



ALPINE CITY COUNCIL PUBLIC MEETING AGENDA

NOTICE is hereby given that the **CITY COUNCIL** of Alpine City, Utah will hold a Public Meeting on **Tuesday, July 27, 2021, at 6:00 pm**, 20 North Main Street and can be viewed on the **Alpine City YouTube Channel**. A direct link to the channel can be found on the home page of the Alpine City website: [alpinecity.org](https://www.alpinecity.org) Public Comments will be accepted during the Public Comment portion of the meeting.

I. CALL MEETING TO ORDER

- | | |
|--------------|------------------|
| A. Roll Call | Mayor Troy Stout |
| B. Prayer: | Greg Gordon |
| C. Pledge: | By Invitation |

II. CONSENT CALENDAR

- A. Approve City Council minutes of July 13, 2021

III. PUBLIC COMMENT

IV. REPORTS AND PRESENTATIONS

- A. Financial Report

V. ACTION/DISCUSSION ITEMS

- A. Final Plat – Fort Creek Landing Subdivision (Formerly Koroem Court)
B. Final Plat – Alpine Layton Subdivision (Formerly Whitby Woodlands Plat I)
C. Resolution No. R2021-14: Consolidated Fee Schedule – Garbage Rates & Water Violations

VI. STAFF REPORTS

VII. COUNCIL COMMUNICATION

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

Mayor Troy Stout
July 22, 2021

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, 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/City Council, 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 vs. 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 PUBLIC MEETING
on Tuesday, July 13, 2021

Mayor Troy Stout called the meeting to order at 6:02 p.m. He welcomed the public in attendance. He began the meeting with a roll call.

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

Carla Merrill, Greg Gordon, Jason Thelin, Lon Lott, and Jessica Smuin excused

Staff: Shane Sorensen, Austin Roy, Chief Brian Gwilliam, Chief Brian Patton, Craig Hall, Bonnie Cooper

Others: Will Jones, Ed Bush, Mindy Gertler, Shelley Cox-Snarr, Jeff Dong – Bloks Construction, Greg Link, Wendy Fisher, Breezy Anson, Michael McArthur

A. Prayer:

Lon Lott

B. Pledge:

Chief Brian Patton

II. WORK SESSION: General Plan

Continuation from last week City Council Work Session – Parks, Recreation, Trails, Open Space, and Lambert Park Element.

Austin Roy, City Planner, said at the last City Council meeting on June 22, 2021, the council had a work session about parks, recreation, trails, and open space. He said the council made great progress on that element and tonight's work session will focus on finishing that element. He gave an update on what was decided during the last meeting. He said on policy 1.4 the council removed the ATV reference and changed the word hiking to walking. He said policy 1.6 was added to refer residents to the Trail Committee because they are critical to the city's parks and trails.

Austin Roy said in policy 2.1 the council wanted to wait to discuss Jason Thelin's comments. Jason Thelin, City Council member, said he would like to have access to the mountains and not have hard surfaces in trails and some parks. Austin Roy said there was also a question about using the word leisure in policy 2.1. Greg Gordon, City Council member, asked whether it was going to be a goal or a policy it should be added to the General Plan. Austin Roy said the council had decided to have it be a goal. Greg Gordon said it was also decided to be in the transportation element but it can be put in two places. Jason Thelin said this is a master plan that gives us a vision to what we want for our city. He believes this goal is to maximize the city residents' access to the mountain it is open space as well as beginning of trails. Council was all in agreement that Jason Thelin's comment should be a goal in the parks, recreation, trails, and open space. Lon Lott, City Council member, asked are any policies going along with that goal. Jason Thelin said about 18 years ago we have lost that access because residents have encroached upon the access point in the end of the cul-de-sac. Jason Thelin said in Three Falls the city had to come to an agreement with the developer to have access to the trails and mountain. Greg Gordon said the city needs to secure and increase access to the trails and mountains. Jason Thelin said if annexation comes in the city, we need to protect the access residents have to the mountains. Mayor Troy Stout asked if city needs to have something specific for a developer to do if they are coming in and their development is butting up against mountainside. Greg Gordon asked if an ordinance needs to be written. Craig Hall said yes.

Austin Roy said in Goal 2 policy 1.3, some parks need to be added to the list such as the family park at the Ridge at Alpine. He asked council what they consider an open space park. Greg Gordon said should have something put in about leisure. Lon Lott said last meeting Shane Sorensen had talked about rewording the policy using undisturbed and disturbed. Will Jones, Trail Committee Chair, said do not forget Heritage Hills Park and anything that fits those criteria. Lon Lott said words like natural would also work well as undisturbed. Mayor Troy Stout said using groomed or ungroomed could work too we need to be careful with the rodeo grounds and the wording around that. He said adding language in the policy about any future open space or anything that may fit this criterion so nothing is left out would be a good idea. Lon Lott said that is something the council talked about at the last City Council meeting to have a little clearer verbiage when it came to disturbed/undisturbed. Carla Merrill, City Council member, said can we say genuinely undisturbed other than allowing for trails and trailheads or something like that. Lon Lott said after the discussion last week council said to let the attorney and staff work on the verbiage. Carla Merrill said most of the land is undisturbed except for trails and trailheads. Mayor Troy Stout said the city is putting in parking, restrooms, and pavilion too. Carla Merrill asked would those things not be considered part of the trailhead. Jason Thelin agreed that this needs to be completely reworded because the city will be putting benches somewhere along the trails. He said there are so many ways in disturbing the natural vegetation. He said the city does not want to limit ourselves on the trail. Mayor Troy Stout said protecting the trails is very important.

Austin Roy said in Lambert Park and Dry Creek Corridor, the council did not want to have anything paved whether that be a trail or a road. He asked if maybe council would want to have a paved path in the Dry Creek Corridor since part of it is already paved. He asked how the city can distinguish where these are both still kind of open spaces areas and in one have natural paths and, in the other, have paved paths. Mayor Troy Stout said the city already has that in the central corridor. Austin Roy said the plan was to always have the central corridor paved. Mayor Troy Stout said he thinks the paved system in that area rounds out the improved and unimproved parks in the city. He said paving gives access to stroller or wheelchairs. He asked if council was listing out specific parks or in just general terms of natural open spaces. Jason Thelin said his opinion is to not list by specific parks. He said he is not in favor of paving Dry Creek Corridor and would vote against any pavement. Will Jones, Trail Committee chair, said the city has already began to pave the trail from Main Street down through to Canyon Crest in Dry Creek. He said the goal was to create a stroller path of about eight feet of paved trail and two feet on the side for horses to go along from Burgess Park to Creekside Park. He said the trail is a 10-foot-wide easement. Carla Merrill said this pavement will give accessibility to any residents who may need a wheelchair.

Shane Sorensen said he had a resident on 800 south approach him and asked why Alpine does not have more paved trails. He said she goes to Highland to use their trails system because it is paved. He said she takes her children with a stroller. Greg Gordon said part of that trail has already been paved but the tree roots are becoming a problem breaking up the pavement.

Austin Roy said the open space ordinance for Lambert Park has its own section with its own goals. He said many in the council talked about preserving the poppies this would be a good place to put that goal. Ed Bush, Planning Commission member, said the city should be careful because Lambert Park already has paved roads in it and maybe should add some language in there about the existing roads.

Shelly Cox-Snarr

13413 Grove Drive

Shelley Cox-Snarr said she had concerns about having only one access street out of the Box Elder neighborhood. She said when there was a fire, the only way out was backed up because the streets were being dug up. She said the city had always planned on paving Box Elder to Moyle Drive for additional access in case of an emergency. She said she would like to have that happen and have two access points to the neighborhood along with many of her neighbors.

Carla Merrill asked Austin Roy to update the trail master plan regarding the Forbidden Trail. Greg Gordon asked about an update on the fence going in at Lambert Park. Mayor Troy Stout said the city is just waiting to obtain labor to put it in, the city has the supplies. Carla Merrill said the fence was being put in to have definition between the shooting area and Lambert Park. Mayor Troy Stout said council should have language in the General Plan that would give the city permission to expand Lambert Park in the future if the opportunity presents itself. Ed Bush asked about the motorized vehicles on trails because right now the map is showing a trail for ATV. He said he would be cautious moving forward with the conservation easement, he said he loves Lambert Park and walks it daily. He said his concern is the city having no flexibility if the city goes with a restrictive conservation easement. He said most of the comments he has received are in favor of a conservation easement, but many do not know what that entails. Austin Roy said the trail map has some improvements that need to be made especially with the one-way trails. Mayor Troy Stout suggested before that were for four-wheeler trails, the city could take those trails and reseed them and clarify where the other trails are. Greg Gordon said the rodeo grounds would be a little different because of the entrance and parking. Austin Roy said the bowery may still apply for motorized access. Lon Lott said the city has service equipment that needs to be able to go into this area that are currently designated as motorized trails.

Shelley Cox-Snarr

13413 Grove Drive

Shelley Cox-Snarr said she is concerned because the rodeo grounds seem to have ambulances go up there. She lives right by the bridge near there and it is unsafe. She said she has a circular driveway, and many people go off the bridge into her driveway and hit her mailbox.

Austin Roy said the last thing he would like to bring up to the council is to talk about the poppies in Lambert Park. Mayor Troy Stout said the need to have an ordinance saying Lambert Park is not for commercial use. He said the city could require photographers to get a permit to take photo up at the poppies for the city to monitor any damage done to the poppies. Carla Merrill said she agrees with the mayor, the city needs to do some more vegetation and set up a path and rope the poppies area off. She suggested putting signs up saying "do not pluck the blossoms." Mayor Troy Stout said the city should have a board walk so that residents know where the designated path is. Greg Gordon said policy 1.7 addresses this issue well the city needs to go do something about the poppy area now. He said he was there this year, there were 70 people there at the same time and there are trails made everywhere. Mayor Troy Stout asked Will Jones to get the Trail Committee to work on the poppy area in Lambert

1 Park this fall. Lon Lott asked legally how the city enforces people not taking pictures up at poppies. Craig Hall, City
 2 Attorney, said it is not practical to enforce. Lon Lott said the city can post signs to deter abuse of the poppies and let
 3 people know they need a permit to take photos.
 4

5 Jason Thelin asked for an update on the structure being installed in Lambert Park to help prevent the shooting issue
 6 from happening. Will Jones said he and Jed Muhlestein met with a specialist on trails out of Park City named Bryce
 7 Sacks. Will Jones said Bryce specializes in structural wood items for trails. He said the three of them walked the
 8 trails for a few hours and are putting together a plan for Alpine City so that the structure will be able to be
 9 maintained and be in a good location. Will Jones said that Jed Muhlestein should have the plan and he will follow
 10 up with Jed Muhlestein. He said the Trail Committee will be using natural materials like stone and wood that can
 11 maintain themselves. He said with the structure there will be a trail sign pavilion and would include a bench. Jason
 12 Thelin asked if this is one of the layers to deter people from shooting in the area. Will Jones said Bryce Sacks is the
 13 one who built trailside in Park City which is a highly valued trail because of the unique structures that he built and
 14 designed. Jason Thelin asked Will Jones when he thought this would be installed. Will Jones said he should have
 15 the bids for the council to look over soon.
 16

17 Will Jones said Alpine City received a \$300 from Lone Peak Mountain Bike Club. He said we receive \$1 per hour
 18 of service donated. He said another check for the city will be coming from Sky Ridge Mountain Bike Club for
 19 another \$300. He said that means the trails have had over 600 hours of service donated.
 20

21 III. CONSENT CALENDAR

- 22 A. Approve City Council minutes of June 22, 2021
- 23 B. Pay Request 4 – 800 South Project: \$285,810.33
- 24 C. Pay Request 5 – Final Pay Request - 800 South Project: \$38,184.10
- 25 D. Bond Release 3 – The Ridge at Alpine Phase 5: \$408,965.25
- 26 E. Bond Release 6 – The Ridge at Alpine Phase 4: \$171,797.15
- 27 F. Bond Release 14 – The Ridge at Alpine Phase 3: \$5,605.00
- 28 G. Final Payment #3 – Hillside Waterline: \$111,277.59
- 29
- 30

31 **Motion:** Lon Lott moved to approve the consent calendar as proposed with the edits made by Lon Lott to the minutes
 32 of June 22, 2021. Greg Gordon seconded the motion. There were 4 Ayes and 0 Nays, as recorded below. The motion
 33 passed unanimously.
 34

35 Ayes

36 Carla Merrill
 37 Jason Thelin
 38 Greg Gordon
 39 Lon Lott
 40

Nays

41 III. PUBLIC COMMENT

42
 43 Mayor Troy Stout said he would allow 20 minutes total for public comment tonight. He reminded citizens that they
 44 each have a three-minute time limit to present their message. He opened the meeting for public comment.
 45

46 ***Will Jones***

47
 48 *Will Jones asked the City Council if they would consider having a short meeting 2 weeks from now on July 27,*
 49 *2021. He has a client Mr. Layton that needs approval for a final plat - Whitby Woodland, otherwise he must wait*
 50 *Until September to finish his project.*
 51

52 Mayor Troy Stout said he would discuss it with the rest of the council and let Will Jones know.
 53

54 ***Ed Bush***

55 *1463 Box Elder Drive*

56 *Ed Bush asked if the barrier near Moyle Drive and Box Elder Drive worked with a passenger car going over them.*
 57 *He said he knew they were for emergency vehicles, but he had neighbors asking him about passenger cars in case of*
 58 *an emergency. Shane Sorensen said yes, they work with a passenger car going over them and the staff has tested it.*
 59

60 Shane Sorensen said he has been very concerned with water conservation this week. Mayor Troy Stout said some
 61 neighborhoods that are using culinary water should not and they need to follow their watering schedule. Shane

Sorensen said both PI (pressurized irrigation) and culinary should conserve. He said he will have staff send out a message through Everbridge.

Greg Link

13303 Grove Drive

Greg Link said the Lambert Park conservation easement it not a slam dunk. He said if the city does not have any pavement can we take it out by the stake center. Mayor said it is not in the city it is in the county. At this point it is open for emergency accesses. Greg Link walks up there every day and no one obeys the speed limit. Traffic issues are going to become an issue with the Lambert Park easement.

Shelley Snarr

13413 Grove Drive

It is just more than safety the street is overloaded she does not know how the county got it approved with only one access point.

IV. REPORTS AND PRESENTATIONS

V. ACTION/DISCUSSION ITEMS

A. Public Hearing – Lambert Park Conservation Easement

Mayor Troy Stout said on June 16, 2021, the City Council held a special work session to discuss the future of Lambert Park and the idea of placing the open space in a conservation easement. He said the City Council is now seeking further input from the community and would like to hold a public hearing to gather more feedback from residents of Alpine City. He opened the meeting for public comment.

Ed Bush

1463 Box Elder Drive

I am on the fence about this easement. I am a big fan of Lambert Park. My concern is if we know how we want to treat the park in 20-30 years. We could put a clause in about having a majority vote if there were to be any changes and that the easement agreement be looked at by the residents.

Greg Link

13300 Grove Dr.

He said most people do not understand this. He said it is a living document and there can be adjustment to the document.

Carla Merrill read an email she received from a resident:

Shelley Butterfield

Grove Drive

My name is Shelly Butterfield I have lived on Grove Dr. for 26 years. I have also been walking, riding my horses and mountain biking in Lambert Park for over 30 years. Lambert Park is a jewel to our city I'm completely in favor of the park being in a conservation easement and no road through the park at the end of Moyle drive. Currently the traffic on Grove is increasing and quite terrible, the bigger part of this problem is the speed at which people drive. Residents who live and construction workers who are driving to Box Elder, Cove and Lambert Park could slow down to 25 and alleviate 90% of the problem. I have called our police dept with no response, perhaps the city could aid in this effort!

Shane Sorensen has talked to the Chief Gwilliam regarding speeding in that area. He said unfortunately, people are speeding everywhere throughout the city. Jason Thelin said traffic is an issue throughout all Alpine but especially downtown Main Street. He believes the traffic is more of an issue then speed is. He recalls when Julie Beck, resident of Alpine spearheaded a campaign commit to the limit that he thought that was very effective, maybe the city could revisit that.

Wendy Fisher from the conservation hopes to talk to all the council members. There is no hidden agenda. We are the vehicle for preservation for Lambert Park. This is a learning process, this August 4, 2021 open house 5:00 p.m.-7:00p.m. We will put up maps to show a visual of how Lambert Park is vulnerable to development for the scenic value. There is wildlife and historical value to protect. We could refresh it every 5 years. We would get public 158 people survey and she want to do another survey. 98% of the people support perpetual protection of Lambert Park we will have computers there for them to take the survey. Mayor said we asked them to come they did not ask us to do this. Access to our assets and protection of our assets. We will have the survey on our website and public notice.

Shelley Snarr said Lambert Park bottle necks in her neighborhood. Jason said they can use the emergency road if they need it.

B. Public Hearing – Purchase Proposal – 539 N. Pfeifferhorn Drive

Austin Roy said 1,738 square foot piece of open space located at 539 North Pfeifferhorn Drive. The open space in question includes an easement with a large gas pipeline that runs through it and has been vacated or retired by Dominion Energy. The easement does allow for certain things to be built within it, such as: a driveway, curbing, and landscaping (no deep-rooted trees permitted). The piece of open space also contains a ground moisture box that would have to remain, but any future property owner would be able to landscape around it. The city sees the open space as a possible location for a future trailhead with parking.

Austin Roy said in January 2019, the City Council approved a land swap with the previous landowner to exchange a 5,190 square foot piece of private property for a 5,190 square foot piece of public open space. However, the previous landowner never ended up recording an amended plat to this effect. Therefore, the County records still show the same boundaries as before. The property has since been sold and the new owner would like to purchase a piece of the open space rather than the exchange that was approved in the past.

Austin Roy said the petitioner is seeking to purchase public open space to add frontage to his existing lot. The public open space proposed for purchase runs from the northeast corner of his property to 5 feet past the moisture box (see exhibit). The petitioner feels this would be the highest and best used of the land as it would be landscaped, and the moisture box would be hidden from the street view. Also, the petitioner does not feel like the proposed purchase would interfere with the City's future planned trailhead in this location (if the city did not want to put a trailhead in this location the petitioner would be interested in purchasing even more of the open space).

Austin Roy said any alteration to public open space requires Planning Commission recommendation, and City Council approval.

Article 3.16.4.2 says:

Land included in these parks shall not be materially changed, improved, altered, disposed of in any manner or used for any other purpose except after a recommendation of the Planning Commission following a public hearing and by a super majority vote of the City Council (4 positive votes out of 5 City Council members are required). A material change shall include, but is not limited to, a change to the park's present and essential defining characteristics, creation of or improvement of roadways or parking lots within the park.

The petitioner is proposing to offer \$8,094 for approximately 1,738 square feet of public open space. According to the petitioner this value was based on the most recent tax information, which values the property at \$9.31 per square foot. The petitioner is proposing that the purchase price would be 50% of valuation since he feels that the land is unbuildable, and therefore less valuable. However, staff does not agree that the property has diminished value. In fact, the open space would greatly enhance the value and utility of the petitioner's property. Therefore, staff would recommend that the city ask full price or fair market value for the 1,738 square feet of public open space (based on the \$9.31 per square foot valuation mentioned above, the value would be closer to \$16,180.78 or \$405,543.60 per acre).

Austin Roy said the Planning Commission reviewed this proposal on May 18, 2021 and recommended that the City approve the sale of 1,738 square feet of public open space as proposed.

MOTION: *Commission Member Ethan Allen moved to recommend that the proposal to sell approximately 1,738 square feet of public open space be approved as proposed. Troy Slade seconded the motion. There were 5 Ayes and 0 Nays (recorded below). The motion passed.*

Ayes:

Jane Griener
John MacKay
Ethan Allen
Ed Bush
Troy Slade

Nays:

None

and on May 25, 2021, the City Council tabled this item to a future meeting.

MOTION: *Jessica Smuin moved to table the Open Space Purchase Proposal – 539 N Pfeifferhorn Drive – Michael McArthur to allow more discussion and to have more time to have a trailhead design with parking lot. Greg Gordon seconded the motion. There were 4 Ayes and 0 Nays, as recorded below. The motion passed unanimously.*

Ayes:

Jessica Smuin
Greg Gordon

Nays:

Lon Lott
Jason Thelin

Austin Roy said on June 22, 2021, the City Council adopted Ordinance 2021-14, which pertains to the definition of Significant Property and establishes a process to dispose of City owned real property. Based on the Ordinance 2021-14 the property at 539 N Pfeifferhorn Drive would be deemed significant property and thus would have to follow the process outlined to dispose of City owned real property should the City Council decided to dispose of the property.

Greg Gordon asked about the gas line and if the city could pave over it. Austin Roy said the city cannot build a structure over it but could pave over it. He said putting a trailhead there the city could swap the front triangle for the rear triangle. He said there is a moisture evaporation box from the gas line that is no longer used but that cannot be develop on, this barrier would be there, but we could still have parking and a trailhead.

Greg Link

13303 Grove Drive

Greg Link asked where the property owners' road is located.

Shane Sorensen said the property is at 539 N Pfeifferhorn Drive.

Michael McArthur

539 N Pfeifferhorn Drive

Michael McArthur, property owner, said if the council does not want to sell, he would be willing to trade and do a land swap. He is open to either option.

Carla Merrill asked if trade was still a real option in this case. Austin Roy said it was approved by a previous council years ago but was never recorded. Carla Merrill asked some of her real estate friends how much property in Alpine is going for and to purchase a half-acre started in the low \$600's - \$800's. She thinks she would like to go back to the original swap. Mayor Troy Stout asked Shane Sorensen if there was a problem with accepting the land swap offer. Shane Sorensen said only that staff did not have a parking lot plan drawn up yet. Carla Merrill asked if that back triangle was too steep an area for a parking lot. Lon Lott said the area he envisions for the parking lot would be the west side because it is flatter. Greg Gordon said the city does not have trail easements north of this area so that could be why there is not a trail head design.

Lon Lott said the most logical option would be a land swap. He asked Craig Hall if another public hearing would be necessary. Craig Hall said yes. Jason Thelin said residents can pull right off the road for parking. He said it seems like the best thing to him is to have the four parking stalls in front and not to sell or swap the land. Carla Merrill said she sees anywhere between 3-12 cars using that trail and does not believe four stalls would be enough. She said when she spoke with Jed Muhlestein, City Engineer, he said he could see eight parking spots go in that area. She likes to have the parking off the street and further back. She said if the parking lot were put on the sloped area a four and half foot retaining wall would be installed and would cost more. Shane Sorensen said parking backing into the street is against the city ordinance but backing on to the street usually does not get complaints. He said it is a safety issue and maybe angle parking would be better. Carla Merrill asked if it would be possible to have a road back to a parking lot in the back triangle area. Shane Sorensen said he usually would want to want to see a 5% grade and right now it appears to be a 7% grade so that could be worked out.

Craig Hall reminded Mayor Troy Stout that tonight's decision/vote is only about the property being disposed of. Jason Thelin asked if they vote in favor of disposing the property does that mean the city would have to sell it. Craig Hall said no, the city would have to agree on a selling price. Breezy Anson, Trail committee member, said he prefers a swap, he does not think the city needs to sell any land. He said the city does not have an easement with Draper City, but the Trail Committee is hoping to have connections to have biking trails connecting into Alpine. He thinks the sell is a bad idea, but the land swap might be a good idea. He said the road into the parking lot should be wide enough for two-way traffic. Mayor Troy Stout said to have a field trip for the council to go look at the area and see where the trail ties into Draper City.

Jason Thelin is not in favor of the swap. Lon Lott said he believe the field trip would be good and he is not for selling the land.

Motion: Greg Gordon moved to table the decision of whether to dispose of real property at 539 N Pfeifferhorn Drive as proposed pending further design considerations of parking land swap options by city staff. Carla Merrill seconded the motion. There were 4 Ayes and 0 Nays, as recorded below. The motion passed unanimously.

Ayes

Nays

Carla Merrill
 Jason Thelin
 Greg Gordon
 Lon Lott

C. Cherry Point Subdivision Plat A

Austin Roy said Cherrypoint consists of 2 lots on 6.121 acres. The development is located at approximately 1528 N Grove Drive, and in the CR 40,000 zone. The plans are consistent with the previously approved concept plan. It is proposed that the development be done in two phases, with "Plat A," which is a single lot, being the first phase of development. The final plat for the second phase, "Plat B" and its associated improvements, would come forward at a later future date.

Austin Roy said the property on which the Cherrypoint subdivision is proposed is currently one large lot with a single-family home on it. The applicant is seeking to subdivide the lot to create a new single lot to allow for a new home for resident Pete Christiansen.

Austin Roy said on April 20, 2021, the Planning Commission reviewed and unanimously approved the concept plan. On June 1, 2021, the Planning Commission unanimously approved the preliminary plan and recommended approval of the final plat for Cherrypoint Subdivision Plat A with the following conditions:

1. The City Council reviews and approves the Development Agreement as proposed by Staff.
2. The Developer provide funds for the improvements of curb, gutter, and sidewalk along the frontage of Lot 1 prior to recording the plat.

Austin Roy said on June 8, 2021, the City Council reviewed the item and decided to table it to the next meeting so that a development agreement could be drafted by the City Attorney, Hyrum Bosserman.

Motion: Lon Lott motioned to table the final plat Cherrypoint Subdivision Plat A until next City Council meeting on June 22, 2021, wherein Hyrum Bosserman, City Attorney, will get the wording on the development agreement for the right of way lot two. Jason Thelin seconded the motion. There were 4 Ayes and 0 Nays, as recorded below. The motion passed unanimously.

Ayes	Nays
Jessica Smuin	
Greg Gordon	
Lon Lott	
Jason Thelin	

Austin Roy said on June 22, 2021, the City Council tabled the item to provide more time for the developer to review the development agreement drafted by the City Attorney.

Mayor Troy Stout asked if the city moves forward with improvements prior to phase two if that vacates any obligations for the landowner to contribute financially to any of the improvements. Austin Roy said yes, that is correct. Carla Merrill asked if this is a normal thing for a city to agree to. Shane Sorensen said an example of where the city has done this before would be, the interception of Westfield Road and 200 North and 400 West. He said the city rebuilt the roads, the city wanted to continue curb and gutter up 400 West. He said the approved subdivision there did not have intentions of developing that phase of the subdivision. He said so 15 years ago the developer did not intend to help the city financially. He said the city wanted to move forward and did the construction and improvements. He said this only happens if the city wants the project done sooner. He said another example of the opposite is Ranch Drive, the one is not complete because the city has been waiting this one out.

Austin Roy said one of the key aspects is to get the right of way today. Lon Lott said the city receives the right of way either within 30 days of receipt of written notice from the city that its intents to initiate improvements on Grove Drive or completion of phase two. He said the city does not get right of way now because if the developer decides to wait a long time the city can chose not to make the improvements. He said the city does not get the deed until the developer chooses to complete phase two. He asked if the city could get the deed now and have verbiage in the contract saying the city can choose the time of improvement. Craig Hall said the city could certainly go back and negotiate that. Austin Roy said as soon as the city chooses to do the project it will get done and no sooner. Lon Lott said as soon as the city chooses to. Shane Sorensen said as in The Ridge at Alpine was being developed there was an attempt to get this right of way. He said ultimately the council took that requirement off the developer.

Mayor Troy Stout said the way this contract is written today the city does not get the right of way until certain things happen, but the right of way is imminent. Lon Lott asked no matter what the city will get the right of way. Austin Roy said that is way the contract is written. Lon Lott said he had one concern in item eight as far recordation where

is the clause that if the land were sold before improvement were complete. Shane Sorensen said the clause of changing of ownership is on the last page of the contract, it mentions the successors. He said when this is recorded all twelve pages would be recorded on this project and on this property. Mayor Troy Stout said could the city add to the contract A) have a timeline set up or B) if the city choses to have the property owner financial responsibility when he subdivided. Shane Sorensen said the city would have to purchase the right of way and need to expand the road and with the agreement. He said giving the property owner 30 days' notice so that we can acquire it. He said with all the improvements the city has done downtown on 800 South and Pioneer Road we have never had the landowner not participate in the cost in the last twenty-six years that he knows about. He said he thought that this contract would work best without purchasing the easement. Mayor Troy Stout we need to envision the future curb and gutter in the area.

Motion: Lon Lott moved to approve the Cherry Point Subdivision Plat A with the following conditions: 1) The developer agrees to the terms of the Development Agreement as proposed by the city. 2) The developer provides funds for the improvements of curb/gutter and sidewalk along the frontage of Lot 1 to recording the plat. Jason Thelin seconded the motion. There were 4 Ayes and 0 Nays, as recorded below. The motion passed unanimously.

Ayes

Nays

Carla Merrill
Jason Thelin
Greg Gordon
Lon Lott

D. Setback Exception – Lot 9 Brookside Meadows PRD

Austin Roy said an exception is being requested for the setbacks for Lot 9 of the Brookside Meadows PRD. Specifically, the petitioner is seeking an exception for the side setback on the north side of the lot. Article 3.01.110 of the Alpine City Development Code defines a Side Yard as:

"A yard that is neither a front yard nor a rear yard. The depth (or setback) of the side yard is the minimum distance between the side lot line and the nearest part of the primary structure of the nearest main building at the foundation level. (Primary structure includes overhangs, porches and decks)."

Brookside Meadows is a Planned Residential Development (PRD), and as such, the City Council may grant exceptions for setbacks following a recommendation from Planning Commission and

"...upon a finding that such exception is appropriate for the proper development of the lot and that the exception will not result in the establishment of a hazardous condition" (3.09.060.4.d).

Austin Roy said the lot borders open space to the north, meaning a reduced setback would not directly impact a neighboring resident. The open space to the north of the lot is not part of the Brookside Meadows Subdivision but it is land that was dedicated as part of another PRD. Also, the proposed exception would not result in the establishment of a hazardous condition. On June 15, 2021, the Planning Commission unanimously recommended approval of the proposed exception. On June 22, 2021, the City Council tabled the proposed exception until they could get more information from the developer on plans for retaining walls on the north property boundary.

Austin Roy said this is an unusual circumstance because it is a PRD and the lot sizes are smaller due to all of the dedicated open space. He said the home is made of insulated blocks into the hillside and acts as a retaining wall. Greg asked if the city expects more of these kinds of exceptions to be brought forward from this subdivision. Austin said no.

Jeff Dong, Bloks – ICF (insulated concrete forms) construction and his business partner Josh, both builds homes from blocks insulated with foam and cement and use French drain systems. He said this is not typical construction, if traditional concrete were used runoff may be a problem but not with ICF. He said they will get the sloping away from the house so that it will meet all building requirements. He said the home design will push the home as much as possible into the hillside. He said the basement level will be exposed from the street level. He said they have done this type of construction before and brought an example and invited the council to come visit the site. He said he has been in business for over 20 years.

Lon Lott said he had concerns on the north side of the home where the homeowner wants the setback exception. He asked with it being so close to the hillside is the backside of the home completely covered two stories or just the basement area. Jeff Gong said the basement area will be covered, there will be 15-foot grade difference between the sides. Mayor Troy Stout asked if the city would have any addition liability after approving the build of this home.

Craig Hall said no, provided it meets all city and international building codes. He said the city would not be liable if anything went wrong with the home. Jeff said ICF is the wave of the future because it costs less than typical construction with the price of wood increasing people will be looking for other options. Lon Lott asked if building this home will require the contractor to go into the private open space to get the grade set properly. Jeff Dong said no, it should not. He said the engineering has not been done because they were waiting for approval before beginning on this project. He said Wilding Engineering recommended where the placement of the home should go. Lon Lott said the city wants to protect the open space. Jeff Dong said he will not be encroaching on the open space building the home.

Jason Thelin said he had concerns about the home being built in a hazardous situation. Lon Lott said it is only a difference of 5 feet, the setback would be going from 12 to 7 feet which is not much. He said the slope will be six inches. Lon Lott does not have a concern if it is not an open basement. Greg Gordon said Alpines lots are not big enough for the homes that residents want to build on them. He said he thinks the council will be seeing more residents coming in and wanting exceptions. Lon Lott said this is different because there is not a lot right next door. He said the home would be next to open space and is not going to ruin anyone's views. Mayor Troy Stout said near Preston Drive the council saw nearly the entire subdivision had to have exceptions. Greg Gordon asked if the council could put something in the motion about the reason why this was being approved was because it was being built next to open space and not obstructing anyone's views. Craig Hall said yes.

Motion: Lon Lott moved that an exception be granted and that a 7-foot north side setback be approved for Lot 9 of the Brookside Meadows PRD as requested by the applicant noting that this due to open space and not infringing on anyone's view. Greg Gordon seconded the motion. There were 4 Ayes and 0 Nays, as recorded below. The motion passed unanimously.

Ayes

Nays

Carla Merrill
Jason Thelin
Greg Gordon
Lon Lott

E. Acceptance of ARPA (American Rescue Plan Act) Funds

Shane Sorensen said the Governor's Office of Planning and Budget (GOPB) recently sent an email to non-entitlement (populations of less than 50,000 residents) cities and towns opening the application to access the ARPA funds entitled for our city. To receive the funding that has been allocated to our city, we need to fill out and sign the Coronavirus Local Fiscal Recovery Fund Non-Entitlement Unit of Local Government Request for Payment. If a non-entitlement city chooses not to accept the ARPA Funds, the funds allocated for that city will be distributed to the other cities that accept the funds.

Shane Sorensen said the allocation for Alpine City is \$1,242,445, with half of the funds being available now and the other half in about one year. The allocation is based on the 2019 U.S. Census data. The funds can be used through the end of 2024, and possibly through the end of 2026 if they are committed, as we understand the rules. The funds can be used for a variety of different projects. A State grant program is also available for certain projects. If the City Council votes to accept the funds, we will work through the process of determining if proposed projects are eligible.

Staff recommends that the city drill a new well to be connected to the pressurized irrigation system, as a first choice. It is not clear if culinary water projects are eligible, but staff are trying to clarify if our proposed project is eligible. Many culinary systems also provide irrigation water to customers. If it is determined that the well is ineligible, or if the City Council wants to go in a different direction, we will do the necessary planning to make a project happen.

Mayor stated that he is not in favor of spending money but if we do not other cities will. Craig said over two fiscal years. Shane said this will come back to the city council when we decide on what projects will be done.

Motion: Carla Merrill moved to approve 2021-15 the ARPA Funds in the amount of \$1,242,445.00. Greg Gordon seconded the motion. There were 4 Ayes and 0 Nays, as recorded below. The motion passed unanimously.

Ayes

Nays

Carla Merrill
Jason Thelin
Greg Gordon
Lon Lott

F. Appoint New Planning Commission Member

Mayor Troy Stout said on July 20, 2021, will be Sylvia Christiansen's last day serving on the Planning Commission. Sylvia will be moving from Alpine out of state. The Planning Commission consists of seven members, with staggered terms. Mayor Troy Stout will recommend a new member to be appointed to the Planning Commission to serve the remainder of Sylvia's term, which ends in January of 2022 at the next City Council Meeting in August.

Motion: Greg Gordon table the appointment of a new Planning Commission member until next City Council meeting. Carla Merrill seconded the motion. There were 4 Ayes and 0 Nays, as recorded below. The motion passed unanimously.

Ayes

Carla Merrill
Jason Thelin
Greg Gordon
Lon Lott

Nays

G. Ordinance 2021-16: Water management Program

Shane said he is very concerned about the water conditions in Alpine City. He said the city has gone down to two days a week watering schedule. He said Ogden City will have no irrigation water next month for its residents and no watering of grass. He said two of pumps have run dry already this summer, he said staff is looking ahead to next year. He said the city will have to change things before next year. Mayor Troy Stout said the city is now borrowing water from years past and he has never seen it this bad. Shane Sorensen said 100 % of Alpine's water is from snowpack. He said Alpine is looking to purchase the gravel pit between Highland City and Alpine. He said this would enable us to save water there and be able to have it pumped back into the city. Mayor Troy Stout asked if the city put in a reservoir pond in Lambert Park. He said it could be used for recreations like paddle boarding, and a reservoir. Shane Sorensen said other cities have used such reservoirs as a fishery, and had sandy beach area for recreational use. Mayor Troy Stout said if the city drills another well, it may not help as much a reservoir. He asked what type of authority the city has to enforce the penalties. Craig Hall said with this ordinance Tommy Youngblood, Code Enforcement Officer, will be able to enforce violators.

Motion: Lon Lott moved to approve Ordinance 2021-16 Water Management Program. Carla Merrill seconded the motion. There were 3 Ayes and 1 Nays, as recorded below. The motion passed.

Ayes

Carla Merrill
Greg Gordon
Lon Lott

Nays

Jason Thelin

VI. STAFF REPORTS

None given

VII. COUNCIL COMMUNICATION

None given

VIII. EXECUTIVE SESSION:

None held

Motion: Jason Thelin moved to adjourn. Carla Merrill seconded the motion. There were 5 Ayes and 0 Nays, as recorded below. The motion passed unanimously.

Ayes

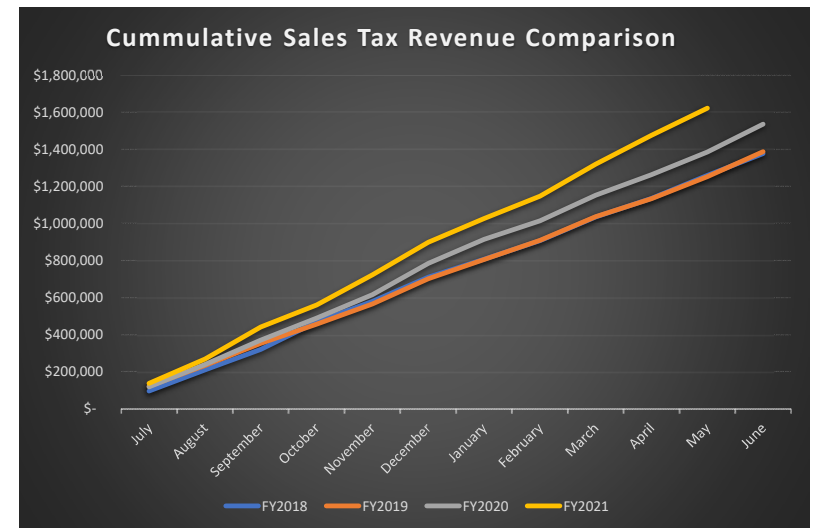
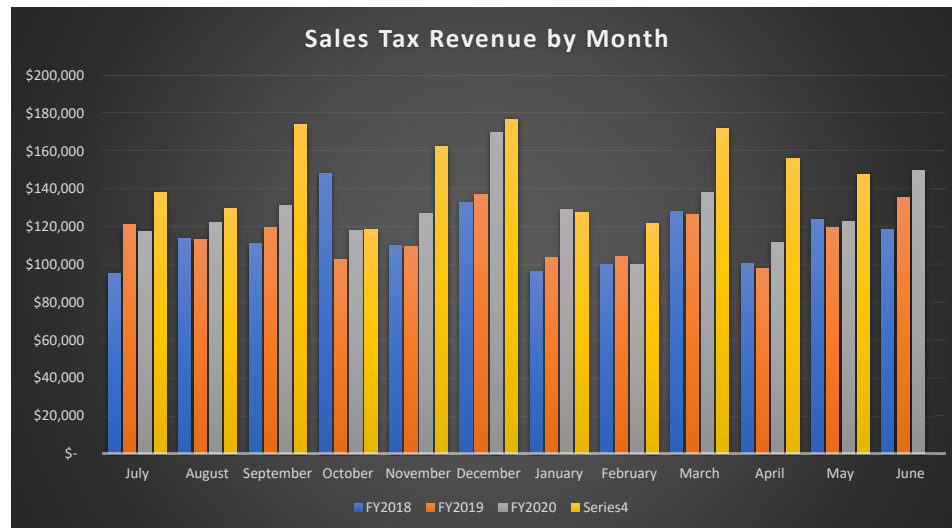
Carla Merrill
Jason Thelin
Greg Gordon

Nays

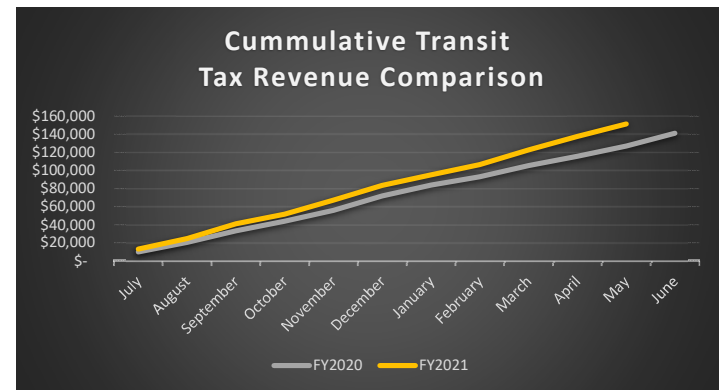
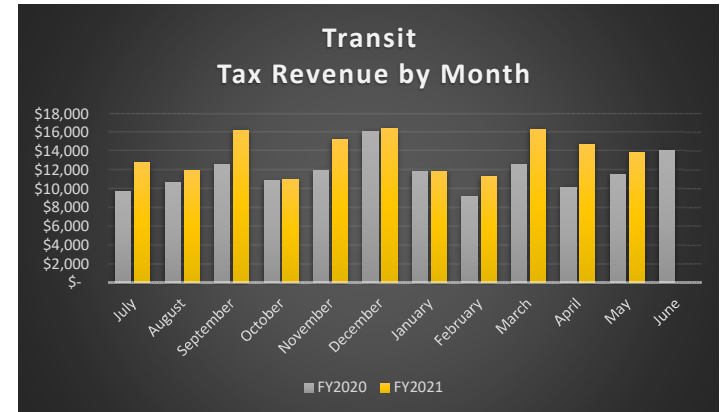
Lon Lott

DRAFT

Sales Tax Revenue		FY2018		FY2019				FY2020				FY2021			
Month Received	Accrued Month	Monthly Total	Cumulative Total	Monthly Total	Cumulative Total	YOY - Month	YOY to Date - Cumulative	Monthly Total	Cumulative Total	YOY - Month	YOY to Date - Cumulative	Monthly Total	Cumulative Total	YOY - Month	YOY to Date - Cumulative
September	July	\$ 95,001	\$ 95,001	\$ 121,011	\$ 121,011	27.38%	27.38%	\$ 117,461	\$ 117,461	-2.93%	-2.93%	\$ 137,733	\$ 137,733	17.26%	17.26%
October	August	\$ 113,649	\$ 208,650	\$ 112,961	\$ 233,972	-0.61%	12.14%	\$ 121,991	\$ 239,452	7.99%	2.34%	\$ 129,719	\$ 267,452	6.33%	11.69%
November	September	\$ 111,100	\$ 319,750	\$ 119,564	\$ 353,536	7.62%	10.57%	\$ 131,216	\$ 370,668	9.75%	4.85%	\$ 173,746	\$ 441,198	32.41%	19.03%
December	October	\$ 148,257	\$ 468,007	\$ 102,686	\$ 456,222	-30.74%	-2.52%	\$ 117,769	\$ 488,437	14.69%	7.06%	\$ 118,249	\$ 559,447	0.41%	14.54%
January	November	\$ 110,197	\$ 578,204	\$ 109,264	\$ 565,486	-0.85%	-2.20%	\$ 126,912	\$ 615,349	16.15%	8.82%	\$ 162,468	\$ 721,915	28.02%	17.32%
February	December	\$ 132,782	\$ 710,986	\$ 136,828	\$ 702,315	3.05%	-1.22%	\$ 169,627	\$ 784,977	23.97%	11.77%	\$ 176,856	\$ 898,771	4.26%	14.50%
March	January	\$ 96,347	\$ 807,333	\$ 103,359	\$ 805,674	7.28%	-0.21%	\$ 129,105	\$ 914,081	24.91%	13.46%	\$ 127,256	\$ 1,026,028	-1.43%	12.25%
April	February	\$ 99,883	\$ 907,216	\$ 103,889	\$ 909,563	4.01%	0.26%	\$ 99,855	\$ 1,013,936	-3.88%	11.48%	\$ 121,338	\$ 1,147,365	21.51%	13.16%
May	March	\$ 128,031	\$ 1,035,247	\$ 126,332	\$ 1,035,895	-1.33%	0.06%	\$ 137,786	\$ 1,151,722	9.07%	11.18%	\$ 171,824	\$ 1,319,189	24.70%	14.54%
June	April	\$ 100,288	\$ 1,135,535	\$ 97,739	\$ 1,133,634	-2.54%	-0.17%	\$ 111,682	\$ 1,263,404	14.27%	11.45%	\$ 156,158	\$ 1,475,347	39.82%	16.78%
July	May	\$ 123,667	\$ 1,259,202	\$ 119,308	\$ 1,252,942	-3.52%	-0.50%	\$ 122,892	\$ 1,386,296	3.00%	10.64%	\$ 147,597	\$ 1,622,944	20.10%	17.07%
August	June	\$ 118,672	\$ 1,377,874	\$ 135,603	\$ 1,388,544	14.27%	0.77%	\$ 149,742	\$ 1,536,038	10.43%	10.62%				



Transit Tax Revenue		FY2020		FY2021			
Month Received	Accrued Month	Monthly Total	Cumulative Total	Monthly Total	Cumulative Total	YOY - Month	YOY to Date - Cumulative
September	July	\$ 9,741	\$ 9,741	\$ 12,728	\$ 12,728	30.7%	30.7%
October	August	\$ 10,684	\$ 20,425	\$ 11,897	\$ 24,625	11.4%	20.6%
November	September	\$ 12,601	\$ 33,026	\$ 16,191	\$ 40,817	28.5%	23.6%
December	October	\$ 10,842	\$ 43,868	\$ 10,944	\$ 51,761	0.9%	18.0%
January	November	\$ 11,942	\$ 55,810	\$ 15,274	\$ 67,035	27.9%	20.1%
February	December	\$ 16,126	\$ 71,936	\$ 16,371	\$ 83,406	1.5%	15.9%
March	January	\$ 11,851	\$ 83,787	\$ 11,898	\$ 95,304	0.4%	13.7%
April	February	\$ 9,161	\$ 92,949	\$ 11,309	\$ 106,613	23.4%	14.7%
May	March	\$ 12,534	\$ 105,483	\$ 16,287	\$ 122,900	29.9%	16.5%
June	April	\$ 10,133	\$ 115,616	\$ 14,722	\$ 137,622	45.3%	19.0%
July	May	\$ 11,535	\$ 127,152	\$ 13,908	\$ 151,531	20.6%	19.2%
August	June	\$ 14,079	\$ 141,230				



ALPINE CITY COUNCIL AGENDA

SUBJECT: Final Plat – Fort Creek Landing Subdivision (Formerly Koroem Court)

FOR CONSIDERATION ON: 27 July 2021

PETITIONER: Brian Hansen with Heritage Custom Homes

ACTION REQUESTED BY PETITIONER: Approve the proposed Final Plat

BACKGROUND INFORMATION:

The Fort Creek Landing Subdivision consists of 3 lots on 8.44 acres, with lots ranging in size from 1.56 acres to 4.37 acres. The development is located in the CR-20,000 zone at approximately 662 North Whitby Woodlands Drive. Applicant is seeking approval of the Final Plat.

STAFF RECOMMENDATION:

Review the staff report and determine if the proposed subdivision should be approved.

SAMPLE MOTION TO APPROVE:

I move to approve the Fort Creek Landing Final Plat and plans with the following conditions:

- Prior to recording, the developer:
 - meets the water policy;
 - provides a construction cost estimate;
 - provides roadway preservation funds;
 - provides signed offsite utility easement documents;
 - Change cul-de-sac name to Fort Creek Court.

SAMPLE MOTION TO TABLE/DENY:

I move to table (or deny) the Fort Creek Landing Final Plat and plans based on the following:

- **** INSERT FINDING****



**ALPINE CITY
STAFF REPORT**
July 16, 2021

To: Alpine City Planning Commission

From: Staff

Prepared By: Austin Roy, City Planner
Planning & Zoning Department

Jed Muhlestein, City Engineer
Engineering & Public Works Department

Re: Fort Creek Landing (aka - Koroem Court) - FINAL

Applicant: Brian Hansen with Heritage Custom Homes
Project Location: 662 North Whitby Woodlands Drive
Zoning: CR-20,000 Zone
Acreage: Approximately 8.44 Acres
Lot Number & Size: 3 lots range from 1.56 acres to 4.37 acres
Request: Approve the Final Plat

SUMMARY

The proposed Koroem Court Subdivision consists of 3 lots on 8.44 acres, with lots ranging in size from 1.56 acres to 4.37 acres. The development is located in the CR-20,000 zone at approximately 662 North Whitby Woodlands Drive. Applicant is seeking approval of the Final Plat.

BACKGROUND

Proposed development is located on previously undeveloped land. Staff has been working with the developer to make sure plans will meet ordinance. Developer has worked with Horrocks Engineering to resolve potential issues with the culinary water.

ANALYSIS

Lot Width and Area

Per the requirements of the CR-20,000 zone lots with greater amounts of slope have increased area requirements. See table below:

3.03.040 Density, Lot Area And Width Requirements - Single Family Dwellings

1. The minimum area and width requirements of a zoning lot shall be determined upon the average slope of the lot and the following schedule:

Average Slope of Lot*	Minimum Area (in square feet)	Minimum Width (at min. front setback)
0-9.9%	20,000 (.46 ac)	110 ft.
10-14.9%	30,000 (.68 ac)	110 ft.
15-19.9%	40,000 (.92 ac)	110 ft.
20-24.9%	60,000 (1.37 ac)	110 ft.
25%+	Not Buildable	Not Buildable

The proposed lots all exceed the minimum requirements for area, with the smallest lot being 68,059 square feet in size.

Lot width requirements for the CR-20,000 zone are 110 feet for a standard lot as measured at the 30 foot front setback line, and 80 feet for a cul-de-sac lot located on a curve as measured at the right of way line, and 110 feet as measured at the 30 foot front setback line. All proposed lots appear to meet the width requirement.

Two of the lots do not meet the definition of a lot, which is: “Lots shall be generally rectangular in nature, and shall have **no more than five sides without an exception** being recommended by the Planning Commission and approved by the City Council; the front of a property, located at the front right of way, does not count against this requirement.” (DC 3.01.110 Lots) The City Council granted an exception to allow more than five sides on November 24, 2020.

Buildable Area

The proposed plat meets the buildable area requirements outlined in code.

Use

The developer is proposing that the lots be used for single-unit detached dwellings, which is consistent with the permitted uses of the CR-20,000 zone.

Sensitive Lands (Wildland Urban Interface)

The property is in areas identified on the City hazard maps. Applicant has submitted a Geotechnical report which is covered in the engineering review below. See Lone Peak Fire Department review for Wildland Urban Interface requirements.

Trails

The City has no planned trails through this area.

General Plan

Proposed subdivision is compatible with the City’s General Plan.

REVIEWS

PLANNING AND ZONING DEPARTMENT REVIEW

The analysis section in the body of this report serves as the Planning and Zoning Department review.

ENGINEERING AND PUBLIC WORKS DEPARTMENT REVIEW

This section constitutes the engineering review for the Final application of Fort Creek Landing, previously known as Koroem Court. Typically, the Final Engineering review of any development is less extensive on the engineering side of things as Preliminary submittals require complete construction sets and are reviewed at that time. At Final, Engineering is reviewing the final plat for completeness and calculating water rights and bonds. The Final Plat has been reviewed and appears to be complete. The remaining portions of this review were provided at Preliminary and discussed at length at that time. If any sections have changed, they will be in bold lettering for discussion.

Streets

The application shows the appropriate right of way dedication for the new cul-de-sac street with street grades that meet code. Frontage improvements (curb, gutter, sidewalk) are shown along all newly proposed frontages and are shown connecting to existing improvements along Whitby Woodlands Drive.

Utilities

Culinary Water and Pressurized Irrigation.

Water infrastructure exists at the end of Whitby Woodlands Drive and are available to be extended to serve the development. Having said that, Horrocks Engineers maintains the water models for the city. Horrocks reviews plans to make sure a proposed development fits within the master plans. The culinary and pressurized irrigation systems were found to require offsite improvements to meet the minimum fire flows and pressures for the development. The plans propose to connect both systems to Main Street via Nathan Terry's property (717 N Main St.). Connecting the waterlines to Main Street and Whitby Woodlands Drive creates a "looped" water system. Looped water systems provide water to the development from more than one connection point and are the preferred way of providing supply to any given area. The developer will need to provide access and maintenance easements for the water systems where they are not located in a public right-of-way. The easements are to be provided prior to construction or recorded with the Final Plat (prior to construction). **Easements for offsite waterlines was provided with the Final application.** The applicant will be required to acquire a Utah Stream Alteration Permit for any work near Fort Creek as well as an Alpine City Flood Plain Permit for work within the flood plain. New services are shown for each lot.

Storm Water.

Westfield ditch runs along the easterly side of the proposed development. This ditch is shown to be piped though the development, which follows DC 4.07.190 requirements. The alignment of the piped ditch works out well for access and maintenance, being close to a proposed driveway. Piping the ditch will also help alleviate issues such as dumping of trash and yard waste the City sees on open ditches throughout the city. A 20-foot wide easement for said ditch/pipe is shown on the preliminary plat.

An existing drainage easement resides on the property for stormwater runoff generated by a

ravine on the west side of the property, which extends further west off the property. This easement was intended to provide a route for stormwater flows to drain to Westfield Ditch or Fort Creek. The plans show vacating this easement and propose a new alignment and easement for these flows. Engineering has reviewed and approved the proposed alignment.

The plans show a retention pond on the south side of Lot 1. This pond handles the stormwater flows from the development and appears to follow city codes as it pertains to design. An access road for maintenance, along with easements for access are also shown. There is a small retaining wall on the upper west side of the retention pond; the Developer will be required to provide a design of the retaining wall prior to Final submittal. **The Developer has provided details on the retaining walls.**

Sewer.

Sewer is shown to connect to the main line in Whitby Woodlands Drive and extend to serve the development. New sewer laterals are shown for each lot.

Geologic Hazards

The site is situated within areas of potential geologic hazards as identified on Alpine City hazard maps and as thus, was required to investigate earthquake, rockfall, debris flow, flooding, and slide hazards for the site. Gordon Geotechnical Engineering, Inc. (G²) performed the study and no issues of concern on any of the studied items were brought forward.

Alpine City Construction Standard Specifications require a California Bearing Ratio (CBR) value to be obtained and reported in the geotechnical report for roadway design. This value was provided, and an appropriate roadway design was chosen based on this information.

Other

Developer is requesting cash in lieu of water rights. This can be approved now (at the City Council level) or later when they have a final plat ready for approval. For properties historically irrigated with Alpine Company Irrigation shares (which this property was), the city typically requires Alpine Irrigation Company shares be turned in to serve the development. Accepting cash in lieu of water rights requires the developer to pay 125% of the current market value of the water rights. (DC 4.07.230.3.e) **Recent discussions with the developer show they intend to meet the water policy with Alpine Irrigation Company water shares.**

There are redlines on the plat and construction drawings to be corrected prior to Final submittal. **All redlines from Preliminary review have been corrected.**

The Developer needs to provide a construction cost estimate for bonding purposes.

Alpine City specifications require escrow funds for a roadway preservation coat (See Alpine City Construction Standard Specifications 300.030 & 600.020). The amount for this requirement will be calculated based on current preservation coat costs at the time of recording. The escrow funds for this roadway preservation coat will be required of the Developer prior to recording.

LONE PEAK FIRE DEPARTMENT REVIEW

See the attached review from the Lone Peak Fire Department.

HORROCKS ENGINEERING REVIEW

See the attached review from Horrocks Engineers.

NOTICING

Notice has been properly issued in the manner outlined in City and State Code

STAFF RECOMMENDATION

Review staff report and findings and either recommend approval, table, or deny the proposed subdivision. Findings are outlined below.

Findings for a Positive Motion:

- A. the proposed plan meets city ordinances in terms design, frontage, lot size, and infrastructure improvements;
- B. City Council granted an exception to the number of sides a lot can have;
- C. there are no geologic hazard issues mentioned in the geologic hazard report for the area;
- D. the developer has provided a design which coincides with ordinances and master plans.

Findings for Negative Motion:

- A. ****INSERT FINDING****

MODEL MOTIONS

SAMPLE MOTION TO APPROVE

I move to recommend approval of the proposed final plans with the following conditions:

- Prior to recording, the developer:
 - meets the water policy;
 - provides a construction cost estimate;
 - provides roadway preservation funds;
 - provides signed offsite utility easement documents.

SAMPLE MOTION TO DENY/TABLE

I move to recommend that the proposed plans be tabled (or denied) based on the following:

- ****INSERT FINDING****



LONE PEAK FIRE DISTRICT
5582 PARKWAY WEST DRIVE
HIGHLAND, UTAH 84003
(801) 763-5365
WWW.LONEPEAKFIRE.COM

REED M. THOMPSON, FIRE CHIEF

MEMORANDUM

DATE: 27 October 2020

TO: Jed Muhlestein, City Engineer, Alpine City
CC: Austin Roy, City Planner, Alpine City
FROM: Reed M. Thompson, Fire Chief *Reed M. Thompson*
SUBJECT: KOROEM COURT SUBDIVISION 3-LOT CONCEPT PLAN

In review of the proposed site development concept plan for “Koroem Court 3-Lot Concept”, dated 3 September 2020, and located at 662 North Whitby Woodlands Drive, please note:

- The distance of the proposed building footprint on Lot 78 exceeds the distance allowed for fire access, when coming off of the cul-de-sac. All portions of the building are to be within 150 feet of the access road. An exception can be met if one or both of the following conditions are met:
 - Residential fire sprinklers are installed. (Note: This may be required as a result of the location in the WUI.)
 - A 20-foot-wide fire access road is constructed within 150 feet of the furthest point of the structure. The said access road needs to meet structural standards established in the currently approved International Fire Code. Access roads in excess of 150 feet require an approved turnaround.
- A fire hydrant is required within 250 feet of all structures.
- Fire flows need to be in accordance with the currently approved International Fire Code.

If you have further questions regarding this information, please contact me directly.

To: Jed Muhlestein
Alpine City

From: John E. Schiess, P.E.

Date: May 14, 2021

Memorandum

Subject: Koroem Court Hydraulic Modeling Results and Recommendations Update 3

The proposed Korem Court development consist of 3 single family homes located at 662 North Whitby Woodlands Dr. Development is right at the upper edge of the lower culinary and PI pressure zones. This version of the proposed development proposes to install a loop from the north end of the cul-de-sac east to Main Street through an easement.

The development proposes 3 culinary ERC's, 5.21 irrigated acres, and 3 sanitary sewer ERU's. The current master plan anticipated 16.11 culinary ERC's, 4.66 irrigated acres, and 16.11 sanitary sewer ERU's. Proposed connections fall well within the current master plans for culinary and sewer but are slightly more than anticipated for PI in this area. It is estimated that 66 percent of the total lot area will be irrigated although this may not be the case given the topography and number of lots.

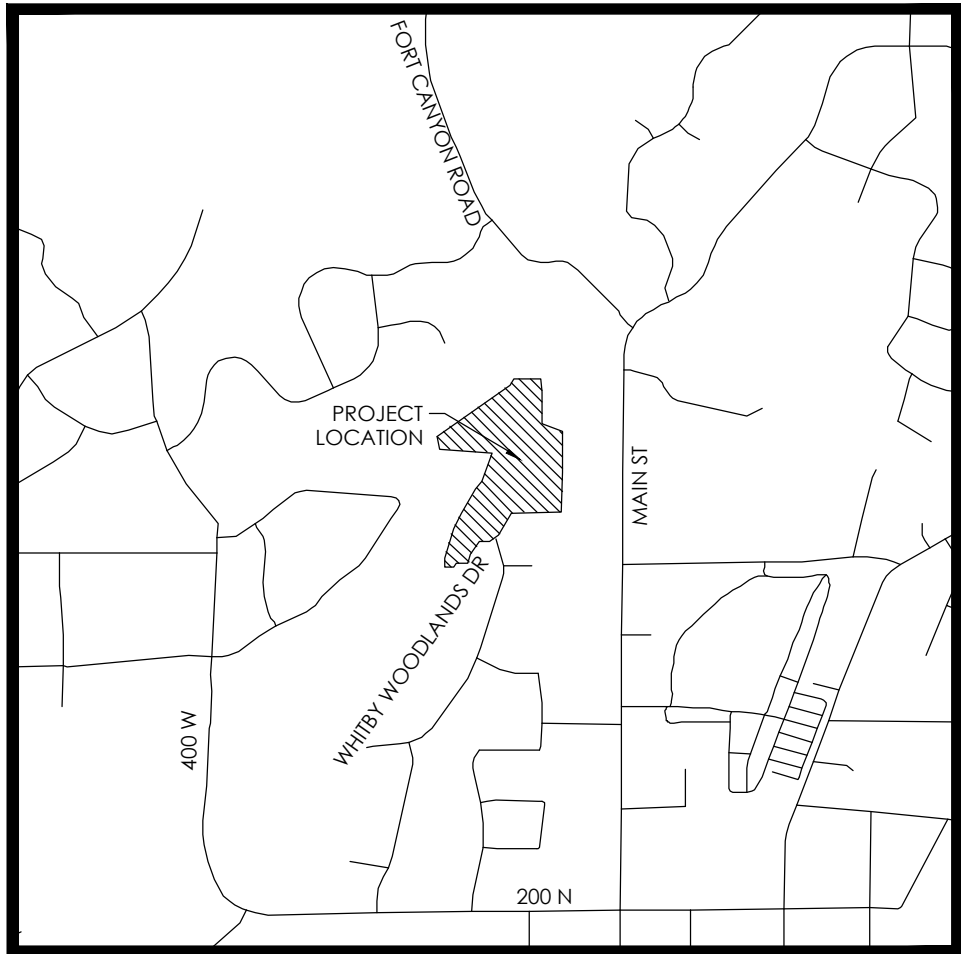
The proposed culinary water improvements have been modeled in both the current and buildout models. The proposed improvements fit well within the City's culinary water master plan and modeling shows them to be adequate. The plan as it stands will provide approximately 2,000 gpm fire flow. This analysis assumes the highest home elevation was 5040 feet in elevation. The following comments and recommendations are noted for the proposed culinary water system. There would be adequate pressures and fire flows for homes under 6,200 sf without fire sprinklers. If fire sprinklers were installed, then homes up to 23,300 sf could be constructed. A note similar to the following should be considered on this plat. "Culinary water pressures as designed meet the State of Utah Division of Drinking Water minimum standards at the water main. Individual homes within this plat may need to adjust their internal plumbing to account for minimal pressures. Individual home booster pumps are not allowed unless approved by the City and the Division of Drinking Water."

