



HURRICANE CITY UTAH

Mayor

City Manager

Nanette Billings Kaden DeMille

City Council

Joseph Prete
Dave Sanders
David Hirschi
Kevin Thomas
Doug Heideman

Hurricane City Council Meeting Agenda

February 2, 2023
5:00 PM

City Council Chambers 147 N 870 W, Hurricane

Notice is hereby given that the City Council will hold a Regular Meeting in the City Council Chambers 147 N 870 W, Hurricane, UT. [Meeting Link on Webex](#) Meeting number: 2630 456 5376 Meeting password: HCcouncil Join from a video or application Dial 26304565376@cityofhurricane.webex.com. You can also dial 173.243.2.68 and enter your meeting number. Join by phone +1-415-655-0001 US Toll Access code:26304565376. A silent roll call will be taken, followed by the Pledge of Allegiance and prayer by invitation. **THOSE WISHING TO SPEAK DURING PUBLIC FORUM MUST SIGN IN WITH THE RECORDER BY 6:00 P.M.**

5:00 p.m. Pre-meeting

6:00 p.m. - Call to Order

Prayer

Thought

Pledge of Allegiance

Declaration of any conflicts of interest

Agenda Summary

Public Forum – Comments from Public

Please Note: In order to be considerate of everyone attending the meeting and to more closely follow the published agenda, public comments will be limited to 2 minutes per person per item. A spokesperson representing a group to summarize their concerns will be allowed 5 minutes to speak. Repetitious commentary will not be allowed. If you need additional time, please request agenda time with Cindy Beteag in writing before 5:00 p.m. the Wednesday one week before the Council meeting.

Consent Agenda

1. Consideration and possible approval of **local consent for an off-premise beer license-Gas Stop Hurricane**
2. Consideration and possible approval of **local consent for 6 events held at Sand Hollow Resort-Jennifer**
3. Consideration and possible approval of **local consent for the Washington County Fair-Sui Lafaele**

4. Consideration and possible approval of **Ordinance 2023-03 amending Chapter 8 Section Utility rate and fees**
5. Consideration and possible approval of an **Amended Resolution 2022-01 regarding fees for utilities**
6. Consideration and possible approval of **Resolution 2023-10 reappointing members to the Planning Commission**
7. Minutes of the Regular **City Council meeting for January 19, 2023**

OLD BUSINESS

1. Ordinance 2022-61 Consideration and possible approval of an amendment to Hurricane City Code **Title 10 Chapter 7 Section 9 Conditional Use Permit Standards, Title 10 Chapter 12 Agriculture Zoning Standards and Title 10 Chapter 14 Residential Agriculture Standards** to amend the code to allow Reception Centers as a conditional use within Agriculture and Residential Agriculture Zones.
2. Ordinance 2022-62 Consideration and possible approval on a **Land Use Code Amendment Request to Title 10-Chapter 3-Subsection 4 and 10, Title 10-Chapter 15-Subsection 3, Title 10-Chapter 41, and Title 10-Chapter 51; and Title 3 Chapter 10** to make changes regarding short-term rental standards within residential areas, residential hosting standards, and short-term rental standards in commercial zones. Hurricane City Applicant.
3. Consideration and possible approval of an **appeal to the denial of a residential hosting application** - Kelly Ashcroft
4. Consideration and possible approval of **Resolution 2023-05 adopting the Washington County Water Conservancy excess water surcharges**

NEW BUSINESS

1. Consideration and possible approval of a **conditional donation from Scott Nielson**
2. Consideration and possible approval of **revoking the residential hosting license at 2640 S 3480 West**-Cindy Beteag
3. Consideration and possible approval of **revoking the residential hosting license at 3445 W 120 North**-Cindy Beteag
4. Consideration and possible **approval of support for United We Pledge Art Show**-Dennis Leavitt
5. Consideration and possible approval of allowing a **building permit to be issued for Quail Creek Industrial Phase 5 lot #501**. Denet Construction Applicant
6. Consideration and possible approval of a **preliminary plat for Desert Sky Estates, a 73 lot residential subdivision located at 2100 W and 3350 S**. Desert Sky Estates Applicant. Ben Wilits and Tony Carter Agents.
7. Consideration and possible approval of a **preliminary plat for Southern Dunes Townhomes, a recreation resort 345 townhome development located at 2600 W and 4200 S**. Southern Dunes Townhomes Applicant. Bush & Gudgeon, Inc Agent

8. Consideration and possible approval of a **preliminary plat for Dixie Meadows, a 238 lot single family subdivision, located at approximately 4392 W 2400 S.** Western Mortgage and Realty Co-Brent Moser Applicant. ProValue Engineering-Karl Rasmussen Agent.
9. Consideration and possible approval for a **preliminary plat for Bench Lake Townhomes, a 196 unit townhome development located at approximately 3145 S 1100 W.** Blue Mountain Property Enterprises LLC and Diamond Edge Construction, LLC-Scott Stratton Applicant. ProValue Engineering-Karl Rasmussen Agent.
10. Consideration and possible approval for the Planning Director to **issue a grading permit for Cordero Phase 2**-Brant Tuttle
11. Ordinance 2023-04: Consideration and possible approval of a **Land Use Code Amendment request to Title 10 Chapter 32: Landscaping and Screening to make updates to water conservation standards.** Hurricane City Applicant.
12. Discussion and possible direction to staff on whether to **proceed with the purchase of a natural gas generator** -Scott Hughes
13. Consideration and possible approval of an **updated policy governing power generation by customers connected to the City's power grid.** -Scott Hughes
14. Consideration and possible approval of a **MOU with the Utah Department of Workforce Services** regarding the Five County HEAT program
15. Consideration and possible approval of a **Cost Sharing and Reimbursement Agreement with DAF Development and Richardson Brothers** for 2800 West. - Mike Vercimak
16. Consideration and possible approval of **Resolution 2023-09 authorizing and directing the retention of an outside engineering firm** to perform development plan reviews. -Mayor Billings
17. Discussion and possible decision regarding the **maintenance of the park area behind the LDS Stake Center** at 677 S 700 West
18. Closed Meeting held pursuant to Utah Code section 52-4-205, upon request

Adjournment

I hereby certify that the above notice was posted to the city website, (www.cityofhurricane.com) posted to the state public notice website, and at the following locations:

1. City office – 147 North 870 West, Hurricane, UT
2. The Post Office – 1075 West 100 North, Hurricane, UT
3. The library – 36 South 300 West, Hurricane, UT

_____ for the City Recorder

Agenda Summary for Hurricane City Council February 2, 2023

Consent Agenda

1. Applicant is purchasing the existing Chevron at 4390 W State Street. This location currently has an off-premise license. He has a gas station in Richfield, so he is familiar with Utah's laws on alcohol. A background check was completed on the owner and there are no concerns.
2. Applicant Sand Hollow Resort is applying for local consent for six events that will be held in their Rock Bowl. They hold events every year and staff has no concerns.
3. The Washington County Fair needs local consent for their beer garden. This has been approved previously and there have been no problems.
4. This ordinance is to clean up the chapter regarding utilities. The proposed changes bring the water section language in line with the power section. It also removes any set dollar amounts that are listed in the ordinance and instead references fee amounts set by resolution. This way, fee amounts can be updated periodically by resolution instead of amending the City's ordinances each time.
5. This Resolution was approved the first meeting in January but staff realized there are two fees that are currently being charged that couldn't be found in a resolution. The first one being a higher deposit if a resident doesn't provide a social security number. The second one is a late fee for hydrant meters that has not been paid within 30 days.
6. Paul Farthing and Shelley Goodfellow's terms expire this month. Both have agreed to serve another term on the Planning Commission. Mayor Billing's has recommended approval of them serving again.

Old Business

1. This item was last discussed on January 5th. It was continued to allow time for the Fire District to respond and staff to expand on the definition of a reception center.
2. This item was also discussed on January 5th. It was continued to give the City Attorney time to review the proposed changes.
3. This item was discussed January 5th as well. Council directed Mr. Ashcroft to research what it would take to make it compliant. Mr. Ashcroft has supplied the inspection report and a letter from a builder regarding the footings.
4. The Council has considered the proposed excess water use surcharges in two previous meetings. In the last meeting, the Council voted to continue the item until the Planning Commission had forwarded to the Council a recommendation on the proposed amendments to the water conservation ordinance so that they could be considered together. The Planning Commission has now forwarded that recommendation on the water conservation ordinance. Also, in the last two weeks since the Council reviewed the proposed resolution, the Washington County Water Conservancy District has elected not to pursue the standby fee that was included in one of its resolutions. That resolution, which was Exhibit C in the previous draft that the Council had reviewed, has now been removed.

What remains before the Council is the District's following proposals:

- a. For each issued meter for existing residents, that the City pay an "excess water use surcharge" to the District in the amount of \$1.00 per each thousand gallons over a monthly threshold, which for residents with 3/4" meters is 36,000 per month. If a resident is watering more than 20 head of cattle (or equivalent livestock), then the resident can apply to the District for a rebate for the month

that the livestock were being watered. There is no rebate available for excess water usage if the resident is watering less than 20 cattle or animals. There is no rebate available for residents that are assessed a surcharge that are maintaining a garden.

- b. For each residential meter issued after January 1, 2023, that the City pay an "excess water use surcharge" to the District in the amount of \$10.00 per each thousand gallons over a monthly threshold. For residents not connected to a secondary irrigation system, the thresholds vary by season as follows: 8,000 gallons in December, January, February; 15,000 gallons in March & April; 20,000 gallons in May, June, July, August, & September; 15,000 gallons in October & November. For residents that are connected to a secondary irrigation system, the monthly threshold is 8,000 gallons each month all year. There are no rebates available for meters issued after January 1, 2023.

The Water Board met and made a recommendation on this item. The recommendation is to adopt in part and to reject in part.

1. Regarding the surcharge on pre-2023 connections of \$1 per thousand gallons over 36,000 gallons per month, the Water Board recommended approval on the condition that the City first obtain clarification on how those surcharge funds will be used to benefit Hurricane City.
2. Regarding the surcharge on post-1/1/23 connections of \$10 per thousand gallons over the seasonal thresholds set by the District, the Water Board recommended denial for two reasons: (1) the monthly threshold amounts proposed by the District target average water users instead of bad actors and (2) \$10 per thousand gallons is an excessive charge.

One member abstained from voting, but all other Board Members voted in favor of the above recommendations.

During the discussion, the Water Board Members made the following comments and suggestions that may be informative for the Council:

1. Perhaps the surcharge charged by the City should stay in the City and be used by the City for conservation, instead of relaying the funds to the District for the district to use the funds for conservation.
2. For new users, a charge of \$5 instead of \$10 might be more appropriate.
3. For new users, perhaps the bell curve threshold of the monthly allowable water should be increased so that average water users will not be penalized.
4. The Board was generally concerned about the City ceding control to the District of setting surcharge and rate terms.

New Business

1. Scott Nielson has offered to donate a 150' flag pole and two flags for the new Veterans Park. This donation would include the pole, two flags, the excavation, and the engineering. Mr. Nielson would like the City to commit to the concrete, steel, erecting the pole, and all future flag purchases. The flag that was used on Mr. Nielson's business in St. George was 40 x 80. Prices for this size of flag are anywhere from \$5,000-\$7,000. Staff has concerns about the maintenance of an oversized flag pole.
2. This owner was issued a residential hosting license on August 2, 2022. A neighbor complained on December 6, 2022, that they were renting the whole house and not living there. Staff reviewed the information and felt the complaint was valid. A letter was sent

to the homeowner on December 8, 2022, asking them to provide proof they are living in the house full time. Owner called and asked what they needed to do. Staff gave them direction on what they needed to do. The next day, they came in and talked to the City Attorney. During their conversation, he admitted he did not live in the home when it was being rented out. The owner stated to the City Attorney that he intended to relinquish his residential hosting license now that he understood the use was not permitted and that he would confirm that intent in an email to the City Attorney. Staff has not heard from the owner since that day. Staff recommends that the license be revoked based on the owner's failure to comply with the requirement that the house be owner-occupied.

3. This owner was issued a residential hosting license on September 27, 2022. The City has received multiple complaints about their occupants parking on the road and blocking the neighbors as well as guests letting their dogs urinate on the neighboring lawns. A warning letter was sent on October 20, 2022, letting them know about the complaints and gave them time to correct it. The City continued to get complaints so a revocation hearing was scheduled. Two neighbors have volunteered to testify of the problems they are having with the guests of this rental. Staff recommends that the license be revoked based on evidence that the owner is allowing guests to park on the public street, which is in violation of the City's ordinance governing Residential Hosting Facilities.
4. Applicant is proposing an art competition to be ran through the Hurricane Recreation Department. The purpose is to help families in Hurricane get to know about Liberty Village and what better way than working with kids to express their patriotism through art. Applicant is asking permission for Hurricane City to send out email to the community, put on their website and display a poster at the community center.
5. The applicant is requesting that the City Council direct staff to issue a building permit so that they can build on a lot within Quail Creek, Phase 5. Currently, utility services have not been completed for the phase and the site does not meet the standards of 10-39-15 for issuing a building permit within subdivisions. However, part of the applicant's request is reviewing how the City should interpret Subsection F and if an industrial building could be considered a "model home".

Staff makes the following findings:

- a) The improvements that are required by HCC 10-39-15(A)(2)(b) prior to a building permit being issued have not been met.
- b) The exception for model homes in HCC 10-39-15(F) does not apply because (1) the owner is not requesting to build a "home" and (2) the infrastructure to support a model home and qualify for the exception has not been installed.

Staff recommends that the Council direct staff and the applicant to comply with the applicable City ordinance and only issue a building permit after the requirements of HCC 10-39-15 have been met.

6. The applicant is proposing a 72-lot single family subdivision located along 2100 West. The zone change for this property was approved in 2021 under the name "Spendlove 37 PDO" conditioned on a development agreement being signed that limits their unit count and ability to move forward until utilities are available to the site. A previous preliminary plat application was denied by the City Council, but the Council recently invited the applicant to re-apply. The Planning Commission again recommended the preliminary plat be denied based on the following findings: 1. Lack of adequate public facilities and infrastructure, including power capacity. 2. Failure to comply with the terms of the development agreement governing the development of this property. Staff recommends denial for the same reasons. Please see staff report in the packet for comments from the

planning, legal, and financial.

7. The applicant has filed a preliminary plat application for Southern Dunes Townhomes within the Cordero development. The applicant is proposing 345 resort townhome units for a density of about 8.63 units per acre. The Cordero development, as approved in 2020 is split into three sections with different zonings: the west side is zoned Recreation Resort (Southern Dunes), the middle section is zoned R1-10 (Southern Shores) and the east side is zoned R1-6 (Cordero). A development agreement governs this development that limits the overall unit count to 700 units across all three sections. This preliminary plat will complete the preliminary plat process for the entire development. Utilities are still scarce throughout the region so any approval should be contingent on the developer being able to supply adequate services to the property. A previous preliminary plat application was denied by the City Council, but the Council recently invited the applicant to re-apply. The Planning Commission again recommended denial of the preliminary plat finding that there are inadequate facilities to serve the property. Staff recommends denial for the same reasons. Please see staff report in the packet for comments from the planning, legal, and financial.
8. The applicant is proposing a 238-lot single family subdivision located between the existing Marla at Elim Valley development and Dixie Springs. This is part of Phase 3 of the Sand Hollow Gateway Public Infrastructure District, phase 1 of which is currently under development. No off-site improvement plans for phase 3 (or Phase 2) have been submitted at this time. The Planning Commission recommended approval of the preliminary plat.
9. This is a multi-family townhome and some single-family homes proposed development located along 1100 W. and 3145 S. The applicant is seeking approval for a preliminary plat for the site after a PDO Zone Change approval last spring. Staff and the Planning Commission both recommend denying this application based on limited utility facilities in the area. Please see staff report in the packet for comments from the planning, legal, and financial.
10. Cordero Phase 2 has an approved preliminary plat but the City staff have been unable to sign the construction drawings for the development lack of adequate power capacity. The developers met last Thursday, Jan. 19th with the Power Department, City Attorney, and Mayor Billings. The Power Department explained their efforts in updating the power in the area and the developers understand the City's power concerns. The developers are requesting a grading permit so they can begin earthwork while they await power capacity to be increased in the area. The City Council must authorize the Zoning Administrator to issue a grading permit. Some staff concerns with issuing a grading permit are that: (1) it may create an expectation as to the timeline of when power capacity will be increased, which timeline is not certain at this point and (2) grading of the native soils and vegetation is known to create a weed and dust problem, especially if the development is unable to move forward past the grading stage in the near future due to lack of public facilities or the developer's choice or lack of financing.
11. The Mayor has asked the Planning Commission to consider an update to the Water Conservation section of the City Landscape Code. This allows Hurricane residents to qualify for grants and reimbursement programs by the state and the Washington County Water Conservation District. To qualify, the City needs to update the standard on how much percentage of lawn is allowed in residential areas, namely up to 8% or 2,500 sq. ft. max. Staff has made some additional water conservation additions to the ordinance. The Planning Commission recommended denying the proposed changes for the following reasons: the state recommendation of a 15% cap is more suitable in light of quality of life; the conservation is used to accelerate growth; the proposed ordinance adds to many restrictions; and "rather than being focused on the few remaining areas that will yield

large water savings, it is laden with minutiae that significantly increase administrative costs while providing little or no conservation benefit."

12. The Power Department has the space for one additional generator in the current building. They have been in discussions with Power Board regarding the purchase of one (1) additional generator for quite some time. They have been working on the approval on an adjusted air permit with Utah Department of Air Quality and have received approval for that permit. On January 11th, 2023, Power Board recommended the approval of the purchase of that one generator. If approved by City Council, the Power Department will be looking to finance that generator through UAMPS. The total price quoted is \$3,077,022.20.
13. The proposed, updated policy governs the relationship between the City and customers that wish to generate power on their property through either solar panels or generators. As solar becomes more sophisticated and common, the Power Department had made an effort to update its policy accordingly and to better protect the power grid and existing residents. As part of its analysis, the Power Board created a sub-committee to focus on this specific issue and advise the Power Board. The proposed, updated policy simplifies the previous version by combining what is currently several different policies into one document. The proposed policy seeks to strike the balance between risks to the City's power grid imposed by self-generation and the benefits to the community that self-generation provides.
14. The City currently participates in an MOU with the Department of Workforce Services for the Five County HEAT program. This program helps residents that are having difficulty paying their power bill. There is also a program to help residents with their water bill. Hurricane is not currently part of the agreement, but if this is approved then our residents could qualify to get help with their water bill. Funding for the water portion is only available until September 2023 unless the government extends it. Staff is still working with the Workforce Office on all the details of the agreement but should have a recommendation by next week.
15. The City is in the process of constructing 2800 West Street between State Street and 600 North. DAF Development and Richardson Brothers Development own land adjacent to 2800 West and will be obligated to make certain improvements when they develop the property. Instead of requiring these developers to make the improvements to the right-of-way after 2800 West is already constructed, it is proposed that the City's contractor make some of the improvements during construction, which will be reimbursed by the developers. This approach will avoid the issues that occur when improvements are made to a new roadway after it is constructed. The proposed contract is attached and includes the cost breakdown showing the amounts that will be owed by the developers. Staff recommends approval of the contract.
16. Mayor Billings is proposing a resolution that authorizes and directs the hiring of an outside engineering firm as an option for plan review. The proposed resolution states that after a 14-day period for outside review, the City has 5 business days to review it and return it to the developer.
17. David Stirland, on behalf of the School District, reached out to David Hirschi regarding the grass/park area behind the LDS Stake Center at 677 S 700 West. The school district no longer wants to water or maintain that grass so they are asking the City to take it over. Staff would like direction from the Council on whether to pursue this endeavor.
18. Closed session is not scheduled as of Friday.



STAFF COMMENTS

Consideration and possible approval of **local consent for an off-premise beer license**-Gas Stop Hurricane

Discussion:

Applicant is purchasing the existing Chevron at 4390 W State Street. This location currently has an off premise license. He has a gas station in Richfield, so he is familiar with Utah's laws on alcohol. A background check was completed on the owner and there were no concerns.

Findings:

Recommendation:

Staff recommends approval.

Attachments:

1. Gas Stop App_Redacted
2. Gas Stop Local Consent



LIQUOR LICENSE APPLICATION AND QUESTIONNAIRE

HURRICANE CITY
147 N 870 W
HURRICANE, UTAH 84737
(435) 635-2811

NOTE: **Please print or type.** All questions must be answered completely or application will not be considered.

NEW LICENSES OR CHANGE OF OWNERSHIP must be accompanied by:

- ☒ \$50.00 non-refundable application fee
- ☒ Annual license fee (refunded if application is denied)
- ☒ Statement from 5 individuals or entities recommending the applicant
- ☒ Copy of business license or business license application
- ☒ Proof of completion of all necessary certifications by employees required by the city and state or understanding of necessary training requirements for new applicants
- ☒ Names and addresses of shareholders, members, or partners (applicable to Corporations, limited liability companies and partnerships)

1. Applicant If the license is for an individual or sole proprietorship, applicant must be the owner. If license is for a corporation, the applicant shall be a corporate officer/agent authorized to make the application and a separate sheet must be attached giving the names and addresses of all shareholders owning more than 10% of the corporation. If license is for a limited liability company, applicant must be a manager or managing member authorized to make the application. If license is for a partnership, the applicant shall be a general partner and a separate sheet must be attached giving the names and addresses of all partners.

Name Hemant P Patel

Home address [REDACTED]
(Street) (City) (State/Zip)

Phone Number [REDACTED]

Social Security # [REDACTED] Date of Birth [REDACTED]

U. S. Citizen? (Yes) No, if no, registered alien? Yes No

Relationship of applicant to entity for which license is sought:

Owner Corporate Agent Corporate Officer Officer

Partner ☒ Member of Limited Liability Company Other

- ☐ Sole Proprietorship ☐ Corporation ☐ Non Profit Corporation
☐ Partnership ☒ LLC ☐ Other

Address of Principal Office 12111 S. 111 Dickens Ln Riverton Ut
(Street) (City) (State/Zip) 84065
Phone [REDACTED] Email KORNERSTORE@gmail.com

[illegible]

3. Business Name / Location / Management

Name under which business will be operated (if different from name of the applicant, corporation or partnership) _____

Business Address 4390 W. State St. Hurricane Ut 84737
(Street) (City) (State/Zip)

Phone Number 435-635-2243

Owner of Property Gas stop Hurricane

Name of Business Manager Hemant P Patel
(First) (Middle)

Social Security # _____ Date of Birth _____

Phone Number _____

*Distance in feet from nearest public or public or private school 5 miles or more

*Distance in feet from nearest church 5 miles

*Distance in feet from nearest public playground 5 miles or more

*Distance in feet from nearest public park more than 5 miles

*Distance in feet from nearest public library 7 miles

4. Classification of license applied for:

☐ Airport Lounge	☐ Banquet
☐ Bar	☐ Beer Recreational
☐ Hotel	☒ Off-Premise Beer
☐ Package Agency	☐ Reception Center
☐ Restaurant-beer only	☐ Restaurant-Full
☐ Restaurant-Limited	☐ Tavern
☐ Beer wholesaler	☐ Liquor warehouse
☐ Manufacturing	

5. Miscellaneous Information (For purposes of the following questions, the term "you" shall refer to any applicant, corporate officer, corporate director, corporate agent, LLC member, partner or manager)

Have you ever been engaged in any other business where beer or alcoholic beverages were sold to the public? Yes No. If yes, state name of business, location of business, nature of business, date(s) of operation. Gas stop Richfield, Richfield Ut, C-store from Nov 2020

Have you at any time been convicted of a felony in any court in the United States? No Yes No If so, give particulars – City, Dates, pertinent information, etc. _____

Have you been convicted or have you entered a plea of guilty at any time to a law violation involving beer or alcoholic beverages? _____ Yes _____ No If so, give particulars – City, Dates, pertinent information, etc. _____

Give particulars of your employment or business engaged in during the past five years, stating dates, business name and address, nature of business, position or title, employer's name and address of business. I have been
in Gas station business from last 5 yrs
Gas Stop Richfield, Richfield UT

Are business premises to be leased? _____ Yes _____ No If yes, state name and address of lessor and nature of lessor's interest in business premises. _____

Will food be served at business location? _____ Yes _____ No (If yes, please attach a sample of the menu you plan to use)

Has a license covering any place in which you had a financial interest ever been revoked or suspended? _____ Yes _____ No If yes, state type of license, location of license, date license was revoked or suspended, reason for revocation or suspension _____

6. Additional Information: Give any additional information which you believe will help the City Council to make a decision upon your application: _____



HURRICANE CITY
UTAH

147 N 870 WEST, HURRICANE, UTAH 84737
PHONE: 435-635-2811 FAX: 435-635-2184
www.cityofhurricane.com

License Fee \$50.00
Application Fee \$25.00
Total Due \$75.00

BUSINESS LICENSE APPLICATION

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Gas stop Hurricane

Business Phone: 435-635-2243 Business Email: KORNER CSTORE @ gmail .com

Business Address: 4390 W State St, Hurricane UT 84737
(Street Number) (Suite) (City) (State) (Zip)

Mailing Address (if different): 12111 S. Lil Dickens Ln, Riverton UT 84065
(Street Number) (City) (State) (Zip)

State Sales Tax Number (if applicable): 23500691 Dept. of Commerce Entity #: 13214441-0160

Professional License # (if applicable): _____ Federal Identification #: 92-1768337

Website: _____

Description of Business: Gas station with C store

Will there be any building or remodeling: Yes ☐ No ☒ Will the business be located in a newly constructed building: Yes ☐ No ☒
Commercial License - Property Owner Written Approval: Yes ☐ No ☐ Are you a Sexually Oriented Business: Yes ☐ No ☒
Does your business sell alcohol: Yes ☒ No ☐ Does your business sell tobacco products: Yes ☒ No ☐

PART B — HOME OCCUPATION APPLICANTS ONLY

Will customers visit the home.....	Yes ☐	No ☒
Will display or stock of merchandise be at home	Yes ☐	No ☒
Will employees be at the house.....	Yes ☐	No ☒
Any unusual traffic be created in neighborhood.....	Yes ☐	No ☒
Will parking on roadside be needed.....	Yes ☐	No ☒
Will flammable, toxic or poisonous materials be kept at the home	Yes ☐	No ☒
Will there be any disposal of material into the septic or sewer system?	Yes ☐	No ☒
What portion of home is to be used for business (25% total structure area)	<u>NO</u>	

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: Hemant Patel Phone Number: _____

Home Address: _____

Please add any additional owners/partners on a separate piece of paper and attach.

> **This form is an application for a business license. The receipt for payment of license fees thereof does not constitute being approved to operate a business.** The actual license will be issued only when all inspections are completed and signed off by the various City departments and approval is given by the Business License Office. **To open and/or operate a business without final approval is a Class B Misdemeanor and punishable by law.**

Manager (if different): _____

Phone Number: _____

All businesses licensed in Hurricane City must be in compliance with applicable fire codes and regulations at all times. New businesses may be required to pass a fire inspection prior to issuance of a business license. Fire inspections encompass, but are not limited to: fire equipment such as extinguishers, exits and aisles, electrical equipment, storage, and fire protection systems. Inspections may include additional areas of concern specific to particular business activities and/or locations. The licensing clerk will inform new applicants whether an initial inspection is required.

I understand that compliance with applicable fire codes and regulations is required for all businesses licensed in Hurricane City. I understand that a fire inspection of my business may be required in the future and would be conducted by Hurricane City Fire Department personnel. I understand that failure to comply with applicable fire codes and regulations may be grounds for revocation of my business license.

I UNDERSTAND AND AGREE to comply with all regulations of Title 3 Business License Regulations. **I UNDERSTAND that business shall not commence at this location without first obtaining an official copy of the business license**, and that inspections of the City Building, Zoning, Fire Officials, and the County Health Officials must first be completed and the building approved by these officials for business activities.

Applicant's Signature

1/16/23

Date

TOTAL FEES	\$ <u>75</u>	Office Use Only	AMOUNT PAID \$ <u>75</u>
DATE	<u>1/19/23</u>	RECEIPT #	<u>8.165489</u>
CITY LICENSE NUMBER _____			
Home Occupation: yes / <u>no</u>		Zone: <u>HC</u>	Permitted Use: <u>yes</u> / no
Planning Commission Approval Required: yes / <u>no</u> If yes, which approval: site plan / conditional use			
Planning Commission approval date: <u>N/A</u> Zoning approval/date: _____			
New Construction: yes / <u>no</u>		Remodel: yes / <u>no</u>	Building Permit: yes / <u>no</u>
Certificate of Occupancy or Tenant Improvement inspection required: yes / <u>no</u>			



147 N 870 WEST, HURRICANE, UTAH 84737
PHONE: 435-635-2811 FAX: 435-635-2184
www.cityofhurricane.com

Date of Application 1/14/23

NEW BUSINESS ☐
NEW OWNER ☐
RE-APPLY ☐

◆ **TOBACCO LICENSE APPLICATION** ◆

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Gas Stop Hurricane
Business Phone: 435 215 5864 Fax Number: _____
Contact Person: Hemant Patel
Business Address: 4390 W Steele St, Hurricane UT 84065
(Street Number) (Suite) (City) (State) (Zip)
Mailing Address (if different): 1211 S. 1st Diacena Ln, Hurricane Riverlon UT 84065
(Street Number) (City) (State) (Zip)
Does this business have a current permit from Southwest Utah Public Health Department: (please attach) _____

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: Hemant Patel Title: member LLC

Home Address: _____

Social Security Number: _____

Home Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

I UNDERSTAND AND AGREE to comply with all regulations of Title 3 Business License Regulations. I UNDERSTAND that business shall not commence at this location without first obtaining an official copy of the business license, and that inspections of the City Building, Zoning, Fire Officials, and the County Health Officials must first be completed and the building approved by these officials for business activities.

[Signature]
Applicant's Signature

1/16/23
Date

➤ **This form is an application for a business license. The receipt for payment of license fees thereof does not constitute being approved to operate a business. The actual license will be issued only when all inspections are completed and signed off by the various City departments and approval is given by the Business License Office. To open and/or operate a business without final approval is a Class B Misdemeanor and punishable by law.**

To,

Hurricane City,

Dear Sir/ Madam,

I am pleased to write the reference letter for Mr. Hemant Patel. I have had pleasure knowing him for the last few years.

I have witnessed him growing as a smart, talented and responsible Business person. Hemant has always displayed a high degree of integrity and ambition in many Business fields. He is more mature than his years, displaying many innovative ideas in the field of his businesses. He has displayed many qualities of being Leader rather than follower.

I highly recommend Hemant, as a businessman and community member.

Sincerely,

A handwritten signature in blue ink that reads "Sucha Rai". The signature is fluid and cursive, with the first name "Sucha" and the last name "Rai" clearly distinguishable.

Sucha Rai

To Hurricane City

Dear Sir / Madam,

I would like to be a reference for Mr. Hemant Patel. I have known him since he took over the store that I currently manage since March of 2021.

He is a very smart & talented & responsible Business person. Hemant has always displayed a very high degree of integrity and ambition in all fields of Business.

He has displayed many qualities of being a leader in all of his Business dealings. He is fair & compassionate.

I highly recommend Hemant as a business and community member.

Sincerely,
Conna Charter
Manager, ~~East~~ Washington
CONNIE CARTER

1/16/23

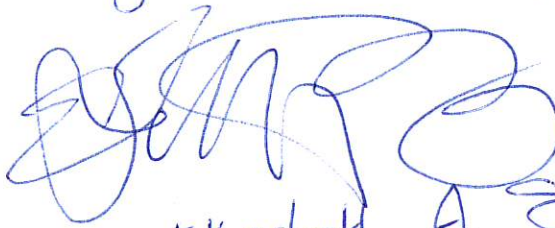
To whom it may concern.

I have known Hemant Patel for number of years so business associate & good friend.

I can confirm that he is a person of good integrity, is extremely dedicated to his family & community and extremely peace loving.

I highly recommend him as good character business man, who can be great as community member at any time.

Yours faithfully



Elizabeth A. Singh

to

Hurricane city

Dear sir / madam,

I am pleased to write the reference letter for Mr. Hemant Patel. I have had pleasure knowing him for the last few years.

I have witnessed him growing as a smart, talented and responsible Business Person. Hemant has always displayed a high degree of integrity and ambition in many Business fields. He is more mature than his years, displaying many innovative ideas in the field of his businesses. He has displayed many qualities Leader rather than follower.

I highly recommend Hemant, as a businessman and community member

Nayana. R. Patel

To Hurricane City

I have known Hemant Patel for over 20 years and have done business with him as long.

My company Core Mark is his supplier in the convenience stores. And we have a great relationship

Hemant Patel a very honest businessman and a close friend.

Sincerely

John Pettis

STATE OF UTAH

)

: ss.

COUNTY OF WASHINGTON

)

I, Hemant Patel, being first duly sworn, depose and say as follows:

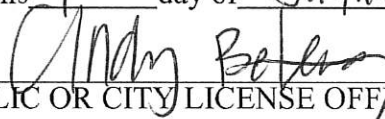
1. The foregoing Application and Questionnaire is in all respects true and correct, to the best of my knowledge and belief;
2. I am the applicant above-named and have not leased, assigned, or entered into a profit-sharing arrangement of any type with any other person for operation of the above-named business except as disclosed herein;
3. I have received and read the beer/alcoholic beverage license ordinance of the City of Hurricane, and I believe that this application in all respects conforms to the requirements thereof;
4. I consent to the entry in or upon the business premises by City employees or representatives at reasonable times for the purpose of inspecting the business premises to ensure compliance with applicable laws, ordinances, rules and regulation; and
5. I understand and agree that any false information contained in this application shall be grounds for denial of this application and shall constitute perjury.



Hemant Patel

Applicant

SUBSCRIBED AND SWORN TO before me this 19th day of January, 2023



(NOTARY PUBLIC OR CITY LICENSE OFFICER)

OFF-PREMISE BEER LICENSE

Local Consent

PURPOSE: Local business licensing authority provides written consent to the Alcoholic Beverage Control Commission to issue an off-premise beer license for a person to purchase, store, sell, or offer for sale beer for consumption off the premises of the applicant.

AUTHORITY: Utah Code 32B-5-201, 203, 205, and 32B-7

Hurricane

Local business license authority

☒ City ☐ Town ☐ County

hereby grants its consent to the issuance of an off-premise beer license to:

Business Name (DBA): Gas Stop Hurricane LLC

Entity Name (or owner's name if sole proprietor): _____

Location Address: 4390 W State Street

Authorized Signature

Nanette Billings/Mayor

Name/Title

2/3/2023

Date

This is a suggested format. A locally produced city, town, or county form is also acceptable.
The local consent must be submitted to the DABC by the applicant as part of a complete application.



STAFF COMMENTS

Consideration and possible approval of **local consent for 6 events held at Sand Hollow Resort**-Jennifer

Discussion:

Applicant Sand Hollow Resort is applying for local consent for six events that will be held in their Rock Bowl. They hold events every year and staff has no concerns.

Findings:

Recommendation:

Attachments:

1. Events at Sand Hollow



147 N 870 WEST, HURRICANE, UTAH 84737
PHONE: 435-635-2811 FAX: 435-635-2184
www.cityofhurricane.com

Date of Application 1/26/2023

Permit Fee \$250.00
Application Fee \$50.00
Total Due \$300.00

SINGLE EVENT LIQUOR PERMIT

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Grille @ Sand Hollow Resort
Business Phone: 435-656-4653 Email: Adam@sandhollowresorts.com
Contact Person: Adam Jasperson
Business Address: 5662 W. Clubhouse Dr., Hurricane, UT 84737
(Street Number) (Suite) (City) (State) (Zip)
Mailing Address (if different): _____
(Street Number) (City) (State) (Zip)
State Sales Tax Number: 14718721-004-STC Does this business have a current DABC license: RE02680

Business Type (check one):

Proprietorship ☐ Partnership ☐ Corporation ☒ Religious Organization ☐ Non-profit Corporation ☐

SECTION B — EVENT INFORMATION

Event Name: Farm Bureau Financial Services
Event Venue: Rock Bowl @ Sand Hollow
5662 W. Clubhouse Hurricane UT 84737
(Street Number) (Suite) (City) (State) (Zip)

Date (s) of the event: 3-31-2023 Alcohol Service hours: 3:00pm to 11:59pm

For the sale of (check all that apply): X Beer Heavy Beer X Wine X Liquor Flavored Malt Beverages

Will food be available? Yes Full Meals? Yes Will minors attend the event? No

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: _____ Title: _____

Home Address: _____
(Street Number) (City) (State) (Zip)

Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

APPLICATION MUST INCLUDE A DETAILED PLAN ON AN 8 ½" X 11" SHEET OF PAPER SHOWING ALL CONTROL MEASURES.

STATE OF UTAH)

: ss.

COUNTY OF WASHINGTON)

I, _____, being first duly sworn, depose and say as follows:

1. The foregoing Application and Questionnaire is in all respects true and correct, to the best of my knowledge and belief and
2. I am the applicant above-named and have not leased, assigned or entered into a profit-sharing arrangement of any type with any other person for operation of the above-named business except as disclosed herein; and
3. I have received and read the beer/alcoholic beverage license ordinance of the City of Hurricane, and believe that this application in all respects conforms to the requirements thereof and
4. I consent to the entry in or upon the business premises by City employees or representatives at reasonable times for the purpose of inspecting the event premises to insure compliance with applicable laws, ordinances, rules and regulation; and
5. I understand and agree that any false information contained in this application shall be grounds for denial of this application and shall constitute perjury.

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 20____

(NOTARY PUBLIC OR CITY LICENSE
OFFICER)

Office Use Only	
TOTAL FEES \$ _____	AMOUNT PAID \$ _____
DATE _____	RECEIPT # _____
CITY LICENSE NUMBER: _____	
DATE APPLICATION WENT TO CITY COUNCIL: _____	
DATE OF APPROVAL FROM STATE: _____	



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Total Due \$300.00

SINGLE EVENT LIQUOR PERMIT

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Grille @ Sand Hollow Resort
Business Phone: 435-656-4653 Email: Adam@sandhollowresorts.com
Contact Person: Adam Jasperson
Business Address: 5662 W. Clubhouse Dr., Hurricane, UT 84737
(Street Number) (Suite) (City) (State) (Zip)
Mailing Address (if different): _____
(Street Number) (City) (State) (Zip)
State Sales Tax Number: 14718721-004-STC Does this business have a current DABC license: RE02680

Business Type (check one):

Proprietorship ☐ Partnership ☐ Corporation ☒ Religious Organization ☐ Non-profit Corporation ☐

SECTION B — EVENT INFORMATION

Event Name: D'Silva - O'Conner Wedding
Event Venue: Rock Bowl @ Sand Hollow
5662 W. Clubhouse Hurricane UT 84737
(Street Number) (Suite) (City) (State) (Zip)

Date (s) of the event: 4-21-2023 Alcohol Service hours: 3:00pm to 11:59pm

For the sale of (check all that apply): X Beer Heavy Beer X Wine X Liquor Flavored Malt Beverages

Will food be available? Yes Full Meals? Yes Will minors attend the event? No

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: _____ Title: _____

Home Address: _____
(Street Number) (City) (State) (Zip)

Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

APPLICATION MUST INCLUDE A DETAILED PLAN ON AN 8 ½" X 11" SHEET OF PAPER
SHOWING ALL CONTROL MEASURES.

STATE OF UTAH)

: ss.

COUNTY OF WASHINGTON)

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SUBSCRIBED AND SWORN TO before me this _____ day of _____, 20____

Applicant
(NOTARY PUBLIC OR CITY LICENSE
OFFICER)

Office Use Only	
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SINGLE EVENT LIQUOR PERMIT

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Grille @ Sand Hollow Resort
Business Phone: 435-656-4653 Email: Adam@sandhollowresorts.com
Contact Person: Adam Jasperson
Business Address: 5662 W. Clubhouse Dr., Hurricane, UT 84737
(Street Number) (Suite) (City) (State) (Zip)
Mailing Address (if different): _____
(Street Number) (City) (State) (Zip)
State Sales Tax Number: 14718721-004-STC Does this business have a current DABC license: RE02680

Business Type (check one):

Proprietorship ☐ Partnership ☐ Corporation ☒ Religious Organization ☐ Non-profit Corporation ☐

SECTION B — EVENT INFORMATION

Event Name: Southern Y University
Event Venue: Rock Bowl @ Sand Hollow
5662 W. Clubhouse Hurricane UT 84737
(Street Number) (Suite) (City) (State) (Zip)
Date (s) of the event: 4-29-2023 Alcohol Service hours: 3:00pm to 11:59pm

For the sale of (check all that apply): ☒ Beer ☐ Heavy Beer ☒ Wine ☒ Liquor ☐ Flavored Malt Beverages
Will food be available? Yes Full Meals? Yes Will minors attend the event? No

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: _____ Title: _____

Home Address: _____
(Street Number) (City) (State) (Zip)

Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

APPLICATION MUST INCLUDE A DETAILED PLAN ON AN 8 ½" X 11" SHEET OF PAPER
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STATE OF UTAH)

: ss.

COUNTY OF WASHINGTON)

I, _____, being first duly sworn, depose and say as follows:

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5. I understand and agree that any false information contained in this application shall be grounds for denial of this application and shall constitute perjury.

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 20____

Applicant
(NOTARY PUBLIC OR CITY LICENSE
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SINGLE EVENT LIQUOR PERMIT

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Grille @ Sand Hollow Resort
Business Phone: 435-656-4653 Email: Adam@sandhollowresorts.com
Contact Person: Adam Jasperson
Business Address: 5662 W. Clubhouse Dr., Hurricane, UT 84737
(Street Number) (Suite) (City) (State) (Zip)
Mailing Address (if different): _____
(Street Number) (City) (State) (Zip)
State Sales Tax Number: 14718721-004-STC Does this business have a current DABC license: RE02680

Business Type (check one):

Proprietorship ☐ Partnership ☐ Corporation ☒ Religious Organization ☐ Non-profit Corporation ☐

SECTION B — EVENT INFORMATION

Event Name: Reynold's Wedding
Event Venue: Rock Bowl @ Sand Hollow
5662 W. Clubhouse Hurricane UT 84737
(Street Number) (Suite) (City) (State) (Zip)
Date (s) of the event: 5-20-2023 Alcohol Service hours: 3:00pm to 11:59pm

For the sale of (check all that apply): X Beer Heavy Beer X Wine X Liquor Flavored Malt Beverages
Will food be available? Yes Full Meals? Yes Will minors attend the event? No

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: _____ Title: _____
Home Address: _____
(Street Number) (City) (State) (Zip)
Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

APPLICATION MUST INCLUDE A DETAILED PLAN ON AN 8 ½" X 11" SHEET OF PAPER
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STATE OF UTAH)

: ss.

COUNTY OF WASHINGTON)

I, _____, being first duly sworn, depose and say as follows:

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3. I have received and read the beer/alcoholic beverage license ordinance of the City of Hurricane, and believe that this application in all respects conforms to the requirements thereof and
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5. I understand and agree that any false information contained in this application shall be grounds for denial of this application and shall constitute perjury.

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 20____

Applicant
(NOTARY PUBLIC OR CITY LICENSE
OFFICER)

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www.cityofhurricane.com

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Application Fee \$50.00
Total Due \$300.00

SINGLE EVENT LIQUOR PERMIT

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Grille @ Sand Hollow Resort

Business Phone: 435-656-4653

Email: Adam@sandhollowresorts.com

Contact Person: Adam Jasperson

Business Address: 5662 W. Clubhouse Dr., Hurricane, UT 84737

(Street Number) (Suite) (City) (State) (Zip)

Mailing Address (if different):

(Street Number) (City) (State) (Zip)

State Sales Tax Number: 14718721-004-STC Does this business have a current DABC license: RE02680

Business Type (check one):

Proprietorship ☐ Partnership ☐ Corporation ☒ Religious Organization ☐ Non-profit Corporation ☐

SECTION B — EVENT INFORMATION

Event Name: Winsemann - O'Brian Wedding

Event Venue: Rock Bowl @ Sand Hollow

5662 W. Clubhouse

Hurricane UT

84737

(Street Number) (Suite) (City) (State) (Zip)

Date (s) of the event: 5-27-2023 Alcohol Service hours: 3:00pm to 11:59pm

For the sale of (check all that apply): ☒ Beer ☐ Heavy Beer ☒ Wine ☒ Liquor ☐ Flavored Malt Beverages

Will food be available? Yes Full Meals? Yes Will minors attend the event? No

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: _____ Title: _____

Home Address: _____
(Street Number) (City) (State) (Zip)

Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

APPLICATION MUST INCLUDE A DETAILED PLAN ON AN 8 ½" X 11" SHEET OF PAPER
SHOWING ALL CONTROL MEASURES.

STATE OF UTAH)

: ss.

COUNTY OF WASHINGTON)

I, _____, being first duly sworn, depose and say as follows:

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2. I am the applicant above-named and have not leased, assigned or entered into a profit-sharing arrangement of any type with any other person for operation of the above-named business except as disclosed herein; and
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5. I understand and agree that any false information contained in this application shall be grounds for denial of this application and shall constitute perjury.

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 20____

Applicant
(NOTARY PUBLIC OR CITY LICENSE
OFFICER)

Office Use Only	
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147 N 870 WEST, HURRICANE, UTAH 84737
PHONE: 435-635-2811 FAX: 435-635-2184
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Total Due \$300.00

SINGLE EVENT LIQUOR PERMIT

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Grille @ Sand Hollow Resort

Business Phone: 435-656-4653

Email: Adam@sandhollowresorts.com

Contact Person: Adam Jasperson

Business Address: 5662 W. Clubhouse Dr., Hurricane, UT 84737

(Street Number)

(Suite)

(City)

(State)

(Zip)

Mailing Address (if different):

(Street Number)

(City)

(State)

(Zip)

State Sales Tax Number: 14718721-004-STC

Does this business have a current DABC license: RE02680

Business Type (check one):

Proprietorship ☐ Partnership ☐ Corporation ☒ Religious Organization ☐ Non-profit Corporation ☐

SECTION B — EVENT INFORMATION

Event Name: Szabo Wedding

Event Venue: Rock Bowl @ Sand Hollow

5662 W. Clubhouse

Hurricane UT

84737

(Street Number)

(Suite)

(City)

(State)

(Zip)

Date (s) of the event: 5-28-2023

Alcohol Service hours: 3:00pm to 11:59pm

For the sale of (check all that apply): X Beer Heavy Beer X Wine X Liquor Flavored Malt Beverages

Will food be available? Yes Full Meals? Yes Will minors attend the event? No

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: _____ Title: _____

Home Address: _____

(Street Number)

(City)

(State)

(Zip)

Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

APPLICATION MUST INCLUDE A DETAILED PLAN ON AN 8 ½" X 11" SHEET OF PAPER SHOWING ALL CONTROL MEASURES.

STATE OF UTAH)

: ss.

COUNTY OF WASHINGTON)

I, _____, being first duly sworn, depose and say as follows:

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2. I am the applicant above-named and have not leased, assigned or entered into a profit-sharing arrangement of any type with any other person for operation of the above-named business except as disclosed herein; and
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5. I understand and agree that any false information contained in this application shall be grounds for denial of this application and shall constitute perjury.

SUBSCRIBED AND SWORN TO before me this _____ day of _____, 20____

(NOTARY PUBLIC OR CITY LICENSE
OFFICER)

Office Use Only	
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PHONE: 435-635-2811 FAX: 435-635-2184
www.cityofhurricane.com

Date of Application _____

Permit Fee \$250.00
Application Fee \$50.00
Total Due \$300.00

SINGLE EVENT LIQUOR PERMIT

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Washington County
Business Phone: 435-922-2766 Email: susi@washcofair.net
Contact Person: Susi Lafaele
Business Address: 5500 W. 700 S. Hurricane UT 84737
(Street Number) (Suite) (City) (State) (Zip)
Mailing Address (if different): 197 E. Tabernacle Street St. George UT 84770
(Street Number) (City) (State) (Zip)
State Sales Tax Number: 12125513 002 STC Does this business have a current DABC license: No
Business Type (check one):
Proprietorship ☐ Partnership ☐ Corporation ☐ Religious Organization ☐ Non-profit Corporation ☐

SECTION B — EVENT INFORMATION

Event Name: Washington County Fair
Event Venue: Washington County Legacy Park
5500 W. 700 S. Hurricane UT 84737
(Street Number) (Suite) (City) (State) (Zip)
Date (s) of the event: April 14-22, 2023 Alcohol Service hours: 2pm to 11:30pm
For the sale of (check all that apply): X Beer Heavy Beer Wine Liquor Flavored Malt Beverages
Will food be available? Yes Full Meals? Yes Will minors attend the event? Yes

PART C — BUSINESS OWNER INFORMATION

A list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: _____ Title: _____
Home Address: _____
(Street Number) (City) (State) (Zip)
Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

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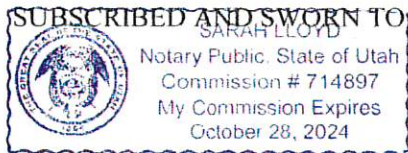
STATE OF UTAH)

: ss.

COUNTY OF WASHINGTON)

I, Susi Lafaele, being first duly sworn, depose and say as follows:

1. The foregoing Application and Questionnaire is in all respects true and correct, to the best of my knowledge and belief and
2. I am the applicant above-named and have not leased, assigned or entered into a profit-sharing arrangement of any type with any other person for operation of the above-named business except as disclosed herein; and
3. I have received and read the beer/alcoholic beverage license ordinance of the City of Hurricane, and believe that this application in all respects conforms to the requirements thereof and
4. I consent to the entry in or upon the business premises by City employees or representatives at reasonable times for the purpose of inspecting the event premises to insure compliance with applicable laws, ordinances, rules and regulation; and
5. I understand and agree that any false information contained in this application shall be grounds for denial of this application and shall constitute perjury.



Susi Lafaele
Applicant
day of January, 2023
Sarah Lloyd
(NOTARY PUBLIC OR CITY LICENSE OFFICER)

Office Use Only	
TOTAL FEES \$ _____	AMOUNT PAID \$ _____
DATE _____	RECEIPT # _____
CITY LICENSE NUMBER: _____	
DATE APPLICATION WENT TO CITY COUNCIL: _____	
DATE OF APPROVAL FROM STATE: _____	



- ① Parking
- ② Race Track
- ③ Large Outdoor Arena
- ④ Harmony Building
- ⑤ Indoor Arena
- ⑥ Law Enforcement / Lost & Found
- ⑦ Parking Lot
- ⑧ Food / Entertainment Stage
- ⑨ Beer Garden
- ⑩ Parking
- ⑪ Covered Outdoor Arena
- ⑫ Carnival
- ⑬ Boxing
- ⑭ Food / Entertainment Stage
- ⑮ Grafton Building
- ⑯ Pioneer Corner



STAFF COMMENTS

Consideration and possible approval of **Ordinance 2023-03 amending Chapter 8 Section Utility rate and fees**

Discussion:

This ordinance is to clean up the chapter regarding utilities. The proposed changes bring the water section language in line with the power section. It also removes any set dollar amounts that are listed in the ordinance and instead references fee amounts set by resolution. This way, fee amounts can be updated periodically by resolution instead of amending the City's ordinances each time.

Findings:

Recommendation:

Attachments:

1. Ordinance 2023-03 Amending 8-1 Rates and fees redline
2. Ordinance 2023-03 Amending 8-1 Rates and fees

**AN ORDINANCE OF THE CITY COUNCIL OF HURRICANE, UTAH AMENDING
~~TITLE 8~~SECTIONS 8-1-3, 8-1-4, AND 8-1-9, OF THE HURRICANE CITY CODE
GOVERNING THE RATES AND CONNECTION FEES FOR UTILITIES AND FIRE
HYDRANT METERS**

WHEREAS, the City Council of Hurricane, Utah desires to amend Title 8, Chapter 1 of the Hurricane City Code governing the rates and connection fees; and

WHEREAS, the City Council deems this amendment necessary and desirable for the preservation of the general health, safety, and welfare of the residents of Hurricane;

BE IT HEREBY ORDAINED that [Title 8, Chapter 1 sections 8-1-3, 8-1-4, and 8-1-9](#) of the Hurricane City Code shall be, and is hereby, amended in ~~its~~[their](#) entirety as follows:

Sec. 8-1-3. - Application for connection.

Any person who desires a water connection shall file with the Water Department for each connection a written and signed connection application in substantially the following form, which may be picked up at the City office:

Application For Water Connection To Hurricane City

I (we) hereby apply to Hurricane City for connection at the location of:

_____ Print name

_____ New construction address

_____ Subdivision and lot number

_____ Phone number

I (we) hereby agree to pay the City \$ _____ for a size _____ water connection.

That from the connection date I agree to pay Hurricane City the ~~regular monthly service fees and fines established by the Hurricane City Council~~[regular monthly service fees and fines established by the Hurricane City Council](#) and in the event that the ~~connection fee or the service fees or fines~~[connection fee or the service fees or fines](#) become delinquent, the City will shut off my service; until all indebtedness is paid.

Filed at the Hurricane City office this ____ day of ~~19~~[20](#)____, 20____.

Signature

Signature

Witnessed by

(1998 Code § 14-115)

Sec. 8-1-4. Rates and connection fees; payment provisions.

A. ~~Enumerated.~~ General.

1. ~~Setting fees, rates, and charges.~~ The rates, penalty fee for delinquency in payment, connection fee, reservoir fee, inspection fee, and other charges incidental to connection and services from the City water system shall be fixed from time to time by resolution enacted by the City Council. The City Council may from time to time promulgate rules for levying, billing, guaranteeing and collecting charges for water services and all other rules necessary for the management and control of the water system.

B. ~~2. Security Deposit.~~ A deposit of ~~\$300.00~~ in the amount established by resolution of the City Council as security for payment of ~~water or power (or both water and power)~~ services is hereby established for all utility connections; provided, however, that said deposit may be waived for owners of property for which utility service is sought who provide satisfactory evidence of timely payment of past utility billings. Such deposit may, upon request, be returned after two years of good credit or upon termination of said account, whichever first occurs.

C. ~~3. Connection fee.~~ ~~Fee shall be as established by resolution of the City Council. Turn on/transfer fee. A turn on/transfer fee in an amount established by resolution of the City Council shall be charged to any person opening a utility account within the City. The turn on/transfer fee is considered operating costs for utility departments to read the power and/or water meter and to transfer this same meter to a new account. The turn on/transfer fee is nonrefundable, and is considered nonrefundable.~~

D. ~~4. Service rates.~~ Rates shall be as established by resolution of the City Council.

E. ~~Application.~~ Any person residing within the water service area and desiring to obtain water service in their name will be required to file an application for utility service at the City Office.

F. ~~B. Special rates.~~ The City Council may from time to time fix by agreement or resolution special rates and conditions for users using exceptionally large amounts of water service or making use of the water system under exceptional circumstances, upon such terms and conditions as they may deem proper.

G. ~~C. Board of equalization; rates and rebates.~~

1. The City Council is hereby constituted a board of equalization of water rates to hear complaints and make corrections of any assessments deemed to be illegal, unequal, or unjust. They may, if they see fit, rebate all or any part of the water bill of any indigent person.
2. A claim against the City or against its employees for an act or omission occurring during the performance of his duties, within the scope of his employment, or under color of authority, including claims for refunds or reimbursements of water, power, sewer and other utility services furnished by the City, is barred unless notice of claim is filed with the City Manager within two years after claim arises, as required by Utah State Code.

H.D. Use without payment prohibited. It shall be unlawful for any person by himself, family, servants, or agents to utilize the City water or sewer system without paying therefor, as herein provided, or, without authority, to open any fire hydrant, stopcock valve or other fixtures attached to the system of water supply unless it is done pursuant to proper application, agreement, or resolution. It shall be unlawful to injure, deface or impair any part or appurtenance of the water or sewer system, or to cast anything into any reservoir or tank belonging to the water system.

I.E. Billings; delinquency; discontinuance of service.

1. The City is hereby authorized and empowered to combine all charges for all utility services, including water, sewer, garbage, power, etc., into one monthly billing, describing the various utility services supplied, the amount owed for each individual utility service and the total amount of all such services.
2. Any such monthly utility billing shall be due and payable in full on or before the fifteenth day of the month following the month for which such utility services were rendered.
3. Any such monthly utility billing not paid in full on or before the 15th day of the month, as specified in subsection E12 of this section, shall be deemed delinquent and shall be assessed a late charge in the amount of five percent of the unpaid balance of said monthly utility billing. ~~If said billing is not paid within 30 days from the due date, power may be disconnected. If the billing does not include power service, water may be disconnected.~~ If the billing is not paid in full by the end of the month in which it was due, an additional nonpayment penalty shall be assessed to the account in the amount set by resolution of the City Council. If said billing is not paid in full before the tenth of the month following the month in which it was due, powerwater services may be disconnected.
4. In the event that service is disconnected, before service can be reconnected, the bill must be brought current or arrangements made with the City office. In the event of disconnection, there will be a \$25.00 reconnect fee. Upon reconnection of power or other utility service, a reconnect fee will be assessed in the amount established by resolution of the City Council.
5. In the event that powerwater or other utility services is-are disconnected for lack of payment and the balance remains unpaid for one week, the utility account will be

Commented [CB1]: Should this be power or water? I copied it from the power section

terminated. Once the account has been terminated, the customer must pay: (a) the balance owed for utility service rendered; (b) a reconnect fee; and (c) the utility security deposit before utility service will be restored.

6. A fee in an amount established by resolution of the City Council shall be charged and added to the next month's utility bill for any customer whose ~~electric power~~water service requires maintenance or repair because of a meter lock or seal which has been damaged, cut, or otherwise tampered with.
7. If the City hires an agent to collect on a delinquent account, the account will be assessed an additional fee as charged by the collection agency.

J.F. *Monthly fee due for all connections.* The City shall charge the current base water rate for all connections to the system, whether or not the customer is currently using water from the system. The fee charged will also include ~~any applicable surcharges assessed by the Washington County Water Conservancy District.~~the county water conservancy district water development surcharge.

K. *Reasonable access.* All customers shall permit the City's authorized representatives to enter on the customer's premises at all reasonable times for purposes connected with rendering, billing, or disconnecting utility services. Customers shall not construct, erect, or otherwise put in place any barrier impeding free and easy access to all utility service meters.

L. *Termination of service; subsequent service location.*

1. Utility customers shall be responsible for the payment of utility charges incurred at the service location until such time as their responsibility is terminated in one of the following ways by: a) written order of the applicant; b) the City's termination for lack of payment, as outlined in subsection I5 of this section; or c) the proper assumption of the payment responsibility by a party acceptable to the City and upon completion of an application for service by said party.
2. In order to establish power or other utility service at any additional and/or subsequent service location(s), utility customers must complete a utility service application for each location. Prior to connecting any subsequent or additional utility service, customers must pay any billing amount due for current utility service at the time a subsequent or additional service connection is requested.

(1998 Code §§ 14-117—14-120, 14-122; 2000 Code; Ord. 03-8-7, 8-7-2003; Ord. 2008-24, 8-21-2008; Ord. 2018-18, 12-20-2018)

Sec. 8-1-9. - Fire hydrants.

Sections A-E ~~Is of this section are~~ to remain unchanged.

F. Violations, additional fees, impound of fire hydrant meter and suspension of privileges.

1. In the event that the person or entity to whom a fire hydrant meter has been issued fails to report fire hydrant meter readings within ten days of the end of the applicable monthly period, an additional fee shall be added in such amount as shall be determined from time to time by resolution of City.

2. In the event that the person or entity to whom a fire hydrant meter has been issued fails to report fire hydrant meter readings for two consecutive months, City shall cause the fire hydrant meter to be impounded until such time that the monthly water usage fee and such additional amount, as set from time to time by resolution of City, have been paid.

3. In the event that the person or entity to whom a fire hydrant meter has been issued fails to pay all amounts due for two consecutive months, the fire hydrant meter shall be impounded, the deposit forfeited, and the person or entity's rental privileges may be suspended for a period of up to one year. If the City hires an agent to collect on a delinquent account, the account will be assessed an additional fee as charged by the collection agency.

4. Any person or entity who, having first obtained a fire hydrant meter in accordance with the provisions hereof, thereafter violates the provisions of this chapter, shall be required to immediately return the fire hydrant meter to the City, and any unpaid water usage fees shall be immediately due and owing or deducted from the deposit, with the balance of said deposit, if any, to be refunded to said person or entity.

5. Any person or entity that uses water from a fire hydrant without having first obtained a fire hydrant meter as required by this section shall be guilty of an infraction, subject to a fine of \$750.00.

BE IT FURTHER ORDAINED that this Ordinance shall, after adoption and approval, take effect immediately upon publication or posted as required by law.

PASSED AND APPROVED this 2nd day of February 2023

Hurricane City

Nanette Billings, Mayor

Attest:

Cindy Beteag, City Recorder

The foregoing Ordinance was presented at a regular meeting of the Hurricane City Council held at the Hurricane City Office Building on the 2nd day of February 2023. Whereupon a motion to adopt and approve said Resolution was made by _____ and seconded by _____. A roll call vote was then taken with the following results:

	Yea	Nay	Abstain	Absent
Joseph Prete	___	___	___	___
David Sanders	___	___	___	___
David Hirschi	___	___	___	___
Kevin Thomas	___	___	___	___
Doug Heideman	___	___	___	___

Cindy Beteag, Recorder

**AN ORDINANCE OF THE CITY COUNCIL OF HURRICANE, UTAH AMENDING
SECTIONS 8-1-3, 8-1-4, AND 8-1-9, OF THE HURRICANE CITY CODE GOVERNING
THE RATES AND CONNECTION FEES FOR UTILITIES AND FIRE HYDRANT
METERS**

WHEREAS, the City Council of Hurricane, Utah desires to amend Title 8, Chapter 1 of the Hurricane City Code governing the rates and connection fees; and

WHEREAS, the City Council deems this amendment necessary and desirable for the preservation of the general health, safety, and welfare of the residents of Hurricane;

BE IT HEREBY ORDAINED that sections 8-1-3, 8-1-4, and 8-1-9 of the Hurricane City Code shall be, and is hereby, amended in their entirety as follows:

Sec. 8-1-3. - Application for connection.

Any person who desires a water connection shall file with the Water Department for each connection a written and signed connection application in substantially the following form, which may be picked up at the City office:

Application For Water Connection To Hurricane City

I (we) hereby apply to Hurricane City for connection at the location of:

_____ Print name

_____ New construction address

_____ Subdivision and lot number

_____ Phone number

I (we) hereby agree to pay the City \$ _____ for a size _____ water connection.

That from the connection date I agree to pay Hurricane City the fees and fines established by the Hurricane City Council and in the event that the fees or fines become delinquent, the City will shut off my service until all indebtedness is paid.

Filed at the Hurricane City office this ____ day of ~~19~~ _____, 20 ____.

Signature

Signature

Witnessed by

(1998 Code § 14-115)

Sec. 8-1-4. Rates and connection fees; payment provisions.

- A. ~~*Enumerated.*~~ *General. Setting fees, rates, and charges.* The rates, penalty fee for delinquency in payment, connection fee, reservoir fee, inspection fee, and other charges incidental to connection and services from the City water system shall be fixed from time to time by resolution enacted by the City Council. The City Council may from time to time promulgate rules for levying, billing, guaranteeing and collecting charges for water services and all other rules necessary for the management and control of the water system.
- B. ~~*Security Deposit.*~~ A deposit of \$300.00 in the amount established by resolution of the City Council as security for payment of water services is hereby established for all utility connections; provided, however, that said deposit may be waived for owners of property for which utility service is sought who provide satisfactory evidence of timely payment of past utility billings. Such deposit may, upon request, be returned after two years of good credit or upon termination of said account, whichever first occurs.
- C. ~~*Connection fee.*~~ ~~Fee shall be as established by resolution of the City Council.~~ *Turn on/transfer fee.* A turn on/transfer fee in an amount established by resolution of the City Council shall be charged to any person opening a utility account within the City. The turn on/transfer fee is considered operating costs for utility departments to read the power and/or water meter and to transfer this same meter to a new account. The turn on/transfer fee is nonrefundable.
- D. *Service rates.* Rates shall be as established by resolution of the City Council.
- E. *Application.* Any person residing within the water service area and desiring to obtain water service in their name will be required to file an application for utility service at the City Office.
- F. ~~B.~~ *Special rates.* The City Council may from time to time fix by agreement or resolution special rates and conditions for users using exceptionally large amounts of water service or making use of the water system under exceptional circumstances, upon such terms and conditions as they may deem proper.
- G. ~~C.~~ *Board of equalization; rates and rebates.*
1. The City Council is hereby constituted a board of equalization of water rates to hear complaints and make corrections of any assessments deemed to be illegal, unequal, or unjust. They may, if they see fit, rebate all or any part of the water bill of any indigent person.

2. A claim against the City or against its employees for an act or omission occurring during the performance of his duties, within the scope of his employment, or under color of authority, including claims for refunds or reimbursements of water, power, sewer and other utility services furnished by the City, is barred unless notice of claim is filed as required by Utah State Code.

H.D. *Use without payment prohibited.* It shall be unlawful for any person by himself, family, servants, or agents to utilize the City water or sewer system without paying therefor, as herein provided, or, without authority, to open any fire hydrant, stopcock valve or other fixtures attached to the system of water supply unless it is done pursuant to proper application, agreement, or resolution. It shall be unlawful to injure, deface or impair any part or appurtenance of the water or sewer system, or to cast anything into any reservoir or tank belonging to the water system.

I.E. *Billings; delinquency; discontinuance of service.*

1. The City is hereby authorized and empowered to combine all charges for all utility services, including water, sewer, garbage, power, etc., into one monthly billing, describing the various utility services supplied, the amount owed for each individual utility service and the total amount of all such services.
2. Any such monthly utility billing shall be due and payable in full on or before the fifteenth day of the month following the month for which such utility services were rendered.
3. Any such monthly utility billing not paid in full on or before the 15th day of the month, as specified in subsection E12 of this section, shall be deemed delinquent and shall be assessed a late charge in the amount of five percent of the unpaid balance of said monthly utility billing. ~~If said billing is not paid within 30 days from the due date, power may be disconnected. If the billing does not include power service, water may be disconnected.~~ If the billing is not paid in full by the end of the month in which it was due, an additional nonpayment penalty shall be assessed to the account in the amount set by resolution of the City Council. If said billing is not paid in full before the tenth of the month following the month in which it was due, ~~water~~ services may be disconnected.
4. In the event that service is disconnected, before service can be reconnected, the bill must be brought current or arrangements made with the City office. Upon reconnection of power or other utility service, a reconnect fee will be assessed in the amount established by resolution of the City Council.
5. In the event that ~~water or other~~ utility services ~~is~~-are disconnected for lack of payment and the balance remains unpaid for one week, the utility account will be terminated. Once the account has been terminated, the customer must pay: (a) the balance owed for utility service rendered; (b) a reconnect fee; and (c) the utility security deposit before utility service will be restored.
6. A fee in an amount established by resolution of the City Council shall be charged and added to the next month's utility bill for any customer whose water service requires

maintenance or repair because of a meter lock or seal which has been damaged, cut, or otherwise tampered with.

7. If the City hires an agent to collect on a delinquent account, the account will be assessed an additional fee as charged by the collection agency.

J.F. *Monthly fee due for all connections.* The City shall charge the current base water rate for all connections to the system, whether or not the customer is currently using water from the system. The fee charged will also include any applicable surcharges assessed by the Washington County Water Conservancy District.

K. *Reasonable access.* All customers shall permit the City's authorized representatives to enter on the customer's premises at all reasonable times for purposes connected with rendering, billing, or disconnecting utility services. Customers shall not construct, erect, or otherwise put in place any barrier impeding free and easy access to all utility service meters.

L. *Termination of service; subsequent service location.*

1. Utility customers shall be responsible for the payment of utility charges incurred at the service location until such time as their responsibility is terminated in one of the following ways by: a) written order of the applicant; b) the City's termination for lack of payment, as outlined in subsection I5 of this section; or c) the proper assumption of the payment responsibility by a party acceptable to the City and upon completion of an application for service by said party.
2. In order to establish power or other utility service at any additional and/or subsequent service location(s), utility customers must complete a utility service application for each location. Prior to connecting any subsequent or additional utility service, customers must pay any billing amount due for current utility service at the time a subsequent or additional service connection is requested.

(1998 Code §§ 14-117—14-120, 14-122; 2000 Code; Ord. 03-8-7, 8-7-2003; Ord. 2008-24, 8-21-2008; Ord. 2018-18, 12-20-2018)

Sec. 8-1-9. - Fire hydrants.

Sections A-E of this section are to remain unchanged.

F. *Violations, additional fees, impound of fire hydrant meter and suspension of privileges.*

1. In the event that the person or entity to whom a fire hydrant meter has been issued fails to report fire hydrant meter readings within ten days of the end of the applicable monthly period, an additional fee shall be added in such amount as shall be determined from time to time by resolution of City.

2. In the event that the person or entity to whom a fire hydrant meter has been issued fails to report fire hydrant meter readings for two consecutive months, City shall cause the fire hydrant meter to be impounded until such time that the monthly water usage fee and such additional amount, as set from time to time by resolution of City, have been paid.

3. In the event that the person or entity to whom a fire hydrant meter has been issued fails to pay all amounts due for two consecutive months, the fire hydrant meter shall be impounded, the deposit forfeited, and the person or entity's rental privileges may be suspended for a period of up to one year. If the City hires an agent to collect on a delinquent account, the account will be assessed an additional fee as charged by the collection agency.

4. Any person or entity who, having first obtained a fire hydrant meter in accordance with the provisions hereof, thereafter violates the provisions of this chapter, shall be required to immediately return the fire hydrant meter to the City, and any unpaid water usage fees shall be immediately due and owing or deducted from the deposit, with the balance of said deposit, if any, to be refunded to said person or entity.

5. Any person or entity that uses water from a fire hydrant without having first obtained a fire hydrant meter as required by this section shall be guilty of an infraction, subject to a fine of \$750.00.

BE IT FURTHER ORDAINED that this Ordinance shall, after adoption and approval, take effect immediately upon publication or posted as required by law.

PASSED AND APPROVED this 2nd day of February 2023

Hurricane City

Nanette Billings, Mayor

Attest:

Cindy Beteag, City Recorder

The foregoing Ordinance was presented at a regular meeting of the Hurricane City Council held at the Hurricane City Office Building on the 2nd day of February 2023. Whereupon a motion to adopt and approve said Resolution was made by _____ and seconded by _____. A roll call vote was then taken with the following results:

	Yea	Nay	Abstain	Absent
Joseph Prete	_____	_____	_____	_____
David Sanders	_____	_____	_____	_____
David Hirschi	_____	_____	_____	_____
Kevin Thomas	_____	_____	_____	_____
Doug Heideman	_____	_____	_____	_____

Cindy Beteag, Recorder



STAFF COMMENTS

Consideration and possible approval of an **Amended Resolution 2022-01 regarding fees for utilities**

Discussion:

This Resolution was approved the first meeting in January but staff realized there are two fees that are currently being charged that couldn't be found in a resolution. The first one being a higher deposit if a resident doesn't provide a social security number. The second one is a late fee for hydrant meters that has not been paid within 30 days.

Findings:

Recommendation:

Attachments:

1. Amended Resolution 2023-01 Amending fees associated with connections for power and water
2. Accounts gone to collections

**A RESOLUTION OF THE CITY COUNCIL OF HURRICANE, UTAH,
AMENDING FEES RELATED TO CONNECTION OF MUNICIPAL POWER AND
WATER SERVICES.**

WHEREAS the Hurricane City Council is authorized by Section 10-3-717 of the Utah Code and Section 1-5-6(G)(1) of the Hurricane City Code to establish fees for municipal services; and

WHEREAS Hurricane City Code sections 8-1-4, 8-1-9, & 8-4-4 authorize the City Council to set by resolution fees, rates, deposit requirements, and charges associated with municipal power and water services; and

WHEREAS the City Council has previously adopted fees related to municipal power services and water services and desires to clarify and amend these fees; and

WHEREAS the Hurricane City Council finds that these clarifications and amendments are necessary and desirable for the preservation and protection of the health, safety, and welfare of the residents of Hurricane,

BE IT HEREBY RESOLVED by the Hurricane City Council that the following schedule of fees, rates, deposit requirements, and charges associated with municipal power and water services are hereby approved and adopted:

- Utility Deposit \$300.00
- Utility Deposit- if a social Security number is not provided \$900.00
- Turn On/Transfer Fee \$20.00
- After-Hours Turn On Fee \$120.00
- Non-Payment Reconnect Fee \$50.00
- Meter Seal Tamper Fee \$250.00
- Non-Payment Penalty \$10.00
- Turn on Fee Requiring Additional Time, Labor, or Manpower \$100.00
- Late fee for Hydrant Meters 5% of total amount due Not paid within 30 days

BE IT FURTHER RESOLVED that this Resolution shall take effect at the earliest date allowed by law.

DATED this 2nd day of February 2023.

Nanette Billings, Mayor

Attest:

Cindy Beteag, Hurricane City Recorder

The foregoing Resolution was presented at a regular meeting of the Hurricane City Council held at the Hurricane City Office Building on the 2nd day of February 2023. Whereupon a motion to adopt and approve said Resolution was made by _____ and seconded by _____. A roll call vote was then taken with the following results:

	Yea	Nay	Abstain	Absent
Joseph Prete	_____	_____	_____	_____
David Sanders	_____	_____	_____	_____
David Hirschi	_____	_____	_____	_____
Kevin Thomas	_____	_____	_____	_____
Doug Heideman	_____	_____	_____	_____

Cindy Beteag, Recorder

9281103	\$	228.56	
10-065-800	\$	382.19	
8212007	\$	172.63	AFS-COL
5235001	\$	47.60	AFS-COL
PIW	\$	800.00	BANKRUPCY
12281707	\$	250.23	AFS-COL
1620201	\$	264.15	AFS-COL
4168004	\$	187.57	
7332001 2ACCT	\$	64.74	
12014102	\$	269.68	AFS-COL
19447007	\$	463.86	AFS-COL
10118601	\$	136.05	URG-COLLECTION
5884003	\$	40.71	URG-COLLECTION
10004301	\$	70.14	URG-COLLECTION
2136004-2ACCT	\$	275.91	AFS-COL
21009604	\$	18.74	URG-COLLECTION
2261008 2ACCT	\$	649.41	AFS-COL
5198106	\$	79.02	AFS-COL
2895702	\$	400.48	URG-COLLECTION
18147006	\$	174.92	AFS-COL
18440101	\$	492.09	AFS-COL
12292205	\$	247.74	AFS-COL
4148004	\$	395.72	
2261002	\$	332.84	AFS-COL
5250003	\$	307.44	
19388505	\$	65.43	AFS-COL
12004003	\$	288.99	AFS-COL
2109007	\$	205.64	URG-COLLECTION
BAD CHECK	\$	60.00	
1200001	\$	205.35	AFS-COL
11002102	\$	285.56	BANKRUPCY
2188006	\$	82.65	
8154006	\$	291.21	
25006903	\$	294.50	AFS-COL
4341004	\$	77.62	AFS-COL
11007802	\$	134.84	AFS-COL
	\$	478.51	
821400	\$	771.86	AFS-COL
6250006	\$	163.36	BANKRUPCY
1329001 2ACCT	\$	542.16	
6214208	\$	63.99	AFS-COL
12283108	\$	121.22	AFS-COL
9955101	\$	53.28	
20637213	\$	211.22	URG-COLLECTION
7199902	\$	185.08	AFS-COL
20653004	\$	629.96	AFS-COL
5129001	\$	102.12	LOOKING FOR APP
5-17799	\$	16.09	
19005207	\$	309.63	AFS-COL
18027004	\$	273.66	AFS-COL
3702004	\$	140.73	URG-COLLECTION
245	\$	264.28	
92-176-200	\$	262.31	
1035	\$	122.60	
9276001	\$	2,804.76	BANKRUPCY
2122201	\$	132.99	AFS-COL
8332003	\$	34.58	
20121007	\$	96.52	AFS-COL
2196004	\$	334.32	URG-COLLECTION
31015701	\$	330.15	BANKRUPCY

pd 15.97 refund owes 2.77

ACCOUNT#	AMOUNT DUE	ACTION
5296002	\$ 68.10	
39021801	\$ 30.01	URG-COLLECTION
3164004	\$ 448.47	AFS-COL
24444002	\$ 224.05	AFS-COL
1420	\$ 28.33	
3933003	\$ 327.11	URG-COLLECTION
8364004	\$ 484.33	AFS-COL
25220504	\$ 41.73	AFS-COL
6815801	\$ 654.29	AFS-COL
4268006	\$ 177.53	SM CLAIMS
3310004	\$ 23.96	AFS-COL
759101	\$ 486.84	AFS-COL
39017901	\$ 694.24	AFS-COL
	\$ 163.31	
11029006	\$ 291.96	URG-COLLECTION
1394	\$ 163.31	
2-05270	\$ 77.32	
2144008	\$ 506.52	AFS-COL
7580005	\$ 956.33	
2171004	\$ 163.70	AFS-COL
8134002	\$ 107.18	AFS-COL
9688001	\$ 121.27	TRANSWORLD
18002008	\$ 3.34	AFS-COL
25003602	\$ 101.96	AFS-COL
11232005	\$ 358.01	AFS-COL
25005501	\$ 96.24	AFS-COL
4-16045	\$ 28.39	
9264002	\$ 426.05	BANKRUPTCY
5123004	\$ 2.92	WRITTEN OFF
750200	\$ 1,868.12	
14001101	\$ 279.18	AFS-COL
20049205	\$ 151.49	AFS-COL
7336003	\$ 35.00	
2168006	\$ 173.84	AFS-COL
2168000	\$ 54.04	AFS-COL
5146002	\$ 233.01	AFS-COL
12002006	\$ 305.29	AFS-COL
1-01453	\$ 36.93	
12292204	\$ 84.05	AFS-COL
9277901	\$ 175.06	AFS-COL
3288006	\$ 222.69	AFS-COL
3152009	\$ 267.09	AFS-COL
INV # 332	\$ 418.30	AFS-COL
7212003	\$ 248.48	AFS-COL
24444000	\$ 294.26	AFS-COL
7212004	\$ 367.98	URG-COLLECTION
9300001	\$ 518.15	
3144001-2ACC	\$ 707.39	AFS-COL
31010001	\$ 153.39	AFS-COL
24018903	\$ 509.09	URG-COLLECTION
12276803	\$ 183.66	AFS-COL
29038701	\$ 275.60	DECEASED
1154102	\$ 1,231.32	AFS-COL
8-03550 2ACCT	\$ 631.75	
19404005	\$ 237.81	AFS-COL
24266902	\$ 135.27	URG-COLLECTION
8356002	\$ 420.31	AFS-COL
6257008	\$ 431.81	AFS-COL
1206003	\$ 41.45	AFS-COL

8145004	\$	64.80	
20004803	\$	37.82	AFS-COL
5213001	\$	28.83	
2ACCOUNTS	\$	304.05	AFS-COL
9283001 2ACCT	\$	783.07	
12005503	\$	298.37	LOWER FROM 423.37 PAYMENT MADE
	\$	58.51	
39051102	\$	518.91	URG-COLLECTION
5124006	\$	154.62	
31-505-500	\$	196.46	
2188006	\$	82.65	
11029005	\$	302.06	URG-COLLECTION
12002004	\$	246.13	AFS-COL
5236002	\$	347.31	AFS-COL
5142402	\$	429.24	AFS-COL
20066507	\$	79.66	AFS-COL
18106504	\$	134.24	AFS-COL
5122002	\$	234.05	AFS-COL
1296008	\$	234.81	AFS-COL
9802802	\$	423.47	URG-COLLECTION
640001	\$	101.01	SM CLAIMS
12286505	\$	302.02	AFS-COL
7220002	\$	210.01	
1-01431	\$	119.99	
18236006	\$	210.44	AFS-COL
31009802	\$	473.49	URG-COLLECTION
5142002	\$	444.45	AFS-COL
8166008	\$	604.62	AFS-COL
2203102	\$	473.96	AFS-COL
1432309	\$	104.59	
31010101	\$	454.38	URG-COLLECTION
10023	\$	206.80	
12292301	\$	153.51	AFS-COL
2430003	\$	95.51	AFS-COL
151	\$	295.20	
2-06040	\$	129.70	
2172004	\$	547.21	AFS-COL
2252008	\$	42.09	AFS-COL
9282901	\$	402.48	AFS-COL
12001401	\$	49.69	AFS-COL
4-17462	\$	159.25	
18106008	\$	372.45	AFS-COL
9367001	\$	225.65	URG-COLLECTION
9332303	\$	183.82	SM CLAIMS
818604	\$	400.99	AFS-COL
10-64-1000	\$	246.12	
5166007	\$	348.49	AFS-COL
8352509	\$	1,027.80	AFS-COL
310	\$	626.21	
2154102	\$	221.74	AFS-COL
7529101-2ACCT	\$	165.42	
3 ACCOUNTS	\$	401.20	AFS-COL
2276003	\$	124.90	
737408	\$	108.38	AFS-COL
20635202	\$	573.66	AFS-COL
12928011	\$	217.85	AFS-COL
9106007	\$	61.38	
4356008	\$	194.23	AFS-COL
9282902	\$	46.89	AFS-COL
6267002	\$	104.70	AFS-COL

6072001	\$	848.22	URG-COLLECTION
25004504	\$	209.91	BANKRUPCY
5236014	\$	126.11	AFS-COL
	\$	52,513.78	
		5,079.79	BANKRUPCY
	\$	428.99	Death



STAFF COMMENTS

Consideration and possible approval of **Resolution 2023-10 reappointing members to the Planning Commission**

Discussion:

Paul Farthing and Shelley Goodfellow's terms expire this month. Both have agreed to serve another term on the Planning Commission. Mayor Billing's has recommended approval of them serving again.

Findings:

Recommendation:

Attachments:

1. Resolution 2023-10 reappointing members to the Planning Commission

A RESOLUTION OF THE CITY COUNCIL OF HURRICANE, UTAH,
REAPPOINTING SHELLEY GOODFELLOW AND PAUL FARTHING TO THE PLANNING
COMMISSION.

WHEREAS, Utah Law 10-9a-301 requires that each municipality “shall enact an ordinance establishing a planning commission”; and

WHEREAS, Hurricane City has adopted Hurricane City Code 10-6-4: Planning Commission; and

WHEREAS, Hurricane City code requires the City Council to appoint a Planning Commission “consisting of eight members”, and that each Planning Commissioner shall “serve for a term of four (4) years and until a successor is appointed; provided, that the term of the first members shall be such that the terms of two (2) members shall expire each year.” (10-6-4 (B)); and

WHEREAS, the terms “of Planning Commission members shall begin on or before the first Monday in February of each year”; and

WHEREAS, the Mayor, with advice and consent of the City Council, may reappoint current Planning Commission member to service for successive terms.

BE IT HEREBY RESOLVED by the Hurricane City Council that Shelley Goodfellow and Paul Farthing shall be reappointed to the Planning Commission for the following term:

Planning Commission Terms:

Name	Term ends date
Shelley Goodfellow	February 1, 2027
Paul Farthing	February 1, 2027

PASSED AND APPROVED the 2nd day of February 2023.

Nanette Billings, Mayor

Attest:

Cindy Beteag, City Recorder

The foregoing Resolution was presented at a regular meeting of the Hurricane City Council held at the Hurricane City Office Building on the 2nd day of February 2023. Whereupon a motion to adopt and approve said Resolution was made by _____ and seconded by _____. A roll call vote was then taken with the following results:

	Yea	Nay	Abstain	Absent
Joseph Prete	_____	_____	_____	_____
David Sanders	_____	_____	_____	_____
David Hirschi	_____	_____	_____	_____
Kevin Thomas	_____	_____	_____	_____
Doug Heideman	_____	_____	_____	_____

Cindy Beteag, Recorder

Minutes of the Hurricane City Council meeting held on January 19th, 2023, in the Council Chambers at 147 North 870 West, Hurricane, Utah, at 4:00 p.m.

Members Present: Mayor Nanette Billings and **Council Members:** Joseph Prete, Dave Sanders, David Hirschi, and Doug Heideman. Kevin Thomas excused.

Also Present: City Manager Kaden DeMille, City Attorney Dayton Hall, Police Chief Lynn Excell, Power Superintendent Scott Hughes, Public Works Director Mike Vercimack, Planning Director Stephen Nelson, Street Superintendent Weston Walker, Recreation Director Tiffani Wright, City Engineer Arthur LeBaron, City Recorder Cindy Beteag, and Fire Chief Tom Kuhlman.

AGENDA

4:00 p.m. Work Meeting with Washington County Water Conservancy District

Members Present: Mayor Nanette Billings and **Council Members:** Joseph Prete, Dave Sanders, David Hirschi, and Doug Heideman.

Also Present: City Manager Kaden DeMille, City Attorney Dayton Hall, Power Superintendent Scott Hughes, Water Superintendent Ken Richins, Police Chief Lynn Excell, Street Superintendent Weston Walker, Planning Director Stephen Nelson, Assistant Planner Fred Resch III, and City Recorder Cindy Beteag.

Planning Commission Members Present: Paul Farthing, Mark Sampson, and Rebecca Bronemann,

Washington County Conservancy District Members Present: General Manager Zach Renstrom and Karry Rathje

Zach Renstrom presented data showing the average daily stream flow of the Virgin River. He reported that the past twenty years have been the second driest period in one thousand years. Washington County is having rapid growth and will eventually be one of the fastest-growing communities in the western United States. The State of Utah states that 0.89 acre-feet of water are necessary for each new connection. The State of Utah's conservation goal is 0.59 acre-feet of water per connection. Mr. Renstrom explained that the combined wet water within Washington County is 63,000 acre-feet. The primary concern is that eventually, the demand will outreach supply. To find a solution to meet the conservation goal, the Conservancy District would like to incentivize developers to build to the 0.59 acre-feet with an impact fee reduction. Mr. Renstrom presented the Water Conservancy's goals to maintain water for the community until 2028. They are actively conducting a feasibility study on water reuse and working on the Lake Powell pipeline.

1 The purpose of the excess water use surcharge is to incentivize high-end users to reduce their
2 flow. The money collected with the excess use surcharge will go directly back to conservation.
3 He is advocating for the surcharge money to stay in Washington County. Mr. Renstrom
4 presented the monthly demand thresholds by meter size and discussed the changes that
5 community members can make to decrease their water usage. The average water user can
6 reduce their usage by 2,500 gallons if they follow the Water District's guidelines.

7 Rebecca Broneman asked if it would come to the point where it is necessary to stop issuing
8 building permits. Mr. Renstrom reported that without active conservation efforts, it would be
9 necessary to stop issuing build permits. Councilman Prete explained that developers are
10 currently seeking development agreements declaring that they will only build once water is
11 developed to the property. He asked if District sees a trend of Cities denying plats based on
12 water availability. Mr. Renstrom reported that Cedar City requires developers to acquire water
13 rights. He noted other communities in Arizona that are denying developments.

14 **5:00 p.m. Pre-meeting - Discussion of Agenda Items, Department Reports**

15 Weston Walker reported that the Street Department is experiencing minor drainage callouts.
16 Mayor Billings asked Mr. Walker to ensure that each City building has salt before the upcoming
17 storm.

18 Chief Lynn Excell provided the statistics from December 2022 Statistics. The department is
19 seeing an influx of mental health problems among the youth. He reported that the department
20 is working with Ironman and the Utah Department of Utah (UDOT) for the event in May. The
21 half marathon will be on the same route as last year. He reported that SR-9 is classified as one
22 of Utah's most heavily traveled roads. UDOT is working on a plan to prohibit events on SR-9. He
23 noted that different routes are necessary to create better access to subdivisions and
24 businesses. The department is working with Utah Local Governments Insurance Trust to train
25 officers in the Active Bystanders for Law Enforcement program. K-9 Rico is on light duty and still
26 in the care of veterinaries. All other employees involved in the incident are back to work. Mayor
27 Billings commended Officer Raditz for the work he does on social media.

28 Arthur LeBaron reported that he is mobilizing the City crews to get the new gym building. The
29 building needs to be under construction by September. The current occupant has vacated the
30 home, but the business will remain until March. Mr. LeBaron reported that the Utah Mountain
31 Bike race has been forced out of the venues they have used in the past, and they are looking at
32 a site by the Frog Hollow Dam. The Bureau of Land Management (BLM) will allow trails to be
33 constructed if the City will allow the use of City property. He explained that this is a big event. It
34 does not need power or water, and the event provides port-a-potties. The Dixie Transportation
35 Expo is on February 7th at the Dixie Event Center. Councilman Prete asked about the status of a
36 bus route through Hurricane. Mr. LeBaron reported that St. George City is taking the lead. They
37 will purchase clean diesel buses and anticipate that the bus line will be operational by 2024.

1 Fred Resch III has been compiling building permit and Planning Commission approval data to
2 present at the next City Council meeting.

3 Stephen Nelson reported that the General Plan open house is on January 8th from 5:00 p.m. to
4 7:00 p.m. A special session for staff and elected officials will be held from 1:00 p.m. to 3:00 p.m.
5 A targeted session for business and property owners in the downtown area will be held on
6 January 7th. The 1515 West Gate and Transportation Master Plan were held this week. The
7 consensus is that citizens want something that will prohibit pedestrian traffic.

8 Ken Richins reported that the Dixie Spring Well wasn't plumb, but they have continued to move
9 forward.

10 Scott Hughes stated the rain makes it difficult to work on the substation. The drilling on 600
11 North will start next week.

12 Selwin Lovell commented he completed OSHA training. There are still open positions for a
13 Journey lineman, Golf Maintenance, and Building Official. There are interviews set for next
14 week on the building official.

15 Mike Vercimack reported that the Public Works Department is still very busy.

16 Darren Barney reported that the department is fully staffed. They are utilizing RAP tax funds to
17 replace lights at the parks. The department is exceedingly busy with Baseball Tournaments.

18 **6:00 p.m. - Call to Order –**

19 Mayor Nanette Billings welcomed everyone to the meeting.

20 Prayer, Thought, and Pledge led by Councilman David Hirschi

21 Mayor Billings noted that two residents have reached out to report that they appreciate how
22 professionally Stephen Nelson handled the meetings this week.

23 Declaration of any conflicts of interest

24 Councilman Hirschi reported that his brother is representing New Business item 3, but he still
25 plans on voting.

26 Councilman Prete declared a conflict on New Business item 11, and he will abstain from voting.

27 Mayor Billings moved New Business item 3 to after New Business item 13.

Public Forum – Comments From Public

Consent Agenda

1. Consideration and possible approval of **Ordinance 2023-02 amending 8-4-2 number of power board members**
2. Consideration and possible approval of **Resolution 2023-07 confirming the Power Board Member terms**
3. Consideration and possible approval of **Resolution 2023-06 reappointing John Slack to the Water Board**
4. Minutes of the Regular City Council Meeting for **January 5, 2023**

Joseph Prete motioned to approve the consent agenda. Seconded by Doug Heideman. Joseph Prete, Dave Sanders, Doug Heideman, and David Hirschi - aye. Motion carried unanimously.

OLD BUSINESS

1. Consideration and possible approval of **Resolution 2023-05 adopting the Washington County Water Conservancy excess water surcharge and a monthly standby fee, administrative fee, and extension fee**

Mayor Billings explained that the landscape ordinance was continued at the Planning Commission meeting and is not up for City Council to review.

Councilman Prete explained that the Washington County Water Conservancy District voted in favor of conservation resolutions to penalize excess water use and set water limits on new construction. He understands that citizens may not be excited about it, but the data shows that something needs to be done. Councilman Hirschi is concerned about penalizing existing homeowners. Ken Richins stated that the excess water surcharge fee will apply to residents that exceed the existing allotment. New construction will incur the excess water surcharge if they exceed the States new allotment.

Councilman Prete noted the excess water surcharge for residents that live in Las Vegas, and he feels this penalty is reasonable. Mayor Billings reported that there are some exemptions for farming and livestock. Councilman Hirschi reported that he is on Sewer Board and is not entirely in favor of water reuse; however, he understands that demand will eventually exceed the supply. Councilman Prete voiced concern about opening the door to penalties.

Dave Sanders motioned to approve Resolution 2023-05. Motion dies for lack of a second.

David Hirschi motioned to continue until the February 2nd meeting. Seconded by Doug Heideman. Joseph Prete, Dave Sanders, Doug Heideman, and David Hirschi - aye. Motion carried unanimously.

NEW BUSINESS

1. Consideration and possible approval of access improvements to the historic Will Hinton Cistern - Arthur LeBaron

Arthur LeBaron explained there is a trailhead on the south end of 60 East for people to access the canal trail and the three falls connector trail. There is a historic cistern by the Hinton house, and the historical committee is working to create access to the cistern. Mr. LeBaron presented the Historical Committee's proposal. The drawing shows a grate on top of the cistern, a dirt trail leading to the cistern, and lining the slop with basalt. They want to keep the paved turnaround intact. Mr. LeBaron stated that the proposal addresses his concerns. Mayor Billings explained that the Hinton family wants to ensure that the parking is designated and does not infringe on their property.

Samantha Hinton reviewed her father's comments. He is concerned about the lack of fencing on the steep slope and whether there is enough space for four parking spaces. Mr. LeBaron reported that this approval is contingent upon adequate parking, and he noted that this proposal does not include fencing.

David Hirschi motioned to approve access improvements to the historic Will Hinton Cistern contingent on the number of parking spaces based on space available. Seconded by Doug Heideman. Joseph Prete, Dave Sanders, Doug Heideman, and David Hirschi -aye. Motion carried unanimously.

2. Consideration and possible approval of awarding a contract for the construction of the 700 West Project: 100 North to 400 North - Arthur LeBaron

Arthur LeBaron reviewed the proposed road alignment. There was a lot of interest in the project, and he received seven bids. Mr. LeBaron provided the bid tabulation and the engineer's estimated cost. He explained that the City requires a statement of qualifications from each bidder. The recommendation from the group that reviewed the bids is to award the bid to Interstate Rock. Interstate Rock is not the lowest bid but is the most responsible based on the selection criteria. Mayor Billings stated that Interstate Rock has a lot of experience in this type of construction.

Dayton Hall explained that the City is not required to award to the lowest bidder; however, if the bid is not awarded to the lowest bidder, the City Council needs to state the reasons.

Councilman Prete noted that the lowest bid was barely below two million, and the highest bid was slightly higher than three million. He reported that Interstate Rock was only ½ point higher than Sunroc. Mr. LeBaron reported that the two lowest bidders did not provide enough information. Interstate Rock was the most qualified bidder and provided all the requested information.

Doug Heideman motioned to award the bid for the construction of the 700 West Project: 100 North to 400 North bid to Interstate Rock for \$2,604,591.05. Based on their qualifications, approach to the project, and the information they provided. Seconded by David Hirschi. Joseph Prete, Dave Sanders, Doug Heideman, and David Hirschi – aye. Roll call vote. Motion carried unanimously.

Mr. LeBaron reported that there are some opportunities to save money through engineering. He explained that the road was shifted to avoid impacting the developed property. The roundabout is meant to prevent the need for a traffic signal at this intersection and provide a safer pedestrian route. He anticipates that the road will be completed by this time next year.

3. Consideration and possible approval of bringing back two preliminary plats previously denied based on inadequate power and water infrastructure and capacity

Mayor Billings explained that developers have voiced concern that they will need more time to work on drawings after the preliminary plat is approved. Stephen Nelson explained that the preliminary plats were denied; however, they can be invited to reapply. Mayor Billings asked the Council to waive the time frame, so this can go before the Planning Commission next week and waive the fee. Dayton Hall noted that the preliminary plats were denied not only due to the lack of power capacity, but for other reasons as well. The reasons for denial will need to be addressed.

Dave Sanders motioned to approve bringing the applications back subject to no fee charged, and the applications have to be in by Monday. Seconded by Doug Heideman. Dave Sanders, David Hirschi, and Doug Heideman - aye. Joseph Prete - nay. Motion carried.

Mr. Hall clarified the direction from the Council is for the Planning Department to invite the applicants to submit a new application for preliminary plat approval. Councilman Prete asked why this was on the agenda. Mr. Hall explained that this is on the agenda by request from Mayor Billings. Mayor Billings acknowledged that there is not adequate water or power; however, if approved, they can proceed with construction drawings. Councilman Prete noted that by ordinance, inadequate infrastructure is a basis to deny preliminary plats and zone changes. Councilman Prete feels the current problems have been caused by approving developments without adequate infrastructure.

1 **4. Consideration and possible approval of the annual State Fraud Risk Assessment - Paige**
2 **Chapman**

3 Paige Chapman reviewed the annual State Fraud Risk Assessment findings and explained the
4 current mitigating controls. The City ranked low on the Fraud Risk Assessment. She noted that
5 she is in the process of becoming a certified government finance manager. Kaden DeMille and
6 Mrs. Chapman are preparing an annual ethical statement. Mayor Billings thanked Kaden
7 DeMille for his leadership and how he controls the budget.

8 Doug Heideman motioned to approve the annual State Fraud Risk Assessment. Seconded by
9 Dave Sanders. Joseph Prete, Dave Sanders, Doug Heideman, and David Hirschi - aye. Motion
10 carried unanimously.

11 **5. Discussion to advertise and receive donations for the New Veterans Park**

12 Darren Barney stated three engineering firms have donated their time to draw up plans for the
13 Veteran's Park. The plans have gone through the JUC redline process. Mr. Barney reported that
14 the cost estimate is slightly under \$540,000. The Veterans Park will be located east of the
15 cemetery entrance. Mayor Billings reported that a resident has requested a two-hundred-foot
16 flagpole, and the resident has committed to replacing the flag for ten years. Mayor Billings
17 explained that the item for discussion tonight is to notify the City Council that the City is
18 advertising for donations to the Veterans Park.

19 **6. Consideration and possible approval of a time and material contract with Jviation for**
20 **services at the airport in an amount not to exceed \$14,000 - Mike Vercimack**

21 Dave Houston reported that the Airport Board voted to continue the proposal to add insurance
22 to the leases to the next meeting to give the hangar owners time to review the provisions. He
23 provided the revised noise abatement plan. The plan will be mounted on signs along the
24 taxiway. Mr. Houston reported that there have been two complaints in the last six weeks. Both
25 complaints pertain to the same aircraft. Based on the software data, the plane was not flying
26 too low. He feels the airport is doing an excellent job of informing the pilots. Mr. Houston noted
27 there was one no-vote from the airport board on the agenda item. The board member is
28 concerned that more growth will increase the noise concerns.

29 Mike Vercimack reported the City entered into an agreement with Steve Lemmon to build a
30 hangar between an existing row hangar. Mr. Lemmon has retained Pratt Engineering for the
31 site work. Mr. Vercimack met with Mr. Lemmon to discuss his concerns about grading. They
32 determined that additional planning needs to go into this area. They want to ensure that when
33 Mr. Lemmon builds his hangar, the property to the north will still work for the taxiway. Mr.
34 Vercimack contacted the aviation consultant to determine the necessary materials and
35 estimated cost. Their recommendation is to do this on a time-material basis. Mayor Billings

1 reported that the money is already in the budget. She noted a four-foot difference between Mr.
2 Lemmon's proposed hanger and the runway.

3 Doug Heideman motioned to approve the time and material contract with Jviation for services
4 at the airport not to exceed \$14,000 to improve the grade. Seconded by Joseph Prete. David
5 Hirschi, Dave Sanders, Doug Heideman, and Joseph Prete – aye. Roll call vote. Motion carried
6 unanimously.

7 **7. Consideration and possible approval of a renewed contract with Pacific Corp** regarding
8 the sale and purchase of power - Scott Hughes

9 Scott Hughes explained that the City has been in a contract with PacificCorp Corp for many years.
10 The Power Department has been working with Pacific Corp in an effort to take over the Sky
11 Ranch area, and PacifiCorp needs more time to investigate what they need in the area. They
12 have asked to extend the current contract for another year. The renewed contract changes the
13 price to \$194 per megawatt. Mr. Hughes reported that the Power Department matches the
14 price per megawatt for power sold to PacifiCorp. Dayton Hall feels this is a net benefit to the
15 City, the amendment extends the contract for one year, and he recommends approval.

16 Joseph Prete motioned to approve the renewed contract with Pacific Corp as written. Seconded
17 by Dave Sanders. David Hirschi, Doug Heideman, Joseph Prete, and Dave Sanders – aye. Motion
18 carried unanimously.

19 **8. Consideration and possible approval of an updated Resolution regarding interruptible**
20 **power rate** - Scott Hughes

21 Scott Hughes reported that an interruptible power rate was passed in 2021. The rate was
22 created for a specific customer; however, there are some issues with the resolution. It is vague
23 in how it was written and could be interpreted differently. The customer agrees with the
24 updated resolution. Councilman Prete is concerned about the definition of peak hours. He
25 explained that the resolution limits the customer to use full power for twelve hours; however,
26 most of that usage occurs during half of the peak period. Mr. Hughes agrees with Councilman
27 Prete. He reported that peak hours are 10:00 a.m. to 11:00 p.m. The super peak hours are 2:00
28 p.m. to 7:00 p.m. Mr. Hughes feels this resolution is better than the previous resolution.

29 Joseph Prete motioned to approve an updated Resolution regarding the interruptible power
30 rate. Seconded by Dave Sanders. Doug Heideman, David Hirschi, Dave Sanders, and Joseph
31 Prete – aye. Motion carried unanimously.

32 **9. Consideration and possible approval of an amended final plat for Coral Springs Phase 2**
33 **Amended and Extended located at 204 N Cliff Side Dr.** SU Commercial Construction,
34 LLC Applicant. Drake Howell Agent.

Adam Allen with American Land Consulting reported that the original plat was approved and recorded in 2005; however, only a small portion of the buildings were completed. Kole West needs to amend the plat to match their current building. Stephen Nelson explained that buildings were approved but never built. They have approved the preliminary plat and final site plan. The final plat will establish the uses within the development. Arthur LeBaron explains a convertible area is part of a condominium plat which allows an area to be taken out of the common area and used elsewhere.

Dave Sanders motioned to approve the amended final plat for Coral Springs Phase 2 subject to staff and JUC comments. Seconded by Joseph Prete. David Hirschi, Doug Heideman, Dave Sanders, and Joseph Prete – aye. Motion carried unanimously.

10. Consideration and possible approval of a preliminary plat for Gateway at Sand Hollow Resort Phase 1-3, a 219 unit resort condominium development, located south of Sand Hollow Road and West of 3700 W. Western Mortgage and Realty Co-Applicant. Brent Moser Agent.

Stephen Nelson sent an email with the updated parking letter, water acknowledgment, and preliminary plat. Mayor Billings reported that the Planning Commission made a positive recommendation. Karl Rasmussen reported that the preconstruction meeting is on January 31st, and the construction drawings have been signed.

Dave Sanders motioned to approve the preliminary plat for Gateway at Sand Hollow Resort Phase 1-3 subject to staff and JUC comments. Seconded by Doug Heideman. Dave Sanders, David Hirschi, and Doug Heideman - aye. Joseph Prete – abstained. Motion carried.

11. Consideration and possible approval of an amended final plat for Hurricane Industrial Park Lot 24, located at 2430 W 350 N. Darryl Zitting Applicant. Ryan Scholes Agent.

Stephen Nelson explained that this is in an existing industrial lot in an older industrial subdivision. The current plat has a utility easement that is not being utilized, and this plat abandons that easement so the property owner can build closer to the lot line.

Doug Heideman motioned to approve the amended final plat for Hurricane Industrial Park lot 24. Seconded by Joseph Prete. Dave Sanders, David Hirschi, Doug Heideman, and Joseph Prete – aye. Motion carried unanimously.

12. Ordinance 2023-ZC-02: Consideration and possible approval of a Zone Change Amendment request located at approximately 2445 W 2890 S to readjust the underlying zones within the existing PDO, planned development overlay, to allow housing to fit better within the PDO, which would result in moving the M-1, light

1 industrial, zone boundary to the West and expanding the R1-10, residential one unit per
2 10,000 square feet, zone. Molly View LLC-Richard Wedig Applicant. Pro Value
3 Engineering-Karl Rasmussen Agent.

4 Karl Rasmussen explained that this request adjusts parcel one to match the original plan. The
5 applicant is working with all departments to obtain approvals for this project. Mr. Rasmussen
6 reviewed the extraction overlay plan. Stephen Nelson reported that the Planning Commission
7 recommended approval subject to a development agreement, which has been signed.

8 Dave Sanders motioned to approve the zone change request at approximately 2445 W 2890 S
9 subject to the Development Agreement. Seconded by David Hirschi. Joseph Prete, Doug
10 Heidemen, Dave Sanders, and David Hirschi – aye. Motion carried unanimously.

11 **3. Consideration and possible approval of waiving the fees for field rentals or hosting the**
12 **softball tournament** - Matt Hirschi/Tiffani Wright

13 Matt Hirschi explained that they are trying to find an amicable agreement to use the fields. He
14 reported that there are sixty girls signed up for the softball tournament. He has met with
15 Councilman Heideman and Darren Barney. Councilman Heideman proposed going before the
16 City Council to waive the fee. Mr. Hirschi explained that only Hurricane residents are allowed to
17 participate in the program. He reviewed his proposal and the economic impact to the City. He is
18 asking for the City to host the softball tournament. He has some volunteers that will help, and
19 he does not think the tournament will burden City Staff heavily. Mayor Billings is concerned
20 that the City would have to hire someone to oversee the program. Mr. Hirschi asked the City
21 Council to host one tournament and revisit the proposal for a future tournament. Councilman
22 Heideman explained that waiving the fee will affect the Recreation and Parks Department. He
23 noted that this could open the door for more requests from other tournaments. Darren Barney
24 agrees with Councilman Heideman's comments. He feels that this expansion will impact the
25 current staff, and he will need to hire more employees if this grows.

26 Doug Heideman motioned to approve waiving the fee for the field rental and the City hosting
27 the tournament on April 21-22 as a trial for future tournaments. Seconded by Dave Sanders.
28 Joseph Prete, David Hirschi, Doug Heideman, and Dave Sanders – aye. Motion carried
29 unanimously.

30 **Open and Public Meeting Training**

31 Stephen Nelson explained that the state's public bodies must attend a yearly public meeting
32 training. Mr. Nelson played the training video for the City Council.

33 Kaden DeMille provided a summary of the Bench Lake PID update. They are requesting an
34 amendment regarding the two four-million-gallon water tanks. Due to the economy, they are

1 requesting one of the tanks to be reprioritized based on growth. Mr. DeMille reported that
2 Staff feels one tank would be sufficient at the beginning of the project. If both tanks are built
3 right now, and one sits empty, it might deteriorate. Mr. DeMille provided a list of pros and
4 cons. Staff is looking for direction from the City Council.

5 Arthur LeBaron thinks some flexibility in the water tanks could be beneficial to the City.
6 Councilman Prete pointed out the other tank might not be built if the developer runs out of
7 money. Kaden DeMille agreed that reprioritizing the water tanks increases the risk for the City.
8 Eventually, the PID board will be made up of only residents, and they will be hesitant to
9 increase their taxes to put in another tank. Mr. DeMille asked if City Council is in favor of
10 looking at it further. Councilman Sanders feels they need more information before they can
11 make a decision. Councilman Prete's suggestion is for the City to hold fast to the current
12 agreement. Mayor Billings explained that the developer could request to bring this item before
13 the City Council if they chose.

14 **14.** Closed Meeting held pursuant to Utah Code section 52-4-205 upon request

15 Joseph Prete motioned to go into a closed session to discuss the purchase of land. Seconded by
16 Dave Sanders. Motion carried unanimously.

17 **Adjournment: 9:53 p.m.**



STAFF COMMENTS

Ordinance 2022-61 Consideration and possible approval of an amendment to Hurricane City Code **Title 10 Chapter 3 Definitions, Title 10 Chapter 7 Section 9 Conditional Use Permit Standards, Title 10 Chapter 12 Agriculture Zoning Standards and Title 10 Chapter 14 Residential Agriculture Standards** to amend the code to allow Reception Centers as a conditional use within Agriculture and Residential Agriculture Zones.

Discussion:

This item was last discussed on January 5th. It was continued to allow time for the Fire District to respond and staff to expand on the definition of a reception center.

Findings:

Recommendation:

Attachments:

1. Ordinance 2022-61 Reception Center
2. Reception Centers (3) (2)

AN ORDINANCE OF THE CITY COUNCIL OF HURRICANE, UTAH AMENDING SECTIONS TITLE 10 CHAPTER 14: RESIDENTIAL AGRICULTURE ZONING, TITLE 10 CHAPTER 7 SECTION 9: CONDITIONAL USE PERMIT STANDARDS, AND TITLE 10 CHAPTER 12: AGRICULTURE ZONING STANDARDS.OF THE HURRICANE CITY CODE STANDARDS TO ALLOW RECEPTION CENTERS AS A CONDTIONAL USE IN THOSE ZONES

WHEREAS the City Council of Hurricane, Utah has authority to adopt and regulate zoning within its boundaries; and

WHEREAS, Hurricane City general plan recommends that the City adopt policies that will help preserve agriculture within the City; and

WHEREAS said City Council deems it necessary to make these changes to allow for the protection of agriculture within the City,

BE IT HEREBY ORDAINED by the Hurricane City Council Hurricane City Code Title 10 Chapter 14: Residential Agriculture Zoning Standards, Title 10 Chapter 7 Section 9: Conditional Use Permit Standards, And Title 10 Chapter 12: Agriculture Zoning Standards. shall be, and is hereby, amended with the additional text as follows:

BE IT FURTHER ORDAINED that this Ordinance shall, after adoption and approval, take effect immediately upon publication or posting as required by law.

PASSED AND APPROVED this _____ day of _____, 2022.

Nanette Billings, Mayor

[Seal]
Attest:

Cindy Beteag, City Recorder

Sec. 10-3-4 Definitions

Reception center means a facility rented for private social gatherings and used for hosting large social and business event.

Sec. 10-7-9. Conditional use permit.

A. *Purpose.* This section sets forth procedures for considering and approving conditional use permits.

B. *Authority.*

1. The Planning Commission is authorized to issue conditional use permits for the following uses:

Agricultural industry.

Agritourism activities.

Animal specialties.

Assisted living facility.

Greater heights than permitted by this Code in all zones except residential and residential agricultural zones.

Greater size than permitted by this Code in all zones except residential and residential agricultural zones.

Metal building in commercial and residential zones.

Multi family in commercial zones.

Public stable.

Reception center.

Recreation and entertainment, outdoor.

2. The Zoning Administrator is authorized to issue conditional use permits for the following uses:

Animals and fowl for recreation and family food production.

Greater size accessory buildings than permitted by this Code in residential zones.

Greater size accessory buildings than permitted by this Code in residential and residential agricultural zones.

Greater height accessory buildings than permitted by this Code in residential and residential agricultural zones.

C. *Initiation.* A property owner, or the owner's agent, may request a conditional use permit as provided in subsection D1 of this section.

D. *Procedure.* An application for a conditional use permit shall be considered and processed as provided in this subsection.

1. A complete application shall be submitted to the office of the Zoning Administrator in a form established by the administrator along with any fee established by the City's schedule of fees. The application shall include at least the following information:

- a. The name, address and telephone number of the applicant and the applicant's agent, if any;
- b. The address and parcel identification of the subject property;
- c. The zone, zone boundaries and present use of the subject property;
- d. A description of the proposed conditional use;
- e. A plot plan showing the following:
 - (1) Applicant's name;
 - (2) Site address;
 - (3) Property boundaries and dimensions;
 - (4) Layout of existing and proposed buildings, parking, landscaping, and utilities; and
 - (5) Adjoining property lines and uses within 100 feet of the subject property;
- f. Traffic impact analysis, if required by the City Engineer or the Planning Commission;
- g. A statement by the applicant demonstrating how the conditional use permit request meets the approval standards for the conditional use desired; and
- h. Such other and further information or documentation as the Zoning Administrator may deem necessary for proper consideration and disposition of a particular application.

2. After the application is determined to be complete, the Zoning Administrator shall schedule a public meeting before the Planning Commission as provided in section 10-7-4 of this

chapter or shall review the application to determine if it meets the standards for an administrative conditional use permit.

3. A staff report evaluating the application shall be prepared by the Zoning Administrator for a conditional use permit that will be reviewed by the Planning Commission.

4. The Planning Commission shall hold a public meeting and shall thereafter approve, approve with conditions, or deny the application pursuant to the standards set forth in subsection E of this section. A conditional use shall be approved if reasonable conditions are proposed or can be imposed to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with applicable standards. If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with the applicable standards, the conditional use may be denied.

5. After the Planning Commission or Zoning Administrator makes a decision, the Zoning Administrator shall give the applicant written notice of the decision.

6. A record of all conditional use permits shall be maintained in the office of the Zoning Administrator.

E. *Approval standards.* The following standards shall apply to the issuance of a conditional use permit:

1. A conditional use permit may be issued only when the proposed use is shown as conditional in the zone where the conditional use will be located, or by another provision of this title.

2. Standards for each use must be reviewed. Specific standards are set forth for each use in subsections E2a through E2g of this section:

a. *Standards for a reception center.*

(1) Hours of operation must be compatible with adjoining uses and comply with City noise regulations.

(2) Parking must be provided.

(3) The use of on-street parking to provide up to 40 percent of the required parking may be permitted if adjoining uses are not residential uses and the street is fully improved.

(4) The center must have an approved site plan.

(5) If beer, wine, or other alcoholic beverages are served, the center must be licensed by the state alcohol control board.

(6) Reception Center use must be secondary to any agricultural use on the property.

(7) Property shall be a minimum of 5 acres

(8) In RA Zoning, Reception Center shall only be used a maximum of five days a months.

Sec. 10-12-3. Uses allowed.

A. *Permitted and conditional uses.* Permitted and conditional uses allowed within agricultural zones shall be as set forth in table 10-12-1 of this section. Permitted and conditional uses are indicated by a "P" or "C," respectively, in the appropriate column. Uses not permitted are indicated by "N." Any use not shown on table 10-12-1 of this section shall be prohibited unless the Zoning Administrator determines the use is substantially the same as a permitted or conditional use as provided in subsection 10-7-18E4 of this title.

TABLE 10-12-1

PERMITTED AND CONDITIONAL USES ALLOWED IN AGRICULTURAL ZONES

Use	Zones				
	A-40	A-20	A-10	A-5	A-1
Agricultural uses:					
Accessory building	P	P	P	P	P
Agricultural business	P	P	P	P	P
Agricultural industry	P	P	P	P	C
Agriculture	P	P	P	P	P
Agritourism	P	P	P	P	C
Animal specialties	P	P	P	P	C

Animals and fowl for recreation and family food production	P	P	P	P	P
Stable, private	P	P	P	P	P
Residential uses:					
Assisted living facility	P	P	P	P	N
Building, accessory	P	P	P	P	P
Dwelling, earth sheltered	P	P	P	P	P
Dwelling, single-family	P	P	P	P	P
Dwelling, single-family with single accessory dwelling unit	P	P	P	P	P
Dwelling, temporary	P	P	P	P	P
Guesthouse for family members and non-paying guests	P	P	P	P	P
Home base business	P	P	P	P	P
Manufactured home	P	P	P	P	P
Residential facility for elderly persons ¹	P	P	P	P	N
Residential facility for persons with a disability ¹	P	P	P	P	P
Residential facility for troubled youth	N	N	N	N	N
Short term rental	N	N	N	N	P
Public and civic uses:					

Auditorium or stadium	N	N	N	N	N
Cemetery	P	P	P	P	P
Church or place of worship	P	P	P	P	P
Club or service organization	P	P	P	P	P
Convalescent care facility	N	N	N	N	N
Cultural service	P	P	P	P	P
Golf course	N	N	N	N	N
Hospital	N	N	N	N	N
Park	P	P	P	P	P
Protective service	P	P	P	P	P
Reception center	<u>CN</u>	<u>CN</u>	<u>CN</u>	<u>CN</u>	<u>CN</u>
Stable, public	P	P	P	P	C
Utility, minor	P	P	P	P	P
Utility substation	P	P	P	P	P
Commercial uses:					
Agricultural sales and service	P	P	C	C	N
Agritourism activities	P	P	P	P	C
Animal hospital	P	P	P	P	P

Bed and breakfast, home	P	P	P	P	P
Garden center	P	P	P	P	P
Kennel, residential	P	P	P	P	P
Licensed family child care ²	P	P	P	P	P
Media service	N	N	N	N	N
Personal care service, home based ²	P	P	P	P	P
Personal instruction service, home based ²	P	P	P	P	P
Produce stand	P	P	P	P	P
Recreation and entertainment, outdoor	C	C	C	C	N
Residential certificate child care facility ²	P	P	P	P	N
Vehicle repair, limited	N	N	N	N	N
Veterinary service	P	P	P	P	P
Wireless telecommunication facility	See section 10-50-5, table 10-50-1 of this title				

Notes

1. See chapter 46 of this title.
2. See chapter 42 of this title.

B. *Accessory uses.* Permitted and conditional uses set forth in table 10-12-1 of this section shall be deemed to include accessory uses and activities that are necessarily and customarily associated with and incidental and subordinate to such uses.

1. Accessory uses shall be subject to the same regulations that apply to permitted and conditional uses in the same zone except as otherwise expressly provided in this title.
2. No accessory use, building, or structure shall be allowed on a lot unless a permitted or conditional use has been established.
3. Accessory uses in agricultural zones shall include, but are not limited to, the following:

Garage sales, subject to applicable standards of chapter 48, temporary uses, of this title.

Garages, carports, and off street parking areas, subject to applicable standards of chapter 34, off street parking and loading, of this title.

Hobby activities when conducted by an occupant of the premises solely for personal enjoyment, amusement, or recreation and which does not conflict with any applicable provision of this Code.

Home based businesses, subject to applicable standards of chapter 42, home based businesses, of this title.

Household pets.

Keeping of machinery, livestock, and farming equipment as needed for agricultural use.

Nurseries and greenhouses.

Playhouses, patios, porches, gazebos, and incidental storage buildings.

Produce stands.

Swimming pools and hot tubs for use by residents and their guests.

Temporary real estate offices, subject to applicable standards of chapter 48, temporary uses, of this title.

Sec. 10-14-3. Uses allowed.

A. *Permitted and conditional uses.* Permitted and conditional uses allowed within residential agriculture zones shall be as set forth in table 10-14-1 of this section. Permitted and conditional uses are indicated by a "P" or "C," respectively, in the appropriate column. Uses not permitted are indicated by "N." Any use not shown on table 10-14-1 of this section shall be prohibited unless the Zoning Administrator determines the use is substantially the same as a permitted or conditional use as provided in subsection 10-7-18E4 of this title.

TABLE 10-14-1

PERMITTED AND CONDITIONAL USES ALLOWED IN
RESIDENTIAL AGRICULTURE ZONES

Use	Zones	
	RA-1	RA-.5
Agricultural uses:		
Agricultural business	P	N
Agricultural industry	N	N
Agriculture	P	P
Animal specialties	P	P
Animals and fowl for recreation and family food production	P	P ³
Stable, private	P	P
Residential uses:		
Assisted living facility	P	P
Boarding house	N	N
Building, accessory	P	P
Dwelling, earth sheltered	P	P
Dwelling, multiple-family	N	N
Dwelling, single-family	P	P
Dwelling, single-family with single accessory dwelling unit	P	P

Dwelling, temporary	P	P
Dwelling, two-family	N	N
Guesthouse	P	P
Manufactured home	P	P
Manufactured/mobile home park	N	N
Manufactured/mobile home subdivision	N	N
Protective housing facility	P	P
Residential facility for elderly persons ¹	P	P
Residential facility for persons with a disability ¹	P	P
Residential facility for troubled youth	C	C
Short term rental ⁴	P	P
Public and civic uses:		
Auditorium or stadium	N	N
Cemetery	P	P
Church or place of worship	P	P
Club or service organization	N	N
Convalescent care facility	N	N
Cultural service	P	P

Golf course	P	P
Hospital	N	N
Park	P	P
Protective service	P	P
Reception center	<u>CN</u>	<u>CN</u>
Stable, public	P	N
Utility, minor	P	P
Utility substation	P	P
Commercial uses:		
Agricultural sales and service	N	N
Animal hospital	P	P
Bed and breakfast, home	P	P
Bed and breakfast inn	N	N
Garden center	N	N
Kennel, residential	P	P
Licensed family child care ²	P	P
Media service	N	N
Personal care service, home based ²	P	P

Personal instruction service, home based ²	P	P
Produce stand	P	P
Recreational vehicle park	N	N
Residential certificate child care facility ²	P	P
Residential hosting facility	P	P
Temporary trailer	P	P
Veterinary service	N	N
Warehouse, self-service storage	N	N
Wireless telecommunication facility	See section 10-50-5, table 10-50-1 of this title	

Notes

1. See chapter 46 of this title.
2. See chapter 42 of this title.
3. See section 10-37-15 of this title for permitted animals and fowl.
4. See licensing and operations requirements in title 3 of this Code.

B. Accessory uses. Permitted and conditional uses set forth in table 10-14-1 of this section shall be deemed to include accessory uses and activities that are necessarily and customarily associated with and incidental and subordinate to such uses.

1. Accessory uses shall be subject to the same regulations that apply to permitted and conditional uses in the same zone except as otherwise expressly provided in this title.
2. No accessory use, building, or structure shall be allowed on a lot unless a permitted or conditional use has been established.

3. Accessory uses in residential agriculture zones shall include, but not be limited to, the following:

Garage sales, subject to applicable standards of chapter 48, temporary uses, of this title.

Garages and off street parking areas, subject to applicable standards of chapter 34, off street parking and loading, of this title.

Hobby activities when conducted by an occupant of the premises solely for personal enjoyment, amusement, or recreation and which does not conflict with any other City ordinance.

Home based businesses, subject to applicable standards of chapter 42, home based businesses, of this title.

Household pets.

Nurseries and greenhouses.

Playhouses, patios, porches, gazebos, and incidental storage buildings.

Swimming pools and hot tubs for use by residents and their guests.

AN ORDINANCE OF THE CITY COUNCIL OF HURRICANE, UTAH AMENDING SECTIONS TITLE 3-CHAPTER 11, 10-CHAPTER 3-SUBSECTION 4 AND 10, TITLE 10-CHAPTER 15-SUBSECTION 3, TITLE 10-CHAPTER 41, AND TITLE 10-CHAPTER 51 OF THE HURRICANE CITY CODE STANDARDS ADDRESSING SHORT TERM RENTAL STANDARDS FOR ACCESSORY DWELLING UNITS AND UNITS IN SINGLE FAMILY ZONE

WHEREAS the City Council of Hurricane, Utah has authority to adopt and regulate zoning and land use within its boundaries; and

WHEREAS, Hurricane City's General Plan and Moderate Income Housing Plan recommends that the City adopt policies that will govern and limit the use of short term rentals within single family zones; and

WHEREAS, Hurricane City has seen a large demand for short term rentals within the City; and

WHEREAS, short term rentals can have a negative impact on the surrounding neighbors and property; and

WHEREAS, Hurricane City is facing a high demand for long-term housing and has a lack of affordable options; and

WHEREAS, the City Council deems it necessary to make these changes to further govern and define short term rentals within the City.

BE IT HEREBY ORDAINED by the Hurricane City Council Hurricane City Code Title 3-Chapter 11, Title 10-Chapter 3-Subsection 4 And 10, Title 10-Chapter 15-Subsection 3, Title 10-Chapter 41, And Title 10-Chapter 51 shall be, and is hereby, amended with the additional text as follows:

NOW THEREFORE, BE IT ORDAINED BY THE HURRICANE CITY COUNCIL OF HURRICANE CITY, UTAH THAT:

1. All ordinances, resolutions, and policies of the City, or parts thereof, inconsistent herewith, are hereby repealed, but only to the extent of such inconsistency. This repealer shall not be construed as reviving any law, order, resolution, or ordinance, or part thereof.
2. Should any provision, clause, or paragraph of this ordinance or the application thereof to any person or circumstance be declared by a court of competent jurisdiction to be invalid, in whole or in part, such invalidity shall not affect the other provisions or applications of this ordinance or the Hurricane City Municipal Code to which these amendments apply. The valid part of any provision, clause, or paragraph of this ordinance shall be given independence from the invalid provisions or applications, and to this end the parts, sections, and subsections of this ordinance, together with the regulations contained therein, are hereby declared to be severable.

PASSED AND APPROVED this _____ day of _____, 2022.

Nanette Billings, Mayor

[Seal]
Attest:

Cindy Beteag, City Recorder

CHAPTER 10. - TRANSIENT LODGING FACILITIES

Sec. 3-10-1. - Business License Required

- A. *Business license required.* No Transient Lodging Facility shall be occupied or used as short term vacation rental until such time that the owner has obtained a business license issued in accordance with the provisions of this section. A current, valid business license shall be posted in a conspicuous place in each Transient Lodging Facility.
- B. Business conditions shall be subject to the terms within this Title and Title 10, Chapter 51 of Hurricane City Code.

Sec. 10-3-4. - Definitions of words and phrases.

Accessory building means a detached subordinate building located on the same lot with a main building, the use of which is customarily incidental to that permitted in the main building, or to the land upon which the main building is located.

Accessory Dwelling Unit (ADU) means a subordinate residential dwelling unit that is being used to provide long-term or short-term housing of any person not qualifying as the property owner's Family, as that term is defined in this section. Each subordinate residential dwelling unit meeting this definition shall constitute a separate ADU regardless of how the units are configured or accessed. Guesthouses and casitas shall be considered an ADU when used for long-term or short-term housing of any person not qualifying as the property owner's Family. An ADU may be internal, attached, or detached from the primary dwelling. All ADUs must meet the requirements of chapter 41 of this title.

Accessory use. See definition of *use, accessory*.

Apartment house. See definition of *dwelling, multiple-family*.

Bed and Breakfast Inn means a commercial activity within a residential structure, in a residential or a commercial zone, where five or more rooms may be rented to paying guests on a nightly basis, and the breakfast meal is provided for in the rental rate pursuant to the requirements of this chapter.

Building means a permanently located structure having a roof supported by columns or walls for the shelter, housing, or enclosure of any person, animal, article, or chattel.

Duplex. See definition of *dwelling, two-family*.

Dwelling means any building, or portion thereof, having one or more dwelling units occupied as, or designed or intended for occupancy as, a residence by one or more families as permitted by this title, but not including hotels, motels, boarding houses, or other facilities offering transient lodging facilities.

Dwelling unit means one or more rooms in a dwelling designed for or occupied as separate living quarters which provide sleeping and sanitary facilities and which includes kitchen facilities, all for exclusive use by a single family maintaining a household or a single person or group utilizing the unit for a short-term stay.

Family means any one of the following who occupies a dwelling unit:

- A. One person living alone.
- B. Two or more persons related by blood, marriage, adoption, or other legal relationship living together as a single housekeeping unit; and up to two other unrelated persons residing on the same premises where the housekeeping unit is located.
- C. Two unrelated persons and the children of either of them.
- D. Five unrelated individuals living together as a single housekeeping unit.

Hotel means an establishment with or without fixed cooking facilities in individual rooms offering transient lodging accommodations to the general public, and which may provide additional services such as restaurants and meeting rooms. Hotels shall contain four or more sleeping rooms.

Household means a family living together in a one-dwelling unit with common access to and common use of all living and eating areas and facilities for the preparation and serving of food within the dwelling unit.

Kitchen means an area within a dwelling unit which contains a sink, fixed cooking appliances, and refrigeration facilities.

Motel means any building or group of buildings containing four or more sleeping rooms, with or without fixed cooking facilities, designed for temporary occupancy by tourists or transients, with a garage attached or parking space conveniently located to each unit.

Residential Hosting means a limited commercial activity within an owner-occupied single family residential structure where an Accessory dwelling unit not occupied by the full-time residents is used to house persons not qualifying as the property owner's Family on a short-term basis.

Short Term or Vacation Rental means any dwelling unit used as a transient lodging facility.

Transient Lodging Facility means any establishment that receives payment, compensation, value, trade, or consideration in any form in exchange for the use of any unit for one to 30 days, including any hotel, motel, time period unit, hostel, boarding house, vacation rental property, short term rental, or bed and breakfast inn.

(Ord. 03-5-1, 5-1-2003, eff. 6-1-2003; Ord. 2004-15, 6-17-2004; Ord. 2005-15, 7-21-2005; Ord. 2008-4, 3-6-2008; Ord. 2009-01, 2-5-2009; Ord. 2011-11, 12-15-2011; Ord. 2012-8, 10-18-2012; Ord. 2013-10, 10-3-2013; Ord. 2014-10, 11-6-2014; Ord. 2015-3, 2-19-2015; Ord. 2015-12, 12-17-2015; Ord. 2016-11, 11-17-2016; Ord. 2017-03, 1-19-2017; Ord. 2017-06, 2-16-2017; Ord. 2018-04, 4-5-2018; Ord. 2018-12, 10-18-2018; Ord. 2019-04, 5-2-2019; Ord. 2020-03, 2-6-2020; Ord. No. [2022-10](#), 5-19-2022; Ord. No. [2022-36](#), 8-18-2022)

CHAPTER 41. - ACCESSORY DWELLING UNITS

Sec. 10-41-1. - Purpose.

The purpose of this chapter is to establish use and development regulations for ~~A~~accessory ~~D~~dwelling ~~U~~units ("ADU"). These regulations are intended to ensure that limited use of ADUs allowed in a residential zone do not disturb the single-family residential character of a neighborhood.

(Ord. 2018-04, 4-5-2018; Ord. No. [2022-10](#), 5-19-2022)

Sec. 10-41-2. - Scope.

The requirements of this chapter shall apply to all ~~ADU~~accessory dwelling units in single-family zones. Such requirements shall not be construed to prohibit or limit other applicable provisions of this title, this Code, and other laws.

(Ord. 2018-04, 4-5-2018; Ord. No. [2022-10](#), 5-19-2022)

Sec. 10-41-3. - Permitted use.

Only one ADU is allowed as a permitted use as listed in sections 10-13-3 and 10-14-3, except where a second ADU is allowed as a conditional use pursuant to Chapter 7 of this Title. ADUs shall ~~A single accessory dwelling unit shall be allowed as permitted uses as listed in 10-13-3 and 10-14-3, and shall~~ be subject to the development standards of this chapter. Relevant definitions may be found in Chapter 3 of this Title.~~The definition of each use is set forth in 10-3 of this title.~~

(Ord. 2018-04, 4-5-2018; Ord. No. [2022-10](#), 5-19-2022)

Sec. 10-41-4. - Development standards; permitted use.

The development standards set forth in this section shall apply to any ~~ADU~~accessory unit allowed as a permitted use.

- A. *Definition; setbacks and size.* An ~~ADU~~accessory dwelling unit is an accessory use to the main residential dwelling unit. Setbacks and size and lot coverage limitations established for accessory buildings in each zone shall apply.
- B. *Egress and life safety requirements.* The dwelling unit must meet egress and life safety requirements of the International Residential Building Code.
- C. *Ownership.* The owner or ~~a member of the Family of the~~an immediate family member of the property owner shall reside on the property as their primary residence as a condition for an ~~ADU~~accessory dwelling unit to be rented. For long-term occupancy, the property owner may live in the ~~ADU~~accessory building or the primary building. Only the ~~ADU~~accessory unit may be used as a ~~S~~short-term ~~R~~rental pursuant to chapter 51 of this ~~Title~~Code.
- D. *Limit.* Generally, only one ~~ADU~~may accessory dwelling unit and/or casita shall be established on one residential property. However, two ~~ADU~~accessory dwelling units may be allowed by a conditional use permit pursuant to ~~Chapter 7 of this Title~~section 10-7-9 of City Code.
- E. *Entrance.* ~~An ADU~~The accessory dwelling unit may have its own outside entrance.
- F. *Landscaping.* Landscaping shall be provided and maintained to minimize impact on neighboring properties, to retain residential character, and to provide a visual buffer for onsite parking in relation to adjacent properties and the street. Landscaping may include, but shall not be limited to, planting trees in the park strip.
- G. *Secondary use.* ~~An ADU~~The accessory dwelling unit shall be clearly incidental and secondary to the primary use of the dwelling for residential purposes.

H. *Maximum size.* ~~An ADU~~~~The accessory dwelling unit~~, if it is detached, must meet the size limitations for the zone or have been granted a conditional use permit.

I. *Residential Hhosting.* One ~~ADU~~~~accessory dwelling unit~~ may be used per residential lot for ~~R~~residential ~~H~~hosting pursuant to ~~Chapter 51 of this Title~~~~Title 10-51 of the City Code~~.

(Ord. 2018-04, 4-5-2018; Ord. No. [2022-10](#), 5-19-2022)

Sec. 10-41-5. - Compliance with development standards.

A. Residential properties with ~~ADU~~~~saccessory dwelling units~~ found to be in violation of the development standards set forth in section 10-42-4 of this title shall be subject to all applicable remedies set forth in ~~C~~chapter 9 of this title to ensure compliance.

B. In order to ensure ~~ADU~~~~saccessory dwelling units~~ meet the development standards, a permit must be issued by the City for any use of the unit described in ~~S~~sections 3-9-2 and ~~Chapter 51 of this Title~~~~section 10-51~~.

(Ord. 2017-03, 1-19-2017; Ord. No. [2022-10](#), 5-19-2022)

CHAPTER 51. -Transient Lodging Facilities

Sec. 10-51-1. - Purpose.

The purpose of this chapter is to establish use and development regulations for Transient Lodging Facilities to ensure their compatibility with adjoining uses, particularly when located in a residential zone.

Sec 10-51-2 Definitions

Terms and phrases used in this chapter are found in Chapter 3 of this Title.

As used throughout this chapter, the following terms or phrases shall have the following meanings:

Bed and Breakfast Inn means a commercial activity within a residential structure, in a residential or a commercial zone, where five or more rooms may be rented to paying guests on a nightly basis, and the breakfast meal is provided for in the rental rate pursuant to the requirements of this chapter.

Boarding House means a building with not more than five guestrooms, where, for compensation, meals are provided for not more than 15 persons.

Hostel means an establishment in which people are lodged for a single night or less than a week at a time, excluding short term rental complex, bed and breakfast inn; hotel; or motel.

Hotel means an establishment with or without fixed cooking facilities in individual rooms offering transient lodging accommodations to the general public, and which may provide additional services such as restaurants and meeting rooms. Hotels shall contain four or more sleeping rooms.

Motel means any building or group of buildings containing four or more sleeping rooms, with or without fixed cooking facilities, designed for temporary occupancy by tourists or transients, with a garage attached or parking space conveniently located to each unit.

Residential Hosting means a limited commercial activity within an owner occupied single family residential structure where not more than four sleeping rooms not occupied by the full-time residents may be rented to paying guests on a nightly basis.

Recreation Resort Short Term Rentals means any dwelling unit used as a transient lodging facility within the Recreation Resort Zone as governed by Hurricane City Code 10-26.

Short Term or Vacation Rental means any dwelling unit used as a transient lodging facility.

Short Term Rental Complex means any group of two to three Short Term Rental units within commercial zones.

Commented [1]: Move the whole section to 10-3 and then reference it in this chapter

Commented [2]: Is there any difference between a Short Term Rental and a Transient Lodging Facility? Are the terms interchangeable? Or, are Short Term or Vacation Rentals only for residential structures? What about units in Recreational Resort zones? I am wondering if we need to differentiate a Short Term Rental from a hotel. For example, do the yearly inspection requirements of 10-51-10 apply to just single family residents being used as Short-Term Rentals? Or does that also apply to a Motel?

Time Period Unit (timeshare) means a multi-unit project in which an annually recurring part or parts of a calendar year specified in the condominium declaration or other document as a period for which a physical unit is separately owned. Separate ownership is represented by shares in a corporation, a partnership interest, or any other individually owned transferable property right or interest.

Transient Lodging Facility means any establishment that receives payment, compensation, value, trade, or consideration in any form in exchange for the use of any unit for one to 30 days, including any hotel, motel, time period unit, hostel, boarding house, vacation rental property, short term rental, or bed and breakfast inn.

Whole Home Vacation Rental means an entire single family residential structure located in a single family zone and rented out on a short-term basis. Whole Home Vacation Rentals are comprised of the entire structure, are not owner-occupied, and are regulated on a per capita and unit separation basis by the Hurricane City Code.

Sec. 10-51-3. Management

- A. Each Bed and Breakfast Inn, Boarding House, Hostel, Hotel, or Motel must maintain a management office on the premises at all times that is under the immediate supervision of a manager or attendant. Such office shall remain continuously open and staffed whenever guests are registered or present or when the facility is open to receive guests.
- B. Short Term Rental Complexes must have management located within Hurricane City boundaries and be available at all times to respond to complaints or issues related to the complex. A phone number for management must be posted within each unit and be given to the City with the business license application. Management shall inform the City if the contact phone number is updated.
- C. Residential Hosting units shall be managed by the resident owner and meet accessory dwelling unit standards in Title 10, Chapter 41 of the Hurricane City Code.

Sec. 10-51-4. - Disclosure of available rooms.

- A. Each transient lodging facility shall disclose to the Business License Officer the current number of rooms available and/or held out for public accommodation, or, in the case of Vacation Rentals, the total number of people the dwelling can safely accommodate:
 1. At the time of initial licensure or license renewal; and
 2. Within 72 hours of any change in the number of such available rooms or accommodation of guests.

(Ord. 2015-2, 2-19-2015)

Sec. 10-51-5. - Display of license; guest register.

- A. Business license required. No Transient Lodging Facility shall be occupied or used until such time that the owner has obtained a business license in accordance with

this section's provisions. A current, valid business license shall be posted in a conspicuous place in each Transient Lodging Facility.

B. A register of all guests shall be kept at all times on the Transient Lodging Facility premises, except for Short Term or Vacation Rentals or Short Term Rental Complexes. The guest register shall contain in ink the following information about each guest for which the transient lodging facility affords accommodations:

1. Name and permanent address.
2. Dates of arrival at the transient lodging facility and departure from the transient lodging facility.
3. License plate number, state of licensure, make, type, and color of all motor vehicles.
4. Verification of a form of picture identification, including, but not limited to, driver's license, passport, or state issued identification card showing current name, address, and age of person registering and indicating which type of identification was verified and the identification number shown on said identification.

C. The guest register required by this section shall be kept current and shall be immediately available at all times for inspection upon the demand of police officers or City officials.

D. Short Term or Vacation Rental business license owners must keep an accurate register of all guests containing all the above information that can be provided upon the demand of police or emergency services personnel or City officials.

(Ord. 2015-2, 2-19-2015)

Sec. 10-51-6. - Occupancy.

It shall be unlawful for any Transient Lodging Facility unit to be occupied by a greater number of persons than that which it is designed or furnished to accommodate.

(Ord. 2015-2, 2-19-2015)

Sec. 10-51-7. - Responsibility for minors.

No Transient Lodging Facilities unit shall be rented, leased, or registered to any person under the age of 18 years. Each person to whom a lodging unit is rented, leased, or registered shall be responsible for any minors occupying such unit and shall remain on the Transient Lodging Facility premises at all times while there are minors occupying such unit.

(Ord. 2015-2, 2-19-2015)

Sec. 10-51-8. - Length of stay.

No person shall occupy any unit or combination of units at any one Transient Lodging Facility for longer than 30 consecutive days, and no Transient Lodging Facility shall permit any person to occupy any unit or combination of units on the facility premises for longer than 30 consecutive days. This section shall not apply to federal, state, or municipal law enforcement or emergency personnel, or to Transient Lodging Facilities renting, leasing, or registering units to such personnel. Vacation Rental properties may be occupied for longer than 30 days but must still comply with all vacation rental regulations.

(Ord. 2015-2, 2-19-2015)

Sec. 10-51-9. - Sanitary facilities.

A. Each unit within a Transient Lodging Facility held out for public accommodation must comply with the minimum rules established by the state department of health.

B. It shall be unlawful to rent, lease, or otherwise hold out for public accommodation any Transient Lodging Facility unit that does not have:

1. A complete operable bathroom, including flush toilet, sink, and bath or shower in working order; and
2. For each guest, an adequate daily supply of at least the following sanitary supplies:
 - a. Hot and cold running water;
 - b. Soap;
 - c. Towels;
 - d. Toilet paper; and
 - e. Clean linen.

C. Each Transient Lodging Facility shall be cleaned after the departure of each guest and before the arrival of any subsequent guest.

(Ord. 2015-2, 2-19-2015)

Sec. 10-51-10. - Inspections.

Each Transient Lodging Facility shall comply and cooperate with any fire, land use, code enforcement, building, health, or other inspection conducted by municipal officials, with or without notice. Each Short Term Rental unit shall be inspected by the Fire Marshal or their representative each year upon their license renewal.

(Ord. 2015-2, 2-19-2015)

Sec. 10-51-11. - Duty to report.

Any owner, manager, or attendant of any facility covered by this section shall report promptly to the proper authorities any violations of a municipal ordinance or any

violation of law which he or she has reason to believe was or is being committed on the premises.

(Ord. 2015-2, 2-19-2015)

10-51-12 General Development and Maintenance Standards

A. *Maintenance standards.* Any property that contains a dwelling which is licensed as Transient Lodging Facilities shall conform to the following standards:

1. Structures shall be properly maintained, painted and kept in good repair, and grounds and landscaped areas shall be properly maintained and watered in order that the use in no way detracts from the general appearance of the area;
2. For Short-Term Rentals, the use of a dwelling as a Short-Term Rental shall not in any way change the appearance of the dwelling or property for residential purposes; and
3. Each sleeping room must meet current international residential code codes for egress and be equipped with smoke and CO2 detectors. A fire exiting route plan and maximum occupancy number must be posted in each sleeping room.

B. *Prevention of noise, nuisance or trespass at Short-Term Rentals.* The owner of any Short-Term Rental shall be responsible to ensuring that guests or occupants do not:

1. Create noises that by reason of time, nature, intensity or duration are out of character with noises customarily heard in the surrounding residential neighborhood.
2. Disturb the peace of surrounding residential property residents by engaging in shouting, fighting, playing of loud music, racing of cars or recreational vehicles on streets, engaging in outside recreational activities after 10:00 p.m., or other similar activities.
3. Interfere with the privacy of surrounding residents or trespass onto surrounding properties.
4. Allow pets or animals to create noise, roam the streets, trespass on neighboring properties, or create a mess that is not cleaned up by the owner or custodian of the pet or animal.
5. Engage in any disorderly or illegal conduct, including illegal consumption of drugs and alcohol.

C. *Required posting.* The following information must be posted in a clear, concise, and unambiguous manner and in a conspicuous location inside any dwelling licensed as a Short Term or Vacation Rental:

1. A copy of the Vacation Rental business license.

2. The name, address, and phone number of the owner or property manager.
3. The location of all fire extinguishers.
4. A list of all rules applicable for Vacation Rentals.
5. The maximum occupancy of the Vacation Rental and the maximum number of vehicles allowed.

D. *Miscellaneous rules and regulations.* The following rules and regulations shall apply to any property for which a Transient Lodging Facilities license has been issued:

1. Outdoor pools, hot tubs, or spas shall not be used between the hours of 11:00 p.m. and 6:00 a.m.
2. Maximum occupancy in any dwelling licensed as a Short Term or Vacation Rental shall be ten persons at any one time. If, however, the property has a fire sprinkler system or other fire suppression system acceptable to the Hurricane Valley Fire District, a greater occupancy may be approved. Maximum occupancy of the dwelling must be included in the regulations sign.
3. The owner of any property containing a dwelling licensed as a Short Term or Vacation Rental shall cause to be displayed in a City approved location on the exterior of the property an approved sign containing the name and 24-hour per day, 365-day per year telephone number of the owner or other party designated by the owner as property manager who will be responsible for receiving and resolving complaints regarding activities on the property and the conduct of its occupants and guests. The sign shall not exceed 12 inches by 18 inches and shall be the only sign other than an address permitted on a short term vacation rental property.
4. The owner or property manager shall provide information on current occupants to police, emergency, or City personnel as requested. The owner or other person designated as the property manager shall respond to complaints and concerns within one hour of any phone call or other notification. Failure of the owner or property manager to respond in a timely manner may result in a violation and possible fines to the business license holder and property owner.
5. The requirements of this section shall be in effect throughout the time a short term vacation rental license is in effect on the property, regardless of whether the property is occupied by the owner, nonpaying guests of the owner, or paying guests of the owner. The City finds that, given the practical difficulty of determining whether or not the occupants are paying guests, enforcement of the requirements contained in this section shall be based on whether the property is licensed as a short term vacation rental.
6. An inspection of a vacation rental property for compliance with these regulations will be performed at the time of business license review shall be

required before a license is issued and each year before renewal. Additional inspections may be performed with 24-hour notice to the license holder/property manager if deemed necessary by the City. An inspection of a vacation rental property for compliance with these regulations will be performed at the time of the business license review. Additional inspections may be performed with 24 hour notice to the license holder/property manager if deemed necessary by the City.

7. The owner of any dwelling licensed as a short term vacation rental shall be required to collect and remit on a timely basis transient lodging taxes.

Sec. 10-51-13. - Whole Home Vacation Rentals.

- A. Regulations and restrictions imposed by this section are in recognition of the premise that a Vacation Rental provides lodging for a transient population that may or may not honor neighborhood mores or exhibit neighborly consideration to the same extent as permanent residents. Separation requirements listed in subsection C of this section and total license limits listed in subsection D of this section are based on a desire to maintain the overall residential character of neighborhoods and the purpose of single-family residential zones to promote safe locations for residential uses.
- B. *Business license required.* No dwelling in any permitted zone shall be occupied or used as Short Term or Vacation Rental until such time that the owner has obtained a business license issued in accordance with the provisions of this section.
- C. *Conditions for issuance of a business license for a Short Term or Vacation Rental.* Issuance of a Short Term or Vacation Rental business license by the Business License Officer shall be subject to the following:
 - 1. A complete application for a Short Term or Vacation Rental business license shall have been submitted in accordance with section 3-1-5, and which shall also include:
 - a. The name, address and phone number of the owner or other person designated by the owner as the property manager who shall be responsible for ensuring compliance with the rules and regulations specified in this section, and
 - b. A valid state tax number for remittance of transient lodging taxes.
 - 2. The dwelling unit for which the business license is sought shall be located in a permitted zone according to this title and that has been built to meet building and fire codes for transient occupancy and has been issued a certificate of occupancy.
 - 3. Portions of a single-family dwelling may not be used as a short term rental unless located within a Recreation Resort Zone or appropriately licensed as a Residential Hosting Vacation Rental in accordance with the regulations for that use. A Whole Home Vacation Rental and a Residential

Hosting facility located in a residential zone may not be located in the same single-family dwelling.

4. In permitted single-family zones, the owner of a single-family dwelling for which a Short Term or Vacation Rental business license is sought shall not hold a business license to operate another Short Term or Vacation Rental within the City limits. For purposes of this subsection, "owner" means any individual, corporation, partnership, limited liability company, trust or other entity which has a legal or equitable ownership interest in the single-family dwelling, or any individual who has an ownership interest in any corporation, partnership, limited liability company, trust or other entity which has a legal or equitable ownership interest in the single-family dwelling.

5. In permitted single-family zones, a Whole Home Vacation Rental license shall not be issued if there is another licensed Whole Home Vacation Rental property located within 300 feet, as measured along the same street or around the corner, of the front property line corners of the property where the proposed short term vacation rental license is being sought. This criterion does not apply to Residential Hosting, Recreation Resort zoning, or Transient Lodging Facilities uses within commercial zoning.

D. *Limit on the total number of Whole Home Vacation Rental licenses within single-family zones as contained in title 10, chapters 13 and 14 of this Code.* The total number of short term vacation rental business licenses issued within single-family zones shall be limited in accordance with the following:

1. The maximum number of Whole Home Vacation Rental business licenses for properties in single-family zones to be issued shall be based on the City's total population, allowing three licenses for every 1,000 people of the total population.

2. The total number of licenses available each year shall be recalculated based on an estimated population derived by adding the total number of new dwelling units times 2.779 residents per unit to the prior year's base population. The City shall readjust the population numbers every ten years after the release of the census numbers. If the census numbers are lower than the City's projection, the City shall not revoke any issued license but shall not issue any additional licenses until the City population justifies additional license availability.

3. If, after the maximum number of licenses has been issued, an application meeting all other requirements for issuance of a license is received, the application shall be placed on a waiting list in order of the date of receipt. No fees will be due until a license becomes available. When a license becomes available, the first applicant on the waiting list shall be notified of the license availability, and the applicant shall have 45 days from the date of such notice to file a complete application and pay the filing fee, and six months thereafter to complete the licensing process. In the event that the applicant fails to file a complete application and filing fee within said 45 days, or fails to complete the licensing process within said six months, the

application shall be deemed to have expired, and the next applicant will be notified of the license availability, and the same procedure shall apply.

4. In the event of a sale or other transfer of any property containing a dwelling licensed as a Whole Home Vacation Rental, the purchaser or transferee of the property is permitted to continue to use the property as a Whole Home Vacation Rental, but the purchaser or transferee shall be required to apply for a new license within 45 days of the date of purchase or transfer. In the event that the purchaser or transferee fails to apply for a new license within said 45 days, the license and ability to use the property as a Whole Home Vacation Rental will be forfeited and the owner must reapply for any available license or be placed on the waiting list.

E. *Parking regulations.* The following regulations apply to property licensed as a Whole Home Vacation Rental:

1. No tenant, guest, or other person visiting a Whole Home Vacation Rental shall park on a public street.
2. Off-street parking shall be provided on the same lot as the dwelling that is licensed as a Short Term or Vacation Rental.
3. Off-street parking shall be provided at one vehicle per bedroom. Tandem spaces on a driveway may be used.
4. No off-street parking space may be located in front of the living area of the dwelling unless there is a circular driveway.
5. The number of vehicles permitted for the occupants of a Vacation Rental shall be restricted to the number of off-street parking spaces provided by the owner.
6. No tenant, guest, or other person visiting a Whole Home Vacation Rental shall park or allow to be parked recreational vehicles or trailers of any kind on the public street.
7. Owner shall supply a parking plan that complies with this section with the business license application.

