down-dropped block between the northeast to west-trending Traverse Mountain South fault and the overall north-south-trending Wasatch fault zone. The total displacement across the Traverse Mountain South fault is not known in the Alpine City area; however, Biek (2005) shows more than 1,500 feet of offset, down to the east/southeast along the fault on a northwest-to-southeast-orientated cross section (B-B') located about 2.5 miles to the southwest of the Asay and

Jones locations. The Alpine City 300 North Well encountered unconsolidated and cemented valley-fill deposits to its total depth of 700 feet (Hansen Allen & Luce, 1997); see summary of area wells in Attachment A. According to Hunt and others (1953) and Cederberg and others (2009), displacement along the north-south-trending Wasatch Fault zone, located to the east of Alpine City, can be as much as 7,000 feet along the east side of Utah Valley.

As displacement occurred along the faults, material eroded from the bedrock exposed in the uplifted mountains was transported to and deposited in the subsiding valley. These materials range in size from clay to boulders, with the coarsest and poorly sorted sediments (sand, gravel, cobbles, and boulders) deposited near the mountain front and along major surface water drainages and finer sediments (silt to clay) deposited farther out toward the center of the valley. Table 1 provides a key to map symbols and descriptions of the Quaternary- and Tertiary-age units.

Table 1
Descriptions of Quaternary and Tertiary-age Geologic Units [a]

Age	Unit	Symbol	Thickness (feet)	Description
Quaternary	Unconsolidated deposits	Qal_1, Qat_{2-3}, Qaly, Qalp, Qalo, Qaf_1, Qaf_2, Qaf_3, Qafy, Qafp, Qafb, Qafo, Qf, Qfl, Qfd, Qc, Qlgb, Qlsp, Qlsb, Qlmp, Qlmb, Qldp, Qmsb, Qmso Qac, Qatc, Qmtc	0-150 (range of thickness of individual units)	Qal_1 – Stream deposits. Qat_{2-3} – Stream-terrace deposits. Qaly, Qalp, Qalo – Alluvial deposits. Qaf_1, Qaf_2, Qaf_3, Qafy, Qafp, Qafb, Qafo – Alluvial fan deposits. Qf – Artificial fill Qfl - Landfill Qfd – Disturbed land. Qc – Colluvial deposits Qlgb – Lacustrine sand and gravel. Qlsp, Qlsb – Lacustrine sand and silt. Qlmp, Qlmb – Lacustrine silt and clay. Qldp – Deltaic deposits. Qmsb, Qmso – Landslide deposits Qac – Alluvial and colluvial deposits. Qatc – Alluvial terrace and colluvial deposits. Qmtc – Talus and colluvium.
Tertiary	Alluvial-fan deposits	Taf	1000+	Unconsolidated, pebble-to boulder-sized, subangular to subrounded orthoquartzite and calcareous sandstone clasts and, especially near the base and top of deposits, minor volcanic clasts.
	Volcanic rocks of the east Traverse Mountains, undivided	Tv	1000	Complexly-interbedded block and ash-flow tuffs, volcanic mudflow breccia, minor lava flows, and minor fluvial volcaniclastic deposits; classified as borderline latite, trachyte, dacite, and andesite.

[a] Descriptions are modified from Biek (2005).

According to Cederberg and others (2009), regionally-extensive lakes, such as Lake Bonneville, have intermittently filled Utah Valley during Quaternary time (approximately the last 2.5 million years). In general, (1) thick and extensive deposits of clay and silt accumulated during periods when the lakes expanded to cover large areas and (2) the fine-grained lake (lacustrine) deposits were covered by coarser deposits when the lakes contracted. The depositional processes created alternating and interfingering layers and lenses and horizontal and vertical heterogeneity.

HYDROGEOLOGIC SETTING

Groundwater in the Alpine area is produced from: (1) unconsolidated and cemented valley-fill deposits and (2) consolidated bedrock. Seven of eight Alpine City wells produce groundwater from valley-fill, also known as (aka) basin fill, deposits which at the Healey and Ranch Drive wells extend to a depth of more than 1,500 feet. Much of the information presented herein was adapted from Hunt and others (1953), Clark and Appel (1985), and Cederberg and others (2009) and the files of Alpine City, the DDW, the Utah Division of Water Rights (DWRi), and Utah Geological Survey (UGS).

Figure 6 is a block diagram, modified from Cederberg and others (2009), that illustrates the conceptual groundwater model and the relationship between the bedrock and basin-fill aquifers in Northern Utah Valley.

AREA WELLS

This section presents and discusses information for the eight Alpine City wells shown on Figures 2, 3, and 4 and other relevant wells in the area.

ALPINE CITY WELLS

Table 2 summarizes construction and testing information for Alpine City wells. We obtained the information on the Alpine City wells from the Drinking Water Source Protection (DWSP) plans listed in the References Cited section and from the files of the DWRi and DDW. Appendix A provides a summary of well information.

Table 2
Construction Summary of Existing Alpine City Wells

Well	Well Use	Year Con-structed	Drilled Depth (feet)	Completed Interval(s) (feet)	Aquifer	Test Rate (gpm)/ Drawdown (feet)	Specific Capacity (gpm/ft)
300 N Well[a]	Secondary	1990	700	300 to 680	Valley-Fill	900/ 210	24
Busch Well	Secondary	1967	602	430 to 590	Valley-fill	449/31.6	15
300 E Well[b]	Culinary	1962	650	467 to 622	Valley-fill	1070/ 95	11

Well	Well Use	Year Con-structed	Drilled Depth (feet)	Completed Interval(s) (feet)	Aquifer	Test Rate (gpm)/ Drawdown (feet)	Specific Capacity (gpm/ft)
100 W Well[c]	Secondary	1973	651	300 to 630	Valley-fill	1194/76	16
Silver Leaf Well	Culinary	2000	700	224 to 687	Valley-fill	1001/15.92	63
Carlisle Well	Secondary	1978	609	685 to 900 900 to 1077	Valley-fill Bedrock[d]	2026/74	27
Healey Well	Secondary	2002	1540	800 to 1480[e]	Valley-fill	2574/161	16
Ranch Drive Well	Secondary	2002	1496	888 to 1476[f]	Valley-fill	2578/37	70

[a] Also known as (aka) Alpine City Well #3
[b] Aka Alpine City Well #1
[c] Aka Alpine City Well #2
[d] Bedrock described as limestone and "quartz" (quartzite?)
[e] Five screened intervals between 800 and 1480 feet
[f] Seven screened intervals between 888 and 1476 feet.

Note from Table 2 that:

- All eight wells produce groundwater from the valley-fill aquifer.
- Drilled depths range from about 600 to more than 1,500 feet.
- According to the well log, Carlisle Well also produces from bedrock consisting of limestone and possibly quartzite.
- The wells were tested at rates from 449 to 2,578 gpm with specific capacities ranging from 11 to 70 gpm per foot (gpm/ft).

Figure 3 shows equipped rates of Alpine City wells which range from 350 gpm (Busch Well) to 3000 gpm (Healey Well).

OTHER AREA WELLS

We obtained copies and reviewed Well Driller Reports (well logs) for 41 area wells, which include the 8 Alpine City wells discussed above, 14 wells from the Fort Canyon area, and 19 wells from the upper (northern) Dry Creek area. Attachment A provides air-photo base maps showing the locations and water right numbers of the wells. Attachment A also includes a summary table of water right, construction, geology, yield and other information. In general, wells in the Fort Canyon area provide insight into what to expect in the subsurface at the Asay location and wells in the upper Dry Creek area provide insight into what to expect in the subsurface at the Lambert Park and Jones locations.

WATER QUALITY

Water quality data compiled for the Alpine City area by Cederberg and others (2009) and provided for Alpine City wells by Horrocks Engineers indicate that the quality of groundwater in the area is suitable for secondary supply. Total dissolved solids (TDS) concentrations are less than 500 milligrams per liter (mg/L) and other constituents have relatively low concentrations.

FEASIBILITY OF DEVELOPING A SECONDARY WATER SUPPLY WELL

This section presents our assessment of the feasibility and estimated costs of drilling an exploration and secondary water supply well at the Asay, Lambert Park, and Jones locations.

ASAY LOCATION

As indicated on Figure 4, the Asay location is on the upthrown (footwall) side of the Traverse Mountain South fault, which is located about 200 feet to the southeast. Based on our review of the geologic map and cross section B-B' by Biek (2005), the logs of area wells (see Attachment A), and other reports and information, we believe that a well drilled at the Asay location would likely encounter:

- Quaternary-age alluvial fan (Qafy) and lacustrine (Qlsb) deposits to an estimated depth of 100 to 200 feet;
- Tertiary-age alluvial fan (Taf) deposits to an estimated depth of 500 to 1000 feet; and
- Paleozoic-age bedrock in the footwall of the Traverse Mountain South fault below an estimated depth of 500 to 1,000 feet.

Alluvial-Fan Deposits at Asay Location

We believe that the potential yield of the Quaternary- and Tertiary-age alluvial fan deposits at the Asay location is likely less than and may be considerably less than 500 gpm. As indicated on Figure 4, the Asay location in the mouth of Fort Canyon, on the upthrown side of the Traverse Mountain South fault. Wells in the Fort Canyon area are also located on the upthrown side of the fault and have:

- Drilled depths that range from 60 to 1690 feet;
- Reported test rates that range from 2 to 75 gpm;
- Specific capacities, where drawdown was reported, that range from 0.03 to 6 gpm/ft; and

- Drilled depths that reportedly reached granite bedrock in 3 of the 9 wells, with the other wells completed exclusively in Quaternary- and Tertiary-age alluvial fan deposits.

The deepest well in the Fort Canyon area is the Young Well (Water Right #a27922) which is about 6,700 feet due north of the Asay location. According to the geologic log by Janae Wallace of the UGS, the Young Well encountered what appears to be alluvial fan deposits from 0 to 1410 feet and possibly monzogranite from 1410 to the total depth of 1690 feet. As indicated in Attachment A, this well had an artesian head of 180 pounds per square inch (psi) and very low yield of less than 5 gpm.

The Asay location is about 8,700 feet to the northeast of the southeast portal of the approximately 15,600-foot long, southeast- to northwest-trending, Alpine-Draper Tunnel. The tunnel is part of the Salt Lake City Aqueduct. According to Murdock (1941), from the southeast (Alpine) portal to the northeast (Draper) portal, the tunnel encountered (1) "*Talus Outwash*" from 0 to about 5,100 feet, (2) volcanic bedrock from about 5,100 to 13,000 feet, and (3) quartzite from 13,000 to 15,600 feet. Murdock (1941) reported that most of the water in the tunnel flowed from faults in the volcanic bedrock and that the total sustained flow was only about 0.5 cubic feet per second (cfs), which is about 225 gpm.

Bedrock at Asay Location

We believe that Paleozoic-age bedrock, if present beneath the alluvial fan deposits, has the greatest potential yield at the Asay location. However, our high-end estimate is about 1,000 to 1,500 gpm, which is less than the 3,000-gpm desired by Alpine City. Important factors for the groundwater development potential of the bedrock include the depth to, type(s) of, and degree of fracturing of the bedrock.