The proposed pressurized irrigation improvements have been modeled in both the current and buildout models under both wet and dry year supply conditions. The proposed improvements fit within the City's pressurized irrigation master plan and modeling shows them to be adequate in the current system. The following comments and recommendations are noted for the proposed pressurized irrigation system. A note similar to the proposed culinary note is recommended for the PI system as well.

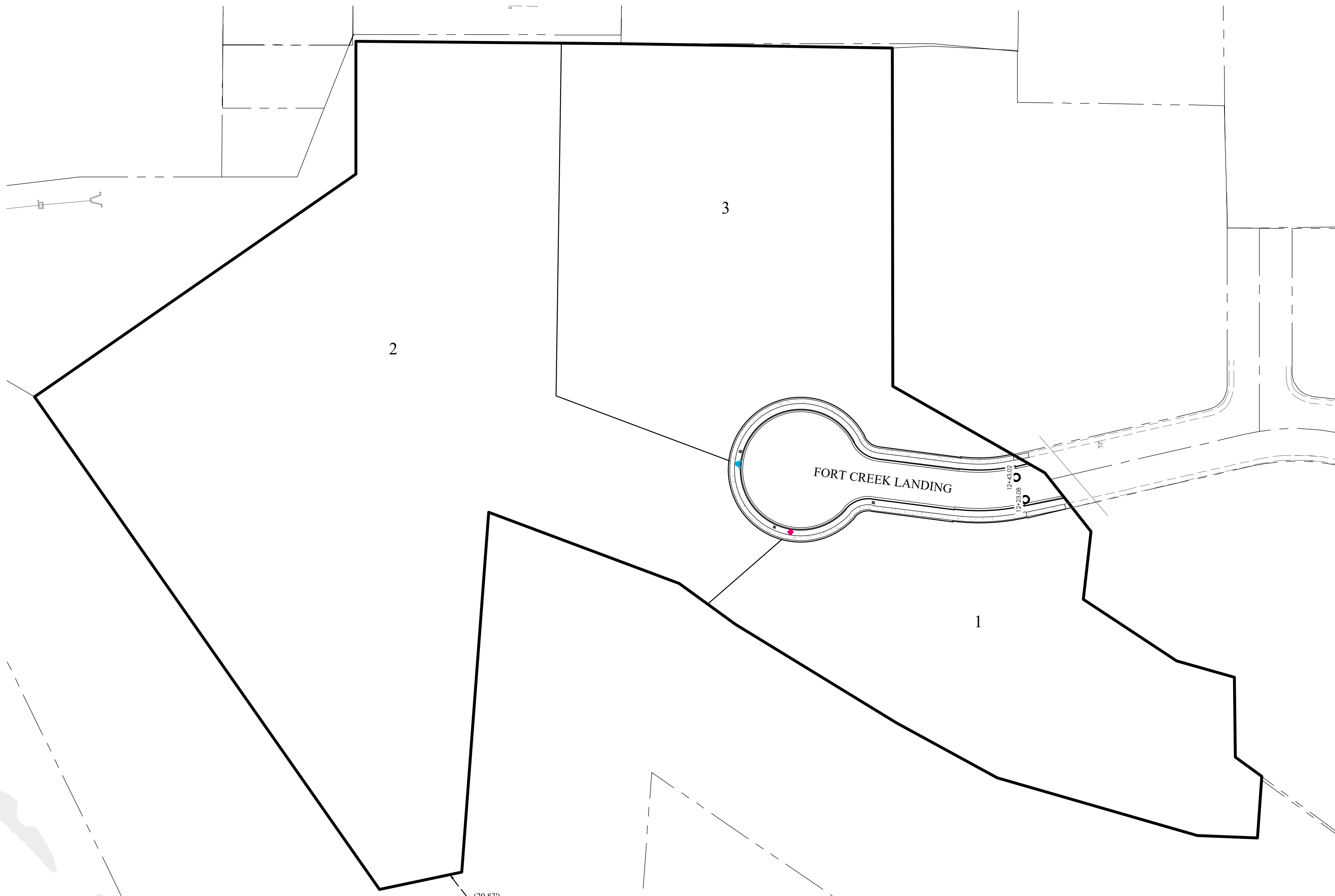
The proposed sanitary sewer improvements have been modeled in both the current and buildout models. The proposed improvements fit well within the City's sanitary sewer master plan and modeling shows them to be adequate.

FORT CREEK LANDING

PREPARED FOR:
HERITAGE CUSTOM HOMES
LOCATED IN:
ALPINE CITY, UTAH COUNTY, UTAH



VICINITY MAP
NTS



SITE MAP

GENERAL NOTES

- CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION, AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
- ANY AND ALL DISCREPANCIES IN THESE PLANS ARE TO BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL CONSTRUCTION SHALL ADHERE TO ALPINE CITY STANDARD PLANS AND SPECIFICATIONS.
- ALL UTILITIES AND ROAD IMPROVEMENTS SHOWN ON THE PLANS HEREIN SHALL BE CONSTRUCTED USING REFERENCE TO SURVEY CONSTRUCTION STAKES PLACED UNDER THE SUPERVISION OF A PROFESSIONAL LICENSED SURVEYOR WITH A CURRENT LICENSE ISSUED BY THE STATE OF UTAH. ANY IMPROVEMENTS INSTALLED BY ANY OTHER VERTICAL OR HORIZONTAL REFERENCE WILL NOT BE ACCEPTED OR CERTIFIED BY THE ENGINEER OF RECORD.
- THIS DRAWING SET IS SCALED TO BE PRINTED ON A 24" X 36" SIZE OF PAPER (ARCH. D). IF PRINTED ON A SMALLER PAPER SIZE, THE DRAWING WILL NOT BE TO SCALE AND SHOULD NOT BE USED TO SCALE MEASUREMENTS FROM THE PAPER DRAWING. ALSO USE CAUTION, AS THERE MAY BE TEXT OR DETAIL THAT MAY BE OVERLOOKED DUE TO THE SMALL SIZE OF THE DRAWING.

NOTICE

BEFORE PROCEEDING WITH THIS WORK, THE CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY ALL CONDITIONS, QUANTITIES, DIMENSIONS, AND GRADE ELEVATIONS, AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER.

ENGINEER'S NOTES TO CONTRACTOR

- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS, TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS. IF UTILITY LINES ARE ENCOUNTERED DURING CONSTRUCTION THAT ARE NOT IDENTIFIED BY THESE PLANS, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE CITY, THE OWNER, AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
- UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
- ALL CONTOUR LINES SHOWN ON THE PLANS ARE AN INTERPRETATION BY CAD SOFTWARE OF FIELD SURVEY WORK PERFORMED BY A LICENSED SURVEYOR. DUE TO THE POTENTIAL DIFFERENCES IN INTERPRETATION OF CONTOURS BY VARIOUS TYPES OF GRADING SOFTWARE BY OTHER ENGINEERS OR CONTRACTORS, FOCUS DOES NOT GUARANTEE OR WARRANTY THE ACCURACY OF SUCH LINework. FOR THIS REASON, FOCUS WILL NOT PROVIDE ANY GRADING CONTOURS IN CAD FOR ANY TYPE OF USE BY THE CONTRACTOR. SPOT ELEVATIONS AND PROFILE ELEVATIONS SHOWN IN THE DESIGN DRAWINGS GOVERN ALL DESIGN INFORMATION ILLUSTRATED ON THE APPROVED CONSTRUCTION SET. CONSTRUCTION EXPERTISE AND JUDGMENT BY THE CONTRACTOR IS ANTICIPATED BY THE ENGINEER TO COMPLETE BUILD-OUT OF THE INTENDED IMPROVEMENTS.

CONTACTS

ENGINEER & SURVEYOR
FOCUS ENGINEERING & SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047
(801) 352-0075
PROJECT MANAGER: MATHEW WANGSGAARD, PE
SURVEY MANAGER: SPENCER LLEWELYN, PLS

OWNER/DEVELOPER
HERITAGE CUSTOM HOMES
623 NORTH PATTERSON LANE
ALPINE, UTAH 84004
(801) 694-9125
CONTACT: BRIAN HANSEN



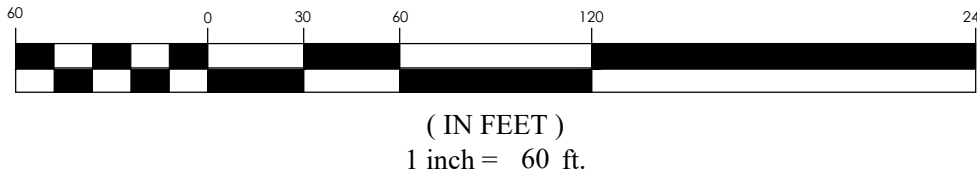
FLOOD ZONE
PORTIONS OF THE SUBJECT PROPERTY LIE WITHIN A REGULATORY FLOODWAY AND FLOOD HAZARD AREAS ZONE AE & UNSHADED ZONE X ACCORDING TO FEMA (FEDERAL EMERGENCY MANAGEMENT AGENCY) FIRM (FLOOD INSURANCE RATE MAP) #49049C0159F
MAP REVISION DATE: JUNE 19, 2020 (TO REFLECT LOMR)

BENCHMARK

NORTHEAST CORNER OF SECTION 13
TOWNSHIP 4 SOUTH, RANGE 1 EAST
SALT LAKE BASE AND MERIDIAN
ELEV: 5036.49
DATUM: NGVD 29



GRAPHIC SCALE



Sheet List Table

Sheet Number	Sheet Title
C1	COVER SHEET
C2	PLAT
C3	SITE AND UTILITY PLAN
C3.1	BUILDABLE AREA PLAN
C3.2	BUILDABLE AREA SLOPE ANALYSIS PLAN
C4	GRADING AND DRAINAGE PLAN
C5.1	OFF-SITE DRAINAGE AREA
C5.2	SITE DRAINAGE AREA
C6	OFF SITE WATER
PP01	FORT CREEK LANDING
PP02	STORM DRAIN
PP03	OFFSITE WATER
PP04	OFFSITE WATER
PP05	IRRIGATION LINE
.PP06	.PP06
D1	DETAILS

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
COVER SHEET

REVISION BLOCK	
#	DESCRIPTION
1	
2	
3	
4	
5	
6	

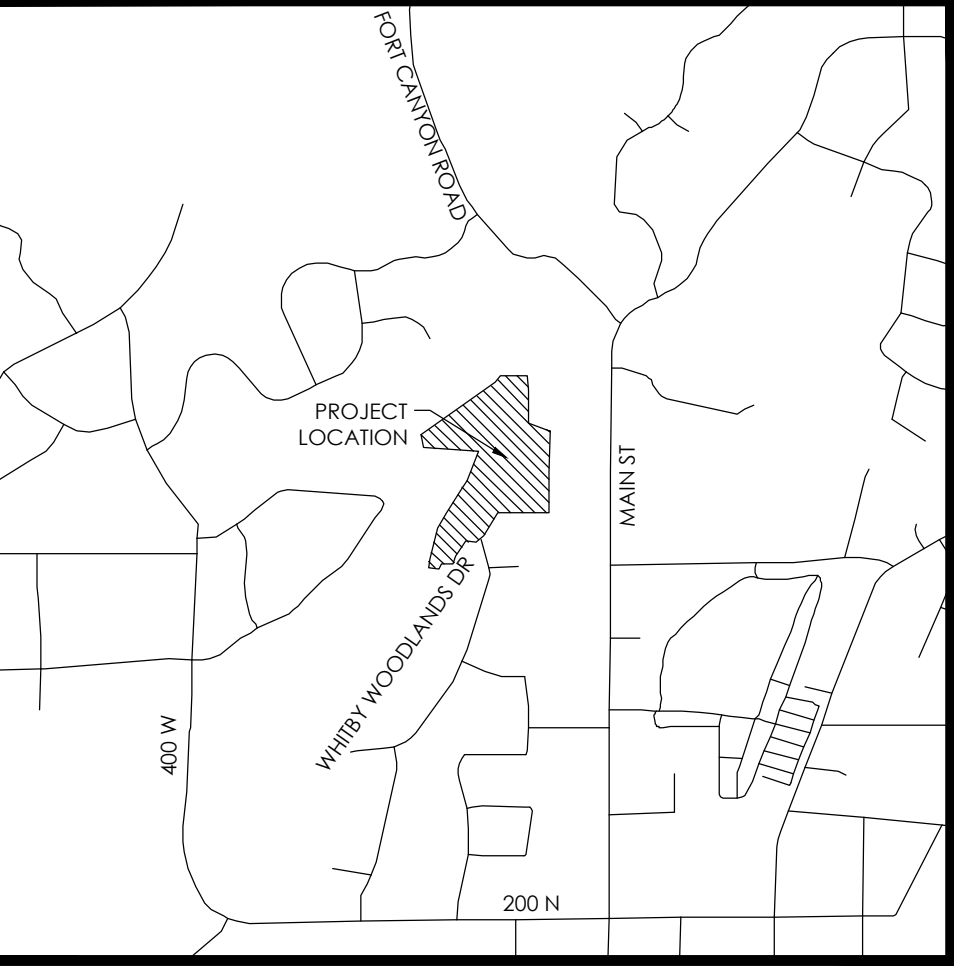
COVER SHEET

Scale: 1"=60'
Date: 07/09/21
Sheet: C1
Drawn: MHW
Job #: 19-0487

C1

FOCUS
ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

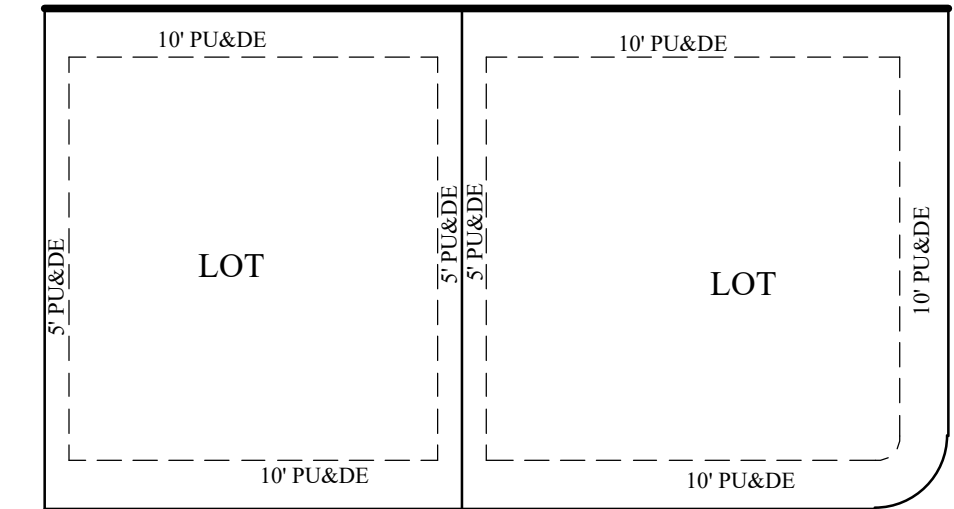
FOR
REVIEW
ONLY



VICINITY MAP
N.T.S

LEGEND

	BOUNDARY
	SECTION LINE
	EASEMENT
	RIGHT-OF-WAY LINE
	BUILDABLE AREA
	EXISTING PROPERTY LINE
	SECTION MONUMENT (FOUND)
	STREET MONUMENT (TO BE SET)
	BOUNDARY MARKERS
	FEMA REGULATORY FLOODWAY
	FEMA SPECIAL FLOOD HAZARD AREA ZONE AE



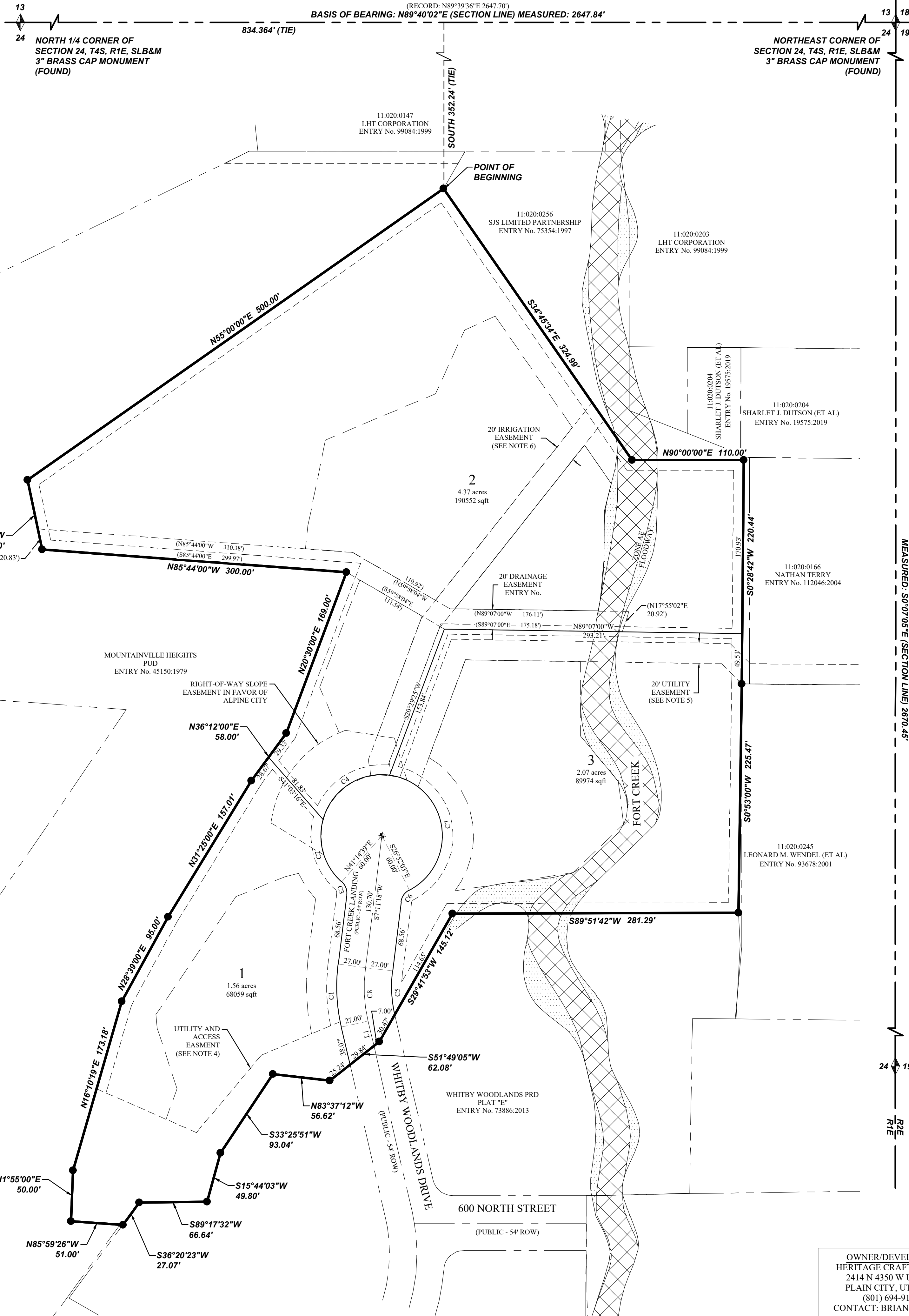
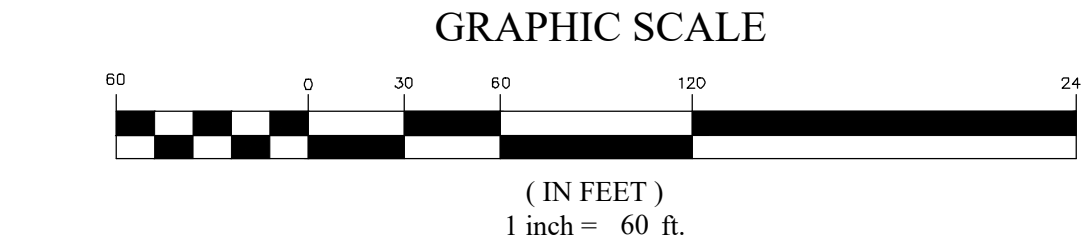
PUBLIC STREET
TYPICAL PUBLIC UTILITY AND
DRAINAGE EASEMENTS
N.T.S.

- NOTES
- #5 X 24" REBAR & CAP (FOCUS ENG) TO BE SET AT ALL LOT CORNERS. NAILS OR PLUGS TO BE SET IN TOP BACK OF CURB AT EXTENSION OF SIDE LOT LINES, IN LIEU OF REBAR AND CAPS AT FRONT LOT CORNERS.
 - LOTS 2 AND 3 CANNOT HAVE OPENINGS TO A BASEMENT LOWER THAN THE NEAREST BASE FLOOD ELEVATION.

FLOOD ZONE
PORTIONS OF THE SUBJECT PROPERTY LIE WITHIN A REGULATORY FLOODWAY AND FLOOD HAZARD AREAS ZONE AE & UNSHADED ZONE X ACCORDING TO FEMA (FEDERAL EMERGENCY MANAGEMENT AGENCY) FIRM (FLOOD INSURANCE RATE MAP) #49049C0159F. MAP REVISION DATE: JUNE 19, 2020 (TO REFLECT LOMR).

Curve Table					
CURVE	RADIUS	DELTA	LENGTH	CHORD DIRECTION	CHORD LENGTH
C1	177.00	20°11'18"	62.37	S02°54'21"E	62.04
C2	60.00	64°00'31"	67.03	S16°45'06"E	63.60
C3	15.00	55°56'39"	14.65	S20°47'02"E	14.07
C4	60.00	81°59'24"	85.86	S56°14'52"W	78.72
C5	123.00	20°11'17"	43.34	N02°54'20"W	43.11
C6	15.00	55°56'39"	14.65	N35°09'38"E	14.07
C7	60.00	145°53'23"	152.78	N09°48'44"W	114.72
C8	150.00	20°11'18"	52.85	S02°54'21"E	52.58

Line Table		
LINE	DIRECTION	LENGTH
L1	S13°00'00"E	25.37



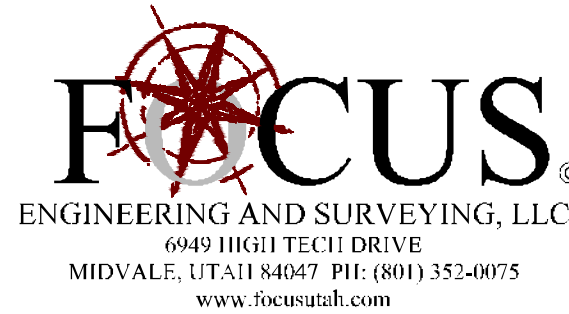
ADDRESS TABLE	
LOT	ADDRESS
1	655 NORTH FORT CREEK LANDING
2	751 NORTH FORT CREEK LANDING
3	692 NORTH FORT CREEK LANDING

- NOTES
- FIRE HYDRANT REQUIRED WITHIN 250' OF ANY PROPOSED HOME.
 - HOMES BUILT FURTHER THAN 150' FROM A PUBLIC STREET MUST PROVIDE FIRE ACCESS ROAD TO BE APPROVED BY THE LONE PEAK FIRE DEPARTMENT.
 - THIS PLAT CONTAINS PROPERTIES SITUATED WITHIN THE WILDLAND/URBAN INTERFACE. HOMES WITHIN THIS AREA MAY BE REQUIRED TO INSTALL FIRE SPRINKLERS.
 - A PORTION OF LOT 1 CONTAINS AN EASEMENT IN FAVOR OF ALPINE CITY CORPORATION FOR THE PURPOSE OF STORM WATER COLLECTION. THE CITY RESERVES THE RIGHT TO ENTER THE PROPERTY FOR MAINTENANCE, REPAIR, AND INSPECTION. THE OWNER CANNOT MODIFY THE EASEMENT AREA IN ANY WAY WITHOUT APPROVAL OF THE CITY ENGINEER AND CITY ADMINISTRATOR.
 - A PORTION OF LOT 3 CONTAINS AN EASEMENT IN FAVOR OF ALPINE CITY CORPORATION FOR THE PURPOSE OF PRESSURIZED IRRIGATION AND CULINARY WATER. THE CITY RESERVES THE RIGHT TO ENTER THE PROPERTY FOR MAINTENANCE, REPAIR, AND INSPECTION. THE OWNER CANNOT MODIFY THE EASEMENT AREA IN ANY WAY WITHOUT APPROVAL OF THE CITY ENGINEER AND CITY ADMINISTRATOR.
 - A PORTION OF LOT 2 CONTAINS AN EASEMENT IN FAVOR OF ALPINE CITY CORPORATION FOR THE WESTFIELD DITCH. THE CITY RESERVES THE RIGHT TO ENTER THE PROPERTY FOR MAINTENANCE, REPAIR, AND INSPECTION. THE OWNER CANNOT MODIFY THE EASEMENT AREA IN ANY WAY WITHOUT APPROVAL OF THE CITY ENGINEER AND CITY ADMINISTRATOR.

MEASURED: S0°07'05"E (SECTION LINE) 2870.45'

EAST 1/4 CORNER OF
SECTION 24, T4S, R1E, SLB&M
3" BRASS CAP MONUMENT
(FOUND)

OWNER/DEVELOPER
HERITAGE CRAFT HOMES
2414 N 4350 W UNIT B
PLAIN CITY, UT 84404
(801) 694-9125
CONTACT: BRIAN HANSEN



SURVEYOR'S CERTIFICATE

I, Evan J. Wood, do hereby certify that I am a Professional Land Surveyor, and that I hold License No. 183395 in accordance with Title 58, Chapter 22 of Utah State Code. I further certify by authority of the owners(s) that I have completed a Survey of the property described on this Plat in accordance with Section 17-23-17 of said Code, and have subdivided said tract of land into lots, blocks, streets, and easements, and the same has, or will be correctly surveyed, staked and monumented on the ground as shown on this Plat, and that this Plat is true and correct.

FOR REVIEW ONLY

Evan J. Wood
Professional Land Surveyor
License No. 183395

Date

BOUNDARY DESCRIPTION

Commencing North 89°40'02" East 834.364 feet along the Section line and South 352.24 feet from the North one-quarter corner of Section 24, Township 4 South, Range 1 East, Salt Lake Base and Meridian; thence South 34°45'34" East 324.994 feet; thence East 110.00 feet; thence along an existing fence South 0°28'42" West 220.442 feet to the North line of Wendel property as described in Warranty Deed Entry 15831.1995; thence South 0°53' West 225.472 feet along said deed/fence line and B.L.A. of Entry 2547.1982; thence along Whitby Woodlands PRD Plats C & E boundaries (same as existing fence line) as follows: South 89°51'42" West 281.288 feet; thence South 29°41'53" West 145.12 feet; thence South 51°49'05" West 62.08 feet; thence North 83°37'12" West 56.62 feet; thence South 33°25'51" West 93.043 feet; thence South 15°44'03" West 49.798 feet; thence South 89°17'32" West 66.64 feet; thence South 36°20'23" West 27.065 feet; thence along Mountainville Heights PUD Subdivision boundary as follows: North 85°59'26" West 51.00 feet; thence North 1°55' East 50.00 feet; thence North 16°10'19" East 173.18 feet; thence North 28°39' East 95.00 feet; thence North 31°25' East 157.01 feet; thence North 36°12' East 58.00 feet; thence North 20°30' East 169.00 feet; thence North 85°44' West 300.00 feet; thence North 12°00' West 70.00 feet; thence North 55°00' East 500.00 feet to the point of beginning.

OWNER'S DEDICATION

KNOW ALL MEN BY THESE PRESENT THAT WE, ALL OF THE UNDERSIGNED OWNERS OF ALL OF THE PROPERTY DESCRIBED IN THE SURVEYOR'S CERTIFICATE HEREON AND SHOWN ON THIS MAP, HAVE CAUSED THE SAME TO BE SUBDIVIDED INTO LOTS, BLOCKS, STREETS AND EASEMENTS AND DO HEREBY DEDICATE ANY PUBLIC STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON FOR PERPETUAL USE OF THE PUBLIC.

IN WITNESS WHEREOF WE HAVE HEREUNTO SET OUR HANDS THIS ____ DAY OF _____ A.D. 20__

BY:
(PRINTED NAME)

ITS:

CORPORATE ACKNOWLEDGMENT

STATE OF UTAH
S.S.
COUNTY OF _____

ON THE ____ DAY OF _____, A.D. 20__, PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR THE COUNTY OF _____, IN SAID STATE OF UTAH, WHO AFTER BEING DULY SWORN, ACKNOWLEDGED TO ME THAT HE IS THE _____ OF _____ A UTAH INC. AND THAT HE SIGNED THE OWNERS DEDICATION FREELY AND VOLUNTARILY FOR AND IN BEHALF OF SAID COMPANY FOR THE PURPOSES THEREIN MENTIONED.

MY COMMISSION EXPIRES: _____ A NOTARY PUBLIC COMMISSIONED IN UTAH RESIDING IN _____ COUNTY

MY COMMISSION No. _____ PRINTED FULL NAME OF NOTARY _____

ACCEPTANCE BY LEGISLATIVE BODY

THE CITY COUNCIL OF ALPINE CITY, COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS ____ DAY OF _____, A.D. 20__.

APPROVED BY MAYOR _____ ATTEST: CITY RECORDER _____

APPROVED BY CITY ENGINEER _____

PLANNING COMMISSION APPROVAL

APPROVED THIS ____ DAY OF _____, A.D. 20__ BY THE ALPINE CITY PLANNING COMMISSION.

DIRECTOR - SECRETARY _____ CHAIRMAN, PLANNING COMMISSION _____

APPROVAL AS TO FORM

APPROVED AS TO FORM THIS ____ DAY OF _____, A.D. 20__

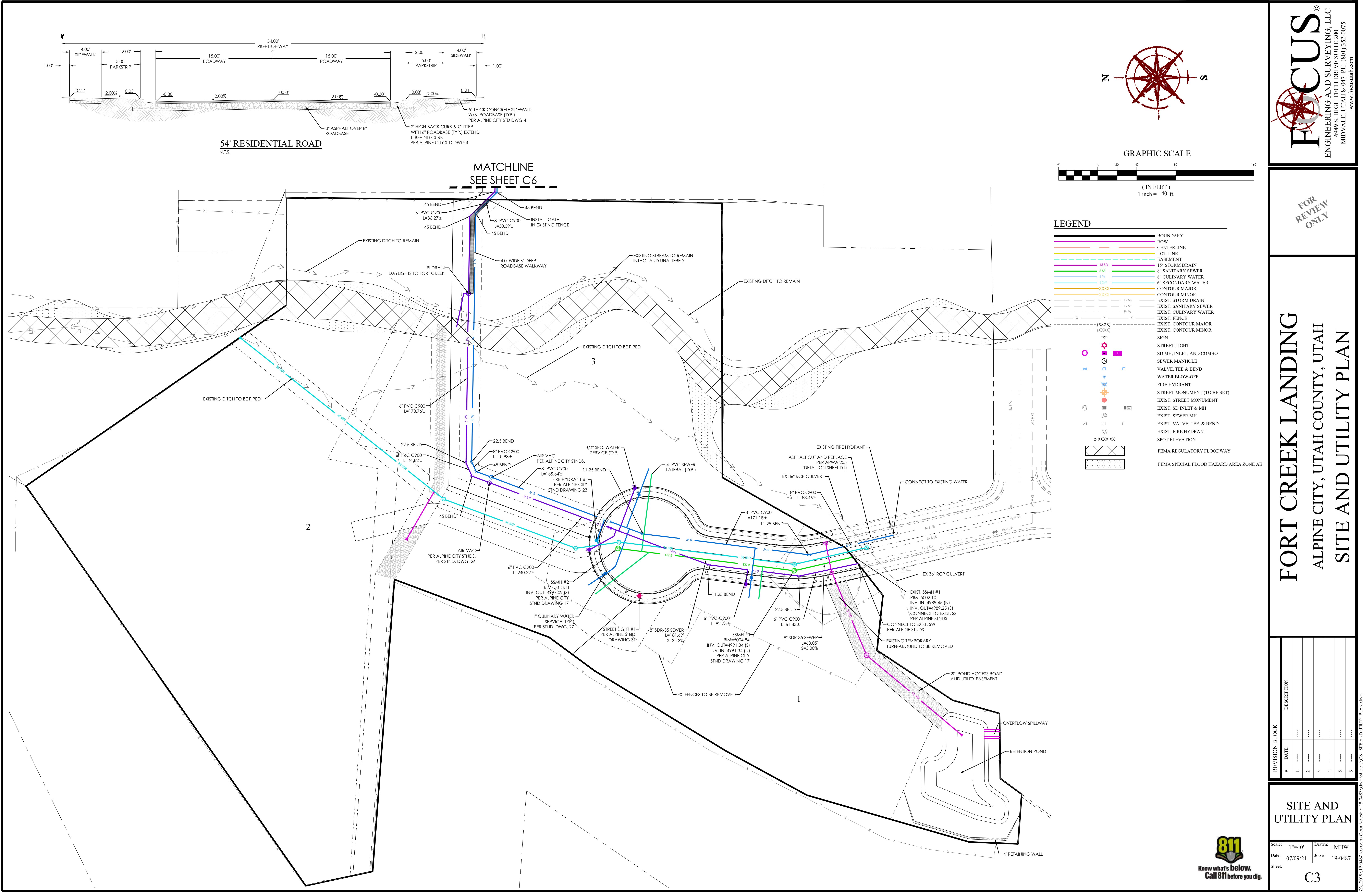
CITY ATTORNEY: _____

FORT CREEK LANDING

SUBDIVISION
LOCATED IN THE NE 1/4 OF SECTION 24, T4S, R1E,
SALT LAKE BASE & MERIDIAN
ALPINE CITY, UTAH COUNTY, UTAH

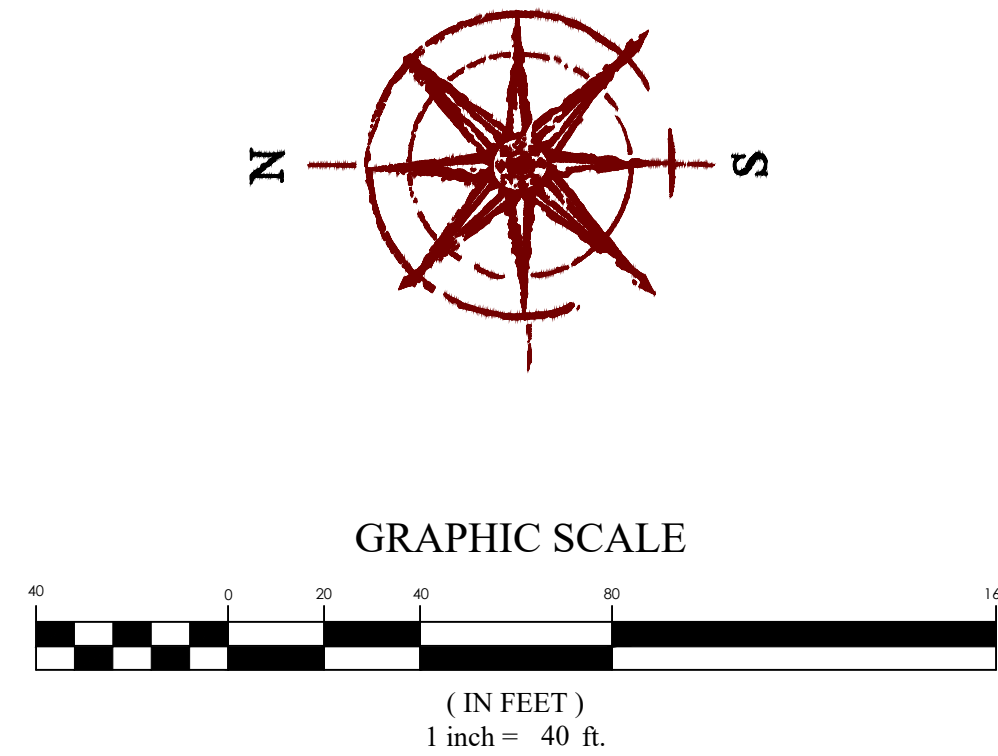
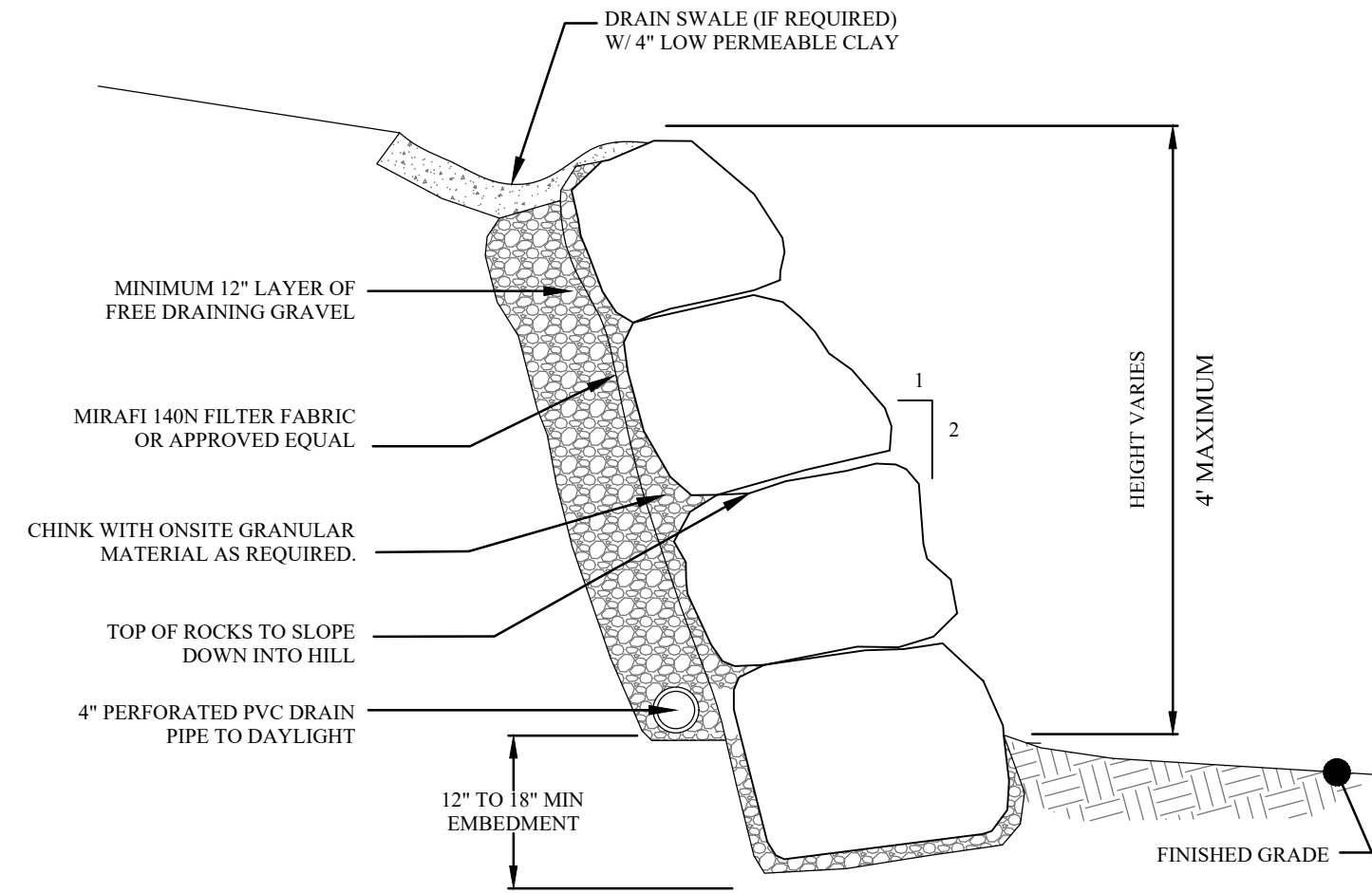
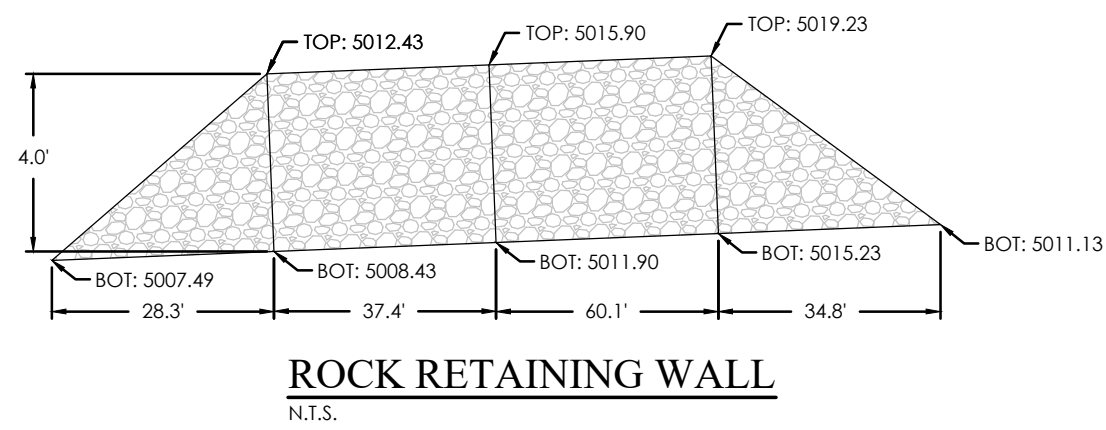
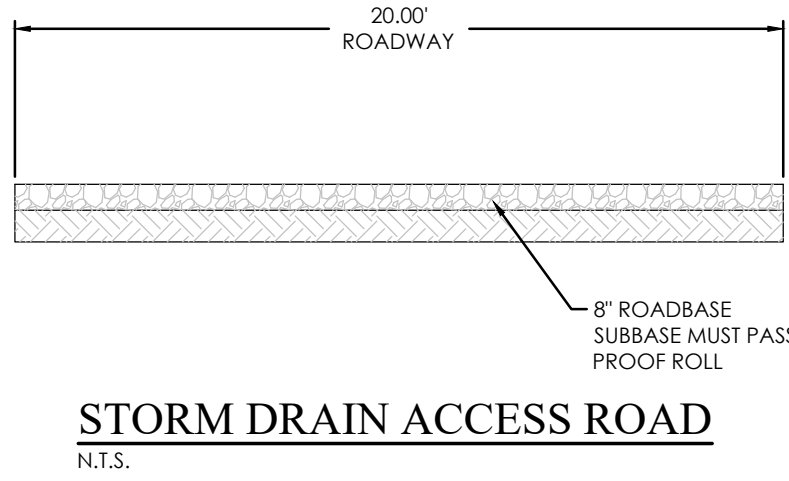
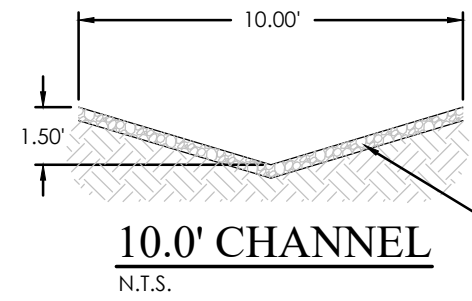
SURVEYOR'S SEAL NOTARY PUBLIC SEAL ALPINE CITY ENGINEER SEAL ALPINE CITY RECORDER SEAL

FOR REVIEW ONLY



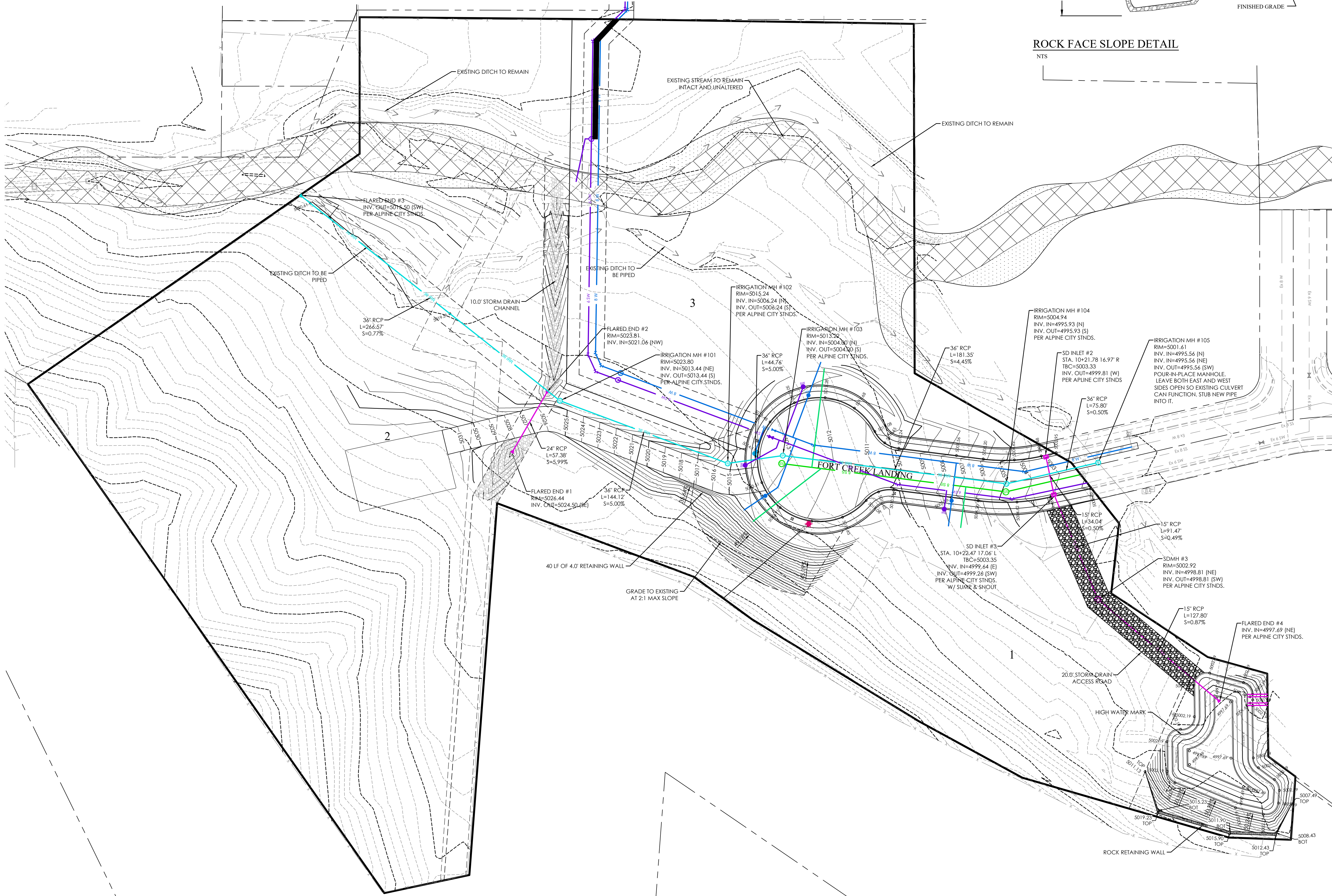
FOR
REVIEW
ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
SITE AND UTILITY PLAN



LEGEND	
	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
	15" STORM DRAIN
	8" SANITARY SEWER
	8" CULINARY WATER
	6" SECONDARY WATER
	CONTOUR MAJOR
	CONTOUR MINOR
	EXIST. STORM DRAIN
	EXIST. SANITARY SEWER
	EXIST. CULINARY WATER
	EXIST. FENCE
	EXIST. CONTOUR MAJOR
	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
	SEWER MANHOLE
	VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
	EXIST. SD INLET & MH
	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
	SPOT ELEVATION
	FEMA REGULATORY FLOODWAY
	FEMA SPECIAL FLOOD HAZARD AREA ZONE AE

- NOTES:
- EACH LOT TO HAVE A RETENTION BASIN AT BUILDING PERMIT STAGE.
 - THIS PROJECT HAS A CBR VALUE OF 15 PER THE GEOTECH REPORT PROVIDED BY GORDON GEOTECHNICAL ENGINEERING, INC PROJECT # 660-003-20



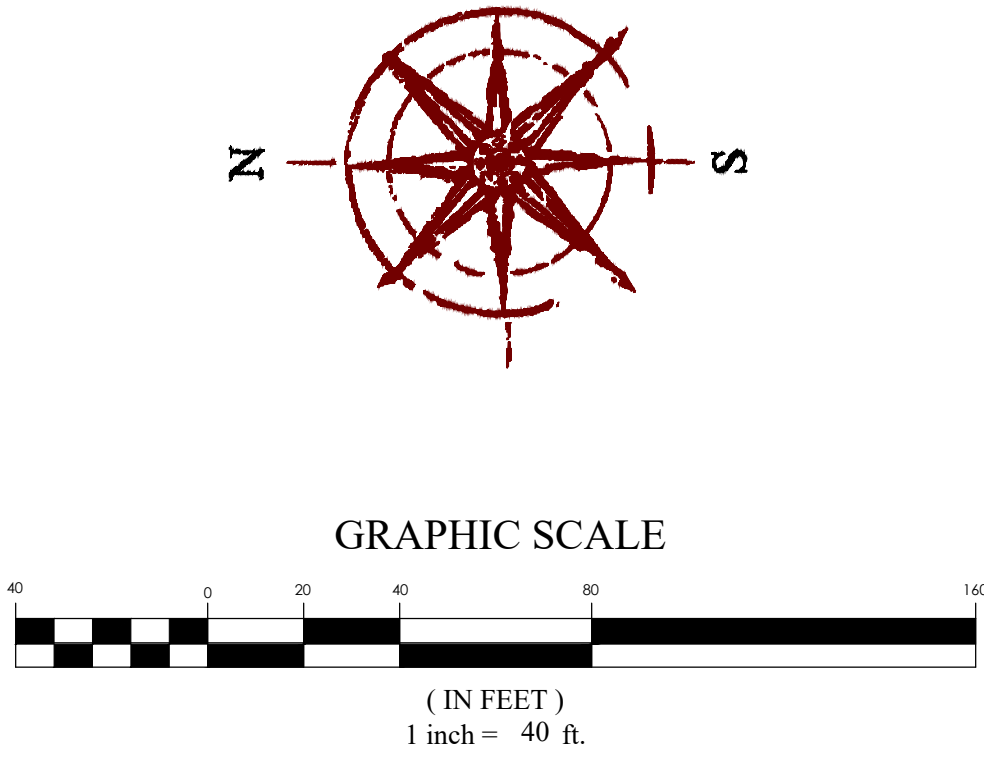
FOR
REVIEW
ONLY

KOROEM COURT
ALPINE CITY, UTAH COUNTY, UTAH
GRADING AND DRAINAGE PLAN

REVISION BLOCK	
#	DESCRIPTION
1	
2	
3	
4	
5	
6	

GRADING AND DRAINAGE PLAN	
Scale: 1"=40'	Drawn: MHW
Date: 06/09/21	Job #: 19-0487
Sheet:	C4





LEGEND	
	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
	15" STORM DRAIN
	8" SANITARY SEWER
	8" CULINARY WATER
	6" SECONDARY WATER
	CONTOUR MAJOR
	CONTOUR MINOR
	EXIST. STORM DRAIN
	EXIST. SANITARY SEWER
	EXIST. CULINARY WATER
	EXIST. FENCE
	EXIST. CONTOUR MAJOR
	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
	SEWER MANHOLE
	VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
	EXIST. SD INLET & MH
	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
	SPOT ELEVATION
	FEMA REGULATORY FLOODWAY
	FEMA SPECIAL FLOOD HAZARD AREA ZONE AE

FOR
REVIEW
ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
BUILDABLE AREA PLAN

REVISION BLOCK	
#	DESCRIPTION
1	
2	
3	
4	
5	
6	

**BUILDABLE
AREA PLAN**

Scale: 1"=40'

Date: 07/09/21

Sheet:

Drawn: MHW

Job #: 19-0487

C3.1





FOR
REVIEW
ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
BUILDABLE AREA SLOPE ANALYSIS PLAN

REVISION BLOCK	
#	DESCRIPTION
1	DATE
2	DATE
3	DATE
4	DATE
5	DATE
6	DATE

**BUILDABLE
AREA SLOPE
ANALYSIS
PLAN**

Scale: 1"=40'

Date: 07/09/21

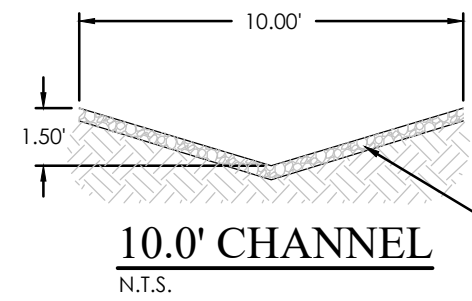
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Drawn: MHW

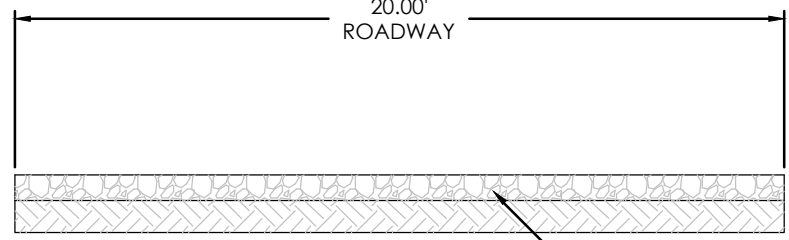
Job #: 19-0487

C3.2

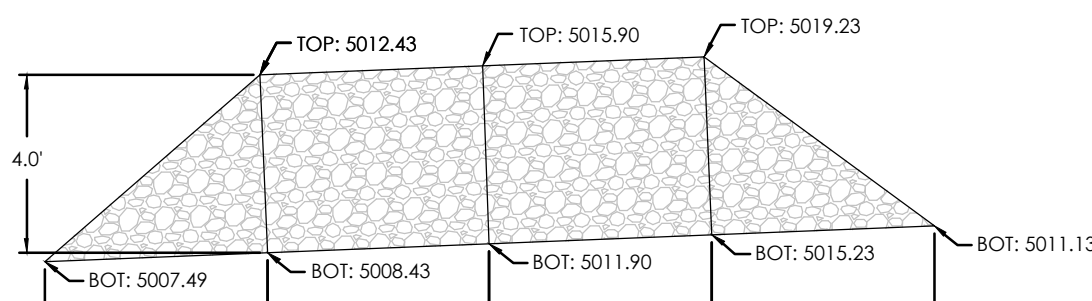




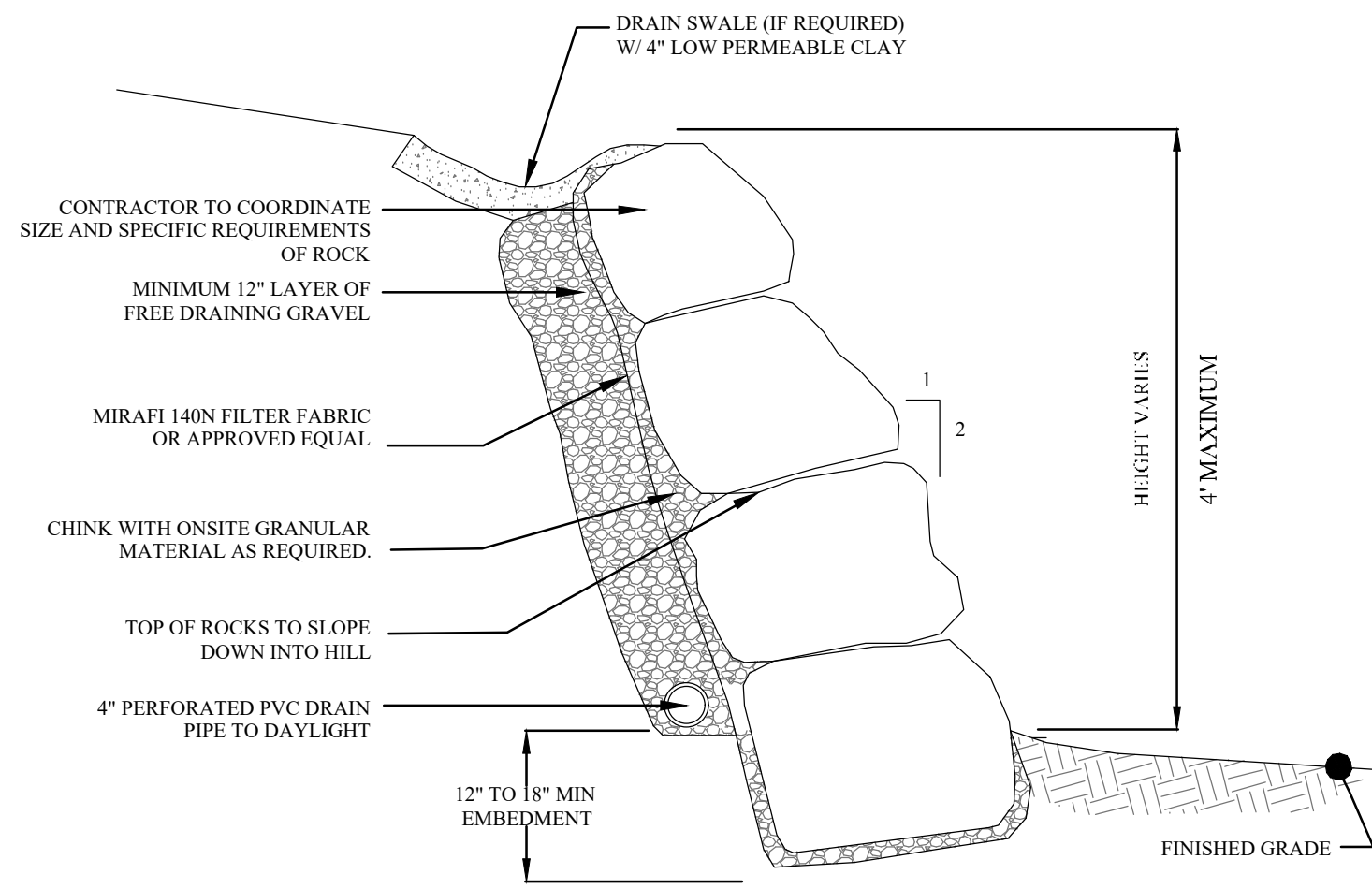
RIP-RAP
D₅₀ = 4"
1.0' DEEP WITH 6" BURY
SEE DRAINAGE REPORT
FOR CALCULATIONS



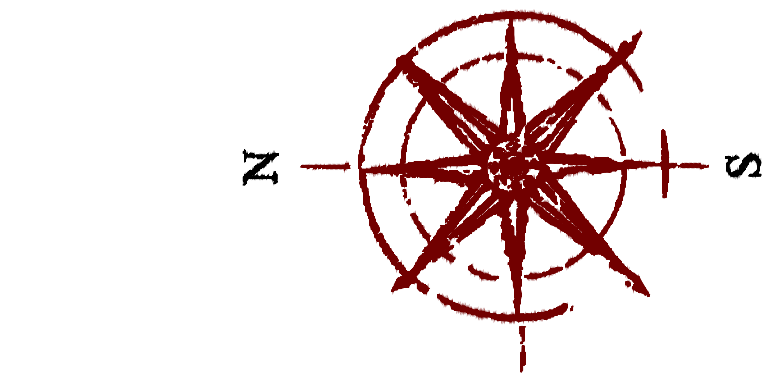
STORM DRAIN ACCESS ROAD
N.T.S.



ROCK RETAINING WALL
N.T.S.



ROCK FACE SLOPE DETAIL
N.T.S.



GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

LEGEND

---	BOUNDARY
---	ROW
---	CENTERLINE
---	LOT LINE
---	EASEMENT
---	15" SD
---	8" SS
---	8" CULINARY WATER
---	6" CULINARY WATER
---	CONTOUR MAJOR
---	CONTOUR MINOR
---	EXIST. STORM DRAIN
---	EXIST. SANITARY SEWER
---	EXIST. CULINARY WATER
---	EXIST. FENCE
---	EXIST. CONTOUR MAJOR
---	EXIST. CONTOUR MINOR
---	SIGN
---	STREET LIGHT
---	SD MH, INLET, AND COMBO
---	SEWER MANHOLE
---	VALVE, TEE & BEND
---	WATER BLOW-OFF
---	FIRE HYDRANT
---	STREET MONUMENT (TO BE SET)
---	EXIST. STREET MONUMENT
---	EXIST. SD INLET & MH
---	EXIST. SEWER MH
---	EXIST. VALVE, TEE, & BEND
---	EXIST. FIRE HYDRANT
---	SPOT ELEVATION
---	FEMA REGULATORY FLOODWAY
---	FEMA SPECIAL FLOOD HAZARD AREA ZONE AE

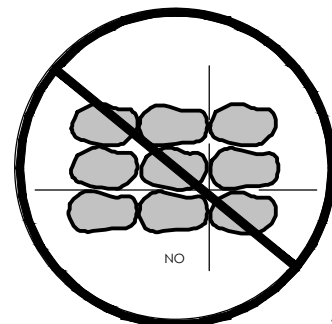
NOTES:

- EACH LOT TO HAVE A RETENTION BASIN AT BUILDING PERMIT STAGE.
- THIS PROJECT HAS A CBR VALUE OF 15 PER THE GEOTECH REPORT PROVIDED BY GORDON GEOTECHNICAL ENGINEERING, INC PROJECT # 660-003-20

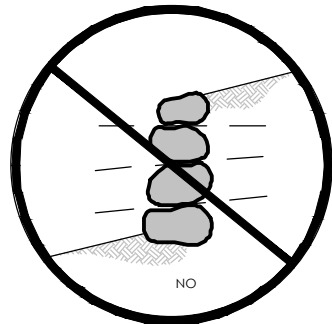
DRAINAGE POND DATA:

TOP OF POND ELEV: 5002.19
HIGH WATER ELEV: 5001.19
BOTTOM OF POND ELEV: 4997.69
REQUIRED VOLUME: 9,680 C.F.
DESIGNED VOLUME: 10,480 C.F.