10-51-14 Residential Hosting Facilities

A. *Conformity with standards and business license required.* No Residential Hosting Facility shall be established unless:

1. The facility can meet the development standards of this chapter;
2. A business license has been issued in accordance with the regulations in title 3 of this Code;

3. Operation of a Residential Hosting Facility without a current City business license is considered a violation and each day of operation shall be considered a separate offense.

(Ord. 2017-14, 8-17-2017)

B. Development standards; Residential Hosting Facilities. The development standards set forth in this section shall apply to all Residential Hosting Facilities.

1. *Location.* A residential hosting facility shall be located in a single family residential structure deemed suitable for habitation.
2. *Number of Accessory Dwelling Units (ADU).* Only one ADU may be used as a residential hosting facility on any one lot, as those terms are defined in Title 10, Chapter 3 and Chapter 41 of the Hurricane City Code.
3. *Accessory Dwelling Units.* The use of an accessory dwelling unit for a residential hosting facility shall be governed by this chapter, Hurricane City Code 10-41, and other applicable chapters.
4. *Guestrooms.* Rentable guestrooms shall be limited to not more than four bedrooms in the entirety of one ADU. The total number of occupants, including an owner, owner's family, and guests occupying the home at one time shall be no more than ten. Maximum occupancy must be posted in each rentable guestroom.
5. *Number of Bookings.* No more than one booking is allowed and no more than one party may occupy any Residential Hosting facility at any one time.
6. *Current codes.* Guestrooms must meet current international residential codes for egress and be provided with smoke and CO2 detectors. A fire exiting route plan must be posted in each sleeping guestroom.
7. *Meals.* If meals are offered, meals shall be served only to overnight guests.
8. *Landscaping.* Landscaping shall be provided and maintained to minimize impact on neighboring properties, to retain the residential character, and to provide a visual buffer for on-site parking in relation to adjacent properties and the street.
9. *Parking.* Nonfrontage, off street parking shall be provided as follows:
 - a. Two spaces for owner.
 - b. One space per guestroom.
 - c. Parking must be located on the same property as the guestrooms.
 - d. Tandem parking is permitted for one space only.
 - e. Off street parking may not be provided within the front yard setback other than the existing driveway.
 - f. Landscaping is required between parking and adjoining residential properties.
9. *Signs.* Only one sign not larger than one foot by two foot in size may be used to advertise a Residential Hosting facility. The sign may not be illuminated unless by a single down facing low wattage fixture.

10. *Street standards.* A Residential hosting facility shall be located on a street that meets fire code requirements.
11. *Structural modifications.* A valid building permit is required before any structural modifications or additions may be made to a building to be used pursuant to this chapter. A business license to operate a Residential Hosting facility shall not be issued for a property that was modified or added to without a valid building permit. A previously-issued business license shall be subject to revocation pursuant to Title 3 of the City Code upon evidence that the structure was modified or added to without a valid building permit. Provided, however, that a business license may be issued or maintained for a structure that was modified or constructed without a building permit if all applicable fines are paid and the Hurricane City Building Official is provided with adequate evidence to the satisfaction of the Official that the modification or construction was done in compliance with the building code and fire code.
12. *Other regulations.* A Residential Hosting facility is subject to all other applicable sections of this Code, including, but not limited to, building and fire codes, Transient Lodging Facility regulations, and transient room tax requirements.

(Ord. 2015-12, 12-17-2015; Ord. 2018-04, 4-5-2018; Ord. No. [2022-10](#), 5-19-2022)

Sec. 10-51-15 Recreation Resort Units

Recreation Resort Short Term Rental units shall be subject to the provision of this chapter.

Sec. 10-51-16. - Development standards; Bed and Breakfast Inn.

A Bed and Breakfast Inn may be established in any zone where allowed as a permitted or conditional use, and shall conform to applicable commercial construction codes, zoning requirements, state health department requirements, and the requirements of any other applicable codes and/or ordinances adopted by the City.

(Ord. 2015-12, 12-17-2015)

Sec. 10-51-17. - Penalty; suspension or revocation of license.

A. Enforcement provisions.

1. Any owner of any dwelling within the City who allows or permits occupation of said dwelling as a Short-Term Rental without having first obtained a business license in accordance with the provisions of this section shall be in violation of this section and shall be subject to a civil citation with a penalty of \$750 per day as set forth in section 1-4-5 of this Code. A violator of this paragraph shall also be guilty of an infraction, which shall be punishable by a fine of up to \$750.00 for each such violation. In addition, in the event that such dwelling is on the waiting list for a Whole Home Vacation Rental as described in this chapter at the time of such violation, the business

license application for said dwelling shall be removed from the waiting list and the dwelling shall not be considered for a Shorterm Rental business license unless a new application is submitted.

2. Any owner of any dwelling within the City, who, having first obtained a business license for use or occupation of said dwelling as a Short-Term Rental, thereafter operates or permits the operation of said short term vacation rental in violation of the terms and provisions of this section shall be subject to a civil citation with a penalty of \$750 per day as set forth in section 1-4-5 of this Code. A violator of this paragraph shall also be guilty of an infraction, and shall be punished by a fine of up to \$750.00 for each such violation.

3. Any person who occupies a short term rental as a guest and who violates any local ordinance or state law shall be subject to arrest, issuance of a citation, or other civil or criminal process in accordance with all state, federal or local statutes, rules or ordinances.

4. Violation of any provision of this section regulating Short-erm Rentals shall constitute a separate offense for each day said violation occurs or continues.

5. In the event of three or more violations of this section committed by an owner or guest, or any combination of the two, within any 12-month period, the City Council may, depending on the nature or extent of the violations, proceed with the revocation of the business license for any ~~Short-Term Rvocation~~ rental property in accordance with the provisions of the general business license ordinance.

6. In the event of a license being revoked by the City Council for violations of this chapter, the owner of the property in question shall not be issued a new ~~Short-term Rvocation~~ rental business license for a period of one year.

B. In addition to the denial, suspension, revocation, or refusal to renew a license as outlined in ~~this chapter section 3-1-9 of Hurricane City Code~~, any licensee who shall operate a ~~T~~transient Lodging Facility in violation of this chapter, and/or any person designated by the licensee as the manager or person in charge of daily operation of said facility who shall permit or allow said facility to operate in violation of this chapter, shall be guilty of an infraction and shall be punished for each offense by a fine as provided in section 1-4-1 of this Code.

(Ord. 2015-2, 2-19-2015)



STAFF COMMENTS

Consideration and possible approval of an **appeal to the denial of a residential hosting application** - Kelly Ashcroft

Discussion:

Applicant applied for a residential hosting license for a detached casita. Staff has denied the application due to Applicant's failure to meet City Code. Applicant is appealing the denial as allowed by City Code.

The application for a residential hosting license was denied because the structure in which the proposed rental will be is not a lawful structure. Staff was able to verify a building permit was pulled in 2019 but it was for a shop only. The plans for the shop show a bathroom and sink, but the plans show the bathroom and sink in a different location than where the proposed rental is shown. The plans submitted with the building permit plainly do not show a living area. A note submitted with plans by the Applicant states that the building will be a "shed." County records only show the building as a wood shop and only reference one building on the property, so Applicant is not paying taxes on a second habitable structure. Applicant has, without a building permit and without inspections, modified the structure to add a residential living area within the shed. Just as with other structures, development standards for residential hosting facilities require that a building permit be obtained for modifications of structures or construction of new structures. HCC 10-51-4. Now that the unauthorized construction has been completed, the required inspections cannot be completed without damage to the structure--such as removing sheetrock to inspect electrical wiring and plumbing.

Not only is the issuance of a residential hosting license prohibited by ordinance in these circumstances, but staff is also concerned about authorizing the use of an uninspected shed to house short-term renters. The residential component of the shed has not been inspected and the City cannot know if the structure is safe to habitate.

This item was discussed January 5th as well. Council directed Mr. Ashcroft to research what it would take to make it compliant. Mr. Ashcroft has supplied the inspection report and a letter from a builder regarding the footings.

Findings:

Staff makes the following findings:

1. Applicant violated City Code by constructing a residential living area inside a building that was only approved and constructed as a shop.
2. Applicant does not qualify for a residential hosting license for failure to comply with the development standards of HCC 10-51-4; specifically, the structure is not a lawful

structure because it was built and modified without the requisite permits and related inspections.

Recommendation:

Staff recommends that the City Council denies Applicant's appeal because modifications were made to the building without proper permits or inspections.

Attachments:

1. KAM Family Partnership documentation
2. Ashcroft response
3. Documents provided by Mr. Ashcroft

Mayor
Nanette Billings

City Manager
Kaden C. DeMille



City Council
Joseph Prete
David Sanders
David Hirschi
Kevin Thomas
Doug Heideman

November 15, 2022

KAM Family Partnership
599 S Main
Hurricane, UT 84737

Mr. Ashcroft,

On November 8, 2022, a residential hosting license application was submitted to my office for KAM Family Partnership along with payment of the license and application fees. This application was reviewed in accordance with licensing procedures, and it was determined that the license could not be approved because modifications converting a detached shop to living space was done without a building permit or inspections.

Please find enclosed a reimbursement check for \$50.00 you paid for the Business License. The \$25.00 for the application fee is not refundable. Operating the business without a license will subject you to a citation for operating without a valid business license.

If you wish to appeal this decision, you must submit a written notice of appeal with the City Recorder within 15 days of this denial. Upon receiving a written notice of appeal, the matter shall be heard and decided by the City Council in the next City Council meeting.

Thank you,

Cindy Beteag

Cindy Beteag
City Recorder



147 N 870 WEST, HURRICANE, UTAH 84737
PHONE: 435-635-2811 FAX: 435-635-2184
www.cityofhurricane.com

Date of Application _____

License Fee \$50.00
Application Fee \$25.00
Total Due \$75.00

◆ **BUSINESS LICENSE APPLICATION HOME BED AND BREAKFAST OR RESIDENTIAL HOSTING** ◆

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: KAM FAMILY PARTNERSHIP
Business Phone: 435-467-0208 Fax Number: -
Business Address: 599 SOUTH MAIN, HURRICANE UT 84737
Mailing Address (if different): -
State Sales Tax Number (if applicable): _____ Dept. of Commerce Entity #: 2103991-0180
Professional License # (if applicable): _____ Federal Identification #: _____
Website: _____ E-Mail Address: ASHCROFT-5@HOTMAIL.COM
Description of Business: RESIDENTIAL HOSTING - SHORT TERM RENTAL
Business Type (check one): Proprietorship ☐ Partnership ☒ Corporation ☐

PART B — Residential Hosting or Home Bed and Breakfast Questionnaire

- Number of parking spaces for owner _____ Number of guest parking spaces _____ Number of permanent residents _____
DIAGRAM OR PHOTOGRAPH OF PARKING FACILITIES MUST BE INCLUDED!
· Total number of guest rooms 1
· Smoke and CO₂ detectors in each guest room? ☒ Yes ☐ No
· Fire exiting route plan posted in each guest room? ☒ Yes ☐ No
· Landscaping completed? ☒ Yes ☐ No
· Will there be a sign on the property for the business? ☒ Yes ☐ No
· Size and location of sign (maximum allowed 1' X 2') _____

PART C — BUSINESS OWNER INFORMATION

If other than sole proprietor, a list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: Kelly Ashcroft Title: GENERAL PARTNER
Home Address: 599 South Main HURRICANE UTAH 84737
(Street Number) (City) (State) (Zip)
Social Security Number: [REDACTED] Date of Birth: [REDACTED]
Home Phone: [REDACTED] Cell Phone: [REDACTED]

Please add any additional owners/partners on a separate piece of paper and attach.

> This form is an application for a business license. The receipt for payment of license fees thereof does not constitute being approved to operate a business. The actual license will be issued only when all inspections are completed and signed off by the various City departments and approval is given by the Business License Office. To open and/or operate a business without final approval is a Class B Misdemeanor and punishable by law.

LIST TWO RESPONSIBLE / AVAILABLE EMERGENCY CONTACTS:

Name: MARY LU ASHCROFT
 Address: 599 South MAIN HURRICANE UT 84737
 Phone: [REDACTED]
 Name: ANDY ASHCROFT
 Address: 599 South MAIN HURRICANE UT 84737
 Phone: [REDACTED]

PART D — HURRICANE VALLEY FIRE DISTRICT

All businesses licensed in Hurricane City must be in compliance with applicable fire codes and regulations at all times. New businesses may be required to pass a fire inspection prior to issuance of a business license. Fire inspections encompass, but are not limited to: fire equipment such as extinguishers, exits and aisles, electrical equipment, storage, and fire protection systems. Inspections may include additional areas of concern specific to particular business activities and/or locations. The licensing clerk will inform new applicants whether an initial inspection is required.

☐ **Inspection Required. Contact the Fire Dept at 435-635-9562 to schedule a fire inspection.**

☐ **No Inspection required at this time.**

I understand that compliance with applicable fire codes and regulations is required for all businesses licensed in Hurricane City. I understand that a fire inspection of my business may be required in the future and would be conducted by Hurricane Valley Fire District personnel. I understand that failure to comply with applicable fire codes and regulations may be grounds for revocation of my business license.

[Signature] 11/7/2022
 Applicant's Signature Date

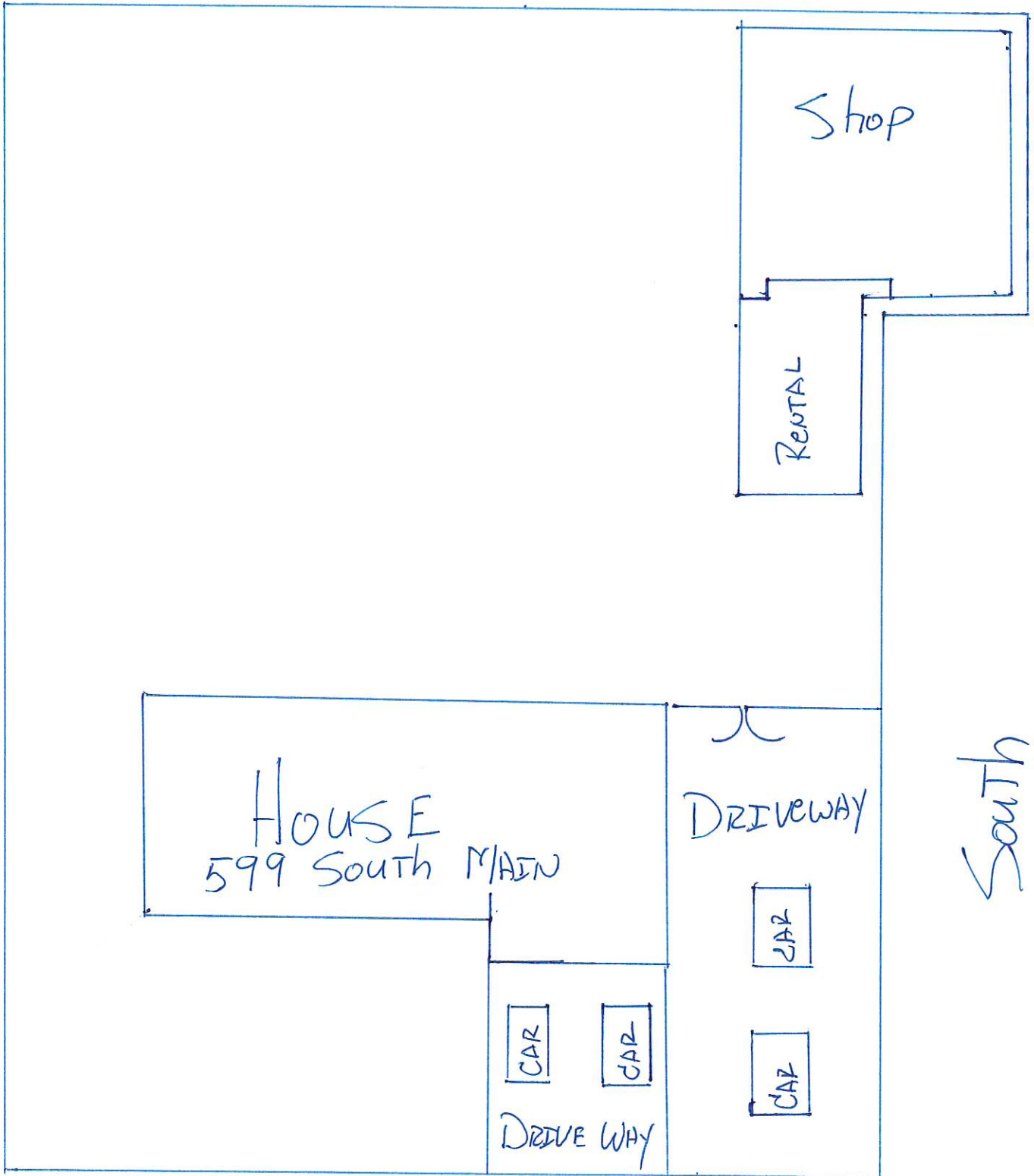
I REPRESENT, COVENANT AND AGREE: (a) that this home is my primary residence and will be occupied by me whenever guests are present, and that I will not rent rooms occupied by me or other family members who occupy the home as their primary residence, (b) to comply with all regulations of Title 3 Business License Regulations, (c) that business shall not commence or be conducted at this location until a business license has been issued by the City of Hurricane, (d) that an inspection must be completed and the building approved by the appropriate Building, Zoning, Fire and Health authorities prior to issuance of a business license, (e) that any misrepresentation contained herein or any violation of any of the foregoing shall constitute grounds for denial or revocation of a business license.

[Signature] 11/7/2022
 Applicant's Signature Date

TOTAL FEES \$ <u>75</u>	Office Use Only	AMOUNT PAID \$ <u>75</u>
DATE <u>11/8/22</u>	RECEIPT # <u>7.703218</u>	
CITY LICENSE NUMBER _____		
Home Occupation: <u>yes</u> / no	Zone: <u>R1-10</u>	Permitted Use: <u>yes</u> / no
Planning Commission Approval Required: yes / no, if yes, which approval: site plan / conditional use		
Planning Commission approval date: <u>N/A</u> Zoning approval/date: <u>11/9/22</u>		
New Construction: yes / no	Remodel: yes / no	Building Permit: yes / no
Certificate of Occupancy or Tenant Improvement inspection required: yes / no <u>?</u>		

EAST

North



South

STREET West

★ BECOMES PERMIT
WHEN SIGNED & PAID

HURRICANE

ION

★ Date of Application _____ Date Work Starts _____

★ Name of Applicant _____

★ Lot # _____ ★ Phase _____ ★ Subd. Name & Number _____

★ Bldg Address _____

★ Cost of Construction _____ ★ Assessors P _____

★ Single Family ☐ Condo ☐

Apartment ☐ Townhomes ☐ Other ☐

Owner Builder ☒ Custom ☐ ★ Construction _____

Spec. Home ☐ # Of Units ☐ New ☐

★ Owner of Property _____ Phone _____

★ Mailing Address _____ City _____

★ Architect or Engineer _____ Phone _____

★ General Contractor _____ Phone _____

★ Business Address _____ ★ State Lic. No. _____ ★ City/Co. Lic. No. _____

★ Electrical Contractor _____ Phone _____

★ Business Address _____ ★ State Lic. No. _____ ★ City/Co. Lic. No. _____

★ Plumbing Contractor _____ Phone _____

★ Business Address _____ ★ State Lic. No. _____ ★ City/Co. Lic. No. _____

★ Mechanical Contractor _____ Phone _____

★ Business Address _____ ★ State Lic. No. _____ ★ City/Co. Lic. No. _____

★ Other Sub. Contractors _____

★ Type of Improvement / Kind of Const. ☐ Mobile Home ☒ Other

☐ Sign ☐ Ret. Wall ☐ Pool ☐ Fence

☐ Repair ☐ Move ☐ Convert Use ☐ Demolish

★ No. of offstreet parking spaces: _____

Minimum Setbacks in Feet From Property Lines

Front _____ Side _____ Side _____ Rear _____ Zone _____

SPECIAL CONDITIONS / COMMENTS

Min. Floor Elevation to be not less than 12 inches above back of curb or crown of road.

Can be within 2' of the
Side and back property
line with drip edge
of building

We need to
see if this
needs a red
tag
Thanks
Toni

Permit Number
HUR190614342

FEE SCHEDULE

5 Valuation 25.875

Special Approvals _____ Re _____

City Zoning Approval _____

Board of Adjustment / PC _____

Health Department _____

Fire Department _____

Soil Report _____

Flood Plain _____

Flood _____

Sewer or Septic Tank _____

City Engineer (off site) _____

☒ Frame ☐ Brick Var. ☐ Stucco
☐ Brick ☐ Block ☐ Concrete ☐ Steel
Max. Occ. Load _____

Fire Sprinkler ☐ Yes ☒ No

① IMPACT ② CONNECTION ③ PERMIT FEE

Public Safety _____

Water _____

Sewer _____

Park & Rec. _____

Streets _____

Power _____

SUBTOTAL → _____

② Water Meter (Size _____)

Sewer _____

Anti-siphon _____

SUBTOTAL → _____

③ Bldg. Permit 405.35

Drainage _____

H.P. _____

Fire Hydrant _____

State Permit tax 4.01

Sewer Permit _____

SUBTOTAL → _____

TOTAL 405.36

This application does not become a permit until signed below.

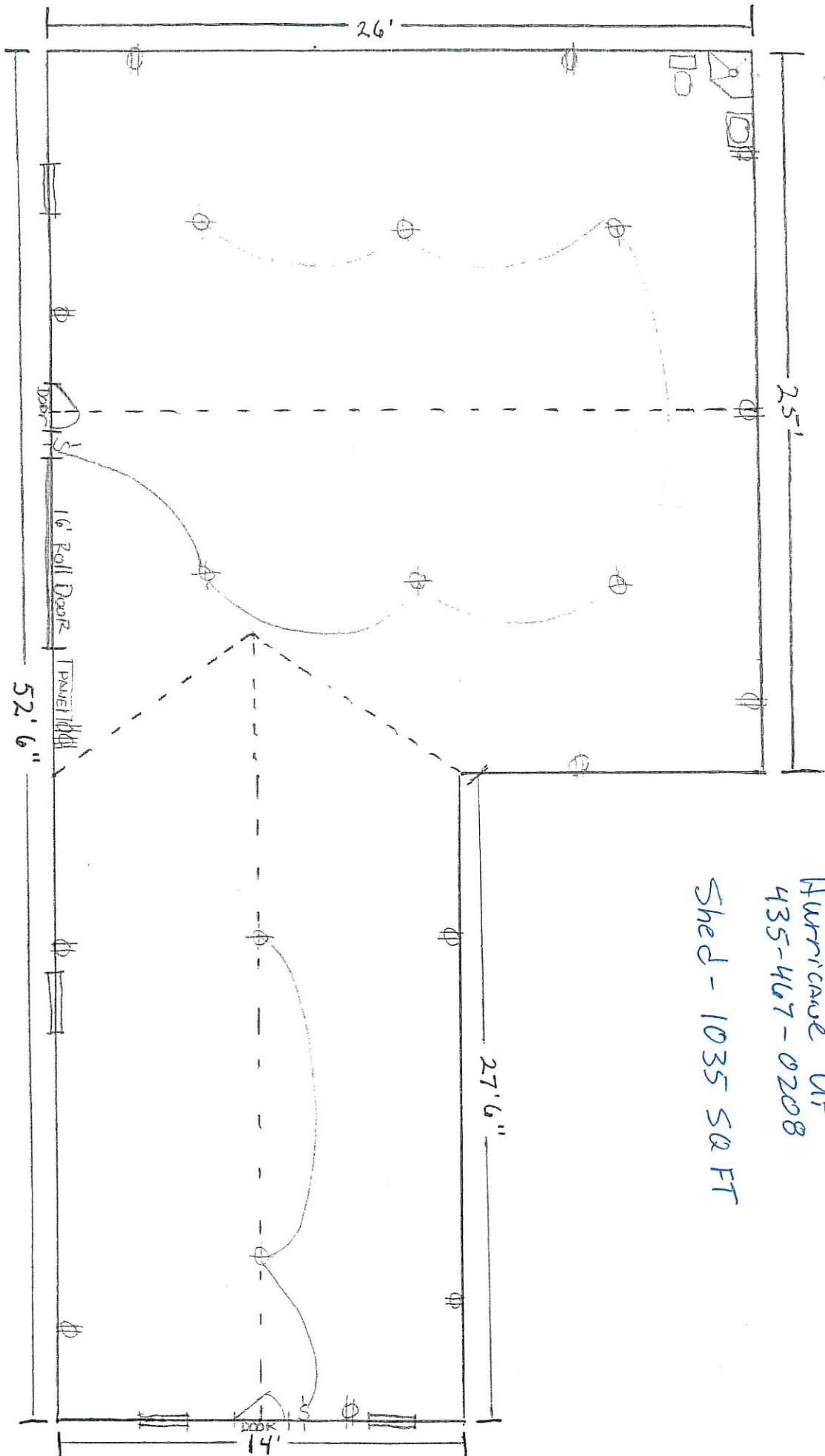
Plan Chk. OK by _____

Signature of Approval _____ Date 6/6/19

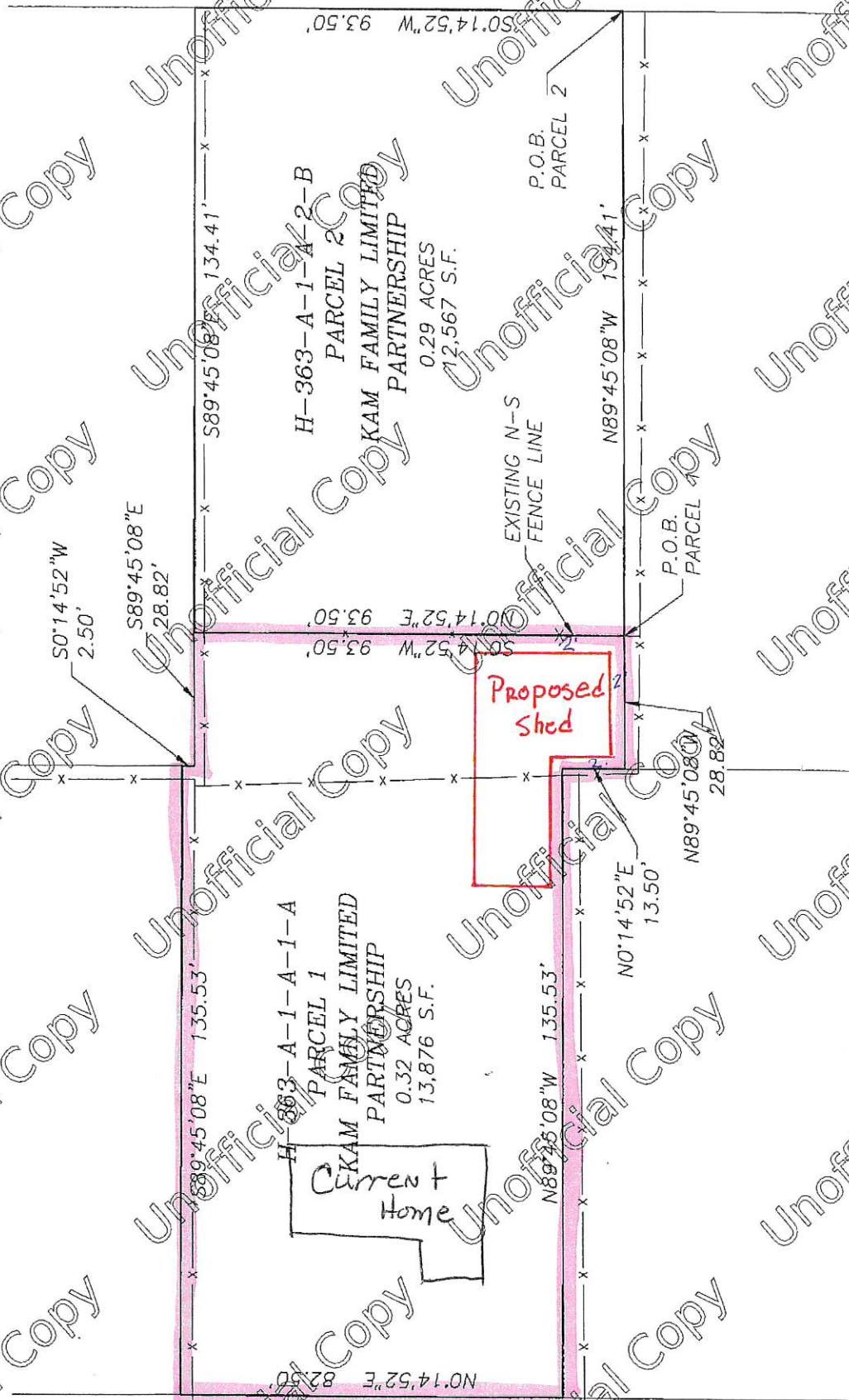
This permit becomes null and void if work or construction authorized is not commenced within 180 days, or if construction of work is suspended or abandoned for a period of 180 days at any time after work is commenced. I hereby certify that I have read and examined this application and know the same to be true and correct. All provisions of laws and ordinances governing this type of work will be complied within whether specified herein or not. The granting of a permit does not presume to give authority to violate or cancel the provisions of any other state or local law regulating construction or the performance of construction and that I make this statement under penalty of perjury.

★ Signature of Contractor or Authorized Agent _____ Date _____

★ Signature of Owner (if owner) _____ Date _____



Kelly Ashcroft
 599 South Main
 Hurricane UT
 435-467-0208
 Shed - 1035 SQ FT



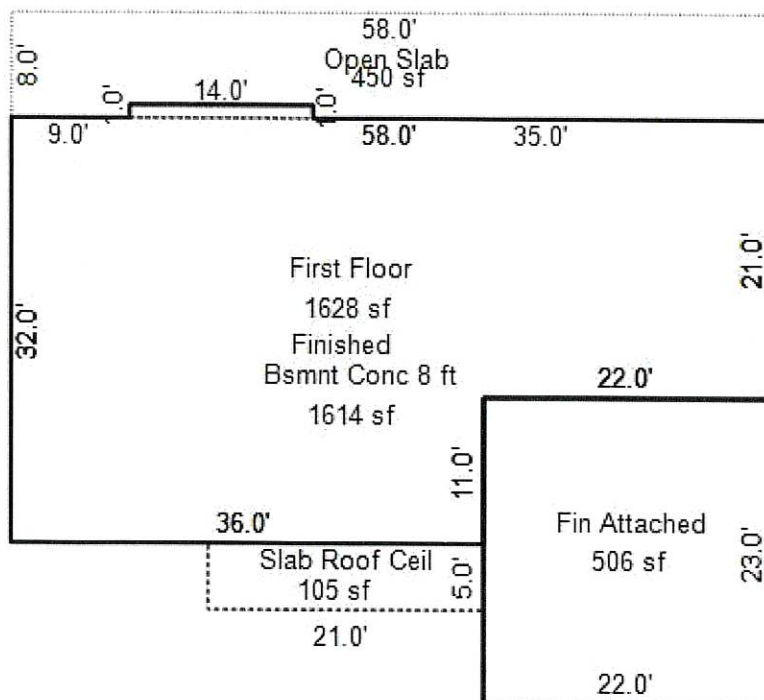
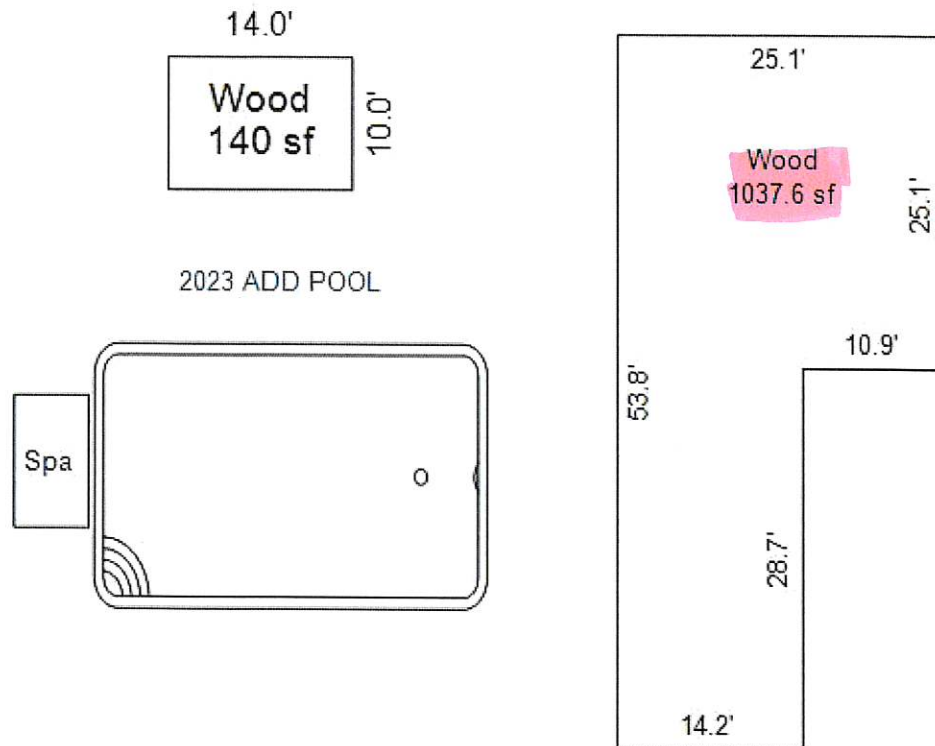
South MAIN STREET

KELLY ASHCROFT

PROPOSED SHED

599 SOUTH MAIN

Proposed shed will be a conventional build shed using 2x4 lumber and plywood for the exterior and roof. It will have a metal roofing material and the exterior will be cement board panels and painted to look like the adjacent home. The shed will be 9' walls with a 4x12 pitch roof.



Assessor Record Search

You may use the form below to search by either
Account Number (e.g.: 1000432) or **Parcel Number** (e.g.: SG-12-A).

PLEASE NOTE: This page shows selected Assessor CAMA data as of
January 1, 2022.

Account Summary:

Account Number:	0074578
Parcel Number:	H-363-A-1-A-1-A-1
Address:	599 S MAIN ST
City:	HURRICANE
Buildings:	1
Subdivision:	HURRICANE LOCAL SUR
Total Property Value:	Value Summary
 Account Photo	 Account Sketch
 View Property Record	 Map Parcel

Building Characteristics:

Building: 1

Property Type:	Residential
Occupancy Desc.:	Single Family Residential
Stories:	1.00
Year Built:	1989
Square Feet:	1,628
Percent Complete:	100%
HVAC Desc.:	Central Air
Exterior:	Frame Masonry Veneer
Roof Type:	Hip
Roof Cover:	Composition Shingle
Bedrooms:	4
Bathrooms:	3.50
Units:	1
Basement Square Feet:	1,614
Basement Square Feet Finished:	1,614

Garage Square Feet:	506
Spa:	1

 Want to leave feedback?

To search this data as it was on January 1, 2021, [click here](#).

RL 11/21/22 OB

November 21, 2022

To whom it may concern.

I am writing this appeal in request to an application that was submitted to the City of Hurricane on November 8, 2022 to allow KAM Family Partnership to have a residential hosting license for an apartment located at 599 South Main, Hurricane Ut.

A building permit was given to me, Kelly Ashcroft, on June 14, 2019. When we built said shop in our back yard we were given a permit for the building as a shop. I was unaware that we needed a different permit for living quarters, however, it was inspected as required and the inspectors knew that it had a living quarters in the shop and was inspected accordingly. Had I known that I needed a different permit I would have obtained the proper permit. The building has been assessed by the county and I am currently paying taxes for the space as a living quarters.

I would like to appeal to the city to allow me to change the building permit that I do have, to allow me to rent the living quarters as a single residential hosting unit. I am willing to do what is necessary to obtain this license.

Thank you for your time.



Kelly Ashcroft

LM 11/22/22
Kelly called back - confirmed 1/5/23 agenda

Home » Permits and Inspections » Projects » LM Module Administration » Location Records » Location Record Details » Archive Permit » **Archived Inspections Overview**

Archived Inspections Overview

Archived by Tami Jones
2020-04-07 15:00:07



Requested 11 Passed 7 Failed 4
(Inspector:0d 21h Contractor:216d 16h)

 Print Page

 PDF Page

 Email PDF

ID#	PROJECT	PROJECT DESCRIPTION	INSPECTION
19-0338	Accessory Building		All
Address 		Owner	Contractor
599 S Main St.		Kelly Ashcroft	Owner/builder Owner/builder Owner/builder

↪ expand location information

View 3 images across ▼

Framing (Inspector: 0d 0h Contractor: 161d 23h)			
User	Date	Time	Result
Tami Jones	08/19/2019 @ 02:54 pm 08/19/2019 @ 02:54 pm	-0d 0h -1d -1h	Requested Ready
Lance Gifford	08/19/2019 @ 02:54 pm	0d	Failed
Tami Jones	10/17/2019 @ 10:12 am 10/17/2019 @ 10:12 am	41d 19h 41d 19h	Requested Ready
Casey Chivers	10/17/2019 @ 10:35 am	0d 0h	Failed
Mason Snow	04/07/2020 @ 02:59 pm 04/07/2020 @ 02:59 pm	120d 4h 120d 4h	Requested Ready
Mason Snow	04/07/2020 @ 02:59 pm	0d	Passed
Required Item Tami Jones on 2019-08-19 at 02:56 pm			
need to use 3" washers on all bolts bottom plate need bolts to within 12" of ends and splices need block joints on sheeting and nail.			
Required Item Casey Chivers on 2019-10-17 at 10:35 am			
No attic access in garage section			

Mechanical (Inspector: 0d 0h Contractor: 0d 0h)			
User	Date	Time	Result
Casey Chivers	10/17/2019 @ 10:38 am 10/17/2019 @ 10:38 am	-0d 0h -1d -1h	Requested Ready
Casey Chivers	10/17/2019 @ 10:39 am	0d 0h	Passed

Rough Electrical (Inspector: 0d 0h Contractor: 0d 0h)			
User	Date	Time	Result
Tami Jones	10/17/2019 @ 10:12 am 10/17/2019 @ 10:12 am	41d 19h 41d 19h	Requested Ready
Casey Chivers	10/17/2019 @ 10:17 am	0d 0h	Passed

Rough Plumbing (Inspector: 0d 19h Contractor: 12d 21h)			
User	Date	Time	Result
Casey Chivers	10/17/2019 @ 10:38 am 10/17/2019 @ 10:38 am	-0d 0h -1d -1h	Requested Ready

Casey Chivers	10/17/2019 @ 10:38 am	0d	Failed
Cindy Beteag	11/04/2019 @ 03:16 pm 11/05/2019 @ 07:00 am	12d 5h 12d 21h	Requested Ready
Casey Chivers	11/05/2019 @ 11:10 am	0d 19h	Passed
Required Item Casey Chivers on 2019-10-17 at 10:38 am			
Not full			

Shear (Inspector: 0d 0h Contractor: 41d 19h)			
User	Date	Time	Result
Lance Gifford	08/19/2019 @ 02:57 pm	0d 0h	Failed
Tami Jones	08/19/2019 @ 02:57 pm 08/19/2019 @ 02:57 pm	0d 0d 0h	Requested Ready
Tami Jones	10/17/2019 @ 10:12 am 10/17/2019 @ 10:12 am	41d 19h 41d 19h	Requested Ready
Casey Chivers	10/17/2019 @ 10:35 am	0d 0h	Passed
Required Item		Tami Jones on 2019-08-19 at 02:58 pm	
exterior sheeting missing nails			

Shower Pan-Accessory (Inspector: 0d 0h Contractor: 0d 0h)			
User	Date	Time	Result
Casey Chivers	01/17/2020 @ 11:20 am 01/17/2020 @ 11:20 am	-0d 0h -1d -1h	Requested Ready
Casey Chivers	01/17/2020 @ 11:34 am	0d 0h	Passed

Final Closing Inspection (Inspector: 0d 0h Contractor: 0d 0h)			
User	Date	Time	Result
Mason Snow	04/07/2020 @ 02:59 pm 04/07/2020 @ 02:59 pm	-0d 0h -1d -1h	Requested Ready
Mason Snow	04/07/2020 @ 03:00 pm	0d 0h	Passed

[Back](#)

Tami Jones

Version 4.0

January 12, 2023

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Hurricane City,

The secondary dwelling in the backyard of the residents at 599 S. Main Hurricane, UT 84737 for Kelly and Mary Lu Ashcroft, has 20 inch deep by 18-inch-wide footing around the perimeter and interior footings on the load bearing walls. It has three #4 bar in all footings and a 4ft mat on center of #3 bar through the entire slab. It has half inch anchor bolts on 32-inch centers around the entire building, and load bearing walls. It is of my opinion that the foundation is adequate to hold up the structure for a livable dwelling.

Sincerely,

Brenn Iverson 1/26/23

Robert Iverson & Sons, INC.



- Footing & interior Footings are Dotted lines

- Solid lines are Roof lines & valleys



STAFF COMMENTS

Consideration and possible approval of **Resolution 2023-05 adopting the Washington County Water Conservancy excess water use surcharges**

Discussion:

The Council has considered the proposed excess water use surcharges in two previous meetings. In the last meeting, the Council voted to continue the item until the Planning Commission had forwarded to the Council a recommendation on the proposed amendments to the water conservation ordinance so that they could be considered together. The Planning Commission has now forwarded that recommendation on the water conservation ordinance. Also, in the last two weeks since the Council reviewed the proposed resolution, the Washington County Water Conservancy District has elected not to pursue the standby fee that was included in one of its resolutions. That resolution, which was Exhibit C in the previous draft that the Council had reviewed, has now been removed.

What remains before the Council is the District's following proposals:

1. For each issued meter for existing residents, that the City pay an "excess water use surcharge" to the District in the amount of \$1.00 per each thousand gallons over a monthly threshold, which for residents with 3/4" meters is 36,000 per month. If a resident is watering more than 20 head of cattle (or equivalent livestock), then the resident can apply to the District for a rebate for the month that the livestock were being watered. There is no rebate available for excess water usage if the resident is watering less than 20 cattle or animals. There is no rebate available for residents that are assessed a surcharge that are maintaining a garden.
2. For each residential meter issued after January 1, 2023, that the City pay an "excess water use surcharge" to the District in the amount of \$10.00 per each thousand gallons over a monthly threshold. For residents not connected to a secondary irrigation system, the thresholds vary by season as follows: 8,000 gallons in December, January, February; 15,000 gallons in March & April; 20,000 gallons in May, June, July, August, & September; 15,000 gallons in October & November. For residents that are connected to a secondary irrigation system, the monthly threshold is 8,000 gallons each month all year. There are no rebates available for meters issued after January 1, 2023.

Findings:

Recommendation:

The Water Board met and made a recommendation on this item. The recommendation is to adopt in part and to reject in part.

1. Regarding the surcharge on pre-2023 connections of \$1 per thousand gallons over 36,000 gallons per month, the Water Board recommended approval on the condition that the City first obtain clarification on how those surcharge funds will be used to benefit Hurricane City.
2. Regarding the surcharge on post-1/1/23 connections of \$10 per thousand gallons over the seasonal thresholds set by the District, the Water Board recommended denial for two reasons: (1) the monthly threshold amounts proposed by the District target average water users instead of bad actors and (2) \$10 per thousand gallons is an excessive charge.

One member abstained from voting, but all other Board Members voted in favor of the above recommendations.

During the discussion, the Water Board Members made the following comments and suggestions that may be informative for the Council:

1. Perhaps the surcharge charged by the City should stay in the City and be used by the City for conservation, instead of relaying the funds to the District for the district to use the funds for conservation.
2. For new users, a charge of \$5 instead of \$10 might be more appropriate.
3. For new users, perhaps the bell curve threshold of the monthly allowable water should be increased so that average water users will not be penalized.
4. The Board was generally concerned about the City ceding control to the District of setting surcharge and rate terms.

Attachments:

1. Resolution 2023-05 Approving WCWCD Fees (updated on 1-27-23)

RESOLUTION

**A RESOLUTION OF THE CITY COUNCIL OF HURRICANE, UTAH, APPROVING
AND ADOPTING SURCHARGES AND FEES AUTHORIZED BY THE
WASHINGTON COUNTY WATER CONSERVANCY DISTRICT BOARD OF
TRUSTEES**

WHEREAS, on December 1, 2021, the Washington County Water Conservancy District Board of Trustees (the “WCWCD Board”) approved a Resolution of the Washington County Water Conservancy District Board of Trustees Authorizing An Increase in the Water Development Surcharge for Excess Water Use, attached hereto as **Exhibit A**; and

WHEREAS, on December 7, 2022, the WCWCD Board approved a Resolution of the Washington County Water Conservancy District Board of Trustees Authorizing An Increase in the Excess Water Surcharge For New Connections Made On or After January 1, 2023, attached hereto as **Exhibit B**; and

WHEREAS, to protect the public health, safety, and welfare of the City’s residents, the City Council deems it necessary and desirable to adopt and approve the surcharges and fees authorized by the WCWCD Board.

NOW, THEREFORE, BE IT HEREBY RESOLVED by the City Council of Hurricane, Utah that the resolutions adopted by the WCWCD Board and attached hereto as Exhibit A and Exhibit B are hereby approved and adopted, to be implemented beginning on _____.

PASSED AND APPROVED THIS _____ day of _____, 2023.

Nanette Billings, Mayor

ATTEST:

Cindy Beteag, Recorder

The foregoing Resolution was presented at a regular meeting of the Hurricane City Council held at the Hurricane City Office Building on the 5th day of January, 2023. Whereupon a motion to adopt and approve said Resolution was made by _____ and seconded by _____. A roll call vote was then taken with the following results:

	Yea	Nay	Abstain	Absent
Joseph Prete	_____	_____	_____	_____
Dave Sanders	_____	_____	_____	_____
David Hirschi	_____	_____	_____	_____
Kevin Thomas	_____	_____	_____	_____
Doug Heideman	_____	_____	_____	_____

Cindy Beteag, Recorder

**A RESOLUTION OF THE WASHINGTON COUNTY WATER
CONSERVANCY DISTRICT BOARD OF TRUSTEES AUTHORIZING
AN INCREASE IN THE WATER DEVELOPMENT SURCHARGE FOR
EXCESS WATER USE**

WHEREAS, Washington County Water Conservancy District provides wholesale water to Municipal Customers under the Revised Regional Water Supply Agreement (effective January 1, 2019); and

WHEREAS, the Revised Regional Water Supply Agreement provides for the payment of a Water Development Surcharge by the Municipal Customers to the District; and

WHEREAS, an increase in the Water Development Surcharge for excess water use, as set forth in Attachment A, has been proposed; and

WHEREAS, notice of the proposed increase in the Water Development Surcharge for excess water use has been given to the Municipal Customers and provided to the public; and

WHEREAS, the Board of Trustees has held a public hearing giving interested persons an opportunity to speak for or against the proposed increase in the Water Development Surcharge for excess water use; and

WHEREAS, the need for the increase in the Water Development Surcharge for excess water use has been demonstrated;

NOW, THEREFORE, the Board of Trustees of the Washington County Water Conservancy District hereby authorizes an increase in Water Development Surcharge for excess water use as proposed in Attachment A.

Signatures on succeeding page.

DATED this 1 day of December, 2021.



ED BOWLER, Chairman

Attest:



ROBERTA MCMULLIN, Secretary

VOTING:

Ed Bowler
Adam Bowler
Chris Hart
Victor Iverson
Ken Neilson
Michele Randall
Kevin Tervort

Yea	☒	No	☐
Yea	☒	No	☐
Yea	☒	No	☐
Yea	☐	No	☐
Yea	☒	No	☐
Yea	☒	No	☐
Yea	☒	No	☐

Attachment A: Proposed Increase to Water Development Surcharge for Excess Water Use

It is proposed that the Water Development Surcharge paid by Municipal Customers to the Washington County Water Conservancy District (District) under the Revised Regional Water Supply Agreement (January 1, 2019), as set forth in Article 8 of that agreement be increased as set forth below:

Section 1. Base Surcharge. Municipal Customers will continue to pay a Water Development Surcharge equal to (i) One and 75/100 Dollars (\$1.75) per Equivalent Residential Connection (ERC) per month (base surcharge).

Section 2. Excess Water Use Surcharge. In addition to the base surcharge, for each issued meter, Municipal Customers will pay an “excess water use surcharge” in the amount of One Dollar (\$1.00) per each thousand gallons of water used that exceeds the designated monthly demand threshold for volume of water per meter size as shown in the table below:

Meter Size	Monthly Demand Threshold (gal)
3/4" meter	36,000
1" meter	80,000
1.5" meter	260,000
2" meter	420,000
3" meter	850,000
4" meter	1,400,000
6" meter	2,600,000
8" meter	4,200,000

Section 3. Billing Labeling. This increase to the Water Development Surcharge contemplates that Municipal Customers may elect to pass the cost of the increase on to their individual retail customers. If a Municipal Customer elects to pass the cost on, it may list the charge on the bill as “Excess Water Use Surcharge” and indicate that it is paid to the Washington County Water Conservancy District.

Section 4. Administrative Fee. To help cover administrative costs of collecting the excess water use surcharge, Municipal Customers may retain from the proceeds of the excess water use

surcharge up to a 5% administrative fee before remitting the proceeds to the District. Municipal customers must clearly indicate the percentage of the administrative fee and the total amount retained when remitting payment to the District.

Section 5. Leak Rate. If the Municipal Customer offers a leak rate program to its retail customers that provides a short-term reduction in the retail customer's bill when a leak is suspected, and if the leak rate program requires the leak to be fixed within 30 days of the previous bill (except under extreme circumstances where the Municipal Customer may extend the time), the Municipal Customer may reduce the excess water use surcharge in the same manner it reduces the regular billing pursuant to its leak rate program.

Section 6. Commercial, Industrial and Institutional Water Users. Where commercial, industrial and institutional water users incur excess water use surcharges because they are using more water than their designated monthly demand threshold for volume of water per meter size as shown in the table above, they may be permitted to upsize their meter(s) to increase their designated monthly demand threshold for volume of water per meter size to reduce the excess water use surcharge, provided that they pay the District the Impact Fee associated with upsizing a meter at the time the meter is upsized. Municipal Customers are responsible for ensuring that the Impact Fee is paid prior to upsizing a meter or adjusting the excess water use surcharge for the commercial, industrial or institutional water user.

Section 7. Livestock Watering Relief Program. When a retail customer of a Municipal Customer is charged an excess water use surcharge and the retail customer is watering more than twenty head of cattle or the equivalent livestock unit using a meter issued by a Municipal Customer, the retail customer may apply monthly for a rebate of up to the total amount of the excess water use surcharge for the month. The rebate will be calculated based on an allotment of 600 gallons of water per month per each animal exceeding twenty. The District will issue a rebate to the retail customer upon proof from the retail customer on forms provided by the District that the retail customer was watering more than twenty head of cattle or the equivalent livestock unit during the month for which the rebate is applied.

**A RESOLUTION OF THE WASHINGTON COUNTY WATER
CONSERVANCY DISTRICT BOARD OF TRUSTEES AUTHORIZING
AN INCREASE IN THE EXCESS WATER USE SURCHARGE FOR NEW
CONNECTIONS MADE ON OR AFTER JANUARY 1, 2023**

WHEREAS, on December 1, 2021, “A Resolution of the Washington County Water Conservancy District Board of Trustees Authorizing an Increase in the Water Development Surcharge for Excess Water Use” (“2021 Resolution”) was adopted by the Board and is incorporated herein by reference; and

WHEREAS, the 2021 Resolution authorized an increase in the Water Development Surcharge established under the Revised Regional Water Supply Agreement (January 1, 2019, “Agreement”) through the adoption of an excess water use component of the Water Development Surcharge (“Excess Water Use Surcharge”) for all types of connections for which water use exceeded proposed thresholds for volume of water, which varied by meter size. The 2021 kept the base component of the surcharge at \$1.75 per Equivalent Residential Connection per month for all connections; and

WHEREAS, on November 15, 2022, “A Resolution Determining that an Increase in the Excess Water Use Surcharge is Needed for New Connections Made on or after January 1, 2023,” (“November 2022 Resolution”) was adopted by the Board and is incorporated by reference. In the November 2022 Resolution, the Board found that in order to help ensure that the water efficient level of service adopted in the 2022 Regional Water Impact Fee Facilities Plan and Impact Fee Analysis is observed, an increase in the Excess Water Use Surcharge would be needed for new connections to the district’s regional system connecting on or after January 1, 2023 (“New Connections”), and directed the General Manager to evaluate what amount of increase in the surcharge for New Connections would be needed to achieve the District’s objectives set forth in the resolution, along with other related factors, and cause notice to be given to the parties to the Agreement and to the public;

WHEREAS, pursuant to the Board’s direction in the November 2022 Resolution, an increase in the Excess Water Use Surcharge, as set forth in Attachment A (incorporated herein by reference), has been evaluated and proposed for New Connections, and notice of the proposed increase has been provided to the Municipal Customers and the public; and

WHEREAS, the Board of Trustees has held a public hearing giving interested persons an opportunity to speak for or against the proposed increase in the Excess Water Use Surcharge for New Connections; and

WHEREAS, the need for the increase in the Excess Water Use Surcharge for New Connections has been demonstrated;

NOW, THEREFORE, the Board of Trustees of the Washington County Water Conservancy District hereby authorizes an increase in the Excess Water Use Surcharge for new connections to the district's regional system connecting on or after January 1, 2023, as set forth in Attachment A.

DATED this 7th day of December, 2022.



ED BOWLER, Chairman

Attest:



MINDY MEES, Secretary

VOTING:

Ed Bowler	Yea ☒	No ☐
Adam Bowler	Yea ☒	No ☐
Chris Hart	Yea ☒	No ☐
Victor Iverson	Yea ☒	No ☐
Michele Randall	Yea ☒	No ☐
Kress Staheli	Yea ☒	No ☐
Kevin Tervort	Yea ☒	No ☐

Attachment A: Increase in Excess Water Use Surcharge

Section 1. Amount of Excess Water Use Surcharge. For new connections to the district's regional system connecting on or after January 1, 2023 ("New Connections"), Excess Water Use Surcharge established in "A Resolution of the Washington County Water Conservancy District Board of Trustees Authorizing an Increase in the Water Development Surcharge for Excess Water Use," adopted by the Board on December 1, 2021 (2021 Resolution), shall be increased to Ten Dollars (\$10.00) per thousand gallons of potable water exceeding the thresholds set forth in Sections 2 and 3, below. (The base surcharge of the Water Development Surcharge shall remain at One Dollar and Seventy-Five Cents (\$1.75) for all New Connections.)

Section 2. Residential Thresholds. The Excess Water Use Surcharge will be charged monthly for each new residential connection for which water use exceeds the monthly threshold, which varies by type of residential connection and by season, as set forth in the following table:

Residential Thresholds for New Connections				
Season	Winter (December, January, February)	Spring (March, April,)	Summer (May, June, July, August, September)	Fall (, October, November)
Potable Only Residential Connection	8,000 gallons per month	15,000 gallons per month	20,000 gallons per month	15,000 gallons per month
Potable and Non-Potable Residential Connections	8,000 gallons per month	8,000 gallons per month	8,000 gallons per month	8,000 gallons per month

Section 3. Non-Residential Thresholds. The Excess Water Use Surcharge will be charged monthly for each new non-residential connection for which water use exceeds the monthly threshold, which varies by meter size as set forth in the following table:

Non-Residential Thresholds for New Connections	
Meter Size	Monthly Threshold
3/4" meter	36,000 gallons per month
1" meter	80,000 gallons per month
1.5" meter	260,000 gallons per month
2" meter	420,000 gallons per month
3" meter	850,000 gallons per month
4" meter	1,400,000 gallons per month
6" meter	2,600,000 gallons per month
8" meter	4,200,000 gallons per month

Section 4. Allocation of Revenue. To help cover administrative costs of collecting the excess water use surcharge for New Connections, Municipal Customers may retain 10% from the proceeds of the excess water use surcharge for New Connections. The Municipal Customers shall remit the remaining 90% of the proceeds to the District to be budgeted in the appropriate fund for water conservation.

Section 5. Incorporation of 2021 Resolution. With the exception of Section 7 ("Livestock Watering Relief Program"), which shall not apply to New Connections, all other provisions of the 2021 Resolution and its attachment are incorporated herein and shall remain in effect.



STAFF COMMENTS

Consideration and possible approval of a **conditional donation from Scott Nielson**

Discussion:

Scott Nielson has offered to donate a 150' flag pole and two flags for the new Veterans Park. This donation would include the pole, two flags, the excavation, and the engineering. Mr. Nielson would like the City to commit to the concrete, steel, erecting the pole, and all future flag purchases. The flag that was used on Mr. Nielson's business in St. George was 40 x 80. Prices for this size of flag are anywhere from \$5,000-\$7,000. Staff has concerns about the maintenance of an oversized flag pole.

Findings:

Recommendation:

Attachments:

None



STAFF COMMENTS

Consideration and possible approval of **revoking the residential hosting license at 2640 S 3480 West**-Cindy Beteag

Discussion:

This owner was issued a residential hosting license on August 2, 2022. A neighbor complained on December 6, 2022, that they were renting the whole house and not living there. Staff reviewed the information and felt the complaint was valid. A letter was sent to the homeowner on December 8, 2022, asking them to provide proof they are living in the house full time. Owner called and asked what they needed to do. Staff gave them direction on what they needed to do. The next day, they came in and talked to the City Attorney. During their conversation, he admitted he did not live in the home when it was being rented out. The owner stated to the City Attorney that he intended to relinquish his residential hosting license now that he understood the use was not permitted and that he would confirm that intent in an email to the City Attorney. Staff has not heard from the owner since that day.

Findings:

Recommendation:

Staff recommends that the license be revoked based on the owner's failure to comply with the requirement that the house be owner-occupied.

Attachments:

1. Bryan Johnson

Mayor
Nanette Billings

City Manager
Kaden C. DeMille



City Council
Joseph Prete
David Sanders
David Hirschi
Kevin Thomas
Doug Heideman

January 10, 2023

Bryan Johnson
2640 S 3480 West
Hurricane, UT 84737

Mr. Johnson,

A letter was sent to you December 8, 2022, giving you 30 days to provide proof that you are living at the above address where a residential hosting license is issued. As of today's date, nothing has been provided; therefore, this notice is to inform you that a hearing before the City Council has been scheduled to consider revocation of the business license for Thursday, February 2, at 6:00 pm, or as soon thereafter as the matter can be heard, during the regular City Council meeting. The hearing will be held at the City Office located at 147 North 870 West, Hurricane. You have the right to appear at this hearing, to be represented by counsel, to hear the evidence against you, to cross examine witnesses, and to present evidence as to why the license should not be revoked.

If you have any questions or concerns, please do not hesitate to contact me at 435-635-2811 x106.

Sincerely,

Cindy Beteag

Cindy Beteag
City Recorder

Cc: Dayton Hall, City Attorney
Fred Resch III, Code Enforcement

7021 2720 0002 3979 8566

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☐ Certified Mail Restricted Delivery	\$
☐ Adult Signature Required	\$
☐ Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage and Fees	\$ 7.82
Sent To	Bryan Johnson
Street and Apt. No., or PO Box No.	1/10/23
City, State, ZIP+4®	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

Postmark Here

Mayor
Nanette Billings

City Manager
Kaden C. DeMille



City Council
Joseph Prete
David Sanders
David Hirschi
Kevin Thomas
Doug Heideman

December 8, 2022

Bryan Johnson
2640 S 3480 West
Hurricane, UT 84737

RE: Notice of Violation

Mr. Johnson,

The City has been provided with evidence that you are renting your entire home and not just a portion of the home as a short-term rental. According to Hurricane City Code 10-51 the owner is required to live on the property to qualify for a residential hosting license. This letter serves as notice that you have 30 days to provide proof that the owner is living on site and is present when the home is being rented or a hearing will be scheduled with the City Council to revoke your residential hosting license.

If you have any questions, please call me at 435-635-2811 x 106.

Thank you,

Cindy Beteag
Hurricane City Recorder

Cc: Dayton Hall, City Attorney
Fred Resch III, Code Enforcement

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OFFICIAL USE

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 7.82

Postmark Here

Sent To Bryan Johnson
Street, Apt. No.,
or PO Box No.
City, State, ZIP+4

PS Form 3800, August 2006 See Reverse for Instructions

7009 1410 0000 0527 1559

12/8/22

Cindy Beteag

From: [REDACTED]
Sent: Tuesday, December 06, 2022 1:47 PM
To: Cindy Beteag
Subject: Re: Nightly Rental

Another one that was recently built and already has a full home being Airbnb. (I don't think this home would have its license already)

2640 S 3480W
Hurricane UT 84737

https://www.airbnb.com/rooms/650636473334915105?check_in=2022-12-13&check_out=2022-12-16&source_impression_id=p3_1670359367_w5967aCcmXUjVm2U



On Tue, May 31, 2022 at 9:05 AM Cindy Beteag <cindy@cityofhurricane.com> wrote:

I just pulled it up. You are correct. I will get this fixed on our end. Thank you for bringing to our attention!

Cindy Beteag



HURRICANE CITY
UTAH

Cindy Beteag

City Recorder

Hurricane City

Office 435-635-2811 x 106

From: [REDACTED]
Sent: Tuesday, May 31, 2022 8:50 AM
To: Cindy Beteag <cindy@cityofhurricane.com>
Subject: Re: Nightly Rental

There is renters in there this past week. And the listing is active on the airbnb again

Property overview



Living room



Full kitchen



Bedroom 3



Bedroom 2



Bedroom 4



Bedroom 1



Full bathroom 1



Full bathroom 3



Full bathroom 2



Laundry room



Exterior



Patio



Backyard



Additional photos

12

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

CHECK-IN

Add date

CHECKOUT

Add date

GUESTS

1 guest

▼

Check availability

Report this listing

★ 5.0 · 3 reviews

Cleanliness	4.7
Accuracy	5.0
Communication	5.0
Location	5.0



5.0 · 3 reviews

Q Search reviews

Accuracy	5.0
Communication	5.0
Location	5.0
Check-in	5.0
Value	5.0

Ken
November 2022

What a lovely home. It was everything we needed. Clean, comfortable, and spacious. Felt right at home.

Julie
November 2022

This house is beautiful and comfortable and in a nice and quiet neighborhood. Perfectly located to the trails, gas station, and Wal-Mart. We had plenty of parking for our 3 Jeeps, 2 trucks, and 2 trailers. Bryan was easy to communicate with and quick to reply.

Elvin
September 2022

I really enjoyed my stay at this house. It's really close to the lake. The house is new and clean. The neighborhood is quiet and peaceful. The communication from Bryan was excellent and he is very kind. I have nothing bad to say about this place, we enjoyed our time here. I would for sure come back here if I came back.

The Diamond at the Dunes

★ 5.0 · 3 reviews · [Hurricane, Utah, United States](#)

[Share](#) [Save](#)



Entire home hosted by Bryan

10 guests · 4 bedrooms · 5 beds · 3 baths



Great for remote work

Fast wifi at 279 Mbps, plus a dedicated workspace in a private room.

aircover

Every booking includes free protection from Host cancellations, listing inaccuracies, and other issues like trouble checking in.

[Learn more](#)

\$146 night

★ 5.0 · 3 reviews

CHECK-IN
Add date

CHECKOUT
Add date

GUESTS
1 guest



[Check availability](#)

[Report this listing](#)

Come explore Southern Utah and experience everything there is to offer by staying at Diamond at the Dunes. During your stay you can hike slot canyons at Zion Nation Park, visit Sand Hollow State Park or Quail Creek State Park within minutes, enjoy an abundance of local golf courses, a plethora of cycling paths are nearby, and you can drive your UTV or rent one and drive it straight to the dunes.

Where you'll sleep

1 / 2



Bedroom 1
1 king bed



Bedroom 2
1 king bed



147 N 870 WEST, HURRICANE, UTAH 84737
PHONE: 435-635-2811 FAX: 435-635-2184
www.cityofhurricane.com

Date of Application

6/28/2022
License Fee \$50.00
Application Fee \$25.00
Total Due \$75.00

◆ BUSINESS LICENSE APPLICATION HOME BED AND BREAKFAST OR RESIDENTIAL HOSTING ◆

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Bryan Johnson

Business Phone: 435-619-7099 Fax Number: _____

Business Address: 2640 S 3480 W

Mailing Address (if different): _____

State Sales Tax Number (if applicable): Airbnb Dept. of Commerce Entity #: _____

Professional License # (if applicable): _____ Federal Identification #: _____

Website: _____ E-Mail Address: Come to St George @bryanj1.com

Description of Business: _____

Business Type (check one): Proprietorship ☒ Partnership ☐ Corporation ☐

PART B — Residential Hosting or Home Bed and Breakfast Questionnaire

Number of parking spaces for owner 2 Number of guest parking spaces 3 Number of permanent residents 1

DIAGRAM OR PHOTOGRAPH OF PARKING FACILITIES MUST BE INCLUDED!

Total number of guest rooms 3
Smoke and CO₂ detectors in each guest room? Yes No
Fire exiting route plan posted in each guest room? Yes No
Landscaping completed? Yes No
Will there be a sign on the property for the business? Yes No
Size and location of sign (maximum allowed 1' X 2') _____

PART C — BUSINESS OWNER INFORMATION

If other than sole proprietor, a list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: Same as above Title: _____

Home Address: _____
(Street Number) (City) (State) (Zip)

Social Security Number: _____ Date of Birth: _____

Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

➤ **This form is an application for a business license. The receipt for payment of license fees thereof does not constitute being approved to operate a business. The actual license will be issued only when all inspections are completed and signed off by the various City departments and approval is given by the Business License Office. To open and/or operate a business without final approval is a Class B Misdemeanor and punishable by law.**

LIST TWO RESPONSIBLE / AVAILABLE EMERGENCY CONTACTS:

Name: Brynn Johnson
 Address: 7640 S 3480 W Hurricane, Utah, 84737
 Phone: [REDACTED]
 Name: [REDACTED]
 Address: Hurricane, Utah, 84737
 Phone: [REDACTED]

PART D — HURRICANE VALLEY FIRE DISTRICT

All businesses licensed in Hurricane City must be in compliance with applicable fire codes and regulations at all times. New businesses may be required to pass a fire inspection prior to issuance of a business license. Fire inspections encompass, but are not limited to: fire equipment such as extinguishers, exits and aisles, electrical equipment, storage, and fire protection systems. Inspections may include additional areas of concern specific to particular business activities and/or locations. The licensing clerk will inform new applicants whether an initial inspection is required.

- ☒ **Inspection Required. Contact the Fire Dept at 435-635-9562 to schedule a fire inspection.**
☐ **No Inspection required at this time.**

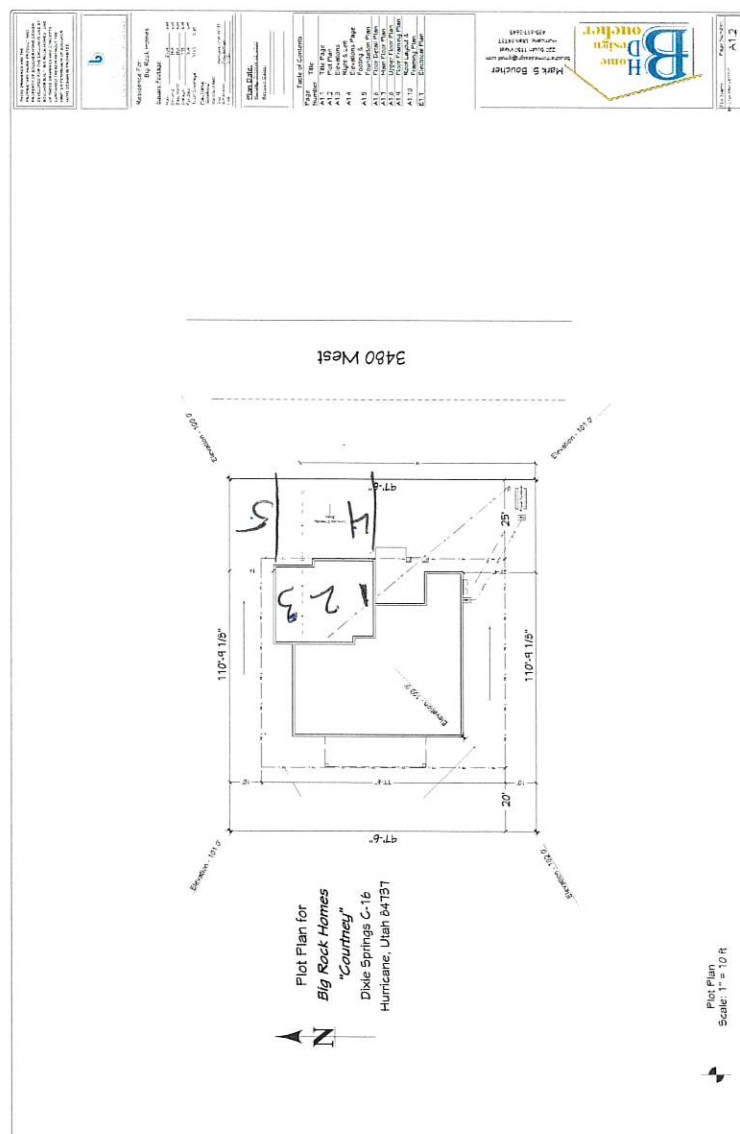
I understand that compliance with applicable fire codes and regulations is required for all businesses licensed in Hurricane City. I understand that a fire inspection of my business may be required in the future and would be conducted by Hurricane Valley Fire District personnel. I understand that failure to comply with applicable fire codes and regulations may be grounds for revocation of my business license.

[Signature] Applicant's Signature 6/28/22 Date

I REPRESENT, COVENANT AND AGREE: (a) that this home is my primary residence and will be occupied by me whenever guests are present, and that I will not rent rooms occupied by me or other family members who occupy the home as their primary residence, (b) to comply with all regulations of Title 3 Business License Regulations, (c) that business shall not commence or be conducted at this location until a business license has been issued by the City of Hurricane, (d) that an inspection must be completed and the building approved by the appropriate Building, Zoning, Fire and Health authorities prior to issuance of a business license, (e) that any misrepresentation contained herein or any violation of any of the foregoing shall constitute grounds for denial or revocation of a business license.

[Signature] Applicant's Signature 6/28/22 Date

TOTAL FEES \$ <u>75</u>	Office Use Only
DATE <u>6/28/22</u>	AMOUNT PAID \$ <u>75</u>
CITY LICENSE NUMBER <u>10430</u>	RECEIPT # <u>7.696840</u>
Home Occupation: yes / no <u>no</u>	Zone: <u>R1-10</u>
Planning Commission Approval Required: yes / no <u>no</u>	Permitted Use: yes / no <u>no</u>
Planning Commission approval date: <u>N/A</u>	if yes, which approval: site plan / conditional use
New Construction: yes / no <u>no</u>	Zoning approval/date: <u>5/24/22</u>
Remodel: yes / no <u>no</u>	Building Permit: yes / no <u>no</u>
Certificate of Occupancy or Tenant Improvement inspection required: yes / no <u>no</u>	



Hurricane Valley Fire Spec. Serv. Dist.



Occupancy: **Bryan Johnson**
Occupancy ID: **BRY2640**
Address: **2640 S 3480 W**
Hurricane UT 84737

Inspection Type: **Vacation Rental**

Inspection Date: **7/18/2022**

By: Barlow, Kevin J (5929)

Time In: **15:00**

Time Out: **15:15**

Authorized Date: **07/18/2022**

By: Barlow, Kevin J (5929)

Next Inspection Date: **07/18/2022 Vacation Rental**

Form: Fire Safety Business
Inspection

Inspection Description:

Fire Safety Business Inspection

Inspection Topics:

Fire Alarm/Escape

Off site monitoring tested for compliance

Off site monitoring tested for compliance

Status:

Notes:

Fire alarm working with no trouble lights

No Trouble lights

Status:

Notes:

Fire escape plans and practice records

Fire escape plans and practice records

Status:

Notes:

Exits

Provide exit signs with letters at least 6" high on a contrasting background (Glow or Illuminated)

Ex

Status:

Notes:

Repair or maintain exit doors and hardware to operate properly.

Well maintained exit doors and panic hardware provide safe and easy egress from a building.

Status:

Notes:

Remove obstructions from exits, aisles, corridors, and stairways.

Clear exit access is essential to prevent panic or accidental falling of occupants during evacuation.

Status:

Notes:

Provide X extinguisher(s) of a X minimum rating.

Extinguishers provided need to be appropriate to the type of hazard.

Status:

Notes:

Fire Protection Access and Equipment

Maintain clear access to and operation of standpipes, fire hose, sprinkler valves, fire hydrants, fire extinguishers, and other fire protection equipment

Access

Status:

Notes:

Install approved protective covers on fire department hose connection.

Protective covers must be installed on the supply connection to prevent accumulations of debris that might inhibit the system's effectiveness.

Status:

Notes:

Provide and maintain smoke detectors in proper operating condition.

The proper installation and maintenance of smoke detectors is of the utmost importance. In the event of a fire, they will notify occupants, and, in some cases, may automatically notify the Fire Department.

Status:

Notes:

Provide minimum 4 inches high address numbers so they are visible from the street.

Address numbers are critical to help emergency personnel find people who may need some sort of aid. The numbers must contrast with their background for greatest visibility.

Status:

Notes:

Remove obstructions and provide access in fire lanes.

Large fire apparatus need room to effectively maneuver in the event of an emergency.

Status:

Notes:

Fire Separations

Keep attic and scuttle covers closed, and ceiling tiles in place.

Ceilings are an integral part of the building's fire protection. If kept in place, the ceiling will protect roof structures from premature collapse.

Status:

Notes:

Remove obstructions from fire doors and maintain to operate properly.

Fire and smoke doors should not be blocked open or obstructed or fire and smoke will easily travel through the opening and cause excessive risk to life and property.

Status:

Notes:

Seal unapproved openings with approved material.

Flame, smoke, and hot gases can easily travel through holes and pipe chases, thus creating more damage and a hazard to occupants.

Status:

Notes:

Electrical

Discontinue use of extension cords in lieu of permanent wiring.

Temporary wire does not afford the durability, safety, and protection from shock or fire that is found in the construction of an enclosed electrical system.

Status:

Notes:

Maintain at least 30 inches clearance in front of electrical panel.

Access to electrical panels must be cleared to allow for general inspection and emergency shutdown.

Status:

Notes:

Each outlet box shall have a cover faceplate or fixture canopy.

Covers protect people from being shocked by exposed wires, prevent spread of electrical current, and heat and flame during short circuits.

Status:

Notes:

Discontinue use of non-approved multi-plug adapters.

Multi-plug adapters invite the overuse of the circuit that can result in overheating and a fire.

Status:

Notes:

Maintain wiring in good condition and protect from damage.

Worn or broken wires and plugs present a fire hazard and risk of electrical short circuit that can result in a fire.

Status:

Notes:

Additional Time Spent on Inspection:

Category	Start Date / Time	End Date / Time
Notes: No Additional time recorded		

Total Additional Time: 0 minutes

Inspection Time: 15 minutes

Total Time: 15 minutes

Summary:

Overall Result: Passed with Comments

New partial home short term rental. Full house was inspected. Current configuration is 4 bedrooms with bed accommodations to sleep 8 people total. Maximum occupancy must not exceed 10 persons without approved fire sprinkler system installed.

Inspector Notes:

Mount fire extinguisher as discussed.
Maintain monthly test log for all smoke/CO detectors as well as at least annual battery replacement.
Annual fire extinguisher service tag or new purchase with receipt required.



STAFF COMMENTS

Consideration and possible approval of **revoking the residential hosting license at 3445 W 120 North-Cindy Beteag**

Discussion:

This owner was issued a residential hosting license on September 27, 2022. The City has received multiple complaints about their occupants parking on the road and blocking the neighbors as well as guests letting their dogs urinate on the neighboring lawns. A warning letter was sent on October 20, 2022, letting them know about the complaints and gave them time to correct it. The City continued to get complaints so a letter revocation hearing was scheduled. Two neighbors have volunteered to testify of the problems they are having with the guests of this rental. Staff recommends that the license be revoked based on evidence that the owner is allowing guests to park on the public street, which is in violation of the City's ordinance governing Residential Hosting Facilities.

Findings:

Recommendation:

Attachments:

1. Knudson Airbnb
2. Knudson - pictures of violations

Mayor
Nanette Billings

City Manager
Kaden C. DeMille



City Council
Joseph Prete
David Sanders
David Hirschi
Kevin Thomas
Doug Heideman

January 12, 2023

Knudson Airbnb LLC
3445 W 120 North
Hurricane, UT 84737

Mr. Knudson

A letter was sent to you October 20, 2022, notifying you that your guests are required to park off the street. As of today's date, Hurricane City continues to get complaints that your guests are still parking on the street; therefore, this notice is to inform you that a hearing before the City Council has been scheduled to consider revocation of the business license for Thursday, February 2, at 6:00 pm, or as soon thereafter as the matter can be heard, during the regular City Council meeting. The hearing will be held at the City Office located at 147 North 870 West, Hurricane. You have the right to appear at this hearing, to be represented by counsel, to hear the evidence against you, to cross examine witnesses, and to present evidence as to why the license should not be revoked.

If you have any questions or concerns, please do not hesitate to contact me at 435-635-2811 x106.

Sincerely,

Cindy Beteag

Cindy Beteag
City Recorder

Cc: Dayton Hall, City Attorney
Fred Resch III, Code Enforcement

7021 2720 0002 3979 8580

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For delivery information, visit our website at www.usps.com ®.	
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Certified Mail Fee	\$
Extra Services & Fees (check box, add fee as appropriate)	
☐ Return Receipt (hardcopy)	\$
☐ Return Receipt (electronic)	\$
☐ Certified Mail Restricted Delivery	\$
☐ Adult Signature Required	\$
☐ Adult Signature Restricted Delivery	\$
Postage	\$
Total Postage and Fees	\$ 7.82
Sent To	Knudson Airbnb
Street and Apt. No., or PO Box No.	1112
City, State, ZIP+4®	
PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions	

Mayor
Nanette Billings

City Manager
Kaden C. DeMille



City Council
Joseph Prete
David Sanders
David Hirschi
Kevin Thomas
Doug Heideman

October 20, 2022

Knudson Airbnb LLC
3445 W 120 North
Hurricane, UT 84737

RE: Notice of Parking Violation

Mr. & Mrs. Knudson,

It has come to our attention that your short-term rental guests are parking on the street. Off street parking is a requirement for the residential hosting license.

10-51-4. *F Parking*. Nonfrontage, off street parking shall be provided as follows:

1. Two spaces for owner.
2. One space per guestroom.
3. Parking must be located on the same property as the guestrooms.
4. Tandem parking is permitted for one space only.
5. Off street parking may not be provided within the front yard setback other than the existing driveway.
6. Landscaping is required between parking and adjoining residential properties.

We understand you may not have been aware of this rule so this is a courtesy letter notifying you that if you continue to violate this ordinance, I will have no choice but to start the revocation process of your business license. Please ensure all parking is contained on the site as required by the ordinance.

Thank you for your compliance and understanding.

Sincerely,

Cindy Beteag
Hurricane City Recorder

Cc: Dayton Hall, City Attorney



Date of Application August 16 2022

License Fee \$50.00
Application Fee \$25.00
Total Due \$75.00

147 N 870 WEST, HURRICANE, UTAH 84737
PHONE: 435-635-2811 FAX: 435-635-2184
www.cityofhurricane.com

◆ **BUSINESS LICENSE APPLICATION HOME BED AND BREAKFAST OR RESIDENTIAL HOSTING** ◆

NOTICE: Please complete each statement below. Incomplete applications will not be accepted.

SECTION A — BUSINESS INFORMATION

Name of Business: Florence's Comfy Place Knudson Airbnb LLC
Business Phone (435)899-9582 Fax Number: _____
Business Address: 3445 W 120 N Hurricane Utah 84737
Mailing Address (if different): _____
State Sales Tax Number (if applicable): _____ Dept. of Commerce Entity #: 12996062-0160
Professional License # (if applicable): _____ Federal Identification #: 238021174
Website: _____ E-Mail Address: florenceholm01@icloud.com
Description of Business: Airbnb Private room
Business Type (check one): Proprietorship ☐ Partnership ☐ Corporation ☒

PART B — Residential Hosting or Home Bed and Breakfast Questionnaire

- Number of parking spaces for owner 2 Number of guest parking spaces 1 Number of permanent residents 4
DIAGRAM OR PHOTOGRAPH OF PARKING FACILITIES MUST BE INCLUDED!
· Total number of guest rooms 1
· Smoke and CO₂ detectors in each guest room? Yes No
· Fire exiting route plan posted in each guest room? Yes No
· Landscaping completed? Yes No
· Will there be a sign on the property for the business? Yes No
· Size and location of sign (maximum allowed 1' X 2') _____

PART C — BUSINESS OWNER INFORMATION

If other than sole proprietor, a list of all corporate officers or partners must be included. This list must include name, home address, and phone number.

Owner's Name: Florence Knudson Title: _____
Home Address: 3445 w 120 n Hurricane Utah 84737
(Street Number) (City) (State) (Zip)
Social Security Number: _____ Date of Birth: _____
Home Phone: _____ Cell Phone: _____

Please add any additional owners/partners on a separate piece of paper and attach.

➤ **This form is an application for a business license. The receipt for payment of license fees thereof does not constitute being approved to operate a business. The actual license will be issued only when all inspections are completed and signed off by the various City departments and approval is given by the Business License Office. To open and/or operate a business without final approval is a Class B Misdemeanor and punishable by law.**

Owner's Name: Levi S Knudson Title: Home Owner
Home Address: 3445 w 120 n Hurricane Utah 84737
(Street Number) (City) (State) (Zip)
Social Security Number: [REDACTED] Date of Birth: [REDACTED]
Home Phone: [REDACTED] Cell Phone: [REDACTED]

Please add any additional owners/partners on a separate piece of paper and attach.

> This form is an application for a business license. The receipt for payment of license fees thereof does not constitute being approved to operate a business. The actual license will be issued only when all inspections are completed and signed off by the various City departments and approval is given by the Business License Office. To open and/or operate a business without final approval is a Class B Misdemeanor and punishable by law.

Levi Knudson

August 24 2022

LIST TWO RESPONSIBLE / AVAILABLE EMERGENCY CONTACTS:

Name: Levi Knudson
 Address: 3445 w 120 n hurricane
 Phone: [REDACTED]
 Name: Janessa Holm
 Address: [REDACTED]
 Phone: [REDACTED]

PART D — HURRICANE VALLEY FIRE DISTRICT

All businesses licensed in Hurricane City must be in compliance with applicable fire codes and regulations at all times. New businesses may be required to pass a fire inspection prior to issuance of a business license. Fire inspections encompass, but are not limited to: fire equipment such as extinguishers, exits and aisles, electrical equipment, storage, and fire protection systems. Inspections may include additional areas of concern specific to particular business activities and/or locations. The licensing clerk will inform new applicants whether an initial inspection is required.

☐ **Inspection Required. Contact the Fire Dept at 435-635-9562 to schedule a fire inspection.**

☒ **No Inspection required at this time.**

I understand that compliance with applicable fire codes and regulations is required for all businesses licensed in Hurricane City. I understand that a fire inspection of my business may be required in the future and would be conducted by Hurricane Valley Fire District personnel. I understand that failure to comply with applicable fire codes and regulations may be grounds for revocation of my business license.

[Signature]
 Applicant's Signature

August 16 2022

Date

I REPRESENT, COVENANT AND AGREE: (a) that this home is my primary residence and will be occupied by me whenever guests are present, and that I will not rent rooms occupied by me or other family members who occupy the home as their primary residence, (b) to comply with all regulations of Title 3 Business License Regulations, (c) that business shall not commence or be conducted at this location until a business license has been issued by the City of Hurricane, (d) that an inspection must be completed and the building approved by the appropriate Building, Zoning, Fire and Health authorities prior to issuance of a business license, (e) that any misrepresentation contained herein or any violation of any of the foregoing shall constitute grounds for denial or revocation of a business license.

[Signature]
 Applicant's Signature

August 16 2022

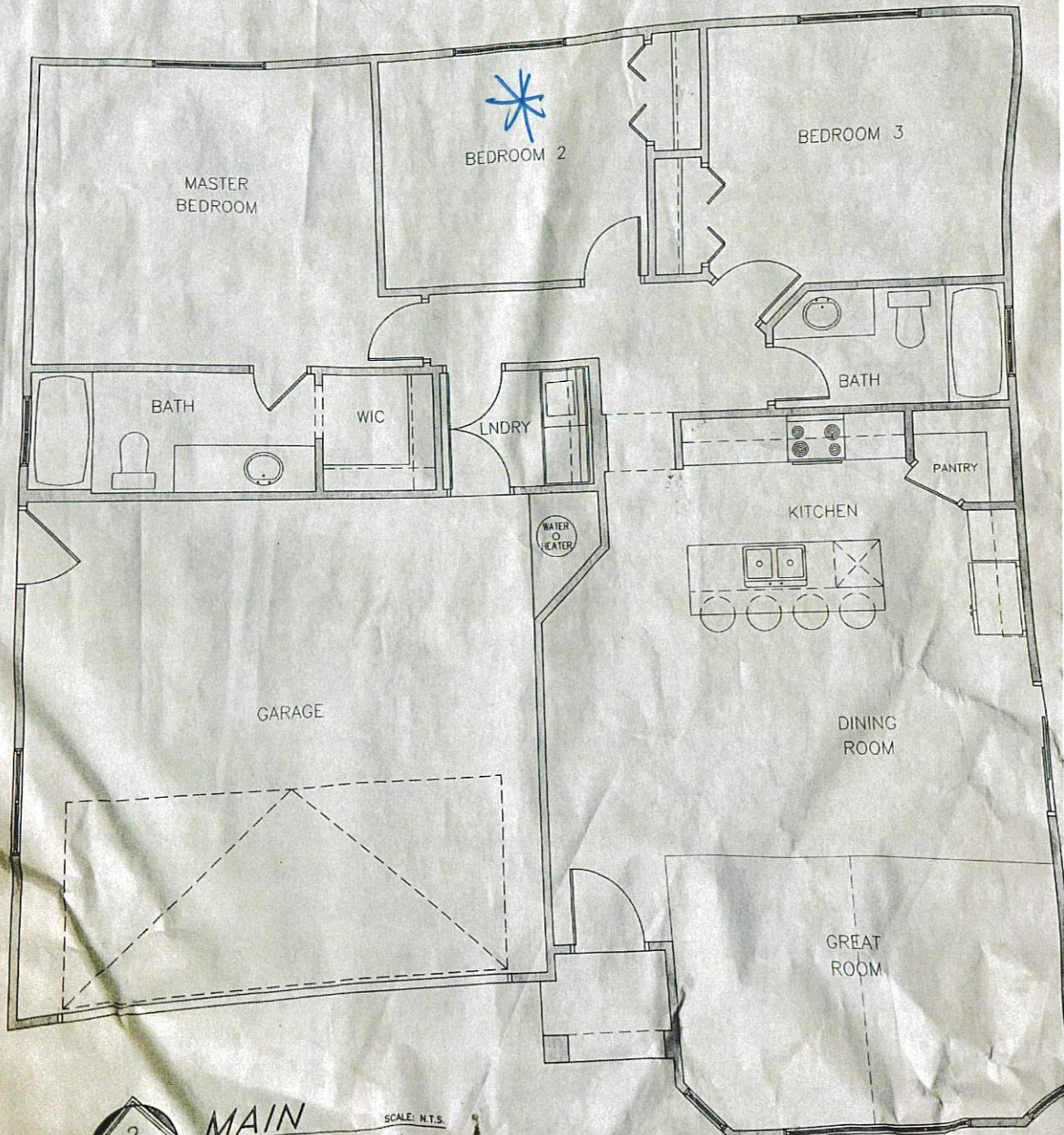
Date

TOTAL FEES \$ <u>75</u>	Office Use Only	<u>75</u>
DATE <u>8/17/22</u>	AMOUNT PAID \$	<u>8.16/453</u>
CITY LICENSE NUMBER <u>10500</u>	RECEIPT #	
Home Occupation: <u>yes</u> / no	Zone: <u>R-1-b</u>	Permitted Use: <u>yes</u> / no
Planning Commission Approval Required: <u>yes</u> / no	if yes, which approval: <u>site plan</u> / conditional use	
Planning Commission approval date: <u>N/A</u>	Zoning approval/date: <u>8.24.22</u>	
New Construction: <u>yes</u> / no	Remodel: <u>yes</u> / no	Building Permit: <u>yes</u> / no
Certificate of Occupancy or Tenant Improvement inspection required: <u>yes</u> / no		



FRONT
ELEVATION

SCALE: N.T.S.



MAIN
FLOOR PLAN

SCALE: N.T.S.



Cindy Beteag

From: Florence R Knudson <[REDACTED]>
Sent: Tuesday, August 16, 2022 5:50 PM
To: Cindy Beteag
Subject: Airbnb private room application
Attachments: Residential-Hosting-or-Bed--Breakfast-Application-PDF.pdf

Parking is on the left side of the garage in driveway. Airbnb room so bedroom number 2

Hurricane Valley Fire Spec. Serv. Dist.



Form: Fire Safety Business
Inspection

Occupancy: **Levi & Florence Knudson**
Occupancy ID: **KNU3445**
Address: **3445 W 120 North**
Hurricane UT 84737

Inspection Type: **Vacation Rental-Reinspect**

Inspection Date: **9/19/2022** By: Barlow, Melvin J (5764)

Time In: **11:00** Time Out: **11:05**

Authorized Date: **09/19/2022** By: Barlow, Melvin J (5764)

Next Inspection Date: **09/19/2022 Vacation Rental-Reinspect**

Inspection Description:

Fire Safety Business Inspection

Inspection Topics:

Additional Time Spent on Inspection:

Category	Start Date / Time	End Date / Time
Notes: No Additional time recorded		

Total Additional Time: 0 minutes

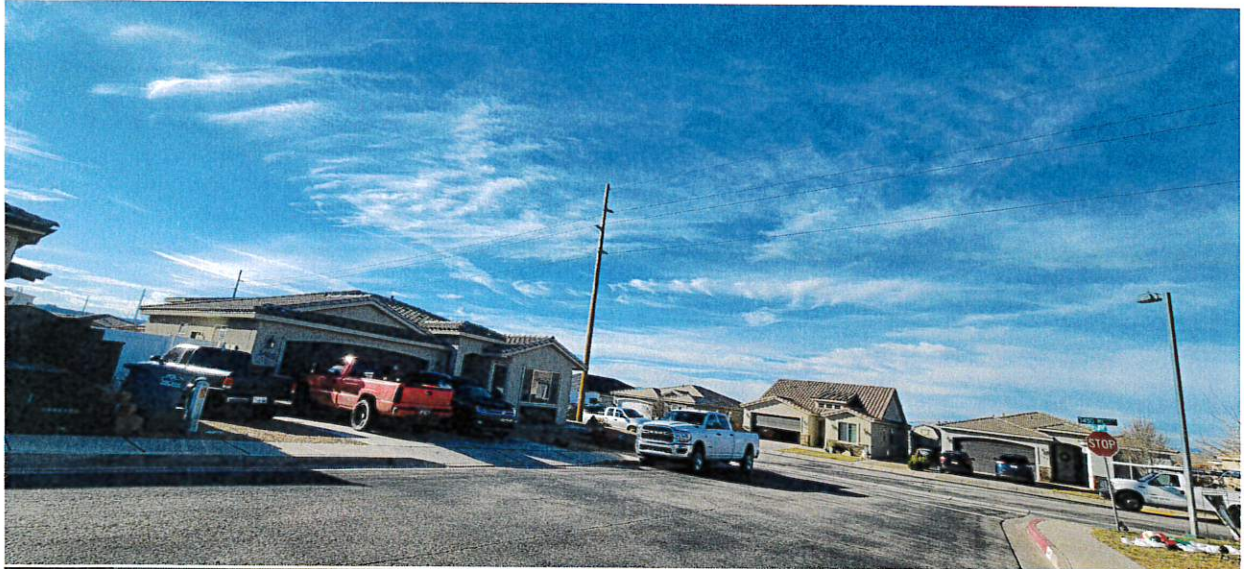
Inspection Time: 5 minutes

Total Time: 5 minutes

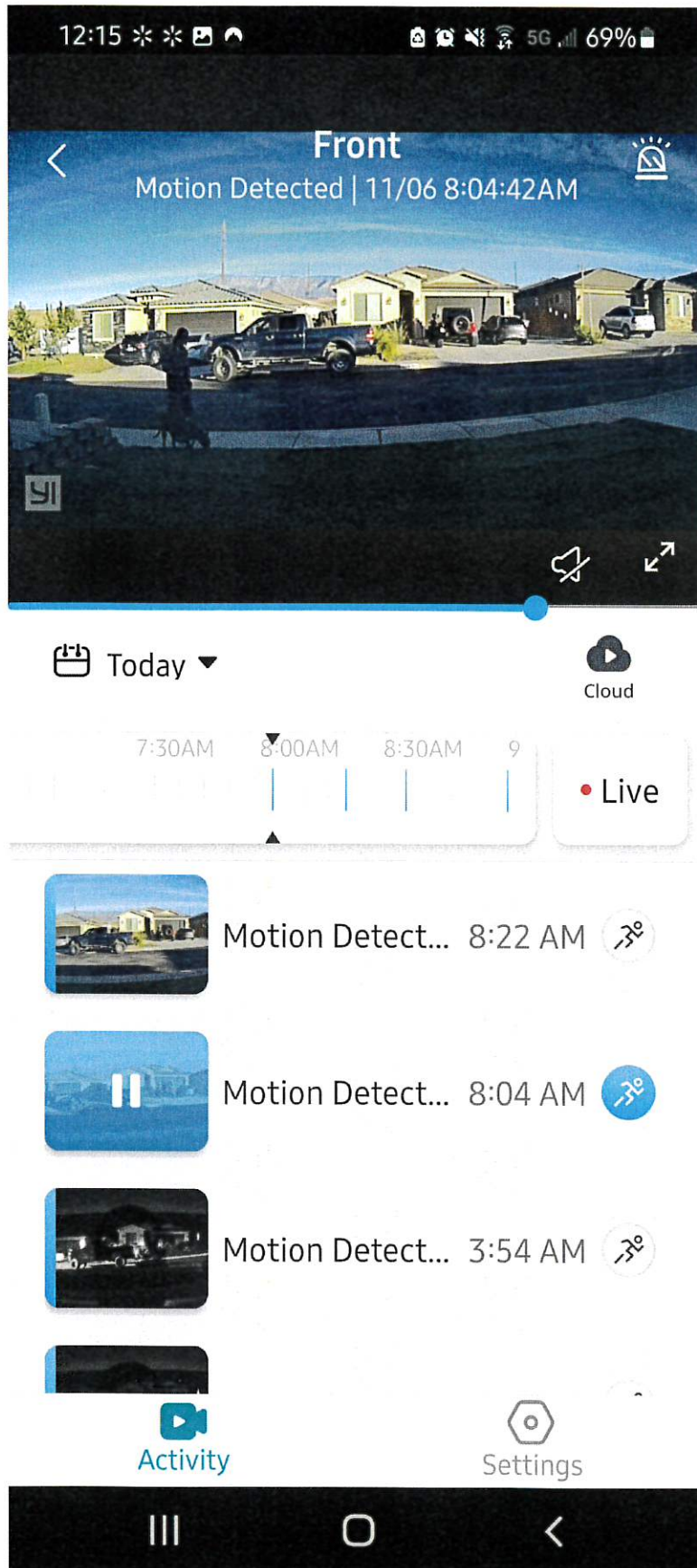
Summary:

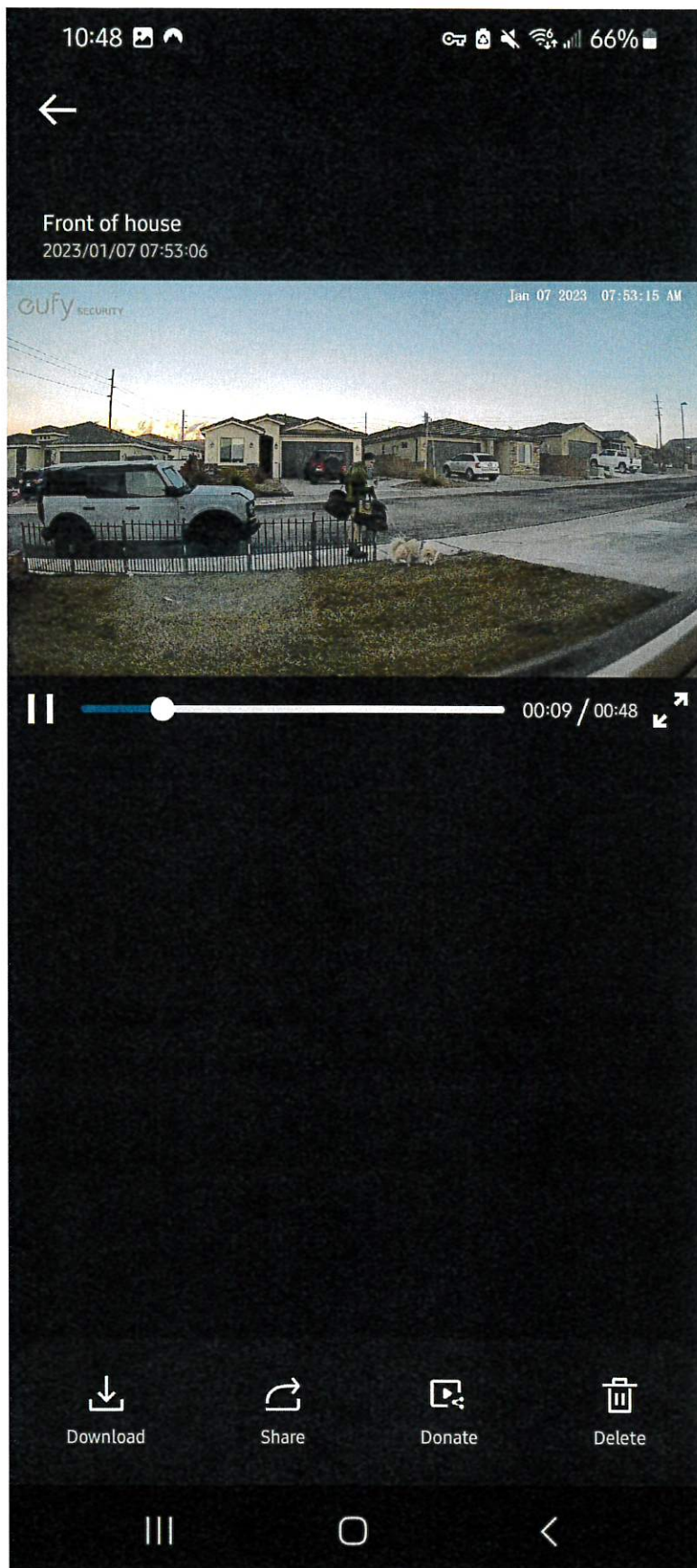
Overall Result: Passed

Inspector Notes:













STAFF COMMENTS

Consideration and possible **approval of support for United We Pledge Art Show**-Dennis Leavitt

Discussion:

Applicant is proposing an art competition to be ran through the Hurricane Recreation Department. The purpose is to help families in Hurricane get to know about Liberty Village and what better way than working with kids to express their patriotism through art. Applicant is asking permission for Hurricane City to send out email to the community, put on their website and display a poster at the community center.

Findings:

Recommendation:

Attachments:

1. Art Show - Hurricane



Proposal

Art Show - Hurricane Community Center

Grades K-7

Purpose

United We Pledge is asking permission for Hurricane City to send out email to the community, put on their website and display a poster at the community center.

Details

- Location: Hurricane Community Center
- Date of Submission sent out through Community Center: February 6
- Art Collection deadline date: March 6 at Community Center
- Art Show Date: March 9
- Time: 6-8:00 pm
- Pick up date: March 10

Theme for artwork: What did Liberty mean in 1776?

Medium - pencil/pen/paint/pastels/watercolor/crayon - no larger than 18 x 24
Judged by theme, creativity and quality

Awards

- Each grade will have 1, 2, 3rd plus best in show
 - Ribbons, \$20 1st, \$10 2nd, \$5 3rd, \$25 best in show
 - Cash will be provided by local businesses with recognition to those businesses.

Art will be judged by the United We Pledge team and awards will be placed on art before the show begins. Artists will pick up their prize money at the Bryce Canyon Room. Art will be picked up at the community center the next day with information about United We Pledge and Liberty Village.

System will be provided for check in/check out of artwork

When they take their art home, they have a flier with United We Pledge and Liberty Village information w/QR code etc.



STAFF COMMENTS

Consideration and possible approval of allowing a **building permit to be issued for Quail Creek Industrial Phase 5 lot #501**. Denet Construction Applicant

Discussion:

The applicant is requesting that the City Council direct staff to issue a building permit so that they can build on a lot within Quail Creek, Phase 5. Currently, utility services for the development have not been completed and the site does not meet the standards of 10-39-15 for issuing a building permit within subdivisions. However, part of the applicant's request is reviewing how the City should interpret Subsection F and if an industrial building could be considered a "model home".

[SHARE LINK TO SECTIONPRINT](#)
[SECTIONDOWNLOAD \(DOCX\)](#) ([SECTIONEMAIL](#) [SECTIONCOM](#)
[VERSIONS](#)

Sec. 10-39-15. - Enforcement and permits.

A.

In order to enforce compliance with this chapter, the Building Official shall not issue any permit for the proposed erection, construction, reconstruction, alteration of any structure, or use of any land until the provisions of this chapter have been met. No City officer or employee shall issue any permit or license for the construction or installation of any building or structure or use on any subdivision lot until the following conditions have been met:

1.

Such subdivision plat shall have been approved and recorded in the office of the county recorder.

2.

Infrastructure improvements shown on approved construction plans for the subdivision:

a.

Have been constructed and installed and preliminarily accepted; or

b.

The City has received and accepted an improvement completion assurance for the subdivision in accordance with this chapter, and the following improvements have been constructed, installed, tested and accepted in accordance with the requirements of the building or fire code:

(1)

A road base of untreated, compacted and graded gravel;

(2)

Sewer, storm drains and storm drain facilities;

(3)

Curb and gutter unless otherwise not required by this Code;

(4)

Water system, including water lines and hydrants; and

(5)

Power lines.

B.

All required improvements must be complete within 12 months of notice to proceed.

C.

The City may call upon the improvement completion assurance filed with the City for all improvements not completed within 12 months of the notice to proceed or when the first building within the subdivision seeks an occupancy permit, whichever is sooner.

D.

It shall be prohibited for anyone to start construction on any building within a subdivision until they have fulfilled the requirements of this chapter.

E.

Any license or permit issued in conflict with this chapter shall be null and void.

F.

Notwithstanding the provisions of subsection A above, a building permit may be issued for:

1.

A single model home in a subdivision, provided that a certificate of occupancy shall not be granted and the model home may not be used or occupied for any reason until the subdivision plat has been approved and recorded.

2.

A model home complex within a master planned community with a planned development overlay upon approval by the City Council of an amendment to the development agreement stating the terms and conditions for issuance of the building permit.

(Ord. 2008-32, 12-18-2008; Ord. 2012-2, 4-19-2012; Ord. 2019-09, 7-18-2019; Ord. No. [2021-04](#), 6-17-2021)

Findings:

Staff makes the following findings:

1. The improvements that are required by HCC 10-39-15(A)(2)(b) prior to a building permit being issued have not been met.
2. The exception for model homes in HCC 10-39-15(F) does not apply because (1) the owner is not requesting to build a "home" and (2) the infrastructure to support a model home and qualify for the exception has not been installed.

Recommendation:

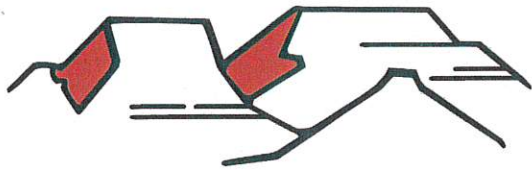
Staff recommends that the Council direct staff and the applicant to comply with the applicable City ordinance and only issue a building permit after the requirements of HCC 10-39-15 have been met.

Attachments:

1. Plat Map
2. Quail Creek 5 Lot 1
3. Quail Creek 5 Lot







PLANNING & ZONING
HURRICANE CITY
UTAH

147 N 870 W Hurricane UT
PHONE: 435.635.2811 FAX: 435.635.2184

PRELIMINARY PLAT APPLICATION

For office use only: \$150.00 Fee
File No. 2022-PP-26
Receipt No. 8-16-2195

Name: Desert Sky Estates Telephone: 435-773-0707

Address: 2712 Rio Vista Drive, St. George, UT 84790 Fax No. _____

Email: ty@beathomeutah.com Agent Email: bwillits@horrocks.com -or- tcarter@horrocks.com

Agent (If Applicable): Ben Willits & Tony Carter Telephone: Ben: 435-599-7372 Tony: 435-599-7368

Address/Location of Subject Property: South of 2100 W. & 3000 S.

Tax ID of Subject Property: H-3386-B (PARCEL "B") Zone District: R1-10

Proposed Use: (Describe, use extra sheet if necessary. Include total number of lots) The proposed use is for 73
single family residential lots to be constructed on 21.087 acres. The west side of 2100 west will be improved.

Submittal Requirements: The preliminary plat application shall provide the following:

- ☒ 1. Description: In a title block located in the lower right-hand corner of the sheet the following is required:
 - ☒ a. The proposed name of the subdivision.
 - ☒ b. The location of the subdivision, including the address and section, township and range.
 - ☒ c. The names and addresses of the owner or subdivider, if other than the owner.
 - ☒ d. Date of preparation, and north point.
 - ☒ e. Scale shall be of sufficient size to adequately describe in legible form, all required conditions of Chapter 39, City Subdivision regulations.
- ☒ 2. Existing Conditions: The preliminary plat shall show:
 - ☒ a. The location of the nearest monument.
 - ☒ b. The boundary of the proposed subdivision and the acreage included.
 - ☒ c. All property under the control of the subdivider, even though only a portion is being subdivided. (Where the plat submitted covers only a part of the subdivider's tract, a sketch of the prospective street system of the unplatted parts of the subdivider's land shall be submitted, and the street system of the part submitted shall be considered in light of existing Master Street Plan or other Commission studies.)
 - ☒ d. The location, width, and names/numbers of all existing streets within two hundred (200) feet of the subdivision and of all prior streets or other public ways, utility rights of way, parks and other public open spaces, within and adjacent to the tract.
 - ☒ e. The location of all wells and springs or seeps, proposed, active and abandoned, and of all reservoirs or ponds within the tract and at a distance of at least one hundred feet (100') beyond the tract boundaries.
 - ☒ f. Existing sewers, water mains, culverts, or other underground facilities within the tract, indicating the pipe sizes, grades, manholes and the exact locations.
 - ☒ g. Existing Hurricane Canal Company facilities; other ditches, canals, natural drainage channels and open waterways and any proposed realignments.

- ✓ h. Contours at vertical intervals not greater than five (5) feet.
 - ✓ i. Identification of potential geotechnical constraints on the project site (such as expansive rock and soil, collapsible soil, shallow bedrock, and caliche, gypsiferous rock and soil, potentially unstable rock or soil units including fault lines, shallow groundwater, and windblown sand) and recommendations for their mitigation.
 - ✓ j. Information on whether property is located in desert tortoise take area
- ✓ 3. Proposed Plan: The subdivision plans shall show:
- ✓ a. The layout of streets, showing location, widths, and other dimensions of proposed streets, crosswalks, alleys, and easements.
 - ✓ b. The layout, numbers, and typical dimensions of lots.
 - ✓ c. Parcels of land intended to be dedicated or temporarily reserved for public use or set aside for use of property owners in the subdivision.
 - ✓ d. Easements for water, sewers, drainage, utilities, lines and other purposes.
 - ✓ e. Typical street cross sections and street grades where required by the Planning Commission. (All street grades over 5% should be noted on the preliminary plat)
 - ✓ f. A tentative plan or method by which the subdivider proposes to handle the storm water drainage for the subdivision.
 - ✓ g. Approximate radius of all center line curves on highways or streets.
 - ✓ h. Each lot shall abut a street shown on the subdivision plat or on an existing publicly dedicated street. (Double frontage or flag lots shall be prohibited except where conditions make other design undesirable)
 - ✓ i. In general, all remnants of lots below minimum size left over after subdividing of a larger tract must be added to adjacent lots, rather than allow to remain as unusable parcels.
 - ✓ j. Where necessary, copies of any agreements with adjacent property owners relevant to the proposed subdivision shall be presented to the Planning Commission.
 - ✓ k. A letter from both the local sanitary sewer provider and culinary water provider indicating availability of service.
 - ✓ l. Will this subdivision be phased? If yes show possible phasing lines.
 - ✓ m. A tentative plan or method for providing non-discriminatory access to the subdivision for purposes of placement of communications infrastructure, and for purposes of placement of utility infrastructure.
- ✓ 4. Required copies of plans:
- ✓ a. Three copies of all full-scale drawings
 - ✓ b. One copy of each drawing on a 11 x 17-inch sheets. (8 ½ x 11 is acceptable if the project is small and the plans are readable at that size).
- ✓ 5. Warranty deed or preliminary title report or other document (see attached Affidavit) showing evidence that the applicant has control of the property
- ✓ 6. Signed and notarized Acknowledgement Water Supply (see attached)

NOTE: It is important that all applicable information noted above is submitted with the application. An incomplete application will not be scheduled for Planning Commission consideration. A deadline missed due to an incomplete application, could result in a month's delay. Planning Commission meetings are held on the second Thursday and fourth Wednesday of each month at 6:00 p.m. The deadline to submit an application to be placed on an agenda is no later than 12:00 (noon) 20 full calendar days before the Planning Commission meeting at which you plan for your application to be heard.

(Office Use Only)

Date Received: _____ Application Complete: YES _____ NO _____

Date application deemed to be complete: _____ Completion determination made by: _____

AFFIDAVIT

PROPERTY OWNER

STATE OF UTAH)

COUNTY OF Washington

:SS

I (we), Tyler Meyers + Del Bently being duly sworn, depose and say that I (we) am (are) the owner(s) of the property identified in the attached application and that the statements herein contained and the information provided identified in the attached plans and other exhibits are in all respects true and correct to the best of my (our) knowledge. I (we) also acknowledge that I have received written instructions regarding the process for which I am applying and the Hurricane City Planning staff have indicated they are available to assist me in making this application.

Tyler Meyers
(Property Owner)

Del Bently
(Property Owner)

Subscribed and sworn to me this 13 day of SEP 2022

Brendan J. Snow
(Notary Public)

Residing in: St George UT

My Commission Expires: 1/5/23



BRENDAN J. SNOW
Notary Public
State Of Utah
My Commission Expires 01/05/2023
COMMISSION NO. 703540

Agent Authorization

I (we), Tyler Meyers + Del Bently, the owner(s) of the real property described in the attached application, do authorize as my (our) agent(s) BEN WILLIAMS, TONY CORTI to represent me (us) regarding the attached application and to appear on my (our) behalf before any administrative or legislative body in the City considering this application and to act in all respects as our agent in matters pertaining to the attached application.

Tyler Meyers
(Property Owner)

Del Bently
(Property Owner)

Subscribed and sworn to me this 13 day of SEP 2022

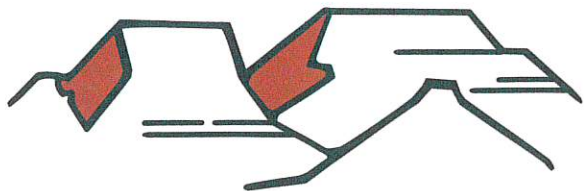
Brendan J. Snow
(Notary Public)

Residing in: St George UT

My Commission Expires: 1/5/23



BRENDAN J. SNOW
Notary Public
State Of Utah
My Commission Expires 01/05/2023
COMMISSION NO. 703540



HURRICANE CITY

UTAH

ACKNOWLEDGEMENT OF WATER SUPPLY

I/We, Tyler Meyers & Del Beatty am/are the applicant(s) of the application known as DESERT SKY ESTATES located on parcel(s) H-3386-B (PARCEL "B") within the City of Hurricane, Washington County, Utah.

By my/our signature(s) below I/we do hereby acknowledge and agree to the following:

1. Neither acceptance nor approval of a development application by Hurricane City shall constitute a guarantee that sufficient water will be available to serve the zone designation, project, or permit for which this application is being submitted; and
2. Prior to receiving final approval for the application, the applicant may be required by Hurricane City to provide a guarantee of water availability which verifies that there is a sufficient water supply; and
3. For any application which may be approved without a guarantee of water availability, the applicant knowingly assumes the entire risk of water availability for the project and/or application; and
4. I/we waive any and all claims against Hurricane City that are in any way related to water availability for any project, permit, or use for which the land use application has been approved.

Dated this 13 day of September, 2022

Applicant Name: TYLER MEYERS & DEL BEATTY

Name of Signer (if different from Applicant Name): _____

Title of Signer: MANAGER

Signature: Tyler Meyers

MANAGER
Del Beatty

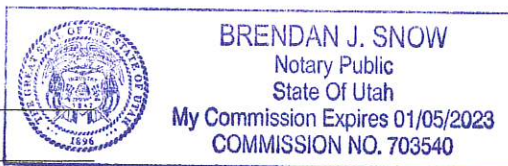
STATE OF Utah

COUNTY OF Washington

On the 13 day of September, 2022, personally appeared before me Tyler Meyers & Del Beatty the signer of the above instrument, who duly acknowledged to me that he/she executed the same in the capacity indicated on behalf of the Applicant.

Notary Public: Brendan J. Snow

My Commission Expires: 11/5/23



PRELIMINARY PLAT APPLICATION page 5 (General Information)

PURPOSE

The preliminary plat application is the first step in land development process in those instances where land is divided for eventual sale. The process is established to ensure that all proposed divisions of land conform to the City General Plan and to adopted development standards of the Land Use Ordinance.

WHEN REQUIRED

The preliminary plat is required any time land is to be divided, re-subdivided or proposed to be divided into two (2) or more lots, parcels, sites, units, plots or other division of land for the purpose, whether immediate or future, for offer, sale, lease or development either on installment plan or upon any and all other plans, terms and conditions. It is not required on agricultural divisions where the agricultural parcel is divided to be combined with another agricultural parcel, nor is it required when two un-subdivided properties are merged, or where the boundary between two un-subdivided properties are adjusted.

The preliminary plat must be approved before a final plat can be processed and recorded.

Subdivision approval process:

- Determine current zoning for property.
- If zoning fits desired subdivision, meet with Planning staff to discuss the proposed project.
- Obtain a preliminary plat application form and complete the application and have a plat prepared by an engineer to meet the requirements on the preliminary plat application.
- Submit completed application, preliminary plat, and required \$150 fee to Planning Department before noon on the Wednesday two weeks before desired Planning Commission meeting. (See submittal dates sheet)
- Appear at the scheduled Planning Commission meeting to discuss preliminary plat, hear comments, answer questions, and receive recommendation of approval or disapproval from Planning Commission.
- Appear at the next scheduled City Council meeting that occurs after the Planning Commission meeting at which a recommendation was received. Hear City Council comments, answer questions, and receive City Council decision. City Council can approve the plat with conditions, recommend changes and send it back to the Planning Commission, or deny the plat.

If the preliminary plat is approved, have construction drawings for utilities and streets prepared by an engineer according to Hurricane City standards. Construction drawings must be approved by both the Hurricane Joint Utilities Committee and the Ash Creek Special Service District. Approval means changes are made and all required signatures are obtained.

Once the preliminary plat is approved by the City Council, the applicant has one year after receiving approval of the preliminary plat to submit the final plat to the Planning Commission for action. The Planning Commission may authorize a one-year time extension, provided the extension request is made before the one-year time limit is reached. The Planning Commission will review and make recommendation to the City Council on the final plat

when submitted. The City Council will typically review the Planning Commission recommendation within 1-2 weeks after the Commission action on the final plat.

APPEALS

The Planning Commission makes a recommendation to the City Council, so there is no appeal. The City Council's action on a preliminary plat is final unless appealed to the appropriate court.



Ash Creek Special Service District

1350 S. Sand Hollow Road

Hurricane, UT 84737

Office: (435) 635-2348 Fax: (435) 635-8550

ashcreek@infowest.com

September 7, 2022

Hurricane City
Stephen Nelson
127 N. 870 W.
Hurricane, UT 84737

RE: Spendlove 21 Acre Subdivision

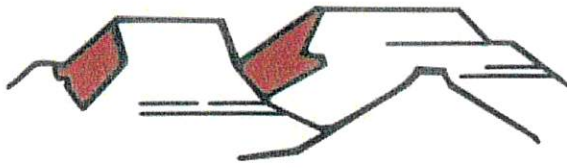
Stephen,

There is sewer capacity for this project. The developers understand and agree that they will need to get plan approval for the sewer system.

After approval, they agree to pay all costs associated with construction and impact fees. Please let us know if you have any questions.

Sincerely,

Amber Gillette, P.E.
Engineer
Ash Creek Special Service District



HURRICANE CITY

UTAH

Water Department
Ken Richins, Superintendent

September 7, 2022

To Whom It May Concern:

Titanium Development LLC (the "Developer") has requested a culinary water will serve letter for the subdivision known as **Spendlove 21 Acre**, located at approximately **2100 W 3500 S** in Hurricane, Utah (the "Project").

Infrastructure

The City currently has infrastructure to supply culinary water in the general area of the Project. However, Developer will be responsible to connect the Project to the existing water infrastructure, including the installation of infrastructure in dedicated public streets and as otherwise required to meet City standards. In addition, Developer may be required to obtain and supply a hydraulic water study to ensure the waterline will deliver required fire flows. A looped water system may be required.

Water Supply

As of the date of this letter, the city has adequate water to supply water to **73** residential connections within the Project. However, water within the City is a finite resource with limited supply. The ability of the City to supply water to previously approved projects, as well as continue to serve additional water customers, is contingent on water supplies being available from the Washington County Water Conservancy District (the "Conservancy District"). Therefore, the City's statements in this letter regarding the adequacy of water supply is (1) contingent on water being available from the Conservancy District and (2) shall expire one year from the date of this letter, after which a renewed will serve letter will be required for any property or lot that has not obtained a metered connection to the City's culinary water system. Developer is encouraged to obtain a guarantee of water from the Conservancy District.

General Requirements

In addition to the requirements and limitations described above, Developer shall be required to comply with all applicable laws, ordinances, policies, and construction and design standards. These requirements include, but are not limited to, secondary water system requirements and any obligations described in an applicable development agreement.

Sincerely,

Ken Richins
Water Department Superintendent

Transaction Identification Data for reference only:

Report Number: 225784

Searcher: Jarom Taylor

Searcher Utah License Number: 691339

Searcher Contact: (435) 634-7991 | jarom@sutc.com

**SCHEDULE A**

1. Effective Date: August 26, 2022 at 7:00AM
2. Report: Report prepared for Spendlove Ground in preparation for platting.
3. Title to the Fee Simple estate or interest in the land is at the Effective Date vested in:
Tytanium Development, LLC, a Utah Limited Liability Company, as to 75% interest and Dellionaire Investments, LLC, a Utah Limited Liability Company, as to 25% interest
4. The land referred to in this Report is situated in the County of Washington, State of Utah, and described as follows:
See attached Exhibit A-Legal Description

Southern Utah Title Company

By: Joseph McPhie
Authorized Signatory

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For reference only:

Page 1 | Reference Number: 225784 | Underwriter: First American Title Insurance Company | OS83LzlyLUpD

EXHIBIT A
Legal Description

PARCEL "A":

BEGINNING AT THE SOUTHEAST CORNER OF SECTION 20, T42S, R13W, SLB&M, RUNNING THENCE N88°49'17"W, 888.26 FEET ALONG THE SECTION LINE TO THE EASTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, A 70.00 FOOT WIDE PUBLIC ROADWAY, DEDICATED BY DOCUMENT NO. 20180050579, AS FILED IN THE OFFICE OF THE WASHINGTON COUNTY RECORDER, SAID POINT BEING ON A 1230.00 FOOT RADIUS NON-TANGENT CURVE TO THE RIGHT, RADIUS POINT BEARS S83°44'07"E; THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE THE FOLLOWING THREE (3) COURSES: NORTHEASTERLY 1080.97 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 50°21'14"; THENCE N56°37'07"E, 55.43 FEET TO THE POINT OF CURVE OF AN 800.00 FOOT RADIUS CURVE TO THE LEFT; THENCE NORTHEASTERLY 496.81 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 35°34'52" TO A POINT ON THE 1/16TH LINE; THENCE S88°51'25"E, 13.25 FEET ALONG THE 1/16TH LINE TO THE EAST LINE OF SAID SECTION 20; THENCE S1°02'03"W, 1322.42 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.

PARCEL "B":

BEGINNING AT A POINT N88°49'17"W, 958.53 FEET ALONG THE SECTION LINE FROM THE SOUTHEAST CORNER OF SECTION 20, T42S, R13W, SLB&M, SAID POINT BEING ON THE WESTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, A 70.00 FOOT WIDE PUBLIC ROADWAY DEDICATED BY DOCUMENT NO. 20180050579 AS FILED IN THE OFFICE OF THE WASHINGTON COUNTY RECORDER, RUNNING THENCE N88°49'17"W, 357.43 FEET ALONG THE SECTION LINE TO THE EAST 1/16TH CORNER; THENCE N1°01'36"E, 1321.58 FEET TO A POINT ON THE 1/16TH LINE; THENCE S88°51'25"E, 1227.96 FEET ALONG THE 1/16TH LINE TO SAID WESTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, SAID POINT BEING ON A 730.00 FOOT RADIUS NON-TANGENT CURVE TO THE RIGHT, RADIUS POINT BEARS N66°57'41"W; THENCE SOUTHWESTERLY 427.84 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 33°34'48"; THENCE S56°37'07"W, 55.43 FEET TO THE POINT OF CURVE OF A 1300.00 FOOT RADIUS CURVE TO THE LEFT; THENCE SOUTHWESTERLY 1148.72 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 50°37'41" TO THE POINT OF BEGINNING.

(Preliminary Legal Description Only)

Tax Serial No. H-3386-B

SCHEDULE B
Exceptions

1. Any facts, rights, interests, or claims which are not shown by the public records but which could be by an inspection of the land or which may be asserted by persons in possession, or claiming be in possession, thereof.
2. Easements, liens, encumbrances, or claims thereof, which are not shown by the public records.
3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land, and that is not shown by the Public Records.
4. Any lien, or right to a lien, imposed by law for services, labor, or material heretofore or hereafter furnished, which lien, or right to a lien, is not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) Indian treaty or aboriginal rights, including, but not limited to, easements or equitable servitudes; or, (d) water rights, claims or title to water, whether or not the matters excepted under (a), (b), (c) or (d) are shown by the public records.
6. Taxes or assessments which are not now payable or which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
7. Any service, installation, connection, maintenance or construction charges for sewer, water, electricity, or garbage collection or disposal or other utilities unless shown as an existing lien by the public records.
8. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the records or attaching subsequent to the effective date hereof but prior to the date the proposed acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.
9. Claim, right, title or interest to water or water rights whether or not shown by the Public Records.
10. Rights of way for any roads, ditches, canals, or transmission lines now existing over, under, or across said property.
11. Taxes for the current year 2022, which are liens, but not yet due or payable in the estimated amount of \$8,111.61, under Tax Serial No. H-3386-B, Account No. 0163108.
12. Subject to any Reservations, Exceptions and Easements as set forth on Transcript, from the State of Utah, recorded December 2, 1943, as Entry No. [61210](#) , in Book U-10, at Page 329, Official Washington County Records. (Affects this and other property)
13. Subject to any Reservations, Exceptions and Easements as set forth on State of Utah Patent, recorded as Entry No. [62496](#) , in Book U-10, at Page 414, Official Washington County Records. (Affects this and other property)
14. Liability to Assessments levied by the Ash Creek Special Service District, as disclosed by Resolution No. R-2003-857, recorded June 12, 2003, as Entry No. [824223](#) , in Book 1554, at Pages 102-106, Official Washington County Records. (Affects this and other property)

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For reference only:

Page 3 | Reference Number: 225784 | Underwriter: First American Title Insurance Company | OS83LzlyLUPD

15. Liability to Assessments levied by the Board of County Commissioners of Washington County, Utah, creating and establishing a Special Service District ("Hurricane Valley Fire Special Service District") to provide for fire protection, paramedic services, and ambulance services, as disclosed by Resolution No. R-2007-1203, recorded December 22, 2009, as Doc. No. [20090048182](#), Official Washington County Records. (Affects this and other property)

A Resolution Amending the Boundary of the Hurricane Valley Fire Special Service District, recorded March 1, 2010, as Doc. No. [20100006648](#), Official Washington County Records.

2nd Amended Hurricane Valley Fire Special Service District, recorded December 30, 2010, as Doc. No. [20100044122](#), Official Washington County Records.

Resolution No. R-2015-1946, A Resolution Amending the Boundary of the Hurricane Valley Fire Special Service District to include the Corporate Limits of the City of Hurricane, recorded November 9, 2015, as Doc. No. [20150039260](#), Official Washington County Records and Hurricane Valley Fire District 3rd Amended, recorded November 9, 2015, as Doc. No. [20150039261](#), Official Washington County Records.

Hurricane Valley Fire District 4th Amended, Extended & Clarified, recorded December 14, 2015, as Doc. No. [20150043173](#), Official Washington County Records.

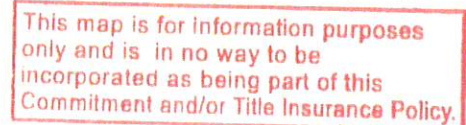
5th Amended & Extended Hurricane Valley Fire District Local Entity Plat, recorded November 8, 2019, as Doc. No. [20190046477](#), Official Washington County Records, A Resolution Amending the Boundary of The Hurricane Valley Fire Special Service District to Include the Area Within the Rockville-Springdale Fire Special Service District, recorded November 8, 2019, as Doc. No. [20190046478](#), Official Washington County Records and Certificate of Boundary Adjustment, with 5th Amended and Extended Hurricane Valley Fire District Local Entity Plat Boundary Description, recorded November 8, 2019, as Doc. No. [20190046479](#), Official Washington County Records.

16. Subject to easements, notes, restrictions, reservations, any and all other matters as set forth and disclosed on the Roadway Dedication Plat for "COPPER ROCK PARKWAY AND 2100 WEST", recorded December 26, 2018 as Doc No. [20180050579](#), Official Washington County Records.
17. Subject to easements, notes, restrictions, reservations, any and all other matters as set forth and disclosed on the Record of Survey prepared by R&B Surveying dated April 5, 2022".
18. We find no Open Deed of Trust/Trust Deed of Record. Require any party with knowledge to the contrary to inform this Office prior to any Final Plat Approval.
19. This Report and the information shown herein is limited to the Record of Survey prepared by R&B Surveying dated April 5, 2022, no information is given or implied beyond this. Upon receipt of a proposed Final Plat additional exceptions may be added.
20. This report is provided for information purposes only and is not intended to be a Commitment to issue Title Insurance.

Note: The names on Schedule A have been checked for judgments and, if any were found, are disclosed on Schedule B of this Report.

SALT LAKE BASE & MERIDIAN
SCALE: ONE INCH=400 FEET

This plot is furnished for information only.
No liability is assumed by AISCOR's
Board of Directors for any loss or damage
resulting therefrom.





GEOTECHNICAL INVESTIGATION

SPENDLOVE 37 ACRE PARCEL

HURRICANE, UTAH

**TYLER MEYERS
348 NORTH BLUFF STREET
ST. GEORGE, UTAH 84770**

PROJECT NO. 2211872

OCTOBER 6, 2021

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SUMMARY

1. The subsurface profile observed within the test pits consists of silty sand overlying caliche and sandstone bedrock to the maximum depth investigated, approximately 9 feet below the existing grade. Refusal was encountered on caliche in each of the test pits at depths ranging from 3½ to 9 feet below the existing grade.
2. Subsurface water was not encountered within the test pits to the maximum depth investigated, approximately 9 feet.
3. The on-site soils in their existing condition are not suitable to support the proposed construction. The site is suitable for the proposed construction provided recommendations within this report are followed.
4. The proposed residences may be supported on conventional spread footings bearing on properly compacted structural fill underlain by a properly prepared subgrade as recommended in the Subgrade Preparation section of this report. Specifically, we recommend building pad areas be overexcavated at least 2 to 7½ feet below the existing grade to remove the full depth of the near surface unsuitable soils. The estimated overexcavation depths are shown on Figures 2 and 4.

Basement footings and slabs should extend through the collapsible soils to the underlying caliche. Basement footings may be supported on properly compacted structural fill extending to the caliche or directly on the underlying caliche. Bearing capacities are provided in the Foundations Section of this report.

5. The on-site silty sand, free of organics, debris and material greater than 6 inches in size, is suitable for use as structural fill, site grading fill, wall backfill and utility trench backfill. The on-site caliche is also suitable for use as structural fill, site grading fill, and utility trench backfill provided it is processed such that the maximum particle size is 4 inches and at least 50 percent of the material passes the number 4 sieve. Soil removed during grubbing may be placed in landscaped areas.
6. Detailed recommendations for subgrade preparation, materials, foundations, and drainage are included in the report.
7. The information provided in this summary should not be used independent of that provided within the body of this report.

SCOPE

This report presents the results of a geotechnical investigation for the proposed residential subdivision to be located in Hurricane, Utah, as shown in Figure 1. This report presents the subsurface conditions encountered, laboratory test results, and recommendations for the project.

Field exploration was conducted to obtain information on the subsurface conditions and to obtain samples for laboratory testing. Information obtained from the field and laboratory was used to define conditions at the site and to develop recommendations for the proposed development.

This report has been prepared to summarize the data obtained during the study and to present our conclusions and recommendations based on the proposed construction and the subsurface conditions encountered. Design parameters and a discussion of geotechnical engineering considerations related to construction are included in the report. This report was prepared in general accordance with our proposal for Professional Geotechnical Services under Project No. 2211872, dated July 29, 2021.

SITE CONDITIONS

The project site consists approximately 37 acres of generally undeveloped property that slopes down from the southeast to the northwest. A relatively steep hillside is located on the east portion of the project. A new road with underground utilities bisects the project site, running diagonally from the northeast towards the southwest corners of the project. Vegetation on the site consists of typical desert brush, grass, cactus and occasional creosote trees. The site is bounded on the north, west and south by undeveloped parcels, and on the east by undeveloped hillside.

FIELD STUDY

On August 24, 2021, an engineer from AGECE visited the site and observed the excavation of 9 test pits at the approximate locations shown on the Site Plan, Figure 2. The test pits were excavated with a track mounted excavator. The subsurface soil profile was logged and soil samples were obtained at this time for laboratory testing.

SUBSURFACE SOIL CONDITIONS

The subsurface profile observed within the test pits consists of silty sand overlying caliche and sandstone bedrock to the maximum depth investigated, approximately 9 feet below the existing grade. Refusal was encountered on caliche in each of the test pits at depths ranging from 3½ to 9 feet below the existing grade.

Detailed descriptions of the soil type encountered follow.

Silty Sand - The silty sand is medium dense, dry to slightly moist, contains varied silt content and occasional gravel, and is reddish brown in color. Sandy silt was observed at the surface of Test Pit TP-8.

Laboratory tests conducted on samples of the silty sand and sandy silt indicate in-place moisture contents ranging from less than 1 to 5 percent, in-place dry densities ranging from 89 to 114 pounds per cubic foot (pcf), a gravel content (percent retained on the No. 4 sieve) of 1 percent, and fines contents (percent passing the No. 200 sieve) ranging from 16 to 59 percent. An Atterberg Limits test indicates that the silty sand is not plastic.

A moisture-density relationship (Modified Proctor) test conducted on a sample of the silty sand indicates a maximum dry density of 130.0 pcf and an optimum moisture content of 7.5 percent.

Caliche - The caliche consists of moderately cemented silty sand. It is moderately hard, dry, and reddish white in color.

The Logs of Test Pits are shown on Figure 4. The Legend and Notes of Test Pits are shown on Figure 5. Results of the laboratory tests are also shown on Figure 4 and are summarized in the Summary of Laboratory Test Results, Table 1. The gradation and moisture-density relationship (Modified Proctor) results are shown on Figure 6.

SUBSURFACE WATER

Subsurface water was not encountered within the test pits to the maximum depth investigated, approximately 9 feet. Fluctuations in the groundwater level may occur over time. An evaluation of such fluctuations is beyond the scope of this report.

PROPOSED CONSTRUCTION

The project site is proposed to be developed into lot residential subdivision. Based on the existing topography and the proposed grading plan, we anticipate cuts and fills of approximately 2 to 3 feet to construct the subdivision.

We understand it is proposed to construct single-family residences on the western portion of the site and multi-unit town homes on the eastern portion of the site. The structures will typically consist of single and multi-story slab-on-grade type construction. A portion of the residences may include full depth basements or below grade pools. We anticipate the residences will be constructed using conventional spread footings with slab-on-grade floors. The residences will likely be constructed with wood framing, stucco or rock veneer, and tile roofs.

For design purposes, we have assumed wall loads less than 4 kips per linear foot and column loads less than 50 kips.

As part of the development, we anticipate that interior roadways, utilities and city improvements will also be included. For design purposes, we have utilized a traffic index (TI) of 5 for the interior roadways.

If the proposed construction, or building loads are significantly different from those listed, we should be notified so that we can reevaluate our recommendations.

GEOLOGIC HAZARDS

Based on a review of geologic hazard maps provided by the Utah Geological Survey (UGS) the following geologic hazards are present on the site:

A. Surface-Fault-Rupture-Hazard

A surface-fault-rupture-hazard Special Study Area has been identified near the northwest corner of the project site as shown on Figure 3A. The fault has been defined by the UGS as a well defined fault with unknown activity level. The special-study area for a well-defined fault extends for 500 feet on the down thrown (east) side of the fault and 250 feet on the up thrown (west) side of the fault.

AGEC should provide surface fault rupture hazard study for additional fees if requested. The fault study will determine if a surface fault rupture hazard is present on the site, and will provide setback recommendations for structures.

B. Rock-Fall-Hazard

A moderate rock-fall-hazard Special Study Area has been identified near the northwest corner of the project site as shown on Figure 3B. The rock fall hazard should be further evaluated prior to determining development plans for this area. Typically, a geologist with experience in evaluating rock fall hazards conducts an evaluation which will provides a rock fall run out line. If the run out line extends into a development area, then mitigation measures would be provided. These measures may include rock fall fences, berms, or relocating structures out of the rock fall hazard area. AGECC can provide this study if requested.

RECOMMENDATIONS

Based on our experience in the area, the subsurface conditions encountered, laboratory test results, and the proposed construction, the following recommendations are given:

A. Site Grading

Based on the subsurface conditions and engineering analysis, the following recommendations are provided:

1. Subgrade Preparation

a. *General Subgrade Preparation*

Prior to placing fill or concrete beneath building areas, pavement/flatwork or improvements, the site should be grubbed to remove the existing vegetation and soil containing significant roots and organics. We anticipate that grubbing will extend on the order of 4 inches below the existing grade.

b. *Building Pads*

Prior to placing site grading fill or concrete, the building pads should be overexcavated to remove the full depth of the loose, dry, potentially collapsible soils. We anticipate this will require the overexcavation of approximately 2 to 7½ feet below the existing grade. The estimated depths are shown for each test pit location on Figures 2 and 4.

The limits of overexcavation should extend at least 5 feet beyond the perimeter of the proposed construction. The lateral extent of the overexcavation should be determined by survey and is the responsibility of the owner/contractor.

c. *Pavement, Flatwork and Improvements*

Subsequent to grubbing and prior to placing site grading fill or road base in pavement areas, a portion of the underlying collapsible silty sand soil should be removed. As a minimum, we recommend the exposed subgrade beneath pavement, flatwork and improvement areas be prepared by over excavating a minimum of 2 feet below the existing grade or 2 feet below the proposed subgrade (whichever is greater) prior to placing fill or road base. The removed soil may then be replaced in properly moisture conditioned and compacted lifts.

Subsequent to overexcavation and prior to placing fill, the exposed subgrade should be scarified to a depth of approximately 8 inches, properly moisture conditioned and compacted to meet the recommendations provided in the compaction section of this report.

Consideration should be given to full depth overexcavation to beneath hard surfaces and CMU fences. If the remaining collapsible soils beneath the overexcavated zone are wetted subsequent to construction, settlement of the surface improvement (pavement, flatwork, CMU fence, etc.) may occur. We estimate that on the order of ½ inch of settlement may occur for each foot of remaining collapsible soil left in place below improvements.

2. Excavation

We anticipate that excavation of the soils at the site can be accomplished with typical excavation equipment. Excavations which extend into the underlying caliche may require the use of heavy duty excavation equipment such as a large track mounted excavator equipped with rock teeth or a ripper.

The on-site soil classifies as a Type C soil according to OSHA and temporary excavations should be excavated no steeper than 1 ½:1 (Horizontal:vertical). The caliche classifies as a Type A soil according to OSHA and temporary excavations should be excavated no steeper than ¾:1.

3. Materials

Import materials should be non-expansive, non-gypsiferous, granular soil. Listed below are the materials recommended for imported fill.

Area	Fill Type	Recommendations
Foundations/slabs	Site grading/ structural fill	-200 < 35%, LL < 30% Maximum size: 4 inches Solubility < 1%
Underslab (upper 4 inches)	Base course	-200 < 12% Maximum size: 1 inch Solubility < 1%

-200 = Percent Passing the No. 200 Sieve
LL = Liquid Limit

The on-site silty sand, free of organics, debris and material greater than 6 inches in size, is suitable for use as structural fill, site grading fill, wall backfill and utility trench backfill. The on-site caliche is also suitable for use as structural fill, site grading fill, and utility trench backfill provided it is processed such that the maximum particle size is 4 inches and at least 50 percent of the material passes the number 4 sieve. Soil removed during grubbing may be placed in landscaped areas.

4. Compaction

Compaction of materials placed at the site should equal or exceed the following minimum densities when compared to the maximum dry density as determined by ASTM D-1557:

Area	Percent Compaction
Subgrade	90
Footings/building pad	95
Site grading	95
Utility trenches	95
Wall backfill	95

To facilitate the compaction process, the fill should be moisture conditioned to within 2 percentage points of the optimum moisture content as determined by ASTM D-1557 prior to placement. Fill should be placed in loose lift thicknesses which do not exceed the capacity of the equipment being utilized. Generally, 6 to 8-inch loose lifts are adequate. Lift thicknesses should be reduced to 4-inches for hand compaction equipment.

5. Surface Drainage

Positive site drainage should be maintained during the course of construction. After construction has been completed, positive drainage of the surface water away from the buildings in each direction must be maintained. To reduce infiltration adjacent to foundations we recommend the following:

- a. A minimum slope of 6 inches in the first 10 feet from the perimeters of the structures should be provided.
- b. Roof gutter systems should be installed around the perimeters of the structures. Roof downspouts should discharge away from the buildings so as to prevent ponding adjacent to foundations. We recommend piping roof drains to the curb and gutter downslope from the structures.

- c. Placement of 3 to 4 foot wide concrete aprons around the perimeters of the structures.
- d. Landscaping requiring water should not be placed adjacent to foundations.
- e. Below grade portions of walls/fences which are backfilled with soil should be protected with an impermeable membrane and a subsurface drain. A gravel covered, perforated PVC pipe should also be placed at the base of the wall to carry water to a discharge point. This is intended to reduce the potential for salt weathering and sulfate attack on concrete/masonry.

6. Subsurface Drainage

We recommend placement of a perimeter subdrain around the basement walls in case surface water infiltrates to the basement level. The drain should consist of a 4 inch perforated PVC pipe placed around the perimeter of the of the basement footings. It should be placed such that the bottom of the pipe is at least 12 inches below the finished floor elevation and should slope at a 2% minimum grade to drain to a sump to remove water which may become present in the future. The perforated pipe should be backfilled with 2 feet of 1 inch minus crushed gravel. Prior to backfilling the basement walls with properly compacted fill, Mirafi 140N filter fabric should be placed over the gravel to prevent sand and fines from migrating into the gravel.

B. Foundations

The proposed residences may be supported on conventional spread footings bearing on compacted structural fill underlain by a properly prepared subgrade as recommended in the Subgrade Preparation section of this report. The subgrade should be prepared during site grading by overexcavating and compacting the entire building pad as recommended in the Subgrade Preparation section of this report. Recommendations for design of conventional spread and spot footings are provided below.

1. Bearing Material

Upper level footings should be supported on a zone of properly compacted structural fill extending through the full depth of the collapsible soils with a minimum thickness of one foot. Basement footings should extend through the collapsible soils and should be supported on properly compacted structural fill extending to, or directly on the underlying caliche.

2. Bearing Pressure

Footings bearing on properly compacted structural fill or caliche may be designed for the following net allowable bearing pressures of 2,000 pounds per square foot.

3. Footing Width and Embedment

Footings should have a minimum width of 18 inches and should be embedded at least 12 inches below the lowest adjacent grade.

4. Temporary Loading Conditions

The allowable bearing pressures may be increased by one-half for temporary loading conditions such as wind or seismic loads.

5. Settlement

We estimate that settlement will be approximately 1 inch for footings designed as indicated above due to the load of the structure. Differential settlement is estimated to be approximately ½ inch.

6. Foundation Base

The base of excavations should be cleared of loose or deleterious material prior to placement of fill or concrete.

C. Pool Support

Based on the encountered subsurface conditions, the following recommendations are provided:

1. The pool may be supported on a conventional matt foundation.
2. The pool shell and pool decking should be supported directly on the underlying caliche, or on properly compacted fill extending through the collapsible soil depths shown on Figures 2 and 4.
3. The pool should be excavated with a smooth bladed excavator or a flat shovel prior to construction. Loose or disturbed soil or bedrock should be removed from the bottom of the pool excavation. In no case should any loose or disturbed soil or bedrock remain beneath the pool prior to construction. Alternatively, if the pool is supported on fill, the exposed subgrade should be properly compacted prior to construction.
4. An engineer from AGECE should observe the pool excavation prior to construction to observe subsurface conditions and to verify unsuitable soils or bedrock have been removed.

D. Concrete Slab-on-Grade**1. Slab Support**

Concrete slabs may be supported on a zone of properly prepared (overexcavated) and compacted fill as stated in the Subgrade Preparation section of this report. Fill placed in slab areas should be tested frequently to verify compaction meets the recommendations provided within this report.

2. Underslab Base Course

A 4-inch layer of properly compacted base course should be placed below slabs to provide a firm and consistent subgrade and promote even curing of the concrete.

3. Vapor Barrier

A vapor barrier should be placed below slabs in areas which will receive floor coverings sensitive to moisture or coverings which are impermeable. In addition, a vapor barrier should also be considered beneath the building slab to provide protection from sulfate attack (on the concrete slab) due to the potentially high water soluble sulfates which may exist in the underlying soil.

E. Lateral Earth Pressures**1. Lateral Resistance for Footings**

Lateral resistance for spread footings is controlled by sliding resistance developed between the footing and the subgrade soil. An ultimate friction value of 0.45 may be used in design for ultimate lateral resistance of footings bearing on properly compacted structural fill.

2. Retaining Structures

The following equivalent fluid weights are given for design of subgrade walls and retaining structures. The active condition is where the wall moves away from the soil. The passive condition is where the wall moves into the soil and the at-rest condition is where the wall does not move. We recommend the basement walls be designed in an at-rest condition.

The values listed below assume a horizontal surface adjacent the top and bottom of the wall.

Description	Active	At-Rest	Passive
Imported or on-site granular backfill (sand or processed caliche/sandstone)	35 pcf	55 pcf	325 pcf
Imported or on-site granular backfill - Earth pressure coefficient	0.28	0.44	-

The above values account for the lateral earth pressures due to the soil and level backfill conditions and do not account for hydrostatic pressures or surcharge loads.

Lateral loading should be increased to account for surcharge loading (using the appropriate earth pressure coefficient) and a rectangular distribution if structures are placed above the wall and are within a horizontal distance equal to the height of the wall. If the ground surface slopes up away from the wall, the equivalent fluid weights should also be increased.

Care should be taken to prevent percolation of surface water into the backfill material adjacent to the retaining walls. The risk of hydrostatic buildup can be reduced by placing a subdrain behind the walls consisting of free-draining gravel wrapped in a filter fabric.

3. Seismic Conditions

Under seismic conditions, the equivalent fluid weight should be modified as follows according to the Mononobe-Okabe method assuming a level backfill condition:

Lateral Earth Pressure Condition	Seismic Modification (2% PE in 50 yrs)
	Granular Backfill
Active	9 pcf increase
At-rest	no increase
Passive	23 pcf decrease

The resultant of the seismic increase should be placed at a point equal to 60 percent of the height of the wall.

4. Safety Factors

The values recommended assume mobilization of the soil to achieve the assumed soil strength. Conventional safety factors used for structural analysis for such items as overturning and sliding resistance should be used in design.

F. **Seismicity and Liquefaction**

1. Seismicity

Listed below is a summary of the site parameters as required by the 2018 International Building Code and ASCE 7-16:

Description	Seismic Event - 2% PE in 50 Yrs
	Value
Site Class	C
S_s (0.2 second period)	0.61g
S_1 (1 second period)	0.20g
PGA	0.26g
F_a	1.27
F_v	1.50
F_{PGA}	1.20

The values provided above were generated using the ASCE 7-16 Seismic Hazard Tool. Based on the subsurface conditions anticipated and the seismic parameters mapped for the site as per ASCE 7-16, a ground motion hazard analysis as per ASCE 7-16 is not required by the 2018 International Building Code.

2. Liquefaction

Based on subsurface conditions encountered in the test pits, the subsurface soils observed are non-liquefiable to the depths investigated during a seismic event.

G. Soil Corrosion

Our experience in the area has shown that the on-site soils, caliche, and many imported sources may contain sulfates in sufficient concentration to be corrosive to concrete. Therefore, we recommend concrete elements that will be exposed to the on-site soils be designed in accordance with provisions provided in the American Concrete Institute Manual of Concrete Practice (ACI) 318-14. Tables 19.3.1.1 and 19.3.2.1 of ACI 318-14 should be referenced for design of concrete elements utilizing a Sulfate Exposure Class of S2.

Consideration should also be given to cathodic protection of buried metal pipes. We recommend utilizing PVC pipes where local building codes allow.

H. Pavement

Based on the subsoil conditions encountered and the laboratory test results, the following recommendations are given:

1. Analysis

Asphaltic Concrete: The flexible pavement analysis is based on UDOT and AASHTO design methods and a 20 year design life. The following parameters were considered for our analysis:

- Base course that meets specifications which would correspond to a Structural Coefficient (a_2) of at least 0.12. Asphalt that provides a Structural Coefficient (a_1) of at least 0.40.
- Drainage Coefficient = 1.0.
- The subgrade support soils consist of properly compacted silty sand. A M_R value of 9,000 pounds per square inch (psi) was used for the subgrade based upon an estimated CBR value of 6 percent and the relationship between CBR and Resilient Modulus (M_R).
- Serviceability Index: $P_o = 4.0$, $P_t = 2.5$.
- Reliability of 90 percent.
- Standard Deviation (S_o) = 0.45.

2. Subgrade Support

We anticipate the subgrade materials will consist of compacted on-site silty sand. Our design assumes a properly compacted subgrade. Prior to placing base course or site grading fill, the subgrade should be prepared as recommended in the Subgrade Preparation section of this report.

3. Pavement Thickness

Based on the anticipated traffic, a 20 year design life and AASHTO design methods, the following pavement sections are recommended.

Area	Flexible Pavement	
	Asphaltic concrete (inches)	Base Course (inches)
Interior Roadways (TI = 5)	2½	6
Entrance/Dumpster	3	6

4. Pavement Materials

Flexible Pavement (Asphaltic Concrete)

The pavement materials should meet AASHTO and Hurricane City specifications for gradation and quality. The pavement thicknesses indicated above assume that the base course is high quality material with a CBR of at least 60 percent. Asphalt material should have a Marshall stability of at least 1,800 pounds.

5. Drainage

The collection and diversion of drainage away from the pavement surface is extremely important to the satisfactory performance of the pavement section. Proper drainage should be provided. We further recommend a yearly maintenance program including crack sealing and a surface treatment such as a "slurry seal" to extend the pavement life and reduce water infiltration into the subsurface soils.

I. Construction Testing and Observations

We recommend the following testing and observations be done as a minimum as required by the City of Hurricane.

1. Observe grubbing and verify removal of soil containing roots and organics.
2. Verify that recommended overexcavation depths are achieved in the building pads and beneath roadways. The lateral extent of the building pad should be located by survey (not included in AGECE's Scope of Services) and include the area which extends at least 5 feet beyond the buildable area as per city set-back requirements.
3. Verify that recommended structural fill depths are provided below foundations and slabs.
4. Conduct compaction testing on fill placed below foundations and in building pads. We recommend testing each foot of fill placed.
5. Conduct construction materials testing on city improvements at a frequency which meets or exceeds Hurricane City requirements.

J. Geotechnical Recommendation Review

The client should familiarize themselves with the information contained in this letter. If specific questions arise or if the client does not fully understand the conclusions/recommendations provided, AGECE should be contacted to provide clarification.

LIMITATIONS

This report has been prepared in accordance with generally accepted soil and foundation engineering practices in the area for the use of the client for design purposes. The conclusions and recommendations included within the report are based on the information obtained from the test pits excavated, the data obtained from laboratory testing, our experience in the area and information from the referenced geotechnical investigation. Variations in the subsurface conditions may not become evident until excavation is conducted. If the subsurface conditions or groundwater level are found to be significantly different from those described above, we should be notified to reevaluate our recommendations.

If you have any questions or if we can be of further service please call.

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

Jon Russell Hanson, P.E.

Reviewed by: Arnold DeCastro, P.E.