We do not know the depth to or type of bedrock present below the alluvial fan deposits at the Asay location; however, Figure 4 shows that the Mississippian-age Doughnut Formation (Mdo) is exposed on the upthrown (footwall) side of the fault, about a mile to the northeast. Figure 5 shows that the 300- to 1200-foot thick Doughnut Formation is underlain by Paleozoic-age carbonate and clastic rocks. The Doughnut Formation and older Paleozoic rocks, such as the Humbug Formation, Deseret Limestone, Gardison Limestone, Fitchville Formation, and Maxfield Limestone are significant aquifers and have been successfully developed for water supply in other areas of Utah. Note, however, that the Doughnut Formation outcrop shown on Figure 5 has been metamorphosed to marble (Biek, 2005) and may actually be underlain by Tertiary-age intrusive igneous rocks that would have a significantly lower groundwater development potential than the Paleozoic rocks.

LAMBERT PARK LOCATION

As indicated on Figure 4, the Lambert Park location is on the downthrown side (down-dropped/hanging wall block) of both the Traverse Mountain South fault, which is located about 2,500 feet to the west, and the Wasatch fault, which is located about 3,000 feet to the east. There is even more hydrogeologic uncertainty at the Lambert

Park location than at the Asay location; however, based on our review of available information, we believe that a well drilled at the Lambert Park location would likely encounter:

- Unconsolidated Quaternary-age alluvial fan (Qaf) and alluvial deposits to an estimated depth of 100 to 200 feet;
- Cemented and possibly tilted and faulted Pre-Lake Bonneville and Tertiary-age valley-fill deposits to an estimated depth of at least 400 to 500 feet; and
- Paleozoic-age, and possibly younger (Tertiary-age), bedrock below the valley–fill deposits at an estimated depth of 400 to 1,000 feet.

Note that because the Lambert Park location is on the downthrown (hanging wall) side of both faults, the depth to the Paleozoic-age bedrock may be even greater than at the Asay location.

Valley-Fill Deposits at Lambert Park Location

We believe that the potential yield of the valley-fill deposits at the Lambert Park location is likely less and may be considerably less than 500 gpm. As indicated on Figure 4, the Lambert Park location is in the upper Dry Creek area and on the downthrown side of both the Traverse Mountain South and Wasatch faults. Wells in the upper Dry Creek area are also located in the downthrown block between these two faults and have:

- Drilled depths that range from 200 to 1180 feet;
- Reported test rates that range from 15 to 300 gpm;
- Specific capacities, where drawdown was reported, that range from 0.14 to 6 gpm/ft; and
- Drilled depths that reportedly reached bedrock consisting mostly of granite, with some wells in limestone and/or shale in 6 of 19 wells, with the other wells completed exclusively in valley-fill deposits.

Although some of the wells reportedly reached bedrock, we believe that the reported yields represent the valley-fill deposits and not the underlying bedrock.

Bedrock at Lambert Park Location

We believe that Paleozoic-age bedrock, if present beneath the valley-fill deposits, has the greatest potential yield at the Lambert Park location. However, our high-end estimate is about 1,000 to 1,500 gpm, which is less than the 3,000-gpm desired by Alpine City. Important factors for the groundwater development potential of the bedrock include the depth to, type(s) of, and degree of fracturing of the bedrock.

Although we do not know the depth to or type of bedrock present below the valley-fill fan deposits at the Lambert Park location, Figure 4 shows that the Mississippian-age Doughnut Formation (Mdo) is exposed on the upthrown side of the Traverse Mountain South fault, about 2,500 feet to the west and the Gardison (Mg) and Deseret (Md) limestones are exposed on the upthrown side of the Wasatch fault, about 3,000 feet to the east. All of these units are significant aquifers that have been successfully developed for water supply in other areas of Utah.

Note, however, that because the Lambert Park location is in the down-dropped block, the bedrock units underlying the valley-fill deposits may be considerably deeper than at the Asay location. In addition, as indicated in Attachment A, many of the wells drilled in the upper Dry Creek area encountered granite below the valley-fill deposits. As such, the valley-fill deposits at the Lambert Park location may actually be underlain by Tertiary-age intrusive igneous rocks that would have a significantly lower groundwater development potential than the Paleozoic rocks.

JONES LOCATION

As indicated on Figure 4, the Jones location is on the downthrown side (down-dropped block) of both the Traverse Mountain South fault, which is located about 650 feet to the northwest, and the Wasatch fault, which is located about 6,700 feet to the east. Based on our review of the geologic map and cross section B-B' by Biek (2005), the logs of area wells (see Attachment A), and other reports and information, we believe that a well drilled at the Jones location would likely encounter:

- Unconsolidated Quaternary-age alluvial (Qalp) and lacustrine (Qlsb) deposits to an estimated depth of 200 to 300 feet;
- Unconsolidated to cemented and possibly tilted and faulted Pre-Lake Bonneville and Tertiary-age valley-fill deposits to an estimated depth of 1,000 feet; and
- Paleozoic-age bedrock by drilling from the hanging wall (downthrown) side into the footwall (upthrown) side of the Traverse Mountain South fault below an estimated depth of 1,000 feet.

Valley-Fill Deposits at Jones Location

We believe that the potential yield of the valley-fill deposits at the Jones location may be as high as 900 gpm. Potential subsurface conditions at the Jones location are likely best represented by the well drilled under Water Right #55-9408 that is located about 1700 feet to the northeast; see Figures 3, 4, and 5. This well is also on the downthrown side and about 500 feet to the southeast of the Traverse Mountain South fault and, as indicated in Attachment A, drilled to a depth 302 feet, completed in unconsolidated valley-fill deposits, and bailed for an unspecified period of time at 60 gpm with "*no*" drawdown. Subsurface conditions of the valley-fill deposits at the Jones location may also be similar to the Alpine City 300 North Well which is located 3,200 feet to the southeast and drilled to a depth of 700 feet, completed in valley-fill deposits, and pump

tested at 900 gpm with 210 feet of drawdown (specific capacity of 2.4 gpm/ft); see Figures 3, 4, and 5 and Table 2.

Bedrock at Jones Location

We believe that Paleozoic-age bedrock, if present below the valley-fill deposits, would have the greatest potential yield at the Jones location. However, a high-end estimate of potential yield is about 1,000 to 1,500 gpm, which is less than the 3,000-gpm desired by Alpine City. Important factors for the groundwater development potential of the bedrock include the depth to, type(s) of, and degree of fracturing of the bedrock.

We do not know the depth to or type of bedrock present below the alluvial fan deposits at the Asay location; however, Figure 4 shows that the Mississippian-age Doughnut Formation (Mdo) is exposed on the upthrown side of the fault, about a mile to the northeast. Figure 5 shows that the 300- to 1200-foot thick Doughnut Formation is underlain by Paleozoic-age carbonate and clastic rocks. The Doughnut Formation and older Paleozoic rocks, such as the Humbug Formation, Deseret Limestone, Gardison Limestone, Fitchville Formation, and Maxfield Limestone are significant aquifers and have been successfully developed for water supply in other areas of Utah. Note, however, that the Doughnut Formation outcrop shown on Figure 5 has been metamorphosed to marble (Biek, 2005) and may actually be underlain by Tertiary-age intrusive igneous rocks that would have a significantly lower groundwater development potential than the Paleozoic rocks.

ESTIMATED COST OF EXPLORATION AND PRODUCTION WELLS

We based our estimated costs on bids that we received during 2015 and 2016 for similar projects.

ESTIMATED COST OF WELLS AT ASAY AND LAMBERT PARK LOCATIONS

For cost estimating purposes, we assumed that for both the Asay and Lambert Park locations the:

- Target aquifer would be Paleozoic-age bedrock;
- Top of the Paleozoic-age bedrock would be at a depth of about 750 feet; and
- Total depth of both an exploration well and a production well would be 1,500 feet.

Our estimate for a water well contractor to drill, test, sample, plug, and abandon a 7-inch diameter 1,500-foot deep exploration well into bedrock is $250,000 to $300,000. Air lift tests of the bedrock would be used to assess potential yield and water quality of the bedrock. Engineering costs for well site and construction management services and reporting for the exploration well is $30,000 to $40,000.

Our estimate for a water well contractor to drill, construct, develop, and test a 16-inch diameter, 1,500-foot deep production well into bedrock is $800,000 to $850,000. Engineering costs for well site and construction management services and reporting for the production well is $40,000 to $50,000.

If results of an exploration well are favorable, then it may be possible, depending on hydrogeologic conditions and DWRi approval, for a production well to be completed in both the valley-fill deposits and underlying bedrock. If so, then the potential yield could be greater than our estimates.

ESTIMATED COST OF WELLS AT JONES LOCATION

We assumed that both the valley-fill deposits and underlying bedrock are both potential target aquifers at the Jones location. An exploration well would be drilled to test the valley-fill deposits to an estimated depth of about 1,000 feet and the underlying bedrock to an estimated depth of 1,500 feet. Our estimate for a water well contractor to drill, test, sample, plug, and abandon a 7-inch diameter 1,500-foot deep exploration well into both the valley-fill deposits and underlying bedrock at the Jones location is $250,000 to $350,000. Air lift tests would be used to assess potential yield and water quality of the bedrock. Engineering costs for well site and construction management services and reporting for the exploration well is $30,000 to $40,000.

Our estimate for a water well contractor to drill, construct, develop, and test a 16-inch diameter production well at the Jones location is (1) $500,000 to $550,000 for a 700-foot deep well completed in the valley-fill deposits and (2) $800,000 to $850,000 for a 1,500 feet deep well completed in the bedrock. Engineering costs for well site and construction management services and reporting for the production well is $40,000 to $50,000.

If results of an exploration well are favorable, then it may be possible, depending on hydrogeologic conditions and DWRi approval, for a production well to be completed in both the valley-fill deposits and underlying bedrock. If so, then the potential yield could be greater than our estimates.

CONCLUSIONS AND RECOMMENDATIONS

Our conclusions and recommendations are as follows:

- We believe, with some qualifications, that it may be feasible to construct a secondary water supply well capable of producing as much as (1) 1,000 to 1,500 gpm from Paleozoic-age bedrock at all three locations and (2) 500 to 900 gpm from the valley-fill deposits at the Jones location.

- We do not believe that it is feasible to construct a well capable of 3,000 gpm at any of the three locations.

- If results of an exploration well are favorable, then it may be possible, depending on hydrogeologic conditions and DWRi approval, for a production well to be completed in both the valley-fill deposits and underlying bedrock. If so, then the potential yield could be greater than our estimates.

- Our conclusions are qualified due to the large degree of uncertainty with respect to the depth to, type, and yield of aquifer(s) present at all three locations.

- We believe that the water quality at all three locations would meet the requirements of a secondary water supply well.

- The target aquifers would be (1) Paleozoic-age bedrock below an estimated depth of 500 to 1,000 feet at all three locations or (2) valley-fill deposits at an estimated depth of about 700 feet at the Jones location.

- We strongly recommend that (1) an exploration well be drilled and tested to a minimum depth of 1,500 feet at all three locations before proceeding with a production well and (2) budgeting for an exploration well should include a contingency for deeper drilling, if necessary.

- Our estimate for water well contractor to drill and test a 1,500-foot deep exploration well is $250,000 to $300,000, not including engineering or site preparation costs.

- Our estimate for a water well contractor to drill, construct, and test a 1,500-foot deep 16-inch diameter production well completed in bedrock at the Asay, Lambert Park, or Jones locations is $800,000 to $850,000, not including engineering or site preparation costs.

- Our estimate for a water well contractor to drill, construct, and test a 700-foot deep 16-inch diameter production well completed in the valley-fill deposits at the Jones location is $550,000 to $600,000, not including engineering or site preparation costs.