ROCK STACKING CONSTRUCTION GUIDELINES:
ROCKS SHOULD BE STACKED IN GENERAL ACCORDANCE WITH THE FOLLOWING GUIDELINES:
1. ROCKS SHOULD BE PLACED SO THAT THERE ARE NO CONTINUOUS JOINTS.
2. ROCKS IN EITHER THE VERTICAL OR LATERAL DIRECTION (SEE DETAIL A).
3. ROCKS SHOULD BE STAGGERED SUCH THAT EACH ROCK BEARS ON THE TWO ROCKS BELOW IT.
4. THE SPACES BETWEEN ROCKS SHOULD BE FILLED WITH GRAVEL.
5. THE TOP SURFACE OF ROCKS SHOULD SLOPE BACK TOWARDS THE SLOPE FACE AND AWAY FROM THE FACE OF THE ROCK WALL (SEE DETAIL B).



DETAIL A



DETAIL B

FOR
REVIEW
ONLY

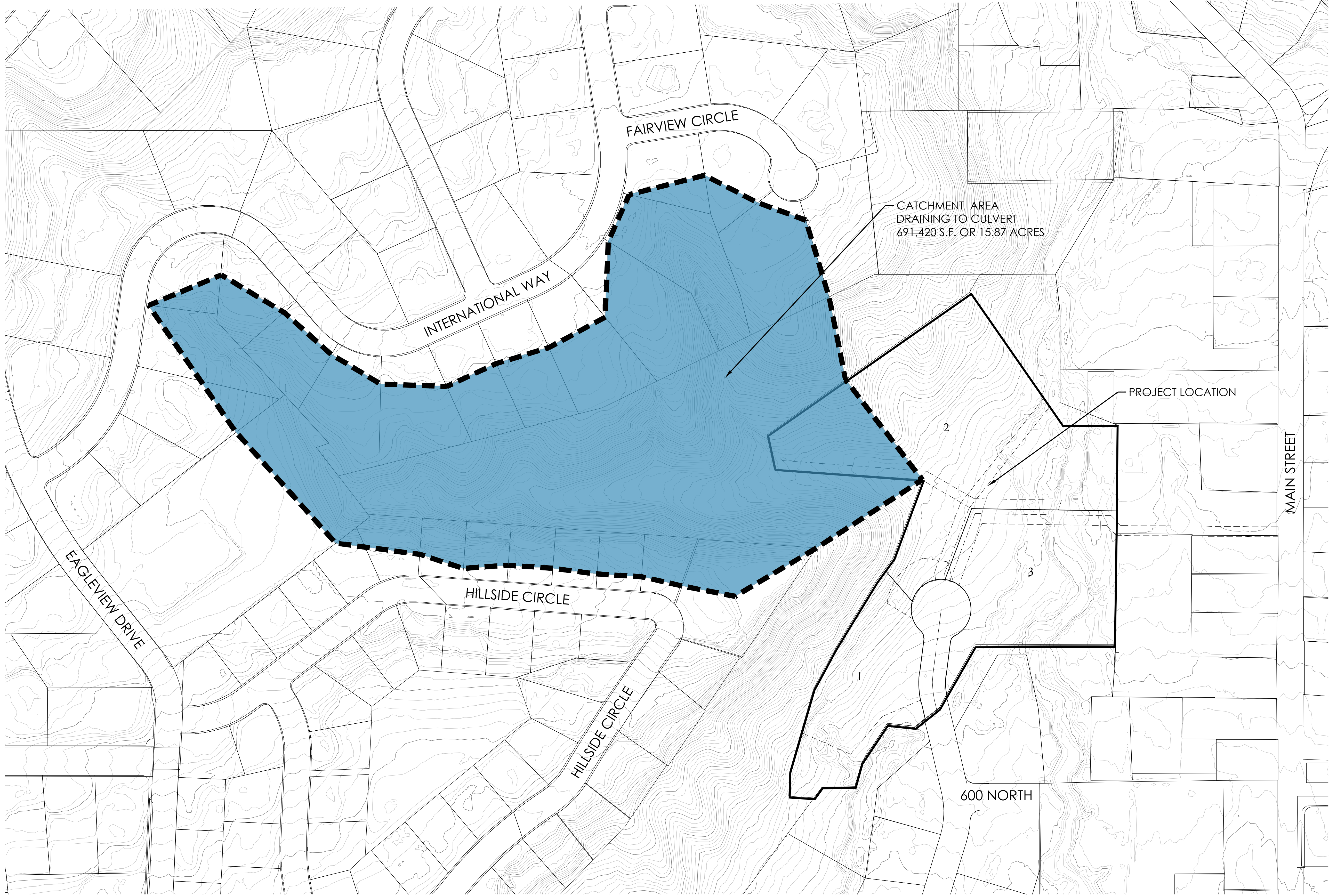
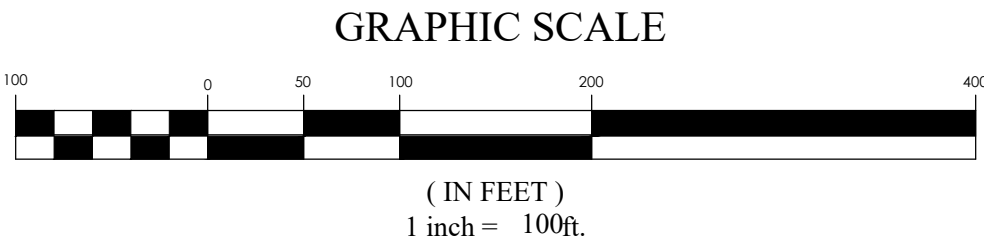
FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
GRADING AND DRAINAGE PLAN

REVISION BLOCK	DATE	DESCRIPTION
1	07/09/21	1. INITIAL DESIGN
2	07/09/21	2. REVISIONS
3	07/09/21	3. REVISIONS
4	07/09/21	4. REVISIONS
5	07/09/21	5. REVISIONS
6	07/09/21	6. REVISIONS

GRADING AND DRAINAGE PLAN	
Scale: 1"=40'	Drawn: MHW
Date: 07/09/21	Job #: 19-0487
Sheet:	
C4	



- NOTES:
1. SEE DRAINAGE REPORT FOR FULL CULVERT FLOW CALCULATIONS AND CAPACITY.



FOR
REVIEW
ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
OFF-SITE DRAINAGE AREA

REVISION BLOCK		DESCRIPTION
#	DATE	
1	****	
2	****	
3	****	
4	****	
5	****	
6	****	

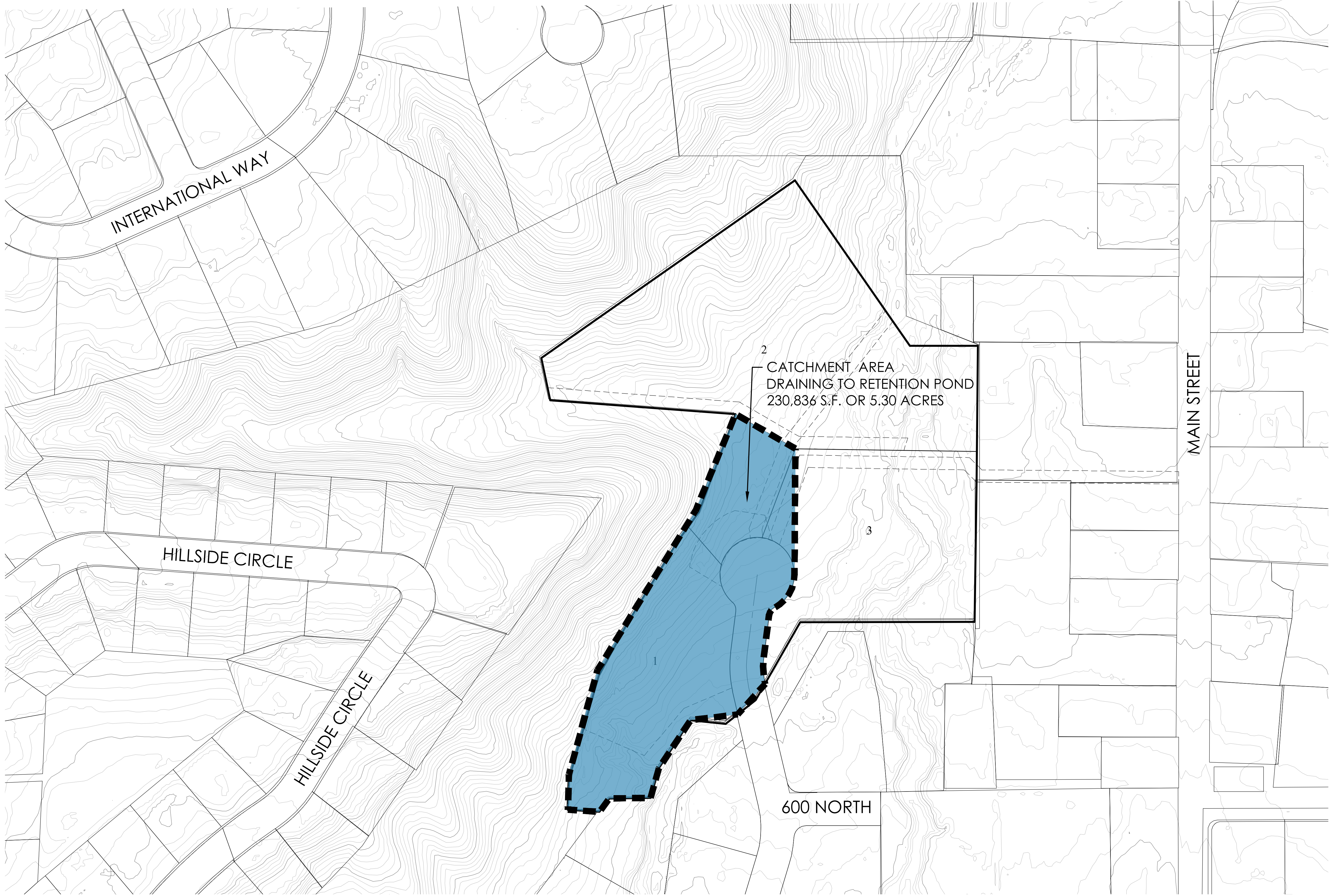
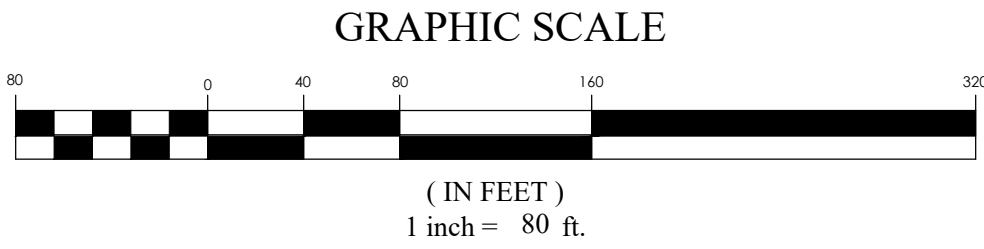
**OFF-SITE
DRAINAGE
AREA**

Scale: 1"=100' Drawn: MHW
Date: 07/09/21 Job #: 19-0487

Sheet: **C5.1**



- NOTES:
1. SEE DRAINAGE REPORT FOR FULL RETENTION POND CALCULATIONS AND CAPACITY.



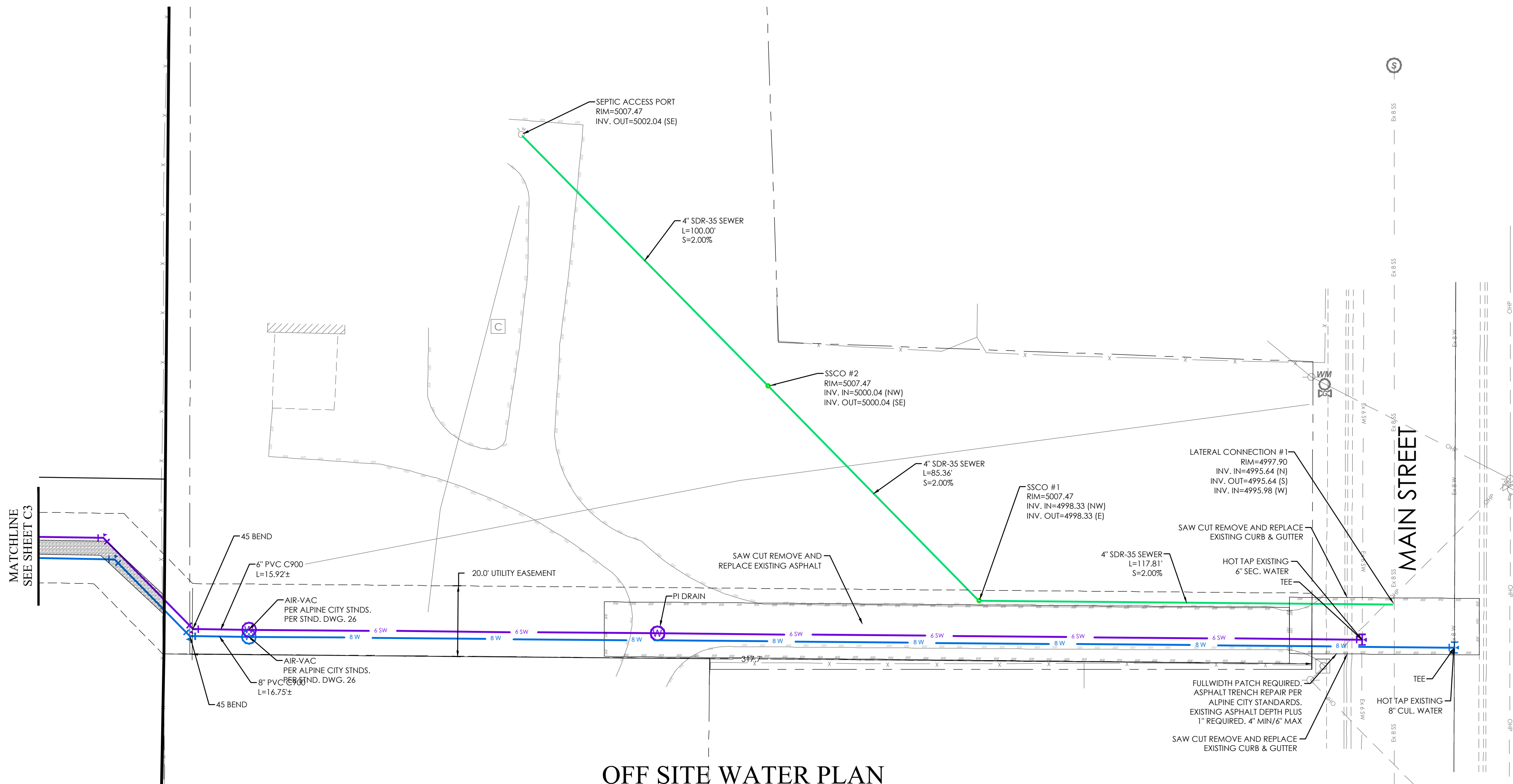
FOR
REVIEW
ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
SITE DRAINAGE AREA

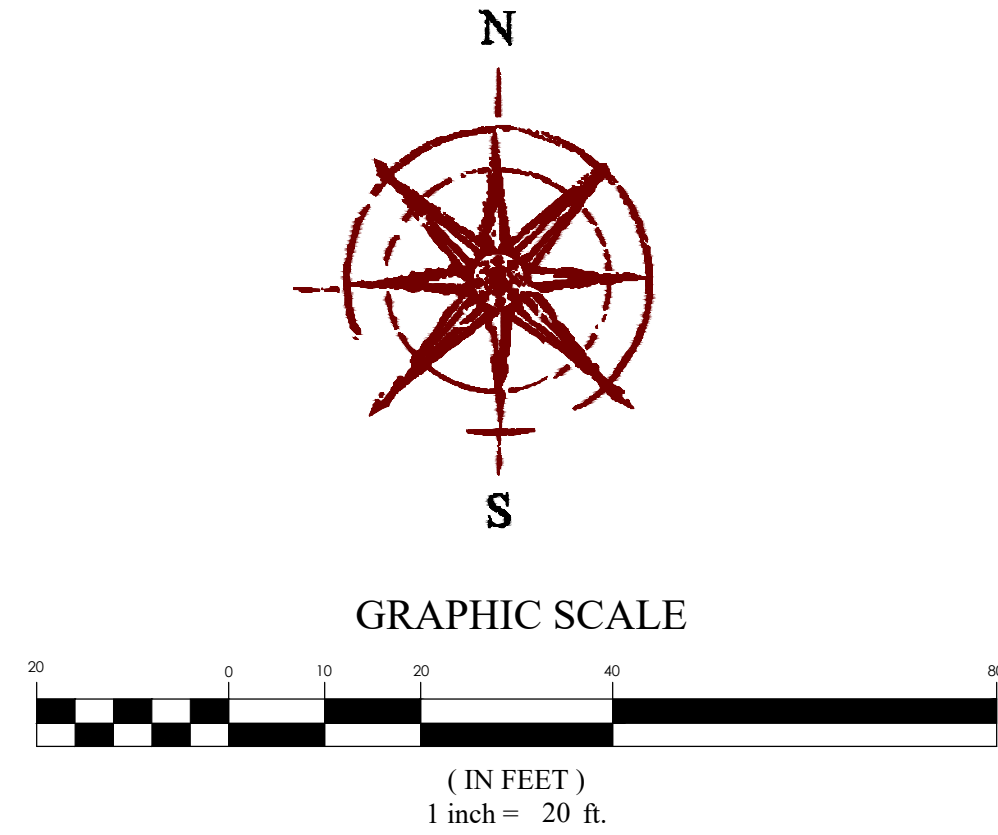
REVISION BLOCK		DESCRIPTION
#	DATE	
1	****	
2	****	
3	****	
4	****	
5	****	
6	****	

SITE DRAINAGE AREA	
Scale: 1"=80'	Drawn: MHW
Date: 07/09/21	Job #: 19-0487
Sheet:	C5.2

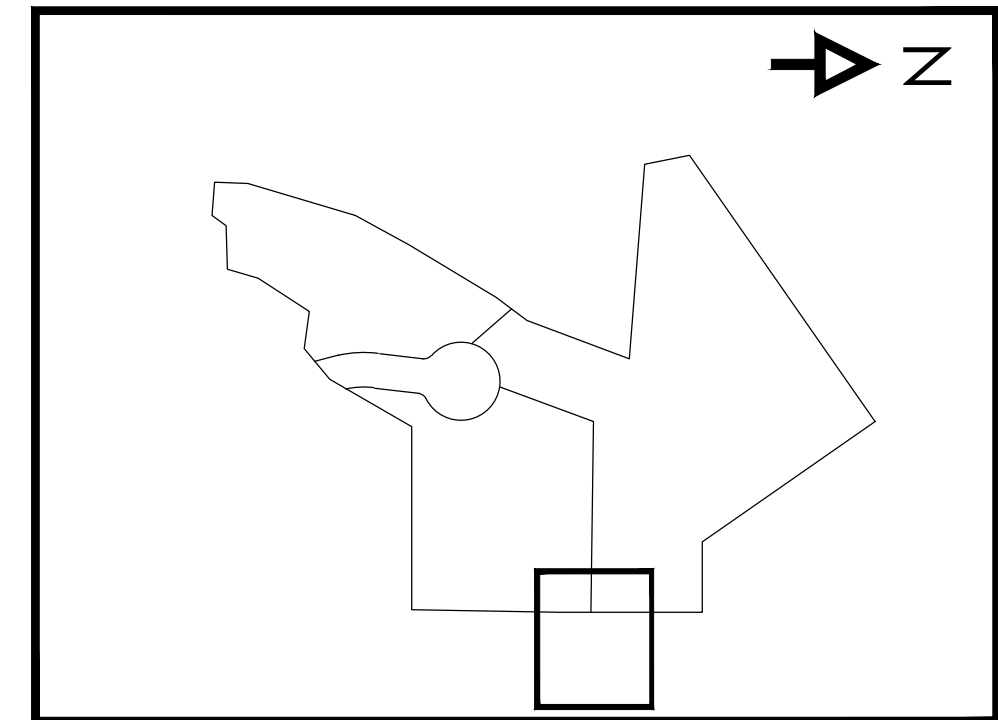




OFF SITE WATER PLAN
SEE SHEET PP04 FOR PROFILE



LEGEND	
	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
	15\"/>
	8\"/>
	8\"/>
	6\"/>
	6\"/>
	CONTOUR MAJOR
	CONTOUR MINOR
	EXIST. STORM DRAIN
	EXIST. SANITARY SEWER
	EXIST. CULINARY WATER
	EXIST. FENCE
	EXIST. CONTOUR MAJOR
	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
	SEWER MANHOLE
	VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
	EXIST. SD INLET & MH
	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
	SPOT ELEVATION
	FEMA REGULATORY FLOODWAY
	FEMA SPECIAL FLOOD HAZARD AREA ZONE AE



KEY MAP
N.T.S



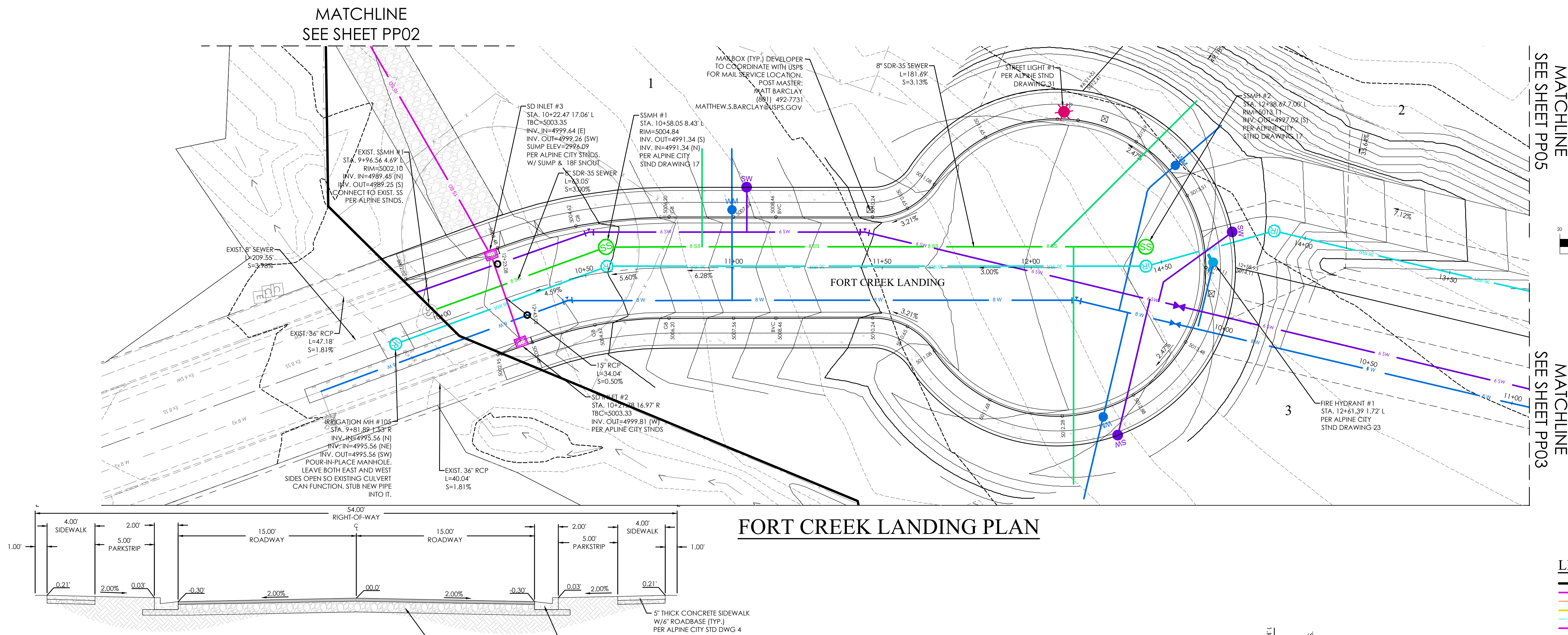
BENCHMARK
NORTHEAST CORNER OF SECTION 13
TOWNSHIP 4 SOUTH, RANGE 1 EAST
SALT LAKE BASE AND MERIDIAN
ELEV: 5036.49
DATUM: NGVD 29

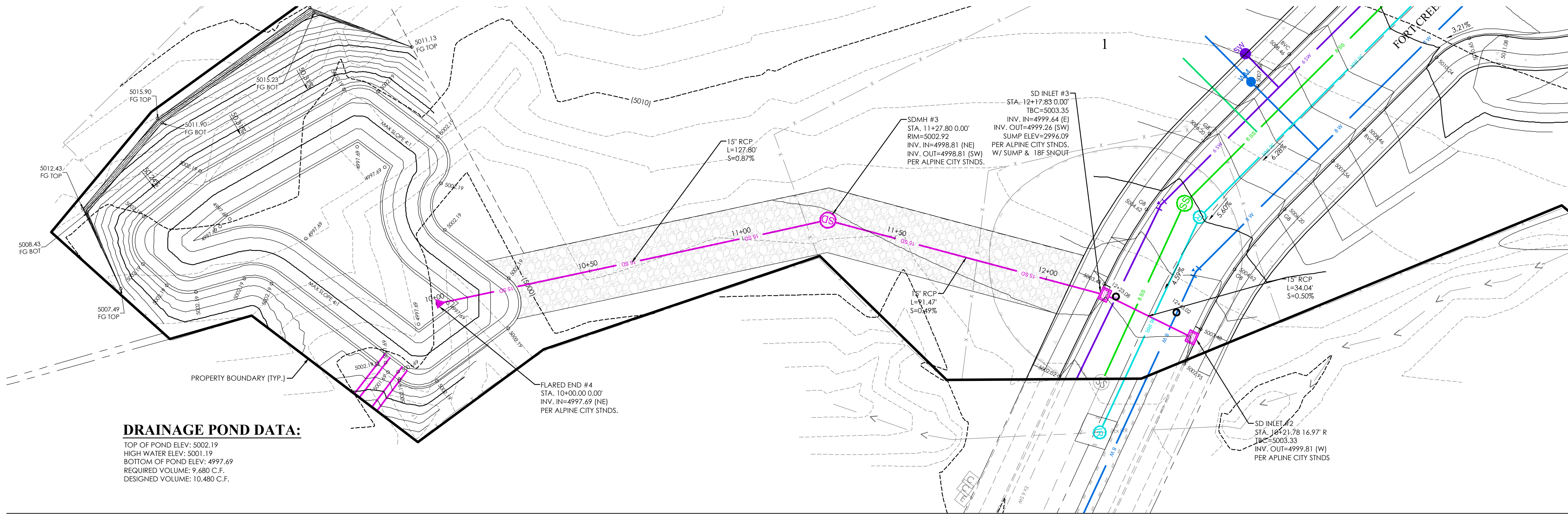
FOR
REVIEW
ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
OFF SITE WATER

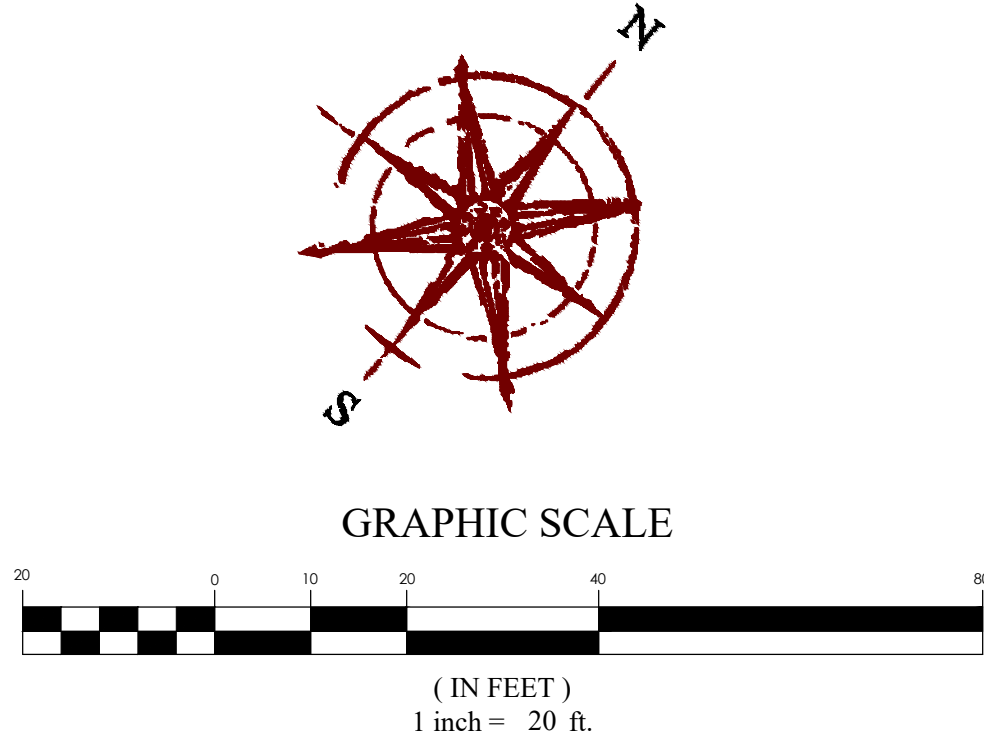
REVISION BLOCK	
#	DESCRIPTION
1	DATE
2	DATE
3	DATE
4	DATE
5	DATE
6	DATE

OFF SITE WATER	
Scale: 1"=20'	Drawn: MHW
Date: 07/09/21	Job #: 19-0487
Sheet:	C6

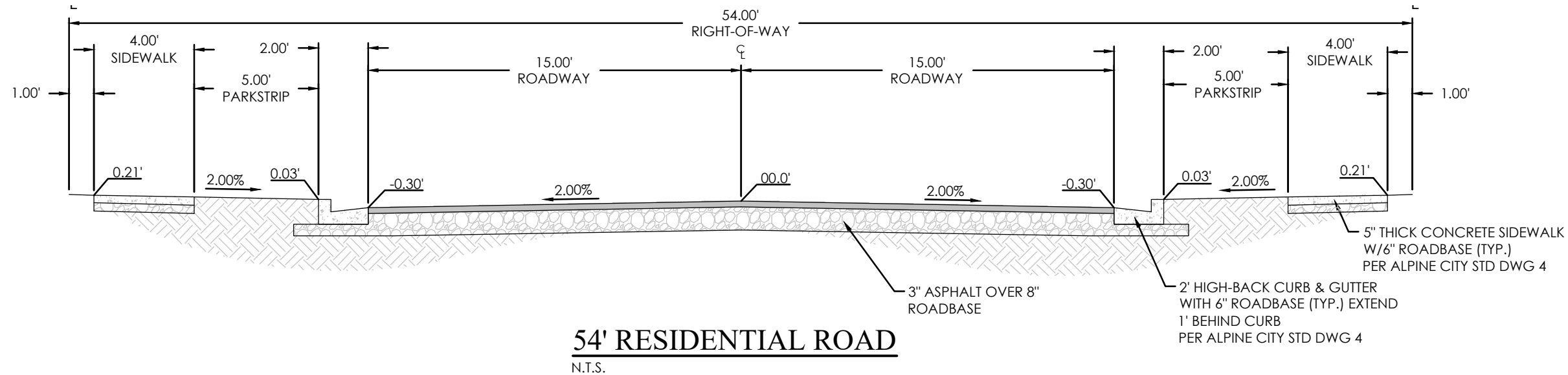




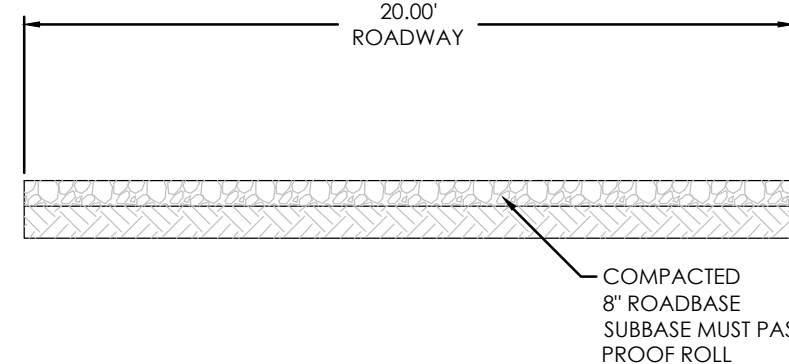
DRAINAGE POND DATA:
TOP OF POND ELEV: 5002.19
HIGH WATER ELEV: 5001.19
BOTTOM OF POND ELEV: 4997.69
REQUIRED VOLUME: 9,680 C.F.
DESIGNED VOLUME: 10,480 C.F.



STORM DRAIN PLAN

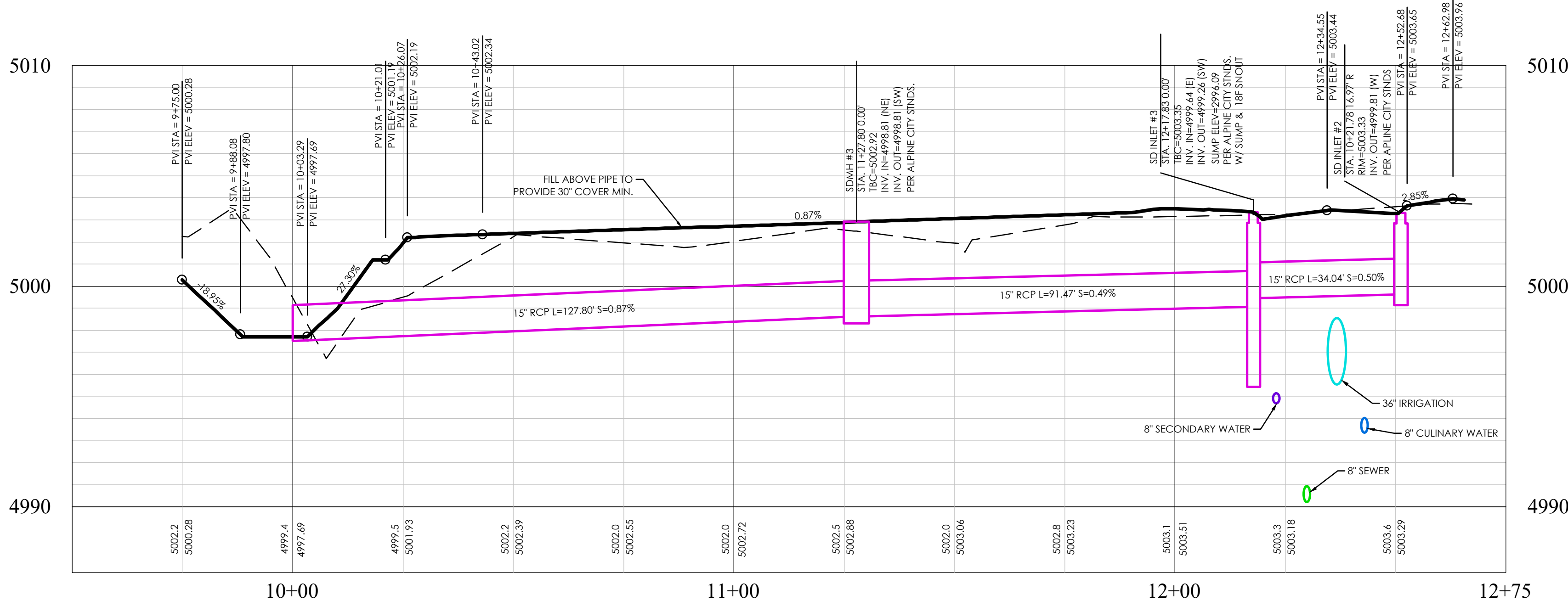


54' RESIDENTIAL ROAD
N.T.S.

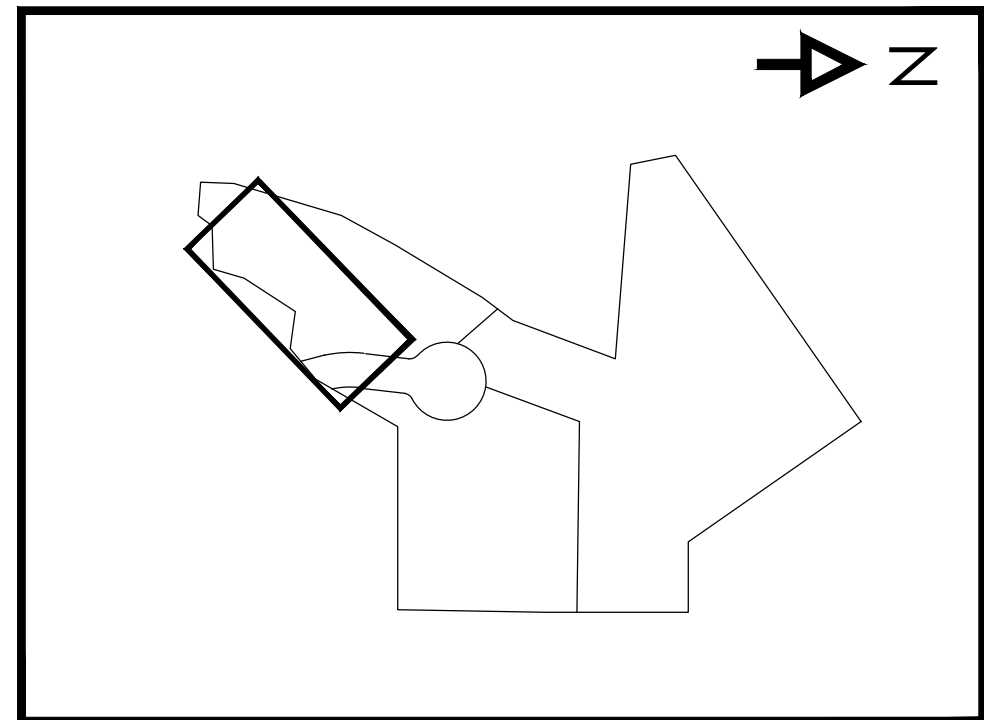


STORM DRAIN ACCESS ROAD
N.T.S.

- LEGEND**
- BOUNDARY
 - ROW
 - CENTERLINE
 - LOT LINE
 - EASEMENT
 - 15" STORM DRAIN
 - 8" SANITARY SEWER
 - 8" CULINARY WATER
 - 6" SECONDARY WATER
 - CONTOUR MAJOR
 - CONTOUR MINOR
 - EXIST. STORM DRAIN
 - EXIST. SANITARY SEWER
 - EXIST. CULINARY WATER
 - EXIST. FENCE
 - EXIST. CONTOUR MAJOR
 - EXIST. CONTOUR MINOR
 - SIGN
 - STREET LIGHT
 - SD MH, INLET, AND COMBO
 - SEWER MANHOLE
 - VALVE, TEE & BEND
 - WATER BLOW-OFF
 - FIRE HYDRANT
 - STREET MONUMENT (TO BE SET)
 - EXIST. STREET MONUMENT
 - EXIST. SD INLET & MH
 - EXIST. SEWER MH
 - EXIST. VALVE, TEE, & BEND
 - EXIST. FIRE HYDRANT
 - SPOT ELEVATION
 - FEMA REGULATORY FLOODWAY
 - FEMA SPECIAL FLOOD HAZARD AREA ZONE AE



STORM DRAIN PROFILE



KEY MAP
N.T.S.



BENCHMARK

NORTHEAST CORNER OF SECTION 13
TOWNSHIP 4 SOUTH, RANGE 1 EAST
SALT LAKE BASE AND MERIDIAN
ELEV: 5036.49
DATUM: NGVD 29

FOR
REVIEW
ONLY

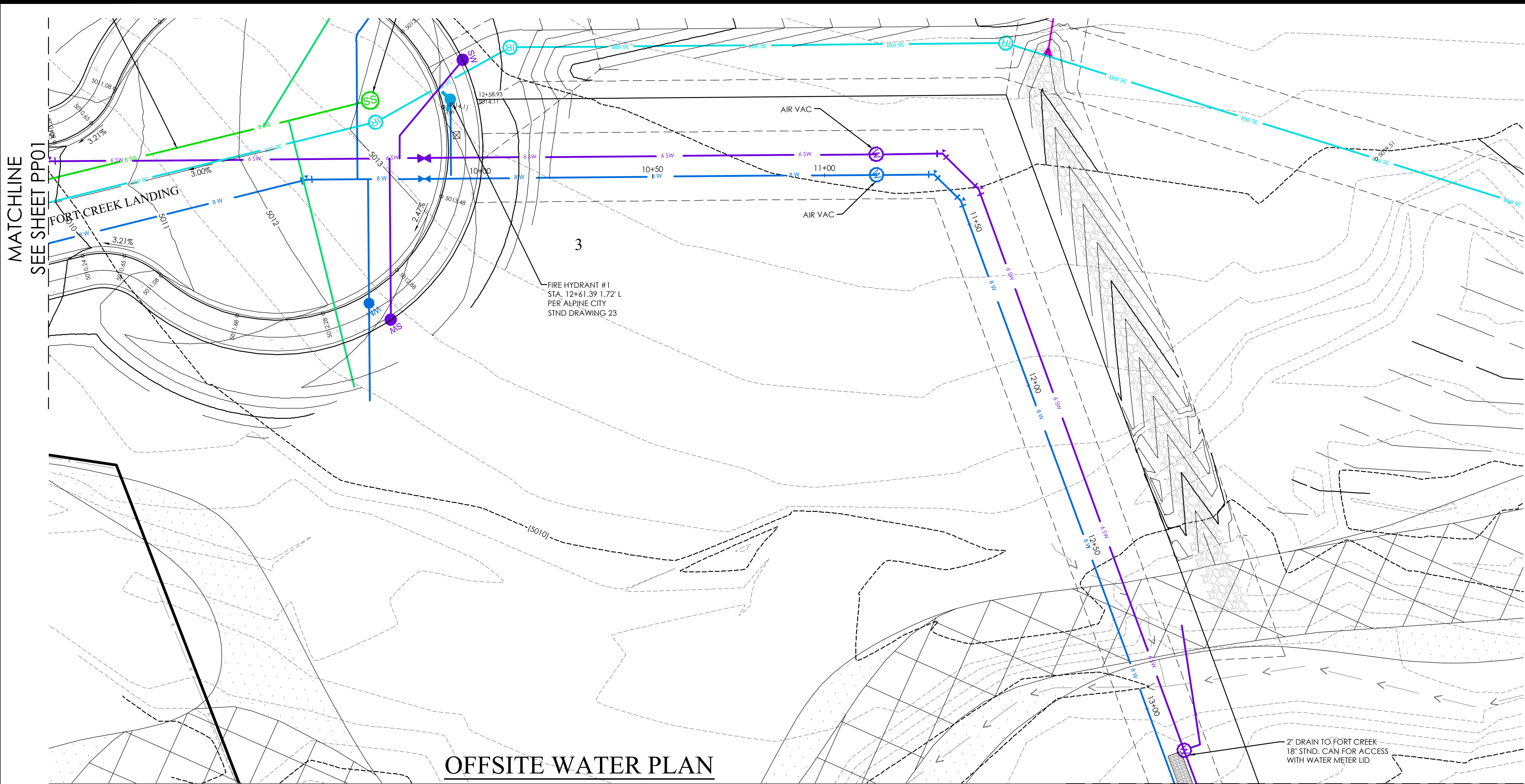
FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
STORM DRAIN

REVISION BLOCK	
#	DESCRIPTION
1	
2	
3	
4	
5	
6	

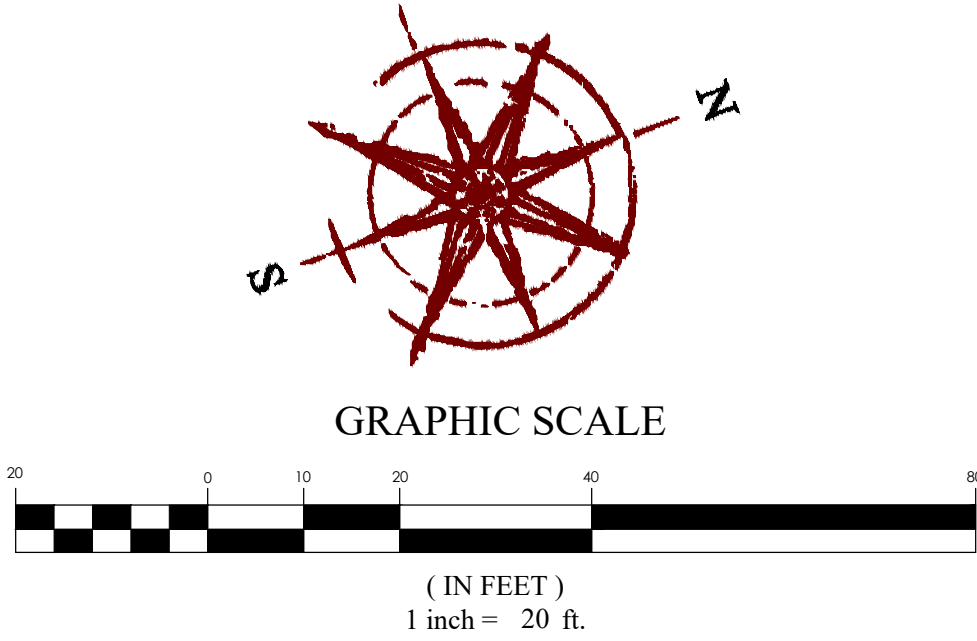
STORM DRAIN

Scale: 1"=20'
Date: 07/09/21
Sheet: PP02

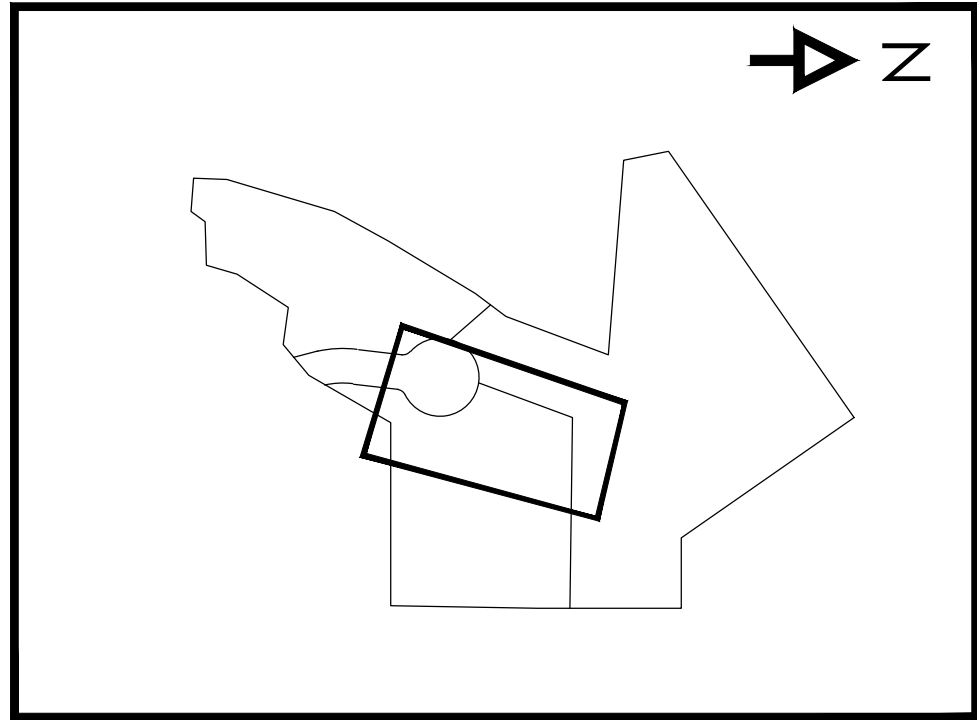
Drawn: MHW
Job #: 19-0487



OFFSITE WATER PLAN



- LEGEND**
- | | |
|----------|--|
| [Symbol] | BOUNDARY |
| [Symbol] | ROW |
| [Symbol] | CENTERLINE |
| [Symbol] | LOT LINE |
| [Symbol] | EASEMENT |
| [Symbol] | 15\"/> |
| [Symbol] | 8\"/> |
| [Symbol] | 8\"/> |
| [Symbol] | 6\"/> |
| [Symbol] | CONTOUR MAJOR |
| [Symbol] | CONTOUR MINOR |
| [Symbol] | EXIST. STORM DRAIN |
| [Symbol] | EXIST. SANITARY SEWER |
| [Symbol] | EXIST. SANITARY WATER |
| [Symbol] | EXIST. CULINARY WATER |
| [Symbol] | EXIST. FENCE |
| [Symbol] | EXIST. CONTOUR MAJOR |
| [Symbol] | EXIST. CONTOUR MINOR |
| [Symbol] | SIGN |
| [Symbol] | STREET LIGHT |
| [Symbol] | SD MH, INLET, AND COMBO |
| [Symbol] | SEWER MANHOLE |
| [Symbol] | VALVE, TEE & BEND |
| [Symbol] | WATER BLOW-OFF |
| [Symbol] | FIRE HYDRANT |
| [Symbol] | STREET MONUMENT (TO BE SET) |
| [Symbol] | EXIST. STREET MONUMENT |
| [Symbol] | EXIST. SD INLET & MH |
| [Symbol] | EXIST. SEWER MH |
| [Symbol] | EXIST. VALVE, TEE, & BEND |
| [Symbol] | EXIST. FIRE HYDRANT |
| [Symbol] | SPOT ELEVATION |
| [Symbol] | FEMA REGULATORY FLOODWAY |
| [Symbol] | FEMA SPECIAL FLOOD HAZARD AREA ZONE AE |



KEY MAP
N.T.S.



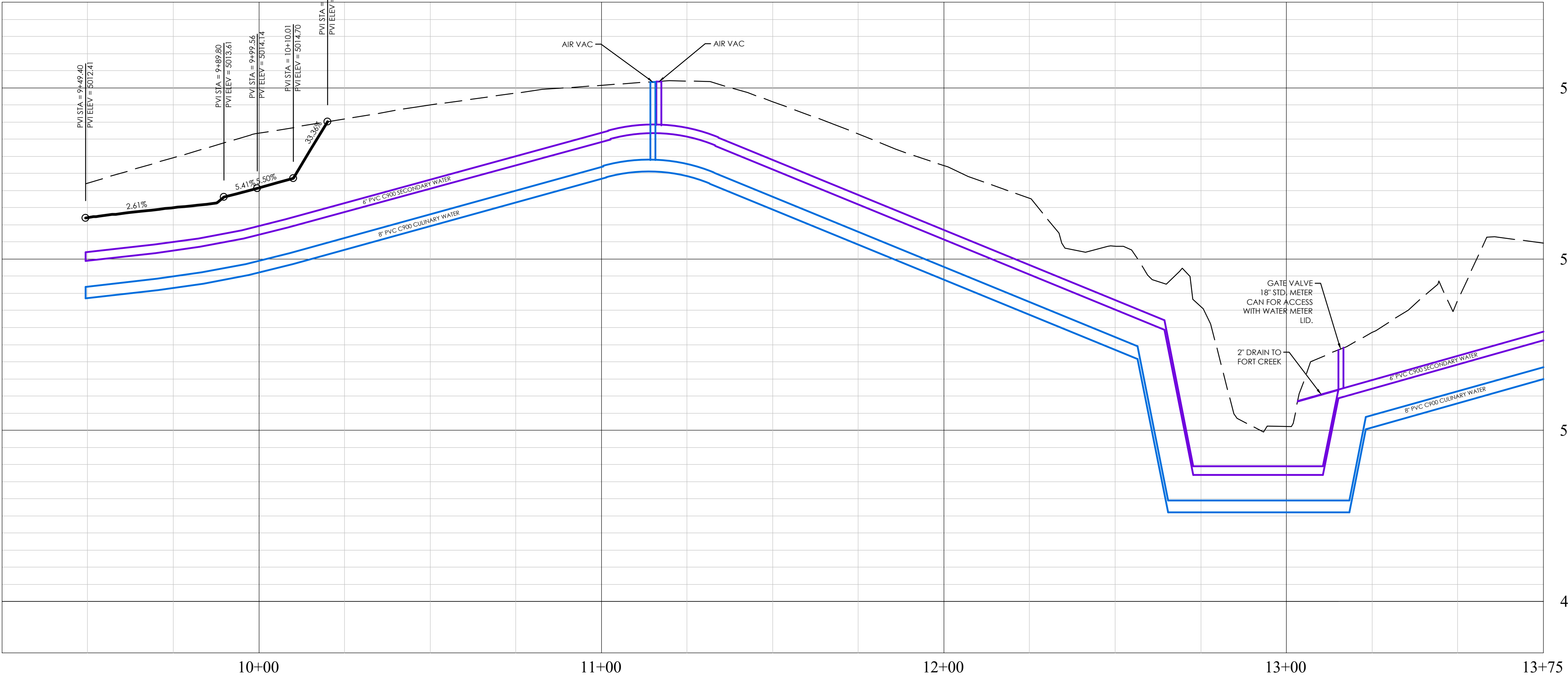
BENCHMARK
NORTHEAST CORNER OF SECTION 13
TOWNSHIP 4 SOUTH, RANGE 1 EAST
SALT LAKE BASE AND MERIDIAN
ELEV: 5036.49
DATUM: NGVD 29

FOR
REVIEW
ONLY

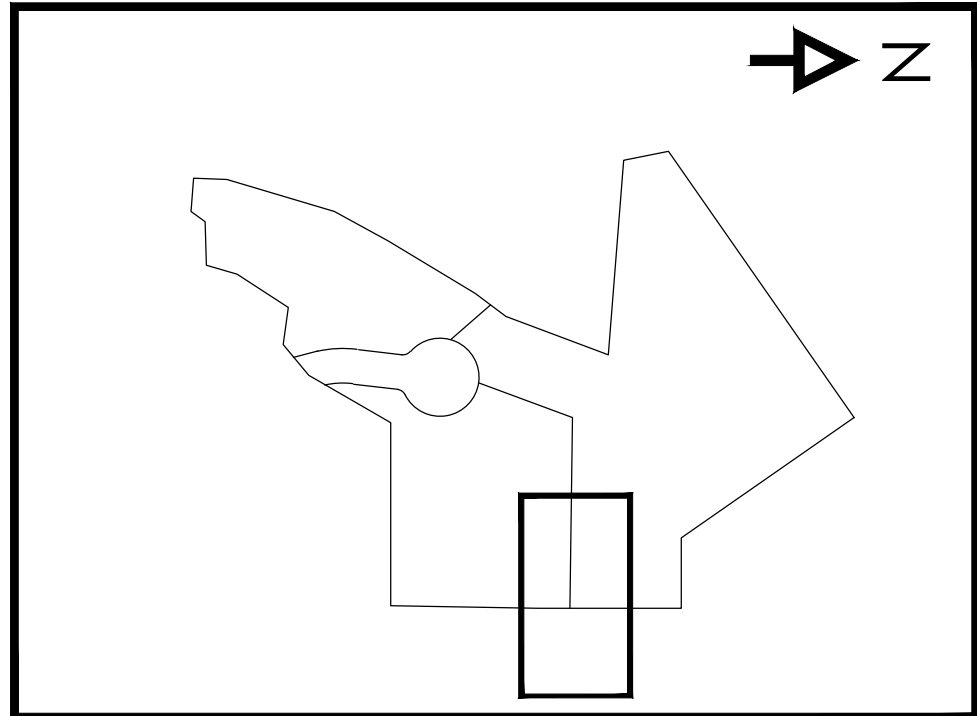
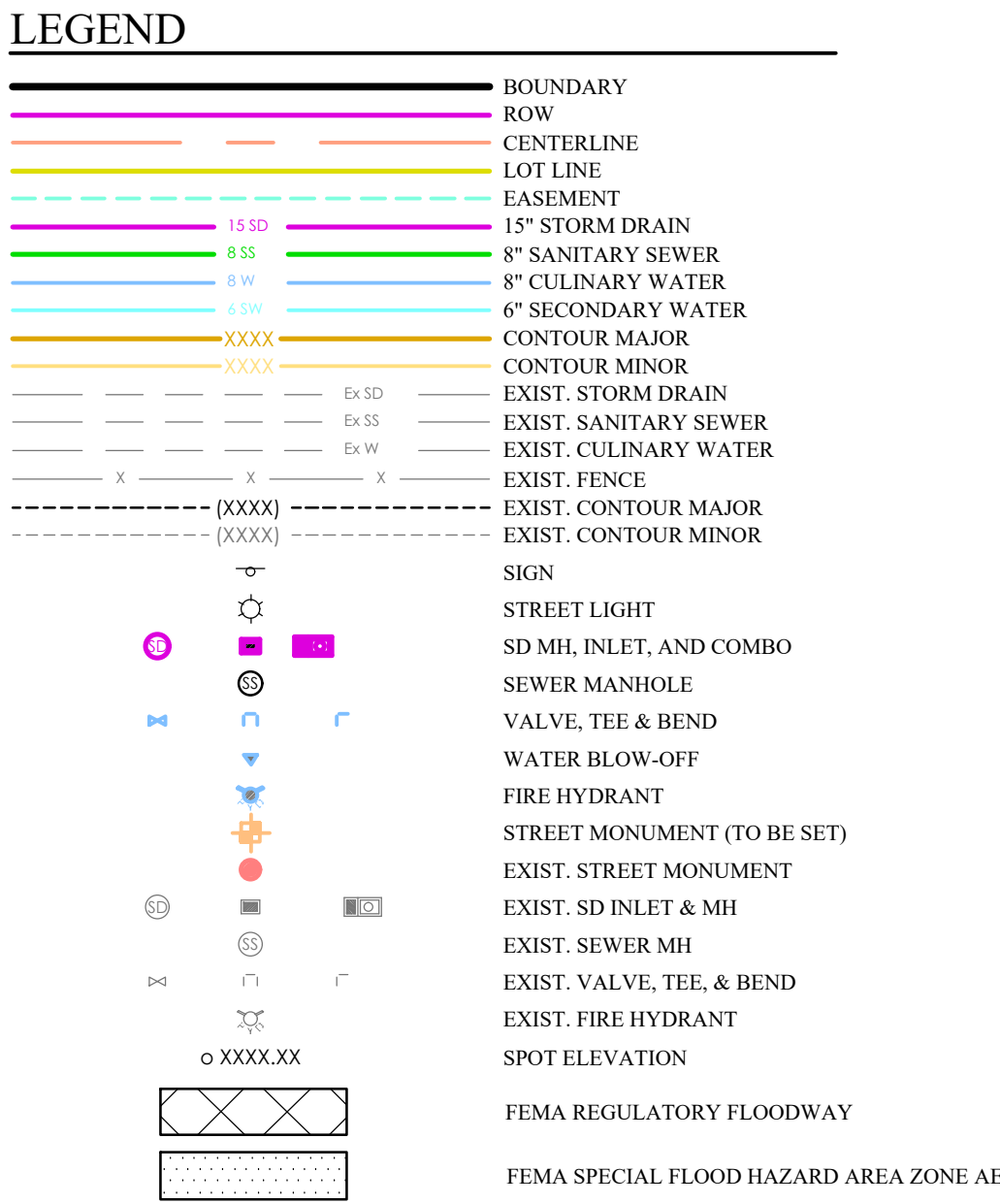
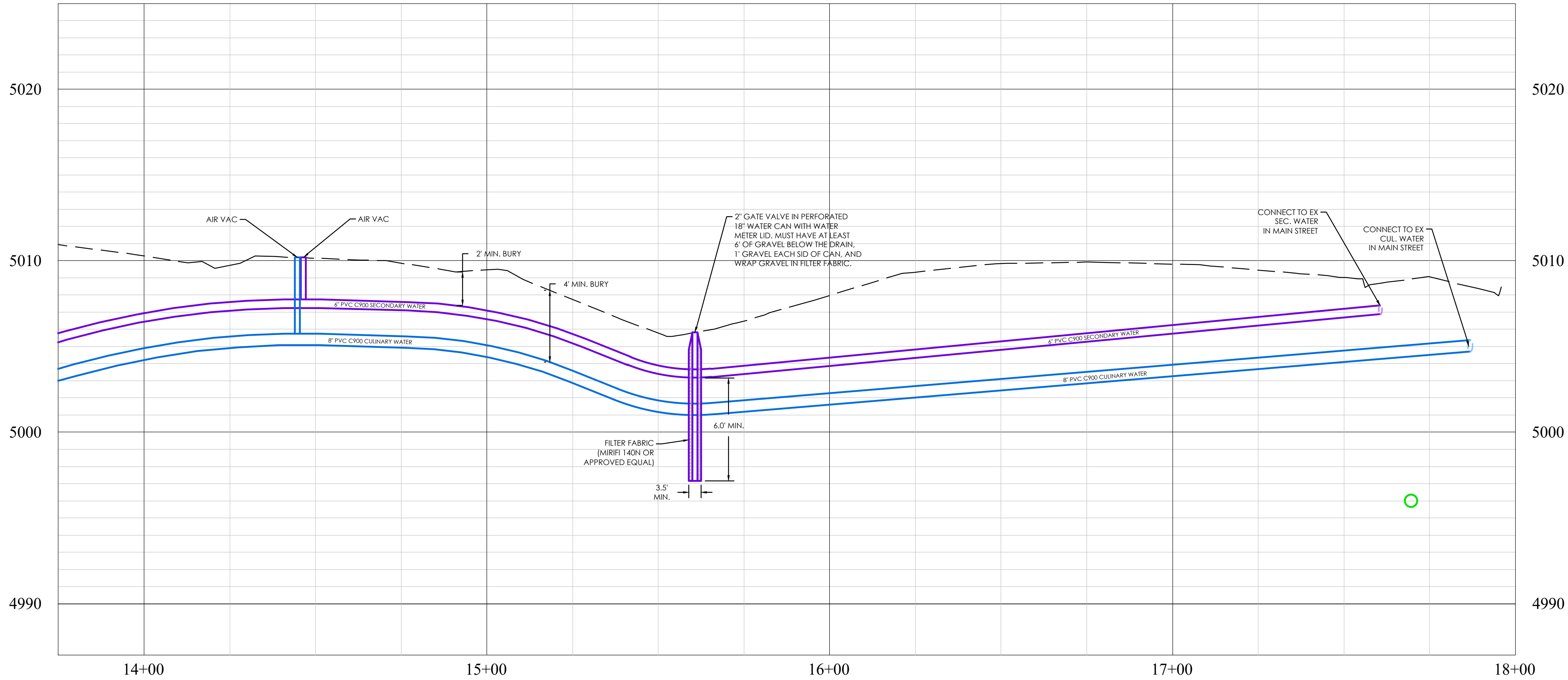
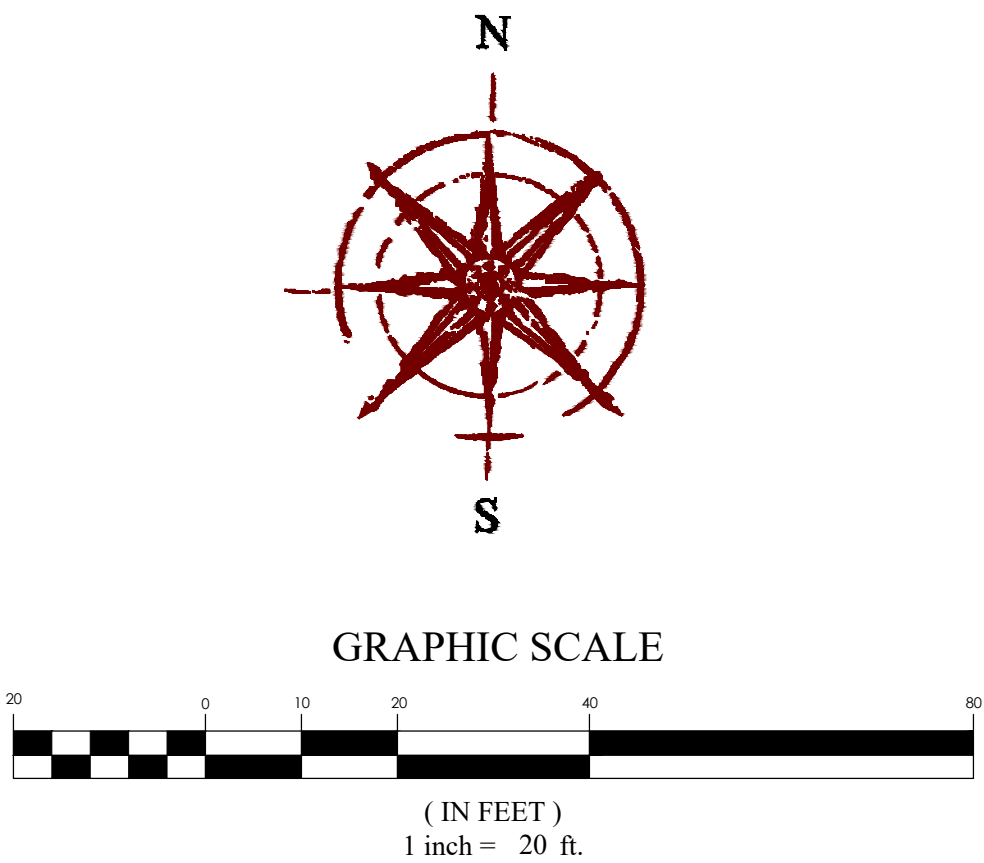
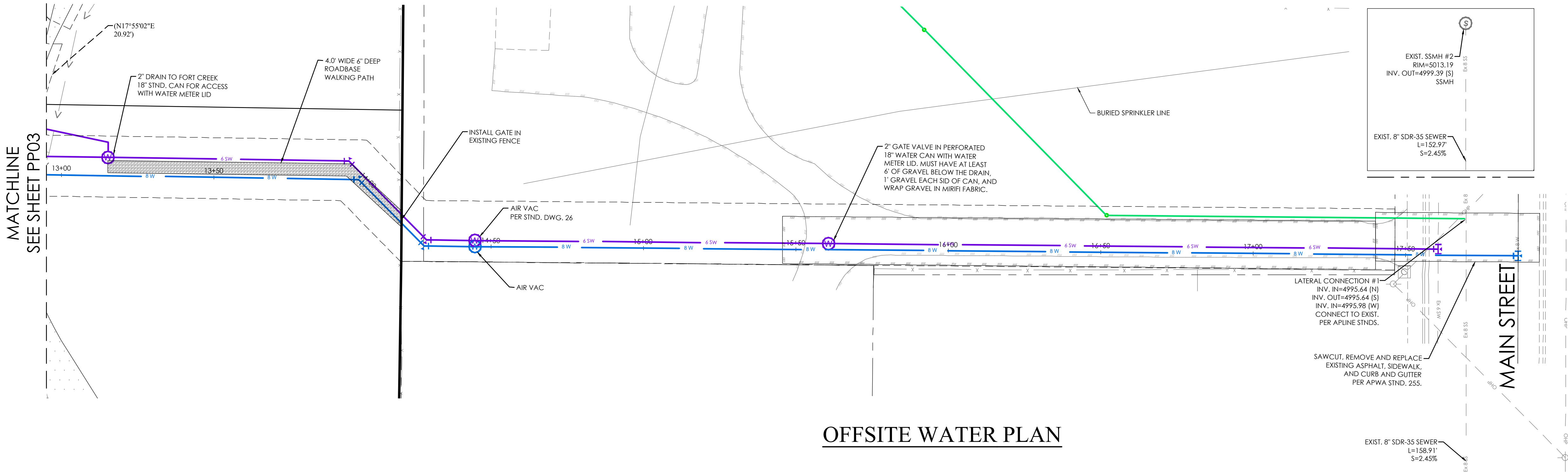
FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
OFFSITE WATER