JRH/sd P:\2021 Project Files\2211800\2211872 - GT - Spendlove 37 Acre Parcel\2211





Not to Scale

SPENDLOVE 37 ACRE PARCEL HURRICANE, UTAH

SPENDLOVE 37 ACRE PARC
HURRICANE, UTAH

-  Approximate test pit location
- (3') Approximate depth to caliche
-  Approximate limit of investigation



0 150 300 feet
Approximate Scale

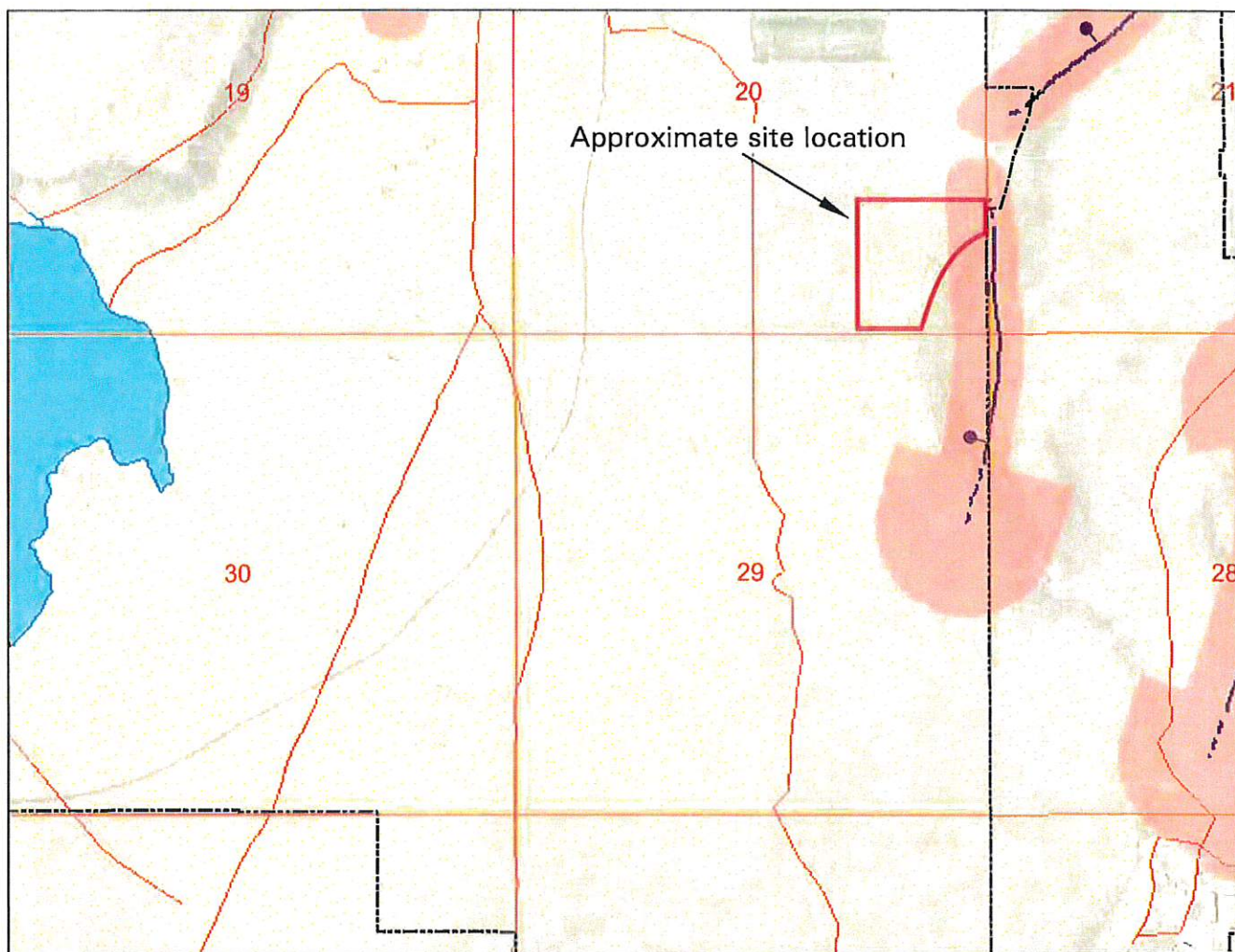


2211872

AGEC

Site

Figure 2



St. George-Hurricane Metropolitan Area, Washington County, Utah, UGS Special Study 127 2008, W.R. Lund, T.R. Knudson, G.S. Vice and L.M. Shaw

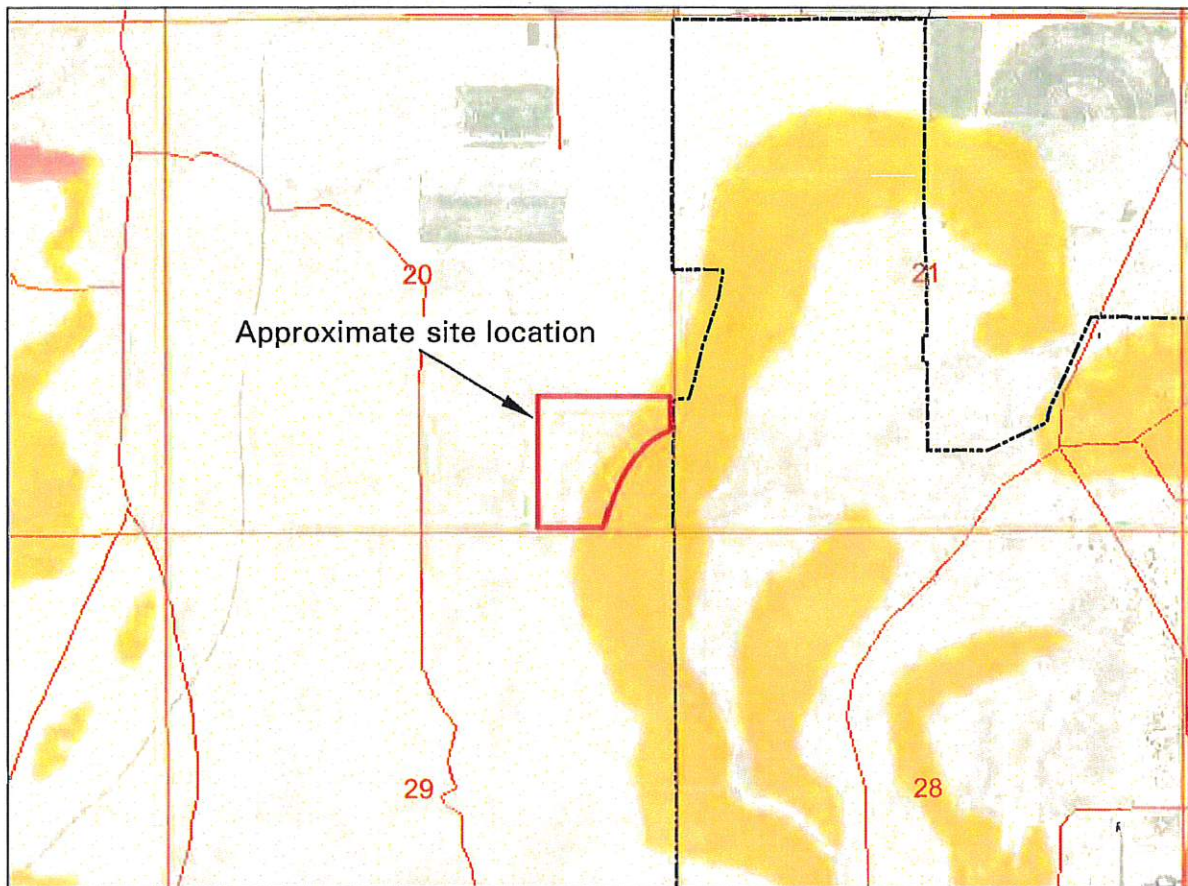
Explanation

-  Well-defined fault with unknown activity level: paleoseismic data are lacking, recommend treating as a Holocene fault until proven otherwise.
-  Buried or approximately located fault with unknown activity level: paleoseismic data are lacking, recommend treating as a Holocene fault until proven otherwise.
-  Surface-fault-rupture-hazard special-study area. The special-study areas established for well-defined faults extend for 500 feet on the downthrown side and 250 feet on the upthrown side of each fault. Because their location is uncertain, the special-study areas around buried or approximately located faults are broader, extending 1000 feet on each side of the suspected trace of the faults.



SPENDLOVE 37 ACRE PARCEL
HURRICANE, UTAH

Approximate Scale 1" = 24,000



Rock-Fall Hazard Map for the St. George-Hurricane Metropolitan Area, Washington County, Utah, UGS Special Study 127 2008, W.R. Lund, T.R. Knudson, G.S. Vice and L.M. Shaw

Explanation:

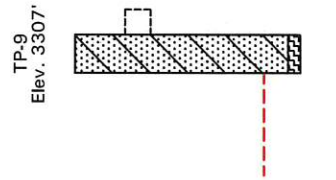
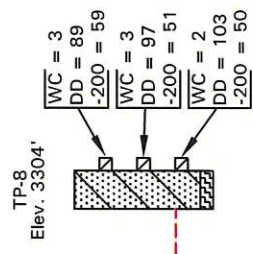
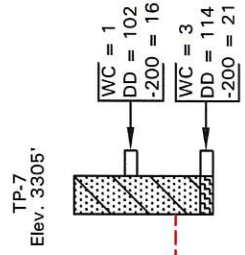
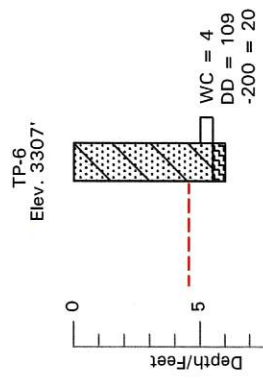
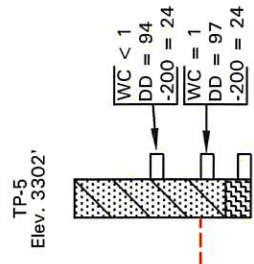
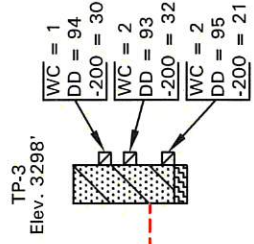
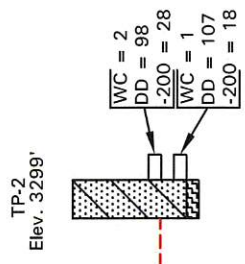
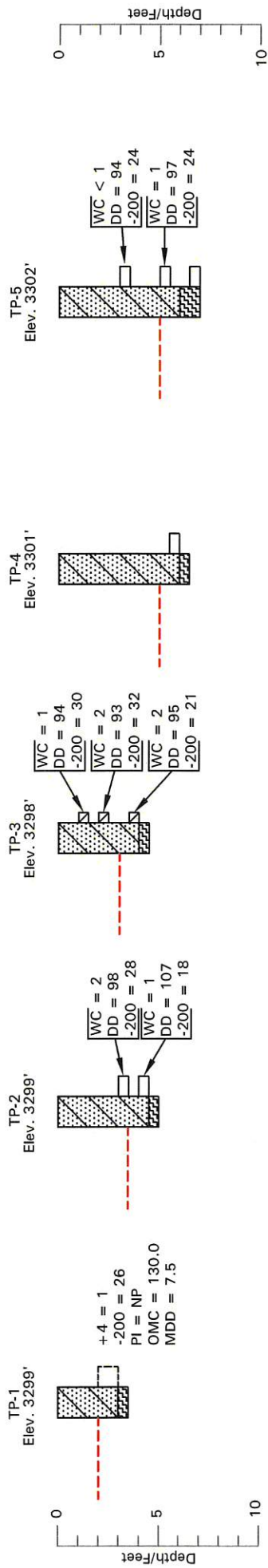


Moderate rock-fall-hazard areas are present where slopes provide sufficient relief to create an acceleration zone, but where only sparse rock-fall debris is present on slopes or in the runoff zone at the base of the slope. Typically rock units in moderate-hazard areas crop out in the slope instead of forming a capping unit, or where a capping unit is present, the resulting rock-fall debris is typically less than 1.5 feet in diameter. Rock units in moderate rock-fall-hazard areas include the Kayenta Formation, Moenave Formation, and portions of the Kaiparowits Formation and Navajo Sandstone.

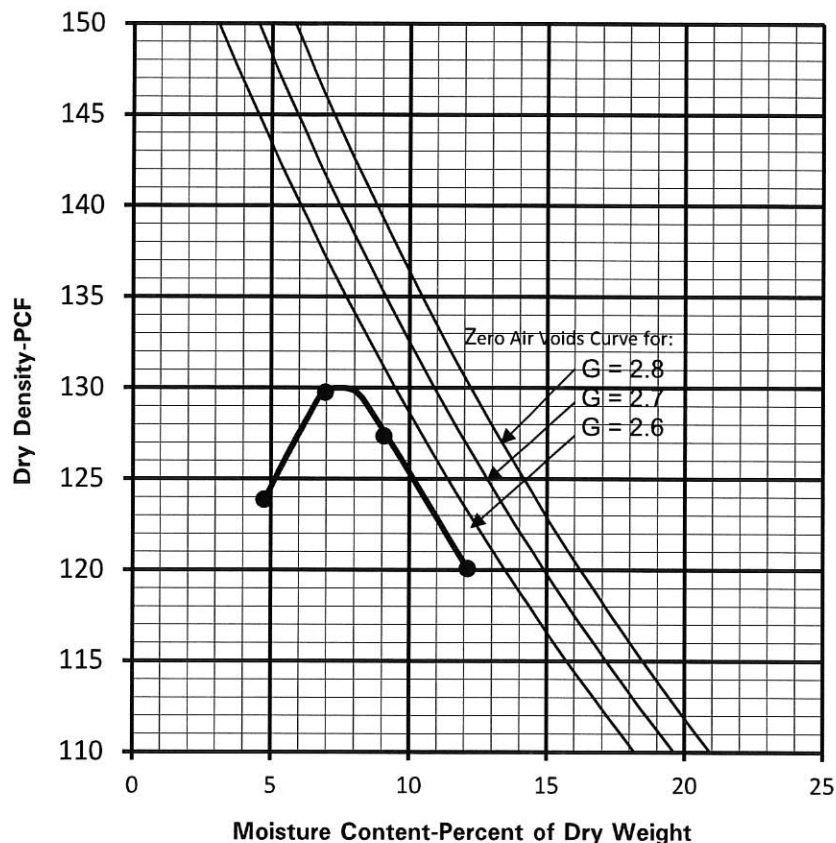


SPENDLOVE 37 ACRE PARCEL
HURRICANE, UTAH

Approximate Scale 1" = 24,000



LEGEND: Silty Sand (SM): medium dense, dry to slightly moist, contains varied silt content and occasional gravel, and is reddish brown in color. Caliche: consists of moderately cemented silty sand. It is moderately hard, dry, and reddish white in color. Indicates relatively undisturbed hand drive sample taken. Indicates relatively undisturbed block sample taken. Indicates disturbed sample taken. Indicates practical backhoe refusal on caliche.	NOTES: 1. The test pits were excavated on August 24, 2021 with a mini-excavator. 2. The locations of the test pits were measured by pacing from site features. 3. The elevations of the test pits were estimated by interpolating between contours on a site plan provided by Desert Shadow Development, dated July 15, 2021. 4. The test pit locations and elevations should be considered accurate only to the degree implied by the method used. 5. The lines between the materials shown on the test pit logs represent the approximate boundaries between material types and the transitions may be gradual. 6. Free water was not encountered in the test pits at the time of excavation. 7. - WC = water content (%); - DD = dry density (pcf); +4 = percent retained on the No. 4 sieve; -200 = percent passing No. 200 sieve; - PI = plasticity index (%); - NP = non-plastic; - MDD = maximum dry density (pcf); - OMC = optimum moisture content (%).
2211872	AGEC Legend and Notes of Test Pits Figure 5



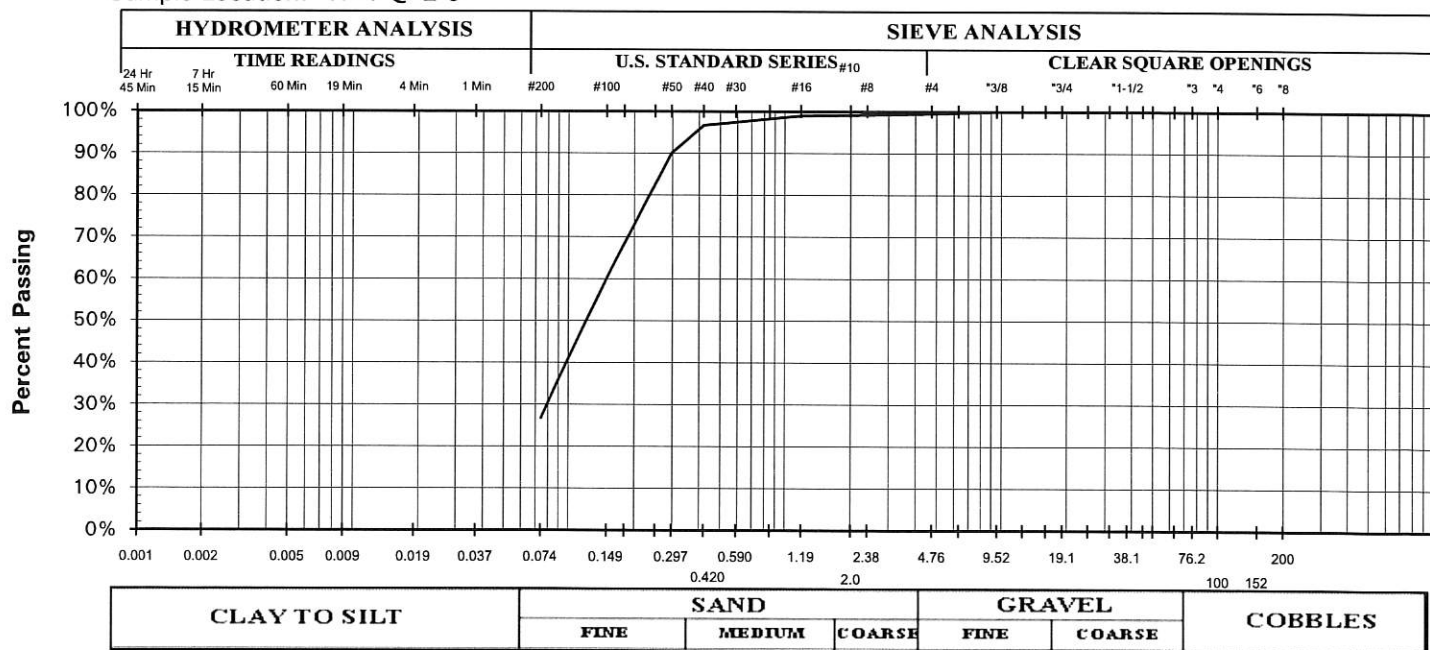
Sample Date: 8/24/21
Sample No. 210825B
Maximum Dry Density: 130.0
Optimum Moisture: 7.5

Atterberg Limits
Liquid Limit:
Plasticity Index: Non-Plastic

Gradation
Gravel: 1%
Sand: 73%
Silt & Clay: 26%

Moisture - Density Relationship Test Procedure: ASTM D-1557 B
 USCS Classification: silty sand (SM)
 AASHTO Classification: A-2-4
 Sample Location: TP-1 @ 2-3'

Reviewed By: TT



GRADATION AND MOISTURE-DENSITY RELATIONSHIP RESULTS

Project No.: 2211872

Figure: 6

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

TABLE I
SUMMARY OF LABORATORY TEST RESULTS

Sample Location		Test Pit No.	Depth (feet)	Natural Moisture Content (%)	Natural Dry Density (pcf)	Gradation			Atterberg Limits		Moisture-Density Relationship		Sample Classification
						Gravel (%)	Sand (%)	Silt/clay (%)	Liquid Limit (%)	Plasticity Index (%)	Optimum Moisture Content (%)	Maximum Dry Density (pcf)	
TP-1	2-3					1	73	26		NP	130.0	7.5	Silty Sand (SM)
TP-2	3			2	98			28					Silty Sand (SM)
TP-2	4			1	107			18					Silty Sand (SM)
TP-3	1			1	94			30					Silty Sand (SM)
TP-3	2			2	93			32					Silty Sand (SM)
TP-3	3½			2	95			21					Silty Sand (SM)
TP-5	3			<1	94			24					Silty Sand (SM)
TP-5	5			1	97			24					Silty Sand (SM)
TP-6	5			4	109			20					Silty Sand (SM)
TP-7	2			1	102			16					Silty Sand (SM)
TP-7	5			3	114			21					Silty Sand (SM)
TP-8	1			3	89			59					Sandy Silt (ML)
TP-8	2½			3	97			51					Sandy Silt (ML)
TP-8	4			2	103			50					Silty Sand (SM)

Spendlove 37 Acres Project Number 2211872

ENGINEER:
HORROCKS ENGINEERS
555 South Bluff St., Suite 101
St. George, UT 84770
(435) 599-7368
CONTACT: TONY CARTER, PE

APPLICANT/OWNER:
TYTANIUM DEVELOPMENT, LLC
2712 RIO VISTA DRIVE
ST. GEORGE, UTAH 84790
(435) 773-0707
CONTACT: TY MEYERS

DESERT TORTOISE

THE PROPERTY IS NOT IN TAKE AREA 7 - HURRICANE

CENTER 1/4 OF OF SECTION 20,
T42S, R13W, SLB&M
R&B SURVEYING REBAR/CAP
SET DURING PREVIOUS SURVEY
FOR OTHERS

**SECTION A-A
RESIDENTIAL LOCAL (PUBLIC)**

TYTANIUM DEVELOPMENT, LLC
DOC. NO. 20210065536
LESS 2100 WEST STREET PER DOC. NO. 20180050579
PARCEL "B" - 21.087 ACRES
TPN #H-3386-B

**3500 SOUTH
MAJOR COLLECTOR (PUBLIC)**

TPN #H-3384-B
ROS RS008216-21

TPN #H-3385
ROS RS008216-21

TPN #H-3386-A
ROS RS008216-21

TPN #H-3387

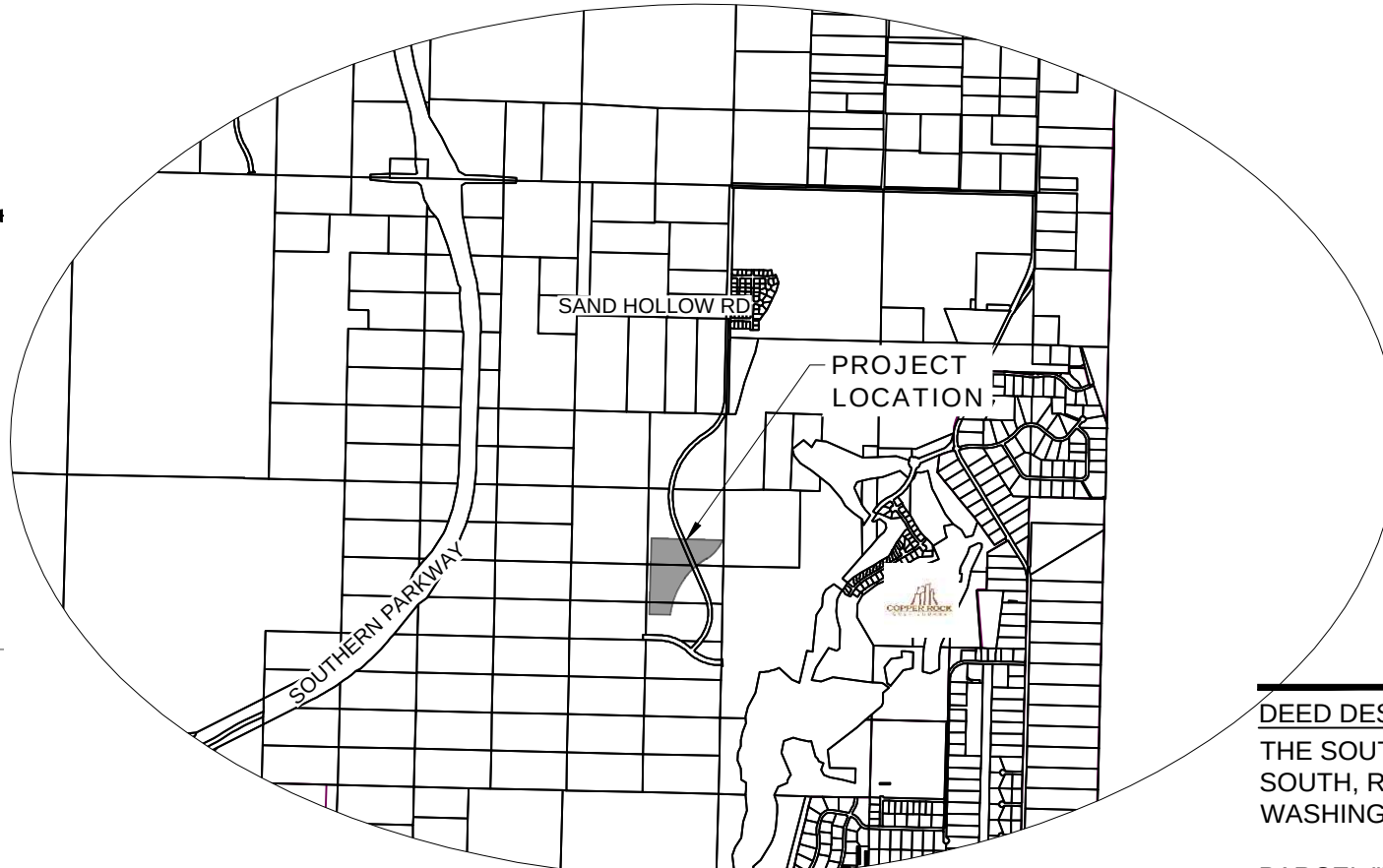
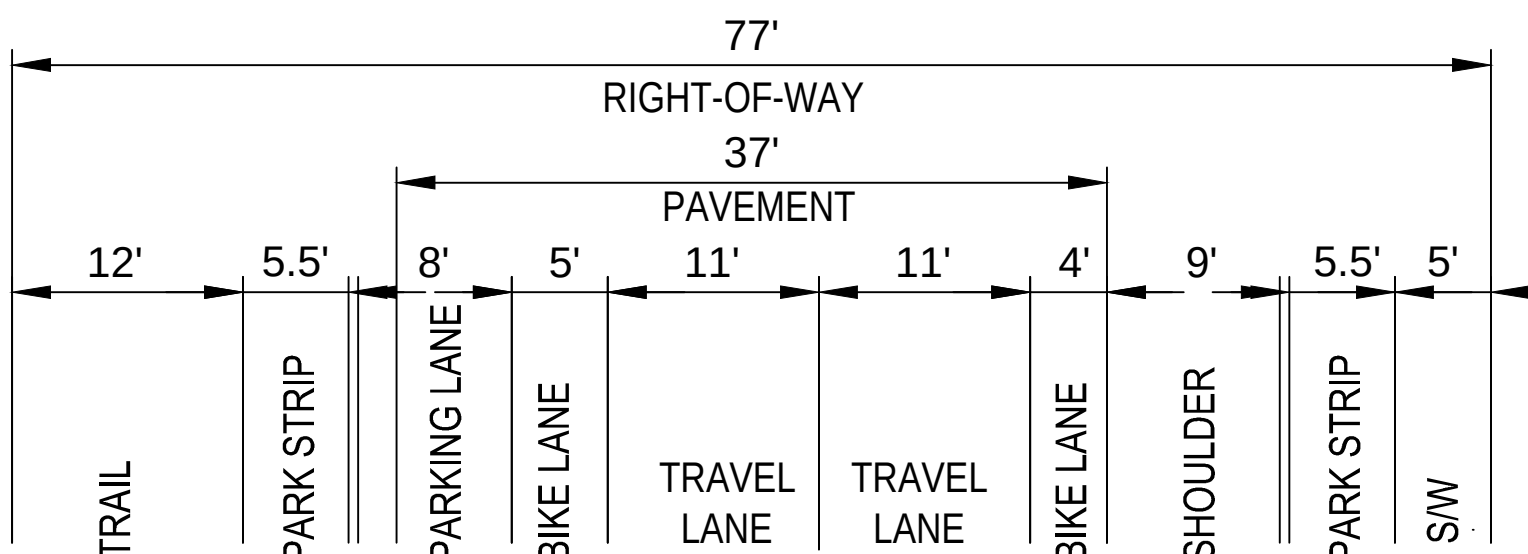
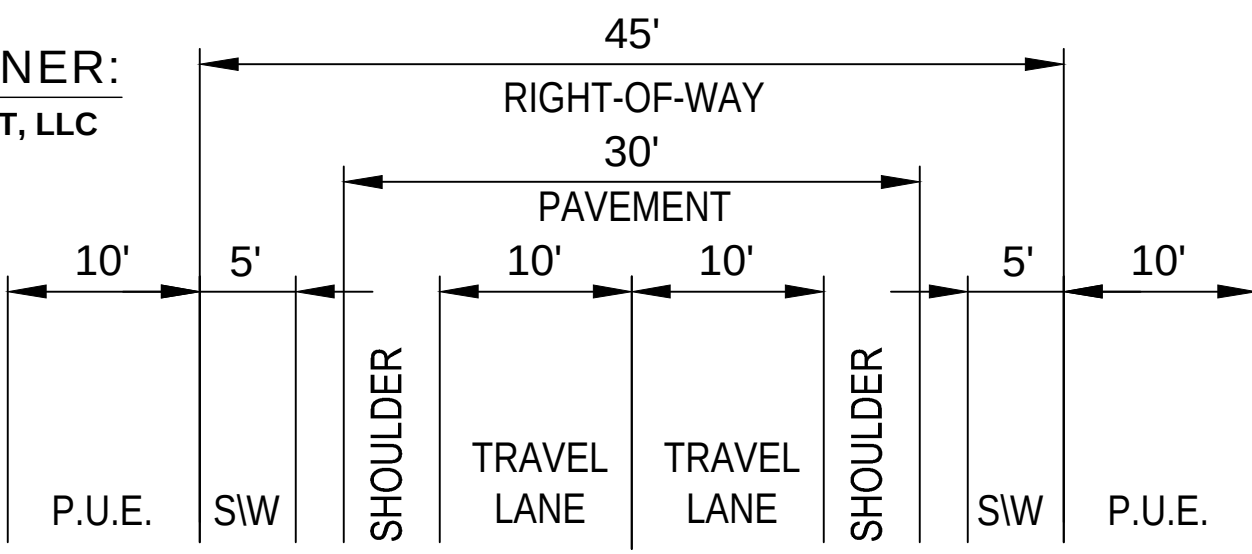
1/16TH CORNER
R&B SURVEYING REBAR/CAP
SET DURING PREVIOUS SURVEY
FOR OTHERS

TPN #H-3393
ROS RS008216-21

SOUTH 1/4 CORNER OF OF SECTION 20,
T42S, R13W, SLB&M
ROSENBERG REBAR/CAP
ROSENBERG SURVEY
ROS RS008216-21

TPN #H-3399
ROS RS008216-21

TPN #H-3399-HP
ROS RS008216-21



VICINITY MAP



0 100' 200'
SCALE: 1" = 100'

BOUNDARY DESCRIPTIONS

DEED DESCRIPTION (DOC. NO. 20210065536):
THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 42 SOUTH, RANGE 13 WEST OF THE SALT LAKE MERIDIAN, COUNTY OF WASHINGTON

PARCEL "B":
BEGINNING AT A POINT N88°49'17"W, 958.53 FEET ALONG THE SECTION LINE FROM THE SOUTHEAST CORNER OF SECTION 20, T42S, R13W, SLB&M, SAID POINT BEING ON THE WESTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, A 70.00 FOOT WIDE PUBLIC ROADWAY DEDICATED BY DOCUMENT NO. 20180050579 AS FILED IN THE OFFICE OF THE WASHINGTON COUNTY RECORDER, RUNNING THENCE N88°49'17"W, 357.43 FEET ALONG THE SECTION LINE TO THE EAST 1/16TH CORNER; THENCE N1°01'36"E, 1321.58 FEET TO A POINT ON THE 1/16TH LINE; THENCE S88°51'25"E, 1227.96 FEET ALONG THE 1/16TH LINE TO SAID WESTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, SAID POINT BEING ON A 730.00 FOOT RADIUS NON-TANGENT CURVE TO THE RIGHT, RADIUS POINT BEARS N66°57'41"W, THENCE SOUTHWESTERLY 427.84 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 33°34'48"; THENCE S56°37'07"W, 55.43 FEET TO THE POINT OF CURVE OF A 1300.00 FOOT RADIUS CURVE TO THE LEFT; THENCE SOUTHWESTERLY 1148.72 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 50°37'41" TO THE POINT OF BEGINNING.

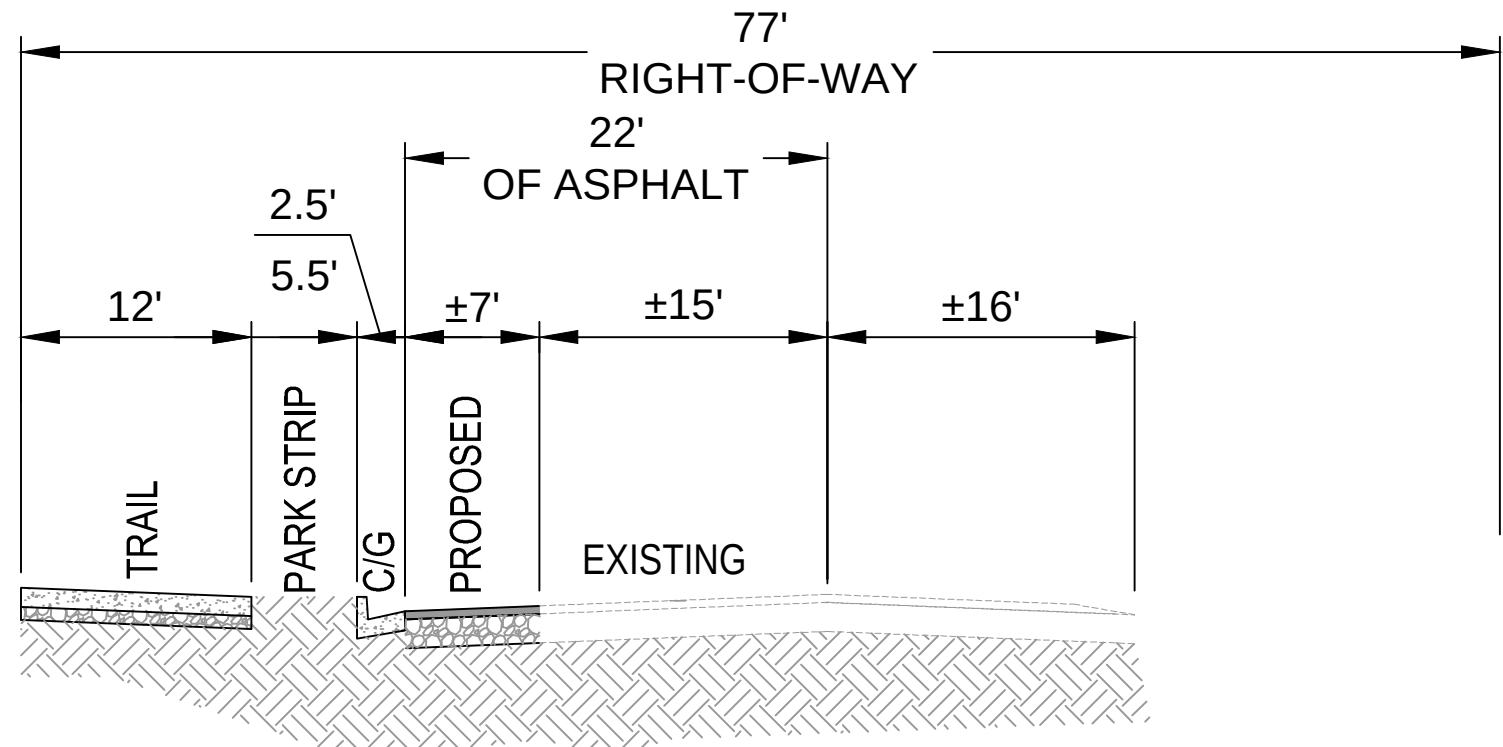
CONTAINING 21.087 ACRES.

BASIS OF BEARING

THE BASIS OF BEARING FOR THIS SURVEY IS N88°49'17"W ALONG THE SECTION LINE BETWEEN THE SOUTHEAST CORNER AND THE SOUTH QUARTER OF SECTION 20, T42S, R13W, SLB&M AS SHOWN AND NOTED HEREON.

LEGEND:

- SS --- EXISTING 8" SANITARY SEWER
- W --- EXISTING 8" WATER
- S --- EXISTING SEWER MANHOLE
- V --- EXISTING WATER VALVE
- F --- EXISTING FIRE HYDRANT
- SD --- PROPOSED STORM DRAIN INLET
- SD --- PROPOSED STORM DRAIN
- S --- SECTION LINE
- S --- FOUND SECTION CORNER
- L --- LOT LINE
- S --- PHASE LINE
- SD --- EXISTING STORM DRAIN
- S --- PROPERTY BOUNDARY
- SS --- PROPOSED 8" SANITARY SEWER
- W --- PROPOSED 8" WATER
- S --- PROPOSED SEWER MANHOLE
- V --- PROPOSED WATER/IRRIGATION VALVE
- F --- PROPOSED FIRE HYDRANT
- S --- PROPOSED CURB & GUTTER
- S --- EXISTING MAJOR CONTOURS
- S --- EXISTING MINOR CONTOURS
- S --- PROPOSED DETENTION POND
- S --- PROPOSED ROADWAY PAVEMENT



**2100 WEST STREET
MAJOR COLLECTOR (PUBLIC)**

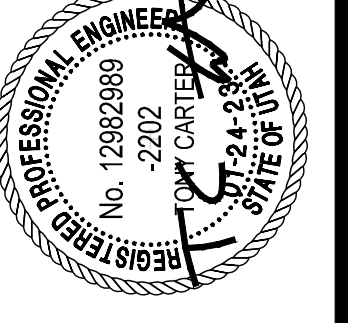
HORROCKS ENGINEERS

2162 West Grove Plwy., Suite 400
Pleasant Grove, UT 84062
(801) 763-5100
www.horrocksm.com

WARNING

IF THIS BAR DOES NOT
MEASURE 2" THEN
DRAWING IS NOT TO SCALE

DRAWING INFO	REVISIONS
DATE: 01/24/2023	REV #
DESIGNED: TC	DATE
DRAWN: CC	
CHECKED: TC	
PROJECT: UT-617-22	



DESERT SKY ESTATES

HURRICANE CITY, UTAH
PRELIMINARY PLAT
R-1-10 SINGLE FAMILY SUBDIVISION



PP-01

Agenda Date:	02/02/2022
Application Number:	2022-PP-26
Type of Application:	Preliminary Plat Application
Action Type:	Administrative
Applicant:	Desert Sky Estates
Agent:	Ben Willits and Tony Carter
Request:	Approval of a Preliminary Plat
Location:	South of 2100 W and 3000 S
Zoning:	R1-8 PDO ¹
General Plan Map:	Planned Community

Planning Commission Recommendation

The Planning Commission recommended the preliminary plat be denied with the findings that

1. Lack of adequate public facilities and infrastructure, including power capacity.
2. Failure to comply with the terms of the development agreement governing the development of this property.

Updated Plat 1/26/2023:

The Applicant has submitted a new plat to address the comments by staff and JUC. They have also submitted will-serve letters as required. Main changes with the preliminary plat

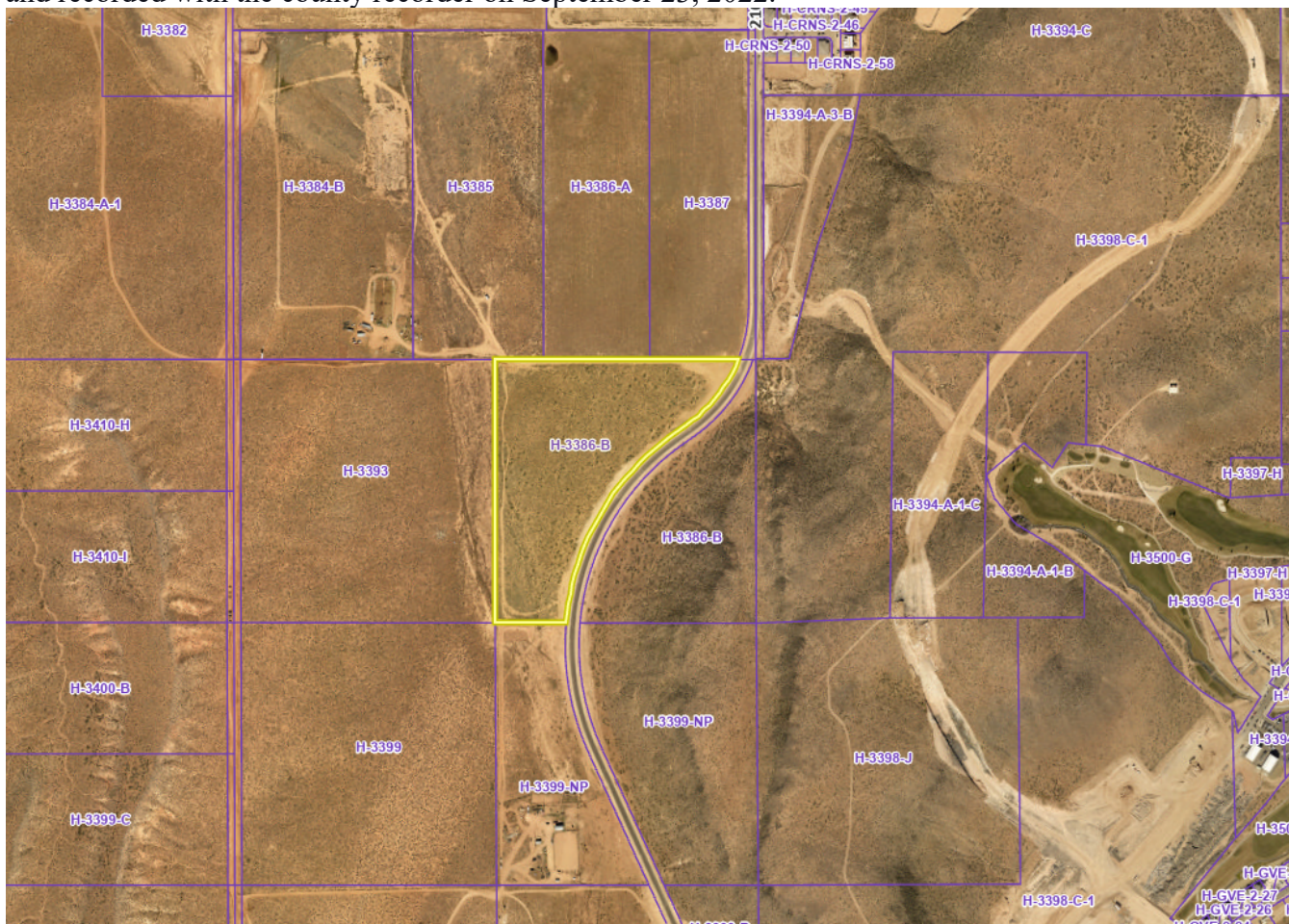
- Increased connectivity to adjacent properties. They now have two roads stubbed north and one other road to the west. These connections have fixed the connectivity issues and the block length issues
- They have dropped one unit from 73 to 72.
- They have updated the master plan roadway cross-section to match our Active Transportation Master Plan for both the eastern roadway and southern
- Staff has forwarded this to engineering and water to get feedback. Engineering's initial review is that the plat addresses their concerns except for drainage. This property has historic drainage that needs to be planned and accounted. Engineering has expressed concerns that what is shown likely will not address the drainage issues.
- The Applicant has submitted a water model to the Water Departments' engineer. Unfortunately, at this time, staff has not heard if the water department is ready to accept the update.
- The Applicant has summarized the update in a memo to the City.

¹ The Zone Map shows this as property as R1-10. This is an error per the November 18, 2021, Hurricane City Council minutes

Update 01/26/2023: The City Council voted to allow this application to reapply for preliminary plat approval. The City Council’s rationale was that by the time construction drawings were completed then power will be sufficient in the area. However, this would only resolve one of the issues with this application. Staff encourages the Planning Commission to reread through our original report below and evaluate this application under the standards of the Hurricane City Code. Staff still recommends denial of this application for the reasons listed below.

Update 10/27/2022: No updates have been received at the time of this writing. Staff recommends tabling this application.

Discussion: The applicant is proposing a 72 lot single family subdivision located along 2100 West. The zone change for this property was approved in 2021 under the name “Spendlove 37 PDO” conditioned on a development agreement being signed that limits their unit count and ability to move forward until utilities are available to the site. This development agreement has been recently signed by the applicant and recorded with the county recorder on September 23, 2022.



JUC Comments

Public Works: Needs second access. Needs to complete improvements on 2100 West. No power to location at present.

Water: The City's water system distribution capacity is limited in this area due to substantial growth and limited connectivity between existing water tanks and pipelines. The areas with limited distribution capacity are shown on the attached exhibit. Prior to any additional plats or site plans being approved in this area, the Water Department recommends that the developer be required to provide an analysis to determine whether adequate public water facilities are available to service the development, and whether the development will change existing levels of service or create a demand that exceeds acceptable levels of service for water flow, water lines, and water pressure. The Water Department also requests an opportunity to have its own engineer review the analysis or study prior to any approvals. Requiring this type of water study prior to approval of a development is authorized by City Code sections 10-37-4 and 9-6-3.

Cable: No comments.

Power: At this time, the City's power grid is inadequate to support all of the development planned in the area south of 2700 South Street. Although the Power Department has plans to expand and enhance its system to supply adequate power to this area, those plans are subject to funding limitations, the City's acquisition of easements and rights-of-way, the availability of materials, and other limitations. Therefore, the Power Department cannot presently guarantee that it can provide power to all of the development planned in this area, which includes this proposed development. Developers must fill out a construction application and meet with the power department before proceeding to JUC. Overhead powerline on 2100 West will need to be upgraded and moved to the west side of the road at developers' cost. Necessary easements must be obtained by the developer.

Sewer: Sewer is in 2100 West and will need to be stubbed to the next property over on the southern roadway.

Engineering: Where will the proposed basin outlet to? An open storm drain channel is shown crossing the property on page 36 of the Hurricane Storm Drain Master Plan. It appears stormwater is semi-channelised by existing conditions near the property's southwest corner. 2100 W is a planned 77' ROW with a 12' trail on the west side. It appears the developer will need to transfer an additional 7' wide strip along 2100 W to the City after providing curb, gutter and trail improvements. Full movement intersections on 2100 W and the other master planned road (3500 S?) must be separated 250' or offset 200' minimum. Stormwater from existing culverts must be conveyed to the next logical outfall. Southern roadway is a master planned major collector with a 12' sidepath on both sides. Storm drain between lots should be protected by a public ROW or common area. It appears the proposed road network is inconsistent with design standards 3.2.4.2.E and 3.2.4.2.F. A roadway should be stubbed to the northern property.

Streets: Improvements on 2100 West. Are detention ponds sufficient for this size of development?

Fire: Need second access.

Staff Comments: Preliminary Plat

1. **Density:** The applicant is proposing 73 units over 21.087 acres for a density of 3.46 units per acre. The development agreement guarantees a total of 129 units for the development. This will

leave a total of 56 units remaining, which is planned to be townhomes located to the east of 2100 West.

2. Connectivity: Hurricane City Code states:

- a. *Sec. 10-39-11. - Subdivision streets and fencing.*
- b. *Relation to adjoining street systems.*
 - i. *The arrangements of streets in new subdivisions shall make provision for the continuation of the existing streets to adjoining areas insofar as such may be deemed necessary by the Planning Commission for public requirements. New streets within subdivisions shall not preclude future access to adjoining properties.*
- c. The applicant has made the required changes.

3. Second access: The requirement for developments to have a second access if they have more than 30 units is adjudicated by the Hurricane Valley Fire District. The plan shows all of the property's access being off 2100 W. At this time there are almost no other roadways in the area. Cordero has put in 2600 W up to 3000 S for their fire access and this may be usable for this development as well and needs additional review by the fire marshal.

- a. The applicant has made changes to address these concerns.

4. Hurricane City Code 10-37-4 states:

- a. *Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development. The City may require an analysis to be completed to determine whether adequate public facilities are available to service a development and whether such development will change existing levels of service or will create a demand which exceeds acceptable levels of service for roadways, intersections, bridges, storm drainage facilities, water lines, water pressure, sewer lines, fire and emergency response times, and other similar public services. The City may disapprove a proposed development if demand for public services exceeds accepted levels of service. No subsequent approval of such development shall be given until either the developer or the City installs improvements calculated to raise service levels to the standard adopted by the City.*
- b. The Power Department has indicated that there is no more power capacity for additional units in this area in light of other developments that have already obtained signed construction drawings. There is also a question regarding the sufficiency of water in the area.

5. Will serve letters have been provided from the culinary and sanitary water providers

6. A note has not been added to the plat indicating whether the property is in a tortoise take area

7. The Development Agreement governing the property includes the following language:

a. Developer understands, acknowledges and specifically agrees that: (a) power, water, and other utility services to the Property are not currently available and have not been extended to the Property, (b) the granting of this zone change does not in any way guarantee or warrant the availability and extension of power and water utility services to the Property, (c) **no application** for any permit **requiring the availability or extension of power or water service**, and no other request requiring the availability and extension of power or water services, **shall be filed or made until such time that such services are available and have been extended to the Property**, and (d) Developer assumes all risk and liability associated with any development activity on the Property, including but not limited to all costs incurred for engineering, feasibility studies, etc., in the event that such services do not become available and are not extended to the Property.

b. Adequate Public Facilities. The City may deny any land use application for any development on the Property, including but not limited to preliminary plats, building permits, zone changes, and preliminary site plans by finding that utilities and roadways are (1) inadequate to support the proposed development or (2) services are not in the vicinity of the proposed application. The City may consider approval of a project if the applicant can show that current utility and roadway systems are adequate to meet the demand for the project and the applicant can provide a plan on how to reasonably connect utilities and roadways to the proposed development according to Hurricane City standards.

The development agreement prohibits the filing of an application that requires the availability power until the services are available.

LEGAL COMMENTS ON APPLICATION

Applying the Ordinances:

The approval or denial of a preliminary plat application is an administrative decision in which the City's ordinances are applied to the application, so the City's ordinances should dictate whether a preliminary plat application is approved or denied. There are two City ordinances that are relevant to this application: Hurricane City Code ("HCC") sections 9-6-3 and 10-37-4.

HCC section 10-37-4 states that: "Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development. ... The City may disapprove a proposed development if demand for public services exceeds accepted levels of service. No subsequent approval of such development shall be given until either the developer or the City installs improvements calculated to raise service levels to the standard adopted by the City."

HCC section 9-6-3 states that: "Land shall be developed only where public facilities are in place or will be timely provided to serve proposed development at a level of service which meets the City's adopted level of service standards. ... A proposed development shall not be approved if demand for a public facility will exceed adopted level of service standards unless public facility improvements, reasonably calculated to raise service levels to adopted level of service standards, will be available to serve the development.

When considering an application for development in an area where City staff have found that public facilities are inadequate to serve the development at the established level of service, the question for the Planning Commission and City Council is whether the necessary public facilities "will be timely provided" to serve the development at adopted levels of service. If the City Council cannot find (determine) that the necessary public facilities "will be timely provided" to provide for the new development, then the City's ordinances require that the development be denied.

Basis and Support for Decision:

An approval or denial of a preliminary plat application needs to be supported by evidence in the record. City staff's recommendation of denial is based on the following evidence: (1) a report prepared by Intermountain Consumer Professional Engineers, Inc., together with the Power Department's analysis, concluding that "addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels"; (2) a Limited Distribution Capacity analysis for water service levels in the area prepared by Alpha Engineering; and (3) the uncertainty and unknown timeline as to when power and water infrastructure will be installed to raise service levels to acceptable standards. If the Planning Commission or City Council finds (determines) that the necessary public facilities "will be timely provided" to address the inadequate facilities, that finding needs to be supported by evidence in the record.

Understanding the Process:

After a preliminary plat is approved by the City Council, the development typically never returns to the Council for further approval. After preliminary plat approval, the next phase is the preparation of detailed construction drawings, which are reviewed and approved by members of the city's Joint Utility Committee. After construction drawings are approved and a final plat application is filed with staff, the developer is permitted to move forward with actual construction of the development. The recording of a final plat is the final step and is approved by the City Engineer, the Mayor, and the City Attorney. If a development that lacks adequate public facilities is approved at the preliminary plat stage, then it leaves members of staff to determine whether construction drawings should be approved to allow the development to begin construction. When reviewing construction drawings, members of staff are

also constrained by the requirements of HCC sections 9-6-3 and 10-37-4. Therefore, it would be ideal if the City Council and staff were aligned on when development with inadequate public facilities should be permitted to proceed. If a proposed development cannot be approved pursuant to City ordinances, the City Council would be the preferred body to make that determination—instead of letting it fall to individual utility departments and staff members.

Policy Behind the Ordinances:

The adequacy of public facilities is a factor at every phase of development, beginning with zone change applications. A key policy driving this approach is to avoid a situation where a developer believes that a development is entitled to proceed, but the City is unable to provide the necessary services to the development without jeopardizing service to existing residents. Also, developers invest additional funds into a project at each phase of development. Therefore, the further along that the City allows development to occur without adequate public facilities, the larger the potential legal claim against the City if the developer ultimately cannot connect to the City's utility systems for lack of capacity. If the City Council determines that the necessary public facilities are not currently available but "will be timely provided" to serve the development, the City Council should only approve the preliminary plat on the condition that the owner execute a development agreement limiting the developer's rights and outlining the procedure for handling the project, all in a form approved by the City Attorney.

Recommendation: Staff recommends the City Council review this application based on standards within the Hurricane City Code and the terms listed within the Development Agreement. Staff recommends that the application for a preliminary plat be denied or tabled for the reasons listed in this report, including:

1. Lack of adequate public facilities and infrastructure, including power capacity.
2. Failure to comply with the terms of the development agreement governing the development of this property.

MEMORANDUM

TO: Hurricane Planning Commission
FROM: Tony Carter, P.E.
DATE: January 24, 2023
SUBJECT: Desert Sky Estates

Desert Sky Estates – Response to Planning Staff Comments

- **Public Works:** Secondary access will be provided along 3500 S. There will be future access points to the north and to the west of the property.
- **Water:** A water model is provided with this submittal and has been emailed to Alpha Engineering and Hurricane City Engineering.
- **Power:** There are currently no power lines located on the east side of the road, Horrocks Engineers looks forward to meeting with the power department during the completion of JUC plans.
- **Sewer:** Sewer will be provided along 3500 S. extending past the edge of pavement.
- **Engineering:** I see a proposed 810 cfs open flow channel proposed in Hurricane City Storm Drain Master Plan Reports. Horrocks plan on working with Hurricane City Engineering department to address this concern before JUC drawings are submitted.
 - The 77-ft ROW is included along 2100 W and 3500 S which include the 12-ft trail. A new cross section has been added to the preliminary plat.
 - Roadways are now stubbed to the north and to the west.
 - Currently 2100 W & 3500 S are separated by 269-ft which satisfy the 250-ft Hurricane separation code.
- **Streets:** Detention Pond sizing will take place prior to JUC submittal. If revisions need to happen to provide adequate storage then the lot lines will be adjusted or removed to make room for the required storage.
- **Fire:** Secondary access is provided along 3500 S. Two additional access points will be provided to the north and two more to the west.
- **Connectivity:** The block lengths have been adjusted to meet the 800-ft standard and to provide secondary access to the west of the property.

Addendum to Hurricane Circuit CW101 Analysis Report

In the "Hurricane Circuit CW101 Analysis Report" it was stated:

Load Flow Analysis

Circuit CW-101 was studied using real time regulator load data and through computer modeling using SKM software. Study shows that the existing circuit does not have overloading conditions but is voltage limited. It was determined that:

- 1. Areas of the existing circuit does experience voltage drop below Level of Service criteria under peak loading.*
- 2. Addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels.*

Potential short term solutions for some load addition would be:

- 1. Optimize voltage regulator bank position.*
- 2. Add another in line regulator bank.*
- 3. Add capacitor banks to maintain a high power factor during peak loading.*
- 4. If possible, move existing load to another circuit to allow new load.*

Additional work is needed to determine potential loading with equipment addition and or load transfer; noting the limitations of the existing Bench Lake regulators (1.9 MVA margin) and line conductors.

Subsequent to report issuance, ICPE was requested to study potential short term solutions to maximize load addition to the southern end of the circuit. This addendum provides finding of the additional study.

As a part of the study ICPE was directed to study transferring approximately 1.5 MW from circuit CW101 to other circuits. Transferred load include loads along 600N, loads east of 700 West, and some loads off 2500 South and 700 west.

Studies included:

1. Determining possible load addition at the southern end of the circuit with only the 1.5 MW load transfers.
2. Determining possible load addition with load transfer and relocation of the Bench Lake regulators in the Northward direction.
3. Determine possible load addition with a new regulator bank and with the Bench Lake regulators.
4. Study optimizing regulator bank(s) locations.
5. Studying the effect of capacitor banks added for power factor correction.

For the studies voltage was allowed to drop to 0.97 pu at circuit end points. Studies indicate that maximum power transfer is possible with:

1. The addition of a regulator bank in the vicinity of 1300 South and 950 West (with no load between the substation and regulator bank).
2. Add a second regulator bank southward (approx. ½ mile) of the existing Bench Lake regulator bank. (The existing Bench Lake regulators would need to be removed and with a larger bank installed in the southward location)
3. Install capacitor banks as needed and in optimal locations to main a high power factor on the circuit.
4. Maintain a balanced circuit.

With improvements as indicated loading on circuit CW101 can go to approximately 4.8 MW with approximately 4.2 MW's flowing southward of 2050 south. The 4.2 MW flow represents 2.3 MW over existing loads south of the Bench Lake regulators. Under indicated loading voltage at the unregulated (source side) bus of the 1300 South regulator bank falls to 0.95 pu.

Some incremental load addition (600 kW) may be obtained by reconductoring the 1/0 circuit section between approximately 2100 South and 3000 south and with the regulator bank bench lake regulator bank upsized and located southward 1mile, verses 0.5 mile, from the existing site.

Removal of the existing Bench Lake regulator bank with a new down line replacement bank should be delayed until needed allowing to monitor load growth patterns.

It is noted that actual allowable load addition will be influenced by actual grow patterns.

For review select load flow studies and results are tabulated and results for various configurations.

All cases with approx 1.5MVA moved to other circuits from 2021 Loading

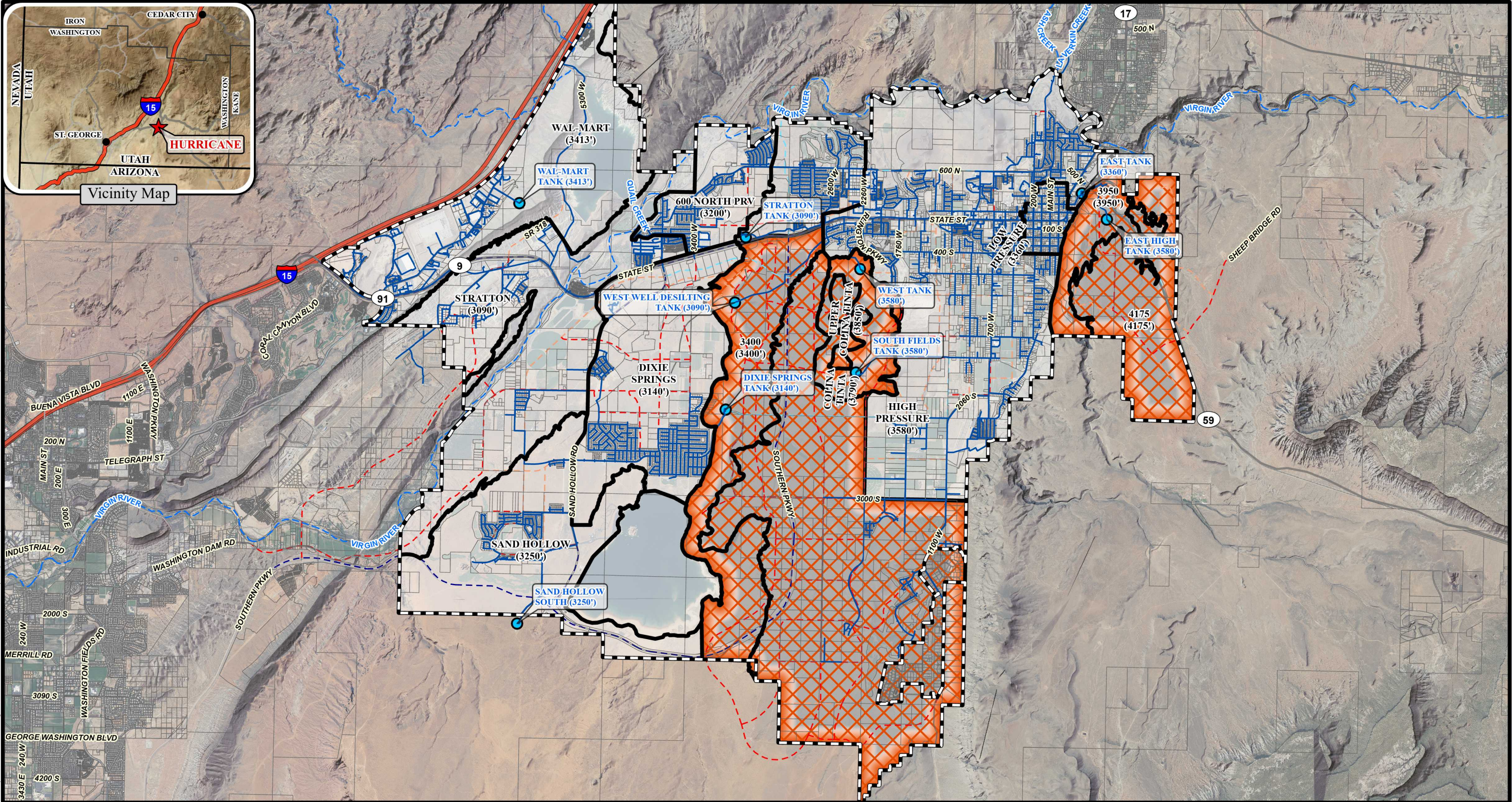
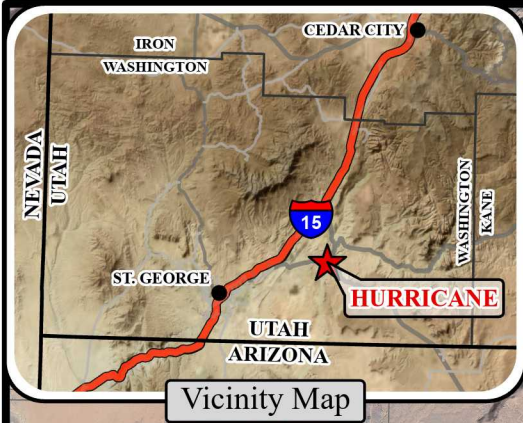
Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results ---															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps		
1	2021 loading with loads relocated to other circuits and aprox 500KW added below BL reg's Capacitor Addition: none	@CW MVA 2.637; MW 2.157; MVAR .788 @ BL REGS MVA 2.277; MW 2.161; MVAR .717.3 CW P.F: .95	Volt: 12,579 Vpu: 1.008	Volt: 12,243 Vpu: 0.982	Volt: 12,186 Vpu: 0.977	Volt: 12,099 Vpu: 0.97	Volt: 12,675 Vpu: 1.016	Volt: 12,499 Vpu: 1.002	Volt: 12,426 Vpu: 0.997	Volt: 12,488 Vpu: 1.001	Volt: 12,486 Vpu: 1.001	Volt: 12,322 Vpu: 0.981	Volt: 12,390 Vpu: 0.994		

All cases with approx 1.5MVA moved to other circuits from 2021 loading

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results ---- with BL Regulators Removed and NEW Regulator at approx. 1300 So and 950 West															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	1300 So 950West non Reg bus	1300 So 950 West Reg bus	Bus-004 (1300 South)	Bus-009 (2050 South)	-	Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
4	No BL Regs -- Regs at 1300 So and pump load at end of circuit -- Addition: none	@CW MVA 2.820; MW 2.674; MVAR .896 CW PF: .95	Volt: 12,570 Vpu: 1.008	Volt: 12,260 Vpu: 0.983	Volt: 12,668 Vpu: 1.016	Volt: 12,617 Vpu: 1.012	Volt: 12,559 Vpu: 1.007		Volt: 12,470 Vpu: 1	Volt: 12,277 Vpu: 0.985	Volt: 12,189 Vpu: 0.977	Volt: 12,265 Vpu: 0.984	Volt: 12,263 Vpu: 0.983	Volt: 12,096 Vpu: 0.97	Volt: 12,153 Vpu: 0.975
4A	No BL Regs -- Regs at 1300 So and pump load at end of circuit removed. Addition: 450 kvar	@CW MVA 3.06; MW 3.025; MVAR .460 CW PF: .99	Volt: 12,577 Vpu: 1.009	Volt:12,307 Vpu: 0.987	Volt: 12,651 Vpu: 1.015	Volt: 12,608 Vpu: 1.011	Volt: 12,553 Vpu: 1.006		Volt: 12,464 Vpu: 0.995	Volt: 12,272 Vpu: 0.984	Volt: 12,172 Vpu: 0.976	Volt: 12,263 Vpu: 0.9864	Volt: 12,262 Vpu: 0.983	Volt: 12,097 Vpu: 0.97	Volt: - NA Vpu: - NA

All cases with approx 1.5MVA moved to other circuits from 2021 loading

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results -- With BL Regulators and NEW Regulators at 1300 south and 950 west															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	1300 So 950West non Reg bus	1300 So 950 West Reg bus	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
7	BL Regs & Regs at 1300 So and pump load at end of circuit. CAP Addition: 600 kvar	@CW MVA 4.259; MW 4.05; MVAR 1.319 @ BL REGS MVA 3.676 ; MW 3.545 ; MVAR .973 CW PF: .95	Volt: 12,562 Vpu: 1.007	Volt: 12,100 Vpu: 0.97	Volt: 12,683 Vpu: 1.017	Volt: 12,612 Vpu: 1.014	Volt: 12,525 Vpu: 1.004	Volt: 12,390 Vpu: 0.994	Volt: 12,662 Vpu: 1.015	Volt: 12,378 Vpu: 0.993	Volt: 12,177 Vpu: 0.977	Volt: 12,369 Vpu: 0.992	Volt: 12,367 Vpu: 0.992	Volt: 12,201 Vpu: 0.979	Volt: 12,096 Vpu: 0.97
8	BL Regs & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: none	@CW MVA 4.737; MW 4.165; MVAR 2.255 @ BL REGS MVA 3.963; MW 3.615; MVAR 1.625 CW PF: .95	Volt: 12,589 Vpu: 1.009	Volt: 11,984 Vpu: 0.961	Volt: 12,679 Vpu: 1.016	Volt: 12,585 Vpu: 1.009	Volt: 12,483 Vpu: 1.001	Volt: 12,331 Vpu: 0.989	Volt: 12,668 Vpu: 1.016	Volt: 12,344 Vpu: 0.989	Volt: 12,125 Vpu: 0.972	Volt: 12,331 Vpu: 0.989	Volt: 12,329 Vpu: 0.988	Volt: 12,163 Vpu: 0.975	Volt: - NA Vpu: - NA
11	BL Regs Relocated 1/2 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 750 kvar	@CW MVA 5.24 ; MW 4.860 ; MVAR 1.960 @ BL REGS 4.209 ; MW 3.993; MVAR 1.33 CW PF: .93	Volt: 12,563 Vpu: 1.007	Volt: 11,957 Vpu: 0.959	Volt: 12,665 Vpu: 1.016	Volt: 12,574 Vpu: 1.008	Volt: 12,467 Vpu: 0.999	Volt: 12,105 Vpu: 0.986	Volt: 12,631 Vpu: 1.017	Volt: 12,513 Vpu: 1.003	Volt: 12,228 Vpu: 0.981	Volt: 12,505 Vpu: 1.002	Volt: 12,502 Vpu: 1.002	Volt: 12,339 Vpu: 0.989	Volt: - NA Vpu: - NA
12	BL Regs Relocated 1/2 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 1.05 mvar	@CW MVA 4.871 ; MW 4.605; MVAR 1.432 @ BL REGS MVA 3.942; MW 3.788; MVAR 1.091 CW PF: .95	Volt: 12,527 Vpu: 1.005	Volt: 12,013 Vpu: 0.963	Volt: 12,617 Vpu: 1.018	Volt: 12,540 Vpu: 1.006	Volt: 12,440 Vpu: 0.9976	Volt: 12,098 Vpu: 0.97	Volt: 12,631 Vpu: 1.013	Volt: 12,470 Vpu: 1	Volt: 12,211 Vpu: 0.979	Volt: 12,462 Vpu: 0.994	Volt: 12,460 Vpu: 0.999	Volt: 12,296 Vpu: 0.986	Volt: - NA Vpu: - NA
10	BL Regs Relocated 1 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 750 kvar	@CW MVA 4.017; MW 3.867 ; MVAR 1.088 @ BL REGS MVA 3.066; MW 3.002; MVAR .623 CW PF: .96	Volt: 12,599 Vpu: 1.01	Volt: 12,185 Vpu: 0.977	Volt: 12,653 Vpu: 1.015	Volt: 12,588 Vpu: 1.009	Volt: 12,508 Vpu: 1.003	Volt: 12,097 Vpu: 0.97	Volt: - Vpu: -	Volt: 12,648 Vpu: 1.014	Volt: 12,478 Vpu: 1.006	Volt: 12,640 Vpu: 1.013	Volt: 12,638 Vpu: 1.014	Volt: 12,476 Vpu: 1.005	Volt: - NA Vpu: - NA
13	BL Regs Relocated 1 mile South; Regs at 1300 So; pump load at end of circuit removed. 1/0 conductor replaced with 336 CAP Addition: 1.65 mvar	@CW MVA 5.798; MW 5.522 ; MVAR 1.767 @ BL REGS MVA 4.719; MW 4.484; MVAR 1.468 CW PF: .95	Volt: 12,478 Vpu: 1.00	Volt: 11,816 Vpu: 0.947	Volt: 12,603 Vpu: 1.010	Volt: 12,506 Vpu: 1.003	Volt: 12,383 Vpu: 0.993	Volt: 12,091 Vpu: 0.97	Volt: - Vpu: -	Volt: 12,652 Vpu: 1.014	Volt: 12,276 Vpu: 0.984	Volt: 12,643 Vpu: 1.014	Volt: 12,639 Vpu: 1.014	Volt: 12,479 Vpu: 1.00	Volt: - NA Vpu: - NA



02500500010000

Feet

ALPHA

ENGINEERING

43 South 100 East, Suite 100 • St George, Utah 84770
T: 435.628.6500 • F: 435.628.6553 • alphaengineering.com

Legend

Hurricane Municipal Boundary

Washington County Parcels

Pressure Zone Boundaries

Approximate Extent of Limit Culinary Distribution

Existing Culinary Water

Existing Tank

Master Planned Roads

Major Arterial (106' ROW)

Minor Arterial (90' ROW)

Major Collector (70' ROW)

Minor Collector (60' ROW)

N

W

E

S

1 of 1

Approximate Areas of Limited Distribution Capacity

Hurricane, Utah

Spatial Reference: Utah State Plane NAD 83, feet

Drawn By: JRH

Scale: 1" = 6,000 feet

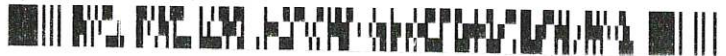
Date: October 2022

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Recording Requested By, and
Return Recorded Document To:
Hurricane City
147 N 870 W
Hurricane, UT 84737

DOC # 20220044210

Agreement Page 1 of 26
Gary Christensen Washington County Recorder
09/23/2022 03:11:11 PM Fee \$ 0.00
By HURRICANE CITY



DEVELOPMENT AGREEMENT FOR SPENDLOVE 37 PDO

THIS DEVELOPMENT AGREEMENT ("Agreement") is made and entered into as of the 9th day of September, 2022 (the "Effective Date"), by and between HURRICANE CITY, a Utah municipal corporation (hereinafter referred to as "City") and Louise P. Spendlove, Trustee of The Paul and Louise Spendlove Family Trust Dated March 26, 1993, Tytanium Development, LLC a Utah Limited Liability Company, and Dellionaire Investments, LLC a Utah Limited Liability Company (hereinafter referred to collectively as "Developer"). The City and Developer are hereinafter collectively referred to as "Parties."

RECITALS

A. Developer is the owner of approximately 37.37 acres of land located within the City of Hurricane as is more particularly described on EXHIBIT A, attached hereto and incorporated herein by reference (the "Property").

B. On November 18, 2021, the City Council approved a zone change subject to and conditioned upon the terms and conditions of this Agreement, as set forth in the Hurricane City Council Meeting Minutes for November 18, 2021, attached as EXHIBIT B.

C. Developer has proposed, and City has approved, a Preliminary Site Plan attached hereto and incorporated herein as EXHIBIT C.

D. Developer is willing to design and construct the Project in accordance with the preliminary site plan and in a manner that is in harmony with and intended to promote the long-range policies, goals, and objectives of the City's general plan, zoning and development regulations in order to receive the benefit of vesting for certain uses and zoning designations under the terms of this Agreement as more fully set forth below.

E. The City Council has accepted Developer's proffer to enter into this Agreement to memorialize the intent of Developer and City and decreed that the effective date of the vesting for the zoning and other Developer rights associated with the Property be the date this Agreement is recorded with the Washington County Recorder's Office.

F. The City Council has further authorized the Mayor of the City to execute

and deliver this Agreement on behalf of the City.

G. The City has the authority to enter into this Agreement pursuant to Utah Code Section 10-9a-102(2) and relevant municipal ordinances, and desires to enter into this Agreement with the Developer for the purpose of guiding the development of the Property in accordance with the terms and conditions of this Agreement and in accordance with applicable City Ordinances.

H. This Agreement is generally consistent with, and all preliminary and final plats within the Property are subject to and shall conform with, the City's General Plan, Zoning Ordinances, and Subdivision Ordinances, and any permits issued by the City pursuant to City Ordinances and regulations.

I. The Parties desire to enter into this Agreement to specify the rights and responsibilities of the Developer to develop the Property as expressed in this Agreement and the rights and responsibilities of the City to allow and regulate such development pursuant to the requirements of this Agreement.

J. The Parties understand and intend that this Agreement is a "development agreement" within the meaning of, and entered into pursuant to, the terms of Utah Code Ann., §10-9a-102.

K. The Parties intend to be bound by the terms of this Agreement as set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the City and the Developer hereby agree as follows:

1. Incorporation of Recitals. The foregoing Recitals are hereby incorporated into this Agreement, as a substantive part hereof.

2. Zoning. The Property shall be developed in accordance with (i) the requirements of the underlying zone as shown on EXHIBIT C, (ii) all other features as generally shown on the Preliminary Site Plan, and (iii) this Agreement. Except as otherwise approved in writing by City, the Developer shall not develop the Property in a manner that deviates materially from the attached Preliminary Site Plan in EXHIBIT C and as permitted by the aforementioned zoning designation for the Property.

3. Governing Standards. The Preliminary Site Plan, the record of the City Council meeting, and this Agreement (together the "Approval Documents") establish the development rights for the Project, including the use, maximum density, intensity and general configuration for the Project. The Project shall be developed by the Developer in accordance with the Approval Documents. All Developer submittals must comply generally with the

Approval Documents. Non-material variations to the Preliminary Site Plan, as defined and approved by the City's Zoning Administrator, such as exact building locations, location of local roadways, exact locations of open space and parking may be varied by the Developer without official City Council or Planning Commission approval. Such variations however shall in no way change the maximum density, use and intensity of the development of the Project.

4. Additional Specific Developer Obligations. As an integral part of the consideration for this agreement, the Developer voluntarily agrees as follows:

- a. Guaranteed Density and Uses. City specifically acknowledges that at build-out Developer shall be entitled to a total overall density of 3.45 ERUs per acre within the Project, which density equals approximately 129 residential units for the entire Property. Further, the Parties acknowledge that actual densities on certain acreage will exceed 3.45 units per acre because several acres of the Property will be (a) set aside as open space and (b) larger lots. For each phase of development of the Property, the Developer shall provide a table on the preliminary plat setting out the total number of ERUs that were included in previous phases, the number of ERUs proposed in the instant phase, and the number of approved ERUs remaining available for development in future phases.

5. Construction Standards and Requirements. All construction on the Property at the direction of the Developer shall be conducted and completed in accordance with the City Ordinances and Design Standards, including, but not limited to infrastructure construction, setback requirements, minimum lot sizes, building height requirements, lot coverage requirements, requirements arising from Public Infrastructure Districts in the vicinity, and all other zoning and development requirements.

- a. Developer understands, acknowledges and specifically agrees that: (a) power, water, and other utility services to the Property are not currently available and have not been extended to the Property, (b) the granting of this zone change does not in any way guarantee or warrant the availability and extension of power and water utility services to the Property, (c) no application for any permit requiring the availability or extension of power or water service, and no other request requiring the availability and extension of power or water services, shall be filed or made until such time that such services are available and have been extended to the Property, and (d) Developer assumes all risk and liability associated with any development activity on the Property, including but not limited to all costs incurred for engineering, feasibility studies, etc., in the event that such services do not become available and are not extended to the Property.
- b. Adequate Public Facilities. The City may deny any land use application

for any development on the Property, including but not limited to preliminary plats, building permits, zone changes, and preliminary site plans by finding that utilities and roadways are (1) inadequate to support the proposed development or (2) services are not in the vicinity of the proposed application. The City may consider approval of a project if the applicant can show that current utility and roadway systems are adequate to meet the demand for the project and the applicant can provide a plan on how to reasonably connect utilities and roadways to the proposed development according to Hurricane City standards.

- c. Acceptance of Improvements. The City shall accept all improvements which are intended for public use and which have been constructed by Developer or its agents in accordance with the City's standards and as shown on the approved construction drawings. Prior to the construction of any road, utility, or public improvements within the Project, the City shall review proposed construction drawings and require adjustments or changes to meet the requirements of this Agreement and applicable City standards. The City shall cooperate and allow Developer to construct the Offsite Improvements, and the City shall accept Developer's dedication of the Offsite Improvements. The City shall only accept improvements once improvements have been installed, inspected by the City or its representative, a warranty bond has been provided by Developer, and all other conditions for acceptance set out in Hurricane City's Ordinances and standards are satisfied.
- d. Unless otherwise specifically approved by the City Council and clearly labeled on the final subdivision plat, all roads within the Project shall be public roads. Upon final acceptance of such roads as having been constructed in conformity with all approved plans and City standards, City shall be responsible for maintenance of the roads at the same level of maintenance applicable to other similar roads within the City. City shall not be responsible for maintenance of any private road within the Project.

6. Vested Rights and Reserved Legislative Powers.

- a. Vested Rights. As of the Effective Date, Developer shall have the vested right to develop and construct the Project in accordance with the uses, maximum permissible densities, intensities, and general configuration of development established in the Approval Documents, subject to compliance with the City Ordinances in existence on the Effective Date. The Parties intend that the rights granted to Developer under this Agreement are contractual and also those rights that exist under statute, common law and at equity. The Parties specifically intend that this Agreement grants to Developer "vested rights" as that term is construed in Utah's common law and pursuant to Utah Code Ann., §10-9a-509.

i. Examples of Exceptions to Vested Rights. Notwithstanding the foregoing, the Parties understand and agree that the Project will be required to comply with future changes to City Laws that do not limit or interfere with the vested rights granted pursuant to the terms of this Agreement. The following are examples for illustrative purposes of a non-exhaustive list of the type of future laws that may be enacted by the City that would be applicable to the Project:

1. Developer Agreement. Future laws that Developer agrees in writing to the application thereof to the Project;
2. Compliance with State and Federal Laws. Future laws which are generally applicable to all properties in the City and which are required to comply with State and Federal laws and regulations affecting the Project;
3. Safety Code Updates. Future laws that are updates or amendments to existing building, plumbing, mechanical, electrical, dangerous buildings, drainage, or similar construction or safety related codes, such as the International Building Code, the APWA Specifications, AAHSTO Standards, the Manual of Uniform Traffic Control Devices or similar standards that are generated by a nationally or statewide recognized construction/safety organization, or by the State or Federal governments and are required to meet legitimate concerns related to public health, safety or welfare; or,
4. Taxes. Taxes, or modifications thereto, so long as such taxes are lawfully imposed and charged uniformly by the City to all properties, applications, persons and entities similarly situated.
5. Fees. Changes to the amounts of fees for the processing of Development Applications that are generally applicable to all development within the City (or a portion of the City as specified in the lawfully adopted fee schedule) and which are adopted pursuant to State law.
6. Impact Fees. Impact Fees or modifications thereto which are lawfully adopted, imposed and collected.

b. Reserved Legislative Powers. The Developer acknowledges that the City

is restricted in its authority to limit its police power by contract and that the limitations, reservations and exceptions set forth herein are intended to reserve to the City all of its police power that cannot be so limited. Notwithstanding the retained power of the City to enact such legislation of the police powers, such legislation shall not modify the Developer's vested right as set forth herein unless facts and circumstances are present which meet the exceptions to the vested rights doctrine as set forth in Section 10-9a-509 of the Municipal Land Use, Development, and Management Act, as adopted on the Effective Date, *Western Land Equities, Inc. v. City of Logan*, 617 P.2d 388 (Utah 1980), its progeny, or any other exception to the doctrine of vested rights recognized under state or federal law. Notwithstanding the foregoing, the City reserves the right to enact an ordinance in accordance with Utah Code Ann. §10-9a-504 establishing a temporary land use regulation for any part or all of the area within the municipality, including area within the Project, which prohibits or regulates issuance of any building permit or the erection, construction, reconstruction or alteration of any building or structure or any subdivision approval if the City Council makes a finding of compelling countervailing public interest in accordance with Utah and federal law after notice to Developer and an opportunity to be heard.

7. Default. An "Event of Default" shall occur under this Agreement if any party fails to perform its obligations hereunder when due and the defaulting party has not performed the delinquent obligations within sixty (60) days following delivery to the delinquent party of written notice of such delinquency. Notwithstanding the foregoing, if the default cannot reasonably be cured within that 60-day period, a party shall not be in default so long as that party commences to cure the default within that 60-day period and diligently continues such cure in good faith until complete.

8. Default and Remedies. Failure of a party to perform any of the Party's obligations under this Agreement within a thirty (30) day period (the "**Cure Period**") after written notice thereof from the other party shall constitute a default ("**Default**") by such failing party under this Agreement; provided, however, that if the failure cannot reasonably be cured within thirty (30) days, the Cure Period shall be extended for the time period reasonably required to cure such failure so long as the failing party commences its efforts to cure within the initial thirty (30) day period and thereafter diligently proceeds to complete the cure. Such notice shall specify the nature of the alleged Default and the manner in which such Default may be satisfactorily cured, if possible. If the Default is cured, then no Default shall exist and the noticing Party shall take no further action.

- a. In the event of an uncured Default, the non-defaulting party shall, in addition to any other remedy allowed by law, be entitled to the court's imposition of specific performance and /or injunctive relief, but not monetary damages. All rights and remedies under this Agreement, and /or statute or common law shall be deemed cumulative and the selection of one of the rights or remedies shall not be deemed a waiver of any other

right or remedy.

- b. If City elects to consider terminating this Agreement due to a Default by Developer, then City shall give to Developer written notice of City's intent to terminate this Agreement and the matter shall be scheduled for consideration and review by City's legislative body at a duly noticed public meeting. Developer shall have the right to offer written and oral evidence prior to or at the time of said public meeting. If City's legislative body determines that a material uncured Default has occurred and is continuing, City may thereafter pursue the remedy of termination through an appropriate judicial proceeding.

9. Specific Acts of Default. The Parties hereto agree that any of the following occurrences, acts or failure to act shall constitute a Default by Developer, for which City may elect to terminate the agreement in accordance with Section 8 above: (a) the filing of a petition in bankruptcy by Developer, (b) foreclosure on any portion of the Property which has the effect of creating an unapproved or illegal subdivision under Utah law or City ordinances, (c) the Developer's failure to comply with the requirements of any Section above, or (d) Developer's failure, without good cause as determined in good faith by City, for a period of five (5) years to commence construction of improvements in any new development phase or new Development Parcel. Upon such termination, all approvals or development rights granted hereunder to Developer shall lapse and all obligations of City hereunder shall cease.

10. 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 Developer: Tytanium Dev. LLC
 3439 S. Barcelona Dr. #46
 St. George, Utah 84790

To the City: Hurricane City
 Attn: Dayton Hall, City Attorney
 147 N. 870 W.
 Hurricane, UT 84737

11. General Term and Conditions.

a. 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.

b. 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 (to the extent that assignment is permitted). Without limiting the generality of the foregoing, a "successor" includes a party that succeeds to the rights and interests of the Developer as evidenced by, among other things, such party's submission of land use applications to the City relating to the Property or the Project.

c. Non Liability of City Officials and Employees. No officer, representative, consultant, attorney, agent or employee of the City shall be personally liable to the Developer, or any successor in interest or assignee of the Developer, for any default or breach by the City, or for any amount which may become due to the Developer, or its successors or assignees, or for any obligation arising under the terms of this Agreement. Nothing herein will release any person from personal liability for their own individual acts or omissions.

d. Third Party Rights. Except for the Developer, the City and other parties that may succeed the Developer on title to any portion of the Property, all of whom are express intended beneficiaries of this Agreement, this Agreement shall not create any rights in and/or obligations to any other persons or parties. The Parties acknowledge that this Agreement refers to a private development and that the City has no interest in, responsibility for, or duty to any third parties concerning any improvements to the Property unless the City has accepted the dedication of such improvements

e. Further Documentation. This Agreement is entered into by the Parties with the recognition and anticipation that subsequent agreements, plans, profiles, engineering and other documentation implementing and carrying out the provisions of this Agreement may be necessary. The Parties agree to negotiate and act in good faith with respect to all such future items.

f. Relationship of Parties. This Agreement does not create any joint venture, partnership, undertaking, business arrangement or fiduciary relationship between the City and the Developer.

g. Agreement to Run With the Land. This Agreement shall be recorded in the Office of the Washington County Recorder against the Property and is intended to and shall be deemed to run with the land, and shall be binding on and shall benefit all successors in the ownership of any portion of the Property.

h. Performance. Each party, person and/or entity governed by this Agreement shall perform its respective obligations under this Agreement in a manner that will not unreasonably or materially delay, disrupt or inconvenience any other party, person and/or entity governed by this Agreement, the development of any portion of the Property or the issuance

of final plats, certificates of occupancy or other approvals associated therewith.

i. Applicable Law. This Agreement is entered into under and pursuant to, and is to be construed and enforceable in accordance with, the laws of the State of Utah.

j. Construction. This Agreement has been reviewed and revised by legal counsel for both the City and the Developer, and no presumption or rule that ambiguities shall be construed against the drafting party shall apply to the interpretation or enforcement of this Agreement.

k. Consents and Approvals. Except as expressly stated in this Agreement, the consent, approval, permit, license or other authorization of any party under this Agreement shall be given in a prompt and timely manner and shall not be unreasonably withheld, conditioned or delayed. Any consent, approval, permit, license or other authorization required hereunder from the City shall be given or withheld by the City in compliance with this Agreement and the City Ordinances.

l. Approval and Authority to Execute. Each of the Parties represents and warrants as of the Effective Date this Agreement, it/he/she has all requisite power and authority to execute and deliver this Agreement, being fully authorized so to do and that this Agreement constitutes a valid and binding agreement.

m. Termination.

i. Notwithstanding anything in this Agreement to the contrary, it is agreed by the parties hereto that in the event the final plat for any portion of the Property has not been recorded in the Office of the Washington County Recorder within five (5) years from the date of this Agreement (the "Term"), or upon the occurrence of an event of default of this Agreement that is not cured, the City shall have the right, but not the obligation, at the sole discretion of the City Council, to terminate this Agreement as to the defaulting party (*i.e.*, the Developer). The Term may be extended by mutual agreement of the Parties.

ii. Upon termination of this Agreement for the reasons set forth herein, following the notice and process required hereby, the obligations of the City and the defaulting party to each other hereunder shall terminate and the zoning that existed prior to the zone change that was conditioned on this Agreement shall be reinstated on all property for which a final plat has not been recorded, but none of the licenses, building permits, or certificates of occupancy granted prior to expiration of the Term or

termination of this Agreement shall be rescinded or limited in any manner.

12. Assignability. The rights and responsibilities of Developer under this Agreement may be assigned in whole or in part by Developer with the consent of the City as provided herein.

- a. Notice. Developer shall give Notice to the City of any proposed assignment and provide such information regarding the proposed assignee that the City may reasonably request in making the evaluation permitted under this Section. Such Notice shall include providing the City with all necessary contact information for the proposed assignee.
- b. Partial Assignment. If any proposed assignment is for less than all of Developer's rights and responsibilities, then the assignee shall be responsible for the performance of each of the obligations contained in this Agreement to which the assignee succeeds. Upon any such approved partial assignment, Developer shall be released from any future obligations as to those obligations which are assigned but shall remain responsible for the performance of any obligations that were not assigned.
- c. Grounds for Denying Assignment. The City may only withhold its consent if the City is not reasonably satisfied of the assignee's reasonable financial ability to perform the obligations of Developer proposed to be assigned.
- d. Assignee Bound by this Agreement. Any assignee shall consent in writing to be bound by the assigned terms and conditions of this Agreement as a condition precedent to the effectiveness of the assignment.

13. Sale or Conveyance. If Developer sells or conveys parcels of land within the Property, the lands so sold and conveyed shall bear the same rights, privileges, restrictions, limitations, intended uses, configurations, and density as applicable to such parcel and be subject to the same limitations and rights of the City as when owned by Developer and as set forth in this Agreement without any required approval, review, or consent by the City except as otherwise provided herein.

14. No Waiver. Any party's failure to enforce any provision of this Agreement shall not constitute a waiver of the right to enforce such provision. The provisions may be waived only in writing by the party intended to be benefited by the provisions, and a waiver by a party of a breach hereunder by the other party shall not be construed as a waiver of any succeeding breach of the same or other provisions.

15. Severability. If any portion of this Agreement is held to be unenforceable for any reason, the remaining provisions shall continue in full force and effect.

16. Force Majeure. Except for termination of this agreement due to Developer's failure to record a final plat on the Property within five (5) years of the date of this Agreement, any prevention, delay or stoppage of the performance of any obligation under this Agreement which is due to strikes, labor disputes, inability to obtain labor, materials, equipment or reasonable substitutes therefore; acts of nature; governmental restrictions, regulations or controls; judicial orders; enemy or hostile government actions; wars, civil commotions; fires or other casualties or other causes beyond the reasonable control of the party obligated to perform hereunder shall excuse performance of the obligation by that party for a period equal to the duration of that prevention, delay or stoppage.

17. Amendment. This Agreement may be amended only in writing signed by the Parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement by and through their respective, duly authorized representatives as of the day and year first hereinabove written.

CITY:

Hurricane City

By: Nanette Billings
Mayor Nanette Billings

DEVELOPER:

The Paul and Louise Spendlove Family Trust Dated March 26, 1993

By: Louise P. Spendlove, Trustee
Name: Louise P. Spendlove
Title: Trustee

Tytanium Develoment, LLC a Utah Limited Liability Company

By: Tyler Meyers
Name: Tyler Meyers
Title: Manager

Dellionaire Investments, LLC a Utah Limited Liability Company

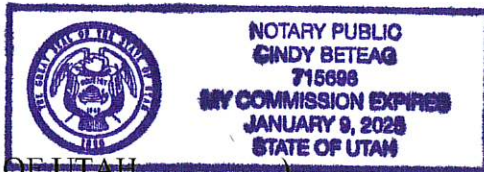
By: Dez Beatty
Name: DEZ BEATTY
Title: Manager

STATE OF UTAH)

:SS

COUNTY OF WASHINGTON)

On the 15th day of September, 2022, personally appeared before me **Nanette Billings**, who being by me duly sworn, did say that she is the Mayor of Hurricane City, a Utah municipal corporation, and that the within and foregoing instrument was signed on behalf of said corporation with proper authority and duly acknowledged to me that she executed the same.



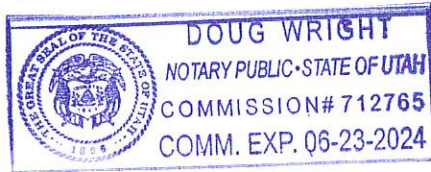
Cindy Beteag
Notary Public

STATE OF UTAH)

:SS

COUNTY OF UTAH)

On the 9th day of September, 2022, personally appeared before me **Louise P. Spendlove**, who being by me duly sworn, did say that she is the duly authorized Trustee of **The Paul and Louise Spendlove Family Trust Dated March 26, 1993**, that the within and foregoing instrument was signed on behalf of said Trust with proper authority, and did duly acknowledge to me that she executed the same.



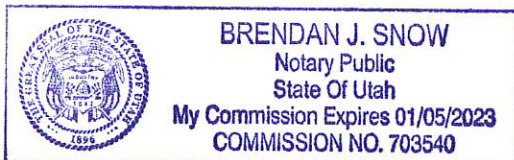
[Signature]
Notary Public

STATE OF UTAH)

:SS

COUNTY OF UTAH Washington

On the 13 day of September, 2022, personally appeared before me Tyler Meyers, who being by me duly sworn, did say that s/he is the Manager of **Tytanium Develoment, LLC a Utah Limited Liability Company**, that the within and foregoing instrument was signed on behalf of said limited liability company with proper authority, and did duly acknowledge to me that s/he executed the same.



Brendan J. Snow
Notary Public

STATE OF UTAH)
COUNTY OF Washington :SS
UTAH pd

On the 13 day of September, 2022, personally appeared before me
Del Beatty, who being by me duly sworn, did say that s/he is the Manager of
Dellionaire Investments, LLC a Utah Limited Liability Company, that the within and
foregoing instrument was signed on behalf of said limited liability company with proper
authority, and did duly acknowledge to me that s/he executed the same.



Brendan J. Snow
Notary Public

EXHIBIT A
Legal Description of Property:

The following tract of land in Washington County, State of Utah:

The Southeast $\frac{1}{4}$ of the Southeast $\frac{1}{4}$ of Section 20, Township 42 South, Range 13 West of the Salt Lake Meridian, County of Washington.

EXHIBIT B

Hurricane City Council Meeting Minutes for November 18, 2021

Minutes of the Hurricane City Council meeting held on November 18, 2021, in the Council Chambers at 147 North 870 West, Hurricane, Utah, at 4:00 p.m.

Council Members: Nanette Billings, Darin Larson, Joseph Prete, Dave Sanders, and Kevin Tervort. Mayor John Bramall excused.

Also Present: City Manager Kaden DeMille, City Attorney Fay Reber, Lieutenant Jerod Brisk, Power Superintendent Scott Hughes, Public Works Director Mike Vercimack, Planning Director Stephen Nelson, Recreation Director Kole Staheli, City Recorder Cindy Beteag, and Fire Chief Tom Kuhlman.

AGENDA

4:00 p.m. Consideration and possible decision regarding economic impacts to the City

Kaden DeMille presented wage information. The information included an option to increase wages by two percent and three percent. He reported that other municipalities in the County are also looking at wage increases. He is not confident that the economy will not change; he recommends a bonus rather than a wage increase. He would like to look at increasing wages in January to align with the timing of wage increases in other municipalities. Mr. DeMille noted that forty-five applicants applied for the utility clerk position. Ten candidates were selected for interviews. Three candidates did not attend the interview, and several more terminated their applications. Councilwoman Billings noted that the City increased wages by two percent in February, three percent in July, and another three percent increase for the Police Department in September. She suggested a Christmas bonus of one percent of the employee's wages. She feels a lump sum is more beneficial than a slight pay increase. Councilman Sanders does not think employees will remember the Christmas bonus when wages are discussed next year.

Councilman Prete feels that the City does need to do its best to keep up morale. However, considering the drastically changing economy, it is important to know whether the City can sustain the wage increase. Councilman Tervort agrees that an increase needs to happen, but he is concerned about postponing capital projects to compensate for the wage increase. Mr. DeMille noted that the revenue generated from property and sales tax goes to the General Fund, and the revenue from sales tax has increased by five percent. Councilman Larson suggests a two percent increase and a medium size bonus starting now. He explained that hiring an employee to replace a key employee will cost more than this wage increase.

Scott Hughes reported that the City will lose valuable employees if this is not addressed. Mr. DeMille is working to change the culture in the office and make the City an enjoyable place to work, and he is asking departments to do the same thing. Councilman Sanders agrees with Councilman Larson's suggested wage increase and bonus. Councilman Prete agrees that an increase may be necessary to stay competitive and alleviate the burden of inflation.

The City Council discussed a two percent wage increase to each department's budget to be allocated by the department head with a three hundred and fifty dollar bonus for full-time employees and a one hundred dollar bonus for part-time employees.

Nanette Billings motioned to move this to the end of the meeting as item 11. Seconded by Joseph Prete. Darin Larson, Dave Sanders, Kevin Tervort, Nanette Billings and Joseph Prete, voting aye. Motion carried unanimously.

5:00 p.m. Pre-meeting - Discussion of Agenda Items, Department Reports

Discussion regarding development of all abilities park on City land at 1410 W 650 South-Art in the Park Committee.

Sarah Jackman is representing Art in the Park. She explained that Art in the Park has placed several sculptures in Hurricane City. The committee wants to create a place for people to connect with art, neighbors, and themselves. Mental and physical health is an essential aspect of life, and they feel this can be accomplished by creating an interactive art park. The idea for the park is to have areas representing the national parks, sculptures, mosaics, rock climbing, yoga, a building for art classes, and a children's play area. The location they are considering is a gravel pit owned by the City. Ms. Jackman noted that they have not researched costs yet. Stephen Nelson reported that there is a master planned roadway through the gravel pit. Councilman Prete thinks this will be a unique park that can serve the entire region. There may be grant funds available to fund the park.

Mike Vercimack thinks it is innovative, but this location is not ideal. The property would have to be filled in when the roadway is built, and the planned roadway will consume a large portion of the property. Mr. Nelson stated that other cities have added interactive art in downtown areas, and he plans to incorporate some of these ideas into the downtown master plan.

Councilwoman Billings suggested meeting with the parks and other departments to get ideas. Councilman Larson stated that the Rotary Club plans to do an all-abilities park in Hurricane City, and the club is farther along in the planning process. He thinks these two parks could be incorporated together.

Chief Kuhlman reported that Fire Academy starts on January 24th. They are planning to hire thirty employees in the next year. Mr. Kuhlman presented the recruiting video, and the application is open to the public. He explained that the department funds the expensive cost of training new employees. However, the employee is required to pay back the cost of their training if they do not stay with the department for forty-eight months.

Jared Brisk reported that the Police Department is busy. Two officers are out with COVID.

Kole Staheli reported that the annual Christmas Tree Lighting/Festival is on November 29th. There is a large lineup of Christmas concerts at the fine arts facility. Arthur LeBaron and Darren Barney are excited about the property near Quail Lake, and he is hopeful that the Water Conservancy District will lease the property to Hurricane City. There are nearly nine acres that can be used for recreational purposes. The walls for the bell tower are going up today.

Mike Vercimack reported that the City is staying remarkably busy. Many commercial developments are coming in, and development continues to be the driving force. The Planning Commission has recommended approval for zoning on 2800 West. Half of the owners have signed a right of occupancy, and the right of way and power lines easement needs to be finalized.

Stephen Nelson reported that thirty-four responses were received during the downtown walking survey. Most of the concerns received involved SR-9. He will prepare the information to present to the City Council and the Utah Department of Transportation. There were twenty-two applications at the last Planning Commission meeting. The final site plan was approved for Intermountain Health Care. The Water Conservancy District submitted a zone change application for 3,200 acres. The Planning Commission tabled the item so they can hold a work meeting with the City Council in January. The holiday dinner for the boards and commission is planned for December 13th.

6:00 p.m. - Call to Order –

Kevin Tervort welcomed everyone to the meeting.

Pledge: Darin Larson

Prayer: Joseph Prete

Approval of Minutes: July 15, 2021

Nanette Billings motioned to approve the Minutes of the regular City Council Meeting on July 15, 2021. Seconded by Dave Sanders. Darin Larson, Nanette Billings, Dave Sanders, and Kevin Tervort, voting aye. Joseph Prete abstained. Motion carried.

Public Forum – Comments From Public

Lily McEntire lives in Ivy Wood. She is a mother of six children, and four attend Valley Academy. They walk or ride their bike to school. Traffic has increased in this area, and many children walk along 400 North. She thinks a second crosswalk is necessary on 870 West and 400 North. She

reported that three hundred and eighty-five community members signed the petition supporting another crosswalk.

OLD BUSINESS

1. Consideration and possible approval of a **proposed code amendment to Hurricane City Code 10-26**. Hurricane City Planning Applicant.

Stephen Nelson explained that this ordinance defines the City's recreational resort development standards. With guidance from the Council, the Planning Commission made some changes to the ordinance. These changes clarify required amenities, parking, and additional consideration for zone changes. The verbiage for the onsite management requirement was edited for clarity. Councilman Prete suggested adding verbiage to note that onsite management is required from the beginning and suggested requiring completion of the pool and clubhouse within one year of starting the project. He questioned what "other amenities shall be phased proportionately" means in the last sentence. Mr. Nelson explained that this prevents developers from postponing major improvements. Councilman Prete suggested adding "construction of other amenities" to the sentence. Councilwoman Billings confirmed that this applies to developments zoned for recreation resorts that do not have an approved preliminary plat.

Joseph Prete motioned to approve the proposed code amendment to Hurricane City Code 10-26 subject to the changes discussed and final legal review. Seconded by Nanette Billings. Darin Larson, Dave Sanders, Kevin Tervort, Nanette Billings, and Joseph Prete, voting aye. Motion carried unanimously.

2. Consideration and possible approval of a proposed **zone change amendment request on 327 acres from RA-1, residential agriculture one unit per acre, to R1-10, residential one unit per 10,000 square feet. Parcel ID's H-3402 and H-3401-A**. Silver Flats LLC/ Duane Fielding Applicant, Jon Jensen Agent.

The applicant is not present.

Nanette Billings motioned to table approval of a proposed zone change amendment request on 327 acres from RA-1, residential agriculture one unit per acre, to R1-10, residential one unit per 10,000 square feet. Parcel ID's H-3402 and H-3401-A. Seconded by Joseph Prete. Darin Larson, Dave Sanders, Kevin Tervort, Nanette Billings, and Joseph Prete, voting aye. Motion carried unanimously.

3. Consideration and possible approval **for a Zone Change and preliminary site plan request on 37 acres from RA-1, residential agriculture 1 unit per acre, to R1-8,**

residential 1 unit per 8,0000 square feet, with a PDO, planned development overlay.
Parcel H-3386-B. Louise P Spendlove Applicant. Tyler Meyers Agent.

Tyler Meyers reported that the applicants understand the utility issues. They likely will not be ready to start building for a year or more, and they are okay with a development agreement noting that building permits will not be issued until they have adequate utilities. Stephen Nelson reported that this agreement is similar to the Balance of Nature development agreement. The Planning Commission gave a positive recommendation. The applicant will have to present a sensitive land application for the south and east side of the property with the preliminary plat. Councilwoman Billings confirmed that the proposed units per acre are 3.45 with an R1-8 underlying zone.

Nanette Billings motioned to approve the Zone Change and preliminary site plan request on 37 acres from RA-1, residential agriculture 1 unit per acre, to R1-8, residential 1 unit per 8,0000 square feet, with a PDO, planned development overlay with 3.45 units per acre based on it is harmounious with the surrounding properties. Approval is subject to the development agreement. Seconded by Darin Larson. Dave Sanders, Kevin Tervort, Darin Larson, and Nanette Billings, voting aye. Joseph Prete voting nay. Motion carried.

NEW BUSINESS

- 1. Consideration and possible approval of Resolution 2021-29 to update the Zion Regional Collaborative Independent Contractor Agreement - Stephen Nelson**

Stephen Nelson reported that Zion Regional Collaborative hired an independent contractor last year. Mr. Nelson feels this is an excellent organization that helps coordinate regional projects. This is the same contract as last year. Hurricane City has budgeted \$10,000 for this year's contract. However, other participating cities have increased their contribution by ten percent.

Nanette Billings motioned to approve Resolution 2021-29 to update the Zion Regional Collaborative Independent Contractor Agreement. In the budgeted amount of \$10,000. Seconded by Dave Sanders. Darin Larson, Kevin Tervort, Joseph Prete, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously

Councilman Prete advocated hiring a grant writer.

- 2. Public Hearing to take comments on the following.**

Nanette Billings motioned to go into a public hearing. Seconded by Darin Larson. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously.

- a. A sensitive land application for Sand Cove located at 3350 W 500 North**

No comments

Nanette Billings motioned to go out of the public hearing. Seconded by Darin Larson. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously

3. Consideration and possible approval of a **preliminary plat and sensitive land application for a proposed single-family subdivision located at approximately 3350 W and 500 N.** Mortar & Beam Applicant, Jim Lyman Agent.

Jim Lyman explained that three lots had a thirteen percent slope. After meeting with the Council and Planning Commission, the applicant swapped land with the City to accommodate the park. This creates better access, and the walkway was continued from Coronado Ridge to access the park. Stephen Nelson noted that there are other lots exceeding ten percent. The Planning Commission recommended approval because grading the lots will minimize the slope's impact. The Parks Department has reviewed and supports the park plan. Mr. Lyman stated that a portion of the 1.92-acre park will be preserved as open space. Mr. Nelson reported that Arthur LeBaron made the recommendation that the three lots by the parking lot need to have garages on the main street. Mr. Lyman noted that the City Engineer is willing to make an exception for the intersection length connecting to Shoshone Land Company's property. Councilman Sanders asked if there are plans to address the drainage on 3400 West. Mike Vercimack reported that any development on 600 North is required to make improvements along 600 North, and there is a planned drainage basin.

Dave Sanders motioned to approve the preliminary plat and sensitive land application for a proposed single-family subdivision located at approximately 3350 W and 500 N subject to Arthur LeBaron approving the road that exceeds eight hundred feet. Seconded by Nanette Billings. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously

4. Discussion regarding the additional of a **crosswalk at Hurricane Elementary** -Jenny Chamberlain

Jenny Chamberlain is the President of the Community Council of Hurricane Elementary School. This Council includes principals, teachers, and parents. The Community Council has been discussing the ongoing safety concerns regarding the lack of a crosswalk on 870 W and 400 North. She explained that the previous traffic study did not find that this location warranted a crosswalk. She asked the Council to consider having a new traffic study because the density has significantly increased. Ms. Chamberlain reviewed events that take place during the school year. Jerod Brisk reported that the road is going to get busier. The crosswalk will have no impact without a crossing guard. Mike Vercimack noted that a simple, immediate solution is to erect a

crosswalk sign and paint a crosswalk. He will check with Arthur LeBaron to see if a crossing guard is required at a crosswalk. Councilman Sanders explained that completing 700 West will eliminate much of the problem. Becky is concerned that painting a crosswalk without a crossing guard will encourage children to cross without help. Councilwoman Billings asked if teachers could help by explaining to the student that they can't cross there.

Maggie Maxfield reported that the new section of 700 West has eliminated some traffic. She has witnessed teachers telling students not to cross, only to have the parents tell them to cross there. Ms. Chamberlain read the petition to the City Council. Derek's son was hit at this intersection. He explained that there is limited visibility, and the school zone signs only meet the minimum requirements.

5. Consideration and possible approval of an **amended final plat for Hinton Home Estates Subdivision: Partial Amendment A (Lots 2 & 3)**, located at 754 W 1130 S. Ryan and Chantel Reeve Applicants, Ben Syphus Agent.

The Planning Commission unanimously recommended approval. The applicant wants to combine two lots to build a pool and a pool house.

Dave Sanders motioned to approve the amended final plat for Hinton Home Estates Subdivision subject to the staff and JUC comments. Seconded by Joseph Prete. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously.

6. Consideration and possible approval on a **final plat for Canyons RV Resort Amended and Extended. Located at 100 N and 2800 W.** Western Commercial Real Estate, PLLC Applicant. Joseph Venuti Applicant.

Joby Venuti explained that this amendment addresses the problems with the sewer. Stephen Nelson reported that the open space was approved in the initial development agreement, and the Homeowner's Association does not plan to do anything with the land. They have entered a preliminary agreement with Ash Creek Sewer District based on this approval. The Planning Commission unanimously recommended approval.

Joseph Prete motioned to approve the final plat for Canyons RV Resort Amended and Extended. Located at 100 N and 2800 W subject to staff and JUC comments. Seconded by Nanette Billings. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously.

7. Consideration and possible approval of a **preliminary plat for Red Cliff Preliminary Plat, a 31 lot duplex development, located at 2170 W 600 N.** Jay Rice- Red Cliff Development Applicant. Jared Madsen- Alpha Engineering Agent.

The applicant nor the agent are present.

Joseph Prete motioned to continue approval of a preliminary plat for Red Cliff Preliminary Plat, a 31 lot duplex development, located at 2170 W 600 N. Seconded by Nanette Billings. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously.

8. Discussion regarding the Memorandum of Understanding with SUU

Councilwoman Billings, Kaden DeMille, the City Attorney, and SUU held a conference call last week. SUU originally proposed limiting the flights to three per day with two helicopters. The drafted MOU listed five flights per day, and the group compromised on four flights per day. Scott Freeman would like to add verbiage that defines four flight groups per day with a thirty-minute time limit per flight group. Exhibit A was not available for review. The Airport Board suggested implementing an ordinance instead of having multiple MOUs with multiple entities. The Board also wants the MOU to note that there are six patterns, and no run-on landing is allowed at our airport. Councilman Sanders suggested updating the MOU for the attorney to review and present to SUU.

9. Consideration and possible approval of waiving the power impact fees for the bell tower power source

Nanette Billings motioned to waive the power impact fees for the bell tower power source. Seconded by Joseph Prete. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously.

10. Consideration and possible approval to change 5140 West to Pecan Valley Road - Chris Wyler

Councilwoman Billings prefers the grid address system because it is challenging to navigate if a street is only marked with a name. Stephen Nelson reported that the grid number cannot be replaced on the signage, but a street name can be added.

Dave Sanders motioned to add Pecan Valley Road with 5140 West to meet the standard. Seconded by Nanette Billings. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously.

Mayor and Council reports

Mayor Bramall	Airport, Administration, Police, Animal Control, School Crossing Guards, Victim Services, Public Works, Engineering -
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Nanette Billings	Parks & Cemetery, Appeals Board, Airport, Historical Preservation, Solid Waste District, and Youth Council -
Darin Larson	Planning Commission, Economic Development, Planning Department, Power, and Swimming Pool -
Joseph Prete	Court, Water, Recreation, Tree Board, and Beautification Committee -
Dave Sanders	Emergency Management, Streets & Drainage, Prosecutor's Office, Code Enforcement, and Building and Inspections – asked if impact fees could be reviewed.
Kevin Tervort	Ash Creek Special Service District, Golf Course, Industrial Park, Mosquito Abatement, Fire District -
Kaden DeMille	City Administration – asked about PID. Not until it is certified.

11. Consideration and possible decisions regarding economic impacts to the City

Councilman Larson thinks bonuses are a morale booster, but a wage increase will eliminate future issues with competing cities. Councilwoman Billings stated that while the budget is open, the Council should consider hiring an assistant for Kaden DeMille, a Human Resource Director, and a full-time City Attorney. Mr. DeMille explained that there had been many changes in the administration office, and he would like more time to gauge these changes before hiring a Human Resource Director. He agrees that an assistant will be helpful. Councilman Larson feels it is important to hire a Human Resource Director, and he would like that to be considered in the next fiscal year.

Darin Larson motioned to approve a wage increase of two percent allocated per department in January plus a bonus of three hundred fifty dollars for full-time employees and a one-hundred-dollar bonus for part-time employees. Seconded by Dave Sanders. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously.

Closed Session:

Nanette Billings motioned to go into a closed session. Seconded by Dave Sanders. Kevin Tervort, Joseph Prete, Darin Larson, Dave Sanders, and Nanette Billings, voting aye. Motion carried unanimously.

Adjournment: 8:42 p.m.

EXHIBIT C

Preliminary Site Plan

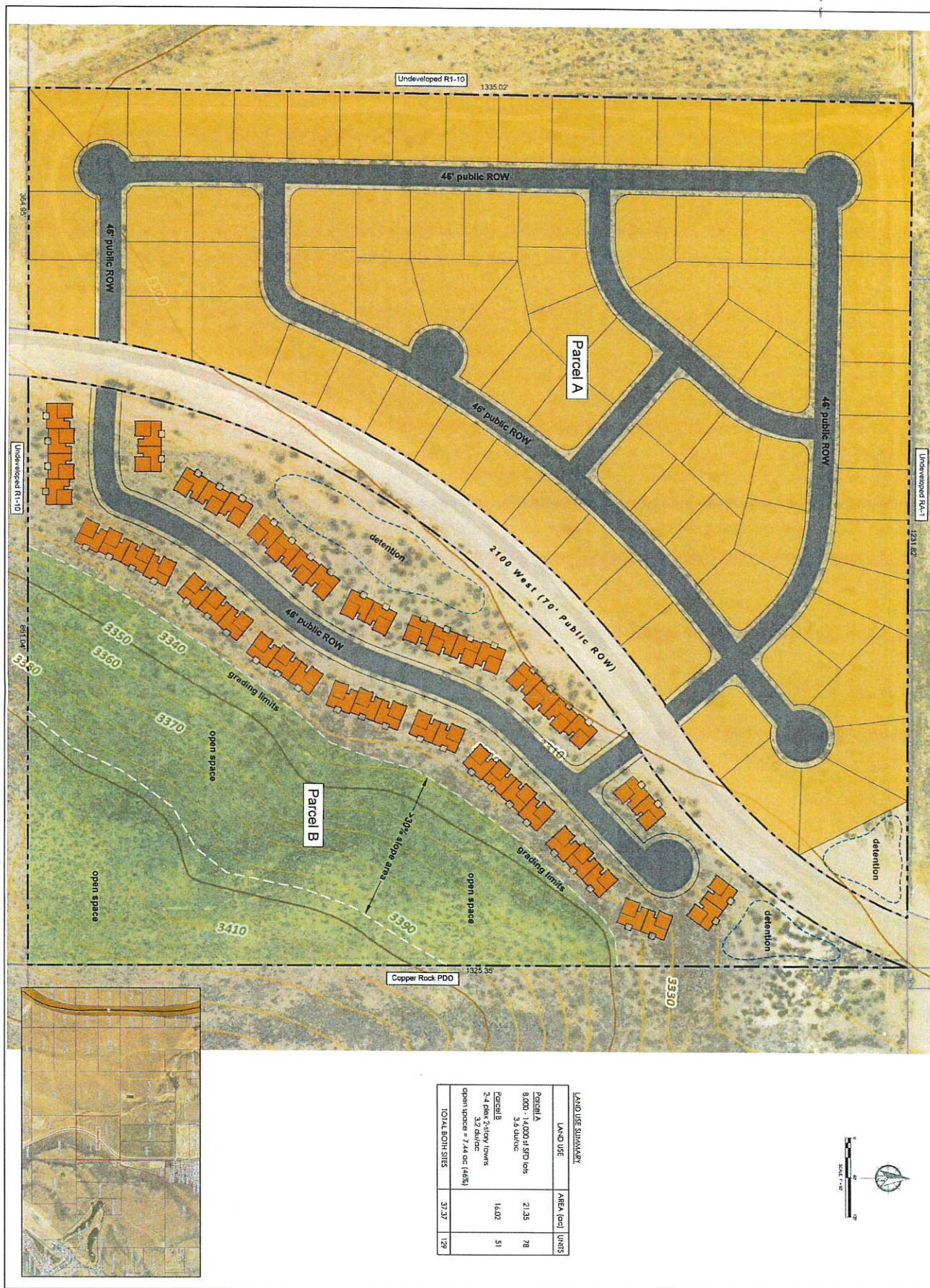


EXHIBIT A

Spendlove
37 ac. Parcel

DATE: 07/15/2021
DRAWN BY: BW
CHECKED BY: TM

APPROVED BY:
PERSON/DATE

Conceptual Land Use Plan

**PRELIMINARY SITE
PLAN REVIEW**

Concept:

Conceptual Land Use Plan

APN: H-3386-B
Hurricane, UT





Hurricane City Power

Clifton Wilson Substation

Circuit CW-101 Analysis

Report

October 2021



**Intermountain Consumer
Professional Engineers, Inc.**
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INTRODUCTION

As requested by Hurricane City Power, Intermountain Consumer Professional Engineers (“ICPE”) performed a study on Clifton Wilson substation circuit CW-101 to determine electrical conditions during peak loading and to evaluate loading capacity.

As a part of the study ICPE’s Scope included:

System Modelling

1. Develop circuit line impedance for circuit modeling.
2. Develop a circuit model for computer simulation on SKM software.
3. Develop load distribution across circuit CW-101 for circuit modeling.
4. Develop an expanded circuit model with proposed system additions.

Study & Report

1. Perform circuit load flow studies under existing conditions and historic peak loading.
2. Determine maximum 3 phase loading as to not cause greater than industry standard voltage drop and in accordance with IEEE C84.1 Range-A.
3. Develop study report on study finding.

This Report consists of the Introduction section, Summary section, Services Standard section, Study Finding section and Appendix.

General findings of the Study are presented in the Summary Section of this Report.

The Level of Service Standard Section covers voltage criteria as set forth in the IEEE C84.1 Standard and which represents Standard Utility Practice.

The Study Finding section contains a Circuit Description section, Substation Capacity section, Circuit CW-101 Loading Section and a Load Flow Analysis Section.. Sections generally contain supporting data for conclusions.

SUMMARY

This study considers the existing electrical system condition and impact of electrical load addition to Clifton Wilson Circuit CW101. Circuit CW 101 generally extends southward from Clifton Wilson 7.1 circuit miles. New development contemplated extension of CW101 and additional 4.5 miles southward.

Level of Service

IEEE Standard C84.1 requires that minimum service entrance voltage during normal operation do not fall below 95% of base voltage and that utilization voltage should not fall below 90% of base voltage. Service Entrance voltage is measured at the point of delivery; Utilization voltage is measured at the terminals of the utilization equipment. To meet the Standard, a value of 97% - 98% per unit distribution voltage, at the high side of distribution transformers is considered necessary and adopted for the study.

Substation Capacity

In assessing and planning electrical systems loading levels of all system equipment should be evaluated. Typically, transformers, voltage regulation, circuit breakers, reclosers, power lines, and system protection are considered.

Evaluation of substation are performed to determine existing loading conditions, ability for future load addition, ability to backup adjacent substation, and to determine the need for new substations.

From review, it was determined that the existing Clifton Wilson substation serving circuit CW-101 is a heavily loaded substation but could provide some additional load to CW-101 assuming completion of the Sky Mountain substation and some load transfer from Clifton Wilson to Sky Mountain Substations.

Voltage Regulation

Clifton Wilson substation is equipped with voltage regulator banks that regulate voltage to distribution circuits. The Clifton Wilson regulators are set for 122.5 V output (secondary) with a 3 volt bandwidth (voltage range from 121 to 124V).

Circuit Loading

Clifton Wilson circuit CW-101 was determined to have peak loading at 3.8 MW (4.1 MVA) with 1.7 MVA of the 4.1 MVA flowing through the Bench Lake regulators

Circuit CW-101 is equipped with a three phase inline regulator bank (Bench Lake regulators) and are rated 114.3/128.0 kVA (150/168) amp thru current. Regulator output is set for 122 V (secondary) with a 2 volt band width.

Load Flow Analysis

Circuit CW-101 was studied using real time regulator load data and through computer modeling using SKM software. Study shows that the existing circuit does not have overloading conditions but is voltage limited. It was determined that:

1. Areas of the existing circuit does experience voltage drop below Level of Service criteria under peak loading.
2. Addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels.

Potential short term solutions for some load addition would be:

1. Optimize voltage regulator bank position.
2. Add another in line regulator bank.
3. Add capacitor banks to maintain a high power factor during peak loading.
4. If possible, move existing load to another circuit to allow new load.

Additional work is needed to determine potential loading with equipment addition and or load transfer; noting the limitations of the existing Bench Lake regulators (1.9 MVA margin) and line conductors.

SERVICE STANDARD

To provide reliable power delivery, and equitably to all its customers; utilities strives to operate the power system to obtain a uniform level of service throughout. Below is a typical utility Level of Service Standard.

Level of Service Standard

- The system must be able to adequately serve load under single contingency (N-1) situations, where “N” is a power system element such as a transformer or non-radial line.
- System switching required under an N-1 contingency should remain as simplified as possible to ensure that switching orders are not unnecessarily complex.
- Distribution circuit loading must remain below 90% of its maximum current rating.
- Distribution circuit voltage must remain between 98% and 105% (at loads) of its nominal value; and
- Distribution circuit mains must be able to serve additional load under N-1 contingencies.
- System to Meet IEEE C84.1 Voltage limits.

In performing the study, criteria as set forth in the Level of Service Standard, was utilized. Of primary concern was meeting IEEE C84.1 normal voltage requirements as listed in Table 1. As seen the Standard requires that minimum service entrance voltage during normal operation do not fall below 95% of base voltage. Utilization voltage should not fall below 90% of base voltage. Service Entrance voltage is measured at the point of delivery; Utilization voltage is measured at the terminals of the utilization equipment. The difference between the minimum service and minimum utilization voltage is intended to allow for voltage drop in the customer’s wiring system. The difference between distribution circuit voltage and service entrance voltage is to allow for voltage drop across distribution transformers and secondary wire to the service entrance.

TABLE 1

Voltage Point of Measurement	Standard Voltages 120, 208, 240, 277, 480, 600, 660	Percent of Nominal
Service Entrance Voltage High Range - A	126, 218, 252, 291, 504, 630, 720	105.0%
Service Entrance Voltage Low Range - A	114, 197, 228, 263, 456, 570, 655	95%
Utilization High Voltage Range - A	126, 218, 252, 291, 504, 630, 720	105.0%
Utilization Low Voltage Range - A	108, 187, 249, 432, 540, 630	90%

Study Findings

Circuit Description

Clifton Wilson circuit CW-101 is a long three phase branched 12.47kV distribution circuits, approximately 7 miles long, that serves load through Clifton Wilson substation and extends from 600 North and southward to approximately 4500 south. The circuit is equipped with an inline 3-phase voltage regulator bank (Lake Bench regulator bank) located at approximately 2300 South and 1000 west (approx. 4.6 miles from Clifton Wilson substation). Proposed circuit addition would extend the circuit another 4.8 mile beyond the southern end of the circuit.

Existing circuit conductors and associated nominal published thermal rating is indicated in Table 2.

Table 2
Circuit Conductor

Line Section	Length (Miles)	Conductor	Thermal Rating (amp) ¹	MVA Rating at Nominal Amp and 100% Voltage
Clifton Wilson Sub to 1500 So 700W	3.6	336 ACSR	514	11.1
1500 South to 1750 South	0.27	750 MCM AL URD	497	10.7
1750 South to approx. 2070 So	0.44	4/0 AL URD	248	5.35
2070 So to Bench Lake Regulators	0.27	1/0 ACSR	242	5.22
Bench Lake Regulators to 3000 South	1.28	1/0 ACSR	242	5.22
3000 So 1100W to approx. 3300 So. 1100 West	0.77	336 ACSR	514	11.1
Approx. 3300 So. 1100 West to Circuit End	0.59	750 MCM AL URD	497	10.7
(tap) 3000 So 1100W to approx. 3100 So. 2100 West (circuit end)	1.45	336 ACSR	514	11.1
3100 So. 2100 West to 3300 So 2100 West (circuit end)	0.26	#2 ACSR	180	3.9
New Circuit Extension 3300 So. 2100 West (circuit end) to pump station	4.8	336 ACSR	514	11.1

1. Thermal ratings are at nominal publish values. De-rate value may apply for high ambient temperatures.

From a thermal prospective conductor ratings are adequate for some load addition; however, as discussed below, the circuit is voltage limited. Without voltage limitation, the circuit is next limited by Bench Lake regulator Bank size, 1/0 ACSR and #2 ACSR ratings.

Substation Capacity

In assessing and planning electrical systems loading levels all system equipment are evaluated. Typically; transformers, regulators, circuit breakers, reclosers, power lines, and system protection are evaluated. Evaluation of substations are performed to determine existing loading conditions, ability for future load addition, ability to backup adjacent substations, and to determine the need for new substations.

The Clifton Wilson substation has two power transformer bays and several distribution circuits. Both power transformer are rated 12/16/22 MVA with 667//994 FA (1303 A) kva regulators. During normal operation power transformers are not paralleled. For summer 2021 load behind the Clifton Wilson substation was 28.6 MW, with 7.2 MW provided by local generation. With consideration for an N-1 contingency (loss of one power transformer) transformer capacity at Clifton Wilson substation is questionable for allowing additional loading. However, with the addition of the Sky Mountain Substation transformer, loading at Clifton Wilson substation can be reduced by load

transfers to Sky Mountain substation. Load transfer to Sky Mountain would allow for other loads to be added to Clifton Wilson transformers. Generally transformer capacity is not an initial limiting factor for load addition in the range of two to three megawatt to CW-101.

Circuit CW-101 Loading

To perform circuit analysis circuit peak loading information is necessary. Circuit peak loading data was provided by Hurricane City Power personnel and included indication of circuit maximum load level at the substation circuit recloser and load through the Bench Lake regulator bank. Overall circuit peak loading was indicated to be 3.8 MW during summer 2021 peak load period. Approximately 1.7 MW of the 3.8 MW circuit load flowed through the Bench Lake Regulators.

Table 3 contains overall circuit loading data as provide and used in the circuit analysis.

**Table 3
Circuit Load Data**

CW-101 Loading -- 7/09/2021					
Circuit	Max MW	Assumed load power factor	MVA	Circuit Capacitors	MVA
CW-101	3.8 MW	0.92	4.13	2- 150 KVAR Banks	4.02

Table 4 contains select data that was provided by Hurricane City Power personnel and as obtained from the Lake Bench regulator bank controller. Additional regulator load data is provided in the appendix for review.

**Table 4
Lake Bench Regulator Data**

Regulator Max Data - Report				
Regulator	Max Amp (Inst.)	Max Load (kW) (Inst)	Time	Tap Position
A - Phase	102.8	739	7-9-21 18:38	---
B - Phase	95.0	682	7-9-21 18:43	---
C- Phase	93.9	677	7-9-21 16:30	---
Regulator 15 Minute Max Reading				
Regulator	Max Amp	Max Load (kW)	Time	
A - Phase	68.7	499	7-9-21 18:15	7 ⁽¹⁾
B - Phase	92.1	666	7-9-21 16:30	13
C- Phase	84.5	611	7-9-21 16:30	9 ⁽¹⁾
A - Phase	70.0	508	9-7-21 15:30	10
B - Phase	----	----	----	----
C- Phase	----	----	----	----

1. Tap to position 10 at 14:00 to 15:00 hr

From regulator data it can be concluded that the circuit is near or below the lower distribution voltage limits (0.97-0.98) north of the regulator bank during heavy loading periods. The regulators allow for a +/- 10 % regulation over 32 steps

with maximum regulation at +/- step 16, each step correlates to a 0.625% voltage change. B phase regulator is shown to have move to position +13 under high loading. A phase and C phase regulator data shows the regulators tapped to position 10 at 14:30 hr. Bench Lake regulator setting were indicated to be at 122 volts with a 2 volt bandwidth (121 to 123 range); for a tap position of +13 with load voltage at 122 V (represent 1.67% above nominal) source voltage would be at 93.5% of nominal; for a tap position of +10 source voltage would be at 95.5% of nominal. Regulator data indicates that the circuit has some imbalance during peak; however, noting that exact balancing is generally not possible.

Bench Lake regulator are rated 114.3/128.0 kVA (150/168 amp thru current); Assuming balanced loading, maximum through load at 168 amps is 3.6 MVA, the bank is currently load at 1.7 MVA. Assuming balanced loading, maximum additional loading through the regulators is 1.9 MVA.

Load Flow Analysis

To determine circuit electrical conditions during peak loading and to evaluate the circuits ability for additional loading circuit impedances were determined and a circuit model was developed on SKM Software for computer simulations.

The circuit was studied for:

1. Voltage drop under peak loading.
2. Line loading under peak loading.
3. Equipment loading under peak loading.
4. Effect of power factor improvements.
5. Additional loading capabilities.

Table 5 contains results of select load flows under varying conditions, additional load flow results are in the Appendix. .

**Table 5
Load Flow Results**

Location Voltage (per unit)												
C a s e	Case Description	Case Load	Clifton Low Side 12.47 kV	Bus - 004 (1300 So.)	Bus - 009 (2050 So.)	Bus - 011 (Bench Lake Reg.)	Bus - 012 (Bench Lake Reg.)	Bus -014 (3000 So.)	Bus - 017 3300 So 2100W	Bus - 020 (approx 3800 So.)	Bus -022 (RMP Tap end)	Bus -033 (Pump Sta..)
1	2021 Loading w/100 Amps thru Bench Lake Regs.	CW101 Recloser: 4.11 MVA (3.8MW) Bench Lake Reg: 2.127 MVA	1.007	0.964	0.958	0.95	1.01	1.0	1.0	1.0	0.99	N/A
2	2021 Loading w/70 Amps thru Bench Lake Reg.	CW101 Recloser: 4.135 MVA (3.8MW) Bench Lake Reg: 1.5 MVA	1.008	0.976	0.97	0.964	1.017	1.004	1.0	1.004	0.996	N/A
3	2021 Loading w/100 Amps thru Bench Lake Reg. and 700 kvar capacitor add.	CW101 Recloser: 3.872 MVA (3.8MW) Bench Lake Reg: 2.08 MVA	1.008	0.976	0.97	0.964	1.01	1.0	1.0	1.0	0.99	N/A
4	2021 Loading w/load (550KW) addition over 100 Amps thru Bench Lake Reg.	CW101 Recloser: 4.7 MVA Bench Lake Reg: 2.6 MVA	1.008	0.96	0.954	0.947	1.016	1.0	0.99	1.0	0.99	0.99

To meet “Service Entrance Voltage Low Range – A” requirements , as covered in the Service Standard section, a minimum of 0.97 pu voltage (preferable 0.98) is necessary to allow for voltage drop across distribution transformers and secondary cabling to the service entrance.

Case 1 represents the existing system with 2021 loading and load distributed to have 98 amps of overall circuit load following through the Bench Lake regulators. The study was performed with an overall circuit loading of 4.1 MVA (Summer 2021 loading) and with 2.1 MVA (98 amps) of the 4.1MVA through the Lake Bench regulators. For all cases voltage at Clifton Wilson substation was held at 1.008 p.u. (121V), noting that the regulator set point is 122.5V with a 3 volt band width (121 -124 volt range).

Study results indicate that there are no overload conditions; however, the study indicates that the circuit is voltage limited. Voltage from 1300 South to the Bench Lake regulator bank is below 0.97 p.u. Results correlated to regulator data.

Case 2 represents the existing system with 2021 loading. The study was performed with an overall circuit loading of 4.1 MVA (Summer 2021 loading) and with loads redistributed for 1.5 MVA (70 amps) of the 4.1MVA to flow through the Lake Bench regulators. Results indicate that there are no overload conditions; however, the study indicates that circuit remains voltage limited with the reduced flow through the regulators. Voltage from 1300 South to the Bench Lake regulator bank is at or below 0.97 p.u.

Case 3 is equivalent to Case 1 and includes the addition of 700 kvar capacitance for power factor correction to 0.98. Through the addition of capacitors some marginal voltage improvements is obtained but voltage is still near 0.97p.u. and under 0.98pu.

Case 4 is equivalent to Case 1 with the addition of approximately 4.5 miles of 336 ACSR circuit to the end of the existing circuit and the addition of 550 kW past the Bench Lake regulators. Results show that there is no over loading but voltage drops are increased.

Computer studies and real time voltage regulator data show that the circuit is voltage limited with voltage at or below criteria of 0.97-0.98 per unit at the distribution voltage. With consideration for normal load growth along the length of the existing circuit large load addition is not recommended.

Potential short term solutions for some load addition would be:

5. Optimize voltage regulator bank position.
6. Add another in line regulator bank.
7. Add capacitor banks to maintain a high power factor during peak loading.
8. If possible, move some existing load to another circuit to allow new load to CW-101.

Additional work is needed to determine potential loading with equipment addition and or load transfer; it is noted that with voltage limitation reduced other limitation will arise. Specifically, the existing Bench Lake regulator (1.9 MVA margin) and 1/0 and #2 ACSR line conductors. The optimum solution is a new substation in the vicinity of major load growth.

APPENDIX

APPENDIX

System Load Flow Summary
Bench Lake Regulator Data
System Model – SKM
Model Input Data
Model impedance Data

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results												
Case Description	Power Flow	Regulator (600 North)	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
2021 Load	Recloser: 4.111 MVA, 1.543 MVAR, 3.812 MW Bench Lake Reg: 2.127 MVA, .693 MVAR, 2.013 MW	Voltage: 12,551 V (1.007pu) Voltage Drop: -0.7%	Voltage: 12,027 V (0.964pu) Voltage Drop: 3.6%	Voltage: 11,952 V (0.958pu) Voltage Drop: 4.2%	Voltage: 11,867 V (0.952pu) Voltage Drop: 4.8%	Voltage: 12,669 V (1.016pu) Voltage Drop: -1.6%	Voltage: 12,502 V (1.003pu) Voltage Drop: -0.3%	Voltage: 12,460 V (0.999pu) Voltage Drop: 0.1%	Voltage: 12,494 V (1.002pu) Voltage Drop: -0.2%	Voltage: 12,492 V (1.002) Voltage Drop: -0.2%	Voltage: 12,395 V (0.994pu) Voltage Drop: 0.6%	N/A
Flat Build with 250 kVA Load + 350 hp	Recloser: 4.723 MVA, 1.777 MVAR, 4.377 MW Bench Lake Reg: 2.645 MVA, .798 MVAR, 2.522 MW	Voltage: 12,544 V Voltage Drop: -0.6%	Voltage: 11,936 V Voltage Drop: 4.3%	Voltage: 11,847 V Voltage Drop: 5.0%	Voltage: 11,740 V Voltage Drop: 5.9%	Voltage: 12,687 V Voltage Drop: -1.7%	Voltage: 12,476 V Voltage Drop: -0.1%	Voltage: 12,365 V Voltage Drop: 0.8%	Voltage: 12,468 V Voltage Drop: 0.0%	Voltage: 12,466V Voltage Drop: 0.0%	Voltage: 12,369 V Voltage Drop: 0.8%	Voltage: 12,327 V Voltage Drop: 1.2%
Flat Build with 500 kVA Load + 350 hp	Recloser: 5.046 MVA, 1.959 MVAR, 4.651 MW Bench Lake Reg: 2.910 MVA, .906 MVAR, 2.765 MW	Voltage: 12,587 V Voltage Drop: -0.9%	Voltage: 11,930 V Voltage Drop: 4.3%	Voltage: 11,833 V Voltage Drop: 5.1%	Voltage: 11,714 V Voltage Drop: 6.1%	Voltage: 12,678 V Voltage Drop: -1.7%	Voltage: 12,442 V Voltage Drop: 0.2%	Voltage: 12,294 V Voltage Drop: 1.4%	Voltage: 12,434 V Voltage Drop: 0.3%	Voltage: 12,432 V Voltage Drop: 0.3%	Voltage: 12,335 V Voltage Drop: 1.1%	Voltage: 12,249 V Voltage Drop: 1.8%
Flat Build with 1000 kVA load + 350 hp	Recloser: 5.735 MVA, 2.370 MVAR, 5.223 MW Bench Lake Reg: 3.450 MVA, 1.13 MVAR, 3.26 MW	Voltage: 12,581 V Voltage Drop: -0.9%	Voltage: 11,809 V Voltage Drop: 5.3%	Voltage: 11,695 V Voltage Drop: 6.2%	Voltage: 11,550 V Voltage Drop: 7.4%	Voltage: 12,636 V Voltage Drop: -1.3%	Voltage: 12,349 V Voltage Drop: 1.0%	Voltage: 12,125 V Voltage Drop: 2.8%	Voltage: 12,341 V Voltage Drop: 1.0%	Voltage: 12,338 V Voltage Drop: 1.1%	Voltage: 12,241 V Voltage Drop: 1.8%	Voltage: 12,066 V Voltage Drop: 3.2%
2021 Load w/ added capacitors	Recloser: 3.872 MVA, .761 MVAR, 3.797 MW Bench Lake Reg: 2.084 MVA, .545 MVAR, 2.011 MW Capacitors: 1.038 MVAR	Voltage: 12,566 V Voltage Drop: -0.8%	Voltage: 12,170 V Voltage Drop: 2.4%	Voltage: 12,100 V Voltage Drop: 3.0%	Voltage: 12,019 V Voltage Drop: 3.6%	Voltage: 12,680 V Voltage Drop: -1.7%	Voltage: 12,522 V Voltage Drop: -0.4%	Voltage: 12,479 V Voltage Drop: -0.1%	Voltage: 12,516 V Voltage Drop: -0.4%	Voltage: 12,517 V Voltage Drop: -0.4%	Voltage: 12,417 V Voltage Drop: 0.4%	N/A
70A at Bench Lake Reg												
2021 Load w/ 70A at Bench Lake Reg	Recloser: 4.045 MVA, 1.46 MVAR, 3.772 MW Bench Lake Reg: 1.47 MVA, .456 MVAR, 1.397 MW	Voltage: 12,557 V (1.007pu) Voltage Drop: -0.7%	Voltage: 12,064 V (0.967pu) Voltage Drop: 3.25%	Voltage: 12,002 V (0.9625pu) Voltage Drop: 3.75%	Voltage: 11,944 V (0.958pu) Voltage Drop: 4.21%	Voltage: 12,670 V (1.016pu) Voltage Drop: -1.6%	Voltage: 12,558 V (1.007pu) Voltage Drop: -0.71%	Voltage: 12,529 V (1.004pu) Voltage Drop: -0.48%	Voltage: 12,553 V (1.006pu) Voltage Drop: -0.67%	Voltage: 12,553 V (1.006pu) Voltage Drop: -0.67%	Voltage: 12,485 V (1.001) Voltage Drop: -0.13%	N/A
2021 Load 250 kVA Load + 350 hp	Recloser: 4.733 MVA, 1.738 MVAR, 4.404 MW Bench Lake Reg: 2.229 MVA, .630 MVAR, 2.137 MW	Voltage: 12,575 V Voltage Drop: -0.8%	Voltage: 11,983 V Voltage Drop: 3.9%	Voltage: 11,902 V Voltage Drop: 4.6%	Voltage: 11,813 V Voltage Drop: 5.3%	Voltage: 12,675 V Voltage Drop: -1.6%	Voltage: 12,498 V Voltage Drop: -0.2%	Voltage: 12,395 V Voltage Drop: 0.6%	Voltage: 12,491 V Voltage Drop: -0.2%	Voltage: 12,490V Voltage Drop: -0.2%	Voltage: 12,411 V Voltage Drop: 0.5%	Voltage: 12,356 V Voltage Drop: 0.9%
2021 Load 500 kVA Load + 350 hp	Recloser: 5.051 MVA, 1.915 MVAR, 4.674 MW Bench Lake Reg: 2.490 MVA, .737 MVAR, 2.379 MW	Voltage: 12,578V Voltage Drop: -0.9%	Voltage: 11,935 V Voltage Drop: 4.3%	Voltage: 11,846 V Voltage Drop: 5.0%	Voltage: 11,745 V Voltage Drop: 5.8%	Voltage: 12,680 V Voltage Drop: -1.7%	Voltage: 12,478 V Voltage Drop: -0.1%	Voltage: 12,339 V Voltage Drop: 1.1%	Voltage: 12,472 V Voltage Drop: -0.0%	Voltage: 12,470V Voltage Drop: -0.0%	Voltage: 12,391 V Voltage Drop: 0.6%	Voltage: 12,294 V Voltage Drop: 1.4%
2021 Load 1000 kVA Load + 350 hp	Recloser: 5.720 MVA, 2.303 MVAR, 5.236 MW Bench Lake Reg: 3.024 MVA, .957 MVAR, 2.869 MW	Voltage: 12,571V Voltage Drop: -0.8%	Voltage: 11,819 V Voltage Drop: 5.2%	Voltage: 11,713 V Voltage Drop: 6.1%	Voltage: 11,588 V Voltage Drop: 7.1%	Voltage: 12,675 V Voltage Drop: -1.6%	Voltage: 12,424 V Voltage Drop: 0.4%	Voltage: 12,209 V Voltage Drop: 2.1%	Voltage: 12,417 V Voltage Drop: 0.4%	Voltage: 12,415V Voltage Drop: 0.4%	Voltage: 12,336 V Voltage Drop: 1.1%	Voltage: 12,150 V Voltage Drop: 2.6%

Min/Max Metering Values

SEL-2431
Voltage Reg

A-Phase

Date: 09/14/2021 Time: 10:58:08

Forward

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	102.8	07/09/2021	18:38:24	5.7	03/25/2021	22:11:35
VS (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VS (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
VL (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VL (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
VCMP (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VCMP (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
P (kW)	739	07/09/2021	18:38:24	40	03/25/2021	22:11:35
Q (kVAr)	212	07/07/2017	12:55:57	-92	02/11/2020	13:58:27
S (kVA)	749	07/09/2021	18:38:24	41	03/25/2021	22:11:35
PF @ S Max/Min	0.99	07/09/2021	18:38:24	0.96	03/25/2021	22:11:35
Freq (Hz)	60.12	09/18/2018	09:52:34	59.71	06/16/2017	04:15:54
Tap Pos	+16	02/20/2017	11:42:24	-16	02/20/2017	11:48:16

Reverse

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
VS (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VS (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VL (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VL (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VCMP (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VCMP (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
P (kW)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
Q (kVAr)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
S (kVA)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
PF @ S Max/Min	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
Freq (Hz)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
Tap Pos	\$\$\$	(Reset)		\$\$\$	(Reset)	

Last MaxMin Reset 02/14/2017 19:55:55

Demand/Peak

SEL-2431

B Phase

Date: 09/14/2021

Time: 10:55:40

Voltage Reg

Line Current (IL)

	DEMAND (A pri)	PEAK (A pri)	DATE	TIME
Forward	49	95	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:51

Real Power (P)

	DEMAND (kW)	PEAK (kW)	DATE	TIME
Forward	353	682	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:50

Reactive Power (Q)

	DEMAND (kVAr)	PEAK (kVAr)	DATE	TIME
Forward OUT	58	126	07/30/2020	14:12:27
Forward IN	0	85	04/10/2020	23:40:33
Reverse OUT	0	0	(Reset)	
Reverse IN	0	0	03/15/2017	12:33:51

Apparent Power (S)

	DEMAND (kVA)	PEAK (kVA)	DATE	TIME
Forward	357	691	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:51

Last Demand Reset 07/07/2021 17:23:17

Last Peak Reset 02/14/2017 19:55:55

Snipping Tool

New Mode

Select the snip mode using the button.