- We prefer the Jones location to the Asay and Lambert Park locations because it is relatively close to the Traverse Mountain South fault and we believe that both the valley-fill deposits and underlying bedrock are potential target aquifers.

If you have any questions or need more information, please do not hesitate to call us at (435) 649-4005 (office).

Loughlin Water Associates, LLC

William D. Loughlin, P.G.
Manager, Principal Hydrogeologist

LICENSED PROFESSIONAL GEOLOGIST
WILLIAM D. LOUGHLIN
5205683-2250
4.21.2016
STATE OF UTAH

cc: Shane Sorensen, P.E. – Alpine City
Jed Muhlestein, P.E. – Alpine City
Greg Kmetzsch – Alpine City

Table 1 – Descriptions of Quaternary and Tertiary-age Geologic Units
Table 2 – Summary of Alpine City Wells
Figure 1 – Location Map
Figure 2 - Topographic Map
Figure 3 – City Well Capacity Map
Figure 4 – Geology Map
Figure 5 – Stratigraphic Column
Figure 6 – Block Diagram of Northern Utah Valley

Attachment A – Summary of Available Wells

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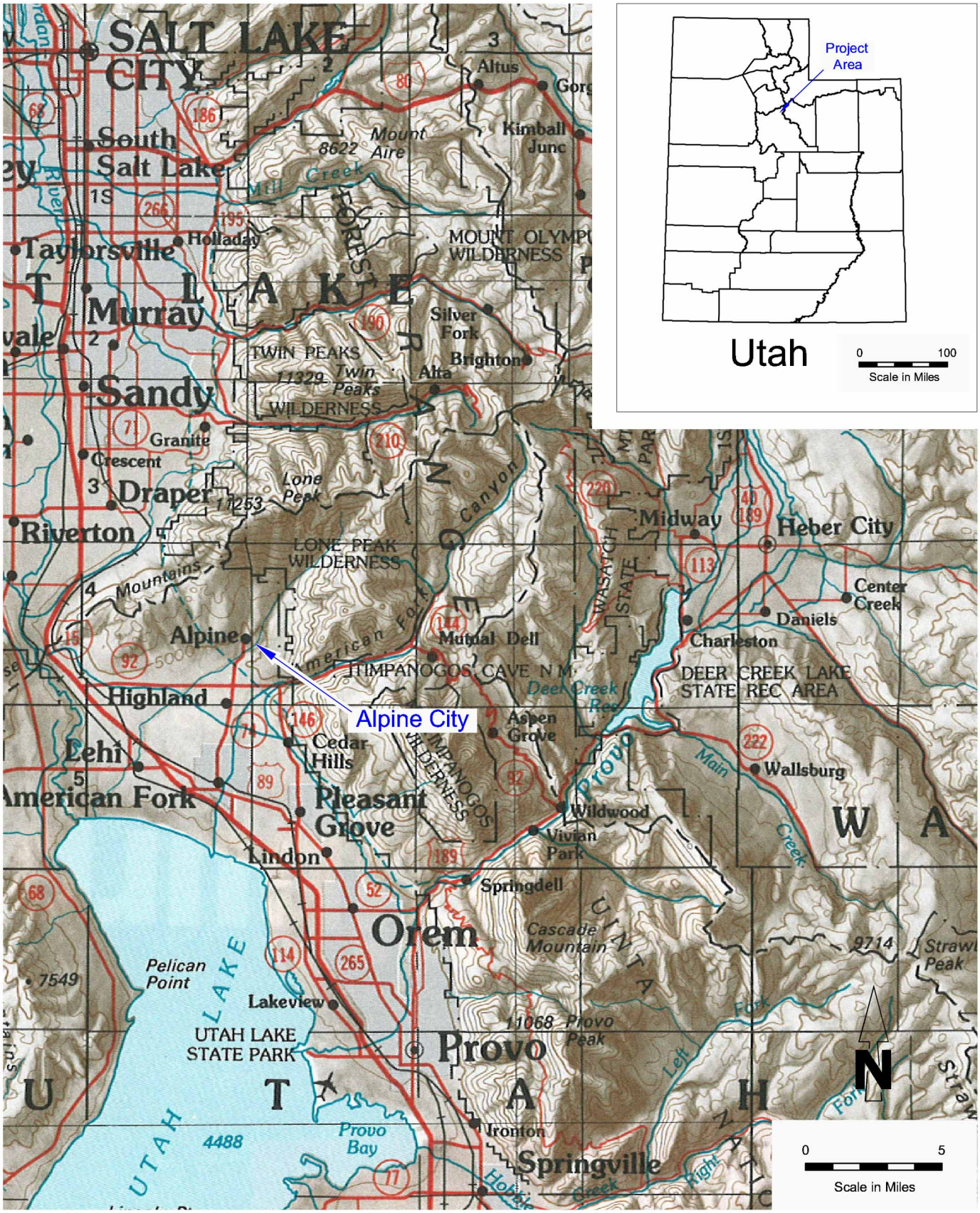
FIGURES



Base map: "State of Utah Shaded Relief Map":
U.S. Geological Survey (1988).
Contour interval 500 feet.

LOUGHLIN WATER ASSOCIATES ▲ LLC

Horrocks Engineers
Alpine City

Location Map

Figure 1

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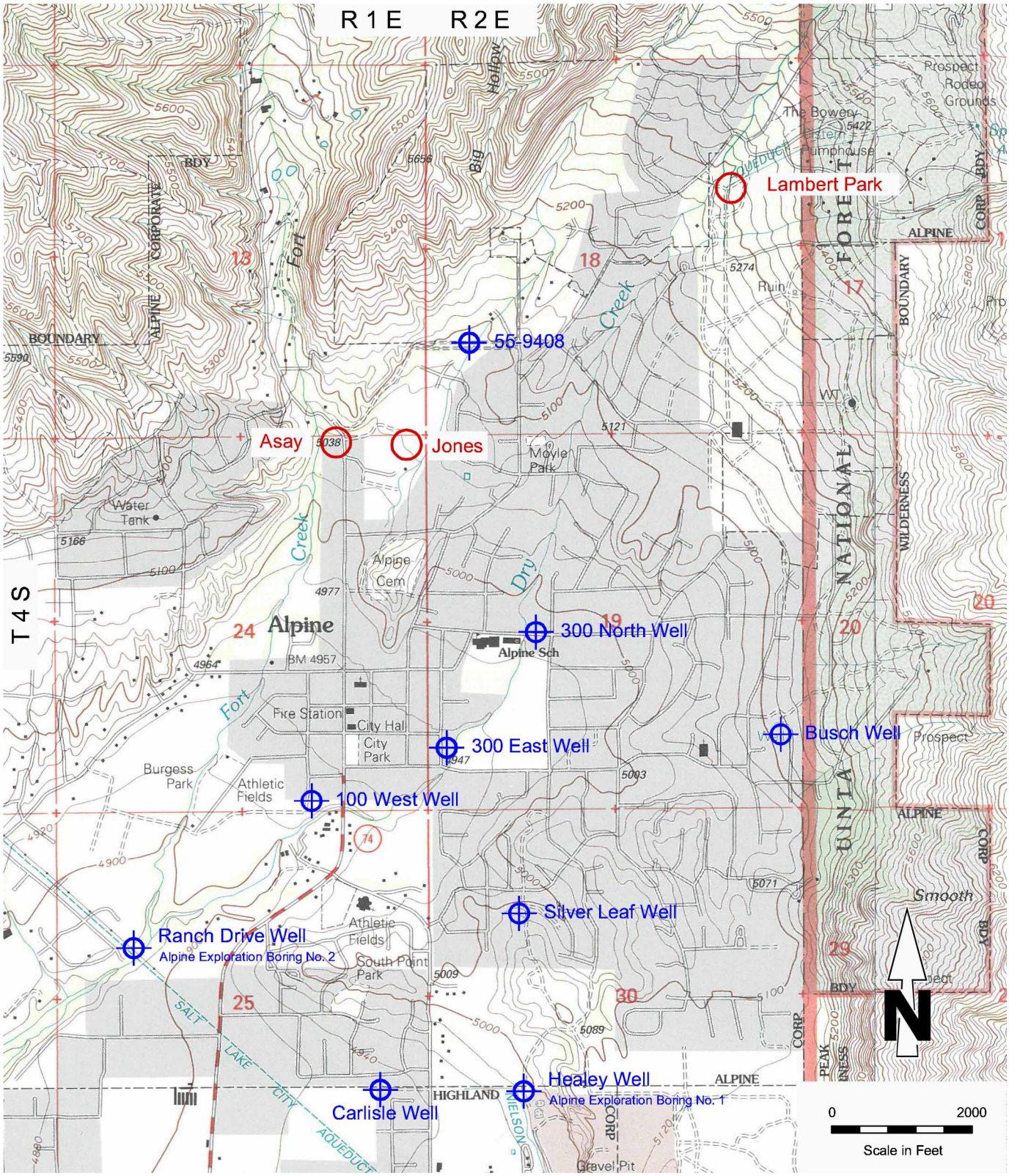

Base map: "Lehi, Utah" and "Timpanogos Cave, Utah" (1998) USGS topographic maps

Production Well

Horrocks Engineers
Alpine City
Topographic Map
Figure 2

LOUGHLIN WATER ASSOCIATES LLC

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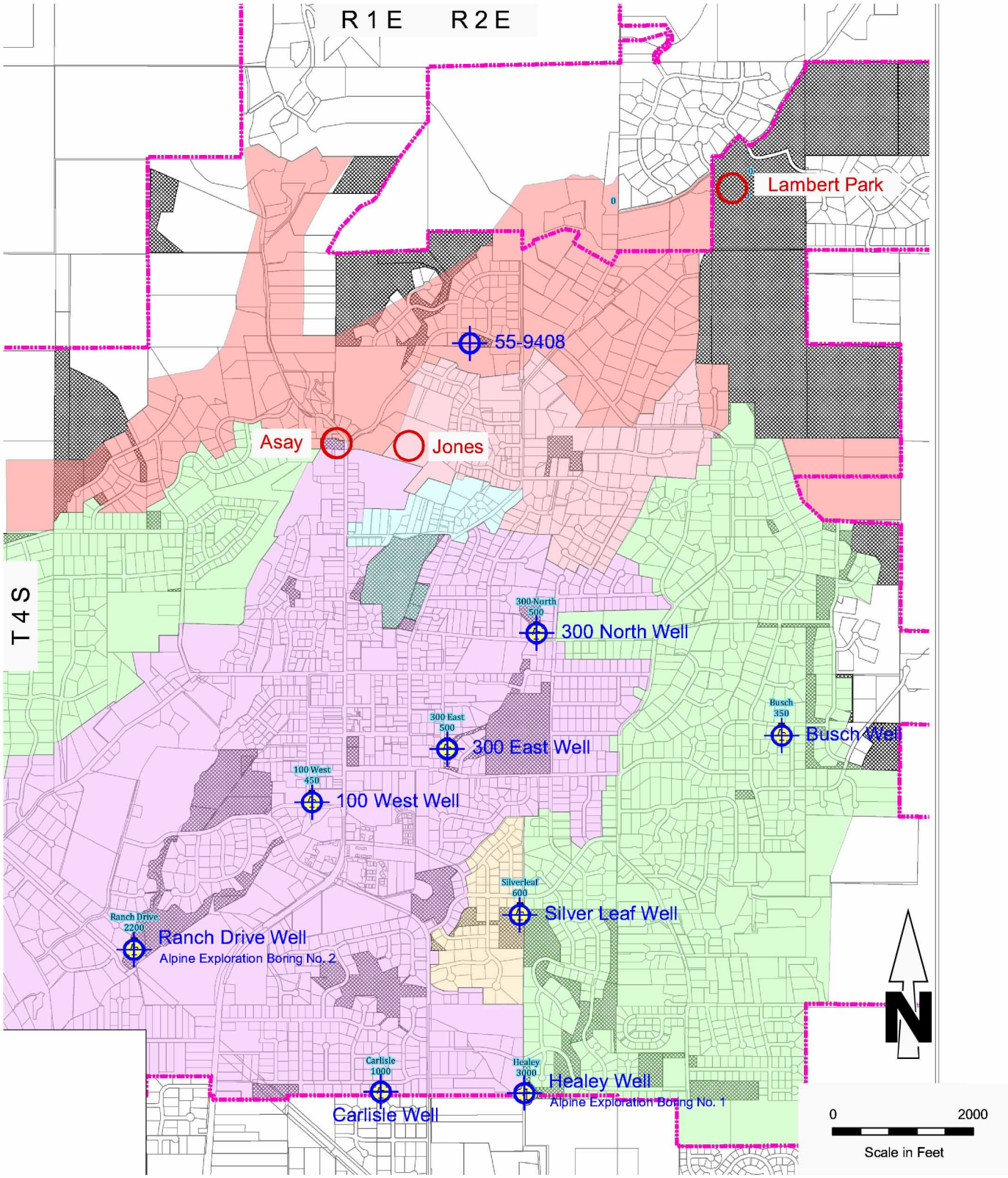