#	DATE	DESCRIPTION
1	***	***
2	***	***
3	***	***
4	***	***
5	***	***
6	***	***

OFFSITE WATER	
Scale: 1"=20'	Drawn: MHW
Date: 07/09/21	Job #: 19-0487
Sheet: PP03	



WATER LINES PROFILE



BENCHMARK

NORTHEAST CORNER OF SECTION 13
TOWNSHIP 4 SOUTH, RANGE 1 EAST
SALT LAKE BASE AND MERIDIAN
ELEV: 5036.49
DATUM: NGVD 29

FOR
REVIEW
ONLY

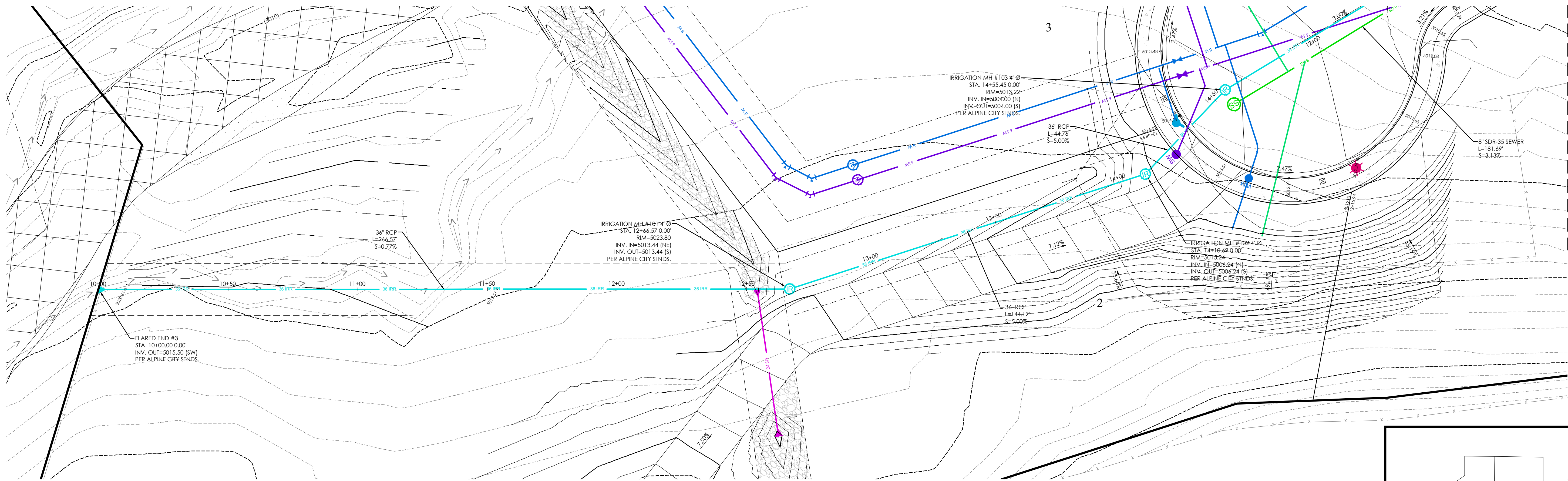
FORT CREEK LANDING

ALPINE CITY, UTAH COUNTY, UTAH

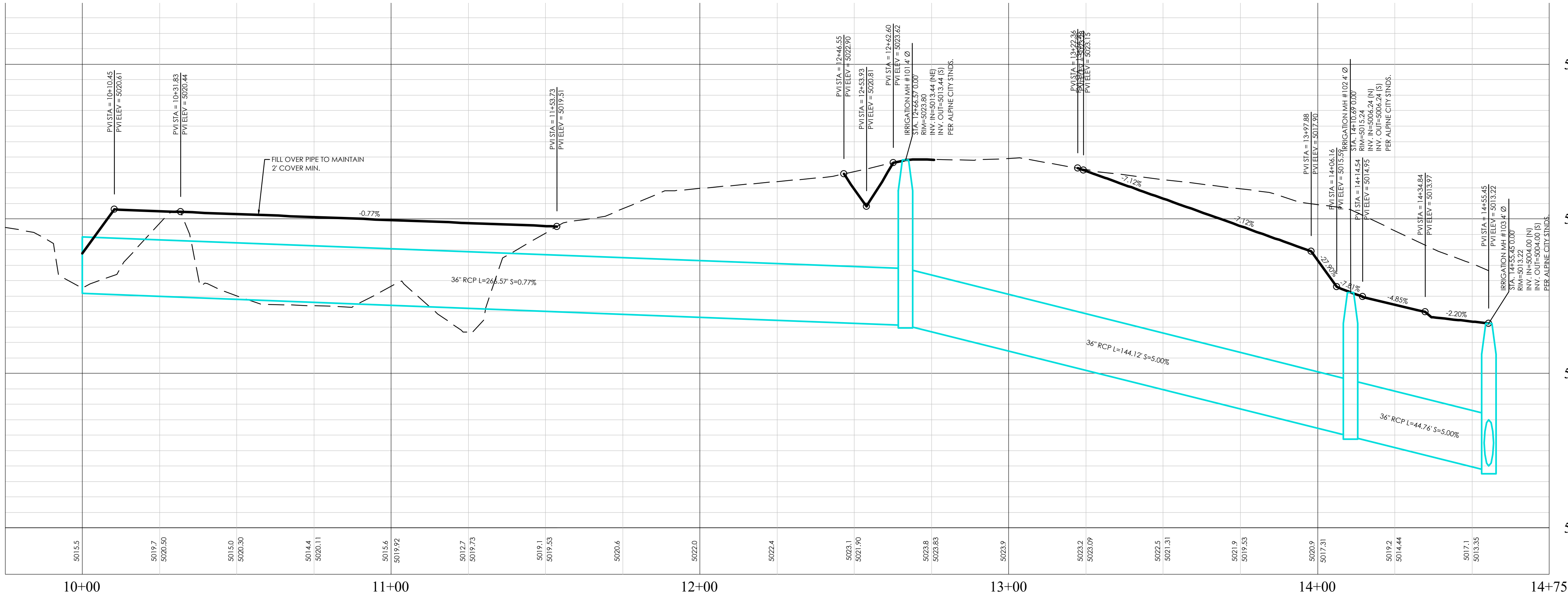
OFFSITE WATER

REVISION BLOCK	#	DATE	DESCRIPTION
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	2	***	***
	3	***	***
	4	***	***
	5	***	***
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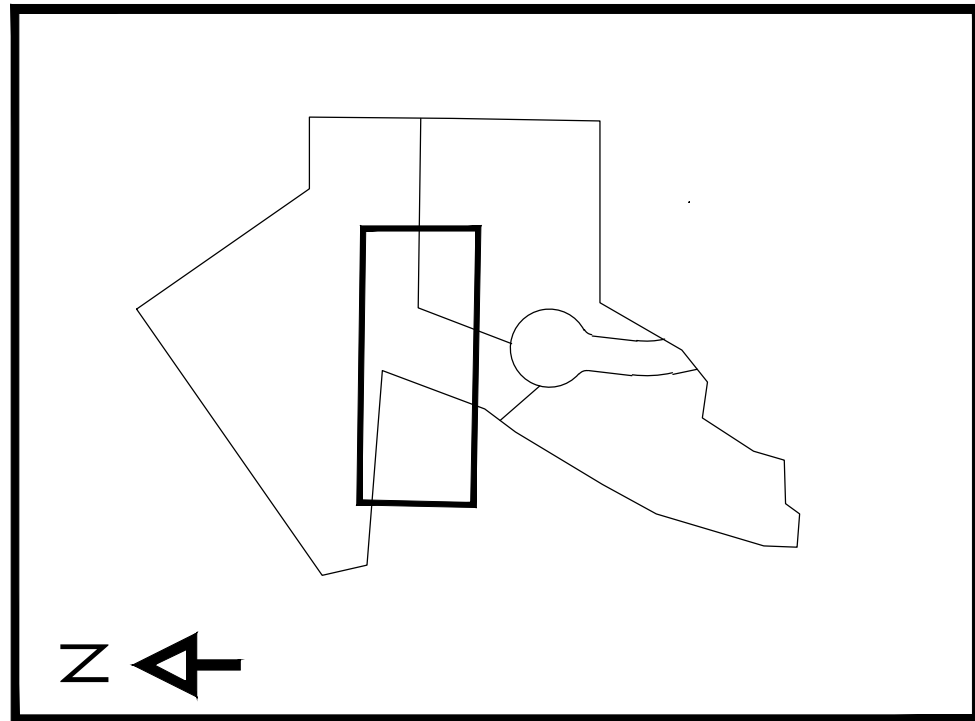
OFFSITE WATER	
Scale: 1"=20'	Drawn: MHW
Date: 07/09/21	Job #: 19-0487
Sheet: PP04	



IRRIGATION LINE PLAN

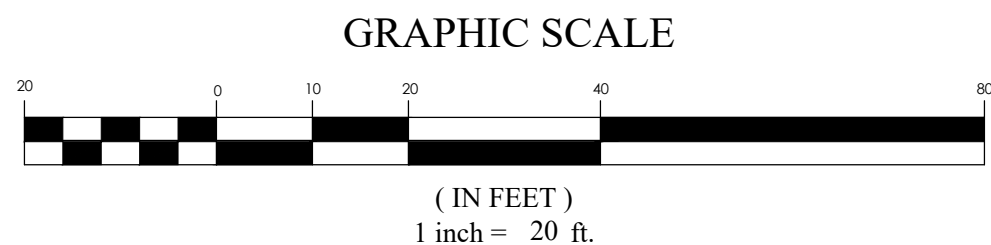


IRRIGATION LINE PROFILE



KEY MAP
N.T.S

LEGEND	
	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
	15" SDR
	8" SDR
	8" SANITARY SEWER
	6" SECONDARY WATER
	CONTOUR MAJOR
	CONTOUR MINOR
	EXIST. STORM DRAIN
	EXIST. SANITARY SEWER
	EXIST. CULINARY WATER
	EXIST. FENCE
	EXIST. CONTOUR MAJOR
	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
	SEWER MANHOLE
	VALVE, TEE, & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
	EXIST. SD INLET & MH
	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
	SPOT ELEVATION
	FEMA REGULATORY FLOODWAY
	FEMA SPECIAL FLOOD HAZARD AREA ZONE AE

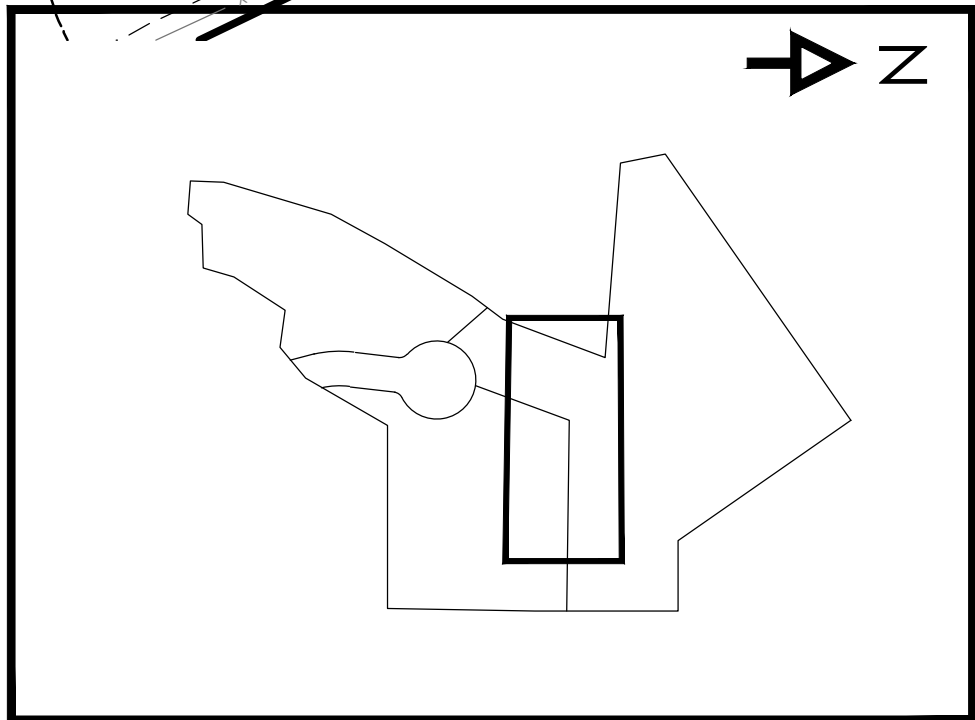
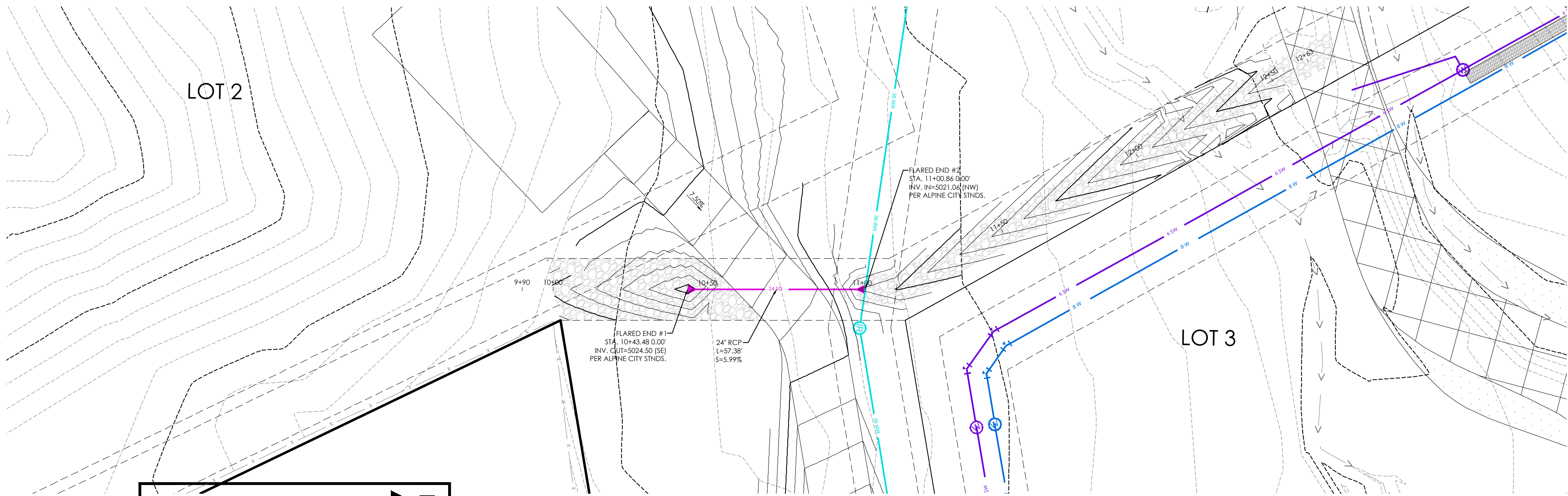


BENCHMARK
NORTHEAST CORNER OF SECTION 13
TOWNSHIP 4 SOUTH, RANGE 1 EAST
SALT LAKE BASE AND MERIDIAN
ELEV. 5036.49
DATUM: NGVD 29

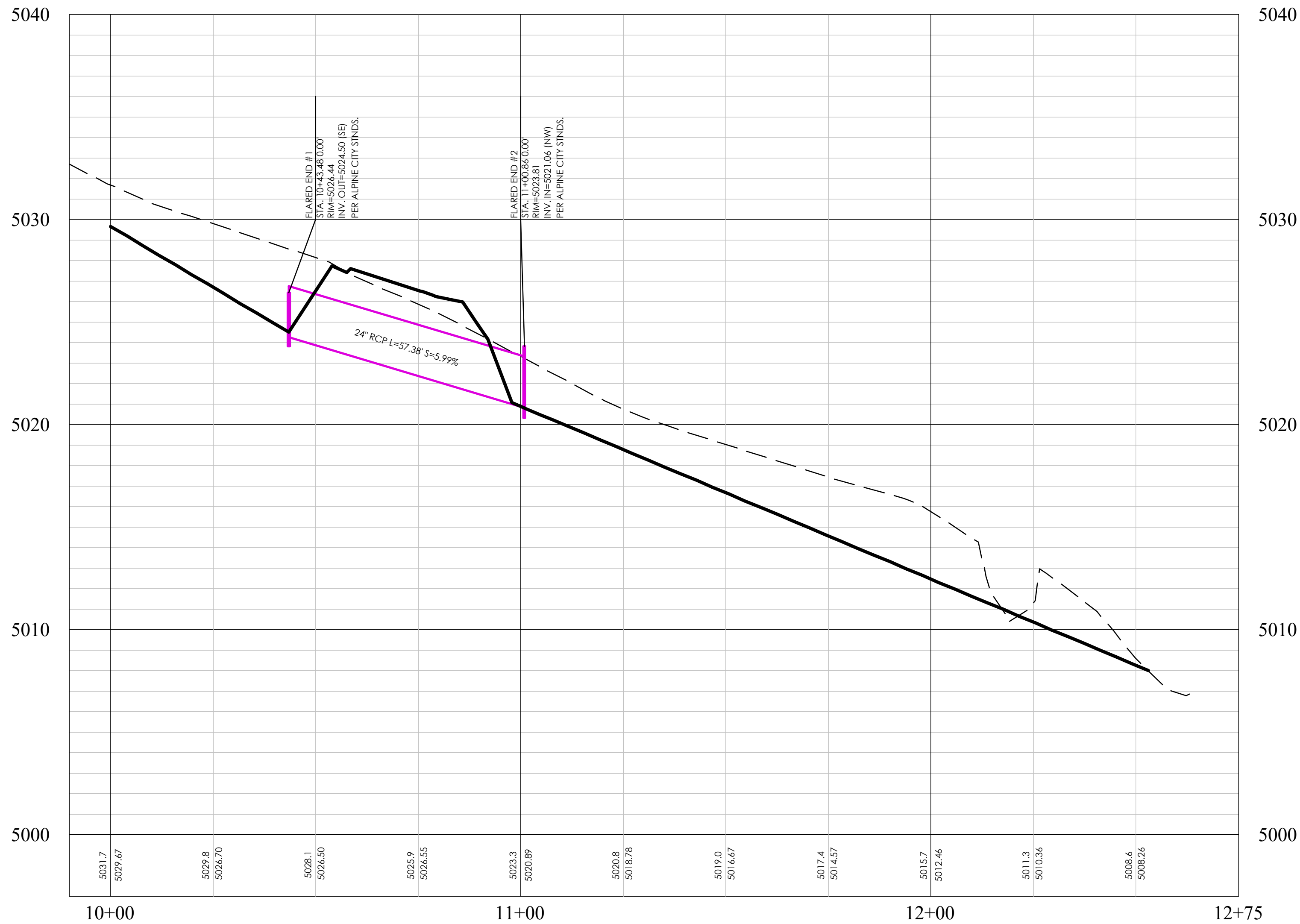
FOR
REVIEW
ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
IRRIGATION LINE

REVISION BLOCK	
#	DESCRIPTION
1	
2	
3	
4	
5	
6	



KEY MAP
N.T.S.



STORM DRAIN CROSSING #1 PROFILE

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

LEGEND

BOUNDARY	15" SD	EXIST. SD	SIGN
CENTERLINE	8" SS	EXIST. SS	STREET LIGHT
LOT LINE	8" SW	EXIST. SW	SD MH, INLET, AND COMBO
EASEMENT	6" SW	EXIST. SW	SEWER MANHOLE
15" STORM DRAIN	XXXXXX	EXIST. STORM DRAIN	VALVE, TEE & BEND
8" SANITARY SEWER	XXXXXX	EXIST. SANITARY SEWER	WATER BLOW-OFF
8" CULINARY WATER	XXXXXX	EXIST. CULINARY WATER	FIRE HYDRANT
6" SECONDARY WATER	XXXXXX	EXIST. CONTOUR MAJOR	STREET MONUMENT (TO BE SET)
CONTOUR MAJOR	XXXXXX	EXIST. CONTOUR MINOR	EXIST. STREET MONUMENT
CONTOUR MINOR	XXXXXX	EXIST. FENCE	EXIST. SD INLET & MH
EXIST. STORM DRAIN	XXXXXX	EXIST. CONTOUR MAJOR	EXIST. SEWER MH
EXIST. SANITARY SEWER	XXXXXX	EXIST. CONTOUR MINOR	EXIST. VALVE, TEE, & BEND
EXIST. CULINARY WATER	XXXXXX		EXIST. FIRE HYDRANT
EXIST. FENCE	XXXXXX		SPOT ELEVATION
EXIST. CONTOUR MAJOR	XXXXXX		FEMA REGULATORY FLOODWAY
EXIST. CONTOUR MINOR	XXXXXX		FEMA SPECIAL FLOOD HAZARD AREA ZONE AE

BENCHMARK
NORTHEAST CORNER OF SECTION 13
TOWNSHIP 4 SOUTH, RANGE 1 EAST
SALT LAKE BASE AND MERIDIAN
ELEV: 5036.49
DATUM: NGVD 29

FOCUS
ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE, SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

FOR REVIEW ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
STORM DRAIN CROSSING #1

#	DATE	DESCRIPTION
1	07/09/21	1
2	07/09/21	2
3	07/09/21	3
4	07/09/21	4
5	07/09/21	5
6	07/09/21	6

Scale: 1"=20'
Date: 07/09/21
Sheet: PP06

Drawn: MHW
Job #: 19-0487

STORM DRAIN CROSSING #1

Asphalt concrete T-patch

1. GENERAL
- A. If a saw cut in the direction of vehicular travel is in a wheel path, consult ENGINEER for directions on removing additional pavement other than the amount shown on the drawing.
2. PRODUCTS
- A. Base Course: Untreated base course, APWA Section 32 11 23. Do not use gravel as a base course without ENGINEER's permission.
- B. Flowable Fill: Target is 60 psi in 28 days with 90 psi maximum in 28 days, APWA Section 31 05 15. It must flow easily requiring no vibration for consolidation.
- C. Reinforcement: No. 5, Galvanized or epoxy coated, deformed, 60 ksi yield grade steel, ASTM A 615.
- D. Concrete: Class 4000, APWA Section 03 30 04.
- E. Tack Coat: APWA Section 32 12 13.13.
- F. Asphalt Concrete. APWA Section 32 12 05.

1) Warm Weather Patch: AC-20-DM-1/2, unless indicated otherwise.

2) Cold Weather Patch: Modified MC-250-FM-1 as indicated in APWA Section 33 05 25.
3. EXECUTION
- A. Base Course Placement: APWA Section 32 05 10. Maximum lift thickness before compaction is 8-inches when using riding equipment or 6-inches when using hand held equipment. Compaction is 95 percent or greater relative to a modified proctor density, APWA Section 31 23 26
- B. Flowable Fill: Cure to initial set before placing aggregate base or asphalt pavement. Use in excavations that are too narrow to receive compaction equipment.
- C. Tack Coat: Clean all horizontal and vertical surfaces. Apply full coverage.
- D. Asphalt Pavement. Match existing thickness plus 1 inch but not More than 6-inches in residential thoroughfares or 8-inches non residential thoroughfares. Install in lifts no greater than 3-inches after compaction. Compact to 94 percent of ASTM D 2041 (Rice density) plus or minus 2 percent. If asphalt pavement is substituted for concrete substrate, omit rebar and provide 1.25 inches of pavement for each 1 inch of concrete substrate substituted.
- E. Reinforcement. Required if thickness of existing Portland-cement concrete substrate is 6-inches or greater. Not required if (1) less than 6-inches thick, (2) if existing concrete is deteriorating, (3) if excavation is less than 3 feet square, or (4) if asphalt pavement is substituted for Portland-cement concrete substrate.
- F. Concrete Substrate. Cure to initial set before placing new asphalt concrete patch.
- G. Joint Repair: If a crack occurs at a connection to an existing pavement or at any street fixture, flush seal the crack per Plan 265.
- H. Patch Repair: Repair patch if any of the following conditions within the patch occur.

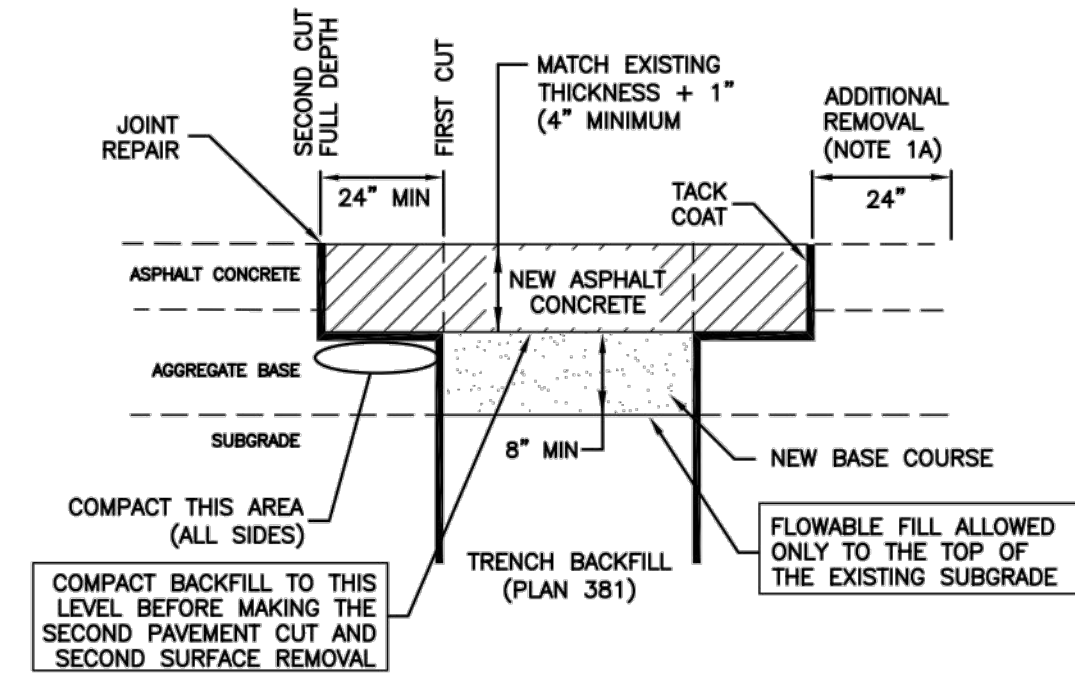
1) Pavement surface distortion exceeds 1/4-inch deviation in 10 feet. Repair option: Plane off surface distortions. Coat planed surfaces with a cationic or anionic emulsion that complies with APWA Section 32 12 03.

2) Cracks at least 1-foot long and 1/4-inch wide occur more often than 1 in 10 square feet. Repair option: Crack seal.

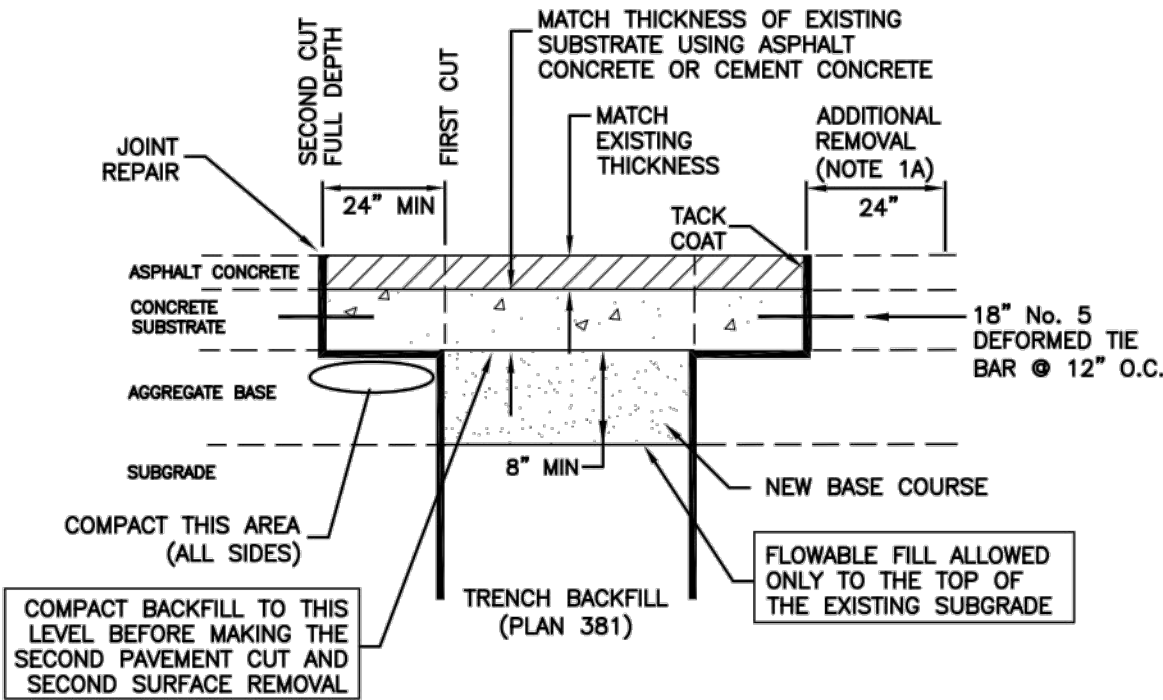
3) Asphalt raveling is greater than 1 square foot per 100 square feet. Repair option: Mill and inlay.

96

SHALLOW EXCAVATION
(LESS THAN 48 INCHES FROM PAVEMENT SURFACE TO BOTTOM OF EXCAVATION)



ASPHALT RESTORATION



COMPOSITE RESTORATION

Asphalt concrete T-patch

December 2010

97

Plan
255
Sheet 1 of 2

FOR
REVIEW
ONLY

FORT CREEK LANDING
ALPINE CITY, UTAH COUNTY, UTAH
DETAILS

REVISION BLOCK		DESCRIPTION
#	DATE	
1	----	----
2	----	----
3	----	----
4	----	----
5	----	----
6	----	----

DETAILS

Scale: NONE Drawn: MHW
Date: 07/09/21 Job #: 19-0487
Sheet:

D1

WHEN RECORDED, MAIL TO:

Alpine City
20 North Main Street
Alpine, Utah 84004

GRANT OF EASEMENT

The undersigned Nathan Terry, herein after referred to as Grantor(s), of 717 North Main St., City of Alpine, County of Utah, State of Utah, in consideration of Ten Dollars (\$10) and other consideration, receipt of which is acknowledged, do hereby convey and grant to Alpine City, a permanent twenty (20) foot wide easement for the location, construction and maintenance of culinary water and pressurized irrigation water public facilities, hereinafter more particularly designated and described, over and across lands owned by Grantor(s) and situated in the Northeast Quarter of Section 24, Township 4 South, Range 1 East, Salt Lake Base & Meridian, Alpine City, Utah County, Utah, being more particularly described as follows:

Beginning at a point on the westerly right-of-way line of Alpine Main Street, said point located S00°07'05"E 830.66 feet along the Section line and S89°52'55"W 1,195.81 feet from the Northeast Corner of Section 24, T4S, R1E, SLB&M; running thence along said westerly right-of-way line S00°12'59"W 20.00 feet; thence N89°29'14"W 325.83 feet to an established fence line and Boundary Line Agreement on file in the Office of the Utah County Recorder as Entry No. 2547:1982; thence along said fence line and Boundary Line Agreement N00°28'42"E 27.93 feet; thence S44°29'16"E 11.22 feet; thence S89°29'16"E 317.82 feet to the point of beginning.

Contains: 6,547 square feet+/-

IN WITNESS WHEREOF, we have hereunto set out hands this _____ day of _____, 20__.

GRANTOR(s):

By: _____
Nathan Terry

STATE OF UTAH)
) ss.
COUNTY OF UTAH)

On this _____ day of _____, 20__, personally appeared before me _____ and _____, the signers of the within instrument, who duly acknowledged to me that they executed the same.

Notary Public

Residing at: _____



11:020:0166
NATHAN TERRY

**20' WATERLINE
EASEMENT
(6,547 ft²)**

FUTURE
FORT CREEK LANDING
SUBDIVISION

3

11:020:0089
MATTHEW PRAWITT

11:020:0245
LEONARD M. &
MERRILLE R.
WENDEL

ALPINE MAIN STREET



ENGINEERING AND SURVEYING, LLC
6949 S. HIGH TECH DRIVE SUITE 200
MIDVALE, UTAH 84047 PH: (801) 352-0075
www.focusutah.com

FORT CREEK LANDING OFFSITE WATER EASEMENT

Date Created:
07/12/21
Scale:
N.T.S.
Drawn:
BCD
Job:
19-0487
Sheet:

EXHIBIT



July 15, 2021

Austin Roy
Alpine City Planner
20 North Main
Alpine, Utah 84004

Subject: Fort Creek Landing Road Preservation Coat Cost

Dear Austin:

I have reviewed the **Fort Creek Landing** plans and recommend the following be required in cash prior to recording. These are non-refundable funds required by ordinance or development agreement:

ROADWAY IMPROVEMENTS

Asphalt Roadway Preservation Coat Cost*	12,312 SF @ \$	0.25	\$3,078.00
TOTAL CASH REQUIRED:			\$3,078.00

**Square footages obtained from project AutoCAD files*

Per Alpine City Construction Standard Specifications, adopted November 19, 2019, Section 600.020, the Developer is required to provide funds for a roadway preservation coat prior to recording the development. Alpine City received a quote from Holbrook Asphalt for such costs April 14, 2020 (quote good through 2022) in the amount of 25 cents per square foot of HA5 material installed. This unit price will be used on all development projects through the year 2022, at which time the costs will be reevaluated.

Sincerely,
ALPINE CITY

Jed Muhlestein, P.E.
City Engineer

cc: File



July 15, 2021

Austin Roy, City Planner
Alpine City
20 North Main
Alpine, Utah 84004

Subject: Fort Creek Landing
3 lots on 8.44 acres

Dear Austin:

The water requirement for **Fort Creek Landing** has been calculated. The subdivision consists of **3 lots on 8.44 acres**. The developer will be required to provide **14.63** acre-feet of water to meet the water policy for the development.

Please contact me if you have any questions.

Sincerely,
ALPINE CITY

A handwritten signature in black ink, appearing to read "Jed Muhlestein", is written over a horizontal line.

Jed Muhlestein, P.E.
City Engineer

cc: File
Developer

Alpine City Engineering
20 North Main
Alpine, Utah 84004



Water Requirements
Fort Creek Landing
July 15, 2021

Lot	Area (sf)	Indoor Requirement (0.45 ac-ft per home)	Outdoor Requirement (1.66 ac-ft/acre)	Total (ac-ft)
1	68,059	0.45	2.59	3.04
2	190,552	0.45	7.26	7.71
3	89,974	0.45	3.43	3.88
<u>Total required</u>				<u>14.63</u>

Jed Muhlestein, P.E.
City Engineer

cc: file/developer

March 30, 2021
Job No. 660-003-20

Brian Hansen
623 North Patterson Lane
Alpine, Utah 84004

Attention: Mr. Brian Hansen

Re: California Bearing Ratio, Revision 1
Proposed Koroem Court Subdivision
North of 662 North Whitby Woodlands Drive
Alpine, Utah

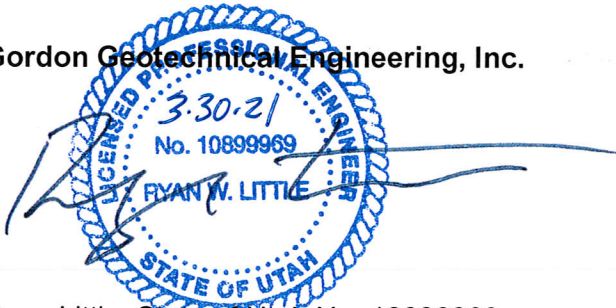
At the request of Mr. Brian Hansen, Gordon Geotechnical Engineering was asked to provide a California Bearing Ratio (CBR) for the subgrade at the Proposed Koroem Court Subdivision, located in Alpine, Utah. G² previously performed a geotechnical study at the site dated July 15, 2020¹. Underlying the topsoil, silty fine sand was encountered. Based on our experience with similar soils, G² recommends a CBR value of 15 for the existing subgrade.

If you have any questions or require additional information, please do not hesitate to contact us.

Respectfully submitted,

Gordon Geotechnical Engineering, Inc.

Reviewed By:



A blue circular professional engineer seal for Ryan W. Little, State of Utah, No. 10899969. The seal includes the date 3.30.21 and is signed with a blue ink signature.



A handwritten signature in blue ink, likely belonging to Patrick R. Emery.

Ryan Little, State of Utah No. 10899969
Professional Engineer

Patrick R. Emery, State of Utah No. 7941710
Professional Engineer

RL/PRE:nc

Addressee (email only)

¹ "Report, Geological Hazard Reconnaissance and Geotechnical Study, Proposed Koroem Court Subdivision, North of 662 North Whitby Woodlands Drive, Alpine, Utah," G² Job No. 660-003-20, Dated July 15, 2020.

KOROEM COURT SUBDIVISION

05/07/21

Prepared for:

HERITAGE CUSTOM HOMES

Prepared by:

MAT WANGSGAARD, PE



6949 S. High Tech Drive Suite 200
Midvale, UT 84047
Phone: 801-352-0075
Web: www.focusutah.com

Table of Contents

- I. General Location and Description 1
- II. Drainage Basin 1
- III. Proposed Drainage Plan..... 2
- IV. Stormwater Quality 2
- V. Analysis 2
- VI. Conclusion 3

APPENDICES

- Grading and drainage plan
- CRB Geotech report
- Web Soil Survey
- Calculations and model input/output
 - Rational method
 - Rip-rap sizing
 - Pipe capacity
 - Stormwater basins
 - Retention sizing
- Maps
 - Vicinity Map

I. GENERAL LOCATION AND DESCRIPTION

The proposed project is located in the NE 1/4 of section 24, T4S, R1E, just north of the intersection of Whitby Woodlands Drive and 600 North and is 8.44 acres, with approximately 23% being disturbed with construction. The current use is an open field and the proposed use will be single family residential consisting of 3 lots and a roadway. The property slopes from north-west to south-east at slopes between 30.0% and 3.0%

There are three (3) existing water features that run through the site. The first is an open ditch that runs along the eastern lots of the project. This is included in a known FEMA flood zone. The second is an active irrigation ditch on the west side of the open ditch that includes a FEMA flood zone. The third is an existing drainage path for an open area to the west of this project that does not have a currently well-defined path. There is an existing easement on the property to provide a path for the off-site flows. This easement is being re-aligned with the proposed lot lines and a similar easement is being created to maintain the intent of the original easement.

A CBR report has been prepared by Gordon Geotechnical Engineering, INC dated December 23, 2020. Based on information from Web Soil Survey the soil consists mainly of clayey gravelly fine sandy loam and Hillfield-Layton complex.

II. DRAINAGE BASIN

The current drainage on the site is the natural slope down into the existing open ditch along the east side of the project. There are no current existing drainage structures on the site.

The property resides in flood zone AE and Unshaded zone X per FEMA FIRM panel number 49049C0159F.

III. PROPOSED DRAINAGE PLAN

A drainage plan has been developed per Alpine City standards. The onsite system will consist of buried pipes, catch basins, ditches, and a retention pond sized to hold the 100-year storm event. The proposed storm drain system will collect water from the ROW and convey the water to a Retention pond on the south-west corner of the project.

The NOAA data supplied by the Storm Water Drainage Design Manual from Alpine City was used as well as the rational method. The retention requirement from the same document have been used to size the pond for this project.

An overflow path from the retention pond will flow into an existing irrigation ditch just south of this project.

IV. STORMWATER QUALITY

A storm water pollution prevention plan will be developed for the construction of the project and submitted for review.

A snouts and sump will be installed in the last box in the public ROW before flowing out to the retention pond. With this site having a retention basin for the project, all water will be retained on site and therefore meets the LID requirements of retaining the 90th percentile storm.

V. ANALYSIS

Hydrology:

The design storm required is the 100-year event for retention and the rainfall intensity information was obtained from the NOAA Data in the Storm Water Drainage Design Manual from Alpine City.

The rational method ($Q=CIA$) was used to determine storm drain runoff flows. A weighted "C" value of 0.30, a variable rainfall intensity (from NOAA data), and the project drainage area of 2.64 acres were used to size the retention pond. The runoff calculations resulted in a maximum retention volume of 9,680 cubic feet. See the appendix for retention pond sizing calculations.

Hydraulics:

The design storm required is the 100-year, 3-hour event for pipe capacity. The pipes were sized using Manning's equation for uniform flow $Q = VA = \left(\frac{1.49}{n}\right) AR^{\frac{2}{3}} S^{\frac{1}{2}}$ with a Manning's n value of 0.013. See the appendix for pipe sizing calculations.

Storm drain inlets have been placed at all low points in the road and as needed to minimize the amount of storm water runoff that bypasses catch basins. Inlets have also been spaced no more than 400 feet apart for ease of maintenance.

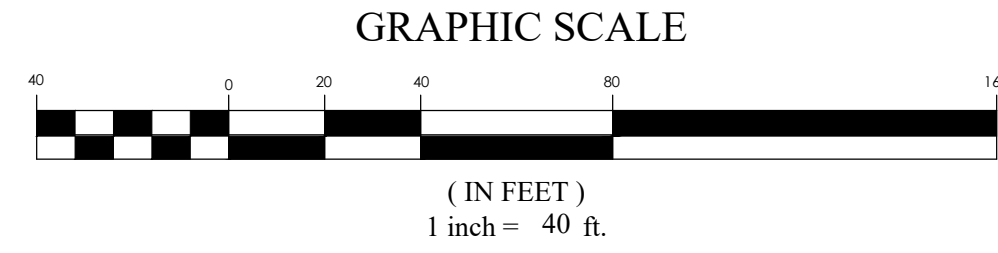
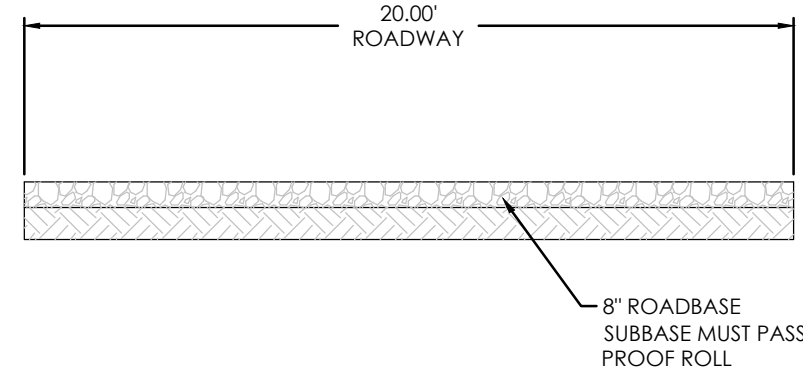
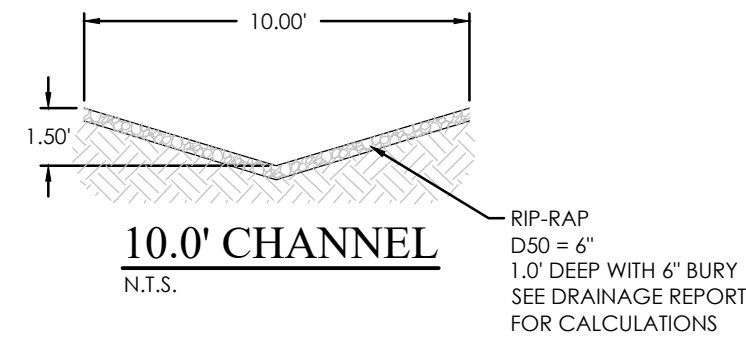
This project is the extension of an existing road ending in a cul-de-sac. The storm water from the site will either flow into the ROW, the retention pond, or the existing open ditch on the east side of the project. The retention pond has an overflow plat to spill into an existing irrigation ditch on the south side of the pond, directing the flow away from homes.

VI. CONCLUSION

It is concluded that the project is in compliance with city standards and design guidelines.

Sincerely,

Mathew Wangsgaard, PE
Project Manager
FOCUS Engineering & Surveying



LEGEND	
	BOUNDARY
	ROW
	CENTERLINE
	LOT LINE
	EASEMENT
	15" STORM DRAIN
	8" SANITARY SEWER
	8" CULINARY WATER
	6" SECONDARY WATER
	CONTOUR MAJOR
	CONTOUR MINOR
	EXIST. STORM DRAIN
	EXIST. SANITARY SEWER
	EXIST. CULINARY WATER
	EXIST. FENCE
	EXIST. CONTOUR MAJOR
	EXIST. CONTOUR MINOR
	SIGN
	STREET LIGHT
	SD MH, INLET, AND COMBO
	SEWER MANHOLE
	VALVE, TEE & BEND
	WATER BLOW-OFF
	FIRE HYDRANT
	STREET MONUMENT (TO BE SET)
	EXIST. STREET MONUMENT
	EXIST. SD INLET & MH
	EXIST. SEWER MH
	EXIST. VALVE, TEE, & BEND
	EXIST. FIRE HYDRANT
	SPOT ELEVATION
	FEMA REGULATORY FLOODWAY
	FEMA SPECIAL FLOOD HAZARD AREA ZONE AE

- NOTES:
1. EACH LOT TO HAVE A RETENTION BASIN AT BUILDING PERMIT STAGE.
 2. THIS PROJECT HAS A CBR VALUE OF 15 PER THE GEOTECH REPORT PROVIDED BY GORDON GEOTECHNICAL ENGINEERING, INC PROJECT # 660-003-20

KOROEM COURT PRELIMINARY

ALPINE CITY, UTAH COUNTY, UTAH

GRADING AND DRAINAGE PLAN

REVISION BLOCK	
#	DESCRIPTION
1	
2	
3	
4	
5	
6	

GRADING AND DRAINAGE PLAN	
Scale: 1"=40'	Drawn: MHW
Date: 05/07/21	Job #: 19-0487
Sheet:	C4



December 23, 2020
Job No. 660-003-20

Brian Hansen
623 North Patterson Lane
Alpine, Utah 84004

Attention: Mr. Brian Hansen

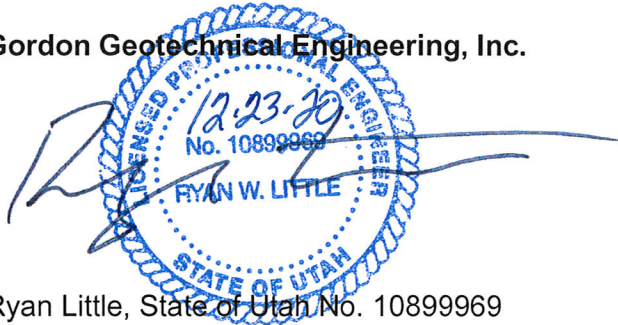
Re: California Bearing Ratio
Proposed Koroem Court Subdivision
North of 662 North Whitby Woodlands Drive
Alpine, Utah

At the request of Mr. Brian Hansen, Gordon Geotechnical Engineering was asked to provide a California Bearing Ratio (CBR) for the subgrade at the Proposed Koroem Court Subdivision, located in Alpine, Utah. G² previously performed a geotechnical study at the site dated July 15, 2020¹. Underlying the topsoil, silty fine sand was encountered. Based on our experience with similar soils, G² recommends a CBR value of 15 be used for asphalt design.

If you have any questions or require additional information, please do not hesitate to contact us.

Respectfully submitted,

Gordon Geotechnical Engineering, Inc.



12.23.20
No. 10899969
RYAN W. LITTLE
STATE OF UTAH

Ryan Little, State of Utah No. 10899969
Professional Engineer

RL/PRE:nc

Addressee (email only)

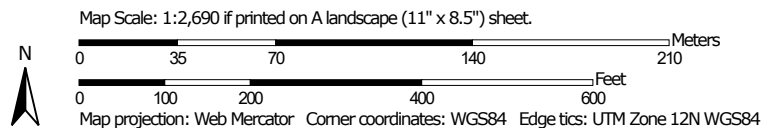
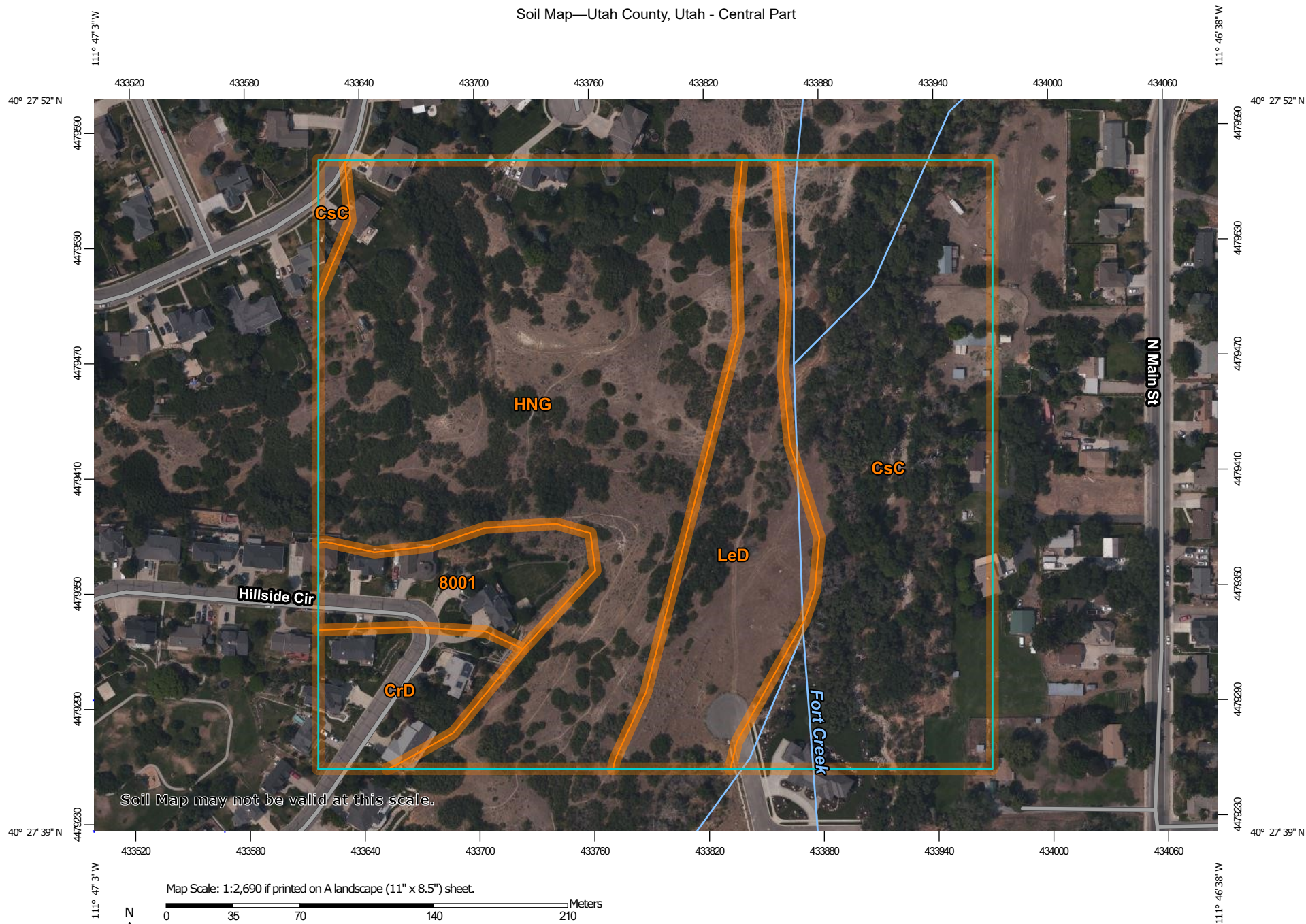
Reviewed By:



Patrick R. Emery, State of Utah No. 7941710
Professional Engineer

¹ "Report, Geological Hazard Reconnaissance and Geotechnical Study, Proposed Koroem Court Subdivision, North of 662 North Whitby Woodlands Drive, Alpine, Utah," G² Job No. 660-003-20, Dated July 15, 2020.