Snipping Tool

In a future update, home. Try improve & Sketch (or try the Windows logo key)

Try Snip & Sketch

Min/Max Metering Values

SEL-2431
Voltage Reg

C Phase

Date: 09/20/2021 Time: 12:58:53

Forward

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	93.9	07/09/2021	16:30:55	0.8	05/20/2019	11:37:00
VS (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VS (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
VL (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VL (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
VCMP (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VCMP (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
P (kW)	677	07/09/2021	16:30:55	-8	03/09/2020	11:44:34
Q (kVAr)	205	02/07/2019	09:21:23	-95	10/07/2020	01:35:10
S (kVA)	683	07/09/2021	16:30:55	5	05/20/2019	11:37:00
PF @ S Max/Min	0.99	07/09/2021	16:30:55	0.93	05/20/2019	11:37:00
Freq (Hz)	60.12	09/18/2018	09:42:58	59.71	06/16/2017	04:15:37
Tap Pos	+15	07/07/2021	17:30:28	-07	11/16/2018	10:08:06

Reverse

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	2.9	03/17/2020	13:52:53	2.3	03/26/2020	12:44:45
VS (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VS (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
VL (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VL (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
VCMP (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VCMP (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
P (kW)	8	03/17/2020	13:52:53	-6	03/17/2020	13:52:09
Q (kVAr)	-17	03/26/2020	12:44:46	-20	03/17/2020	13:51:21
S (kVA)	21	03/17/2020	13:52:53	17	03/26/2020	12:44:46
PF @ S Max/Min	0.42	03/17/2020	13:52:53	-0.05	03/26/2020	12:44:46
Freq (Hz)	60.04	03/17/2020	13:51:23	59.99	03/26/2020	12:46:10
Tap Pos	-02	03/26/2020	12:44:14	-03	03/17/2020	13:50:55

Last MaxMin Reset 02/14/2017 18:46:47

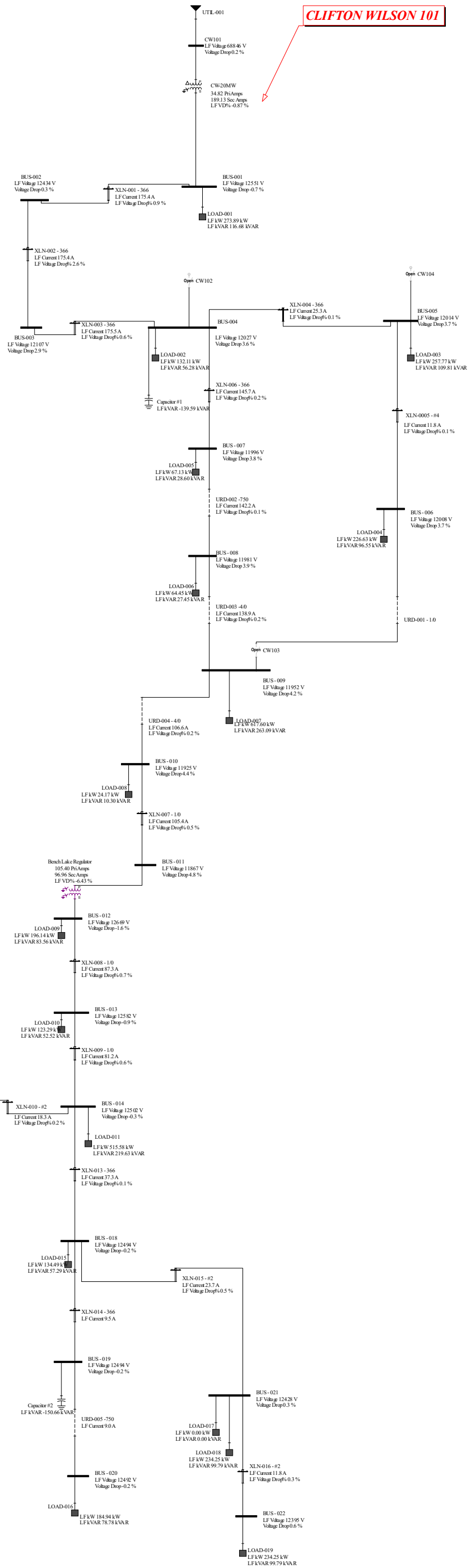
BenchLake VoltageReg A

#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7698	7/9/2021	23:45:01	42.85	122.225	122.235	122.235	2	41.62	304.981	12.165	0	305.255	0	0	0	0	0
7699	7/9/2021	23:30:01	42.5	122.255	122.265	122.265	2	41.707	305.811	11.815	0	306.072	0	0	0	0	0
7700	7/9/2021	23:15:00	41.25	122.61	122.625	122.625	3	43.497	319.275	17.316	0	319.766	0	0	0	0	0
7701	7/9/2021	23:00:00	44.25	122.77	122.785	122.785	3	45.388	333.435	15.89	0	333.834	0	0	0	0	0
7702	7/9/2021	22:45:00	44.55	122.59	122.6	122.6	3	46.764	342.847	20.861	0	343.495	0	0	0	0	0
7703	7/9/2021	22:30:00	45.65	122.295	122.305	122.305	3	46.288	338.962	20.379	0	339.587	0	0	0	0	0
7704	7/9/2021	22:15:01	47.3	122.42	122.435	122.435	3	47.446	347.99	21.345	0	348.691	0	0	0	0	0
7705	7/9/2021	22:00:01	47.7	122.33	122.345	122.345	4	51.315	374.444	24.296	0	375.247	0	0	0	0	0
7706	7/9/2021	21:45:01	51	122.035	122.05	122.05	4	52.793	385.514	26.362	0	386.429	0	0	0	0	0
7707	7/9/2021	21:30:00	49.95	122.245	122.255	122.255	4	52.308	383.185	31.125	0	384.462	0	0	0	0	0
7708	7/9/2021	21:15:01	51.25	121.74	121.75	121.75	5	51.381	374.692	26.424	0	375.656	0	0	0	0	0
7709	7/9/2021	21:00:00	55.35	121.94	121.95	121.95	4	54.655	398.267	36.084	0	399.907	0	0	0	0	0
7710	7/9/2021	20:45:01	53.65	122	122.015	122.015	4	55.166	400.687	36.84	0	402.393	0	0	0	0	0
7711	7/9/2021	20:30:01	56.75	121.43	121.435	121.435	4	58.317	426.218	37.191	0	427.853	0	0	0	0	0
7712	7/9/2021	20:15:01	57.55	122.175	122.19	122.19	5	58.246	425.034	34.874	0	426.498	0	0	0	0	0
7713	7/9/2021	20:00:01	54.45	122.25	122.26	122.26	5	57.431	418.045	38.481	0	419.831	0	0	0	0	0
7714	7/9/2021	19:45:00	56.35	122.4	122.415	122.415	5	57.837	423.124	30.756	0	424.255	0	0	0	0	0
7715	7/9/2021	19:30:00	57.95	122.205	122.215	122.215	5	59.767	435.646	35.251	0	437.087	0	0	0	0	0
7716	7/9/2021	19:15:00	58.95	122.22	122.235	122.235	5	60.252	440.462	37.614	0	442.103	0	0	0	0	0
7717	7/9/2021	19:00:01	62.05	122.51	122.515	122.515	6	62.898	459.502	44.922	0	461.714	0	0	0	0	0
7718	7/9/2021	18:45:01	65.1	121.8	121.81	121.81	6	63.91	465.648	55.094	0	468.909	0	0	0	0	0
7719	7/9/2021	18:30:01	69.35	121.865	121.875	121.875	6	67.674	493.475	60.032	0	497.125	0	0	0	0	0
7720	7/9/2021	18:15:01	67.35	122.07	122.08	122.08	7	68.726	499.865	60.452	0	503.528	0	0	0	0	0
7721	7/9/2021	18:00:00	67.6	122.01	122.025	122.025	7	65.778	480.141	49.162	0	482.685	0	0	0	0	0
7722	7/9/2021	17:45:00	63	122.88	122.885	122.885	7	61.681	451.21	40.697	0	453.054	0	0	0	0	0
7723	7/9/2021	17:30:00	63.25	122.885	122.895	122.895	8	64.412	471.369	44.064	0	473.453	0	0	0	0	0
7724	7/9/2021	17:15:00	63.9	121.795	121.81	121.81	8	63.973	466.163	39.828	0	467.887	0	0	0	0	0
7725	7/9/2021	17:00:00	61.2	122.585	122.595	122.595	9	62.759	459.415	38.827	0	461.064	0	0	0	0	0
7726	7/9/2021	16:45:01	62.05	122.125	122.135	122.135	9	64.289	468.296	42.3	0	470.211	0	0	0	0	0
7727	7/9/2021	16:30:01	65.85	121.525	121.535	121.535	9	65.723	478.175	44.564	0	480.256	0	0	0	0	0
7728	7/9/2021	16:15:01	64.6	122.24	122.255	122.255	9	62.989	460.262	40.106	0	462.025	0	0	0	0	0
7729	7/9/2021	16:00:00	62.05	122.77	122.78	122.78	10	64.149	468.181	42.989	0	470.177	0	0	0	0	0
7730	7/9/2021	15:45:01	65.05	121.735	121.745	121.745	9	62.577	455.07	42.648	0	457.075	0	0	0	0	0
7731	7/9/2021	15:30:01	64.35	121.485	121.5	121.5	9	63.721	463.309	42.081	0	465.229	0	0	0	0	0
7732	7/9/2021	15:15:01	62.8	122.545	122.555	122.555	10	61.991	453.815	38.204	0	455.428	0	0	0	0	0
7733	7/9/2021	15:00:00	59.25	122.465	122.475	122.475	10	61.818	451.679	41.527	0	453.591	0	0	0	0	0
7734	7/9/2021	14:45:00	61.25	122.21	122.22	122.22	10	60.642	443.076	43.738	0	445.243	0	0	0	0	0
7735	7/9/2021	14:30:01	60	122.425	122.43	122.43	10	59.798	436.841	42.002	0	438.861	0	0	0	0	0
7736	7/9/2021	14:15:01	61.2	122.885	122.9	122.9	10	59.257	432.559	40.007	0	434.409	0	0	0	0	0
7737	7/9/2021	14:00:01	59.6	121.09	121.1	121.1	9	56.451	409.574	35.74	0	411.142	0	0	0	0	0
7738	7/9/2021	13:45:00	59.15	121.64	121.65	121.65	9	58.938	427.895	43.956	0	430.161	0	0	0	0	0
7739	7/9/2021	13:30:00	58.4	122.045	122.06	122.06	9	57.375	418.16	41.321	0	420.214	0	0	0	0	0
7740	7/9/2021	13:15:01	57.05	121.055	121.06	121.06	9	56.927	413.7	37.848	0	415.451	0	0	0	0	0
7741	7/9/2021	13:00:00	54.05	121.805	121.815	121.815	9	55.205	402.069	36.192	0	403.728	0	0	0	0	0
7742	7/9/2021	12:45:00	56.6	122.115	122.135	122.135	9	55.975	407.425	39.779	0	409.611	0	0	0	0	0
7743	7/9/2021	12:30:01	53.55	122.24	122.25	122.25	9	55.352	398.194	77.594	0	405.699	0	0	0	0	0
7744	7/9/2021	12:15:01	56.9	121.55	121.56	121.56	9	54.575	392.426	76.152	0	399.764	0	0	0	0	0
7745	7/9/2021	12:00:01	59.35	121.625	121.635	121.635	9	58.876	421.215	84.668	0	429.663	0	0	0	0	0
7746	7/9/2021	11:45:00	54.15	122.195	122.205	122.205	9	58.007	415.814	80.254	0	423.52	0	0	0	0	0
7747	7/9/2021	11:30:00	57.3	121.93	121.94	121.94	8	56.712	407.312	77.086	0	414.597	0	0	0	0	0
7748	7/9/2021	11:15:00	53.2	121.83	121.845	121.845	8	53.835	387.229	72.478	0	393.975	0	0	0	0	0
7749	7/9/2021	11:00:00	56.25	121.51	121.52	121.52	8	55.434	396.304	77.515	0	403.89	0	0	0	0	0
7750	7/9/2021	10:45:00	56.05	121.07	121.085	121.085	7	52.997	380.447	66.635	0	386.25	0	0	0	0	0
7751	7/9/2021	10:30:01	52.55	121.6	121.615	121.615	7	51.982	373.008	66.761	0	378.95	0	0	0	0	0
7752	7/9/2021	10:15:01	51.45	121.825	121.84	121.84	7	53.105	380.71	71.184	0	387.328	0	0	0	0	0
7753	7/9/2021	10:00:00	48.4	121.79	121.8	121.8	7	52.73	377.202	73.317	0	384.293	0	0	0	0	0
7754	7/9/2021	9:45:01	52.2	121.06	121.075	121.075	5	50.763	363.689	69.285	0	370.291	0	0	0	0	0
7755	7/9/2021	9:30:01	52.25	121.8	121.81	121.81	5	50.205	362.448	67.878	0	368.763	0	0	0	0	0
7756	7/9/2021	9:15:01	49.05	122.435	122.455	122.455	6	50.029	360.775	63.715	0	366.371	0	0	0	0	0
7757	7/9/2021	9:00:00	48.75	121.675	121.69	121.69	6	48.904	350.889	62.971	0	356.515	0	0	0	0	0
7758	7/9/2021	8:45:00	50.9	121.655	121.67	121.67	6	48.796	351.697	62.077	0	357.147	0	0	0	0	0
7759	7/9/2021	8:30:01	46.05	122.07	122.085	122.085	6	46.001	331.534	62.304	0	337.354	0	0	0	0	0
7760	7/9/2021	8:15:00	47	122.415	122.425	122.425	7	48.168	346.538	62.899	0	352.223	0	0	0	0	0
7761	7/9/2021	8:00:00	47.75	121.17	121.18	121.18	5	46.666	335.742	57.225	0	340.594	0	0	0	0	0
7762	7/9/2021	7:45:00	45.75	121.84	121.85	121.85	5	47.386	340.322	59.627	0	345.532	0	0	0	0	0
7763	7/9/2021	7:30:00	43.95	121.745	121.755	121.755	5	43.107	310.641	54.221	0	315.356	0	0	0	0	0
7764	7/9/2021	7:15:01	45.6	121.94	121.95	121.95	5	42.651	308.525	51.029	0	312.753	0	0	0	0	0
7765	7/9/2021	7:00:00	42.45	122.03	122.045	122.045	5	40.691	293.319	44.553	0	296.713	0	0	0	0	0
7766	7/9/2021	6:45:01	42.8	121.43	121.44	121.44	4	40.712	293.052	48.345	0	297.035	0	0	0	0	0
7767	7/9/2021	6:30:00	37.95	121.98	121.99	121.99	4	37.052	268.515	39.782	0	271.491	0	0	0	0	0
7768	7/9/2021	6:15:00	34.9	122.17	122.18	122.18	4	36.502	263.596	37.844	0	266.351	0	0	0	0	0
7769	7/9/2021	6:0															

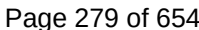
#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7699	7/9/2021	23:45:01	55.85	122.06	122.095	122.095	4	55.748	405.242	47.46	0	408.022	0	0	0	0	0
7700	7/9/2021	23:30:01	55.05	122.02	122.05	122.05	4	55.09	400.452	45.369	0	403.033	0	0	0	0	0
7701	7/9/2021	23:15:00	54.45	121.555	121.58	121.58	4	55.787	405.676	46.863	0	408.391	0	0	0	0	0
7702	7/9/2021	23:00:00	53.75	122.04	122.07	122.07	5	58.65	426.388	56.833	0	430.181	0	0	0	0	0
7703	7/9/2021	22:45:01	60.35	121.81	121.84	121.84	5	61.305	444.469	59.939	0	448.503	0	0	0	0	0
7704	7/9/2021	22:30:01	58.7	121.97	122	122	5	59.817	435.223	57.585	0	439.038	0	0	0	0	0
7705	7/9/2021	22:15:00	64.6	122.595	122.62	122.62	6	62.973	458.29	63.92	0	462.734	0	0	0	0	0
7706	7/9/2021	22:00:00	66.15	121.845	121.87	121.87	6	66.15	479.921	65.002	0	484.307	0	0	0	0	0
7707	7/9/2021	21:45:00	66.7	121.945	121.97	121.97	6	68.067	493.689	67.105	0	498.236	0	0	0	0	0
7708	7/9/2021	21:30:00	67	122.905	122.935	122.935	7	68.736	500.724	68.741	0	505.435	0	0	0	0	0
7709	7/9/2021	21:15:00	66.55	122.79	122.82	122.82	7	68.2	496.759	62.908	0	500.737	0	0	0	0	0
7710	7/9/2021	21:00:01	72.05	122.27	122.3	122.3	7	68.895	502.268	63.506	0	506.288	0	0	0	0	0
7711	7/9/2021	20:45:01	75.85	121.79	121.815	121.815	7	73.808	534.374	74.552	0	539.559	0	0	0	0	0
7712	7/9/2021	20:30:00	75.8	121.735	121.76	121.76	7	70.437	512.848	67.224	0	517.26	0	0	0	0	0
7713	7/9/2021	20:15:01	72.1	122.51	122.54	122.54	8	74.556	543.386	68.757	0	547.727	0	0	0	0	0
7714	7/9/2021	20:00:01	72.2	122.19	122.22	122.22	8	75.726	550.278	73.792	0	555.214	0	0	0	0	0
7715	7/9/2021	19:45:00	77.2	122.76	122.785	122.785	9	78.217	570.32	79.807	0	575.885	0	0	0	0	0
7716	7/9/2021	19:30:00	75.85	122.85	122.88	122.88	9	80.553	585.712	84.768	0	591.823	0	0	0	0	0
7717	7/9/2021	19:15:00	83.15	122.935	122.96	122.96	9	84.293	612.744	94.711	0	620.026	0	0	0	0	0
7718	7/9/2021	19:00:01	85.9	122.895	122.92	122.92	9	89.502	649.124	101.644	0	657.043	0	0	0	0	0
7719	7/9/2021	18:45:01	91.65	122.405	122.435	122.435	10	94.134	680.091	108.369	0	688.688	0	0	0	0	0
7720	7/9/2021	18:30:00	85.35	122.285	122.315	122.315	9	86.858	630.072	96.388	0	637.411	0	0	0	0	0
7721	7/9/2021	18:15:01	92.55	120.695	120.72	120.72	9	85.584	617.524	89.692	0	624.012	0	0	0	0	0
7722	7/9/2021	18:00:01	86.9	122.195	122.225	122.225	10	87.014	631.101	93.983	0	638.078	0	0	0	0	0
7723	7/9/2021	17:45:01	84.7	122.235	122.265	122.265	11	84.585	615.379	88.698	0	621.749	0	0	0	0	0
7724	7/9/2021	17:30:01	82.95	122.295	122.325	122.325	12	86.55	628.587	93.834	0	635.561	0	0	0	0	0
7725	7/9/2021	17:15:00	86.25	122.3	122.325	122.325	13	87.266	633.485	95.25	0	640.617	0	0	0	0	0
7726	7/9/2021	17:00:01	90.2	121.67	121.705	121.705	13	87.976	637.173	99.303	0	644.87	0	0	0	0	0
7727	7/9/2021	16:45:00	96.35	121.755	121.785	121.785	13	92.128	665.715	100.677	0	673.29	0	0	0	0	0
7728	7/9/2021	16:30:00	96.55	121.335	121.365	121.365	13	92.016	665.912	101.781	0	673.65	0	0	0	0	0
7729	7/9/2021	16:15:00	89.8	122.045	122.07	122.07	13	91.565	660.947	104.05	0	669.095	0	0	0	0	0
7730	7/9/2021	16:00:01	93.1	121.02	121.05	121.05	12	88.092	636.346	96.028	0	643.561	0	0	0	0	0
7731	7/9/2021	15:45:01	88.1	121.37	121.4	121.4	12	86.984	628.195	94.651	0	635.299	0	0	0	0	0
7732	7/9/2021	15:30:01	81.15	121.75	121.785	121.785	12	84.519	609.647	88.868	0	616.094	0	0	0	0	0
7733	7/9/2021	15:15:01	84.7	121.36	121.385	121.385	12	84.892	613.21	91.48	0	620.002	0	0	0	0	0
7734	7/9/2021	15:00:01	87.65	121.525	121.555	121.555	12	82.764	600.983	87.389	0	607.309	0	0	0	0	0
7735	7/9/2021	14:45:01	82.7	121.99	122.02	122.02	12	83.784	606.074	89.031	0	612.585	0	0	0	0	0
7736	7/9/2021	14:30:01	74.35	122.915	122.945	122.945	13	80.007	581.449	84.199	0	587.519	0	0	0	0	0
7737	7/9/2021	14:15:01	85.4	121.505	121.53	121.53	13	82.045	590.713	84.377	0	596.714	0	0	0	0	0
7738	7/9/2021	14:00:00	78.6	121.35	121.38	121.38	12	79.199	570.858	83.531	0	576.943	0	0	0	0	0
7739	7/9/2021	13:45:00	79	121.66	121.685	121.685	12	77.827	561.049	84.113	0	567.332	0	0	0	0	0
7740	7/9/2021	13:30:01	78.5	122.04	122.07	122.07	11	73.194	531.438	71.473	0	536.235	0	0	0	0	0
7741	7/9/2021	13:15:00	73.25	121.68	121.71	121.71	11	74.955	541.659	74.603	0	546.789	0	0	0	0	0
7742	7/9/2021	13:00:00	66.7	122.17	122.195	122.195	10	70.477	513.359	68.706	0	518	0	0	0	0	0
7743	7/9/2021	12:45:00	72.05	122.64	122.67	122.67	11	70.922	515.052	78.789	0	521.257	0	0	0	0	0
7744	7/9/2021	12:30:00	69.85	121.285	121.315	121.315	11	73.857	527.035	111.556	0	538.717	0	0	0	0	0
7745	7/9/2021	12:15:00	76.2	121.64	121.665	121.665	11	74.738	534.383	115.089	0	546.65	0	0	0	0	0
7746	7/9/2021	12:00:00	75.3	121.68	121.71	121.71	11	72.659	519.572	113.991	0	531.966	0	0	0	0	0
7747	7/9/2021	11:45:00	72.8	122.18	122.215	122.215	11	74.639	533.374	119.69	0	546.664	0	0	0	0	0
7748	7/9/2021	11:30:01	72.95	121.375	121.405	121.405	10	71.507	509.55	110.513	0	521.411	0	0	0	0	0
7749	7/9/2021	11:15:00	72.85	121.175	121.2	121.2	9	70.229	499.306	111.79	0	511.674	0	0	0	0	0
7750	7/9/2021	11:00:01	71.1	120.955	120.98	120.98	9	67.803	483.882	107.603	0	495.713	0	0	0	0	0
7751	7/9/2021	10:45:00	66	122.82	122.85	122.85	10	65.939	472.05	102.912	0	483.147	0	0	0	0	0
7752	7/9/2021	10:30:00	63.55	122.055	122.08	122.08	9	64.067	457.074	98.722	0	467.622	0	0	0	0	0
7753	7/9/2021	10:15:00	64.5	121.495	121.52	121.52	9	64.073	457.374	98.911	0	467.962	0	0	0	0	0
7754	7/9/2021	10:00:00	62.7	121.79	121.82	121.82	9	66.583	473.281	108.013	0	485.473	0	0	0	0	0
7755	7/9/2021	9:45:00	62.2	121.56	121.585	121.585	7	59.501	426.154	89.192	0	435.4	0	0	0	0	0
7756	7/9/2021	9:30:01	64	121.575	121.6	121.6	7	60.778	435.605	93.31	0	445.502	0	0	0	0	0
7757	7/9/2021	9:15:01	54.4	122.475	122.5	122.5	7	53.698	387	76.402	0	394.48	0	0	0	0	0
7758	7/9/2021	9:00:01	55.7	121.485	121.515	121.515	8	55.189	395.926	76.206	0	403.211	0	0	0	0	0
7759	7/9/2021	8:45:00	60.75	121.61	121.64	121.64	8	56.738	406.226	82.782	0	414.585	0	0	0	0	0
7760	7/9/2021	8:30:00	52.7	121.825	121.855	121.855	8	53.606	384.545	74.776	0	391.76	0	0	0	0	0
7761	7/9/2021	8:15:00	57.15	121.535	121.565	121.565	7	55.043	394.708	76.124	0	402.003	0	0	0	0	0
7762	7/9/2021	8:00:01	52.75	121.985	122.015	122.015	7	51.193	366.532	71.286	0	373.413	0	0	0	0	0
7763	7/9/2021	7:45:00	50.6	121.37	121.4	121.4	6	50.855	364.755	65.357	0	370.573	0	0	0	0	0
7764	7/9/2021	7:30:00	48.3	121.45	121.48	121.48	6	48.432	348.281	62.981	0	353.942	0	0	0	0	0
7765	7/9/2021	7:15:01	51.2	122.02	122.045	122.045	6	50.333	361.872	70.214	0	368.631	0	0	0	0	0
7766	7/9/2021	7:00:00	52.2	121.665	121.69	121.69	6	49.209	353.398	66.207	0	359.558	0	0	0	0	0
7767	7/9/2021	6:45:01	50.1	121.09	121.115	121.115	5	49.172	353.301	62.892	0	358.871	0	0	0	0	0
7768	7/9/2021	6:30:00	49.05	122.05	122.085	122.085	5	48.475	347.774	63.291	0	353.497	0	0	0	0	0
7769	7/9/2021	6:15:01	46.15	121.37	121.395	121.395	4	46.193	331.132	58.679	0	336.302	0	0	0	0	0
7770	7/9/2021	6:00:01	42.25	121													

#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7699	7/9/2021	23:45:01	46.3	121.925	121.94	121.94	1	46.966	343.645	22.703	0	344.434	0	0	0	0	0
7700	7/9/2021	23:30:01	49.65	122.14	122.155	122.155	2	49.6	363.32	28.687	0	364.467	0	0	0	0	0
7701	7/9/2021	23:15:00	48.3	122.65	122.665	122.665	3	50.736	372.199	29.122	0	373.357	0	0	0	0	0
7702	7/9/2021	23:00:00	52.1	121.79	121.8	121.8	3	52.2	381.13	33.174	0	382.608	0	0	0	0	0
7703	7/9/2021	22:45:00	55.05	121.54	121.555	121.555	3	53.684	390.458	35.946	0	392.163	0	0	0	0	0
7704	7/9/2021	22:30:01	57	122.32	122.335	122.335	3	55.312	404.269	41.787	0	406.445	0	0	0	0	0
7705	7/9/2021	22:15:00	52.7	122.455	122.47	122.47	3	54.793	401.136	36.645	0	402.819	0	0	0	0	0
7706	7/9/2021	22:00:00	58.1	122.46	122.475	122.475	4	58.731	427.968	40.525	0	429.898	0	0	0	0	0
7707	7/9/2021	21:45:01	57.85	121.225	121.24	121.24	3	57.867	421.261	38.885	0	423.089	0	0	0	0	0
7708	7/9/2021	21:30:01	57.15	122.74	122.755	122.755	4	62.018	452.489	50.747	0	455.35	0	0	0	0	0
7709	7/9/2021	21:15:01	63.3	121.505	121.515	121.515	4	63.214	458.313	47.975	0	460.827	0	0	0	0	0
7710	7/9/2021	21:00:00	64	122.635	122.65	122.65	5	62.144	452.185	47.72	0	454.736	0	0	0	0	0
7711	7/9/2021	20:45:00	61.85	122.695	122.71	122.71	4	65.029	475.374	51.487	0	478.221	0	0	0	0	0
7712	7/9/2021	20:30:00	66.5	122.46	122.48	122.48	5	66.95	487.984	55.798	0	491.172	0	0	0	0	0
7713	7/9/2021	20:15:00	72.05	121.415	121.425	121.425	5	70.734	512.856	62.062	0	516.607	0	0	0	0	0
7714	7/9/2021	20:00:00	67.75	121.95	121.965	121.965	5	70.474	510.632	59.952	0	514.161	0	0	0	0	0
7715	7/9/2021	19:45:01	74.4	121.12	121.14	121.14	5	75.821	548.217	70.238	0	552.713	0	0	0	0	0
7716	7/9/2021	19:30:00	75.35	121.78	121.795	121.795	5	75.556	547.509	65.801	0	551.463	0	0	0	0	0
7717	7/9/2021	19:15:00	80.1	121.555	121.57	121.57	5	78.497	567.764	74.301	0	572.636	0	0	0	0	0
7718	7/9/2021	19:00:01	76.5	121.965	121.98	121.98	5	83.019	599.817	84.329	0	605.73	0	0	0	0	0
7719	7/9/2021	18:45:01	72.5	122.76	122.78	122.78	6	78.991	575.32	80.673	0	580.96	0	0	0	0	0
7720	7/9/2021	18:30:00	84.2	122.25	122.265	122.265	7	81.674	594.463	84.757	0	600.48	0	0	0	0	0
7721	7/9/2021	18:15:00	85.8	122.685	122.7	122.7	8	85.363	620.785	91.636	0	627.521	0	0	0	0	0
7722	7/9/2021	18:00:01	82.35	122.59	122.605	122.605	8	81.27	590.905	85.345	0	597.052	0	0	0	0	0
7723	7/9/2021	17:45:01	85.45	121.6	121.615	121.615	8	80.747	584.664	81.752	0	590.362	0	0	0	0	0
7724	7/9/2021	17:30:00	78.2	121.935	121.945	121.945	8	77.025	559.908	74.335	0	564.832	0	0	0	0	0
7725	7/9/2021	17:15:01	80.75	122.01	122.025	122.025	9	76.755	557.735	75.868	0	562.879	0	0	0	0	0
7726	7/9/2021	17:00:00	79.4	122.1	122.115	122.115	9	81.662	590.52	81.085	0	596.083	0	0	0	0	0
7727	7/9/2021	16:45:01	75.1	123.24	123.255	123.255	9	82.451	597.924	83.084	0	603.674	0	0	0	0	0
7728	7/9/2021	16:30:01	91.8	121.465	121.48	121.48	9	84.499	611.895	86.681	0	618.017	0	0	0	0	0
7729	7/9/2021	16:15:01	77.85	122.48	122.495	122.495	9	81.186	589.48	89.242	0	596.209	0	0	0	0	0
7730	7/9/2021	16:00:01	80.8	122.28	122.295	122.295	9	79.397	575.17	90.218	0	582.21	0	0	0	0	0
7731	7/9/2021	15:45:01	71.35	122.44	122.45	122.45	9	77.456	560.304	86.887	0	567.014	0	0	0	0	0
7732	7/9/2021	15:30:01	76.5	122.105	122.125	122.125	9	76.822	555.39	84.186	0	561.747	0	0	0	0	0
7733	7/9/2021	15:15:00	82.75	121.105	121.12	121.12	9	79.193	570.805	87.547	0	577.502	0	0	0	0	0
7734	7/9/2021	15:00:01	69.4	122.75	122.76	122.76	9	71.511	517.952	80.071	0	524.113	0	0	0	0	0
7735	7/9/2021	14:45:01	74.75	122.535	122.55	122.55	9	70.866	515.114	78.545	0	521.083	0	0	0	0	0
7736	7/9/2021	14:30:01	75.1	121.67	121.685	121.685	10	73.267	530.386	86.608	0	537.42	0	0	0	0	0
7737	7/9/2021	14:15:01	71.85	122.225	122.235	122.235	10	69.745	505.355	77.239	0	511.233	0	0	0	0	0
7738	7/9/2021	14:00:00	66.35	122.01	122.025	122.025	10	69.357	499.933	77.571	0	505.925	0	0	0	0	0
7739	7/9/2021	13:45:00	68.55	121.6	121.61	121.61	9	65.988	477.117	69.963	0	482.231	0	0	0	0	0
7740	7/9/2021	13:30:00	73.05	121.875	121.885	121.885	9	70.287	508.043	78.801	0	514.145	0	0	0	0	0
7741	7/9/2021	13:15:00	67	121.325	121.34	121.34	9	67.112	484.398	68.539	0	489.238	0	0	0	0	0
7742	7/9/2021	13:00:00	65.1	122.075	122.09	122.09	9	63.55	459.094	68.152	0	464.161	0	0	0	0	0
7743	7/9/2021	12:45:01	65.7	121.435	121.45	121.45	8	65.44	470.716	78.296	0	477.351	0	0	0	0	0
7744	7/9/2021	12:30:00	68.55	121.175	121.19	121.19	8	64.125	456.932	102.735	0	468.352	0	0	0	0	0
7745	7/9/2021	12:15:00	57.6	121.815	121.83	121.83	8	61.197	435.492	99.943	0	446.823	0	0	0	0	0
7746	7/9/2021	12:00:00	60.5	121.96	121.97	121.97	8	64.925	461.123	108.95	0	473.848	0	0	0	0	0
7747	7/9/2021	11:45:01	67.3	121.56	121.575	121.575	8	65.316	463.38	112.15	0	476.8	0	0	0	0	0
7748	7/9/2021	11:30:00	65.3	122.105	122.12	122.12	8	63.028	449.038	100.878	0	460.237	0	0	0	0	0
7749	7/9/2021	11:15:01	63.6	121.55	121.565	121.565	7	65.016	462.576	106.041	0	474.582	0	0	0	0	0
7750	7/9/2021	11:00:01	56.95	121.9	121.915	121.915	7	56.645	402.267	93.804	0	413.076	0	0	0	0	0
7751	7/9/2021	10:45:01	62.75	121.375	121.39	121.39	7	57.507	409.27	96.488	0	420.513	0	0	0	0	0
7752	7/9/2021	10:30:01	61.6	121.375	121.385	121.385	7	58.877	418.984	99.447	0	430.639	0	0	0	0	0
7753	7/9/2021	10:15:00	55.1	122.145	122.16	122.16	7	59.176	421.035	97.508	0	432.205	0	0	0	0	0
7754	7/9/2021	10:00:01	62.25	121.215	121.23	121.23	7	59.729	423.737	97.667	0	434.872	0	0	0	0	0
7755	7/9/2021	9:45:00	60.65	120.86	120.88	120.88	5	55.754	397.147	91.017	0	407.459	0	0	0	0	0
7756	7/9/2021	9:30:00	53.65	122.035	122.05	122.05	5	55.914	398.456	94.752	0	409.585	0	0	0	0	0
7757	7/9/2021	9:15:01	56.2	122.545	122.56	122.56	6	53.982	385.326	89.265	0	395.576	0	0	0	0	0
7758	7/9/2021	9:00:01	53.35	121.715	121.725	121.725	6	52.995	378.248	79.261	0	386.475	0	0	0	0	0
7759	7/9/2021	8:45:00	52.4	121.35	121.365	121.365	5	52.628	374.35	82.847	0	383.421	0	0	0	0	0
7760	7/9/2021	8:30:00	50.45	121.78	121.795	121.795	5	48.695	349.177	75.964	0	357.359	0	0	0	0	0
7761	7/9/2021	8:15:01	48.55	121.46	121.47	121.47	5	48.722	348.405	73.103	0	356.014	0	0	0	0	0
7762	7/9/2021	8:00:01	49.3	121.705	121.72	121.72	5	51.259	364.989	78.517	0	373.373	0	0	0	0	0
7763	7/9/2021	7:45:00	50.1	121.495	121.51	121.51	4	49.959	357.617	71.37	0	364.695	0	0	0	0	0
7764	7/9/2021	7:30:00	48.3	122.55	122.565	122.565	4	48.149	347.036	68.01	0	353.665	0	0	0	0	0
7765	7/9/2021	7:15:00	47.9	121.85	121.86	121.86	4	46.833	335.084	63.935	0	341.147	0	0	0	0	0
7766	7/9/2021	7:00:00	50.45	121.425	121.435	121.435	3	43.814	313.557	56.592	0	318.643	0	0	0	0	0
7767	7/9/2021	6:45:00	41.25	121.635	121.645	121.645	2	41.18	296.185	53.053	0	300.92	0	0	0	0	0
7768	7/9/2021	6:30:00	38.4	122.14	122.155	122.155	2	39.962	288.506	46.65	0	292.286	0	0	0	0	0
7769	7/9/2021	6:15:01	42.1	121.1	121.115	121.115	1	41.073	296.075	45.863	0	299.631	0	0	0	0	0
7770	7/9/2021	6:00:00	44.45	121.505	121.51</												

Existing Circuit



CLIFTON WILSON 101



Input Report (English)

Utilities

Contribution From Name	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)		
				DutyUnits		X/R	R PU	X PU	
UTIL-001	CW101	In	69,000	3P:	900 MVA	9.86	Pos: 0.011	0.111	
				SLG:	300 MVA	7.00	Zero: 0.025	0.109	

Non-Motor Loads

Name	Phase	In/Out Service	Bus Name	L-L Volts	Rated size	Units	PF	Type
LOAD-001	ABC	In	BUS-001	12,470	297.71	kVA	0.92	Lag
LOAD-006	ABC	In	BUS - 008	12,470	70.05	kVA	0.92	Lag
LOAD-016	ABC	In	BUS - 020	12,470	201.02	kVA	0.92	Lag
LOAD-002	ABC	In	BUS-004	12,470	143.60	kVA	0.92	Lag
LOAD-003	ABC	In	BUS-005	12,470	280.19	kVA	0.92	Lag
LOAD-004	ABC	In	BUS - 006	12,470	246.34	kVA	0.92	Lag
LOAD-005	ABC	In	BUS - 007	12,470	72.97	kVA	0.92	Lag
LOAD-008	ABC	In	BUS - 010	12,470	26.27	kVA	0.92	Lag
LOAD-010	ABC	In	BUS - 013	12,470	134.01	kVA	0.92	Lag
LOAD-009	ABC	In	BUS - 012	12,470	213.20	kVA	0.92	Lag
LOAD-011	ABC	In	BUS - 014	12,470	560.41	kVA	0.92	Lag
LOAD-012	ABC	In	BUS - 015	12,470	36.55	kVA	0.92	Lag
LOAD-013	ABC	In	BUS - 016	12,470	201.02	kVA	0.92	Lag
LOAD-014	ABC	In	BUS - 017	12,470	158.38	kVA	0.92	Lag
LOAD-015	ABC	In	BUS - 018	12,470	146.19	kVA	0.92	Lag
LOAD-007	ABC	In	BUS - 009	12,470	671.30	kVA	0.92	Lag
LOAD-018	ABC	In	BUS - 021	12,470	254.62	kVA	0.92	Lag
LOAD-019	ABC	In	BUS - 022	12,470	254.62	kVA	0.92	Lag

2-Winding Transformers

Name 1 / 3Phase	In/Out	-----Primary & Secondary-----				Nominal kVA	Percent Z in %	
	Phases	Bus	Conn.	Volts	FLA		R	jX

Name 1 / 3Phase	In/Out	-----Primary & Secondary-----					Nominal kVA	Percent Z in %		
		Phases	Bus	Conn.	Volts	FLA		R	jX	
Bench Lake Regulator	In	ABC	BUS - 011	WG	12,470	162	3,500.0	Pos:	0.86	5.30
3Phase			BUS - 012	WG	12,470	162		Zero:	0.86	5.30
CW-20MW	In	ABC	CW101	D	69,000	167	12,000.0	Pos:	0.86	5.30
3Phase			BUS-001	WG	12,470	926		Zero:	0.80	5.00

Transmission Lines

Name LibModel	In/Out Service	From Bus To Bus	Miles Phases	Num Circuits	Per Unit (100 MVA Base)		Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu	R pu	jX pu	
URD-001 - 1/0	In	BUS - 006	0.55	1	0.0000	0.0000	Pos:	0.001	0.001
		BUS - 009	ABC		0.0000	0.0000	Zero:	0.0028	0.0008
URD-002 - 750	In	BUS - 007	0.27	1	0.0000	0.0000	Pos:	0.027	0.037
		BUS - 008	ABC		0.0000	0.0000	Zero:	0.0275	0.0371
URD-003 - 4/0	In	BUS - 008	0.19	1	0.0000	0.0000	Pos:	0.071	0.031
		BUS - 009	ABC		0.0000	0.0000	Zero:	0.0713	0.0306
URD-004 - 4/0	In	BUS - 009	0.24	1	0.0000	0.0000	Pos:	0.089	0.038
		BUS - 010	ABC		0.0000	0.0000	Zero:	0.0887	0.0380
URD-005 - 750	In	BUS - 019	0.59	1	0.0000	0.0001	Pos:	0.060	0.081
		BUS - 020	ABC		0.0000	0.0000	Zero:	0.0600	0.0809
XLN-0005 - #4	In	BUS-005	0.44	1	0.0000	0.0000	Pos:	0.136	0.189
		BUS - 006	ABC		0.0000	0.0000	Zero:	0.1358	0.1889
XLN-001 - 336	In	BUS-001	0.74	1	0.0000	0.0000	Pos:	0.146	0.306
		BUS-002	ABC		0.0000	0.0000	Zero:	0.1457	0.3061
XLN-002 - 336	In	BUS-002	2.11	1	0.0000	0.0000	Pos:	0.416	0.853
		BUS-003	ABC		0.0000	0.0000	Zero:	0.4162	0.8530
XLN-003 - 336	In	BUS-004	0.52	1	0.0000	0.0000	Pos:	0.103	0.216
		BUS-003	ABC		0.0000	0.0000	Zero:	0.1027	0.2158
XLN-004 - 366	In	BUS-005	0.53	1	0.0000	0.0000	Pos:	0.104	0.214
		BUS-004	ABC		0.0000	0.0000	Zero:	0.1044	0.2140
XLN-006 - 336	In	BUS-004	0.23	1	0.0000	0.0000	Pos:	0.046	0.095
		BUS - 007	ABC		0.0000	0.0000	Zero:	0.0462	0.0948
XLN-007 - 1/0	In	BUS - 010	0.27	1	0.0000	0.0000	Pos:	0.170	0.125
		BUS - 011	ABC		0.0000	0.0000	Zero:	0.1703	0.1254

Name LibModel	In/Out Service	From Bus To Bus	Miles Phases	Num Circuits	Per Unit (100 MVA Base)		Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu		R pu	jX pu
XLN-008 - 1/0	In	BUS - 012	0.50	1	0.0000	0.0000	Pos:	0.311	0.229
		BUS - 013	ABC		0.0000	0.0000	Zero:	0.3106	0.2287
XLN-009 - 1/0	In	BUS - 013	0.50	1	0.0000	0.0000	Pos:	0.311	0.229
		BUS - 014	ABC		0.0000	0.0000	Zero:	0.3106	0.2287
XLN-010 - #2	In	BUS - 015	0.47	1	0.0000	0.0000	Pos:	0.472	0.227
		BUS - 014	ABC		0.0000	0.0000	Zero:	0.4721	0.2268
XLN-011 - 336	In	BUS - 015	0.49	1	0.0000	0.0000	Pos:	0.097	0.199
		BUS - 016	ABC		0.0000	0.0000	Zero:	0.0970	0.1987
XLN-012 - #2	In	BUS - 016	0.42	1	0.0000	0.0000	Pos:	0.415	0.200
		BUS - 017	ABC		0.0000	0.0000	Zero:	0.4154	0.1996
XLN-013 - 336	In	BUS - 014	0.29	1	0.0000	0.0000	Pos:	0.058	0.118
		BUS - 018	ABC		0.0000	0.0000	Zero:	0.0578	0.1184
XLN-014 - 336	In	BUS - 018	0.48	1	0.0000	0.0000	Pos:	0.094	0.193
		BUS - 019	ABC		0.0000	0.0000	Zero:	0.0942	0.1931
XLN-015 - #2	In	BUS - 021	0.94	1	0.0000	0.0000	Pos:	0.937	0.450
		BUS - 018	ABC		0.0000	0.0000	Zero:	0.9366	0.4499
XLN-016 - #2	In	BUS - 021	0.93	1	0.0000	0.0000	Pos:	0.925	0.444
		BUS - 022	ABC		0.0000	0.0000	Zero:	0.9252	0.4444

Clifton Wilson Circuit 101 Impedance

From	To	LENGTH	Conductor Size	Z(+) Ohms/Mile		Z(0) Ohms/Mile		Z(+) pu Full Section		Z(0) pu Full Section		B	Bpu Total	1/2 Bpu Total
		Feet		R	X	R	X	R	X	R	X	mmho/Mil		
12.47 kV Lines														
XFMR/Bus 001	Bus 002	3,900	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.04854	0.10199	0.10265	0.25102	6.58600	0.00002	0.00001
Bus 002	Bus 003	11,160	366 OH	0.30620	0.62760	0.64830	1.62210	0.13872	0.28432	0.29370	0.73485	6.67600	0.00007	0.00003
Bus 003	Bus 004	2,750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03423	0.07191	0.07238	0.17700	6.58600	0.00002	0.00001
Bus 004	Bus 005	2,800	4/0 OH	0.48480	0.67450	0.95070	1.76950	0.05510	0.07667	0.10806	0.20113	6.35600	0.00002	0.00001
Bus 005	Bus 006	2,300	#2 OH	1.55030	0.74470	2.32340	2.35830	0.14474	0.06953	0.21693	0.22018	5.73400	0.00001	0.00001
Bus 006	Bus 009	2,900	1/0 UG	1.11400	0.27190	1.94300	0.34320	0.13114	0.03201	0.22873	0.04040	102.35000	0.00026	0.00013
Bus 004	Bus 007	1,240	336 OH	0.30620	0.62760	0.64830	1.62210	0.01541	0.03159	0.03263	0.08165	6.67600	0.00001	0.00000
Bus 007	Bus 008	1,420	750 UG	0.15890	0.21590	0.05280	0.15310	0.00916	0.01245	0.00304	0.00883	200.28000	0.00025	0.00013
Bus 008	Bus 009	1,025	4/0 UG	0.57020	0.24440	1.70000	0.50160	0.02373	0.01017	0.07073	0.02087	130.41000	0.00012	0.00006
Bus 009	Bus 010	1,276	4/0 UG	0.57020	0.24440	1.70000	0.50160	0.02953	0.01266	0.08806	0.02598	130.41000	0.00015	0.00007
Bus 010	Bench Lake Reg	1,435	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.05677	0.04180	0.09684	0.12044	5.96900	0.00001	0.00000
Bench Lake Reg	Bus 013	2,618	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.10356	0.07625	0.17668	0.21972	5.96900	0.00001	0.00001
Bus 013	Bus 014	2,618	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.10356	0.07625	0.17668	0.21972	5.96900	0.00001	0.00001
Bus 014	Bus 015	2,500	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.09890	0.07281	0.16872	0.20982	5.96900	0.00001	0.00001
Bus 015	Bus 016	2,600	336 OH	0.30620	0.62760	0.64830	1.62210	0.03232	0.06624	0.06842	0.17120	6.67600	0.00002	0.00001
Bus 016	Bus 017	2,200	#2 OH	1.55030	0.74470	2.32340	2.35830	0.13845	0.06651	0.20749	0.21061	5.73400	0.00001	0.00001
Bus 014	Bus 018	1,549	336 OH	0.30620	0.62760	0.64830	1.62210	0.01925	0.03946	0.04076	0.10200	6.67600	0.00001	0.00000
Bus 018	Bus 019	2,526	336 OH	0.30620	0.62760	0.64830	1.62210	0.03140	0.06435	0.06648	0.16633	6.67600	0.00001	0.00001
Bus 019	Bus 020	3,100	750 UG	0.15890	0.21590	0.05280	0.15310	0.02000	0.02717	0.00664	0.01927	200.28000	0.00055	0.00027
Bus 018	Bus 021	4,960	#2 OH	1.55030	0.74470	2.32340	2.35830	0.31214	0.14994	0.46780	0.47483	5.73400	0.00003	0.00001
Bus 021	Bus 022	4,900	#2 OH	1.55030	0.74470	2.32340	2.35830	0.30837	0.14813	0.46215	0.46909	5.73400	0.00002	0.00001
New Flat Build														
Bus 017	Bus 023	1,750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.02178	0.04576	0.04606	0.11264	6.58600	0.00001	0.00001
Bus 023	Bus 024	2,600	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03236	0.06799	0.06843	0.16735	6.58600	0.00002	0.00001
Bus 024	Bus 025	9,230	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.11488	0.24137	0.24294	0.59409	6.58600	0.00005	0.00003
Bus 025	Bus 026	2,100	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.02614	0.05492	0.05527	0.13517	6.58600	0.00001	0.00001
Bus 026	Bus 027	850	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.01058	0.02223	0.02237	0.05471	6.58600	0.00000	0.00000
Bus 027	Bus 028	1,580	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.01966	0.04132	0.04159	0.10170	6.58600	0.00001	0.00000
Bus 028	Bus 029	3,060	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03808	0.08002	0.08054	0.19696	6.58600	0.00002	0.00001
Bus 029	Bus 030	2,700	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03360	0.07061	0.07107	0.17379	6.58600	0.00002	0.00001
Bus 030	Bus 031	750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.00933	0.01961	0.01974	0.04827	6.58600	0.00000	0.00000
Bus 031	Bus 030	2,580	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03211	0.06747	0.06791	0.16606	6.58600	0.00002	0.00001

	Hurricane Distribution C101 – 12.47kV Overhead Impedances – FLAT Construction						
Conductor size	Ampacity (Amps)	Z(+) Ohms/mile		Z(0) Ohms/mile		Xc(+) Mohm/mile	B _{pu} mmho/mile
		R	X	R	X		
#2 ACSR	180	1.5510	0.7621	2.3237	2.3221	0.1767	5.658
1/0 ACSR	230	0.9752	0.7346	1.6627	2.0312	0.1698	5.889
4/0 ACSR	340	0.4863	0.6913	0.9526	1.7335	0.1595	6.270
336 ACSR	530	0.3066	0.6442	0.6484	1.5856	0.1518	6.586

	Hurricane Distribution C101 – 12.47kV Overhead Impedances – Pole Top w/lower Cross Arm Construction						
Conductor size	Ampacity (Amps)	Z(+) Ohms/Mile		Z(0) Ohms/Mile		Xc (+) Mohm/Mile	B _{pu} mmho/Mile
		R	X	R	X		
#2 ACSR	180	1.5503	0.7447	2.3234	2.3583	0.1744	5.734
1/0 ACSR	230	0.9745	0.7175	1.6625	2.0675	0.1675	5.969
4/0 ACSR	340	0.4848	0.6745	0.9507	1.7695	0.1573	6.356
336 ACSR	530	0.3062	0.6276	0.6483	1.6221	0.1498	6.676

	Hurricane Distribution C101 – 12.47kV Underground Impedances – Three Conductors in One non- metallic Conduit						
Conductor size	Ampacity (Amps)	Z(+) Ohms/1000'		Z(0) Ohms/1000'		Xc (+) Mohm/mile	B _{pu} mmho/Mile'
		R	X	R	X		
1/0 Al.	175	0.211	.0515	0.3680	0.0650	.009770	102.35
4/0 Al.	231	0.1080	0.0463	0.322	0.095	.007668	130.41
750 Al. MCM	457	0.03010	0.04090	0.0100	0.029	.004993	200.28

	Hurricane Distribution C101 – 12.47kV Underground Impedances – Three Conductors in One non- metallic Conduit						
Conductor size	Ampacity (Amps)	Z(+) Ohms/Mile'		Z(0) Ohms/Mile'		Xc (+) Mohm/mile	B _{pu} mmho/Mile'
		R	X	R	X		
1/0 Al.	175	1.114	0.2719	1.943	0.3432	.009770	102.35
4/0 Al.	231	0.5702	0.2444	1.700	0.5016	.007668	130.41
750 Al. MCM	457	0.1589	0.2159	0.0528	0.1531	.004993	200.28

The Okonite Company,
Ramsey NJ, 07446,
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Impedance and Technical Data

From Master Catalog of Okonite Cables:
Section 2 - Sheet 36

[Okonite Product Catalog Page](#)

Cable Catalog ID	Size	Phase Arrangement	(+/-) Sequence Impedance, Multi- Point Grounding [ohms/kft]	(+/-) Sequence Impedance, 1-Point Grounding [ohms/kft]	Zero Sequence Impedance, Ground and Shield Return [ohms/kft]	Zero Sequence Impedance, Shield Return Only [ohms/kft]	Zero Sequence Impedance, Ground Return Only [ohms/kft]
162-23-3081	4/0 AWG Al	Triplexed	0.114+j0.044	0.112+j0.044	0.385+j0.145	0.449+j0.025	0.167+j0.759
		Cradled	0.112+j0.041	0.110+j0.046	0.376+j0.142	0.440+j0.024	0.164+j0.738
		1 OD -Horizontal	0.113+j0.053	0.110+j0.048	0.376+j0.143	0.440+j0.024	0.164+j0.734
		7.5 in. -Horizontal	0.125+j0.091	0.110+j0.089	0.363+j0.150	0.440+j0.024	0.164+j0.653
		Rectangular	0.112+j0.049	0.110+j0.046	0.376+j0.142	0.440+j0.024	0.164+j0.739
Additional Information:	Capacitance = 80.5 [pF/ft]		DC Resistance @ 25C = 0.084 [ohms/kft]				
Calculation Parameters:	kV=15.00, Insulation=133%, Conductor Temp.=105C, Concentric Wires 11 x 14 AWG, OD=1.300in						

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Impedance and Technical Data

From Master Catalog of Okonite Cables:
Section 2 - Sheet 36

[Okonite Product Catalog Page](#)

Cable Catalog ID	Size	Phase Arrangement	(+/-) Sequence Impedance, Multi- Point Grounding [ohms/kft]	(+/-) Sequence Impedance, 1-Point Grounding [ohms/kft]	Zero Sequence Impedance, Ground and Shield Return [ohms/kft]	Zero Sequence Impedance, Shield Return Only [ohms/kft]	Zero Sequence Impedance, Ground Return Only [ohms/kft]
162-23-3096	750 kcmil Al	Triplexed	0.036+j0.038	0.032+j0.039	0.127+j0.032	0.130+j0.019	0.087+j0.725
		Cradled	0.038+j0.035	0.032+j0.041	0.124+j0.031	0.127+j0.018	0.085+j0.704
		1 OD -Horizontal	0.041+j0.045	0.032+j0.043	0.124+j0.031	0.127+j0.018	0.085+j0.700
		7.5 in. -Horizontal	0.059+j0.061	0.032+j0.074	0.124+j0.032	0.127+j0.018	0.085+j0.638
		Rectangular	0.038+j0.042	0.032+j0.041	0.124+j0.031	0.127+j0.018	0.085+j0.705
Additional Information:	Capacitance = 136 [pF/ft]		DC Resistance @ 25C = 0.024 [ohms/kft]				
Calculation Parameters:	kV=15.00, Insulation=133%, Conductor Temp.=105C, Concentric Wires 15 x 10 AWG, OD=1.950in						

MAX LOAD - 3.77 MW ON CW101
MAX Current T-1 520 AMPS

—— overhead
---- underground





**GEOTECHNICAL INVESTIGATION
SPENDLOVE 37 ACRE PARCEL
HURRICANE, UTAH**

**TYLER MEYERS
348 NORTH BLUFF STREET
ST. GEORGE, UTAH 84770**

PROJECT NO. 2211872

OCTOBER 6, 2021

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SUMMARY

1. The subsurface profile observed within the test pits consists of silty sand overlying caliche and sandstone bedrock to the maximum depth investigated, approximately 9 feet below the existing grade. Refusal was encountered on caliche in each of the test pits at depths ranging from 3½ to 9 feet below the existing grade.
2. Subsurface water was not encountered within the test pits to the maximum depth investigated, approximately 9 feet.
3. The on-site soils in their existing condition are not suitable to support the proposed construction. The site is suitable for the proposed construction provided recommendations within this report are followed.
4. The proposed residences may be supported on conventional spread footings bearing on properly compacted structural fill underlain by a properly prepared subgrade as recommended in the Subgrade Preparation section of this report. Specifically, we recommend building pad areas be overexcavated at least 2 to 7½ feet below the existing grade to remove the full depth of the near surface unsuitable soils. The estimated overexcavation depths are shown on Figures 2 and 4.

Basement footings and slabs should extend through the collapsible soils to the underlying caliche. Basement footings may be supported on properly compacted structural fill extending to the caliche or directly on the underlying caliche. Bearing capacities are provided in the Foundations Section of this report.

5. The on-site silty sand, free of organics, debris and material greater than 6 inches in size, is suitable for use as structural fill, site grading fill, wall backfill and utility trench backfill. The on-site caliche is also suitable for use as structural fill, site grading fill, and utility trench backfill provided it is processed such that the maximum particle size is 4 inches and at least 50 percent of the material passes the number 4 sieve. Soil removed during grubbing may be placed in landscaped areas.
6. Detailed recommendations for subgrade preparation, materials, foundations, and drainage are included in the report.
7. The information provided in this summary should not be used independent of that provided within the body of this report.

SCOPE

This report presents the results of a geotechnical investigation for the proposed residential subdivision to be located in Hurricane, Utah, as shown in Figure 1. This report presents the subsurface conditions encountered, laboratory test results, and recommendations for the project.

Field exploration was conducted to obtain information on the subsurface conditions and to obtain samples for laboratory testing. Information obtained from the field and laboratory was used to define conditions at the site and to develop recommendations for the proposed development.

This report has been prepared to summarize the data obtained during the study and to present our conclusions and recommendations based on the proposed construction and the subsurface conditions encountered. Design parameters and a discussion of geotechnical engineering considerations related to construction are included in the report. This report was prepared in general accordance with our proposal for Professional Geotechnical Services under Project No. 2211872, dated July 29, 2021.

SITE CONDITIONS

The project site consists approximately 37 acres of generally undeveloped property that slopes down from the southeast to the northwest. A relatively steep hillside is located on the east portion of the project. A new road with underground utilities bisects the project site, running diagonally from the northeast towards the southwest corners of the project. Vegetation on the site consists of typical desert brush, grass, cactus and occasional creosote trees. The site is bounded on the north, west and south by undeveloped parcels, and on the east by undeveloped hillside.

FIELD STUDY

On August 24, 2021, an engineer from AGECH visited the site and observed the excavation of 9 test pits at the approximate locations shown on the Site Plan, Figure 2. The test pits were excavated with a track mounted excavator. The subsurface soil profile was logged and soil samples were obtained at this time for laboratory testing.

SUBSURFACE SOIL CONDITIONS

The subsurface profile observed within the test pits consists of silty sand overlying caliche and sandstone bedrock to the maximum depth investigated, approximately 9 feet below the existing grade. Refusal was encountered on caliche in each of the test pits at depths ranging from 3½ to 9 feet below the existing grade.

Detailed descriptions of the soil type encountered follow.

Silty Sand - The silty sand is medium dense, dry to slightly moist, contains varied silt content and occasional gravel, and is reddish brown in color. Sandy silt was observed at the surface of Test Pit TP-8.

Laboratory tests conducted on samples of the silty sand and sandy silt indicate in-place moisture contents ranging from less than 1 to 5 percent, in-place dry densities ranging from 89 to 114 pounds per cubic foot (pcf), a gravel content (percent retained on the No. 4 sieve) of 1 percent, and fines contents (percent passing the No. 200 sieve) ranging from 16 to 59 percent. An Atterberg Limits test indicates that the silty sand is not plastic.

A moisture-density relationship (Modified Proctor) test conducted on a sample of the silty sand indicates a maximum dry density of 130.0 pcf and an optimum moisture content of 7.5 percent.

Caliche - The caliche consists of moderately cemented silty sand. It is moderately hard, dry, and reddish white in color.

The Logs of Test Pits are shown on Figure 4. The Legend and Notes of Test Pits are shown on Figure 5. Results of the laboratory tests are also shown on Figure 4 and are summarized in the Summary of Laboratory Test Results, Table 1. The gradation and moisture-density relationship (Modified Proctor) results are shown on Figure 6.

SUBSURFACE WATER

Subsurface water was not encountered within the test pits to the maximum depth investigated, approximately 9 feet. Fluctuations in the groundwater level may occur over time. An evaluation of such fluctuations is beyond the scope of this report.

PROPOSED CONSTRUCTION

The project site is proposed to be developed into lot residential subdivision. Based on the existing topography and the proposed grading plan, we anticipate cuts and fills of approximately 2 to 3 feet to construct the subdivision.

We understand it is proposed to construct single-family residences on the western portion of the site and multi-unit town homes on the eastern portion of the site. The structures will typically consist of single and multi-story slab-on-grade type construction. A portion of the residences may include full depth basements or below grade pools. We anticipate the residences will be constructed using conventional spread footings with slab-on-grade floors. The residences will likely be constructed with wood framing, stucco or rock veneer, and tile roofs.

For design purposes, we have assumed wall loads less than 4 kips per linear foot and column loads less than 50 kips.

As part of the development, we anticipate that interior roadways, utilities and city improvements will also be included. For design purposes, we have utilized a traffic index (TI) of 5 for the interior roadways.

If the proposed construction, or building loads are significantly different from those listed, we should be notified so that we can reevaluate our recommendations.

GEOLOGIC HAZARDS

Based on a review of geologic hazard maps provided by the Utah Geological Survey (UGS) the following geologic hazards are present on the site:

A. Surface-Fault-Rupture-Hazard

A surface-fault-rupture-hazard Special Study Area has been identified near the northwest corner of the project site as shown on Figure 3A. The fault has been defined by the UGS as a well defined fault with unknown activity level. The special-study area for a well-defined fault extends for 500 feet on the down thrown (east) side of the fault and 250 feet on the up thrown (west) side of the fault.

AGEC should provide surface fault rupture hazard study for additional fees if requested. The fault study will determine if a surface fault rupture hazard is present on the site, and will provide setback recommendations for structures.

B. Rock-Fall-Hazard

A moderate rock-fall-hazard Special Study Area has been identified near the northwest corner of the project site as shown on Figure 3B. The rock fall hazard should be further evaluated prior to determining development plans for this area. Typically, a geologist with experience in evaluating rock fall hazards conducts an evaluation which will provides a rock fall run out line. If the run out line extends into a development area, then mitigation measures would be provided. These measures may include rock fall fences, berms, or relocating structures out of the rock fall hazard area. AGECE can provide this study if requested.

RECOMMENDATIONS

Based on our experience in the area, the subsurface conditions encountered, laboratory test results, and the proposed construction, the following recommendations are given:

A. Site Grading

Based on the subsurface conditions and engineering analysis, the following recommendations are provided:

1. Subgrade Preparation

a. *General Subgrade Preparation*

Prior to placing fill or concrete beneath building areas, pavement/flatwork or improvements, the site should be grubbed to remove the existing vegetation and soil containing significant roots and organics. We anticipate that grubbing will extend on the order of 4 inches below the existing grade.

b. *Building Pads*

Prior to placing site grading fill or concrete, the building pads should be overexcavated to remove the full depth of the loose, dry, potentially collapsible soils. We anticipate this will require the overexcavation of approximately 2 to 7 ½ feet below the existing grade. The estimated depths are shown for each test pit location on Figures 2 and 4.

The limits of overexcavation should extend at least 5 feet beyond the perimeter of the proposed construction. The lateral extent of the overexcavation should be determined by survey and is the responsibility of the owner/contractor.

c. *Pavement, Flatwork and Improvements*

Subsequent to grubbing and prior to placing site grading fill or road base in pavement areas, a portion of the underlying collapsible silty sand soil should be removed. As a minimum, we recommend the exposed subgrade beneath pavement, flatwork and improvement areas be prepared by over excavating a minimum of 2 feet below the existing grade or 2 feet below the proposed subgrade (whichever is greater) prior to placing fill or road base. The removed soil may then be replaced in properly moisture conditioned and compacted lifts.

Subsequent to overexcavation and prior to placing fill, the exposed subgrade should be scarified to a depth of approximately 8 inches, properly moisture conditioned and compacted to meet the recommendations provided in the compaction section of this report.

Consideration should be given to full depth overexcavation to beneath hard surfaces and CMU fences. If the remaining collapsible soils beneath the overexcavated zone are wetted subsequent to construction, settlement of the surface improvement (pavement, flatwork, CMU fence, etc.) may occur. We estimate that on the order of ½ inch of settlement may occur for each foot of remaining collapsible soil left in place below improvements.

2. Excavation

We anticipate that excavation of the soils at the site can be accomplished with typical excavation equipment. Excavations which extend into the underlying caliche may require the use of heavy duty excavation equipment such as a large track mounted excavator equipped with rock teeth or a ripper.

The on-site soil classifies as a Type C soil according to OSHA and temporary excavations should be excavated no steeper than 1 ½:1 (Horizontal:vertical). The caliche classifies as a Type A soil according to OSHA and temporary excavations should be excavated no steeper than ¾:1.

3. Materials

Import materials should be non-expansive, non-gypsiferous, granular soil. Listed below are the materials recommended for imported fill.

Area	Fill Type	Recommendations
Foundations/slabs	Site grading/ structural fill	-200 < 35%, LL < 30% Maximum size: 4 inches Solubility < 1%
Underslab (upper 4 inches)	Base course	-200 < 12% Maximum size: 1 inch Solubility < 1%

-200 = Percent Passing the No. 200 Sieve
LL = Liquid Limit

The on-site silty sand, free of organics, debris and material greater than 6 inches in size, is suitable for use as structural fill, site grading fill, wall backfill and utility trench backfill. The on-site caliche is also suitable for use as structural fill, site grading fill, and utility trench backfill provided it is processed such that the maximum particle size is 4 inches and at least 50 percent of the material passes the number 4 sieve. Soil removed during grubbing may be placed in landscaped areas.

4. Compaction

Compaction of materials placed at the site should equal or exceed the following minimum densities when compared to the maximum dry density as determined by ASTM D-1557:

Area	Percent Compaction
Subgrade	90
Footings/building pad	95
Site grading	95
Utility trenches	95
Wall backfill	95

To facilitate the compaction process, the fill should be moisture conditioned to within 2 percentage points of the optimum moisture content as determined by ASTM D-1557 prior to placement. Fill should be placed in loose lift thicknesses which do not exceed the capacity of the equipment being utilized. Generally, 6 to 8-inch loose lifts are adequate. Lift thicknesses should be reduced to 4-inches for hand compaction equipment.

5. Surface Drainage

Positive site drainage should be maintained during the course of construction. After construction has been completed, positive drainage of the surface water away from the buildings in each direction must be maintained. To reduce infiltration adjacent to foundations we recommend the following:

- a. A minimum slope of 6 inches in the first 10 feet from the perimeters of the structures should be provided.
- b. Roof gutter systems should be installed around the perimeters of the structures. Roof downspouts should discharge away from the buildings so as to prevent ponding adjacent to foundations. We recommend piping roof drains to the curb and gutter downslope from the structures.

- c. Placement of 3 to 4 foot wide concrete aprons around the perimeters of the structures.
- d. Landscaping requiring water should not be placed adjacent to foundations.
- e. Below grade portions of walls/fences which are backfilled with soil should be protected with an impermeable membrane and a subsurface drain. A gravel covered, perforated PVC pipe should also be placed at the base of the wall to carry water to a discharge point. This is intended to reduce the potential for salt weathering and sulfate attack on concrete/masonry.

6. Subsurface Drainage

We recommend placement of a perimeter subdrain around the basement walls in case surface water infiltrates to the basement level. The drain should consist of a 4 inch perforated PVC pipe placed around the perimeter of the basement footings. It should be placed such that the bottom of the pipe is at least 12 inches below the finished floor elevation and should slope at a 2% minimum grade to drain to a sump to remove water which may become present in the future. The perforated pipe should be backfilled with 2 feet of 1 inch minus crushed gravel. Prior to backfilling the basement walls with properly compacted fill, Mirafi 140N filter fabric should be placed over the gravel to prevent sand and fines from migrating into the gravel.

B. Foundations

The proposed residences may be supported on conventional spread footings bearing on compacted structural fill underlain by a properly prepared subgrade as recommended in the Subgrade Preparation section of this report. The subgrade should be prepared during site grading by overexcavating and compacting the entire building pad as recommended in the Subgrade Preparation section of this report. Recommendations for design of conventional spread and spot footings are provided below.

1. Bearing Material

Upper level footings should be supported on a zone of properly compacted structural fill extending through the full depth of the collapsible soils with a minimum thickness of one foot. Basement footings should extend through the collapsible soils and should be supported on properly compacted structural fill extending to, or directly on the underlying caliche.

2. Bearing Pressure

Footings bearing on properly compacted structural fill or caliche may be designed for the following net allowable bearing pressures of 2,000 pounds per square foot.

3. Footing Width and Embedment

Footings should have a minimum width of 18 inches and should be embedded at least 12 inches below the lowest adjacent grade.

4. Temporary Loading Conditions

The allowable bearing pressures may be increased by one-half for temporary loading conditions such as wind or seismic loads.

5. Settlement

We estimate that settlement will be approximately 1 inch for footings designed as indicated above due to the load of the structure. Differential settlement is estimated to be approximately ½ inch.

6. Foundation Base

The base of excavations should be cleared of loose or deleterious material prior to placement of fill or concrete.

C. Pool Support

Based on the encountered subsurface conditions, the following recommendations are provided:

1. The pool may be supported on a conventional matt foundation.
2. The pool shell and pool decking should be supported directly on the underlying caliche, or on properly compacted fill extending through the collapsible soil depths shown on Figures 2 and 4.
3. The pool should be excavated with a smooth bladed excavator or a flat shovel prior to construction. Loose or disturbed soil or bedrock should be removed from the bottom of the pool excavation. In no case should any loose or disturbed soil or bedrock remain beneath the pool prior to construction. Alternatively, if the pool is supported on fill, the exposed subgrade should be properly compacted prior to construction.
4. An engineer from AGECC should observe the pool excavation prior to construction to observe subsurface conditions and to verify unsuitable soils or bedrock have been removed.

D. Concrete Slab-on-Grade**1. Slab Support**

Concrete slabs may be supported on a zone of properly prepared (overexcavated) and compacted fill as stated in the Subgrade Preparation section of this report. Fill placed in slab areas should be tested frequently to verify compaction meets the recommendations provided within this report.

2. Underslab Base Course

A 4-inch layer of properly compacted base course should be placed below slabs to provide a firm and consistent subgrade and promote even curing of the concrete.

3. Vapor Barrier

A vapor barrier should be placed below slabs in areas which will receive floor coverings sensitive to moisture or coverings which are impermeable. In addition, a vapor barrier should also be considered beneath the building slab to provide protection from sulfate attack (on the concrete slab) due to the potentially high water soluble sulfates which may exist in the underlying soil.

E. Lateral Earth Pressures**1. Lateral Resistance for Footings**

Lateral resistance for spread footings is controlled by sliding resistance developed between the footing and the subgrade soil. An ultimate friction value of 0.45 may be used in design for ultimate lateral resistance of footings bearing on properly compacted structural fill.

2. Retaining Structures

The following equivalent fluid weights are given for design of subgrade walls and retaining structures. The active condition is where the wall moves away from the soil. The passive condition is where the wall moves into the soil and the at-rest condition is where the wall does not move. We recommend the basement walls be designed in an at-rest condition.

The values listed below assume a horizontal surface adjacent the top and bottom of the wall.

Description	Active	At-Rest	Passive
Imported or on-site granular backfill (sand or processed caliche/sandstone)	35 pcf	55 pcf	325 pcf
Imported or on-site granular backfill - Earth pressure coefficient	0.28	0.44	-

The above values account for the lateral earth pressures due to the soil and level backfill conditions and do not account for hydrostatic pressures or surcharge loads.

Lateral loading should be increased to account for surcharge loading (using the appropriate earth pressure coefficient) and a rectangular distribution if structures are placed above the wall and are within a horizontal distance equal to the height of the wall. If the ground surface slopes up away from the wall, the equivalent fluid weights should also be increased.

Care should be taken to prevent percolation of surface water into the backfill material adjacent to the retaining walls. The risk of hydrostatic buildup can be reduced by placing a subdrain behind the walls consisting of free-draining gravel wrapped in a filter fabric.

3. Seismic Conditions

Under seismic conditions, the equivalent fluid weight should be modified as follows according to the Mononobe-Okabe method assuming a level backfill condition:

Lateral Earth Pressure Condition	Seismic Modification (2% PE in 50 yrs)
	Granular Backfill
Active	9 pcf increase
At-rest	no increase
Passive	23 pcf decrease

The resultant of the seismic increase should be placed at a point equal to 60 percent of the height of the wall.

4. Safety Factors

The values recommended assume mobilization of the soil to achieve the assumed soil strength. Conventional safety factors used for structural analysis for such items as overturning and sliding resistance should be used in design.

F. **Seismicity and Liquefaction**

1. Seismicity

Listed below is a summary of the site parameters as required by the 2018 International Building Code and ASCE 7-16:

Description	Seismic Event - 2% PE in 50 Yrs
	Value
Site Class	C
S_s (0.2 second period)	0.61g
S_1 (1 second period)	0.20g
PGA	0.26g
F_a	1.27
F_v	1.50
F_{PGA}	1.20

The values provided above were generated using the ASCE 7-16 Seismic Hazard Tool. Based on the subsurface conditions anticipated and the seismic parameters mapped for the site as per ASCE 7-16, a ground motion hazard analysis as per ASCE 7-16 is not required by the 2018 International Building Code.

2. Liquefaction

Based on subsurface conditions encountered in the test pits, the subsurface soils observed are non-liquefiable to the depths investigated during a seismic event.

G. Soil Corrosion

Our experience in the area has shown that the on-site soils, caliche, and many imported sources may contain sulfates in sufficient concentration to be corrosive to concrete. Therefore, we recommend concrete elements that will be exposed to the on-site soils be designed in accordance with provisions provided in the American Concrete Institute Manual of Concrete Practice (ACI) 318-14. Tables 19.3.1.1 and 19.3.2.1 of ACI 318-14 should be referenced for design of concrete elements utilizing a Sulfate Exposure Class of S2.

Consideration should also be given to cathodic protection of buried metal pipes. We recommend utilizing PVC pipes where local building codes allow.

H. Pavement

Based on the subsoil conditions encountered and the laboratory test results, the following recommendations are given:

1. Analysis

Asphaltic Concrete: The flexible pavement analysis is based on UDOT and AASHTO design methods and a 20 year design life. The following parameters were considered for our analysis:

- Base course that meets specifications which would correspond to a Structural Coefficient (a_2) of at least 0.12. Asphalt that provides a Structural Coefficient (a_1) of at least 0.40.
- Drainage Coefficient = 1.0.
- The subgrade support soils consist of properly compacted silty sand. A M_R value of 9,000 pounds per square inch (psi) was used for the subgrade based upon an estimated CBR value of 6 percent and the relationship between CBR and Resilient Modulus (M_R).
- Serviceability Index: $P_o = 4.0$, $P_t = 2.5$.
- Reliability of 90 percent.
- Standard Deviation (S_o) = 0.45.

2. Subgrade Support

We anticipate the subgrade materials will consist of compacted on-site silty sand. Our design assumes a properly compacted subgrade. Prior to placing base course or site grading fill, the subgrade should be prepared as recommended in the Subgrade Preparation section of this report.

3. Pavement Thickness

Based on the anticipated traffic, a 20 year design life and AASHTO design methods, the following pavement sections are recommended.

Area	Flexible Pavement	
	Asphaltic concrete (inches)	Base Course (inches)
Interior Roadways (TI = 5)	2 ½	6
Entrance/Dumpster	3	6

4. Pavement Materials

Flexible Pavement (Asphaltic Concrete)

The pavement materials should meet AASHTO and Hurricane City specifications for gradation and quality. The pavement thicknesses indicated above assume that the base course is high quality material with a CBR of at least 60 percent. Asphalt material should have a Marshall stability of at least 1,800 pounds.

5. Drainage

The collection and diversion of drainage away from the pavement surface is extremely important to the satisfactory performance of the pavement section. Proper drainage should be provided. We further recommend a yearly maintenance program including crack sealing and a surface treatment such as a "slurry seal" to extend the pavement life and reduce water infiltration into the subsurface soils.

I. Construction Testing and Observations

We recommend the following testing and observations be done as a minimum as required by the City of Hurricane.

1. Observe grubbing and verify removal of soil containing roots and organics.
2. Verify that recommended overexcavation depths are achieved in the building pads and beneath roadways. The lateral extent of the building pad should be located by survey (not included in AGECE's Scope of Services) and include the area which extends at least 5 feet beyond the buildable area as per city set-back requirements.
3. Verify that recommended structural fill depths are provided below foundations and slabs.
4. Conduct compaction testing on fill placed below foundations and in building pads. We recommend testing each foot of fill placed.
5. Conduct construction materials testing on city improvements at a frequency which meets or exceeds Hurricane City requirements.

J. Geotechnical Recommendation Review

The client should familiarize themselves with the information contained in this letter. If specific questions arise or if the client does not fully understand the conclusions/recommendations provided, AGECE should be contacted to provide clarification.

LIMITATIONS

This report has been prepared in accordance with generally accepted soil and foundation engineering practices in the area for the use of the client for design purposes. The conclusions and recommendations included within the report are based on the information obtained from the test pits excavated, the data obtained from laboratory testing, our experience in the area and information from the referenced geotechnical investigation. Variations in the subsurface conditions may not become evident until excavation is conducted. If the subsurface conditions or groundwater level are found to be significantly different from those described above, we should be notified to reevaluate our recommendations.

If you have any questions or if we can be of further service please call.

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

Jon Russell Hanson, P.E.

Reviewed by: Arnold DeCastro, P.E.

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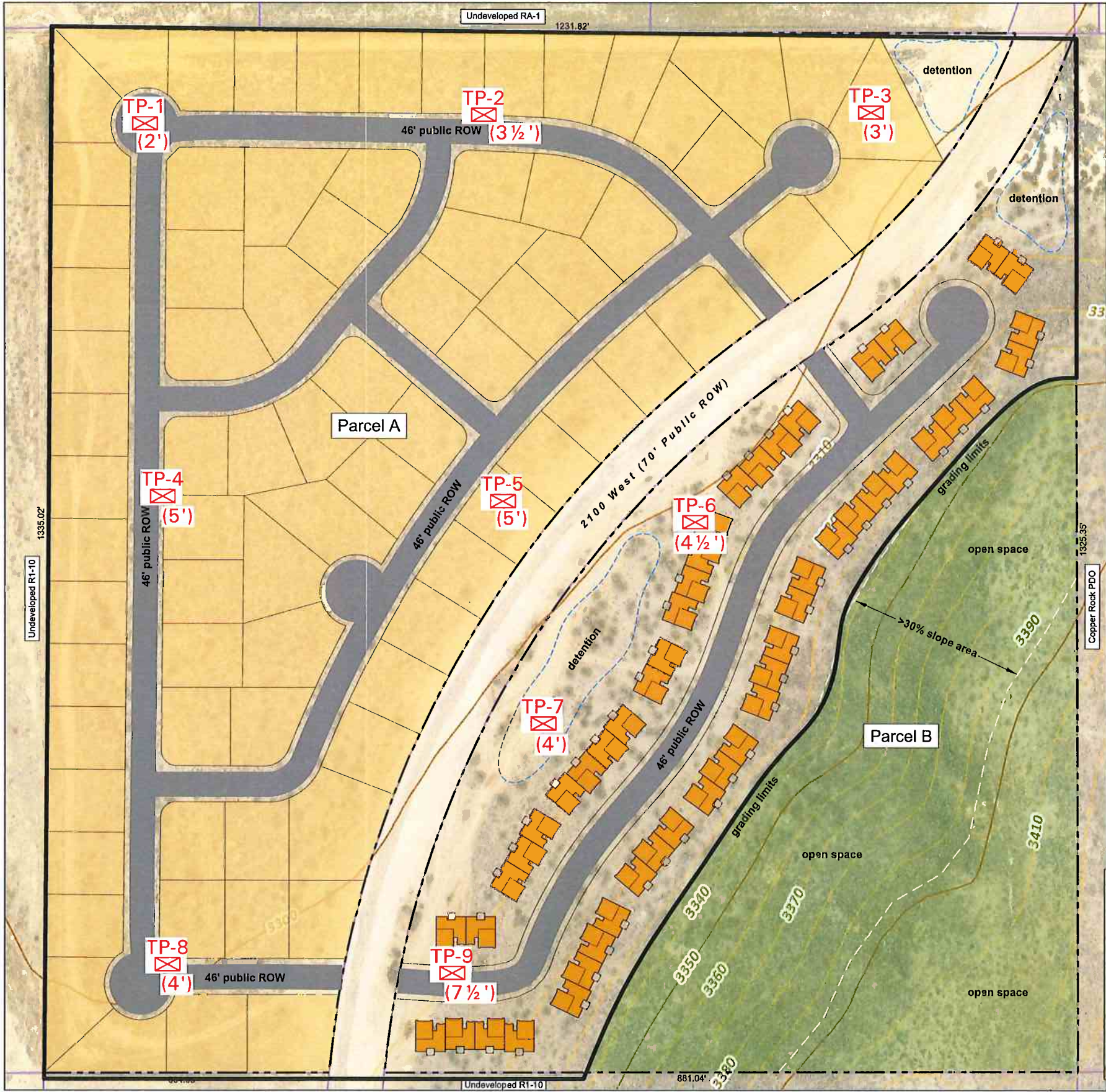
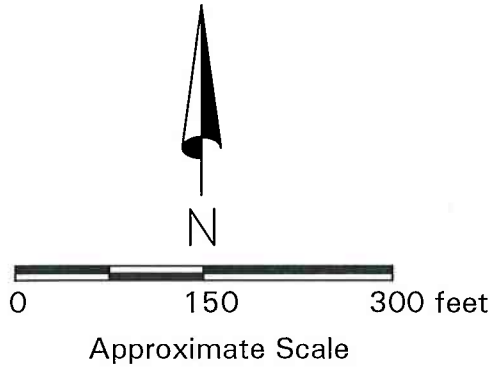


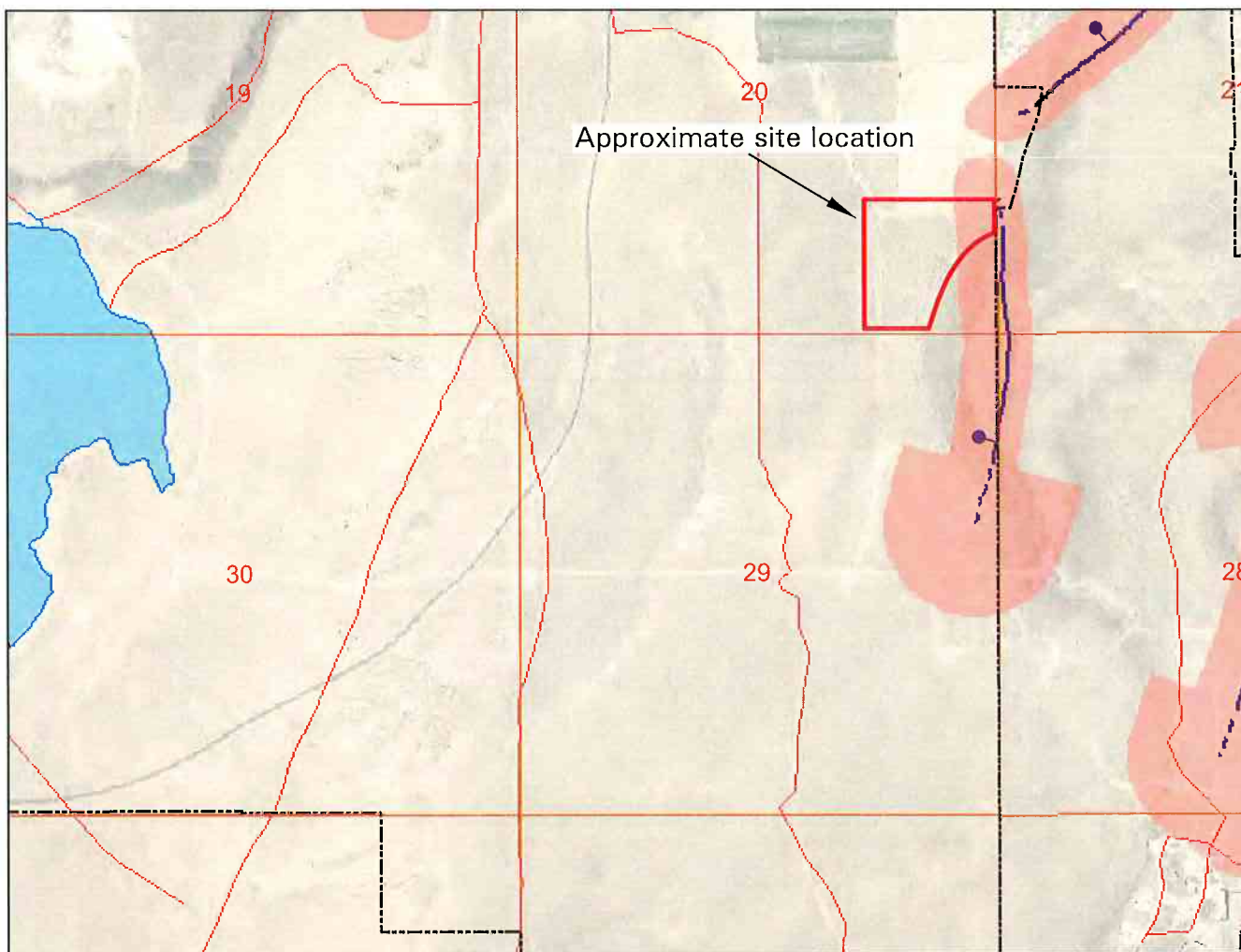
Not to Scale

SPENDLOVE 37 ACRE PARCEL HURRICANE, UTAH

SPENDLOVE 37 ACRE PARCEL
HURRICANE, UTAH

- Approximate test pit location
- Approximate depth to caliche
- Approximate limit of investigation





St. George-Hurricane Metropolitan Area, Washington County, Utah, UGS Special Study 127 2008, W.R. Lund, T.R. Knudson, G.S. Vice and L.M. Shaw

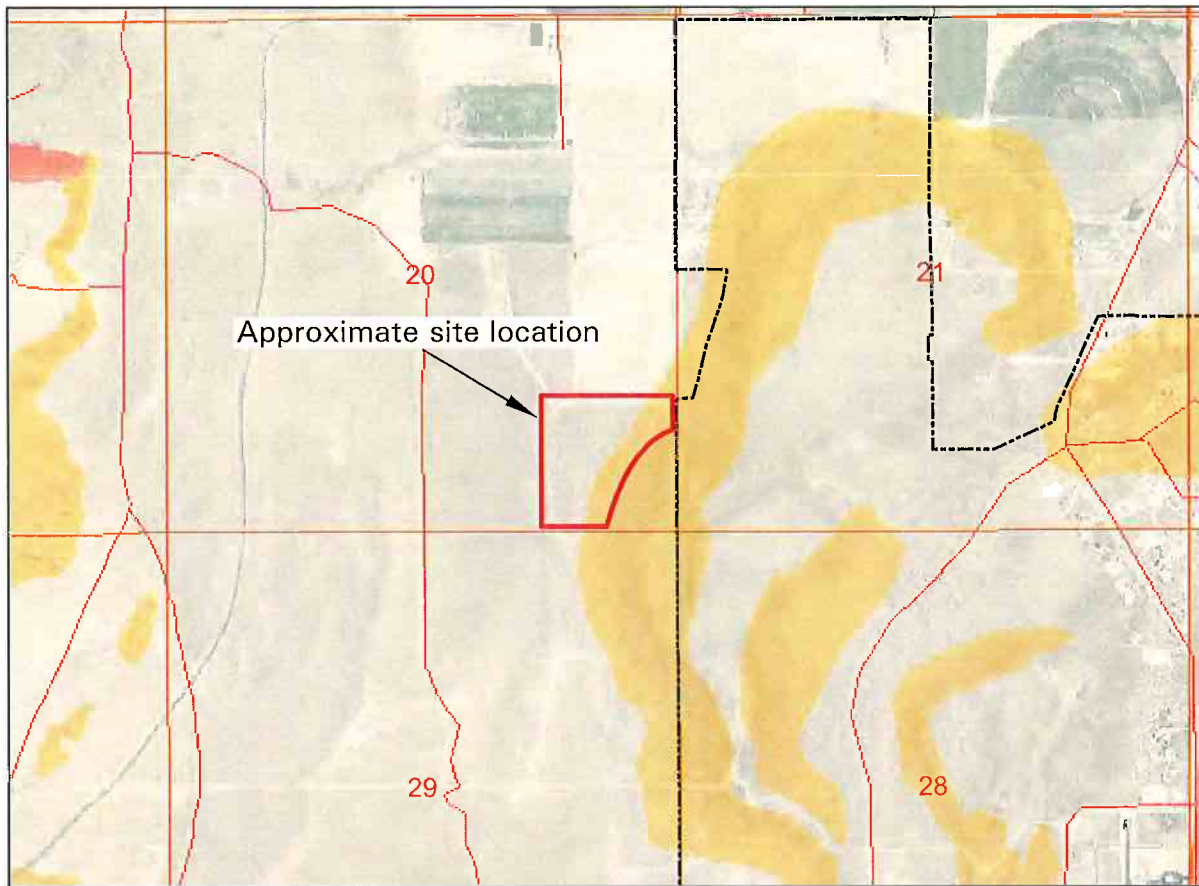
Explanation

- Well-defined fault with unknown activity level: paleoseismic data are lacking, recommend treating as a Holocene fault until proven otherwise.
- - - Buried or approximately located fault with unknown activity level: paleoseismic data are lacking, recommend treating as a Holocene fault until proven otherwise.
- Surface-fault-rupture-hazard special-study area. The special-study areas established for well-defined faults extend for 500 feet on the downthrown side and 250 feet on the upthrown side of each fault. Because their location is uncertain, the special-study areas around buried or approximately located faults are broader, extending 1000 feet on each side of the suspected trace of the faults.



SPENDLOVE 37 ACRE PARCEL
HURRICANE, UTAH

Approximate Scale 1" = 24,000



Rock-Fall Hazard Map for the St. George-Hurricane Metropolitan Area, Washington County, Utah, UGS Special Study 127 2008, W.R. Lund, T.R. Knudson, G.S. Vice and L.M. Shaw

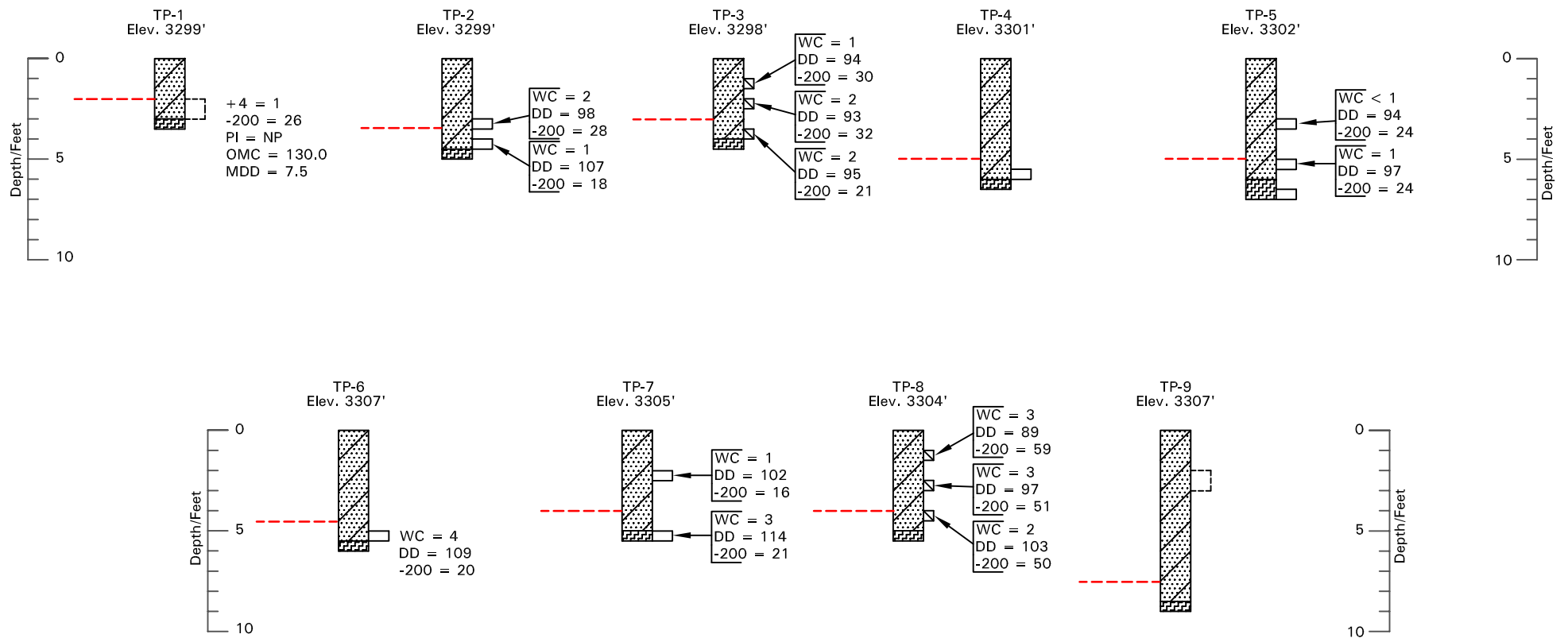
Explanation:

M	Moderate rock-fall-hazard areas are present where slopes provide sufficient relief to create an acceleration zone, but where only sparse rock-fall debris is present on slopes or in the runout zone at the base of the slope. Typically rock units in moderate-hazard areas crop out in the slope instead of forming a capping unit, or where a capping unit is present, the resulting rock-fall debris is typically less than 1.5 feet in diameter. Rock units in moderate rock-fall-hazard areas include the Kayenta Formation, Moenave Formation, and portions of the Kaibab Formation and Navajo Sandstone.
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SPENDLOVE 37 ACRE PARCEL
HURRICANE, UTAH

Approximate Scale 1" = 24,000



LEGEND:



Silty Sand (SM); medium dense, dry to slightly moist, contains varied silt content and occasional gravel, and is reddish brown in color.



Caliche; consists of moderately cemented silty sand. It is moderately hard, dry, and reddish white in color.



Indicates relatively undisturbed hand drive sample taken.



Indicates relatively undisturbed block sample taken.



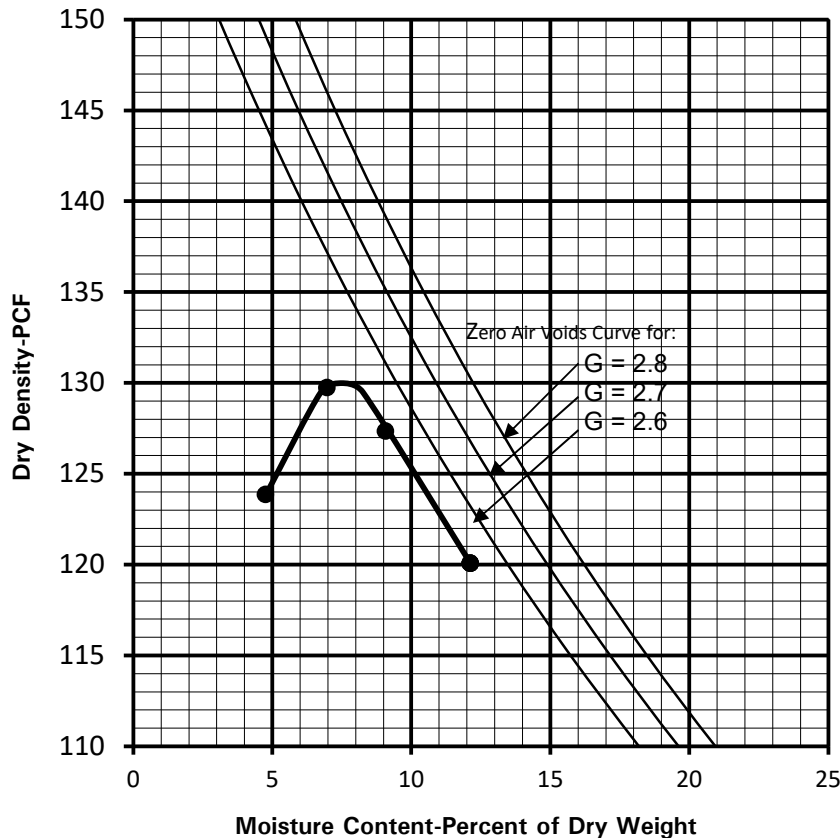
Indicates disturbed sample taken.



Indicates practical backhoe refusal on caliche.

NOTES:

1. The test pits were excavated on August 24, 2021 with a mini-excavator.
2. The locations of the test pits were measured by pacing from site features.
3. The elevations of the test pits were estimated by interpolating between contours on a site plan provided by Desert Shadow Development, dated July 15, 2021.
4. The test pit locations and elevations should be considered accurate only to the degree implied by the method used.
5. The lines between the materials shown on the test pit logs represent the approximate boundaries between material types and the transitions may be gradual.
6. Free water was not encountered in the test pits at the time of excavation.
7. WC = water content (%);
DD = dry density (pcf);
+ 4 = percent retained on the No. 4 sieve;
-200 = percent passing No. 200 sieve;
PI = plasticity index (%);
NP = non-plastic;
MDD = maximum dry density (pcf);
OMC = optimum moisture content (%).



Sample Date: 8/24/21
Sample No. 210825B
Maximum Dry Density: 130.0
Optimum Moisture: 7.5

Atterberg Limits

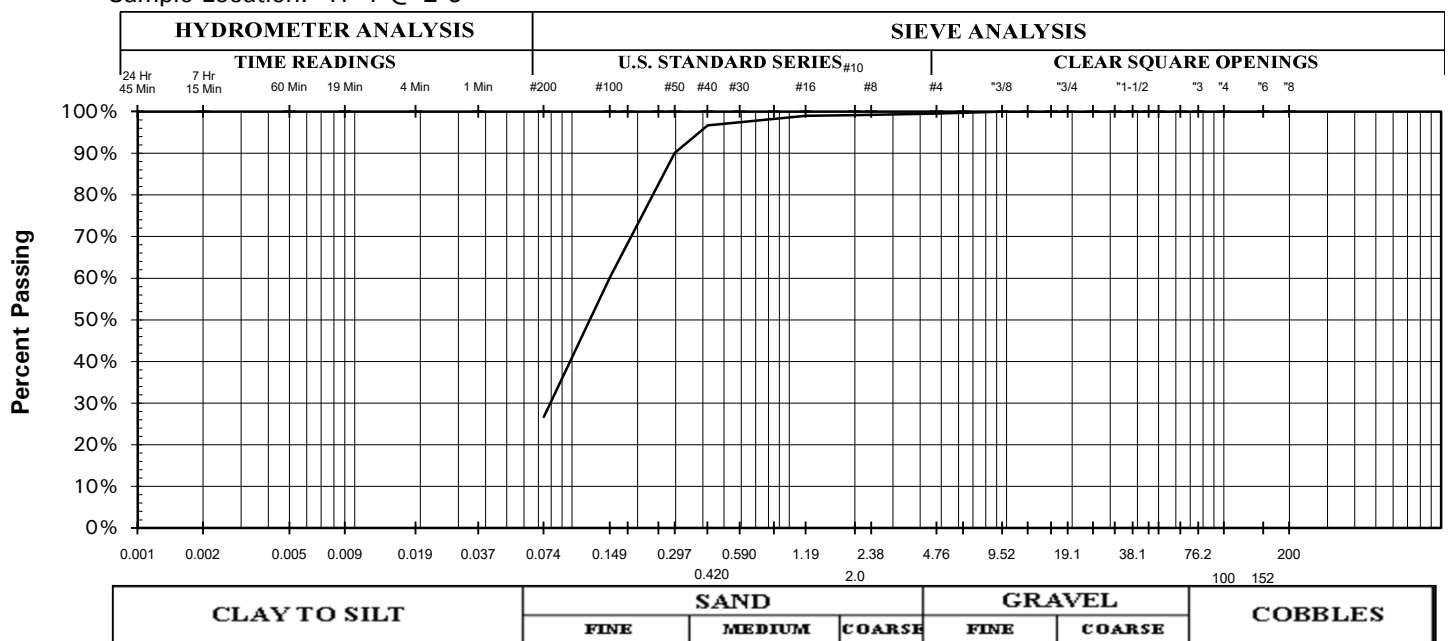
Liquid Limit:
Plasticity Index: Non-Plastic

Gradation

Gravel: 1%
Sand: 73%
Silt & Clay: 26%

Moisture - Density Relationship Test Procedure: ASTM D-1557 B
 USCS Classification: silty sand (SM)
 AASHTO Classification: A-2-4
 Sample Location: TP-1 @ 2-3'

Reviewed By: TT



GRADATION AND MOISTURE-DENSITY RELATIONSHIP RESULTS

Project No.: 2211872

Figure: 6

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

TABLE I
SUMMARY OF LABORATORY TEST RESULTS

Spendlove 37 Acres

Project Number 2211872

Sample Location		Natural Moisture Content (%)	Natural Dry Density (pcf)	Gradation			Atterberg Limits		Moisture-Density Relationship		Sample Classification
Test Pit No.	Depth (feet)			Gravel (%)	Sand (%)	Silt/clay (%)	Liquid Limit (%)	Plasticity Index (%)	Optimum Moisture Content (%)	Maximum Dry Density (pcf)	
TP-1	2-3			1	73	26		NP	130.0	7.5	Silty Sand (SM)
TP-2	3	2	98			28					Silty Sand (SM)
TP-2	4	1	107			18					Silty Sand (SM)
TP-3	1	1	94			30					Silty Sand (SM)
TP-3	2	2	93			32					Silty Sand (SM)
TP-3	3½	2	95			21					Silty Sand (SM)
TP-5	3	< 1	94			24					Silty Sand (SM)
TP-5	5	1	97			24					Silty Sand (SM)
TP-6	5	4	109			20					Silty Sand (SM)
TP-7	2	1	102			16					Silty Sand (SM)
TP-7	5	3	114			21					Silty Sand (SM)
TP-8	1	3	89			59					Sandy Silt (ML)
TP-8	2½	3	97			51					Sandy Silt (ML)
TP-8	4	2	103			50					Silty Sand (SM)

Transaction Identification Data for reference only:

Report Number: 225784

Searcher: Jarom Taylor

Searcher Utah License Number: 691339

Searcher Contact: (435) 634-7991 | jarom@sutc.com

**SCHEDULE A**

1. Effective Date: August 26, 2022 at 7:00AM
2. Report: Report prepared for Spendlove Ground in preparation for platting.
3. Title to the Fee Simple estate or interest in the land is at the Effective Date vested in:
Tytanium Development, LLC, a Utah Limited Liability Company, as to 75% interest and Dellionaire Investments, LLC, a Utah Limited Liability Company, as to 25% interest
4. The land referred to in this Report is situated in the County of Washington, State of Utah, and described as follows:
See attached Exhibit A-Legal Description

Southern Utah Title Company

By: 

Authorized Signatory

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For reference only:

Page 1 | Reference Number: 225784 | Underwriter: First American Title Insurance Company | OS83LzlyLUpD

EXHIBIT A
Legal Description

PARCEL "A":

BEGINNING AT THE SOUTHEAST CORNER OF SECTION 20, T42S, R13W, SLB&M, RUNNING THENCE N88°49'17"W, 888.26 FEET ALONG THE SECTION LINE TO THE EASTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, A 70.00 FOOT WIDE PUBLIC ROADWAY, DEDICATED BY DOCUMENT NO. 20180050579, AS FILED IN THE OFFICE OF THE WASHINGTON COUNTY RECORDER, SAID POINT BEING ON A 1230.00 FOOT RADIUS NON-TANGENT CURVE TO THE RIGHT, RADIUS POINT BEARS S83°44'07"E; THENCE ALONG SAID EASTERLY RIGHT OF WAY LINE THE FOLLOWING THREE (3) COURSES: NORTHEASTERLY 1080.97 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 50°21'14"; THENCE N56°37'07"E, 55.43 FEET TO THE POINT OF CURVE OF AN 800.00 FOOT RADIUS CURVE TO THE LEFT; THENCE NORTHEASTERLY 496.81 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 35°34'52" TO A POINT ON THE 1/16TH LINE; THENCE S88°51'25"E, 13.25 FEET ALONG THE 1/16TH LINE TO THE EAST LINE OF SAID SECTION 20; THENCE S1°02'03"W, 1322.42 FEET ALONG THE SECTION LINE TO THE POINT OF BEGINNING.

PARCEL "B":

BEGINNING AT A POINT N88°49'17"W, 958.53 FEET ALONG THE SECTION LINE FROM THE SOUTHEAST CORNER OF SECTION 20, T42S, R13W, SLB&M, SAID POINT BEING ON THE WESTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, A 70.00 FOOT WIDE PUBLIC ROADWAY DEDICATED BY DOCUMENT NO. 20180050579 AS FILED IN THE OFFICE OF THE WASHINGTON COUNTY RECORDER, RUNNING THENCE N88°49'17"W, 357.43 FEET ALONG THE SECTION LINE TO THE EAST 1/16TH CORNER; THENCE N1°01'36"E, 1321.58 FEET TO A POINT ON THE 1/16TH LINE; THENCE S88°51'25"E, 1227.96 FEET ALONG THE 1/16TH LINE TO SAID WESTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, SAID POINT BEING ON A 730.00 FOOT RADIUS NON-TANGENT CURVE TO THE RIGHT, RADIUS POINT BEARS N66°57'41"W; THENCE SOUTHWESTERLY 427.84 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 33°34'48"; THENCE S56°37'07"W, 55.43 FEET TO THE POINT OF CURVE OF A 1300.00 FOOT RADIUS CURVE TO THE LEFT; THENCE SOUTHWESTERLY 1148.72 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 50°37'41" TO THE POINT OF BEGINNING.

(Preliminary Legal Description Only)

Tax Serial No. H-3386-B

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For reference only:

Page 2 | Reference Number: 225784 | Underwriter: First American Title Insurance Company | OS83LzlyLUPd

SCHEDULE B
Exceptions

1. Any facts, rights, interests, or claims which are not shown by the public records but which could be by an inspection of the land or which may be asserted by persons in possession, or claiming to be in possession, thereof.
2. Easements, liens, encumbrances, or claims thereof, which are not shown by the public records.
3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land, and that is not shown by the Public Records.
4. Any lien, or right to a lien, imposed by law for services, labor, or material heretofore or hereafter furnished, which lien, or right to a lien, is not shown by the public records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) Indian treaty or aboriginal rights, including, but not limited to, easements or equitable servitudes; or, (d) water rights, claims or title to water, whether or not the matters excepted under (a), (b), (c) or (d) are shown by the public records.
6. Taxes or assessments which are not now payable or which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
7. Any service, installation, connection, maintenance or construction charges for sewer, water, electricity, or garbage collection or disposal or other utilities unless shown as an existing lien by the public records.
8. Defects, liens, encumbrances, adverse claims or other matters, if any, created, first appearing in the records or attaching subsequent to the effective date hereof but prior to the date the proposed acquires of record for value the estate or interest or mortgage thereon covered by this Commitment.
9. Claim, right, title or interest to water or water rights whether or not shown by the Public Records.
10. Rights of way for any roads, ditches, canals, or transmission lines now existing over, under, or across said property.
11. Taxes for the current year 2022, which are liens, but not yet due or payable in the estimated amount of \$8,111.61, under Tax Serial No. H-3386-B, Account No. 0163108.
12. Subject to any Reservations, Exceptions and Easements as set forth on Transcript, from the State of Utah, recorded December 2, 1943, as Entry No. [61210](#) , in Book U-10, at Page 329, Official Washington County Records. (Affects this and other property)
13. Subject to any Reservations, Exceptions and Easements as set forth on State of Utah Patent, recorded as Entry No. [62496](#) , in Book U-10, at Page 414, Official Washington County Records. (Affects this and other property)
14. Liability to Assessments levied by the Ash Creek Special Service District, as disclosed by Resolution No. R-2003-857, recorded June 12, 2003, as Entry No. [824223](#) , in Book 1554, at Pages 102-106, Official Washington County Records. (Affects this and other property)

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For reference only:

Page 3 | Reference Number: 225784 | Underwriter: First American Title Insurance Company | OS83LzlyLUPD

15. Liability to Assessments levied by the Board of County Commissioners of Washington County, Utah, creating and establishing a Special Service District ("Hurricane Valley Fire Special Service District") to provide for fire protection, paramedic services, and ambulance services, as disclosed by Resolution No. R-2007-1203, recorded December 22, 2009, as Doc. No. [20090048182](#) , Official Washington County Records. (Affects this and other property)

A Resolution Amending the Boundary of the Hurricane Valley Fire Special Service District, recorded March 1, 2010, as Doc. No. [20100006648](#) , Official Washington County Records.

2nd Amended Hurricane Valley Fire Special Service District, recorded December 30, 2010, as Doc. No. [20100044122](#) , Official Washington County Records.

Resolution No. R-2015-1946, A Resolution Amending the Boundary of the Hurricane Valley Fire Special Service District to include the Corporate Limits of the City of Hurricane, recorded November 9, 2015, as Doc. No. [20150039260](#) , Official Washington County Records and Hurricane Valley Fire District 3rd Amended, recorded November 9, 2015, as Doc. No. [20150039261](#) , Official Washington County Records.

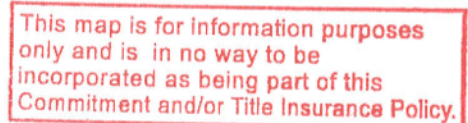
Hurricane Valley Fire District 4th Amended, Extended & Clarified, recorded December 14, 2015, as Doc. No. [20150043173](#) , Official Washington County Records.

5th Amended & Extended Hurricane Valley Fire District Local Entity Plat, recorded November 8, 2019, as Doc. No. [20190046477](#) , Official Washington County Records, A Resolution Amending the Boundary of The Hurricane Valley Fire Special Service District to Include the Area Within the Rockville-Springdale Fire Special Service District, recorded November 8, 2019, as Doc. No. [20190046478](#) , Official Washington County Records and Certificate of Boundary Adjustment, with 5th Amended and Extended Hurricane Valley Fire District Local Entity Plat Boundary Description, recorded November 8, 2019, as Doc. No. [20190046479](#) , Official Washington County Records.

16. Subject to easements, notes, restrictions, reservations, any and all other matters as set forth and disclosed on the Roadway Dedication Plat for "COPPER ROCK PARKWAY AND 2100 WEST", recorded December 26, 2018 as Doc No. [20180050579](#) , Official Washington County Records.
17. Subject to easements, notes, restrictions, reservations, any and all other matters as set forth and disclosed on the Record of Survey prepared by R&B Surveying dated April 5, 2022".
18. We find no Open Deed of Trust/Trust Deed of Record. Require any party with knowledge to the contrary to inform this Office prior to any Final Plat Approval.
19. This Report and the information shown herein is limited to the Record of Survey prepared by R&B Surveying dated April 5, 2022, no information is given or implied beyond this. Upon receipt of a proposed Final Plat additional exceptions may be added.
20. This report is provided for information purposes only and is not intended to be a Commitment to issue Title Insurance.

Note: The names on Schedule A have been checked for judgments and, if any were found, are disclosed on Schedule B of this Report.

This plot is furnished for information only.
No liability is assumed by Assessor's
Bureau's Office as to correctness
of data.





Ash Creek Special Service District

1350 S. Sand Hollow Road

Hurricane, UT 84737

Office: (435) 635-2348 Fax: (435) 635-8550

ashcreek@infowest.com

September 7, 2022

Hurricane City
Stephen Nelson
127 N. 870 W.
Hurricane, UT 84737

RE: Spendlove 21 Acre Subdivision

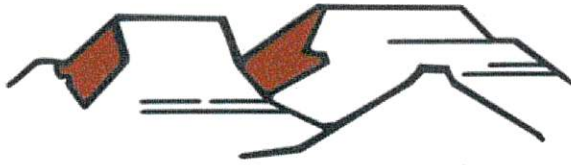
Stephen,

There is sewer capacity for this project. The developers understand and agree that they will need to get plan approval for the sewer system.

After approval, they agree to pay all costs associated with construction and impact fees. Please let us know if you have any questions.

Sincerely,

Amber Gillette, P.E.
Engineer
Ash Creek Special Service District



HURRICANE CITY

UTAH

Water Department
Ken Richins, Superintendent

September 7, 2022

To Whom It May Concern:

Titanium Development LLC (the "Developer") has requested a culinary water will serve letter for the subdivision known as Spendlove 21 Acre, located at approximately 2100 W 3500 S in Hurricane, Utah (the "Project").

Infrastructure

The City currently has infrastructure to supply culinary water in the general area of the Project. However, Developer will be responsible to connect the Project to the existing water infrastructure, including the installation of infrastructure in dedicated public streets and as otherwise required to meet City standards. In addition, Developer may be required to obtain and supply a hydraulic water study to ensure the waterline will deliver required fire flows. A looped water system may be required.

Water Supply

As of the date of this letter, the city has adequate water to supply water to 73 residential connections within the Project. However, water within the City is a finite resource with limited supply. The ability of the City to supply water to previously approved projects, as well as continue to serve additional water customers, is contingent on water supplies being available from the Washington County Water Conservancy District (the "Conservancy District"). Therefore, the City's statements in this letter regarding the adequacy of water supply is (1) contingent on water being available from the Conservancy District and (2) shall expire one year from the date of this letter, after which a renewed will serve letter will be required for any property or lot that has not obtained a metered connection to the City's culinary water system. Developer is encouraged to obtain a guarantee of water from the Conservancy District.

General Requirements

In addition to the requirements and limitations described above, Developer shall be required to comply with all applicable laws, ordinances, policies, and construction and design standards. These requirements include, but are not limited to, secondary water system requirements and any obligations described in an applicable development agreement.

Sincerely,

Ken Richins
Water Department Superintendent

ENGINEER:
HORROCKS ENGINEERS
555 South Bluff St., Suite 101
St. George, UT 84770
(435) 599-7368
CONTACT: TONY CARTER, PE

APPLICANT/OWNER:
TITANIUM DEVELOPMENT, LLC
2712 RIO VISTA DRIVE
ST. GEORGE, UTAH 84790
(435) 773-0707
CONTACT: TY MEYERS

DESERT TORTOISE

THE PROPERTY IS NOT IN TAKE AREA 7 - HURRICANE

CENTER 1/4 OF OF SECTION 20,
T42S, R13W, SLB&M
R&B SURVEYING REBAR/CAP
SET DURING PREVIOUS SURVEY
FOR OTHERS

**SECTION A-A
RESIDENTIAL LOCAL (PUBLIC)**

TITANIUM DEVELOPMENT, LLC
DOC. NO. 20210065536
LESS 2100 WEST STREET PER DOC. NO. 20180050579
PARCEL "B" - 21.087 ACRES
TPN #H-3386-B

**3500 SOUTH
MAJOR COLLECTOR (PUBLIC)**

TPN #H-3384-B
ROS RS008216-21

TPN #H-3385
ROS RS008216-21

TPN #H-3386-A
ROS RS008216-21

TPN #H-3387

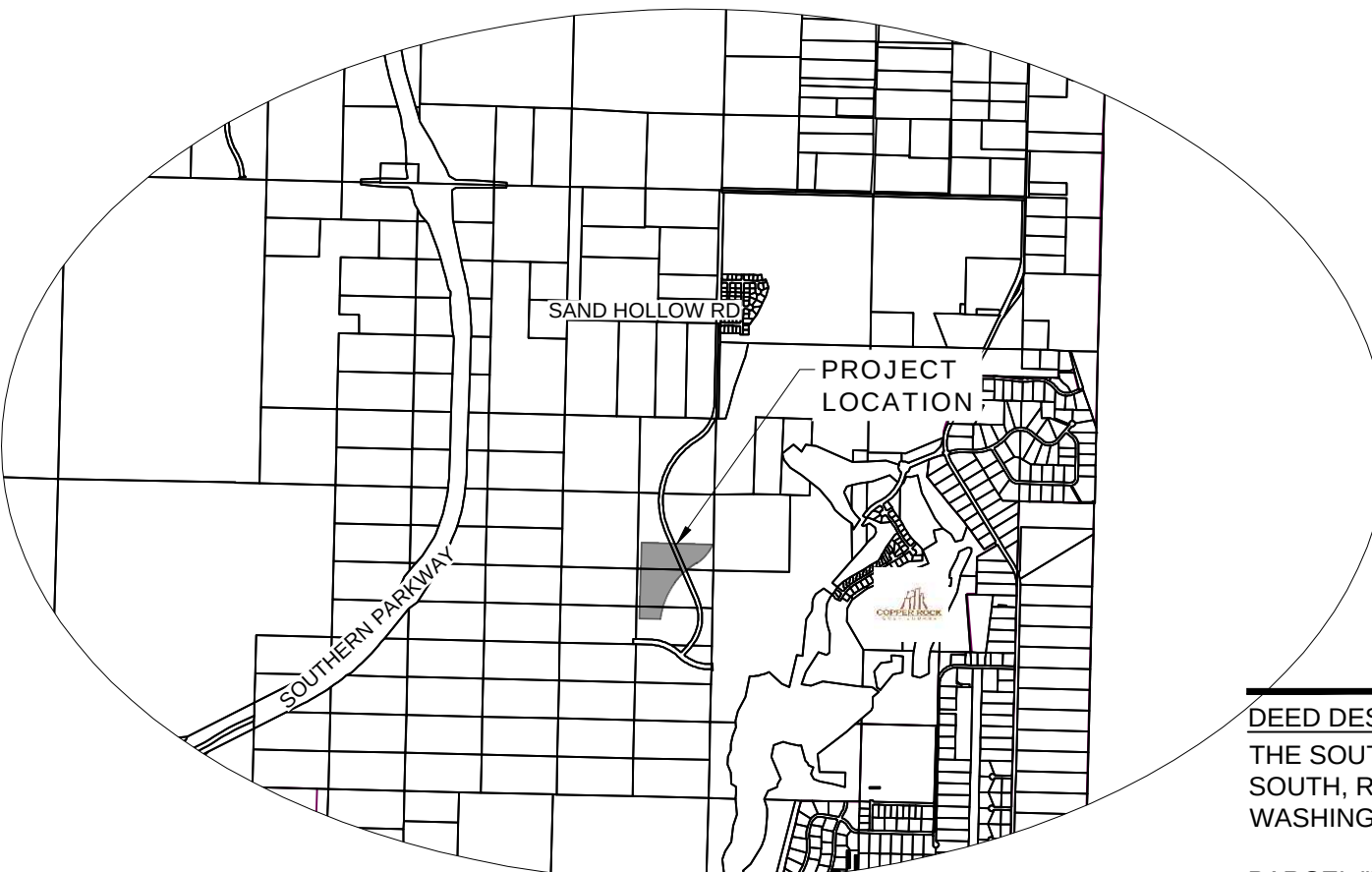
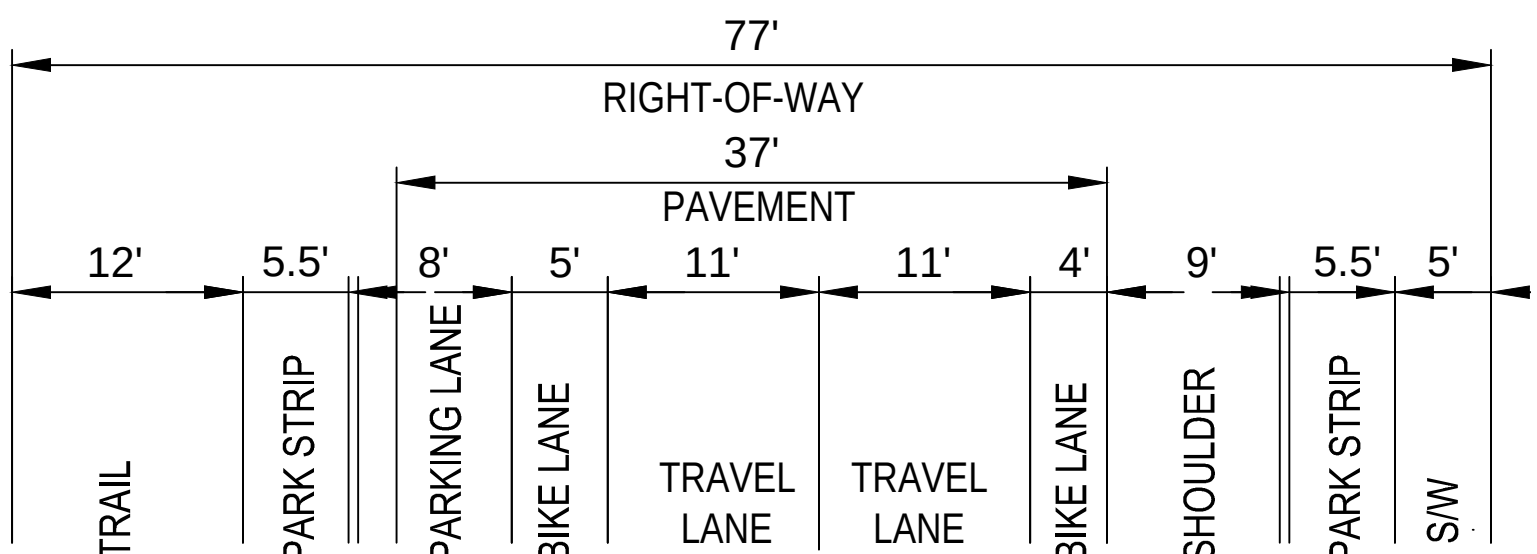
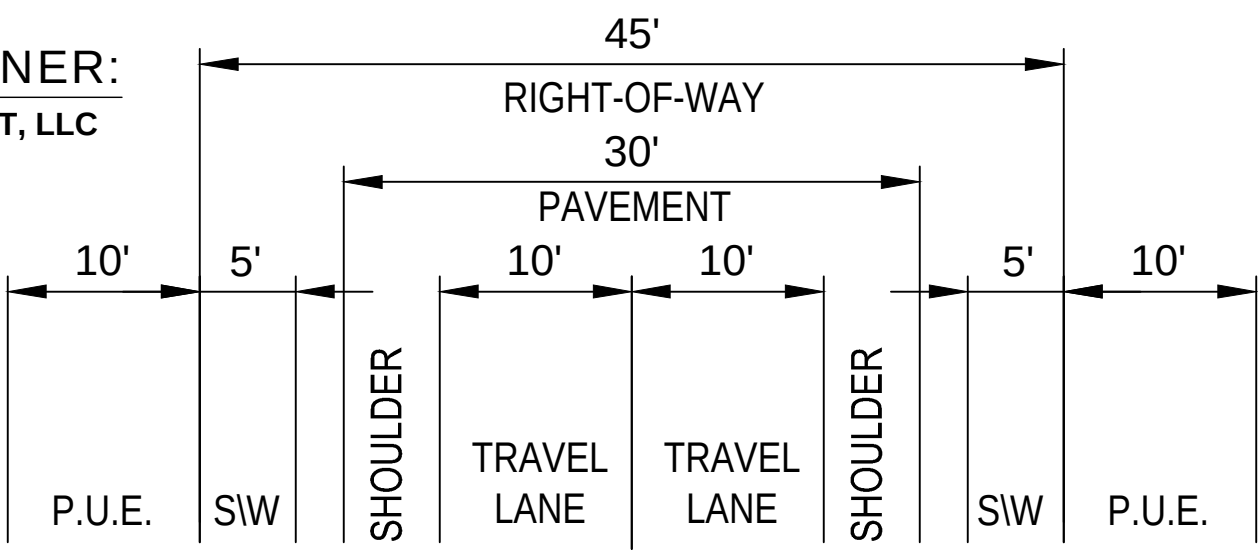
1/16TH CORNER
R&B SURVEYING REBAR/CAP
SET DURING PREVIOUS SURVEY
FOR OTHERS

TPN #H-3393
ROS RS008216-21

SOUTH 1/4 CORNER OF OF SECTION 20,
T42S, R13W, SLB&M
ROSENBERG REBAR/CAP
ROSENBERG SURVEY
ROS RS008216-21

TPN #H-3399
ROS RS008216-21

TPN #H-3399-HP
ROS RS008216-21



VICINITY MAP



SCALE: 1" = 100'

BOUNDARY DESCRIPTIONS

DEED DESCRIPTION (DOC. NO. 20210065536):
THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 42 SOUTH, RANGE 13 WEST OF THE SALT LAKE MERIDIAN, COUNTY OF WASHINGTON

PARCEL "B":
BEGINNING AT A POINT N88°49'17"W, 958.53 FEET ALONG THE SECTION LINE FROM THE SOUTHEAST CORNER OF SECTION 20, T42S, R13W, SLB&M, SAID POINT BEING ON THE WESTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, A 70.00 FOOT WIDE PUBLIC ROADWAY DEDICATED BY DOCUMENT NO. 20180050579 AS FILED IN THE OFFICE OF THE WASHINGTON COUNTY RECORDER, RUNNING THENCE N88°49'17"W, 357.43 FEET ALONG THE SECTION LINE TO THE EAST 1/16TH CORNER; THENCE N1°01'36"E, 1321.58 FEET TO A POINT ON THE 1/16TH LINE; THENCE S88°51'25"E, 1227.96 FEET ALONG THE 1/16TH LINE TO SAID WESTERLY RIGHT OF WAY LINE OF 2100 WEST STREET, SAID POINT BEING ON A 730.00 FOOT RADIUS NON-TANGENT CURVE TO THE RIGHT, RADIUS POINT BEARS N66°57'41"W, THENCE SOUTHWESTERLY 427.84 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 33°34'48"; THENCE S56°37'07"W, 55.43 FEET TO THE POINT OF CURVE OF A 1300.00 FOOT RADIUS CURVE TO THE LEFT; THENCE SOUTHWESTERLY 1148.72 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 50°37'41" TO THE POINT OF BEGINNING.

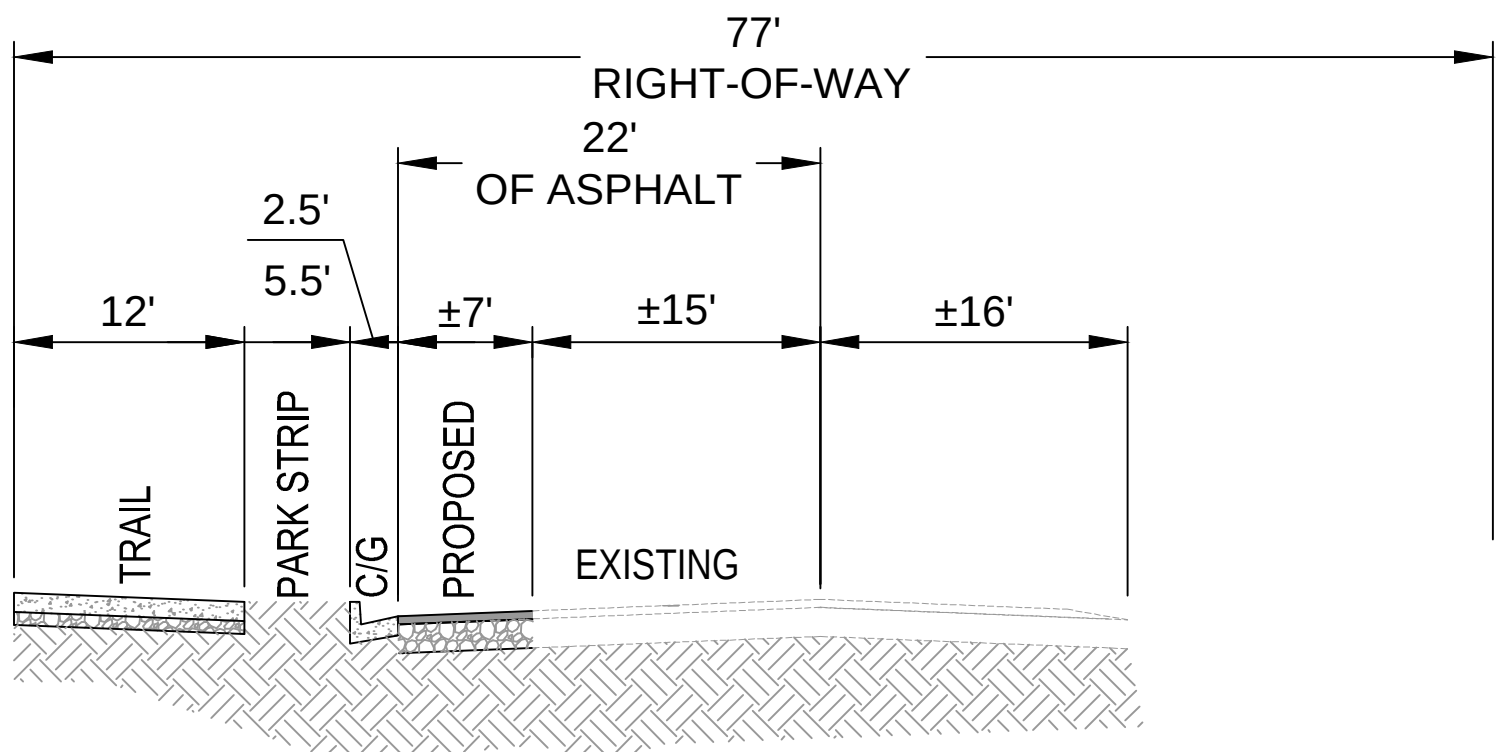
CONTAINING 21.087 ACRES.

BASIS OF BEARING

THE BASIS OF BEARING FOR THIS SURVEY IS N88°49'17"W ALONG THE SECTION LINE BETWEEN THE SOUTHEAST CORNER AND THE SOUTH QUARTER OF SECTION 20, T42S, R13W, SLB&M AS SHOWN AND NOTED HEREON.

LEGEND:

- SS --- EXISTING 8" SANITARY SEWER
- W --- EXISTING 8" WATER
- S --- EXISTING SEWER MANHOLE
- V --- EXISTING WATER VALVE
- F --- EXISTING FIRE HYDRANT
- SD --- PROPOSED STORM DRAIN INLET
- SD --- PROPOSED STORM DRAIN
- S --- SECTION LINE
- S --- FOUND SECTION CORNER
- L --- LOT LINE
- P --- PHASE LINE
- SD --- EXISTING STORM DRAIN
- P --- PROPERTY BOUNDARY
- SS --- PROPOSED 8" SANITARY SEWER
- W --- PROPOSED 8" WATER
- S --- PROPOSED SEWER MANHOLE
- V --- PROPOSED WATER/IRRIGATION VALVE
- F --- PROPOSED FIRE HYDRANT
- C --- PROPOSED CURB & GUTTER
- S --- EXISTING MAJOR CONTOURS
- S --- EXISTING MINOR CONTOURS
- P --- PROPOSED DETENTION POND
- P --- PROPOSED ROADWAY PAVEMENT



**2100 WEST STREET
MAJOR COLLECTOR (PUBLIC)**

HORROCKS ENGINEERS

2162 West Grove Plwy., Suite 400
Pleasant Grove, UT 84062
(801) 763-5100
www.horrocksm.com

WARNING

IF THIS BAR DOES NOT
MEASURE 2" THEN
DRAWING IS NOT TO SCALE

REVISIONS

REV #

DATE

01/24/2023

DESIGNED

TC

DRAWN

CC

CHECKED

TC

PROJECT

UT-617-22

DESERT SKY ESTATES

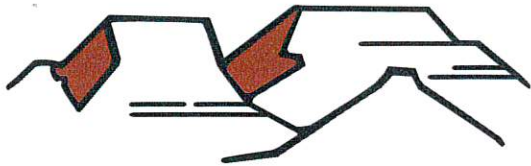
HURRICANE CITY, UTAH

PRELIMINARY PLAT

R-1-10 SINGLE FAMILY SUBDIVISION



PP-01



PLANNING & ZONING
HURRICANE CITY
UTAH

147 N 870 W Hurricane UT
PHONE: 435.635.2811 FAX: 435.635.2184

PRELIMINARY PLAT APPLICATION

For office use only: \$150.00 Fee

File No. 2022-PP-20

Receipt No. 8-160765

Name: Southern Dunes Townhomes Telephone: _____

Address: 4061 South 2420 East, St. George, UT 84790 Fax No. _____

Email: anthonyboc1@gmail.com Agent _____ Email: _____
bobh@bushandgudgell.com

Agent (If Applicable): Bush & Gudgell, Inc. Telephone: 435-673-2337

Address/Location of Subject Property: SE ¼ Section 29, T42S, R13W

Tax ID of Subject Property: H-3400-O and H-3400-N Zone District: R1-10

Proposed Use: (Describe, use extra sheet if necessary. Include total number of lots) _____

Submittal Requirements: The preliminary plat application shall provide the following:

- ____ 1. Description: In a title block located in the lower right-hand corner of the sheet the following is required:
- ____ a. The proposed name of the subdivision.
 - ____ b. The location of the subdivision, including the address and section, township and range.
 - ____ c. The names and addresses of the owner or subdivider, if other than the owner.
 - ____ d. Date of preparation, and north point.
 - ____ e. Scale shall be of sufficient size to adequately describe in legible form, all required conditions of Chapter 39, City Subdivision regulations.
- ____ 2. Existing Conditions: The preliminary plat shall show:
- ____ a. The location of the nearest monument.
 - ____ b. The boundary of the proposed subdivision and the acreage included.
 - ____ c. All property under the control of the subdivider, even though only a portion is being subdivided. (Where the plat submitted covers only a part of the subdivider's tract, a sketch of the prospective street system of the unplatted parts of the subdivider's land shall be submitted, and the street system of the part submitted shall be considered in light of existing Master Street Plan or other Commission studies.)
 - ____ d. The location, width, and names/numbers of all existing streets within two hundred (200) feet of the subdivision and of all prior streets or other public ways, utility rights of way, parks and other public open spaces, within and adjacent to the tract.
 - ____ e. The location of all wells and springs or seeps, proposed, active and abandoned, and of all reservoirs or ponds within the tract and at a distance of at least one hundred feet (100') beyond the tract boundaries.
 - ____ f. Existing sewers, water mains, culverts, or other underground facilities within the tract, indicating the pipe sizes, grades, manholes and the exact locations.
 - ____ g. Existing Hurricane Canal Company facilities; other ditches, canals, natural drainage channels and open waterways and any proposed realignments.

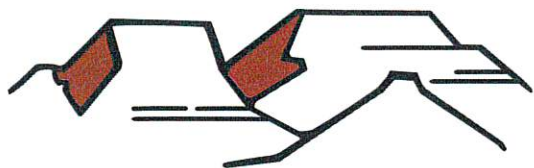
- ____ h. Contours at vertical intervals not greater than five (5) feet.
 - ____ i. Identification of potential geotechnical constraints on the project site (such as expansive rock and soil, collapsible soil, shallow bedrock, and caliche, gypsiferous rock and soil, potentially unstable rock or soil units including fault lines, shallow groundwater, and windblown sand) and recommendations for their mitigation.
 - ____ j. Information on whether property is located in desert tortoise take area
- ____ 3. Proposed Plan: The subdivision plans shall show:
- ____ a. The layout of streets, showing location, widths, and other dimensions of proposed streets, crosswalks, alleys, and easements.
 - ____ b. The layout, numbers, and typical dimensions of lots.
 - ____ c. Parcels of land intended to be dedicated or temporarily reserved for public use or set aside for use of property owners in the subdivision.
 - ____ d. Easements for water, sewers, drainage, utilities, lines and other purposes.
 - ____ e. Typical street cross sections and street grades where required by the Planning Commission. (All street grades over 5% should be noted on the preliminary plat)
 - ____ f. A tentative plan or method by which the subdivider proposes to handle the storm water drainage for the subdivision.
 - ____ g. Approximate radius of all center line curves on highways or streets.
 - ____ h. Each lot shall abut a street shown on the subdivision plat or on an existing publicly dedicated street. (Double frontage or flag lots shall be prohibited except where conditions make other design undesirable)
 - ____ i. In general, all remnants of lots below minimum size left over after subdividing of a larger tract must be added to adjacent lots, rather than allow to remain as unusable parcels.
 - ____ j. Where necessary, copies of any agreements with adjacent property owners relevant to the proposed subdivision shall be presented to the Planning Commission.
 - ____ k. A letter from both the local sanitary sewer provider and culinary water provider indicating availability of service.
 - ____ l. Will this subdivision be phased? If yes show possible phasing lines.
 - ____ m. A tentative plan or method for providing non-discriminatory access to the subdivision for purposes of placement of communications infrastructure, and for purposes of placement of utility infrastructure.
- ____ 4. Required copies of plans:
- ____ a. Three copies of all full-scale drawings
 - ____ b. One copy of each drawing on a 11 x 17-inch sheets. (8 1/2 x 11 is acceptable if the project is small and the plans are readable at that size).
- ____ 5. Warranty deed or preliminary title report or another document (see attached Affidavit) showing evidence that the applicant has control of the property
- ____ 6. Signed and notarized Acknowledgement Water Supply (see attached)

NOTE: It is important that all applicable information noted above is submitted with the application. An incomplete application will not be scheduled for Planning Commission consideration. A deadline missed due to an incomplete application, could result in a month's delay. Planning Commission meetings are held on the second Thursday and fourth Wednesday of each month at 6:00 p.m. The deadline to submit an application to be placed on an agenda is no later than 12:00 (noon) 20 full calendar days before the Planning Commission meeting at which you plan for your application to be heard.

.....
(Office Use Only)

Date Received: _____ Application Complete: YES _____ NO _____

Date application deemed to be complete: _____ Completion determination made by: _____



PLANNING & ZONING
HURRICANE CITY
UTAH

147 N 870 W Hurricane UT
PHONE: 435.635.2811 FAX: 435.635.2184

PRELIMINARY SITE PLAN APPLICATION

For office use only: \$200.00 Fee

File No. 2022-PSP-30

Receipt No. 8-160769

Name: Southern Dunes Townhomes Telephone: _____

Address: 4061 South 2420 East, St. George, UT 84790 Fax No. _____

Email: anthonyboc1@gmail.com Agent Email: bobh@bushandgudgell.com

Agent (If Applicable): _____ Telephone: 435-673-2337

Address/Location of Subject Property: SE 1/4 Section 29, T42S, R13W

Tax ID of Subject Property: H-3400-O and H-3400-N Zone District: R1-10

Proposed Use: (Describe, use extra sheet if necessary. Include total number of lots) _____

This application shall be accompanied by the following:

- ____ 1. A vicinity map showing the general location of the project.
- ____ 2. Three (3) copies of a site plan showing:
 - ____ Topography showing 2' contours, identification of 30% or greater slopes;
 - ____ The layout of proposed uses.
 - ____ Location of open space when applicable.
 - ____ Proposed access to the property and traffic circulation patterns.
 - ____ Adjoining properties and uses;
 - ____ Proposed reservations for parks, playgrounds, school, and any other public facility sites, if any.
- ____ 3. Preliminary utility plan, including water, sewer, and storm drainage plans, and including access points to utilities.
- ____ 4. Tables showing the number of acres in the proposed development and a land use summary; and
- ____ 5. A phased development plan if applicable.
- ____ 6. Warranty deed or preliminary title report or other document (see attached Affidavit) showing evidence that the applicant has control of the property
- ____ 7. Signed and notarized Acknowledgment Water Supply (see attached)

NOTE: It is important that all applicable information noted above is submitted with the application. An incomplete application will not be scheduled for Planning Commission consideration. Planning Commission meetings are held on the second Thursday and the fourth Wednesday of each month at 6:00 p.m. Contact the Planning Department for the deadline date for submissions. Once your application is deemed complete, it will be put on the agenda for the next Planning Commission meeting. A deadline missed due to an incomplete application could result in a month's delay.

(Office Use Only)

Date Received: _____ Received by: _____

Date application deemed to be complete: _____ Completion determination made by: _____

Warranty Deed Page 1 of 1

Gary Christensen Washington County Recorder
 05/20/2022 02:05:09 PM Fee \$40.00 By AMERICAN
 SECURE TITLE TREMONTON

ORDER NO. 176531A/T

WHEN RECORDED MAIL DOCUMENT
 AND TAX NOTICE TO:
 RANLIFE HOMES CORDERO, LLC
 9272 South 700 East
 Sandy, UT 84070

WARRANTY DEED**RIVER VALLEY DEVELOPMENT, LLC, A UTAH LIMITED LIABILITY COMPANY**

Grantor, organized and existing under the laws of the State of Utah with its principal office at 470 NORTH
 2450 WEST, TREMONTON, County of BOX ELDER, State of UTAH
 hereby CONVEYS and WARRANTS to

Grantor

RANLIFE HOMES CORDERO, LLC

Grantee,

of Sandy, County of Box Elder, State of Utah, for the sum of TEN DOLLARS and other good and valuable
 consideration, the following tract of land in WASHINGTON county, State of UT, to-wit

All of the North 1/2 of the Southeast 1/4 of the Southwest 1/4 of Section 29, Township 42 South, Range 13
 West, of the Salt Lake Base and Meridian.
 LESS THAT PORTION LYING WITHIN 2600 WEST

H-3400-N

Subject to easements, restrictions and rights of way appearing of record and enforceable in law and subject
 to 2022 taxes and thereafter.

The officers who sign this deed hereby certify that this deed and the transfer represented thereby was duly
 authorized under Resolution adopted by the Manager/Member(s) of the Grantor at a lawful meeting held and
 attended by a quorum.

In witness whereof, the Grantor has caused its Limited Liability Company name and seal to be hereunto
 affixed by its duly authorized Members, this 19 day of May, 2022.

RIVER VALLEY DEVELOPMENT, LLC, a Utah
 Limited Liability Company

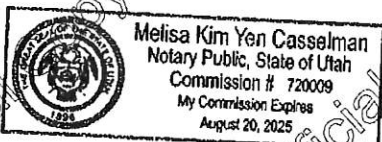
BY: 

BOYD COOK, AUTHORIZED SIGNATORY

STATE OF UTAH)

COUNTY OF BOX ELDER)

On the 19 day of May, 2022, personally appeared before me BOYD COOK, who being duly sworn, did say
 that he/she is the AUTHORIZED SIGNATORY of RIVER VALLEY DEVELOPMENT, LLC, a Utah Limited
 Liability Company, by authority of its Articles of Organization and duly acknowledged to me that the said
 Limited Liability Company executed the same.



Notary Public
 My Commission Expires: 08/20/2025
 Residing at: Premont, Utah

Special Warranty Deed Page 1 of 3
Gary Christensen Washington County Recorder
07/12/2022 04:38:48 PM Fee \$40.00 By US TITLE
INSURANCE AGENCY

When Recorded, Mail To:

Kirton McConkie
Attn: R. Gary Winger
50 E. South Temple, Suite 400
Salt Lake City, Utah 84111

Tax Parcel No.

4-3400-D

[Space Above for Recorder's Use]

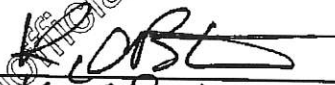
SPECIAL WARRANTY DEED

KOBALT DEVELOPMENT GROUP, L.L.C., a Utah limited liability company ("Grantor"), does hereby convey to CAPITOL PROPERTIES ONE, LLC, a Utah limited liability company, whose address is 2880 S. Main St. Ste. 100, Salt Lake City, UT 84115 ("Grantee"), for the sum of Ten Dollars (\$10.00) and other good and valuable consideration, a two-ninths (2/9) tenancy-in-common interest in the real property located in Washington County, State of Utah, and more particularly described on Exhibit A, which is attached hereto and incorporated herein by reference (the "Property") and Grantor warrants against all claiming by, through, or under it. Grantor hereby retains the remaining seven-ninths (7/9) interest in the Property as a tenant-in-common with Grantee.

The foregoing conveyance includes a two-ninths (2/9) tenancy-in-common ownership in all tenements, hereditaments and appurtenances thereto belonging or in any wise appertaining, including but not limited to easements and rights-of-way over adjoining property, which easements and rights-of-way are appurtenant to the real property described on Exhibit A, and all of Grantor's interest in and to any land lying in the bed of any body of water, waterway or public street, public road or public avenue in front of or adjoining the land, and all of Grantor's interest in and to oil, gas, geothermal, water and mineral rights, wells, and all water rights appurtenant to the Property described on Exhibit A, which is attached hereto and incorporated herein by reference.

WITNESS the hand of said Grantor this 30th day of June, 2022.

KOBALT DEVELOPMENT GROUP, L.L.C.
a Utah limited liability company

By: Name: Kay C. Barton

Its: Manager

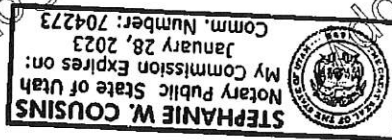
CERTIFICATE OF ACKNOWLEDGEMENT OF NOTARY PUBLIC

STATE OF Utah

: ss

COUNTY OF Salt Lake

On this 30th day of June, 2022, personally appeared before me Ray C. Barton, the manager of KOBALT DEVELOPMENT GROUP, L.C., a Utah limited liability company, known or satisfactorily proved to me to be the person who signed the foregoing instrument.



NOTARY PUBLIC
My Commission Expires: 1/28/23

LAES

**EXHIBIT A
DESCRIPTION OF REAL PROPERTY**

KOBALT DEVELOPMENT GROUP, LLC

of SALT LAKE CITY, County of SALT LAKE CITY, State of UTAH, for the sum of TEN DOLLARS and other good and valuable consideration, the following tract of land in WASHINGTON county, State of UT, to-wit.

All of the South 1/2 of the Southeast 1/4 of the Southwest 1/4 of Section 29, Township 42 South, Range 13 West, of the Salt Lake Base and Meridian.

LESS THAT PORTION LYING WITHIN 2600 WEST

AGEC

Applied GeoTech

July 29, 2022

RANlife Homes
9272 South 700 East
Sandy, Utah 84070

Attention: Anthony Bochino
Email: anthonyboc1@gmail.com

Subject: Geotechnical Consultation
Codero Subdivision
Hurricane, Utah
AGEC Project No. 2220977

Applied Geotechnical Engineering Consultants, Inc., (AGEC) was requested to conduct a geotechnical investigation for the proposed Codero Subdivision located in Hurricane, Utah. The study is currently in progress. We have scheduled to excavate 8 exploratory test pits across the 40-acre development. A final report will be provided upon completion of the study. The report summarizes the work to date and the conditions of the site along with conclusions to the suitability of the property for the proposed development.

Site Conditions

The property is located west of the Southern Shores Ski Lake Community project in south Hurricane. The property consists of undeveloped property. There is vacant property to the west, north and south.

The property slopes down to the north with approximately 30 feet of elevation change. The property is moderately covered with small brush and grasses infilled with wind blown sand and silt.

Geology

AGEC has reviewed the available literature for the property including the following:

- Literature Document No. 1:* Geologic Map of the Hurricane 7.5' Quadrangle, Washington County, Utah, Map M-187, 2003, Robert F. Biek.
- Literature Document No. 2:* Geologic Hazards and adverse Construction Conditions, St. George-hurricane Metropolitan Area, Washington County, Utah, SS-127, 2008, Lund etal.

Based on the literature review the following conclusions are made:

1. There is minor amounts of wind blown or aeolian type deposits overlying the basalt with greater amounts along the south end of the site.
2. There are not faults on or near the property. The nearest fault, the Hurricane Fault is on the order of 1.9 miles to the east.
3. There is also shallow hard rock anticipated below the surface sands.

Anticipated Subsurface Conditions

AGEC is in the process of completing 8 test pits (explorations) as shown below. AGECE has also reviewed previous geotechnical studies in the area including:

1. Romney Study – Larger parcel that included this parcel.
2. 100 Acre Study to the south

Based on our experience and review of the property, the subsurface conditions are anticipated to consist of silty sand (wind blown) overlying caliche and/or sandstone bedrock.

Groundwater was not encountered during previous investigations, nor anticipated throughout the property.

Proposed Construction

The property consists of approximately 40 acres and is to be developed with single family residences. There will be public improvements throughout the property.

Conclusions

Based on the review of the various items noted above, the following conclusions are noted:

1. The site is suitable for the proposed development. No geologic hazards other than hard rock for excavation purposes are noted on the property.
2. The site will require cuts and fills. The on-soils and bedrock may be used as fill materials.

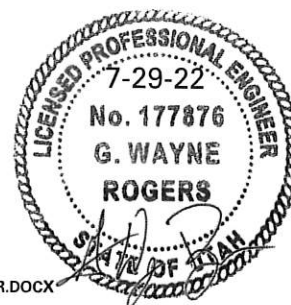
Limitations

AGEC will be providing a final report upon completion of the field exploration and the necessary laboratory testing. The information within this report may be used for review and preliminary design details.

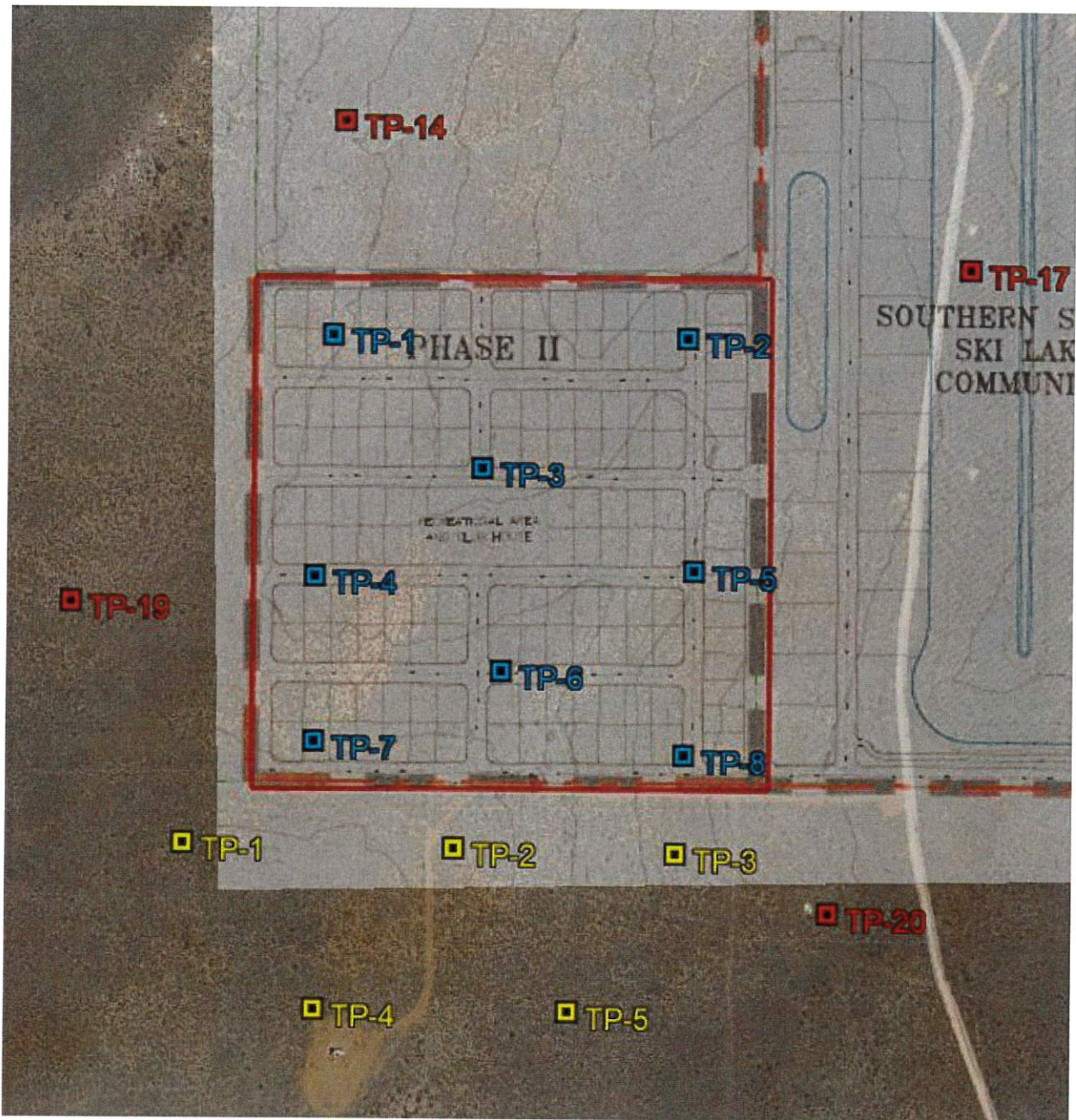
Sincerely,

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

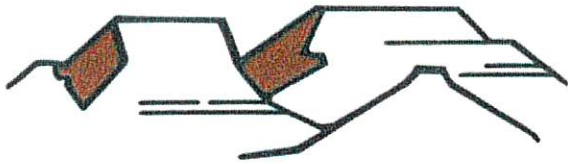
G. Wayne Rogers, P.E.



P:\2022 PROJECT FILES\2220900\2220977 - GT CORDERO SUBDIVISION (40 ACRES)\GEOTECHNICAL CONSULTATION LETTER.DOCX



Yellow TP- indicates test pits from 100 Acre Study
 Red TP- indicates test pits from Romney Study
 Blue = test pits this study



HURRICANE CITY UTAH

Water Department
Ken Richins, Superintendent

July 29, 2022

To Whom It May Concern:

Rainlife Homes Cordero LLC (the "Developer") has requested a culinary water will serve letter for the subdivision known as Southern Dunes Vacation Townhomes, located at approximately 2600 W Cliff View Drive in Hurricane, Utah (the "Project").

Infrastructure

The City currently has infrastructure to supply culinary water in the general area of the Project. However, Developer will be responsible to connect the Project to the existing water infrastructure, including the installation of infrastructure in dedicated public streets and as otherwise required to meet City standards. In addition, Developer may be required to obtain and supply a hydraulic water study to ensure the waterline will deliver required fire flows. A looped water system may be required.

Water Supply

As of the date of this letter, the city has adequate water to supply water to **345** residential connections within the Project. However, water within the City is a finite resource with limited supply. The ability of the City to supply water to previously approved projects, as well as continue to serve additional water customers, is contingent on water supplies being available from the Washington County Water Conservancy District (the "Conservancy District"). Therefore, the City's statements in this letter regarding the adequacy of water supply is (1) contingent on water being available from the Conservancy District and (2) shall expire one year from the date of this letter, after which a renewed will serve letter will be required for any property or lot that has not obtained a metered connection to the City's culinary water system. Developer is encouraged to obtain a guarantee of water from the Conservancy District.

General Requirements

In addition to the requirements and limitations described above, Developer shall be required to comply with all applicable laws, ordinances, policies, and construction and design standards. These requirements include, but are not limited to, secondary water system requirements and any obligations described in an applicable development agreement.

Sincerely,

Ken Richins

Water Department Superintendent



Ash Creek Special Service District

1350 S. Sand Hollow Road

Hurricane, UT 84737

Office: (435) 635-2348 Fax: (435) 635-8550

ashcreek@infowest.com

July 29, 2022

Bush & Gudgell, Inc
Ryan Lay
and
Hurricane City
Stephen Nelson
127 N. 870 W.
Hurricane, UT 84737

RE: Southern Dunes Vacation Townhomes

Stephen,

There is sewer capacity for this project. Connectivity will need to be in 2600 West to Copper Rock Parkway. The developers understand and agree that they will need to get plan approval for the sewer system.

After approval, they agree to pay all costs associated with construction and impact fees. Please let us know if you have any questions.