Base map from "Utilities PI Well Map.pdf"
by Horrocks Engineers (2015)

1000 Test pumping rate in gpm

Production Well

LOUGHLIN WATER ASSOCIATES, LLC

Horrocks Engineers
Alpine City
City Well Capacity Map
Figure 3

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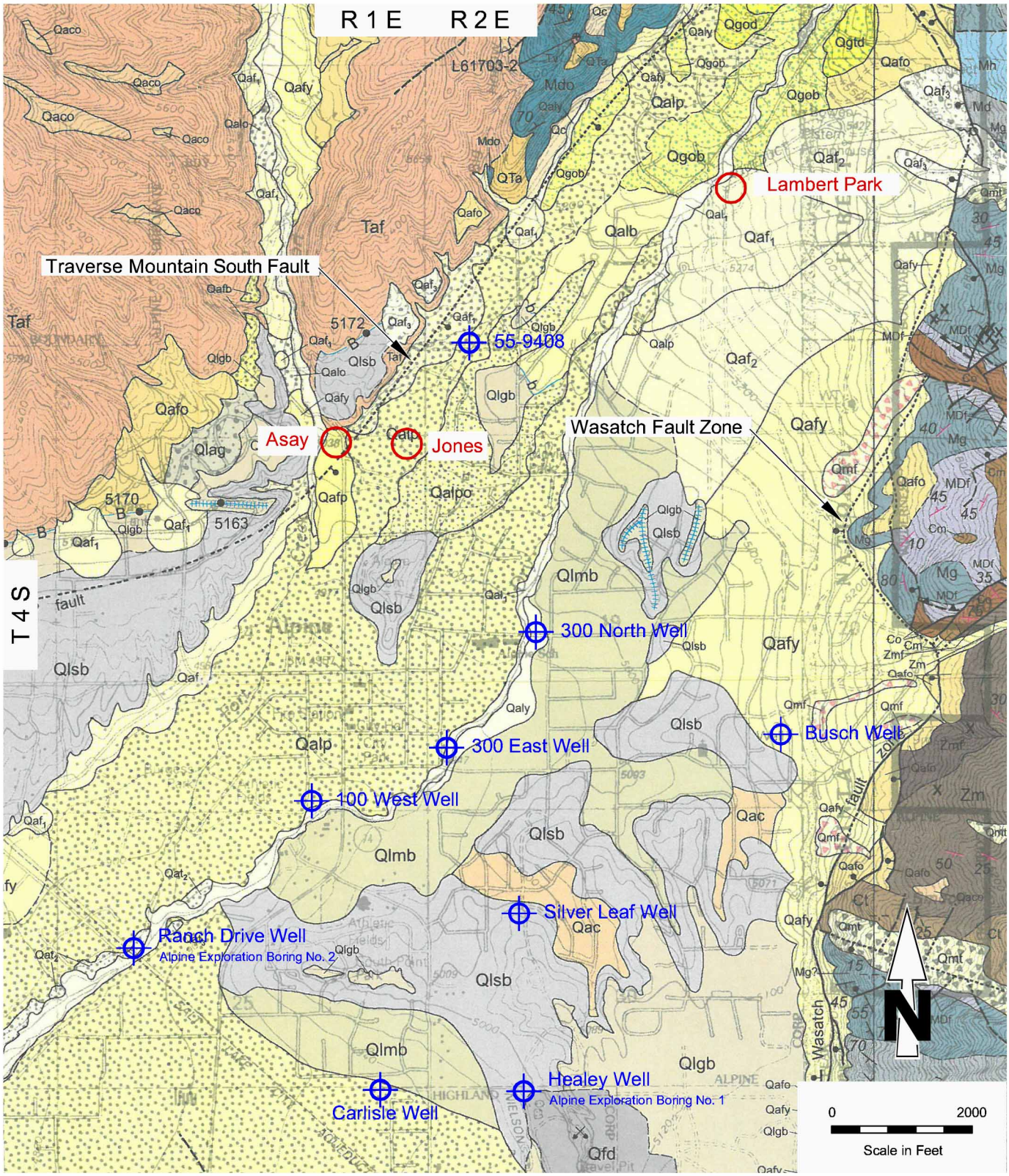

Base map: Biek (2005)

Production Well

LOUGHLIN WATER ASSOCIATES, LLC

Horrocks Engineers
Alpine City
Geology Map
Figure 4

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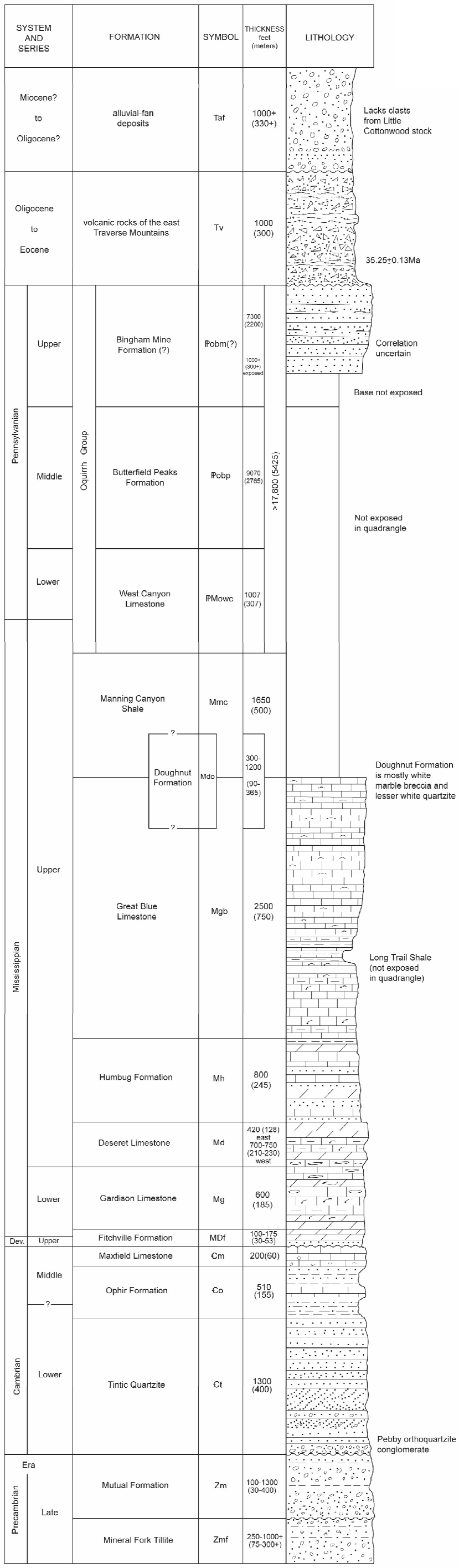

From Biek (2006)

Horrocks Engineers
Alpine City
Stratigraphic Column
Figure 5

LOUGHLIN WATER ASSOCIATES ▲ LLC

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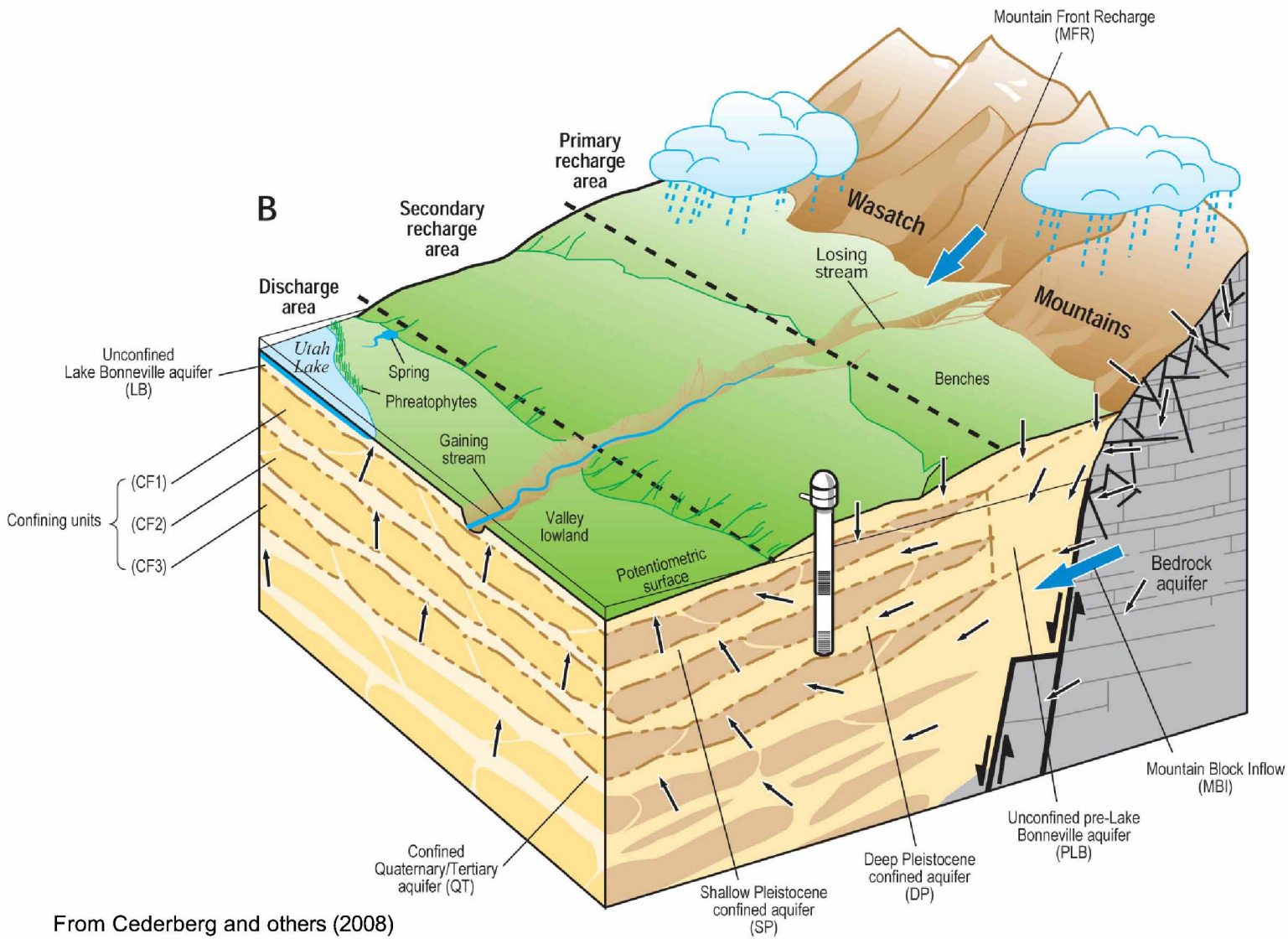