Soil Map—Utah County, Utah - Central Part



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

5/4/2021
Page 1 of 3


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Utah County, Utah - Central Part

Survey Area Data: Version 13, Jun 8, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2018—Aug 29, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8001	Bingham gravelly loam, 1 to 3 percent slopes	1.6	5.9%
CrD	Cleverly cobbly sandy loam, 6 to 15 percent slopes	1.5	5.3%
CsC	Cleverly gravelly fine sandy loam, 3 to 6 percent slopes	8.7	31.3%
HNG	Hillfield-Layton complex, 30 to 60 percent slopes	12.3	44.2%
LeD	Layton loamy fine sand, 6 to 15 percent slopes	3.7	13.2%
Totals for Area of Interest		27.7	100.0%

Retention Pond

Project: Koroem Court
Location: Alpine, Utah
Date: 5/4/2021
Designer: Mat Wangsgaard



100-Year Retention Sizing

Design Criteria

Intensity Table: Per NOAA Atlas 14
Return Period: 100 year
Allowable Discharge: 0.00 cfs/acre

Allowable Discharges

Storm Drain Discharge: 0.00 cfs
Other Discharge: 0.00 cfs
Total Discharge: 0 cfs

Source:

Weighted "C" Value

Surface Type	Area (sf)	"C" Value	C*A
Homes (rooftops)	4,880	0.79	3,855
Drives	3,442	0.75	2,582
Roadway and Sidewalk	19,144	0.80	15,315
Landscape	87,379	0.15	13,107
Totals	114,845		34,858.75
Weighted "C" Value		0.30	

Drainage Calculations

Duration	Intensity	Runoff C	Area	Rainfall	Accumulated	Allowable	Discharge	Required
					Flow	Discharge		Storage
min	in/hr		Ac	cfs	cf	cfs	cf	cf
15.0	4.38	0.30	2.64	3.51	3,155	0.00	0	3,155
30.0	2.95	0.30	2.64	2.36	4,249	0.00	0	4,249
60.0	1.82	0.30	2.64	1.46	5,243	0.00	0	5,243
120.0	1.02	0.30	2.64	0.82	5,877	0.00	0	5,877
180.0	0.71	0.30	2.64	0.57	6,136	0.00	0	6,136
360.0	0.41	0.30	2.64	0.33	7,087	0.00	0	7,087
720.0	0.26	0.30	2.64	0.21	8,988	0.00	0	8,988
1440.0	0.14	0.30	2.64	0.11	9,680	0.00	0	9,680

Maximum Storage Requirement: 9,680
Maximum Storage Requirement (ac-ft): 0.22

24" Culvert Flow Calculation

Flow Calculation Equation: $Q = CIA$
C Value: 0.30
Intensity Value (I): 0.71 in/hr (100-year, 3-hour)
Catchment Area (A): 15.87 Acres (see sheet C5.1 for area delineation)

Culvert Required Capacity (Q): 3.42 CFS

ROW Pipe Flow Calculation

Flow Calculation Equation: $Q = CIA$
C Value: 0.30
Intensity Value (I): 0.71 in/hr (100-year, 3-hour)
Catchment Area (A): 2.64 Acres (see sheet C5.2 for area delineation)

Culvert Required Capacity (Q): 0.57 CFS

Rip-Rap Calculations

Project: Koroem Court

Location: Alpine, Utah

Date: 5/4/2021

Designer: Mat Wangsgaard



D50 Rip-Rap Calculations

INPUT

Q= 3.5 cfs
D= 2 ft
TW= 0.8 ft
g= 32.2 ft/s²

OUTPUT

D50 = 0.05209 ft
0.625079 in

$$D_{50} = 0.2 D \left(\frac{Q}{\sqrt{g} D^{2.5}} \right)^{4/3} \left(\frac{D}{TW} \right)$$

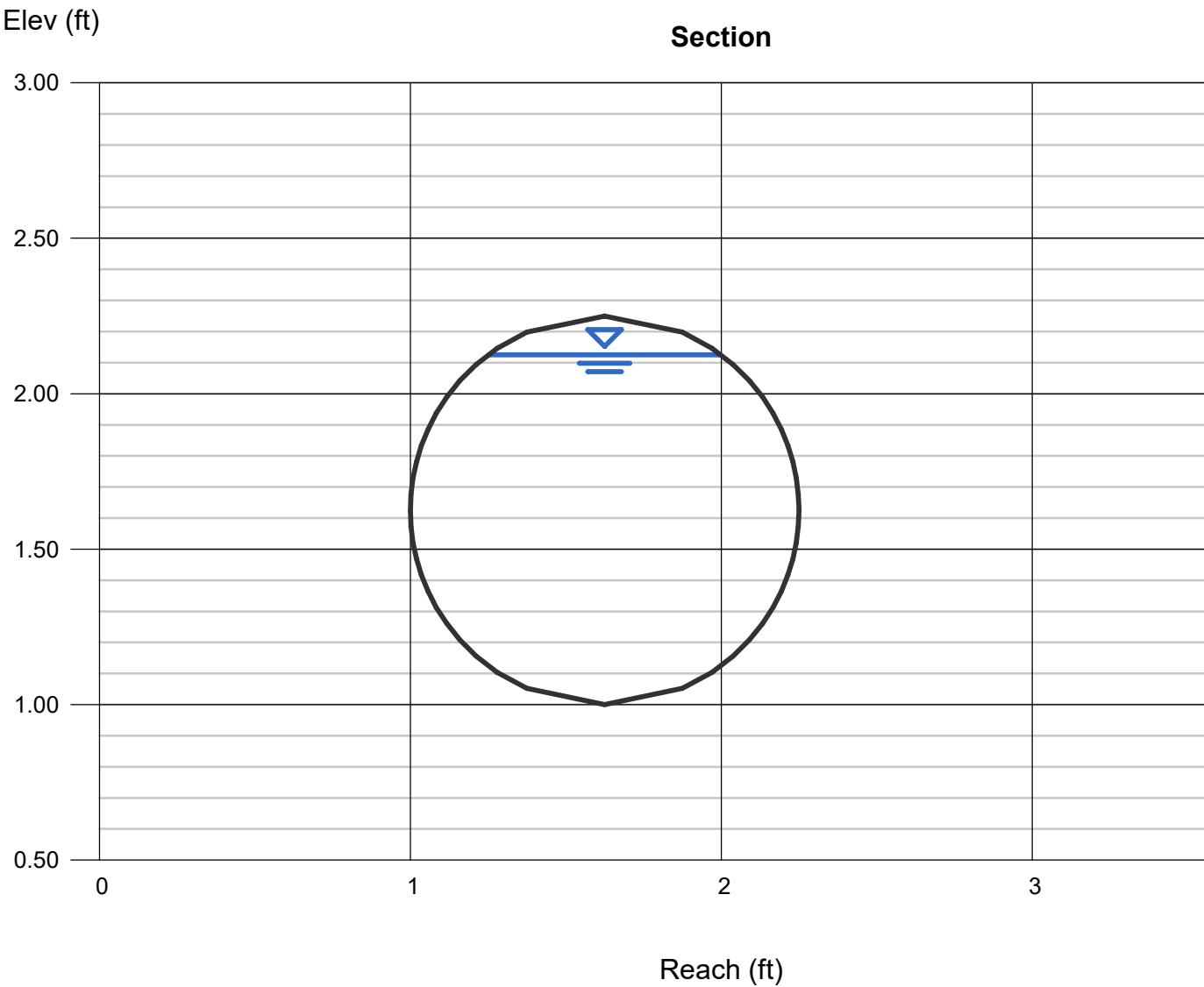
where,

D_{50} = riprap size, m (ft)
Q = design discharge, m³/s (ft³/s)
D = culvert diameter (circular), m (ft)
TW = tailwater depth, m (ft)
g = acceleration due to gravity, 9.81 m/s² (32.2 ft/s²)

Channel Report

19-0487 KOROEM COURT 15-INCH PIPE CAPACITY

Circular		Highlighted	
Diameter (ft)	= 1.25	Depth (ft)	= 1.13
		Q (cfs)	= 4.868
		Area (sqft)	= 1.16
Invert Elev (ft)	= 1.00	Velocity (ft/s)	= 4.18
Slope (%)	= 0.50	Wetted Perim (ft)	= 3.13
N-Value	= 0.013	Crit Depth, Yc (ft)	= 0.90
		Top Width (ft)	= 0.75
		EGL (ft)	= 1.40
Calculations			
Compute by:	Q vs Depth		
No. Increments	= 10		



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Tuesday, May 4 2021

19-0487 KOROEM COURT 24-INCH CULVERT CAPACITY

Circular

Diameter (ft) = 2.00

Invert Elev (ft) = 1.00

Slope (%) = 5.99

N-Value = 0.013

Calculations

Compute by: Q vs Depth

No. Increments = 10

Highlighted

Depth (ft) = 1.80

Q (cfs) = 59.02

Area (sqft) = 2.98

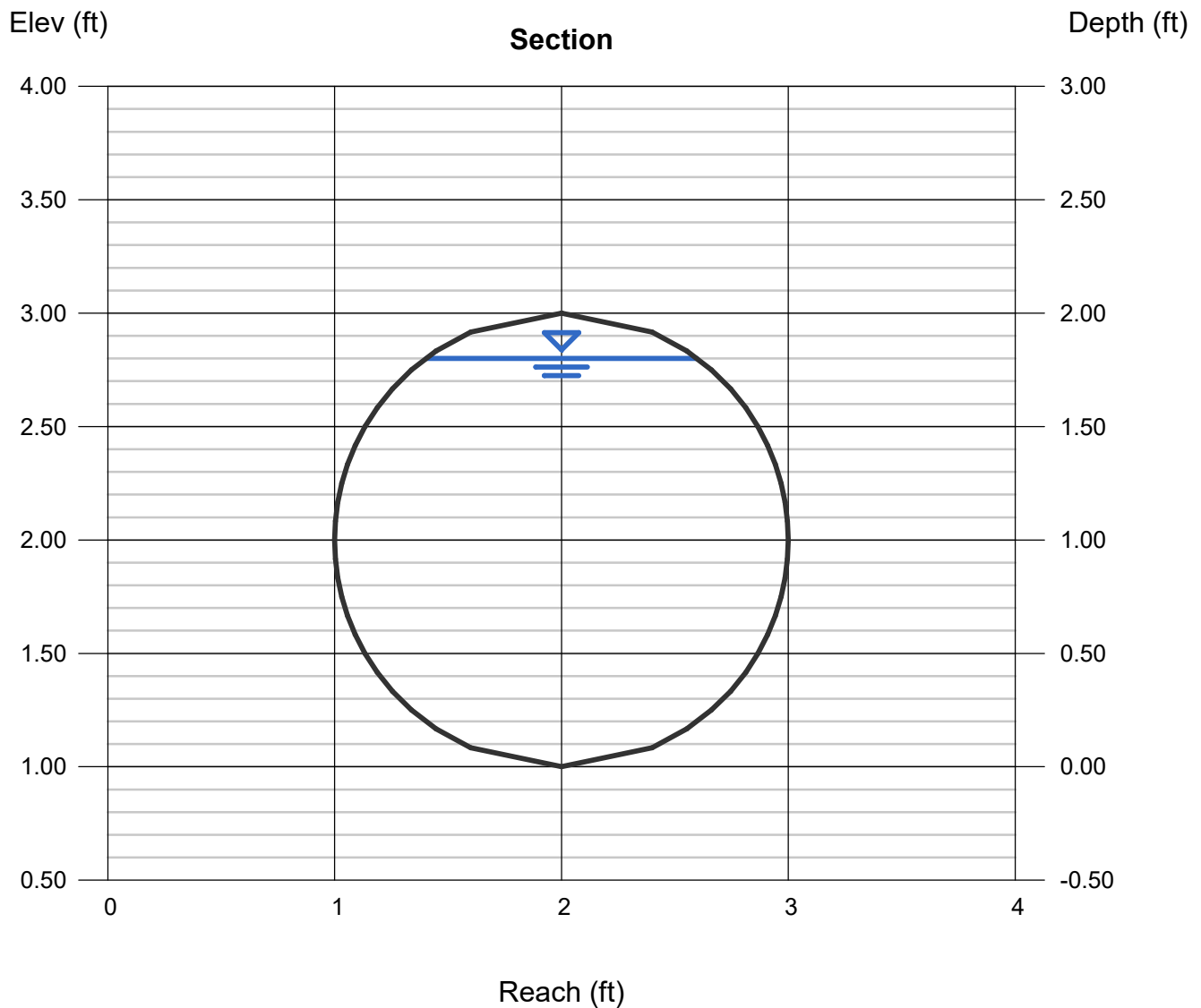
Velocity (ft/s) = 19.81

Wetted Perim (ft) = 5.00

Crit Depth, Yc (ft) = 1.99

Top Width (ft) = 1.20

EGL (ft) = 7.90



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Tuesday, May 4 2021

19-0487 KOROEM COURT OPEN CHANNEL FLOW

Triangular

Side Slopes (z:1) = 5.00, 5.00
Total Depth (ft) = 1.50

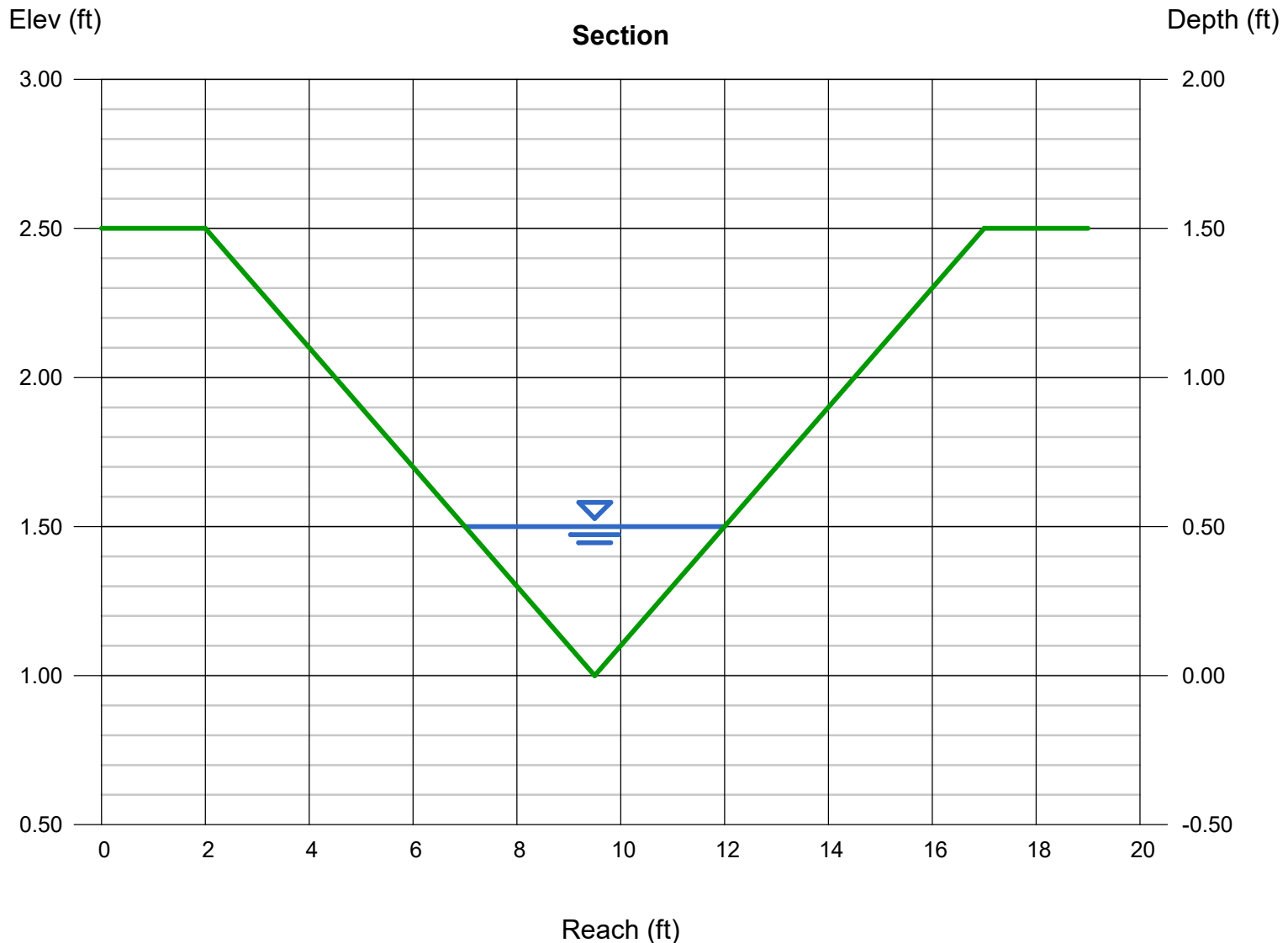
Invert Elev (ft) = 1.00
Slope (%) = 8.00
N-Value = 0.030

Calculations

Compute by: Q vs Depth
No. Increments = 15

Highlighted

Depth (ft) = 0.50
Q (cfs) = 6.856
Area (sqft) = 1.25
Velocity (ft/s) = 5.49
Wetted Perim (ft) = 5.10
Crit Depth, Yc (ft) = 0.66
Top Width (ft) = 5.00
EGL (ft) = 0.97



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Tuesday, May 4 2021

19-0487 KOROEM COURT OPEN CHANNEL FLOW

Triangular

Side Slopes (z:1) = 5.00, 5.00
Total Depth (ft) = 1.50

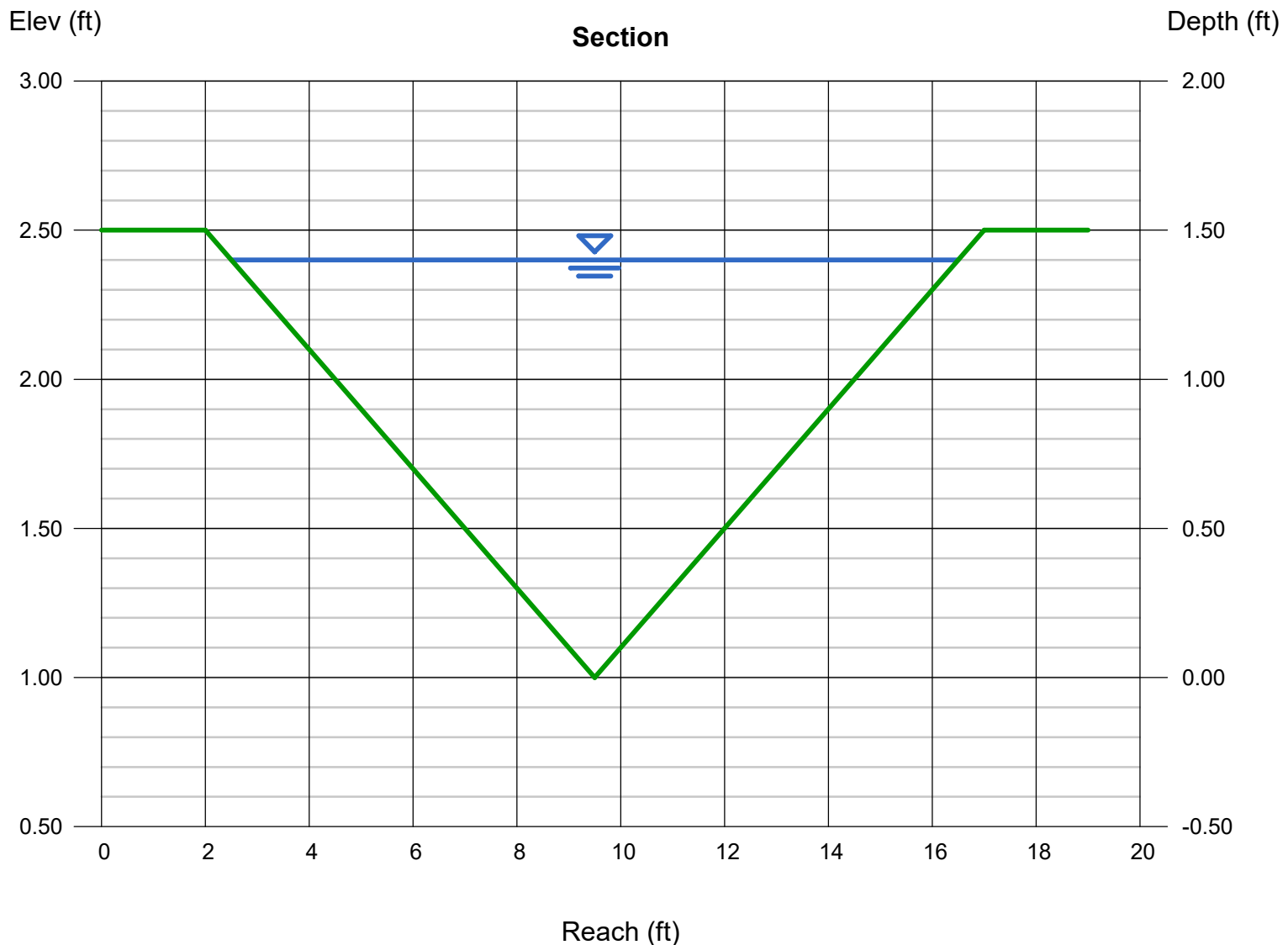
Invert Elev (ft) = 1.00
Slope (%) = 8.00
N-Value = 0.030

Calculations

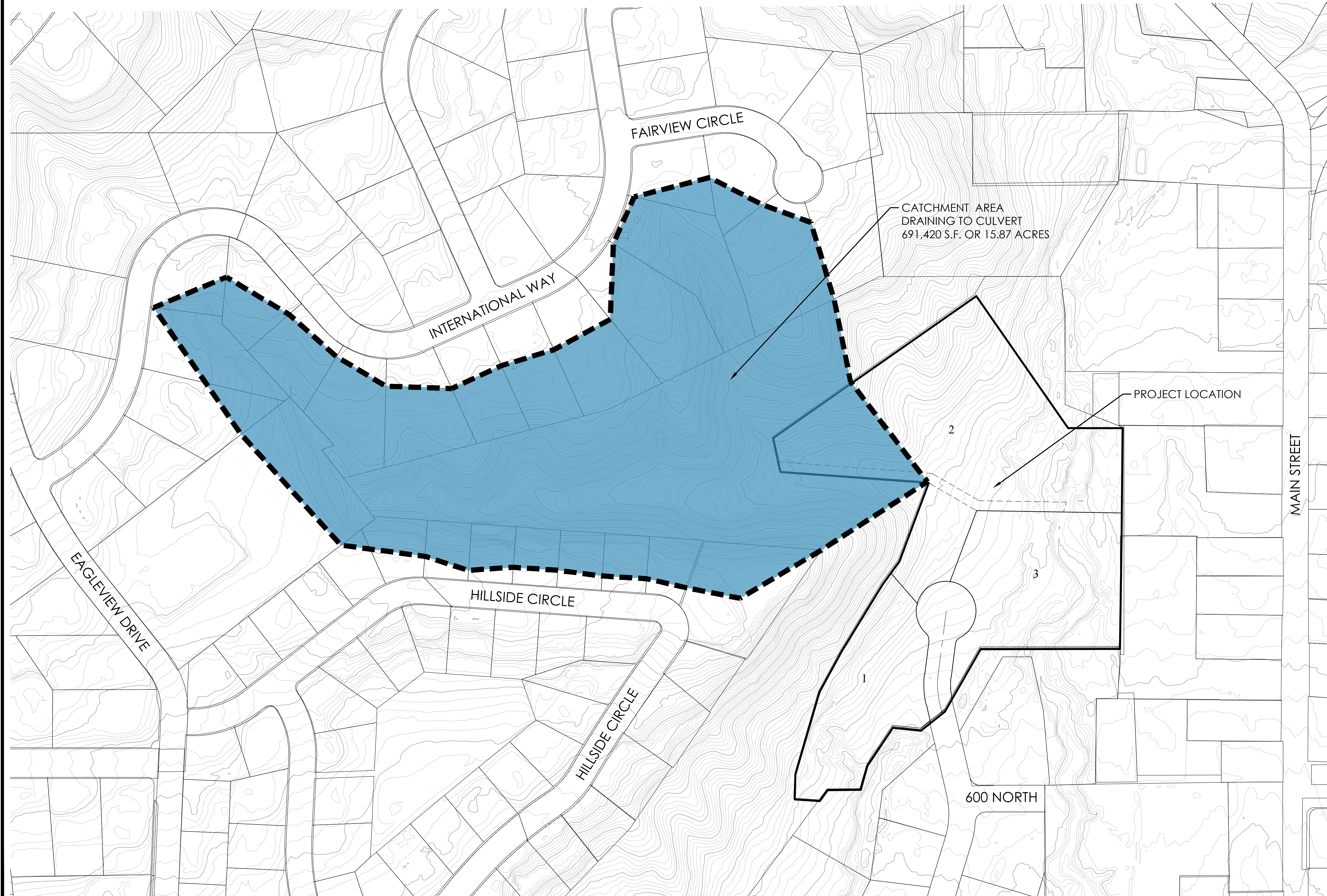
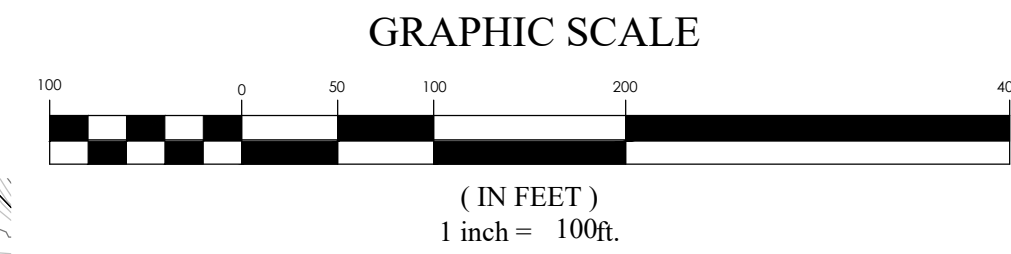
Compute by: Q vs Depth
No. Increments = 15

Highlighted

Depth (ft) = 1.40
Q (cfs) = 106.82
Area (sqft) = 9.80
Velocity (ft/s) = 10.90
Wetted Perim (ft) = 14.28
Crit Depth, Yc (ft) = 1.50
Top Width (ft) = 14.00
EGL (ft) = 3.25



- NOTES:
1. SEE DRAINAGE REPORT FOR FULL CULVERT FLOW CALCULATIONS AND CAPACITY.



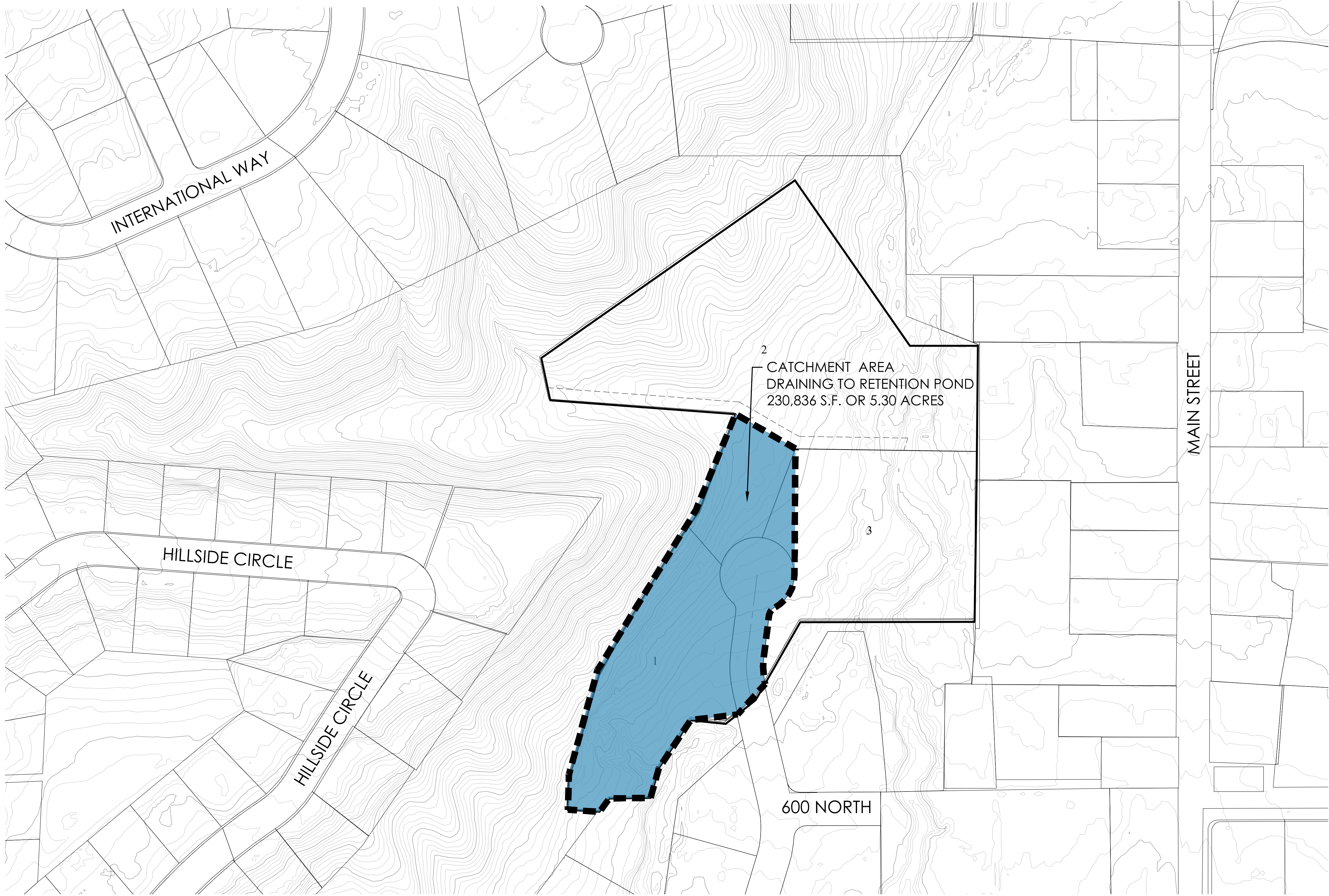
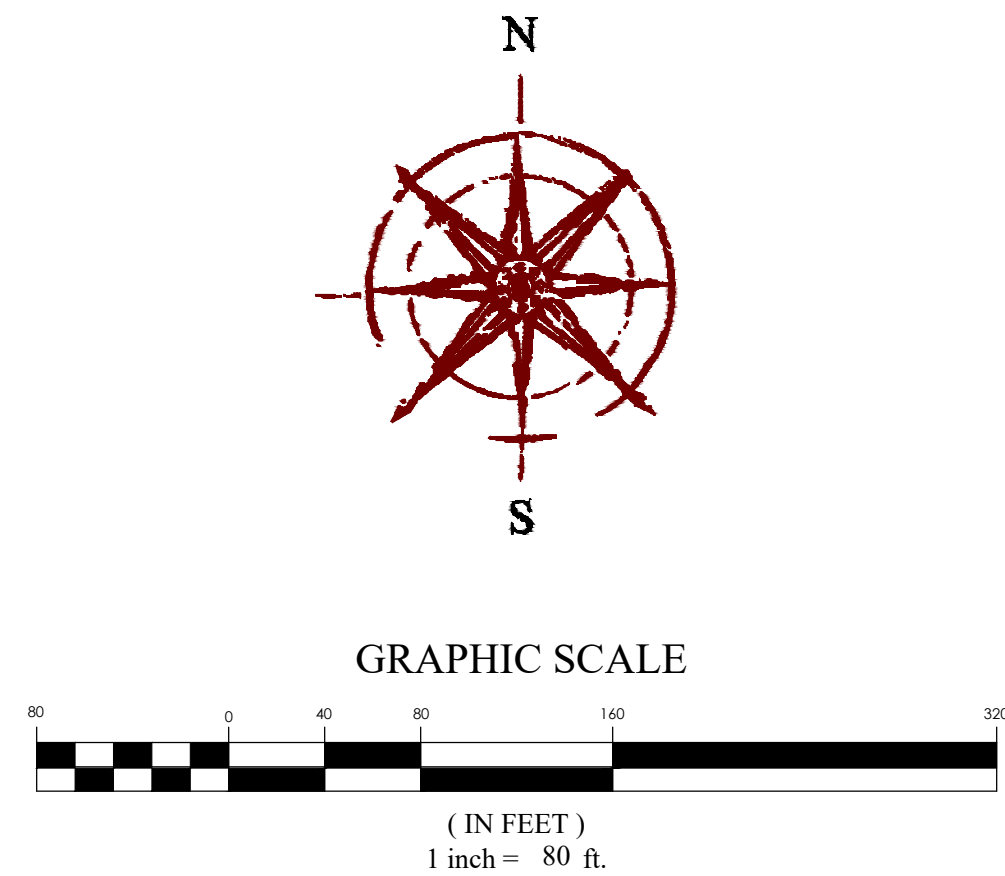
KOROEM COURT PRELIMINARY
ALPINE CITY, UTAH COUNTY, UTAH
OFF-SITE DRAINAGE AREA

REVISION BLOCK		DESCRIPTION
#	DATE	
1	****	
2	****	
3	****	
4	****	
5	****	
6	****	

OFF-SITE DRAINAGE AREA	
Scale: 1"=100'	Drawn: MHW
Date: 05/04/21	Job #: 19-0487
Sheet:	C5.1



- NOTES:
1. SEE DRAINAGE REPORT FOR FULL RETENTION POND CALCULATIONS AND CAPACITY.



FOR
REVIEW
ONLY

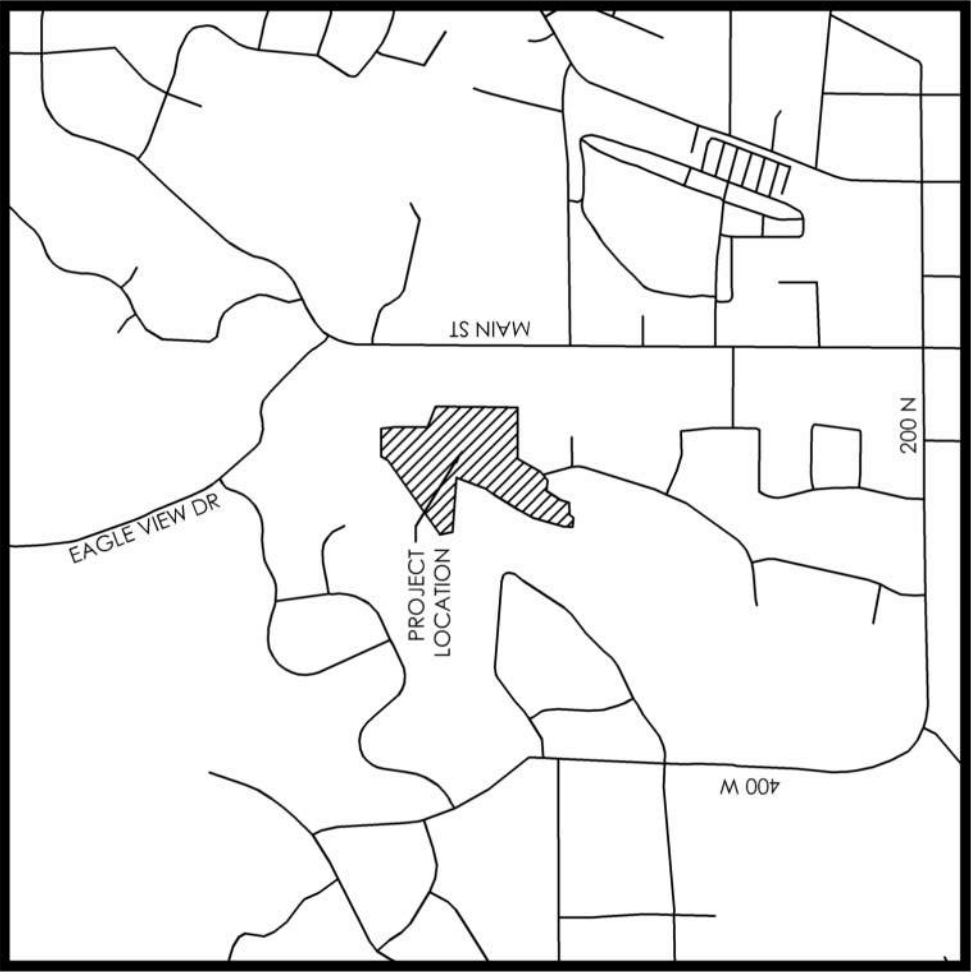
KOROEM COURT PRELIMINARY
ALPINE CITY, UTAH COUNTY, UTAH
SITE DRAINAGE AREA

REVISION BLOCK		DESCRIPTION
#	DATE	
1	****	
2	****	
3	****	
4	****	
5	****	
6	****	

SITE DRAINAGE AREA

Scale: 1"=80' Drawn: MHW
Date: 05/04/21 Job #: 19-0487
Sheet: C5.2





VICINITY MAP
N.T.S

**REPORT
GEOLOGICAL HAZARD RECONNAISSANCE
AND GEOTECHNICAL STUDY
PROPOSED KOROEM COURT SUBDIVISION
NORTH OF
662 NORTH WHITBY WOODLANDS DRIVE
ALPINE, UTAH**

July 15, 2020

Job No. 660-003-20

Prepared for:

Brian Hansen
623 North Patterson Lane
Alpine, Utah 84004

Prepared by:

Gordon Geotechnical Engineering, Inc.
4426 South Century Drive, Suite 100
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Fax: 801-327-9601
www.gordongeotech.com

July 15, 2020
Job No. 660-003-20

Brian Hansen
623 North Patterson Lane
Alpine, Utah 84004

Attention: Mr. Brian Hansen

Ladies and Gentlemen:

Re: Report
Geological Hazard Reconnaissance and Geotechnical Study
Proposed Koroem Court Subdivision
North of 662 North Whitby Woodlands Drive
Alpine, Utah

1. INTRODUCTION

1.1 GENERAL

This report presents the results of our geological hazard reconnaissance and geotechnical study performed at the site of the proposed Koroem Court Subdivision which is located north of 662 North Whitby Woodlands Drive in Alpine City, Utah. A four-lot single family residential subdivision is planned for the approximately 8.4-acre site. The subject parcel is located as shown on attached Figure 1, Vicinity Map, and Figure 2, Site Plan, provides aerial coverage of the site and detail of the current (2018) layout of the site vicinity. As shown on Figure 2, the property parcel consists of an area that is currently vacant and undeveloped. The layout of the four lots proposed for the subdivision are also shown on Figure 2.

1.2 OBJECTIVES AND SCOPE

The objectives and scope of our studies were planned in discussions between Mr. Brian Hansen and Mr. Ryan Little of Gordon Geotechnical Engineering, Inc. (G²).

The objectives and scope of our studies are two-fold, being a geological hazard reconnaissance study and a geotechnical engineering study, and the results of both studies are combined herein with this reporting.

In general, the **objectives** of this study were to:

1. To perform a Geologic Hazard Reconnaissance Study in accordance to Alpine City Development Code 3.12.060. The purpose of the reconnaissance studies is to evaluate if the proposed development is outside or within areas identified as Geologic Hazards Overlay areas, and if within a hazard area, to recommend appropriate additional studies that comply with the purpose and intent of the Alpine City Development Code. These hazards include, but are not limited to: Surface Fault Rupture, Debris Flows, Landslide, Rock Fall, Liquefaction Areas, Flood, or other Hazardous Areas.
2. To perform a geotechnical study to define and evaluate the subsurface soils and provide slope stability, earthwork, foundation, floor slab, geoseismic, and pavement parameters and recommendations to be used in the design and construction of the proposed structures.

The Geologic Hazard Reconnaissance Study **scope** included:

1. Perform a site reconnaissance to study and/or identify any potential geologic hazards.
2. Perform a desk study involving the review of geologic maps, topographic maps, Lidar, and previous geologic hazard reports.
3. Preparation of a geologic letter identifying any found geologic hazards and recommend any appropriate additional studies that comply with the purpose and intent of the Alpine City Development Code.

It should be noted the site is mapped within the Geologic Slope Hazards of “debris”, “rock”, “slide”, and “flood zone” on the Alpine City Hazard maps (Alpine City, 2006).

The Geotechnical Engineering Study **scope** included:

1. A field program consisting of the excavating, logging, and sampling of four test pits.
2. A laboratory testing program.
3. An office program consisting of the correlation of available data, engineering analyses, and the preparation of this summary report.

1.3 AUTHORIZATION

Authorization was provided by Mr. Brian Hansen by returning a signed copy of our Professional Services Agreement No. 20-0609 dated and executed on June 11, 2020.

1.4 PROFESSIONAL STATEMENTS

Supporting data upon which our recommendations are based are presented in subsequent sections of this report. Recommendations presented herein are governed by the physical properties of the soils encountered in the exploration test pits, projected groundwater conditions, and the layout and design data discussed in Section 2., Proposed Construction, of this report. If subsurface conditions other than those described in this report are encountered and/or if design and layout changes are implemented, G² must be informed so that our recommendations can be reviewed and amended, if necessary.

Our professional services have been performed, our findings developed, and our recommendations prepared in accordance with generally accepted engineering principles and practices in this area at this time.

2. PROPOSED CONSTRUCTION

A single-family residential subdivision is planned for the approximately 8.4-acre site. It is our understanding that the site will be subdivided into four lots. It is anticipated that the structures will be up to three levels above grade with a partial- to full-depth basement level.

Maximum column and wall loads are anticipated to be on the order of 40 to 60 kips and 2 to 3 kips per lineal foot, respectively. Real loads are defined as the total of all dead plus frequently applied (reduced) live loads. Floor slab loads will be relatively light, on the order of 200 pounds per square foot or less.

Site development will require a minor amount of earthwork in the form of site grading. Maximum cuts and fills on the order of five to eight feet are projected.

Paved access roadways will also be a part of the overall development. Traffic over the pavements will consist of a light to moderately light volume of automobiles and light trucks, and some medium-weight trucks.

3. GEOLOGIC HAZARD RECONNAISSANCE INVESTIGATION

As part of the Alpine City Sensitive Land Ordinance - Geologic Hazards Overlay 3.12.060, studies are required to *minimize the adverse effects of geologic hazards* (Alpine City, 2006). *The geologic hazard overlay includes surface fault rupture, landslide, debris flow, rockfall, and soil liquefaction.* Because parts of the proposed subdivision site are located within identified as

potentially hazardous area as shown on the Alpine City Hazard maps as geologic hazards, this reconnaissance investigation is required prior to development.

3.1 LITERATURE REVIEW AND ANALYSIS

Our review of existing information and mapping for the subject site has included aforementioned previous reports and documentation and previous Utah Geological Survey (UGS) maps, reports, and data (Biek, 2005; Christenson and Shaw, 2008; FEMA, 2020; Utah County GIS, 2020). The geologic mapping of the site vicinity by Biek (2005) is presented on Figure 3, Geologic Mapping. In addition to the previewed reports, maps, and literature, our review has included an analysis of vertical and stereoscopic aerial photography for the site including a historical 1946 1:20,000 stereoscopic sequence (frames AAL-1B-73 and AAL-1B-74), a contemporary 2012 5.0-inch digital color HRO orthoimagery coverage, and 2018 0.6-meter digital color NAIP orthoimagery coverage of the site, as shown on Figure 2.

A GIS analysis and data integration for the site evaluation was conducted using the QGIS® GIS platform to geoprocess and analyze 2014 0.5-meter LiDAR digital elevation data made available for the site by the Utah Automated Geographic Reference Center (AGRC), and presented on Figure 4, LiDAR Analysis. The GIS analysis includes using the QGIS® platform Geospatial Data Abstraction Library (GDAL) Contour, and the GRASS® (Geographic Resources Analysis Support System) r.slope and r.shaded.relief modules. The GIS platform was used to integrate terrain layers, geologic mapping, photogrammetric details, available digital vector and raster data, and field GPS details collected during our field program, and for graphical presentation of our study findings herein.

3.2 SITE GEOLOGY

The geology of the site was interpreted through an integrated compilation of data analyses, including a review of literature and mapping from our previous studies conducted in the area; geologic mapping by (Biek, 2005) as shown on Figure 3; photogeologic analyses of the historical and contemporary imagery as shown on Figure 2; GIS analyses of elevation and geoprocessed 2014 LiDAR terrain data as shown on Figure 4, and available GIS hazards information provided by the Utah Automated Geographic Reference Center (AGRC at: <http://gis.utah.gov/>) and Utah County GIS (2020); and field reconnaissance of the general site area, and the interpretation of the test pit exposures excavated at the site as part of our field program, which are discussed in Section 5.2, Subsurface Soil, of this report. Seismic hazards information was developed from United States Geologic Survey (USGS) databases (Peterson and others, 2008).

The site is located on the south side of the Traverse Mountain Salient on the north end of Utah Valley, which is within the Basin and Range Physiographic Province. This province is characterized by approximately north-south trending valleys and mountain ranges that have been formed by extensional tectonics and displacement along normal faults. The province

extends from the Wasatch Range on the east to the Sierra Nevada Range on the west (Hunt, 1967). Conversely, the Traverse Mountain Salient is an east-to-west structural ridge comprised largely of Tertiary volcanics and Paleozoic sedimentary rocks (Biek, 2005), that is flanked by the Wasatch Range on the east and the Utah Valley on the west. The salient extends approximately 7.0 miles east-to-west and 3.5 miles north-to-south.

The surface of the site consists of foothill margin ground, with the west side of the site consisting of moderately steep to steep slopes extending beyond the west boundary of the site, and near level floodplain surfaces comprising the center and east side of the site adjacent to Fort Creek which flows from north-to-south along the east side of the site.

Figure 3 shows the location of the site relative to GIS overlays and geological mapping drawn by Biek (2005). A paraphrased summary of the geological mapping of the site vicinity by Biek (2005) is provided as follows:

Qaly- Young alluvial deposits (Holocene to Upper Pleistocene) – Moderately sorted sand, silt, clay, and pebble to boulder gravel deposited in river channels and flood plains; incised by active stream channels, and locally include small alluvial-fan and colluvial deposits...

Qaf₁ - Modern alluvial-fan deposits (Holocene) – Poorly to moderately sorted, non-stratified, clay- to boulder-size sediment deposited principally by debris flows at the mouths of active drainages; upper parts typically characterized by abundant boulders and debris-flow levees...

Qafy- Younger undifferentiated alluvial-fan deposits (Holocene to Upper Pleistocene) – Poorly to moderately sorted, clay- to boulder-size sediment deposited principally by debris flows...

Qalp- Alluvial-fan deposits related to the Provo phase of the Bonneville lake cycle (Upper Pleistocene) – Poorly to moderately sorted, clay- to cobble-size sediment...deposited by streams associated with the Bonneville (transgressive) phase...

Qafo- Older alluvial-fan deposits (Upper Pleistocene) – Similar to younger undifferentiated alluvial-fan deposits (Qafy)...predating, the Bonneville shoreline...

Qalp- Alluvial deposits related to the Provo phase of the Bonneville lake cycle (Upper Pleistocene) – Moderately to well-sorted sand, silt, and pebble gravel deposited principally in river channels; coarsens upgradient and includes boulder-size clasts...

Qalpo- Older alluvial deposits related to the Provo phase of the Bonneville lake cycle (Upper Pleistocene) – Moderately to well-sorted sand, silt, and pebble to boulder gravel...that is about 30 feet (9 m) above adjacent Qalp deposits...

Qlgb - Lacustrine gravel and sand (Upper Pleistocene) – Moderately to well-sorted, moderately to well-rounded clast-supported, pebble to cobble gravel and pebbly sand; thin to thick bedded...Qlgb deposited at and below highest Bonneville shoreline...

Qlsb - Lacustrine sand and silt (Upper Pleistocene) – Fine- to coarse-grained lacustrine sand and silt with minor gravel; typically thick bedded and well sorted; gastropods locally common...Qlsb deposited at and below highest Bonneville shoreline but above the Provo shoreline...

Qlag - Lacustrine and alluvial coarse-grained deposits (Pleistocene) – Poorly to moderately sorted, clay- to boulder-size sediment...

The near-surface geology of the subject site consists of upper Pleistocene age lacustrine and alluvial deposits, and Holocene alluvial deposits (Beik, 2005). The moderately steep to steep slopes extending beyond the west boundary are mapped as **Qlsb - Lacustrine sand and silt (Upper Pleistocene) – Fine- to coarse-grained lacustrine sand and silt with minor gravel**, with a foot-slope buttress comprised of **Qafy- Younger undifferentiated alluvial-fan deposits (Holocene to Upper Pleistocene) – Poorly to moderately sorted, clay- to boulder-size sediment** deposits. The near level floodplain surfaces comprising the center and east side of the site adjacent to Fort Creek are mapped as ancient **Qafp- Alluvial-fan deposits related to the Provo phase of the Bonneville lake cycle (Upper Pleistocene) – Poorly to moderately sorted, clay- to cobble-size sediment**, and more recently deposited **Qaly- Young alluvial deposits (Holocene to Upper Pleistocene) – Moderately sorted sand, silt, clay, and pebble to boulder gravel deposited in river channels and flood plains**.

3.3 GEOLOGIC/NATURAL HAZARDS

The Alpine City geologic hazard overlay requires an assessment of *surface fault rupture, landslide, debris flow, rockfall, and soil liquefaction*. Included with these geologic hazards we also assess exposure to flood hazards, and steep slope limitations for site development. Figure 5, Geologic Hazards Site Evaluation, shows the proposed subdivision layout relative to geologic hazards study areas layers, FEMA flood risk zone layers, and steep slope limitations layers. Our site-specific review of the geologic and natural hazards and recommendations pertaining to the hazards are summarized in the following sections:

3.3.1 Seismic Hazards: Surface Fault Rupture Hazards, Strong Earthquake Ground Motion and Liquefaction:

3.3.1.1 Surface Fault Rupture Hazards

The nearest active (Holocene) earthquake fault to the site is the Provo segment of the Wasatch fault zone (UT2351G) which is located 1.45 miles east of the site (Black and others, 2004).

Accordingly, fault rupture hazards are not considered present on the site. The site is located well outside the surface fault rupture hazard special studies zone, which includes a zone of 500 feet on both sides of the mapped fault trace; thus, a surface fault rupture hazard study and trenching is not required for the proposed subdivision site.

3.3.1.2 Strong Earthquake Ground Motion

Regional strong ground motion originating from the Wasatch fault or other near-by seismic sources is capable of impacting the site and surrounding areas. The Wasatch fault zone is considered active and capable of generating earthquakes as large as magnitude 7.3 (Arabasz and others, 1992). Based on probabilistic estimates (Peterson, and others, 2008) queried for the site, the expected peak horizontal ground acceleration on rock from a large earthquake with a 10-percent probability of exceedance in 50 years is as high as $0.17g$, and for a two-percent probability of exceedance in 50 years is as high as $0.53g$ for the site.

The 10-percent probability of exceedance in 50 years event has a return period of 475 years, and the $0.17g$ acceleration for this event corresponds “strong” perceived shaking with “light” potential damage based on instrument intensity correlations. The 2-percent probability of exceedance in 50 years event has a return period of 2475 years, and the $0.53g$ acceleration for this event corresponds “severe” perceived shaking with “moderate to heavy” potential damage based on instrument intensity correlations (Wald and others, 1999).

Future ground accelerations greater than these are possible but will have a lower probability of occurrence. For IBC motions see Section 6.9.3, Site Seismic Response.

3.3.1.3 Liquefaction Potential Hazards

In conjunction with strong earthquake ground motion potential of large magnitude seismic events as discussed previously, certain soil units may also possess a potential for liquefaction during a large magnitude event. Liquefaction is a phenomenon whereby loose, saturated, granular soil units lose a significant portion of their shear strength due to excess pore water pressure buildup resulting from dynamic loading, such as that caused by an earthquake. Among other effects, liquefaction can result in densification of such deposits causing settlements of overlying layers after an earthquake as excess pore water pressures are dissipated. Horizontally continuous liquefied layers may also have a potential to spread laterally where sufficient slope or free-face conditions exist. The primary factors affecting liquefaction potential of a soil deposit are: (1) magnitude and duration of seismic ground motions; (2) soil type and consistency; and (3) occurrence and depth to groundwater.

Liquefaction potential hazard mapping for Utah County by Anderson and others (1994) classifies the site location as within a “Very Low” Liquefaction Potential area, and an area where liquefaction potential hazard studies are not required.

3.3.2 Landsliding

On the basis of mapping by Biek (2005), the nearest potentially active landslide units are mapped as **Qmsy** (younger landslide deposits) that are located approximately 1.5 miles north of the site (not shown on Figure 3). Figure 5 shows the sloping areas on the west side of the site as within the landslide study area as delimited by Alpine City (2006) and Utah County GIS (2020)¹. On the basis of our analysis of the aerial photography, the LiDAR imagery, and our site reconnaissance, no landslide features or morphology (Varnes, 1978) was observed on the site or on properties adjacent to the site. It is our opinion no active landsliding is present on the site.

3.3.3 Alluvial Fan - Debris Flow Processes

Alluvial fans are landforms that form where upland drainages exit onto unconfined valley or basin surfaces, whereupon stream flow energy is reduced and sediment is deposited. With successive flood events over time, the fan-shaped morphology will develop as distributary channels work and rework the sediments originating at the fan head (apex) and moving the sediments down-fan and distributing the sediments to the distal margins of the landform. Sediments introduced to the fan head may arrive in the form of stream flood to debris flow process events (Bull, 1977).

The nearest alluvial fan and potential debris flow process deposits to the site, are mapped as **Qafy**, and occur sloping areas on the west side of the site as shown on Figure 3. On the basis of our analysis of the aerial photography, the LiDAR imagery, our site reconnaissance and our interpretation of the test pit exposures excavated at the site as part of our field program (see Section 5.2, Subsurface Soil, of this report); we have determined that the **Qafy** deposits mapped on the site are not comprised of coarse alluvium deposited by debris flow processes, but are of finer-grained sediments of silt (ML) and sand (SM and SP), with some gravel particles, likely deposited by sheet-flow and slope-wash processes originating from **Qlsb** deposits (fine- to coarse-grained lacustrine sand and silt with minor gravel) that are located on the slopes on and above the west side of the site.

Alluvial fan deposits and potential debris flow hazards associated with Fort Creek, are mapped as **Qaf₁** (modern alluvial-fan deposits - poorly to moderately sorted, non-stratified, clay- to boulder-size sediment). These deposits occur approximately 1700 feet upstream and north from the site.

On the basis of our on-site analysis and observations, we do not believe debris flow hazards are present on the site.

1 The Alpine City (2006) and Utah County GIS (2020) delimited Landslide Study Area, Debris Flow Study Area, and Rockfall Study Area overlays shown on Figure 5 occupy the same areas on the site and site vicinity for the three hazard study areas.

3.3.4 Rockfall Hazards

Lund and Knudsen (2016) have found that *rockfalls occur where a source of rock exists above a slope steep enough to allow rapid downslope movement of dislodged rocks by falling, rolling, bouncing, and sliding...Rockfall sources include bedrock outcrops or boulders on steep mountainsides or near the edges of escarpments such as cliffs, bluffs, and terraces.* Although the slopes on the west side of the site are moderately steep to steep slopes that extend beyond the west boundary of the site, no bedrock outcrops or latent boulders were observed on these slopes. Because source outcrops or boulders are not expected on the **Qlgb** (lacustrine gravel and sand) and **Qlsb** (lacustrine sand and silt) deposits mapped to the west of the site, we believe that rockfall hazards are not present on the site.

3.3.5 Flooding

The Alpine City Flood Damage Prevention Overlay ordinance Section 3.12.080, defines the Area of Special Flood Hazard - *is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map...Zone A usually is refined into Zones A, AE...* These flood risk zones that are affiliated with Fort Creek are shown on Figure 5 as FEMA Flood Risk Zones A and AE and are based upon mapping by FEMA prepared June of 2020 (FEMA, 2020). The flood risk A – AE Zone is shown to cross parts of the proposed Lots #2, #3, and #4.

Because of the implied flood hazards *on the Zones A, AE* shown on Figure 5, we recommend that these areas as shown on Figure 5 be avoided for general site development and structure placement, unless the site development plans are approved through a *Development Permit* approved by the *Floodplain Administrator* (City Engineer) as outlined in the Alpine City ordinance section Flood Damage Prevention Overlay: 3.12.080.7.c. Permit Procedures (Alpine City, 2006).

3.3.6 Sloping Surfaces

The site vicinity slopes developed from our LiDAR analysis range from level to well over 50-percent as shown on Figure 4. As shown on Figure 4, the site slopes on west side of the site consist of moderately steep to steep slopes extending beyond the west boundary, and slope downward to the southeast, becoming near level near Fort Creek. Elevations on the site range from 4994 feet on the southeast side of the site, to 5090 feet on the northwest side of the site.

The average slopes for the subdivision parcel and the four proposed development lots are summarized on the following page.

Parcel	Area Acres	Slope Percent
Lot #1	1.7	24.22
Lot #2	3.42	22.35
Lot #3	1.39	18.97
Lot #4	1.39	20.47
Subdivision Parcel	8.45	21.45

The threshold gradient for slope development considerations and “Buildable Area” definition according to the Alpine City Geologic Hazards Overlay 3.12.060 includes slopes greater than 20-percent (Alpine City, 2006). The steep slope areas, in excess of 20-percent, for the site are shown on Figure 5.

3.3.7 Site Reconnaissance

The site was reconnoitered on June 16, 2020, and the geotechnical engineering field program and tests pits were excavated on June 17, 2020. The site is an irregular-shaped property occupying area approximately 1120 feet north-south, and 720 feet east-west in maximum plan dimensions. From the south property frontage on the end of Whitby Woodlands Drive, the site surface slopes gently upward to the north, with steeper slopes rising to the northwest. On the east side of the parcel, the Fort Creek stream channel was observed to be entrenched roughly 6 to 8 feet below the surface. A lesser channel that appears to be an irrigation conveyance was observed approximately 50 to 100 feet west of the Fort Creek channel. The lesser channel was also entrenched roughly 5 to 6 feet below the surface. Cover on the east side of the site in the vicinity of Fort Creek and the lesser channel consisted of densely wooded cover with cottonwood, box elder, and alder trees, with an understory of grasses and weeds. The center of the property was open with a cover of tall bunch grasses, weeds, and sagebrush. The sloping areas on the west side of the site were covered with a dense oak and maple brush, with open areas of sagebrush and grass.

The surficial soils on the site appeared to consist of sandy silts with sub-rounded cobble and boulder sized particles exposed along the Fork Creek channel.

Recently constructed and established single-family homesites were observed on near-by and adjacent properties.

During the reconnaissance, no conditions of imminent geologic hazards were observed at the subject parcel.

4. GEOTECHNICAL ENGINEERING INVESTIGATIONS

4.1 FIELD PROGRAM

In order to define and evaluate the subsurface soil and groundwater conditions across the site, 4 test pits were excavated to depths of 12 to 15 feet. It should be noted that refusal was encountered on boulders during excavating operations at Test Pit TP-3 at a depth of 12 feet. The approximate locations of the test pits from this study are presented on Figure 5.

The field portion of our study was under the direct control and continual supervision of an experienced member of our geotechnical staff. During the course of the excavating operations, a continuous log of the subsurface conditions encountered was maintained. In addition, samples of the typical soils encountered were obtained for subsequent laboratory testing and examination. The soils were classified in the field based upon visual and textural examination. These classifications have been supplemented by subsequent inspection and testing in our laboratory. Detailed graphical representation of the subsurface conditions encountered is presented on Figures 6A through 6D, Log of Test Pits. Soils were classified in accordance with the nomenclature described on Figure 7, Unified Soil Classification System.

Disturbed bag samples were collected from the soils brought up by the backhoe bucket.

Following completion of excavating and logging, each test pit was backfilled. Although an effort was made to compact the backfill with the backhoe, backfill was not placed in uniform lifts and compacted to a specific density. Consequently, settlement of the backfill with time is likely to occur. Additionally, some caving of the test pit sidewalls was observed during excavating operations.

4.2 LABORATORY TESTING

4.2.1 General

In order to provide data necessary for our engineering analyses, a laboratory testing program was completed. The program included moisture, density, partial gradation, and consolidation tests. The following paragraphs describe the tests and summarize the test data.

4.2.2 Moisture and Density Tests

To aid in classifying the soils and to help correlate other test data, moisture and density tests were performed on selected samples. The results of these tests are presented on the test pit logs, Figures 6A through 6D.

4.2.3 Partial Gradation Tests

To aid in classifying the soils and to provide general index parameters, a partial gradation test was performed upon six representative samples of the soils encountered in the exploration test pits. The results of the tests are tabulated below:

Test Pits No.	Depth (feet)	Percent Passing No. 4 Sieve	Percent Passing No. 200 Sieve	Soil Classification
TP-1	2.5	90.4	32.2	SM
TP-1	10.0	83.6	15.3	SM
TP-2	3.0	88.1	36.8	SM
TP-2	9.0	-	77.8	ML
TP-3	4.0	70.7	13.6	SM
TP-4	3.0	83.4	15.5	SM

4.2.4 Consolidation Tests

To provide data necessary for our settlement analyses, a consolidation test was performed on one representative sample of the fine-grained soils encountered in the exploration test pits. The data available indicates that the soils are moderately over-consolidated and when loaded below the preconsolidation pressure the soils will exhibit moderate compressibility characteristics. Detailed results of the tests are maintained within our files and can be transmitted to you, at your request.

5. SITE CONDITIONS

5.1 SURFACE

The site consists of an 8.4-acre, irregular-shaped parcel containing undeveloped land covered by grasses, shrubs, and large trees.

The site is bordered by similar undeveloped land to the north, and residential structures to the east, south and west.

The topography of the site slopes gently to the southeast with an overall relief on the order of 50 to 100 feet. The average slope of the four lots varied from 18.97 to 24.22 percent.

5.2 SUBSURFACE SOIL

The soil conditions encountered in each of the test pits, to the depths excavated, were relatively similar. In general, from the ground surface at Test Pits TP-1 through TP-4 and extending to the depths explored of 12 to 15 feet, natural sand with varying amounts of silt and gravel was encountered. The sands are medium dense, slightly moist, brown, and will exhibit relatively high strength and low compressibility characteristics. Additionally, the upper three to six inches contain major roots and are loose. It should be noted that some layers of clayey silt were encountered in Test Pits TP-1 and TP-2. As stated previously, refusal was encountered on boulders during excavating operations at Test Pit TP-3 at a depth of 12 feet.

The lines designating the interface between soil types on the test pit logs generally represent approximate boundaries. In-situ, the transition between soil types may be gradual.

5.3 GROUNDWATER

Groundwater was not encountered in the test pits to the depths explored, 12 to 15 feet, during excavation operations. Groundwater is anticipated to be at a depth greater than 20 feet at the site.

Seasonal and longer-term groundwater fluctuations of one to two feet should be anticipated. The highest seasonal levels will generally occur during the late spring and summer months.

6. DISCUSSIONS AND RECOMMENDATIONS

6.1 SUMMARY OF FINDINGS

The proposed structures may be supported upon conventional spread and continuous wall foundations established upon suitable natural soils and/or structural fill extending to suitable natural soils.

The most significant geotechnical aspects of the site are:

1. The loose, surficial soils in the upper three to six inches of the natural granular soils encountered. Loose, surficial soils must be completely removed from below the building footprint.
2. Excavation refusal due to boulders at a dept of 12 feet in Test Pit TP-3. Basement excavations may be difficult due to boulders.

Due to the variable nature of the loose, surficial soils, a qualified geotechnical engineer from our staff must aid in verifying that all loose, surficial soils have been completely removed prior to the placement of structural site grading fills, footings, or foundations.

Due to possible “perched” groundwater conditions and to minimize variations in the moisture content of the supporting soils, subdrains will be required around subgrade levels and behind retaining structures.

The natural sands and gravels may be suitable for re-use provided they meet the requirements of structural fill specified in Section 5.2.3, Structural Fill.

Detailed discussions pertaining to earthwork, foundations, floor slabs, lateral resistance, pavement, and the geoseismic setting of the site are discussed in the following sections.

6.2 EARTHWORK

6.2.1 Site Preparation

Preparation of the site must consist of the removal of all loose surficial soils, non-engineered fills (if encountered), topsoil, debris, and other deleterious materials from beneath an area extending at least three feet beyond the perimeter of the proposed building, rigid pavement, and exterior flatwork areas.