Sincerely,

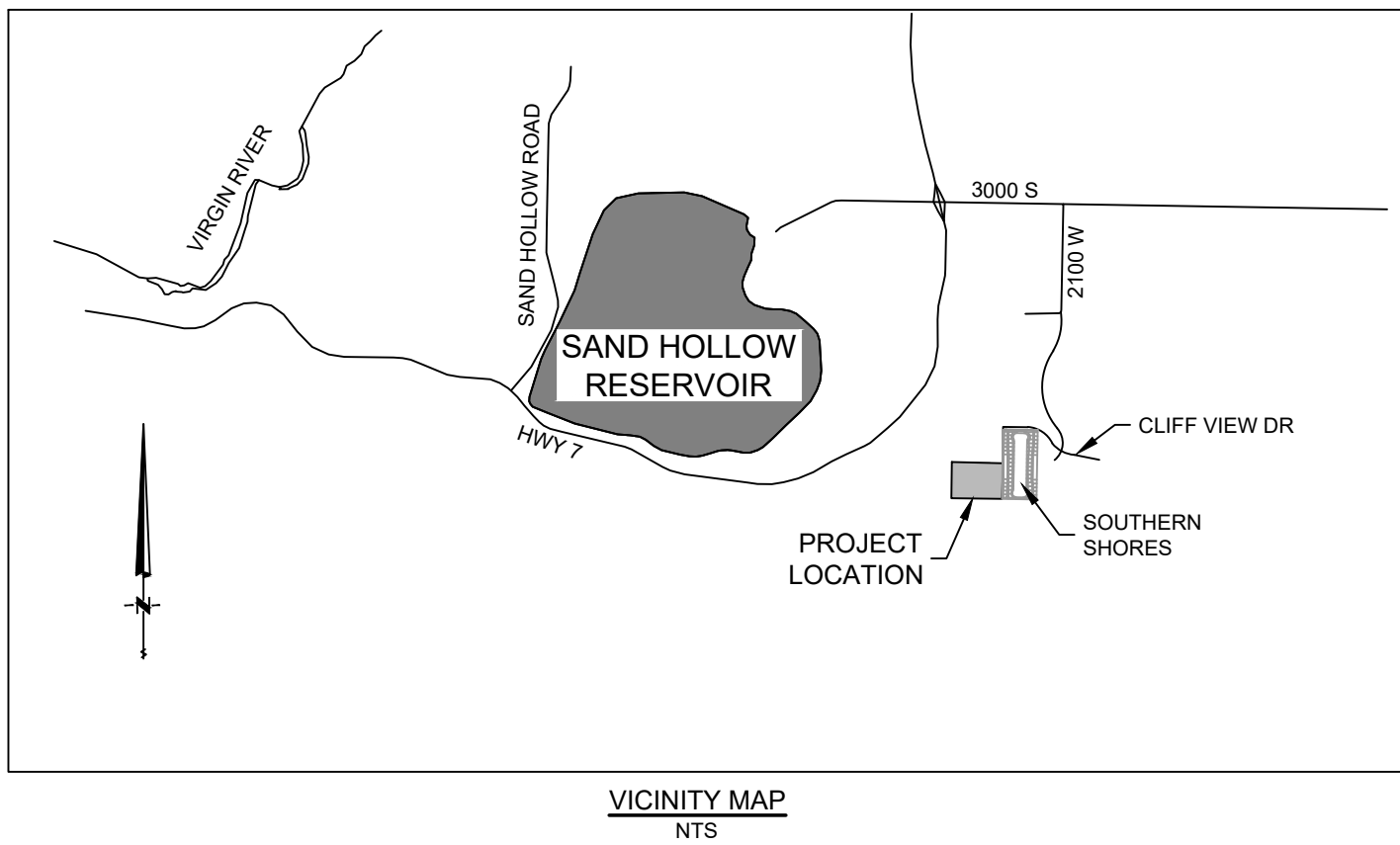
Gary Wilcox
Inspections Department
Ash Creek Special Service District

B&G PROJECT NUMBER 221077

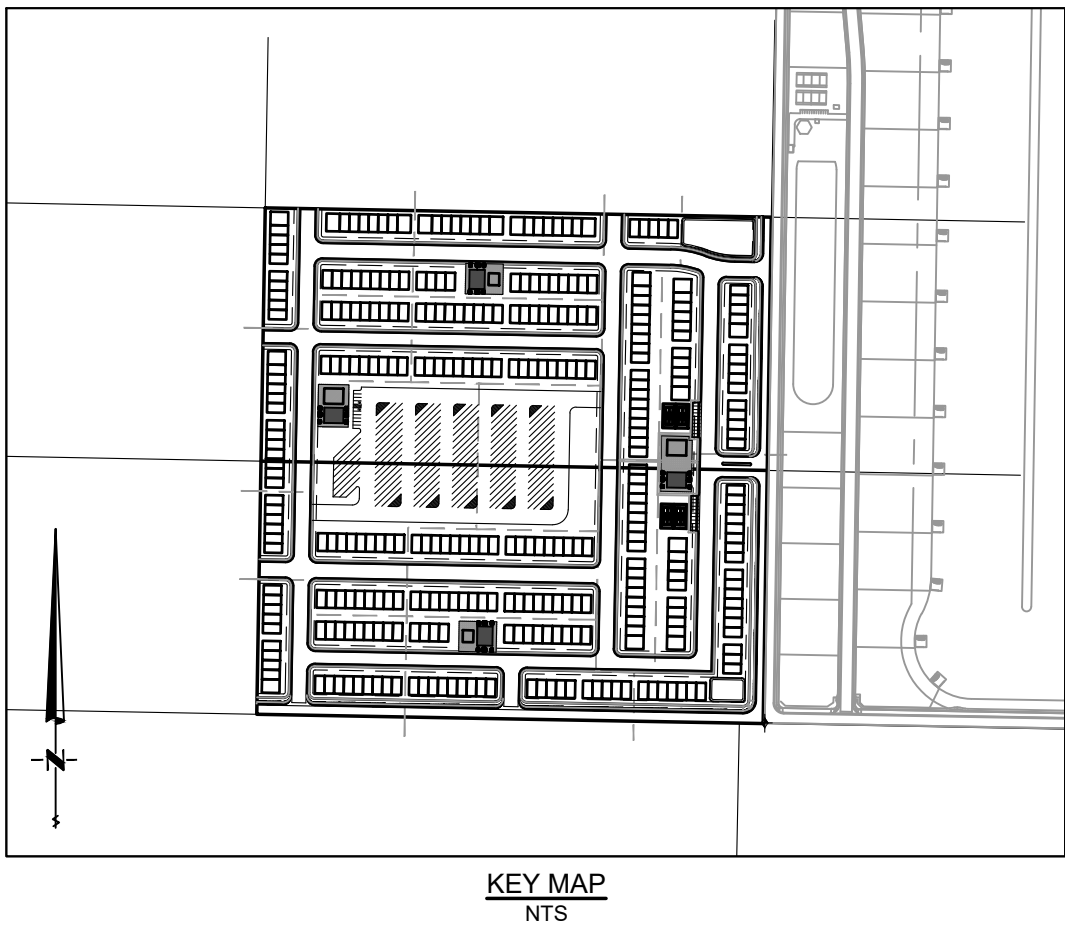
SOUTHERN DUNES TOWNHOMES

PRELIMINARY PLAT LOCATED IN HURRICANE, UTAH

SOUTHEAST 1/4 OF SOUTHWEST 1/4 OF SECTION 29 ,
TOWNSHIP 42 SOUTH, RANGE 13 WEST, SALT LAKE BASE AND MERIDIAN
PARCELS H-3400-N & H-3400-O



SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SITE AND UTILITY PLAN
3	OFFSITE UTILITY PLAN
4	GRADING PLAN
5	PHASING EXHIBIT



GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM WITH THE CURRENT EDITION OF HURRICANE CITY STANDARDS FOR DESIGN AND CONSTRUCTION, TOGETHER WITH HURRICANE CITY STANDARD DRAWINGS. ANY CONFLICT BETWEEN THESE PLANS AND HURRICANE CITY STANDARDS SHALL BE RESOLVED IN FAVOR OF HURRICANE CITY STANDARDS.
2. ALL WORK SHALL BE SUPERVISED BY A PROPERLY LICENSED AND QUALIFIED GENERAL CONTRACTOR.
3. CONSTRUCTION ACTIVITIES THAT DISTURB ONE OR MORE ACRES OF LAND MUST BE AUTHORIZED UNDER THE UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES). OWNERS AND GENERAL CONTRACTORS ARE REQUIRED TO OBTAIN A STORM WATER PERMIT FROM THE STATE OF UTAH.
4. THE CONTRACTOR/OWNER SHALL PROVIDE ADEQUATE RESOURCES TO CONTROL DUST ON THE SITE AND TRACKING OF MUD FROM THE SITE. DUST COMPLAINTS WILL RESULT IN SUSPENSION OF WORK UNTIL THE PROBLEM IS CORRECTED. TRACKING OF MUD ONTO ADJACENT STREETS SHALL BE MINIMIZED AND CLEANED UP DAILY.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE MUST-CALL MANDATORY INSPECTION LIST PROVIDED BY THE PUBLIC WORKS DEPARTMENT AND TO ARRANGE FOR MATERIAL TESTING AT THE STANDARD INTERVALS AND QUANTITIES REQUIRED AND PROVIDE DOCUMENTATION OF TEST RESULTS.
6. PROOFS FOR STREET SIGNS SHALL BE SUBMITTED TO THE GIS COORDINATOR PRIOR TO ORDERING OF SIGNS.
7. WORK IN THE PUBLIC WAY REQUIRES AN ENCROACHMENT PERMIT ISSUED BY HURRICANE CITY PUBLIC WORKS.
8. A CITY-APPROVED TRAFFIC CONTROL PLAN MUST BE IN PLACE PRIOR TO COMMENCING ANY WORK THAT AFFECTS THE TRAVELLING PUBLIC.
9. NO WORK SHALL COMMENCE UNTIL A NOTICE-TO-PROCEED HAS BEEN ISSUED BY HURRICANE CITY PUBLIC WORKS.

DEVELOPER INFORMATION
RANLIFE HOMES CORDERO LLC
ANTHONY BOCCHINNO
(801) 918-1779
9272 S. 700 E
SANDY, UT 84070

ENGINEER INFORMATION
BUSH AND GUDGELL, INC.
PROJECT MANAGER: RICK MEYER
(435) 673-2337
205 EAST TABERNACLE #4
ST. GEORGE, UT 84770

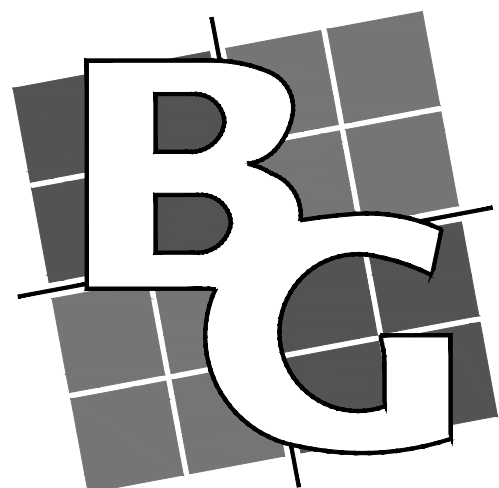
PROJECT INFORMATION	
ZONING	RR
LAND USE	PLANNED COMMUNITY
TOTAL AREA	39.97 ACRES
TOTAL UNITS	344
DENSITY	8.61 D.U./ ACRE

OCTOBER 2022

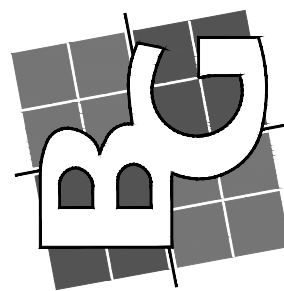
BUSH & GUDGELL, INC.

Engineers - Planners - Surveyors

205 East Tabernacle #4
St. George, Utah 84770
Phone (435) 673-2337



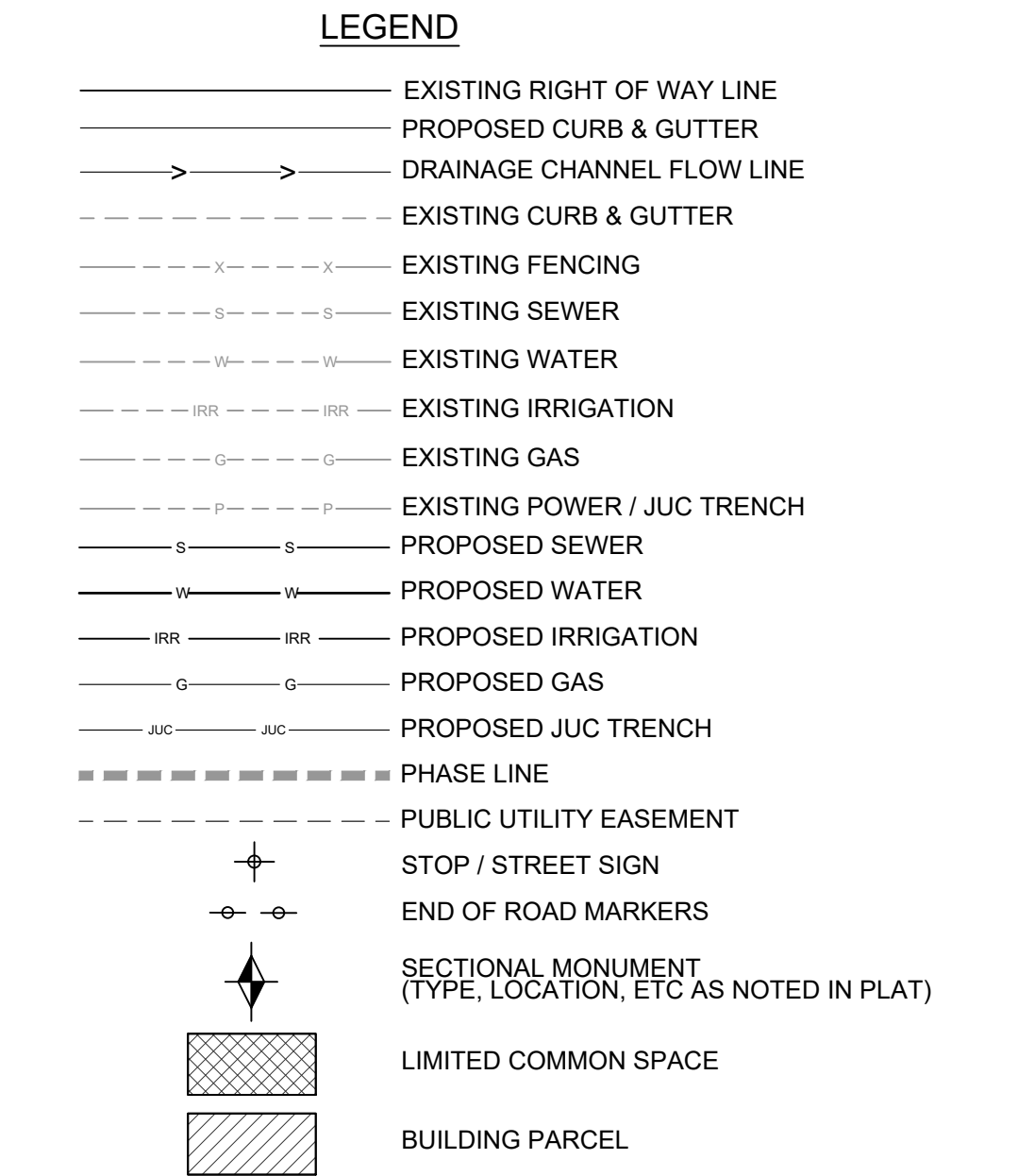
BUSH & GUDGELL, INC.
Engineers - Planners - Surveyors
205 East Tabernacle Suite #4
St. George, Utah 84770
Phone (435) 673-2337 / Fax (435) 673-3161
www.bushandgudgell.com



DATE: OCT 2022
DRAWN: CBW/COL
APPROVED: WEM
SCALE: NTS
JOB NO. 221077

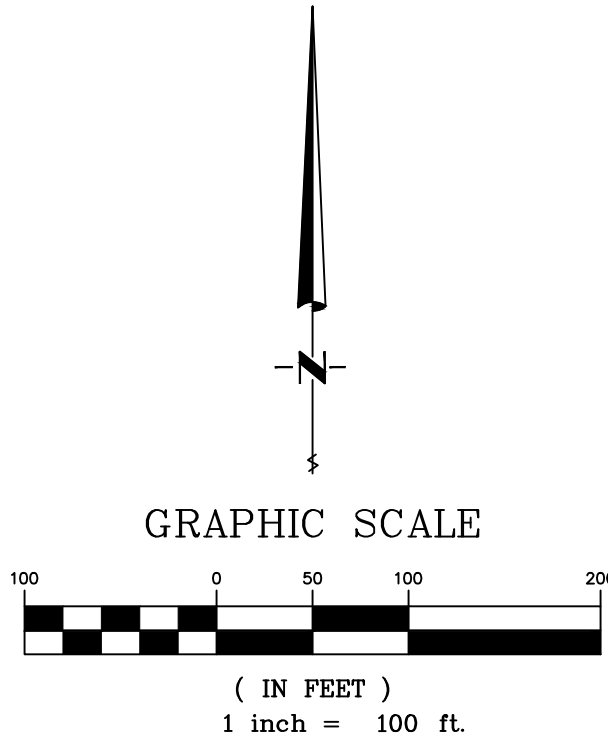
COVER SHEET
SOUTHERN DUNES TOWNHOMES
LOCATED IN HURRICANE, UTAH

SHEET 1 OF 5 SHEETS
FILE: 221077-PRELIMINARY PLAT



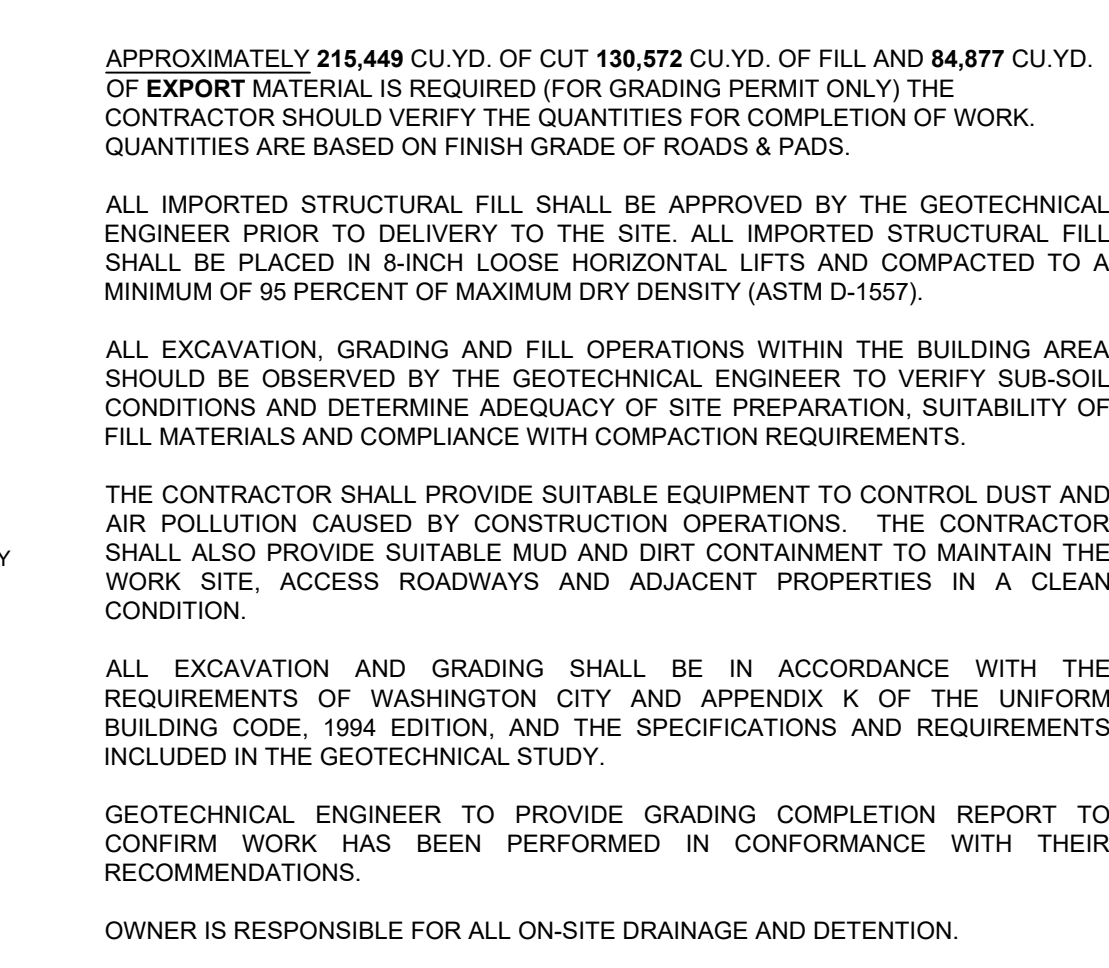
DEVELOPER INFORMATION
RANLIFE HOMES CORDERO LLC
ANTHONY BOCCINNO
(801) 918-1779
9272 S. 700 E
SANDY, UT 84070

ENGINEER INFORMATION
BUSH AND GUDGELL, INC.
PROJECT MANAGER: RICK MEYER
(435) 673-2337
205 EAST TABERNACLE #4
ST. GEORGE, UT 84770



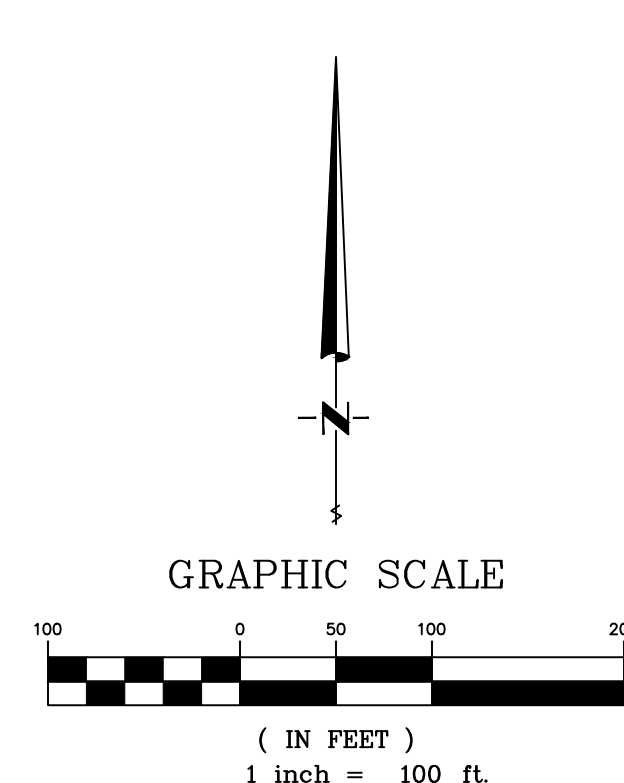
SHEET 2 OF 5 SHEETS
FILE: 221077-PRELIMINARY PLAT

Page 342 of 654

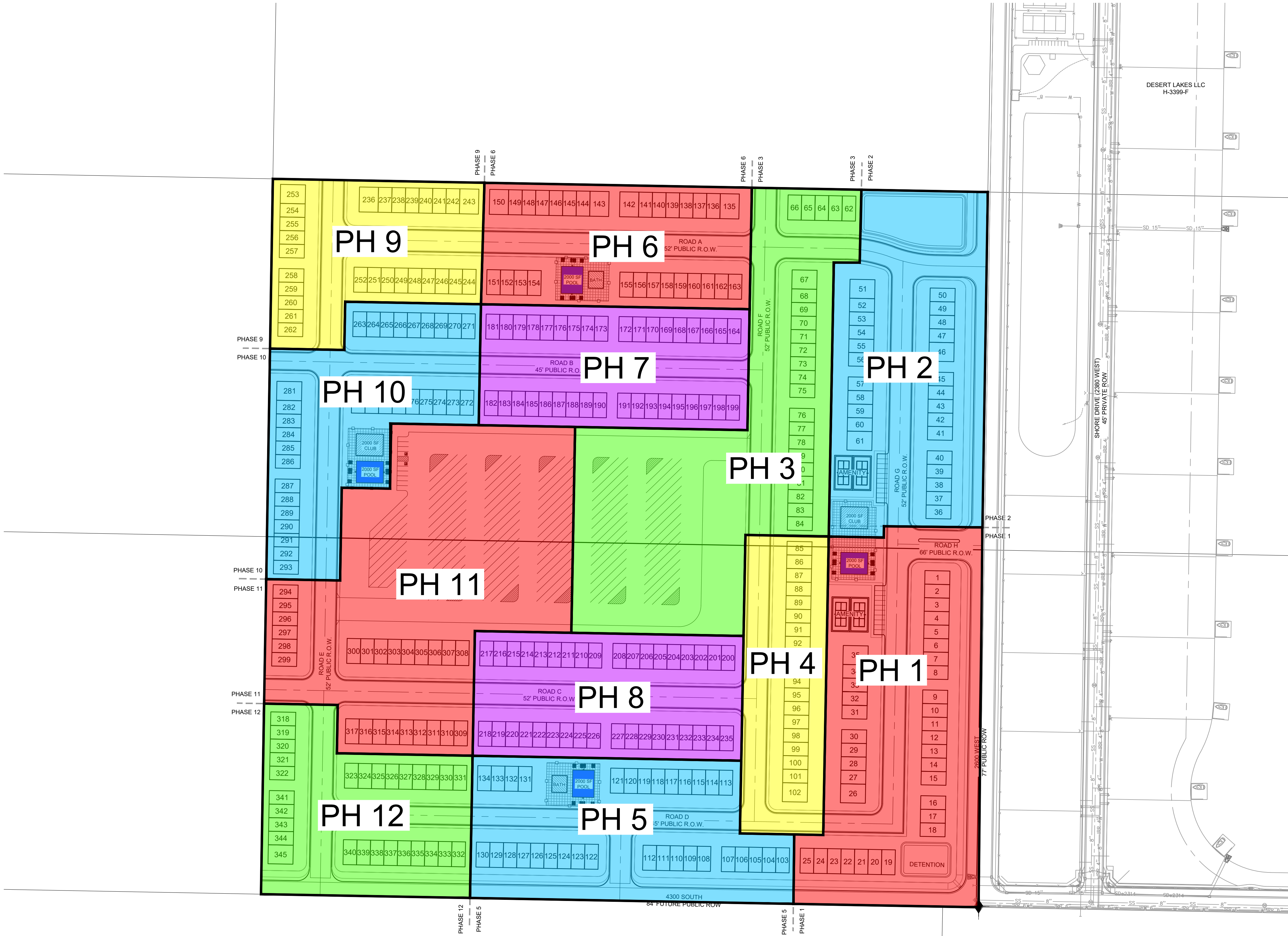


DEVELOPER INFORMATION
RANLIFE HOMES CORDERO LLC
ANTHONY BOCCINHO
(801) 118-1779
9272 S. 700 E
SANDY, UT 84070

ENGINEER INFORMATION
BUSH AND GUDGELL, INC.
PROJECT MANAGER: RICK MEYER
(435) 673-2337
205 EAST TABERNAACLE #4
ST. GEORGE, UT 84770



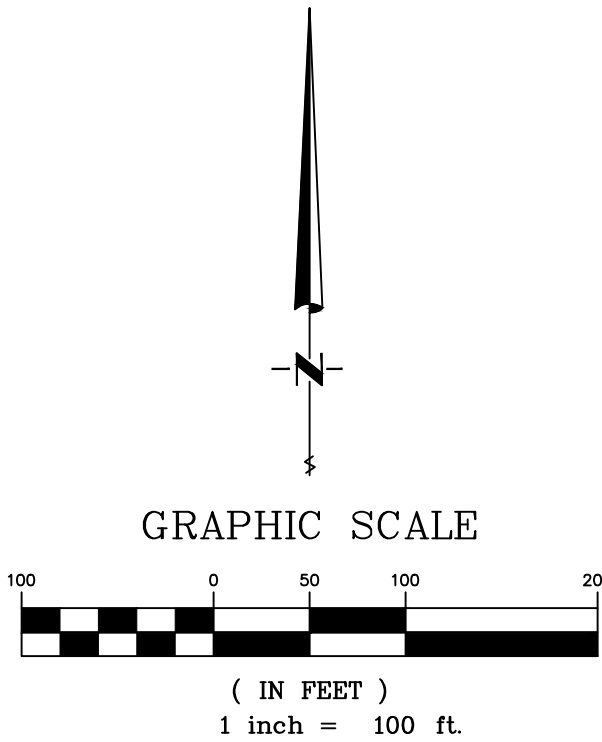
SHEET 4 OF 5 SHEETS
FILE: 221077-PRELIMINARY PLAT



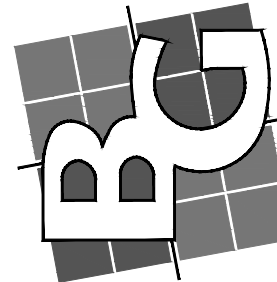
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
Call
before you
Dig
1-800-662-4111
ALWAYS LOCATE UTILITIES FIRST

DEVELOPER INFORMATION
RANLIFE HOMES CORDERO LLC
ANTHONY BOCCHINO
(801) 919-1779
9272 S. 700 E
SANDY, UT 84070

ENGINEER INFORMATION
BUSH AND GUDGELL, INC.
PROJECT MANAGER: RICK MEYER
(435) 673-2337
205 EAST TABERNACLE #4
ST. GEORGE, UT 84770



BUSH & GUDGELL, INC.
Engineers - Planners - Surveyors
205 East Tabernacle Suite #4
St. George, Utah 84770
Phone (435) 673-2337 / Fax (435) 673-3161
www.bushandgudgell.com



DATE: OCT 2022
DRAWN: GBW/CCL
APPROVED: WFM
SCALE: 1"=100'
JOB NO. 221077

PHASING EXHIBIT
SOUTHERN DUNES TOWNHOMES
LOCATED IN HURRICANE, UTAH

SHEET 5 OF 5 SHEETS
FILE: 221077.PRELIMINARY PLAT



STAFF COMMENTS

Agenda Date:	2/2/2023
Application Number:	2022-PP-20 2022-PSP-38
Type of Application:	Preliminary Plat Application
Action Type:	Administrative
Applicant:	Southern Dunes Townhomes
Agent:	Bush & Gudgell, Inc
Request:	Approval of a Preliminary Plat and Site Plan
Location:	2600 W 4200 S
Zoning:	Recreation Resort
General Plan Map:	Planned Community

Planning Commission Recommendation

The Planning Commission recommended denial of the preliminary plat finding that there are inadequate facilities to serve the property.

Update 01/26/2023: The City Council voted on Jan 19, 2023 to allow this application to reapply for preliminary plat approval. This preliminary plat was denied due to insufficient water and power in the area as well as problems with layouts and amenities. The City Council's rationale was that by the time construction drawings were completed then power will be sufficient in the area. Staff and the applicant were able to work out all the concerns with regards to layouts, water, and amenities. Staff recommends that the Planning Commission read the report below and consider the standards of the city ordinances. Staff still has outstanding concerns with utilities, namely power, throughout the region and still recommend denial of this preliminary plat.

Previous Planning Commission Recommendation

2/2/2023

2022-PP-20
2022-PSP-38

The applicant has filed a preliminary plat for Southern Dunes Townhomes within the Cordero development. The applicant is proposing 345 resort townhome units for a density of about 8.63 units per acre. The Cordero development, as approved in 2020 is split into three sections with different zonings: the west side is zoned Recreation Resort (Southern Dunes), the middle section is zoned R1-10 (Southern Shores) and the east side is zoned R1-6 (Cordero). A development agreement governs this development that limits the overall unit count to 700 units across all three sections. This preliminary plat will complete the preliminary plat process for the entire development. Utilities are still scarce throughout the region so any approval should be contingent on the developer being able to supply adequate services to the property.

JUC Comments

The following items will need to be addressed:

1. **Public Works:** Must dedicate and improve 2600 W. Must obtain full ROW for 2600 W and utilities.
2. **Power:** “At this time, the City’s power grid is inadequate to support all of the development planned in the area south of 2700 South Street. Although the Power Department has plans to expand and enhance its system to supply adequate power to this area, those plans are subject to funding limitations, the City’s acquisition of easements and rights-of-way, the availability of materials, and other limitations. Therefore, the Power Department cannot presently guarantee that it can provide power to all of the development planned in this area, which includes this proposed development.”
3. **Sewer:** No comments
4. **Street:** Do these units have garages? Driveways for parking? On street parking?
5. **Water:** Water model needed. Public or private streets? Private streets require ductile iron piping
6. **Engineering:** It appears this development is located in the FH110 subbasin of the Hurricane Storm Drain Master Plan and stormwater from this development will eventually drain to the open channel along 2100 W. The drainage study for this development should elaborate on how. Avoid block lengths greater than 800’ stub roadways accordingly. Verify corner lot driveways are out of sight distance triangles. 4300 S is a master-planned 84’ ROW with trails on the north and south sides. 2600 W is a master-planned 77’ ROW with a trail on the west side that will need to be dedicated at this time. For some reason the current ROW dedication for 2600 W shows a curve in the southeast corner of this development; the road needs to be straight through here.
7. **Fire:** Need second access and buildings to be sprinkled
8. **Cable:** Add Centurylink fiber optic notes for construction drawings
9. **Gas:** No comments.
10. **Water Conservancy:** No comments

Staff Comments: Preliminary Site Plan and Plat

1. Zoning is a Recreation Resort and meets the density requirements of that zone.
 - a. A “concept plan” that showed this area was submitted as part of the zone change that happened in 2020, before the requirements of the Recreation Resort zone were changed. Due to the fact that this previous plan was both substantially different than what is being proposed here and was not part of an official application this will be reviewed under HCC 10-26 as amended under Ordinance No. 2021-09

2. The development is partly governed by a development agreement which capped the total number of lots at 700 for the whole area. The development agreement required preliminary plats to list the number of lots that have been approved for the full Cordero development. This table is not provided. However, this plat plus the other approved preliminary plats add up to 691 units.
3. Staff would assume that all streets and alleyways not specifically marked “public” are private. This should be made more clear on the plat.
4. **Parking:** Per HCC 10-26-6: *“Within recreational resorts, an application shall provide two parking spaces per unit or one space per bedroom, whichever is higher. Tandem parking spaces are permitted only if approved as part of the preliminary site plan by the Planning Commission.”*
 - a. It appears from the site plan that the townhome units will have garages and driveways such to meet this code but this should be called out
 - b. RV/trailer spaces are also required at a rate of one space per five units. 69 spaces are required and approximately 130 are provided
 - c. On-street parking is shown on Road F and Road G. On-street parking is allowed in Recreation Resort zoning, however the code states, *“Parking areas shall be located 50 feet away from any intersection of public roadways.”* These parking spaces do not meet this standard
 - d. **Street Parking:** The applicant has proposed a few street parking spaces. These spaces are permitted with the following conditions.
 - i. They need to be spaced at least 50’ from the intersection.
 - ii. They are limited to 10 spaces for each section.
 - iii. Will need to be signed off by the City Engineer.
5. **Amenities:** Per HCC 10-26-4: two clubhouses with at least 2,000 sq ft of total nonoffice space and four pools of at least 2,000 sq ft are required. The proposed site plan shows two “amenity areas” and one pool. More details are required on the proposed amenities. The Planning Commission may approve consolidated amenities if it leads to a better amenity area. A Pool, club house and on-site management will need to be in place within the first phase of development. The development amenities requirements are listed below.

10-26-4 Development Standards

Number of units	Clubhouses required	Clubhouse size	Pools required	Pool size
300—499	2	At least 2,000 sq ft of total non office space	4	At least 2,000 sq ft

- a. The applicant has requested that the Planning Commission consider approving the pool areas. The applicant is providing a total of 8,810 sq. ft. of pool area of the needed 8,000 sq. ft. They are requesting instead of providing four large pool areas, to provide one large pool area, a large hot tub area, and providing 197 units with individual hottubs instead.
- b. The applicant has also included four pickleball courts in addition to the minimum requirements.
- c. The applicant has provided two location for two club house locations, each 1,400 sq. ft. This is short of the minimum requirement for two at 2,000 sq. ft. total of non office space.
- d. The applicant has requested alternative compliance. The Planning Commission may approve “(a)lternative compliance, such as splash pads, sports courts, and open space amenities may be considered by the Planning Commission to offset other amenities requirements.” (10-26-4 Note 4)

6. Block lengths and connectivity:

Update: The applicant has provided extra connections to the adjacent properties as requested. There are still a couple of roadways internally that do not meet 800’ length with full four way intersection. This map has been sent to engineering for their review.

Previous Notes on Block Lengths: Per Hurricane City Design Standards: “*When designing local road networks, block lengths without an intervening connector street shall not exceed eight hundred feet (800') in length unless previous approval has been obtained from the City Engineer. Cul-de-sacs are not considered an intervening connecting street.*” Several blocks do not meet this standard on one side or another.

Update: The applicant has provided extra connections to the adjacent properties as requested. There are still a couple of roadways internally that do not meet 800’ length with full four way intersection.

- a. This site plan appears to only show alleyway access to the property to the north and limited street access to the property to the west. The Preliminary Site Plan for Sand Hollow Mesa Neighborhoods 7 and 8 shows full street access to this property at approximately the points these alleyways are shown.
- b. The applicant should provide better connection to the surrounding property to
 - i. Cut down on block lengths
 - ii. Provide better transportation and utility connections with adjacent properties.
- c. Connecting Streets: Hurricane City Code states the following for connectivity within subdivisions:

Sec. 10-39-11. - Subdivision streets and fencing.

- A. *Relation to adjoining street systems.*
 - 1. *The arrangements of streets in new subdivisions shall make provision for the continuation of the existing streets to adjoining areas insofar as such may be deemed necessary by the Planning Commission for public requirements. New streets within subdivisions shall not preclude future access to adjoining properties.*
 - 2. *Standard residential streets shall approach the arterial or collector streets at an angle of not less than 80 degrees.*
 - 3. *Except as otherwise provided elsewhere in this Code, all subdivision streets and roadways shall be constructed and installed in accordance with the City roadway construction standards.*

A couple of recommendations would be to have Road B connect all the way through the project. Have Road F make a connection to the North. Have Road D connect to the west.

- d. All alleyways are shown to be 20' wide which may not meet fire code.



Southern Dunes Townhomes location superimposed on the approved Sand Hollow Mesa site plan

7. All park strips will need to be landscaped and have the proper improvements.
8. A will serve letter from the culinary and sanitary water providers has been provided
9. A note indicating whether or not the property is in a tortoise take area has not been provided
10. Hurricane City Code states: "Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development" (Hurricane City Code 10-37-4). The adequacy of public facilities to support the proposed development is in question. The Power Department has stated that the City's power grid is inadequate to support all of the development planned in this area. See JUC comments regarding the limited capacity to supply power to this area. Also, developments adjacent to this proposed development have been unable to meet the water pressure requirements of the Fire Code, so the development nearby has been required to put sprinklers in all units to satisfy the Fire Code. Whether this proposed additional development will be able to meet the Fire Code is uncertain at this point. "A proposed development **shall not be approved** if demand for public facility will exceed adopted level of service standards unless public facility improvements, reasonably calculated to raise service

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2022-PSP-38

levels to adopted level of service standards, will be available to serve the development.” HCC 9-6-3(B) (emphasis added). “The City may require an analysis to be completed to determine whether adequate public facilities are available to service a development and whether such development will change existing levels of service or will create a demand which exceeds acceptable levels of service for roadways, intersections, bridges, storm drainage facilities, water lines, water pressure, sewer lines, fire and emergency response times, and other similar public services.” HCC 10-37-4. “The City may disapprove a proposed development if demand for public services exceeds accepted levels of service.” HCC 10-37-4. The Planning Commission and City Council should carefully consider whether the infrastructure and public facilities necessary to support this proposed development satisfy the requirements of the Code as explained in this section. If not enough information is available for the Commission or Council to make a finding regarding the adequacy of public facilities, then more information or analysis should be requested from the applicant or City staff, as applicable, before acting on the application.

LEGAL COMMENTS ON APPLICATION

Applying the Ordinances:

The approval or denial of a preliminary plat application is an administrative decision in which the City's ordinances are applied to the application, so the City's ordinances should dictate whether a preliminary plat application is approved or denied. There are two City ordinances that are relevant to this application: Hurricane City Code ("HCC") sections 9-6-3 and 10-37-4.

HCC section 10-37-4 states that: "Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development. ... The City may disapprove a proposed development if demand for public services exceeds accepted levels of service. No subsequent approval of such development shall be given until either the developer or the City installs improvements calculated to raise service levels to the standard adopted by the City."

HCC section 9-6-3 states that: "Land shall be developed only where public facilities are in place or will be timely provided to serve proposed development at a level of service which meets the City's adopted level of service standards. ... A proposed development shall not be approved if demand for a public facility will exceed adopted level of service standards unless public facility improvements, reasonably calculated to raise service levels to adopted level of service standards, will be available to serve the development."

When considering an application for development in an area where City staff have found that public facilities are inadequate to serve the development at the established level of service, the question for the Planning Commission and City Council is whether the necessary public facilities "will be timely provided" to serve the development at adopted levels of service. If the City Council cannot find (determine) that the necessary public facilities "will be timely provided" to provide for the new development, then the City's ordinances require that the development be denied.

Basis and Support for Decision:

An approval or denial of a preliminary plat application needs to be supported by evidence in the record. City staff's recommendation of denial is based on the following evidence: (1) a report prepared by Intermountain Consumer Professional Engineers, Inc., together with the Power Department's analysis, concluding that "addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels"; (2) a Limited Distribution Capacity analysis for water service levels in the area prepared by Alpha Engineering; and (3) the uncertainty and unknown timeline as to when power and water infrastructure will be installed to raise service levels to acceptable standards. If the Planning Commission or City Council finds (determines) that the necessary public facilities "will be timely provided" to address the inadequate facilities, that finding needs to be supported by evidence in the record.

Understanding the Process:

After a preliminary plat is approved by the City Council, the development typically never returns to the Council for further approval. After preliminary plat approval, the next phase is the preparation of detailed construction drawings, which are reviewed and approved by members of the city's Joint Utility Committee. After construction drawings are approved and a final plat application is filed with staff, the developer is permitted to move forward with actual construction of the development. The recording of a final plat is the final step and is approved by the City Engineer, the Mayor, and the City Attorney. If a development that lacks adequate public facilities is approved at the preliminary plat stage, then it leaves members of staff to determine whether construction drawings should be approved to allow the development to begin construction. When reviewing construction drawings, members of staff are also constrained by the requirements of HCC sections 9-6-3 and 10-37-4. Therefore, it would be ideal if the City Council and staff were aligned on when development with inadequate public facilities should be permitted to proceed. If a proposed development cannot be approved pursuant to City ordinances, the City Council would be the preferred body to make that determination—instead of letting it fall to individual utility departments and staff members.

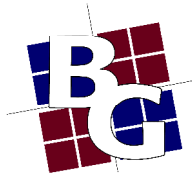
Policy Behind the Ordinances:

The adequacy of public facilities is a factor at every phase of development, beginning with zone change applications. A key policy driving this approach is to avoid a situation where a developer believes that a development is entitled to proceed, but the City is unable to provide the necessary services to the development without jeopardizing service to existing residents. Also, developers invest additional funds into a project at each phase of development. Therefore, the further along that the City allows development to occur without adequate public facilities, the larger the potential legal claim against the City if the developer ultimately cannot connect to the City's utility systems for lack of capacity. If the City Council determines that the necessary public facilities are not currently available but "will be timely provided" to serve the development, the City Council should only approve the preliminary plat on

the condition that the owner execute a development agreement limiting the developer's rights and outlining the procedure for handling the project, all in a form approved by the City Attorney.

Recommendation: Staff recommends the City Council review this application based on standards with Hurricane City Code. Staff would recommend the City Council take into consideration the recommendation by the Planning Commission and items within this report. Though the applicant can likely address most comments within this report, adequate power is outside the control of the applicant. Staff would recommend the City Council discuss if they believe if "existing infrastructure is in place or will be timely provided to service proposed development".

Staff recommends denial of the proposed development finding that there is inadequate facilities.



September 14, 20

Southern Dunes Townhomes Hurricane, Utah JUC and Staff Comments

RE: Hurricane City Staff Comments

Discussion:

The applicant has filed a preliminary plat for Southern Dunes Townhomes within the Cordero development. The applicant is proposing 345 resort townhome units for a density of about 8.63 units per acre. The Cordero development, as approved in 2020 is split into three sections with different zonings: the west side is zoned Recreation Resort (Southern Dunes), the middle section is zoned R1-10 (Southern Shores) and the east side is zoned R1-6 (Cordero). A development agreement governs this development that limits the overall unit count to 700 units across all three sections. This preliminary plat will complete the preliminary plat process for the entire development. Utilities are still scarce throughout the region so any approval should be contingent on the developer being able to supply adequate services to the property.

JUC Comments

The following items will need to be addressed:

1. **Public Works:** Must dedicate and improve 2600 W. Must obtain full ROW for 2600 W and utilities.

Response: 70' ROW improvements along 2600 West matching Transportation Master Plan are part of this plan set.

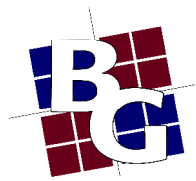
2. **Power:** "At this time, the City's power grid is inadequate to support all of the development planned in the area south of 2700 South Street. Although the Power Department has plans to expand and enhance its system to supply adequate power to this area, those plans are subject to funding limitations, the City's acquisition of easements and rights-of-way, the availability of materials, and other limitations. Therefore, the Power Department cannot presently guarantee that it can provide power to all of the development planned in this area, which includes this proposed development."

Response: We understand and acknowledge that power will be provided on a first come first serve basis. We also understand that a new substation is in the plans to provide power to the entire area.

3. **Sewer:** No comments

Response: N/A

4. **Street:** Do these units have garages? Driveways for parking? On street parking?



Response: All units have a 2 car garage with some end units having a 3 car garage. Driveways are 25' and can be used for parking. Some street parking will be available within the 52' ROW but the street parking on the 45' ROW will not be permitted.

5. **Water:** Water model needed. Public or private streets? Private streets require ductile iron piping

Response: Water model is provided; all streets are Public.

6. **Engineering:** It appears this development is located in the FH110 subbasin of the Hurricane Storm Drain Master Plan and stormwater from this development will eventually drain to the open channel along 2100 W. The drainage study for this development should elaborate on how. Avoid block lengths greater than 800' stub roadways accordingly. Verify corner lot driveways are out of sight distance triangles. 4300 S is a master-planned 84' ROW with trails on the north and south sides. 2600 W is a master-planned 77' ROW with a trail on the west side that will need to be dedicated at this time. For some reason the current ROW dedication for 2600 W shows a curve in the southeast corner of this development; the road needs to be straight through here.

Response: When Drainage study is finished it will demonstrate how drainage will work. Block lengths are less than 800'. Corner lots meet set back requirements. Will need to address the difference from the Transportation Master Plan that shows 70' ROW in the area.

7. **Fire:** Need second access and buildings to be sprinkled

Response: A second access will be provided and all buildings will be fire sprinkled

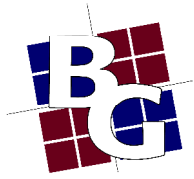
8. **Cable:** Add Centurylink fiber optic notes for construction drawings

Response: Notes will be added to CD's

9. **Gas:** No comments.

Response: N/A

10. **Water Conservancy:** No comments



Response: N/A

Staff Comments: Preliminary Site Plan and Plat

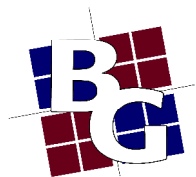
1. Zoning is a Recreation Resort and meets the density requirements of that zone.
 - a. A “concept plan” that showed this area was submitted as part of the zone change that happened in 2020, before the requirements of the Recreation Resort zone were changed. Due to the fact that this previous plan was both substantially different than what is being proposed here and was not part of an official application this will be reviewed under HCC 10-26 as amended under Ordinance No. 2021-09
2. The development is partly governed by a development agreement which capped the total number of lots at 700 for the whole area. The development agreement required preliminary plats to list the number of lots that have been approved for the full Cordero development. This table is not provided. However, this plat plus the other approved preliminary plats add up to 691 units.
3. Staff would assume that all streets and alleyways not specifically marked “public” are private. This should be made more clear on the plat.

Response: All streets will be clearly labeled, there are no alley ways or private streets in this project.

4. **Parking:** Per HCC 10-26-6: *“Within recreational resorts, an application shall provide two parking spaces per unit or one space per bedroom, whichever is higher. Tandem parking spaces are permitted only if approved as part of the preliminary site plan by the Planning Commission.”*
 - a. It appears from the site plan that the townhome units will have garages and driveways such to meet this code but this should be called out
 - b. RV/trailer spaces are also required at a rate of one space per five units. 69 spaces are required and approximately 130 are provided
 - c. On-street parking is shown on Road F and Road G. On-street parking is allowed in Recreation Resort zoning, however the code states, *“Parking areas shall be located 50 feet away from any intersection of public roadways.”* These parking spaces do not meet this standard

Response: On-street parking has been moved away from intersections.

5. **Amenities:** Per HCC 10-26-4: two clubhouses with at least 2,000 sq ft of total nonoffice space and four pools of at least 2,000 sq ft are required. The proposed site plan shows two “amenity areas” and one pool. More details are required on the proposed amenities. The Planning Commission may approve consolidated amenities if it leads to a better amenity area. A Pool, club house and on-site management will need to be in place within the first phase a development.



Response: Amenities will be labeled and tallied.

6. Block lengths and connectivity: Per Hurricane City Design Standards: *“When designing local road networks, block lengths without an intervening connector street shall not exceed eight hundred feet (800') in length unless previous approval has been obtained from the City Engineer. Cul-de-sacs are not considered an intervening connecting street.”* Several blocks do not meet this standard on one side or another.

- a. This site plan appears to only show alleyway access to the property to the north and limited street access to the property to the west. The Preliminary Site Plan for Sand Hollow Mesa Neighborhoods 7 and 8 shows full street access to this property at approximately the points these alleyways are shown.

Response: Will compare designs and make changes as needed.

- b. The applicant should provide better connection to the surrounding property to
 - i. Cut down on block lengths
 - ii. Provide better transportation and utility connections with adjacent properties.

Response: Added street connections to north and west properties

- c. Connecting Streets: Hurricane City Code states the following for connectivity within subdivisions:

Sec. 10-39-11. - Subdivision streets and fencing.

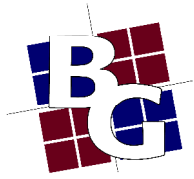
- A. *Relation to adjoining street systems.*
 1. *The arrangements of streets in new subdivisions shall make provision for the continuation of the existing streets to adjoining areas insofar as such may be deemed necessary by the Planning Commission for public requirements. New streets within subdivisions shall not preclude future access to adjoining properties.*
 2. *Standard residential streets shall approach the arterial or collector streets at an angle of not less than 80 degrees.*
 3. *Except as otherwise provided elsewhere in this Code, all subdivision streets and roadways shall be constructed and installed in accordance with the City roadway construction standards.*

An couple of recommendation would be to have Road B connect all the way through the project. Have Road F make a conection to the North. Have Road D connect to the west.

Response: Road F & D stubs have been added to plans with utilities extended.

All alleyways are shown to be 20' wide which may not meet fire code.

Response: No alley ways are proposed on this plat, 20' is the building separation.



7. All park strips will need to be landscaped and have the proper improvements.

Response: Landscaping will be provided

8. A will serve letter from the culinary and sanitary water providers has been provided

Response: Will serve letters have been provided

9. A note indicating whether or not the property is in a tortoise take area has not been provided

Response: Property is not in tortoise take area

Recommendation: Staff recommends the Planning Commission review this application based on standards with Hurricane City Code. Staff would recommend continuing this application so the applicant can address staff concerns about layout and amenities.

AGEC

Applied GeoTech

July 29, 2022

RANlife Homes
9272 South 700 East
Sandy, Utah 84070

Attention: Anthony Bochino
Email: anthonyboc1@gmail.com

Subject: Geotechnical Consultation
Codero Subdivision
Hurricane, Utah
AGEC Project No. 2220977

Applied Geotechnical Engineering Consultants, Inc., (AGEC) was requested to conduct a geotechnical investigation for the proposed Codero Subdivision located in Hurricane, Utah. The study is currently in progress. We have scheduled to excavate 8 exploratory test pits across the 40-acre development. A final report will be provided upon completion of the study. The report summarizes the work to date and the conditions of the site along with conclusions to the suitability of the property for the proposed development.

Site Conditions

The property is located west of the Southern Shores Ski Lake Community project in south Hurricane. The property consists of undeveloped property. There is vacant property to the west, north and south.

The property slopes down to the north with approximately 30 feet of elevation change. . The property is moderately covered with small brush and grasses infilled with wind blown sand and silt.

Geology

AGEC has reviewed the available literature for the property including the following:

- | | |
|-----------------------------------|--|
| <i>Literature Document No. 1:</i> | Geologic Map of the Hurricane 7.5' Quadrangle, Washington County, Utah, Map M-187, 2003, Robert F. Biek. |
| <i>Literature Document No. 2:</i> | Geologic Hazards and adverse Construction Conditions, St. George-hurricane Metropolitan Area, Washington County, Utah, SS-127, 2008, Lund et al. |

Based on the literature review the following conclusions are made:

1. There is minor amounts of wind blown or aeolian type deposits overlying the basalt with greater amounts along the south end of the site.
2. There are not faults on or near the property. The nearest fault, the Hurricane Fault is on the order of 1.9 miles to the east.
3. There is also shallow hard rock anticipated below the surface sands.

Anticipated Subsurface Conditions

AGEC is in the process of completing 8 test pits (explorations) as shown below. AGEC has also reviewed previous geotechnical studies in the area including:

1. Romney Study – Larger parcel that included this parcel.
2. 100 Acre Study to the south

Based on our experience and review of the property, the subsurface conditions are anticipated to consist of silty sand (wind blown) overlying caliche and/or sandstone bedrock.

Groundwater was not encountered during previous investigations, nor anticipated throughout the property.

Proposed Construction

The property consists of approximately 40 acres and is to be developed with single family residences. There will be public improvements throughout the property.

Conclusions

Based on the review of the various items noted above, the following conclusions are noted:

1. The site is suitable for the proposed development. No geologic hazards other than hard rock for excavation purposes are noted on the property.
2. The site will require cuts and fills. The on-soils and bedrock may be used as fill materials.

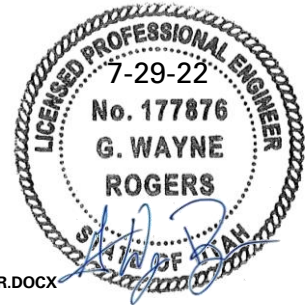
Limitations

AGEC will be providing a final report upon completion of the field exploration and the necessary laboratory testing. The information within this report may be used for review and preliminary design details.

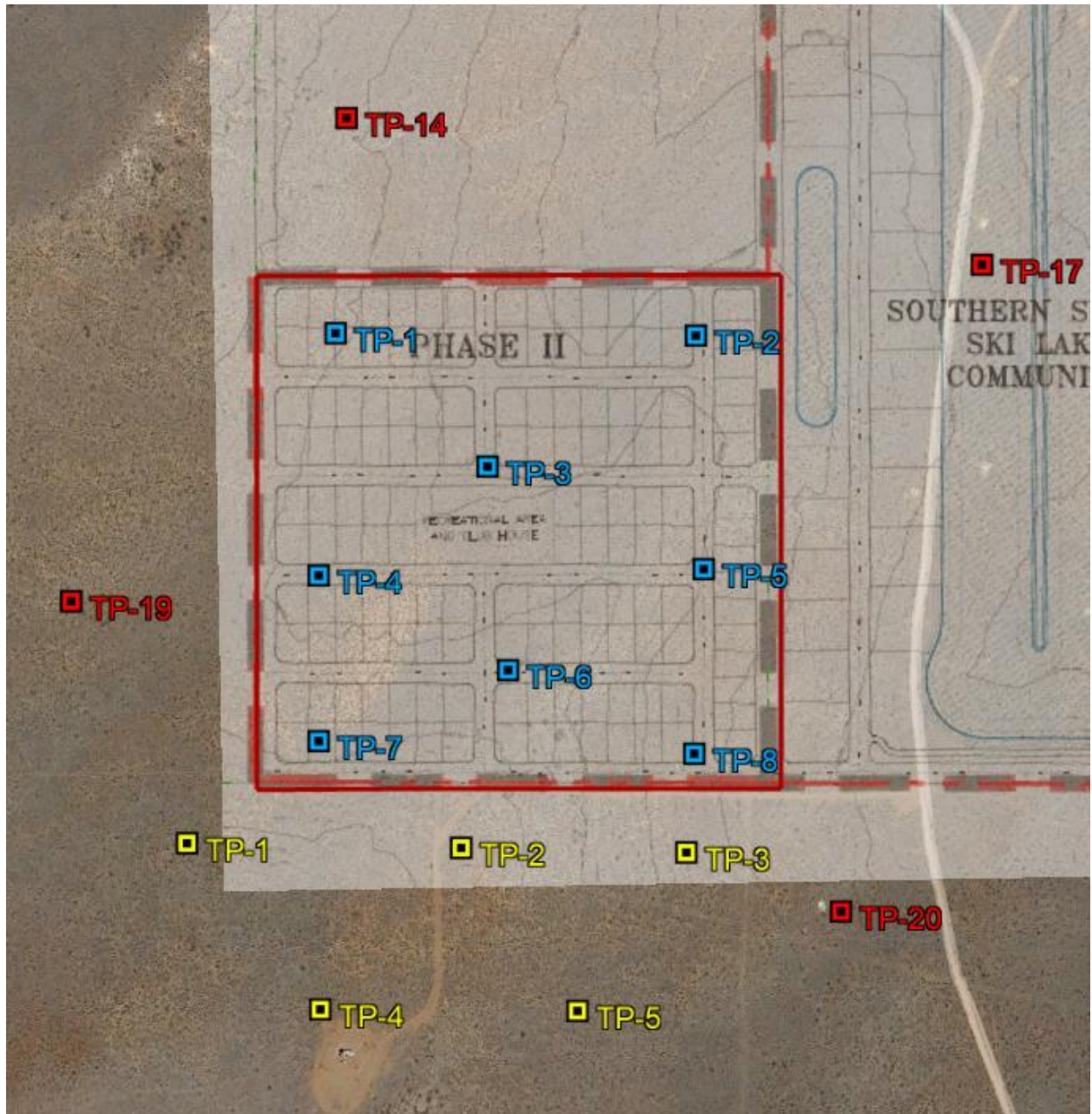
Sincerely,

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.

G. Wayne Rogers, P.E.



P:\2022 PROJECT FILES\2220900\2220977 - GT CORDERO SUBDIVISION (40 ACRES)\GEOTECHNICAL CONSULTATION LETTER.DOCX



Yellow TP- indicates test pits from 100 Acre Study
 Red TP- indicates test pits from Romney Study
 Blue = test pits this study



Hurricane City Power

Clifton Wilson Substation

Circuit CW-101 Analysis

Report

October 2021



**Intermountain Consumer
Professional Engineers, Inc.**
1145 East South Union Avenue
Midvale, Utah 84047
(801) 255-1111

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INTRODUCTION

As requested by Hurricane City Power, Intermountain Consumer Professional Engineers (“ICPE”) performed a study on Clifton Wilson substation circuit CW-101 to determine electrical conditions during peak loading and to evaluate loading capacity.

As a part of the study ICPE’s Scope included:

System Modelling

1. Develop circuit line impedance for circuit modeling.
2. Develop a circuit model for computer simulation on SKM software.
3. Develop load distribution across circuit CW-101 for circuit modeling.
4. Develop an expanded circuit model with proposed system additions.

Study & Report

1. Perform circuit load flow studies under existing conditions and historic peak loading.
2. Determine maximum 3 phase loading as to not cause greater than industry standard voltage drop and in accordance with IEEE C84.1 Range-A.
3. Develop study report on study finding.

This Report consists of the Introduction section, Summary section, Services Standard section, Study Finding section and Appendix.

General findings of the Study are presented in the Summary Section of this Report.

The Level of Service Standard Section covers voltage criteria as set forth in the IEEE C84.1 Standard and which represents Standard Utility Practice.

The Study Finding section contains a Circuit Description section, Substation Capacity section, Circuit CW-101 Loading Section and a Load Flow Analysis Section.. Sections generally contain supporting data for conclusions.

SUMMARY

This study considers the existing electrical system condition and impact of electrical load addition to Clifton Wilson Circuit CW101. Circuit CW 101 generally extends southward from Clifton Wilson 7.1 circuit miles. New development contemplated extension of CW101 and additional 4.5 miles southward.

Level of Service

IEEE Standard C84.1 requires that minimum service entrance voltage during normal operation do not fall below 95% of base voltage and that utilization voltage should not fall below 90% of base voltage. Service Entrance voltage is measured at the point of delivery; Utilization voltage is measured at the terminals of the utilization equipment. To meet the Standard, a value of 97% - 98% per unit distribution voltage, at the high side of distribution transformers is considered necessary and adopted for the study.

Substation Capacity

In assessing and planning electrical systems loading levels of all system equipment should be evaluated. Typically, transformers, voltage regulation, circuit breakers, reclosers, power lines, and system protection are considered.

Evaluation of substation are performed to determine existing loading conditions, ability for future load addition, ability to backup adjacent substation, and to determine the need for new substations.

From review, it was determined that the existing Clifton Wilson substation serving circuit CW-101 is a heavily loaded substation but could provide some additional load to CW-101 assuming completion of the Sky Mountain substation and some load transfer from Clifton Wilson to Sky Mountain Substations.

Voltage Regulation

Clifton Wilson substation is equipped with voltage regulator banks that regulate voltage to distribution circuits. The Clifton Wilson regulators are set for 122.5 V output (secondary) with a 3 volt bandwidth (voltage range from 121 to 124V).

Circuit Loading

Clifton Wilson circuit CW-101 was determined to have peak loading at 3.8 MW (4.1 MVA) with 1.7 MVA of the 4.1 MVA flowing through the Bench Lake regulators

Circuit CW-101 is equipped with a three phase inline regulator bank (Bench Lake regulators) and are rated 114.3/128.0 kVA (150/168) amp thru current. Regulator output is set for 122 V (secondary) with a 2 volt band width.

Load Flow Analysis

Circuit CW-101 was studied using real time regulator load data and through computer modeling using SKM software. Study shows that the existing circuit does not have overloading conditions but is voltage limited. It was determined that:

1. Areas of the existing circuit does experience voltage drop below Level of Service criteria under peak loading.
2. Addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels.

Potential short term solutions for some load addition would be:

1. Optimize voltage regulator bank position.
2. Add another in line regulator bank.
3. Add capacitor banks to maintain a high power factor during peak loading.
4. If possible, move existing load to another circuit to allow new load.

Additional work is needed to determine potential loading with equipment addition and or load transfer; noting the limitations of the existing Bench Lake regulators (1.9 MVA margin) and line conductors.

SERVICE STANDARD

To provide reliable power delivery, and equitably to all its customers; utilities strives to operate the power system to obtain a uniform level of service throughout. Below is a typical utility Level of Service Standard.

Level of Service Standard

- The system must be able to adequately serve load under single contingency (N-1) situations, where “N” is a power system element such as a transformer or non-radial line.
- System switching required under an N-1 contingency should remain as simplified as possible to ensure that switching orders are not unnecessarily complex.
- Distribution circuit loading must remain below 90% of its maximum current rating.
- Distribution circuit voltage must remain between 98% and 105% (at loads) of its nominal value; and
- Distribution circuit mains must be able to serve additional load under N-1 contingencies.
- System to Meet IEEE C84.1 Voltage limits.

In performing the study, criteria as set forth in the Level of Service Standard, was utilized. Of primary concern was meeting IEEE C84.1 normal voltage requirements as listed in Table 1. As seen the Standard requires that minimum service entrance voltage during normal operation do not fall below 95% of base voltage. Utilization voltage should not fall below 90% of base voltage. Service Entrance voltage is measured at the point of delivery; Utilization voltage is measured at the terminals of the utilization equipment. The difference between the minimum service and minimum utilization voltage is intended to allow for voltage drop in the customer’s wiring system. The difference between distribution circuit voltage and service entrance voltage is to allow for voltage drop across distribution transformers and secondary wire to the service entrance.

TABLE 1

Voltage Point of Measurement	Standard Voltages 120, 208, 240, 277, 480, 600, 660	Percent of Nominal
Service Entrance Voltage High Range - A	126, 218, 252, 291, 504, 630, 720	105.0%
Service Entrance Voltage Low Range - A	114, 197, 228, 263, 456, 570, 655	95%
Utilization High Voltage Range - A	126, 218, 252, 291, 504, 630, 720	105.0%
Utilization Low Voltage Range - A	108, 187, 249, 432, 540, 630	90%

Study Findings

Circuit Description

Clifton Wilson circuit CW-101 is a long three phase branched 12.47kV distribution circuits, approximately 7 miles long, that serves load through Clifton Wilson substation and extends from 600 North and southward to approximately 4500 south. The circuit is equipped with an inline 3-phase voltage regulator bank (Lake Bench regulator bank) located at approximately 2300 South and 1000 west (approx. 4.6 miles from Clifton Wilson substation). Proposed circuit addition would extend the circuit another 4.8 mile beyond the southern end of the circuit.

Existing circuit conductors and associated nominal published thermal rating is indicated in Table 2.

**Table 2
Circuit Conductor**

Line Section	Length (Miles)	Conductor	Thermal Rating (amp) ¹	MVA Rating at Nominal Amp and 100% Voltage
Clifton Wilson Sub to 1500 So 700W	3.6	336 ACSR	514	11.1
1500 South to 1750 South	0.27	750 MCM AL URD	497	10.7
1750 South to approx. 2070 So	0.44	4/0 AL URD	248	5.35
2070 So to Bench Lake Regulators	0.27	1/0 ACSR	242	5.22
Bench Lake Regulators to 3000 South	1.28	1/0 ACSR	242	5.22
3000 So 1100W to approx. 3300 So. 1100 West	0.77	336 ACSR	514	11.1
Approx. 3300 So. 1100 West to Circuit End	0.59	750 MCM AL URD	497	10.7
(tap) 3000 So 1100W to approx. 3100 So. 2100 West (circuit end)	1.45	336 ACSR	514	11.1
3100 So. 2100 West to 3300 So 2100 West (circuit end)	0.26	#2 ACSR	180	3.9
New Circuit Extension 3300 So. 2100 West (circuit end) to pump station	4.8	336 ACSR	514	11.1

1. Thermal ratings are at nominal publish values. De-rate value may apply for high ambient temperatures.

From a thermal prospective conductor ratings are adequate for some load addition; however, as discussed below, the circuit is voltage limited. Without voltage limitation, the circuit is next limited by Bench Lake regulator Bank size, 1/0 ACSR and #2 ACSR ratings.

Substation Capacity

In assessing and planning electrical systems loading levels all system equipment are evaluated. Typically; transformers, regulators, circuit breakers, reclosers, power lines, and system protection are evaluated. Evaluation of substations are performed to determine existing loading conditions, ability for future load addition, ability to backup adjacent substations, and to determine the need for new substations.

The Clifton Wilson substation has two power transformer bays and several distribution circuits. Both power transformer are rated 12/16/22 MVA with 667//994 FA (1303 A) kva regulators. During normal operation power transformers are not paralleled. For summer 2021 load behind the Clifton Wilson substation was 28.6 MW, with 7.2 MW provided by local generation. With consideration for an N-1 contingency (loss of one power transformer) transformer capacity at Clifton Wilson substation is questionable for allowing additional loading. However, with the addition of the Sky Mountain Substation transformer, loading at Clifton Wilson substation can be reduced by load

transfers to Sky Mountain substation. Load transfer to Sky Mountain would allow for other loads to be added to Clifton Wilson transformers. Generally transformer capacity is not an initial limiting factor for load addition in the range of two to three megawatt to CW-101.

Circuit CW-101 Loading

To perform circuit analysis circuit peak loading information is necessary. Circuit peak loading data was provided by Hurricane City Power personnel and included indication of circuit maximum load level at the substation circuit recloser and load through the Bench Lake regulator bank. Overall circuit peak loading was indicated to be 3.8 MW during summer 2021 peak load period. Approximately 1.7 MW of the 3.8 MW circuit load flowed through the Bench Lake Regulators.

Table 3 contains overall circuit loading data as provide and used in the circuit analysis.

**Table 3
Circuit Load Data**

CW-101 Loading -- 7/09/2021					
Circuit	Max MW	Assumed load power factor	MVA	Circuit Capacitors	MVA
CW-101	3.8 MW	0.92	4.13	2- 150 KVAR Banks	4.02

Table 4 contains select data that was provided by Hurricane City Power personnel and as obtained from the Lake Bench regulator bank controller. Additional regulator load data is provided in the appendix for review.

**Table 4
Lake Bench Regulator Data**

Regulator Max Data - Report				
Regulator	Max Amp (Inst.)	Max Load (kW) (Inst)	Time	Tap Position
A - Phase	102.8	739	7-9-21 18:38	---
B - Phase	95.0	682	7-9-21 18:43	---
C- Phase	93.9	677	7-9-21 16:30	---
Regulator 15 Minute Max Reading				
Regulator	Max Amp	Max Load (kW)	Time	
A - Phase	68.7	499	7-9-21 18:15	7 ⁽¹⁾
B - Phase	92.1	666	7-9-21 16:30	13
C- Phase	84.5	611	7-9-21 16:30	9 ⁽¹⁾
A - Phase	70.0	508	9-7-21 15:30	10
B - Phase	----	----	----	----
C- Phase	----	----	----	----

1. Tap to position 10 at 14:00 to 15:00 hr

From regulator data it can be concluded that the circuit is near or below the lower distribution voltage limits (0.97-0.98) north of the regulator bank during heavy loading periods. The regulators allow for a +/- 10 % regulation over 32 steps

with maximum regulation at +/- step 16, each step correlates to a 0.625% voltage change. B phase regulator is shown to have move to position +13 under high loading. A phase and C phase regulator data shows the regulators tapped to position 10 at 14:30 hr. Bench Lake regulator setting were indicated to be at 122 volts with a 2 volt bandwidth (121 to 123 range); for a tap position of +13 with load voltage at 122 V (represent 1.67% above nominal) source voltage would be at 93.5% of nominal; for a tap position of +10 source voltage would be at 95.5% of nominal. Regulator data indicates that the circuit has some imbalance during peak; however, noting that exact balancing is generally not possible.

Bench Lake regulator are rated 114.3/128.0 kVA (150/168 amp thru current); Assuming balanced loading, maximum through load at 168 amps is 3.6 MVA, the bank is currently load at 1.7 MVA. Assuming balanced loading, maximum additional loading through the regulators is 1.9 MVA.

Load Flow Analysis

To determine circuit electrical conditions during peak loading and to evaluate the circuits ability for additional loading circuit impedances were determined and a circuit model was developed on SKM Software for computer simulations.

The circuit was studied for:

1. Voltage drop under peak loading.
2. Line loading under peak loading.
3. Equipment loading under peak loading.
4. Effect of power factor improvements.
5. Additional loading capabilities.

Table 5 contains results of select load flows under varying conditions, additional load flow results are in the Appendix. .

**Table 5
Load Flow Results**

Location Voltage (per unit)												
C a s e	Case Description	Case Load	Clifton Low Side 12.47 kV	Bus - 004 (1300 So.)	Bus - 009 (2050 So.)	Bus - 011 (Bench Lake Reg.)	Bus - 012 (Bench Lake Reg.)	Bus -014 (3000 So.)	Bus - 017 3300 So 2100W	Bus - 020 (approx 3800 So.)	Bus -022 (RMP Tap end)	Bus -033 (Pump Sta..)
1	2021 Loading w/100 Amps thru Bench Lake Regs.	CW101 Recloser: 4.11 MVA (3.8MW) Bench Lake Reg: 2.127 MVA	1.007	0.964	0.958	0.95	1.01	1.0	1.0	1.0	0.99	N/A
2	2021 Loading w/70 Amps thru Bench Lake Reg.	CW101 Recloser: 4.135 MVA (3.8MW) Bench Lake Reg: 1.5 MVA	1.008	0.976	0.97	0.964	1.017	1.004	1.0	1.004	0.996	N/A
3	2021 Loading w/100 Amps thru Bench Lake Reg. and 700 kvar capacitor add.	CW101 Recloser: 3.872 MVA (3.8MW) Bench Lake Reg: 2.08 MVA	1.008	0.976	0.97	0.964	1.01	1.0	1.0	1.0	0.99	N/A
4	2021 Loading w/load (550KW) addition over 100 Amps thru Bench Lake Reg.	CW101 Recloser: 4.7 MVA Bench Lake Reg: 2.6 MVA	1.008	0.96	0.954	0.947	1.016	1.0	0.99	1.0	0.99	0.99

To meet “Service Entrance Voltage Low Range – A” requirements , as covered in the Service Standard section, a minimum of 0.97 pu voltage (preferable 0.98) is necessary to allow for voltage drop across distribution transformers and secondary cabling to the service entrance.

Case 1 represents the existing system with 2021 loading and load distributed to have 98 amps of overall circuit load following through the Bench Lake regulators. The study was performed with an overall circuit loading of 4.1 MVA (Summer 2021 loading) and with 2.1 MVA (98 amps) of the 4.1MVA through the Lake Bench regulators. For all cases voltage at Clifton Wilson substation was held at 1.008 p.u. (121V), noting that the regulator set point is 122.5V with a 3 volt band width (121 -124 volt range).

Study results indicate that there are no overload conditions; however, the study indicates that the circuit is voltage limited. Voltage from 1300 South to the Bench Lake regulator bank is below 0.97 p.u. Results correlated to regulator data.

Case 2 represents the existing system with 2021 loading. The study was performed with an overall circuit loading of 4.1 MVA (Summer 2021 loading) and with loads redistributed for 1.5 MVA (70 amps) of the 4.1MVA to flow through the Lake Bench regulators. Results indicate that there are no overload conditions; however, the study indicates that circuit remains voltage limited with the reduced flow through the regulators. Voltage from 1300 South to the Bench Lake regulator bank is at or below 0.97 p.u.

Case 3 is equivalent to Case 1 and includes the addition of 700 kvar capacitance for power factor correction to 0.98. Through the addition of capacitors some marginal voltage improvements is obtained but voltage is still near 0.97p.u. and under 0.98pu.

Case 4 is equivalent to Case 1 with the addition of approximately 4.5 miles of 336 ACSR circuit to the end of the existing circuit and the addition of 550 kW past the Bench Lake regulators. Results show that there is no over loading but voltage drops are increased.

Computer studies and real time voltage regulator data show that the circuit is voltage limited with voltage at or below criteria of 0.97-0.98 per unit at the distribution voltage. With consideration for normal load growth along the length of the existing circuit large load addition is not recommended.

Potential short term solutions for some load addition would be:

5. Optimize voltage regulator bank position.
6. Add another in line regulator bank.
7. Add capacitor banks to maintain a high power factor during peak loading.
8. If possible, move some existing load to another circuit to allow new load to CW-101.

Additional work is needed to determine potential loading with equipment addition and or load transfer; it is noted that with voltage limitation reduced other limitation will arise. Specifically, the existing Bench Lake regulator (1.9 MVA margin) and 1/0 and #2 ACSR line conductors. The optimum solution is a new substation in the vicinity of major load growth.

APPENDIX

APPENDIX

System Load Flow Summary
Bench Lake Regulator Data
System Model – SKM
Model Input Data
Model impedance Data

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results												
Case Description	Power Flow	Regulator (600 North)	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
2021 Load	Recloser: 4.111 MVA, 1.543 MVAR, 3.812 MW Bench Lake Reg: 2.127 MVA, .693 MVAR, 2.013 MW	Voltage: 12,551 V (1.007pu) Voltage Drop: -0.7%	Voltage: 12,027 V (0.964pu) Voltage Drop: 3.6%	Voltage: 11,952 V (0.958pu) Voltage Drop: 4.2%	Voltage: 11,867 V (0.952pu) Voltage Drop: 4.8%	Voltage: 12,669 V (1.016pu) Voltage Drop: -1.6%	Voltage: 12,502 V (1.003pu) Voltage Drop: -0.3%	Voltage: 12,460 V (0.999pu) Voltage Drop: 0.1%	Voltage: 12,494 V (1.002pu) Voltage Drop: -0.2%	Voltage: 12,492 V (1.002) Voltage Drop: -0.2%	Voltage: 12,395 V (0.994pu) Voltage Drop: 0.6%	N/A
Flat Build with 250 kVA Load + 350 hp	Recloser: 4.723 MVA, 1.777 MVAR, 4.377 MW Bench Lake Reg: 2.645 MVA, .798 MVAR, 2.522 MW	Voltage: 12,544 V Voltage Drop: -0.6%	Voltage: 11,936 V Voltage Drop: 4.3%	Voltage: 11,847 V Voltage Drop: 5.0%	Voltage: 11,740 V Voltage Drop: 5.9%	Voltage: 12,687 V Voltage Drop: -1.7%	Voltage: 12,476 V Voltage Drop: -0.1%	Voltage: 12,365 V Voltage Drop: 0.8%	Voltage: 12,468 V Voltage Drop: 0.0%	Voltage: 12,466V Voltage Drop: 0.0%	Voltage: 12,369 V Voltage Drop: 0.8%	Voltage: 12,327 V Voltage Drop: 1.2%
Flat Build with 500 kVA Load + 350 hp	Recloser: 5.046 MVA, 1.959 MVAR, 4.651 MW Bench Lake Reg: 2.910 MVA, .906 MVAR, 2.765 MW	Voltage: 12,587 V Voltage Drop: -0.9%	Voltage: 11,930 V Voltage Drop: 4.3%	Voltage: 11,833 V Voltage Drop: 5.1%	Voltage: 11,714 V Voltage Drop: 6.1%	Voltage: 12,678 V Voltage Drop: -1.7%	Voltage: 12,442 V Voltage Drop: 0.2%	Voltage: 12,294 V Voltage Drop: 1.4%	Voltage: 12,434 V Voltage Drop: 0.3%	Voltage: 12,432 V Voltage Drop: 0.3%	Voltage: 12,335 V Voltage Drop: 1.1%	Voltage: 12,249 V Voltage Drop: 1.8%
Flat Build with 1000 kVA load + 350 hp	Recloser: 5.735 MVA, 2.370 MVAR, 5.223 MW Bench Lake Reg: 3.450 MVA, 1.13 MVAR, 3.26 MW	Voltage: 12,581 V Voltage Drop: -0.9%	Voltage: 11,809 V Voltage Drop: 5.3%	Voltage: 11,695 V Voltage Drop: 6.2%	Voltage: 11,550 V Voltage Drop: 7.4%	Voltage: 12,636 V Voltage Drop: -1.3%	Voltage: 12,349 V Voltage Drop: 1.0%	Voltage: 12,125 V Voltage Drop: 2.8%	Voltage: 12,341 V Voltage Drop: 1.0%	Voltage: 12,338 V Voltage Drop: 1.1%	Voltage: 12,241 V Voltage Drop: 1.8%	Voltage: 12,066 V Voltage Drop: 3.2%
2021 Load w/ added capacitors	Recloser: 3.872 MVA, .761 MVAR, 3.797 MW Bench Lake Reg: 2.084 MVA, .545 MVAR, 2.011 MW Capacitors: 1.038 MVAR	Voltage: 12,566 V Voltage Drop: -0.8%	Voltage: 12,170 V Voltage Drop: 2.4%	Voltage: 12,100 V Voltage Drop: 3.0%	Voltage: 12,019 V Voltage Drop: 3.6%	Voltage: 12,680 V Voltage Drop: -1.7%	Voltage: 12,522 V Voltage Drop: -0.4%	Voltage: 12,479 V Voltage Drop: -0.1%	Voltage: 12,516 V Voltage Drop: -0.4%	Voltage: 12,517 V Voltage Drop: -0.4%	Voltage: 12,417 V Voltage Drop: 0.4%	N/A
70A at Bench Lake Reg												
2021 Load w/ 70A at Bench Lake Reg	Recloser: 4.045 MVA, 1.46 MVAR, 3.772 MW Bench Lake Reg: 1.47 MVA, .456 MVAR, 1.397 MW	Voltage: 12,557 V (1.007pu) Voltage Drop: -0.7%	Voltage: 12,064 V (0.967pu) Voltage Drop: 3.25%	Voltage: 12,002 V (0.9625pu) Voltage Drop: 3.75%	Voltage: 11,944 V (0.958pu) Voltage Drop: 4.21%	Voltage: 12,670 V (1.016pu) Voltage Drop: -1.6%	Voltage: 12,558 V (1.007pu) Voltage Drop: -0.71%	Voltage: 12,529 V (1.004pu) Voltage Drop: -0.48%	Voltage: 12,553 V (1.006pu) Voltage Drop: -0.67%	Voltage: 12,553 V (1.006pu) Voltage Drop: -0.67%	Voltage: 12,485 V (1.001) Voltage Drop: -0.13%	N/A
2021 Load 250 kVA Load + 350 hp	Recloser: 4.733 MVA, 1.738 MVAR, 4.404 MW Bench Lake Reg: 2.229 MVA, .630 MVAR, 2.137 MW	Voltage: 12,575 V Voltage Drop: -0.8%	Voltage: 11,983 V Voltage Drop: 3.9%	Voltage: 11,902 V Voltage Drop: 4.6%	Voltage: 11,813 V Voltage Drop: 5.3%	Voltage: 12,675 V Voltage Drop: -1.6%	Voltage: 12,498 V Voltage Drop: -0.2%	Voltage: 12,395 V Voltage Drop: 0.6%	Voltage: 12,491 V Voltage Drop: -0.2%	Voltage: 12,490V Voltage Drop: -0.2%	Voltage: 12,411 V Voltage Drop: 0.5%	Voltage: 12,356 V Voltage Drop: 0.9%
2021 Load 500 kVA Load + 350 hp	Recloser: 5.051 MVA, 1.915 MVAR, 4.674 MW Bench Lake Reg: 2.490 MVA, .737 MVAR, 2.379 MW	Voltage: 12,578V Voltage Drop: -0.9%	Voltage: 11,935 V Voltage Drop: 4.3%	Voltage: 11,846 V Voltage Drop: 5.0%	Voltage: 11,745 V Voltage Drop: 5.8%	Voltage: 12,680 V Voltage Drop: -1.7%	Voltage: 12,478 V Voltage Drop: -0.1%	Voltage: 12,339 V Voltage Drop: 1.1%	Voltage: 12,472 V Voltage Drop: -0.0%	Voltage: 12,470V Voltage Drop: -0.0%	Voltage: 12,391 V Voltage Drop: 0.6%	Voltage: 12,294 V Voltage Drop: 1.4%
2021 Load 1000 kVA Load + 350 hp	Recloser: 5.720 MVA, 2.303 MVAR, 5.236 MW Bench Lake Reg: 3.024 MVA, .957 MVAR, 2.869 MW	Voltage: 12,571V Voltage Drop: -0.8%	Voltage: 11,819 V Voltage Drop: 5.2%	Voltage: 11,713 V Voltage Drop: 6.1%	Voltage: 11,588 V Voltage Drop: 7.1%	Voltage: 12,675 V Voltage Drop: -1.6%	Voltage: 12,424 V Voltage Drop: 0.4%	Voltage: 12,209 V Voltage Drop: 2.1%	Voltage: 12,417 V Voltage Drop: 0.4%	Voltage: 12,415V Voltage Drop: 0.4%	Voltage: 12,336 V Voltage Drop: 1.1%	Voltage: 12,150 V Voltage Drop: 2.6%

Min/Max Metering Values

SEL-2431
Voltage Reg

A-Phase

Date: 09/14/2021 Time: 10:58:08

Forward

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	102.8	07/09/2021	18:38:24	5.7	03/25/2021	22:11:35
VS (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VS (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
VL (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VL (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
VCMP (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VCMP (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
P (kW)	739	07/09/2021	18:38:24	40	03/25/2021	22:11:35
Q (kVAr)	212	07/07/2017	12:55:57	-92	02/11/2020	13:58:27
S (kVA)	749	07/09/2021	18:38:24	41	03/25/2021	22:11:35
PF @ S Max/Min	0.99	07/09/2021	18:38:24	0.96	03/25/2021	22:11:35
Freq (Hz)	60.12	09/18/2018	09:52:34	59.71	06/16/2017	04:15:54
Tap Pos	+16	02/20/2017	11:42:24	-16	02/20/2017	11:48:16

Reverse

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
VS (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VS (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VL (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VL (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VCMP (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VCMP (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
P (kW)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
Q (kVAr)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
S (kVA)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
PF @ S Max/Min	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
Freq (Hz)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
Tap Pos	\$\$\$	(Reset)		\$\$\$	(Reset)	

Last MaxMin Reset 02/14/2017 19:55:55

Demand/Peak

SEL-2431

B Phase

Date: 09/14/2021

Time: 10:55:40

Voltage Reg

Line Current (IL)

	DEMAND (A pri)	PEAK (A pri)	DATE	TIME
Forward	49	95	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:51

Real Power (P)

	DEMAND (kW)	PEAK (kW)	DATE	TIME
Forward	353	682	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:50

Reactive Power (Q)

	DEMAND (kVar)	PEAK (kVar)	DATE	TIME
Forward OUT	58	126	07/30/2020	14:12:27
Forward IN	0	85	04/10/2020	23:40:33
Reverse OUT	0	0	(Reset)	
Reverse IN	0	0	03/15/2017	12:33:51

Apparent Power (S)

	DEMAND (kVA)	PEAK (kVA)	DATE	TIME
Forward	357	691	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:51

Last Demand Reset 07/07/2021 17:23:17

Last Peak Reset 02/14/2017 19:55:55

Snipping Tool

New Mode

Select the snip mode using the button.

Snipping Tool

In a future update, home. Try improve & Sketch (or try the Windows logo key)

Try Snip & Sketch

Min/Max Metering Values

SEL-2431
Voltage Reg

C Phase

Date: 09/20/2021 Time: 12:58:53

Forward

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	93.9	07/09/2021	16:30:55	0.8	05/20/2019	11:37:00
VS (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VS (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
VL (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VL (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
VCMP (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VCMP (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
P (kW)	677	07/09/2021	16:30:55	-8	03/09/2020	11:44:34
Q (kVAr)	205	02/07/2019	09:21:23	-95	10/07/2020	01:35:10
S (kVA)	683	07/09/2021	16:30:55	5	05/20/2019	11:37:00
PF @ S Max/Min	0.99	07/09/2021	16:30:55	0.93	05/20/2019	11:37:00
Freq (Hz)	60.12	09/18/2018	09:42:58	59.71	06/16/2017	04:15:37
Tap Pos	+15	07/07/2021	17:30:28	-07	11/16/2018	10:08:06

Reverse

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	2.9	03/17/2020	13:52:53	2.3	03/26/2020	12:44:45
VS (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VS (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
VL (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VL (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
VCMP (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VCMP (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
P (kW)	8	03/17/2020	13:52:53	-6	03/17/2020	13:52:09
Q (kVAr)	-17	03/26/2020	12:44:46	-20	03/17/2020	13:51:21
S (kVA)	21	03/17/2020	13:52:53	17	03/26/2020	12:44:46
PF @ S Max/Min	0.42	03/17/2020	13:52:53	-0.05	03/26/2020	12:44:46
Freq (Hz)	60.04	03/17/2020	13:51:23	59.99	03/26/2020	12:46:10
Tap Pos	-02	03/26/2020	12:44:14	-03	03/17/2020	13:50:55

Last MaxMin Reset 02/14/2017 18:46:47

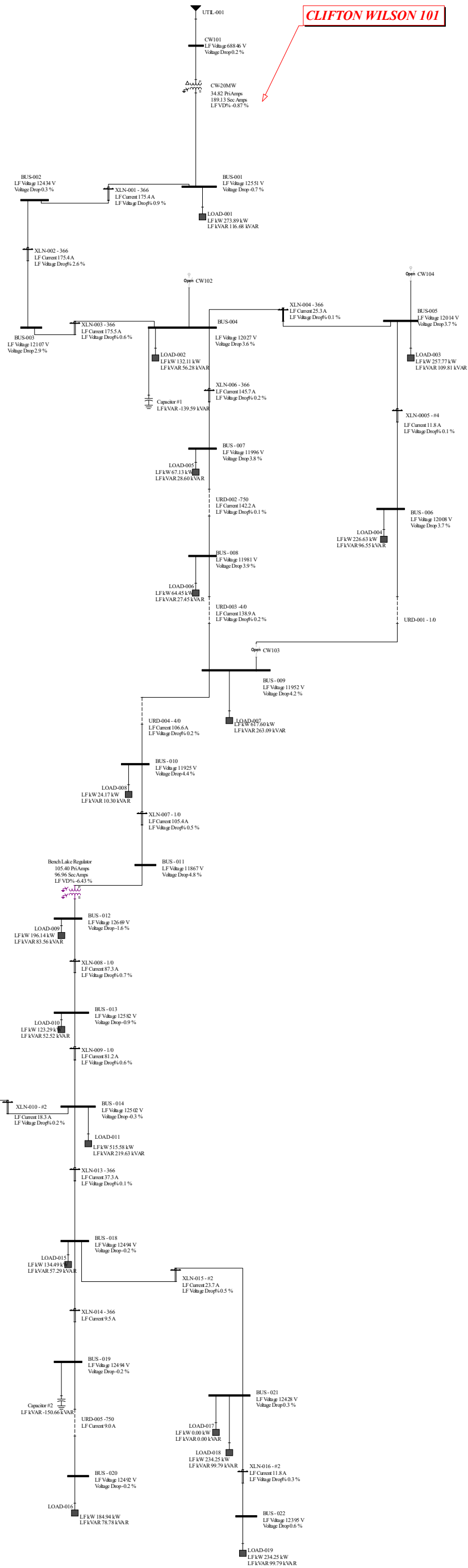
BenchLake VoltageReg A

#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7698	7/9/2021	23:45:01	42.85	122.225	122.235	122.235	2	41.62	304.981	12.165	0	305.255	0	0	0	0	0
7699	7/9/2021	23:30:01	42.5	122.255	122.265	122.265	2	41.707	305.811	11.815	0	306.072	0	0	0	0	0
7700	7/9/2021	23:15:00	41.25	122.61	122.625	122.625	3	43.497	319.275	17.316	0	319.766	0	0	0	0	0
7701	7/9/2021	23:00:00	44.25	122.77	122.785	122.785	3	45.388	333.435	15.89	0	333.834	0	0	0	0	0
7702	7/9/2021	22:45:00	44.55	122.59	122.6	122.6	3	46.764	342.847	20.861	0	343.495	0	0	0	0	0
7703	7/9/2021	22:30:00	45.65	122.295	122.305	122.305	3	46.288	338.962	20.379	0	339.587	0	0	0	0	0
7704	7/9/2021	22:15:01	47.3	122.42	122.435	122.435	3	47.446	347.99	21.345	0	348.691	0	0	0	0	0
7705	7/9/2021	22:00:01	47.7	122.33	122.345	122.345	4	51.315	374.444	24.296	0	375.247	0	0	0	0	0
7706	7/9/2021	21:45:01	51	122.035	122.05	122.05	4	52.793	385.514	26.362	0	386.429	0	0	0	0	0
7707	7/9/2021	21:30:00	49.95	122.245	122.255	122.255	4	52.308	383.185	31.125	0	384.462	0	0	0	0	0
7708	7/9/2021	21:15:01	51.25	121.74	121.75	121.75	5	51.381	374.692	26.424	0	375.656	0	0	0	0	0
7709	7/9/2021	21:00:00	55.35	121.94	121.95	121.95	4	54.655	398.267	36.084	0	399.907	0	0	0	0	0
7710	7/9/2021	20:45:01	53.65	122	122.015	122.015	4	55.166	400.687	36.84	0	402.393	0	0	0	0	0
7711	7/9/2021	20:30:01	56.75	121.43	121.435	121.435	4	58.317	426.218	37.191	0	427.853	0	0	0	0	0
7712	7/9/2021	20:15:01	57.55	122.175	122.19	122.19	5	58.246	425.034	34.874	0	426.498	0	0	0	0	0
7713	7/9/2021	20:00:01	54.45	122.25	122.26	122.26	5	57.431	418.045	38.481	0	419.831	0	0	0	0	0
7714	7/9/2021	19:45:00	56.35	122.4	122.415	122.415	5	57.837	423.124	30.756	0	424.255	0	0	0	0	0
7715	7/9/2021	19:30:00	57.95	122.205	122.215	122.215	5	59.767	435.646	35.251	0	437.087	0	0	0	0	0
7716	7/9/2021	19:15:00	58.95	122.22	122.235	122.235	5	60.252	440.462	37.614	0	442.103	0	0	0	0	0
7717	7/9/2021	19:00:01	62.05	122.51	122.515	122.515	6	62.898	459.502	44.922	0	461.714	0	0	0	0	0
7718	7/9/2021	18:45:01	65.1	121.8	121.81	121.81	6	63.91	465.648	55.094	0	468.909	0	0	0	0	0
7719	7/9/2021	18:30:01	69.35	121.865	121.875	121.875	6	67.674	493.475	60.032	0	497.125	0	0	0	0	0
7720	7/9/2021	18:15:01	67.35	122.07	122.08	122.08	7	68.726	499.865	60.452	0	503.528	0	0	0	0	0
7721	7/9/2021	18:00:00	67.6	122.01	122.025	122.025	7	65.778	480.141	49.162	0	482.685	0	0	0	0	0
7722	7/9/2021	17:45:00	63	122.88	122.885	122.885	7	61.681	451.21	40.697	0	453.054	0	0	0	0	0
7723	7/9/2021	17:30:00	63.25	122.885	122.895	122.895	8	64.412	471.369	44.064	0	473.453	0	0	0	0	0
7724	7/9/2021	17:15:00	63.9	121.795	121.81	121.81	8	63.973	466.163	39.828	0	467.887	0	0	0	0	0
7725	7/9/2021	17:00:00	61.2	122.585	122.595	122.595	9	62.759	459.415	38.827	0	461.064	0	0	0	0	0
7726	7/9/2021	16:45:01	62.05	122.125	122.135	122.135	9	64.289	468.296	42.3	0	470.211	0	0	0	0	0
7727	7/9/2021	16:30:01	65.85	121.525	121.535	121.535	9	65.723	478.175	44.564	0	480.256	0	0	0	0	0
7728	7/9/2021	16:15:01	64.6	122.24	122.255	122.255	9	62.989	460.262	40.106	0	462.025	0	0	0	0	0
7729	7/9/2021	16:00:00	62.05	122.77	122.78	122.78	10	64.149	468.181	42.989	0	470.177	0	0	0	0	0
7730	7/9/2021	15:45:01	65.05	121.735	121.745	121.745	9	62.577	455.07	42.648	0	457.075	0	0	0	0	0
7731	7/9/2021	15:30:01	64.35	121.485	121.5	121.5	9	63.721	463.309	42.081	0	465.229	0	0	0	0	0
7732	7/9/2021	15:15:01	62.8	122.545	122.555	122.555	10	61.991	453.815	38.204	0	455.428	0	0	0	0	0
7733	7/9/2021	15:00:00	59.25	122.465	122.475	122.475	10	61.818	451.679	41.527	0	453.591	0	0	0	0	0
7734	7/9/2021	14:45:00	61.25	122.21	122.22	122.22	10	60.642	443.076	43.738	0	445.243	0	0	0	0	0
7735	7/9/2021	14:30:01	60	122.425	122.43	122.43	10	59.798	436.841	42.002	0	438.861	0	0	0	0	0
7736	7/9/2021	14:15:01	61.2	122.885	122.9	122.9	10	59.257	432.559	40.007	0	434.409	0	0	0	0	0
7737	7/9/2021	14:00:01	59.6	121.09	121.1	121.1	9	56.451	409.574	35.74	0	411.142	0	0	0	0	0
7738	7/9/2021	13:45:00	59.15	121.64	121.65	121.65	9	58.938	427.895	43.956	0	430.161	0	0	0	0	0
7739	7/9/2021	13:30:00	58.4	122.045	122.06	122.06	9	57.375	418.16	41.321	0	420.214	0	0	0	0	0
7740	7/9/2021	13:15:01	57.05	121.055	121.06	121.06	9	56.927	413.7	37.848	0	415.451	0	0	0	0	0
7741	7/9/2021	13:00:00	54.05	121.805	121.815	121.815	9	55.205	402.069	36.192	0	403.728	0	0	0	0	0
7742	7/9/2021	12:45:00	56.6	122.115	122.135	122.135	9	55.975	407.425	39.779	0	409.611	0	0	0	0	0
7743	7/9/2021	12:30:01	53.55	122.24	122.25	122.25	9	55.352	398.194	77.594	0	405.699	0	0	0	0	0
7744	7/9/2021	12:15:01	56.9	121.55	121.56	121.56	9	54.575	392.426	76.152	0	399.764	0	0	0	0	0
7745	7/9/2021	12:00:01	59.35	121.625	121.635	121.635	9	58.876	421.215	84.668	0	429.663	0	0	0	0	0
7746	7/9/2021	11:45:00	54.15	122.195	122.205	122.205	9	58.007	415.814	80.254	0	423.52	0	0	0	0	0
7747	7/9/2021	11:30:00	57.3	121.93	121.94	121.94	8	56.712	407.312	77.086	0	414.597	0	0	0	0	0
7748	7/9/2021	11:15:00	53.2	121.83	121.845	121.845	8	53.835	387.229	72.478	0	393.975	0	0	0	0	0
7749	7/9/2021	11:00:00	56.25	121.51	121.52	121.52	8	55.434	396.304	77.515	0	403.89	0	0	0	0	0
7750	7/9/2021	10:45:00	56.05	121.07	121.085	121.085	7	52.997	380.447	66.635	0	386.25	0	0	0	0	0
7751	7/9/2021	10:30:01	52.55	121.6	121.615	121.615	7	51.982	373.008	66.761	0	378.95	0	0	0	0	0
7752	7/9/2021	10:15:01	51.45	121.825	121.84	121.84	7	53.105	380.71	71.184	0	387.328	0	0	0	0	0
7753	7/9/2021	10:00:00	48.4	121.79	121.8	121.8	7	52.73	377.202	73.317	0	384.293	0	0	0	0	0
7754	7/9/2021	9:45:01	52.2	121.06	121.075	121.075	5	50.763	363.689	69.285	0	370.291	0	0	0	0	0
7755	7/9/2021	9:30:01	52.25	121.8	121.81	121.81	5	50.205	362.448	67.878	0	368.763	0	0	0	0	0
7756	7/9/2021	9:15:01	49.05	122.435	122.455	122.455	6	50.029	360.775	63.715	0	366.371	0	0	0	0	0
7757	7/9/2021	9:00:00	48.75	121.675	121.69	121.69	6	48.904	350.889	62.971	0	356.515	0	0	0	0	0
7758	7/9/2021	8:45:00	50.9	121.655	121.67	121.67	6	48.796	351.697	62.077	0	357.147	0	0	0	0	0
7759	7/9/2021	8:30:01	46.05	122.07	122.085	122.085	6	46.001	331.534	62.304	0	337.354	0	0	0	0	0
7760	7/9/2021	8:15:00	47	122.415	122.425	122.425	7	48.168	346.538	62.899	0	352.223	0	0	0	0	0
7761	7/9/2021	8:00:00	47.75	121.17	121.18	121.18	5	46.666	335.742	57.225	0	340.594	0	0	0	0	0
7762	7/9/2021	7:45:00	45.75	121.84	121.85	121.85	5	47.386	340.322	59.627	0	345.532	0	0	0	0	0
7763	7/9/2021	7:30:00	43.95	121.745	121.755	121.755	5	43.107	310.641	54.221	0	315.356	0	0	0	0	0
7764	7/9/2021	7:15:01	45.6	121.94	121.95	121.95	5	42.651	308.525	51.029	0	312.753	0	0	0	0	0
7765	7/9/2021	7:00:00	42.45	122.03	122.045	122.045	5	40.691	293.319	44.553	0	296.713	0	0	0	0	0
7766	7/9/2021	6:45:01	42.8	121.43	121.44	121.44	4	40.712	293.052	48.345	0	297.035	0	0	0	0	0
7767	7/9/2021	6:30:00	37.95	121.98	121.99	121.99	4	37.052	268.515	39.782	0	271.491	0	0	0	0	0
7768	7/9/2021	6:15:00	34.9	122.17	122.18	122.18	4	36.502	263.596	37.844	0	266.351	0	0	0	0	0
7769	7/9/2021	6:0															

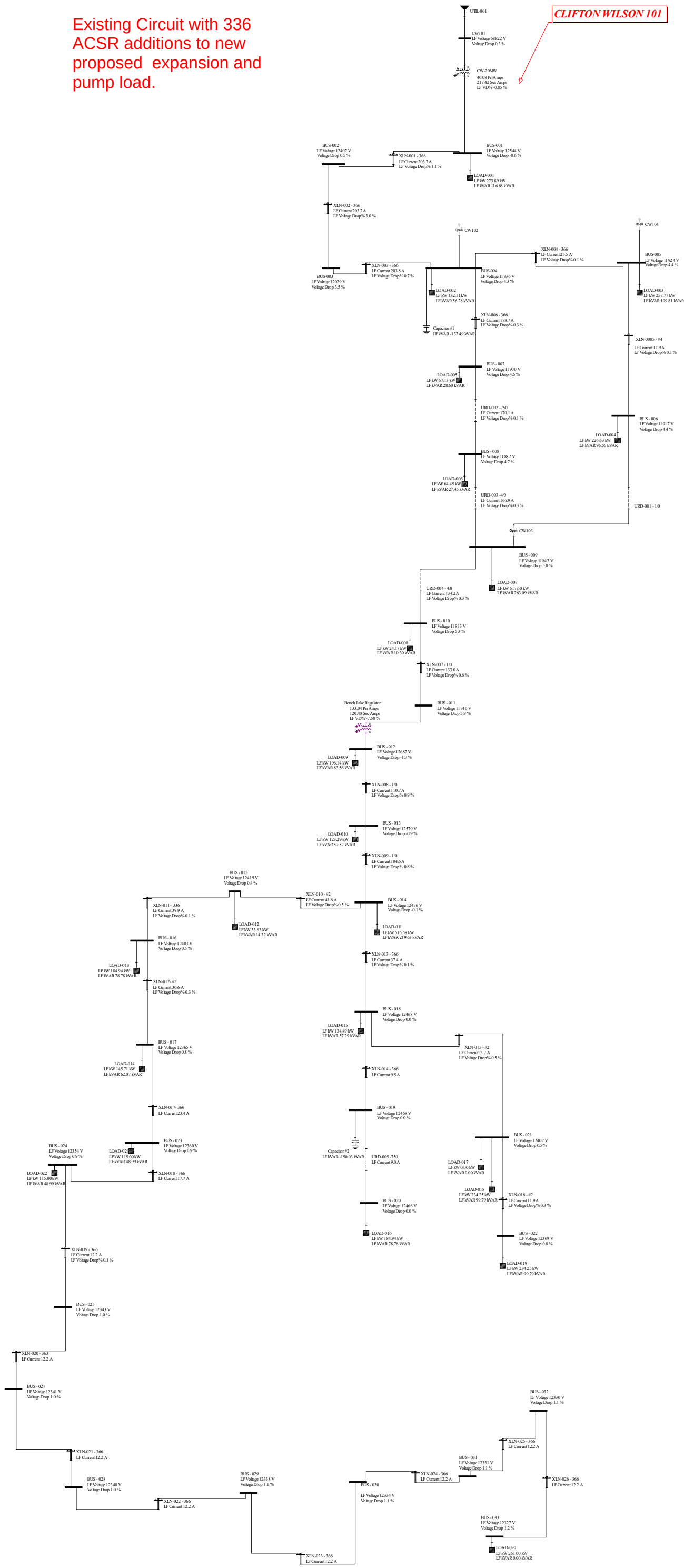
#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7699	7/9/2021	23:45:01	55.85	122.06	122.095	122.095	4	55.748	405.242	47.46	0	408.022	0	0	0	0	0
7700	7/9/2021	23:30:01	55.05	122.02	122.05	122.05	4	55.09	400.452	45.369	0	403.033	0	0	0	0	0
7701	7/9/2021	23:15:00	54.45	121.555	121.58	121.58	4	55.787	405.676	46.863	0	408.391	0	0	0	0	0
7702	7/9/2021	23:00:00	53.75	122.04	122.07	122.07	5	58.65	426.388	56.833	0	430.181	0	0	0	0	0
7703	7/9/2021	22:45:01	60.35	121.81	121.84	121.84	5	61.305	444.469	59.939	0	448.503	0	0	0	0	0
7704	7/9/2021	22:30:01	58.7	121.97	122	122	5	59.817	435.223	57.585	0	439.038	0	0	0	0	0
7705	7/9/2021	22:15:00	64.6	122.595	122.62	122.62	6	62.973	458.29	63.92	0	462.734	0	0	0	0	0
7706	7/9/2021	22:00:00	66.15	121.845	121.87	121.87	6	66.15	479.921	65.002	0	484.307	0	0	0	0	0
7707	7/9/2021	21:45:00	66.7	121.945	121.97	121.97	6	68.067	493.689	67.105	0	498.236	0	0	0	0	0
7708	7/9/2021	21:30:00	67	122.905	122.935	122.935	7	68.736	500.724	68.741	0	505.435	0	0	0	0	0
7709	7/9/2021	21:15:00	66.55	122.79	122.82	122.82	7	68.2	496.759	62.908	0	500.737	0	0	0	0	0
7710	7/9/2021	21:00:01	72.05	122.27	122.3	122.3	7	68.895	502.268	63.506	0	506.288	0	0	0	0	0
7711	7/9/2021	20:45:01	75.85	121.79	121.815	121.815	7	73.808	534.374	74.552	0	539.559	0	0	0	0	0
7712	7/9/2021	20:30:00	75.8	121.735	121.76	121.76	7	70.437	512.848	67.224	0	517.26	0	0	0	0	0
7713	7/9/2021	20:15:01	72.1	122.51	122.54	122.54	8	74.556	543.386	68.757	0	547.727	0	0	0	0	0
7714	7/9/2021	20:00:01	72.2	122.19	122.22	122.22	8	75.726	550.278	73.792	0	555.214	0	0	0	0	0
7715	7/9/2021	19:45:00	77.2	122.76	122.785	122.785	9	78.217	570.32	79.807	0	575.885	0	0	0	0	0
7716	7/9/2021	19:30:00	75.85	122.85	122.88	122.88	9	80.553	585.712	84.768	0	591.823	0	0	0	0	0
7717	7/9/2021	19:15:00	83.15	122.935	122.96	122.96	9	84.293	612.744	94.711	0	620.026	0	0	0	0	0
7718	7/9/2021	19:00:01	85.9	122.895	122.92	122.92	9	89.502	649.124	101.644	0	657.043	0	0	0	0	0
7719	7/9/2021	18:45:01	91.65	122.405	122.435	122.435	10	94.134	680.091	108.369	0	688.688	0	0	0	0	0
7720	7/9/2021	18:30:00	85.35	122.285	122.315	122.315	9	86.858	630.072	96.388	0	637.411	0	0	0	0	0
7721	7/9/2021	18:15:01	92.55	120.695	120.72	120.72	9	85.584	617.524	89.692	0	624.012	0	0	0	0	0
7722	7/9/2021	18:00:01	86.9	122.195	122.225	122.225	10	87.014	631.101	93.983	0	638.078	0	0	0	0	0
7723	7/9/2021	17:45:01	84.7	122.235	122.265	122.265	11	84.585	615.379	88.698	0	621.749	0	0	0	0	0
7724	7/9/2021	17:30:01	82.95	122.295	122.325	122.325	12	86.55	628.587	93.834	0	635.561	0	0	0	0	0
7725	7/9/2021	17:15:00	86.25	122.3	122.325	122.325	13	87.266	633.485	95.25	0	640.617	0	0	0	0	0
7726	7/9/2021	17:00:01	90.2	121.67	121.705	121.705	13	87.976	637.173	99.303	0	644.87	0	0	0	0	0
7727	7/9/2021	16:45:00	96.35	121.755	121.785	121.785	13	92.128	665.715	100.677	0	673.29	0	0	0	0	0
7728	7/9/2021	16:30:00	96.55	121.335	121.365	121.365	13	92.016	665.912	101.781	0	673.65	0	0	0	0	0
7729	7/9/2021	16:15:00	89.8	122.045	122.07	122.07	13	91.565	660.947	104.05	0	669.095	0	0	0	0	0
7730	7/9/2021	16:00:01	93.1	121.02	121.05	121.05	12	88.092	636.346	96.028	0	643.561	0	0	0	0	0
7731	7/9/2021	15:45:01	88.1	121.37	121.4	121.4	12	86.984	628.195	94.651	0	635.299	0	0	0	0	0
7732	7/9/2021	15:30:01	81.15	121.75	121.785	121.785	12	84.519	609.647	88.868	0	616.094	0	0	0	0	0
7733	7/9/2021	15:15:01	84.7	121.36	121.385	121.385	12	84.892	613.21	91.48	0	620.002	0	0	0	0	0
7734	7/9/2021	15:00:01	87.65	121.525	121.555	121.555	12	82.764	600.983	87.389	0	607.309	0	0	0	0	0
7735	7/9/2021	14:45:01	82.7	121.99	122.02	122.02	12	83.784	606.074	89.031	0	612.585	0	0	0	0	0
7736	7/9/2021	14:30:01	74.35	122.915	122.945	122.945	13	80.007	581.449	84.199	0	587.519	0	0	0	0	0
7737	7/9/2021	14:15:01	85.4	121.505	121.53	121.53	13	82.045	590.713	84.377	0	596.714	0	0	0	0	0
7738	7/9/2021	14:00:00	78.6	121.35	121.38	121.38	12	79.199	570.858	83.531	0	576.943	0	0	0	0	0
7739	7/9/2021	13:45:00	79	121.66	121.685	121.685	12	77.827	561.049	84.113	0	567.332	0	0	0	0	0
7740	7/9/2021	13:30:01	78.5	122.04	122.07	122.07	11	73.194	531.438	71.473	0	536.235	0	0	0	0	0
7741	7/9/2021	13:15:00	73.25	121.68	121.71	121.71	11	74.955	541.659	74.603	0	546.789	0	0	0	0	0
7742	7/9/2021	13:00:00	66.7	122.17	122.195	122.195	10	70.477	513.359	68.706	0	518	0	0	0	0	0
7743	7/9/2021	12:45:00	72.05	122.64	122.67	122.67	11	70.922	515.052	78.789	0	521.257	0	0	0	0	0
7744	7/9/2021	12:30:00	69.85	121.285	121.315	121.315	11	73.857	527.035	111.556	0	538.717	0	0	0	0	0
7745	7/9/2021	12:15:00	76.2	121.64	121.665	121.665	11	74.738	534.383	115.089	0	546.65	0	0	0	0	0
7746	7/9/2021	12:00:00	75.3	121.68	121.71	121.71	11	72.659	519.572	113.991	0	531.966	0	0	0	0	0
7747	7/9/2021	11:45:00	72.8	122.18	122.215	122.215	11	74.639	533.374	119.69	0	546.664	0	0	0	0	0
7748	7/9/2021	11:30:01	72.95	121.375	121.405	121.405	10	71.507	509.55	110.513	0	521.411	0	0	0	0	0
7749	7/9/2021	11:15:00	72.85	121.175	121.2	121.2	9	70.229	499.306	111.79	0	511.674	0	0	0	0	0
7750	7/9/2021	11:00:01	71.1	120.955	120.98	120.98	9	67.803	483.882	107.603	0	495.713	0	0	0	0	0
7751	7/9/2021	10:45:00	66	122.82	122.85	122.85	10	65.939	472.05	102.912	0	483.147	0	0	0	0	0
7752	7/9/2021	10:30:00	63.55	122.055	122.08	122.08	9	64.067	457.074	98.722	0	467.622	0	0	0	0	0
7753	7/9/2021	10:15:00	64.5	121.495	121.52	121.52	9	64.073	457.374	98.911	0	467.962	0	0	0	0	0
7754	7/9/2021	10:00:00	62.7	121.79	121.82	121.82	9	66.583	473.281	108.013	0	485.473	0	0	0	0	0
7755	7/9/2021	9:45:00	62.2	121.56	121.585	121.585	7	59.501	426.154	89.192	0	435.4	0	0	0	0	0
7756	7/9/2021	9:30:01	64	121.575	121.6	121.6	7	60.778	435.605	93.31	0	445.502	0	0	0	0	0
7757	7/9/2021	9:15:01	54.4	122.475	122.5	122.5	7	53.698	387	76.402	0	394.48	0	0	0	0	0
7758	7/9/2021	9:00:01	55.7	121.485	121.515	121.515	8	55.189	395.926	76.206	0	403.211	0	0	0	0	0
7759	7/9/2021	8:45:00	60.75	121.61	121.64	121.64	8	56.738	406.226	82.782	0	414.585	0	0	0	0	0
7760	7/9/2021	8:30:00	52.7	121.825	121.855	121.855	8	53.606	384.545	74.776	0	391.76	0	0	0	0	0
7761	7/9/2021	8:15:00	57.15	121.535	121.565	121.565	7	55.043	394.708	76.124	0	402.003	0	0	0	0	0
7762	7/9/2021	8:00:01	52.75	121.985	122.015	122.015	7	51.193	366.532	71.286	0	373.413	0	0	0	0	0
7763	7/9/2021	7:45:00	50.6	121.37	121.4	121.4	6	50.855	364.755	65.357	0	370.573	0	0	0	0	0
7764	7/9/2021	7:30:00	48.3	121.45	121.48	121.48	6	48.432	348.281	62.981	0	353.942	0	0	0	0	0
7765	7/9/2021	7:15:01	51.2	122.02	122.045	122.045	6	50.333	361.872	70.214	0	368.631	0	0	0	0	0
7766	7/9/2021	7:00:00	52.2	121.665	121.69	121.69	6	49.209	353.398	66.207	0	359.558	0	0	0	0	0
7767	7/9/2021	6:45:01	50.1	121.09	121.115	121.115	5	49.172	353.301	62.892	0	358.871	0	0	0	0	0
7768	7/9/2021	6:30:00	49.05	122.05	122.085	122.085	5	48.475	347.774	63.291	0	353.497	0	0	0	0	0
7769	7/9/2021	6:15:01	46.15	121.37	121.395	121.395	4	46.193	331.132	58.679	0	336.302	0	0	0	0	0
7770	7/9/2021	6:00:01	42.25	121													

#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7699	7/9/2021	23:45:01	46.3	121.925	121.94	121.94	1	46.966	343.645	22.703	0	344.434	0	0	0	0	0
7700	7/9/2021	23:30:01	49.65	122.14	122.155	122.155	2	49.6	363.32	28.687	0	364.467	0	0	0	0	0
7701	7/9/2021	23:15:00	48.3	122.65	122.665	122.665	3	50.736	372.199	29.122	0	373.357	0	0	0	0	0
7702	7/9/2021	23:00:00	52.1	121.79	121.8	121.8	3	52.2	381.13	33.174	0	382.608	0	0	0	0	0
7703	7/9/2021	22:45:00	55.05	121.54	121.555	121.555	3	53.684	390.458	35.946	0	392.163	0	0	0	0	0
7704	7/9/2021	22:30:01	57	122.32	122.335	122.335	3	55.312	404.269	41.787	0	406.445	0	0	0	0	0
7705	7/9/2021	22:15:00	52.7	122.455	122.47	122.47	3	54.793	401.136	36.645	0	402.819	0	0	0	0	0
7706	7/9/2021	22:00:00	58.1	122.46	122.475	122.475	4	58.731	427.968	40.525	0	429.898	0	0	0	0	0
7707	7/9/2021	21:45:01	57.85	121.225	121.24	121.24	3	57.867	421.261	38.885	0	423.089	0	0	0	0	0
7708	7/9/2021	21:30:01	57.15	122.74	122.755	122.755	4	62.018	452.489	50.747	0	455.35	0	0	0	0	0
7709	7/9/2021	21:15:01	63.3	121.505	121.515	121.515	4	63.214	458.313	47.975	0	460.827	0	0	0	0	0
7710	7/9/2021	21:00:00	64	122.635	122.65	122.65	5	62.144	452.185	47.72	0	454.736	0	0	0	0	0
7711	7/9/2021	20:45:00	61.85	122.695	122.71	122.71	4	65.029	475.374	51.487	0	478.221	0	0	0	0	0
7712	7/9/2021	20:30:00	66.5	122.46	122.48	122.48	5	66.95	487.984	55.798	0	491.172	0	0	0	0	0
7713	7/9/2021	20:15:00	72.05	121.415	121.425	121.425	5	70.734	512.856	62.062	0	516.607	0	0	0	0	0
7714	7/9/2021	20:00:00	67.75	121.95	121.965	121.965	5	70.474	510.632	59.952	0	514.161	0	0	0	0	0
7715	7/9/2021	19:45:01	74.4	121.12	121.14	121.14	5	75.821	548.217	70.238	0	552.713	0	0	0	0	0
7716	7/9/2021	19:30:00	75.35	121.78	121.795	121.795	5	75.556	547.509	65.801	0	551.463	0	0	0	0	0
7717	7/9/2021	19:15:00	80.1	121.555	121.57	121.57	5	78.497	567.764	74.301	0	572.636	0	0	0	0	0
7718	7/9/2021	19:00:01	76.5	121.965	121.98	121.98	5	83.019	599.817	84.329	0	605.73	0	0	0	0	0
7719	7/9/2021	18:45:01	72.5	122.76	122.78	122.78	6	78.991	575.32	80.673	0	580.96	0	0	0	0	0
7720	7/9/2021	18:30:00	84.2	122.25	122.265	122.265	7	81.674	594.463	84.757	0	600.48	0	0	0	0	0
7721	7/9/2021	18:15:00	85.8	122.685	122.7	122.7	8	85.363	620.785	91.636	0	627.521	0	0	0	0	0
7722	7/9/2021	18:00:01	82.35	122.59	122.605	122.605	8	81.27	590.905	85.345	0	597.052	0	0	0	0	0
7723	7/9/2021	17:45:01	85.45	121.6	121.615	121.615	8	80.747	584.664	81.752	0	590.362	0	0	0	0	0
7724	7/9/2021	17:30:00	78.2	121.935	121.945	121.945	8	77.025	559.908	74.335	0	564.832	0	0	0	0	0
7725	7/9/2021	17:15:01	80.75	122.01	122.025	122.025	9	76.755	557.735	75.868	0	562.879	0	0	0	0	0
7726	7/9/2021	17:00:00	79.4	122.1	122.115	122.115	9	81.662	590.52	81.085	0	596.083	0	0	0	0	0
7727	7/9/2021	16:45:01	75.1	123.24	123.255	123.255	9	82.451	597.924	83.084	0	603.674	0	0	0	0	0
7728	7/9/2021	16:30:01	91.8	121.465	121.48	121.48	9	84.499	611.895	86.681	0	618.017	0	0	0	0	0
7729	7/9/2021	16:15:01	77.85	122.48	122.495	122.495	9	81.186	589.48	89.242	0	596.209	0	0	0	0	0
7730	7/9/2021	16:00:01	80.8	122.28	122.295	122.295	9	79.397	575.17	90.218	0	582.21	0	0	0	0	0
7731	7/9/2021	15:45:01	71.35	122.44	122.45	122.45	9	77.456	560.304	86.887	0	567.014	0	0	0	0	0
7732	7/9/2021	15:30:01	76.5	122.105	122.125	122.125	9	76.822	555.39	84.186	0	561.747	0	0	0	0	0
7733	7/9/2021	15:15:00	82.75	121.105	121.12	121.12	9	79.193	570.805	87.547	0	577.502	0	0	0	0	0
7734	7/9/2021	15:00:01	69.4	122.75	122.76	122.76	9	71.511	517.952	80.071	0	524.113	0	0	0	0	0
7735	7/9/2021	14:45:01	74.75	122.535	122.55	122.55	9	70.866	515.114	78.545	0	521.083	0	0	0	0	0
7736	7/9/2021	14:30:01	75.1	121.67	121.685	121.685	10	73.267	530.386	86.608	0	537.42	0	0	0	0	0
7737	7/9/2021	14:15:01	71.85	122.225	122.235	122.235	10	69.745	505.355	77.239	0	511.233	0	0	0	0	0
7738	7/9/2021	14:00:00	66.35	122.01	122.025	122.025	10	69.357	499.933	77.571	0	505.925	0	0	0	0	0
7739	7/9/2021	13:45:00	68.55	121.6	121.61	121.61	9	65.988	477.117	69.963	0	482.231	0	0	0	0	0
7740	7/9/2021	13:30:00	73.05	121.875	121.885	121.885	9	70.287	508.043	78.801	0	514.145	0	0	0	0	0
7741	7/9/2021	13:15:00	67	121.325	121.34	121.34	9	67.112	484.398	68.539	0	489.238	0	0	0	0	0
7742	7/9/2021	13:00:00	65.1	122.075	122.09	122.09	9	63.55	459.094	68.152	0	464.161	0	0	0	0	0
7743	7/9/2021	12:45:01	65.7	121.435	121.45	121.45	8	65.44	470.716	78.296	0	477.351	0	0	0	0	0
7744	7/9/2021	12:30:00	68.55	121.175	121.19	121.19	8	64.125	456.932	102.735	0	468.352	0	0	0	0	0
7745	7/9/2021	12:15:00	57.6	121.815	121.83	121.83	8	61.197	435.492	99.943	0	446.823	0	0	0	0	0
7746	7/9/2021	12:00:00	60.5	121.96	121.97	121.97	8	64.925	461.123	108.95	0	473.848	0	0	0	0	0
7747	7/9/2021	11:45:01	67.3	121.56	121.575	121.575	8	65.316	463.38	112.15	0	476.8	0	0	0	0	0
7748	7/9/2021	11:30:00	65.3	122.105	122.12	122.12	8	63.028	449.038	100.878	0	460.237	0	0	0	0	0
7749	7/9/2021	11:15:01	63.6	121.55	121.565	121.565	7	65.016	462.576	106.041	0	474.582	0	0	0	0	0
7750	7/9/2021	11:00:01	56.95	121.9	121.915	121.915	7	56.645	402.267	93.804	0	413.076	0	0	0	0	0
7751	7/9/2021	10:45:01	62.75	121.375	121.39	121.39	7	57.507	409.27	96.488	0	420.513	0	0	0	0	0
7752	7/9/2021	10:30:01	61.6	121.375	121.385	121.385	7	58.877	418.984	99.447	0	430.639	0	0	0	0	0
7753	7/9/2021	10:15:00	55.1	122.145	122.16	122.16	7	59.176	421.035	97.508	0	432.205	0	0	0	0	0
7754	7/9/2021	10:00:01	62.25	121.215	121.23	121.23	7	59.729	423.737	97.667	0	434.872	0	0	0	0	0
7755	7/9/2021	9:45:00	60.65	120.86	120.88	120.88	5	55.754	397.147	91.017	0	407.459	0	0	0	0	0
7756	7/9/2021	9:30:00	53.65	122.035	122.05	122.05	5	55.914	398.456	94.752	0	409.585	0	0	0	0	0
7757	7/9/2021	9:15:01	56.2	122.545	122.56	122.56	6	53.982	385.326	89.265	0	395.576	0	0	0	0	0
7758	7/9/2021	9:00:01	53.35	121.715	121.725	121.725	6	52.995	378.248	79.261	0	386.475	0	0	0	0	0
7759	7/9/2021	8:45:00	52.4	121.35	121.365	121.365	5	52.628	374.35	82.847	0	383.421	0	0	0	0	0
7760	7/9/2021	8:30:00	50.45	121.78	121.795	121.795	5	48.695	349.177	75.964	0	357.359	0	0	0	0	0
7761	7/9/2021	8:15:01	48.55	121.46	121.47	121.47	5	48.722	348.405	73.103	0	356.014	0	0	0	0	0
7762	7/9/2021	8:00:01	49.3	121.705	121.72	121.72	5	51.259	364.989	78.517	0	373.373	0	0	0	0	0
7763	7/9/2021	7:45:00	50.1	121.495	121.51	121.51	4	49.959	357.617	71.37	0	364.695	0	0	0	0	0
7764	7/9/2021	7:30:00	48.3	122.55	122.565	122.565	4	48.149	347.036	68.01	0	353.665	0	0	0	0	0
7765	7/9/2021	7:15:00	47.9	121.85	121.86	121.86	4	46.833	335.084	63.935	0	341.147	0	0	0	0	0
7766	7/9/2021	7:00:00	50.45	121.425	121.435	121.435	3	43.814	313.557	56.592	0	318.643	0	0	0	0	0
7767	7/9/2021	6:45:00	41.25	121.635	121.645	121.645	2	41.18	296.185	53.053	0	300.92	0	0	0	0	0
7768	7/9/2021	6:30:00	38.4	122.14	122.155	122.155	2	39.962	288.506	46.65	0	292.286	0	0	0	0	0
7769	7/9/2021	6:15:01	42.1	121.1	121.115	121.115	1	41.073	296.075	45.863	0	299.631	0	0	0	0	0
7770	7/9/2021	6:00:00	44.45	121.505	121.51</												

Existing Circuit



Existing Circuit with 336
ACSR additions to new
proposed expansion and
pump load.



Input Report (English)

Utilities

Contribution From Name	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)		
				DutyUnits		X/R	R PU	X PU	
UTIL-001	CW101	In	69,000	3P:	900 MVA	9.86	Pos:	0.011	0.111
				SLG:	300 MVA	7.00	Zero:	0.025	0.109

Non-Motor Loads

Name	Phase	In/Out Service	Bus Name	L-L Volts	Rated size	Units	PF	Type
LOAD-001	ABC	In	BUS-001	12,470	297.71	kVA	0.92	Lag
LOAD-006	ABC	In	BUS - 008	12,470	70.05	kVA	0.92	Lag
LOAD-016	ABC	In	BUS - 020	12,470	201.02	kVA	0.92	Lag
LOAD-002	ABC	In	BUS-004	12,470	143.60	kVA	0.92	Lag
LOAD-003	ABC	In	BUS-005	12,470	280.19	kVA	0.92	Lag
LOAD-004	ABC	In	BUS - 006	12,470	246.34	kVA	0.92	Lag
LOAD-005	ABC	In	BUS - 007	12,470	72.97	kVA	0.92	Lag
LOAD-008	ABC	In	BUS - 010	12,470	26.27	kVA	0.92	Lag
LOAD-010	ABC	In	BUS - 013	12,470	134.01	kVA	0.92	Lag
LOAD-009	ABC	In	BUS - 012	12,470	213.20	kVA	0.92	Lag
LOAD-011	ABC	In	BUS - 014	12,470	560.41	kVA	0.92	Lag
LOAD-012	ABC	In	BUS - 015	12,470	36.55	kVA	0.92	Lag
LOAD-013	ABC	In	BUS - 016	12,470	201.02	kVA	0.92	Lag
LOAD-014	ABC	In	BUS - 017	12,470	158.38	kVA	0.92	Lag
LOAD-015	ABC	In	BUS - 018	12,470	146.19	kVA	0.92	Lag
LOAD-007	ABC	In	BUS - 009	12,470	671.30	kVA	0.92	Lag
LOAD-018	ABC	In	BUS - 021	12,470	254.62	kVA	0.92	Lag
LOAD-019	ABC	In	BUS - 022	12,470	254.62	kVA	0.92	Lag

2-Winding Transformers

Name 1 / 3Phase	In/Out	-----Primary & Secondary-----				Nominal kVA	Percent Z in %	
	Phases	Bus	Conn.	Volts	FLA		R	jX

Name 1 / 3Phase	In/Out	-----Primary & Secondary-----					Nominal kVA	Percent Z in %		
		Phases	Bus	Conn.	Volts	FLA		R	jX	
Bench Lake Regulator	In	ABC	BUS - 011	WG	12,470	162	3,500.0	Pos:	0.86	5.30
3Phase			BUS - 012	WG	12,470	162		Zero:	0.86	5.30
CW-20MW	In	ABC	CW101	D	69,000	167	12,000.0	Pos:	0.86	5.30
3Phase			BUS-001	WG	12,470	926		Zero:	0.80	5.00

Transmission Lines

Name LibModel	In/Out Service	From Bus To Bus	Miles Phases	Num Circuits	Per Unit (100 MVA Base)		Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu	R pu	jX pu	
URD-001 - 1/0	In	BUS - 006	0.55	1	0.0000	0.0000	Pos:	0.001	0.001
		BUS - 009	ABC		0.0000	0.0000	Zero:	0.0028	0.0008
URD-002 - 750	In	BUS - 007	0.27	1	0.0000	0.0000	Pos:	0.027	0.037
		BUS - 008	ABC		0.0000	0.0000	Zero:	0.0275	0.0371
URD-003 - 4/0	In	BUS - 008	0.19	1	0.0000	0.0000	Pos:	0.071	0.031
		BUS - 009	ABC		0.0000	0.0000	Zero:	0.0713	0.0306
URD-004 - 4/0	In	BUS - 009	0.24	1	0.0000	0.0000	Pos:	0.089	0.038
		BUS - 010	ABC		0.0000	0.0000	Zero:	0.0887	0.0380
URD-005 - 750	In	BUS - 019	0.59	1	0.0000	0.0001	Pos:	0.060	0.081
		BUS - 020	ABC		0.0000	0.0000	Zero:	0.0600	0.0809
XLN-0005 - #4	In	BUS-005	0.44	1	0.0000	0.0000	Pos:	0.136	0.189
		BUS - 006	ABC		0.0000	0.0000	Zero:	0.1358	0.1889
XLN-001 - 336	In	BUS-001	0.74	1	0.0000	0.0000	Pos:	0.146	0.306
		BUS-002	ABC		0.0000	0.0000	Zero:	0.1457	0.3061
XLN-002 - 336	In	BUS-002	2.11	1	0.0000	0.0000	Pos:	0.416	0.853
		BUS-003	ABC		0.0000	0.0000	Zero:	0.4162	0.8530
XLN-003 - 336	In	BUS-004	0.52	1	0.0000	0.0000	Pos:	0.103	0.216
		BUS-003	ABC		0.0000	0.0000	Zero:	0.1027	0.2158
XLN-004 - 366	In	BUS-005	0.53	1	0.0000	0.0000	Pos:	0.104	0.214
		BUS-004	ABC		0.0000	0.0000	Zero:	0.1044	0.2140
XLN-006 - 336	In	BUS-004	0.23	1	0.0000	0.0000	Pos:	0.046	0.095
		BUS - 007	ABC		0.0000	0.0000	Zero:	0.0462	0.0948
XLN-007 - 1/0	In	BUS - 010	0.27	1	0.0000	0.0000	Pos:	0.170	0.125
		BUS - 011	ABC		0.0000	0.0000	Zero:	0.1703	0.1254

Name LibModel	In/Out Service	From Bus To Bus	Miles Phases	Num Circuits	Per Unit (100 MVA Base)		Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu		R pu	jX pu
XLN-008 - 1/0	In	BUS - 012	0.50	1	0.0000	0.0000	Pos:	0.311	0.229
		BUS - 013	ABC		0.0000	0.0000	Zero:	0.3106	0.2287
XLN-009 - 1/0	In	BUS - 013	0.50	1	0.0000	0.0000	Pos:	0.311	0.229
		BUS - 014	ABC		0.0000	0.0000	Zero:	0.3106	0.2287
XLN-010 - #2	In	BUS - 015	0.47	1	0.0000	0.0000	Pos:	0.472	0.227
		BUS - 014	ABC		0.0000	0.0000	Zero:	0.4721	0.2268
XLN-011 - 336	In	BUS - 015	0.49	1	0.0000	0.0000	Pos:	0.097	0.199
		BUS - 016	ABC		0.0000	0.0000	Zero:	0.0970	0.1987
XLN-012 - #2	In	BUS - 016	0.42	1	0.0000	0.0000	Pos:	0.415	0.200
		BUS - 017	ABC		0.0000	0.0000	Zero:	0.4154	0.1996
XLN-013 - 336	In	BUS - 014	0.29	1	0.0000	0.0000	Pos:	0.058	0.118
		BUS - 018	ABC		0.0000	0.0000	Zero:	0.0578	0.1184
XLN-014 - 336	In	BUS - 018	0.48	1	0.0000	0.0000	Pos:	0.094	0.193
		BUS - 019	ABC		0.0000	0.0000	Zero:	0.0942	0.1931
XLN-015 - #2	In	BUS - 021	0.94	1	0.0000	0.0000	Pos:	0.937	0.450
		BUS - 018	ABC		0.0000	0.0000	Zero:	0.9366	0.4499
XLN-016 - #2	In	BUS - 021	0.93	1	0.0000	0.0000	Pos:	0.925	0.444
		BUS - 022	ABC		0.0000	0.0000	Zero:	0.9252	0.4444

Clifton Wilson Circuit 101 Impedance

From	To	LENGTH	Conductor Size	Z(+) Ohms/Mile		Z(0) Ohms/Mile		Z(+) pu Full Section		Z(0) pu Full Section		B	Bpu Total	1/2 Bpu Total
		Feet		R	X	R	X	R	X	R	X	mmho/Mil		
12.47 kV Lines														
XFMR/Bus 001	Bus 002	3,900	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.04854	0.10199	0.10265	0.25102	6.58600	0.00002	0.00001
Bus 002	Bus 003	11,160	366 OH	0.30620	0.62760	0.64830	1.62210	0.13872	0.28432	0.29370	0.73485	6.67600	0.00007	0.00003
Bus 003	Bus 004	2,750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03423	0.07191	0.07238	0.17700	6.58600	0.00002	0.00001
Bus 004	Bus 005	2,800	4/0 OH	0.48480	0.67450	0.95070	1.76950	0.05510	0.07667	0.10806	0.20113	6.35600	0.00002	0.00001
Bus 005	Bus 006	2,300	#2 OH	1.55030	0.74470	2.32340	2.35830	0.14474	0.06953	0.21693	0.22018	5.73400	0.00001	0.00001
Bus 006	Bus 009	2,900	1/0 UG	1.11400	0.27190	1.94300	0.34320	0.13114	0.03201	0.22873	0.04040	102.35000	0.00026	0.00013
Bus 004	Bus 007	1,240	336 OH	0.30620	0.62760	0.64830	1.62210	0.01541	0.03159	0.03263	0.08165	6.67600	0.00001	0.00000
Bus 007	Bus 008	1,420	750 UG	0.15890	0.21590	0.05280	0.15310	0.00916	0.01245	0.00304	0.00883	200.28000	0.00025	0.00013
Bus 008	Bus 009	1,025	4/0 UG	0.57020	0.24440	1.70000	0.50160	0.02373	0.01017	0.07073	0.02087	130.41000	0.00012	0.00006
Bus 009	Bus 010	1,276	4/0 UG	0.57020	0.24440	1.70000	0.50160	0.02953	0.01266	0.08806	0.02598	130.41000	0.00015	0.00007
Bus 010	Bench Lake Reg	1,435	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.05677	0.04180	0.09684	0.12044	5.96900	0.00001	0.00000
Bench Lake Reg	Bus 013	2,618	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.10356	0.07625	0.17668	0.21972	5.96900	0.00001	0.00001
Bus 013	Bus 014	2,618	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.10356	0.07625	0.17668	0.21972	5.96900	0.00001	0.00001
Bus 014	Bus 015	2,500	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.09890	0.07281	0.16872	0.20982	5.96900	0.00001	0.00001
Bus 015	Bus 016	2,600	336 OH	0.30620	0.62760	0.64830	1.62210	0.03232	0.06624	0.06842	0.17120	6.67600	0.00002	0.00001
Bus 016	Bus 017	2,200	#2 OH	1.55030	0.74470	2.32340	2.35830	0.13845	0.06651	0.20749	0.21061	5.73400	0.00001	0.00001
Bus 014	Bus 018	1,549	336 OH	0.30620	0.62760	0.64830	1.62210	0.01925	0.03946	0.04076	0.10200	6.67600	0.00001	0.00000
Bus 018	Bus 019	2,526	336 OH	0.30620	0.62760	0.64830	1.62210	0.03140	0.06435	0.06648	0.16633	6.67600	0.00001	0.00001
Bus 019	Bus 020	3,100	750 UG	0.15890	0.21590	0.05280	0.15310	0.02000	0.02717	0.00664	0.01927	200.28000	0.00055	0.00027
Bus 018	Bus 021	4,960	#2 OH	1.55030	0.74470	2.32340	2.35830	0.31214	0.14994	0.46780	0.47483	5.73400	0.00003	0.00001
Bus 021	Bus 022	4,900	#2 OH	1.55030	0.74470	2.32340	2.35830	0.30837	0.14813	0.46215	0.46909	5.73400	0.00002	0.00001
New Flat Build														
Bus 017	Bus 023	1,750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.02178	0.04576	0.04606	0.11264	6.58600	0.00001	0.00001
Bus 023	Bus 024	2,600	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03236	0.06799	0.06843	0.16735	6.58600	0.00002	0.00001
Bus 024	Bus 025	9,230	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.11488	0.24137	0.24294	0.59409	6.58600	0.00005	0.00003
Bus 025	Bus 026	2,100	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.02614	0.05492	0.05527	0.13517	6.58600	0.00001	0.00001
Bus 026	Bus 027	850	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.01058	0.02223	0.02237	0.05471	6.58600	0.00000	0.00000
Bus 027	Bus 028	1,580	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.01966	0.04132	0.04159	0.10170	6.58600	0.00001	0.00000
Bus 028	Bus 029	3,060	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03808	0.08002	0.08054	0.19696	6.58600	0.00002	0.00001
Bus 029	Bus 030	2,700	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03360	0.07061	0.07107	0.17379	6.58600	0.00002	0.00001
Bus 030	Bus 031	750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.00933	0.01961	0.01974	0.04827	6.58600	0.00000	0.00000
Bus 031	Bus 030	2,580	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03211	0.06747	0.06791	0.16606	6.58600	0.00002	0.00001

	Hurricane Distribution C101 – 12.47kV Overhead Impedances – FLAT Construction						
Conductor size	Ampacity (Amps)	Z(+) Ohms/mile		Z(0) Ohms/mile		Xc(+) Mohm/mile	B _{pu} mmho/mile
		R	X	R	X		
#2 ACSR	180	1.5510	0.7621	2.3237	2.3221	0.1767	5.658
1/0 ACSR	230	0.9752	0.7346	1.6627	2.0312	0.1698	5.889
4/0 ACSR	340	0.4863	0.6913	0.9526	1.7335	0.1595	6.270
336 ACSR	530	0.3066	0.6442	0.6484	1.5856	0.1518	6.586

	Hurricane Distribution C101 – 12.47kV Overhead Impedances – Pole Top w/lower Cross Arm Construction						
Conductor size	Ampacity (Amps)	Z(+) Ohms/Mile		Z(0) Ohms/Mile		Xc (+) Mohm/Mile	B _{pu} mmho/Mile
		R	X	R	X		
#2 ACSR	180	1.5503	0.7447	2.3234	2.3583	0.1744	5.734
1/0 ACSR	230	0.9745	0.7175	1.6625	2.0675	0.1675	5.969
4/0 ACSR	340	0.4848	0.6745	0.9507	1.7695	0.1573	6.356
336 ACSR	530	0.3062	0.6276	0.6483	1.6221	0.1498	6.676

	Hurricane Distribution C101 – 12.47kV Underground Impedances – Three Conductors in One non- metallic Conduit						
Conductor size	Ampacity (Amps)	Z(+) Ohms/1000'		Z(0) Ohms/1000'		Xc (+) Mohm/mile	B _{pu} mmho/Mile'
		R	X	R	X		
1/0 Al.	175	0.211	.0515	0.3680	0.0650	.009770	102.35
4/0 Al.	231	0.1080	0.0463	0.322	0.095	.007668	130.41
750 Al. MCM	457	0.03010	0.04090	0.0100	0.029	.004993	200.28

	Hurricane Distribution C101 – 12.47kV Underground Impedances – Three Conductors in One non- metallic Conduit						
Conductor size	Ampacity (Amps)	Z(+) Ohms/Mile'		Z(0) Ohms/Mile'		Xc (+) Mohm/mile	B _{pu} mmho/Mile'
		R	X	R	X		
1/0 Al.	175	1.114	0.2719	1.943	0.3432	.009770	102.35
4/0 Al.	231	0.5702	0.2444	1.700	0.5016	.007668	130.41
750 Al. MCM	457	0.1589	0.2159	0.0528	0.1531	.004993	200.28

Impedance and Technical Data

[Okonite Product Catalog Page](#)

Cable Catalog ID	Size	Phase Arrangement	(+/-) Sequence Impedance, Multi- Point Grounding [ohms/kft]	(+/-) Sequence Impedance, 1-Point Grounding [ohms/kft]	Zero Sequence Impedance, Ground and Shield Return [ohms/kft]	Zero Sequence Impedance, Shield Return Only [ohms/kft]	Zero Sequence Impedance, Ground Return Only [ohms/kft]
162-23-3081	4/0 AWG Al	Triplexed	0.114+j0.044	0.112+j0.044	0.385+j0.145	0.449+j0.025	0.167+j0.759
		Cradled	0.112+j0.041	0.110+j0.046	0.376+j0.142	0.440+j0.024	0.164+j0.738
		1 OD -Horizontal	0.113+j0.053	0.110+j0.048	0.376+j0.143	0.440+j0.024	0.164+j0.734
		7.5 in. -Horizontal	0.125+j0.091	0.110+j0.089	0.363+j0.150	0.440+j0.024	0.164+j0.653
		Rectangular	0.112+j0.049	0.110+j0.046	0.376+j0.142	0.440+j0.024	0.164+j0.739
Additional Information:	Capacitance = 80.5 [pF/ft]		DC Resistance @ 25C = 0.084 [ohms/kft]				
Calculation Parameters:	kV=15.00, Insulation=133%, Conductor Temp.=105C, Concentric Wires 11 x 14 AWG, OD=1.300in						

The Okonite Company,
Ramsey NJ, 07446,
1 (201) 825-0300

Impedance and Technical Data

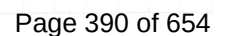
From Master Catalog of Okonite Cables:
Section 2 - Sheet 36

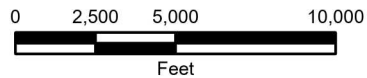
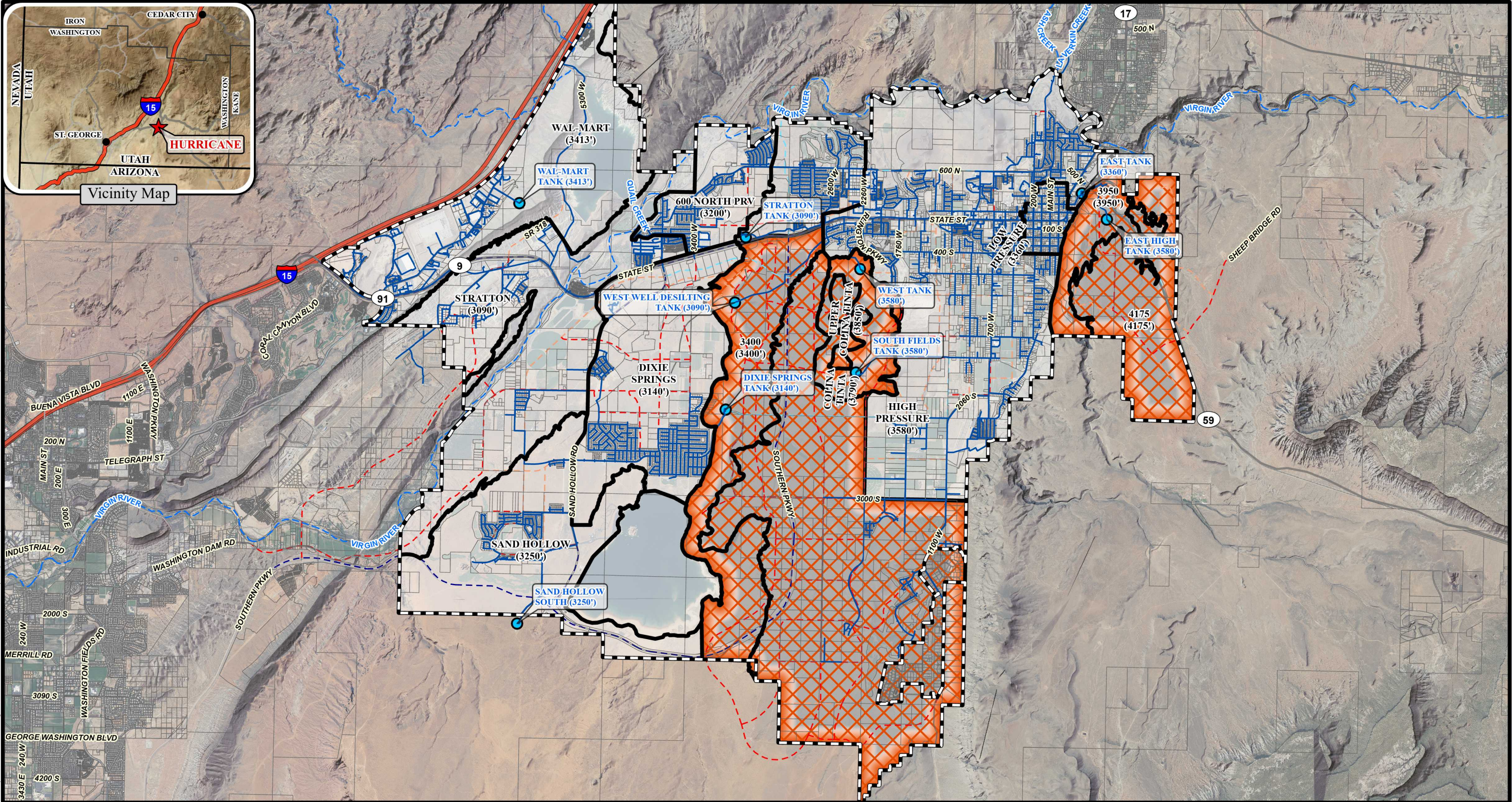
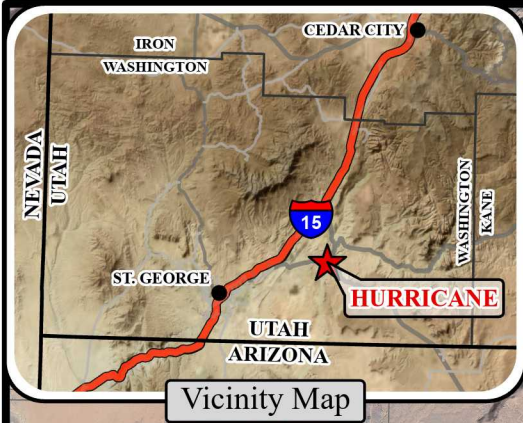
[Okonite Product Catalog Page](#)

Cable Catalog ID	Size	Phase Arrangement	(+/-) Sequence Impedance, Multi- Point Grounding [ohms/kft]	(+/-) Sequence Impedance, 1-Point Grounding [ohms/kft]	Zero Sequence Impedance, Ground and Shield Return [ohms/kft]	Zero Sequence Impedance, Shield Return Only [ohms/kft]	Zero Sequence Impedance, Ground Return Only [ohms/kft]
162-23-3096	750 kcmil Al	Triplexed	0.036+j0.038	0.032+j0.039	0.127+j0.032	0.130+j0.019	0.087+j0.725
		Cradled	0.038+j0.035	0.032+j0.041	0.124+j0.031	0.127+j0.018	0.085+j0.704
		1 OD -Horizontal	0.041+j0.045	0.032+j0.043	0.124+j0.031	0.127+j0.018	0.085+j0.700
		7.5 in. -Horizontal	0.059+j0.061	0.032+j0.074	0.124+j0.032	0.127+j0.018	0.085+j0.638
		Rectangular	0.038+j0.042	0.032+j0.041	0.124+j0.031	0.127+j0.018	0.085+j0.705
Additional Information:	Capacitance = 136 [pF/ft]		DC Resistance @ 25C = 0.024 [ohms/kft]				
Calculation Parameters:	kV=15.00, Insulation=133%, Conductor Temp.=105C, Concentric Wires 15 x 10 AWG, OD=1.950in						

MAX LOAD - 3.77 MW ON CW101
MAX Current T-1 520 AMPS

—— overhead
---- underground





Legend

Hurricane Municipal Boundary

Washington County Parcels

Pressure Zone Boundaries

Approximate Extent of Limit Culinary Distribution

Existing Culinary Water

Existing Tank

Master Planned Roads

Major Arterial (106' ROW)

Minor Arterial (90' ROW)

Major Collector (70' ROW)

Minor Collector (60' ROW)



1 of 1

Approximate Areas of Limited Distribution Capacity

Hurricane, Utah

Spatial Reference: Utah State Plane NAD 83, feet

Drawn By: JRH

Scale: 1" = 6,000 feet

Date: October 2022

ACKNOWLEDGEMENT OF WATER SUPPLY

I/We, RANLIFE HOMES CONDENS LLC am/are the applicant(s) of the application known as _____ located on parcel(s) _____ within the City of Hurricane, Washington County, Utah.

By my/our signature(s) below I/we do hereby acknowledge and agree to the following:

1. Neither acceptance nor approval of a development application by Hurricane City shall constitute a guarantee that sufficient water will be available to serve the zone designation, project, or permit for which this application is being submitted; and
2. Prior to receiving final approval for the application, the applicant may be required by Hurricane City to provide a guarantee of water availability which verifies that there is a sufficient water supply; and
3. For any application which may be approved without a guarantee of water availability, the applicant knowingly assumes the entire risk of water availability for the project and/or application; and
4. I/we waive any and all claims against Hurricane City that are in any way related to water availability for any project, permit, or use for which the land use application has been approved.

Dated this 29th day of July, 2022.

Applicant Name: RANLIFE HOMES CONDENS LLC

Name of Signer (if different from Applicant Name): BUTTON SHARP

Title of Signer: PRESIDENT

Signature: [Handwritten Signature]

STATE OF Utah)

COUNTY OF Salt Lake)

On the 29th day of July, 2022, personally appeared before me Laurie Lund the signer of the above instrument, who duly acknowledged to me that he/she executed the same in the capacity indicated on behalf of the Applicant.

Notary Public: [Handwritten Signature]
My Commission Expires: 2-12-2024



All signatures to this Acknowledgment, other than for Applicants signing in an individual capacity, shall be accompanied by documentation acceptable to the City attesting to the fact that the signer hereof is authorized to execute the Acknowledgment on behalf of the Applicant (e.g. a copy of a corporate resolution, copy of a partnership agreement, etc.). (Ord. No. 2022-37, 6-16-2022)

AFFIDAVIT

PROPERTY OWNER

STATE OF UTAH)

COUNTY OF Salt Lake

:SS

I (we), RANLIFE HOMES CORP LLC, being duly sworn, depose and say that I (we) am (are) the owner(s) of the property identified in the attached application and that the statements herein contained and the information provided identified in the attached plans and other exhibits are in all respects true and correct to the best of my (our) knowledge. I (we) also acknowledge that I have received written instructions regarding the process for which I am applying and the Hurricane City Planning staff have indicated they are available to assist me in making this application.

Bertton Sharp
(Property Owner)

(Property Owner)

Subscribed and sworn to me this 29th day of July 2022

Laurie Lund
(Notary Public)

Residing in: Salt Lake

My Commission Expires: 2-12-2024



Agent Authorization

I (we), RANLIFE HOMES CORP LLC, the owner(s) of the real property described in the attached application, do authorize as my (our) agent(s) Dustin Johnson, Inc. to represent me (us) regarding the attached application and to appear on my (our) behalf before any administrative or legislative body in the City considering this application and to act in all respects as our agent in matters pertaining to the attached application.