From Cederberg and others (2008)

Horrocks Engineers
Alpine City

Block Diagram

Figure 6

LOUGHLIN WATER ASSOCIATES, LLC

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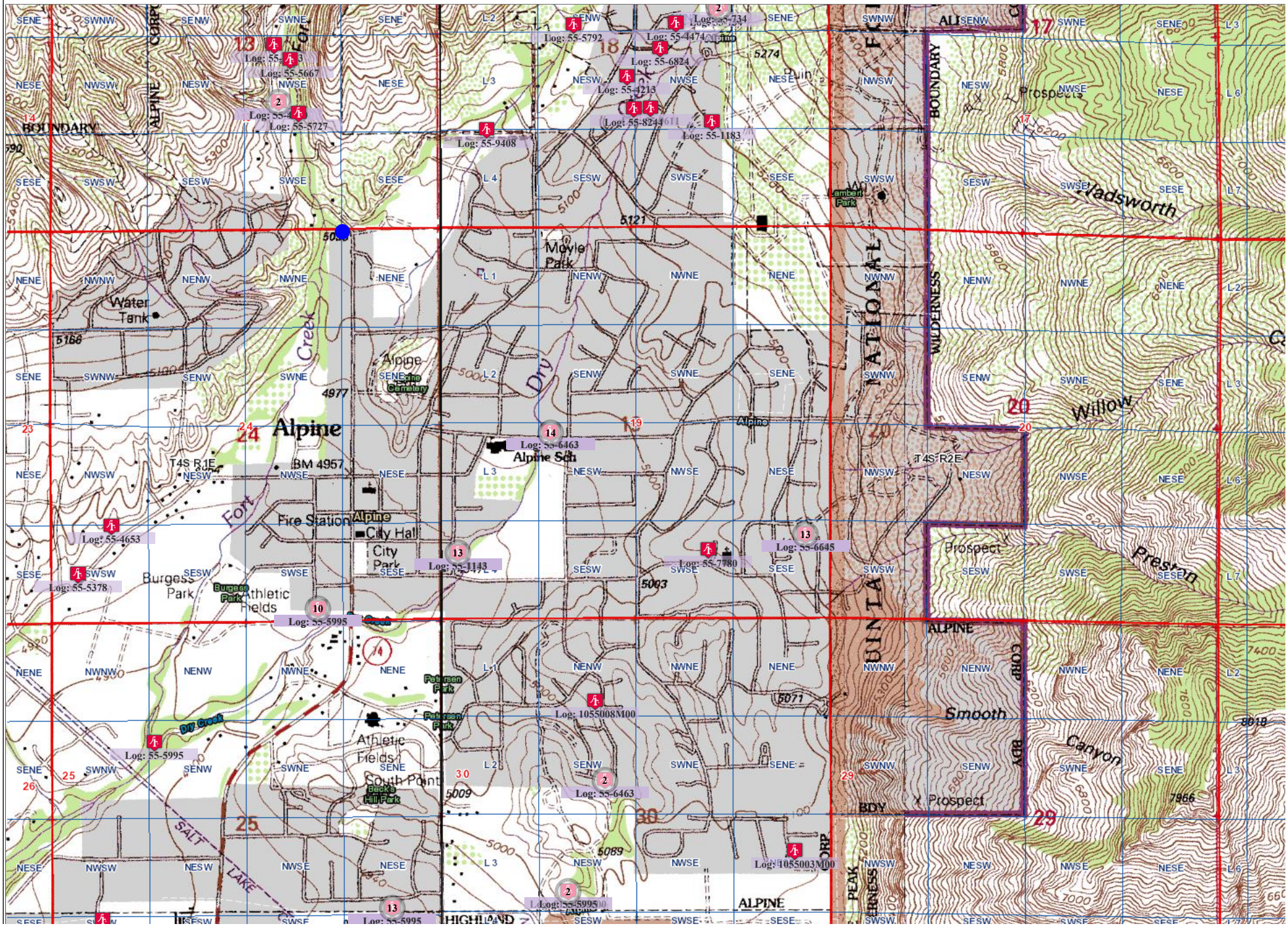
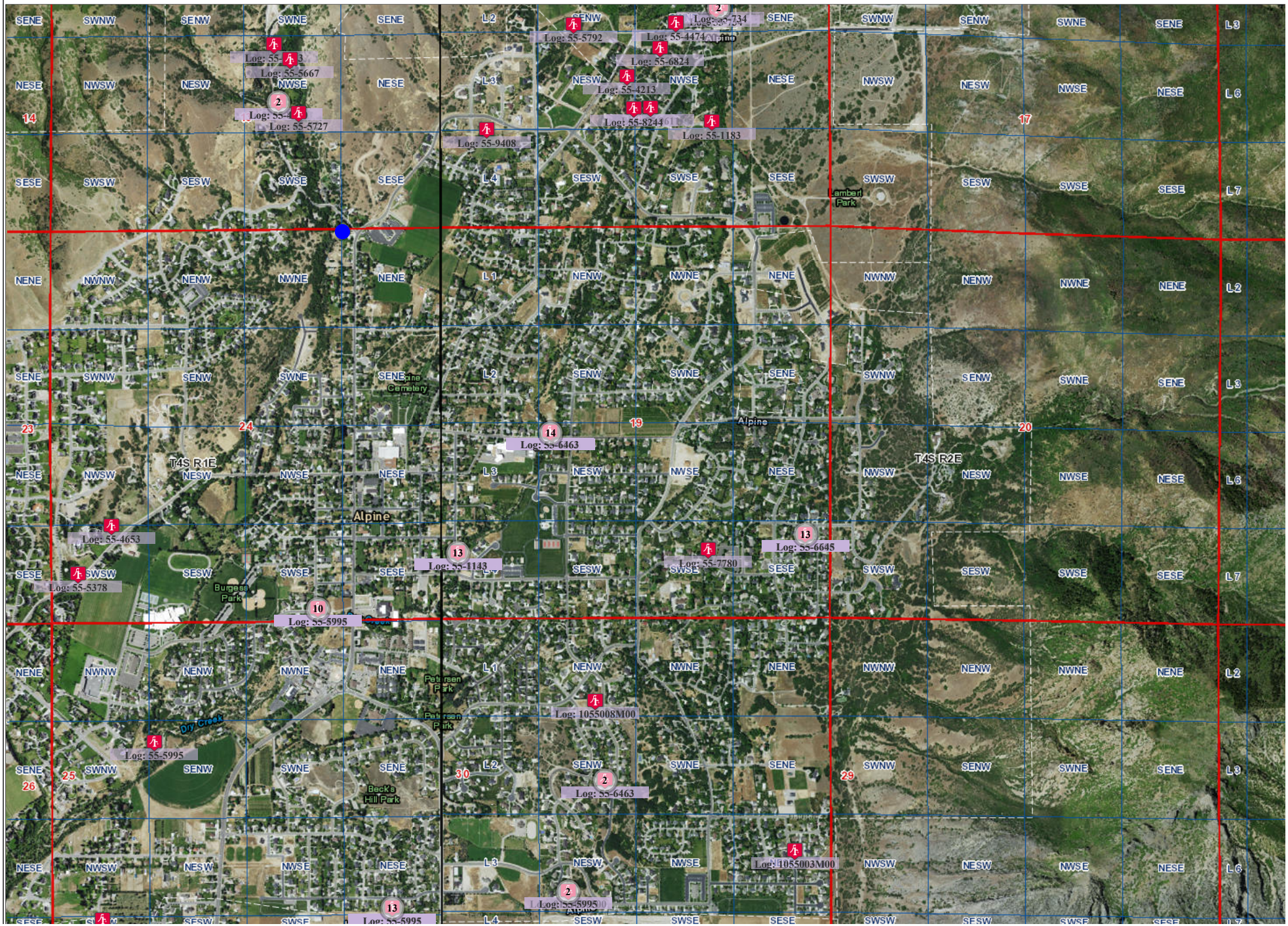
ATTACHMENT A