The loose, surficial soils may remain in flexible pavement areas as long as they are properly prepared. Proper preparation will consist of scarifying and moisture conditioning the upper eight inches and recompacting to the requirements of structural fill. However, it should be noted that compaction of fine-grained soils (if encountered) as structural site grading fill will be very difficult, if not impossible, during wet and cold periods of the year. As an option for proper preparation and recompaction, the upper eight inches of the loose, surficial soils may be removed and replaced with granular subbase over proofrolled subgrade. Even with proper preparation, flexible pavements established on loose, surficial soils may experience some long-term movements. If the possibility of these movements is not acceptable, these loose, surficial soils must be completely removed.

Subsequent to the above operations and prior to the placement of footings, structural site grading fill or floor slabs, the exposed natural subgrade must be proofrolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. If any loose, soft, or disturbed zones are encountered, they must be completely removed in footing and floor slab areas and replaced with granular structural fill. If removal depth required is greater than two feet, G² must be notified to provide further recommendations. In pavement areas, unsuitable soils encountered during recompaction and proofrolling must be removed to a maximum depth of two feet and replaced with compacted granular structural fill.

6.2.2 Temporary Excavations

Temporary construction excavations in cohesive soil, not exceeding four feet in depth, may be constructed with near-vertical sideslopes. Temporary excavations up to 12 feet deep in

granular soils (sands) may be constructed with sideslopes no steeper than one horizontal to one vertical (1.0H:1.0V). Temporary excavations up to 12 feet deep in fine-grained cohesive soils (not anticipated) may be constructed with sideslopes no steeper than one half horizontal to one vertical (0.5H:1.0V).

Utility trench excavations must conform within Occupational Safety and Health (OSHA) guidelines for trench safety.

As stated previously, refusal was encountered on boulders during excavating operations at Test Pit TP-3 at a depth of 12 feet. Deeper excavations may be difficult in areas.

Excavations encountering loose and/or saturated cohesionless soils will be very difficult and will require very flat sideslopes and/or shoring, bracing, and dewatering as these soils will tend to flow into the excavation.

Excavations deeper than 12 feet are not anticipated at the site.

All excavations must be inspected periodically by qualified personnel. If any signs of instability or excessive sloughing are noted, immediate remedial action must be initiated.

6.2.3 Structural Fill

Structural fill is defined as all fill which will ultimately be subjected to structural loadings, such as imposed by footings, floor slabs, pavements, etc. Structural fill will be required as backfill over foundations and utilities, as site grading fill, and possibly as replacement fill below footings. All structural fill must be free of sod, rubbish, topsoil, frozen soil, and other deleterious materials.

Structural site grading fill is defined as structural fill placed over relatively large open areas to raise the overall grade. For structural site grading fill, the maximum particle size shall not exceed four inches; although, occasional larger particles not exceeding six inches in diameter may be incorporated if placed randomly in a manner such that "honeycombing" does not occur and the desired degree of compaction can be achieved. The maximum particle size within structural fill placed within confined areas shall be restricted to two inches.

The non-engineered fills (if encountered), natural fine-grained and underlying granular soils may be utilized as structural site grading fill. It should be noted that unless moisture control is maintained, utilization of fine-grained soils as structural site grading fill will be very difficult, if not impossible, during wet and cold periods of the year. Only granular soils are recommended as structural fill in confined areas, such as around foundations and within utility trenches.

All imported granular structural fills should consist of a fairly well-graded mixture of sand and gravel containing less than 18 percent fines (percent by weight of material passing the No. 200 sieve).

To stabilize soft subgrade conditions (if needed), a mixture of coarse gravels and cobbles (stabilizing fill) should be utilized. A layer of stabilizing fill approximately 12 to 18 inches thick is typically sufficient to stabilize most soft/disturbed areas.

Non-structural site grading fill is defined as all fill material not designated as structural fill and may consist of any cohesive or granular soils not containing excessive amounts of degradable material.

6.2.4 Fill Placement and Compaction

Structural fill shall be placed in lifts not exceeding eight inches in loose thickness. Structural fills shall be compacted in accordance with the percent of the maximum dry density as determined by the AASHTO² T-180 (ASTM³ D-1557) compaction criteria in accordance with the following table:

Location	Total Fill Thickness (feet)	Minimum Percentage of Maximum Dry Density
Beneath an area extending at least 3 feet beyond the perimeter of the structure	0 to 8	95
Outside area defined above	0 to 5	90
Outside area defined above	5 to 8	92
Road base	-	96

Structural fills greater than eight feet thick are not anticipated at the site.

Subsequent to stripping and prior to the placement of structural site grading fill, the subgrade must be prepared as discussed in Section 6.2.1, Site Preparation, of this report. In confined areas, subgrade preparation should consist of the removal of all loose or disturbed soils.

Non-structural fill may be placed in lifts not exceeding 12 inches in loose thickness and compacted by passing construction, spreading, or hauling equipment over the surface at least twice.

Coarse gravel and cobble mixtures (stabilizing fill), if utilized, shall be end-dumped, spread to a maximum loose lift thickness of 15 inches, and compacted by dropping a backhoe bucket onto the surface continuously at least twice. As an alternative, the fill may be compacted by passing

² American Association of State Highway and Transportation Officials

³ American Society for Testing and Materials

moderately heavy construction equipment or large self-propelled compaction equipment over the area at least twice. Subsequent fill material placed over the coarse gravels and cobbles shall be adequately placed so that the “fines” are “worked into” the voids in the underlying coarser gravels and cobbles.

6.2.5 Utility Trenches

All utility trench backfill material below structurally loaded facilities (flatwork, floor slabs, roads, etc.) shall be placed at the same density requirements established for structural fill. If the surface of the backfill becomes disturbed during the course of construction, the backfill shall be proofrolled and/or properly compacted prior to the construction of any exterior flatwork over a backfilled trench. Proofrolling shall be performed by passing moderately loaded rubber tire-mounted construction equipment uniformly over the surface at least twice. If excessively loose or soft areas are encountered during proofrolling, they shall be removed to a maximum depth of two feet below design finish grade and replaced with structural fill.

Most utility companies and City-County governments are now requiring that Type A-1a or A-1b (AASHTO Designation – basically granular soils with limited fines) soils be used as backfill over utilities. These organizations are also requiring that in public roadways the backfill over major utilities be compacted over the full depth of fill to at least 96 percent of the maximum dry density as determined by the AASHTO T-180 (ASTM D-1557) method of compaction. We recommend that as the major utilities continue onto the site that these compaction specifications are followed.

The natural sands may be suitable for re-use as trench backfill provided they meet the requirements of A-1a or A-1b material.

6.3 SPREAD AND CONTINUOUS WALL FOUNDATIONS

6.3.1 Design Data

The proposed structures may be supported upon conventional spread and continuous wall foundations established upon suitable natural soils and/or structural fill extending to suitable natural soils. Under no circumstances shall footings be placed overlying loose, surficial soils.

For design, the following parameters are provided with respect to the projected loading discussed in Section 2., Proposed Construction, of this report:

Minimum Recommended Depth of Embedment for Frost Protection	- 30 inches
Minimum Recommended Depth of Embedment for Non-frost Conditions	- 15 inches
Recommended Minimum Width for Continuous Wall Footings	- 18 inches
Minimum Recommended Width for Isolated Spread Footings	- 24 inches
Recommended Net Bearing Pressure for Real Load Conditions	
For footings on suitable natural soils and/or structural fill extending to suitable natural soils	- 2,500 pounds per square foot
Bearing Pressure Increase for Seismic Loading	- 50 percent*

- * Not applicable for edge bearing pressure when the footings are established upon granular soil.

The term “net bearing pressure” refers to the pressure imposed by the portion of the structure located above lowest adjacent final grade. Therefore, the weight of the footing and backfill to the lowest adjacent final grade need not be considered. Real loads are defined as the total of all dead plus frequently applied live loads. Total load includes all dead and live loads, including seismic and wind.

6.3.2 Installation

Under no circumstances shall the footings be established upon loose or disturbed soils, non-engineered fills (if encountered), rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. If unsuitable soils are encountered, they must be completely removed and replaced with compacted structural fill.

The width of structural replacement fill below footings should be equal to the width of the footing plus one foot for each foot of fill thickness.

6.3.3 Settlements

Settlements of foundations designed and installed in accordance with above recommendations and supporting maximum projected structural loads are anticipated to be on the order of one-half to five-eighths of an inch. Settlements are expected to occur rapidly with approximately 60 to 70 percent of the settlements occurring during construction.

6.4 SUBDRAINS

A permanent foundation/chimney subdrain system will be required around the outside of all subgrade walls.

The perimeter subdrain pipe should consist of a minimum of four-inch diameter, slotted or perforated pipe with the invert established at least 18 inches below the top of the lowest adjacent slab. The pipe should be encased in a one-half- to one-inch minus clean gap-graded crushed gravel extending two inches below, laterally, and up continuously at least 12 inches above the top of the lowest adjacent slab. The same granular material could be utilized as the chimney drain against the subgrade walls. The gravel chimney drain must be continuous and at least six inches wide. In all cases, the gravels must be separated from natural soils or backfill with a geotextile fabric, such as Mirafi 140N or equivalent. As an alternate, a synthetic drain board, such as Miradrain or equivalent, can be used for the chimney subdrain. The slope of the pipe should be at least 0.25 percent to a suitable point of gravity discharge, such as a sump within or outside the perimeter of the below-grade portion of the structure or by gravity down-gradient. Prior to installing the gravels, we recommend that the outside walls adjacent to habitable areas be appropriately waterproofed. If the areas are mechanical areas, dampproofing should be adequate.

6.5 LATERAL RESISTANCE

Lateral loads imposed upon foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footings and the supporting soils. In determining frictional resistance, a coefficient of 0.45 should be utilized for the natural granular soils. In determining frictional resistance, a coefficient of 0.40 should be utilized for the natural fine-grained soils. Passive resistance provided by properly placed and compacted granular structural fill above the water table may be considered equivalent to a fluid with a density of 300 pounds per cubic foot. Below the water table, this granular soil should be considered equivalent to a fluid with a density of 150 pounds per cubic foot.

A combination of passive earth resistance and friction may be utilized provided that the friction component of the total is divided by 1.5.

6.6 LATERAL PRESSURES

The lateral pressure parameters, as presented within this section, assume that the backfill extending at least five feet from the back of the wall be properly placed and compacted granular soil. The lateral pressures imposed upon subgrade facilities will, therefore, be basically dependent upon the relative rigidity and movement of the backfilled structure. For active walls, such as retaining walls which can move outward (away from the backfill), granular backfill may be considered equivalent to a fluid with a density of 35 pounds per cubic foot in computing lateral pressures. For more rigid basement walls, granular backfill may be considered equivalent to a fluid with a density of 45 pounds per cubic foot. For very rigid non-yielding walls, granular backfill should be considered equivalent to a fluid with a density with at least 55 pounds per cubic foot. The above values assume that the surface of the soils slope behind the wall is horizontal, that the granular fill has been placed and lightly compacted, not as structural fill. If the fill is placed as a structural fill the values should be increased to 45 pounds per cubic foot, 60 pounds per cubic foot, and 120 pounds per cubic foot, respectively.

Recommended average lateral uniform pressure for various height walls are tabulated below and assume a granular wall backfill with a horizontal grade above the wall. It should be noted that the lateral pressures as quoted assume that the backfill materials will not become saturated. If the backfill becomes saturated, the above values may be decreased by one-half; however, full hydrostatic water pressures will have to be included.

Wall Height (feet)	Uniform Seismic Lateral Pressure*, ** (psf)
4	88
8	176
12	265

* Maximum short-term pressures, they are not sustained loads.

** For intermediate height wall, the lateral pressure will be developed based upon a straightline interpolated between the pressures at the specific height.

Note that the pressures presented in this section do not include surcharge loadings, such as floor slabs, adjacent footings, etc.

6.7 FLOOR SLABS

Floor slabs may be established directly upon suitable natural soils and/or structural fill extending to suitable natural soils. Loose, surficial soils are not considered suitable. To provide a "working mat", it is recommended that floor slabs are directly underlain by a minimum of four

inches of aggregate base material. Settlements of lightly to moderately loaded floor slabs are anticipated to be minor.

6.8 PAVEMENTS

The properly prepared loose, surficial soils will exhibit poor engineering characteristics when saturated or nearly saturated. Loose, surficial soils may remain in flexible pavement areas if properly prepared, as stated previously in this report. Rigid pavements shall not be placed overlying loose, surficial soils, even if properly prepared. Considering the existing loose, surficial soils as the subgrade soils and the projected traffic, the following pavement sections are recommended:

Subdivision Roadways

(Moderate Volume of Automobiles and Light Trucks,
Light Volume of Medium-Weight Trucks,
and Occasional Heavy-Weight Trucks)
[5 equivalent 18-kip axle loads per day]

Flexible:

3.0 inches	Asphalt concrete
8.0 inches	Aggregate base
Over	Properly prepared natural soils, properly prepared existing loose, surficial soils, and/or structural site grading fill extending to suitable stabilized natural soils.

Rigid:

5.5 inches	Portland cement concrete (non-reinforced)
5.0 inches	Aggregate base
Over	Properly prepared natural soils, and/or structural site grading fill extending to suitable stabilized natural soils.*

* Rigid pavements shall not be placed over loose, surficial soils, even if properly prepared.

These above rigid pavement sections are for non-reinforced Portland cement concrete. Concrete should be designed in accordance with the American Concrete Institute (ACI) and joint details should conform to the Portland Cement Association (PCA) guidelines. The concrete should have a minimum 28-day unconfined compressive strength of 4,000 pounds per square inch and contain 6 percent \pm 1 percent air-entrainment.

6.9 GEOSEISMIC SETTING

6.9.1 General

In July 2019, the State of Utah adopted the 2018 International Building Code (IBC) and the 2015 International Residential Code (IRC). The IRC determines the seismic hazard for a site based upon 2008 mapping of bedrock accelerations prepared by the United States Geologic Survey (USGS) and the soil being Site Class D. The USGS values are presented on maps incorporated into the building code and are available based on latitude and longitude coordinates (grid points).

The single-family residential structures should be designed in accordance with the procedures presented in Section R301.2.2, Seismic Provisions of the 2015 IRC.

6.9.2 Soil Class

For dynamic structural analysis, the Site Class D - Stiff Soil Profile as defined in Table 20.3-1, Site Classification, of ASCE 7-10 can be utilized.

6.9.3 Site Seismic Response

The IRC 2015 code is based on 2008 USGS mapping, which provides peak values of short and long period accelerations (S_s , S_1) for the Site Class B-C boundary for the Maximum Considered Earthquake (MCE). This Site Class B-C boundary represents a hypothetical bedrock surface and must be corrected for local soil conditions. The following table summarizes the peak ground and short and long period accelerations for this site for a MCE event and incorporates a soil amplification factor for a Site Class D soil profile in the second column. Based on the site latitude and longitude (40.4622 degrees north and -111.7803 degrees west, respectively), the values for this site are tabulated on the following page.

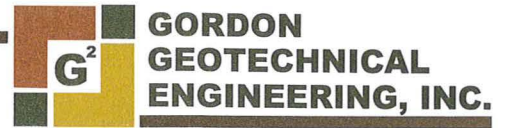
Spectral Acceleration Value, T Seconds	Site Class B Boundary [mapped values] (% g)	Site Class D [adjusted for site class effects] (% g)
Peak Ground Acceleration	49.4	49.7
0.2 Seconds (Short Period Acceleration)	$S_S = 123.4$	$S_{MS} = 124.2$
1.0 Seconds (Long Period Acceleration)	$S_1 = 45.7$	$S_{M1} = 70.5$

The IBC design accelerations (S_{DS} and S_{D1}) are based on multiplying the above accelerations (adjusted for site class effects) for the MCE event by two-thirds.

6.10 SITE OBSERVATIONS

As stated previously, due to the potential for encountering loose, surficial soils at foundation depth, a qualified geotechnical engineer from our staff must aid in verifying that all loose, surficial soils have been completely removed prior to the placement of structural site grading fills, footings, or foundations.

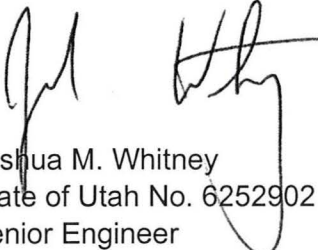
Job No. 660-003-20
Geologic Hazard Reconnaissance and Geotechnical Study
July 15, 2020




We appreciate the opportunity of providing this service for you. If you have any questions or require additional information, please do not hesitate to contact us.

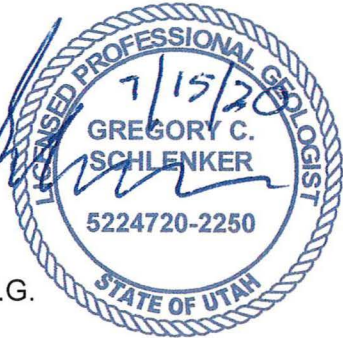
Respectfully submitted,

Gordon Geotechnical Engineering, Inc.



Joshua M. Whitney
State of Utah No. 6252902
Senior Engineer

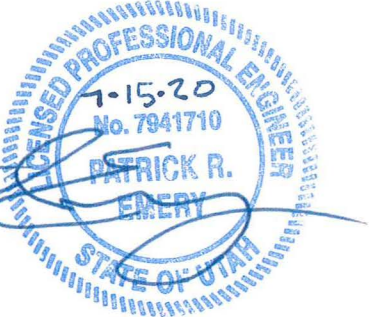
And


Gregory C. Schlenker PhD, P.G.
State of Utah No. 5224720
Senior Engineering Geologist

A circular professional seal for Gregory C. Schlenker, a Licensed Professional Geologist in the State of Utah. The seal includes the date 7/15/20, the name GREGORY C. SCHLENKER, and the license number 5224720-2250.

Reviewed By:


Patrick R. Emery
State of Utah No. 7941710
Senior Engineer

A circular professional seal for Patrick R. Emery, a Licensed Professional Engineer in the State of Utah. The seal includes the date 7-15-20, the name PATRICK R. EMERY, and the license number No. 7941710.

JMW/PRE/GCS:sn

- Encl. Figure 1, Vicinity Map
Figure 2, Site Plan
Figure 3, Geologic Mapping
Figure 4, LiDAR Analysis
Figure 5, Geologic Hazards Site Evaluation
Figures 6A through 6D, Log of Test Pits
Figure 7, Unified Soil Classification

Addressee (3 + email)

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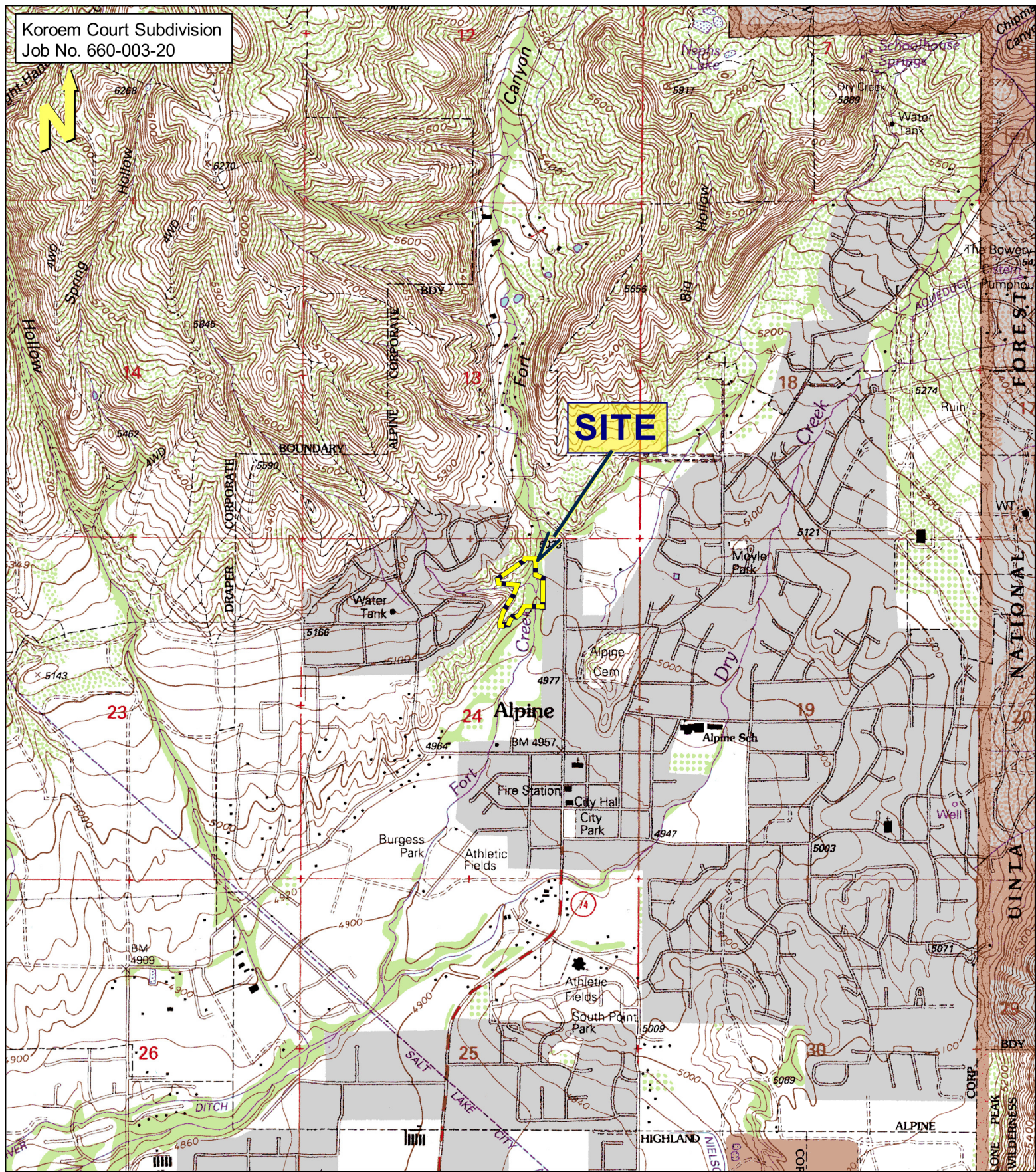
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Koroem Court Subdivision
Job No. 660-003-20



Base:
1998 USGS 7.5 Minute topographic
map titled "Lehi, Utah" from Utah
AGRC; <http://gis.utah.gov/>

0 200 400 ft

1:24,000

FIGURE 1 VICINITY MAP



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Koroem Court Subdivision
Job No. 660-003-20



SITE

Lot #2

Lot #3

Lot #4

Lot #1

Fort Creek

Whitby Woodlands Dr.

Main St.

Base:
2018 0.6m NAIP Color Orthoimagery,
from Utah AGRC; <http://gis.utah.gov/>

0 200 400 ft

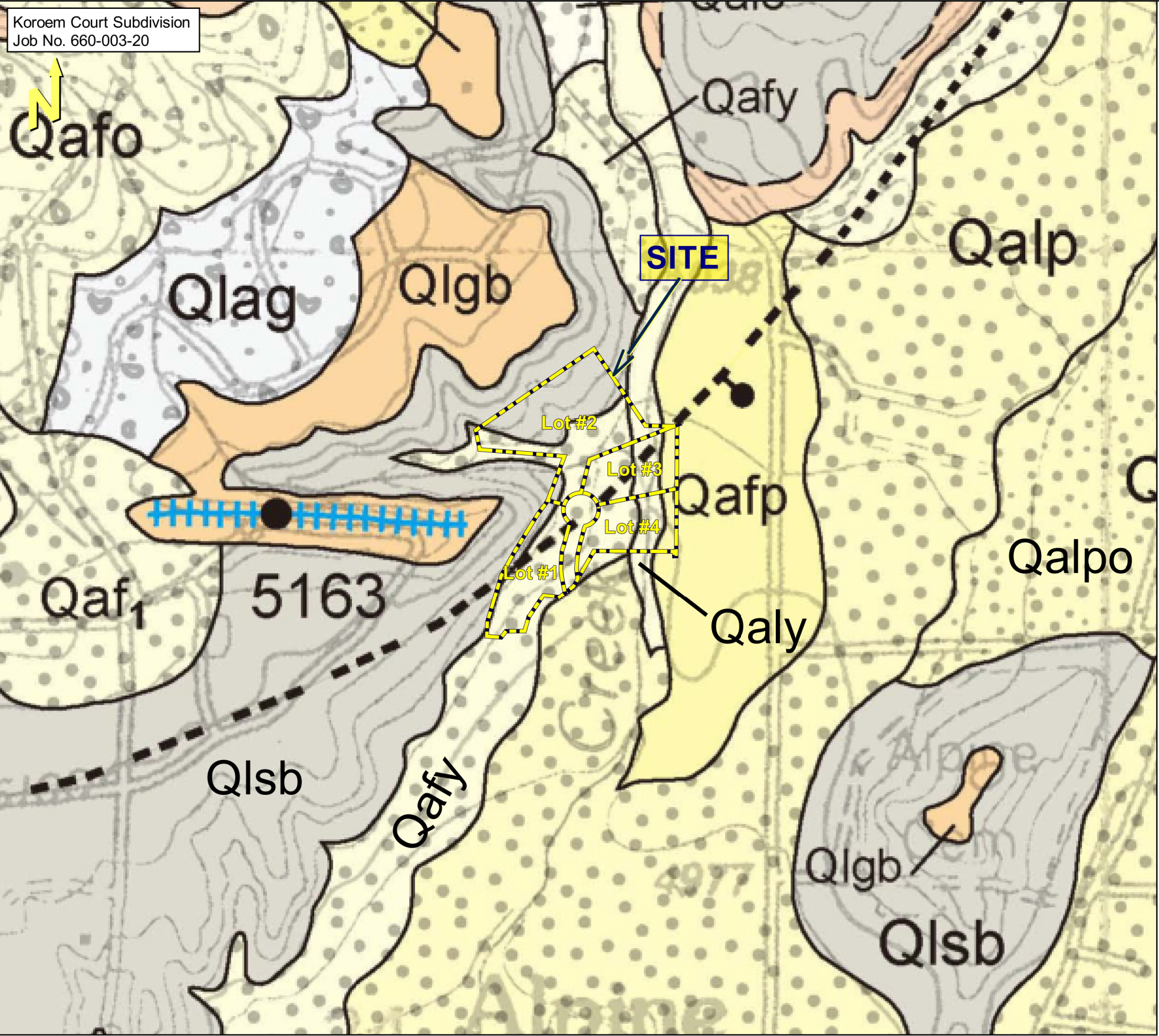


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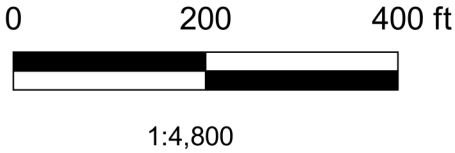
FIGURE 2 SITE PLAN



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Base:
Biek, R.F., 2005, Geologic map of the Lehi
quadrangle and part of the Timpanogos Cave
quadrangle, Salt Lake and Utah Counties, Utah: 2 pl.
2005 Utah Geological Survey, scale 1:24,000

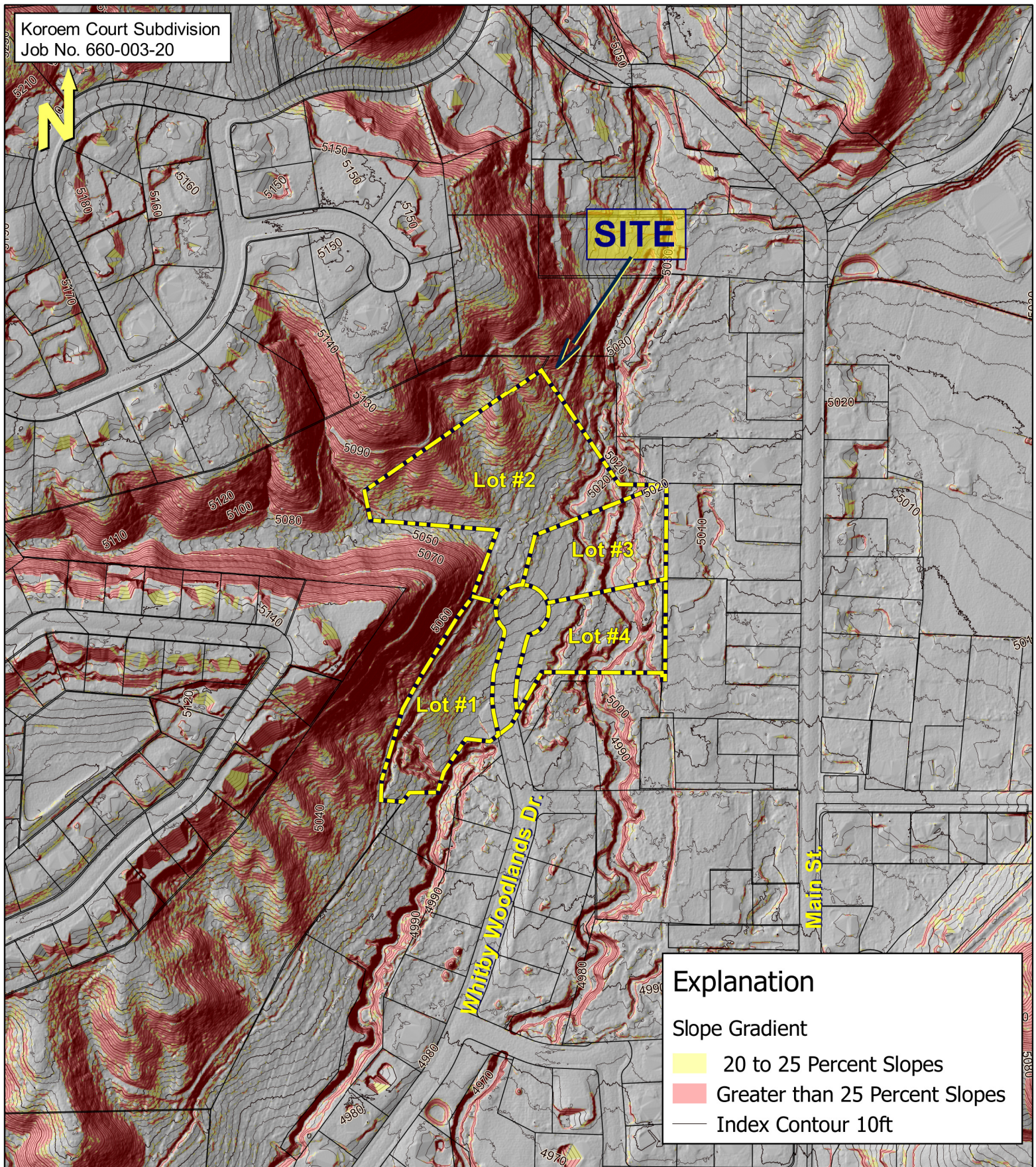


Explanation

(Geology after Beik, 2005)

- Qaly** - Young alluvial deposits (Holocene to Upper Pleistocene) – Moderately sorted sand, silt, clay, and pebble to boulder gravel deposited in river channels and flood plains; incised by active stream channels, and locally include small alluvial-fan and colluvial deposits...
- Qaf₁** - Modern alluvial-fan deposits (Holocene) – Poorly to moderately sorted, non-stratified, clay- to boulder-size sediment deposited principally by debris flows at the mouths of active drainages; upper parts typically characterized by abundant boulders and debris-flow levees...
- Qaf_y** - Younger undifferentiated alluvial-fan deposits (Holocene to Upper Pleistocene) – Poorly to moderately sorted, clay- to boulder-size sediment deposited principally by debris flows...
- Qafp** - Alluvial-fan deposits related to the Provo phase of the Bonneville lake cycle (Upper Pleistocene) – Poorly to moderately sorted, clay- to cobble-size sediment... deposited by streams associated with the Bonneville (transgressive) phase...
- Qafo** - Older alluvial-fan deposits (Upper Pleistocene) – Similar to younger undifferentiated alluvial-fan deposits (Qaf_y)...predating, the Bonneville shoreline...
- Qalp** - Alluvial deposits related to the Provo phase of the Bonneville lake cycle (Upper Pleistocene) – Moderately to well-sorted sand, silt, and pebble gravel deposited principally in river channels; coarsens upgradient and includes boulder-size clasts...
- Qalpo** - Older alluvial deposits related to the Provo phase of the Bonneville lake cycle (Upper Pleistocene) – Moderately to well-sorted sand, silt, and pebble to boulder gravel...that is about 30 feet (9 m) above adjacent Qalp deposits...
- Qlgb** - Lacustrine gravel and sand (Upper Pleistocene) – Moderately to well-sorted, moderately to well-rounded, clast-supported, pebble to cobble gravel and pebbly sand; thin to thick bedded...Qlgb deposited at and below highest Bonneville shoreline...
- Qlsb** - Lacustrine sand and silt (Upper Pleistocene) – Fine- to coarse-grained lacustrine sand and silt with minor gravel; typically thick bedded and well sorted; gastropods locally common...Qlsb deposited at and below highest Bonneville shoreline but above the Provo shoreline...
- Qlag** - Lacustrine and alluvial coarse-grained deposits (Pleistocene) – Poorly to moderately sorted, clay- to boulder-size sediment...
- Normal fault**, dashed where approximately located, dotted where concealed and approximately located...
- Lake Bonneville Shoreline**
- Crest of Lake Bonneville offshore bar or spit**

FIGURE 3
GEOLOGIC MAPPING
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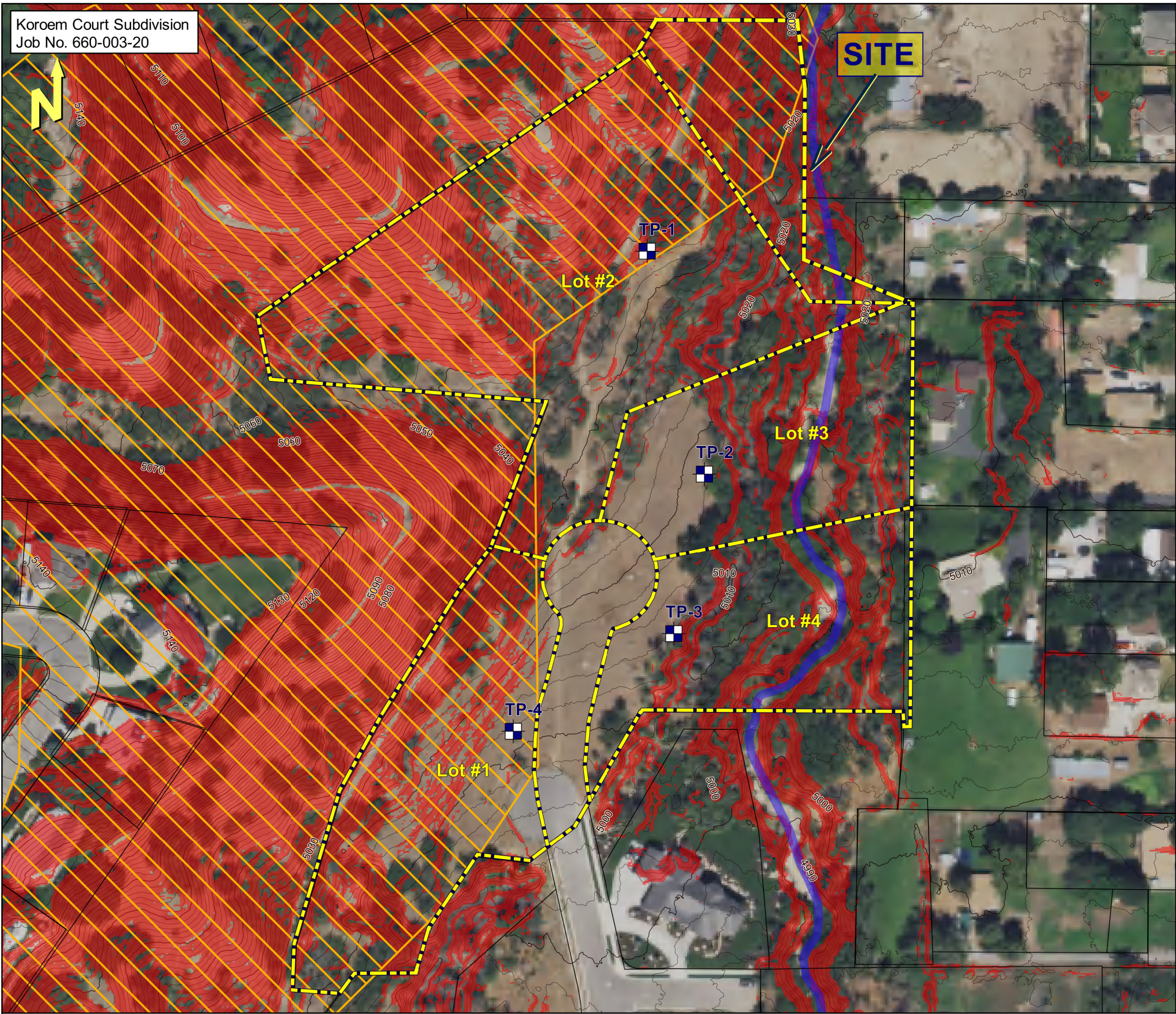


Base:
2014 0.5m LiDAR Imagery,
from Utah AGRC; <http://gis.utah.gov/>

0 300 600 ft

1:3,600

FIGURE 4 LiDAR ANALYSIS



Base:
2018 0.6m NAIP Color Orthoimagery,
from Utah AGRC; <http://gis.utah.gov/>

0 120 240 ft
1:1,440

Explanation

Geologic Hazard Study Areas (Alpine City, 2006; Utah County, 2020)*

- Landslide Study Area
- Debris Flow Study Area
- Rock Fall Study Area

*The Alpine City (2006) and Utah County GIS (2020) delimited Landslide Study Area, Debris Flow Study Area, and Rockfall Study Area overlays occupy the same areas on the site and site vicinity for the three hazard study areas.

FEMA (2020) - Alpine City (2006) Flood Risk Zones

- Zone A and AE: Areas subject to inundation by the 1-percent -annual-chance flood event generally determined using approximate methodologies...Mandatory flood insurance purchase requirements and floodplain management standards apply.

Slope Limitation Areas

- Greater than 20 Percent Slopes
- Index Contour 10ft

- Test Pit Locations

FIGURE 5 GEOLOGIC HAZARDS SITE EVALUATION





TEST PIT TP-1

Project Name: Proposed Koroem Court Subdivision

Project No.: 660-003-20

Location: North of 662 North Whitby Woodlands Dr, Alpine, Utah

Client: Brian Hansen

Excavating Method: JCB 4CX Backhoe

Date Excavated: 06-17-20

Elevation: ---

Water Level: No groundwater encountered.

Remarks:

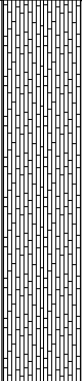

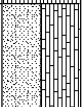


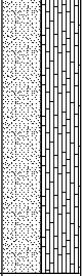

[illegible]

The discussion in the text under the section titled, SUBSURFACE CONDITIONS, is necessary for a proper understanding of the nature of the subsurface material.

FIGURE 6A

Project Name: Proposed Koroem Court Subdivision
 Location: North of 662 North Whitby Woodlands Dr, Alpine, Utah
 Excavating Method: JCB 4CX Backhoe
 Elevation: ---
 Remarks: ---

Project No.: 660-003-20
 Client: Brian Hansen
 Date Excavated: 06-17-20
 Water Level: No groundwater encountered.

DESCRIPTION	GRAPHIC LOG	WATER LEVEL	DEPTH (FT.)	SAMPLE SYMBOL	SAMPLE TYPE	BLOWS/FT.	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	REMARKS
SILTY FINE SAND with fine and coarse gravel; occasional large cobbles; numerous undecomposed roots and root casts; major roots (topsoil) to 2"; brown (SM)												slightly moist "medium dense"
					B		6.8		36.8			
			5									
FINE TO COARSE SAND with some silt; with fine and coarse gravel and occasional cobbles; light brown (SP-SM)												slightly moist "medium dense"
CLAYEY SILT with some fine sand; occasional root casts; brown (ML)					B		13.4		77.8			slightly moist "stiff"
FINE SAND with some silt; some fine and coarse gravel; undecomposed roots; brown (SP-SM)			10									slightly moist "medium dense"
					B							
			15									
Stopped excavating at 15.0'. Stopped sampling at 14.5'. No significant sidewall caving.												
			20									
			25									

The discussion in the text under the section titled, SUBSURFACE CONDITIONS, is necessary for a proper understanding of the nature of the subsurface material.

FIGURE 6B

Project Name: Proposed Koroem Court Subdivision

Project No.: 660-003-20

Location: North of 662 North Whitby Woodlands Dr, Alpine, Utah

Client: Brian Hansen

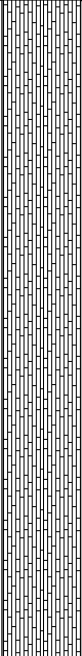

Excavating Method: JCB 4CX Backhoe

Date Excavated: 06-17-20

Elevation: ---

Water Level: No groundwater encountered.

Remarks: _____

DESCRIPTION	GRAPHIC LOG	WATER LEVEL	DEPTH (FT.)	SAMPLE SYMBOL	SAMPLE TYPE	BLOWS/FT.	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTIC LIMIT (%)	REMARKS
SILTY FINE TO COARSE SAND with fine and coarse gravel; numerous undecomposed and decomposed roots and root casts; major roots (topsoil) to 2"; brown (SM)												slightly moist "medium dense"
grades with zones of cleaner sand and fine gravel			5		B		5.1		13.6			
3.0' boulder at 11.0'			10									
Excavating refusal at 12.0' on boulders.			15									
Stopped sampling at 4.5'.												
No significant sidewall caving.			20									
			25									

The discussion in the text under the section titled, SUBSURFACE CONDITIONS, is necessary for a proper understanding of the nature of the subsurface material.

FIGURE 6C



Remarks:

The discussion in the text under the section titled, SUBSURFACE CONDITIONS, is necessary for a proper understanding of the nature of the subsurface material.

FIGURE 6D

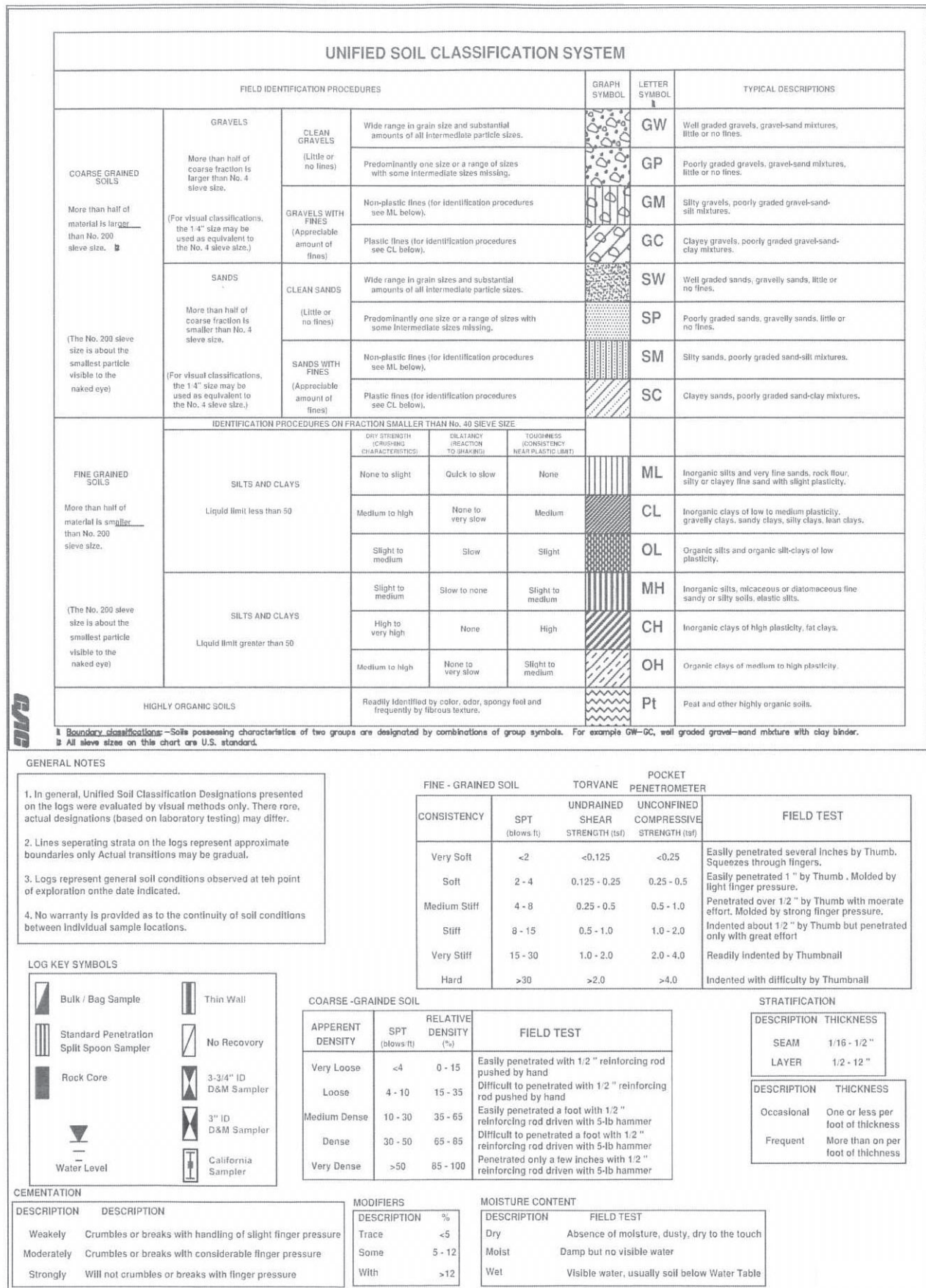


FIGURE 7

ALPINE CITY COUNCIL AGENDA

SUBJECT: Final Plat – Alpine Layton Subdivision Plat A (Revised Preliminary and Final)

FOR CONSIDERATION ON: 27 July 2021

PETITIONER: Will Jones representing Alpine Layton Development LLC

ACTION REQUESTED BY PETITIONER: Review and approve the final plat

BACKGROUND INFORMATION:

The Alpine Layton Subdivision consists of 5 lots on 9.7 acres, with lots ranging from 0.94 acres to 4.76 acres in size. The development is located at approximately 200 North 400 West, and in the CR 20,000 zone. The Alpine Layton Subdivision Plat A is the final plat of the final phase of the Whitby Woodlands Development.

STAFF RECOMMENDATION:

Review the staff report and determine if the proposed subdivision should be approved.

SAMPLE MOTION TO APPROVE WITH CONDITIONS:

I move to approve Alpine Layton Subdivision Plat A with the following conditions:

- An exception be granted for grading beyond the 50-foot clear zone
- Prior to recording, the developer:
 - Meet the water policy and provide escrow funds for a roadway preservation coat;
 - Provide a cost estimate for development;
 - Address the redlines on the plat and plans;
 - Keep the street name Whitby Woodlands Drive

SAMPLE MOTION TO TABLE/DENY:

I move to table (or deny) Alpine Layton Subdivision Plat A based on the following:

- **** INSERT FINDING****



**ALPINE CITY
STAFF REPORT
July 16, 2021**

To: Alpine City Planning Commission & City Council

From: Staff

Prepared By: Austin Roy, City Planner
Planning & Zoning Department

Jed Muhlestein, City Engineer
Engineering & Public Works Department

Re: Alpine Layton Subdivision Plat A – REVISED PRELIMINARY/FINAL

Applicant:	Will Jones, representing Alpine Layton Development, LLC
Project Location:	Approximately 200 North 400 West
Zoning:	CR-20,000 Zone
Acreage:	9.7 Acres
Lot Number & Size:	5 lots ranging from 0.94 acres to 4.76 acres
Request:	Recommend approval of and approve the Final Plat & Plans

SUMMARY

The Alpine Layton Subdivision consists of 5 lots on 9.7 acres, with lots ranging from 0.94 acres to 4.76 acres in size. The development is located at approximately 200 North 400 West, and in the CR 20,000 zone. The Alpine Layton Subdivision Plat A is the final plat of the final phase of the Whitby Woodlands Development.

BACKGROUND

In 2007 Alpine City granted approval of the Preliminary Plat of the Whitby Woodlands Subdivision, and an agreement was recorded between Alpine City and Roger Whitby, which granted the City right of way at 200 North and 400 West and in exchange gave Roger Whitby fifteen years to complete the development by extending approval of the preliminary plans throughout that time.

ANALYSIS

PRD Status and Requirements

The Whitby Woodlands subdivision was granted Planned Residential Development (PRD) status at Concept and the approved Preliminary Plat also reflected this. However, it is proposed that the

Alpine Layton Subdivision be developed as a standard subdivision with no additional PRD requirements.

Lot Width and Area

Per the requirements of the CR-20,000 zone lots with greater amounts of slope have increased area requirements. See table below:

3.03.040 Density, Lot Area And Width Requirements - Single Family Dwellings

1. The minimum area and width requirements of a zoning lot shall be determined upon the average slope of the lot and the following schedule:

Average Slope of Lot*	Minimum Area (in square feet)	Minimum Width (at min. front setback)
0-9.9%	20,000 (.46 ac)	110 ft.
10-14.9%	30,000 (.68 ac)	110 ft.
15-19.9%	40,000 (.92 ac)	110 ft.
20-24.9%	60,000 (1.37 ac)	110 ft.
25%+	Not Buildable	Not Buildable

The proposed lots all exceed the minimum requirements for area, with the smallest lot being 41,050 square feet in size.

Lot width requirements for the CR-20,000 zone are 110 feet for a standard lot as measured at the 30 foot front setback line, and 80 feet for a cul-de-sac lot located on a curve as measured at the right of way line, and 110 feet as measured at the 30 foot front setback line. All proposed lots appear to meet the width requirement.

Use

The developer is proposing that the lots be used for single-unit detached dwellings, which is consistent with the permitted uses for the CR-20,000 zone.

Sensitive Lands (Wildland Urban Interface)

See the Engineering and Public Works, and the Lone Peak Fire Department Reviews below for further comments on sensitive lands requirements.

Trails

The City Trail Master Plan shows no trails within the development area. Thus, trails are not a requirement for this subdivision.

General Plan

As part of the City General Plan, the Street Master Plan, shows a connection between Whitby Woodlands Drive and 200 North Street. The proposed plan fulfills this planned connection.

Other

None.

REVIEWS

PLANNING AND ZONING DEPARTMENT REVIEW

The analysis section in the body of this report serves as the Planning and Zoning Department review.

ENGINEERING AND PUBLIC WORKS DEPARTMENT REVIEW

This section constitutes the engineering review for the revised preliminary/final application for what used to be Whitby Woodlands Plat J; the last phase of the Whitby Woodlands development project. This last phase was bought by another developer and modified slightly from the original. The original approved proposal had more lots but the roadway alignment is the same as what was submitted. At Final, Engineering reviews previous redline comments on the construction drawings and reviews the final plat. Most of the comments have been corrected and are approved. There are a few minor remaining redline comments for both the construction drawings and plat that need corrected and approved by Staff prior to recording.

Streets

The plans show connecting Whitby Woodlands Drive to 200 North. This connection is reflected on the Transportation Master Plan. The road meets ordinance regarding width, length, grade, and curvature.

Frontage Improvements. The plans show frontage improvements along all sections of existing and proposed roadways (including 400 W). Frontage improvements consist of streets, curb and gutter, and sidewalk. The sidewalk improvements will connect Whitby Woodlands Drive to both 200 N and 400 W.

Traffic Study. In 2011 a traffic study was performed (attached) at this intersection to investigate the need for a 3-way stop scenario, which was currently installed and in operation at that time. The study found that a 3-way stop was not warranted at that time, but when the fourth leg of the intersection was built, it would be warranted. The 3-way stop was removed in 2011. Now that the fourth leg of the intersection is going to be constructed, a 4-way stop intersection is warranted and is reflected on the plans to be built as such during construction.

Grading. There is one small section of roadway excavation that extends beyond the 50-foot clear zone allowed by City standard details. A developer is allowed 50-feet of area beyond the right-of-way to grade the land to construct roadways. If the grading cannot be within this area, retaining walls are required to keep the disturbance within this area. As can be noted on sheet 5, Grading & Drainage, the amount of area required beyond the 50-foot clear zone is minimal, approximately 10 more feet. **An exception to the 50-foot clear zone grading rule would need to be granted for the plans as currently drawn.** Engineering would be in favor of an exception to the 50-foot clear zone grading rule in this situation for the following reasons: 1) If the developer is required to build a retaining wall, the retaining wall will become property of the city who is then responsible for the maintenance and operation of the wall in the future. 2) Adding a retaining wall on the edge of the road, in this location, is in the middle of a curbed section of

roadway. Adding a retaining wall at this location will reduce driver sight distance as they travel the road.

The Fire Chief has approved road grades and design. His report is attached.

Lots

Lots, and slopes on lots, were reviewed and buildable areas have been defined on lots 1 and 5 where steep slopes exist. All other lots have no restrictions in terms of buildable areas. Each lot contains the appropriate amount of space and frontage for the zone, based on the average slope of the lot as defined in section 3.03.040 of the Development Code.

Utilities

A detailed utility plan has been submitted and reviewed. The subdivision has been accounted for within the utility master plans. Horrocks Engineers has modeled each utility system and has given recommendations regarding line sizing. That letter is attached and the plans reflect the recommendations.

Sewer System. 8-inch sewer mains exist in both Whitby Woodlands Dr. and 200 North which can serve the development. 8-inch mains and 4-inch sewer laterals would be required and are shown for each new lot. There are no existing services to terminate or reuse on the property.

Culinary Water System. The subdivision is well below the 5350-foot elevation, which is the highest elevation the existing water system can serve and still provide a minimum 40 psi required by ordinance. There are currently 8-inch waterlines stubbed into the property from both 200 N and Whitby Woodlands Drive which would serve the development. The plans show connection to these lines with 8-inch lines throughout the development. 1-inch water service laterals with $\frac{3}{4}$ -inch meters would be required. New laterals are shown to be constructed for each lot. The Fire Chief has approved the location of proposed fire hydrants. There are no existing services to terminate or reuse on the property.

Pressurized Irrigation System. Similar to the culinary, there is currently 6-inch and 12-inch pressurized irrigation lines in both 200 N and Whitby Woodlands Drive which would serve the development. The plans show connection to these lines with 6-inch lines throughout the development. 1-inch laterals are shown to be constructed for each new lot. There are no existing services to terminate or reuse on the property.

Storm Water Drainage System. The development shows a storm drain system that meets City Standards. The storm drain system report is attached for reference. In general, one detention pond is proposed on the south side of lot 4. The pond retains the 80th percentile storm with a sump and detains all storms larger, up to the 100-yr event storm. The larger storms are released at a controlled rate to the existing system in 200 North.

A storm water pollution prevention plan (SWPPP) was submitted with the plans. A City Land Disturbance permit will be obtained prior to construction which incorporates the SWPPP and requires a state storm water permit as well. The contractor will be required to follow erosion and control guidelines during construction to prevent erosion, dust, and downstream pollution.

Natural Hazards

Sensitive Lands. The proposed development falls within the Geologic Hazards Overlay Zone which has areas identified as having the potential for rockfall, slide, and debris flows. Rockfall, debris flow, and slides were reviewed and, in each instance, were shown to have a low risk for such an event. Buildable areas have been restricted where steeper slopes reside.

Flood Plain. The property is situated away from the mapped flood plains of Fort and Dry Creek.

Irrigation Ditches. Westfield Ditch runs along the east side of the development. Ditches are typically required to be piped when development occurs (Dev. Code 4.07.190) but this section of ditch (Westfield Ditch, north of 200 North) is specifically required to be left open per agreement with Alpine Irrigation Company. The plans reflect this and an easement is shown for the ditch on the plat.

Other

There are some minor redlines to correct on the plans and plat.

Alpine City specifications require escrow funds for a roadway preservation coat (See Alpine City Construction Standard Specifications 300.030 & 600.020). The amount for this requirement will be calculated based on current preservation coat costs at the time of recording. The escrow funds for this roadway preservation coat will be required of the Developer prior to recording.

The water policy will need to be met for this development.

An engineer's cost estimate will be required for bonding purposes.

LONE PEAK FIRE DEPARTMENT REVIEW

See the attached review from the Lone Peak Fire Department.

HORROCKS ENGINEER'S REVIEW

See the attached review from Horrocks Engineering.

NOTICING

Notice has been properly issued in the manner outlined in City and State Code

STAFF RECOMMENDATION

Review staff report and findings and make a motion to approve or table the proposed subdivision. Findings are outlined below.

Findings for a Positive Motion:

- A. The streets and lot layout meet ordinance;
- B. The complies with the General Plan and Street Master Plan, showing a local street connecting Whitby Woodlands Drive to Westfield Road.
- C. There are no major hazards of concern mentioned in the geotechnical reports.

Findings for a Motion to Table:

- A. The grading plan does not adhere to ordinance and requires an exception.

MODEL MOTIONS

SAMPLE MOTION TO APPROVE

I motion to recommend approval of the Alpine Layton Subdivision Plat A development with the following conditions:

- An exception be granted for grading beyond the 50-foot clear zone
- Prior to recording the Developer:
 - Meet the water policy and provide escrow funds for a roadway preservation coat;
 - Provide a cost estimate for development;
 - Address the redlines on the plat and plans.

SAMPLE MOTION TO TABLE

I motion to table the Alpine Layton Subdivision Plat A subdivision based on the following:

- ****INSERT FINDING****



LONE PEAK FIRE DISTRICT
5582 PARKWAY WEST DRIVE
HIGHLAND, UTAH 84003
(801) 763-5365
WWW.LONEPEAKFIRE.COM

BRIAN PATTEN, DEPUTY CHIEF

Date: 6/1/21

To: Alpine City

Address:

I have reviewed and approve: Whitby Woodlands Layton subdivision

Recommendations: Follow city spec for hydrants and setbacks

All Structures within approved subdivisions are subject to individual sprinkler requirements based on location and size (above 10,000 sq ft).

If you have any further questions, please contact me directly.

Brian Patten
Deputy Chief
Lone Peak Fire District



To: Jed Muhlestein
Alpine City

From: John E. Schiess, P.E.

Date: May 28, 2021

Memorandum

Subject: Layton Sub Plat A Hydraulic Modeling Results and Recommendations

The proposed subdivision is a single family residential development on the northeast corner of 200 South and 400 West.

The development proposes 5 culinary ERC's, 3.3 irrigated acres, and 5 sanitary sewer ERU's. The current master plan anticipated 17.6 culinary ERC's, 5.1 irrigated acres, and 17.6 sanitary sewer ERU's. Proposed connections fall well within the current master plans.

The proposed culinary water improvements have been modeled in both the current and buildout models. The proposed improvements fit well within the City's culinary water master plan and modeling shows them to be adequate.

The proposed pressurized irrigation improvements have been modeled in both the current and buildout models under both wet and dry year supply conditions. The proposed improvements fit well within the City's pressurized irrigation master plan and modeling shows them to be adequate. The following comments and recommendations are noted for the proposed pressurized irrigation system.

The proposed sanitary sewer improvements have been modeled in both the current and buildout models. The proposed improvements fit well within the City's sanitary sewer master plan and modeling shows them to be adequate.

Recommendations:

1. 6 inch pressurized irrigation line should tie into the 12 inch in 200 South. This is primarily because the current master plan calls for upsizing the existing 6 inch to 12 inch in 400 West for buildout.

Comments:

2. Fire flow available in the area surrounding the proposed improvements should be over 2,500 gallons per minute at 20 psi for the proposed lines.

ALPINE LAYTON SUBDIVISION PLAT A

JUNE 2021

GENERAL

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND/OR REQUIREMENTS OF THE ALPINE CITY PUBLIC WORKS DEPARTMENT.
2. A PRE CONSTRUCTION CONFERENCE WILL BE HELD A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO START OF WORK. ALL CONTRACTORS, SUBCONTRACTORS AND/OR UTILITY CONTRACTORS, ALPINE CITY PUBLIC WORKS AND CITY'S ENGINEER SHOULD BE PRESENT.
3. ALL LOT DIMENSIONS, EASEMENTS AND CERTAIN OFF SITE EASEMENTS ARE TO BE TAKEN FROM THE PLAT OF ALPINE VIEW ESTATES SUBDIVISION.
4. ALL CONSTRUCTION STAKES MUST BE REQUESTED A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO PLANNED USE.
5. CERTAIN CONTROL POINTS WILL BE SET BY THE ENGINEER, OR HIS REPRESENTATIVE, WHICH ARE CRITICAL TO THE CONSTRUCTION STAKING OF THE PROJECT. THESE POINTS WILL BE DESIGNATED AT THE TIME THEY ARE SET AND THE CONTRACTOR SHALL BE NOTIFIED. DESTRUCTION OF THESE POINTS BY THE CONTRACTOR OR HIS SUBCONTRACTORS SHALL BE GROUNDS FOR CHARGING THE CONTRACTOR FOR REESTABLISHING SAID POINTS.
6. ALL CUT & FILL SLOPES NOT INCLUDED IN LOTS TO BE REVEGETATED WITH BROADCAST SEEDS TO MEET CITY STANDARDS UNLESS NOTED OTHERWISE.

ROADWAY/STORM DRAIN

1. ALL ROADWAY CONSTRUCTION SHALL MEET THE MINIMUM REQUIREMENTS OF ALPINE CITY'S TECHNICAL SPECIFICATIONS OR AS APPROVED IN THE PLANS HEREIN.
2. WHEN DISCREPANCIES OCCUR BETWEEN PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. UNTIMELY NOTIFICATION SHALL NEGATE ANY CONTRACTORS CLAIM FOR ADDITIONAL COMPENSATION.
3. ALL STORM DRAIN PIPES TO BE RCP CLASS V OR APPROVED EQUAL UNLESS OTHERWISE NOTED.