Bertton Sharp
(Property Owner)

(Property Owner)

Subscribed and sworn to me this 29th day of July 2022

Laurie Lund
(Notary Public)

Residing in: Salt Lake

My Commission Expires: 2-12-2024



Addendum to Hurricane Circuit CW101 Analysis Report

In the "Hurricane Circuit CW101 Analysis Report" it was stated:

Load Flow Analysis

Circuit CW-101 was studied using real time regulator load data and through computer modeling using SKM software. Study shows that the existing circuit does not have overloading conditions but is voltage limited. It was determined that:

- 1. Areas of the existing circuit does experience voltage drop below Level of Service criteria under peak loading.*
- 2. Addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels.*

Potential short term solutions for some load addition would be:

- 1. Optimize voltage regulator bank position.*
- 2. Add another in line regulator bank.*
- 3. Add capacitor banks to maintain a high power factor during peak loading.*
- 4. If possible, move existing load to another circuit to allow new load.*

Additional work is needed to determine potential loading with equipment addition and or load transfer; noting the limitations of the existing Bench Lake regulators (1.9 MVA margin) and line conductors.

Subsequent to report issuance, ICPE was requested to study potential short term solutions to maximize load addition to the southern end of the circuit. This addendum provides finding of the additional study.

As a part of the study ICPE was directed to study transferring approximately 1.5 MW from circuit CW101 to other circuits. Transferred load include loads along 600N, loads east of 700 West, and some loads off 2500 South and 700 west.

Studies included:

1. Determining possible load addition at the southern end of the circuit with only the 1.5 MW load transfers.
2. Determining possible load addition with load transfer and relocation of the Bench Lake regulators in the Northward direction.
3. Determine possible load addition with a new regulator bank and with the Bench Lake regulators.
4. Study optimizing regulator bank(s) locations.
5. Studying the effect of capacitor banks added for power factor correction.

For the studies voltage was allowed to drop to 0.97 pu at circuit end points. Studies indicate that maximum power transfer is possible with:

1. The addition of a regulator bank in the vicinity of 1300 South and 950 West (with no load between the substation and regulator bank).
2. Add a second regulator bank southward (approx. ½ mile) of the existing Bench Lake regulator bank. (The existing Bench Lake regulators would need to be removed and with a larger bank installed in the southward location)
3. Install capacitor banks as needed and in optimal locations to main a high power factor on the circuit.
4. Maintain a balanced circuit.

With improvements as indicated loading on circuit CW101 can go to approximately 4.8 MW with approximately 4.2 MW's flowing southward of 2050 south. The 4.2 MW flow represents 2.3 MW over existing loads south of the Bench Lake regulators. Under indicated loading voltage at the unregulated (source side) bus of the 1300 South regulator bank falls to 0.95 pu.

Some incremental load addition (600 kW) may be obtained by reconductoring the 1/0 circuit section between approximately 2100 South and 3000 south and with the regulator bank bench lake regulator bank upsized and located southward 1mile, verses 0.5 mile, from the existing site.

Removal of the existing Bench Lake regulator bank with a new down line replacement bank should be delayed until needed allowing to monitor load growth patterns.

It is noted that actual allowable load addition will be influenced by actual grow patterns.

For review select load flow studies and results are tabulated and results for various configurations.

All cases with approx 1.5MVA moved to other circuits from 2021 Loading

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results ---															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps		
1	2021 loading with loads relocated to other circuits and aprox 500KW added below BL reg's Capacitor Addition: none	@CW MVA 2.637; MW 2.157; MVAR .788 @ BL REGS MVA 2.277; MW 2.161; MVAR .717.3 CW P.F: .95	Volt: 12,579 Vpu: 1.008	Volt: 12,243 Vpu: 0.982	Volt: 12,186 Vpu: 0.977	Volt: 12,099 Vpu: 0.97	Volt: 12,675 Vpu: 1.016	Volt: 12,499 Vpu: 1.002	Volt: 12,426 Vpu: 0.997	Volt: 12,488 Vpu: 1.001	Volt: 12,486 Vpu: 1.001	Volt: 12,322 Vpu: 0.981	Volt: 12,390 Vpu: 0.994		

All cases with approx 1.5MVA moved to other circuits from 2021 loading

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results ---- with BL Regulators Removed and NEW Regulator at approx. 1300 So and 950 West															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	1300 So 950West non Reg bus	1300 So 950 West Reg bus	Bus-004 (1300 South)	Bus-009 (2050 South)	-	Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
4	No BL Regs -- Regs at 1300 So and pump load at end of circuit -- Addition: none	@CW MVA 2.820; MW 2.674; MVAR .896 CW PF: .95	Volt: 12,570 Vpu: 1.008	Volt: 12,260 Vpu: 0.983	Volt: 12,668 Vpu: 1.016	Volt: 12,617 Vpu: 1.012	Volt: 12,559 Vpu: 1.007		Volt: 12,470 Vpu: 1	Volt: 12,277 Vpu: 0.985	Volt: 12,189 Vpu: 0.977	Volt: 12,265 Vpu: 0.984	Volt: 12,263 Vpu: 0.983	Volt: 12,096 Vpu: 0.97	Volt: 12,153 Vpu: 0.975
4A	No BL Regs -- Regs at 1300 So and pump load at end of circuit removed. Addition: 450 kvar	@CW MVA 3.06; MW 3.025; MVAR .460 CW PF: .99	Volt: 12,577 Vpu: 1.009	Volt:12,307 Vpu: 0.987	Volt: 12,651 Vpu: 1.015	Volt: 12,608 Vpu: 1.011	Volt: 12,553 Vpu: 1.006		Volt: 12,464 Vpu: 0.995	Volt: 12,272 Vpu: 0.984	Volt: 12,172 Vpu: 0.976	Volt: 12,263 Vpu: 0.9864	Volt: 12,262 Vpu: 0.983	Volt: 12,097 Vpu: 0.97	Volt: - NA Vpu: - NA

All cases with approx 1.5MVA moved to other circuits from 2021 loading

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results -- With BL Regulators and NEW Regulators at 1300 south and 950 west															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	1300 So 950West non Reg bus	1300 So 950 West Reg bus	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
7	BL Regs & Regs at 1300 So and pump load at end of circuit. CAP Addition: 600 kvar	@CW MVA 4.259; MW 4.05; MVAR 1.319 @ BL REGS MVA 3.676 ; MW 3.545 ; MVAR .973 CW PF: .95	Volt: 12,562 Vpu: 1.007	Volt: 12,100 Vpu: 0.97	Volt: 12,683 Vpu: 1.017	Volt: 12,612 Vpu: 1.014	Volt: 12,525 Vpu: 1.004	Volt: 12,390 Vpu: 0.994	Volt: 12,662 Vpu: 1.015	Volt: 12,378 Vpu: 0.993	Volt: 12,177 Vpu: 0.977	Volt: 12,369 Vpu: 0.992	Volt: 12,367 Vpu: 0.992	Volt: 12,201 Vpu: 0.979	Volt: 12,096 Vpu: 0.97
8	BL Regs & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: none	@CW MVA 4.737; MW 4.165; MVAR 2.255 @ BL REGS MVA 3.963; MW 3.615; MVAR 1.625 CW PF: .95	Volt: 12,589 Vpu: 1.009	Volt: 11,984 Vpu: 0.961	Volt: 12,679 Vpu: 1.016	Volt: 12,585 Vpu: 1.009	Volt: 12,483 Vpu: 1.001	Volt: 12,331 Vpu: 0.989	Volt: 12,668 Vpu: 1.016	Volt: 12,344 Vpu: 0.989	Volt: 12,125 Vpu: 0.972	Volt: 12,331 Vpu: 0.989	Volt: 12,329 Vpu: 0.988	Volt: 12,163 Vpu: 0.975	Volt: - NA Vpu: - NA
11	BL Regs Relocated 1/2 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 750 kvar	@CW MVA 5.24 ; MW 4.860 ; MVAR 1.960 @ BL REGS 4.209 ; MW 3.993; MVAR 1.33 CW PF: .93	Volt: 12,563 Vpu: 1.007	Volt: 11,957 Vpu: 0.959	Volt: 12,665 Vpu: 1.016	Volt: 12,574 Vpu: 1.008	Volt: 12,467 Vpu: 0.999	Volt: 12,105 Vpu: 0.986	Volt: 12,631 Vpu: 1.017	Volt: 12,513 Vpu: 1.003	Volt: 12,228 Vpu: 0.981	Volt: 12,505 Vpu: 1.002	Volt: 12,502 Vpu: 1.002	Volt: 12,339 Vpu: 0.989	Volt: - NA Vpu: - NA
12	BL Regs Relocated 1/2 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 1.05 mvar	@CW MVA 4.871 ; MW 4.605; MVAR 1.432 @ BL REGS MVA 3.942; MW 3.788; MVAR 1.091 CW PF: .95	Volt: 12,527 Vpu: 1.005	Volt: 12,013 Vpu: 0.963	Volt: 12,617 Vpu: 1.018	Volt: 12,540 Vpu: 1.006	Volt: 12,440 Vpu: 0.9976	Volt: 12,098 Vpu: 0.97	Volt: 12,631 Vpu: 1.013	Volt: 12,470 Vpu: 1	Volt: 12,211 Vpu: 0.979	Volt: 12,462 Vpu: 0.994	Volt: 12,460 Vpu: 0.999	Volt: 12,296 Vpu: 0.986	Volt: - NA Vpu: - NA
10	BL Regs Relocated 1 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 750 kvar	@CW MVA 4.017; MW 3.867 ; MVAR 1.088 @ BL REGS MVA 3.066; MW 3.002; MVAR .623 CW PF: .96	Volt: 12,599 Vpu: 1.01	Volt: 12,185 Vpu: 0.977	Volt: 12,653 Vpu: 1.015	Volt: 12,588 Vpu: 1.009	Volt: 12,508 Vpu: 1.003	Volt: 12,097 Vpu: 0.97	Volt: - Vpu: -	Volt: 12,648 Vpu: 1.014	Volt: 12,478 Vpu: 1.006	Volt: 12,640 Vpu: 1.013	Volt: 12,638 Vpu: 1.014	Volt: 12,476 Vpu: 1.005	Volt: - NA Vpu: - NA
13	BL Regs Relocated 1 mile South; Regs at 1300 So; pump load at end of circuit removed. 1/0 conductor replaced with 336 CAP Addition: 1.65 mvar	@CW MVA 5.798; MW 5.522 ; MVAR 1.767 @ BL REGS MVA 4.719; MW 4.484; MVAR 1.468 CW PF: .95	Volt: 12,478 Vpu: 1.00	Volt: 11,816 Vpu: 0.947	Volt: 12,603 Vpu: 1.010	Volt: 12,506 Vpu: 1.003	Volt: 12,383 Vpu: 0.993	Volt: 12,091 Vpu: 0.97	Volt: - Vpu: -	Volt: 12,652 Vpu: 1.014	Volt: 12,276 Vpu: 0.984	Volt: 12,643 Vpu: 1.014	Volt: 12,639 Vpu: 1.014	Volt: 12,479 Vpu: 1.00	Volt: - NA Vpu: - NA

Culinary Water Distribution System Sizing & Modeling Report

The Cordero Subdivision



April 15, 2022
Prepared by: Jake Black, EIT
Reviewed by: Brant Tuttle, PE
Northern Engineering, Inc.
1040 East 800 North
Orem, Utah 84097
(801) 802-8992

The Cordero Subdivision

1.0 INTRODUCTION & PURPOSE:

The original Cordero Subdivision is a 200-acre residential development located at Copper Rock Parkway and 2100 West. An 80-acre parcel has been sold for the Southern Shores Ski Lake Community, which has been designed, approved, and is under construction with 56 lots. The remaining 120-acres has been divided into the east 80-acres (299 units) consisting of single-family lots zoned R1-6, and west 40-acres (345 units) which is zoned Recreational Resort and planned for vacation rentals. The total combined unit count for the 200-acres is 700 units. The purpose of this report is to demonstrate that the proposed water distribution system can meet the anticipated peak water demands that it may come subject to. The State of Utah stipulates that public water systems be sized adequately to deliver the high flows associated with the periods of peak use and for fire flow emergencies. (See applicable Utah codes R309-105, R309-510, and R309-511 along with the International Fire Code). Typically, these peak usage events occur during the hottest period of the summer, when outdoor watering is at its highest.

- The Peak Day Demand (PDD) for a system is defined as the maximum volume of water used on any given day during the year, including water used for irrigation.
- Peak Instantaneous Demand (PID) is defined as the maximum amount of water used in a single hour, in any given day, including water used for irrigation.
- The Fire Flow Demand (FFD) is the flow rate expected at any given fire hydrant within the system and is determined by the Fire Marshall in accordance with building codes.

Delivery of these peak flows are to be provided while simultaneously keeping residual pressures within the system above certain levels. Flow tests performed on the new fire hydrant located at the 2100 W and Copper Rock Parkway intersection (also known as Ex.FH3 in the water model labeling system) by City Staff, provided information on what types of pressures the model needed to meet. The fire hydrant elevation is 3338 feet. The static pressure of the hydrant was 95 psi. According to State Code, Public Water Systems are to ensure that distribution systems maintain a ***minimum*** residual system pressure of:

- (a) at least 40 psi during a *peak day demand* condition;
- (b) at least 30 psi during a *peak instantaneous demand* condition; and
- (c) at least 20 psi during *fire flow conditions* **and** that this fire demand be experienced concurrently with a *peak day demand* condition.

1.1 WATER SYSTEM DESIGN CRITERIA:

State of Utah Admin Code Section R309R-510 was used to calculate the Peak Day Demand for each residential lot. Both indoor use and irrigation use together was analyzed to calculate the PDD. For indoor use, Table 510-1 of State code lists a PDD of 800 gallons per day per residence. This equates to 0.556 gallons per minute. Table 510-3 lists a PDD of 4.90 gallons per minute per irrigated acre within Map Zone 6, which this project falls within. We determined this project will have an average

of 3,000 square feet of irrigation per lot which equates to 0.0689 acres. Multiplying 4.90 gallons per minute per acre by 0.0689 acres equates to 0.337 gallons per minute. Adding this to the indoor use, the total PDD equals 0.893 gallons per minute. This demand was applied to all 700 lots of the project for analysis of PDD and PDD+FFD.

For the Peak Instantaneous Demand, the Peak Day Demand is multiplied by a factor of 2. This equals 1.786 gallons per minute. This demand was applied to all 700 lots of the project for the analysis of PID.

State of Utah Admin Code Section R309R-510 was used to calculate the total storage requirement for the project. Both indoor use and irrigation use together was analyzed to calculate the total storage. For indoor use, Table 510-4 of State code lists a storage of 400 gallons per residence. Table 510-5 lists a storage of 4,964 gallons per irrigated acre within Map Zone 6, which this project falls within. We determined this project will have an average of 3,000 square feet of irrigation per lot which equates to 0.0689 acres. Multiplying 4,964 gallons per acre by 0.0689 acres equates to 342 gallons. Adding this to the indoor use storage, the total storage equals 742 gallons per residence. This storage applied to all 700 lots of the project equates to a total storage requirement of 519,400 gallons.

According to the International Code, Fire Flow demand is dependent on dwelling size. For dwellings less than 3,600 sq. ft. the Fire Flow Demand is 1,500 gpm. For dwellings less than 4,800 sq. ft. but greater than 3600 sq. ft. the Fire Flow Requirement is 1,750 gpm. For dwellings less than 6,200 sq. ft. but greater than 4,800 sq. ft. the Fire Flow Requirement is 2,000 gpm.

$$FFD = \begin{cases} 1500 \text{ gpm}, & \text{dwelling} < 3600 \text{ ft}^2 \\ 1750 \text{ gpm}, & 3600 \text{ ft}^2 < \text{dwelling} < 4800 \text{ ft}^2 \\ 2000 \text{ gpm}, & 4800 \text{ ft}^2 < \text{dwelling} < 6200 \text{ ft}^2 \end{cases}$$

It was determined that the average dwelling size for this project will be less than 3600 sq. ft. For the PDD+FFD analysis, the PDD was applied to all lots and a 1500 gallons per minute fire flow was applied to the most critical fire hydrant for the project. This fire hydrant is node labeled “FH-SW” in the model as shown in the Appendix and sits higher in elevation than all other hydrants. Applying the fire flow to this hydrant resulted in the lowest pressures as compared to applying the fire flow to all other hydrants.

➔ <u>Peak Day Demand (PDD)</u>	0.893 GPM
➔ <u>Peak Instantaneous Demand (PID)</u>	1.786 GPM
➔ <u>Peak Day w/ Fire Flow Flows (PDD+FFD)</u>	0.893 GPM + 1500 GPM

1.2 HYDRAULIC ANALYSIS AND COMPUTER MODELING:

Hydraulic modeling software programs have been developed to aid in the analysis and design of water distribution systems and, when properly prepared, have been found to accurately simulate available flows and system pressures with a system. These analyses allow the designer to size, compare, and confirm the performance of existing or proposed infrastructure.

“EPANET 2.2”, a hydraulic modeling software developed by the United States Department of Environmental Protection, was utilized for the water distribution system analysis herein described. EPANET 2.2 was developed for conducting steady-state analysis of pressure pipe networks and allows the evaluation of a variety of water demands and operating conditions within a water system. The software allows the designer to link a graphical representation of the water distribution system to a database that describes the physical characteristics of each hydraulic feature (i.e. length, diameter, and roughness coefficient for a pipeline) and the physical attributes and demand conditions at junction nodes (i.e. ground elevation, demand, etc.). In a water model, junction nodes are established at all intersections between pipes as well as other water demand locations in the system. Altogether, these water models can accurately simulate the different components of the distribution system, including the piping, points of connection, system elevations, system demands, and available pressures.

1.3 DISTRIBUTION SYSTEM:

The distribution system within the model was laid within the proposed public streets. All 700 lots were divided up and their water demands applied to the nearest node. Nodes representing fire hydrants were also placed throughout the system according to fire code and Hurricane City Standards.

As per Hurricane City Standards, pipes 12-inches and larger are to be constructed as ductile iron. All smaller pipes are to be constructed as PVC. The model was created to reflect this standard. A roughness coefficient of 150 was applied to all PVC pipes and 130 to all ductile iron pipes. See Appendix A for an exhibit of the subdivision showing the proposed waterline sizes and location, as well as fire hydrant locations. See Appendix A for a map of the 200 acres.

The model was calibrated to reflect the existing condition of the new fire hydrant at 2100 W and Copper Rock Parkway intersection that was tested at a static 95 psi. In order for the model to reflect the measured static pressures in hydrants, a coefficient of 134 was applied to the existing 8-inch water line in 3000 South. A static test was conducted in the model with no demands applied to the lots or hydrants to verify matching static pressures at existing hydrant.

1.4 SYSTEM ANALYSIS:

The goal of the model is to determine if upsizing the 8” water main in 3000 South to a 12” water main will provide sufficient flows to meet state code. The system was modeled using the following:

- Upsizing the existing 8” main in 3000 South to a 12” main from 1100 W to 2100 W.
- The new 12” main that runs down 2100 West from 3000 South to Copper Rock Parkway remains.
- The new 8” main running from 1500 West to 2100 West in approximately 2800 South remains. (across the Zarbock and Beard Property).
- The new 12” main connected to the new 8” main mentioned previous, running from 2100 West to 2600 West at approximately 2800 South and then down to 3000 South remains.

- The new 18" main in 2600 West running from 3000 South to Copper Rock Parkway remains.
- The new 12" main in Copper Rock Parkway running from 2600 West to 2100 West remains.

All new mains listed above have been approved and are under construction. The only new proposed change would be the upsizing of the existing 3000 S main from 1100 W to 2100 W. See Table 1 for model results. See Figure 1 for a map exhibit of main lines.

Table 1 – Minimum Connection Pressure Values:

MODEL	LOWEST RESULTING PRESSURE PSI			MODEL RESULTS: PASS/FAIL
	PDD (P>40psi)	PID (P>30psi)	PDD+FFD (P>20psi)	
SCENARIO 1	56.93	49.12	29.59	PASS

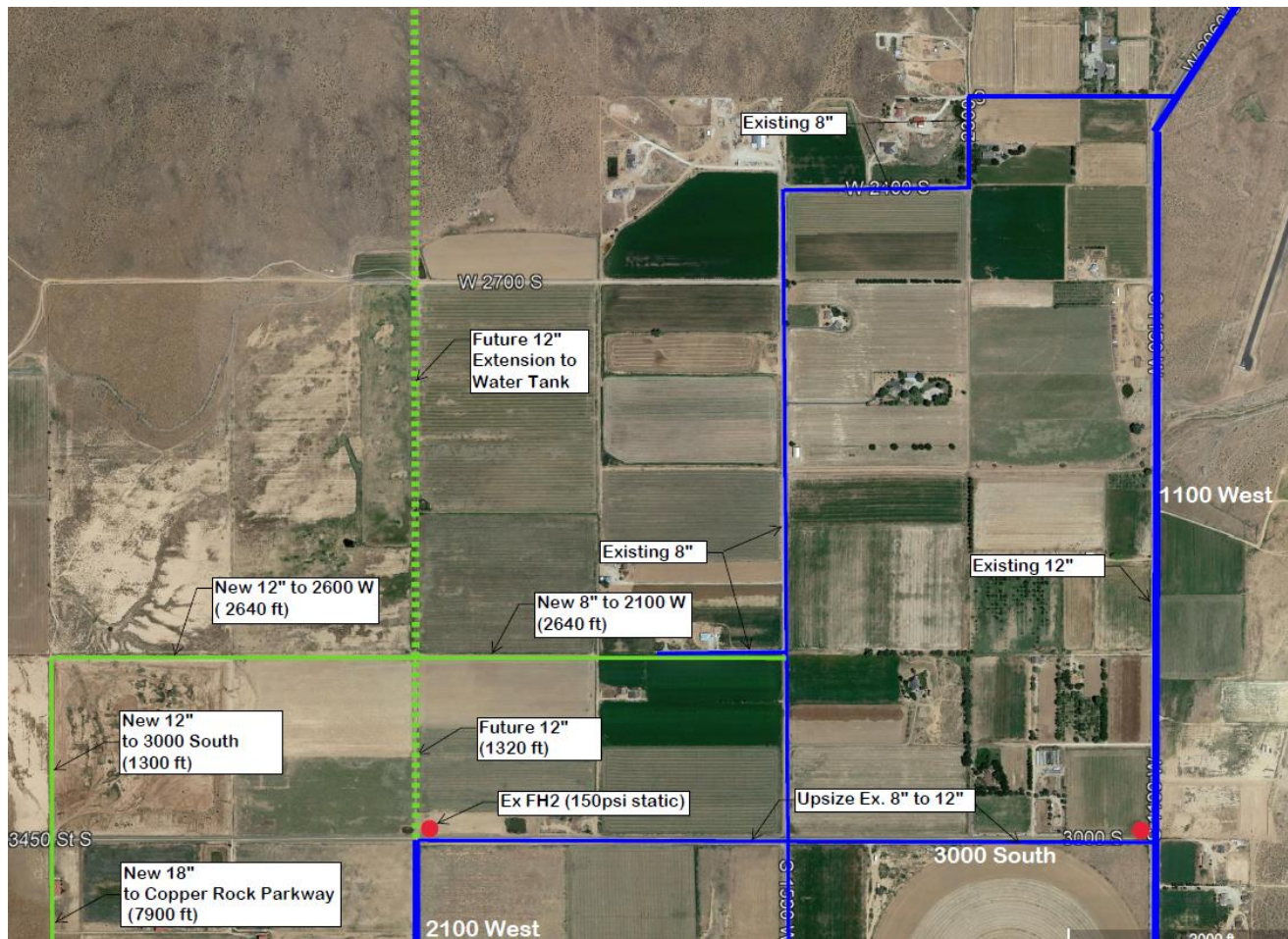


Figure 1: Map Exhibit of Main Water Lines

1.5 RESULTS:

The modeled system was able to supply sufficient pressure during PDD, PID, and Fire Flow + PDD and is acceptable per state code. See Appendix for all figures and data of the model.

1.6 CONCLUSION:

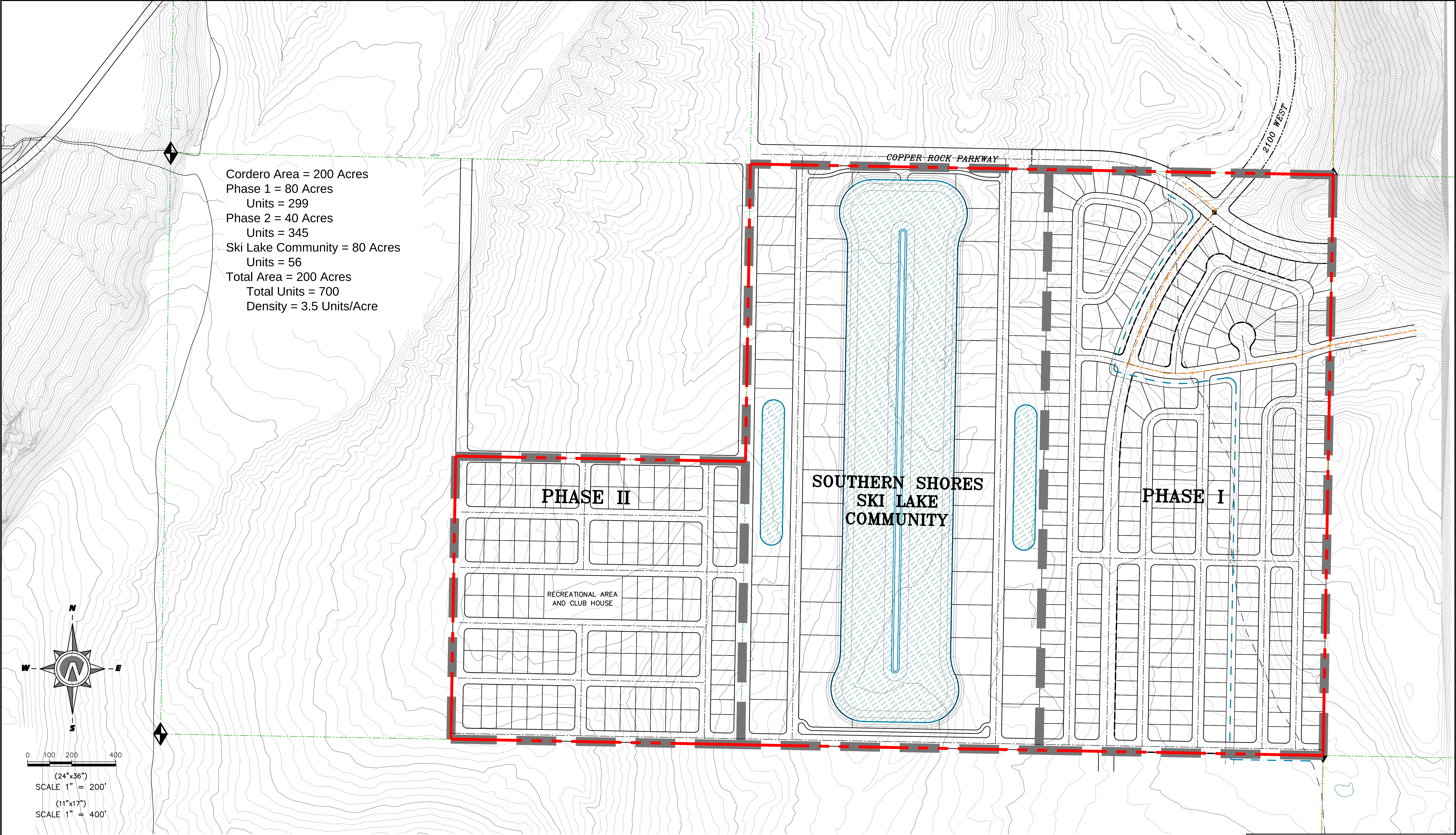
The new, under construction water system is able to supply the pressures and meet the design criteria minimums of Utah State Code.

1.7 APPENDIX:

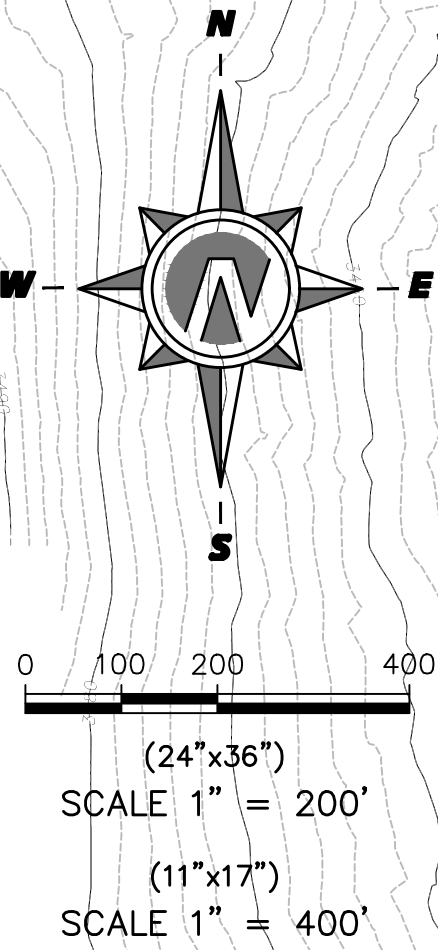
Appendix A – Project Map

Appendix B – Node & Pipe Locations

Appendix C – Scenario 1 Model Tests



Cordero Area = 200 Acres
Phase 1 = 80 Acres
Units = 299
Phase 2 = 40 Acres
Units = 345
Ski Lake Community = 80 Acres
Units = 56
Total Area = 200 Acres
Total Units = 700
Density = 3.5 Units/Acre



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:
K:\3-16-052-00 SPILSBURY-COPPER ROCK\CAD\2020 DESIGN\2020 BASE_09-02-20_c.dwg 9/9/2020 5:11 PM				



Northern
ENGINEERING INC
ENGINEERING-LAND PLANNING
CONSTRUCTION MANAGEMENT

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

CORDERO

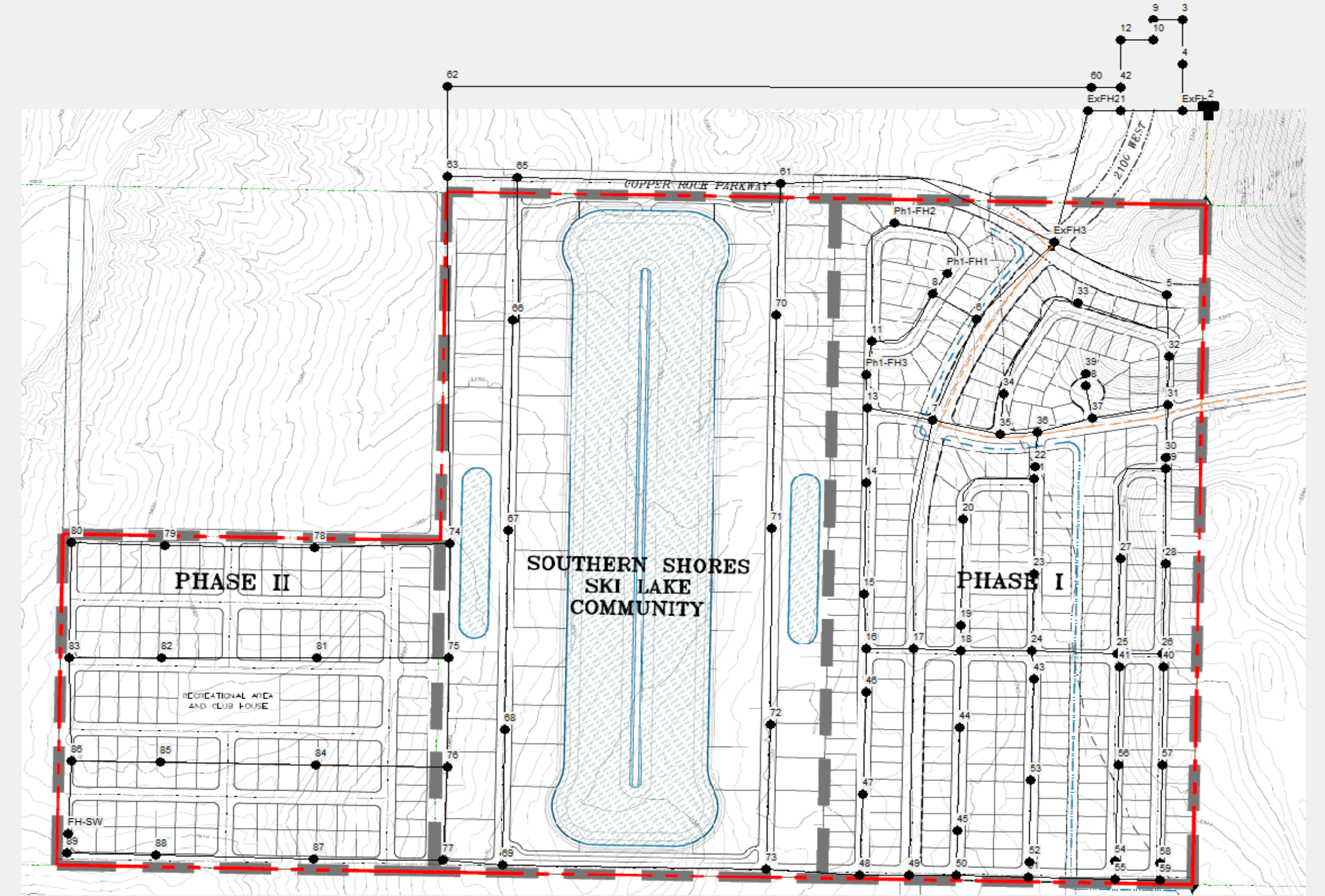
CONCEPT PLAN

HURRICANE, UTAH

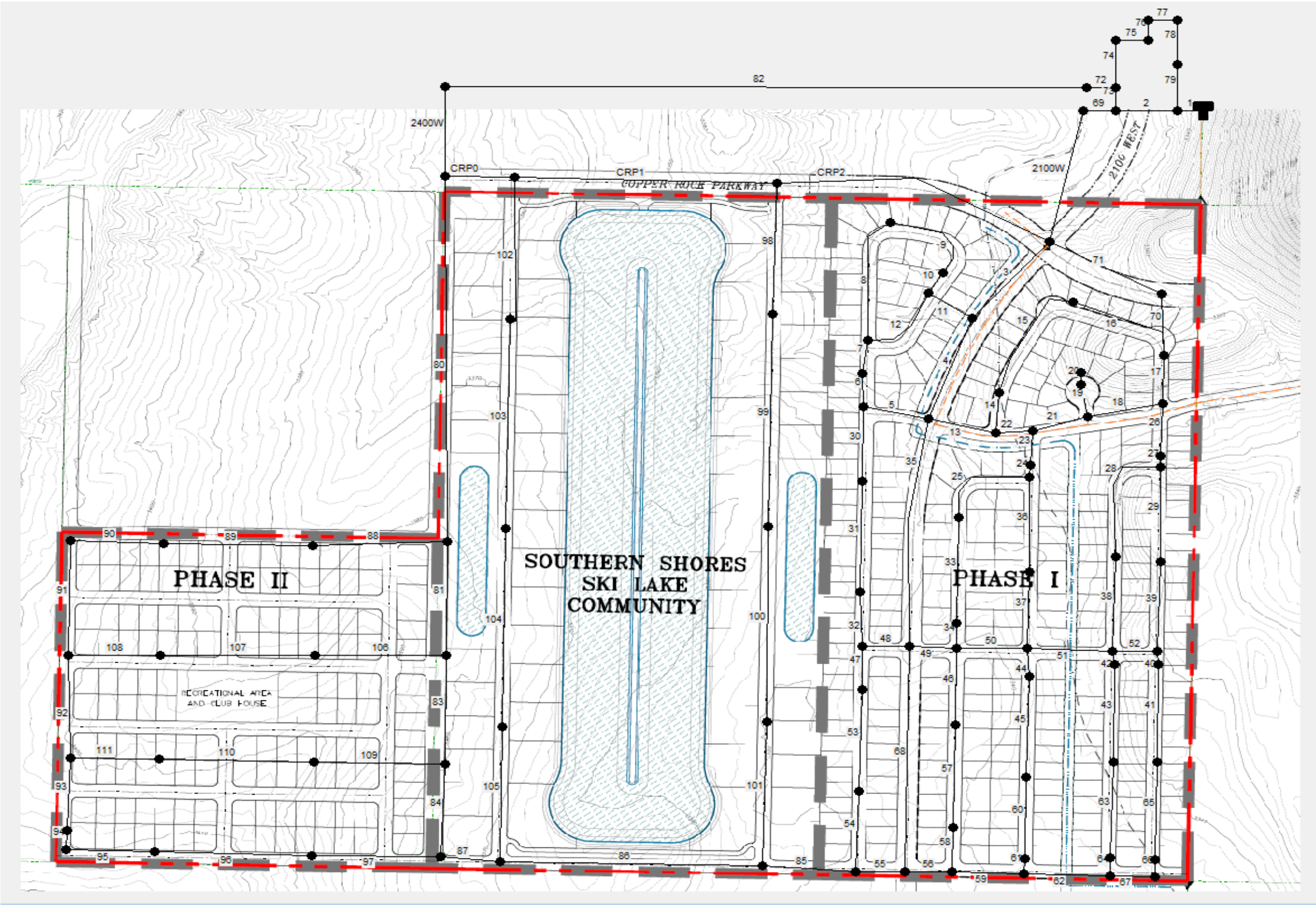
JOB NO.
3-16-052

SHEET NO.
1

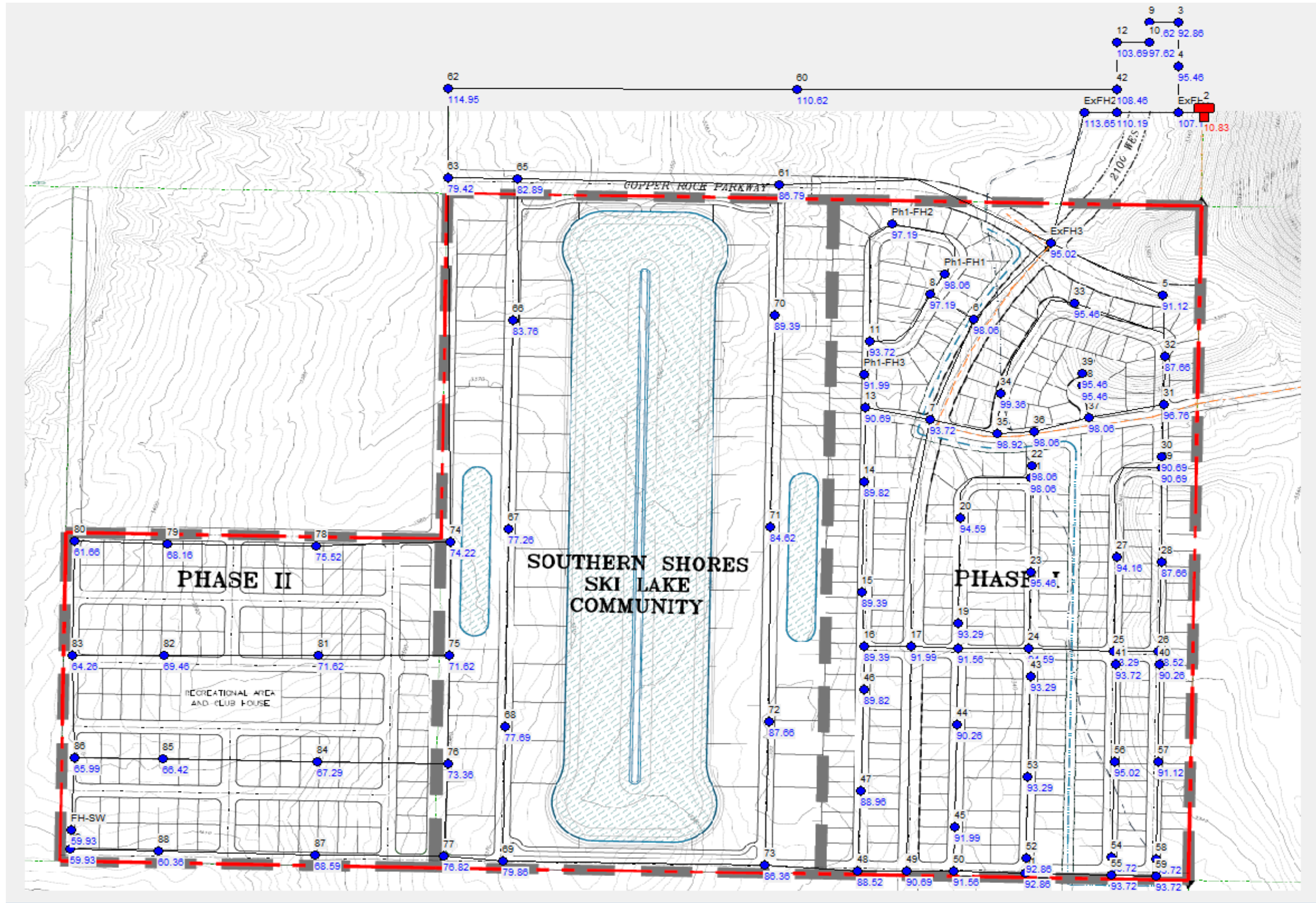
Node IDs and Locations



Link IDs and Locations



Static - No Demands



Static - No Demands - Nodes

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 89	3414	0	3552.3	59.93
Junc FH-SW	3414	0	3552.3	59.93
Junc 88	3413	0	3552.3	60.36
Junc 80	3410	0	3552.3	61.66
Junc 83	3404	0	3552.3	64.26
Junc 86	3400	0	3552.3	65.99
Junc 85	3399	0	3552.3	66.42
Junc 84	3397	0	3552.3	67.29
Junc 79	3395	0	3552.3	68.16
Junc 87	3394	0	3552.3	68.59
Junc 82	3392	0	3552.3	69.46
Junc 81	3387	0	3552.3	71.62
Junc 75	3387	0	3552.3	71.62
Junc 76	3383	0	3552.3	73.36
Junc 74	3381	0	3552.3	74.22
Junc 78	3378	0	3552.3	75.52
Junc 77	3375	0	3552.3	76.82
Junc 67	3374	0	3552.3	77.26
Junc 68	3373	0	3552.3	77.69
Junc 63	3369	0	3552.3	79.42
Junc 69	3368	0	3552.3	79.86
Junc 65	3361	0	3552.3	82.89
Junc 66	3359	0	3552.3	83.76
Junc 71	3357	0	3552.3	84.62
Junc 73	3353	0	3552.3	86.36
Junc 61	3352	0	3552.3	86.79
Junc 72	3350	0	3552.3	87.66
Junc 32	3350	0	3552.3	87.66
Junc 28	3350	0	3552.3	87.66
Junc 26	3348	0	3552.3	88.52
Junc 48	3348	0	3552.3	88.52
Junc 47	3347	0	3552.3	88.96

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 15	3346	0	3552.3	89.39
Junc 16	3346	0	3552.3	89.39
Junc 70	3346	0	3552.3	89.39
Junc 46	3345	0	3552.3	89.82
Junc 14	3345	0	3552.3	89.82
Junc 40	3344	0	3552.3	90.26
Junc 44	3344	0	3552.3	90.26
Junc 49	3343	0	3552.3	90.69
Junc 13	3343	0	3552.3	90.69
Junc 29	3343	0	3552.3	90.69
Junc 30	3343	0	3552.3	90.69
Junc 5	3342	0	3552.3	91.12
Junc 57	3342	0	3552.3	91.12
Junc 18	3341	0	3552.3	91.56
Junc 50	3341	0	3552.3	91.56
Junc Ph1-FH3	3340	0	3552.3	91.99
Junc 17	3340	0	3552.3	91.99
Junc 45	3340	0	3552.3	91.99
Junc 3	3338	0	3552.3	92.86
Junc 51	3338	0	3552.3	92.86
Junc 52	3338	0	3552.3	92.86
Junc 19	3337	0	3552.3	93.29
Junc 43	3337	0	3552.3	93.29
Junc 53	3337	0	3552.3	93.29
Junc 25	3337	0	3552.3	93.29
Junc 41	3336	0	3552.3	93.72
Junc 54	3336	0	3552.3	93.72
Junc 59	3336	0	3552.3	93.72
Junc 58	3336	0	3552.3	93.72
Junc 11	3336	0	3552.3	93.72
Junc 55	3336	0	3552.3	93.72
Junc 7	3336	0	3552.3	93.72

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 27	3335	0	3552.3	94.16
Junc 20	3334	0	3552.3	94.59
Junc 24	3334	0	3552.3	94.59
Junc 56	3333	0	3552.3	95.02
Junc ExFH3	3333	0	3552.3	95.02
Junc 4	3332	0	3552.3	95.46
Junc 38	3332	0	3552.3	95.46
Junc 23	3332	0	3552.3	95.46
Junc 33	3332	0	3552.3	95.46
Junc 39	3332	0	3552.3	95.46
Junc 31	3329	0	3552.3	96.76
Junc 8	3328	0	3552.3	97.19
Junc Ph1-FH2	3328	0	3552.3	97.19
Junc 10	3327	0	3552.3	97.62
Junc 9	3327	0	3552.3	97.62
Junc Ph1-FH1	3326	0	3552.3	98.06
Junc 6	3326	0	3552.3	98.06
Junc 21	3326	0	3552.3	98.06
Junc 22	3326	0	3552.3	98.06
Junc 37	3326	0	3552.3	98.06
Junc 36	3326	0	3552.3	98.06
Junc 35	3324	0	3552.3	98.92
Junc 34	3323	0	3552.3	99.36
Junc 12	3313	0	3552.3	103.69
Junc ExFH1	3305	0	3552.3	107.16
Junc 42	3302	0	3552.3	108.46
Junc 1	3298	0	3552.3	110.19
Junc 60	3297	0	3552.3	110.62
Junc ExFH2	3290	0	3552.3	113.65
Junc 62	3287	0	3552.3	114.95

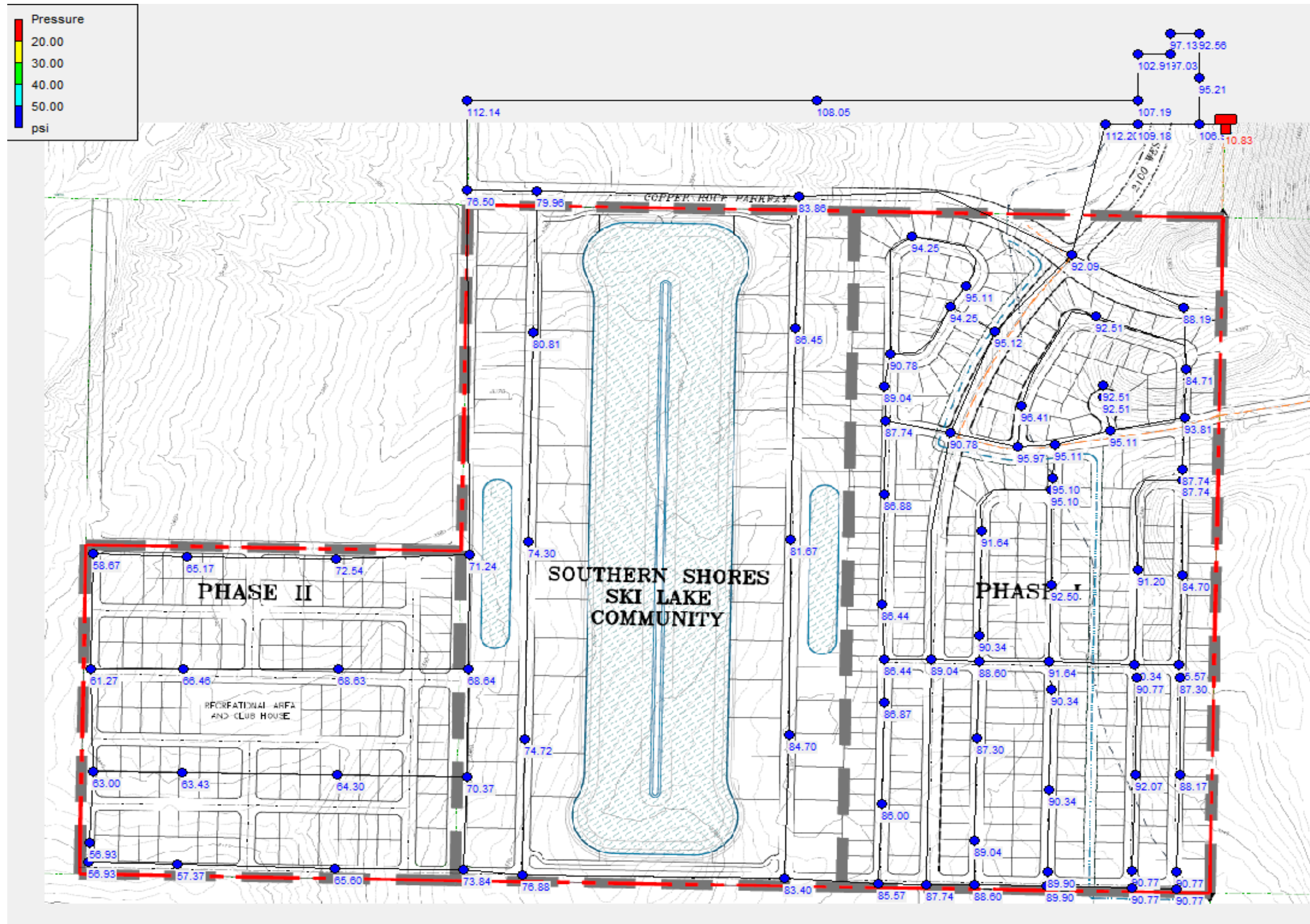
Static - No Demands - Links

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 38	362.01	8	150	0	0
Pipe 35	874.02	18	130	0	0
Pipe 86	920	12	130	0	0
Pipe 87	240	12	130	0	0
Pipe 103	880	8	150	0	0
Pipe 102	440	8	150	0	0
Pipe 104	880	8	150	0	0
Pipe 36	361.83	8	150	0	0
Pipe 105	440	8	150	0	0
Pipe 80	1400	12	130	0	0
Pipe 28	478.35	8	150	0	0
Pipe 42	49.2	8	150	0	0
Pipe 22	125.92	8	150	0	0
Pipe 85	340	12	130	0	0
Pipe 61	55.41	12	100	0	0
Pipe 56	162.17	12	130	0	0
Pipe 63	366.83	8	150	0	0
Pipe 43	372.26	8	150	0	0
Pipe 37	293.37	8	150	0	0
Pipe 2400W	9200	18	130	0	0
Pipe 64	66.37	8	150	0	0
Pipe 45	385.3	8	150	0	0
Pipe 60	311.45	8	150	0	0
Pipe 44	106.8	8	150	0	0
Pipe 59	248.84	8	150	0	0
Pipe 68	860.44	18	130	0	0
Pipe 48	159.97	8	150	0	0
Pipe 67	154.89	8	150	0	0
Pipe 24	45.86	8	150	0	0
Pipe 98	440	8	150	0	0
Pipe 101	440	8	150	0	0
Pipe 23	129.72	8	150	0	0
Pipe 100	880	8	150	0	0
Pipe 40	49.07	8	150	0	0
Pipe 99	880	8	150	0	0
Pipe 81	430	12	130	0	0
Pipe 82	2640	12	130	0	0
Pipe 55	167.7	12	130	0	0
Pipe 89	430	12	130	0	0

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 91	430	12	130	0	0
Pipe 88	430	12	130	0	0
Pipe 90	430	12	130	0	0
Pipe CRP1	950	12	130	0	0
Pipe 21	197.76	8	150	0	0
Pipe CRP0	250	12	130	0	0
Pipe 33	399.99	8	150	0	0
Pipe 34	99.03	8	150	0	0
Pipe 25	368.41	8	150	0	0
Pipe 46	292.53	8	150	0	0
Pipe 57	390.74	8	150	0	0
Pipe 58	169.58	8	150	0	0
Pipe 62	293.1	8	150	0	0
Pipe 39	342.98	8	150	0	0
Pipe 29	361.83	8	150	0	0
Pipe CRP2	1000	12	130	0	0
Pipe 27	41.9	8	150	0	0
Pipe 26	198.2	8	150	0	0
Pipe 3	384.76	18	130	0.01	0
Pipe CRP3	420	12	130	0	0
Pipe 47	165.56	8	150	0	0
Pipe 54	308.02	8	150	0	0
Pipe 53	385.25	8	150	0	0
Pipe 66	66.34	8	150	0	0
Pipe 41	372.25	8	150	0	0
Pipe 83	430	12	130	0	0
Pipe 65	372.36	8	150	0	0
Pipe 12	304.26	8	150	0	0
Pipe 52	152.35	8	150	0	0
Pipe 92	430	12	130	0	0
Pipe 78	2643	12	130	0	0
Pipe 79	2674	12	130	0	0
Pipe 106	430	8	150	0	0
Pipe 108	430	8	150	0	0
Pipe 107	430	8	150	0	0
Pipe 4	413.75	18	130	0.01	0
Pipe 17	186.67	8	150	0	0
Pipe 1	400	12	130	0	0
Pipe 72	2640	8	150	0	0

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 73	1330	8	134	0	0
Pipe 30	281.87	8	150	0	0
Pipe 31	422.84	8	150	0	0
Pipe 32	209.62	8	150	0	0
Pipe 51	293.49	8	150	0	0
Pipe 19	127.75	8	150	0	0
Pipe 20	45.7	8	150	0	0
Pipe 11	179.66	8	150	0	0
Pipe 7	127.12	8	150	0	0
Pipe 6	129.55	8	150	0	0
Pipe 110	430	8	150	0	0
Pipe 109	430	8	150	0	0
Pipe 111	430	8	150	0	0
Pipe 2100W	8620	12	130	0.01	0
Pipe 69	2650	12	130	0.01	0
Pipe 50	239.95	8	150	0	0
Pipe 49	163.95	8	150	0	0
Pipe 84	430	12	130	-0.01	0
Pipe 94	30	12	130	0.01	0
Pipe 97	430	12	130	0.01	0
Pipe 96	430	12	130	0.01	0
Pipe 95	430	12	130	0.01	0
Pipe 93	400	12	130	0.01	0
Pipe 70	200	8	150	0	0
Pipe 18	259.94	8	150	0	0
Pipe 2	2650	12	130	0.01	0
Pipe 74	3268	8	134	0	0
Pipe 76	628	8	134	0	0
Pipe 75	1320	8	134	0	0
Pipe 77	1340	8	134	0	0
Pipe 8	487.49	8	150	0	0
Pipe 10	96.13	8	150	0	0
Pipe 9	355.92	8	150	0	0
Pipe 5	225.58	8	150	0	0
Pipe 13	238.37	8	150	0	0
Pipe 14	156.58	8	150	0	0
Pipe 15	480.87	8	150	0	0
Pipe 16	415.24	8	150	0	0

Peak Daily Demand (PDD)



Peak Daily Demand (PDD) Nodes

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc FH-SW	3414	0	3545.39	56.93
Junc 89	3414	8.93	3545.39	56.93
Junc 88	3413	16.97	3545.4	57.37
Junc 80	3410	8.93	3545.39	58.67
Junc 83	3404	16.97	3545.39	61.27
Junc 86	3400	16.97	3545.39	63
Junc 85	3399	33.93	3545.39	63.43
Junc 84	3397	34.83	3545.39	64.3
Junc 79	3395	16.97	3545.4	65.17
Junc 87	3394	16.97	3545.4	65.6
Junc 82	3392	33.93	3545.39	66.46
Junc 81	3387	33.93	3545.39	68.63
Junc 75	3387	16.97	3545.41	68.64
Junc 76	3383	16.97	3545.41	70.37
Junc 74	3381	8.93	3545.42	71.24
Junc 78	3378	16.97	3545.41	72.54
Junc 77	3375	8.93	3545.41	73.84
Junc 67	3374	8.04	3545.47	74.3
Junc 68	3373	8.04	3545.44	74.72
Junc 63	3369	0	3545.54	76.5
Junc 69	3368	0	3545.43	76.88
Junc 65	3361	0	3545.54	79.96
Junc 66	3359	8.93	3545.51	80.81
Junc 71	3357	8.04	3545.49	81.67
Junc 73	3353	0	3545.47	83.4
Junc 61	3352	0	3545.53	83.86
Junc 72	3350	8.04	3545.48	84.7
Junc 28	3350	0	3545.48	84.7
Junc 32	3350	0	3545.5	84.71
Junc 26	3348	16.07	3545.48	85.57
Junc 48	3348	11.61	3545.48	85.57
Junc 47	3347	0	3545.49	86

40 req.

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 16	3346	24.11	3545.49	86.44
Junc 15	3346	0	3545.49	86.44
Junc 70	3346	8.93	3545.51	86.45
Junc 46	3345	0	3545.49	86.87
Junc 14	3345	0	3545.5	86.88
Junc 40	3344	0	3545.48	87.3
Junc 44	3344	0	3545.49	87.3
Junc 29	3343	18.75	3545.48	87.74
Junc 30	3343	0	3545.49	87.74
Junc 49	3343	0	3545.49	87.74
Junc 13	3343	16.97	3545.5	87.74
Junc 57	3342	0	3545.48	88.17
Junc 5	3342	0	3545.52	88.19
Junc 18	3341	19.65	3545.49	88.6
Junc 50	3341	10.72	3545.49	88.6
Junc 45	3340	0	3545.49	89.04
Junc 17	3340	0	3545.49	89.04
Junc Ph1-FH3	3340	0	3545.5	89.04
Junc 51	3338	10.72	3545.48	89.9
Junc 52	3338	0	3545.48	89.9
Junc 25	3337	14.29	3545.48	90.34
Junc 43	3337	0	3545.48	90.34
Junc 53	3337	0	3545.48	90.34
Junc 19	3337	0	3545.49	90.34
Junc 59	3336	8.04	3545.48	90.77
Junc 58	3336	0	3545.48	90.77
Junc 55	3336	8.04	3545.48	90.77
Junc 54	3336	0	3545.48	90.77
Junc 41	3336	0	3545.48	90.77
Junc 11	3336	18.75	3545.5	90.78
Junc 7	3336	0	3545.51	90.78
Junc 27	3335	0	3545.48	91.2

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 24	3334	19.65	3545.48	91.64
Junc 20	3334	0	3545.49	91.64
Junc 56	3333	0	3545.48	92.07
Junc ExFH3	3333	0	3545.53	92.09
Junc 23	3332	0	3545.49	92.5
Junc 38	3332	6.25	3545.49	92.51
Junc 39	3332	0	3545.49	92.51
Junc 33	3332	0	3545.5	92.51
Junc 3	3338	0	3551.61	92.56
Junc 31	3329	12.5	3545.49	93.81
Junc Ph1-FH2	3328	0	3545.51	94.25
Junc 8	3328	11.61	3545.51	94.25
Junc 21	3326	19.65	3545.49	95.1
Junc 22	3326	0	3545.49	95.1
Junc 36	3326	0.89	3545.49	95.11
Junc 37	3326	1.79	3545.49	95.11
Junc Ph1-FH1	3326	0	3545.51	95.11
Junc 6	3326	0	3545.52	95.12
Junc 4	3332	0	3551.74	95.21
Junc 35	3324	16.97	3545.5	95.97
Junc 34	3323	0	3545.5	96.41
Junc 10	3327	0	3550.94	97.03
Junc 9	3327	0	3551.16	97.13
Junc 12	3313	0	3550.49	102.91
Junc ExFH1	3305	0	3551.88	106.97
Junc 42	3302	0	3549.38	107.19
Junc 60	3297	0	3546.36	108.05
Junc 1	3298	0	3549.98	109.18
Junc 62	3287	0	3545.81	112.14
Junc ExFH2	3290	0	3548.93	112.2

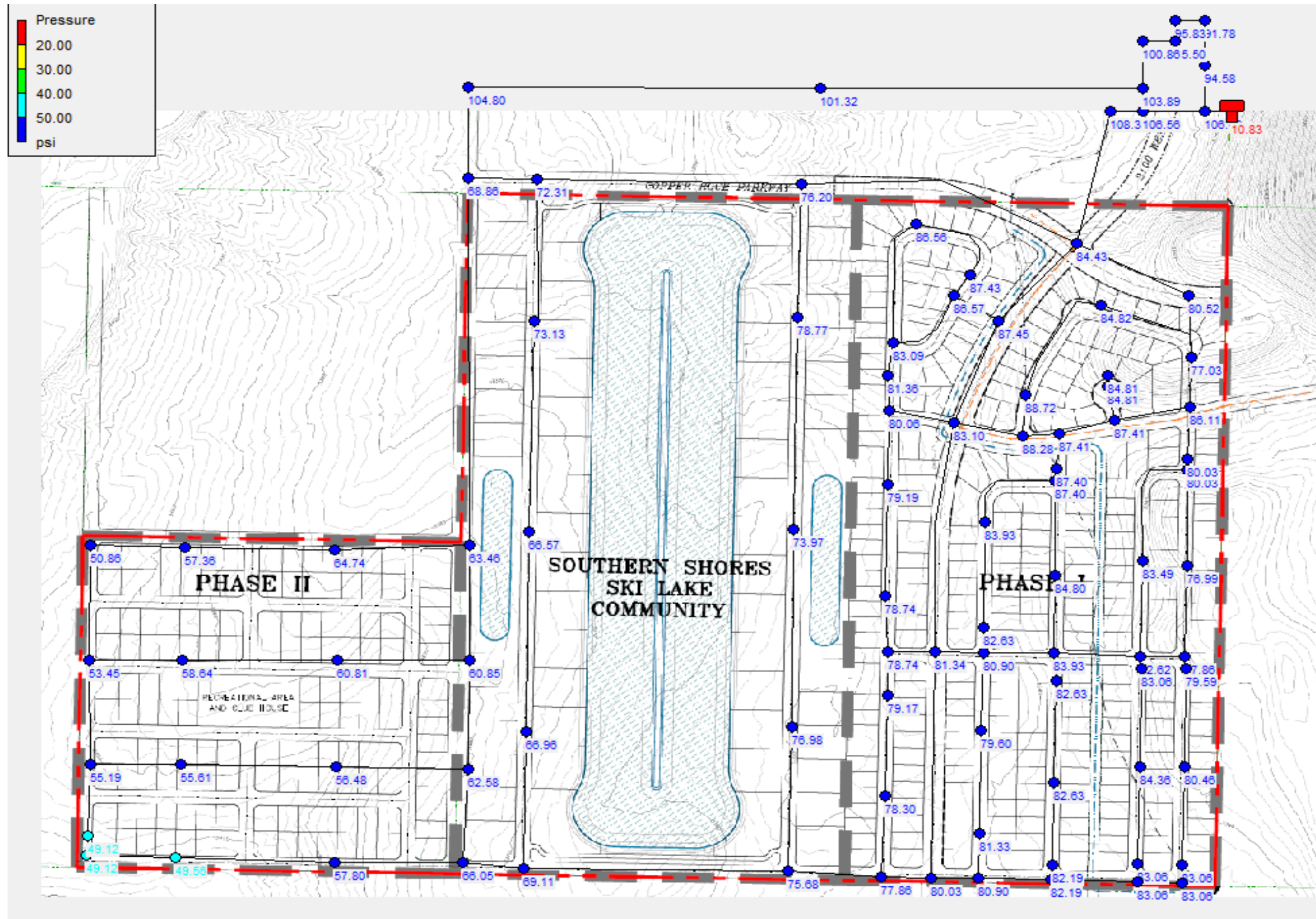
Peak Daily Demand (PDD) Links

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 20	45.7	8	150	0	0
Pipe 61	55.41	12	100	2.16	0.01
Pipe 40	49.07	8	150	1.19	0.01
Pipe 66	66.34	8	150	1.19	0.01
Pipe 41	372.25	8	150	1.19	0.01
Pipe 65	372.36	8	150	1.19	0.01
Pipe 92	430	12	130	2.83	0.01
Pipe 64	66.37	8	150	1.32	0.01
Pipe 42	49.2	8	150	1.32	0.01
Pipe 63	366.83	8	150	1.32	0.01
Pipe 43	372.26	8	150	1.32	0.01
Pipe 58	169.58	8	150	1.71	0.01
Pipe 57	390.74	8	150	1.71	0.01
Pipe 46	292.53	8	150	1.71	0.01
Pipe CRP2	1000	12	130	-4.06	0.01
Pipe 44	106.8	8	150	2.16	0.01
Pipe 45	385.3	8	150	2.16	0.01
Pipe 60	311.45	8	150	2.16	0.01
Pipe 34	99.03	8	150	2.18	0.01
Pipe 33	399.99	8	150	2.18	0.01
Pipe 25	368.41	8	150	2.18	0.01
Pipe 18	259.94	8	150	3.29	0.02
Pipe 83	430	12	130	9.08	0.03
Pipe 21	197.76	8	150	-4.75	0.03
Pipe 19	127.75	8	150	6.25	0.04
Pipe 67	154.89	8	150	6.85	0.04
Pipe 52	152.35	8	150	7.06	0.05
Pipe 38	362.01	8	150	8.72	0.06
Pipe 28	478.35	8	150	8.72	0.06
Pipe 39	342.98	8	150	10.2	0.07
Pipe 29	361.83	8	150	10.2	0.07
Pipe 110	430	8	150	11.85	0.08
Pipe 10	96.13	8	150	-12.25	0.08
Pipe 9	355.92	8	150	-12.25	0.08
Pipe 8	487.49	8	150	-12.25	0.08
Pipe 107	430	8	150	12.44	0.08
Pipe 36	361.83	8	150	13.36	0.09
Pipe 37	293.37	8	150	13.36	0.09
Pipe 62	293.1	8	150	13.57	0.09

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 56	162.17	12	130	31.15	0.09
Pipe 51	293.49	8	150	13.95	0.09
Pipe 14	156.58	8	150	-15.75	0.1
Pipe 16	415.24	8	150	-15.75	0.1
Pipe 15	480.87	8	150	-15.75	0.1
Pipe 6	129.55	8	150	-15.99	0.1
Pipe 7	127.12	8	150	-15.99	0.1
Pipe 93	400	12	130	-36.22	0.1
Pipe 94	30	12	130	-36.22	0.1
Pipe CRP1	950	12	130	-38.77	0.11
Pipe 101	440	8	150	17.82	0.11
Pipe 91	430	12	130	41.28	0.12
Pipe 47	165.56	8	150	19.99	0.13
Pipe 54	308.02	8	150	19.99	0.13
Pipe 53	385.25	8	150	19.99	0.13
Pipe 95	430	12	130	-45.15	0.13
Pipe 48	159.97	8	150	-21.31	0.14
Pipe 108	430	8	150	-21.49	0.14
Pipe 111	430	8	150	-22.08	0.14
Pipe 59	248.84	8	150	22.13	0.14
Pipe 90	430	12	130	50.21	0.14
Pipe 50	239.95	8	150	22.4	0.14
Pipe 12	304.26	8	150	22.49	0.14
Pipe 31	422.84	8	150	22.79	0.15
Pipe 30	281.87	8	150	22.79	0.15
Pipe 32	209.62	8	150	22.79	0.15
Pipe 68	860.44	18	130	117.99	0.15
Pipe 5	225.58	8	150	23.77	0.15
Pipe 84	430	12	130	-54.57	0.15
Pipe 100	880	8	150	25.86	0.17
Pipe 96	430	12	130	-62.12	0.18
Pipe 105	440	8	150	29.54	0.19
Pipe 89	430	12	130	67.18	0.19
Pipe CRP3	420	12	130	-69.21	0.2
Pipe 81	430	12	130	72.43	0.21
Pipe 99	880	8	150	33.9	0.22
Pipe 97	430	12	130	-79.09	0.22
Pipe 24	45.86	8	150	35.19	0.22
Pipe 23	129.72	8	150	35.19	0.22

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 35	874.02	18	130	180.87	0.23
Pipe 88	430	12	130	84.15	0.24
Pipe 104	880	8	150	37.58	0.24
Pipe 26	198.2	8	150	37.67	0.24
Pipe 27	41.9	8	150	37.67	0.24
Pipe 55	167.7	12	130	-86.84	0.25
Pipe 22	125.92	8	150	-40.83	0.26
Pipe CRP0	250	12	130	-93.32	0.26
Pipe 49	163.95	8	150	41.57	0.27
Pipe 13	238.37	8	150	42.05	0.27
Pipe 85	340	12	130	95.23	0.27
Pipe 98	440	8	150	42.83	0.27
Pipe 103	880	8	150	45.62	0.29
Pipe 11	179.66	8	150	-46.35	0.3
Pipe 106	430	8	150	46.37	0.3
Pipe 109	430	8	150	46.68	0.3
Pipe 4	413.75	18	130	246.69	0.31
Pipe 86	920	12	130	113.05	0.32
Pipe 2400W	9200	18	130	258.83	0.33
Pipe 78	2643	12	130	-119.86	0.34
Pipe 79	2674	12	130	-119.86	0.34
Pipe 17	186.67	8	150	53.46	0.34
Pipe 102	440	8	150	54.55	0.35
Pipe 3	384.76	18	130	293.04	0.37
Pipe 87	240	12	130	142.59	0.4
Pipe 70	200	8	150	-69.21	0.44
Pipe 80	1400	12	130	165.51	0.47
Pipe 82	2640	12	130	258.83	0.73
Pipe 75	1320	8	134	-119.86	0.77
Pipe 74	3268	8	134	-119.86	0.77
Pipe 77	1340	8	134	-119.86	0.77
Pipe 76	628	8	134	-119.86	0.77
Pipe 73	1330	8	134	-138.98	0.89
Pipe 2100W	8620	12	130	366.32	1.04
Pipe 69	2650	12	130	366.32	1.04
Pipe 2	2650	12	130	505.29	1.43
Pipe 72	2640	8	150	-258.83	1.65
Pipe 1	400	12	130	625.15	1.77

Peak Instantaneous Demand (PID)



Peak Instantaneous Demand (PID) Nodes

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc FH-SW	3414	0	3527.37	49.12
Junc 89	3414	17.86	3527.37	49.12
Junc 88	3413	33.94	3527.38	49.56
Junc 80	3410	17.86	3527.37	50.86
Junc 83	3404	33.94	3527.36	53.45
Junc 86	3400	33.94	3527.36	55.19
Junc 85	3399	67.86	3527.34	55.61
Junc 84	3397	69.66	3527.35	56.48
Junc 79	3395	33.94	3527.39	57.36
Junc 87	3394	33.94	3527.41	57.8
Junc 82	3392	67.86	3527.34	58.64
Junc 81	3387	67.86	3527.35	60.81
Junc 75	3387	33.94	3527.42	60.85
Junc 76	3383	33.94	3527.42	62.58
Junc 74	3381	17.86	3527.45	63.46
Junc 78	3378	33.94	3527.41	64.74
Junc 77	3375	17.86	3527.44	66.05
Junc 67	3374	16.08	3527.64	66.57
Junc 68	3373	16.08	3527.53	66.96
Junc 63	3369	0	3527.91	68.86
Junc 69	3368	0	3527.5	69.11
Junc 65	3361	0	3527.88	72.31
Junc 66	3359	17.86	3527.78	73.13
Junc 71	3357	16.08	3527.71	73.97
Junc 73	3353	0	3527.65	75.68
Junc 61	3352	0	3527.86	76.2
Junc 72	3350	16.08	3527.66	76.98
Junc 28	3350	0	3527.69	76.99
Junc 32	3350	0	3527.76	77.03
Junc 26	3348	32.14	3527.69	77.86
Junc 48	3348	23.22	3527.69	77.86
Junc 47	3347	0	3527.7	78.3

30 req.

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 16	3346	48.22	3527.72	78.74
Junc 15	3346	0	3527.73	78.74
Junc 70	3346	17.86	3527.8	78.77
Junc 46	3345	0	3527.71	79.17
Junc 14	3345	0	3527.75	79.19
Junc 40	3344	0	3527.69	79.59
Junc 44	3344	0	3527.7	79.6
Junc 29	3343	37.5	3527.69	80.03
Junc 30	3343	0	3527.7	80.03
Junc 49	3343	0	3527.71	80.03
Junc 13	3343	33.94	3527.76	80.06
Junc 57	3342	0	3527.69	80.46
Junc 5	3342	0	3527.84	80.52
Junc 50	3341	21.44	3527.7	80.9
Junc 18	3341	39.3	3527.7	80.9
Junc 45	3340	0	3527.7	81.33
Junc 17	3340	0	3527.73	81.34
Junc Ph1-FH3	3340	0	3527.77	81.36
Junc 51	3338	21.44	3527.69	82.19
Junc 52	3338	0	3527.69	82.19
Junc 25	3337	28.58	3527.69	82.62
Junc 53	3337	0	3527.69	82.63
Junc 43	3337	0	3527.69	82.63
Junc 19	3337	0	3527.7	82.63
Junc 59	3336	16.08	3527.69	83.06
Junc 58	3336	0	3527.69	83.06
Junc 55	3336	16.08	3527.69	83.06
Junc 54	3336	0	3527.69	83.06
Junc 41	3336	0	3527.69	83.06
Junc 11	3336	37.5	3527.77	83.09
Junc 7	3336	0	3527.77	83.1
Junc 27	3335	0	3527.69	83.49

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 24	3334	39.3	3527.69	83.93
Junc 20	3334	0	3527.7	83.93
Junc 56	3333	0	3527.69	84.36
Junc ExFH3	3333	0	3527.86	84.43
Junc 23	3332	0	3527.7	84.8
Junc 38	3332	12.5	3527.72	84.81
Junc 39	3332	0	3527.72	84.81
Junc 33	3332	0	3527.75	84.82
Junc 31	3329	25	3527.72	86.11
Junc Ph1-FH2	3328	0	3527.78	86.56
Junc 8	3328	23.22	3527.78	86.57
Junc 21	3326	39.3	3527.7	87.4
Junc 22	3326	0	3527.71	87.4
Junc 37	3326	3.58	3527.72	87.41
Junc 36	3326	1.78	3527.72	87.41
Junc Ph1-FH1	3326	0	3527.78	87.43
Junc 6	3326	0	3527.81	87.45
Junc 35	3324	33.94	3527.74	88.28
Junc 34	3323	0	3527.74	88.72
Junc 3	3338	0	3549.81	91.78
Junc 4	3332	0	3550.29	94.58
Junc 10	3327	0	3547.4	95.5
Junc 9	3327	0	3548.17	95.83
Junc 12	3313	0	3545.78	100.86
Junc 60	3297	0	3530.84	101.32
Junc 42	3302	0	3541.77	103.89
Junc 62	3287	0	3528.87	104.8
Junc ExFH1	3305	0	3550.77	106.49
Junc 1	3298	0	3543.92	106.56
Junc ExFH2	3290	0	3540.14	108.39

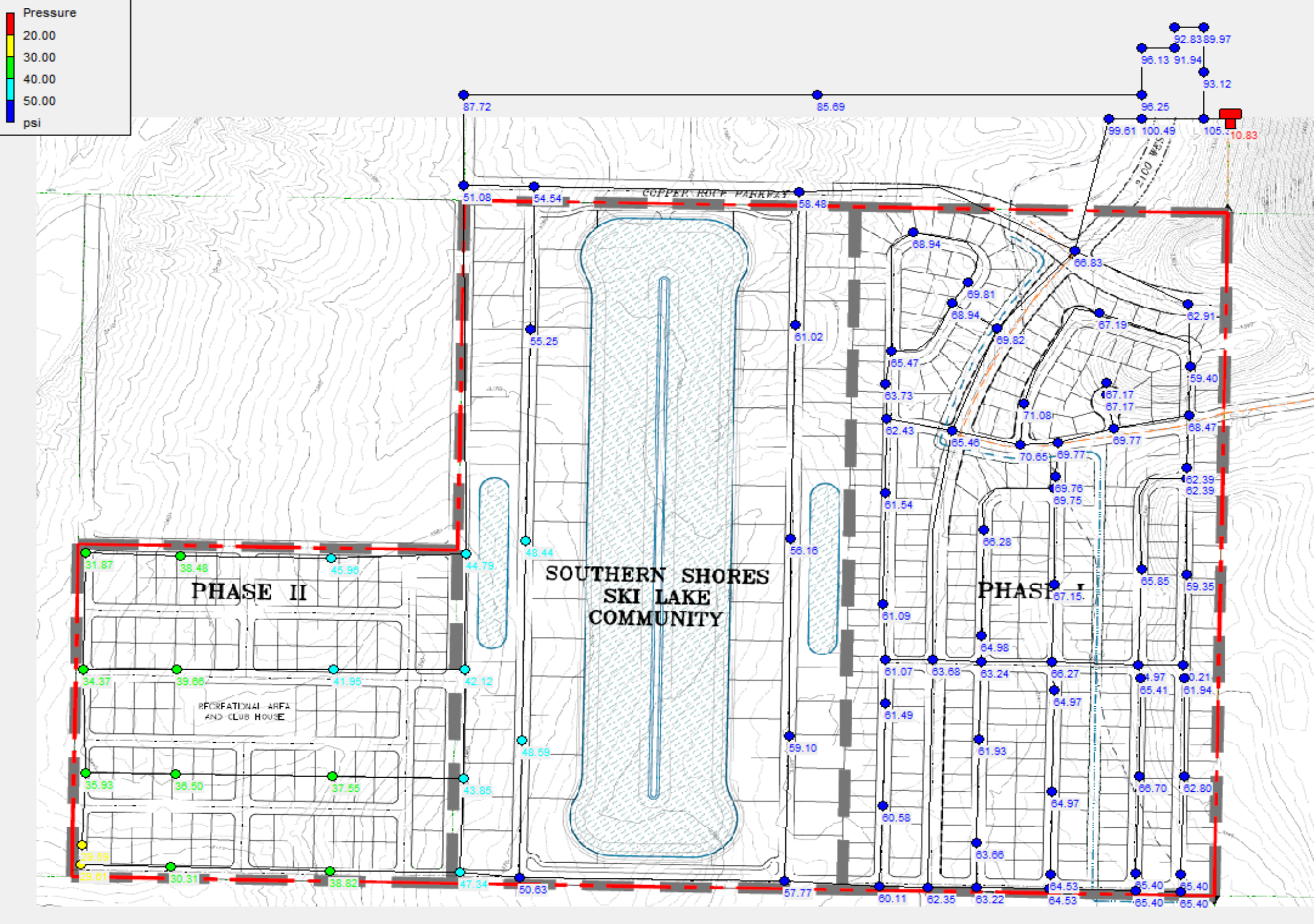
Peak Instantaneous Demand (PID) Links

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 20	45.7	8	150	0	0
Pipe 61	55.41	12	100	4.31	0.01
Pipe 66	66.34	8	150	2.39	0.02
Pipe 41	372.25	8	150	2.39	0.02
Pipe 40	49.07	8	150	2.39	0.02
Pipe 65	372.36	8	150	2.39	0.02
Pipe 92	430	12	130	5.65	0.02
Pipe 64	66.37	8	150	2.63	0.02
Pipe 42	49.2	8	150	2.63	0.02
Pipe 43	372.26	8	150	2.63	0.02
Pipe 63	366.83	8	150	2.63	0.02
Pipe 58	169.58	8	150	3.41	0.02
Pipe 57	390.74	8	150	3.41	0.02
Pipe 46	292.53	8	150	3.41	0.02
Pipe CRP2	1000	12	130	-8.13	0.02
Pipe 44	106.8	8	150	4.31	0.03
Pipe 45	385.3	8	150	4.31	0.03
Pipe 60	311.45	8	150	4.31	0.03
Pipe 34	99.03	8	150	4.37	0.03
Pipe 33	399.99	8	150	4.37	0.03
Pipe 25	368.41	8	150	4.37	0.03
Pipe 18	259.94	8	150	6.58	0.04
Pipe 83	430	12	130	18.17	0.05
Pipe 21	197.76	8	150	-9.5	0.06
Pipe 19	127.75	8	150	12.5	0.08
Pipe 67	154.89	8	150	13.69	0.09
Pipe 52	152.35	8	150	14.12	0.09
Pipe 38	362.01	8	150	17.44	0.11
Pipe 28	478.35	8	150	17.44	0.11
Pipe 39	342.98	8	150	20.41	0.13
Pipe 29	361.83	8	150	20.41	0.13
Pipe 110	430	8	150	23.7	0.15
Pipe 10	96.13	8	150	-24.48	0.16
Pipe 9	355.92	8	150	-24.48	0.16
Pipe 8	487.49	8	150	-24.48	0.16
Pipe 107	430	8	150	24.89	0.16
Pipe 36	361.83	8	150	26.72	0.17
Pipe 37	293.37	8	150	26.72	0.17
Pipe 62	293.1	8	150	27.14	0.17

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 56	162.17	12	130	62.29	0.18
Pipe 51	293.49	8	150	27.9	0.18
Pipe 14	156.58	8	150	-31.5	0.2
Pipe 16	415.24	8	150	-31.5	0.2
Pipe 15	480.87	8	150	-31.5	0.2
Pipe 6	129.55	8	150	-31.97	0.2
Pipe 7	127.12	8	150	-31.97	0.2
Pipe 93	400	12	130	-72.45	0.21
Pipe 94	30	12	130	-72.45	0.21
Pipe CRP1	950	12	130	-77.53	0.22
Pipe 101	440	8	150	35.64	0.23
Pipe 91	430	12	130	82.56	0.23
Pipe 47	165.56	8	150	39.98	0.26
Pipe 54	308.02	8	150	39.98	0.26
Pipe 53	385.25	8	150	39.98	0.26
Pipe 95	430	12	130	-90.31	0.26
Pipe 48	159.97	8	150	-42.63	0.27
Pipe 108	430	8	150	-42.97	0.27
Pipe 111	430	8	150	-44.16	0.28
Pipe 59	248.84	8	150	44.27	0.28
Pipe 90	430	12	130	100.42	0.28
Pipe 50	239.95	8	150	44.79	0.29
Pipe 12	304.26	8	150	45	0.29
Pipe 31	422.84	8	150	45.58	0.29
Pipe 30	281.87	8	150	45.58	0.29
Pipe 32	209.62	8	150	45.58	0.29
Pipe 68	860.44	18	130	235.98	0.3
Pipe 5	225.58	8	150	47.54	0.3
Pipe 84	430	12	130	-109.13	0.31
Pipe 100	880	8	150	51.72	0.33
Pipe 96	430	12	130	-124.25	0.35
Pipe 105	440	8	150	59.09	0.38
Pipe 89	430	12	130	134.36	0.38
Pipe CRP3	420	12	130	-138.43	0.39
Pipe 81	430	12	130	144.86	0.41
Pipe 99	880	8	150	67.8	0.43
Pipe 97	430	12	130	-158.19	0.45
Pipe 24	45.86	8	150	70.38	0.45
Pipe 23	129.72	8	150	70.38	0.45

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 35	874.02	18	130	361.74	0.46
Pipe 88	430	12	130	168.3	0.48
Pipe 104	880	8	150	75.17	0.48
Pipe 26	198.2	8	150	75.35	0.48
Pipe 27	41.9	8	150	75.35	0.48
Pipe 55	167.7	12	130	-173.69	0.49
Pipe 22	125.92	8	150	-81.66	0.52
Pipe CRP0	250	12	130	-186.64	0.53
Pipe 49	163.95	8	150	83.14	0.53
Pipe 13	238.37	8	150	84.1	0.54
Pipe 85	340	12	130	190.45	0.54
Pipe 98	440	8	150	85.66	0.55
Pipe 103	880	8	150	91.25	0.58
Pipe 11	179.66	8	150	-92.69	0.59
Pipe 106	430	8	150	92.75	0.59
Pipe 109	430	8	150	93.36	0.6
Pipe 4	413.75	18	130	493.39	0.62
Pipe 86	920	12	130	226.09	0.64
Pipe 2400W	9200	18	130	517.66	0.65
Pipe 78	2643	12	130	-239.71	0.68
Pipe 79	2674	12	130	-239.71	0.68
Pipe 17	186.67	8	150	106.92	0.68
Pipe 102	440	8	150	109.11	0.7
Pipe 3	384.76	18	130	586.08	0.74
Pipe 87	240	12	130	285.18	0.81
Pipe 70	200	8	150	-138.43	0.88
Pipe 80	1400	12	130	331.02	0.94
Pipe 82	2640	12	130	517.66	1.47
Pipe 75	1320	8	134	-239.71	1.53
Pipe 74	3268	8	134	-239.71	1.53
Pipe 77	1340	8	134	-239.71	1.53
Pipe 76	628	8	134	-239.71	1.53
Pipe 73	1330	8	134	-277.95	1.77
Pipe 2100W	8620	12	130	732.64	2.08
Pipe 69	2650	12	130	732.64	2.08
Pipe 2	2650	12	130	1010.59	2.87
Pipe 72	2640	8	150	-517.66	3.3
Pipe 1	400	12	130	1250.3	3.55

Peak Daily Demand + Fire Flow Demand (PDD+FFD)



Peak Daily Demand + Fire Flow Demand (PDD+FFD) Nodes

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc FH-SW	3414	1500	3482.29	29.59
Junc 89	3414	8.93	3482.33	29.61
Junc 88	3413	16.97	3482.94	30.31
Junc 80	3410	8.93	3483.56	31.87
Junc 83	3404	16.97	3483.32	34.37
Junc 86	3400	16.97	3482.92	35.93
Junc 85	3399	33.93	3483.24	36.5
Junc 84	3397	34.83	3483.66	37.55
Junc 79	3395	16.97	3483.81	38.48
Junc 87	3394	16.97	3483.59	38.82
Junc 82	3392	33.93	3483.53	39.66
Junc 81	3387	33.93	3483.82	41.95
Junc 75	3387	16.97	3484.22	42.12
Junc 76	3383	16.97	3484.2	43.85
Junc 74	3381	8.93	3484.36	44.79
Junc 78	3378	16.97	3484.08	45.96
Junc 77	3375	8.93	3484.26	47.34
Junc 67	3374	8.04	3485.8	48.44
Junc 68	3373	8.04	3485.14	48.59
Junc 69	3368	0	3484.84	50.63
Junc 63	3369	0	3486.88	51.08
Junc 65	3361	0	3486.88	54.54
Junc 66	3359	8.93	3486.5	55.25
Junc 71	3357	8.04	3486.6	56.16
Junc 73	3353	0	3486.32	57.77
Junc 61	3352	0	3486.97	58.48
Junc 72	3350	8.04	3486.4	59.1
Junc 28	3350	0	3486.97	59.35
Junc 32	3350	0	3487.09	59.4
Junc 48	3348	11.61	3486.74	60.11
Junc 26	3348	16.07	3486.95	60.21
Junc 47	3347	0	3486.81	60.58

20 req.

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 70	3346	8.93	3486.83	61.02
Junc 16	3346	24.11	3486.95	61.07
Junc 15	3346	0	3486.98	61.09
Junc 46	3345	0	3486.91	61.49
Junc 14	3345	0	3487.03	61.54
Junc 44	3344	0	3486.94	61.93
Junc 40	3344	0	3486.95	61.94
Junc 49	3343	0	3486.89	62.35
Junc 29	3343	18.75	3486.98	62.39
Junc 30	3343	0	3486.99	62.39
Junc 13	3343	16.97	3487.07	62.43
Junc 57	3342	0	3486.94	62.8
Junc 5	3342	0	3487.19	62.91
Junc 50	3341	10.72	3486.9	63.22
Junc 18	3341	19.65	3486.95	63.24
Junc 45	3340	0	3486.91	63.66
Junc 17	3340	0	3486.96	63.68
Junc Ph1-FH3	3340	0	3487.08	63.73
Junc 51	3338	10.72	3486.92	64.53
Junc 52	3338	0	3486.92	64.53
Junc 53	3337	0	3486.94	64.97
Junc 43	3337	0	3486.95	64.97
Junc 25	3337	14.29	3486.95	64.97
Junc 19	3337	0	3486.96	64.98
Junc 55	3336	8.04	3486.93	65.4
Junc 54	3336	0	3486.94	65.4
Junc 59	3336	8.04	3486.94	65.4
Junc 58	3336	0	3486.94	65.4
Junc 41	3336	0	3486.95	65.41
Junc 7	3336	0	3487.08	65.46
Junc 11	3336	18.75	3487.09	65.47
Junc 27	3335	0	3486.96	65.85

Node ID	Elevation ft	Demand GPM	Head ft	Pressure psi
Junc 24	3334	19.65	3486.95	66.27
Junc 20	3334	0	3486.97	66.28
Junc 56	3333	0	3486.94	66.7
Junc ExFH3	3333	0	3487.23	66.83
Junc 23	3332	0	3486.97	67.15
Junc 38	3332	6.25	3487.02	67.17
Junc 39	3332	0	3487.02	67.17
Junc 33	3332	0	3487.07	67.19
Junc 31	3329	12.5	3487.03	68.47
Junc Ph1-FH2	3328	0	3487.1	68.94
Junc 8	3328	11.61	3487.11	68.94
Junc 21	3326	19.65	3486.99	69.75
Junc 22	3326	0	3487	69.76
Junc 36	3326	0.89	3487.02	69.77
Junc 37	3326	1.79	3487.02	69.77
Junc Ph1-FH1	3326	0	3487.11	69.81
Junc 6	3326	0	3487.15	69.82
Junc 35	3324	16.97	3487.05	70.65
Junc 34	3323	0	3487.05	71.08
Junc 60	3297	0	3494.76	85.69
Junc 62	3287	0	3489.45	87.72
Junc 3	3338	0	3545.64	89.97
Junc 10	3327	0	3539.19	91.94
Junc 9	3327	0	3541.25	92.83
Junc 4	3332	0	3546.92	93.12
Junc 12	3313	0	3534.86	96.13
Junc 42	3302	0	3524.14	96.25
Junc ExFH2	3290	0	3519.88	99.61
Junc 1	3298	0	3529.92	100.49
Junc ExFH1	3305	0	3548.2	105.38

Peak Daily Demand + Fire Flow Demand (PDD+FFD) Links

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 20	45.7	8	150	0	0
Pipe 52	152.35	8	150	1.6	0.01
Pipe 19	127.75	8	150	6.25	0.04
Pipe 51	293.49	8	150	6.77	0.04
Pipe 21	197.76	8	150	9.87	0.06
Pipe 61	55.41	12	100	39.31	0.11
Pipe 18	259.94	8	150	17.91	0.11
Pipe 50	239.95	8	150	18.14	0.12
Pipe 67	154.89	8	150	-19.67	0.13
Pipe CRP0	250	12	130	-52.03	0.15
Pipe 65	372.36	8	150	27.71	0.18
Pipe 40	49.07	8	150	27.71	0.18
Pipe 41	372.25	8	150	27.71	0.18
Pipe 66	66.34	8	150	27.71	0.18
Pipe 63	366.83	8	150	29.23	0.19
Pipe 64	66.37	8	150	29.23	0.19
Pipe 43	372.26	8	150	29.23	0.19
Pipe 42	49.2	8	150	29.23	0.19
Pipe 9	355.92	8	150	-29.88	0.19
Pipe 8	487.49	8	150	-29.88	0.19
Pipe 10	96.13	8	150	-29.88	0.19
Pipe 5	225.58	8	150	30.32	0.19
Pipe 38	362.01	8	150	38.35	0.24
Pipe 28	478.35	8	150	38.35	0.24
Pipe 45	385.3	8	150	39.31	0.25
Pipe 44	106.8	8	150	39.31	0.25
Pipe 60	311.45	8	150	39.31	0.25
Pipe 25	368.41	8	150	39.53	0.25
Pipe 33	399.99	8	150	39.53	0.25
Pipe 34	99.03	8	150	39.53	0.25
Pipe 14	156.58	8	150	-40.22	0.26
Pipe 15	480.87	8	150	-40.22	0.26
Pipe 16	415.24	8	150	-40.22	0.26
Pipe 83	430	12	130	91	0.26
Pipe 62	293.1	8	150	-40.86	0.26
Pipe 39	342.98	8	150	42.18	0.27
Pipe 29	361.83	8	150	42.18	0.27
Pipe 36	361.83	8	150	47.59	0.3
Pipe 37	293.37	8	150	47.59	0.3

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 56	162.17	12	130	-113.77	0.32
Pipe 49	163.95	8	150	53.3	0.34
Pipe 12	304.26	8	150	54.92	0.35
Pipe 46	292.53	8	150	55.04	0.35
Pipe 57	390.74	8	150	55.04	0.35
Pipe 58	169.58	8	150	55.04	0.35
Pipe 48	159.97	8	150	-58.6	0.37
Pipe 7	127.12	8	150	-66.04	0.42
Pipe 6	129.55	8	150	-66.04	0.42
Pipe 59	248.84	8	150	-69.45	0.44
Pipe 13	238.37	8	150	74.53	0.48
Pipe CRP1	950	12	130	169.56	0.48
Pipe CRP3	420	12	130	-169.92	0.48
Pipe 30	281.87	8	150	79.39	0.51
Pipe 31	422.84	8	150	79.39	0.51
Pipe 32	209.62	8	150	79.39	0.51
Pipe 84	430	12	130	-199.16	0.56
Pipe 68	860.44	18	130	464.14	0.59
Pipe 11	179.66	8	150	-96.4	0.62
Pipe 22	125.92	8	150	-97.79	0.62
Pipe 27	41.9	8	150	99.28	0.63
Pipe 26	198.2	8	150	99.28	0.63
Pipe 101	440	8	150	100.49	0.64
Pipe 24	45.86	8	150	106.77	0.68
Pipe 23	129.72	8	150	106.77	0.68
Pipe 100	880	8	150	108.53	0.69
Pipe 35	874.02	18	130	576.03	0.73
Pipe 47	165.56	8	150	113.88	0.73
Pipe 53	385.25	8	150	113.88	0.73
Pipe 54	308.02	8	150	113.88	0.73
Pipe 99	880	8	150	116.57	0.74
Pipe 98	440	8	150	125.5	0.8
Pipe 17	186.67	8	150	129.69	0.83
Pipe CRP2	1000	12	130	-295.07	0.84
Pipe 4	413.75	18	130	680.89	0.86
Pipe 81	430	12	130	337.47	0.96
Pipe 3	384.76	18	130	777.29	0.98
Pipe 108	430	8	150	161.64	1.03
Pipe 70	200	8	150	-169.92	1.08

Link ID	Length ft	Diameter in	Roughness	Flow GPM	Velocity fps
Pipe 2400W	9200	18	130	882.88	1.11
Pipe 78	2643	12	130	-407.88	1.16
Pipe 79	2674	12	130	-407.88	1.16
Pipe 107	430	8	150	195.57	1.25
Pipe 91	430	12	130	441.58	1.25
Pipe 105	440	8	150	196.58	1.25
Pipe 90	430	12	130	450.51	1.28
Pipe 111	430	8	150	204.43	1.3
Pipe 104	880	8	150	204.62	1.31
Pipe 89	430	12	130	467.48	1.33
Pipe 103	880	8	150	212.66	1.36
Pipe 88	430	12	130	484.45	1.37
Pipe 102	440	8	150	221.59	1.41
Pipe 106	430	8	150	229.5	1.46
Pipe 110	430	8	150	238.36	1.52
Pipe 55	167.7	12	130	-577.91	1.64
Pipe 92	430	12	130	586.25	1.66
Pipe 109	430	8	150	273.19	1.74
Pipe 85	340	12	130	680.18	1.93
Pipe 94	30	12	130	-726.28	2.06
Pipe 95	430	12	130	-735.21	2.09
Pipe 96	430	12	130	-752.18	2.13
Pipe 97	430	12	130	-769.15	2.18
Pipe 93	400	12	130	773.72	2.19
Pipe 86	920	12	130	780.67	2.21
Pipe 80	1400	12	130	830.85	2.36
Pipe 82	2640	12	130	882.88	2.5
Pipe 74	3268	8	134	-407.88	2.6
Pipe 77	1340	8	134	-407.88	2.6
Pipe 76	628	8	134	-407.88	2.6
Pipe 75	1320	8	134	-407.88	2.6
Pipe 87	240	12	130	977.25	2.77
Pipe 73	1330	8	134	-474.99	3.03
Pipe 2100W	8620	12	130	1242.27	3.52
Pipe 69	2650	12	130	1242.27	3.52
Pipe 2	2650	12	130	1717.27	4.87
Pipe 72	2640	8	150	-882.88	5.64
Pipe 1	400	12	130	2125.15	6.03



STAFF COMMENTS

Consideration and possible approval of a **preliminary plat for Dixie Meadows, a 238 lot single family subdivision, located at approximately 4392 W 2400 S**. Western Mortgage and Realty Co-Brent Moser Applicant. ProValue Engineering-Karl Rasmussen Agent.

Discussion:

The applicant is proposing a 238 lot single family subdivision located between the existing Marla at Elim Valley development and Dixie Springs. This is part of Phase 3 of the Sand Hollow Gateway Public Infrastructure District, phase 1 of which is currently under development. No off-site improvement plans for phase 3 (or Phase 2) have been submitted at this time.

Planning Commission Recommendation

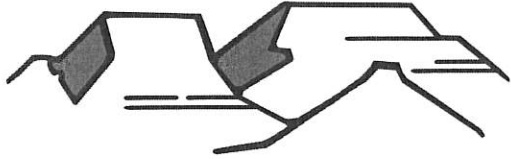
The Planning Commission recommended approval of the preliminary plat.

Findings:

Recommendation:

Attachments:

1. 2023-PP-01 App
2. 336-011 DIXIE MEADOWS PRE PLAT
3. 2023-PP-01 Dixie Meadows
4. Letter for Stephen
5. Will Serve - Dixie Meadows - 2022.12.20
6. Will Serve Letter
7. 2023-PP-01 Dixie Meadows
8. Copy of 336-002 MASTER PLAN - PID DISTRICTS
9. Dixie Meadows Water Ack Letter



PLANNING & ZONING HURRICANE CITY UTAH

147 N 870 W Hurricane UT
PHONE: 435.635.2811 FAX: 435.635.2184

PRELIMINARY PLAT APPLICATION

For office use only: \$150.00 Fee

File No. 2023-PP-01

Receipt No. 8.164647

Name: Western MTG & Realty Co Contact: Brent Moser Telephone: 801-793-0346

Address: 950 E Foster Wells Rd, Pasco, WA 99301 Fax No. _____

Email: enhancedhomesofutah@gmail.com Agent Email: karl@pv-eng.com; treasa@pv-eng.com

Agent (If Applicable): ProValue Engineering- Karl Rasmussen Telephone: 435-668-8307

Address/Location of Subject Property: approx. 4392 W 2400 S

H-4-2-11-31031-GS3, H-4-2-11-2103-GS3,

H-4-2-14-1101-GS3, H-4-2-13-2114-GS3,

Tax ID of Subject Property: H-4-2-12-2113-GS3, H-4-2-12-1102-GS3 Zone District: R1-6 & R1-10

Proposed Use: (Describe, use extra sheet if necessary. Include total number of lots) Subdivision with 238 lots

Submittal Requirements: The preliminary plat application shall provide the following:

- ☒ 1. Description: In a title block located in the lower right-hand corner of the sheet the following is required:
 - ☒ a. The proposed name of the subdivision.
 - ☒ b. The location of the subdivision, including the address and section, township and range.
 - ☒ c. The names and addresses of the owner or subdivider, if other than the owner.
 - ☒ d. Date of preparation, and north point.
 - ☒ e. Scale shall be of sufficient size to adequately describe in legible form, all required conditions of Chapter 39, City Subdivision regulations.
- ☒ 2. Existing Conditions: The preliminary plat shall show:
 - ☒ a. The location of the nearest monument.
 - ☒ b. The boundary of the proposed subdivision and the acreage included.
 - ☒ c. All property under the control of the subdivider, even though only a portion is being subdivided. (Where the plat submitted covers only a part of the subdivider's tract, a sketch of the prospective street system of the unplatted parts of the subdivider's land shall be submitted, and the street system of the part submitted shall be considered in light of existing Master Street Plan or other Commission studies.)
 - ☒ d. The location, width, and names/numbers of all existing streets within two hundred (200) feet of the subdivision and of all prior streets or other public ways, utility rights of way, parks and other public open spaces, within and adjacent to the tract.
 - ☒ e. The location of all wells and springs or seeps, proposed, active and abandoned, and of all reservoirs or ponds within the tract and at a distance of at least one hundred feet (100') beyond the tract boundaries.
 - ☒ f. Existing sewers, water mains, culverts, or other underground facilities within the tract, indicating the pipe sizes, grades, manholes and the exact locations.
 - ☒ g. Existing Hurricane Canal Company facilities; other ditches, canals, natural drainage channels and open waterways and any proposed realignments.

- ☒ h. Contours at vertical intervals not greater than five (5) feet.
- ☒ i. Identification of potential geotechnical constraints on the project site (such as expansive rock and soil, collapsible soil, shallow bedrock, and caliche, gypsiferous rock and soil, potentially unstable rock or soil units including fault lines, shallow groundwater, and windblown sand) and recommendations for their mitigation.
- ☒ j. Information on whether property is located in desert tortoise take area

3. Proposed Plan: The subdivision plans shall show:

- ☒ a. The layout of streets, showing location, widths, and other dimensions of proposed streets, crosswalks, alleys, and easements.
- ☒ b. The layout, numbers, and typical dimensions of lots.
- ☒ c. Parcels of land intended to be dedicated or temporarily reserved for public use or set aside for use of property owners in the subdivision.
- ☒ d. Easements for water, sewers, drainage, utilities, lines and other purposes.
- ☒ e. Typical street cross sections and street grades where required by the Planning Commission. (All street grades over 5% should be noted on the preliminary plat)
- ☒ f. A tentative plan or method by which the subdivider proposes to handle the storm water drainage for the subdivision.
- ☒ g. Approximate radius of all center line curves on highways or streets.
- ☒ h. Each lot shall abut a street shown on the subdivision plat or on an existing publicly dedicated street. (Double frontage or flag lots shall be prohibited except where conditions make other design undesirable)
- ☒ i. In general, all remnants of lots below minimum size left over after subdividing of a larger tract must be added to adjacent lots, rather than allow to remain as unusable parcels.
- ☐ j. Where necessary, copies of any agreements with adjacent property owners relevant to the proposed subdivision shall be presented to the Planning Commission.
- ☒ k. A letter from both the local sanitary sewer provider and culinary water provider indicating availability of service.
- ☒ l. Will this subdivision be phased? If yes show possible phasing lines.
- ☒ m. A tentative plan or method for providing non-discriminatory access to the subdivision for purposes of placement of communications infrastructure, and for purposes of placement of utility infrastructure.

4. Required copies of plans:

- ☒ a. Three copies of all full-scale drawings
- ☒ b. One copy of each drawing on a 11 x 17-inch sheets. (8 1/2 x 11 is acceptable if the project is small and the plans are readable at that size).

5. Warranty deed or preliminary title report or other document (see attached Affidavit) showing evidence that the applicant has control of the property

NOTE: It is important that all applicable information noted above is submitted with the application. An incomplete application will not be scheduled for Planning Commission consideration. A deadline missed due to an incomplete application, could result in a month's delay. Planning Commission meetings are held on the second Thursday and fourth Wednesday of each month at 6:00 p.m. The deadline to submit an application to be placed on an agenda is no later than 12:00 (noon) 20 full calendar days before the Planning Commission meeting at which you plan for your application to be heard.

.....
(Office Use Only)

Date Received: _____ Application Complete: YES NO

Date application deemed to be complete: _____ Completion determination made by: _____

AFFIDAVIT
PROPERTY OWNER

STATE OF UTAH)
)SS
COUNTY OF Washington

I (we), WESTERN MORTGAGE + REALTY COMPANY, being duly sworn, depose and say that I (we) am (are) the owner(s) of the property identified in the attached application and that the statements herein contained and the information provided identified in the attached plans and other exhibits are in all respects true and correct to the best of my (our) knowledge. I (we) also acknowledge that I have received written instructions regarding the process for which I am applying and the Hurricane City Planning staff have indicated they are available to assist me in making this application.

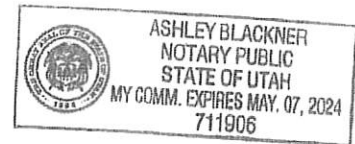
WESTERN MORTGAGE + REALTY CO.
(Property Owner)
[Signature] Vice President
(Property Owner)

Subscribed and sworn to me this 13th day of May 2024.

[Signature]
(Notary Public)

Residing in: Hurricane, UT

My Commission Expires: 5/7/2024



Agent Authorization

I (we), _____, the owner(s) of the real property described in the attached application, do authorize as my (our) agent(s) _____ to represent me (us) regarding the attached application and to appear on my (our) behalf before any administrative or legislative body in the City considering this application and to act in all respects as our agent in matters pertaining to the attached application.

(Property Owner)

(Property Owner)

Subscribed and sworn to me this _____ day of _____ 20__.

(Notary Public)

Residing in: _____

My Commission Expires: _____

PURPOSE

The preliminary plat application is the first step in land development process in those instances where land is divided for eventual sale. The process is established to ensure that all proposed divisions of land conform to the City General Plan and to adopted development standards of the Land Use Ordinance.

WHEN REQUIRED

The preliminary plat is required any time land is to be divided, re-subdivided or proposed to be divided into two (2) or more lots, parcels, sites, units, plots or other division of land for the purpose, whether immediate or future, for offer, sale, lease or development either on installment plan or upon any and all other plans, terms and conditions. It is not required on agricultural divisions where the agricultural parcel is divided to be combined with another agricultural parcel, nor is it required when two un-subdivided properties are merged, or where the boundary between two un-subdivided properties are adjusted.

The preliminary plat must be approved before a final plat can be processed and recorded.

Subdivision approval process:

- Determine current zoning for property.
- If zoning fits desired subdivision, meet with Planning staff to discuss the proposed project.
- Obtain a preliminary plat application form and complete the application and have a plat prepared by an engineer to meet the requirements on the preliminary plat application.
- Submit completed application, preliminary plat, and required \$150 fee to Planning Department before noon on the Wednesday two weeks before desired Planning Commission meeting. (See submittal dates sheet)
- Appear at the scheduled Planning Commission meeting to discuss preliminary plat, hear comments, answer questions, and receive recommendation of approval or disapproval from Planning Commission.
- Appear at the next scheduled City Council meeting that occurs after the Planning Commission meeting at which a recommendation was received. Hear City Council comments, answer questions, and receive City Council decision. City Council can approve the plat with conditions, recommend changes and send it back to the Planning Commission, or deny the plat.

If the preliminary plat is approved, have construction drawings for utilities and streets prepared by an engineer according to Hurricane City standards. Construction drawings must be approved by both the Hurricane Joint Utilities Committee and the Ash Creek Special Service District. Approval means changes are made and all required signatures are obtained.

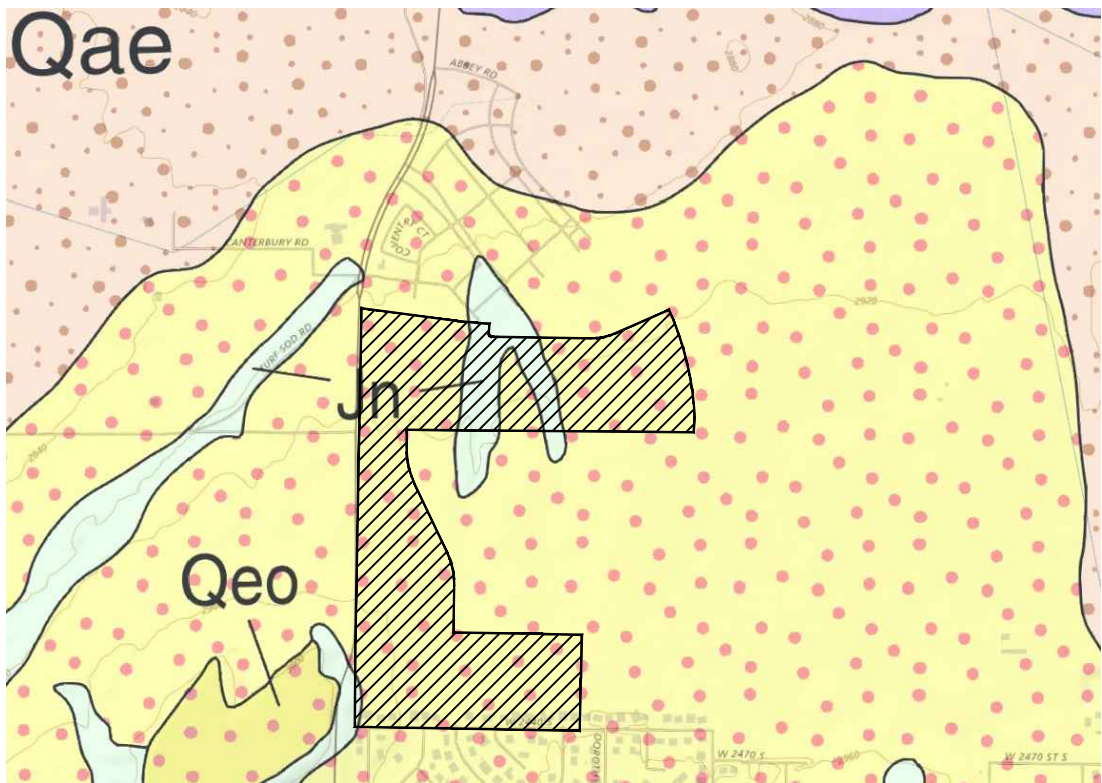
Once the preliminary plat is approved by the City Council, the applicant has one year after receiving approval of the preliminary plat to submit the final plat to the Planning Commission for action. The Planning Commission may authorize a one-year time extension, provided the extension request is made before the one-year time limit is reached. The Planning Commission will review and make recommendation to the City Council on the final plat

when submitted. The City Council will typically review the Planning Commission recommendation within 1-2 weeks after the Commission action on the final plat.

APPEALS

The Planning Commission makes a recommendation to the City Council, so there is no appeal. The City Council's action on a preliminary plat is final unless appealed to the appropriate court.

GEOLOGICAL MAP



GEOLOGICAL NARRATIVE

QEO/QES: EOLIAN SAND DEPOSITS (HOLOCENE TO UPPER PLEISTOCENE):--

WELL SORTED, FINE- TO MEDIUM-GRAINED, WELL-ROUNDED, FROSTED QUARTZ SAND; SAND IS RECYCLED PRINCIPALLY FROM THE NAVAJO SANDSTONE AND KAYENTA FORMATION; LOCALLY FORMS SMALL DUNES PARTLY STABILIZED BY VEGETATION; LOCALLY INCLUDES THICK CALCIC SOILS (HARDPAN OR CALICHE); TYPICALLY LESS THAN 20 FEET (6 M) THICK.

JN: NAVAJO SANDSTONE (LOWER JURASSIC)

PALE-REDDISH-ORANGE, REDDISH-BROWN, OR WHITE, CLIFF-FORMING, CROSS-BEDDED, QUARTZ SANDSTONE; FORMS SPECTACULAR SHEER CLIFFS, DEEP CANYONS, AND IMPRESSIVE SPIRES, PROMONTORIES, AND MONOLITHS; CONSISTS OF WELL SORTED, WELL-ROUNDED, FINE TO MEDIUM-GRAINED, FROSTED QUARTZ SAND; BEDDING CONSISTS OF HIGH-ANGLE, LARGE-SCALE CROSS-BEDDING IN TABULAR-PLANAR, WEDGE-PLANAR, AND TROUGH-SHAPED SETS 10 TO 45 FEET OR MORE (3-14+ M) THICK; CONTAINS SPARSE PLANAR INTERDUNE DEPOSITS AND LOCALLY COMMON IRONSTONE BANDS AND CONCRETIONS; LOCALLY PROMINENTLY JOINTED (SEE, FOR EXAMPLE, ROGERS AND ENGELDER, 2004; ROGERS AND OTHERS, 2004); LOWER PART FORMS TRANSITION ZONE CHARACTERIZED BY PLANAR-BEDDED, FINE-GRAINED SANDSTONE AND SILTY SANDSTONE WITH THIN SILTSTONE INTERBEDS WITH WAVY BEDDING, FLASER-LIKE LAMINAE, AND SOFT-SEDIMENT DEFORMATION AND BIOTURBATION FEATURES, AND LESS COMMON BUT RESISTANT CROSS-STRATIFIED SANDSTONE; DIVIDED INTO THREE INFORMAL NON-STRATIGRAPHIC UNITS OF VARIABLE BUT ROUGHLY EQUAL THICKNESS BASED ON COLOR AND WEATHERING HABIT IN THE SOUTH PART OF ZION NATIONAL PARK (DOELLING AND OTHERS, 2002): (1) "WHITE NAVAJO," WHICH FORMS THE UPPER PART OF THE NAVAJO SANDSTONE AND IS PALE-GRAY, YELLOWISH-GRAY, ORANGISH-GRAY, AND WHITE BECAUSE OF ALTERATION, REMOILIZATION, AND BLEACHING OF LIMONITIC AND HEMATITIC (IRON-BEARING) CEMENT, PROBABLY DUE TO HYDROCARBON MIGRATION (SEE, FOR EXAMPLE, BEITLER AND OTHERS, 2003); (2) "PINK NAVAJO," WHICH FORMS THE MIDDLE PART OF THE NAVAJO SANDSTONE, IS GENERALLY LESS RESISTANT THAN THE "WHITE NAVAJO" ABOVE AND "BROWN NAVAJO" BELOW, AND IS PALE REDDISH ORANGE DUE TO MORE UNIFORMLY DISPERSED HEMATITIC CEMENT; AND (3) "BROWN NAVAJO," WHICH IS STREAKED MEDIUM TO DARK REDDISH BROWN DUE TO IRON OXIDE REMOILIZATION CAUSED BY GROUND-WATER OR HYDROCARBON MIGRATION, AND WHICH FORMS THE LOWER MASSIVE CLIFF OF THE NAVAJO SANDSTONE AND IS CORRELATIVE IN PART WITH THE LOWER TRANSITIONAL BEDS OF THE NAVAJO; NIELSEN AND CHAN (IN PREPARATION) DESCRIBED DIAGENETIC FACIES AND FLUID-RELATED ALTERATION OF THE NAVAJO SANDSTONE IN SOUTHWEST UTAH; THE UPPER, UNCONFORMABLE CONTACT OF THE NAVAJO IS SHARP AND PLANAR AND CORRESPONDS TO A PROMINENT BREAK IN SLOPE, WITH CLIFF-FORMING, CROSS-BEDDED SANDSTONE BELOW AND REDDISH-BROWN MUDSTONE OF THE SINAWAVA MEMBER OF THE TEMPLE CAP FORMATION ABOVE; DEPOSITED IN A VAST COASTAL AND INLAND DUNE FIELD WITH PREVAILING WINDS PRINCIPALLY FROM THE NORTH (BLAKEY, 1994; PETERSON, 1994); CORRELATIVE WITH THE NUGGET SANDSTONE OF NORTHERN UTAH AND WYOMING AND THE AZTEC SANDSTONE OF SOUTHERN NEVADA AND ADJACENT AREAS (SEE, FOR EXAMPLE, KOCUREK AND DOTT, 1983; RIGGS AND OTHERS, 1993); THE LOWER TRANSITION INTERVAL, WHICH REACHES ITS MAXIMUM THICKNESS OF ABOUT 300 FEET (100 M) IN THE RED CLIFFS AREA NORTHEAST OF ST. GEORGE, REPRESENTS DEPOSITION IN A SAND-DOMINATED SABKHA ENVIRONMENT (TUESINK, 1989; SANSOM, 1992); MUCH OF THE SAND MAY ORIGINALLY HAVE BEEN TRANSPORTED TO AREAS NORTH AND NORTHWEST OF UTAH VIA A TRANSCONTINENTAL RIVER SYSTEM THAT TAPPED GRENVILLIAN-AGE (ABOUT 1.0 TO 1.3 BILLION-YEAR-OLD) CRUST INVOLVED IN APPALACHIAN OROGENESIS OF EASTERN NORTH AMERICA (DICKINSON AND GEHRELS, 2003; RAHL AND OTHERS, 2003; REINERS AND OTHERS, 2005); FORMS THE PRINCIPAL AQUIFER THROUGHOUT MUCH OF THE QUADRANGLE (CLYDE, 1987; HURLOW, 1998; HEILWEIL AND OTHERS, 2000; HEILWEIL AND OTHERS, 2002; ROWLEY AND DIXON, 2004; ROWLEY AND OTHERS, 2004); ABOUT 1800 TO 2300 FEET (550-700 M) THICK.

PRELIMINARY PLAT FOR:
DIXIE MEADOWS SUBDIVISION

LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

SUBDIVISION BOUNDARY LEGAL DESCRIPTION

COMMENCING AT THE NORTHEAST CORNER OF SECTION 14, TOWNSHIP 42 SOUTH, RANGE 13 WEST, OF THE SALT LAKE BASE AND MERIDIAN; THENCE S01°07'04"W ALONG THE EAST SECTION LINE, 34.00 FEET TO THE POINT OF BEGINNING. THENCE S88°31'01"E 256.01 FEET; THENCE S01°29'01"W 282.00 FEET; THENCE S01°20'05"W 345.19 FEET; THENCE N88°52'30"W 760.79 FEET; THENCE N88°57'52"W 77.00 FEET; THENCE N89°02'45"W 753.41 FEET; THENCE NORTHERLY ALONG THE ARC OF A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 744.00 FEET AND A RADIAL BEARING OF S83°49'47"E, A DISTANCE OF 144.89 FEET, THROUGH A CENTRAL ANGLE OF 11°09'28" (LONG CHORD BEARS: N11°44'57"E 144.66 FEET); THENCE N17°19'41"E 192.45 FEET; THENCE NORTHERLY ALONG THE ARC OF A 856.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 243.09 FEET, THROUGH A CENTRAL ANGLE OF 16°16'16", (LONG CHORD BEARS: N09°11'33"E 242.27 FEET); THENCE N01°03'25"E 1380.75 FEET; THENCE N01°03'25"E 92.03 FEET; THENCE N01°03'25"E 696.13 FEET; THENCE S82°24'51"E 630.52 FEET; THENCE S84°38'00"E 160.08 FEET; THENCE S84°38'53"E 52.00 FEET; THENCE S04°50'09"W 60.20 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF A 20.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 31.23 FEET, THROUGH A CENTRAL ANGLE OF 89°28'09", (LONG CHORD BEARS: S39°53'55"E 28.15 FEET); THENCE S84°38'00"E 8.58 FEET; THENCE EASTERLY ALONG THE ARC OF A 374.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 28.96 FEET, THROUGH A CENTRAL ANGLE OF 04°26'10", (LONG CHORD BEARS: S86°51'05"E 28.95 FEET); THENCE S89°04'10"E 611.08 FEET; THENCE EASTERLY ALONG THE ARC OF A 374.00 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 159.37 FEET, THROUGH A CENTRAL ANGLE OF 24°24'56", (LONG CHORD BEARS: N78°43'22"E 158.17 FEET); THENCE N66°30'54"E 388.79 FEET; THENCE S23°09'17"E 74.55 FEET; THENCE SOUTHERLY ALONG THE ARC OF A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 1922.99 FEET AND A RADIAL BEARING OF S67°57'21"W, A DISTANCE OF 653.23 FEET, THROUGH A CENTRAL ANGLE OF 19°27'47" (LONG CHORD BEARS: S12°18'45"E 650.09 FEET); THENCE S00°00'35"W 108.65 FEET; THENCE N89°04'10"W 1881.94 FEET; THENCE S00°15'33"W 109.62 FEET; THENCE SOUTHERLY ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 566.56 FEET AND A RADIAL BEARING OF S88°51'39"E, A DISTANCE OF 89.27 FEET, THROUGH A CENTRAL ANGLE OF 09°01'40" (LONG CHORD BEARS: S03°22'29"E 89.18 FEET); THENCE SOUTHERLY ALONG THE ARC OF A NON-TANGENT CURVE TO THE LEFT, HAVING A RADIUS OF 545.00 FEET AND A RADIAL BEARING OF N82°01'19"E, A DISTANCE OF 165.58 FEET, THROUGH A CENTRAL ANGLE OF 17°24'27" (LONG CHORD BEARS: S16°40'55"E 164.95 FEET); THENCE S25°23'08"E 495.31 FEET; THENCE SOUTHERLY ALONG THE ARC OF A 474.94 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 219.14 FEET, THROUGH A CENTRAL ANGLE OF 26°26'14" (LONG CHORD BEARS: S12°10'07"E 217.21 FEET); THENCE S01°05'54"W 309.11 FEET; THENCE S89°02'49"E 585.03 FEET; THENCE S88°31'01"E 0.08 FEET TO THE POINT OF BEGINNING.

AREA CONTAINS 3,096,400 SQUARE FEET OR 71.084 ACRES.

DESERT TORTOISE TAKE AREA

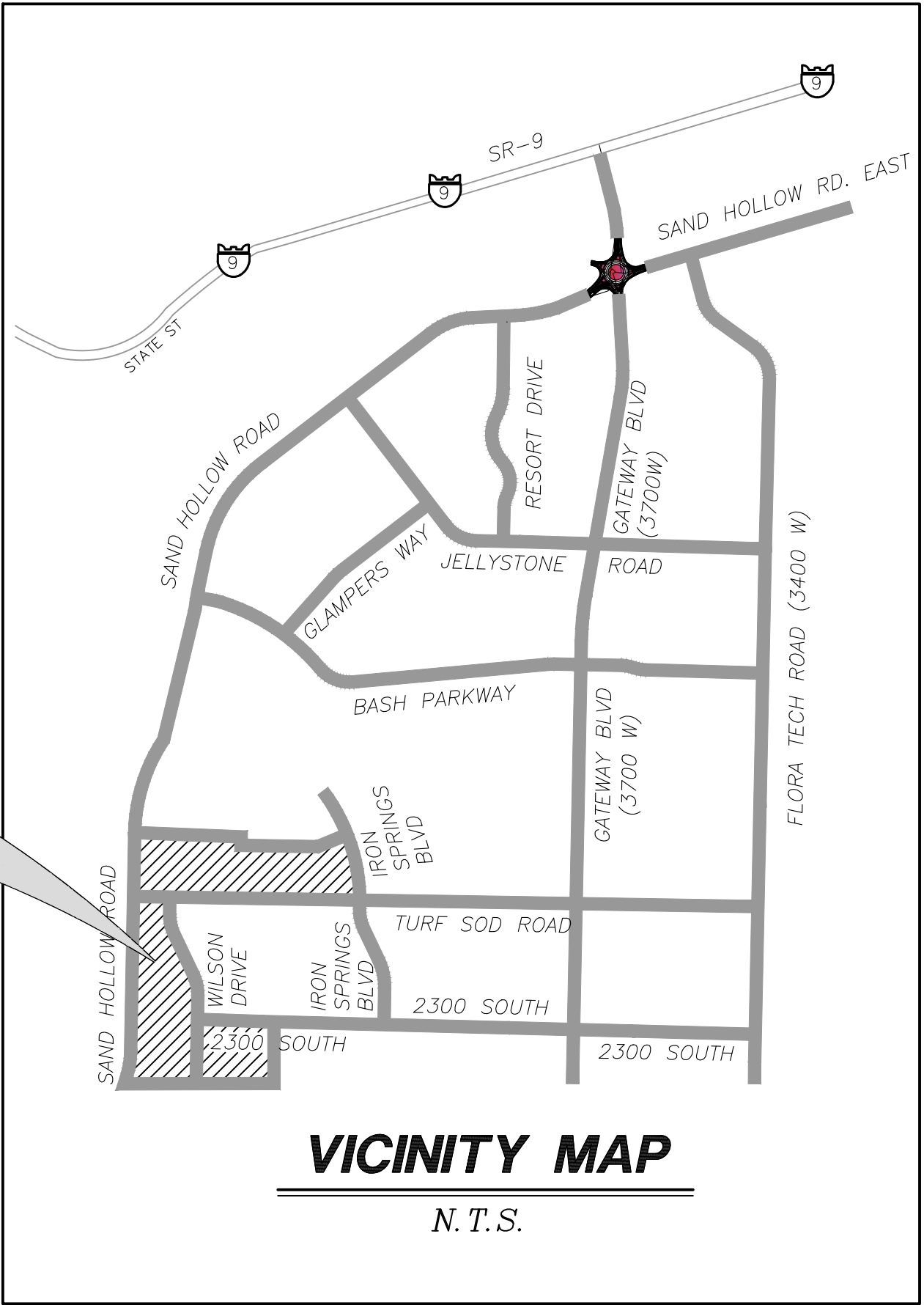
THE PROJECT IS NOT LOCATED IN A DESERT TORTOISE TAKE AREA. (PER RED CLIFFS DESERT RESERVE TAKE AREA 7 MAP)

GEOLOGICAL HAZARDS

FAULTS & SURFACE FAULTING	NONE
LIQUEFACTION	H2 - HIGH2-SIMILAR IN TEXTURE TO HIGH CATEGORY, NO GROUND-WATER INFORMATION
FLOODING	NONE
LANDSLIDE HAZARD	NONE
ROCKFALL HAZARD	NONE
BRECCIA PIPES AND PALEOKARST	NONE
CALICHE	CA - CALICHE
COLLAPSIBLE SOIL	CSA-STREAM/TERRACE ALLUVIUM >=3%
EXPANSIVE SOIL	ESL-SOILS WITH LOW SUSCEPTIBILITY FOR EXPANSION
GYPSEFEROUS SOIL & ROCK	NONE
PIPING & EROSION	P&ES-SOILS SUSCEPTIBLE TO PIPING AND EROSION
SHALLOW BEDROCK	BRB-BURIED: AREAS WHERE DEPTH TO BEDROCK IS GENERALLY ≤10 FEET BENEATH SOIL COVER AND BRB-HARD: AREAS WHERE GENERALLY HARD AND RESISTANT BEDROCK VISIBLE AT GROUND SURFACE
WIND BLOWN SAND	WBSH-HIGH: MODERN SAND-DUNE OR SHEET-SAND DEPOSITS
SHALLOW GROUND WATER	NONE

THE MITIGATION OF POTENTIAL HAZARDS WILL BE RECOMMENDED IN THE FUTURE GEOTECHNICAL REPORT.

PROJECT
LOCATION



VICINITY MAP

N. T. S.

ADDITIONAL NOTES

STORM WATER CAN BE LOCALLY RETAINED AND CONTROLLED USING RETENTION BASINS. THIS IS THE METHOD TO HANDLE STORM WATER.

THERE ARE NO HURRICANE CANAL FACILITIES IN THE SUBJECT AREA.

PROPERTY CAN BE SERVED BY HURRICANE CITY WATER, AND ASH CREEK SPECIAL SERVICE DISTRICT.

THERE ARE NO WELLS, SPRINGS OR SEEPS ON THIS PROPERTY.

OWNER PLANS TO ALLOW PLACEMENT OF COMMUNICATIONS INFRASTRUCTURE AND PLACEMENT OF UTILITY INFRASTRUCTURE ON AND ALONG ALL RIGHTS-OF-WAY AND EASEMENTS.

LAND USE SUMMARY

TOTAL LOTS: 238

TOTAL LOTS PER PHASE

PHASE 1: 74
PHASE 2: 58
PHASE 3: 38
PHASE 4: 36
PHASE 5: 32

ZONING PER PHASE

PHASE 1-2: R1-6
PHASE 3-5: R1-10

AVERAGE LOT SIZES PER PHASE

PHASE 1: 6,685 SQ. FT. OR 0.153 ACRES
PHASE 2: 6,969 SQ. FT. OR 0.160 ACRES
PHASE 3: 11,704 SQ. FT. OR 0.269 ACRES
PHASE 4: 11,522 SQ. FT. OR 0.265 ACRES
PHASE 5: 12,171 SQ. FT. OR 0.279 ACRES

OWNERS:

WESTERN MORTGAGE & REALTY COMPANY

CONTACT REPRESENTATIVE:

BRENT MOSER
(801)-793-0346
THEBEACHATSANDHOLLOW@GMAIL.COM

REVISIONS		DATE	BY
NO	DESCRIPTION		

PROVALUE ENGINEERING, INC.

Engineers - Land Developers - Land Planners
20 South 850 West, Suite 1
Hurricane, Utah 84755
Phone: (435) 830-1807
Fax: (435) 830-3077
Cell: (435) 830-3077



PRELIMINARY PLAT FOR:

DIXIE MEADOWS SUBDIVISION

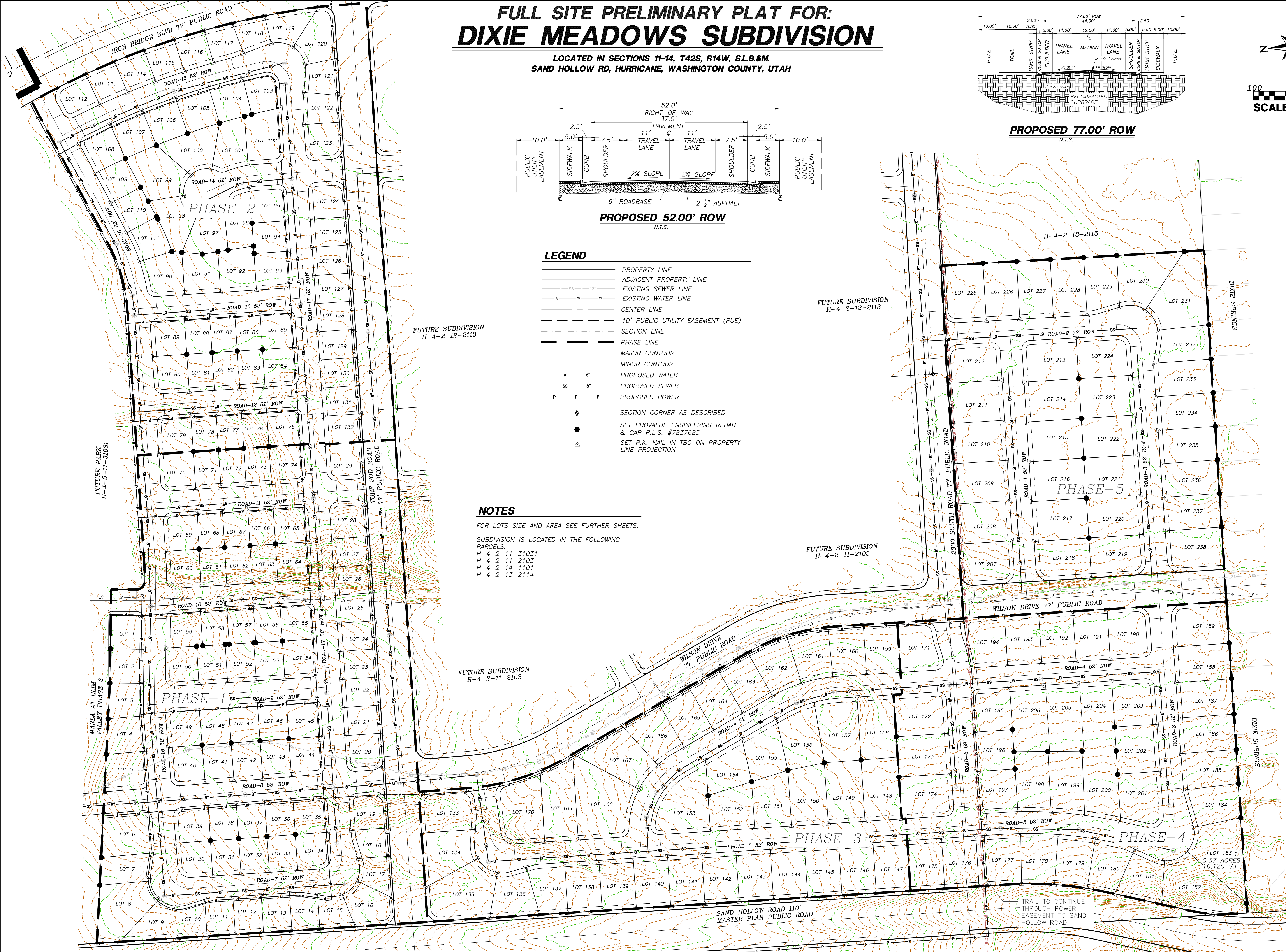
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SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

DATE: 12/19/2022
SCALE: N.T.S.

JOB NO.
336-02

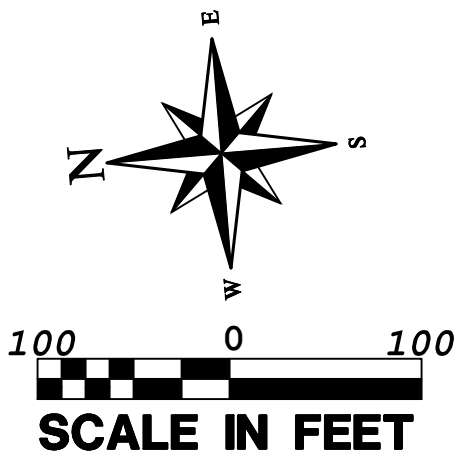
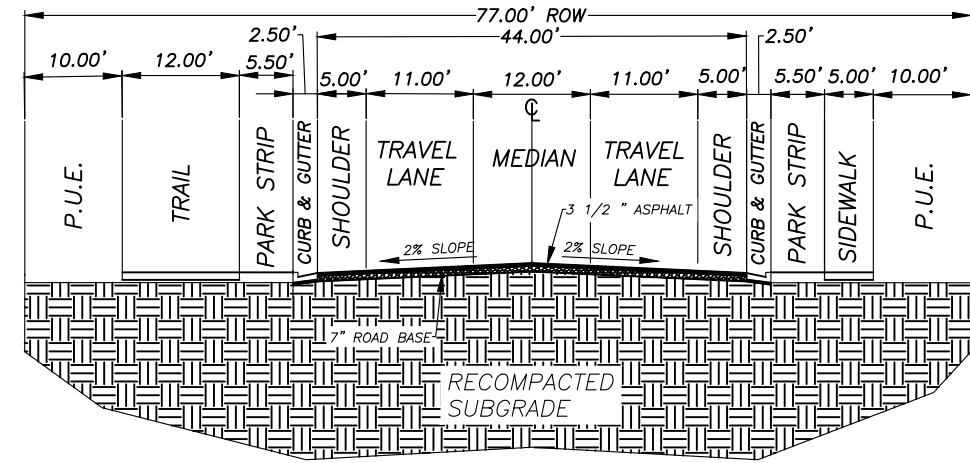
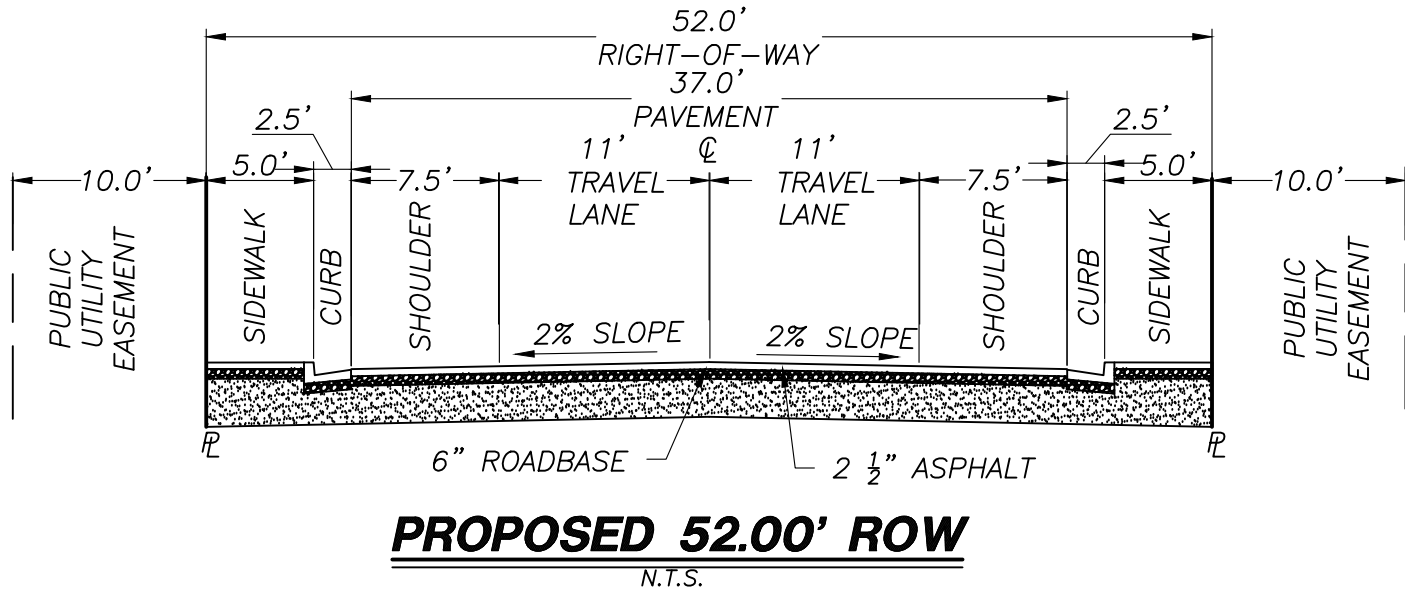
SHEET NO:
1 OF 8

PRELIMINARY PLAT
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FULL SITE PRELIMINARY PLAT FOR:
DIXIE MEADOWS SUBDIVISION

LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH



LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- CENTER LINE
- 10' PUBLIC UTILITY EASEMENT (PUE)
- SECTION LINE
- PHASE LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED POWER
- SECTION CORNER AS DESCRIBED
- SET PROVALUE ENGINEERING REBAR & CAP P.L.S. #7837685
- SET P.K. NAIL IN TBC ON PROPERTY LINE PROJECTION

NOTES

FOR LOTS SIZE AND AREA SEE FURTHER SHEETS.
SUBDIVISION IS LOCATED IN THE FOLLOWING PARCELS:
H-4-2-11-31031
H-4-2-11-2103
H-4-2-14-1101
H-4-2-13-2114

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Landscape Architects
20 South 950 West, Suite 1
Hurricane, Utah 84403
Phone: (435) 590-3127 Chad Hill

PROVALUE ENGINEERING

FULL SITE PRELIMINARY PLAT FOR
DIXIE MEADOWS SUBDIVISION
LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

DATE: 12/19/2022
SCALE: 1"=100'

JOB NO.
336-02

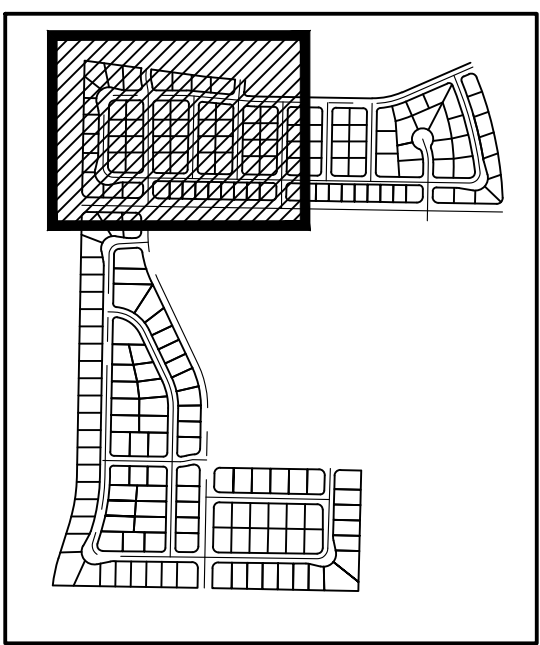
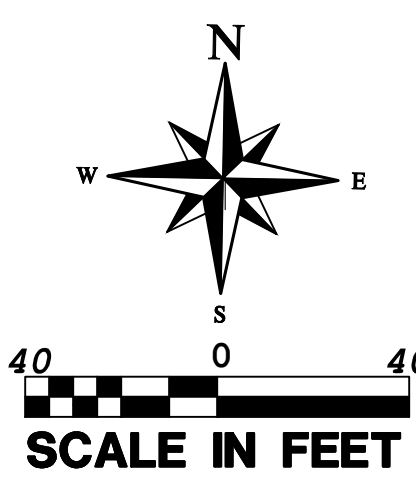
SHEET NO:
2 OF 8

NO	REVISIONS	DATE	BY
	DESCRIPTION		

PRELIMINARY PLAT FOR:
DIXIE MEADOWS SUBDIVISION

LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

MARLA AT ELIM VALLEY PHASE 2



LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- CENTER LINE
- 10' PUBLIC UTILITY EASEMENT (PUE)
- SECTION LINE
- PHASE LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED POWER

SECTION CORNER AS DESCRIBED
SET PROVALUE ENGINEERING REBAR
& CAP P.L.S. #7837685
SET P.K. NAIL IN TBC ON PROPERTY
LINE PROJECTION

FUTURE PARK
H-4-2-11-31031

SAND HOLLOW ROAD 112' MASTER PLAN PUBLIC ROAD

ROAD-7 52' ROW

ROAD-8 52' ROW

ROAD-9 52' ROW

ROAD-17 52' ROW

ROAD-10 52' ROW

ROAD-16 52' ROW

PHASE-2

PHASE-2

PHASE-3

FUTURE SUBDIVISION
H-4-2-11-2103

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Land Planners
28 South 850 West, Suite 1
Hurricane City, Utah 84737
Phone: (435) 590-3271 Chad Hill



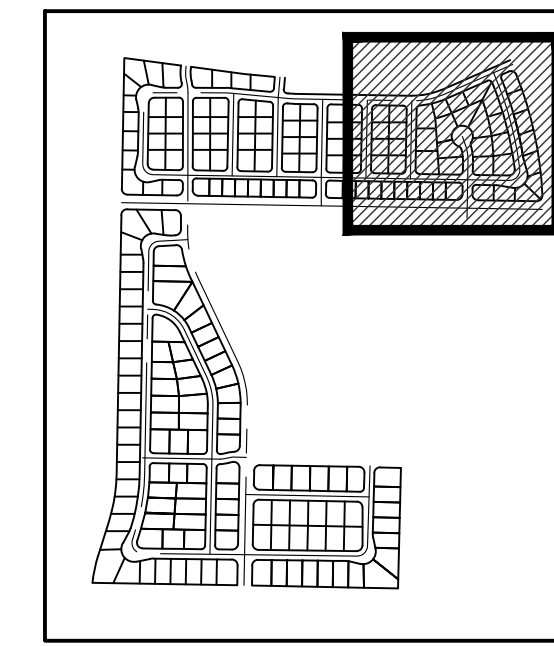
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SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

DATE: 12/19/2022
SCALE: 1"=40'
JOB NO:
336-012
SHEET NO:
3 OF 8

NO	REVISIONS	DATE	BY

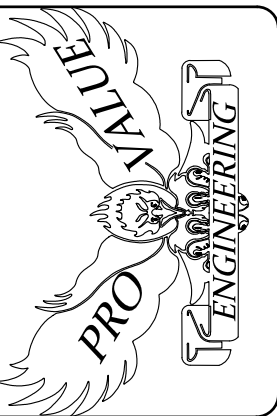
**LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH**

**LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH**



KEY MAP
N.T.S.

H-4-2-12-402-GS1



PRELIMINARY PLAT FOR
DIXIE MEADOWS SUBDIVISION

LOCATED IN SECTIONS 11-14, 1425, R14W, S11B.M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

PRELIMINARY PLAT FOR

DATE: 12/19/2022
SCALE: 1"=40'

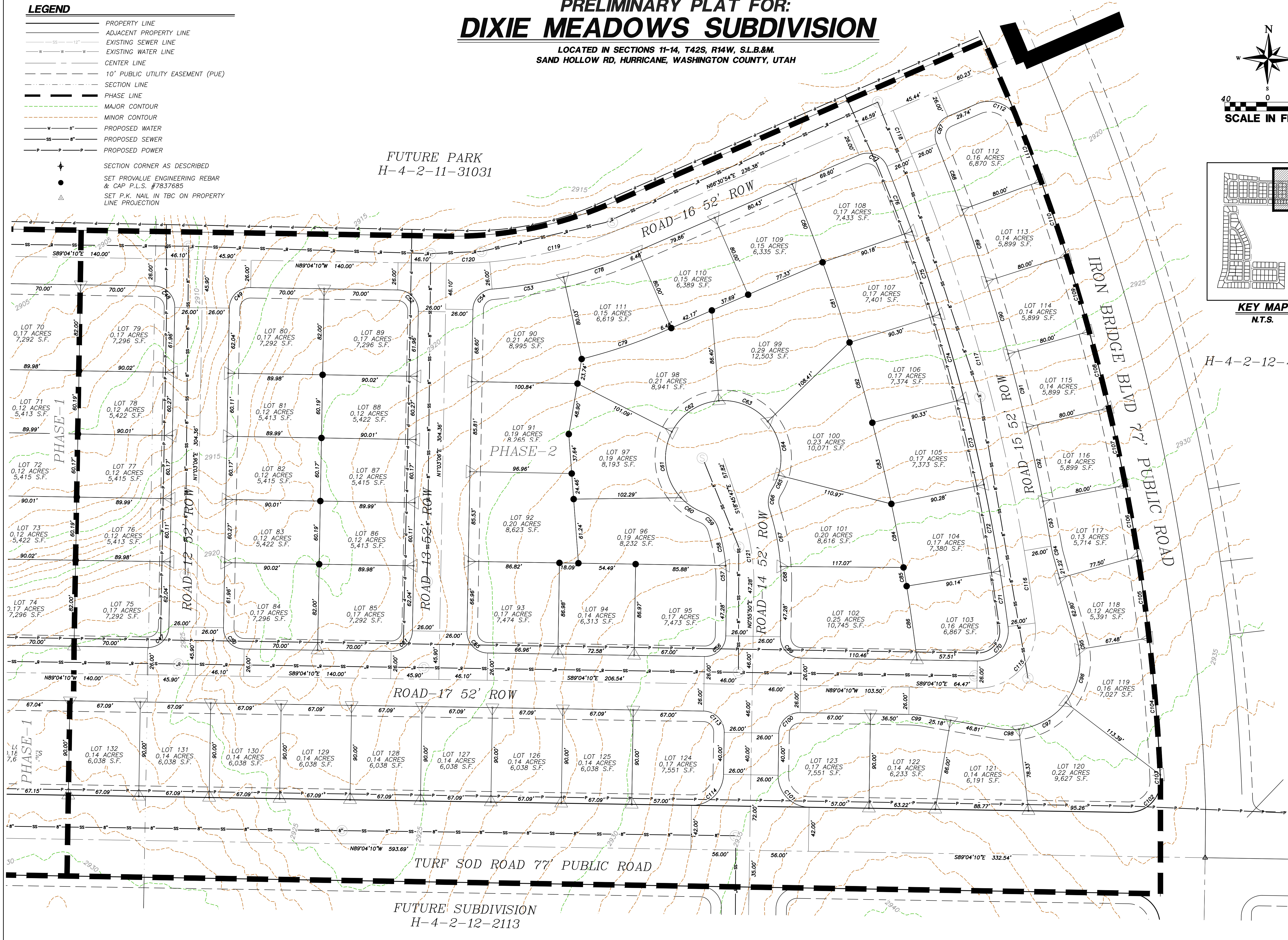
JOB NO.
336-012

OF 8

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PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Land Planners

PRELIMINARY PLAT



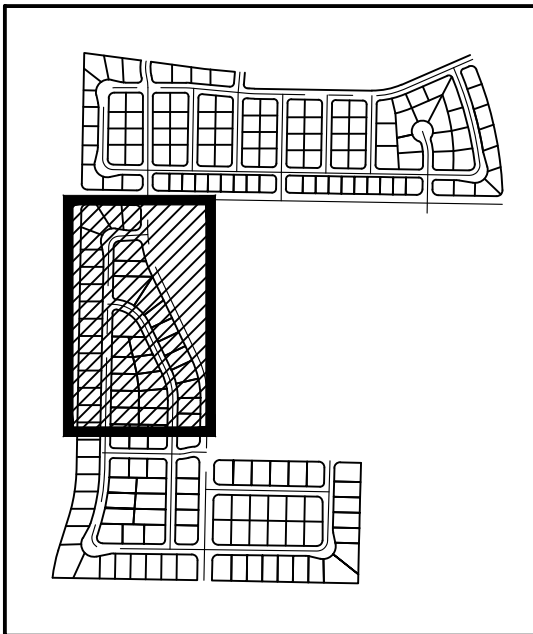
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SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

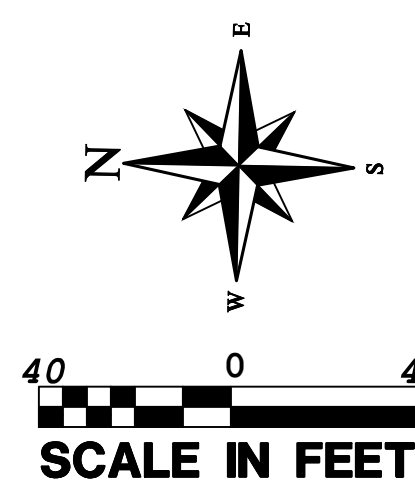
LEGEND

- PROPERTY LINE
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- SET P.K. NAIL IN TBC ON PROPERTY LINE PROJECTION



KEY MAP
N.T.S.