SUMMARY OF AREA WELLS

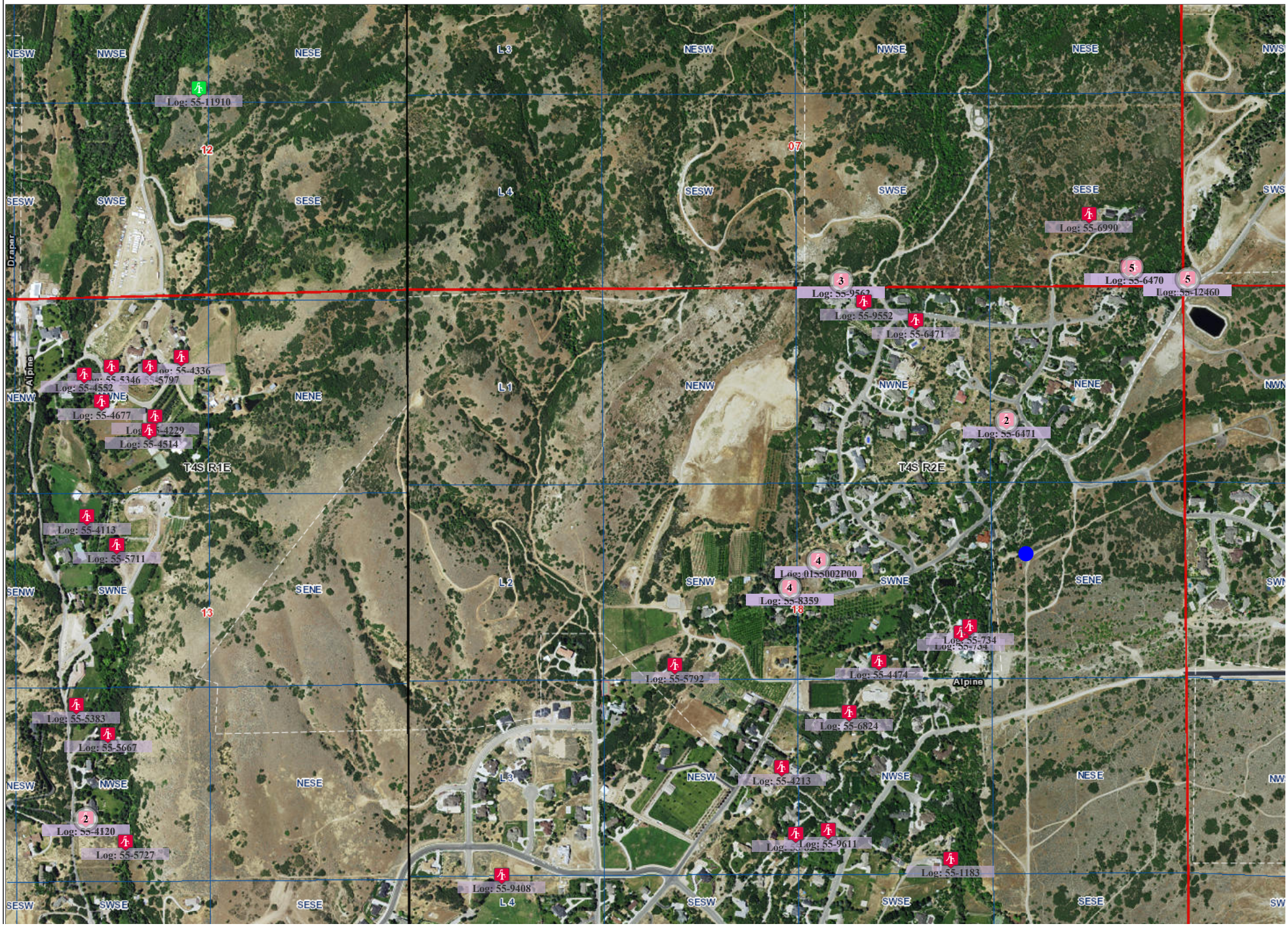
Water Rights Map



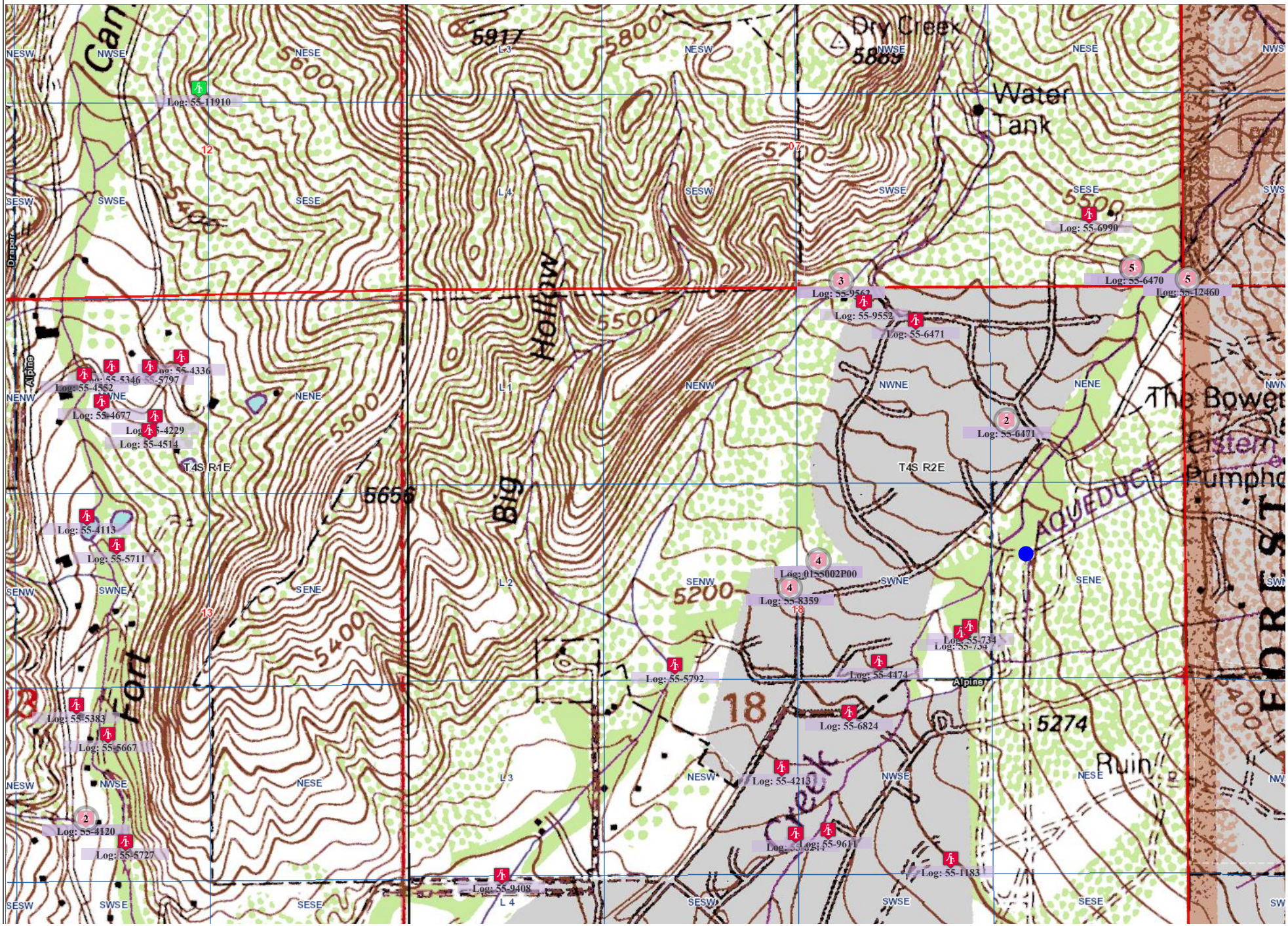
Water Rights Map



Water Rights Map



Water Rights Map



Attachment A

Summary of Alpine City Area Wells[a]

Well Name /Name on Well Log	Water Right No.	DWRi Well ID No. (WIN)	Year Drilled	Drilling Method	Drilled Depth (feet)	Depth to Bedrock	Type of Bedrock	Completed Interval From	Completed Interval To	Driller's Log of Interval	Aquifer	Casing Diameter (inches)	Ground Elevation (feet)	Depth to Water Depth (feet)	Depth to Water Date Measured	Water Level Elevation (feet)	Aquifer Test/Flow Measurements Type of Test	Discharge Rate (gpm)	Drawdown (feet)	Specific Capacity (gpm/ft)	Length of Test (hours)	Date of Test	Comments
ALPINE CITY WELLS																							
300 N Well			1990	Cable	700	>700	NA	300	680	S,G,C,Cgl	VF	14	4990	290	3/22/1990	4700	CRPT	900	210	4.3	24	1990	Also known as Alpine City Well #3
Busch Well			1967	Cable	602	>602	NA	430	590	S,B	VF	16	5110	427.5	12/18/1990	4682.5	SRPT	253	10.5	24	4	12/18 to 12/19/1990	After 24 hours of step-rate test, pumping rate reduced from 548 to 501 gpm for 4 hours, and then to 476 gpm for 3 hours, and finally to 455 gpm for 1 hour
																		351	16.5	21	4.5		
																		449	30.6	15	15		
																		548	75	7	0.5		
300 E Well			1962	Cable	650	623	Granite?	467	622	Cgl	VF	16	4955	352	11/28/1962	4603	CRPT	1070	95	11	73	11/28/1962	Also known as Alpine City Well #1
100 W Well			1973	Cable	651	>651	NA	300	630	S,G	VF	16	4927	324	11/30/1973	4603	CRPT	1194	76	16	24	11/30/1973	Also known as Alpine City Well #2
Silver Leaf Well			2000	Cable	700	>700	NA	224	687	S,C,G,Cgl	VF	16	5040	241	3/30/2000	4799	CRPT	650	287	2	29	3/30 to 3/31/2000	
Carlisle Well			1978	Cable	1077	609	Ls, Ss	385	900	G	VF	10	4920	312	8/29/1978	4608							Open hole completion 900 to 1077
								900	1077	Ls, Ss	Bdrx		4920	313	10/26/1995	4607	SRPT	1433	30.5	47	0.75	10/26/1995	
																		1969	71	28	4	10/26/1995	
																		2026	74	27	6.5	10/26/1995	
Healey Well	a24466		2002	Reverse	1540	>1540	NA	800	820	S,G	VF	16	5080	295	4/10/2002	4785	CRPT	2574	161	16	48	4/10/2002	
								923	1033	S,G	VF												
								1060	1100	G	VF												
								1118	1128	G	VF												
								1160	1480	G	VF												
Ranch Drive Well			2002	Reverse	1496	>1496	NA	888	978	S,G	VF	16	4860	408	4/27/2002	4452	CRPT	2578	37	70	24	4/27/2002	
								990	1060	S,G	VF												
								1080	1130	G	VF												
								1202	1212	G	VF												
								1238	1258	G	VF												
								1266	1276	G	VF												
								1296	1386	G	VF												
								1436	1476	G	VF												
FORT CANYON AREA WELLS																							
Taylor	55-5727	3547	1981	NR	300	>300	NA	NR	NR	Hardpan	VF?	NR	NR	NR	NA	NA	NA	NA	NA	NA	NA	NA	0 to 145 unconsolidated, 145 to 300 "hardpan"; water right acquired by Alpine City; water right
No Name	55-4120	3577	1967	Cable	140	>140	NA	96	105	G	VF	6	5140	NR	NR	NA	Bailer	75	NR	NA	1	7/1/1967	Water right file destroyed
								124	130	B	VF												
Grant	55-5667	3526	1978	Cable	60	55?	Granite?	55	60	C, Granite?	VF or Bdrx?	6	5130	14	4/19/1978	5116	Bailer	4	30	0.1	0.5	4/19/1978	
VanderHoven	55-5383	3523	1974	Cable	65	>65	NA	63	65	G	VF	6	5160	9	11/16/1974	5151	Constant-rate pumping	9	11	0.8	4	11/16/1974	

Attachment A

Summary of Alpine City Area Wells[a]