CONDITIONS OF APPROVAL

-INDEX OF PLAN SHEETS-

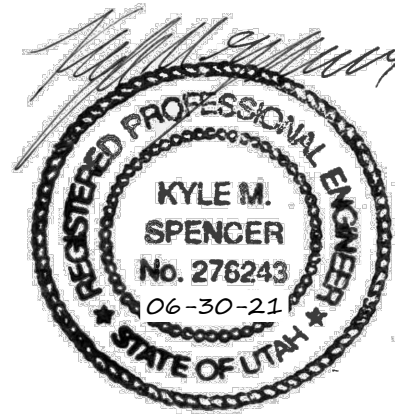
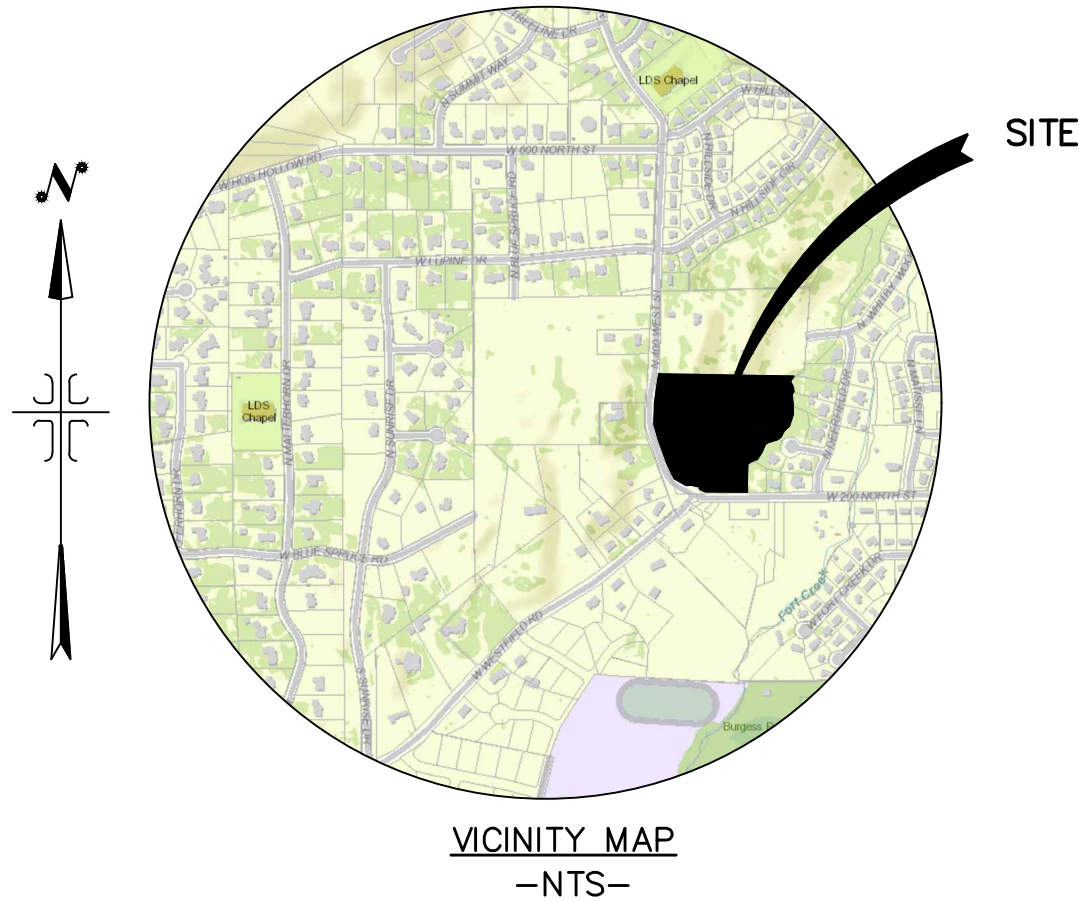
SHEET	DESCRIPTION
1	COVER SHEET AND NOTES
2	FINAL PLAT
3	SITE PLAN
4	UTILITY & INDEX SHEET
5	GRADING & DRAINAGE PLAN
PP-01	STREET PLAN & PROFILE - WHITBY WOODLAND DRIVE 10+00 - 14+50
PP-02	STREET PLAN & PROFILE - WHITBY WOODLAND DRIVE 14+50 - 18+45.74
PND-1	POND PLAN & PROFILE SHEET
DT-01	DETAILS
DT-02	DETAILS
ECP-01	EROSION CONTROL PLAN
ECP-02	EROSION CONTROL PLAN DETAILS

SEWER

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ALPINE CITY DESIGN STANDARDS & PUBLIC IMPROVEMENT SPECIFICATIONS DRAWINGS OF ALPINE CITY.
2. FINAL APPROVAL AND ACCEPTANCE OF ALL SEWER CONSTRUCTION WILL BE BY ALPINE CITY.
3. UPON THE COMPLETION OF WORK, THE CONTRACTOR SHALL SUBMIT 3 SETS OF AS-BUILT PLANS TO ALPINE CITY & (1) SET TO NORTHERN ENGINEERING, INC.
4. HORIZONTAL AND VERTICAL SEPARATION OF CULINARY WATER AND SEWER SHALL BE IN COMPLIANCE WITH ALPINE CITY STANDARDS

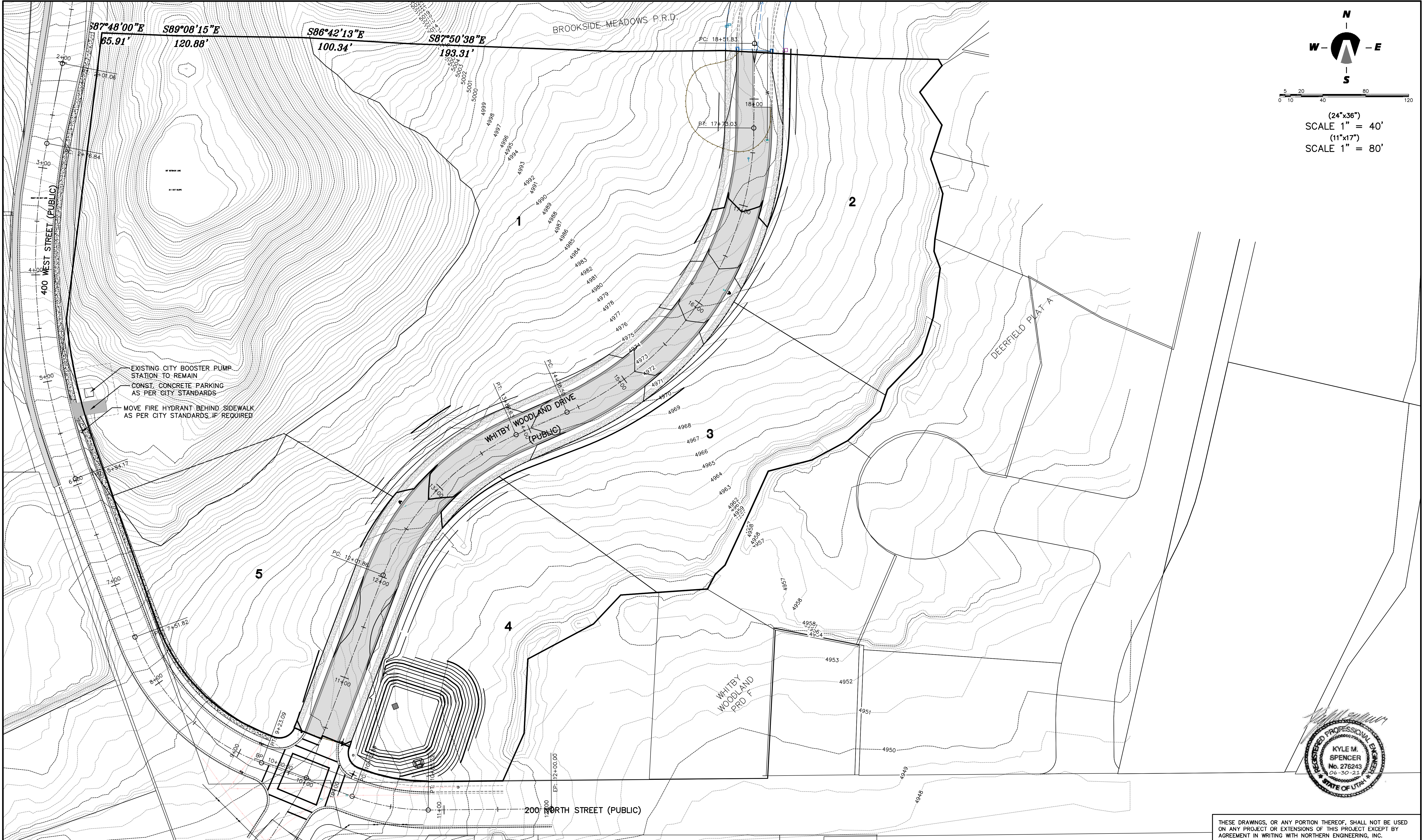
WATER

1. THE WATER SYSTEM SHALL BE CONSTRUCTED TO CONFORM WITH THE STANDARDS SET FORTH IN THE "UTAH REGULATIONS FOR PUBLIC DRINKING WATER SYSTEMS", AND THE ALPINE CITY PUBLIC WORKS DEPARTMENT STANDARD SPECIFICATIONS AND DRAWINGS.
2. CONTRACTOR SHALL NOTIFY NORTHERN ENGINEERING, INC. THREE (3) WORKING DAYS BEFORE INITIAL CONSTRUCTION BEGINS AND SHALL ALSO REQUEST ALPINE CITY WATER DEPARTMENT INSPECTION OF WATER LINES AND APPURTENANCES TWENTY-FOUR (24) HOURS IN ADVANCE OF BACKFILLING.
3. CONTRACTOR TO FIELD VERIFY ALL VALVE BOX LID ELEVATIONS TO ASSURE THAT SAID LID ELEVATIONS MATCH FINAL STREET GRADE, AND ALL METER LID ELEVATIONS TO MATCH AN EXTENSION OF THE SIDEWALK GRADE.
4. UPON THE COMPLETION OF WORK, THE CONTRACTOR SHALL SUBMIT 3 SETS OF AS-BUILT PLANS TO ALPINE CITY & (1) SET TO NORTHERN ENGINEERING, INC.
5. WATER VALVE LIDS ARE TO BE LABELED "WATER" FOR CULINARY VALVES
6. HORIZONTAL AND VERTICAL SEPARATION OF CULINARY WATER AND SEWER SHALL BE IN COMPLIANCE WITH ALPINE CITY STANDARDS
7. WATERLINES TO BE BEDDED IN GRANULAR MATERIAL. A MIN. OF 8" COVER OVER TOPS OF PIPE IS REQUIRED TO AVOID PENETRATION OF SUB BASE FROM ABOVE.



**Northern
ENGINEERING INC**
ENGINEERING-LAND PLANNING
CONSTRUCTION MANAGEMENT

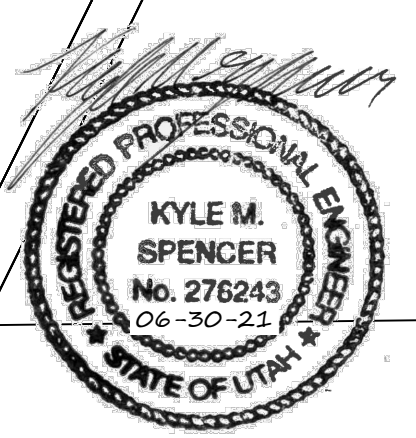
1040 E. 800 N.
OREM, UTAH 84097
(801) 802-8992



N
W — — E
S

0 10 20 40 60 80 100 120

(24"x36")
SCALE 1" = 40'
(11"x17")
SCALE 1" = 80'



THESE DRAWINGS, OR ANY PORTION THEREOF, SHALL NOT BE USED ON ANY PROJECT OR EXTENSIONS OF THIS PROJECT EXCEPT BY AGREEMENT IN WRITING WITH NORTHERN ENGINEERING, INC.

5			DESIGNED BY:	DATE:
4			DRAWN BY:	DATE:
3			CHECKED BY:	DATE:
2			APPROVED:	DATE:
1			COGO FILE:	DATE:
NO.	REVISIONS	BY	DATE	REV. COGO FILE:

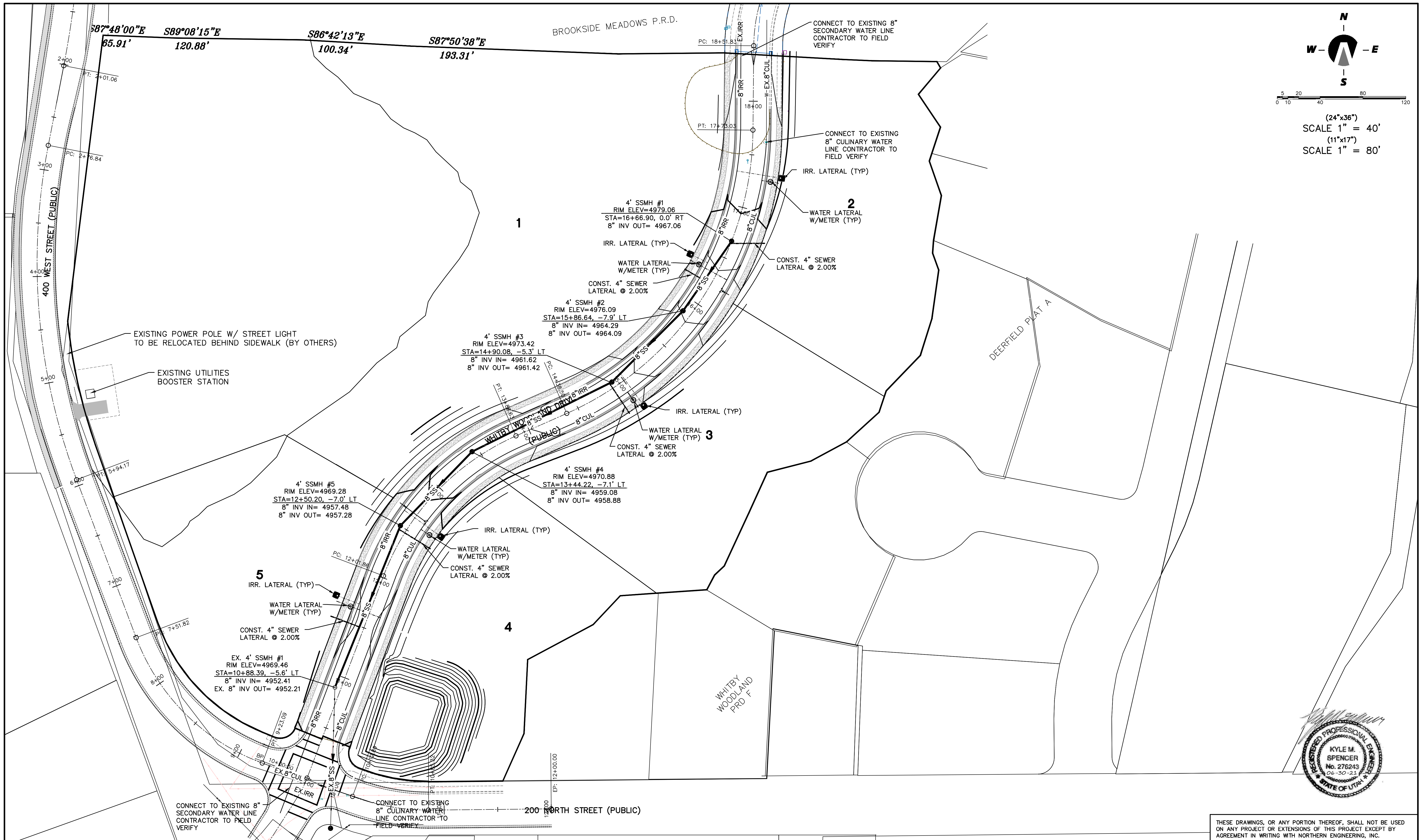


**Northern
ENGINEERING INC**
ENGINEERING—LAND PLANNING
CONSTRUCTION MANAGEMENT

1040 E. 800 N.
OREM, UTAH 84097
(801) 802-8992

**ALPINE LAYTON SUBDIVISION
PLAT A**

SITE PLAN	JOB NO. 3-21-006
ALPINE CITY, UTAH	SHEET NO. 3

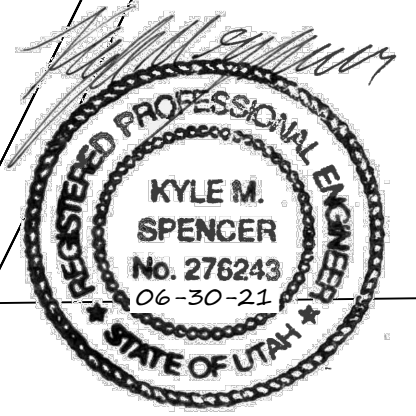


North Arrow

Scale

(24"x36")
SCALE 1" = 40'

(11"x17")
SCALE 1" = 80'



THESE DRAWINGS, OR ANY PORTION THEREOF, SHALL NOT BE USED ON ANY PROJECT OR EXTENSIONS OF THIS PROJECT EXCEPT BY AGREEMENT IN WRITING WITH NORTHERN ENGINEERING, INC.

5	DESIGNED BY:	DATE:
4	DRAWN BY:	DATE:
3	CHECKED BY:	DATE:
2	APPROVED:	DATE:
1	COGO FILE:	DATE:
NO.	REVISIONS	BY DATE
K:\3-21-006-00 Whitby\CAD\Preliminary\UTILITY PLAN.dwg 6/24/2021 3:47 PM		

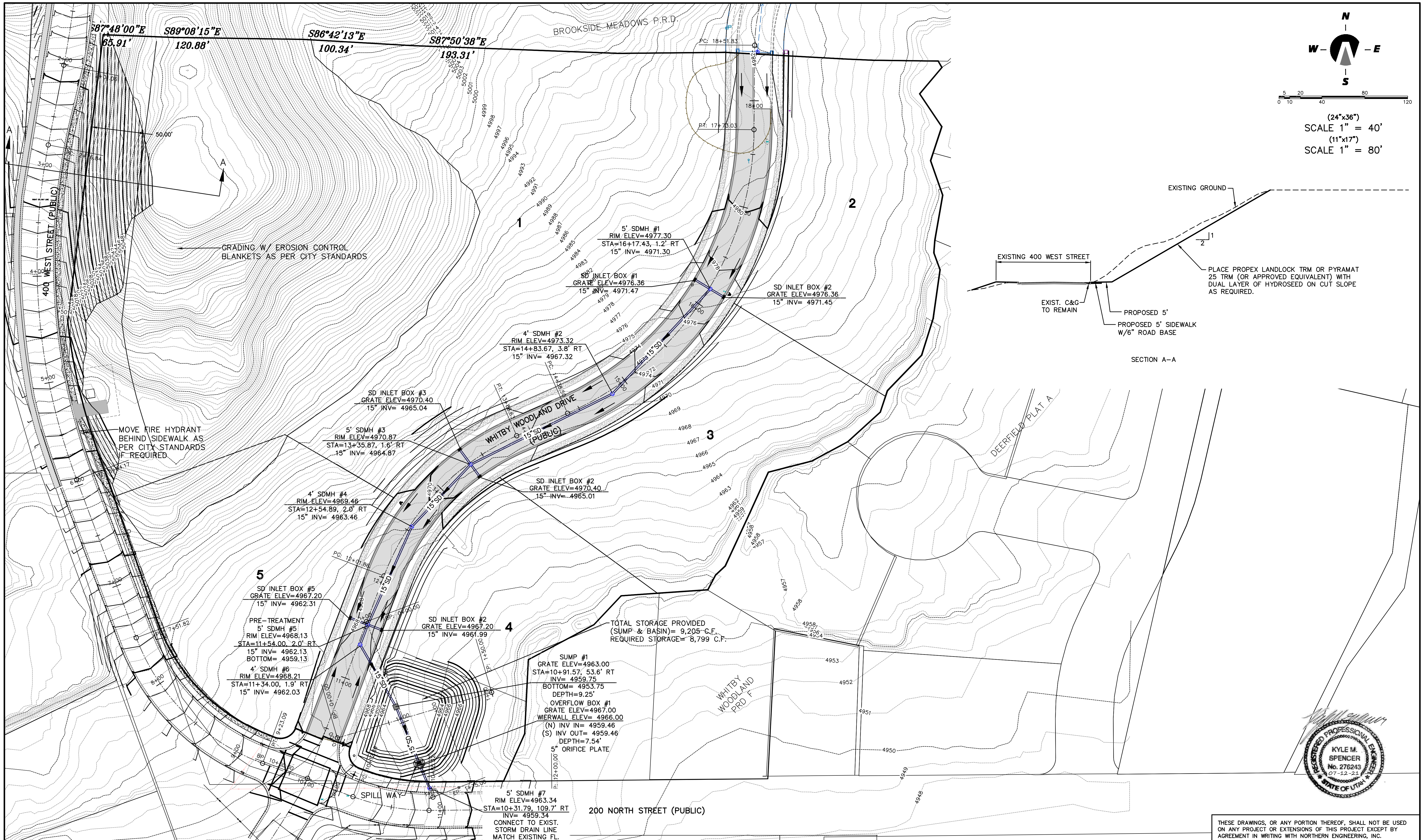
Northern ENGINEERING INC

ENGINEERING-LAND PLANNING
CONSTRUCTION MANAGEMENT

1040 E. 800 N.
OREM, UTAH 84097
(801) 802-8992

**ALPINE LAYTON SUBDIVISION
PLAT A**

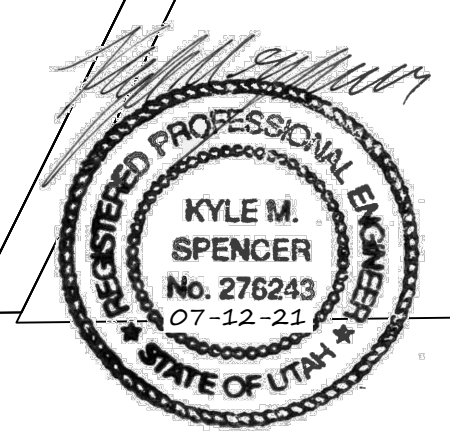
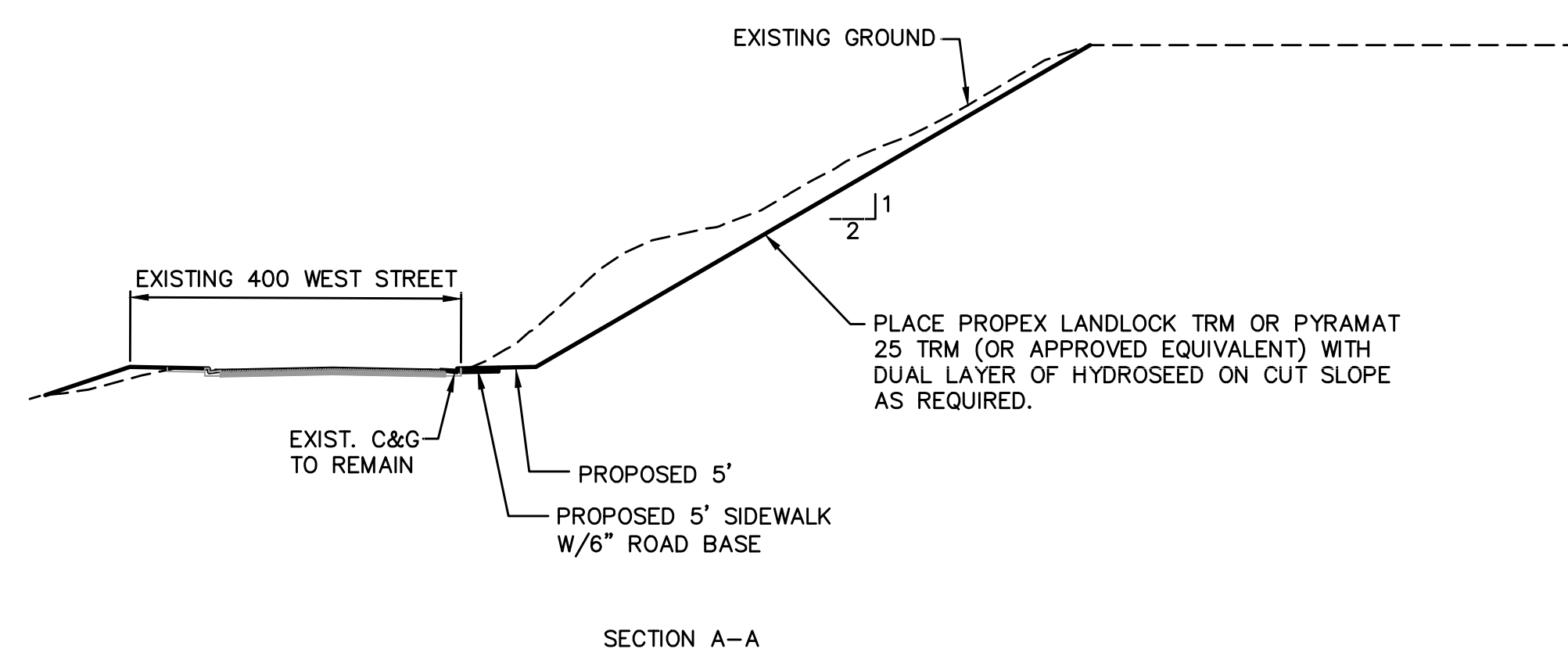
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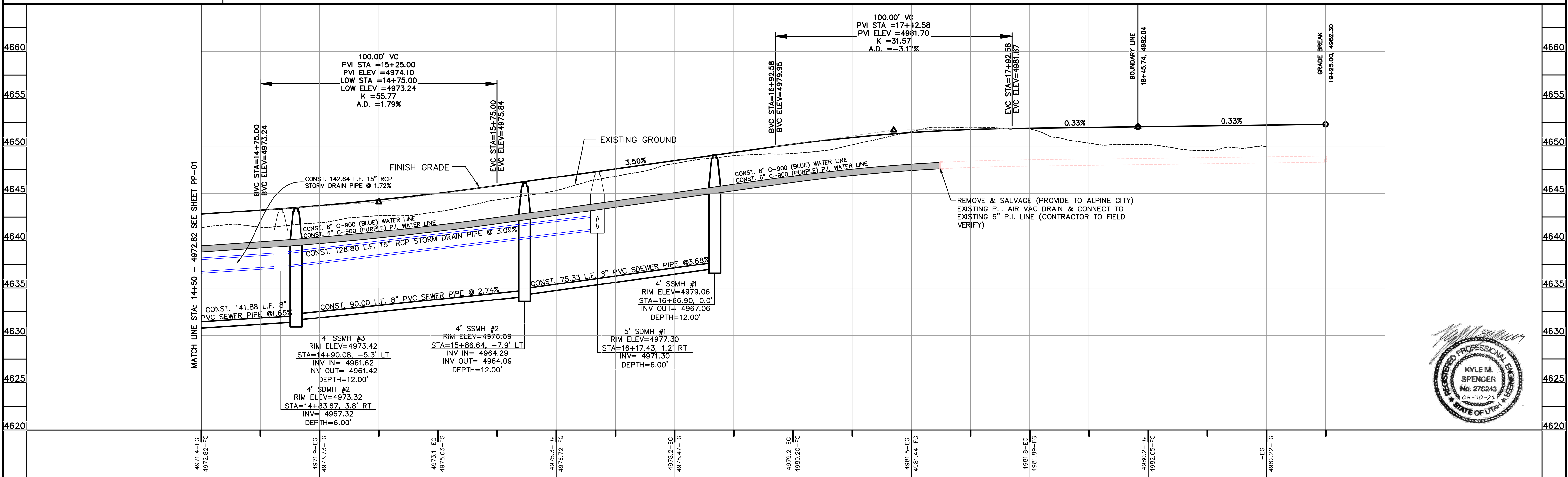
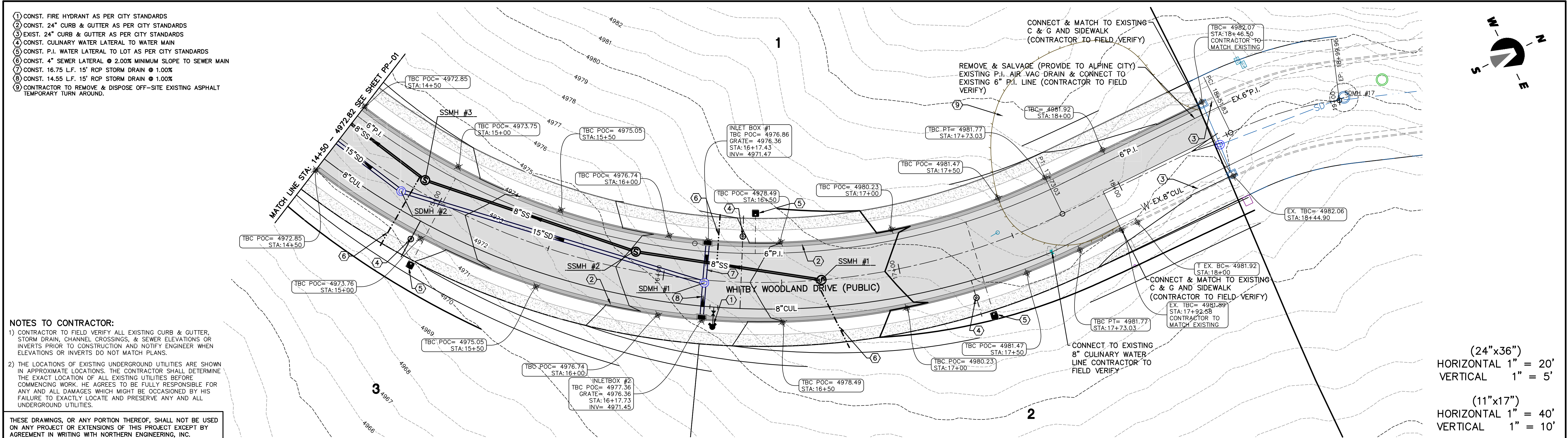


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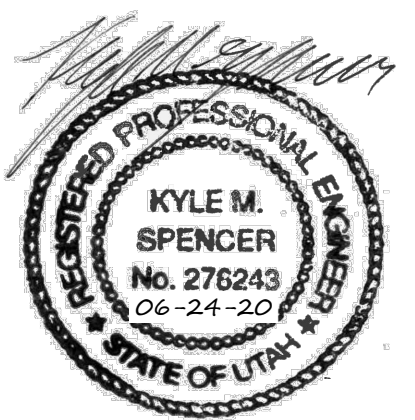
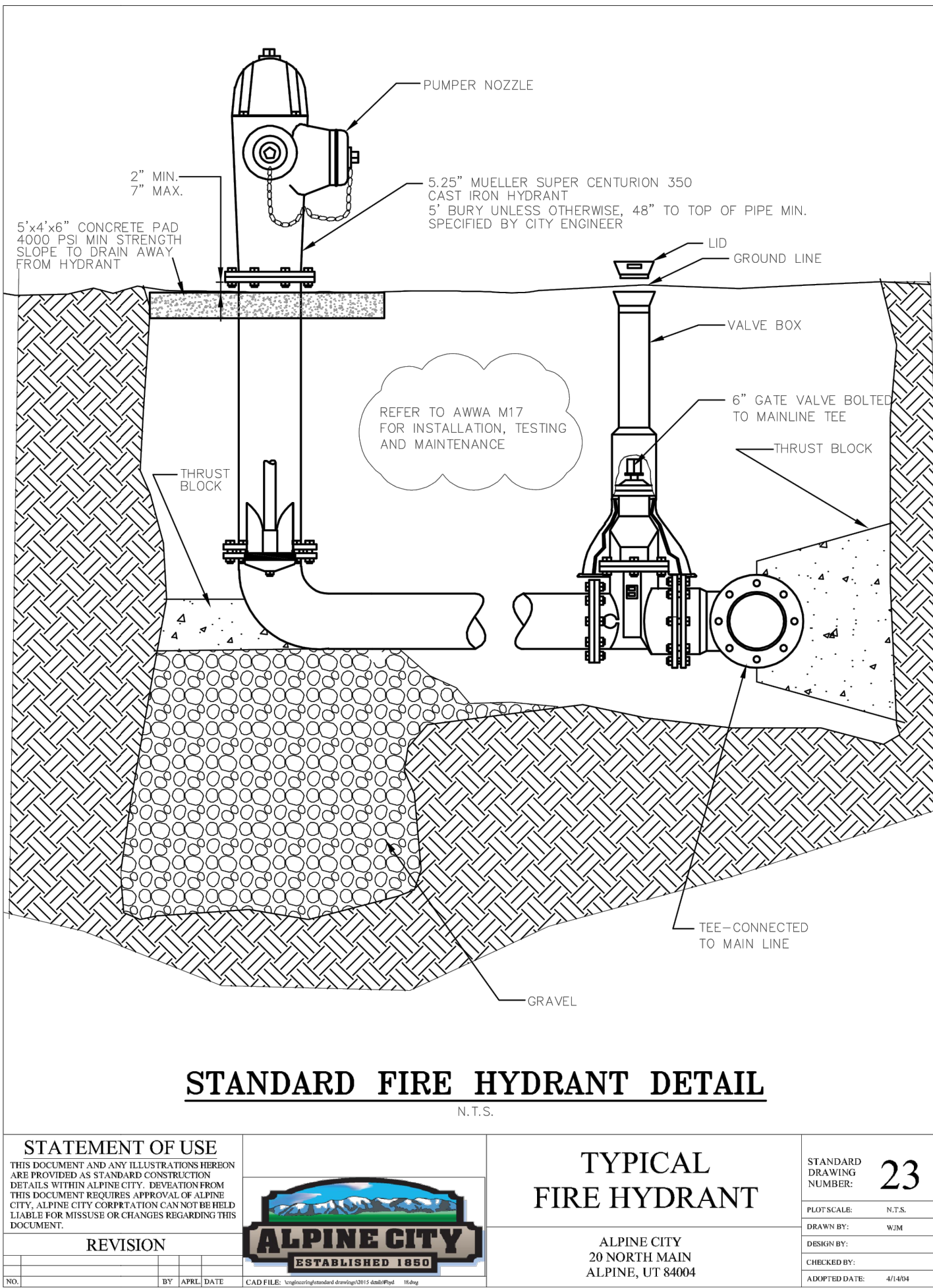
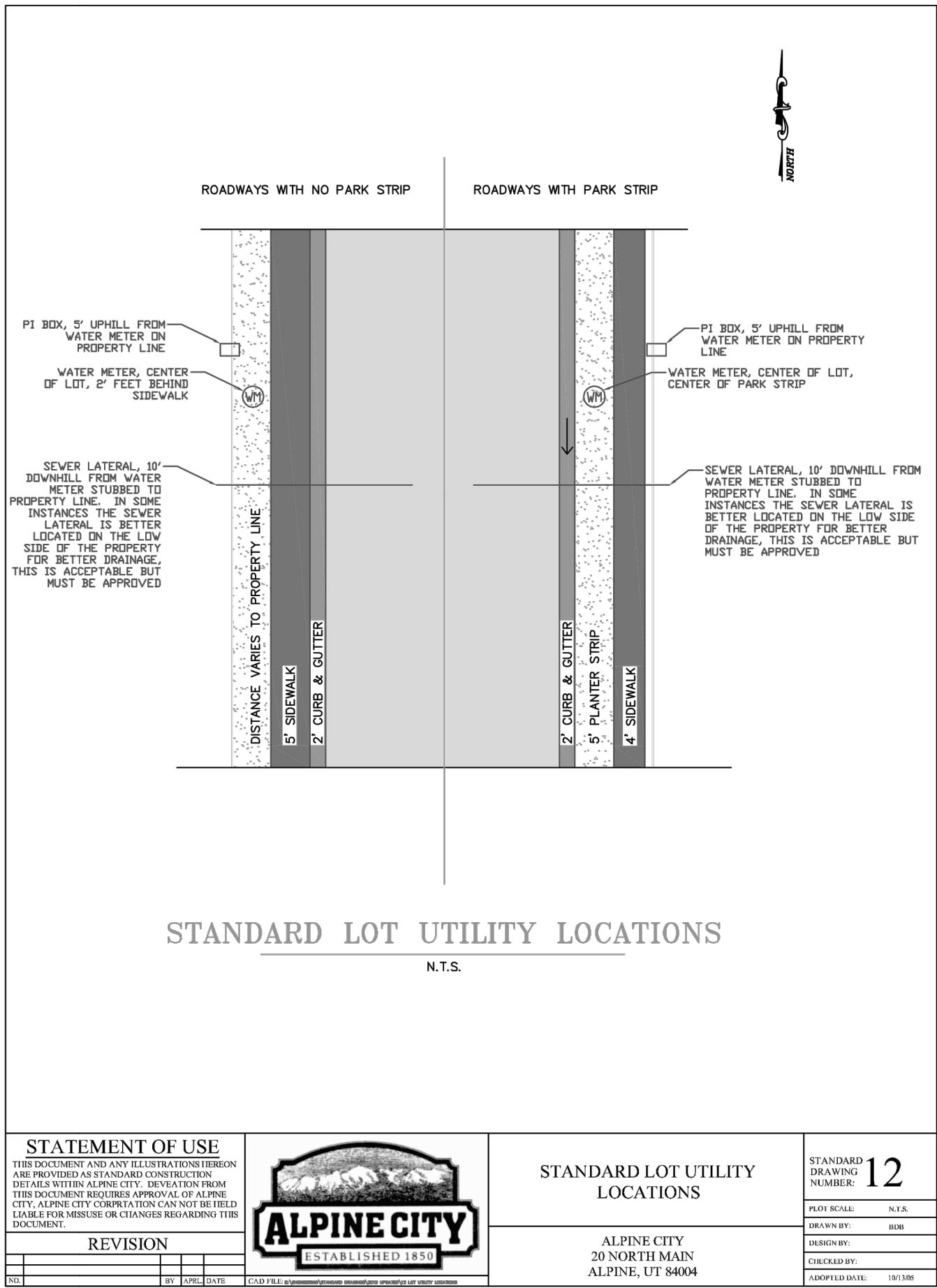
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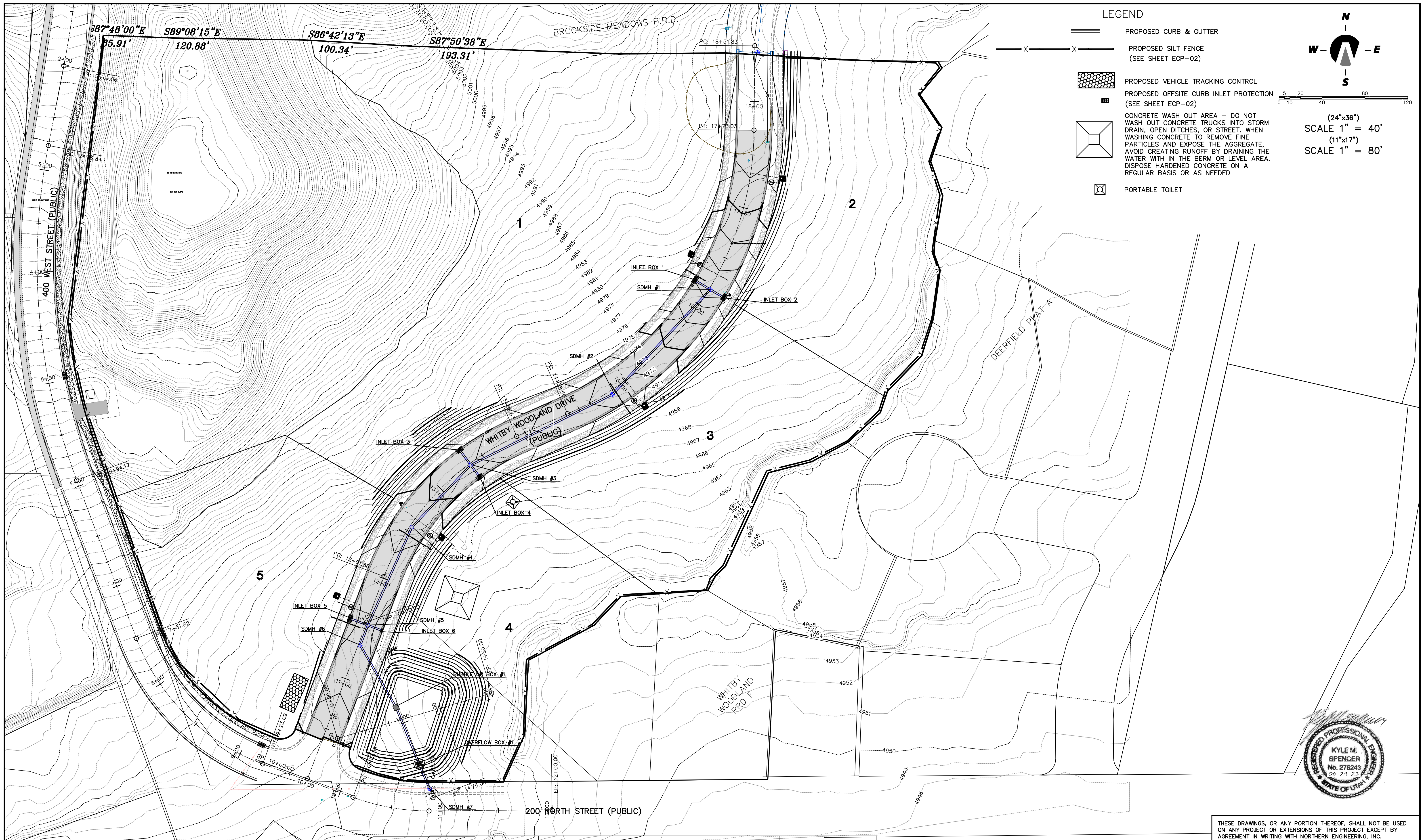
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ALPINE, UTAH

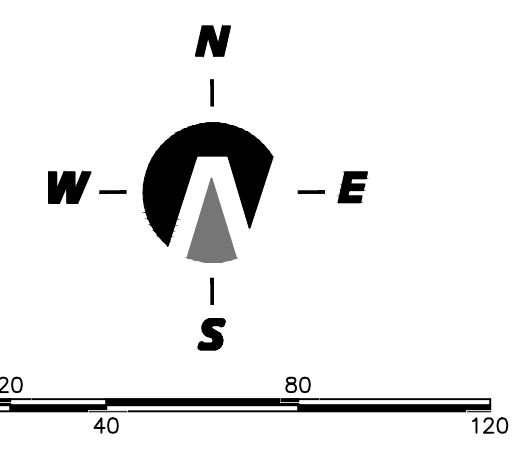
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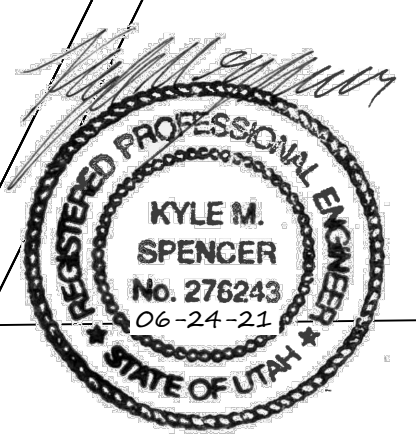


LEGEND

- PROPOSED CURB & GUTTER
- PROPOSED SILT FENCE (SEE SHEET ECP-02)
- PROPOSED VEHICLE TRACKING CONTROL
- PROPOSED OFFSITE CURB INLET PROTECTION (SEE SHEET ECP-02)
- CONCRETE WASH OUT AREA - DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAIN, OPEN DITCHES, OR STREET. WHEN WASHING CONCRETE TO REMOVE FINE PARTICLES AND EXPOSE THE AGGREGATE, AVOID CREATING RUNOFF BY DRAINING THE WATER WITH IN THE BERM OR LEVEL AREA. DISPOSE HARDENED CONCRETE ON A REGULAR BASIS OR AS NEEDED
- PORTABLE TOILET



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SCALE 1" = 40'
(11"x17")
SCALE 1" = 80'



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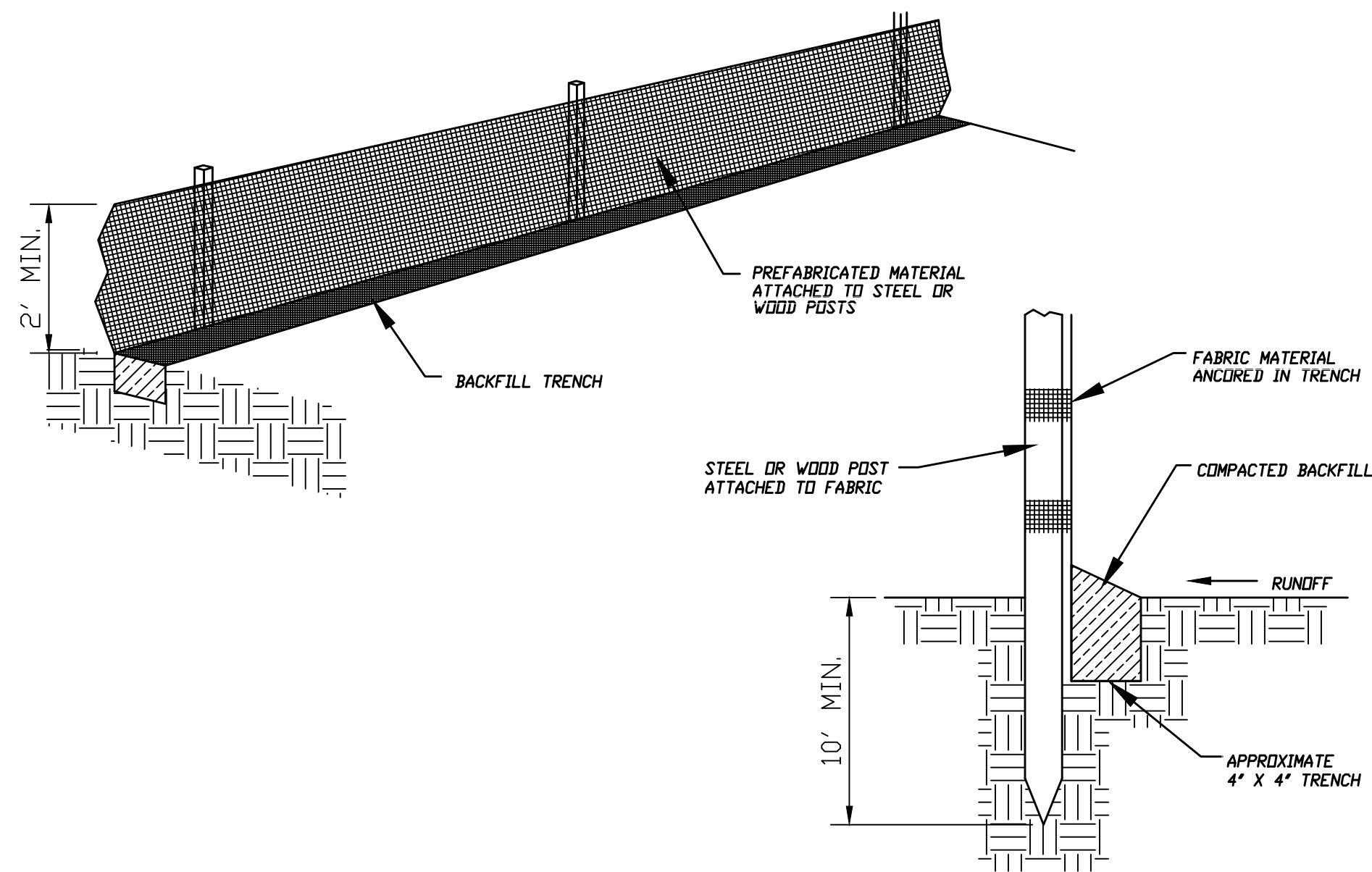


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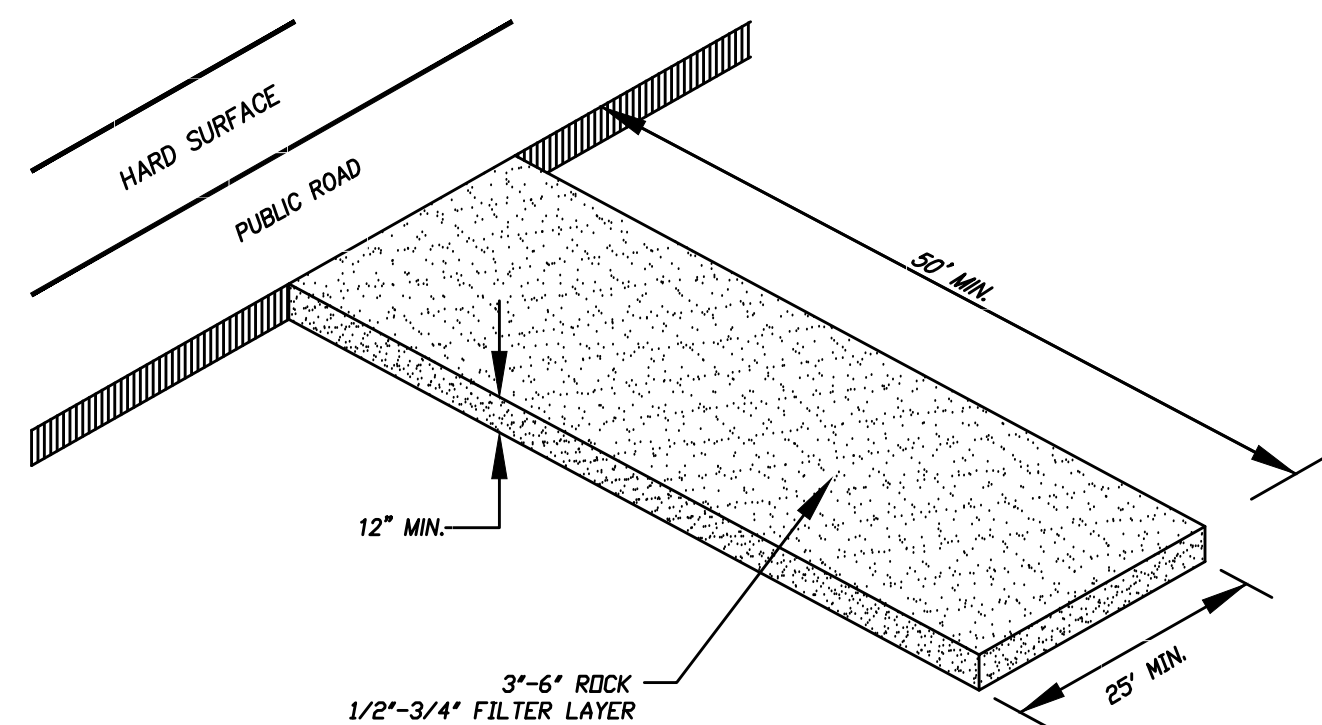
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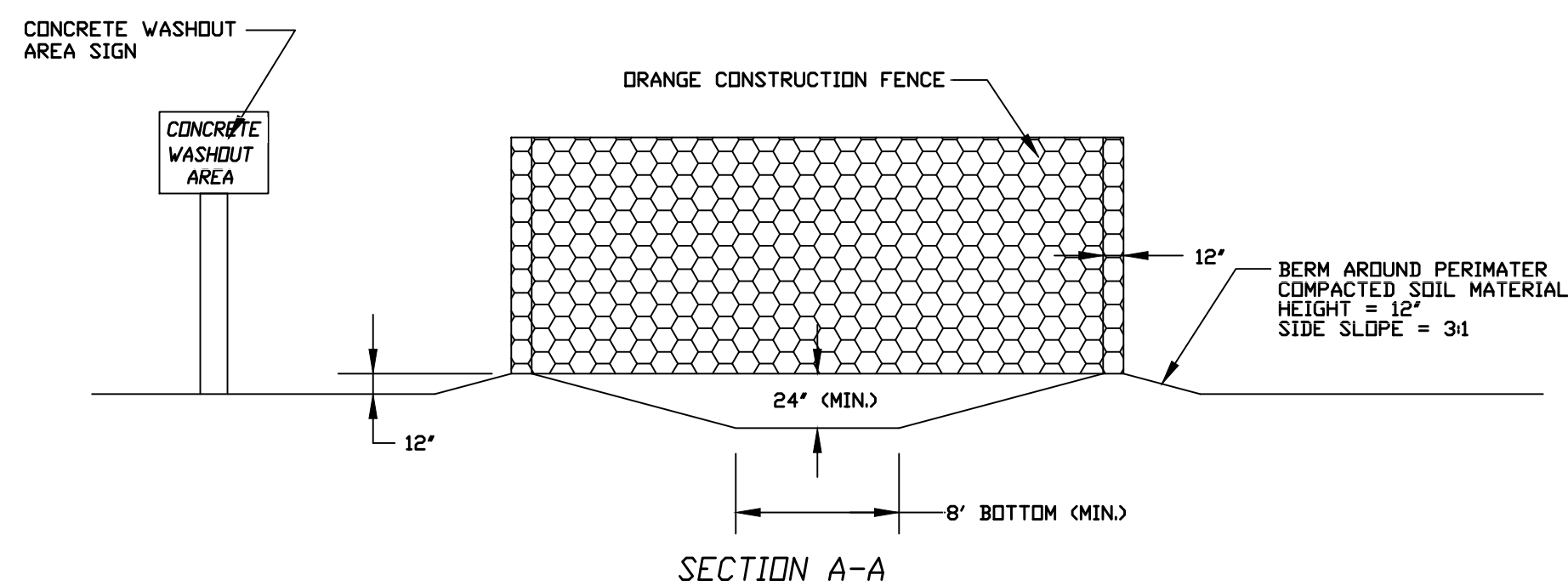
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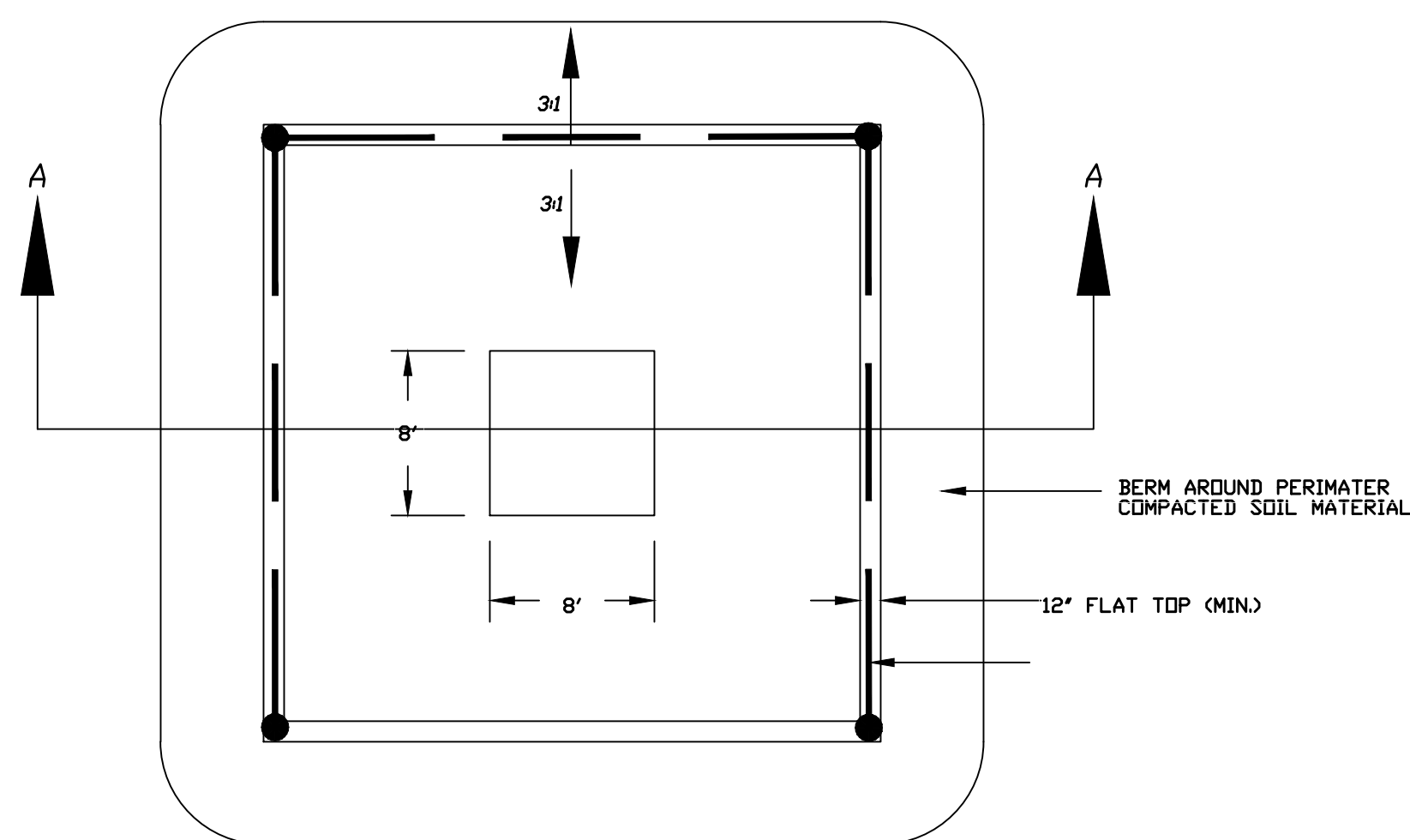
SILT FENCE DETAIL
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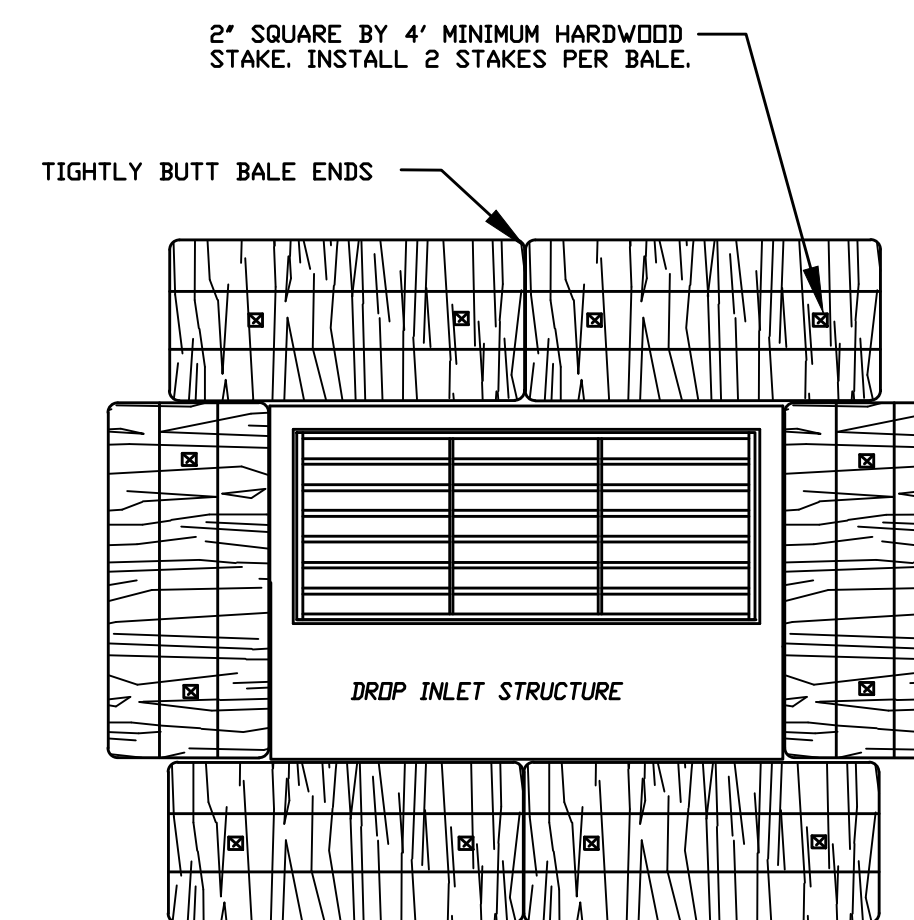
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NOT TO SCALE



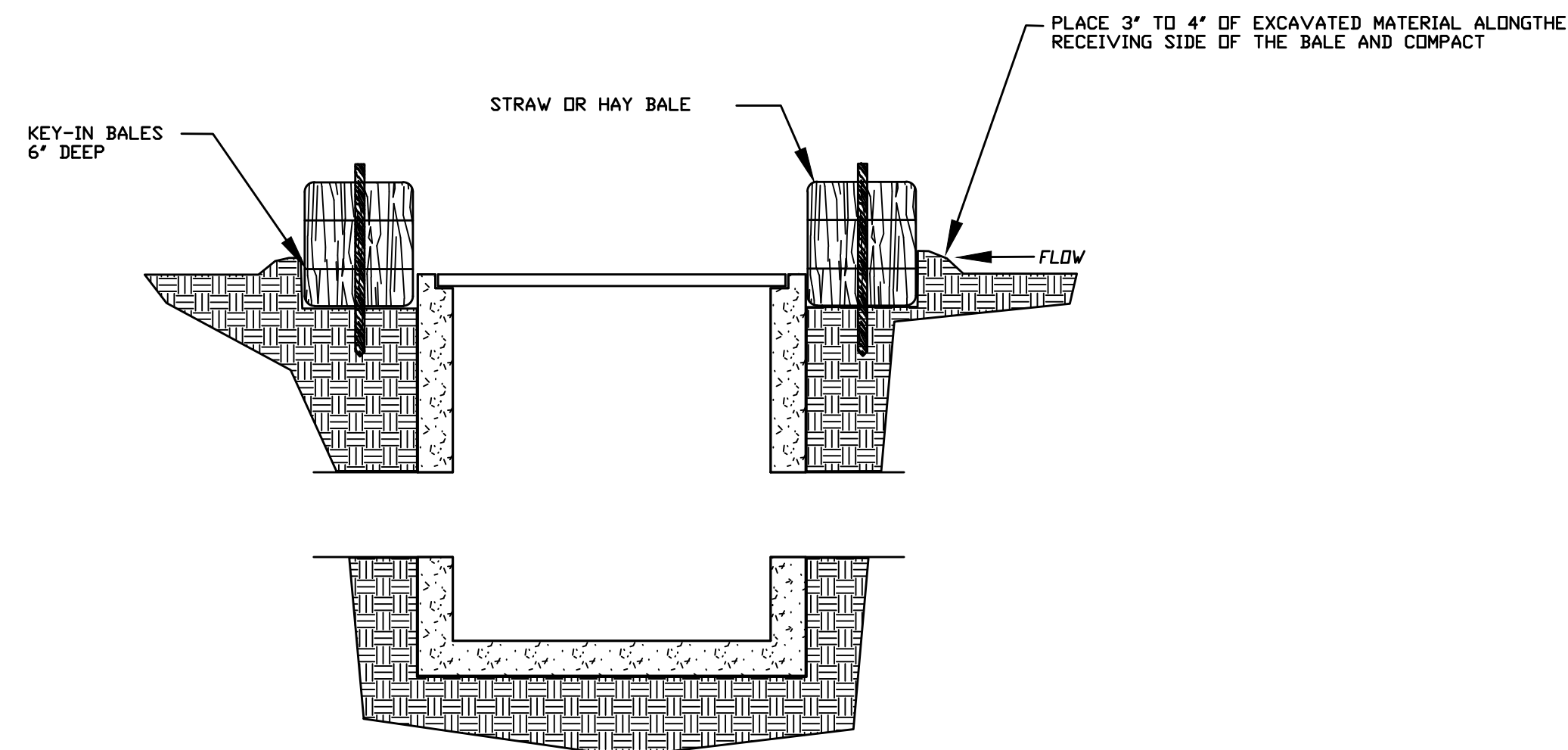
SECTION A-A



CONCRETE WASHOUT PIT
-NTS-



PLAN VIEW



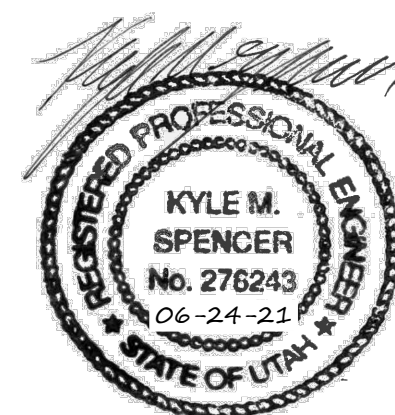
SECTION

STRAW BALE DROP INLET PROTECTION DETAIL
-NTS-

GENERAL NOTES:

1. AT ALL TIMES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING AND CONTROLLING ON-SITE EROSION DUE TO WIND AND RUNOFF. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL FACILITIES SHOWN.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING DRAINAGE AND EROSION CONTROL FACILITIES AS REQUIRED. STREETS SHALL BE KEPT CLEAN OF DEBRIS FROM SITE TRAFFIC.
3. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO UNFORESEEN PROBLEMS OR IF THE PLAN DOES NOT FUNCTION AS INTENDED. A REPRESENTATIVE OF THE CITY OR COUNTY PUBLIC WORKS DEPARTMENT MAY REQUIRE ADDITIONAL CONTROL DEVICES UPON INSPECTION OF PROPOSED FACILITIES.
4. CONTRACTOR SHALL USE VEHICLE TRACKING CONTROL AT ALL LOCATIONS WHERE VEHICLES WILL ENTER OR EXIT THE SITE. CONTROL FACILITIES WILL BE MAINTAINED WHILE CONSTRUCTION IS IN PROGRESS, MOVED WHEN NECESSARY, AND REMOVED WHEN THE SITE IS PAVED.
5. ALL SWPPP DRAINAGE SYSTEMS USING A GEOTECHNICAL FABRIC FOR INLET GRATE PROTECTION MUST HAVE FABRIC REGULARLY CLEANED (14 DAY INTERVAL MAX, MORE FREQUENTLY IF NEEDED) TO INSURE THAT SILT DOES NOT FORM IMPERMEABLE BARRIER OVER INLET.