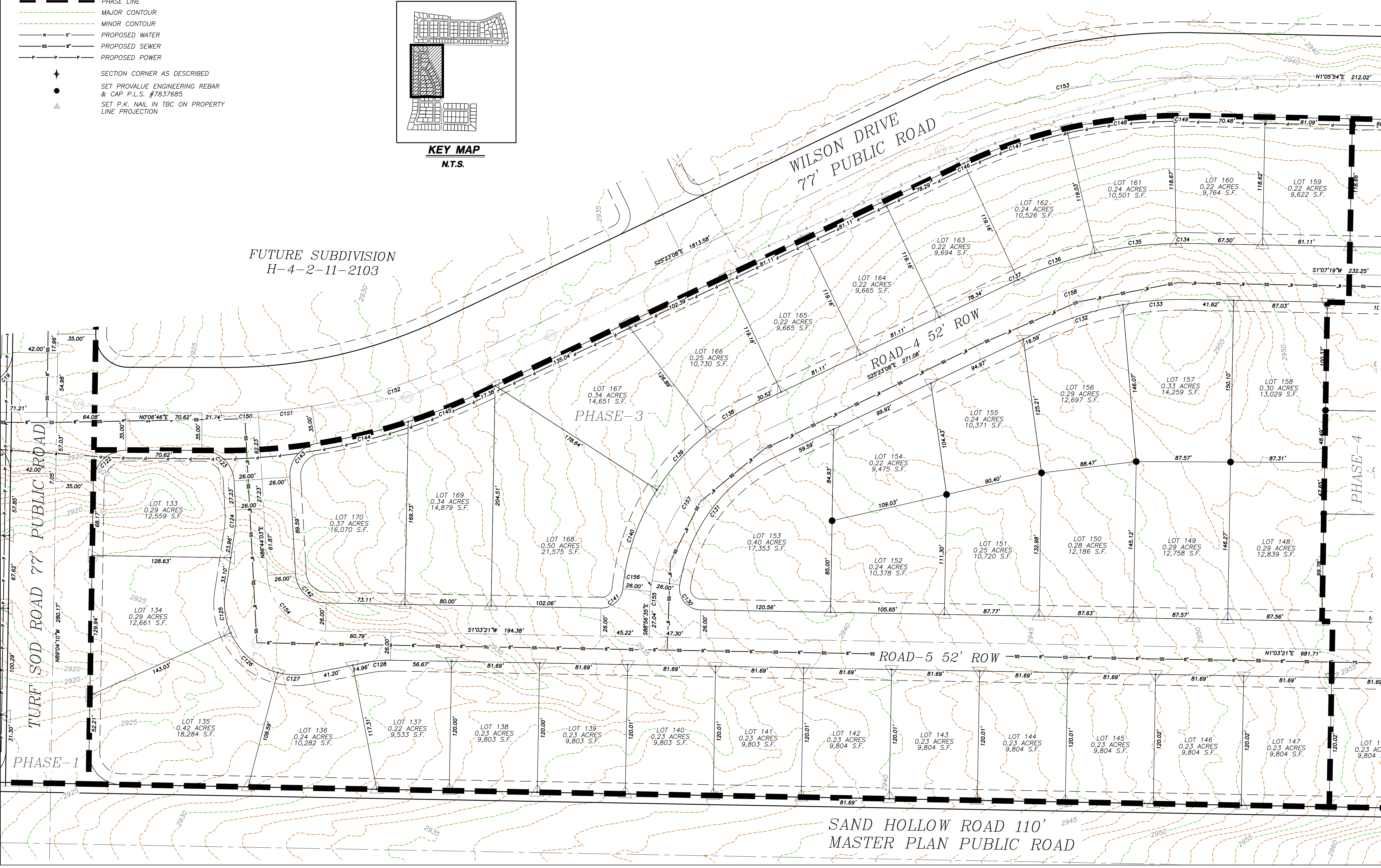
REVISIONS		DATE	BY
NO	DESCRIPTION		

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Licensed Planners
20 South 950 West, Suite 1
Hurricane, Utah 84757
Phone: (435) 890-3127 Chad Hill



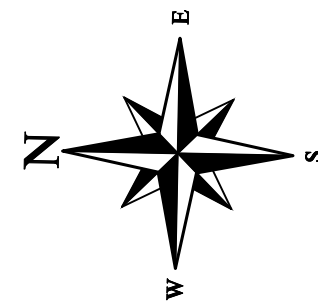
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DATE: 12/19/2022
SCALE: 1"=40'
JOB NO.
336-02
SHEET NO:
5 OF 8

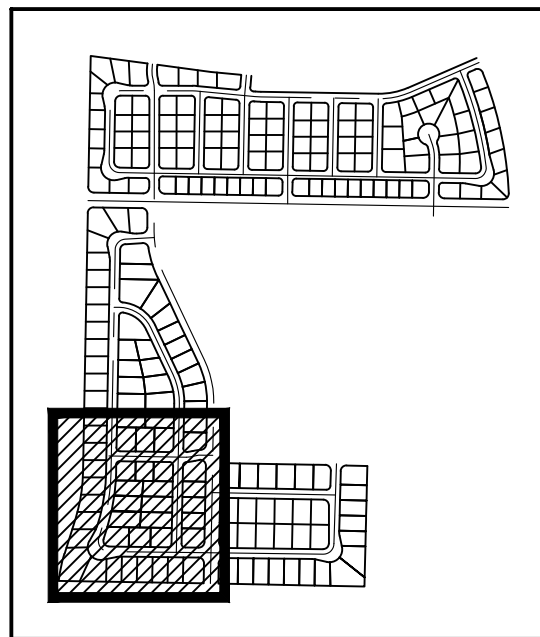


PRELIMINARY PLAT FOR:
DIXIE MEADOWS SUBDIVISION

LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH



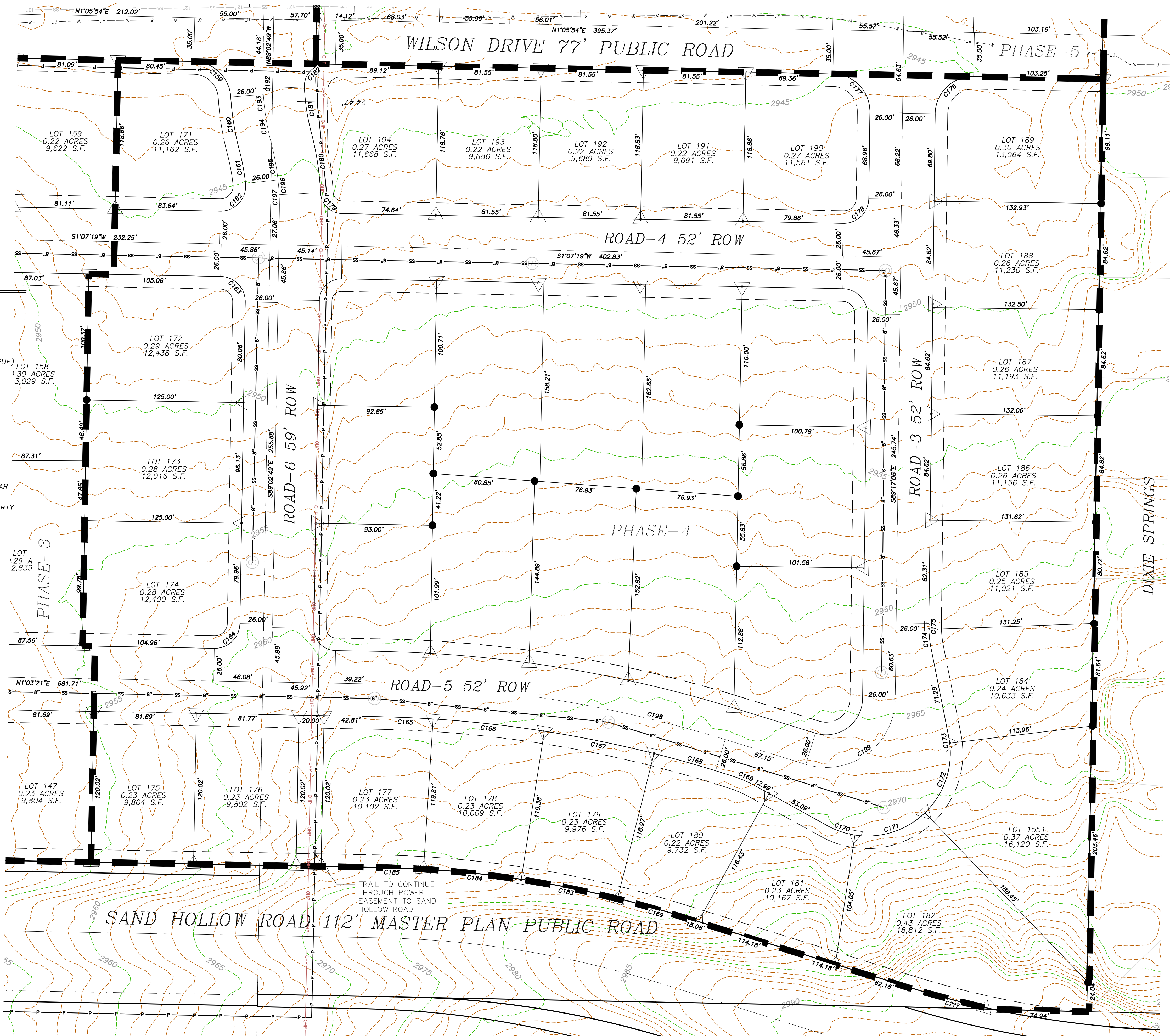
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SCALE IN FEET



KEY MAP
N.T.S.

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
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- 10' PUBLIC UTILITY EASEMENT (PUE)
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REVISIONS		DATE	BY
NO	DESCRIPTION		

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Licensed Planners
20 South 950 West, Suite 1
Hurricane, Utah 84757
Phone: (435) 890-3127 Chad Hill



PRELIMINARY PLAT FOR
DIXIE MEADOWS SUBDIVISION
LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

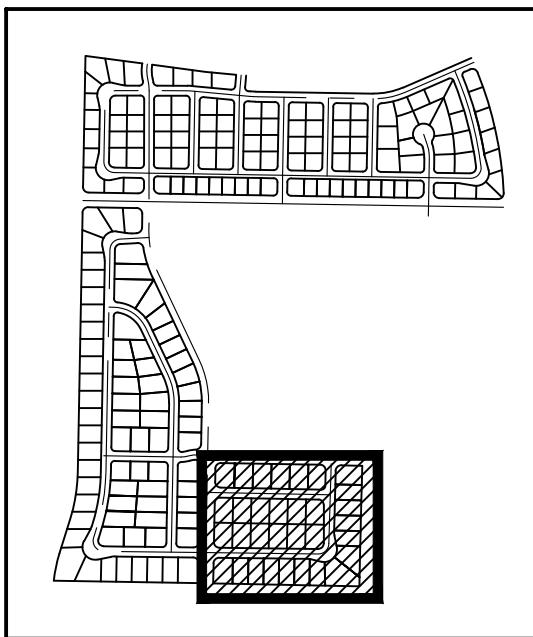
DATE: 12/19/2022
SCALE: 1"=40'
JOB NO.
336-02
SHEET NO:
6 OF 8

PRELIMINARY PLAT FOR:
DIXIE MEADOWS SUBDIVISION

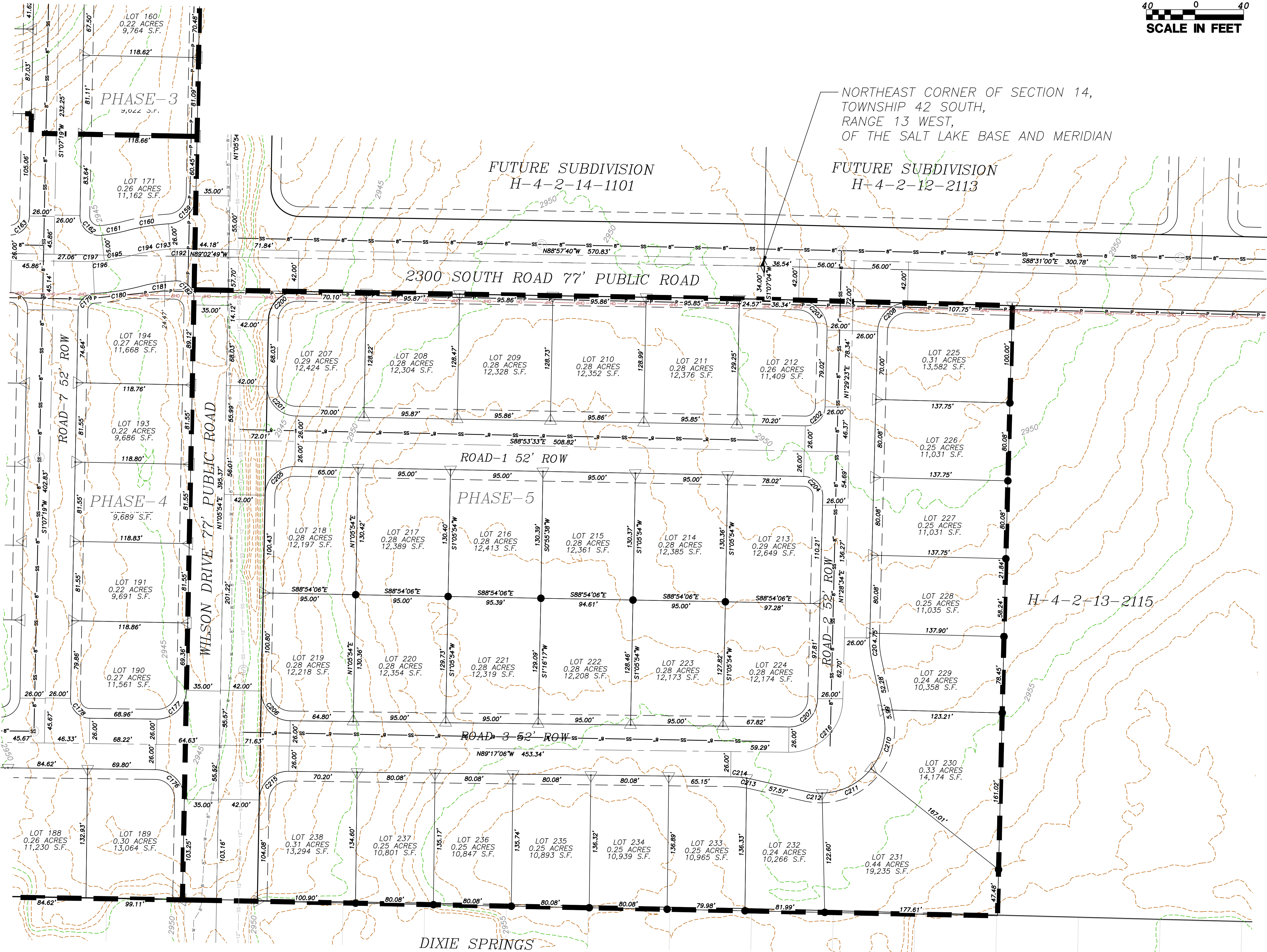
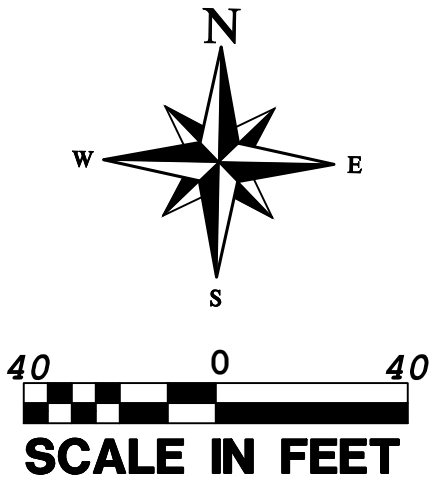
LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING SEWER LINE
- EXISTING WATER LINE
- CENTER LINE
- 10' PUBLIC UTILITY EASEMENT (PUE)
- SECTION LINE
- PHASE LINE
- MAJOR CONTOUR
- MINOR CONTOUR
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED POWER
- SECTION CORNER AS DESCRIBED
- SET PROVALUE ENGINEERING REBAR & CAP P.L.S. #7837685
- SET P.K. NAIL IN TBC ON PROPERTY LINE PROJECTION



KEY MAP
N.T.S.



PRELIMINARY PLAT FOR
DIXIE MEADOWS SUBDIVISION

LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

DATE: 12/19/2022
SCALE: 1"=40'

JOB NO.
336-02

SHEET NO:
7 OF 8

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Licensed Planners
20 South 950 West, Suite 1
Hurricane, UT 84757
Phone: (435) 890-3127 Chad Hill

REVISIONS

NO	DESCRIPTION	DATE	BY

CURVE TABLE FOR:
DIXIE MEADOWS SUBDIVISION

LOCATED IN SECTIONS 11-14, T42S, R14W, S.L.B.&M.
SAND HOLLOW RD, HURRICANE, WASHINGTON COUNTY, UTAH

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD DIST.	CHORD BRG.	DELTA
C1	31.60'	20.00'	28.41'	S50°06'05"W	90°31'51"
C2	31.40'	20.00'	28.27'	N44°54'55"W	89°56'39"
C3	31.44'	20.00'	28.30'	S45°05'05"W	90°03'21"
C4	21.69'	98.00'	21.65'	N83°32'47"W	12°40'54"
C5	14.83'	66.00'	14.80'	N83°38'32"W	12°52'24"
C6	48.95'	66.00'	47.84'	S68°40'19"W	42°29'55"
C7	48.96'	66.00'	47.85'	S26°10'13"W	42°30'18"
C8	20.26'	66.00'	20.18'	S3°52'35"E	17°35'17"
C9	2.83'	98.00'	2.83'	S11°50'37"E	1°39'12"
C10	20.65'	98.00'	20.61'	S4°58'47"E	12°04'26"
C11	20.78'	98.00'	20.74'	S7°07'49"W	12°08'47"
C12	35.03'	66.00'	34.62'	S1°59'59"E	30°24'23"
C13	48.95'	66.00'	47.84'	S38°27'00"E	42°29'39"
C14	49.03'	66.00'	47.91'	S80°58'45"E	42°33'51"
C15	22.56'	98.00'	22.51'	N84°20'05"E	13°11'30"
C16	31.13'	20.00'	28.08'	S44°28'42"E	89°10'56"
C17	47.55'	30.00'	42.73'	S45°31'18"W	90°49'04"
C18	47.19'	30.00'	42.47'	N44°00'22"W	90°07'36"
C19	46.70'	30.00'	42.12'	S44°28'42"E	89°10'56"
C20	31.70'	20.00'	28.49'	S45°31'18"W	90°49'04"
C21	31.46'	20.00'	28.31'	N44°00'32"W	90°07'16"
C22	31.37'	20.00'	28.25'	N45°59'28"E	89°52'44"
C23	31.46'	20.00'	28.31'	S44°00'32"E	90°07'16"
C24	31.37'	20.00'	28.25'	S45°59'28"W	89°52'44"
C25	45.08'	29.00'	40.67'	N45°35'06"E	89°03'20"
C26	45.62'	29.00'	41.06'	N44°00'22"W	90°07'36"
C27	31.70'	20.00'	28.49'	S45°31'18"W	90°49'04"
C28	31.43'	20.08'	28.31'	S44°57'22"E	89°40'41"
C29	31.42'	20.00'	28.28'	S45°06'46"W	90°00'00"
C30	31.13'	20.00'	28.08'	S44°28'42"E	89°10'56"
C31	31.37'	20.00'	28.25'	N45°59'28"E	89°52'44"
C32	31.74'	20.00'	28.52'	N44°25'04"W	90°56'20"
C33	32.92'	20.00'	29.33'	N48°12'33"E	94°18'54"
C34	31.46'	20.00'	28.31'	N44°00'32"W	90°07'16"
C35	31.37'	20.00'	28.25'	S45°59'28"W	89°52'44"
C36	29.91'	20.00'	27.20'	S41°47'27"E	85°41'06"
C37	32.92'	20.00'	29.33'	N48°12'33"E	94°18'54"
C38	31.46'	20.00'	28.31'	N44°00'32"W	90°07'16"
C39	31.37'	20.00'	28.25'	S45°59'28"W	89°52'44"
C40	31.46'	20.00'	28.31'	S44°00'32"E	90°07'16"
C41	31.37'	20.00'	28.25'	N45°59'28"E	89°52'44"
C42	31.46'	20.00'	28.31'	N44°00'32"W	90°07'16"
C43	85.49'	55.00'	77.14'	S45°35'06"W	89°03'20"
C44	86.52'	55.00'	77.87'	S44°00'22"E	90°07'36"
C45	18.34'	200.00'	18.33'	N87°15'37"W	5°15'14"
C46	30.97'	400.00'	30.96'	S86°51'05"E	4°26'10"
C47	31.37'	20.00'	28.25'	S45°59'28"W	89°52'44"
C48	31.46'	20.00'	28.31'	S44°00'32"E	90°07'16"
C49	31.37'	20.00'	28.25'	N45°59'28"E	89°52'44"
C50	31.46'	20.00'	28.31'	N44°00'32"W	90°07'16"
C51	31.37'	20.00'	28.25'	S45°59'28"W	89°52'44"
C52	31.46'	20.00'	28.31'	S44°00'32"E	90°07'16"
C53	69.03'	426.00'	68.96'	N80°22'57"E	9°17'06"
C54	29.33'	20.00'	26.77'	N43°00'57"E	84°01'07"
C55	31.46'	20.00'	28.31'	N44°00'32"W	90°07'16"
C56	31.42'	20.00'	28.28'	S45°55'50"W	90°00'00"
C57	19.72'	174.00'	19.71'	S2°18'57"E	6°29'33"

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD DIST.	CHORD BRG.	DELTA
C58	36.81'	174.00'	36.75'	S11°37'23"E	12°07'21"
C59	20.93'	23.00'	20.21'	S43°45'08"E	52°08'08"
C60	25.74'	55.00'	25.50'	S56°24'51"E	26°48'42"
C61	67.58'	55.00'	63.41'	S7°48'29"E	70°24'02"
C62	55.88'	55.00'	53.50'	S56°29'47"W	58°12'30"
C63	52.54'	55.00'	50.57'	N67°01'51"W	54°44'13"
C64	54.34'	55.00'	52.15'	N11°21'33"W	56°36'22"
C65	14.77'	55.00'	14.73'	N24°38'22"E	15°23'27"
C66	20.25'	23.00'	19.60'	N7°07'01"E	50°26'08"
C67	55.35'	226.00'	55.21'	N11°05'04"W	14°01'58"
C68	19.72'	226.00'	19.71'	N1°34'08"W	4°59'55"
C69	31.42'	20.00'	28.28'	N44°04'10"W	90°00'00"
C70	49.80'	29.00'	43.90'	S41°44'16"W	98°23'07"
C71	53.44'	1750.66'	53.44'	S8°09'38"E	1°44'56"
C72	83.86'	1750.66'	83.85'	S10°24'27"E	2°44'40"
C73	83.80'	1750.66'	83.79'	S13°09'03"E	2°44'34"
C74	83.80'	1750.66'	83.79'	S15°53'37"E	2°44'34"
C75	83.44'	1750.66'	83.43'	S18°37'49"E	2°43'51"
C76	66.48'	1750.66'	66.48'	S21°05'01"E	2°10'33"
C77	31.93'	20.00'	28.65'	S67°44'38"E	91°28'55"
C78	68.59'	426.00'	68.52'	N71°07'39"E	9°13'30"
C79	83.93'	506.00'	83.83'	N71°16'00"E	9°30'12"
C80	80.07'	1701.00'	80.06'	N21°16'02"W	2°41'49"
C81	80.59'	1701.00'	80.58'	N18°33'42"W	2°42'53"
C82	79.48'	1701.00'	79.47'	N15°51'57"W	2°40'38"
C83	79.48'	1701.00'	79.47'	N13°11'19"W	2°40'38"
C84	61.69'	1701.00'	61.69'	N10°48'40"W	2°04'41"
C85	18.04'	1701.00'	18.04'	N9°28'05"W	0°36'28"
C86	71.06'	1701.00'	71.05'	N7°58'03"W	2°23'36"
C87	30.92'	20.00'	27.93'	S22°13'10"W	88°35'28"
C88	67.49'	1843.00'	67.48'	S21°01'38"E	2°05'53"
C89	72.17'	1843.00'	72.16'	S18°51'23"E	2°14'37"
C90	72.17'	1843.00'	72.16'	S16°36'46"E	2°14'37"
C91	72.17'	1843.00'	72.16'	S14°22'09"E	2°14'37"
C92	72.17'	1843.00'	72.16'	S12°07'32"E	2°14'37"
C93	43.45'	1843.00'	43.45'	S10°19'42"E	1°21'03"
C94	10.39'	98.00'	10.38'	S12°41'24"E	6°04'27"
C95	7.56'	66.00'	7.56'	S12°26'46"E	6°33'44"
C96	53.70'	66.00'	52.23'	S14°08'38"W	46°37'03"
C97	52.78'	66.00'	51.38'	S60°21'41"W	45°49'04"
C98	18.97'	66.00'	18.90'	N88°29'46"W	16°28'02"
C99	15.06'	98.00'	15.05'	N84°39'58"W	8°48'25"
C100	31.42'	20.00'	28.28'	S45°55'50"W	90°00'00"
C101	47.12'	30.00'	42.43'	S44°04'10"E	90°00'00"
C102	48.96'	30.00'	43.71'	N44°10'29"E	93°30'42"
C103	4.45'	1923.00'	4.45'	N2°38'51"W	0°07'58"
C104	130.81'	1923.00'	130.78'	N4°39'45"W	3°53'51"
C105	78.81'	1923.00'	78.81'	N7°47'08"W	2°20'54"
C106	68.61'	1923.00'	68.60'	N9°58'54"W	2°02'39"
C107	75.30'	1923.00'	75.30'	N12°07'32"W	2°14'37"
C108	75.30'	1923.00'	75.30'	N14°22'09"W	2°14'37"
C109	75.30'	1923.00'	75.30'	N16°36'46"W	2°14'37"
C110	75.30'	1923.00'	75.30'	N18°51'23"W	2°14'37"
C111	61.00'	1923.00'	61.00'	N20°53'13"W	1°49'03"
C112	48.01'	30.00'	43.05'	N67°38'25"W	91°41'21"
C113	31.42'	20.00'	28.28'	N44°04'10"W	90°00'00"
C114	47.12'	30.00'	42.43'	N45°55'50"E	90°00'00"

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD DIST.	CHORD BRG.	DELTA
C115	94.44'	55.00'	83.26'	N41°44'16"E	98°23'07"
C116	69.71'	1817.00'	69.71'	N8°33'14"W	2°11'54"
C117	391.65'	1817.00'	390.89'	N15°49'41"W	12°21'00"
C118	44.87'	1817.00'	44.87'	N22°47'01"W	1°24'54"
C119	129.22'	400.00'	128.66'	N75°46'12"E	18°30'36"
C120	41.23'	400.00'	41.21'	N87°58'40"E	5°54'20"
C121	68.74'	200.00'	68.41'	S8°54'59"E	19°41'37"
C122	46.70'	30.00'	42.12'	S44°28'43"E	89°10'55"
C123	45.35'	30.00'	41.16'	S43°25'24"W	86°37'18"
C124	20.53'	98.00'	20.49'	N87°15'57"W	12°00'00"
C125	37.73'	66.00'	37.22'	S82°21'24"W	32°45'19"
C126	59.23'	66.00'	57.26'	S40°16'09"W	51°25'09"
C127	29.38'	66.00'	29.14'	S1°48'28"W	25°30'13"
C128	20.53'	98.00'	20.49'	S4°56'39"E	12°00'00"
C130	34.15'	20.00'	30.15'	S49°58'44"W	97°50'45"
C131	154.61'	159.00'	148.59'	N53°14'31"W	55°42'46"
C132	81.58'	309.00'	81.34'	N17°49'21"W	15°07'35"
C133	61.38'	309.00'	61.28'	N4°34'07"W	11°22'53"
C134	12.72'	361.00'	12.72'	S0°06'44"W	2°01'10"
C135	75.85'	361.00'	75.71'	S6°55'01"E	12°02'21"
C136	75.85'	361.00'	75.71'	S18°57'22"E	12°02'21"
C137	2.58'	361.00'	2.58'	S25°10'50"E	0°24'36"
C138	45.23'	211.00'	45.14'	S31°31'35"E	12°16'54"
C139	73.45'	211.00'	73.08'	S47°38'23"E	19°56'42"
C140	98.03'	211.00'	97.15'	S70°55'21"E	26°37'12"
C141	29.77'	20.00'	27.10'	S41°35'18"E	85°17'18"
C142	43.37'	29.00'	39.44'	S43°53'42"W	85°40'41"
C143	44.18'	30.00'	40.29'	N51°04'52"W	84°22'10"
C144	86.91'	545.00'	86.82'	N13°27'54"W	9°08'14"
C145	69.93'	545.00'	69.88'	N21°42'35"W	7°21'07"
C146	3.49'	474.94'	3.49'	N25°10'37"W	0°25'15"
C147	100.88'	474.94'	100.69'	N18°52'53"W	12°10'13"
C148	100.83'	474.94'	100.64'	N6°42'51"W	12°09'51"
C149	13.94'	474.94'	13.94'	N0°12'32"E	1°40'56"
C150	30.49'	510.00'	30.48'	S1°36'00"E	3°25'31"
C151	49.70'	510.00'	49.68'	S6°06'16"E	5°35'02"
C152	146.77'	510.00'	146.27'	S17°08'28"E	16°29'21"
C153	235.32'	510.00'	233.24'	S12°10'01"E	26°26'14"
C154	82.25'	55.00'	74.79'	S43°53'42"W	85°40'41"
C155	15.21'	185.00'	15.21'	N86°35'16"W	4°42'38"
C156	10.12'	185.00'	10.12'	N82°39'55"W	3°08'03"
C157	179.89'	185.00'	172.88'	N53°14'31"W	55°42'46"
C158	154.99'	335.00'	153.61'	N12°07'54"W	26°30'28"
C159	44.62'	30.00'	40.62'	N43°42'31"E	85°13'13"
C160	43.81'	226.00'	43.74'	N80°45'56"E	11°06'22"
C161	26.19'	174.00'	26.17'	N79°31'29"E	8°37'27"
C162	33.96'	20.00'	30.02'	S47°31'14"E	97°17'07"
C163	31.36'	20.00'	28.24'	N46°02'15"E	89°49'52"
C164	31.45'	20.00'	28.31'	S43°59'44"E	90°06'10"
C165	44.00'	974.00'	44.00'	S2°21'00"W	2°35'18"
C166	89.17'	974.00'	89.13'	S6°16'01"W	5°14'43"
C167	89.17'	974.00'	89.14'	S11°30'44"W	5°14'43"
C177	46.92'	30.00'	42.28'	N45°54'24"E	89°37'00"
C178	31.56'	20.00'	28.38'	S44°04'53"E	90°24'25"
C179	26.30'	17.50'	23.89'	S44°10'23"W	86°06'08"
C180	48.85'	233.00'	48.76'	S81°13'06"W	12°00'41"
C181	36.43'	167.00'	36.36'	S81°27'44"W	12°29'57"

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD DIST.	CHORD BRG.	DELTA
C182	28.52'	17.50'	25.47'	N45°35'42"W	93°23'12"
C192	16.18'	200.00'	16.17'	N88°38'09"E	4'38"03"
C193	13.05'	200.00'	13.05'	N84°26'57"E	3°44'21"
C194	25.72'	200.00'	25.70'	N78°53'46"E	7°22'01"
C195	30.10'	200.00'	30.08'	N79°31'29"E	8°37'27"
C196	9.54'	200.00'	9.54'	N85°12'10"E	2°43'55"
C197	15.30'	200.00'	15.30'	N88°45'39"E	4°23'03"
C198	280.54'	1000.00'	279.62'	S9°05'35"W	16°04'26"
C199	102.15'	55.00'	88.09'	S36°04'39"E	106°24'53"
C200	47.05'	30.00'	42.37'	N46°01'32"E	89°51'16"
C201	47.12'	30.00'	42.42'	N43°53'50"W	89°59'27"
C202	31.28'	20.00'	28.19'	S46°17'44"W	89°37'26"
C203	47.12'	30.00'	42.43'	S43°31'00"E	90°00'00"
C204	31.55'	20.00'	28.38'	N43°42'21"W	90°22'25"
C205	47.13'	30.00'	42.43'	S46°06'10"W	90°00'33"
C206	47.32'	30.00'	42.57'	S44°05'36"E	90°23'00"
C207	45.92'	29.00'	41.27'	N45°21'27"E	90°42'54"
C208	47.12'	30.00'	42.43'	N46°29'00"E	90°00'00"
C209	23.06'	98.00'	23.01'	N5°15'30"W	13°29'00"
C210	58.00'	66.00'	56.15'	N13°10'32"E	50°21'05"
C211	58.08'	66.00'	56.22'	N63°33'38"E	50°25'07"
C212	16.06'	66.00'	16.02'	S84°15'27"E	13°56'43"
C213	5.64'	98.00'	5.64'	S78°56'06"E	3°18'00"
C214	14.88'	98.00'	14.87'	N84°56'06"E	8°42'00"
C215	46.92'	30.00'	42.28'	S45°54'24"E	89°37'00"
C216	85.66'	55.00'	77.26'	N46°05'57"E	89°13'54"



STAFF COMMENTS

Agenda Date:	02/02/2023
Application Number:	2023-PP-01
Type of Application:	Preliminary Plat Application
Action Type:	Administrative
Applicant:	Western MTG & Realty Co Brent Moser
Agent:	ProValue Engineering-Karl Rasmussen
Request:	Approval of a Preliminary Plat
Location:	Approximately 4392 W 2400 S
Zoning:	R1-6 and R1-10
General Plan Map:	Planned Community

Planning Commission Recommendation

The Planning Commission recommended approval of the preliminary plat.

Discussion: The applicant is proposing a 238 lot single family subdivision located between the existing Marla at Elim Valley development and Dixie Springs. This is part of Phase 3 of the Sand Hollow Gateway Public Infrastructure District, phase 1 of which is currently under development. No off-site improvement plans for phase 3 (or Phase 2) have been submitted at this time.

JUC Comments

Public Works: What work is the PID doing? Need to see improvement drawings from the PID.

Water: Has a water model been submitted? Need details on water flow, looping, pressure zones, and mainline connections and connections to adjacent properties. The HDPE water line that goes through the property should be replaced and the water line will need to be in designated right of ways

Cable: No comments.

Phone: No facilities in subdivision. Fiber on the west side of Sand Hollow Road. When will Sand Hollow Road be redesigned?

Power: Dixie Power area. No power out there. Need major improvements. Will need to review it with the applicant. Wilson Drive and 2300 S will need to be improved to get power to the area. Almost nothing out there currently.

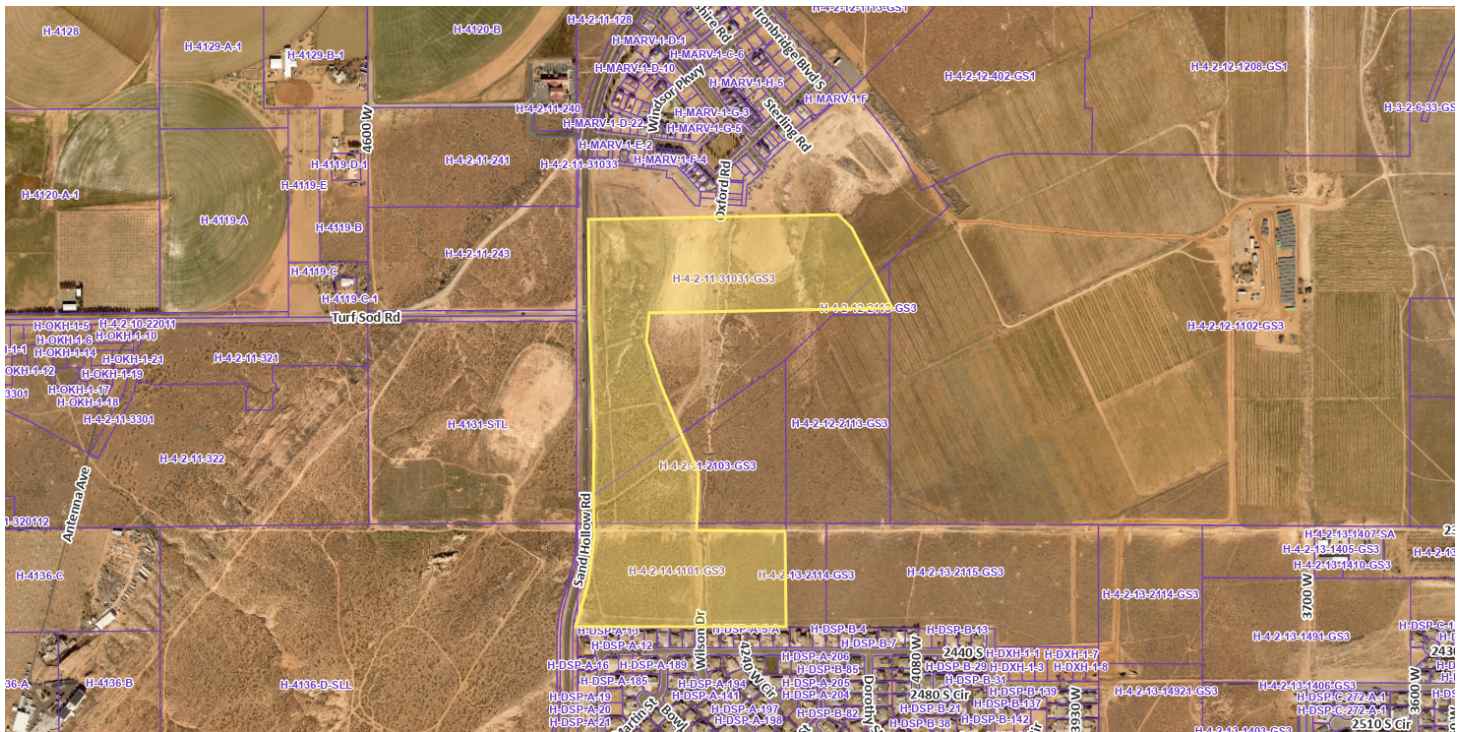
The applicant and planning staff has discussed the needs for power with Dixie Power and a representee from Dixie Power have conveyed to both the applicant and Planning Staff that there will be power to the site for them to access, but the developer may need to do some off-site improvements.

Sewer: 15" sewer main runs through several lots. Adjust roadways or relocate sewer.

Engineering: Legal description incorrect. Much of Sand Hollow Road is not dedicated through here. Stormwater note is inconsistent with both the proposed plans and the PID plans. Construction plans for Marla at Elim Valley Phase 2 have not been approved yet. Construction plans connecting the proposed subdivision to the existing end of Iron Bridge Blvd haven't been approved, depicted plans are about 700' from existing improvements. Master planned storm drain seems to follow Iron Bridge. Existing storm drain isn't shown. Where does the water from the ditch go? GIS data is insufficient. Partial street construction must be completed with or prior to phase 3 and 4 on Wilson Drive. Trail along 2300 S should continue to Sand Hollow Road. Section corner must be preserved on 2300 S. Sand Hollow Road is planned as a 112' wide roadway. Unless a separate roadway dedication plat is planned the subdivision boundary should follow the existing west parcel boundary. It appears the proposed subdivision includes an area owned by the WCWCD. Existing storm drain isn't shown on Wilson Dr, stormwater discharged from a pipe near there. Traffic model required, current model only for phase 1 of the PID.

Streets: Need stormwater plan from Wilson Dr. Will stormwater connect with Marla detention? Current detention system at Marla may need to be addressed.

Fire: Access okay.



Map is approximate

Staff Comments: Preliminary Plat

1. **Density:** Within this subdivision, property north of Turf Sod Road is R1-6 and south of Turf Sod Road is R1-10. All lots north of Turf Sod Road meet R1-6 development standards and all lots south of Turf Sod Road meet R1-10 development standards.
2. Wilson Drive and 2300 S are depicted as outside the phasing lines. These roads will need to be constructed, either by the PID or the developer, as part of this subdivision. The applicant has provided an updated letter address the PID and the funds.

3. Due to the elevation differences 2300 S will not connect to Sand Hollow Road, as anticipated by the Transportation Master Plan, however the Active Transportation Master plan does show the master planned trail connecting 2300 S to the trail on Sand Hollow Road. The applicant has added this change to the plan.
4. Will serve letters have been provided from the culinary and sanitary water providers
5. A note has been added to the plat indicating whether the property is in a tortoise take area
6. A water acknowledgement form has been provided
7. **Utilities:** JUC has raised some concerns about utility availability for this project.
 - a. Hurricane City Code 10-37-4 states:
 - i. *Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development. The City may require an analysis to be completed to determine whether adequate public facilities are available to service a development and whether such development will change existing levels of service or will create a demand which exceeds acceptable levels of service for roadways, intersections, bridges, storm drainage facilities, water lines, water pressure, sewer lines, fire and emergency response times, and other similar public services. The City may disapprove a proposed development if demand for public services exceeds accepted levels of service. No subsequent approval of such development shall be given until either the developer or the City installs improvements calculated to raise service levels to the standard adopted by the City.*
 - b. Hurricane City Code 9-6-3 states:
 - i. *A. Land shall be developed only where public facilities are in place or will be timely provided to serve proposed development at a level of service which meets the City's adopted level of service standards. For each proposed development the City may require an analysis to be completed to determine whether adequate public facilities are available to service the development and whether the development will change existing levels of service or will create a demand which exceeds acceptable levels of service for any public facility, including roadways, intersections, bridges, storm drainage facilities, water storage, water lines, water pressure, sewer lines, fire and emergency response times, and other similar public services.*
 - ii. *B. A proposed development shall not be approved if demand for a public facility will exceed adopted level of service standards unless public facility improvements, reasonably calculated to raise service levels to adopted level of service standards, will be available to serve the development.*
 - c. The following is what is required to show for a preliminary plat from 10-39-7:
 - i. *A tentative plan or method by which the subdivider proposes to handle the stormwater drainage for the subdivision.*
 - ii. *The location, width and names/numbers of all existing streets within 200 feet of the subdivision and of all prior streets or other public ways, easements, utility*

rights-of-way, parks and other public open spaces, within and adjacent to the tract.

- iii. A tentative plan or method for providing nondiscriminatory access to the subdivision for purposes of placement of communications infrastructure, and for purposes of placement of utility infrastructure.*
- d. The City has normally required a tentative plan or method for how an applicant would provide utility services within a preliminary plat. The code requires that during the construction drawings, that the applicant provide a full plan on how to provide utility services to a site, and then bond for those improvements prior to recording a plat.
- e. This site is within the Sand Hollow Gateway Public Infrastructure District Phase 3. The City has not received or reviewed any plans or drawing of future infrastructure other than overall concept plans on how services will tie between each of the phases. If the PID is not funded and submits plans, the developer would be responsible for improvements to all master plan roadway and associated utilities.
- f. As noted by the JUC comments, there are some utilities that are available at the site, but there were significant concerns raised by Public Works and Power.

Recommendation: The City Council should review this application based on standards within the Hurricane City Code. Staff would recommend approval subject to staff and JUC comments.

20 South 850 West, #1
Hurricane, UT 84737



435-668-8307
karl@pv-eng.com

January 25, 2023

Stephen Nielson
Planning Director
Hurricane City
Via email

Subject: Response to Staff Comments on the Dixie Meadows Preliminary Plat

Dear Stephen,

Staff comments on the Dixie Meadows Preliminary Plat have brought up a number of concerns with the future development. Most of the concerns have now been addressed in the updated preliminary plat. However, two concerns needed more explanation. Following you will read the concern raised by staff as well and the response to that comment.

1. The proposed development lies within the boundaries of Gateway at Sand Hollow District 3 PID. The funding for District 3 has not been approved yet. How is the PID involved?
 - a. Answer: The process to approve funds for PID 3 is still underway. The main reason for the developer's desire to begin the development now at this location is drainage. With the recent rain storm drainage from Dixie Springs has filled in the current drainage system and flooded streets, homes, and construction lots at the Marla Subdivision. This flooding has incurred damage and extensive cleanup costs for the developer. Phase 1 is intended to buildout Wilson Drive and homes near Marla. The sales of homes in phase 1 will help offset the cost of installing Wilson Drive. At this point, the hope is to have PID 3 ready by the time construction drawings are approved, but if it is not, the roadways will still be bonded by using other resources.
2. All utilities have questions about proposed changes to existing utilities. Power does not have enough infrastructure in place to bring power to phase 1. Offsite power will be an added cost for this development.
 - a. The existing water line and sewer lines will be rerouted to follow within the proposed roadways. A tentative utility plan has been included in the latest plat to show proposed utility locations.
 - b. Offsite power is necessary for this development. After speaking with Chad Reynolds with Dixie Power, he made it clear this added cost would be forthcoming. The developer knows this. The details on how power will be brought to the site will be resolved during the construction drawing process. With that in mind, Chad Reynolds says he has no problems with the approval of the preliminary plat.

Sincerely,

ProValue Engineering
Karl B. Rasmussen, P.E.



Ash Creek Special Service District

1350 S. Sand Hollow Road

Hurricane, UT 84737

Office: (435) 635-2348 Fax: (435) 635-8550

ashcreek@infowest.com

December 20, 2022

Hurricane City
Stephen Nelson
127 N. 870 W.
Hurricane, UT 84737

RE: Dixie Meadows

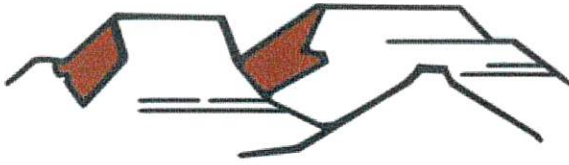
Stephen,

There is sewer capacity for this project. The developers understand and agree that they will need to get plan approval for the sewer system.

After approval, they agree to pay all costs associated with construction and impact fees. Please let us know if you have any questions.

Sincerely,

Amber Gillette, P.E.
Engineer
Ash Creek Special Service District



HURRICANE CITY

UTAH

Water Department
Ken Richins, Superintendent

July 19, 2022

To Whom It May Concern:

Western Mortgage (the "Developer") has requested a culinary water will serve letter for the subdivision known as Dixie Meadows Subdivision, located at approximately 2300 S Sand Hollow Rd in Hurricane, Utah (the "Project").

Infrastructure

The City currently has infrastructure to supply culinary water in the general area of the Project. However, Developer will be responsible to connect the Project to the existing water infrastructure, including the installation of infrastructure in dedicated public streets and as otherwise required to meet City standards. In addition, Developer may be required to obtain and supply a hydraulic water study to ensure the waterline will deliver required fire flows. A looped water system may be required.

Water Supply

As of the date of this letter, the city has adequate water to supply water to 238 residential connections within the Project. However, water within the City is a finite resource with limited supply. The ability of the City to supply water to previously approved projects, as well as continue to serve additional water customers, is contingent on water supplies being available from the Washington County Water Conservancy District (the "Conservancy District"). Therefore, the City's statements in this letter regarding the adequacy of water supply is (1) contingent on water being available from the Conservancy District and (2) shall expire one year from the date of this letter, after which a renewed will serve letter will be required for any property or lot that has not obtained a metered connection to the City's culinary water system. Developer is encouraged to obtain a guarantee of water from the Conservancy District.

General Requirements

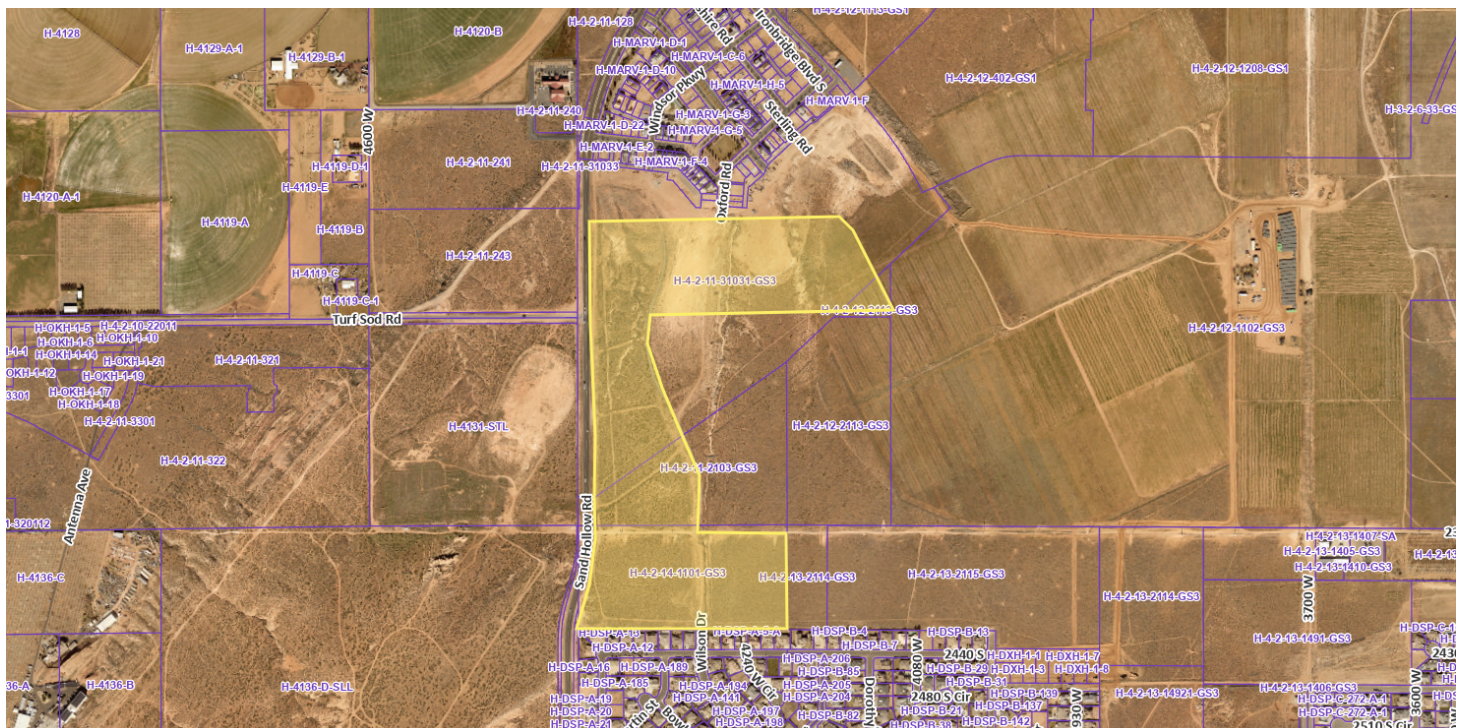
In addition to the requirements and limitations described above, Developer shall be required to comply with all applicable laws, ordinances, policies, and construction and design standards. These requirements include, but are not limited to, secondary water system requirements and any obligations described in an applicable development agreement.

Sincerely,

Ken Richins
Water Department Superintendent

Agenda Date:	01/26/2023
Application Number:	2023-PP-01
Type of Application:	Preliminary Plat Application
Action Type:	Administrative
Applicant:	Western MTG & Realty Co Brent Moser
Agent:	ProValue Engineering-Karl Rasmussen
Request:	Approval of a Preliminary Plat
Location:	Approximately 4392 W 2400 S
Zoning:	R1-6 and R1-10
General Plan Map:	Planned Community

Discussion: The applicant is proposing a 238 lot single family subdivision located between the existing Marla at Elim Valley development and Dixie Springs. This is part of Phase 3 of the Sand Hollow Gateway Public Infrastructure District, phase 1 of which is currently under development. No off-site improvement plans for phase 3 (or Phase 2) have been submitted at this time.



Map is approximate

JUC Comments

Public Works: What work is the PID doing? Need to see improvement drawings from the PID.

Water: Has a water model been submitted? Need details on water flow, looping, pressure zones, and mainline connections and connections to adjacent properties. The HDPE water line that goes through the property should be replaced and the water line will need to be in designated right of ways

Cable: No comments.

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Streets: Need stormwater plan from Wilson Dr. Will stormwater connect with Marla detention? Current detention system at Marla may need to be addressed.

Fire: Access okay.

Staff Comments: Preliminary Plat

1. **Density:** Within this subdivision, property north of Turf Sod Road is R1-6 and south of Turf Sod Road is R1-10. All lots north of Turf Sod Road meet R1-6 development standards and all lots south of Turf Sod Road meet R1-10 development standards.
2. Wilson Drive and 2300 S are depicted as outside the phasing lines. These roads will need to be constructed, either by the PID or the developer, as part of this subdivision
3. Due to the elevation differences 2300 S will not connect to Sand Hollow Road, as anticipated by the Transportation Master Plan, however the Active Transportation Master plan does show the master planned trail connecting 2300 S to the trail on Sand Hollow Road. This will need to be shown on the plans. Staff recommends that the trail follows the power easement on the property.
4. In the southwest corner of the property, the plans show Lot 182 extending all the way from the parcel boundary to Sand Hollow Road, however as shown below there is a strip of property owned by the Washington County Water Conservancy District. This needs to be resolved:



5. Will serve letters have been provided from the culinary and sanitary water providers
6. A note has been added to the plat indicating whether the property is in a tortoise take area
7. A water acknowledgement form has not been provided
8. **Utilities:** JUC has raised some concerns about utility availability for this project.

a. Hurricane City Code 10-37-4 states:

- i. *Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development. The City may require an analysis to be completed to determine whether adequate public facilities are available to service a development and whether such development will change existing levels of service or will create a demand which exceeds acceptable levels of service for roadways, intersections, bridges, storm drainage facilities, water lines, water pressure, sewer lines, fire and emergency response times, and other similar public services. The City may disapprove a proposed development if demand for public services exceeds accepted levels of service. No subsequent approval of such development shall be given until either the developer or the City installs improvements calculated to raise service levels to the standard adopted by the City.*

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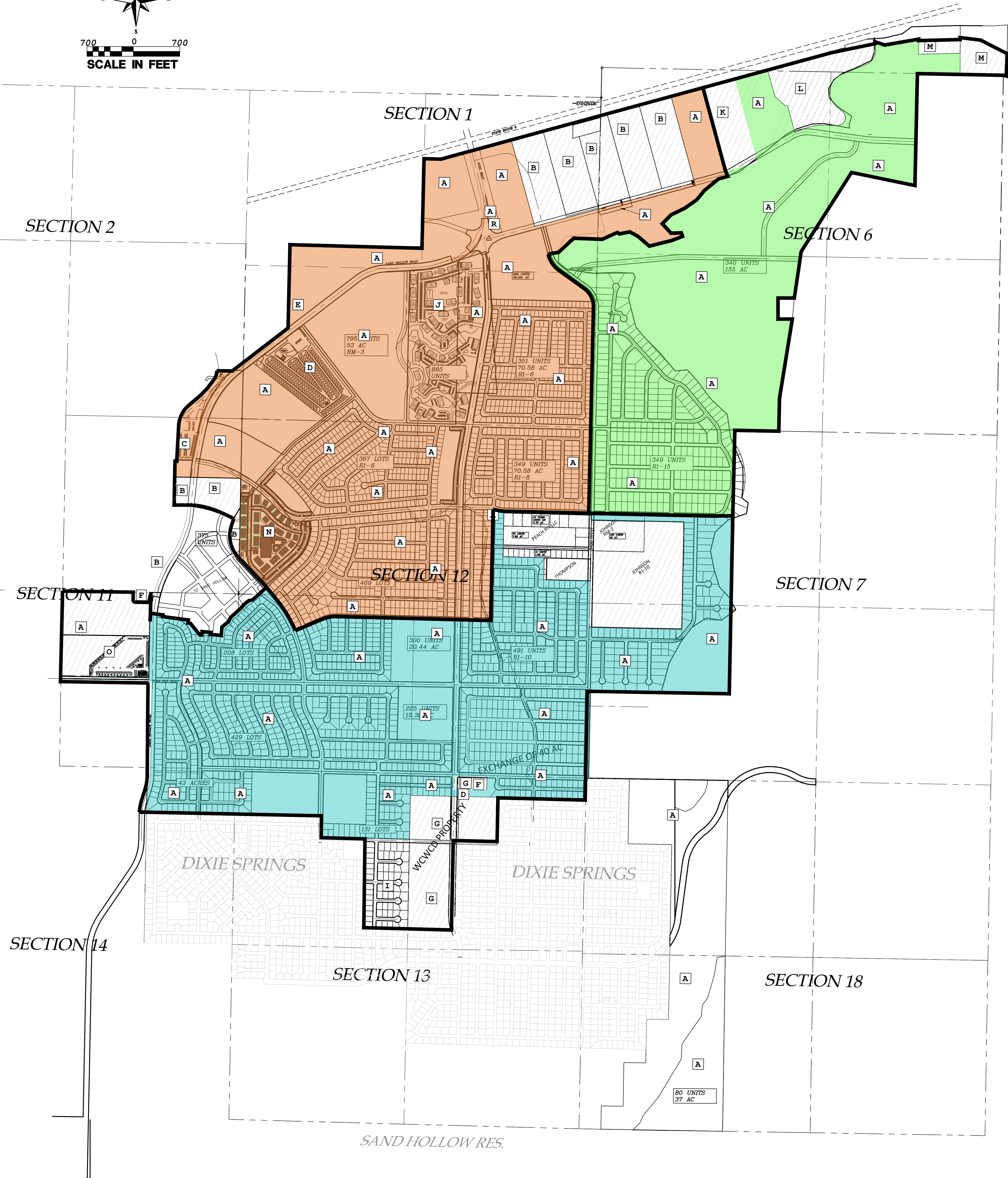
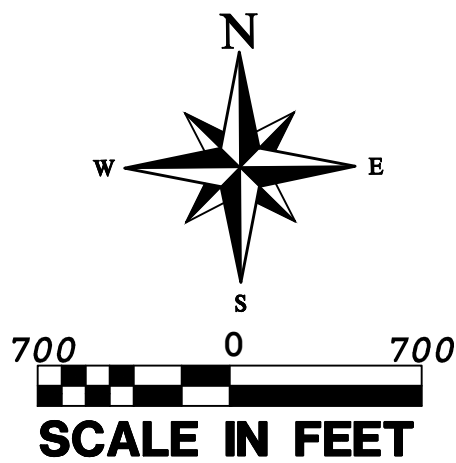
- ii. *B. A proposed development shall not be approved if demand for a public facility will exceed adopted level of service standards unless public facility improvements, reasonably calculated to raise service levels to adopted level of service standards, will be available to serve the development.*
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 - i. *A tentative plan or method by which the subdivider proposes to handle the stormwater drainage for the subdivision.*
 - ii. *The location, width and names/numbers of all existing streets within 200 feet of the subdivision and of all prior streets or other public ways, easements, utility rights-of-way, parks and other public open spaces, within and adjacent to the tract.*
 - iii. *A tentative plan or method for providing nondiscriminatory access to the subdivision for purposes of placement of communications infrastructure, and for purposes of placement of utility infrastructure.*
- d. The City has normally required a tentative plan or method for how an applicant would provide utility services within a preliminary plat. The code requires that during the construction drawings, that the applicant provide a full plan on how to provide utility services to a site, and then bond for those improvements prior to recording a plat.
- e. This site is within the Sand Hollow Gateway Public Infrastructure District Phase 3. The City has not received or reviewed any plans or drawing of future infrastructure other than overall concept plans on how services will tie between each of the phases. If the PID is not funded and submits plans, the developer would be responsible for improvements to all master plan roadway and associated utilities.
- f. As noted by the JUC comments, there are some utilities that are available at the site, but there were significant concerns raised by Public Works and Power.

Recommendation: The Planning Commission should review this application based on standards within the Hurricane City Code. Because of the concerns raised by the different utilities and planning staff, staff would recommend continuing the item to allow the applicant time to respond to the following concerns:

1. Utilities. The applicant should submit a preliminary plan on how utilities shall be addressed. The applicant and the City should discuss the concerns raised by power. Planning staff's main concern is about adequate services and to what extent it would take for the applicant to address those items.
2. Address the property ownership concerns raised in this report. The proposed plat includes property not owned by the applicant.
3. Address active transportation concerns raised in this report.
4. A water acknowledgment form has not been provided as required by City Code.

EXHIBIT A:
GATEWAY AT SAND HOLLOW DISTRICT BOUNDARY MAP

LOCATED ON SAND HOLLOW RD, HURRICANE
WASHINGTON COUNTY, UTAH



LEGEND:

- PROPOSED PETITION AREA DISTRICT 1
- POSSIBLE ANNEXATION AREAS DISTRICTS 1, 2 AND 3
- PROPOSED PETITION AREA DISTRICT 2
- PROPOSED PETITION AREA DISTRICT 3
- PROPOSED PETITION AREA BOUNDARY LINE

ANNEXATION PARCELS

A- WESTERN MORT. & REALTY CO. PARCELS:
H-3-2-6-431 H-4-2-11-127
H-3-2-6-1402 H-4-2-13-1410
H-3-2-6-1406 H-4-2-11-2103
H-3-2-6-1408 H-4-2-11-2112
H-3-2-6-33 H-4-2-1-131
H-3-2-7-4402 H-4-2-11-31031
H-4-2-1-1103 H-4-2-12-1102
H-4-2-1-1104 H-4-2-12-130
H-4-2-1-1107 H-4-2-12-131
H-4-2-1-1108 H-4-2-12-2113
H-4-2-1-1109 H-4-2-13-1409
H-4-2-1-1113 H-4-2-13-2114
H-4-2-1-1123 H-4-2-14-1101
H-4-2-1-125 H-4-2-1-4203

C- SH HOLDINGS LLC PARCELS:

H-4-2-11-21121

D- GLAMPERS INN LLC PARCELS:

H-3-2-6-330

E- JASON AND HOLLY CURTIS PARCEL:

H-4-2-1-340

J- SECURE PRIVATE FUND LLC - PARCEL

H-4-2-1-234

B CYPRESS CAPITAL XI LLC, ET AL - PARCELS H-4-2-1-1105&1106, H-3-2-6-1403,1404,&1405 & H-4-2-11-126,127&128.
F DIXIE ESCALANTE RURAL ELECTRIC - PARCELS H-4-2-13-1407-SA & H-4-2-11-240.
G WASHINGTON CO. WATER CONSERVANCY DISTRICT - PARCELS H-4-2-13-1405 & H-4-2-13-1491.
I WASHINGTON CO. BOARD OF EDUCATION - PARCEL H-4-2-13-1492.
K REV INVEST 1 LP, PERRY J FALK, ET AL - PARCEL H-3-2-6-1407.
L DOS RIOS LC - PARCEL H-3-2-6-1409.
M VIRTUS INVESTMENTS 1 - PARCELS H-3-1-31-220 & H-3-1-31-221.
R QUESTAR GAS - PARCEL H-4-2-1-131

N- BASH RESORTS LLC:
H-4-2-12-2113
O- CROWTHER ELM LLC:
H-4-2-11-243

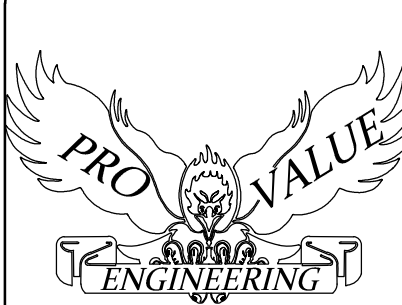
COPYRIGHT © 2013 provalue engineering inc.

EXHIBIT A:

1 OF 1

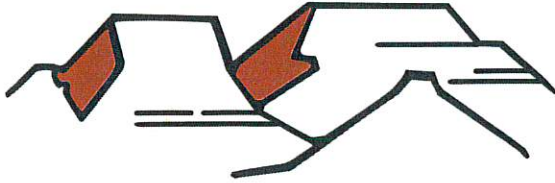
JOB NO.
336-007
DATE: 3/17/2011
SCALE: 1"=100'

EXHIBIT A::
GATEWAY AT S.H. DISTRICT BOUNDARY MAP
SAND HOLLOW RD
HURRICANE, WASHINGTON COUNTY, UTAH



PROVALUE ENGINEERING, INC.
Engineers- Land Surveyors - Land Planners
20 South 850 West, Suite 1
Hurricane City, Utah 84737
Phone: (435) 668-8307

REVISIONS			
NO	DESCRIPTION	DATE	BY



HURRICANE CITY

UTAH

ACKNOWLEDGEMENT OF WATER SUPPLY

I/We, Tony Larson am/are the applicant(s) of the application known as Gateway @ Sand Hollow P.P. located on parcel(s) H-4-2-1-1111-GSI, H-4-2-1-235-GSI, H-4-2-1-234-GSI, H-4-2-1-236-GSI, H-4-2-1-1108-GSI within the City of Hurricane, Washington County, Utah.

By my/our signature(s) below I/we do hereby acknowledge and agree to the following:

- 1 Neither acceptance nor approval of a development application by Hurricane City shall constitute a guarantee that sufficient water will be available to serve the zone designation, project, or permit for which this application is being submitted; and
- 2 Prior to receiving final approval for the application, the applicant may be required by Hurricane City to provide a guarantee of water availability which verifies that there is a sufficient water supply; and
- 3 For any application which may be approved without a guarantee of water availability, the applicant knowingly assumes the entire risk of water availability for the project and/or application; and
- 4 I/we waive any and all claims against Hurricane City that are in any way related to water availability for any project, permit, or use for which the land use application has been approved.

Dated this 18 day of January, 2023.

Applicant Name: Tony Larson

Name of Signer (if different from Applicant Name): _____

Title of Signer: Manager

Signature: Tony Larson

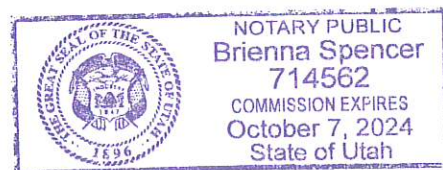
STATE OF Utah

COUNTY OF Washington

On the 18 day of January, 2023, personally appeared before me Tony Larson, the signer of the above instrument, who duly acknowledged to me that he/she executed the same in the capacity indicated on behalf of the Applicant.

Notary Public: Brienna Spencer

My Commission Expires: 10/07/2024



All signatures to this Acknowledgment, other than for Applicants signing in an individual capacity, shall be accompanied by documentation acceptable to the City attesting to the fact that the signer hereof is authorized to execute the Acknowledgment on behalf of the Applicant (e.g. a copy of a corporate resolution, copy of a partnership agreement, etc.). (Ord. No. 2022-37, 6-16-2022)



STAFF COMMENTS

Consideration and possible approval for a **preliminary plat for Bench Lake Townhomes, a 196 unit townhome development located at approximately 3145 S 1100 W**. Blue Mountain Property Enterprises LLC and Diamond Edge Construction, LLC-Scott Stratton Applicant. ProValue Engineering-Karl Rasmussen Agent.

Discussion:

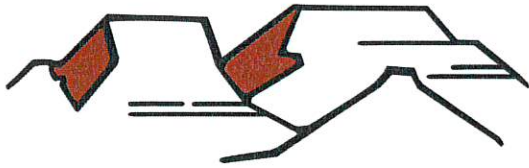
This is a multi-family townhome and some single-family homes proposed development located along 1100 W and 3145 S. The applicant is seeking approval for a preliminary plat for the site after a PDO Zone Change approval last spring. Staff and the Planning Commission both recommend denying this application based on limited utility facilities in the area.

Findings:

Recommendation:

Attachments:

1. Bench Lake townhomes App
2. 335-010 BENCH LAKE TOWNHOMES PRE PLAT 1-10-23
3. Bench Lake TH PP
4. Redlined Preliminary Plat - Bench Lake Townhomes - 2023.01.11
5. Will Serve - Bench Lake Townhomes - 2022.12.27
6. Will Serve Letter - Bench Lake Townhomes
7. Acknowledgement of Water Supply Letter Signed 1-10-23
8. Bench Lake RM-2 Zone Change DA 2008
9. Copy of 1100 West Bramall Parcels 11-25-20
10. Copy of 2022-ZC-09 Map
11. 1100 West Bramall Parcels 11-25-20 (1)
12. 046-191 Limited Culinary Distribution Capacity Exhibit 11x17
13. 046-191 Limited Culinary Distribution Capacity Exhibit 30x42
14. Hurricane Circuit CW101 Analysis Report-Final
15. Addendum to CW101 Analysis Report.--100721
16. 2023-PP-02 Bench Lake Townhomes



PLANNING & ZONING HURRICANE CITY UTAH

147 N 870 W Hurricane UT
PHONE: 435.635.2811 FAX: 435.635.2184

PRELIMINARY PLAT APPLICATION

For office use only: \$150.00 Fee
File No. 2023-PP-02
Receipt No. 8-164692

BLUE MOUNTAINS PROPERTY ENTERPRISES LLC, &
Diamond Edge Construcion, LLC.
Contact: Scott Stratton

Name: _____ Telephone: _____

Address: 256 N 200 W, Blanding, UT 84511-3618 Fax No. _____

Email: scottstratton4966@gmail.com Agent Email: karl@pv-eng.com; treasa@pv-eng.com

Agent (If Applicable): ProValue Engineering- Karl Rasmussen Telephone: 435-668-8307

Address/Location of Subject Property: Approx. 3145 S 1100 W

Tax ID of Subject Property: H-3394-H, H-3394-J-1, H-3394-B-1-B Zone District: RM-2

Proposed Use: (Describe, use extra sheet if necessary. Include total number of lots) To build a subdivision with
200 townhome lots.

Submittal Requirements: The preliminary plat application shall provide the following:

- ☒ 1. Description: In a title block located in the lower right-hand corner of the sheet the following is required:
 - ☒ a. The proposed name of the subdivision.
 - ☒ b. The location of the subdivision, including the address and section, township and range.
 - ☒ c. The names and addresses of the owner or subdivider, if other than the owner.
 - ☒ d. Date of preparation, and north point.
 - ☒ e. Scale shall be of sufficient size to adequately describe in legible form, all required conditions of Chapter 39, City Subdivision regulations.
- ☒ 2. Existing Conditions: The preliminary plat shall show:
 - ☒ a. The location of the nearest monument.
 - ☒ b. The boundary of the proposed subdivision and the acreage included.
 - ☒ c. All property under the control of the subdivider, even though only a portion is being subdivided. (Where the plat submitted covers only a part of the subdivider's tract, a sketch of the prospective street system of the unplatted parts of the subdivider's land shall be submitted, and the street system of the part submitted shall be considered in light of existing Master Street Plan or other Commission studies.)
 - ☒ d. The location, width, and names/numbers of all existing streets within two hundred (200) feet of the subdivision and of all prior streets or other public ways, utility rights of way, parks and other public open spaces, within and adjacent to the tract.
 - n/a e. The location of all wells and springs or seeps, proposed, active and abandoned, and of all reservoirs or ponds within the tract and at a distance of at least one hundred feet (100') beyond the tract boundaries.
 - ☒ f. Existing sewers, water mains, culverts, or other underground facilities within the tract, indicating the pipe sizes, grades, manholes and the exact locations.
 - ☒ g. Existing Hurricane Canal Company facilities; other ditches, canals, natural drainage channels and open waterways and any proposed realignments.

- ☒ h. Contours at vertical intervals not greater than five (5) feet.
- ☒ i. Identification of potential geotechnical constraints on the project site (such as expansive rock and soil, collapsible soil, shallow bedrock, and caliche, gypsiferous rock and soil, potentially unstable rock or soil units including fault lines, shallow groundwater, and windblown sand) and recommendations for their mitigation.
- ☒ j. Information on whether property is located in desert tortoise take area

☒ 3. Proposed Plan: The subdivision plans shall show:

- ☒ a. The layout of streets, showing location, widths, and other dimensions of proposed streets, crosswalks, alleys, and easements.
- ☒ b. The layout, numbers, and typical dimensions of lots.
- ☒ c. Parcels of land intended to be dedicated or temporarily reserved for public use or set aside for use of property owners in the subdivision.
- ☒ d. Easements for water, sewers, drainage, utilities, lines and other purposes.
- ☒ e. Typical street cross sections and street grades where required by the Planning Commission. (All street grades over 5% should be noted on the preliminary plat)
- ☒ f. A tentative plan or method by which the subdivider proposes to handle the storm water drainage for the subdivision.
- ☒ g. Approximate radius of all center line curves on highways or streets.
- ☒ h. Each lot shall abut a street shown on the subdivision plat or on an existing publicly dedicated street. (Double frontage or flag lots shall be prohibited except where conditions make other design undesirable)
- ☒ i. In general, all remnants of lots below minimum size left over after subdividing of a larger tract must be added to adjacent lots, rather than allow to remain as unusable parcels.
- ☒ j. Where necessary, copies of any agreements with adjacent property owners relevant to the proposed subdivision shall be presented to the Planning Commission.
- ☒ k. A letter from both the local sanitary sewer provider and culinary water provider indicating availability of service.
- ☒ l. Will this subdivision be phased? If yes show possible phasing lines.
- ☒ m. A tentative plan or method for providing non-discriminatory access to the subdivision for purposes of placement of communications infrastructure, and for purposes of placement of utility infrastructure.

☒ 4. Required copies of plans:

- ☒ a. Three copies of all full-scale drawings
- ☒ b. One copy of each drawing on a 11 x 17-inch sheets. (8 ½ x 11 is acceptable if the project is small and the plans are readable at that size).

☒ 5. Warranty deed or preliminary title report or other document (see attached Affidavit) showing evidence that the applicant has control of the property

NOTE: It is important that all applicable information noted above is submitted with the application. An incomplete application will not be scheduled for Planning Commission consideration. A deadline missed due to an incomplete application, could result in a month's delay. Planning Commission meetings are held on the second Thursday and fourth Wednesday of each month at 6:00 p.m. The deadline to submit an application to be placed on an agenda is no later than 12:00 (noon) 20 full calendar days before the Planning Commission meeting at which you plan for your application to be heard.

(Office Use Only)

Date Received: _____ Application Complete: YES NO

Date application deemed to be complete: _____ Completion determination made by: _____

ADDITIONAL NOTES

STORM WATER CAN BE LOCALLY RETAINED AND CONTROLLED USING RETENTION BASINS. THIS IS THE METHOD TO HANDLE STORM WATER.

THERE ARE NO IRRIGATION FACILITIES.

PROPERTY CAN BE SERVED BY HURRICANE CITY WATER, AND ASH CREEK SPECIAL SERVICE DISTRICT.

THERE ARE NO WELLS, SPRINGS OR SEEPS ON THIS PROPERTY.

OWNER PLANS TO ALLOW PLACEMENT OF COMMUNICATIONS INFRASTRUCTURE AND PLACEMENT OF UTILITY INFRASTRUCTURE ON AND ALONG ALL RIGHTS-OF-WAY AND EASEMENTS.

PROPERTY IS ZONED AS RM-2: MULTI-FAMILY - 10 UNITS PER ACRE

LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- CENTER LINE
- PHASE LINE
- 10' PUBLIC UTILITY EASEMENT
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING 10" SEWER MAIN
- EXISTING 12" WATER MAIN
- EXISTING OVERHEAD POWER
- EXISTING EDGE OF PAVEMENT
- SECTION CORNER AS DESCRIBED

PRELIMINARY PLAT FOR:
BENCH LAKE TOWNHOMES

LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.
WASHINGTON COUNTY, UTAH

LEGAL DESCRIPTION PHASE 1-3

BEGINNING AT THE EAST QUARTER CORNER OF SECTION 21, TOWNSHIP 42 SOUTH, RANGE 13 WEST, SALT LAKE BASE AND MERIDIAN; THENCE N89°02'04"W ALONG THE QUARTER SECTION LINE, 589.64 FEET TO THE NORTHEASTERLY RIGHT-OF-WAY OF 1100 WEST; THENCE ALONG SAID LINE THE FOLLOWING FOUR (4) COURSES: N25°11'56"E 620.93 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF A NON-TANGENT CURVE TO THE RIGHT, HAVING A RADIUS OF 467.00 FEET AND A RADIAL BEARING OF S52°50'20"E, A DISTANCE OF 1.60 FEET, THROUGH A CENTRAL ANGLE OF 00°11'47" (LONG CHORD BEARS: N37°15'34"E 1.60 FEET); THENCE N37°21'29"E 398.37 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF A 635.24 FOOT RADIUS CURVE TO THE LEFT A DISTANCE OF 200.74 FEET, THROUGH A CENTRAL ANGLE OF 18°06'20" (LONG CHORD BEARS: N28°18'17"E 199.90 FEET) TO THE EAST LINE OF SECTION 21; THENCE S00°42'49"W ALONG SAID LINE, 1065.32 FEET TO THE POINT OF BEGINNING. AREA CONTAINS 335,929 SQUARE FEET OR 7.712 ACRES.

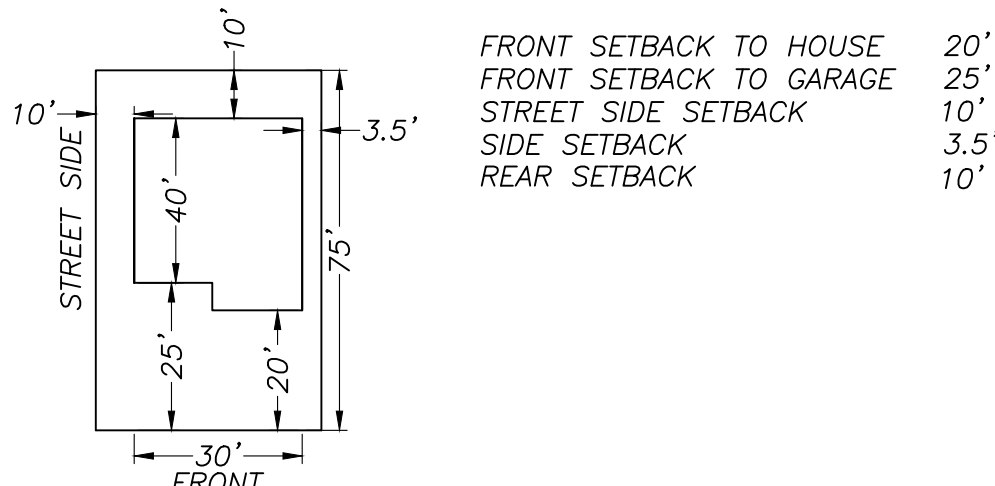
OWNER:

BLUE MOUNTAINS PROPERTY ENTERPRISES LLC
DIAMOND EDGE CONSTRUCTION LLC
256 N 200 W
BLANDING, UT 84511-3618

SITE DATA

AREA	SQ. FT	ACRES
TOTAL AREA	909,968.4	20.89
TOTAL STORM BASIN	67,953.6	1.56
DESCRIPTION	QUANTITY	
TOTAL UNITS	196	
UNITS PER ACRE	9.38	

TYPICAL UNIT & SETBACKS



GEOLOGICAL NARRATIVE:

Qbr: REMNANTS LAVA FLOW (LOWER PLEISTOCENE)

DARK-BROWNISH-BLACK TO DARK-GRAY, MEDIUM-GRAINED BASANITE WITH SMALL OLIVINE PHENOCRYSTS; ERUPTED FROM A DEEPLY ERODED VENT ATOP THE HURRICANE CLIFFS AT THE "THREE BROTHERS," ABOUT 5 MILES (8 KM) SOUTH OF HURRICANE; DISPLACED BY THE HURRICANE FAULT ABOUT 1450 FEET (440 M); YIELDED PREFERRED 40AR/39AR PLATEAU AGES OF 1.06 ± 0.03 MA (1.07 ± 0.08 MA ISOCHRON) AND 0.94 ± 0.04 MA (0.94 ± 0.05 MA ISOCHRON) (HAYDEN, 2004A) AND AN ANOMALOUS 40AR/39AR PLATEAU AGE OF 1.47 ± 0.34 MA (1.12 ± 0.50 MA ISOCHRON) (LUND AND OTHERS, 2001, 2007A); TYPICALLY ABOUT 40 FEET (12 M) THICK.

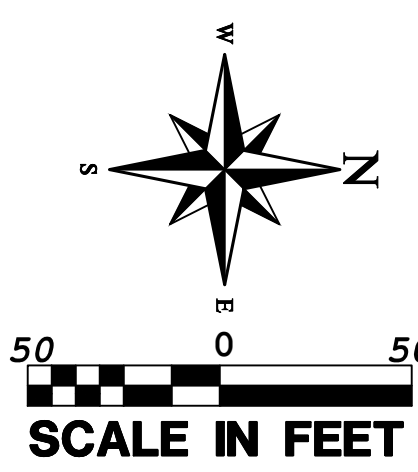
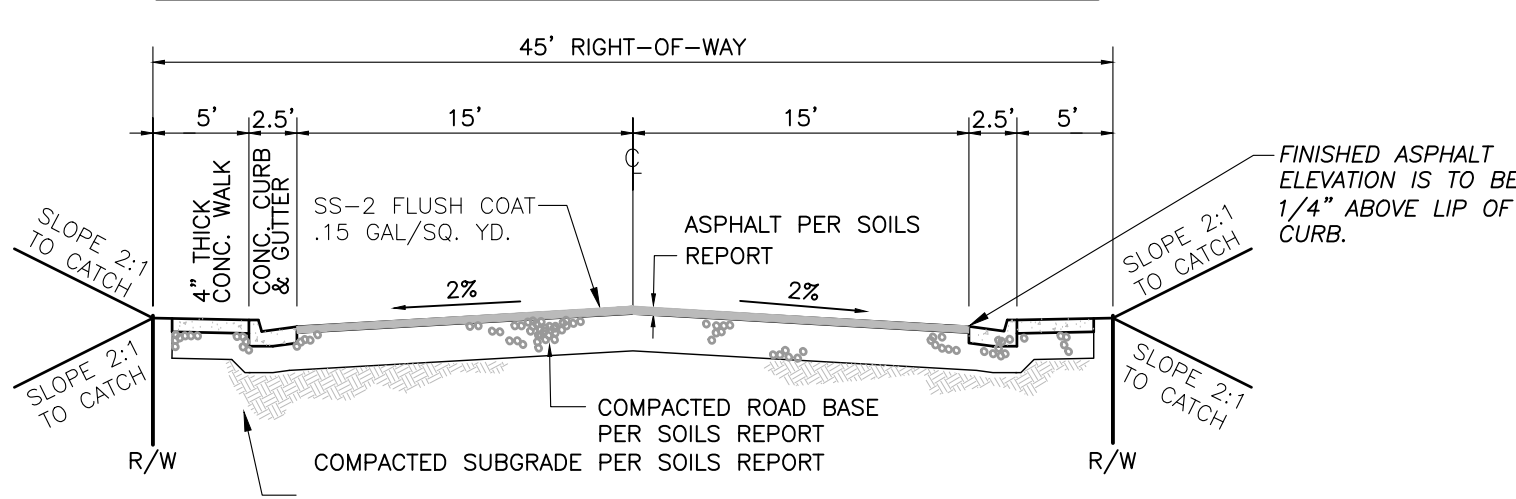
Qae: ALLUVIAL AND EOLIAN DEPOSITS (HOLOCENE TO UPPER PLEISTOCENE)

MODERATELY SORTED GRAVEL, SAND, AND SILT DEPOSITED IN SMALL CHANNELS AND ON ALLUVIAL FLATS, AND WELL-SORTED, FINE- TO MEDIUM-GRAINED, REDDISH-BROWN EOLIAN SAND LOCALLY REWORKED BY ALLUVIAL PROCESSES; YOUNGER DEPOSITS (QAE) FORM ACTIVE DEPOSITIONAL SURFACES, WHEREAS OLDER DEPOSITS (QAO) TYPICALLY FORM INCISED, INACTIVE SURFACES; AS MUCH AS ABOUT 20 FEET (6 M) THICK.

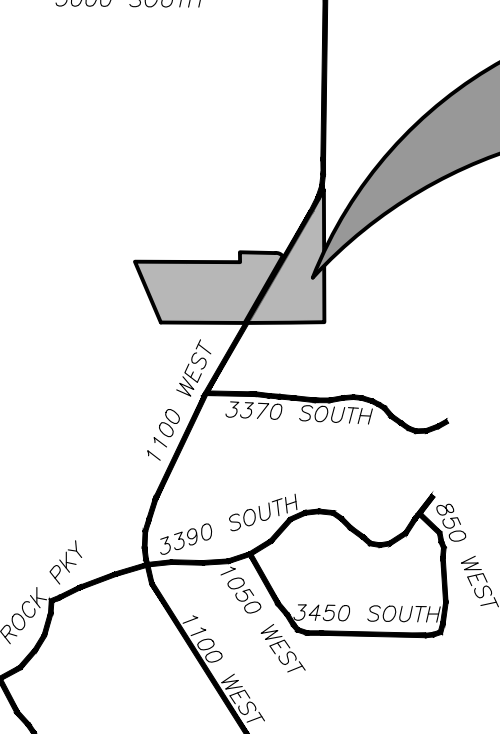
Qafy: YOUNGER ALLUVIAL-FAN DEPOSITS (HOLOCENE)

POORLY TO MODERATELY SORTED, NON-STRATIFIED, SUBANGULAR TO SUBROUNDED, BOULDER- TO CLAY-SIZE SEDIMENT DEPOSITED AT THE MOUTHS OF STREAMS AND WASHES; CLAST COMPOSITION RANGES WIDELY AND REFLECTS ROCK TYPES EXPOSED IN UPSTREAM DRAINAGE BASINS; FORMS BOTH ACTIVE DEPOSITIONAL SURFACES (QAF1 EQUIVALENT) AND LOW-LEVEL INACTIVE SURFACES INCISED BY SMALL STREAMS (QAF2 EQUIVALENT) UNDIVIDED HERE; DEPOSITED PRINCIPALLY AS DEBRIS FLOWS AND DEBRIS FLOODS, BUT COLLUVIUM LOCALLY CONSTITUTES A SIGNIFICANT PART OF THE DEPOSITS; SMALL, ISOLATED ALLUVIAL FANS ARE TYPICALLY LESS THAN A FEW TENS OF FEET THICK, BUT LARGE, COALESCED FANS, AS IN THE NEW HARMONY BASIN, ARE PROBABLY AS MUCH AS 200 FEET (60 M) THICK.

TYPICAL SECTION



PROJECT LOCATION



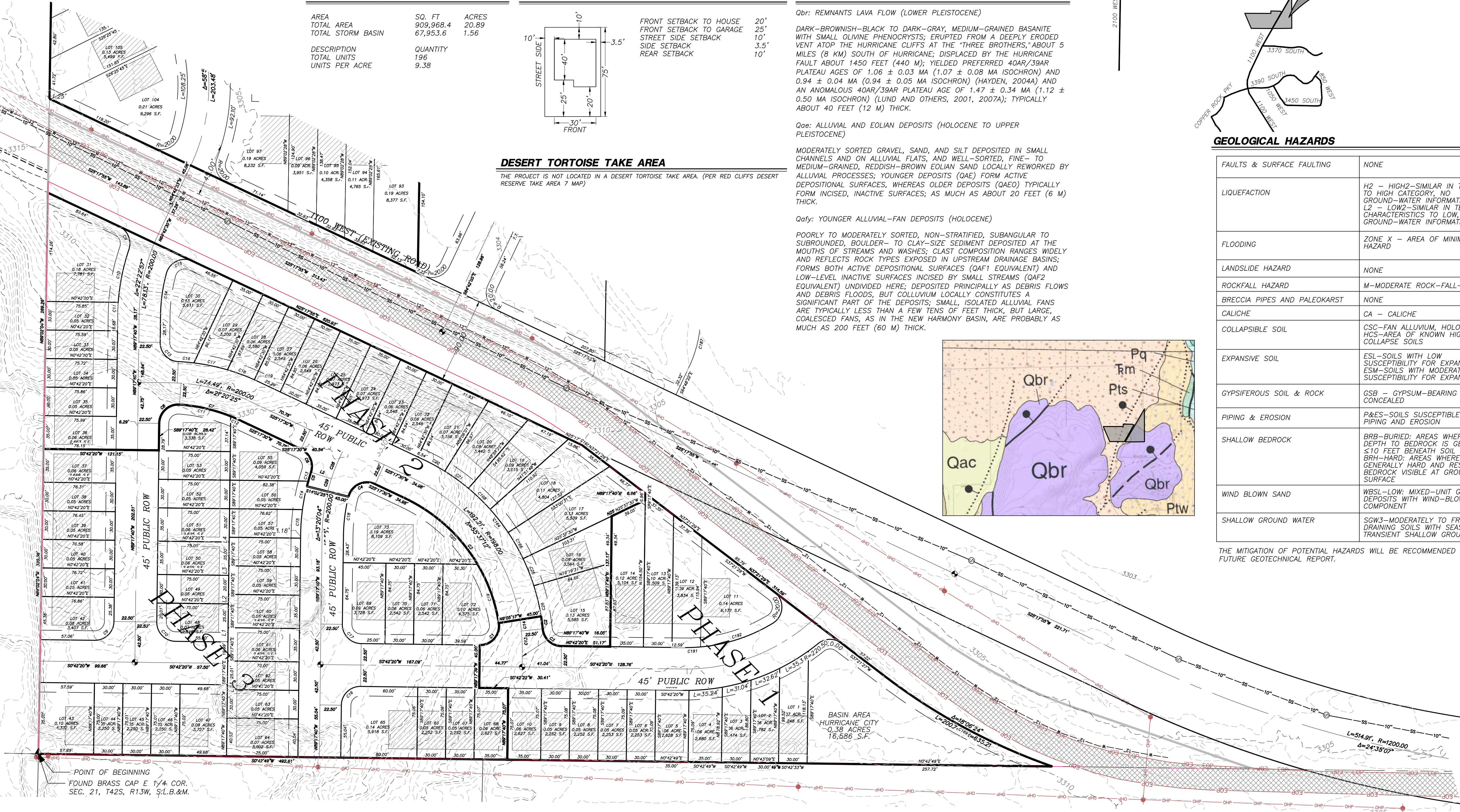
GEOLOGICAL HAZARDS

FAULTS & SURFACE FAULTING	NONE
LIQUEFACTION	H2 - HIGH2-SIMILAR IN TEXTURE TO HIGH CATEGORY, NO GROUND-WATER INFORMATION L2 - LOW2-SIMILAR IN TEXTURAL CHARACTERISTICS TO LOW, NO GROUND-WATER INFORMATION
FLOODING	ZONE X - AREA OF MINIMAL FLOOD HAZARD
LANDSLIDE HAZARD	NONE
ROCKFALL HAZARD	M-MODERATE ROCK-FALL-HAZARD
BRECCIA PIPES AND PALEOKARST	NONE
CALICHE	CA - CALICHE
COLLAPSIBLE SOIL	CSC-FAN ALLUVIUM, HOLOCENE HCS-AREA OF KNOWN HIGH COLLAPSE SOILS
EXPANSIVE SOIL	ESL-SOILS WITH LOW SUSCEPTIBILITY FOR EXPANSION ESM-SOILS WITH MODERATE SUSCEPTIBILITY FOR EXPANSION
GYPSEIFEROUS SOIL & ROCK	GSB - GYPSUM-BEARING SOILS, CONCEALED
PIPING & EROSION	P&ES-SOILS SUSCEPTIBLE TO PIPING AND EROSION
SHALLOW BEDROCK	BRB-BURIED: AREAS WHERE DEPTH TO BEDROCK IS GENERALLY ≤10 FEET BENEATH SOIL COVER BRH-HARD: AREAS WHERE GENERALLY HARD AND RESISTANT BEDROCK VISIBLE AT GROUND SURFACE
WIND BLOWN SAND	WBSL-LOW: MIXED-UNIT GEOLOGIC DEPOSITS WITH WIND-BLOWN COMPONENT
SHALLOW GROUND WATER	SGW3-MODERATELY TO FREELY DRAINING SOILS WITH SEASONAL OR TRANSIENT SHALLOW GROUND WATER

THE MITIGATION OF POTENTIAL HAZARDS WILL BE RECOMMENDED IN THE FUTURE GEOTECHNICAL REPORT.

DESERT TORTOISE TAKE AREA

THE PROJECT IS NOT LOCATED IN A DESERT TORTOISE TAKE AREA. (PER RED CLIFFS DESERT RESERVE TAKE AREA 7 MAP)



PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Land Planners
20 South 850 West, Suite 1
Hurricane City, Utah 84415
Phone: (435) 666-0801



PRELIMINARY PLAT FOR:
BENCH LAKE TOWNHOMES

HURRICANE, UTAH 84415
LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.

DATE: 12/22/2022
SCALE: 1"=50'

JOB NO.
335-010

SHEET NO:
1 OF 2

ADDITIONAL NOTES

STORM WATER CAN BE LOCALLY RETAINED AND CONTROLLED USING RETENTION BASINS. THIS IS THE METHOD TO HANDLE STORM WATER.

THERE ARE NO IRRIGATION FACILITIES.

PROPERTY CAN BE SERVED BY HURRICANE CITY WATER, AND ASH CREEK SPECIAL SERVICE DISTRICT.

THERE ARE NO WELLS, SPRINGS OR SEEPS ON THIS PROPERTY.

OWNER PLANS TO ALLOW PLACEMENT OF COMMUNICATIONS INFRASTRUCTURE AND PLACEMENT OF UTILITY INFRASTRUCTURE ON AND ALONG ALL RIGHTS-OF-WAY AND EASEMENTS.

PROPERTY IS ZONED AS RM-2: MULTI-FAMILY - 10 UNITS PER ACRE

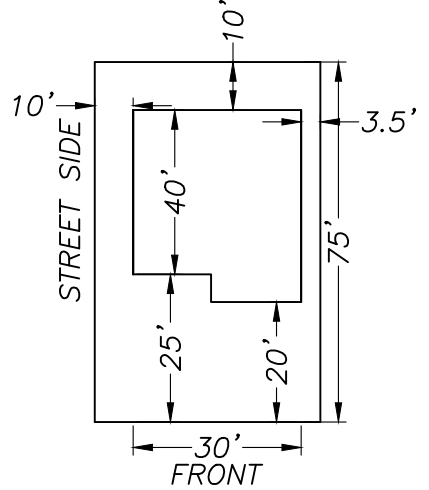
LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- CENTER LINE
- PHASE LINE
- 10' PUBLIC UTILITY EASEMENT
- 3301 EXISTING MINOR CONTOUR
- 3305 EXISTING MAJOR CONTOUR
- 10" EXISTING 10" SEWER MAIN
- 12" EXISTING 12" WATER MAIN
- OHP EXISTING OVERHEAD POWER
- EOP EXISTING EDGE OF PAVEMENT
- SECTION CORNER AS DESCRIBED

PRELIMINARY PLAT FOR:
BENCH LAKE TOWNHOMES

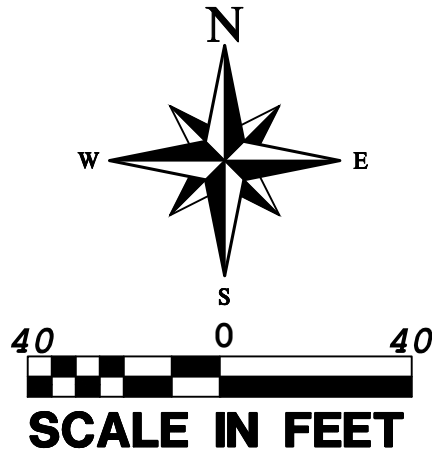
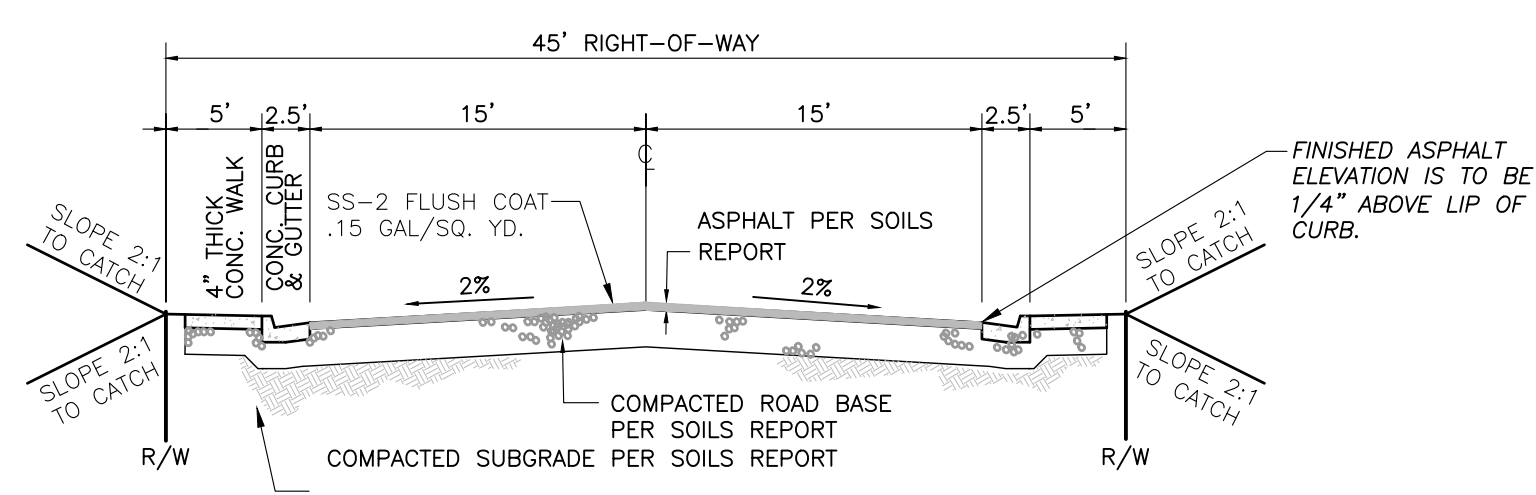
LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.
WASHINGTON COUNTY, UTAH

TYPICAL UNIT & SETBACKS



FRONT SETBACK TO HOUSE 20'
FRONT SETBACK TO GARAGE 25'
STREET SIDE SETBACK 10'
SIDE SETBACK 3.5'
REAR SETBACK 10'

TYPICAL SECTION



LEGAL DESCRIPTION PHASE 4-8

COMMENCING AT THE EAST QUARTER CORNER OF SECTION 21, TOWNSHIP 42 SOUTH, RANGE 13 WEST, SALT LAKE BASE AND MERIDIAN; THENCE N89°02'04"W 688.42 FEET TO THE POINT OF BEGINNING; THENCE N89°02'04"W 709.07 FEET; THENCE N07°23'03"W 594.04 FEET; THENCE S89°02'28"E 678.82 FEET; THENCE N00°42'25"E 100.00 FEET; THENCE S89°02'28"E 335.50 FEET; THENCE EASTERLY ALONG THE ARC OF A 125.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 53.56 FEET, THROUGH A CENTRAL ANGLE OF 24°33'02" (LONG CHORD BEARS: S76°46'05"E 53.15 FEET); THENCE S64°48'22"E 32.32 FEET; THENCE S25°17'54"W 727.97 FEET TO THE POINT OF BEGINNING.

AREA CONTAINS 559,933 SQUARE FEET OR 12.854 ACRES.

NO	REVISIONS	DESCRIPTION	DATE	BY

PROVALLE ENGINEERING, INC.
Engineers - Land Planners
20 South 850 West, Suite 1
Hurricane City, Utah 84731
Phone: (435) 668-0801



PDO SITE PLAN FOR:
BENCH LAKE TOWNHOMES
HURRICANE, UTAH 84731
LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.

DATE: 12/22/2022
SCALE: 1"=40'
JOB NO.
335-010
SHEET NO.
2 OF 2

335-010

ADDITIONAL NOTES

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PROPERTY IS ZONED AS RM-2: MULTI-FAMILY - 10 UNITS PER ACRE

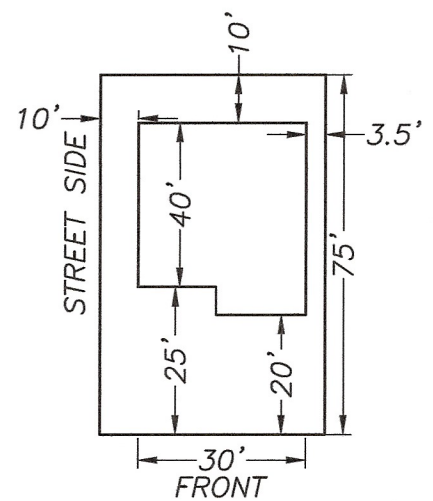
LEGEND

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	CENTER LINE
	PHASE LINE
	10' PUBLIC UTILITY EASEMENT
	3301 EXISTING MINOR CONTOUR
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	10" EXISTING 10" SEWER MAIN
	12" EXISTING 12" WATER MAIN
	EXISTING OVERHEAD POWER
	EXISTING EDGE OF PAVEMENT
	SECTION CORNER AS DESCRIBED

PDO SITE PLAN FOR:
BENCH LAKE TOWNHOMES

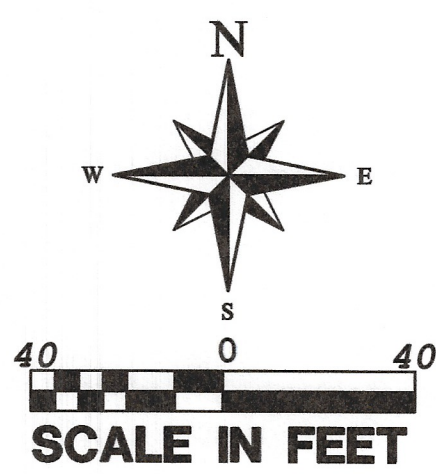
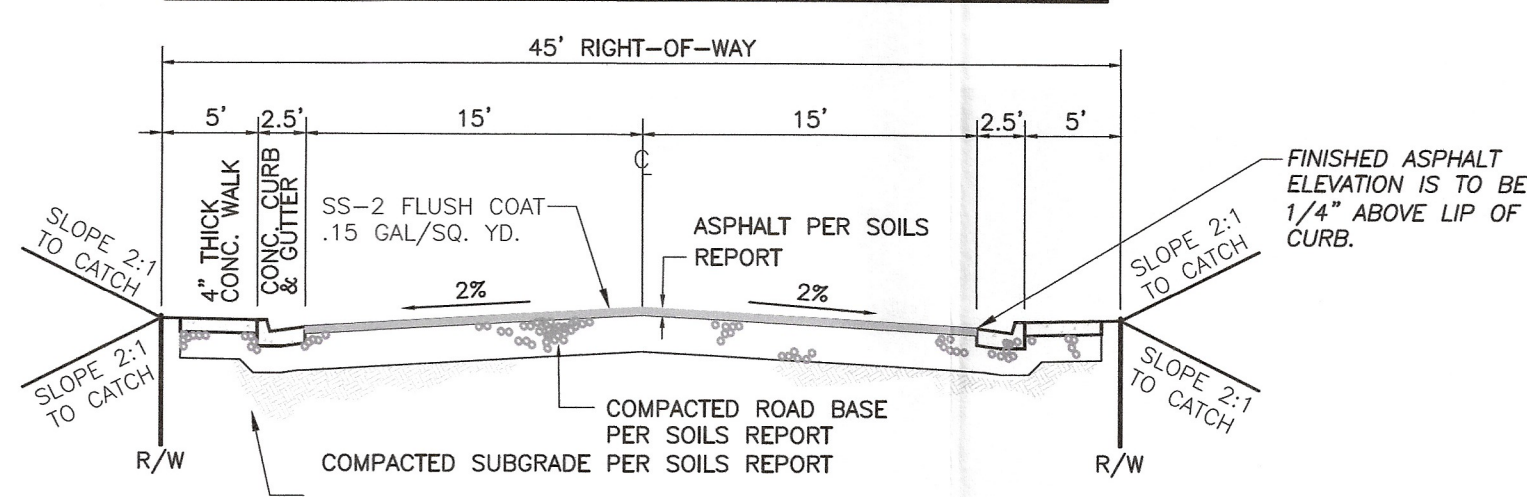
LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.
WASHINGTON COUNTY, UTAH

TYPICAL UNIT & SETBACKS



FRONT SETBACK TO HOUSE	20'
FRONT SETBACK TO GARAGE	25'
STREET SIDE SETBACK	10'
SIDE SETBACK	3.5'
REAR SETBACK	10'

TYPICAL SECTION



LEGAL DESCRIPTION PHASE 4-8

COMMENCING AT THE EAST QUARTER CORNER OF SECTION 21, TOWNSHIP 42 SOUTH, RANGE 13 WEST, SALT LAKE BASE AND MERIDIAN; THENCE N89°02'04"W 688.42 FEET TO THE POINT OF BEGINNING; THENCE N89°02'04"W 709.07 FEET; THENCE N0°42'25"E 100.00 FEET; THENCE S89°02'28"E 335.50 FEET; THENCE EASTERLY ALONG THE ARC OF A 125.00 FOOT RADIUS CURVE TO THE RIGHT A DISTANCE OF 53.56 FEET, THROUGH A CENTRAL ANGLE OF 24°33'02" (LONG CHORD BEARS: S76°46'05"E 53.15 FEET); THENCE S64°48'22"E 32.32 FEET; THENCE S25°17'54"W 727.97 FEET TO THE POINT OF BEGINNING.

FOUND BRASS CAP E 1/4 COR.
SEC. 21, T42S, R13W, S.L.B.&M.

NO	REVISIONS	DESCRIPTION	DATE	BY

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Land Planners
20 South 850 West, Suite 1
Hurricane City, Utah 84137
Phone: (435) 666-8367



PDO SITE PLAN FOR:
BENCH LAKE TOWNHOMES
HURRICANE, UTAH 84137
LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.

DATE: 12/22/2022
SCALE: 1"=40'
JOB NO: 335-010
SHEET NO: 2 OF 2

335-010

STORM WATER CAN BE LOCALLY RETAINED AND CONTROLLED USING RETENTION BASINS. THIS IS THE METHOD TO HANDLE STORM WATER.

PROPERTY CAN BE SERVED BY HURRICANE CITY
WATER,
AND ASH CREEK SPECIAL SERVICE DISTRICT.

OWNER PLANS TO ALLOW PLACEMENT OF COMMUNICATIONS INFRASTRUCTURE AND PLACEMENT OF UTILITY INFRASTRUCTURE ON AND ALONG ALL RIGHTS-OF-WAY AND EASEMENTS.

PROPERTY IS ZONED AS RM-2: MULTI-FAMILY - 10
UNITS PER ACRE

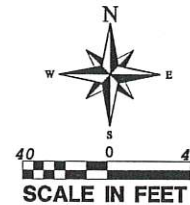
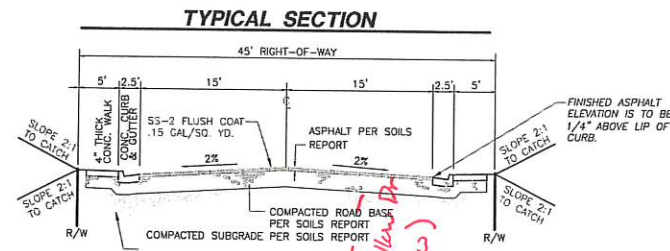
Diagram illustrating the Section Corner AS DESCRIBED, showing various utility lines and contours:

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- CENTER LINE
- PHASE LINE
- 10' PUBLIC UTILITY EASEMENT
- 3301 - EXISTING MINOR CONTOUR
- 3305 - EXISTING MAJOR CONTOUR
- EXISTING 10" SEWER MAIN
- EXISTING 12" WATER MAIN
- EXISTING OVERHEAD POWER
- EXISTING EDGE OF PAVEMENT
- SECTION CORNER AS DESCRIBED

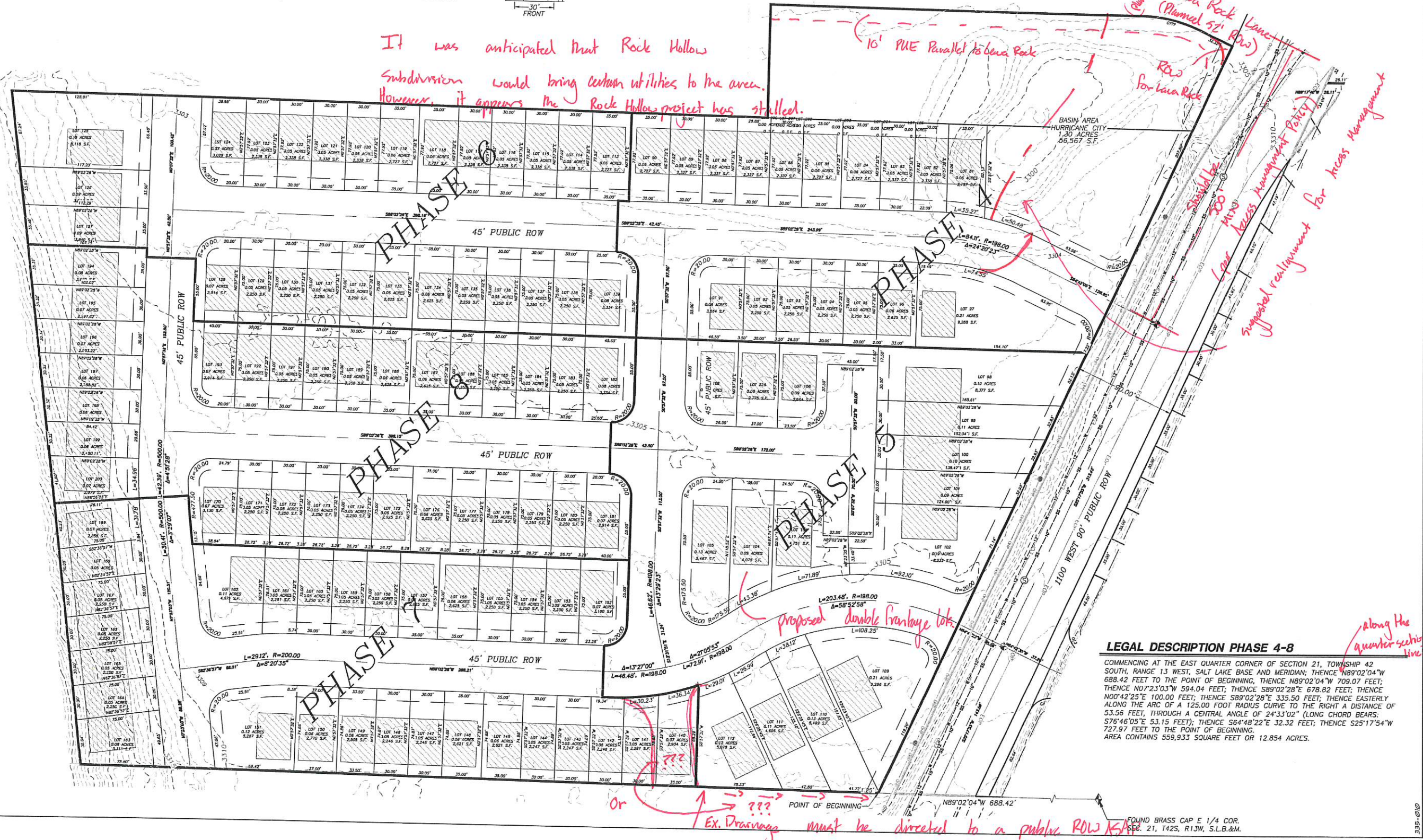
LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.
WASHINGTON COUNTY, UTAH

Diagram illustrating the setbacks and dimensions of a building footprint:

- Overall dimensions: 30' FRONT, 75' DEPTH, 10' STREET SIDE.
- Setbacks (from the street side):
 - FRONT SETBACK TO HOUSE: 20'
 - FRONT SETBACK TO GARAGE: 25'
 - STREET SIDE SETBACK: 10'
 - SIDE SETBACK: 3.5'
 - REAR SETBACK: 10'
- Internal dimensions: 40' (width of the main structure), 25' (width of the front porch area), and 20' (width of the rear porch area).



It was anticipated that Rock Hollow Subdivision would bring certain utilities to the area. However, it appears the Rock Hollow project has stalled



COMMENCING AT THE EAST QUARTER CORNER OF SECTION 21, TOWNSHIP 42 SOUTH, RANGE 13 WEST, SALT LAKE BASE AND MERIDIAN; THENCE N89°02'04" W 688.17 FEET TO THE POINT OF BEGINNING, THENCE N89°02'04" W 709.07 FEET; THENCE N07°23'03" W 594.04 FEET; THENCE S89°02'28" E 678.82 FEET; THENCE N00°42'25" E 100.00 FEET; THENCE S89°02'28" E 335.50 FEET; THENCE EASTERLY ALONG THE ARC OF A 125.00 FOOT RADIUS CURVE TO THE RIGHT, A DISTANCE OF 53.56 FEET, THROUGH A CENTRAL ANGLE OF 24°33'02" (LONG CHORD BEARS S76°46'05" E 53.15 FEET); THENCE S64°48'22" E 32.32 FEET; THENCE S25°17'54" W 72.97 FEET TO THE POINT OF BEGINNING.

AREA CONTAINS 559,933 SQUARE FEET OR 12.854 ACRES.

**PDO SITE PLAN FOR:
BENCH LAKE TOWNHOMES**

HURRICANE, UTAH 84737
LOCATED IN SECTION 21, T42S, R13W, S14B.41M.

PDO SITE PLAN FOR:

DATE: 12/22/2022
SCALE: 1"=40'

JOB NO.

SHEET NO:

2 OF 2

[illegible]

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Land Planners
200 South 950 West, Suite 1
Hurricane City, Utah 84737
Phone: (435) 668-9307





December 27, 2022

Hurricane City
Stephen Nelson
127 N. 870 W.
Hurricane, UT 84737

Subject: Bench Lake Townhomes

Stephen,

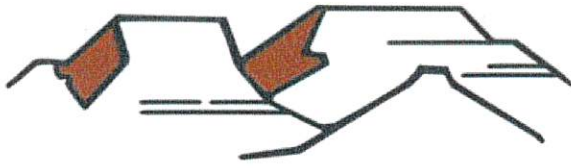
There is sewer capacity for this project. The developers understand and agree that they will need to get plan approval for the sewer system.

After approval, they agree to pay all costs associated with construction and impact fees. Please let us know if you have any questions.

Sincerely,

Amber Gillette, P.E.
Engineer
Ash Creek Special Service District

1350 South Sandhollow Road, Hurricane, UT 84737
phone: 435.635.2348
email: ashcreek@infowest.com



HURRICANE CITY

UTAH

Water Department
Ken Richins, Superintendent

December 29, 2022

To Whom It May Concern:

Blue Mountains Property Enterprises LLC & Diamond Edge Construction LLC

Contact: Scott Stratton (the "Developer") has requested a culinary water will serve letter for the subdivision known as **Bench Lake Townhomes**, located at approximately **3145 S 1100 W** in Hurricane, Utah (the "Project").

Infrastructure

The City currently has infrastructure to supply culinary water in the general area of the Project. However, Developer will be responsible to connect the Project to the existing water infrastructure, including the installation of infrastructure in dedicated public streets and as otherwise required to meet City standards. In addition, Developer may be required to obtain and supply a hydraulic water study to ensure the waterline will deliver required fire flows. A looped water system may be required.

Water Supply

As of the date of this letter, the city has adequate water to supply water to **200** residential connections within the Project. However, water within the City is a finite resource with limited supply. The ability of the City to supply water to previously approved projects, as well as continue to serve additional water customers, is contingent on water supplies being available from the Washington County Water Conservancy District (the "Conservancy District"). Therefore, the City's statements in this letter regarding the adequacy of water supply is (1) contingent on water being available from the Conservancy District and (2) shall expire one year from the date of this letter, after which a renewed will serve letter will be required for any property or lot that has not obtained a metered connection to the City's culinary water system. Developer is encouraged to obtain a guarantee of water from the Conservancy District.

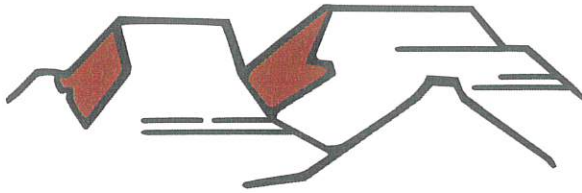
General Requirements

In addition to the requirements and limitations described above, Developer shall be required to comply with all applicable laws, ordinances, policies, and construction and design standards. These requirements include, but are not limited to, secondary water system requirements and any obligations described in an applicable development agreement.

Sincerely,

Ken Richins

Water Department Superintendent



HURRICANE CITY

UTAH

ACKNOWLEDGEMENT OF WATER SUPPLY

I/We, Diamond Edge am/are the applicant(s) of the application known as Benchmark Townhomes located on parcel(s) _____ within the City of Hurricane, Washington County, Utah.

By my/our signature(s) below I/we do hereby acknowledge and agree to the following:

- 1 Neither acceptance nor approval of a development application by Hurricane City shall constitute a guarantee that sufficient water will be available to serve the zone designation, project, or permit for which this application is being submitted; and
- 2 Prior to receiving final approval for the application, the applicant may be required by Hurricane City to provide a guarantee of water availability which verifies that there is a sufficient water supply; and
- 3 For any application which may be approved without a guarantee of water availability, the applicant knowingly assumes the entire risk of water availability for the project and/or application; and
- 4 I/we waive any and all claims against Hurricane City that are in any way related to water availability for any project, permit, or use for which the land use application has been approved.

Dated this 10 day of January, 2023

Applicant Name: Diamond Edge Scott Stratton

Name of Signer (if different from Applicant Name): _____

Title of Signer: Manager

Signature: Scott Stratton

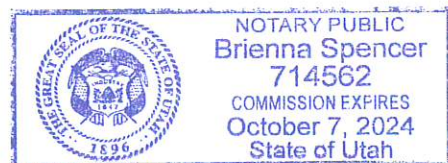
STATE OF Utah

COUNTY OF Washington

On the 10 day of January, 2023, personally appeared before me Scott Stratton, the signer of the above instrument, who duly acknowledged to me that he/she executed the same in the capacity indicated on behalf of the Applicant.

Notary Public: Brienna Spencer

My Commission Expires: 10/07/2024



All signatures to this Acknowledgment, other than for Applicants signing in an individual capacity, shall be accompanied by documentation acceptable to the City attesting to the fact that the signer hereof is authorized to execute the Acknowledgment on behalf of the Applicant (e.g. a copy of a corporate resolution, copy of a partnership agreement, etc.). (Ord. No. 2022-37, 6-16-2022)

DEVELOPMENT AGREEMENT

This Development Agreement is entered into on this 3rd day of September, 2008, by and among The City of Hurricane, Utah, a municipal corporation of the State of Utah, hereinafter referred to as "City", and MCM Development, Matthew Musgrave, and Michael D. Hughes, hereinafter collectively referred to as "Exhibit A Owners", and Dantotsu, LLC and W&W Properties, hereinafter collectively referred to as "Exhibit B Owners."

RECITALS

A. Exhibit A Owners are the owners of certain real property totaling approximately 20 acres, said property being more particularly described in Exhibit A attached hereto and incorporated herein by this reference. Exhibit B Owners are the owners of certain real property, totaling approximately 145 acres, said property being more particularly described in Exhibit B attached hereto and incorporated herein by this reference.

B. On or about December 6, 2007, City held a public hearing for the purpose of considering a request for a zone change from RA-1 to RM-2 for the property described in Exhibit A.

C. City granted the requested zone change, subject to the negotiation and recordation of a development agreement stating the terms and conditions upon which the zone change was granted.

D. City, Exhibit A owners and Exhibit B owners now desire to enter into such an agreement, as more specifically provided hereafter.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants and obligations contained herein, the parties hereto agree as follows:

1. Exhibit A Owners represent, covenant and warrant that they are the owners of record of the property described in Exhibit A attached hereto.

2. Exhibit B Owners represent, covenant and warrant that they are the owners of record of the property described in Exhibit B attached hereto.

3. Subject to the terms of this agreement, City hereby grants the zone change request for the property described in said Exhibit A from RA-1 to RM-2, in accordance with and subject to the provisions of City's Land Use Ordinance, said zone change to become effective upon the recording of this Development Agreement at the office of the Washington County Recorder.

4. Exhibit A Owners acknowledge and agree that no utilities (sewer, water, power, etc.) have been constructed or installed into or for the property described in Exhibit A, and that said utilities must be constructed and installed into or for said property before further development of said property is permitted.

5. Exhibit A Owners further acknowledge and agree that they shall be solely responsible and liable for financing the construction and installation of said utilities into and for the property described in Exhibit A, in accordance with and subject to the provisions of City's Land Use Ordinances, rules and regulations in effect as of the date of application for development approval.

6. City agrees that it will in good faith consider, but shall in no way be obligated to grant, any request by Exhibit A Owners for establishment of a special assessment area to finance construction and installation of utilities and other improvements for the property described in Exhibit A.

6. City and Exhibit A Owners acknowledge and agree that future development of the property described in Exhibit A will necessitate the negotiation and entry into an additional or supplemental development agreement, containing terms and conditions in addition to those contained herein.

7. Exhibit B Owners agree that, for a period of five (5) years from and after the date of recording of this agreement, they shall not request any change in zoning for the property described in Exhibit B.

8. In the event of a breach of any term or condition of this agreement, the party in breach shall be liable to the other party for all damages sustained by the other party, including costs of court and a reasonable attorney's fee.

9. This agreement shall be recorded at the office of the Washington County Recorder and shall be deemed to run with the land, and shall thereafter be binding on all heirs, successors and assigns of Exhibit A Owners and Exhibit B Owners.

10. This agreement shall be construed under the laws of the State of Utah.

IN WITNESS WHEREOF the parties hereto have executed this agreement of the date first above written or as otherwise indicated.



CITY OF HURRICANE:

Thomas B. Hirschi
Thomas B. Hirschi, Mayor

ATTEST:

Michelle Thone
Michelle Thone, City Recorder

EXHIBT A OWNERS:

Matthew Musgrave
Matthew Musgrave

Michael D. Hughes
Michael D. Hughes

MCM Land Development
MCM Land Development

County of Washington)
:ss
State of Utah)

Personally appeared before me on the 3 day of September 2008 Matthew Musgrave and Michael D. Hughes, who, upon oath, duly acknowledged that they executed the above and foregoing Development Agreement in their individual capacity, and in behalf of MCM Land Development by authority of a resolution of its board of directors, for the reasons stated therein.



Janet McCoy
Notary Public

EXHIBIT B OWNERS:

David I. Wadman
Dantotsu LLC

David I. Wadman
W&W Properties

County of Washington)
:ss
State of Utah)

Personally appeared before me on the 5th day of September 2008 David Wadman, who

upon oath duly acknowledged that he executed the above and foregoing Development Agreement in behalf of Dantotsu, LLC, and W & W Properties by authority of a resolution of its board of directors, for the reasons stated therein.


Notary Public



H- 3394-H

H- 3394-J-1

Exhibit "A"

H-3394-H, H-3394-J-1

LEGAL DESCRIPTION PARCEL 1

BEGINNING AT THE EAST QUARTER (1/4) CORNER OF SECTION 21, TOWNSHIP 42 SOUTH, RANGE 13 WEST OF THE SALT LAKE BASE AND MERIDIAN AND RUNNING NORTH 89°51'57" WEST, 601.56 FEET ALONG THE CENTER SECTION LINE TO A POINT ON THE PROPOSED EAST RIGHT OF WAY OF A 66.00 FOOT WIDE PUBLIC STREET; THENCE DEPARTING SAID SECTION LINE AND RUNNING NORTHEASTERLY ALONG SAID PROPOSED RIGHT OF WAY THE FOLLOWING FOUR (4) COURSES, (1) NORTH 24°33'46" EAST, 530.62 FEET TO THE POINT OF CURVATURE OF A 467.00 FOOT RADIUS CURVE TO THE RIGHT; THENCE (2) 97.51 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 11°57'50"; THENCE (3) NORTH 36°31'36" EAST, 398.37 FEET TO THE POINT OF CURVATURE OF A 635.21 FOOT RADIUS CURVE TO THE LEFT; THENCE (4) 200.62 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 18°05'46" TO A POINT ON THE EAST SECTION LINE OF THE AFOREMENTIONED SECTION 21; THENCE DEPARTING SAID PROPOSED RIGHT OF WAY SOUTH 00°07'09" EAST, 1065.22 FEET TO THE POINT OF BEGINNING.

CONTAINS 342,041 SF OR 7.85 ACRES.

LEGAL DESCRIPTION PARCEL 2

BEGINNING AT A POINT NORTH 89°51'57" WEST AND 674.05 FEET ALONG THE CENTER SECTION LINE FROM THE EAST QUARTER (1/4) CORNER OF SECTION 21, TOWNSHIP 42 SOUTH, RANGE 13 WEST OF THE SALT LAKE BASE AND MERIDIAN AND RUNNING THENCE NORTH 89°51'57" WEST ALONG SAID CENTER SECTION LINE 648.38 FEET THENCE DEPARTING SAID SECTION LINE NORTH 21°45'36" WEST, 633.52 FEET; THENCE SOUTH 89°51'57" EAST, 1159.73 FEET TO A POINT ON THE WEST PROPOSED RIGHT OF WAY OF A 66.00 FOOT WIDE PUBLIC STREET SAID POINT BEING ON THE CURVATURE OF A 533.00 FOOT RADIUS CURVE, THE CENTER OF WHICH BEARS SOUTH 55°53'32" EAST; THENCE SOUTHWESTERLY ALONG SAID PROPOSED RIGHT OF WAY THE FOLLOWING TWO (2) COURSES, (1) SOUTHWESTERLY 88.79 FEET ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 09°33'42"; THENCE SOUTH 24°33'46" WEST, 560.60 FEET TO THE POINT OF BEGINNING.

CONTAINS 529,254 SF OR 12.15 ACRES

H- 3364-A

H- 3355-A

H- 3355-B

H- 3356-A

H- 3356-B

H- 3354-B

H- 3358-A

H- 3358-B

H- 3358-C

H- 3358-D

Exhibit "B"

H-3354-A, H-3355-A, H-3355-B, H-3356-A,
H-3356-B, H-3354-B, H-3358-A, H-3358-D,
H-3358-B, H-3358-C

PARCEL "A"

Beginning at the west quarter corner of Section 15, Township 42 South, Range 13 West, Salt Lake Base & Meridian, and running;

thence South 00°05'28" East 660.22 feet along the section line;
thence South 89°54'52" West 16.50 feet;
thence South 00°05'28" East 660.22 feet;
thence North 89°54'49" East 16.50 feet to the section line;
thence South 00°05'28" East 651.71 feet along the section line;
thence South 89°53'51" West 1,301.66 feet;
thence North 00°02'19" West 652.07 feet to the 1/16th line;
thence South 89°54'47" West 1,317.56 feet along the 1/16th line;
thence North 00°00'40" East 495.01 feet;
thence North 89°54'20" East 1,300.63 feet to the 1/16th line;
thence North 00°02'19" West 825.30 feet along the 1/16th line to the section line;
thence North 89°54'55" East 1,316.35 feet along the section line to the Point of Beginning.

Containing 3,220,478 square feet or 73.932 acres.

PARCEL "B"

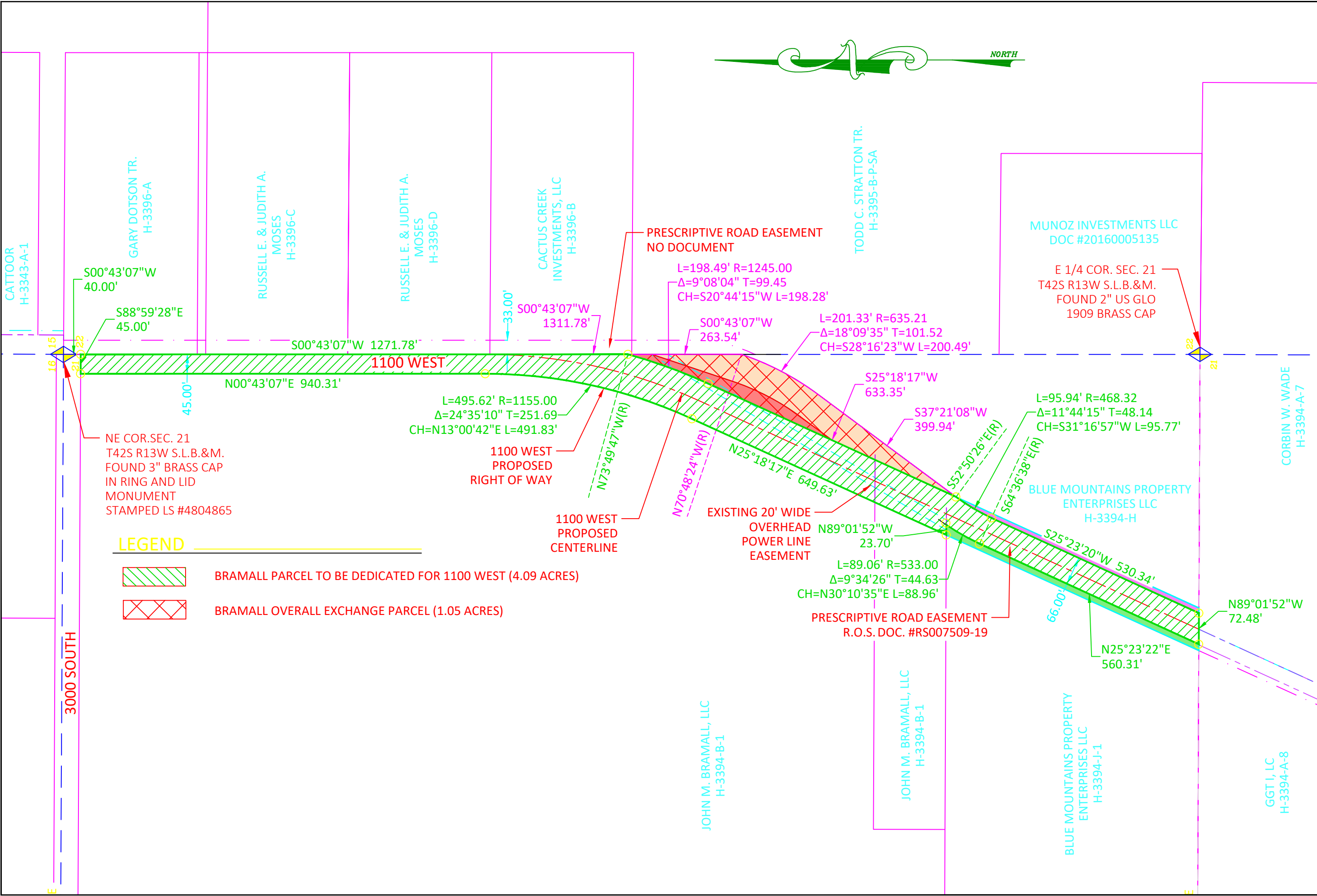
All of the Southwest quarter of the Southeast quarter of Section 16, Township 42 South, Range 13 West, Salt Lake Base & Meridian. Less and excepting 1 rod on the west and on the south.

PARCEL "C"

The Northeast Quarter of the Northeast Quarter (NE 1/4 NE 1/4) of Section 16, Township 42 South, Range 13 West, Salt Lake Base and Meridian.

Excepting therefrom One Rod along the East side thereof used for roadway.

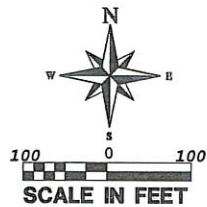
Less and Excepting therefrom the following: Beginning South 00°13'06" West along the 1/16th Section Line 331.28 feet, and South 89°49'20" East 29 feet from the Northwest Corner NE 1/4 NE 1/4 said Section 16: thence North 89°49'20" West 737 feet; thence North 00°13'06" West 300 feet; thence North 89°49'20" West 737 feet; thence North 00°13'06" East 300 feet to the point of beginning. Less: A 29 foot strip used as right of way, beginning South 00°13'06" West along the 1/16th section line 331.28 feet from the Northwest Corner of the NE 1/4 of the NE 1/4 said Section 16, thence South 89°49'20" East 29 feet; thence South 00°13'06" West 300 feet; thence North 89°49'20" East 29 feet; thence South 00°13'06" West 300 feet; thence North 89°49'20" West 29 feet; thence North 00°13'06" East 300 feet to the point of beginning.



DATE: 11/25/20	
JOB NUMBER: 4387	
SCALE: 1" = 200'	
DRAWN BY: JHC	
CHECKED BY: M.W.B.	
ALLIANCE CONSULTING A Planning and Engineering Firm Suite 201 2303 N Coral Canyon Blvd Washington, Utah 84780-0577 Tel: (435) 673-5000 Fax: (435) 673-8065	
RIGHT OF WAY ACQUISITION EXHIBIT FOR 1100 WEST RIGHT OF WAY LOCATED IN SECTION 21, 28, 33, TOWNSHIP 43 SOUTH, RANGE 13 WEST, SALT LAKE BASE & MERIDIAN CITY OF HURRICANE, WASH. CO., UTAH	
DRAWING NAME: 1100 W Acquisition Legals SHEET 1 OF 1 SHEETS	

ZONE CHANGE FOR:
BENCH LAKE TOWNHOMES

LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.
WASHINGTON COUNTY, UTAH



LEGEND

	RA-1: RESIDENTIAL AGRICULTURAL- 1 UNIT PER ACRE
	RM-2 PDO: PLANNED DEVELOPMENT OVERLAY
	R1-10: RESIDENTIAL- 1 UNIT PER 10,000 SQ. FT.
	RA-0.5: RESIDENTIAL AGRICULTURAL- 2 UNITS PER ACRE
	M-1: LIGHT INDUSTRIAL

NARRATIVE

THIS ZONE CHANGE IS INTENDED TO PLACE A PLANNED DEVELOPMENT OVERLAY (PDO) OVER PARCELS H-3394-J-1 & H-3394-H CURRENTLY ZONED RM-2, WHICH WILL ALLOW 176 UNITS WITHIN THIS SUBDIVISION, AND ALLOW FOR THE LOTS TO LAYOUT ACCORDING TO THE PROVIDED SITE PLAN.

LEGAL DESCRIPTION FOR WEST LOTS:

COMMENCING AT THE EAST QUARTER CORNER OF SECTION 21, T44S, R13W, S.L.B.&M.; THENCE N 89°52'35" W 688.47 FEET TO THE POINT OF BEGINNING; THENCE N 89°52'33" W 708.99 FEET; THENCE N 08°13'09" W 594.11 FEET; THENCE S 89°52'34" E 670.85 FEET; THENCE S 89°52'34" E 7.83 FEET; THENCE N 00°00'00" E 100.00 FEET; THENCE S 89°52'34" E 335.28 FEET; THENCE IN A EASTERLY DIRECTION WITH A TANGENT CURVE TURNING TO THE RIGHT WITH A RADIUS OF 125.02 FEET, HAVING A CHORD BEARING OF S 77°36'11" E AND A CHORD DISTANCE OF 53.15, HAVING A CENTRAL ANGLE OF 24°32'47" AND AN ARC LENGTH OF 53.56; THENCE S 65°38'28" E 32.32 FEET; THENCE S 24°27'30" W 727.93 FEET TO THE POINT OF BEGINNING.
AREA: 559884 SQUARE FEET OR 12.85 ACRES

LEGAL DESCRIPTION FOR ROAD DEDICATION WEST:

COMMENCING AT THE EAST QUARTER CORNER OF SECTION 21, T44S, R13W, S.L.B.&M.; THENCE N89°52'34"W 674.04 FEET; THE POINT OF BEGINNING; THENCE N89°53'20"W 14.42 FEET; THENCE N24°27'30"E 645.15 FEET; THENCE S89°52'34"E 23.69 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF A 533.00 FOOT RADIUS NON-TANGENT CURVE TO THE LEFT 88.79 FEET THROUGH THE CENTRAL ANGLE OF 09°32'42", RADIAL BEARING: S55°54'09"E (CHORD BEARS: S29°19'30"W 88.69 FEET); THENCE S24°33'09"W 560.59 FEET TO THE POINT OF BEGINNING.
AREA: 9025 SQUARE FEET OR 0.21 ACRES.

LEGAL DESCRIPTION FOR EAST LOTS:

STARTING AT EAST QUARTER CORNER OF SECTION 21, T44S, R13W, S.L.B.&M., THE POINT OF BEGINNING; THENCE N 89°52'34" W 589.69 FEET; THENCE N 24°27'30" E 687.23 FEET; THENCE N 24°27'30" E 399.83 FEET; THENCE N 24°27'30" E 167.09 FEET; THENCE IN A NORTHERLY DIRECTION WITH A TANGENT CURVE TURNING TO THE LEFT WITH A RADIUS OF 1245.00 FEET, HAVING A CHORD BEARING OF N 19°53'28" E AND A CHORD DISTANCE OF 198.28, HAVING A CENTRAL ANGLE OF 09°08'04" AND AN ARC LENGTH OF 198.49; THENCE S 00°07'41" E 1329.34 FEET TO THE POINT OF BEGINNING.
AREA: 381521 SQUARE FEET OR 8.76 ACRES

LEGAL DESCRIPTION FOR ROAD DEDICATION EAST:

COMMENCING AT THE "AT EAST QUARTER CORNER OF SECTION 21, T44S, R13W, S.L.B.&M.; THENCE N89°52'34"W 601.56 FEET TO THE POINT OF BEGINNING; THENCE N24°33'09"E 530.62 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF A 467.00 FOOT RADIUS CURVE TO THE RIGHT 95.77 FEET THROUGH THE CENTRAL ANGLE OF 11°44'59" (CHORD BEARS: N30°25'38"E 95.60 FEET); THENCE S24°27'30"W 620.81 FEET; THENCE N89°52'34"W 11.87 FEET TO THE POINT OF BEGINNING.
AREA: 6109 SQUARE FEET OR 0.14 ACRES.

OWNER:

BLUE MOUNTAINS PROPERTY ENTERPRISES LLC
256 N 200 W
BLANDING, UT 84511-3618

NO	REVISIONS	DATE	BY
	DESCRIPTION		

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Land Planners
20 South 850 West, Suite 1
Hurricane, Utah 84757
Phone: (435) 886-0581



ZONE CHANGE FOR:
BENCH LAKE TOWNHOMES
HURRICANE, UTAH 84757
LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.

DATE: 3/16/2022
SCALE: 1"=100'

JOB NO.
335-010

SHEET NO.
1 OF 3

STORM WATER CAN BE LOCALLY RETAINED AND CONTROLLED USING RETENTION BASINS. THIS IS THE METHOD TO HANDLE STORM WATER.

PROPERTY CAN BE SERVED BY HURRICANE CITY
WATER,
AND ASH CREEK SPECIAL SERVICE DISTRICT.

THERE ARE NO WELLS, SPRINGS OR SEEPS ON THIS PROPERTY.

OWNER PLANS TO ALLOW PLACEMENT OF COMMUNICATIONS INFRASTRUCTURE AND PLACEMENT OF UTILITY INFRASTRUCTURE ON AND ALONG ALL RIGHTS-OF-WAY AND EASEMENTS.

PROPERTY IS ZONED AS RM-2: MULTI-FAMILY - 10
UNITS PER ACRE

_____ PROPERTY LINE
 _____ ADJACENT PROPERTY LINE
 - - - - - CENTER LINE
 ===== PHASE LINE
 _____ 10' PUBLIC UTILITY EASEMENT
 - - - - - EXISTING MINOR CONTOUR
 - - - - - EXISTING MAJOR CONTOUR
 ---SS---8'---SS---8'--- PROPOSED SEWER MAIN
 ---W---8'---W---8'--- PROPOSED WATER MAIN

PORTION TO BE DEDICATED TO THE
CITY FOR PUBLIC RIGHT-OF-WAY

SITE DATA

AREA	SQ. FT	ACRES
TOTAL AREA	941,474	21.81
TOTAL STORM BASIN	63,984	1.47
TOTAL HOUSING AREA	640,476	14.70
TOTAL DEDICATED ROW	238,874	5.44

DESCRIPTION	QUANTITY
TOTAL UNITS	176
UNITS PER ACRE	8.14

FRONT SETBACK TO HOUSE	20
FRONT SETBACK TO GARAGE	25
STREET SIDE SETBACK	10'
SIDE SETBACK	5'
REAR SETBACK	10'

LOCATED IN SECTION 21, T42S, R13W, S.L.B.&M.
WASHINGTON COUNTY, UTAH

45' RIGHT-OF-WAY

5' 2.5' 2.5' 15' 15' 2.5' 5'

2% 2%

SS-2 FLUSH COAT
15 GAL./SQ. YD.

ASPHALT PER SOILS
REPORT

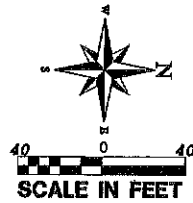
COMPACTED ROAD BASE
PER SOILS REPORT

COMPACTED SUBGRADE
PER SOILS REPORT

2:1 TO CATCH

2:1 TO CATCH

FINISHED ASPHALT
ELEVATION IS 15 TO 18"
ABOVE TOP OF CURB.



COMMENCING AT THE EAST QUARTER CORNER OF SECTION 21, T44S, R13W, S.L.B.M.; THENCE N 89°52'35" W 688.47 FEET TO THE POINT OF BEGINNING; THENCE N 89°52'33" W 708.89 FEET; THENCE N 08°13'09" W 594.11 FEET; THENCE S 86°52'34" E 670.85 FEET; THENCE S 89°52'34" E 7.83 FEET; THENCE N 0°00'00" E 100.00 FEET; THENCE S 89°52'34" E 335.28 FEET; THENCE IN A EASTERLY DIRECTION WITH A TANGENT CURVE TURNING TO THE RIGHT WITH A RADIUS OF 125.02 FEET, HAVING A CHORD BEARING OF S 77°36'11" E AND A CHORD DISTANCE OF 83.15, HAVING A CENTRAL ANGLE OF 24°32'47" AND AN ARC LENGTH OF 33.58; THENCE S 65°38'28" E 32.32 FEET; THENCE S 24°27'30" W 72.93 FEET TO THE POINT OF BEGINNING.

AREA: 559884 SQUARE FEET OR 12.85 ACRES

STARTING AT EAST QUARTER CORNER OF SECTION 21, T44S, R13W, S.L.B.&M., THE POINT OF BEGINNING; THENCE N 69°52'34" W 589.69 FEET; THENCE N 24°27'30" E 697.23 FEET; THENCE N 24°27'30" E 399.63 FEET; THENCE N 24°27'30" E 167.09 FEET; THENCE IN A NORTHERLY DIRECTION WITH A TANGENT CURVE TURNING TO THE LEFT WITH A RADIUS OF 1245.00 FEET, HAVING A CHORD BEARING N 24°27'30" E AND A CHORD DISTANCE OF 1245.00 FEET; THENCE S 82°28'00" W 1245.00 FEET; THENCE S 82°28'00" W 1245.00 FEET; THENCE S 82°28'00" W 1245.00 FEET, HAVING A CENTRAL ANGLE OF 09°08'41" AND AN ARC LENGTH OF 198.49; THENCE S 00°07'41" E 1329.34 FEET TO THE POINT OF BEGINNING.

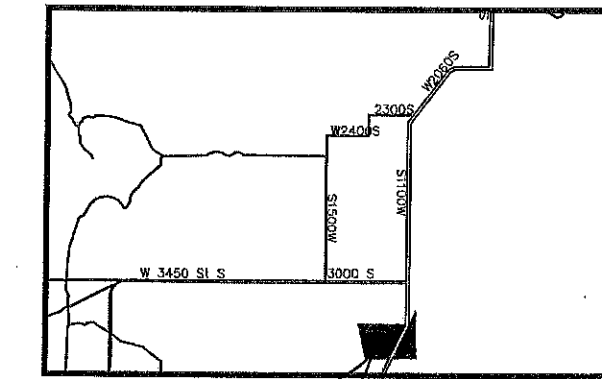
AREA: 381521 SQUARE FEET OR 8.76 ACRES

COMMENCING AT THE EAST QUARTER CORNER OF SECTION 21, T44S, R13W, S1.B.M.; THENCE N89°52'34" W 674.0 FEET; THE POINT OF BEGINNING; THENCE N89°53'20" W 14.42 FEET; THENCE N24°27'30" E 15.00 FEET; THENCE S88°52'42" E 23.69 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF A 51.00' RADIUS NON-TANGENT CURVE TO THE LEFT 88.79 FEET THROUGH THE CENTRAL ANGLE OF 09°32'42", RADIAL BEARING: S55°54'09" E (CHORD BEARS: S29°19'30" W 88.69 FEET); THENCE S24°33'09" W 560.59 FEET TO THE POINT OF BEGINNING, AREA: 9025 SQUARE FEET OR 0.21 ACRES.

COMMENCING AT THE "AT EAST QUARTER CORNER OF SECTION 21, T44S, R13W, S.L.B.2M.; THENCE N89°52'34"W 601.56 FEET TO THE POINT OF BEGINNING; THENCE N24°33'08"E 530.62 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF A 467.00 FOOT RADIUS CURVE TO THE RIGHT 95.77 FEET THROUGH THE CENTRAL ANGLE OF 11°44'59" (CHORD BEARS: N30°25'38"E 95.60 FEET); THENCE S24°27'30"W 620.81 FEET; THENCE N89°52'34"W 11.87 FEET TO THE POINT OF BEGINNING.

AREA: 6109 SQUARE FEET OR 0.14 ACRES.

BLUE MOUNTAINS PROPERTY ENTERPRISES LLC
256 N 200 W
BLANDING, UT 84511-3618



PROJECT LOCATION

[illegible]

PROVALUE ENGINEERING, INC.
Engineers- Land Surveyors - Land Planners
210 South 85th West, Suite 1



PDO SITE PLAN FOR:
BENCH LAKE TOWNHOMES

HURRICANE, UTAH 84737
LOCATED IN SECTION 21, T42S, R13W, S14B, 4M.

DATE: 3/16/2022
SCALE: 1"=40'

JOB NO.
335-010

SHEET NO:

2 OF 3

ADDITIONAL NOTES

STORM WATER CAN BE LOCALLY RETAINED AND CONTROLLED USING RETENTION BASINS. THIS IS THE METHOD TO HANDLE STORM WATER.

THERE ARE NO IRRIGATION FACILITIES.

PROPERTY CAN BE SERVED BY HURRICANE CITY WATER, AND ASH CREEK SPECIAL SERVICE DISTRICT.

THERE ARE NO WELLS, SPRINGS OR SEEPS ON THIS PROPERTY.

OWNER PLANS TO ALLOW PLACEMENT OF COMMUNICATIONS INFRASTRUCTURE AND PLACEMENT OF UTILITY INFRASTRUCTURE ON AND ALONG ALL RIGHTS-OF-WAY AND EASEMENTS.