Well Name /Name on Well Log	Water Right No.	DWRi Well ID No. (WIN)	Year Drilled	Drilling Method	Drilled Depth (feet)	Depth to Bedrock	Type of Bedrock	Completed Interval From	Completed Interval To	Driller's Log of Interval	Aquifer	Casing Diameter (inches)	Ground Elevation (feet)	Depth to Water Depth (feet)	Depth to Water Date Measured	Water Level Elevation (feet)	Aquifer Test/Flow Measurements Type of Test	Discharge Rate (gpm)	Drawdown (feet)	Specific Capacity (gpm/ft)	Length of Test (hours)	Date of Test	Comments
Pitcher	55-5711	3539	1977	Cable	63	>63	NA	60	63	B, H	VF	8	5180	NR	NA	NA	NR	NA	NA	NA	NA	NA	
Broadbent	55-4113	3580	1967	Cable	615	>615	NA	NR	NR	NA	NA	6	5190	NR	NA	NA	NA	NA	NR	NA	NA	NA	Pumping rate from Proof is 13.3 gpm
Zions/Barr	55-4514	3563	1988	Rotary	160	>160	NA	35 130	55 160	C,B S,G,C	VF	8	5260	25	12/20/1988	5235	NR	NA	NA	NA	NA	NA	Pumping rate from Proof is 6.6 gpm
Wilcox	55-4229	3581	1968	Cable	160	>160	NA	30 115 140	43 135 160	S,G S,G,CGL Cgl	VF?	6	5270 5270	23 19	10/30/1968 6/20/1969	5247 5251	CRP	40	10	4	0.5	6/20/1969	
Haynie	55-4677	3575	1989	Rotary	150	49	Granite	42 120	52 140	Granite Granite	Bdrx	6	5250	15	1/29/1989	5235	CRP	23	45	0.5	90	1/29/1989	
Burk	55-4552	31480	1978	Cable	146	>146	NA	13	130	S,C,B	VF	6	5250	8	5/25/1978	5242	Bailer	28	5	6	6	5/25/1978	
Mitchell	55-5346	3554	1976	Cable	155	>155	NA	101	140	S,C,Cgl	VF	8	5270	26	5/8/1976	5244	Bailer	25	0	>25?	NR	5/8/1976	
Doxey	55-5797	3519	1978	Cable	200	>200	NA	NR	NR	S,C,B	VF	8	5290	40	3/15/1978	5250	Bailer	4	150	0.03	4	3/15/1978	
Christensen	55-4336	3540	1971	Cable	147	>147	NA	33	45	S,C,Cgl	VF	6	5310	30	7/10/1913	5280	Bailer	30	8	4	0.5	6/5/1971	
Young	a27922	34244	2005 to 2009	Rotary	1690	1440	Granite	395 1410	515 1690	G,C Granite	VF? Bdrx	4, 2	5510	-415	8/3/2009	5925	Air lift	2 to 5	NR	NA	NR	7/24/2009	Well drilled to 1210 feet in 2005 and then deepened to 1620 feet in 2008 to 2009 Log for deepening of well in 2008 to 2009 in the names of Utah Board of Water Resources and Mary Young
AREA SOUTHWEST OF FORT CANYON																							
Farnsworth	55-4653	33469	1973	Cable	413	>413	NA	360	410	G	VF	6	4970	NR	NA	NA	Bailer	15	0	>15?	1	5/26/1905	Box Elder South Water is current water right owner
Murdock	55-5378	32617	1976	Cable	360	>360	NA	345	360	NR	VF?	8	4940	302	8/26/1976	4638	Bailer	20	5	4	0.5	8/26/1976	
UPPER DRY CREEK AREA WELLS																							
Patterson	55-9408	33055	1974	Cable	302	>302	NA	200	300	S,G	VF	8	5090	180	1/26/1974	4910	Bailer	60	0	>30?	NR	1/26/1974	Box Elder South Water is current water right owner
Russon	55-1183	427860	1966	Cable	260	>260	NA	210	250	S,G,Cgl	VF	6	5200	210	10/15/1966	4990	Bailer	15	5	3	1	10/15/1966	
Bergman	55-9611	24759	2002	Rotary	416	>416	NA	200	416	G,C,Cgl	VF	6	5150	172	2/14/2002	4978	Air lift	75	NR	NA	7	2/14/2002	
Christensen	55-8244	23512	2001	Rotary	360	>360	NA	280	360	G,Cgl	VF	4	5150	170	4/10/2001	4980	Air lift	80	NR	NA	1	4/1/2001	
Kleinman	55-4213	427374	1970	Cable	208	>208	NA	180	208	S,G	VF	6	5180	170	10/1/1970	5010	CRP	40	12	3	6	10/1/1970	
Howell	55-6824	30070	1983	Rotary	274	>274	NA	150	250	S,G,C,B	VF	6	5200	120	11/21/1983	5080	Air lift	150	NR	NR	NR	11/21/1983	
Jones	55-4474	426922	1971	Cable	300	>300	NA	150	291	S,G,Cgl	VF	10	5220	125	8/6/1971	5095	Bailer	50	10	5	2	8/6/1971	
Weixler	55-5792	32297	1977	Cable	200	>200	NA	145	180	S,G	VF	8	5190	147	11/28/1977	5043	Bailer	22	10	2	2	11/28/1977	

Attachment A

Summary of Alpine City Area Wells[a]

Well Name /Name on Well Log	Water Right No.	DWRi Well ID No. (WIN)	Year Drilled	Drilling Method	Drilled Depth (feet)	Depth to Bedrock	Type of Bedrock	Completed Interval From	Completed Interval To	Driller's Log of Interval	Aquifer	Casing Diameter (inches)	Ground Elevation (feet)	Depth to Water Depth (feet)	Depth to Water Date Measured	Water Level Elevation (feet)	Aquifer Test/Flow Measurements Type of Test	Discharge Rate (gpm)	Drawdown (feet)	Specific Capacity (gpm/ft)	Length of Test (hours)	Date of Test	Comments
Mills	55-734	31315	1979	Cable, Rotary	440	>440	NA	122	152	S,G,B,Cgl	VF	7	5250	165	11/1/1979	5085	Bailer	40	15	3	1	11/1/1979	
								219	239														
								248	312														
								250	426														
Mills	55-734	31316	1970	Cable	323	>323	NA	220	235	S,G	VF	8	5250	180	6/16/1970	5070	SRPT	105	36	3	4	6/16/1970	
								255	316									130	50	3	4	6/16/1970	
																		150	70	2	4	6/16/1970	
Pack	55-969	34490	1963	Cable	365	353	Granite	200	352	G	VF	10	5230	155	2/25/1963	5075	CRPT	300	50	6	10	2/25/1963	Well also appears under water rights for (1) Alpine Cit, (2) Pack Mutual Water Co, and (3) Zolman
Alpine Cove Water SSD	55-9361	23589	2001	Rotary	396	353	Granite	196	396	G,C, Granite	VF/Bdrx	12	5240	168	6/29/2021	5072	CRPT	225	59	4	72	6/27/2001	
Jones	55-6471	23454	1981	Cable	394	>394	NA	140	167	Cgl	VF	12	5350	165	3/24/1981	5185	Bailer	35	60	0.6	0.25	3/24/1981	Alpine City and Alpine Cove SSD both own water rights in this well
								185	284	S,G,C,Cgl	VF												
								268	394	Cgl	VF												
Dickman	55-9561	23344	2001	Rotary	900	68	Granite	240	865	Granite	Bdrx	4	5380	90	4/2/2001	5290	Air lift	40	280	0.14	3	3/30/2001	
Patterson	55-2351	28160	2004	Rotary	206	>206	NA	30	200	B	VF	6	5460	69	4/2/2004	5391	CRPT	28	64	0.4	8	4/2/2004	
Patterson	55-623	28160	2004	Rotary	1180	595	Ls	596	616	Ls	Bdrx	6	5470	78	1/15/2005	5392	CRPT	26	300	0.09	10	1/15/2005	
	55-9289							796	1056	Ls	Bdrx												
Melby	55-6990	5515	1986	Cable, Rotary	365	280	NR	140	153	B	VF	6	5490	140	12/24/1985	5350	SRPT	60	210	0.3	2	12/24/1985	
								170	195	C,B	VF							45	210	0.2	4	12/24/1985	
																		35	185	0.2	72	12/24/1985	
Melby	55-6470		1993	Cable, Rotary	405	320	Granite, Ls	320	405	Granite, Ls	Bdrx	12	5450	63.6	10/4/1993	5386	CRPT	100	161	0.6	24	11/19/1993	Alpine Cove Water SSD and Lehi City also own water rights in this well
Patterson	97-55-001-P-01		1997	Cable	530	215	Granite, Sh	115	200	S	VF	8	5750	52	NR	5698	NR	NA	NA	NA	NA	NA	
								215	238	Sh	Bdrx												

NR = Not Reported; NA = Not Applicable; S = Sand; G = Gravel; C = Cobbles; B = Boulders; Ls = Limestone; Ss = Sandstone; Sh = Shale; VF = Valley-Fill Aquifer; Bdrx = Bedrock; CRPT = Constan- rate pumping test; SRPT = Step-discharge pumping test; SSD = Special Service District; gpm = gallons per minute; ft = feet

[a] Data are from Well Driller's Reports (well logs) available from the DWRi online database (2015); copies of well logs are on file with Loughlin Water Associates, LLC.

ALPINE CITY
ESTABLISHED 1850

Proposed Well Site

N

DRAFT - September 21, 2016

Horrocks Engineers
Attn: John Schiess, P.E.
2162 West Grove Parkway, #400
Pleasant Grove, Utah 84062

Subject: **Addendum – Assessment of Proposed Alpine Well Location**
Feasibility of Groundwater Development for Secondary Water Supply Well
Alpine City, Utah County, Utah
for Horrocks Engineers

Dear John:

This letter presents my comparison of the feasibility of groundwater development at the proposed Alpine Well location versus the proposed Jones location for a new secondary water supply well for Alpine City (the City) in Utah County, Utah. This letter is an addendum to my letter report dated April 21, 2016 (Loughlin Water, 2016). I prepared this letter in accordance with our proposal to Horrocks Engineers (Horrocks) dated October 23, 2015 and your request for addendum on September 21, 2016.

BACKGROUND

I understand that Horrocks Engineers is helping the City site, permit, and construct a new secondary water supply well (proposed new well) capable of producing about 3,000 gallons per minute (gpm). Figures 1, 2, and 3 show the approximate location of the proposed Alpine Well location along with the proposed Jones, Asay, and Lambert Park Locations. I assessed the Jones, Asay, and Lambert Park locations in my previous letter report (Loughlin Water, 2016).

ASSESSMENT OF PROPOSED ALPINE WELL LOCATION

As indicated on Figure 1, the proposed Alpine Well location is in the Northeast (NE) Quarter (1/4) of the Southwest (SW) ¼ of the SW¼ of Section 18, Township 4 South, Range 2 East, Salt Lake Base and Meridian (SLB&M).

ANTICIPATED SUBSURFACE GEOLOGY AT PROPSED ALPINE WELL LOCATION

Note from Figure 3 that, similar to the Jones location, the proposed Alpine Well location is on the downthrown side (down-dropped block) of both the Traverse Mountain South fault, which is located about 700 feet to the northwest, and the Wasatch fault, which is

3100 W. Pinebrook Road, Ste. 1100 ▲ Park City, Utah 84098
Phone: 435.649.4005 ▲ Fax: 435.649.4085 ▲ Mobile: 435.659.1752 ▲ www.LoughlinWater.com

located about 5,400 feet to the southeast. Based on my review of the geologic map and cross section B-B' by Biek (2005), the logs of area wells, see Attachment A of Loughlin Water (2016), and other reports and information, I believe that, similar to the Jones location, the proposed Alpine Well location would likely encounter:

- Unconsolidated Quaternary-age alluvial (Qalp) and lacustrine (Qlsb) deposits to an estimated depth of 200 to 300 feet;
- Unconsolidated to cemented and possibly tilted and faulted Pre-Lake Bonneville and Tertiary-age valley-fill deposits to an estimated depth of about 1,000 feet;
- The Traverse Mountain South fault below an estimated depth of about 1,000 feet; and
- Bedrock on the footwall (downthrown) side of the Traverse Mountain South fault below an estimated depth of 1,000 feet.

Valley-Fill Deposits at Proposed Alpine Well Location

I believe that the potential yield of the valley-fill deposits at the proposed Alpine Well location may be as high as 900 gpm. Potential subsurface conditions are likely best represented by the well drilled under Water Right #55-9408 that is located about 300 feet to the northwest; see Figures 1, 2, and 3. This well is also on the downthrown side and about 500 feet to the southeast of the Traverse Mountain South fault and, as indicated in Attachment A of Loughlin Water (2016), drilled to a depth 302 feet, completed in unconsolidated valley-fill deposits, and bailed for an unspecified period of time at 60 gpm with "*no*" drawdown. Subsurface conditions of the valley-fill deposits at the proposed Alpine Well location may also be similar to the Alpine City 300 North Well which is located 3,900 feet to the south and drilled to a depth of 700 feet, completed in valley-fill deposits, and pump tested at 900 gpm with 210 feet of drawdown (specific capacity of 2.4 gpm/ft); see Figures 1, 2, and 3.