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**ALPINE LAYTON SUBDIVISION
PLAT A**

EROSION CONTROL DETAILS

ALPINE, UTAH

JOB NO.
3-21-006

SHEET NO.
ECP-02



DRAINAGE REPORT
for
Alpine Whitby Layton Estates

May 21, 2021
Prepared by:
Kyle Spencer P.E.
Northern Engineering, Inc.
1040 East 800 North
Orem, Utah 84097
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INTRODUCTION & PURPOSE

The Whitby Layton Estates Subdivision residential development project is a 9.71-acre located North of the intersection of 200 North and Westfield Road in Alpine, Utah. Development of the site will yield higher storm-water runoff than it did in its native state. The purpose of this report is to demonstrate that the proposed development and its storm drainage system will:

1. Be capable of capturing, conveying, and retaining the storm water runoff generated by development of the site, thus preventing the flooding of buildings and properties both within and down gradient of the project.
2. Compensate for the increased hard surfaced areas, by providing ample storm water retention/detention and infiltrate at an assumed rate.

HYDROLOGIC CRITERIA

The climate in Alpine is semi-arid and characterized by low precipitation, low humidity, and extreme variations in temperature. The greatest potential for flooding and erosion is caused by spring and summer thunderstorms. These extreme runoff events are caused by cloudburst type storms that are characterized by short periods of high intensity rainfall.

Estimates of rainfall for engineering (design) applications are based on the probability of a storm event with a certain magnitude occurring within a return period (or period of time). The storm depths of accumulation used was found in the *Alpine City Storm Water Drainage Manual*, dated February 2010; the precipitation estimates used were derived from the NOAA Atlas 14, Volume 1, Version 4. These values were used for defining the precipitation estimates used in the analysis described herein.

The analysis for the storm drain pipe drainage system was based on the 10-year storm event and the 100-year storm event for the injection sumps and retention/detention basins as per the City of Alpine and standards of practice. More specifically, Alpine City Ordinances require storage volume design requirements for the 1-hour and 3-hour mark. A percolation rate of 2.00 min/inch was used for the sump designs.

METHODOLOGY

The Rational Method was used to determine expected storm water flows. The Rational Method ($Q=CIA$) defines storm discharge flows as the product of the runoff coefficient (C), the rainfall intensity (I), and the drainage study area (A).

A weighted average analysis was done to determine the appropriate post-development runoff coefficient (C). This analysis incorporated using proposed roof areas, landscaped areas, and hard surface areas, including the curb and gutter, and sidewalks.

The runoff coefficient for the post-development condition for the entire subdivision was calculated to be 0.25. These coefficients are within the typical range of residential developments of this type (Please see the runoff coefficient calculations as shown on the attached sheets).

COLLECTION & RETENTION/DETENTION SYSTEMS

The storm water runoff will be collected by inlet boxes at low elevations along the edge of the ROW. Once collected by the inlet boxes, the runoff will be conveyed towards a sump within a basin or by an injection sump depending on the sub-basin section area, as mention in the *Methodology* section (Please reference the storage volume requirement calculations and sump design parameters in the Appendix section below).

Results for the proposed Detention / Sump basin:

The Detention Basin has Sump #1 within the basin. This basin will work as a detention system. The historical release rate will be 0.20 cfs/acre. The sump design storage is 723 cubic feet with a release rate of 0.42 cfs. With the drainage area of Whitby Woodland Drive Road (including R.O.W./Hard-surface and landscaping) and the area included in the entire subdivision, the release rate within the Alpine Subdivision is 1.94 cfs. Alpine Layton was measured to be 9.71-acres, with a release rate of 1.94 cfs. Therefore, the total release rate used to design the orifice plate diameter was 2.37 cfs.

Sump #1 will act as both a sump and a bubble up box. The Sump will connect to a control box through a 15-inch diameter pipe to eliminate the overland flow of all storm water. This control box will have a weir wall and a grate the top of the box. A 5-inch diameter orifice plate will be implemented in the weir wall. The top of weir wall will be set at the high-water elevation of the detention basin at an elevation of 4966.00. The grate elevation will be set at freeboard elevation of the Basin at an elevation of 4967.00. Any storm greater than the 100-year storm will over top the weir wall and flow into the existing storm drain line in 200 North Street.

The **pond storage capacity design is 8,482 cubic feet**. Combining the pond and the sump storage, the total storage is 9,205 cubic feet. The **required storage volume for this drainage area is 8,799 cubic feet** at minute 30. Therefore, the storage provided by the basin with the sump is adequate in handling the 100-year storm event and meets and exceeds the Alpine City ordinance.

CONCLUSION

The proposed storm drainage system will be capable of capturing and conveying expected flows produced by the 100-year storm events. The 100-year storm event has been controlled and flooding has been mitigated. This shall prevent the flooding of properties both within and down gradient of the project.

APPENDIX

Appendix A – Runoff Coefficient Calculations and Rainfall Intensities

Appendix B – Results for Basin/Orifice Plate Sizing

Appendix C – Results for Sump and Pond volumes

Appendix D – Site Map Exhibit

Layton Estates- Runoff Coefficient Calculations
Proposed Development-Storm Drainage Calculations
Design Criteria: 5/24/2021

Method: Rational Method
Intensity Table: Alpine City Standards
Return Period: 100 year storm event



Subdivision Parameters and Drainage Areas

Subdivision:	Layton Estates- Runoff Coefficient Calculations		
Number of Lots	5		
Total Right of Way Area/Hardsurface/Street	43379 sq. ft.	=	1.00 acre
Total Lot Area	379515 sq. ft.	=	8.71 acre
Total Subdivision Area	422894 sq. ft.	=	9.71 acre
Average Roof Area per Lot	4000 sq.ft.		
Average Driveway & Hard Surface Area per Lot	1500 sq.ft.		

Weighted Runoff Coefficient "C" Calculation			
Surface Type	Area	"C"	C*A
Roofs	20,000	0.92	18,400
Driveways & Hard Surface	7,500	0.92	6,900
ROW Section w/ 5' Planter/5' Curb&Gutter	43,379	0.90	39,041
Lot Landscaped Area	352,015	0.12	42,242
Totals	422,894		106,583

Weighted Runoff Coefficient "C" = (Total C*A)/(Total Area) 0.25

Hydrologic Analysis:

For Pipe Design:

10-year storm event		
Duration	Storm Intensity	
(min)	(in/hr)	(in)
5	3.60	0.30
10	2.70	0.45
15	2.24	0.56
30	1.52	0.76
60	0.94	0.94
120	0.55	1.09
180	0.40	1.21
360	0.26	1.55
720	0.17	2.02
1440	0.10	2.37

25-year storm event		
Duration	Storm Intensity	
(min)	(in/hr)	in
5	4.54	0.38
10	3.45	0.58
15	2.85	0.71
30	1.92	0.96
60	1.19	1.19
120	0.68	1.35
180	0.48	1.43
360	0.28	1.70
720	0.18	2.12
1440	0.09	2.19

For Flood Control:

100-year storm event		
Duration	Storm Intensity	
(min)	(in/hr)	in
5	6.96	0.58
10	5.28	0.88
15	4.36	1.09
30	2.94	1.47
60	1.82	1.82
120	1.03	2.05
180	0.71	2.14
360	0.41	2.44
720	0.26	3.08
1440	0.14	3.40

Hydrologic Analysis & Storage Volume Requirements:

Contributing Drainage Lot Areas for Detention:	9.71 acres =	422894 sq.ft
Allowable Release Rate	0.20 cfs/acre	
Release Flow	1.94 cfs	
Infiltration rate	0.42	
Total Release Rate	2.37	
Flood Route 100-Year 72 hour storm	8,799 cu.ft.	

100-year storm event									
Duration	Total Precipitation	Storm Intensity	Runoff Coefficient	Drainage Area	Stormwater Flow	Accum. Flow	Release Rate	Release Volume	Required Storage
(min)	(in)	(in/hr)	"C"	(ft ²)	(cfs)	(cf)	(cfs)	(cf)	(cf)
5	0.58	6.96	0.25	422894	17.17	5,152	2.37	710	4,442
10	0.88	5.28	0.25	422894	13.03	7,816	2.37	1,419	6,397
15	1.09	4.36	0.25	422894	10.76	9,681	2.37	2,129	7,553
30	1.47	2.94	0.25	422894	7.25	13,056	2.37	4,257	8,799
60	1.82	1.82	0.25	422894	4.49	16,165	2.37	8,514	7,651
120	2.05	1.03	0.25	422894	2.53	18,208	2.37	17,028	1,180
180	2.14	0.71	0.25	422894	1.76	19,007	2.37	25,542	0
360	2.44	0.41	0.25	422894	1.00	21,672	2.37	51,085	0
720	3.08	0.26	0.25	422894	0.63	27,356	2.37	102,170	0
1440	3.40	0.14	0.25	422894	0.35	30,198	2.37	204,340	0

ORIFICE PLATE SIZING:

- USING ORIFICE EQUATION-
 $Q = C \cdot A (2 \cdot g \cdot h)^{1/2}$ $A = Q / (C(2gh)^{1/2})$

Q = Allowable release rate based on acreage	1.94 cfs
Top of pond water surface (@ High Water Elevation)	4966 ft
Center of Orifice Elevation	4959.5 ft
h = (highwater - center of orifice) ft	6.50 ft
C =	0.7
g =	32.2 ft/sec ²
A = Area of Orifice	0.136 sq.ft.
Calculated Orifice Diameter = $(4 \cdot (\text{Area}) / \text{PI})^{1/2} =$	4.99 in

Use 5.00 Inch Diameter Orifice

Sump Design Parameters:

Percolation Rate (min/inch)	2.00
Void ratio	0.40
Height of top cone section (ft):	1.0
Height of manhole section (ft):	4.0
Diameter of manhole section (ft):	5.0
Thickness of section (in):	3.00
Number of manhole sections:	3
Excavation beyond outside of manhole (ft):	3.00
Bottom of manhole section to bottom of rock (ft):	2.00
Depth to top of drain rock (ft):	1.00
Depth to bottom of sections (ft):	13.00
Depth to bottom of drain rock (ft):	15.00
Height of drain rock (ft):	14.00
Excavation Radius (ft)	5.75
Area available for percolation (ft^2):	610
Calculated Percolation Capacity (ft^3/sec):	0.42
Storage in Manhole Sections (ft^3):	236
Storage in drain rock voids (ft^3):	487

Hydrologic Analysis & Storage Volume Requirements:

Required Storage Summary:

Minimum Detention Requirement

8,799 cu. ft.

Number of Sumps

1

Total Proposed Sump Storage

723 cu. ft.

Pond Capacity

8,482 cu. ft.

Pond + Sump Capacity

9,205 cu. ft.

Therefore,

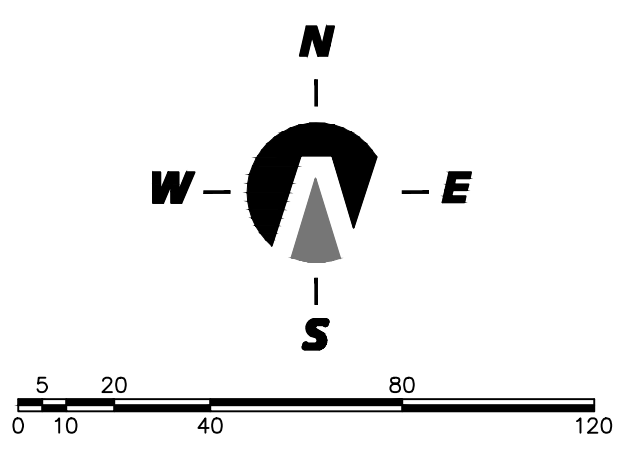
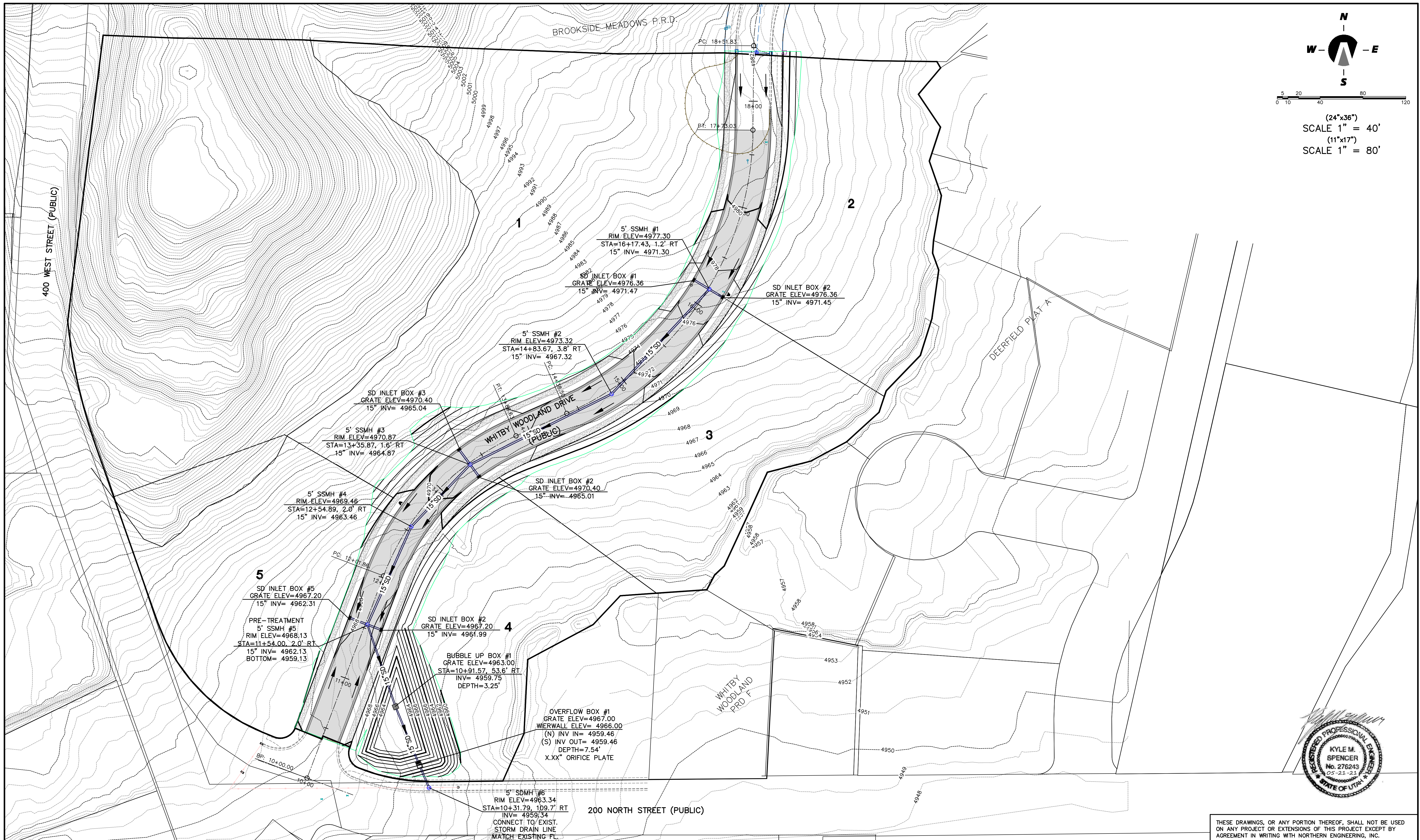
Basin and sump design is adequate

Pond Volume Calculator

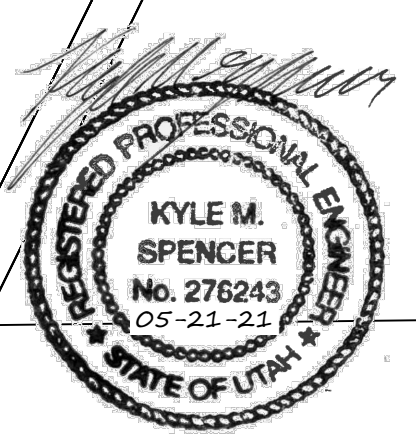
Where Pond Volume is given by the equation:

$$V=H/3[A1+A2+(A1A2)^{1/2}]$$

1 CONTOUR ELEV. (ft.)	2 CONTOUR AREA (A) (ft2)	3 A1+A2 (ft2)	4 (A1*A2) ^{1/2} (ft2)	5 3+4 (ft2)	6 H (ft.)	7 H/3 (ft.)	8 VOLUME 7X5 (ft3)	9 ACCUM. VOLUME Σ 5 (ft3)	
4963.0	1,573								Pond Bottom Elev.
4964.0	2,462	4,035	1,968	6,003	1.00	0.33	2,001	2,001	
4965.0	3,249	5,711	2,828	8,539	1.00	0.33	2,846	4,847	
4966.0	4,035	7,284	3,621	10,905	1.00	0.33	3,635	8,482	Design Elev.
4967.0	4,819	8,854	4,410	13,264	1.00	0.33	4,421	12,904	Top of Embankment



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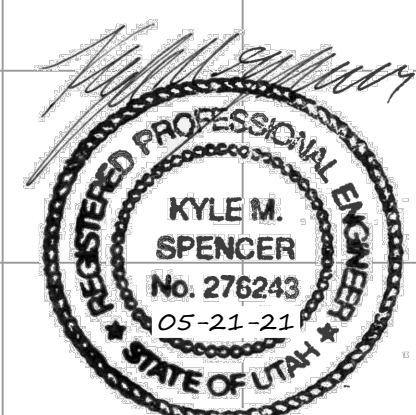
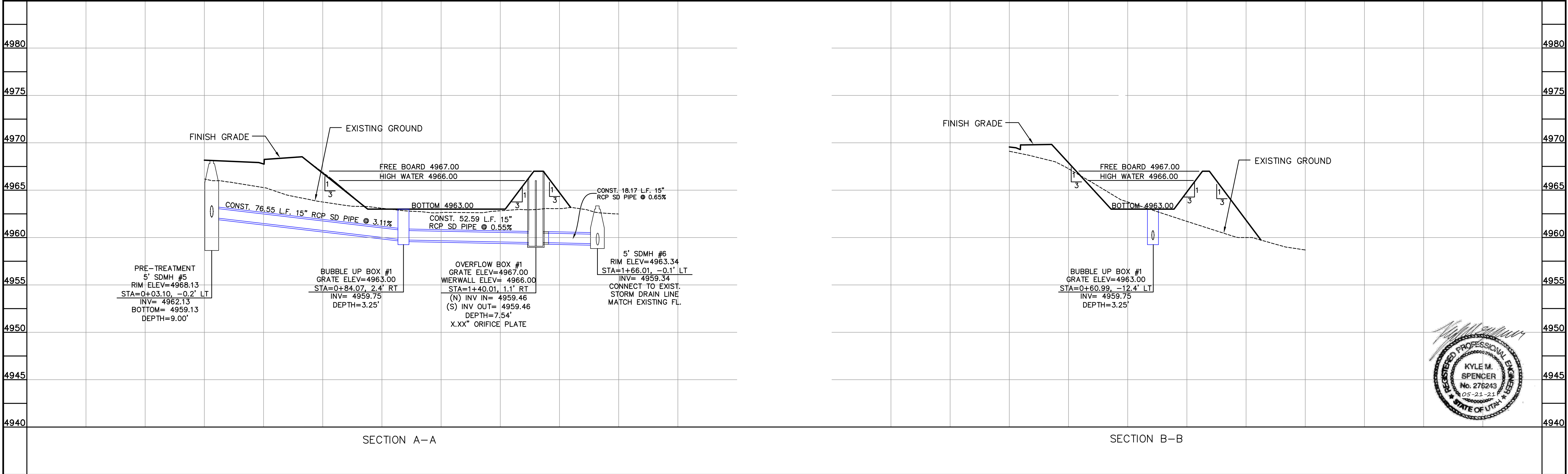
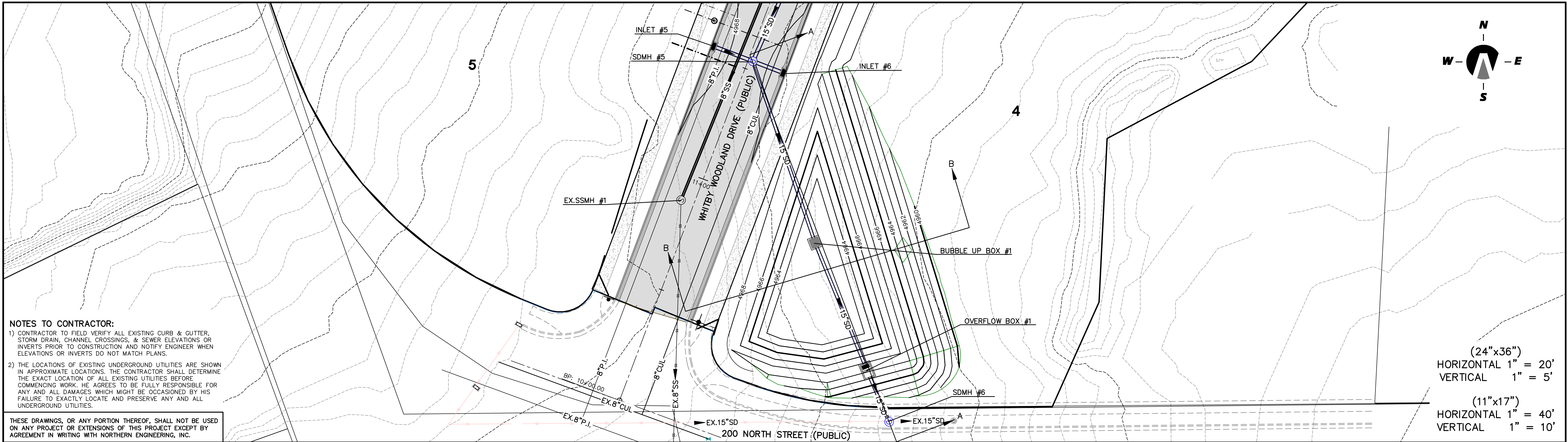
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AGREEMENT

This Agreement is made and entered into this 17th day of April, 2007 by and between Roger Whitby (hereinafter referred to as Land Owner) and Alpine City, a Utah municipal corporation (the "City").

RECITALS

Whereas, Land Owner has obtained Preliminary Plat approval from the Planning Commission of the City for a subdivision of the property known as Whitby Woodlands consisting of approximately 40.4 acres located at approximately 200 North and 400 West in Alpine City, Utah County, Utah. (The Subdivision). The Preliminary Plat is attached as Exhibit A

Whereas, the Subdivision is planned to be developed into 7 phases:

Plat A	<u>3</u>	lots	<u>2.0109</u>	<u> </u>	acres
Plat B	<u>8</u>	lots	<u>5.077</u>	<u> </u>	acres
Plat C	<u>15</u>	lots	<u>9.4166</u>	<u> </u>	acres
Plat D	<u>5</u>	lots	<u>3.6839</u>	<u> </u>	acres
Plat E	<u>10</u>	lots	<u>7.7007</u>	<u> </u>	acres
Plat F	<u>15</u>	lots	<u>10.79</u>	<u> </u>	acres
Plat G	<u>3</u>	lots	<u>1.7339</u>	<u> </u>	acres

Whereas the Land Owner has obtained final plat approval for all phases of the subdivision and is entitled at his request to record the plats subject only to the payment of appropriate fees and the posting of appropriate improvement bonds.

Whereas, the City desires to obtain the dedication of a portion of a road which is known as 400 West and 200 North.

Whereas this portion of 400 West and 200 North Road would normally been dedicated to the City at the time of plat recordation and improved by the Land Owner as part of his development.

Whereas the City has determined that the proposed final plats for all phases of the subdivision are consistent with the preliminary plat approval and City ordinance.

Whereas the Land Owner, if he so desired could immediately record final plats for all phases of the subdivision.

Whereas the Land Owner does not want to record plats for all phases of the subdivision with the Utah County Recorder at this time for personal and market reasons.

Whereas the City is planning to do a road improvement project on Westfield Road and desires to have the portion of 400 West and 200 North as part of that project.

Whereas the City engineer has estimated that the reasonable cost of improving the portion of 400 West and 200 North is \$103,000.

Whereas, the parties desire to memorialize other terms of their relationship.

Now, therefore, in consideration of the foregoing recitals and the following mutual promises, the receipt of sufficiency of which are hereby acknowledged, the parties agree to the following:

TERMS

1. Dedication of Right of Way—Land Owner shall provide a deed which dedicates to the City that portion of 400 West and 200 North that is adjacent to Whitby Woodlands Subdivision as more fully described in Exhibit B.
2. Development of the Subdivision— The Land Owner has already caused the City to record Plats A, B, and C. The City expressly agrees that final Plats D, E, F, and G, have been approved by the City Planning Commission and City Council and could be recorded by the City with the Office of the County Recorder only with the permission of the Land Owner. The City agrees that the approval currently given for these final plats shall be good for Fifteen (15) years from the date of the execution of this agreement. The City agrees that at anytime within Fifteen (15) years from the date of this agreement, if the Land Owner requests any or all of the approved unrecorded plats to be submitted to the Office of the Utah County Recorder, that the City shall record the plats requested to be recorded, subject only to the payment of appropriate fees and the bonding for the construction of infrastructure as may be required by City ordinances in existence at the time the plats are requested to be recorded. In addition, prior to recording Plat D, the Land Owner shall obtain written permission from the adjacent property owner to the west to allow grading for the street to extend onto his property, or the Land Owner shall provide an alternate street design, acceptable to the City, that will allow the street to be constructed entirely on the Land Owner's property. The City hereby expressly agrees to waive any requirements in current City ordinances that would otherwise require an approved plat to be recorded within a particular time period from the date of approval, and expressly waives any provision of City ordinance, or Utah State laws, that would provide that the approvals of the final plats for phases D, E, F, and G, could lapse for the Land Owner's failure to develop, construct or record within the next Fifteen (15) years.

3. The 400 West and 200 North right of way shall be dedicated to the City by the execution of the Attached deed (Exhibit C) at the time of signing this agreement.
4. Special Improvements: The Land Owner will not be required to construct sidewalk in Plat F along 400 West on the frontage of lot 1 and the open space parcel 101F. In addition, the Land Owner will be allowed to construct a 4-foot combination sidewalk in Plat G. along the west side of lots 1-3 as necessary to protect the existing trees.
5. Compliance with Ordinances/Vested rights. In developing the Subdivision, Land Owner shall comply with and be vested in the ordinances of the City in effect as the date of this Agreement, except as may be set forth in this agreement.
6. Impact and development Fees—Impact and development Fees for the development of Subdivision shall be those Fees that are In effect at the time of recordation of each plat.
7. Reimbursement of Road Construction costs—Land Owner shall reimburse City for Land Owner's portion of the Road Construction costs. Those costs are \$103,000 which shall be payable to the City at the time of signing this agreement.
8. Open Space and Streams— Regardless of any changes that may be made in future city ordinances or policies, all open space contained in Plats D, E, F, and G shall be private rather than public, and Land Owner shall not be required to pipe or otherwise contain the Westfield Ditch except as required for street crossings or as mutually agreed by the parties.
9. Assignment. The Land Owner may assign this Agreement or any rights or interests herein without the prior written consent of the City.
10. Attorney's Fees. In the event of any lawsuit between the parties hereto arising out of or related to this Agreement, or any of the documents provided for herein, the prevailing party or parties shall be entitled in addition to the remedies and damages, if any, awarded in such proceeding, to recover their costs and a reasonable attorney's fee.
11. Integration. This Agreement, together with the Exhibits hereto, integrates all of the terms and conditions pertaining to the subject matter hereof and supersedes all prior negotiations, representations, promises, inducements or previous agreements between the parties, whether oral or written with respect to the subject matter hereof. Any amendments hereto must be in writing and signed by the respective parties hereto.

12. **Headings.** The headings contained in this Agreement are intended for convenience only and are in no way to be used to construe or limit the text herein.
13. **Binding Effect.** This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective heirs, representatives, officers, agents, employees, members, successors and assigns (if any assignments are allowed as provided herein).
14. **No Third Party Rights.** The obligations of Land Owner set forth herein shall not create any rights in and/or obligations to any persons or parties other than the City. The City alone shall be entitled to enforce or waive any provisions of this Agreement.
15. **Termination.** Notwithstanding anything in this Agreement to the contrary, it is agreed by the parties hereto that in the event all phases of this Subdivision are not recorded within Fifteen (15) years from date of this Agreement, or in the event the Land Owner does not comply with the General Plan, development Ordinances of the City in existence at the execution of this agreement and the provisions of this Agreement, the City shall have the right, but not the obligation at the sole discretion of the City to withhold all further approvals, licenses, permits or other rights associated with any Subdivision or development described in this Agreement until such default has been cured. Termination may be effected by the City by giving written notice of intent to terminate to the Land Owner at the address of the Land Owner set forth herein. Whereupon the Land Owner shall have sixty (60) days during which the Land Owner shall be given an opportunity to correct any alleged deficiencies and to take appropriate steps to complete the Subdivision or phases thereof.
16. **Notices.** Any notices, requests and demands required or desired to be given hereunder shall be in writing and shall be served personally upon the party for whom intended, or if mailed, by certified mail, return receipt requested, postage prepaid, to such party at its address shown below:

To the Land Owner:
Roger Whitby
536 E. 3125 North
Provo, UT 84604

To the City:
City Administrator
20 North Main Street
Alpine City, UT 84004

Made and entered into as of the date specified above.

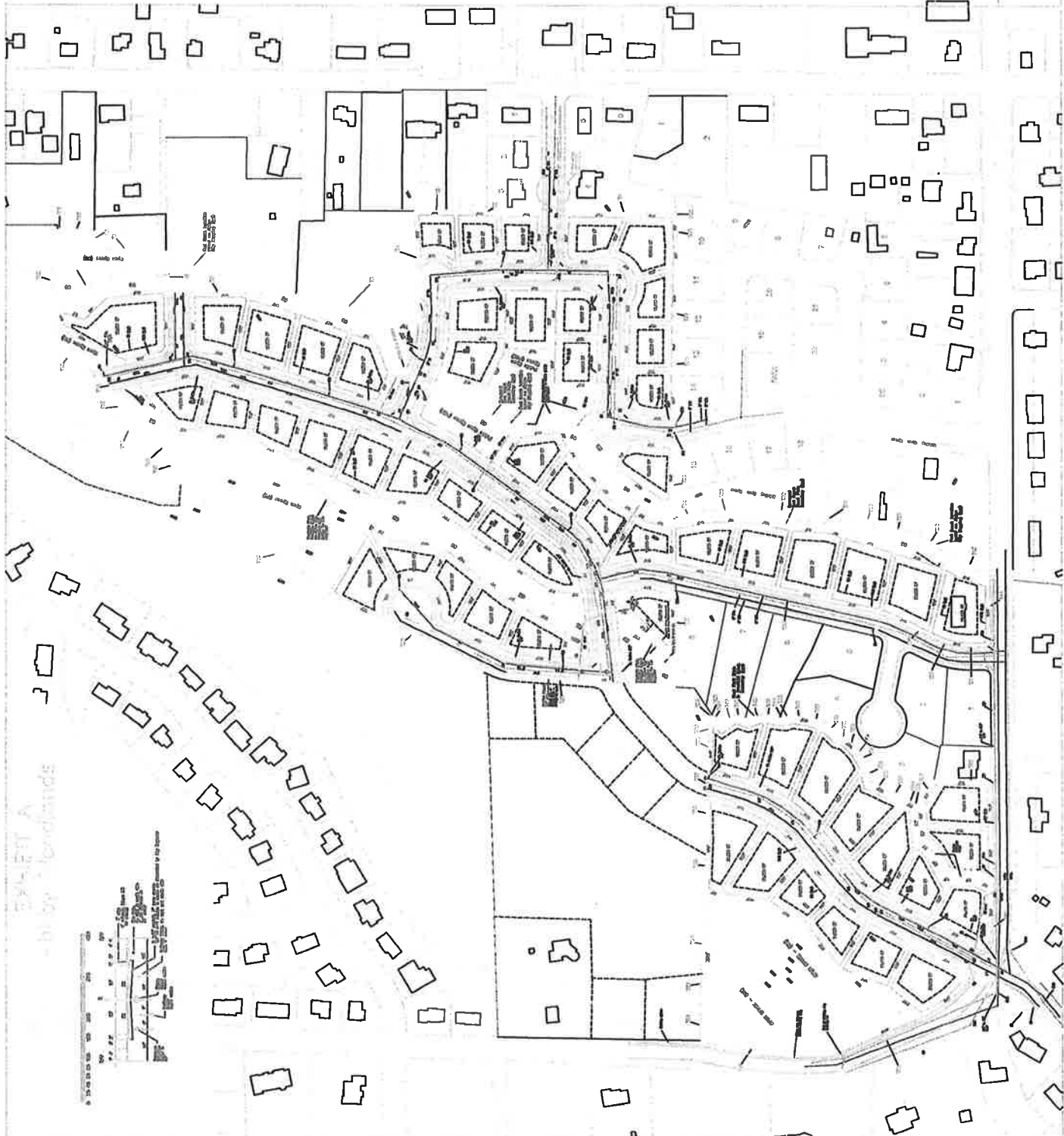

Hunt Willoughby, Mayor

ATTEST:


Janis H. Williams, City Recorder



Roger M. Whitby
Roger Whitby, Land Owner

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For the 1990s, the industry is looking for a more integrated approach to the design and construction process. The industry is looking for a more integrated approach to the design and construction process. The industry is looking for a more integrated approach to the design and construction process.

On October 19, 1973, the 42nd anniversary of the founding of the People's Republic of China, the Chinese government announced that it had decided to suspend the 1960 Sino-Soviet border agreement and to resume the 1909 Sino-Russian border agreement. This decision was a significant step in the normalization of Sino-Soviet relations.

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These figures are a very rough estimate of the total number of people who are likely to be affected by the disease. The actual number of people who are affected by the disease is likely to be much higher than these figures. The actual number of people who are affected by the disease is likely to be much higher than these figures.

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THE UNIVERSITY OF CHICAGO PRESS

THE UNIVERSITY OF CHICAGO PRESS

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Personal effects	Value

此等文字，皆係古人所遺，不可不讀。其言雖多，其理則一。蓋古人所以教人者，不過欲其知此理而已。其理既明，則其行自正。此理之正，即所謂中庸之道也。

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**Est. = Estimating Period
Ch. = Proposed Change
Re. = Existing Value
Pt. = Proposed Total**

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Purchased for school

* **DA**

School of Social History

Landscape from Under the Sun

The Artist

© 1999 by The McGraw-Hill Companies, Inc.

Writing Wonders

Order: 10-14-2008

David Offord
P.O. Box 9600 N.
Farm, Utah 84603
Tel. 772-0255

Pages 18584
S38 E 3125 N.
From, Utah 84604
Phone 372-18024

Updated 12-7-04
Source: as drawn
Drawn by 00-08
Drawn # 00-05
Sheet 1 of 3

1

EXHIBIT B

Whitby Legal Descriptions

Street Dedication for 200 North and 400 West

March 29, 2007

Commencing at a point located N 89°38'36" W 2845.243 feet along the 1/4 section and South 647.303 feet from the East one-quarter corner of Section 24, Township 4 South, Range 1 East, Salt Lake Base and Meridian (said point of beginning also located North 2044.229 feet and West 197.816 feet from the South one-quarter corner of said Section 24);
thence South 89°25' West 520.398 feet along Whitby title;
thence North 19°39' West 410.94 feet along Whitby title;
thence North 7°04' East 46.646 feet along Whitby title;
thence 118.509 feet along the arc of a 498.00 foot radius curve to the left (central angle equals 13°38'05", chord bears South 12°31'20" East 118.559 feet);
thence South 19°20'22" East 176.172 feet;
thence 146.419 feet along the arc of a 173.00 foot radius curve to the left (central angle equals 48°29'33", chord bears South 43°35'09" East 142.088 feet);
thence South 67°49'55" East 11.79 feet;
thence 23.562 feet along the arc of a 15.00 foot radius curve to the left (central angle equals 90°00', chord bears North 67°10'05" East 21.213 feet);
thence South 67°49'55" East 27.00 feet;
thence North 22°10'05' East 3.00 feet;
thence South 67°49'55" East 27.00 feet;
thence 23.581 feet along the arc of a 15.00 foot radius curve to the left (central angle equals 90°04'17", chord bears South 22°52'03" East 21.226 feet) to a point of compound curve;
thence 66.865 feet along the arc of a 170.00 foot radius curve to the left (central angle equals 22°32'09", chord bears S 79°10'16" East 66.435 feet) to the point of beginning. Area = 0.2559 acres.

Whitby Street Dedication
for
200 N. & 400 W.

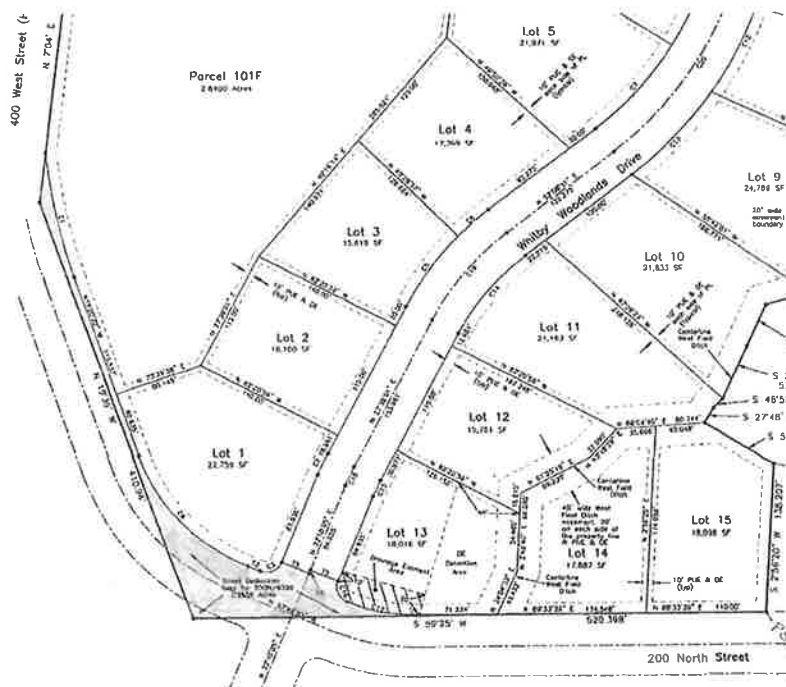


Exhibit C



PHONE (801) 492-5020 FAX (801) 492-5021
456 E STATE RD STE 1800, AMERICAN FORK UT 84003

ST#

Warranty Deed

Sandra A. Whitby,

Grantor,

of Provo, County of Utah, State of UTAH, hereby CONVEYS AND WARRANTS to

Alpine City, A Municipal Corporation,

Grantee,

of 20 North Main Street, Alpine, Utah 84004 for the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration, on the following described tract of land in UTAH County, State of Utah:

See Exhibit "A" attached hereto and by this reference made a part hereof.

SUBJECT TO easements, restrictions, reservations, and rights of way of record and general property taxes for the year 2007. and thereafter.

TOGETHER WITH all the appurtenances, rights, and privileges thereunto belonging.

For reference purposes only: Tax I.D. No.

WITNESS, the hand of said Grantor, this _____ day of April, 2007.

Sandra A. Whitby

STATE OF UTAH

SS:

COUNTY OF UTAH

On this _____ day of April, 2007, personally appeared before me Sandra A. Whitby, proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed on this instrument, and acknowledged that he/she/they executed the same.

NOTARY PUBLIC

Exhibit "A"

Street Dedication for 200 North and 400 West

Commencing at a point located N 89°38'36" W 2845.243 feet along the 1/4 section and South 647.303 feet from the East one-quarter corner of Section 24, Township 4 South, Range 1 East, Salt Lake Base and Meridian (said point of beginning also located North 2044.229 feet and West 197.816 feet from the South one-quarter corner of said Section 24);
thence South 89°25' West 520.398 feet along Whitby title;
thence North 19°39' West 410.94 feet along Whitby title;
thence North 7°04' East 46.646 feet along Whitby title;
thence 118.509 feet along the arc of a 498.00 foot radius curve to the left (central angle equals 13°38'05", chord bears South 12°31'20" East 118.559 feet);
thence South 19°20'22" East 176.172 feet;
thence 146.419 feet along the arc of a 173.00 foot radius curve to the left (central angle equals 48°29'33", chord bears South 43°35'09" East 142.088 feet);
thence South 67°49'55" East 11.79 feet;
thence 23.562 feet along the arc of a 15.00 foot radius curve to the left (central angle equals 90°00', chord bears North 67°10'05" East 21.213 feet);
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thence 23.581 feet along the arc of a 15.00 foot radius curve to the left (central angle equals 90°04'17", chord bears South 22°52'03" East 21.226 feet) to a point of compound curve;
thence 66.865 feet along the arc of a 170.00 foot radius curve to the left (central angle equals 22°32'09", chord bears S 79°10'16" East 66.435 feet) to the point of beginning.

Area = 0.2559 acre

ALPINE CITY COUNCIL AGENDA

SUBJECT: Resolution R2021-14: Consolidated Fee Schedule – Garbage Rates and Water Violations

FOR CONSIDERATION ON: 27 July 2021

PETITIONER: City Staff

ACTION REQUESTED BY PETITIONER: Approve the amendment to the consolidated fee schedule including an increase in garbage rates and the addition of fees for water violations.

BACKGROUND INFORMATION:

At the May 25, 2021, City Council meeting the City Council approved the extension of the garbage contract with ACE Disposal. The original contract also includes a provision for an annual COLA adjustment. The council approved the extension of the contract, a 1.4% COLA increase and an increase of \$4 per ton for the tipping fees.

We have completed a rate study to determine where rates need to be to cover the increases. This study also considered the cost of some additional garbage services that will be included going forward, such as the spring cleanup garbage drop off that was held in June. The rate study showed that a larger increase was necessary per can to cover the costs of the recycle program. The proposed rate structure still incentivizes recycling. Following are the proposed changes in rates:

Monthly Residential Waste	Current Fee	Proposed Fee
Garbage Collection Fee (1 st unit)	\$11.50	\$11.70
Garbage Collection Fee Each Additional Unit	\$6.20	\$6.40
Recycling Fee (1 st unit)	\$5.60	\$6.25
Recycling Fee Each Additional Unit	\$5.35	\$6.25

These rates would go into effect on the July bill which will go out in August.

The proposed amendment to the fee schedule also includes the addition of penalties for violating the City's water management plan, based on Ordinance 2021- 16 which was recently passed.

STAFF RECOMMENDATION:

Review the proposed amendments to the consolidated fee schedule, including the proposed rate structure for garbage and recycling services and the addition of penalties for water violations.

SAMPLE MOTION TO APPROVE:

I move that the amendments to the consolidated fee schedule be approved including the following:

- Garbage Rates: \$11.70 for 1st unit, \$6.40 for each additional unit.
- Recycling Rates: \$6.25 for 1st unit, \$6.26 for each additional unit.
- Violation of Water Management Plan
 - 1st Violation: written warning
 - 2nd Violation: service will be locked with \$50 fee required to have lock removed.
 - 3rd and Subsequent Violations: service will be locked with \$200 fee required to have lock removed.

RESOLUTION NO. R2021-14

A RESOLUTION OF THE GOVERNING BODY OF ALPINE CITY ESTABLISHING A CONSOLIDATED FEE SCHEDULE

WHEREAS, the governing body of Alpine City pursuant to Utah Code Annotated, Section 10-3-717 is empowered by resolution to set fees; and

WHEREAS, the governing body of Alpine City wishes to establish an equitable system of fees to cover the cost of providing municipal services;

NOW, THEREFORE, BE IT RESOLVED by the governing body of Alpine City that:

I. The following fees are hereby imposed as set forth herein:

A. CITY RECORDER:

1. Compiling records in a form other than that maintained by the City. Actual cost and expense for employee time or time of any other person hired and supplies and equipment. Minimum charge of \$10 per request.
2. Copy of record \$0.50/printed page
3. Certification of record \$1.00/certification
4. Postage Actual cost to City
5. Other costs allowed by law Actual cost to City
6. Miscellaneous copying (per printed page):

	8/W	Color
8 1/2x 11	\$0.10	\$0.50
8 1/2x 14	\$0.15	\$0.70
11 x 17	\$0.20	\$0.90

7. Electronic copies of minutes of meetings Actual cost
8. Maps (color copies)

8 1/2 x 11	\$2.50
11 x 17	\$5.00
24 x 36	\$18.00
34 x 44	\$30.00
9. Maps with aerial photos

8 1/2x 11	\$5.00
11 x 17	\$10.00
24 x 36	\$32.00

B. BUILDING PERMITS AND INSPECTIONS:

1. Applications:

New Homes/Commercial Buildings Construction	\$1,000.00
jobs exceeding a value of \$50,000	\$250.00
Fee for all other Building Permit Applications	\$25.00
Retaining Walls	\$300.00
2. Building Permit Fees will be based on the construction values in Exhibit A and in accordance with the Building Code formula in Exhibit B. Finished basements and decks shall fall under (U) Utility, miscellaneous in Exhibit A.

Refunds for permits issued will be limited to 80 percent of the permit costs, not later than 180 days after the date of fee payment. No refunds for plan review costs will be given if the plan review has been conducted.

A building permit extension fee shall be assessed when building permits for new homes have become null and void. A permit becomes null and void if work or construction is not commenced within 180 days or if construction or work is suspended or abandoned for a period of 180 days at any time after work is commenced. The cost of extending a permit after it has become null and void will be one-half the original building permit fee which consists of the construction fee, electrical fee, plumbing fee and heating fee. A current infrastructure protection bond will also be posted by the new owner/applicant. The original infrastructure bond will be applied to any damage that occurred after the original permit was issued.

3. Minimum fees for issuance of individual permits including, but not limited to, meter upgrades, A/C, furnace, water heaters, etc. Actual cost of inspection
4. One percent surcharge per building permit (Utah Code):
 - a. 80 percent submitted to Utah State Government,
 - b. 20 percent retained by City for administration of State collection.
5. Buildings of unusual design, excessive magnitude, or potentially hazardous exposures may, when deemed necessary by the Building Official, warrant an independent review by a design professional chosen by the Chief Building Official. The cost of this review may be assessed in addition to the building permit fee set forth in item #1 above.
6. Special Inspections Actual cost to City
7. Re-inspection Fee Actual cost to City
8. Retaining Wall Design Review Fee \$135/hr plus mileage at current IRS rate
9. Credit Card payments will only be accepted for total payments not exceeding \$1000.00

C. BUSINESS LICENSES:

1. Home Occupations \$50 + \$25.00 for one non-family employee
2. Home Occupations (no impact) No fee
3. Commercial \$50.00 + \$25.00 for each employee
(Maximum - \$400.00)
4. Late Charge after 3/01 of each year Double the base fee
5. Canvasser, Solicitors, and Other \$25.00

	Itinerant Merchants Application Fee	
6.	Accessory Apartment Permit	\$50.00 registration and annual fee

D. ORDINANCE ENFORCEMENT:

	Abatement of injurious and noxious real property and unsightly or deleterious objects or structures.	Actual cost of abatement plus 20% of actual cost
2.	Nuisance Citation	\$50 per violation/per day

E. PLANNING AND ZONING:

1.	General Plan amendment	\$350.00
2.	Zone change	\$350.00
3.	Appeal Authority	Actual Cost of Service
4.	Conditional Use	\$250.00
5.	Subdivisions	
	a. Plat Amendment Fee	\$250.00
	b. Concept Plan Review Fee	\$100.00 + \$20.00 per lot + actual cost of City Engineer's review
	c. Preliminary Plan Fee	\$100.00 + \$90.00 per lot + actual cost of City Engineer's review
	d. Final Plat Fee	\$100.00 + \$90.00 per lot + actual cost of City Engineer's review
	e. Preliminary Plan Reinstatement/Extension Fee	\$100.00
	f. Final Plat Reinstatement/Extension Fee	\$100.00
	g. Recording Fee	\$50.00 per sheet+ \$2.00 per lot
	h. Inspection Fee	\$418.00 per lot
	i. Subdivision & Building Bonds	
	(1) Performance and Guarantee	120% escrow in bank
	(2) Infrastructure Protection Bond	\$2,500.00 cash bond
		\$5,000.00 cash bond for corner lots or regular lots with more than 150 feet of frontage
	(3) Open Space Cash Bond	\$2,500 minimum or as determined by City Engineer
	j. Storm Water Pollution Prevention Plan (SWPPP) Cash Bonds	
	(1) New Home	\$2,000
	(2) Subdivision	\$200/lot or \$2,000 minimum
	(3) Other	As determined by City Engineer

6.	Publications	Electronic	Hard Copy
	a. General Plan	\$15.00	\$10.00
	b. Subdivision Ordinance	\$15.00	\$30.00
	c. Zoning Ordinance	\$15.00	\$30.00
7.	Site Plan Review Fee		
	a. Residential (not in approved subdivision)	\$150.00 + actual cost of engineering review	
	b. Commercial	\$250.00 + actual cost of engineering review	
8.	Lot Line Adjustment	\$75.00	
9.	Annexation		
	a. Application Fee	\$800.00	
	b. Plat Review Fee	\$200.00	
	c. Annexation Study Fee	Actual Cost	
10.	Sign Permits		
	a. Application Fee	\$25.00	
	b. Inspection Fee	Actual cost	
	Application fee shall not apply to temporary non-profit signs.		
11.	Utah County Surveyor Plat review fee	\$125.00	
12.	Preservation Coat	\$0.25 per square feet of asphalt area	
13.	Street Light Connection Fee	\$150.00 per light	
14.	Credit Card payments will only be accepted for total payments not exceeding \$1000.00		

F. PUBLIC WORKS:

1.	Streets		
	a. Street Dedication or Vacation		\$300.00
	b. Street Name Change Application		\$100.00
	c. New Street Sign for Name Change Approval		\$75.00 per sign
2.	Concrete Inspection Permits:		
	a. Curb and Gutter		\$35.00
	b. Sidewalk		\$35.00
3.	Excavation Permits, Asphalt Concrete Cuts/Unimproved Surface		
	a. Excavation bond		\$4,000.00
	b. Minimum fee for cuts in paved surfaces more than 3 years old		\$300.00 + 1.50/sq. ft.
	c. Minimum fee for cuts in paved surfaces 3 years old or less		\$300.00 + 3.00/sq. ft.
	d. Land Disturbance Permit		\$300.00
4.	Culinary Water Rates (Temporary disconnection is not permitted unless authorized by the Alpine City Administrator.):		
	a. Box Elder and those portions of Willow Canyon and any other areas of the City that cannot be served by pressurized irrigation:		

Amount Used	Rate
0 to 8,000 gallons per month (base rate)+ meter fee	\$17.00
Each 1,000 gallons over 8,000 gallons to 60,000 gallons per month	\$0.90
Each 1,000 gallons over 60,000 gallons to 175,000 gallons per month	\$1.40
Each 1,000 gallons over 175,000 gallons per month	\$2.80

b. All other users:

Amount Used	Rate
0 to 8,000 gallons per month (base rate) + meter fee	\$17.00
Each 1,000 gallons over 8,000 gallons to 10,000 gallons per month	\$2.00
Each 1,000 gallons over 10,000 gallons to 12,000 gallons per month	\$3.00
Each 1,000 gallons over 12,000 gallons per month	\$4.00

c. Other utility fees and rates

- (1) Deposit of \$100 refunded after one year of prompt payment
- (2) Transfer of service \$25.00
- (3) Utility service connection \$25.00
- (4) Delinquent & Disconnect Reconnect
 - a. First time annually \$70.00 + 10% penalty (the \$70.00 + 10% penalty will be waived if the customer signs up for automatic bill pay by credit card through Xpress Bill Pay)
 - b. Subsequent times \$45.00 + 10% penalty
- (5) Utility tampering fee \$299.00

5. Culinary Water Meter Connection Fee (In Addition to Impact Fee)

Minimum Lot Size Requirements	Meter Size	Fee
N/A	$\frac{3}{4}$ "	\$350.00
One acre or larger or commercial use	1"	\$460.00
As justified by engineering requirements	1 $\frac{1}{2}$ "	\$800.00
As justified by engineering requirements	2"	\$1,000.00

6. Pressurized Irrigation Connection Fee (in addition to impact fee)

Description	Meter Size	Fee
For connections installed as part of the original Pressurized Irrigation System	1"	\$550.00
For connections installed as part of the original Pressurized Irrigation System	1 ½"	\$800.00
As justified by engineering requirements	2"	\$850.00

7. Pressurized Irrigation Meter Connection Fee (in addition to impact fee and pressurized irrigation connection fee, if applicable)

Description	Fee
1" Meter installation with no provisions for meter	\$585.00
1" Meter installation with provisions for meter	\$520.00
1.5" Meter installation	\$1,625.00
2" Meter installation	\$1,680.00

8. Pressurized Irrigation Rates (Temporary disconnection is not permitted unless authorized by the Alpine City Administrator.):

Users	Rate
All Users - meter fee	\$1.00
Residential Users	
(1) Non-shareholders in Alpine Irrigation Co.	\$0.001112 per square foot per month
(2) Shareholders in Alpine Irrigation Co.	\$0.000618 per square foot per month
Agricultural User	\$1.15 per share per month

9. Water Management Plan Violation Fees:

- 1st Violation: written warning
- 2nd Violation: service will be locked with \$50 fee required to have lock removed.
- 3rd and Subsequent Violations: service will be locked with \$200 fee required to have lock removed.

10. Sewer Connection Fee \$125.00

11. Sewer Usage Rate

Amount Used	Rate
0 to 2,000 gallons per month	\$14.40
Each 1,000 gallons over 2,000 gallons per month	\$3.94

Sewer rates are based on average monthly water use from October 1 - March 30.

12. Storm Drain Usage Rate

Parcels	Rate
Residential (1 ERU)	\$5.00 per month
Commercial	The charge shall be based on the total square feet of the measured impervious surface divided by 4,200 square feet (or 1 ERU) and rounded to the nearest whole number. The actual total monthly service charge shall be computed by multiplying the ERU's for a parcel by the rate of \$5.00 per month. See Municipal Code 14-403.6 for available credits.
Undeveloped	No charge

12. Infrastructure Protection Violation \$300.00

13. Monthly Residential Waste
a. Collection Fee (1st unit) \$11.50
b. Collection Fee each additional unit \$6.20
c. Recycling (1st unit) \$5.60
d. Recycling each additional unit \$5.35

14. Transfer of Utility Service \$25.00

G. PARKS

1. Resident General City Park Reservation \$25.00 use fee

2. Non-resident General City Park Reservation \$75.00 use fee
(parks other than Creekside Park)

3. Non-resident Creekside Park Reservation \$100.00 use fee

4. Sports Use of City Parks
Rugby, Soccer, Football, Baseball, etc. \$2 per player
Outside Leagues \$10 per game

5. Mass Gathering Event" \$150 use fee
\$1,000 deposit

6. Lambert Park
Event - Resident \$25 + \$150 deposit
Event - Non-resident \$75 + \$150 deposit
Races in Lambert Park \$500 + mass gathering fee and deposit

7. Rodeo Grounds
Event - Resident \$25 + \$150 deposit
Event - Non-resident \$75 + \$150 deposit
8. Moyle Park Wedding - 100 people or fewer \$100.00
Moyle Park Wedding - 100+ people \$200.00
Non-resident Moyle Park wedding 100 people or fewer \$200.00
Non-resident Moyle Park wedding 100+ people \$400.00

H. IMPACT FEES

1. Storm Drain \$800.00
2. Street \$1,183.32
3. Park/Trail \$2,688.00
4. Sewer \$492.66
5. Timpanogos Special Service District (fee passed through) \$1,785.55
6. Culinary Water with Pressurized Irrigation \$1,123.00
7. Culinary Water without Pressurized Irrigation \$6,738.00
8. Pressurized Irrigation \$0.095/square foot

I. CEMETERY

1. Above ground marker or monument (upright) \$75.00
2. Single Burial Lot or Space
 - a. Resident \$985.00
 - b. Non-Resident \$1,500.00

3. Opening & Closing Graves*

	Weekday	Saturday
Resident	\$600	\$850
Non-Resident	\$1,000	\$1,500.00
Resident Infant (under one year)	\$125.00	\$350.00
Non-Resident Infant (under one year)	\$175.00	\$400.00

4. Disinterment \$1,500.00
City will remove all earth and obstacles leaving vault exposed.
5. Cremation
 - a. Burial of ashes - Resident \$500.00
 - b. Burial of ashes - Non-Resident \$500.00
6. Deed Work \$50.00

6. *No Holiday Burials

J. SMALL WIRELESS FACILITIES RIGHT-OF-WAY RATES. The fee a wireless provider shall pay for the right to use the right-of-way shall be the greater of the following:

1. 3.5% of all gross revenue relative to the wireless provider's use of the right-of-way for small wireless facilities; or
2. \$250 annually for each small wireless facility.

II. Other Fees

It is not intended by this Resolution to repeal, abrogate, annul or in any way impair or interfere with the existing provisions of other resolutions, ordinances, or laws except to effect modification of the fees reflected above. The fees listed in the Consolidated Fee Schedule supersede present fees for services specified, but all fees not listed remain in effect. Where this Resolution imposes a higher fee than is imposed or required by existing provisions, resolution, ordinance, or law, the provisions of this Resolution shall control.

III. This Resolution shall take effect on the _____ day of _____, 2021

PASSED this _____ day of _____, 2021

Troy Stout, Alpine City Mayor

ATTEST:

Bonnie Cooper
Alpine City Recorder