Bedrock at Proposed Alpine Well Location

I believe that Paleozoic-age carbonate and/or sandstone bedrock, if present below an estimated depth of about 1,000 feet, would have the greatest potential yield at the proposed Alpine Well location. However, a high-end estimate of potential yield is about 1,000 to 1,500 gpm, which is less than the 3,000-gpm desired by Alpine City. Important factors for groundwater development potential include the depth to bedrock, type(s) of bedrock present, and degree of fracturing of the bedrock.

I do not know the depth to or type of bedrock at the proposed Alpine Well location; however, Figure 3 shows that the Mississippian-age Doughnut Formation (Mdo) is exposed on the upthrown side of the fault, about a mile to the northeast. Although (Biek, 2005) indicates that that the 300- to 1200-foot thick Doughnut Formation is underlain by Paleozoic-age carbonate and clastic rocks. The Doughnut Formation and older Paleozoic rocks, such as the Humbug Formation, Deseret Limestone, Gardison

Limestone, Fitchville Formation, and Maxfield Limestone are significant aquifers and have been successfully developed for water supply in other areas of Utah. Note, however, that the Doughnut Formation outcrop shown on Figure 5 has been metamorphosed to marble (Biek, 2005) and may actually be underlain by Tertiary-age igneous rocks that would have a significantly lower groundwater development potential than Paleozoic-age carbonate and/or sandstone. Bedrock could also consist of Paleozoic-age shale or older semi-consolidated to consolidated valley-fill deposits that would also have a lower groundwater development potential.

COMPARISON OF PROPOSED ALPINE WELL TO JONES LOCATION

Both the valley-fill deposits and the underlying bedrock are potential target aquifers at the proposed Alpine Well and Jones locations. Bedrock has the greater potential yield at both locations, but also has the greater uncertainty because the type of bedrock and the degree of fracturing are unknown. If the bedrock consists of carbonate and/or sandstone, then the potential yield will likely be much greater than the valley-fill deposits. If the bedrock is shale, igneous rock, or older semi-consolidated to consolidated valley-fill deposits, then the potential yield will likely be much less than the valley-fill deposits.

Between the two, I prefer the Jones location because it is slightly closer to the center of Utah Valley and, therefore, the valley-fil deposits may be thicker and better sorted than at the proposed Alpine Well location.

ESTIMATED COST OF WELLS AT PROPOSED ALPINE WELL LOCATION

We assumed that both the valley-fill deposits and underlying bedrock are both potential target aquifers at the proposed Alpine Well location. An exploration well would be drilled to test the valley-fill deposits to an estimated depth of about 1,000 feet and the underlying bedrock to an estimated depth of 1,500 feet. Our estimate for a water well contractor to drill, test, sample, plug, and abandon a 7-inch diameter 1,500-foot deep exploration well into both the valley-fill deposits and underlying bedrock at the Jones location is $250,000 to $350,000. Air lift tests would be used to assess potential yield and water quality of the bedrock. Engineering costs for well site and construction management services and reporting for the exploration well is $30,000 to $40,000.

Our estimate for a water well contractor to drill, construct, develop, and test a 16-inch diameter production well at the proposed Alpine Well location is about (1) $500,000 to $550,000 for a 700-foot deep well completed exclusively in the valley-fill deposits, (2) $800,000 to $850,000 for a 1,500 feet deep well completed exclusively in the bedrock, and (3) $900,000 to $1,000,000 for a 1,500-foot deep well completed in both the valley-fill deposits and the bedrock. Engineering costs for well site and construction management services and reporting for the production well is $40,000 to $50,000.

If results of an exploration well are favorable, then it may be possible, depending on hydrogeologic conditions and DWRi approval, for a production well to be completed in both the valley-fill deposits and underlying bedrock. If so, then the potential yield could be greater than our estimates.

If you have any questions or need more information, please do not hesitate to call us at (435) 649-4005 (office).

Loughlin Water Associates, LLC

William D. Loughlin, P.G.
Manager, Principal Hydrogeologist

cc: Shane Sorensen, P.E. – Alpine City
Jed Muhlestein, P.E. – Alpine City
Greg Kmetzsch – Alpine City

Figure 1 - Topographic Map
Figure 2 – City Well Capacity Map
Figure 3 – Geology Map

REFERENCES CITED

Biek, R.F., 2005. *Geologic map of the Lehi quadrangle and part of the Timpanogos Cave quadrangle, Salt Lake and Utah Counties, Utah*: Utah Geological Survey Map 210.

Loughlin Water Associates, LLC (Loughlin Water), 2016, *Letter Report – Assessment of Asay, Lambert Park, & Jones Locations, Feasibility of Groundwater Development for Secondary Water Supply Well, Alpine City, Utah County, Utah*: consultant report prepared for John Schiess, P.E. of Horrocks Engineers by William D. Loughlin, P.G. of Loughlin Water dated April 21, 2016.

FIGURES

ALPINE CITY COUNCIL AGENDA

SUBJECT: Camping at Lambert Park

FOR CONSIDERATION ON: October 11, 2016

PETITONER: Rich Nelson, City Administrator

ACTION REQUESTED BY PETIONER: For clarification from the City Council on overnight camping at Lambert Park.

APPLICABLE STATUTE OR ORDINANCE:

BACKGROUND INFORMATION: City administration has operated under the following guidelines when it comes to overnight camping:

1. **No overnight camping is allowed at any City park except Lambert Park.**
2. **Overnight camping at Lambert Park is only allowed at the Bowery area of the Park.**
3. **No long-term, more than one night, overnight camping is allowed at the Bowery.**
4. **No overnight camping is allowed at the Bowery for any group that would trigger a Mass Gathering request.**
5. **Camping at the Bowery is by reservation only.**

For Council Decision: *Does the City Council want to change the guidelines when it comes to overnight camping at the Lambert Park Bowery or is the Council ok with the guidelines as they presently exist.*

ALPINE CITY COUNCIL AGENDA

SUBJECT: Replacing Sidewalks Damaged by Trees in the Park Strip

FOR CONSIDERATION ON: October 11, 2016

PETITONER: Rich Nelson, City Administrator

ACTION REQUESTED BY PETIONER: That the City Council approve proposed guidelines for dealing with trees in the park strip that are causing sidewalk problems.

APPLICABLE STATUTE OR ORDINANCE:

BACKGROUND INFORMATION: The City is responsible for maintaining the safety of the City's sidewalks. If the sidewalk is unsafe it is the City who is responsible for fixing the sidewalk. A lot of the time the sidewalk problems are caused because of improperly planted trees in the park strip. If the trees are not dealt with the sidewalk problems will just continue. Staff is requesting permission that when they are dealing with sidewalk problems caused by improperly planted trees in the park strip that they be able to deal with the tree problem at the same time.

For Council Action: *If the City Council decides that this is a policy they would like to implement, then staff will develop an ordinance to do this and bring it back to the Council for approval.*

ALPINE CITY COUNCIL AGENDA

SUBJECT: Paulson Easement

FOR CONSIDERATION ON: October 11, 2016

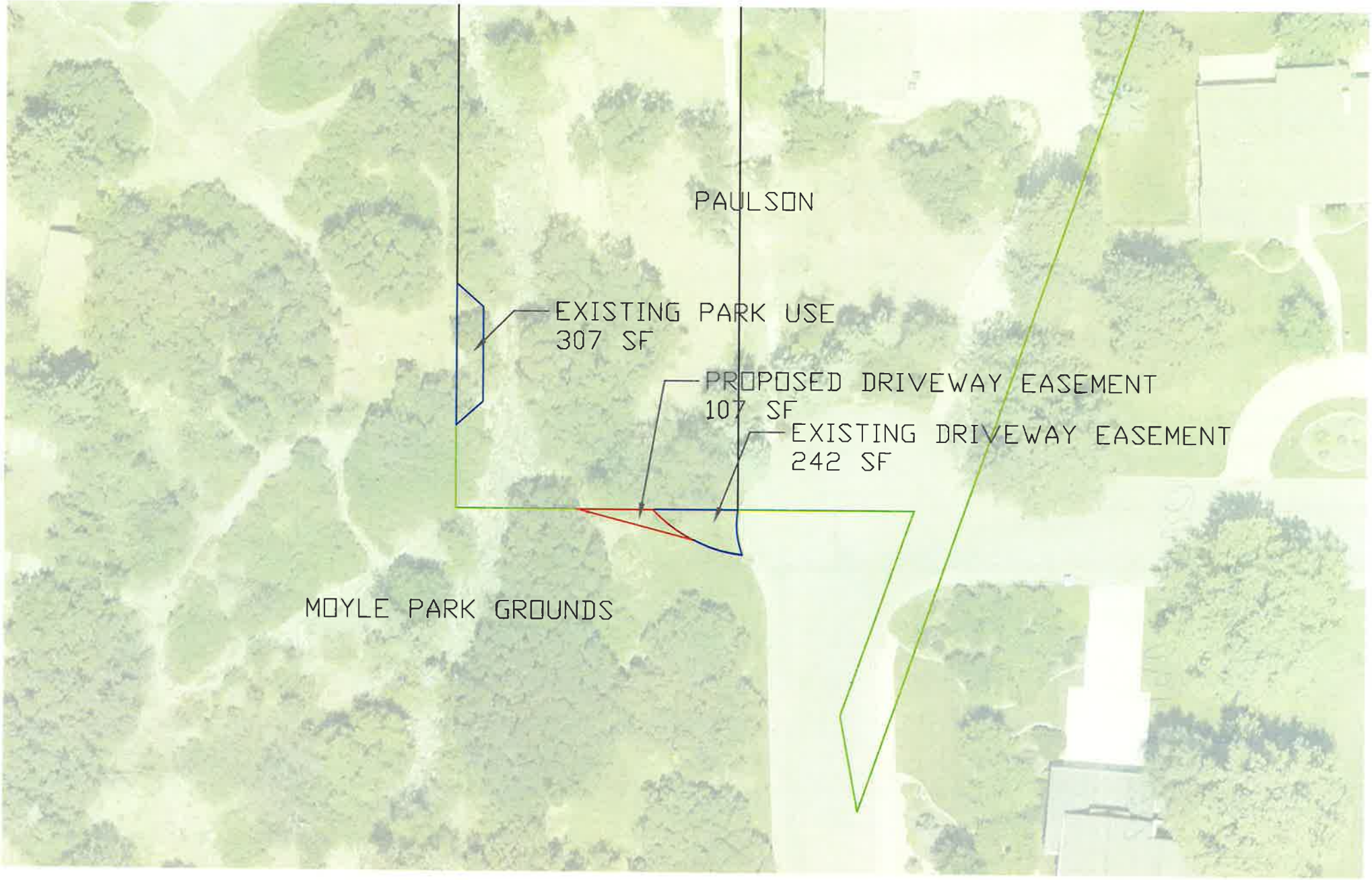
PETITONER: Rich Nelson, City Administrator

ACTION REQUESTED BY PETIONER: Consider granting additional easement to Chris Paulson.

APPLICABLE STATUTE OR ORDINANCE:

BACKGROUND INFORMATION: Chris Paulson, owner of 701 E Sunburst Lane, is requesting an easement from the city near Moyle Park. Easements were granted between the City and Paulson in this same location and are shown on the attached map. Mr. Paulson is in the process of landscaping his property and desires another 107 square feet of easement to be able to accomplish his desires. This item is brought before to Council to consider the granting of this easement.

For Council Decision: Consider Mr. Paulson's request.



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