PROPERTY IS ZONED AS RM-2: MULTI-FAMILY - 10 UNITS PER ACRE

OWNER:

BLUE MOUNTAINS PROPERTY ENTERPRISES LLC
258 N 200 W
BLANDING, UT 84511-3618

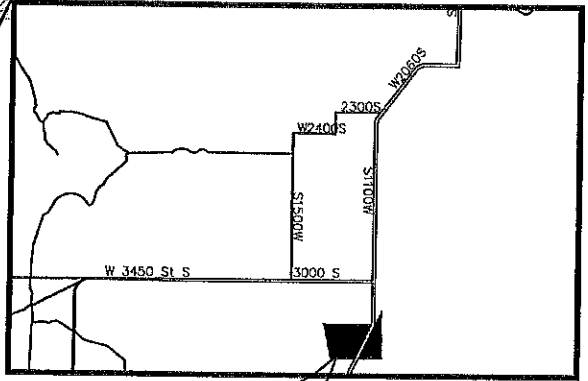
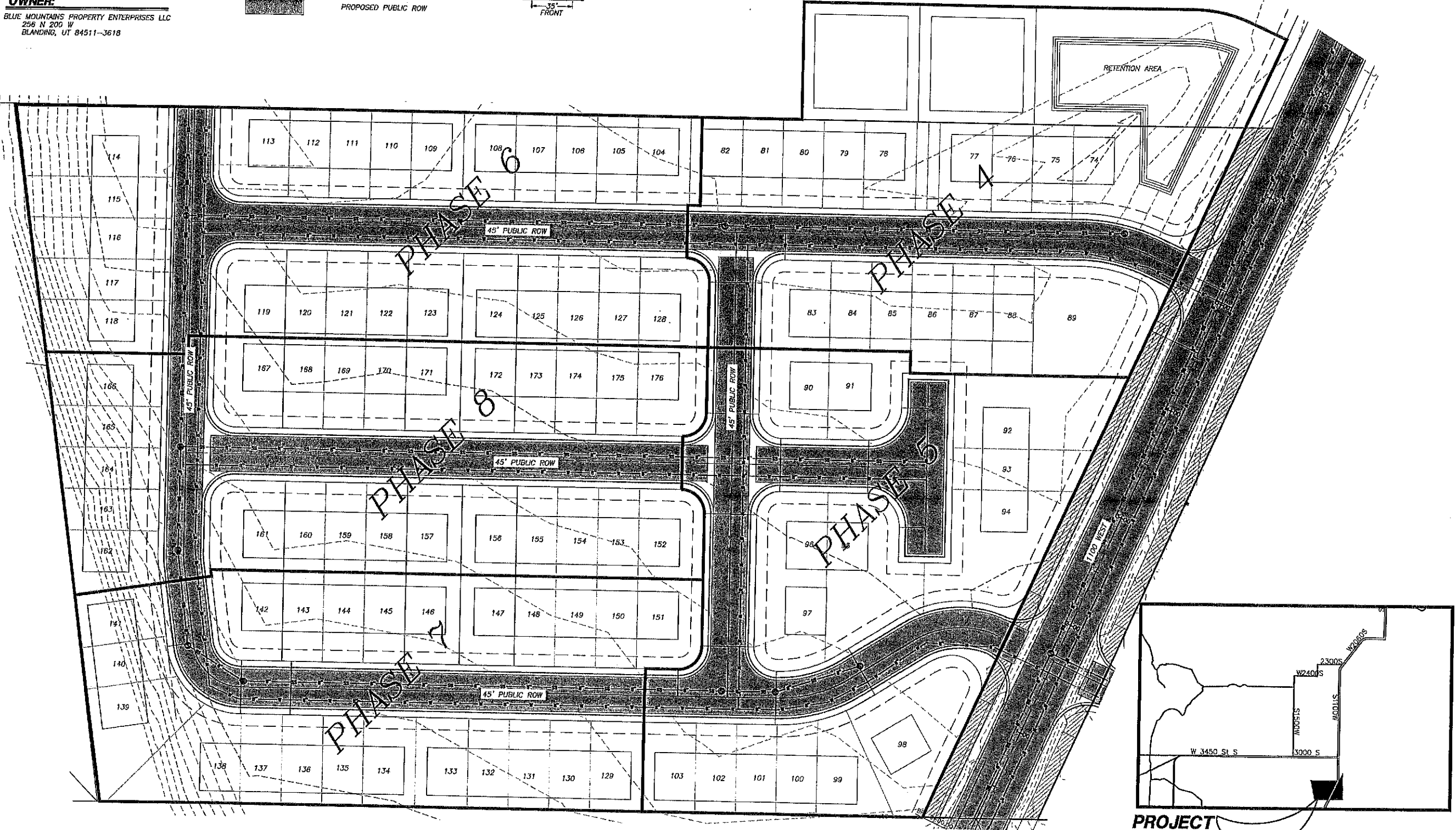
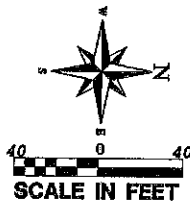
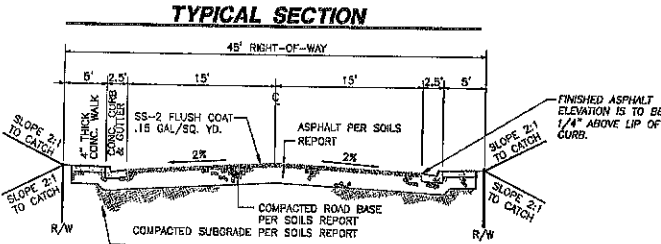
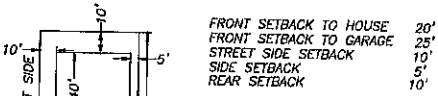
LEGEND

- PROPERTY LINE
- ADJACENT PROPERTY LINE
- CENTER LINE
- PHASE LINE
- 10' PUBLIC UTILITY EASEMENT
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED SEWER MAIN
- PROPOSED WATER MAIN
- SECTION CORNER AS DESCRIBED
- PORTION TO BE DEDICATED TO THE CITY FOR PUBLIC RIGHT-OF-WAY
- PROPOSED PUBLIC ROW

PDO SITE PLAN FOR:
BENCH LAKE TOWNHOMES

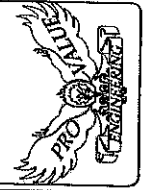
LOCATED IN SECTION 21, T42S, R13W, S1B.4M.
WASHINGTON COUNTY, UTAH

TYPICAL UNIT & SETBACKS



NO.	REVISIONS	DESCRIPTION	DATE	BY

PROVALUE ENGINEERING, INC.
Engineers - Land Surveyors - Land Planners
20 South 400 West, Suite 1
Hurricane City, Utah 84757
Phone: (435) 648-0307



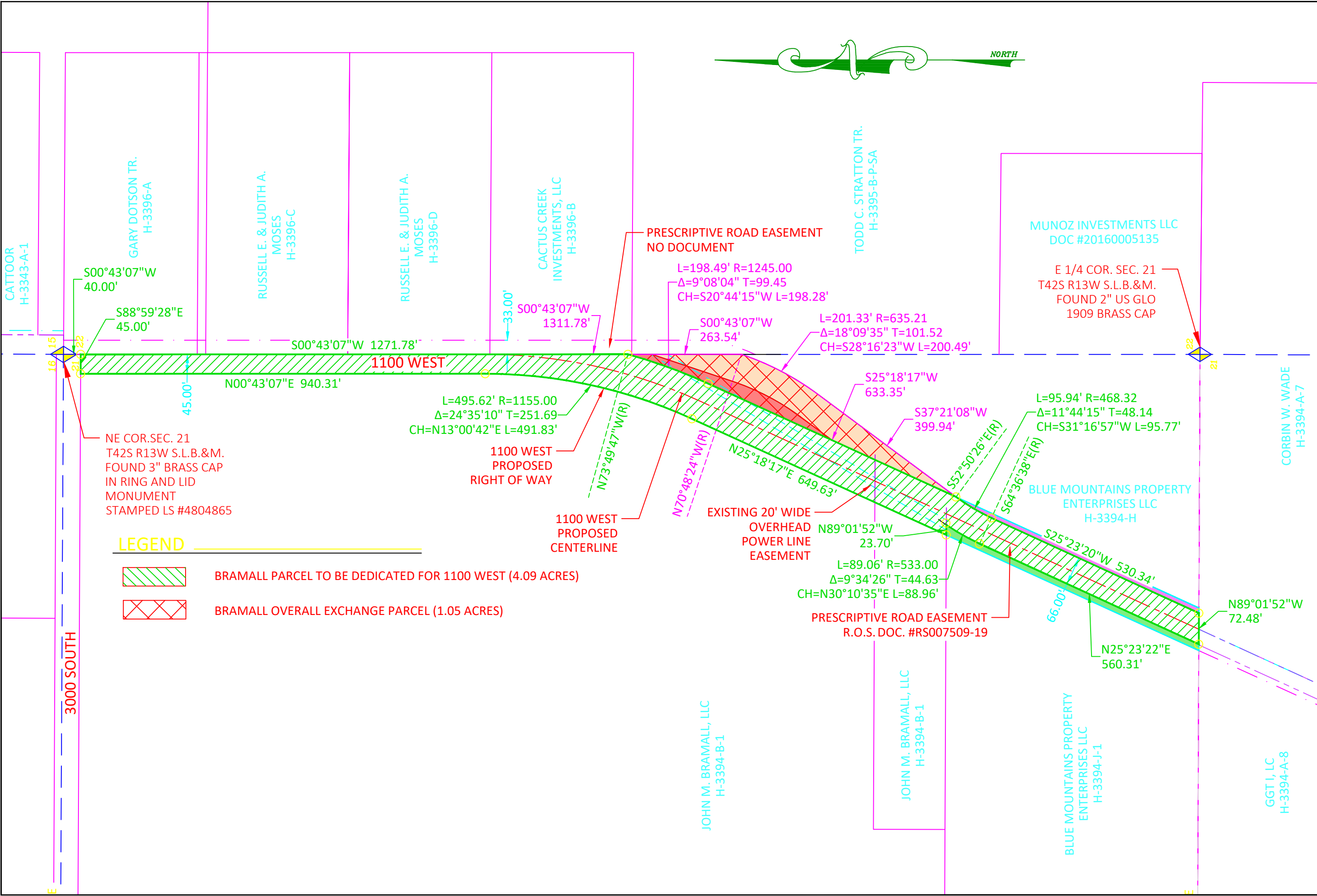
PDO SITE PLAN FOR:
BENCH LAKE TOWNHOMES

HURRICANE, UTAH 84757
LOCATED IN SECTION 21, T42S, R13W, S1B.4M.

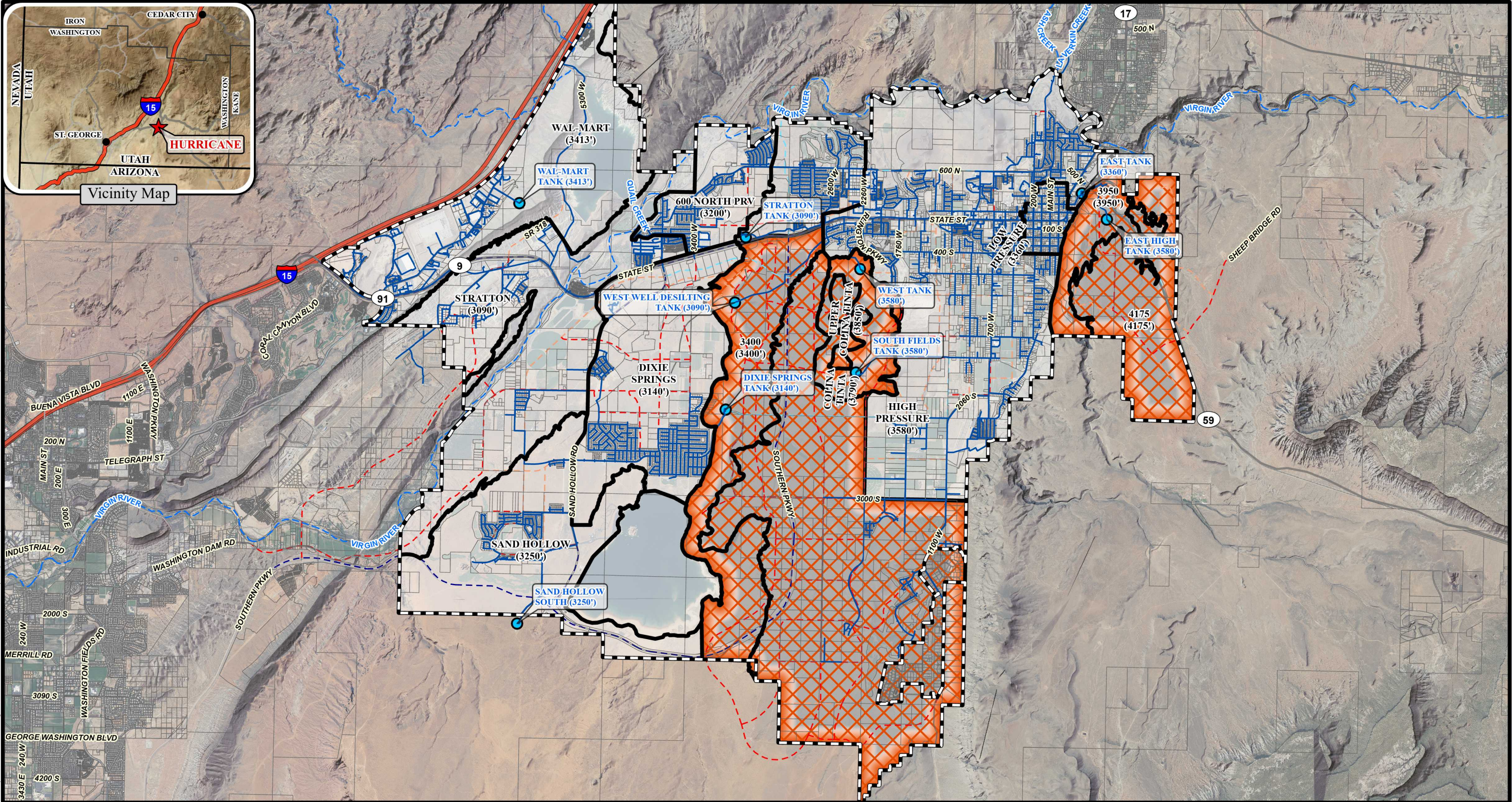
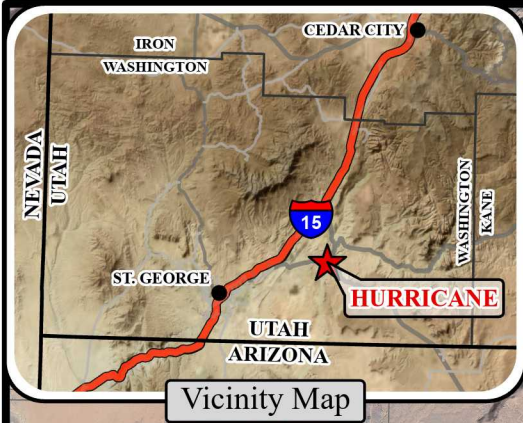
DATE: 3/10/2022
SCALE: 1"=40'

JOB NO:
335-010

SHEET NO:
3 OF 3



DATE: 11/25/20	
JOB NUMBER: 4387	
SCALE: 1" = 200'	
DRAWN BY: JHC	
CHECKED BY: M.W.B.	
ALLIANCE CONSULTING A Planning and Engineering Firm Suite 201 2303 N Coral Canyon Blvd Washington, Utah 84780-0577 Tel: (435) 673-5060 Fax: (435) 673-8065	
RIGHT OF WAY ACQUISITION EXHIBIT FOR 1100 WEST RIGHT OF WAY LOCATED IN SECTION 21, 28, 33, TOWNSHIP 43 SOUTH, RANGE 13 WEST, SALT LAKE BASE & MERIDIAN CITY OF HURRICANE, WASH. CO., UTAH	
DRAWING NAME: 1100 W Acquisition Legals SHEET 1 OF 1 SHEETS	



0

2,500

5,000

10,000

Feet

ALPHA
ENGINEERING

43 South 100 East, Suite 100 • St George, Utah 84770
T: 435.628.6500 • F: 435.628.6553 • alphaengineering.com

Hurricane Municipal Boundary

Washington County Parcels

Pressure Zone Boundaries

Approximate Extent of Limit Culinary Distribution

Existing Culinary Water

Existing Tank

Master Planned Roads

Major Arterial (106' ROW)

Minor Arterial (90' ROW)

Major Collector (70' ROW)

Minor Collector (60' ROW)

N

W

E

S

1 of 1

Approximate Areas of Limited Distribution Capacity

Hurricane, Utah

Spatial Reference: Utah State Plane NAD 83, feet

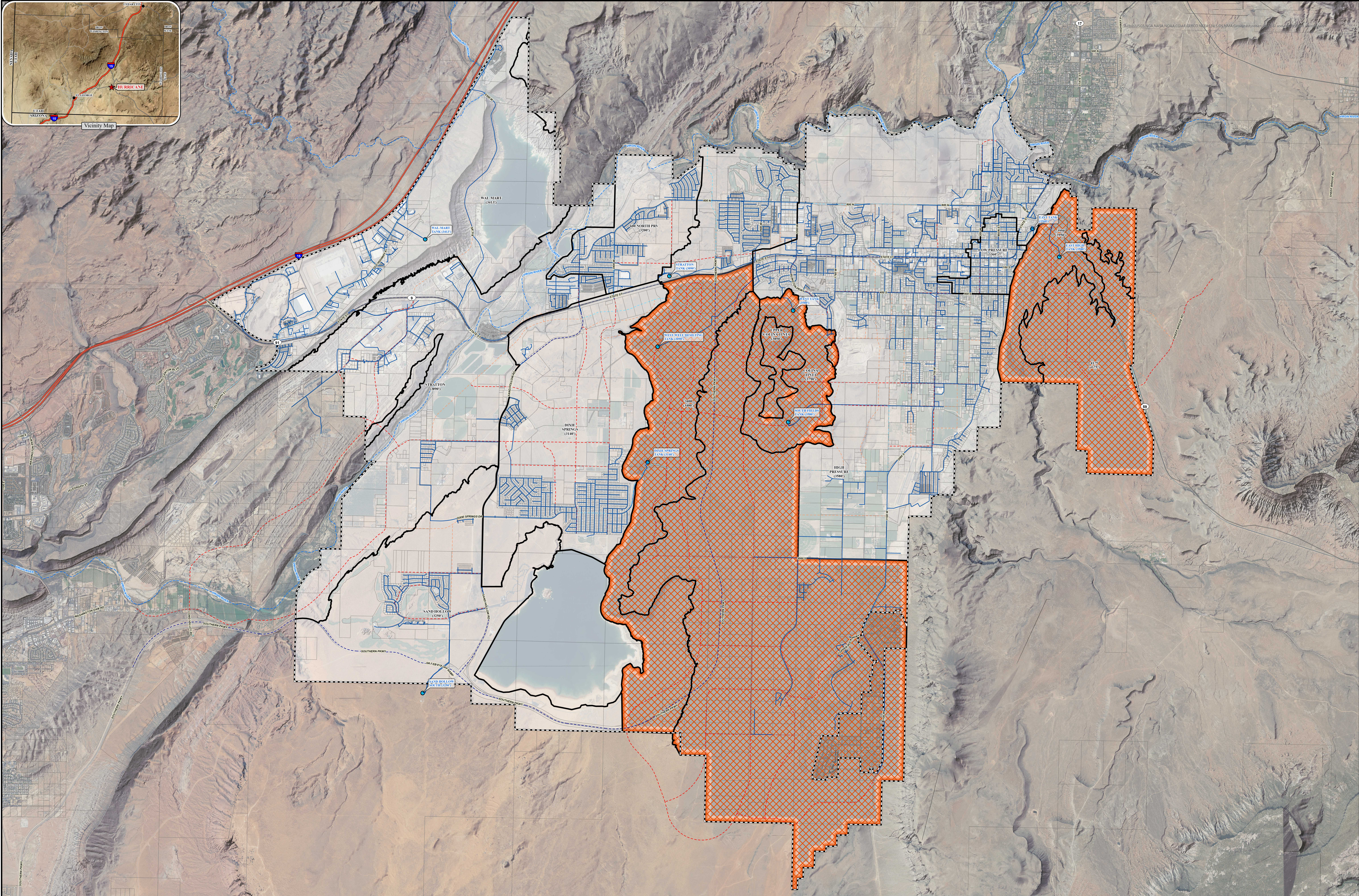
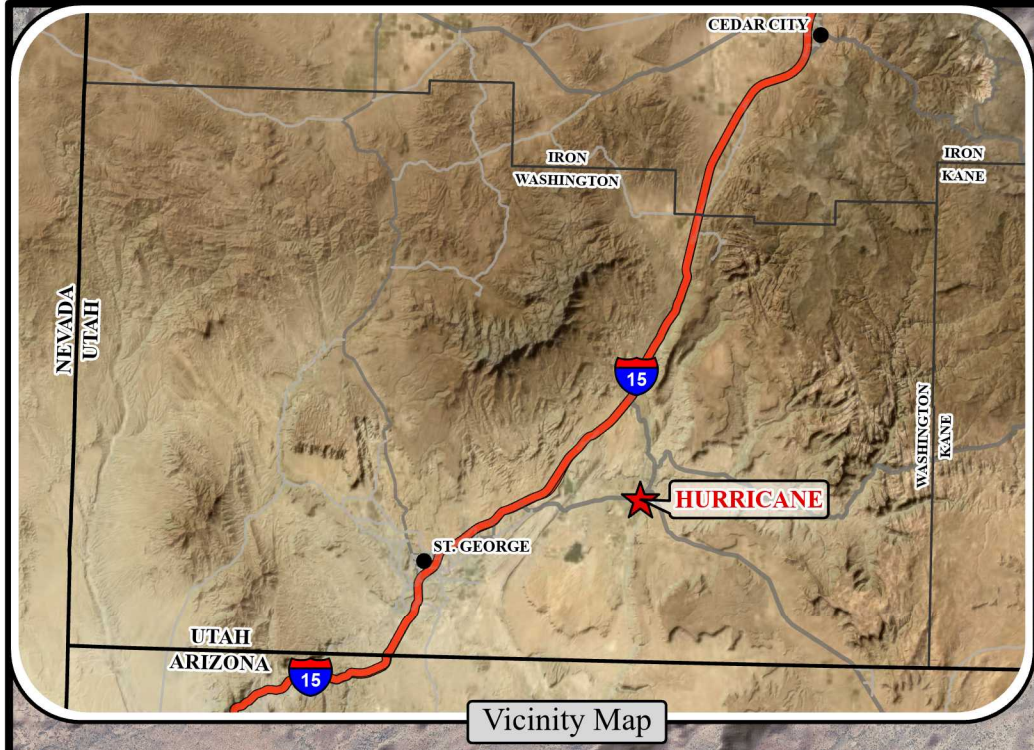
Drawn By: JRH

Scale: 1" = 6,000 feet

Date: October 2022

P:\046-191 Hurricane Water Model & 6-Yr Plan Update 2022\Drawings\GIS\ArcPro\046-191 Distribution Capacity Exhibit.aprx, AEBORDER 11x17, 10/26/2022 9:51 AM jheward

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0 1,000 2,000 4,000
Feet

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Legend

- Hurricane Municipal Boundary
- Washington County Parcels
- Pressure Zone Boundaries
- Approximate Extent of Limit Culinary Distribution
- Existing Culinary Water
- Existing Tank
- Master Planned Roads
 - Major Arterial (106' ROW)
 - Minor Arterial (90' ROW)
 - Major Collector (70' ROW)
 - Minor Collector (60' ROW)

N
W S E

1 of 1

Approximate Areas of Limited Distribution Capacity
Hurricane, Utah

Spatial Reference: Utah State Plane NAD 83, feet

Drawn By: JRH

Scale: 1" = 2,000 feet

Date: October 2022



Hurricane City Power

Clifton Wilson Substation

Circuit CW-101 Analysis

Report

October 2021



**Intermountain Consumer
Professional Engineers, Inc.**
1145 East South Union Avenue
Midvale, Utah 84047
(801) 255-1111

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INTRODUCTION

As requested by Hurricane City Power, Intermountain Consumer Professional Engineers (“ICPE”) performed a study on Clifton Wilson substation circuit CW-101 to determine electrical conditions during peak loading and to evaluate loading capacity.

As a part of the study ICPE’s Scope included:

System Modelling

1. Develop circuit line impedance for circuit modeling.
2. Develop a circuit model for computer simulation on SKM software.
3. Develop load distribution across circuit CW-101 for circuit modeling.
4. Develop an expanded circuit model with proposed system additions.

Study & Report

1. Perform circuit load flow studies under existing conditions and historic peak loading.
2. Determine maximum 3 phase loading as to not cause greater than industry standard voltage drop and in accordance with IEEE C84.1 Range-A.
3. Develop study report on study finding.

This Report consists of the Introduction section, Summary section, Services Standard section, Study Finding section and Appendix.

General findings of the Study are presented in the Summary Section of this Report.

The Level of Service Standard Section covers voltage criteria as set forth in the IEEE C84.1 Standard and which represents Standard Utility Practice.

The Study Finding section contains a Circuit Description section, Substation Capacity section, Circuit CW-101 Loading Section and a Load Flow Analysis Section.. Sections generally contain supporting data for conclusions.

SUMMARY

This study considers the existing electrical system condition and impact of electrical load addition to Clifton Wilson Circuit CW101. Circuit CW 101 generally extends southward from Clifton Wilson 7.1 circuit miles. New development contemplated extension of CW101 and additional 4.5 miles southward.

Level of Service

IEEE Standard C84.1 requires that minimum service entrance voltage during normal operation do not fall below 95% of base voltage and that utilization voltage should not fall below 90% of base voltage. Service Entrance voltage is measured at the point of delivery; Utilization voltage is measured at the terminals of the utilization equipment. To meet the Standard, a value of 97% - 98% per unit distribution voltage, at the high side of distribution transformers is considered necessary and adopted for the study.

Substation Capacity

In assessing and planning electrical systems loading levels of all system equipment should be evaluated. Typically, transformers, voltage regulation, circuit breakers, reclosers, power lines, and system protection are considered.

Evaluation of substation are performed to determine existing loading conditions, ability for future load addition, ability to backup adjacent substation, and to determine the need for new substations.

From review, it was determined that the existing Clifton Wilson substation serving circuit CW-101 is a heavily loaded substation but could provide some additional load to CW-101 assuming completion of the Sky Mountain substation and some load transfer from Clifton Wilson to Sky Mountain Substations.

Voltage Regulation

Clifton Wilson substation is equipped with voltage regulator banks that regulate voltage to distribution circuits. The Clifton Wilson regulators are set for 122.5 V output (secondary) with a 3 volt bandwidth (voltage range from 121 to 124V).

Circuit Loading

Clifton Wilson circuit CW-101 was determined to have peak loading at 3.8 MW (4.1 MVA) with 1.7 MVA of the 4.1 MVA flowing through the Bench Lake regulators

Circuit CW-101 is equipped with a three phase inline regulator bank (Bench Lake regulators) and are rated 114.3/128.0 kVA (150/168) amp thru current. Regulator output is set for 122 V (secondary) with a 2 volt band width.

Load Flow Analysis

Circuit CW-101 was studied using real time regulator load data and through computer modeling using SKM software. Study shows that the existing circuit does not have overloading conditions but is voltage limited. It was determined that:

1. Areas of the existing circuit does experience voltage drop below Level of Service criteria under peak loading.
2. Addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels.

Potential short term solutions for some load addition would be:

1. Optimize voltage regulator bank position.
2. Add another in line regulator bank.
3. Add capacitor banks to maintain a high power factor during peak loading.
4. If possible, move existing load to another circuit to allow new load.

Additional work is needed to determine potential loading with equipment addition and or load transfer; noting the limitations of the existing Bench Lake regulators (1.9 MVA margin) and line conductors.

SERVICE STANDARD

To provide reliable power delivery, and equitably to all its customers; utilities strives to operate the power system to obtain a uniform level of service throughout. Below is a typical utility Level of Service Standard.

Level of Service Standard

- The system must be able to adequately serve load under single contingency (N-1) situations, where “N” is a power system element such as a transformer or non-radial line.
- System switching required under an N-1 contingency should remain as simplified as possible to ensure that switching orders are not unnecessarily complex.
- Distribution circuit loading must remain below 90% of its maximum current rating.
- Distribution circuit voltage must remain between 98% and 105% (at loads) of its nominal value; and
- Distribution circuit mains must be able to serve additional load under N-1 contingencies.
- System to Meet IEEE C84.1 Voltage limits.

In performing the study, criteria as set forth in the Level of Service Standard, was utilized. Of primary concern was meeting IEEE C84.1 normal voltage requirements as listed in Table 1. As seen the Standard requires that minimum service entrance voltage during normal operation do not fall below 95% of base voltage. Utilization voltage should not fall below 90% of base voltage. Service Entrance voltage is measured at the point of delivery; Utilization voltage is measured at the terminals of the utilization equipment. The difference between the minimum service and minimum utilization voltage is intended to allow for voltage drop in the customer’s wiring system. The difference between distribution circuit voltage and service entrance voltage is to allow for voltage drop across distribution transformers and secondary wire to the service entrance.

TABLE 1

Voltage Point of Measurement	Standard Voltages 120, 208, 240, 277, 480, 600, 660	Percent of Nominal
Service Entrance Voltage High Range - A	126, 218, 252, 291, 504, 630, 720	105.0%
Service Entrance Voltage Low Range - A	114, 197, 228, 263, 456, 570, 655	95%
Utilization High Voltage Range - A	126, 218, 252, 291, 504, 630, 720	105.0%
Utilization Low Voltage Range - A	108, 187, 249, 432, 540, 630	90%

Study Findings

Circuit Description

Clifton Wilson circuit CW-101 is a long three phase branched 12.47kV distribution circuits, approximately 7 miles long, that serves load through Clifton Wilson substation and extends from 600 North and southward to approximately 4500 south. The circuit is equipped with an inline 3-phase voltage regulator bank (Lake Bench regulator bank) located at approximately 2300 South and 1000 west (approx. 4.6 miles from Clifton Wilson substation). Proposed circuit addition would extend the circuit another 4.8 mile beyond the southern end of the circuit.

Existing circuit conductors and associated nominal published thermal rating is indicated in Table 2.

Table 2
Circuit Conductor

Line Section	Length (Miles)	Conductor	Thermal Rating (amp) ¹	MVA Rating at Nominal Amp and 100% Voltage
Clifton Wilson Sub to 1500 So 700W	3.6	336 ACSR	514	11.1
1500 South to 1750 South	0.27	750 MCM AL URD	497	10.7
1750 South to approx. 2070 So	0.44	4/0 AL URD	248	5.35
2070 So to Bench Lake Regulators	0.27	1/0 ACSR	242	5.22
Bench Lake Regulators to 3000 South	1.28	1/0 ACSR	242	5.22
3000 So 1100W to approx. 3300 So. 1100 West	0.77	336 ACSR	514	11.1
Approx. 3300 So. 1100 West to Circuit End	0.59	750 MCM AL URD	497	10.7
(tap) 3000 So 1100W to approx. 3100 So. 2100 West (circuit end)	1.45	336 ACSR	514	11.1
3100 So. 2100 West to 3300 So 2100 West (circuit end)	0.26	#2 ACSR	180	3.9
New Circuit Extension 3300 So. 2100 West (circuit end) to pump station	4.8	336 ACSR	514	11.1

1. Thermal ratings are at nominal publish values. De-rate value may apply for high ambient temperatures.

From a thermal prospective conductor ratings are adequate for some load addition; however, as discussed below, the circuit is voltage limited. Without voltage limitation, the circuit is next limited by Bench Lake regulator Bank size, 1/0 ACSR and #2 ACSR ratings.

Substation Capacity

In assessing and planning electrical systems loading levels all system equipment are evaluated. Typically; transformers, regulators, circuit breakers, reclosers, power lines, and system protection are evaluated. Evaluation of substations are performed to determine existing loading conditions, ability for future load addition, ability to backup adjacent substations, and to determine the need for new substations.

The Clifton Wilson substation has two power transformer bays and several distribution circuits. Both power transformer are rated 12/16/22 MVA with 667//994 FA (1303 A) kva regulators. During normal operation power transformers are not paralleled. For summer 2021 load behind the Clifton Wilson substation was 28.6 MW, with 7.2 MW provided by local generation. With consideration for an N-1 contingency (loss of one power transformer) transformer capacity at Clifton Wilson substation is questionable for allowing additional loading. However, with the addition of the Sky Mountain Substation transformer, loading at Clifton Wilson substation can be reduced by load

transfers to Sky Mountain substation. Load transfer to Sky Mountain would allow for other loads to be added to Clifton Wilson transformers. Generally transformer capacity is not an initial limiting factor for load addition in the range of two to three megawatt to CW-101.

Circuit CW-101 Loading

To perform circuit analysis circuit peak loading information is necessary. Circuit peak loading data was provided by Hurricane City Power personnel and included indication of circuit maximum load level at the substation circuit recloser and load through the Bench Lake regulator bank. Overall circuit peak loading was indicated to be 3.8 MW during summer 2021 peak load period. Approximately 1.7 MW of the 3.8 MW circuit load flowed through the Bench Lake Regulators.

Table 3 contains overall circuit loading data as provide and used in the circuit analysis.

**Table 3
Circuit Load Data**

CW-101 Loading -- 7/09/2021					
Circuit	Max MW	Assumed load power factor	MVA	Circuit Capacitors	MVA
CW-101	3.8 MW	0.92	4.13	2- 150 KVAR Banks	4.02

Table 4 contains select data that was provided by Hurricane City Power personnel and as obtained from the Lake Bench regulator bank controller. Additional regulator load data is provided in the appendix for review.

**Table 4
Lake Bench Regulator Data**

Regulator Max Data - Report				
Regulator	Max Amp (Inst.)	Max Load (kW) (Inst)	Time	Tap Position
A - Phase	102.8	739	7-9-21 18:38	---
B - Phase	95.0	682	7-9-21 18:43	---
C- Phase	93.9	677	7-9-21 16:30	---
Regulator 15 Minute Max Reading				
Regulator	Max Amp	Max Load (kW)	Time	
A - Phase	68.7	499	7-9-21 18:15	7 ⁽¹⁾
B - Phase	92.1	666	7-9-21 16:30	13
C- Phase	84.5	611	7-9-21 16:30	9 ⁽¹⁾
A - Phase	70.0	508	9-7-21 15:30	10
B - Phase	----	----	----	----
C- Phase	----	----	----	----

1. Tap to position 10 at 14:00 to 15:00 hr

From regulator data it can be concluded that the circuit is near or below the lower distribution voltage limits (0.97-0.98) north of the regulator bank during heavy loading periods. The regulators allow for a +/- 10 % regulation over 32 steps

with maximum regulation at +/- step 16, each step correlates to a 0.625% voltage change. B phase regulator is shown to have move to position +13 under high loading. A phase and C phase regulator data shows the regulators tapped to position 10 at 14:30 hr. Bench Lake regulator setting were indicated to be at 122 volts with a 2 volt bandwidth (121 to 123 range); for a tap position of +13 with load voltage at 122 V (represent 1.67% above nominal) source voltage would be at 93.5% of nominal; for a tap position of +10 source voltage would be at 95.5% of nominal. Regulator data indicates that the circuit has some imbalance during peak; however, noting that exact balancing is generally not possible.

Bench Lake regulator are rated 114.3/128.0 kVA (150/168 amp thru current); Assuming balanced loading, maximum through load at 168 amps is 3.6 MVA, the bank is currently load at 1.7 MVA. Assuming balanced loading, maximum additional loading through the regulators is 1.9 MVA.

Load Flow Analysis

To determine circuit electrical conditions during peak loading and to evaluate the circuits ability for additional loading circuit impedances were determined and a circuit model was developed on SKM Software for computer simulations.

The circuit was studied for:

1. Voltage drop under peak loading.
2. Line loading under peak loading.
3. Equipment loading under peak loading.
4. Effect of power factor improvements.
5. Additional loading capabilities.

Table 5 contains results of select load flows under varying conditions, additional load flow results are in the Appendix. .

Table 5
Load Flow Results

Location Voltage (per unit)												
C a s e	Case Description	Case Load	Clifton Low Side 12.47 kV	Bus - 004 (1300 So.)	Bus - 009 (2050 So.)	Bus - 011 (Bench Lake Reg.)	Bus - 012 (Bench Lake Reg.)	Bus -014 (3000 So.)	Bus - 017 3300 So 2100W	Bus - 020 (approx 3800 So.)	Bus -022 (RMP Tap end)	Bus -033 (Pump Sta..)
1	2021 Loading w/100 Amps thru Bench Lake Regs.	CW101 Recloser: 4.11 MVA (3.8MW) Bench Lake Reg: 2.127 MVA	1.007	0.964	0.958	0.95	1.01	1.0	1.0	1.0	0.99	N/A
2	2021 Loading w/70 Amps thru Bench Lake Reg.	CW101 Recloser: 4.135 MVA (3.8MW) Bench Lake Reg: 1.5 MVA	1.008	0.976	0.97	0.964	1.017	1.004	1.0	1.004	0.996	N/A
3	2021 Loading w/100 Amps thru Bench Lake Reg. and 700 kvar capacitor add.	CW101 Recloser: 3.872 MVA (3.8MW) Bench Lake Reg: 2.08 MVA	1.008	0.976	0.97	0.964	1.01	1.0	1.0	1.0	0.99	N/A
4	2021 Loading w/load (550KW) addition over 100 Amps thru Bench Lake Reg.	CW101 Recloser: 4.7 MVA Bench Lake Reg: 2.6 MVA	1.008	0.96	0.954	0.947	1.016	1.0	0.99	1.0	0.99	0.99

To meet “Service Entrance Voltage Low Range – A” requirements , as covered in the Service Standard section, a minimum of 0.97 pu voltage (preferable 0.98) is necessary to allow for voltage drop across distribution transformers and secondary cabling to the service entrance.

Case 1 represents the existing system with 2021 loading and load distributed to have 98 amps of overall circuit load following through the Bench Lake regulators. The study was performed with an overall circuit loading of 4.1 MVA (Summer 2021 loading) and with 2.1 MVA (98 amps) of the 4.1MVA through the Lake Bench regulators. For all cases voltage at Clifton Wilson substation was held at 1.008 p.u. (121V), noting that the regulator set point is 122.5V with a 3 volt band width (121 -124 volt range).

Study results indicate that there are no overload conditions; however, the study indicates that the circuit is voltage limited. Voltage from 1300 South to the Bench Lake regulator bank is below 0.97 p.u. Results correlated to regulator data.

Case 2 represents the existing system with 2021 loading. The study was performed with an overall circuit loading of 4.1 MVA (Summer 2021 loading) and with loads redistributed for 1.5 MVA (70 amps) of the 4.1MVA to flow through the Lake Bench regulators. Results indicate that there are no overload conditions; however, the study indicates that circuit remains voltage limited with the reduced flow through the regulators. Voltage from 1300 South to the Bench Lake regulator bank is at or below 0.97 p.u.

Case 3 is equivalent to Case 1 and includes the addition of 700 kvar capacitance for power factor correction to 0.98. Through the addition of capacitors some marginal voltage improvements is obtained but voltage is still near 0.97p.u. and under 0.98pu.

Case 4 is equivalent to Case 1 with the addition of approximately 4.5 miles of 336 ACSR circuit to the end of the existing circuit and the addition of 550 kW past the Bench Lake regulators. Results show that there is no over loading but voltage drops are increased.

Computer studies and real time voltage regulator data show that the circuit is voltage limited with voltage at or below criteria of 0.97-0.98 per unit at the distribution voltage. With consideration for normal load growth along the length of the existing circuit large load addition is not recommended.

Potential short term solutions for some load addition would be:

5. Optimize voltage regulator bank position.
6. Add another in line regulator bank.
7. Add capacitor banks to maintain a high power factor during peak loading.
8. If possible, move some existing load to another circuit to allow new load to CW-101.

Additional work is needed to determine potential loading with equipment addition and or load transfer; it is noted that with voltage limitation reduced other limitation will arise. Specifically, the existing Bench Lake regulator (1.9 MVA margin) and 1/0 and #2 ACSR line conductors. The optimum solution is a new substation in the vicinity of major load growth.

APPENDIX

APPENDIX

System Load Flow Summary
Bench Lake Regulator Data
System Model – SKM
Model Input Data
Model impedance Data

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results												
Case Description	Power Flow	Regulator (600 North)	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
2021 Load	Recloser: 4.111 MVA, 1.543 MVAR, 3.812 MW Bench Lake Reg: 2.127 MVA, .693 MVAR, 2.013 MW	Voltage: 12,551 V (1.007pu) Voltage Drop: -0.7%	Voltage: 12,027 V (0.964pu) Voltage Drop: 3.6%	Voltage: 11,952 V (0.958pu) Voltage Drop: 4.2%	Voltage: 11,867 V (0.952pu) Voltage Drop: 4.8%	Voltage: 12,669 V (1.016pu) Voltage Drop: -1.6%	Voltage: 12,502 V (1.003pu) Voltage Drop: -0.3%	Voltage: 12,460 V (0.999pu) Voltage Drop: 0.1%	Voltage: 12,494 V (1.002pu) Voltage Drop: -0.2%	Voltage: 12,492 V (1.002) Voltage Drop: -0.2%	Voltage: 12,395 V (0.994pu) Voltage Drop: 0.6%	N/A
Flat Build with 250 kVA Load + 350 hp	Recloser: 4.723 MVA, 1.777 MVAR, 4.377 MW Bench Lake Reg: 2.645 MVA, .798 MVAR, 2.522 MW	Voltage: 12,544 V Voltage Drop: -0.6%	Voltage: 11,936 V Voltage Drop: 4.3%	Voltage: 11,847 V Voltage Drop: 5.0%	Voltage: 11,740 V Voltage Drop: 5.9%	Voltage: 12,687 V Voltage Drop: -1.7%	Voltage: 12,476 V Voltage Drop: -0.1%	Voltage: 12,365 V Voltage Drop: 0.8%	Voltage: 12,468 V Voltage Drop: 0.0%	Voltage: 12,466V Voltage Drop: 0.0%	Voltage: 12,369 V Voltage Drop: 0.8%	Voltage: 12,327 V Voltage Drop: 1.2%
Flat Build with 500 kVA Load + 350 hp	Recloser: 5.046 MVA, 1.959 MVAR, 4.651 MW Bench Lake Reg: 2.910 MVA, .906 MVAR, 2.765 MW	Voltage: 12,587 V Voltage Drop: -0.9%	Voltage: 11,930 V Voltage Drop: 4.3%	Voltage: 11,833 V Voltage Drop: 5.1%	Voltage: 11,714 V Voltage Drop: 6.1%	Voltage: 12,678 V Voltage Drop: -1.7%	Voltage: 12,442 V Voltage Drop: 0.2%	Voltage: 12,294 V Voltage Drop: 1.4%	Voltage: 12,434 V Voltage Drop: 0.3%	Voltage: 12,432 V Voltage Drop: 0.3%	Voltage: 12,335 V Voltage Drop: 1.1%	Voltage: 12,249 V Voltage Drop: 1.8%
Flat Build with 1000 kVA load + 350 hp	Recloser: 5.735 MVA, 2.370 MVAR, 5.223 MW Bench Lake Reg: 3.450 MVA, 1.13 MVAR, 3.26 MW	Voltage: 12,581 V Voltage Drop: -0.9%	Voltage: 11,809 V Voltage Drop: 5.3%	Voltage: 11,695 V Voltage Drop: 6.2%	Voltage: 11,550 V Voltage Drop: 7.4%	Voltage: 12,636 V Voltage Drop: -1.3%	Voltage: 12,349 V Voltage Drop: 1.0%	Voltage: 12,125 V Voltage Drop: 2.8%	Voltage: 12,341 V Voltage Drop: 1.0%	Voltage: 12,338 V Voltage Drop: 1.1%	Voltage: 12,241 V Voltage Drop: 1.8%	Voltage: 12,066 V Voltage Drop: 3.2%
2021 Load w/ added capacitors	Recloser: 3.872 MVA, .761 MVAR, 3.797 MW Bench Lake Reg: 2.084 MVA, .545 MVAR, 2.011 MW Capacitors: 1.038 MVAR	Voltage: 12,566 V Voltage Drop: -0.8%	Voltage: 12,170 V Voltage Drop: 2.4%	Voltage: 12,100 V Voltage Drop: 3.0%	Voltage: 12,019 V Voltage Drop: 3.6%	Voltage: 12,680 V Voltage Drop: -1.7%	Voltage: 12,522 V Voltage Drop: -0.4%	Voltage: 12,479 V Voltage Drop: -0.1%	Voltage: 12,516 V Voltage Drop: -0.4%	Voltage: 12,517 V Voltage Drop: -0.4%	Voltage: 12,417 V Voltage Drop: 0.4%	N/A
70A at Bench Lake Reg												
2021 Load w/ 70A at Bench Lake Reg	Recloser: 4.045 MVA, 1.46 MVAR, 3.772 MW Bench Lake Reg: 1.47 MVA, .456 MVAR, 1.397 MW	Voltage: 12,557 V (1.007pu) Voltage Drop: -0.7%	Voltage: 12,064 V (0.967pu) Voltage Drop: 3.25%	Voltage: 12,002 V (0.9625pu) Voltage Drop: 3.75%	Voltage: 11,944 V (0.958pu) Voltage Drop: 4.21%	Voltage: 12,670 V (1.016pu) Voltage Drop: -1.6%	Voltage: 12,558 V (1.007pu) Voltage Drop: -0.71%	Voltage: 12,529 V (1.004pu) Voltage Drop: -0.48%	Voltage: 12,553 V (1.006pu) Voltage Drop: -0.67%	Voltage: 12,553 V (1.006pu) Voltage Drop: -0.67%	Voltage: 12,485 V (1.001) Voltage Drop: -0.13%	N/A
2021 Load 250 kVA Load + 350 hp	Recloser: 4.733 MVA, 1.738 MVAR, 4.404 MW Bench Lake Reg: 2.229 MVA, .630 MVAR, 2.137 MW	Voltage: 12,575 V Voltage Drop: -0.8%	Voltage: 11,983 V Voltage Drop: 3.9%	Voltage: 11,902 V Voltage Drop: 4.6%	Voltage: 11,813 V Voltage Drop: 5.3%	Voltage: 12,675 V Voltage Drop: -1.6%	Voltage: 12,498 V Voltage Drop: -0.2%	Voltage: 12,395 V Voltage Drop: 0.6%	Voltage: 12,491 V Voltage Drop: -0.2%	Voltage: 12,490V Voltage Drop: -0.2%	Voltage: 12,411 V Voltage Drop: 0.5%	Voltage: 12,356 V Voltage Drop: 0.9%
2021 Load 500 kVA Load + 350 hp	Recloser: 5.051 MVA, 1.915 MVAR, 4.674 MW Bench Lake Reg: 2.490 MVA, .737 MVAR, 2.379 MW	Voltage: 12,578V Voltage Drop: -0.9%	Voltage: 11,935 V Voltage Drop: 4.3%	Voltage: 11,846 V Voltage Drop: 5.0%	Voltage: 11,745 V Voltage Drop: 5.8%	Voltage: 12,680 V Voltage Drop: -1.7%	Voltage: 12,478 V Voltage Drop: -0.1%	Voltage: 12,339 V Voltage Drop: 1.1%	Voltage: 12,472 V Voltage Drop: -0.0%	Voltage: 12,470V Voltage Drop: -0.0%	Voltage: 12,391 V Voltage Drop: 0.6%	Voltage: 12,294 V Voltage Drop: 1.4%
2021 Load 1000 kVA Load + 350 hp	Recloser: 5.720 MVA, 2.303 MVAR, 5.236 MW Bench Lake Reg: 3.024 MVA, .957 MVAR, 2.869 MW	Voltage: 12,571V Voltage Drop: -0.8%	Voltage: 11,819 V Voltage Drop: 5.2%	Voltage: 11,713 V Voltage Drop: 6.1%	Voltage: 11,588 V Voltage Drop: 7.1%	Voltage: 12,675 V Voltage Drop: -1.6%	Voltage: 12,424 V Voltage Drop: 0.4%	Voltage: 12,209 V Voltage Drop: 2.1%	Voltage: 12,417 V Voltage Drop: 0.4%	Voltage: 12,415V Voltage Drop: 0.4%	Voltage: 12,336 V Voltage Drop: 1.1%	Voltage: 12,150 V Voltage Drop: 2.6%

Min/Max Metering Values

SEL-2431
Voltage Reg

A-Phase

Date: 09/14/2021 Time: 10:58:08

Forward

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	102.8	07/09/2021	18:38:24	5.7	03/25/2021	22:11:35
VS (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VS (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
VL (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VL (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
VCMP (kV)	7.55	05/08/2018	16:34:20	6.76	11/16/2018	09:10:37
VCMP (V sec)	125.9	05/08/2018	16:34:20	112.6	11/16/2018	09:10:37
P (kW)	739	07/09/2021	18:38:24	40	03/25/2021	22:11:35
Q (kVAr)	212	07/07/2017	12:55:57	-92	02/11/2020	13:58:27
S (kVA)	749	07/09/2021	18:38:24	41	03/25/2021	22:11:35
PF @ S Max/Min	0.99	07/09/2021	18:38:24	0.96	03/25/2021	22:11:35
Freq (Hz)	60.12	09/18/2018	09:52:34	59.71	06/16/2017	04:15:54
Tap Pos	+16	02/20/2017	11:42:24	-16	02/20/2017	11:48:16

Reverse

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
VS (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VS (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VL (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VL (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VCMP (kV)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
VCMP (V sec)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
P (kW)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
Q (kVAr)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
S (kVA)	\$\$\$\$\$\$	(Reset)		\$\$\$\$\$\$	(Reset)	
PF @ S Max/Min	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
Freq (Hz)	\$\$\$\$\$	(Reset)		\$\$\$\$\$	(Reset)	
Tap Pos	\$\$\$	(Reset)		\$\$\$	(Reset)	

Last MaxMin Reset 02/14/2017 19:55:55

Demand/Peak

SEL-2431

B Phase

Date: 09/14/2021

Time: 10:55:40

Voltage Reg

Line Current (IL)

	DEMAND (A pri)	PEAK (A pri)	DATE	TIME
Forward	49	95	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:51

Real Power (P)

	DEMAND (kW)	PEAK (kW)	DATE	TIME
Forward	353	682	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:50

Reactive Power (Q)

	DEMAND (kVAr)	PEAK (kVAr)	DATE	TIME
Forward OUT	58	126	07/30/2020	14:12:27
Forward IN	0	85	04/10/2020	23:40:33
Reverse OUT	0	0	(Reset)	
Reverse IN	0	0	03/15/2017	12:33:51

Apparent Power (S)

	DEMAND (kVA)	PEAK (kVA)	DATE	TIME
Forward	357	691	07/09/2021	18:43:19
Reverse	0	0	03/15/2017	12:33:51

Last Demand Reset 07/07/2021 17:23:17

Last Peak Reset 02/14/2017 19:55:55

Snipping Tool

New Mode

Select the snip mode using the button.

Snipping Tool

In a future update, home. Try improve & Sketch (or try the Windows logo key)

Try Snip & Sketch

Min/Max Metering Values

SEL-2431
Voltage Reg

C Phase

Date: 09/20/2021 Time: 12:58:53

Forward

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	93.9	07/09/2021	16:30:55	0.8	05/20/2019	11:37:00
VS (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VS (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
VL (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VL (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
VCMP (kV)	7.52	05/08/2018	16:33:45	6.79	11/16/2018	09:10:00
VCMP (V sec)	125.3	05/08/2018	16:33:45	113.2	11/16/2018	09:10:00
P (kW)	677	07/09/2021	16:30:55	-8	03/09/2020	11:44:34
Q (kVAr)	205	02/07/2019	09:21:23	-95	10/07/2020	01:35:10
S (kVA)	683	07/09/2021	16:30:55	5	05/20/2019	11:37:00
PF @ S Max/Min	0.99	07/09/2021	16:30:55	0.93	05/20/2019	11:37:00
Freq (Hz)	60.12	09/18/2018	09:42:58	59.71	06/16/2017	04:15:37
Tap Pos	+15	07/07/2021	17:30:28	-07	11/16/2018	10:08:06

Reverse

	MAX	DATE	TIME	MIN	DATE	TIME
IL (A pri)	2.9	03/17/2020	13:52:53	2.3	03/26/2020	12:44:45
VS (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VS (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
VL (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VL (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
VCMP (kV)	7.32	03/26/2020	12:44:53	7.28	03/17/2020	13:52:52
VCMP (V sec)	122.0	03/26/2020	12:44:53	121.4	03/17/2020	13:52:52
P (kW)	8	03/17/2020	13:52:53	-6	03/17/2020	13:52:09
Q (kVAr)	-17	03/26/2020	12:44:46	-20	03/17/2020	13:51:21
S (kVA)	21	03/17/2020	13:52:53	17	03/26/2020	12:44:46
PF @ S Max/Min	0.42	03/17/2020	13:52:53	-0.05	03/26/2020	12:44:46
Freq (Hz)	60.04	03/17/2020	13:51:23	59.99	03/26/2020	12:46:10
Tap Pos	-02	03/26/2020	12:44:14	-03	03/17/2020	13:50:55

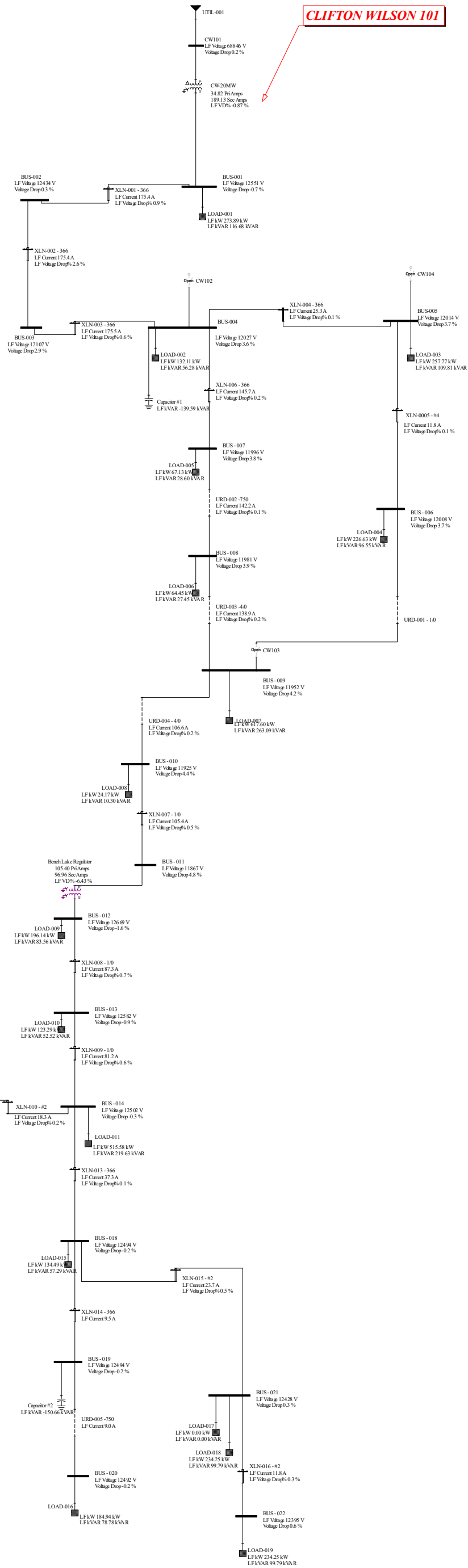
Last MaxMin Reset 02/14/2017 18:46:47

#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7698	7/9/2021	23:45:01	42.85	122.225	122.235	122.235	2	41.62	304.981	12.165	0	305.255	0	0	0	0	0
7699	7/9/2021	23:30:01	42.5	122.255	122.265	122.265	2	41.707	305.811	11.815	0	306.072	0	0	0	0	0
7700	7/9/2021	23:15:00	41.25	122.61	122.625	122.625	3	43.497	319.275	17.316	0	319.766	0	0	0	0	0
7701	7/9/2021	23:00:00	44.25	122.77	122.785	122.785	3	45.388	333.435	15.89	0	333.834	0	0	0	0	0
7702	7/9/2021	22:45:00	44.55	122.59	122.6	122.6	3	46.764	342.847	20.861	0	343.495	0	0	0	0	0
7703	7/9/2021	22:30:00	45.65	122.295	122.305	122.305	3	46.288	338.962	20.379	0	339.587	0	0	0	0	0
7704	7/9/2021	22:15:01	47.3	122.42	122.435	122.435	3	47.446	347.99	21.345	0	348.691	0	0	0	0	0
7705	7/9/2021	22:00:01	47.7	122.33	122.345	122.345	4	51.315	374.444	24.296	0	375.247	0	0	0	0	0
7706	7/9/2021	21:45:01	51	122.035	122.05	122.05	4	52.793	385.514	26.362	0	386.429	0	0	0	0	0
7707	7/9/2021	21:30:00	49.95	122.245	122.255	122.255	4	52.308	383.185	31.125	0	384.462	0	0	0	0	0
7708	7/9/2021	21:15:01	51.25	121.74	121.75	121.75	5	51.381	374.692	26.424	0	375.656	0	0	0	0	0
7709	7/9/2021	21:00:00	55.35	121.94	121.95	121.95	4	54.655	398.267	36.084	0	399.907	0	0	0	0	0
7710	7/9/2021	20:45:01	53.65	122	122.015	122.015	4	55.166	400.687	36.84	0	402.393	0	0	0	0	0
7711	7/9/2021	20:30:01	56.75	121.43	121.435	121.435	4	58.317	426.218	37.191	0	427.853	0	0	0	0	0
7712	7/9/2021	20:15:01	57.55	122.175	122.19	122.19	5	58.246	425.034	34.874	0	426.498	0	0	0	0	0
7713	7/9/2021	20:00:01	54.45	122.25	122.26	122.26	5	57.431	418.045	38.481	0	419.831	0	0	0	0	0
7714	7/9/2021	19:45:00	56.35	122.4	122.415	122.415	5	57.837	423.124	30.756	0	424.255	0	0	0	0	0
7715	7/9/2021	19:30:00	57.95	122.205	122.215	122.215	5	59.767	435.646	35.251	0	437.087	0	0	0	0	0
7716	7/9/2021	19:15:00	58.95	122.22	122.235	122.235	5	60.252	440.462	37.614	0	442.103	0	0	0	0	0
7717	7/9/2021	19:00:01	62.05	122.51	122.515	122.515	6	62.898	459.502	44.922	0	461.714	0	0	0	0	0
7718	7/9/2021	18:45:01	65.1	121.8	121.81	121.81	6	63.91	465.648	55.094	0	468.909	0	0	0	0	0
7719	7/9/2021	18:30:01	69.35	121.865	121.875	121.875	6	67.674	493.475	60.032	0	497.125	0	0	0	0	0
7720	7/9/2021	18:15:01	67.35	122.07	122.08	122.08	7	68.726	499.865	60.452	0	503.528	0	0	0	0	0
7721	7/9/2021	18:00:00	67.6	122.01	122.025	122.025	7	65.778	480.141	49.162	0	482.685	0	0	0	0	0
7722	7/9/2021	17:45:00	63	122.88	122.885	122.885	7	61.681	451.21	40.697	0	453.054	0	0	0	0	0
7723	7/9/2021	17:30:00	63.25	122.885	122.895	122.895	8	64.412	471.369	44.064	0	473.453	0	0	0	0	0
7724	7/9/2021	17:15:00	63.9	121.795	121.81	121.81	8	63.973	466.163	39.828	0	467.887	0	0	0	0	0
7725	7/9/2021	17:00:00	61.2	122.585	122.595	122.595	9	62.759	459.415	38.827	0	461.064	0	0	0	0	0
7726	7/9/2021	16:45:01	62.05	122.125	122.135	122.135	9	64.289	468.296	42.3	0	470.211	0	0	0	0	0
7727	7/9/2021	16:30:01	65.85	121.525	121.535	121.535	9	65.723	478.175	44.564	0	480.256	0	0	0	0	0
7728	7/9/2021	16:15:01	64.6	122.24	122.255	122.255	9	62.989	460.262	40.106	0	462.025	0	0	0	0	0
7729	7/9/2021	16:00:00	62.05	122.77	122.78	122.78	10	64.149	468.181	42.989	0	470.177	0	0	0	0	0
7730	7/9/2021	15:45:01	65.05	121.735	121.745	121.745	9	62.577	455.07	42.648	0	457.075	0	0	0	0	0
7731	7/9/2021	15:30:01	64.35	121.485	121.5	121.5	9	63.721	463.309	42.081	0	465.229	0	0	0	0	0
7732	7/9/2021	15:15:01	62.8	122.545	122.555	122.555	10	61.991	453.815	38.204	0	455.428	0	0	0	0	0
7733	7/9/2021	15:00:00	59.25	122.465	122.475	122.475	10	61.818	451.679	41.527	0	453.591	0	0	0	0	0
7734	7/9/2021	14:45:00	61.25	122.21	122.22	122.22	10	60.642	443.076	43.738	0	445.243	0	0	0	0	0
7735	7/9/2021	14:30:01	60	122.425	122.43	122.43	10	59.798	436.841	42.002	0	438.861	0	0	0	0	0
7736	7/9/2021	14:15:01	61.2	122.885	122.9	122.9	10	59.257	432.559	40.007	0	434.409	0	0	0	0	0
7737	7/9/2021	14:00:01	59.6	121.09	121.1	121.1	9	56.451	409.574	35.74	0	411.142	0	0	0	0	0
7738	7/9/2021	13:45:00	59.15	121.64	121.65	121.65	9	58.938	427.895	43.956	0	430.161	0	0	0	0	0
7739	7/9/2021	13:30:00	58.4	122.045	122.06	122.06	9	57.375	418.16	41.321	0	420.214	0	0	0	0	0
7740	7/9/2021	13:15:01	57.05	121.055	121.06	121.06	9	56.927	413.7	37.848	0	415.451	0	0	0	0	0
7741	7/9/2021	13:00:00	54.05	121.805	121.815	121.815	9	55.205	402.069	36.192	0	403.728	0	0	0	0	0
7742	7/9/2021	12:45:00	56.6	122.115	122.135	122.135	9	55.975	407.425	39.779	0	409.611	0	0	0	0	0
7743	7/9/2021	12:30:01	53.55	122.24	122.25	122.25	9	55.352	398.194	77.594	0	405.699	0	0	0	0	0
7744	7/9/2021	12:15:01	56.9	121.55	121.56	121.56	9	54.575	392.426	76.152	0	399.764	0	0	0	0	0
7745	7/9/2021	12:00:01	59.35	121.625	121.635	121.635	9	58.876	421.215	84.668	0	429.663	0	0	0	0	0
7746	7/9/2021	11:45:00	54.15	122.195	122.205	122.205	9	58.007	415.814	80.254	0	423.52	0	0	0	0	0
7747	7/9/2021	11:30:00	57.3	121.93	121.94	121.94	8	56.712	407.312	77.086	0	414.597	0	0	0	0	0
7748	7/9/2021	11:15:00	53.2	121.83	121.845	121.845	8	53.835	387.229	72.478	0	393.975	0	0	0	0	0
7749	7/9/2021	11:00:00	56.25	121.51	121.52	121.52	8	55.434	396.304	77.515	0	403.89	0	0	0	0	0
7750	7/9/2021	10:45:00	56.05	121.07	121.085	121.085	7	52.997	380.447	66.635	0	386.25	0	0	0	0	0
7751	7/9/2021	10:30:01	52.55	121.6	121.615	121.615	7	51.982	373.008	66.761	0	378.95	0	0	0	0	0
7752	7/9/2021	10:15:01	51.45	121.825	121.84	121.84	7	53.105	380.71	71.184	0	387.328	0	0	0	0	0
7753	7/9/2021	10:00:00	48.4	121.79	121.8	121.8	7	52.73	377.202	73.317	0	384.293	0	0	0	0	0
7754	7/9/2021	9:45:01	52.2	121.06	121.075	121.075	5	50.763	363.689	69.285	0	370.291	0	0	0	0	0
7755	7/9/2021	9:30:01	52.25	121.8	121.81	121.81	5	50.205	362.448	67.878	0	368.763	0	0	0	0	0
7756	7/9/2021	9:15:01	49.05	122.435	122.455	122.455	6	50.029	360.775	63.715	0	366.371	0	0	0	0	0
7757	7/9/2021	9:00:00	48.75	121.675	121.69	121.69	6	48.904	350.889	62.971	0	356.515	0	0	0	0	0
7758	7/9/2021	8:45:00	50.9	121.655	121.67	121.67	6	48.796	351.697	62.077	0	357.147	0	0	0	0	0
7759	7/9/2021	8:30:01	46.05	122.07	122.085	122.085	6	46.001	331.534	62.304	0	337.354	0	0	0	0	0
7760	7/9/2021	8:15:00	47	122.415	122.425	122.425	7	48.168	346.538	62.899	0	352.223	0	0	0	0	0
7761	7/9/2021	8:00:00	47.75	121.17	121.18	121.18	5	46.666	335.742	57.225	0	340.594	0	0	0	0	0
7762	7/9/2021	7:45:00	45.75	121.84	121.85	121.85	5	47.386	340.322	59.627	0	345.532	0	0	0	0	0
7763	7/9/2021	7:30:00	43.95	121.745	121.755	121.755	5	43.107	310.641	54.221	0	315.356	0	0	0	0	0
7764	7/9/2021	7:15:01	45.6	121.94	121.95	121.95	5	42.651	308.525	51.029	0	312.753	0	0	0	0	0
7765	7/9/2021	7:00:00	42.45	122.03	122.045	122.045	5	40.691	293.319	44.553	0	296.713	0	0	0	0	0
7766	7/9/2021	6:45:01	42.8	121.43	121.44	121.44	4	40.712	293.052	48.345	0	297.035	0	0	0	0	0
7767	7/9/2021	6:30:00	37.95	121.98	121.99	121.99	4	37.052	268.515	39.782	0	271.491	0	0	0	0	0
7768	7/9/2021	6:15:00	34.9	122.17	122.18	122.18	4	36.502	263.596	37.844	0	266.351	0	0	0	0	0
7769	7/9/2021	6:00:00	36.05	121.4													

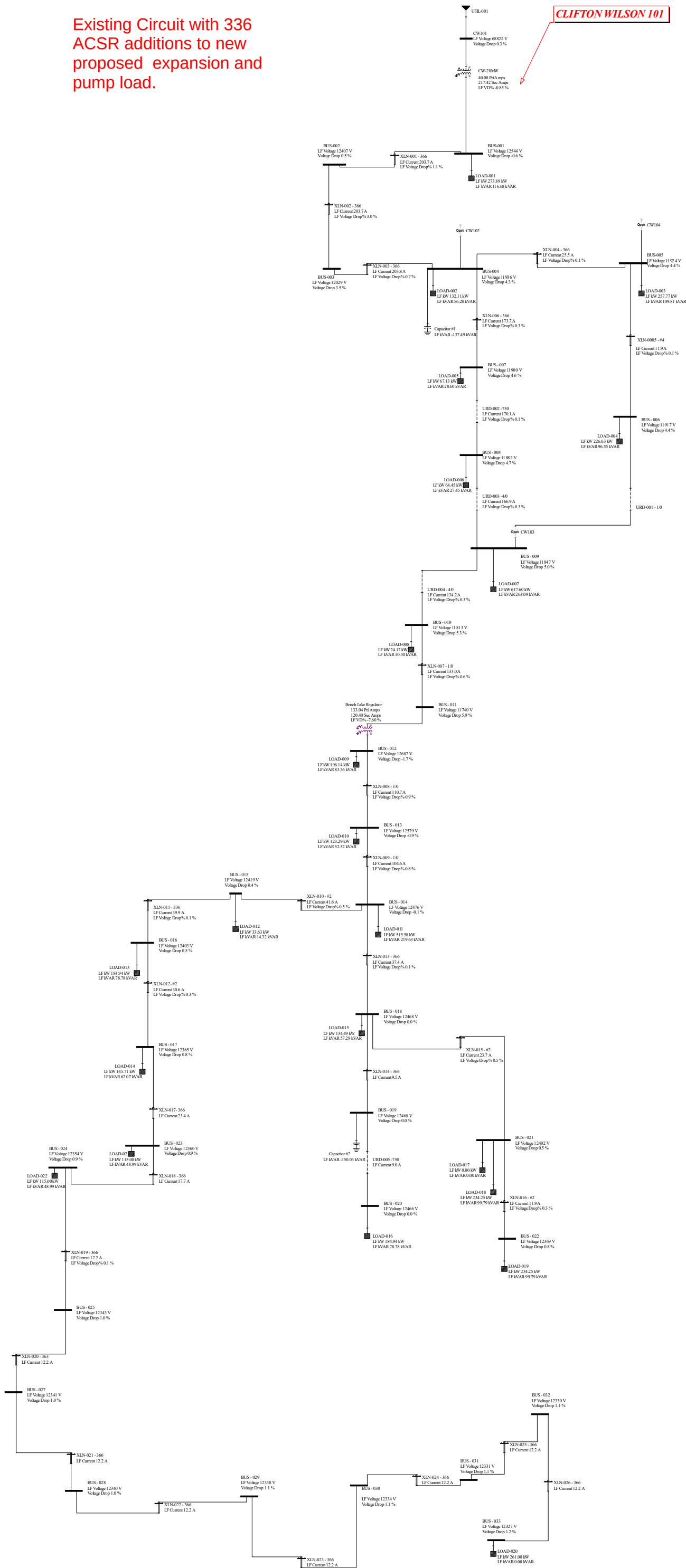
#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7699	7/9/2021	23:45:01	55.85	122.06	122.095	122.095	4	55.748	405.242	47.46	0	408.022	0	0	0	0	0
7700	7/9/2021	23:30:01	55.05	122.02	122.05	122.05	4	55.09	400.452	45.369	0	403.033	0	0	0	0	0
7701	7/9/2021	23:15:00	54.45	121.555	121.58	121.58	4	55.787	405.676	46.863	0	408.391	0	0	0	0	0
7702	7/9/2021	23:00:00	53.75	122.04	122.07	122.07	5	58.65	426.388	56.833	0	430.181	0	0	0	0	0
7703	7/9/2021	22:45:01	60.35	121.81	121.84	121.84	5	61.305	444.469	59.939	0	448.503	0	0	0	0	0
7704	7/9/2021	22:30:01	58.7	121.97	122	122	5	59.817	435.223	57.585	0	439.038	0	0	0	0	0
7705	7/9/2021	22:15:00	64.6	122.595	122.62	122.62	6	62.973	458.29	63.92	0	462.734	0	0	0	0	0
7706	7/9/2021	22:00:00	66.15	121.845	121.87	121.87	6	66.15	479.921	65.002	0	484.307	0	0	0	0	0
7707	7/9/2021	21:45:00	66.7	121.945	121.97	121.97	6	68.067	493.689	67.105	0	498.236	0	0	0	0	0
7708	7/9/2021	21:30:00	67	122.905	122.935	122.935	7	68.736	500.724	68.741	0	505.435	0	0	0	0	0
7709	7/9/2021	21:15:00	66.55	122.79	122.82	122.82	7	68.2	496.759	62.908	0	500.737	0	0	0	0	0
7710	7/9/2021	21:00:01	72.05	122.27	122.3	122.3	7	68.895	502.268	63.506	0	506.288	0	0	0	0	0
7711	7/9/2021	20:45:01	75.85	121.79	121.815	121.815	7	73.808	534.374	74.552	0	539.559	0	0	0	0	0
7712	7/9/2021	20:30:00	75.8	121.735	121.76	121.76	7	70.437	512.848	67.224	0	517.26	0	0	0	0	0
7713	7/9/2021	20:15:01	72.1	122.51	122.54	122.54	8	74.556	543.386	68.757	0	547.727	0	0	0	0	0
7714	7/9/2021	20:00:01	72.2	122.19	122.22	122.22	8	75.726	550.278	73.792	0	555.214	0	0	0	0	0
7715	7/9/2021	19:45:00	77.2	122.76	122.785	122.785	9	78.217	570.32	79.807	0	575.885	0	0	0	0	0
7716	7/9/2021	19:30:00	75.85	122.85	122.88	122.88	9	80.553	585.712	84.768	0	591.823	0	0	0	0	0
7717	7/9/2021	19:15:00	83.15	122.935	122.96	122.96	9	84.293	612.744	94.711	0	620.026	0	0	0	0	0
7718	7/9/2021	19:00:01	85.9	122.895	122.92	122.92	9	89.502	649.124	101.644	0	657.043	0	0	0	0	0
7719	7/9/2021	18:45:01	91.65	122.405	122.435	122.435	10	94.134	680.091	108.369	0	688.688	0	0	0	0	0
7720	7/9/2021	18:30:00	85.35	122.285	122.315	122.315	9	86.858	630.072	96.388	0	637.411	0	0	0	0	0
7721	7/9/2021	18:15:01	92.55	120.695	120.72	120.72	9	85.584	617.524	89.692	0	624.012	0	0	0	0	0
7722	7/9/2021	18:00:01	86.9	122.195	122.225	122.225	10	87.014	631.101	93.983	0	638.078	0	0	0	0	0
7723	7/9/2021	17:45:01	84.7	122.235	122.265	122.265	11	84.585	615.379	88.698	0	621.749	0	0	0	0	0
7724	7/9/2021	17:30:01	82.95	122.295	122.325	122.325	12	86.55	628.587	93.834	0	635.561	0	0	0	0	0
7725	7/9/2021	17:15:00	86.25	122.3	122.325	122.325	13	87.266	633.485	95.25	0	640.617	0	0	0	0	0
7726	7/9/2021	17:00:01	90.2	121.67	121.705	121.705	13	87.976	637.173	99.303	0	644.87	0	0	0	0	0
7727	7/9/2021	16:45:00	96.35	121.755	121.785	121.785	13	92.128	665.715	100.677	0	673.29	0	0	0	0	0
7728	7/9/2021	16:30:00	96.55	121.335	121.365	121.365	13	92.016	665.912	101.781	0	673.65	0	0	0	0	0
7729	7/9/2021	16:15:00	89.8	122.045	122.07	122.07	13	91.565	660.947	104.05	0	669.095	0	0	0	0	0
7730	7/9/2021	16:00:01	93.1	121.02	121.05	121.05	12	88.092	636.346	96.028	0	643.561	0	0	0	0	0
7731	7/9/2021	15:45:01	88.1	121.37	121.4	121.4	12	86.984	628.195	94.651	0	635.299	0	0	0	0	0
7732	7/9/2021	15:30:01	81.15	121.75	121.785	121.785	12	84.519	609.647	88.868	0	616.094	0	0	0	0	0
7733	7/9/2021	15:15:01	84.7	121.36	121.385	121.385	12	84.892	613.21	91.48	0	620.002	0	0	0	0	0
7734	7/9/2021	15:00:01	87.65	121.525	121.555	121.555	12	82.764	600.983	87.389	0	607.309	0	0	0	0	0
7735	7/9/2021	14:45:01	82.7	121.99	122.02	122.02	12	83.784	606.074	89.031	0	612.585	0	0	0	0	0
7736	7/9/2021	14:30:01	74.35	122.915	122.945	122.945	13	80.007	581.449	84.199	0	587.519	0	0	0	0	0
7737	7/9/2021	14:15:01	85.4	121.505	121.53	121.53	13	82.045	590.713	84.377	0	596.714	0	0	0	0	0
7738	7/9/2021	14:00:00	78.6	121.35	121.38	121.38	12	79.199	570.858	83.531	0	576.943	0	0	0	0	0
7739	7/9/2021	13:45:00	79	121.66	121.685	121.685	12	77.827	561.049	84.113	0	567.332	0	0	0	0	0
7740	7/9/2021	13:30:01	78.5	122.04	122.07	122.07	11	73.194	531.438	71.473	0	536.235	0	0	0	0	0
7741	7/9/2021	13:15:00	73.25	121.68	121.71	121.71	11	74.955	541.659	74.603	0	546.789	0	0	0	0	0
7742	7/9/2021	13:00:00	66.7	122.17	122.195	122.195	10	70.477	513.359	68.706	0	518	0	0	0	0	0
7743	7/9/2021	12:45:00	72.05	122.64	122.67	122.67	11	70.922	515.052	78.789	0	521.257	0	0	0	0	0
7744	7/9/2021	12:30:00	69.85	121.285	121.315	121.315	11	73.857	527.035	111.556	0	538.717	0	0	0	0	0
7745	7/9/2021	12:15:00	76.2	121.64	121.665	121.665	11	74.738	534.383	115.089	0	546.65	0	0	0	0	0
7746	7/9/2021	12:00:00	75.3	121.68	121.71	121.71	11	72.659	519.572	113.991	0	531.966	0	0	0	0	0
7747	7/9/2021	11:45:00	72.8	122.18	122.215	122.215	11	74.639	533.374	119.69	0	546.664	0	0	0	0	0
7748	7/9/2021	11:30:01	72.95	121.375	121.405	121.405	10	71.507	509.55	110.513	0	521.411	0	0	0	0	0
7749	7/9/2021	11:15:00	72.85	121.175	121.2	121.2	9	70.229	499.306	111.79	0	511.674	0	0	0	0	0
7750	7/9/2021	11:00:01	71.1	120.955	120.98	120.98	9	67.803	483.882	107.603	0	495.713	0	0	0	0	0
7751	7/9/2021	10:45:00	66	122.82	122.85	122.85	10	65.939	472.05	102.912	0	483.147	0	0	0	0	0
7752	7/9/2021	10:30:00	63.55	122.055	122.08	122.08	9	64.067	457.074	98.722	0	467.622	0	0	0	0	0
7753	7/9/2021	10:15:00	64.5	121.495	121.52	121.52	9	64.073	457.374	98.911	0	467.962	0	0	0	0	0
7754	7/9/2021	10:00:00	62.7	121.79	121.82	121.82	9	66.583	473.281	108.013	0	485.473	0	0	0	0	0
7755	7/9/2021	9:45:00	62.2	121.56	121.585	121.585	7	59.501	426.154	89.192	0	435.4	0	0	0	0	0
7756	7/9/2021	9:30:01	64	121.575	121.6	121.6	7	60.778	435.605	93.31	0	445.502	0	0	0	0	0
7757	7/9/2021	9:15:01	54.4	122.475	122.5	122.5	7	53.698	387	76.402	0	394.48	0	0	0	0	0
7758	7/9/2021	9:00:01	55.7	121.485	121.515	121.515	8	55.189	395.926	76.206	0	403.211	0	0	0	0	0
7759	7/9/2021	8:45:00	60.75	121.61	121.64	121.64	8	56.738	406.226	82.782	0	414.585	0	0	0	0	0
7760	7/9/2021	8:30:00	52.7	121.825	121.855	121.855	8	53.606	384.545	74.776	0	391.76	0	0	0	0	0
7761	7/9/2021	8:15:00	57.15	121.535	121.565	121.565	7	55.043	394.708	76.124	0	402.003	0	0	0	0	0
7762	7/9/2021	8:00:01	52.75	121.985	122.015	122.015	7	51.193	366.532	71.286	0	373.413	0	0	0	0	0
7763	7/9/2021	7:45:00	50.6	121.37	121.4	121.4	6	50.855	364.755	65.357	0	370.573	0	0	0	0	0
7764	7/9/2021	7:30:00	48.3	121.45	121.48	121.48	6	48.432	348.281	62.981	0	353.942	0	0	0	0	0
7765	7/9/2021	7:15:01	51.2	122.02	122.045	122.045	6	50.333	361.872	70.214	0	368.631	0	0	0	0	0
7766	7/9/2021	7:00:00	52.2	121.665	121.69	121.69	6	49.209	353.398	66.207	0	359.558	0	0	0	0	0
7767	7/9/2021	6:45:01	50.1	121.09	121.115	121.115	5	49.172	353.301	62.892	0	358.871	0	0	0	0	0
7768	7/9/2021	6:30:00	49.05	122.05	122.085	122.085	5	48.475	347.774	63.291	0	353.497	0	0	0	0	0
7769	7/9/2021	6:15:01	46.15	121.37	121.395	121.395	4	46.193	331.132	58.679	0	336.302	0	0	0	0	0
7770	7/9/2021	6:00:01	42.25	121													

#	DATE	TIME	IL	VSSEC	VLSEC	VCMPSEC	TAP_POS	ILFDEM	PFDEM	QFODEM	QFIDEM	SFDEM	ILRDEM	PRDEM	QRODEM	QRIDEM	SRDEM
7699	7/9/2021	23:45:01	46.3	121.925	121.94	121.94	1	46.966	343.645	22.703	0	344.434	0	0	0	0	0
7700	7/9/2021	23:30:01	49.65	122.14	122.155	122.155	2	49.6	363.32	28.687	0	364.467	0	0	0	0	0
7701	7/9/2021	23:15:00	48.3	122.65	122.665	122.665	3	50.736	372.199	29.122	0	373.357	0	0	0	0	0
7702	7/9/2021	23:00:00	52.1	121.79	121.8	121.8	3	52.2	381.13	33.174	0	382.608	0	0	0	0	0
7703	7/9/2021	22:45:00	55.05	121.54	121.555	121.555	3	53.684	390.458	35.946	0	392.163	0	0	0	0	0
7704	7/9/2021	22:30:01	57	122.32	122.335	122.335	3	55.312	404.269	41.787	0	406.445	0	0	0	0	0
7705	7/9/2021	22:15:00	52.7	122.455	122.47	122.47	3	54.793	401.136	36.645	0	402.819	0	0	0	0	0
7706	7/9/2021	22:00:00	58.1	122.46	122.475	122.475	4	58.731	427.968	40.525	0	429.898	0	0	0	0	0
7707	7/9/2021	21:45:01	57.85	121.225	121.24	121.24	3	57.867	421.261	38.885	0	423.089	0	0	0	0	0
7708	7/9/2021	21:30:01	57.15	122.74	122.755	122.755	4	62.018	452.489	50.747	0	455.35	0	0	0	0	0
7709	7/9/2021	21:15:01	63.3	121.505	121.515	121.515	4	63.214	458.313	47.975	0	460.827	0	0	0	0	0
7710	7/9/2021	21:00:00	64	122.635	122.65	122.65	5	62.144	452.185	47.72	0	454.736	0	0	0	0	0
7711	7/9/2021	20:45:00	61.85	122.695	122.71	122.71	4	65.029	475.374	51.487	0	478.221	0	0	0	0	0
7712	7/9/2021	20:30:00	66.5	122.46	122.48	122.48	5	66.95	487.984	55.798	0	491.172	0	0	0	0	0
7713	7/9/2021	20:15:00	72.05	121.415	121.425	121.425	5	70.734	512.856	62.062	0	516.607	0	0	0	0	0
7714	7/9/2021	20:00:00	67.75	121.95	121.965	121.965	5	70.474	510.632	59.952	0	514.161	0	0	0	0	0
7715	7/9/2021	19:45:01	74.4	121.12	121.14	121.14	5	75.821	548.217	70.238	0	552.713	0	0	0	0	0
7716	7/9/2021	19:30:00	75.35	121.78	121.795	121.795	5	75.556	547.509	65.801	0	551.463	0	0	0	0	0
7717	7/9/2021	19:15:00	80.1	121.555	121.57	121.57	5	78.497	567.764	74.301	0	572.636	0	0	0	0	0
7718	7/9/2021	19:00:01	76.5	121.965	121.98	121.98	5	83.019	599.817	84.329	0	605.73	0	0	0	0	0
7719	7/9/2021	18:45:01	72.5	122.76	122.78	122.78	6	78.991	575.32	80.673	0	580.96	0	0	0	0	0
7720	7/9/2021	18:30:00	84.2	122.25	122.265	122.265	7	81.674	594.463	84.757	0	600.48	0	0	0	0	0
7721	7/9/2021	18:15:00	85.8	122.685	122.7	122.7	8	85.363	620.785	91.636	0	627.521	0	0	0	0	0
7722	7/9/2021	18:00:01	82.35	122.59	122.605	122.605	8	81.27	590.905	85.345	0	597.052	0	0	0	0	0
7723	7/9/2021	17:45:01	85.45	121.6	121.615	121.615	8	80.747	584.664	81.752	0	590.362	0	0	0	0	0
7724	7/9/2021	17:30:00	78.2	121.935	121.945	121.945	8	77.025	559.908	74.335	0	564.832	0	0	0	0	0
7725	7/9/2021	17:15:01	80.75	122.01	122.025	122.025	9	76.755	557.735	75.868	0	562.879	0	0	0	0	0
7726	7/9/2021	17:00:00	79.4	122.1	122.115	122.115	9	81.662	590.52	81.085	0	596.083	0	0	0	0	0
7727	7/9/2021	16:45:01	75.1	123.24	123.255	123.255	9	82.451	597.924	83.084	0	603.674	0	0	0	0	0
7728	7/9/2021	16:30:01	91.8	121.465	121.48	121.48	9	84.499	611.895	86.681	0	618.017	0	0	0	0	0
7729	7/9/2021	16:15:01	77.85	122.48	122.495	122.495	9	81.186	589.48	89.242	0	596.209	0	0	0	0	0
7730	7/9/2021	16:00:01	80.8	122.28	122.295	122.295	9	79.397	575.17	90.218	0	582.21	0	0	0	0	0
7731	7/9/2021	15:45:01	71.35	122.44	122.45	122.45	9	77.456	560.304	86.887	0	567.014	0	0	0	0	0
7732	7/9/2021	15:30:01	76.5	122.105	122.125	122.125	9	76.822	555.39	84.186	0	561.747	0	0	0	0	0
7733	7/9/2021	15:15:00	82.75	121.105	121.12	121.12	9	79.193	570.805	87.547	0	577.502	0	0	0	0	0
7734	7/9/2021	15:00:01	69.4	122.75	122.76	122.76	9	71.511	517.952	80.071	0	524.113	0	0	0	0	0
7735	7/9/2021	14:45:01	74.75	122.535	122.55	122.55	9	70.866	515.114	78.545	0	521.083	0	0	0	0	0
7736	7/9/2021	14:30:01	75.1	121.67	121.685	121.685	10	73.267	530.386	86.608	0	537.42	0	0	0	0	0
7737	7/9/2021	14:15:01	71.85	122.225	122.235	122.235	10	69.745	505.355	77.239	0	511.233	0	0	0	0	0
7738	7/9/2021	14:00:00	66.35	122.01	122.025	122.025	10	69.357	499.933	77.571	0	505.925	0	0	0	0	0
7739	7/9/2021	13:45:00	68.55	121.6	121.61	121.61	9	65.988	477.117	69.963	0	482.231	0	0	0	0	0
7740	7/9/2021	13:30:00	73.05	121.875	121.885	121.885	9	70.287	508.043	78.801	0	514.145	0	0	0	0	0
7741	7/9/2021	13:15:00	67	121.325	121.34	121.34	9	67.112	484.398	68.539	0	489.238	0	0	0	0	0
7742	7/9/2021	13:00:00	65.1	122.075	122.09	122.09	9	63.55	459.094	68.152	0	464.161	0	0	0	0	0
7743	7/9/2021	12:45:01	65.7	121.435	121.45	121.45	8	65.44	470.716	78.296	0	477.351	0	0	0	0	0
7744	7/9/2021	12:30:00	68.55	121.175	121.19	121.19	8	64.125	456.932	102.735	0	468.352	0	0	0	0	0
7745	7/9/2021	12:15:00	57.6	121.815	121.83	121.83	8	61.197	435.492	99.943	0	446.823	0	0	0	0	0
7746	7/9/2021	12:00:00	60.5	121.96	121.97	121.97	8	64.925	461.123	108.95	0	473.848	0	0	0	0	0
7747	7/9/2021	11:45:01	67.3	121.56	121.575	121.575	8	65.316	463.38	112.15	0	476.8	0	0	0	0	0
7748	7/9/2021	11:30:00	65.3	122.105	122.12	122.12	8	63.028	449.038	100.878	0	460.237	0	0	0	0	0
7749	7/9/2021	11:15:01	63.6	121.55	121.565	121.565	7	65.016	462.576	106.041	0	474.582	0	0	0	0	0
7750	7/9/2021	11:00:01	56.95	121.9	121.915	121.915	7	56.645	402.267	93.804	0	413.076	0	0	0	0	0
7751	7/9/2021	10:45:01	62.75	121.375	121.39	121.39	7	57.507	409.27	96.488	0	420.513	0	0	0	0	0
7752	7/9/2021	10:30:01	61.6	121.375	121.385	121.385	7	58.877	418.984	99.447	0	430.639	0	0	0	0	0
7753	7/9/2021	10:15:00	55.1	122.145	122.16	122.16	7	59.176	421.035	97.508	0	432.205	0	0	0	0	0
7754	7/9/2021	10:00:01	62.25	121.215	121.23	121.23	7	59.729	423.737	97.667	0	434.872	0	0	0	0	0
7755	7/9/2021	9:45:00	60.65	120.86	120.88	120.88	5	55.754	397.147	91.017	0	407.459	0	0	0	0	0
7756	7/9/2021	9:30:00	53.65	122.035	122.05	122.05	5	55.914	398.456	94.752	0	409.585	0	0	0	0	0
7757	7/9/2021	9:15:01	56.2	122.545	122.56	122.56	6	53.982	385.326	89.265	0	395.576	0	0	0	0	0
7758	7/9/2021	9:00:01	53.35	121.715	121.725	121.725	6	52.995	378.248	79.261	0	386.475	0	0	0	0	0
7759	7/9/2021	8:45:00	52.4	121.35	121.365	121.365	5	52.628	374.35	82.847	0	383.421	0	0	0	0	0
7760	7/9/2021	8:30:00	50.45	121.78	121.795	121.795	5	48.695	349.177	75.964	0	357.359	0	0	0	0	0
7761	7/9/2021	8:15:01	48.55	121.46	121.47	121.47	5	48.722	348.405	73.103	0	356.014	0	0	0	0	0
7762	7/9/2021	8:00:01	49.3	121.705	121.72	121.72	5	51.259	364.989	78.517	0	373.373	0	0	0	0	0
7763	7/9/2021	7:45:00	50.1	121.495	121.51	121.51	4	49.959	357.617	71.37	0	364.695	0	0	0	0	0
7764	7/9/2021	7:30:00	48.3	122.55	122.565	122.565	4	48.149	347.036	68.01	0	353.665	0	0	0	0	0
7765	7/9/2021	7:15:00	47.9	121.85	121.86	121.86	4	46.833	335.084	63.935	0	341.147	0	0	0	0	0
7766	7/9/2021	7:00:00	50.45	121.425	121.435	121.435	3	43.814	313.557	56.592	0	318.643	0	0	0	0	0
7767	7/9/2021	6:45:00	41.25	121.635	121.645	121.645	2	41.18	296.185	53.053	0	300.92	0	0	0	0	0
7768	7/9/2021	6:30:00	38.4	122.14	122.155	122.155	2	39.962	288.506	46.65	0	292.286	0	0	0	0	0
7769	7/9/2021	6:15:01	42.1	121.1	121.115	121.115	1	41.073	296.075	45.863	0	299.631	0	0	0	0	0
7770	7/9/2021	6:00:00	44.45	121.505	121.51</												

Existing Circuit



Existing Circuit with 336
ACSR additions to new
proposed expansion and
pump load.



Input Report (English)

Utilities

Contribution From Name	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)		
				DutyUnits		X/R	R PU	X PU	
UTIL-001	CW101	In	69,000	3P:	900 MVA	9.86	Pos: 0.011	0.111	
				SLG:	300 MVA	7.00	Zero: 0.025	0.109	

Non-Motor Loads

Name	Phase	In/Out Service	Bus Name	L-L Volts	Rated size	Units	PF	Type
LOAD-001	ABC	In	BUS-001	12,470	297.71	kVA	0.92	Lag
LOAD-006	ABC	In	BUS - 008	12,470	70.05	kVA	0.92	Lag
LOAD-016	ABC	In	BUS - 020	12,470	201.02	kVA	0.92	Lag
LOAD-002	ABC	In	BUS-004	12,470	143.60	kVA	0.92	Lag
LOAD-003	ABC	In	BUS-005	12,470	280.19	kVA	0.92	Lag
LOAD-004	ABC	In	BUS - 006	12,470	246.34	kVA	0.92	Lag
LOAD-005	ABC	In	BUS - 007	12,470	72.97	kVA	0.92	Lag
LOAD-008	ABC	In	BUS - 010	12,470	26.27	kVA	0.92	Lag
LOAD-010	ABC	In	BUS - 013	12,470	134.01	kVA	0.92	Lag
LOAD-009	ABC	In	BUS - 012	12,470	213.20	kVA	0.92	Lag
LOAD-011	ABC	In	BUS - 014	12,470	560.41	kVA	0.92	Lag
LOAD-012	ABC	In	BUS - 015	12,470	36.55	kVA	0.92	Lag
LOAD-013	ABC	In	BUS - 016	12,470	201.02	kVA	0.92	Lag
LOAD-014	ABC	In	BUS - 017	12,470	158.38	kVA	0.92	Lag
LOAD-015	ABC	In	BUS - 018	12,470	146.19	kVA	0.92	Lag
LOAD-007	ABC	In	BUS - 009	12,470	671.30	kVA	0.92	Lag
LOAD-018	ABC	In	BUS - 021	12,470	254.62	kVA	0.92	Lag
LOAD-019	ABC	In	BUS - 022	12,470	254.62	kVA	0.92	Lag

2-Winding Transformers

Name 1 / 3Phase	In/Out	-----Primary & Secondary-----				Nominal kVA	Percent Z in %	
	Phases	Bus	Conn.	Volts	FLA		R	jX

Name 1 / 3Phase	In/Out	-----Primary & Secondary-----					Nominal kVA	Percent Z in %		
		Phases	Bus	Conn.	Volts	FLA		R	jX	
Bench Lake Regulator	In	ABC	BUS - 011	WG	12,470	162	3,500.0	Pos:	0.86	5.30
3Phase			BUS - 012	WG	12,470	162		Zero:	0.86	5.30
CW-20MW	In	ABC	CW101	D	69,000	167	12,000.0	Pos:	0.86	5.30
3Phase			BUS-001	WG	12,470	926		Zero:	0.80	5.00

Transmission Lines

Name LibModel	In/Out Service	From Bus To Bus	Miles Phases	Num Circuits	Per Unit (100 MVA Base)		Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu	R pu	jX pu	
URD-001 - 1/0	In	BUS - 006	0.55	1	0.0000	0.0000	Pos:	0.001	0.001
		BUS - 009	ABC		0.0000	0.0000	Zero:	0.0028	0.0008
URD-002 - 750	In	BUS - 007	0.27	1	0.0000	0.0000	Pos:	0.027	0.037
		BUS - 008	ABC		0.0000	0.0000	Zero:	0.0275	0.0371
URD-003 - 4/0	In	BUS - 008	0.19	1	0.0000	0.0000	Pos:	0.071	0.031
		BUS - 009	ABC		0.0000	0.0000	Zero:	0.0713	0.0306
URD-004 - 4/0	In	BUS - 009	0.24	1	0.0000	0.0000	Pos:	0.089	0.038
		BUS - 010	ABC		0.0000	0.0000	Zero:	0.0887	0.0380
URD-005 - 750	In	BUS - 019	0.59	1	0.0000	0.0001	Pos:	0.060	0.081
		BUS - 020	ABC		0.0000	0.0000	Zero:	0.0600	0.0809
XLN-0005 - #4	In	BUS-005	0.44	1	0.0000	0.0000	Pos:	0.136	0.189
		BUS - 006	ABC		0.0000	0.0000	Zero:	0.1358	0.1889
XLN-001 - 336	In	BUS-001	0.74	1	0.0000	0.0000	Pos:	0.146	0.306
		BUS-002	ABC		0.0000	0.0000	Zero:	0.1457	0.3061
XLN-002 - 336	In	BUS-002	2.11	1	0.0000	0.0000	Pos:	0.416	0.853
		BUS-003	ABC		0.0000	0.0000	Zero:	0.4162	0.8530
XLN-003 - 336	In	BUS-004	0.52	1	0.0000	0.0000	Pos:	0.103	0.216
		BUS-003	ABC		0.0000	0.0000	Zero:	0.1027	0.2158
XLN-004 - 366	In	BUS-005	0.53	1	0.0000	0.0000	Pos:	0.104	0.214
		BUS-004	ABC		0.0000	0.0000	Zero:	0.1044	0.2140
XLN-006 - 336	In	BUS-004	0.23	1	0.0000	0.0000	Pos:	0.046	0.095
		BUS - 007	ABC		0.0000	0.0000	Zero:	0.0462	0.0948
XLN-007 - 1/0	In	BUS - 010	0.27	1	0.0000	0.0000	Pos:	0.170	0.125
		BUS - 011	ABC		0.0000	0.0000	Zero:	0.1703	0.1254

Name LibModel	In/Out Service	From Bus To Bus	Miles Phases	Num Circuits	Per Unit (100 MVA Base)		Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu		R pu	jX pu
XLN-008 - 1/0	In	BUS - 012	0.50	1	0.0000	0.0000	Pos:	0.311	0.229
		BUS - 013	ABC		0.0000	0.0000	Zero:	0.3106	0.2287
XLN-009 - 1/0	In	BUS - 013	0.50	1	0.0000	0.0000	Pos:	0.311	0.229
		BUS - 014	ABC		0.0000	0.0000	Zero:	0.3106	0.2287
XLN-010 - #2	In	BUS - 015	0.47	1	0.0000	0.0000	Pos:	0.472	0.227
		BUS - 014	ABC		0.0000	0.0000	Zero:	0.4721	0.2268
XLN-011 - 336	In	BUS - 015	0.49	1	0.0000	0.0000	Pos:	0.097	0.199
		BUS - 016	ABC		0.0000	0.0000	Zero:	0.0970	0.1987
XLN-012 - #2	In	BUS - 016	0.42	1	0.0000	0.0000	Pos:	0.415	0.200
		BUS - 017	ABC		0.0000	0.0000	Zero:	0.4154	0.1996
XLN-013 - 336	In	BUS - 014	0.29	1	0.0000	0.0000	Pos:	0.058	0.118
		BUS - 018	ABC		0.0000	0.0000	Zero:	0.0578	0.1184
XLN-014 - 336	In	BUS - 018	0.48	1	0.0000	0.0000	Pos:	0.094	0.193
		BUS - 019	ABC		0.0000	0.0000	Zero:	0.0942	0.1931
XLN-015 - #2	In	BUS - 021	0.94	1	0.0000	0.0000	Pos:	0.937	0.450
		BUS - 018	ABC		0.0000	0.0000	Zero:	0.9366	0.4499
XLN-016 - #2	In	BUS - 021	0.93	1	0.0000	0.0000	Pos:	0.925	0.444
		BUS - 022	ABC		0.0000	0.0000	Zero:	0.9252	0.4444

Clifton Wilson Circuit 101 Impedance

From	To	LENGTH	Conductor Size	Z(+) Ohms/Mile		Z(0) Ohms/Mile		Z(+) pu Full Section		Z(0) pu Full Section		B	Bpu Total	1/2 Bpu Total
		Feet		R	X	R	X	R	X	R	X	mmho/Mil		
12.47 kV Lines														
XFMR/Bus 001	Bus 002	3,900	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.04854	0.10199	0.10265	0.25102	6.58600	0.00002	0.00001
Bus 002	Bus 003	11,160	366 OH	0.30620	0.62760	0.64830	1.62210	0.13872	0.28432	0.29370	0.73485	6.67600	0.00007	0.00003
Bus 003	Bus 004	2,750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03423	0.07191	0.07238	0.17700	6.58600	0.00002	0.00001
Bus 004	Bus 005	2,800	4/0 OH	0.48480	0.67450	0.95070	1.76950	0.05510	0.07667	0.10806	0.20113	6.35600	0.00002	0.00001
Bus 005	Bus 006	2,300	#2 OH	1.55030	0.74470	2.32340	2.35830	0.14474	0.06953	0.21693	0.22018	5.73400	0.00001	0.00001
Bus 006	Bus 009	2,900	1/0 UG	1.11400	0.27190	1.94300	0.34320	0.13114	0.03201	0.22873	0.04040	102.35000	0.00026	0.00013
Bus 004	Bus 007	1,240	336 OH	0.30620	0.62760	0.64830	1.62210	0.01541	0.03159	0.03263	0.08165	6.67600	0.00001	0.00000
Bus 007	Bus 008	1,420	750 UG	0.15890	0.21590	0.05280	0.15310	0.00916	0.01245	0.00304	0.00883	200.28000	0.00025	0.00013
Bus 008	Bus 009	1,025	4/0 UG	0.57020	0.24440	1.70000	0.50160	0.02373	0.01017	0.07073	0.02087	130.41000	0.00012	0.00006
Bus 009	Bus 010	1,276	4/0 UG	0.57020	0.24440	1.70000	0.50160	0.02953	0.01266	0.08806	0.02598	130.41000	0.00015	0.00007
Bus 010	Bench Lake Reg	1,435	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.05677	0.04180	0.09684	0.12044	5.96900	0.00001	0.00000
Bench Lake Reg	Bus 013	2,618	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.10356	0.07625	0.17668	0.21972	5.96900	0.00001	0.00001
Bus 013	Bus 014	2,618	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.10356	0.07625	0.17668	0.21972	5.96900	0.00001	0.00001
Bus 014	Bus 015	2,500	1/0 OH	0.97450	0.71750	1.66250	2.06750	0.09890	0.07281	0.16872	0.20982	5.96900	0.00001	0.00001
Bus 015	Bus 016	2,600	336 OH	0.30620	0.62760	0.64830	1.62210	0.03232	0.06624	0.06842	0.17120	6.67600	0.00002	0.00001
Bus 016	Bus 017	2,200	#2 OH	1.55030	0.74470	2.32340	2.35830	0.13845	0.06651	0.20749	0.21061	5.73400	0.00001	0.00001
Bus 014	Bus 018	1,549	336 OH	0.30620	0.62760	0.64830	1.62210	0.01925	0.03946	0.04076	0.10200	6.67600	0.00001	0.00000
Bus 018	Bus 019	2,526	336 OH	0.30620	0.62760	0.64830	1.62210	0.03140	0.06435	0.06648	0.16633	6.67600	0.00001	0.00001
Bus 019	Bus 020	3,100	750 UG	0.15890	0.21590	0.05280	0.15310	0.02000	0.02717	0.00664	0.01927	200.28000	0.00055	0.00027
Bus 018	Bus 021	4,960	#2 OH	1.55030	0.74470	2.32340	2.35830	0.31214	0.14994	0.46780	0.47483	5.73400	0.00003	0.00001
Bus 021	Bus 022	4,900	#2 OH	1.55030	0.74470	2.32340	2.35830	0.30837	0.14813	0.46215	0.46909	5.73400	0.00002	0.00001
New Flat Build														
Bus 017	Bus 023	1,750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.02178	0.04576	0.04606	0.11264	6.58600	0.00001	0.00001
Bus 023	Bus 024	2,600	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03236	0.06799	0.06843	0.16735	6.58600	0.00002	0.00001
Bus 024	Bus 025	9,230	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.11488	0.24137	0.24294	0.59409	6.58600	0.00005	0.00003
Bus 025	Bus 026	2,100	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.02614	0.05492	0.05527	0.13517	6.58600	0.00001	0.00001
Bus 026	Bus 027	850	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.01058	0.02223	0.02237	0.05471	6.58600	0.00000	0.00000
Bus 027	Bus 028	1,580	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.01966	0.04132	0.04159	0.10170	6.58600	0.00001	0.00000
Bus 028	Bus 029	3,060	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03808	0.08002	0.08054	0.19696	6.58600	0.00002	0.00001
Bus 029	Bus 030	2,700	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03360	0.07061	0.07107	0.17379	6.58600	0.00002	0.00001
Bus 030	Bus 031	750	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.00933	0.01961	0.01974	0.04827	6.58600	0.00000	0.00000
Bus 031	Bus 030	2,580	336 OH Flat	0.30660	0.64420	0.64840	1.58560	0.03211	0.06747	0.06791	0.16606	6.58600	0.00002	0.00001

	Hurricane Distribution C101 – 12.47kV Overhead Impedances – FLAT Construction						
Conductor size	Ampacity (Amps)	Z(+) Ohms/mile		Z(0) Ohms/mile		Xc(+) Mohm/mile	B _{pu} mmho/mile
		R	X	R	X		
#2 ACSR	180	1.5510	0.7621	2.3237	2.3221	0.1767	5.658
1/0 ACSR	230	0.9752	0.7346	1.6627	2.0312	0.1698	5.889
4/0 ACSR	340	0.4863	0.6913	0.9526	1.7335	0.1595	6.270
336 ACSR	530	0.3066	0.6442	0.6484	1.5856	0.1518	6.586

	Hurricane Distribution C101 – 12.47kV Overhead Impedances – Pole Top w/lower Cross Arm Construction						
Conductor size	Ampacity (Amps)	Z(+) Ohms/Mile		Z(0) Ohms/Mile		Xc (+) Mohm/Mile	B _{pu} mmho/Mile
		R	X	R	X		
#2 ACSR	180	1.5503	0.7447	2.3234	2.3583	0.1744	5.734
1/0 ACSR	230	0.9745	0.7175	1.6625	2.0675	0.1675	5.969
4/0 ACSR	340	0.4848	0.6745	0.9507	1.7695	0.1573	6.356
336 ACSR	530	0.3062	0.6276	0.6483	1.6221	0.1498	6.676

	Hurricane Distribution C101 – 12.47kV Underground Impedances – Three Conductors in One non- metallic Conduit						
Conductor size	Ampacity (Amps)	Z(+) Ohms/1000'		Z(0) Ohms/1000'		Xc (+) Mohm/mile	B _{pu} mmho/Mile'
		R	X	R	X		
1/0 Al.	175	0.211	.0515	0.3680	0.0650	.009770	102.35
4/0 Al.	231	0.1080	0.0463	0.322	0.095	.007668	130.41
750 Al. MCM	457	0.03010	0.04090	0.0100	0.029	.004993	200.28

	Hurricane Distribution C101 – 12.47kV Underground Impedances – Three Conductors in One non- metallic Conduit						
Conductor size	Ampacity (Amps)	Z(+) Ohms/Mile'		Z(0) Ohms/Mile'		Xc (+) Mohm/mile	B _{pu} mmho/Mile'
		R	X	R	X		
1/0 Al.	175	1.114	0.2719	1.943	0.3432	.009770	102.35
4/0 Al.	231	0.5702	0.2444	1.700	0.5016	.007668	130.41
750 Al. MCM	457	0.1589	0.2159	0.0528	0.1531	.004993	200.28

The Okonite Company,
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Impedance and Technical Data

From Master Catalog of Okonite Cables:
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Cable Catalog ID	Size	Phase Arrangement	(+/-) Sequence Impedance, Multi- Point Grounding [ohms/kft]	(+/-) Sequence Impedance, 1-Point Grounding [ohms/kft]	Zero Sequence Impedance, Ground and Shield Return [ohms/kft]	Zero Sequence Impedance, Shield Return Only [ohms/kft]	Zero Sequence Impedance, Ground Return Only [ohms/kft]
162-23-3081	4/0 AWG Al	Triplexed	0.114+j0.044	0.112+j0.044	0.385+j0.145	0.449+j0.025	0.167+j0.759
		Cradled	0.112+j0.041	0.110+j0.046	0.376+j0.142	0.440+j0.024	0.164+j0.738
		1 OD -Horizontal	0.113+j0.053	0.110+j0.048	0.376+j0.143	0.440+j0.024	0.164+j0.734
		7.5 in. -Horizontal	0.125+j0.091	0.110+j0.089	0.363+j0.150	0.440+j0.024	0.164+j0.653
		Rectangular	0.112+j0.049	0.110+j0.046	0.376+j0.142	0.440+j0.024	0.164+j0.739
Additional Information:	Capacitance = 80.5 [pF/ft]		DC Resistance @ 25C = 0.084 [ohms/kft]				
Calculation Parameters:	kV=15.00, Insulation=133%, Conductor Temp.=105C, Concentric Wires 11 x 14 AWG, OD=1.300in						

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Impedance and Technical Data

From Master Catalog of Okonite Cables:
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[Okonite Product Catalog Page](#)

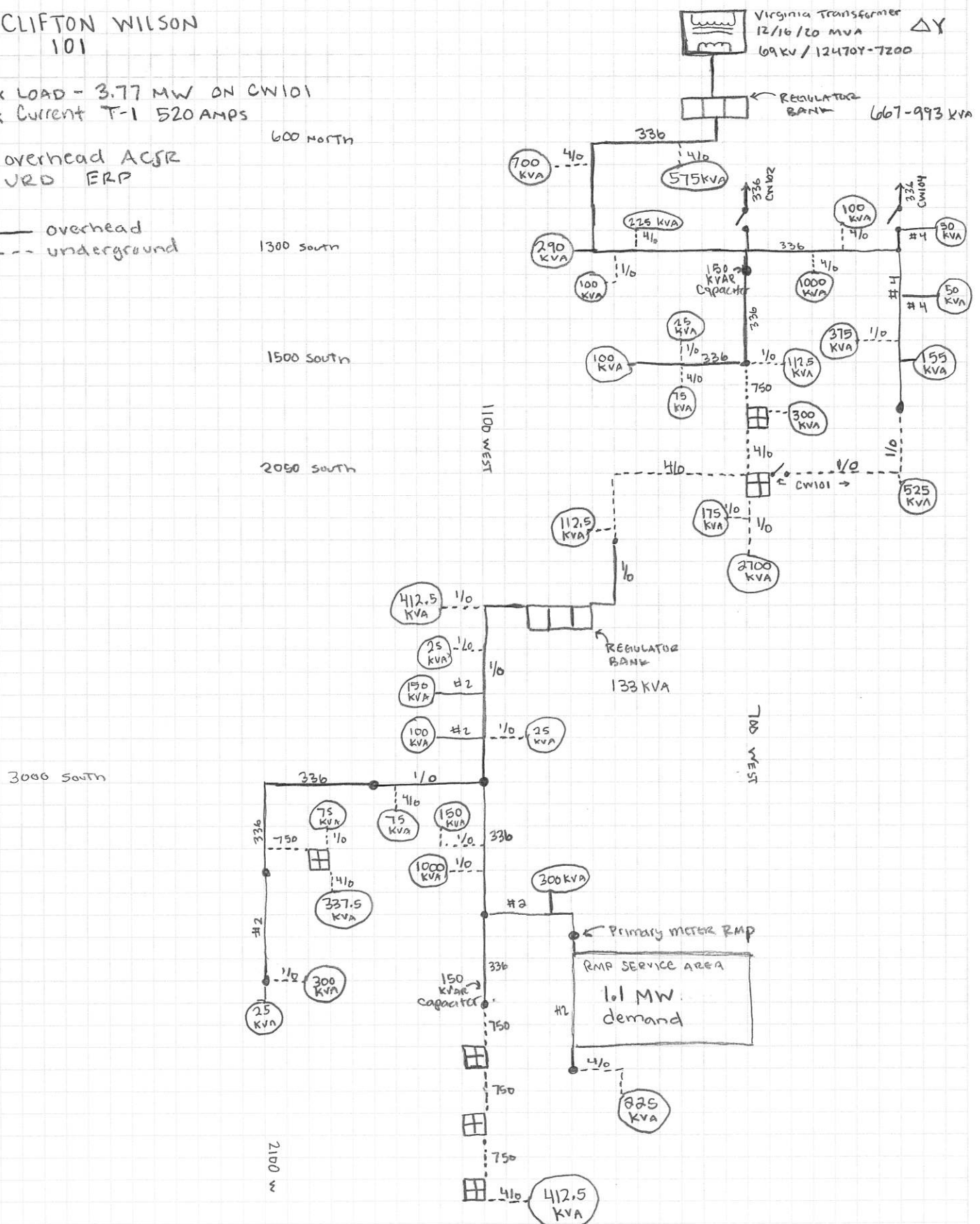
Cable Catalog ID	Size	Phase Arrangement	(+/-) Sequence Impedance, Multi- Point Grounding [ohms/kft]	(+/-) Sequence Impedance, 1-Point Grounding [ohms/kft]	Zero Sequence Impedance, Ground and Shield Return [ohms/kft]	Zero Sequence Impedance, Shield Return Only [ohms/kft]	Zero Sequence Impedance, Ground Return Only [ohms/kft]
162-23-3096	750 kcmil Al	Triplexed	0.036+j0.038	0.032+j0.039	0.127+j0.032	0.130+j0.019	0.087+j0.725
		Cradled	0.038+j0.035	0.032+j0.041	0.124+j0.031	0.127+j0.018	0.085+j0.704
		1 OD -Horizontal	0.041+j0.045	0.032+j0.043	0.124+j0.031	0.127+j0.018	0.085+j0.700
		7.5 in. -Horizontal	0.059+j0.061	0.032+j0.074	0.124+j0.032	0.127+j0.018	0.085+j0.638
		Rectangular	0.038+j0.042	0.032+j0.041	0.124+j0.031	0.127+j0.018	0.085+j0.705
Additional Information:	Capacitance = 136 [pF/ft]		DC Resistance @ 25C = 0.024 [ohms/kft]				
Calculation Parameters:	kV=15.00, Insulation=133%, Conductor Temp.=105C, Concentric Wires 15 x 10 AWG, OD=1.950in						

CLIFTON WILSON
101

MAX LOAD - 3.77 MW ON CW101
MAX Current T-1 520 AMPS

All overhead ACGR
All VRO ERP

—— overhead
- - - - underground



Addendum to Hurricane Circuit CW101 Analysis Report

In the "Hurricane Circuit CW101 Analysis Report" it was stated:

Load Flow Analysis

Circuit CW-101 was studied using real time regulator load data and through computer modeling using SKM software. Study shows that the existing circuit does not have overloading conditions but is voltage limited. It was determined that:

- 1. Areas of the existing circuit does experience voltage drop below Level of Service criteria under peak loading.*
- 2. Addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels.*

Potential short term solutions for some load addition would be:

- 1. Optimize voltage regulator bank position.*
- 2. Add another in line regulator bank.*
- 3. Add capacitor banks to maintain a high power factor during peak loading.*
- 4. If possible, move existing load to another circuit to allow new load.*

Additional work is needed to determine potential loading with equipment addition and or load transfer; noting the limitations of the existing Bench Lake regulators (1.9 MVA margin) and line conductors.

Subsequent to report issuance, ICPE was requested to study potential short term solutions to maximize load addition to the southern end of the circuit. This addendum provides finding of the additional study.

As a part of the study ICPE was directed to study transferring approximately 1.5 MW from circuit CW101 to other circuits. Transferred load include loads along 600N, loads east of 700 West, and some loads off 2500 South and 700 west.

Studies included:

1. Determining possible load addition at the southern end of the circuit with only the 1.5 MW load transfers.
2. Determining possible load addition with load transfer and relocation of the Bench Lake regulators in the Northward direction.
3. Determine possible load addition with a new regulator bank and with the Bench Lake regulators.
4. Study optimizing regulator bank(s) locations.
5. Studying the effect of capacitor banks added for power factor correction.

For the studies voltage was allowed to drop to 0.97 pu at circuit end points. Studies indicate that maximum power transfer is possible with:

1. The addition of a regulator bank in the vicinity of 1300 South and 950 West (with no load between the substation and regulator bank).
2. Add a second regulator bank southward (approx. ½ mile) of the existing Bench Lake regulator bank. (The existing Bench Lake regulators would need to be removed and with a larger bank installed in the southward location)
3. Install capacitor banks as needed and in optimal locations to main a high power factor on the circuit.
4. Maintain a balanced circuit.

With improvements as indicated loading on circuit CW101 can go to approximately 4.8 MW with approximately 4.2 MW's flowing southward of 2050 south. The 4.2 MW flow represents 2.3 MW over existing loads south of the Bench Lake regulators. Under indicated loading voltage at the unregulated (source side) bus of the 1300 South regulator bank falls to 0.95 pu.

Some incremental load addition (600 kW) may be obtained by reconductoring the 1/0 circuit section between approximately 2100 South and 3000 south and with the regulator bank bench lake regulator bank upsized and located southward 1mile, verses 0.5 mile, from the existing site.

Removal of the existing Bench Lake regulator bank with a new down line replacement bank should be delayed until needed allowing to monitor load growth patterns.

It is noted that actual allowable load addition will be influenced by actual grow patterns.

For review select load flow studies and results are tabulated and results for various configurations.

All cases with approx 1.5MVA moved to other circuits from 2021 Loading

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results ---															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps		
1	2021 loading with loads relocated to other circuits and aprox 500KW added below BL reg's Capacitor Addition: none	@CW MVA 2.637; MW 2.157; MVAR .788 @ BL REGS MVA 2.277; MW 2.161; MVAR .717.3 CW P.F: .95	Volt: 12,579 Vpu: 1.008	Volt: 12,243 Vpu: 0.982	Volt: 12,186 Vpu: 0.977	Volt: 12,099 Vpu: 0.97	Volt: 12,675 Vpu: 1.016	Volt: 12,499 Vpu: 1.002	Volt: 12,426 Vpu: 0.997	Volt: 12,488 Vpu: 1.001	Volt: 12,486 Vpu: 1.001	Volt: 12,322 Vpu: 0.981	Volt: 12,390 Vpu: 0.994		

All cases with approx 1.5MVA moved to other circuits from 2021 loading

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results ---- with BL Regulators Removed and NEW Regulator at approx. 1300 So and 950 West															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	1300 So 950West non Reg bus	1300 So 950 West Reg bus	Bus-004 (1300 South)	Bus-009 (2050 South)	-	Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
4	No BL Regs -- Regs at 1300 So and pump load at end of circuit -- CAP Addition: none	@CW MVA 2.820; MW 2.674; MVAR .896 CW PF: .95	Volt: 12,570 Vpu: 1.008	Volt: 12,260 Vpu: 0.983	Volt: 12,668 Vpu: 1.016	Volt: 12,617 Vpu: 1.012	Volt: 12,559 Vpu: 1.007		Volt: 12,470 Vpu: 1	Volt: 12,277 Vpu: 0.985	Volt: 12,189 Vpu: 0.977	Volt: 12,265 Vpu: 0.984	Volt: 12,263 Vpu: 0.983	Volt: 12,096 Vpu: 0.97	Volt: 12,153 Vpu: 0.975
4A	No BL Regs -- Regs at 1300 So and pump load at end of circuit removed. CAP Addition: 450 kvar	@CW MVA 3.06; MW 3.025; MVAR .460 CW PF: .99	Volt: 12,577 Vpu: 1.009	Volt:12,307 Vpu: 0.987	Volt: 12,651 Vpu: 1.015	Volt: 12,608 Vpu: 1.011	Volt: 12,553 Vpu: 1.006		Volt: 12,464 Vpu: 0.995	Volt: 12,272 Vpu: 0.984	Volt: 12,172 Vpu: 0.976	Volt: 12,263 Vpu: 0.9864	Volt: 12,262 Vpu: 0.983	Volt: 12,097 Vpu: 0.97	Volt: - NA Vpu: - NA

All cases with approx 1.5MVA moved to other circuits from 2021 loading

Hurricane City - Clifton Wilson CW101 Circuit Load Flow Results -- With BL Regulators and NEW Regulators at 1300 south and 950 west															
Study No.	Case Description	Power Flow	CW-Regs (600 North)	1300 So 950West non Reg bus	1300 So 950 West Reg bus	Bus-004 (1300 South)	Bus-009 (2050 South)	Bench Lake Non Reg Bus-011	Bench Lake Reg Bus-012	Bus-014 (3000 South)	Bus-017 (2100 West)	Bus-018 (1100 West) RMP TAP	Bus-020 (3800 S)	Bus-022 (4370 S) So. end skypark	Bus-033 -- New Development pumps
7	BL Regs & Regs at 1300 So and pump load at end of circuit. CAP Addition: 600 kvar	@CW MVA 4.259; MW 4.05; MVAR 1.319 @ BL REGS MVA 3.676 ; MW 3.545 ; MVAR .973 CW PF: .95	Volt: 12,562 Vpu: 1.007	Volt: 12,100 Vpu: 0.97	Volt: 12,683 Vpu: 1.017	Volt: 12,612 Vpu: 1.014	Volt: 12,525 Vpu: 1.004	Volt: 12,390 Vpu: 0.994	Volt: 12,662 Vpu: 1.015	Volt: 12,378 Vpu: 0.993	Volt: 12,177 Vpu: 0.977	Volt: 12,369 Vpu: 0.992	Volt: 12,367 Vpu: 0.992	Volt: 12,201 Vpu: 0.979	Volt: 12,096 Vpu: 0.97
8	BL Regs & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: none	@CW MVA 4.737; MW 4.165; MVAR 2.255 @ BL REGS MVA 3.963; MW 3.615; MVAR 1.625 CW PF: .95	Volt: 12,589 Vpu: 1.009	Volt: 11,984 Vpu: 0.961	Volt: 12,679 Vpu: 1.016	Volt: 12,585 Vpu: 1.009	Volt: 12,483 Vpu: 1.001	Volt: 12,331 Vpu: 0.989	Volt: 12,668 Vpu: 1.016	Volt: 12,344 Vpu: 0.989	Volt: 12,125 Vpu: 0.972	Volt: 12,331 Vpu: 0.989	Volt: 12,329 Vpu: 0.988	Volt: 12,163 Vpu: 0.975	Volt: - NA Vpu: - NA
11	BL Regs Relocated 1/2 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 750 kvar	@CW MVA 5.24 ; MW 4.860 ; MVAR 1.960 @ BL REGS 4.209 ; MW 3.993; MVAR 1.33 CW PF: .93	Volt: 12,563 Vpu: 1.007	Volt: 11,957 Vpu: 0.959	Volt: 12,665 Vpu: 1.016	Volt: 12,574 Vpu: 1.008	Volt: 12,467 Vpu: 0.999	Volt: 12,105 Vpu: 0.986	Volt: 12,631 Vpu: 1.017	Volt: 12,513 Vpu: 1.003	Volt: 12,228 Vpu: 0.981	Volt: 12,505 Vpu: 1.002	Volt: 12,502 Vpu: 1.002	Volt: 12,339 Vpu: 0.989	Volt: - NA Vpu: - NA
12	BL Regs Relocated 1/2 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 1.05 mvar	@CW MVA 4.871 ; MW 4.605; MVAR 1.432 @ BL REGS MVA 3.942; MW 3.788; MVAR 1.091 CW PF: .95	Volt: 12,527 Vpu: 1.005	Volt: 12,013 Vpu: 0.963	Volt: 12,617 Vpu: 1.018	Volt: 12,540 Vpu: 1.006	Volt: 12,440 Vpu: 0.9976	Volt: 12,098 Vpu: 0.97	Volt: 12,631 Vpu: 1.013	Volt: 12,470 Vpu: 1	Volt: 12,211 Vpu: 0.979	Volt: 12,462 Vpu: 0.994	Volt: 12,460 Vpu: 0.999	Volt: 12,296 Vpu: 0.986	Volt: - NA Vpu: - NA
10	BL Regs Relocated 1 mile South & Regs at 1300 So and pump load at end of circuit Removed. CAP Addition: 750 kvar	@CW MVA 4.017; MW 3.867 ; MVAR 1.088 @ BL REGS MVA 3.066; MW 3.002; MVAR .623 CW PF: .96	Volt: 12,599 Vpu: 1.01	Volt: 12,185 Vpu: 0.977	Volt: 12,653 Vpu: 1.015	Volt: 12,588 Vpu: 1.009	Volt: 12,508 Vpu: 1.003	Volt: 12,097 Vpu: 0.97	Volt: - Vpu: -	Volt: 12,648 Vpu: 1.014	Volt: 12,478 Vpu: 1.006	Volt: 12,640 Vpu: 1.013	Volt: 12,638 Vpu: 1.014	Volt: 12,476 Vpu: 1.005	Volt: - NA Vpu: - NA
13	BL Regs Relocated 1 mile South; Regs at 1300 So; pump load at end of circuit removed. 1/0 conductor replaced with 336 CAP Addition: 1.65 mvar	@CW MVA 5.798; MW 5.522 ; MVAR 1.767 @ BL REGS MVA 4.719; MW 4.484; MVAR 1.468 CW PF: .95	Volt: 12,478 Vpu: 1.00	Volt: 11,816 Vpu: 0.947	Volt: 12,603 Vpu: 1.010	Volt: 12,506 Vpu: 1.003	Volt: 12,383 Vpu: 0.993	Volt: 12,091 Vpu: 0.97	Volt: - Vpu: -	Volt: 12,652 Vpu: 1.014	Volt: 12,276 Vpu: 0.984	Volt: 12,643 Vpu: 1.014	Volt: 12,639 Vpu: 1.014	Volt: 12,479 Vpu: 1.00	Volt: - NA Vpu: - NA

Agenda Date:	01/19/2023
Application Number:	2023-PP-03
Type of Application:	Preliminary Plat Application
Action Type:	Administrative
Applicant:	Blue Mountains Property Enterprises LLC &
Agent:	Bush & Gudgell, Inc
Request:	Approval of a Preliminary Plat and Site Plan
Location:	2600 W 4200 S
Zoning:	RM-2
General Plan Map:	Planned Community and Rural Residential

Planning Commission Recommendation

The Planning Commission recommends denying the proposed preliminary finding that the plat does not comply with Hurricane City Code 10-37-4 “Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development.” And 9-6-3, “Land shall be developed only where public facilities are in place or will be timely provided to serve proposed development at a level of service which meets the City's adopted level of service standards.”

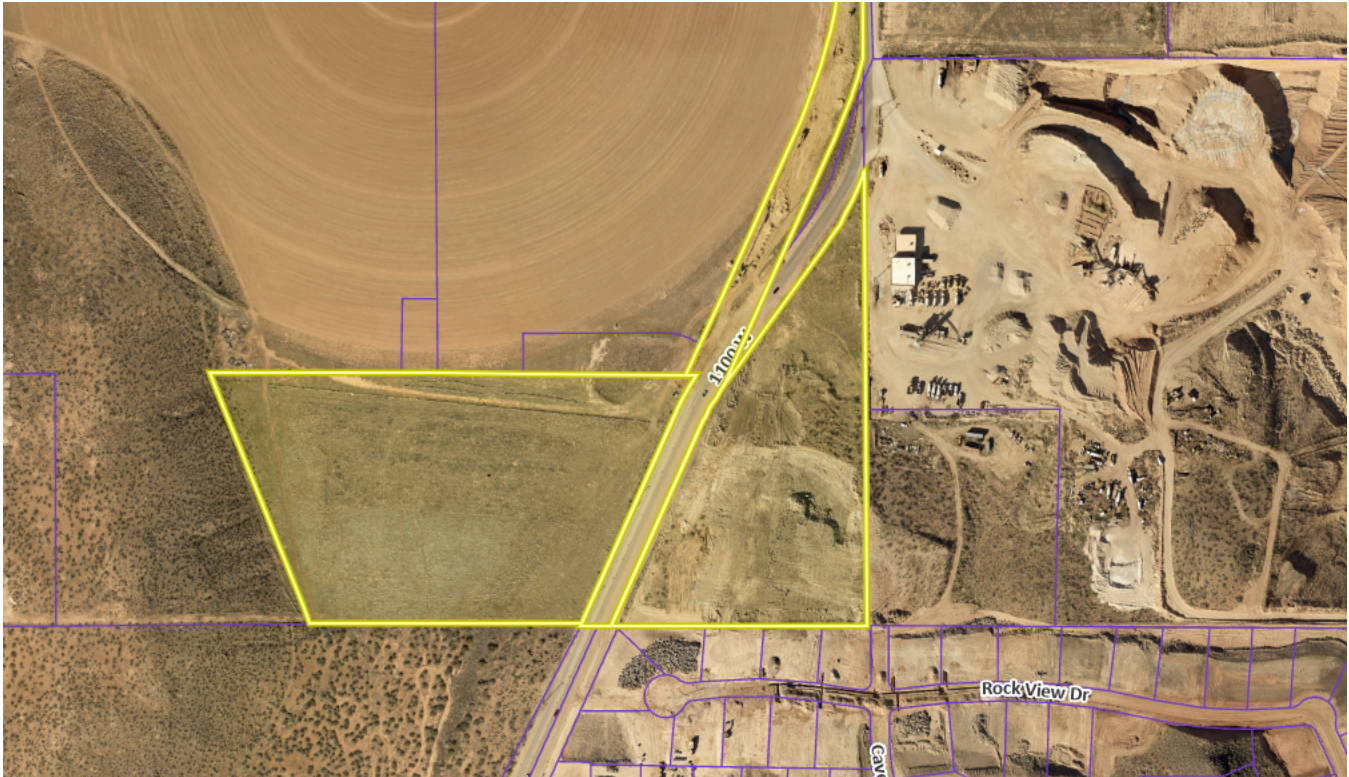
The Planning Commission noted that the issue of adequate facilities was the sole reason for their recommendation.

Discussion:

The applicant has filed a preliminary plat for Bench Lake Townhomes. This development has some unique history. The following is a timeline of the application.

- The area received an approved zone change to RM-2 with a development agreement signed in 2008. An important note from that agreement states:

- *Owners acknowledge and agree that no utilities (sewer, water, power, etc.) have been constructed or installed into or for the property described in Exhibit A, and that said utilities must be constructed and installed into or for said property before further development of said property is permitted.*
- The owner applied for a preliminary plat in June of 2021, approved by the City Council on Aug, 8, 2021. The plat had 172 units on the property. The requirement for a sensitive land plan was waived because many of the slopes were man-made.
- The applicant started on construction drawings, but nothing was ever approved.
- The applicant filed for a Zone Change Amendment for the property in the spring of 2022 from RM-2 to RM-2 PDO. This went back and forth a little because the applicant chose to ask for a variation of the side setbacks and building separation to allow a 7 ft separation and up to 200 units (the site plan showed 176). The Planning Commission gave a positive recommendation, and the application was approved by the City Council on April 21, 2022.
 - At the time power stated that there was limited capacity in the area, but believed it was not “big problem”.
 - Planning Staff noted within the staff report, “An updated preliminary plat will need to be submitted”. This was because the standards for the project changed, and the applicant stated they wanted to increase the number of units to the 200 cap set by the City Council.
- During this time, Hurricane Power was working with Intermountain Consumer Professional Engineer to review the power system’s capacity in this area. It was concluded by Hurricane Power that the study showed capacity was greatly limited in the area. This information was brought to the City Council. Based on this new data, the City Council denied two preliminary plats applications (Southern Dunes and Desert Sky) who both would access off of the southern circuit.
- The applicant later submitted an updated construction drawing to the JUC in the fall of 2022.
- Latter, staff informed the applicant and their agent that they needed to submit a new preliminary plat based on the new zoning standard, increased units, and layout update. At this time, the Planning staff informed the applicant and their agent about the recently denied preliminary plats, and it was likely that the Bench Lake Townhomes Preliminary Plat would be denied.
- The applicant has now filed a preliminary plat and seeking approval by the City Council.



JUC Comments

Due to the holidays, only a preliminary review was able to be done in time to get this report delivered. Planning staff will update this report if new information arises before the meeting. Every department has had a chance to provide redlines back to the applicant since the applicant has filed construction drawings to the JUC a few months ago.

The following items will need to be addressed:

1. **Public Works:**
2. **Power:** “At this time, the City’s power grid is inadequate to support all of the development planned in the area south of 1300 South Street. Although the Power Department has plans to expand and enhance its system to supply adequate power to this area, those plans are subject to funding limitations, the City’s acquisition of easements and rights-of-way, the availability of materials, and other limitations. Therefore, the Power Department cannot presently guarantee that it can provide power to all of the development planned in this area, which includes this proposed development. The applicant is put on notice that pursuant to HCC 9-6-3, the Power Department cannot sign off on construction drawings or other approvals until such time as public facilities exist to supply power to the property at adopted levels of service.”
3. **Sewer:** Sewer is in 1100 W but elevations may not work for connection here. Provide off-site connections as needed.
4. **Street:** Substantial improvements to 1100 W needed.
5. **Water:** A water model has been done, and a will-serve letter has been issued. Each unit will need to have sprinklers because of pressure. Long-term concerns about water in the area.
6. **Engineering:** Engineering has provided some redlines that will need to be address. Those redlines have been attached.

7. **Fire:** Hydrant spacing not shown. Access is okay.
8. **Cable/Phone:** The utility easement needs to be updated to a Public Utility Easement to allow all utilities. Ensure 10' PUE. Fiber in 1100 W needs to be realigned.
9. **Gas:** No comments.
10. **Water Conservancy:** No comments

Staff Comments: Preliminary Site Plan and Plat

1. Density: RM-2 zoning would allow up to 220 units and is proposing 196 units. This is an increase from the preliminary site plan, but the City Council approved the site to have up to 200 units.
2. The applicant was proposing a realignment of 1100 W that complies with Hurricane City Plans. 1100 W is a dedicated city road and thus, a roadway abandonment will be needed to complete this change. The city finds this realignment generally acceptable as long as the applicant agrees to all necessary improvements on 1100 W. However, the applicant provided an updated preliminary plat that no longer proposes making those changes, which decreased their development from 200 to 196. Staff believes that the realignment is the better option and deserves further consideration.
3. In the eastern section, the application provides a single eastern connection. This is needed for connectivity to the eastern parcel and allows Cave Drive to loop into this project, which allows for greater transportation connectivity and allows the developments in the area to meet fire code as shown below.



4. Setbacks. The City approved different side setbacks and building separation, allowing for 3.5 between buildings. The applicant has placed other setbacks on the plat that exceeds PDO front setbacks standards and may be reduced.

5. The applicant has submitted construction drawings for this project based on the preliminary plat approval given in 2021 and the updated site plan approved in the spring of 2022. Those plans reviews have been placed on hold until the updated plat is approved.
6. There are some double-frontage lots. Lots 98-100. Double frontage lots are approved for corner lots.
7. The preliminary plat shows some steep slopes on the property. The sensitive lands application requirement was waived with the preliminary plat in 2021 because many of the steep slopes had been artificially created because of grading that has taken place on the property.
8. There is no open space or any other amenities provided on the preliminary plat. The applicant received approval for the PDO zone change and site plan prior to the new requirements for multifamily development.
9. The applicant needs to submit a water acknowledgment letter with a preliminary plat.
10. All park strips will need to be landscaped and have the proper improvements.
11. The Planning Department has received a will-serve letter from Ash Creek Special Service District, but not from Hurricane City Water.
12. A note indicating whether or not the property is in a tortoise take area has not been provided
13. Utilities:
 - a. Hurricane City Code 10-37-4 states:
 - i. *Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development. The City may require an analysis to be completed to determine whether adequate public facilities are available to service a development and whether such development will change existing levels of service or will create a demand which exceeds acceptable levels of service for roadways, intersections, bridges, storm drainage facilities, water lines, water pressure, sewer lines, fire and emergency response times, and other similar public services. The City may disapprove a proposed development if demand for public services exceeds accepted levels of service. No subsequent approval of such development shall be given until either the developer or the City installs improvements calculated to raise service levels to the standard adopted by the City.*
 - b. Hurricane City Code 9-6-3 states:
 - i. *A. Land shall be developed only where public facilities are in place or will be timely provided to serve proposed development at a level of service which meets the City's adopted level of service standards. For each proposed development the City may require an analysis to be completed to determine whether adequate public facilities are available to service the development and whether the development will change existing levels of service or will create a demand which exceeds acceptable levels of service for any public facility, including roadways, intersections, bridges, storm drainage facilities, water storage, water lines, water pressure, sewer lines, fire and emergency response times, and other similar public services.*
 - ii. *B. A proposed development shall not be approved if demand for a public facility will exceed adopted level of service standards unless public facility*

improvements, reasonably calculated to raise service levels to adopted level of service standards, will be available to serve the development.

- c. The adequacy of public facilities to support the proposed development is in question. The Power Department has stated that the City's power grid is inadequate to support all of the development planned in this area. Hurricane water has also expressed concerns about the adequacy of water infrastructure in the area to support this development, citing the need for an additional tank, water lines, and looping. See JUC comments regarding the limited capacity to supply power and water to this area. Whether this proposed additional development will be able to meet the Fire Code is uncertain at this point. "A proposed development **shall not be approved** if demand for public facility will exceed adopted level of service standards unless public facility improvements, reasonably calculated to raise service levels to adopted level of service standards, will be available to serve the development." Hurricane City Code 9-6-3(B) (emphasis added). "The City may require an analysis to be completed to determine whether adequate public facilities are available to service a development and whether such development will change existing levels of service or will create a demand which exceeds acceptable levels of service for roadways, intersections, bridges, storm drainage facilities, water lines, water pressure, sewer lines, fire and emergency response times, and other similar public services." HCC 10-37-4. "The City may disapprove a proposed development if demand for public services exceeds accepted levels of service." HCC 10-37-4. The Planning Commission and City Council should carefully consider whether the infrastructure and public facilities necessary to support this proposed development satisfies the requirements of the Code as explained in this section. If not enough information is available for the Commission or Council to make a finding regarding the adequacy of public facilities, then more information or analysis should be requested from the applicant or City staff, as applicable, before acting on the application.
- d. The City has denied two preliminary plats proposed to be located on the same power circuit for this area. City staff recommends denying all preliminary plat and construction drawings that will increase the demand on this circuit until the construction of the new substation and extension of additional power services can be provided.
- e. Staff also has an increasing concern about water availability in the area as well, and full water models will need to be provided to justify each subdivision.

LEGAL COMMENTS ON THE APPLICATION

Applying the Ordinances:

The approval or denial of a preliminary plat application is an administrative decision in which the City's ordinances are applied to the application, so the City's ordinances should dictate whether a preliminary plat application is approved or denied. There are two City ordinances that are relevant to this application: Hurricane City Code ("HCC") sections 9-6-3 and 10-37-4.

HCC section 10-37-4 states that: "Land shall be developed only where existing infrastructure is in place or will be timely provided to service proposed development. ... The City may disapprove a proposed development if demand for public services exceeds accepted levels of service. No subsequent approval of such development shall be given until either the developer or the City installs improvements calculated to raise service levels to the standard adopted by the City."

HCC section 9-6-3 states that: "Land shall be developed only where public facilities are in place or will be timely provided to serve proposed development at a level of service which meets the City's adopted level of service standards. ... A proposed development shall not be approved if demand for a public facility will exceed adopted level of service standards unless public facility improvements, reasonably calculated to raise service levels to adopted level of service standards, will be available to serve the development.

When considering an application for development in an area where City staff have found that public facilities are inadequate to serve the development at the established level of service, the question for the Planning Commission and City Council is whether the necessary public facilities "will be timely provided" to serve the development at adopted levels of service. If the City Council cannot find (determine) that the necessary public facilities "will be timely provided" to provide for the new development, then the City's ordinances require that the development be denied.

Basis and Support for Decision:

An approval or denial of a preliminary plat application needs to be supported by evidence in the record. City staff's recommendation of denial is based on the following evidence: (1) a report prepared by Intermountain Consumer Professional Engineers, Inc., together with the Power Department's analysis, concluding that "addition of load without improvements is not recommended as voltage will be further reduced and existing customers will experience substandard voltage levels"; (2) a Limited Distribution Capacity analysis for water service levels in the area prepared by Alpha Engineering; and (3) the uncertainty and unknown timeline as to when power and water infrastructure will be installed to raise service levels to acceptable standards. If the Planning Commission or City Council finds (determines) that the necessary public facilities "will be timely provided" to address the inadequate facilities, that finding needs to be supported by evidence in the record.

Understanding the Process:

After a preliminary plat is approved by the City Council, the development typically never returns to the Council for further approval. After preliminary plat approval, the next phase is the preparation of detailed construction drawings, which are reviewed and approved by members of the city's Joint Utility Committee. After construction drawings are approved and a final plat application is filed with staff, the developer is permitted to move forward with actual construction of the development. The recording of a final plat is the final step and is approved by the City Engineer, the Mayor, and the City Attorney. If a development that lacks adequate public facilities is approved at the preliminary plat stage, then it leaves members of staff to determine whether construction drawings should be approved to allow the development to begin construction. When reviewing construction drawings, members of staff are also constrained by the requirements of HCC sections 9-6-3 and 10-37-4. Therefore, it would be ideal if the City Council and staff were aligned on when development with inadequate public facilities should be permitted to proceed. If a proposed development cannot be approved pursuant to City ordinances, the City Council would be the preferred body to make that determination—instead of letting it fall to individual utility departments and staff members.

Policy Behind the Ordinances:

The adequacy of public facilities is a factor at every phase of development, beginning with zone change applications. A key policy driving this approach is to avoid a situation where a developer believes that a development is entitled to proceed, but the City is unable to provide the necessary services to the development without jeopardizing service to existing residents. Also, developers invest additional funds into a project at each phase of development. Therefore, the further along that the City allows development to occur without adequate public facilities, the larger the potential legal claim against the City if the developer ultimately cannot connect to the City's utility systems for lack of capacity. If the City Council determines that the necessary public facilities are not currently available but "will be timely provided" to serve the development, the City Council should only approve the preliminary plat on the condition that the owner execute a development agreement limiting the developer's rights and outlining the procedure for handling the project, all in a form approved by the City Attorney.

Recommendation: Staff recommends City Council review this application based on standards with Hurricane City Code. Staff would recommend denying this application based on the following findings

- The area has inadequate facilities to support the subdivision, namely power. These requirements are located in Hurricane City Code 10-37-4 and 9-6-3 and are referenced within this report.
- The applicant will need to work with staff about alignment of 1100 W and some other design issues mentioned within this report and redlines provided by engineering.



STAFF COMMENTS

Consideration and possible approval for the Planning Director to **issue a grading permit for Cordero Phase 2**-Brant Tuttle

Discussion:

Cordero Phase 2 has an approved preliminary plat but the City staff have been unable to sign the construction drawings for the development lack of adequate power capacity. The developers met last Thursday, Jan. 19th with the Power Department, City Attorney, and Mayor Billings. The Power Department explained their efforts in updating the power in the area and the developers understand the City's power concerns. The developers are requesting a grading permit so they can begin earthwork while they await power capacity to be increased in the area. The City Council must authorize the Zoning Administrator to issue a grading permit. Some staff concerns with issuing a grading permit are that: (1) it may create an expectation as to the timeline of when power capacity will be increased, which timeline is not certain at this point and (2) grading of the native soils and vegetation is known to create a weed and dust problem, especially if the development is unable to move forward past the grading stage in the near future due to lack of public facilities or the developer's choice or lack of financing.

Findings:

Recommendation:

Attachments:

None

Discussion

The Mayor has asked the Planning Commission to consider an update to the Water Conservation section of the City Landscape Code. This allows Hurricane residents to qualify for grants and reimbursement programs by the state and the Washington County Water Conservation District. See the links below:

<https://conservewater.utah.gov/grass-removal-rebates/>

<https://www.wcwcd.org/conservation/rebates/water-efficient-landscape-rebate/>

To qualify, the City needs to update the standard on how much percentage of lawn is allowed in residential areas, namely up to 8% or 2,500 sq. ft. max.

Staff has also inserted a couple of other sections for the Planning Commission to consider regarding restricting new golf courses, water parks, lakes and ponds, and car washes.

Staff has also removed a section of landscape code about building frontage landscaping that staff was directed to no longer enforce a few years ago.



**AN ORDINANCE OF THE CITY COUNCIL OF HURRICANE, UTAH ADDING 10-32
WATER CONSERVATION TO THE HURRICANE CITY CODE.**

WHEREAS, water is a limited resource within Hurricane City and Southern Utah; and

WHEREAS, the City has been given a stewardship over these resources; and

WHEREAS, City has previously adopted Ordinance No. 2020-13, codified in Section 8-1-10, imposing time of day water use restrictions and other water conservation measures;

WHEREAS, the City has determined that it is in the best interest of the health, safety, and welfare of the City's residents to adopt an ordinance further regulating certain landscaping to better conserve water; and

WHEREAS, the City wants to protect the rights of property owners within the City; and

WHEREAS, the City wants to maintain a high quality of life for those who live, work, and play within the City by allowing property owners to choose to take water conservation steps that meet their needs; and

BE IT HEREBY ORDAINED by the City Council of Hurricane, Utah that Section 10-32 of the Hurricane City Code to read as follows:

NOW THEREFORE, BIT IT ORDAINED BY THE HURRICANE CITY COUNCIL OF HURRICANE CITY, UTAH THAT:

1. All ordinances, resolutions, and policies of the City, or parts thereof, inconsistent herewith, are hereby repealed, but only to the extent of such inconsistency. This repealer shall not be construed as reviving any law, order, resolution, or ordinance, or part thereof.
2. Should any provision, clause, or paragraph of this ordinance or the application thereof to any person or circumstance be declared by a court of competent jurisdiction to be invalid, in whole or in part, such invalidity shall not affect the other provisions or applications of this ordinance or the Hurricane City Municipal Code to which these amendments apply. The valid part of any provision, clause, or paragraph of this ordinance shall be given independence from the invalid provisions or applications, and to this end the parts, sections, and subsections of this ordinance, together with the regulations contained therein, are hereby declared to be severable.

PASSED AND APPROVED this ____ day, February 2023.

Hurricane City

Nanette Billings, Mayor

Attest:

Cindy Beteag, City Recorder

The foregoing Ordinance was presented at a regular meeting of the Hurricane City Council held at the Hurricane City Office Building on the ____ day of February 2023. Whereupon a motion to adopt and approve said Resolution was made by _____ and seconded by _____. A roll call vote was then taken with the following results:

	Yea	Nay	Abstain	Absent
Joseph Prete	_____	_____	_____	_____
David Sanders	_____	_____	_____	_____
David Hirschi	_____	_____	_____	_____
Kevin Thomas	_____	_____	_____	_____
Doug Heideman	_____	_____	_____	_____

Cindy Beteag, Recorder

CHAPTER 32. LANDSCAPING AND SCREENING

Sec. 10-32-1. Purpose.

The purpose of this chapter is to promote public health, safety and welfare by establishing minimum standards for the preservation, installation and maintenance of landscaping and buffering. This chapter is intended to achieve the following objectives:

- A. To improve the aesthetic appearance of development by establishing minimum landscaping standards;
- B. To promote water conservation by encouraging the use of drought tolerant landscape material; and
- C. To maintain and improve environmental conditions by providing groundwater recharge areas and minimizing stormwater runoff, noise and glare.

(Ord. 2004-15, 6-17-2004)

Sec. 10-32-2 Definitions

The following definitions shall apply to this ordinance:

Active Recreation Area: An area that is dedicated to active play or other recreation purposes where grass may be used as the recreation surface. Examples of active recreation areas include sports fields, play areas, and other similar uses designated for outdoor activity.

Grass: A surface layer of earth containing irrigated grass ~~with its roots~~.

Hurricane Canal Company: A Utah non-profit corporation identified as the Hurricane Canal Company that provides secondary water to shareholders within the Hurricane City area.

Irrigation Plan: A plan that shows the components of ~~the~~an irrigation system, ~~including with~~ water meter size, backflow prevention, precipitation rates, flow rate, ~~and~~ operating pressure for each irrigation circuit, and identification of all irrigation equipment.

Landscape Area: Area within a lot, parcel, or development that is not the home footprint, driveway, sidewalk or patio. ~~Areas utilized for agriculture are not Landscaped Areas.~~

Landscape Plan or Planting Plan: A plan that clearly and accurately identifies the location and species of new and existing trees, shrubs, ground covers, and other plants on a site, and any other landscape element, and includes an irrigation plan.

Park Strip: A typically narrow landscaped area located between the back-of-~~bc~~urb and sidewalk.

Secondary Irrigation Water: Non-potable water that is untreated and used for irrigation of outdoor landscaping.

Secondary Irrigation System: A water system designed to deliver Secondary Irrigation Water to property for the purpose of irrigation of outdoor landscaping.

Water Park: ~~An outdoor~~ water play area designed for commercial ~~uses~~ or resort developments with enhanced water features, including but not limited to pools, slides, splash pads, spray grounds, lazy rivers, or similar recreational water related activities. Water Parks ~~are distinguished from pools or splash pads in that they contain multiple~~ water related features and are larger in impact.

Sec. 10-32-23. Scope.

Unless exempted as provided in subsection B of this section, or otherwise specifically provided elsewhere in this title, the standards and requirements for a landscape plan according to this chapter shall apply.

- A. *Continuous maintenance.* Landscaping, buffering and site design features required by this chapter shall be continuously maintained as provided in this chapter.
- B. *Exemption.* The provisions of this chapter shall not apply to any agricultural use Public, civil, and commercial permitted uses in an agricultural zone are not exempt.

(Ord. 2011-11, 12-15-2011)

Sec. 10-32-34. Landscaping plan.

- A. *Information required.* Whenever a landscaping plan is required by this title, such plan shall demonstrate compliance with the provisions of this chapter and shall show the following information:
 - 1. Landscaping materials;
 - 2. Location and spacing of existing and proposed plantings;
 - 3. Plant sizes;
 - 4. Proposed treatment of ground surfaces;
 - 5. Irrigation or watering plan.
- B. *Visual obstructions.* Landscape plans shall conform to the visual obstruction requirements of subsection 10-37-9E of this title.

(Ord. 2004-15, 6-17-2004)

Sec. 10-32-54. Deviation from strict compliance.

- A. *Deviations authorized.* [Since Recognizing that](#) site conditions and development constraints may vary greatly among sites, the Planning Commission may approve landscape plans that deviate from strict compliance with the provisions of this chapter. Any proposed deviation from the requirements of this chapter shall be:
 - 1. Clearly identified on the proposed landscape plan; and
 - 2. Accompanied by a written description of the proposed deviation showing how the intent of this chapter will be met by the proposed plan.
- B. *Findings required.* The Planning Commission may authorize a landscape plan deviation only if it finds the deviation:
 - 1. Is consistent with the intent of this chapter;
 - 2. Is justified by site constraints; and
 - 3. Is of comparable quality to what would otherwise be required without a deviation.

(Ord. 2004-15, 6-17-2004)

Commented [DH1]: We need to clean up the applicability of the chapter. This section says that the chapter does not apply to single family dwellings. But, we want the water conservation section in the chapter to apply to new single family dwellings outside the canal company service area if they are connected to secondary water. I wanted to discuss before I started moving things around and making those types of changes.

Sec. 10-32-65. Required landscaping.

- A. *General requirement.* Landscaped areas may include trees, shrubs, vegetative, organic and inorganic ground cover, and other organic and inorganic materials identified in an approved landscaping plan. All required landscape areas shall be occupied by plant material or ground cover.
- B. *Landscaping adjacent to a public street.* Except for approved driveways and pedestrian walkways, a landscaped area of ten-foot minimum shall be provided adjacent and parallel to the frontage of a public street as follows:
1. A ten-foot wide landscaped area on any commercial development.
 2. At least one tree and three shrubs shall be planted for every 35 feet of street frontage in a required landscaped area. Such trees and shrubs may be clustered, provided that no tree shall be within five feet of another.
 3. The slope of any earth berm shall not exceed a vertical to horizontal ratio of one to two and shall be treated with suitable ground cover to prevent soil erosion.
- C. *Parking strip landscaping.* All parking strips shall be landscaped.
- D. *Parking lot landscaping.*
1. Every parking lot consisting of more than ten spaces and 3,500 square feet of area shall contain internal landscaped areas as follows:
 - a. *Multiple-family residential.* A minimum of ten percent of total parking lot area.
 - b. *Office and commercial.* A minimum of seven percent of total parking lot area.
 - c. *Industrial and warehouse.* A minimum of five percent of total parking lot area.
 2. For every ten required parking spaces, or portion thereof, a minimum of two shrubs and one deciduous tree shall be provided within the internal parking area. The species of such trees shall be such that at maturity a tree canopy is provided to shade the parking area below each tree.
 3. Landscaped areas shall contain a minimum of 25 square feet and shall have a minimum average width of at least five feet.
 4. Landscape islands should be located in the following priority:
 - a. To define major drives and accessways;
 - b. To delineate ends of parking rows;
 - c. At aisle intersections; and
 - d. Within parking rows.
- ~~E. *Foundation landscaping.* Landscaping shall be provided adjacent to the wall of a building which has frontage on a public street as follows:~~
- ~~1. At least 50 percent of the building frontage shall be landscaped; and~~
 - ~~2. The minimum width of the landscaped area shall be three feet.~~
- F. *Landscaping in a multiple residential development.* Open space and common areas within a multiple residential development shall include a minimum of one tree and two shrubs per dwelling unit.

(Ord. 2011-11, 12-15-2011)

Sec. 10-32-67. Plant material standards.

- A. *Plant characteristics.* Plant materials used to provide landscaping should be:
1. Drought tolerant;
 2. Have noninvasive growth habits;
 3. Have low maintenance characteristics; and
 4. Be commercially available.
- B. *Plant quality.* Plants installed pursuant to this chapter shall conform to or exceed the plant quality standards of the most recent edition of American Standard for Nursery Stock published by the American Nursery and Landscape Association.
- C. *Artificial plants.* No artificial plants shall be used to meet any standard of this chapter except by special permission of the Planning Commission.
- D. *Tree diameter and height.*
1. Trees planted to satisfy the standards of this chapter shall have a minimum caliper (diameter) of two inches measured at ground level.
 2. Evergreen trees planted to satisfy the standards of this chapter shall have a minimum height of four feet.
 3. Shrubs planted to satisfy the standards of this chapter shall have a minimum height of 18 inches at the time of planting.
- E. *Ground treatment.* Ground area within a required landscape area shall be landscaped and present a finished appearance upon completion of landscaping. Additional ground cover may consist of plant materials characterized by horizontal as well as vertical growth, generally not exceeding 18 inches in height. Up to 85 percent of additional ground cover may consist of inert material such as decomposed granite, gravel, crushed rock, bark chips, or other similar material. Porous landscape fabric shall be required under these types of ground cover.

(Ord. 2004-15, 6-17-2004)

Sec. 10-32-87. Installation, irrigation, and maintenance.

Any required landscaping shall be installed, irrigated, and maintained in accordance with the following standards:

- A. *Installation.* All landscaping shall be installed according to accepted nursery practices.
- B. *Verification of installation.* Prior to issuing a certificate of occupancy, the Zoning Administrator shall verify that [the requirements of this chapter have been met and the](#) required landscaping and screening has been installed in compliance with the approved landscape plan.
- C. *Irrigation.* Landscape areas shall be irrigated as necessary to maintain required plant materials in good and healthy condition, while at the same time avoiding water waste through inefficient irrigation.
- D. *Maintenance.* Landscape areas, including park strips, shall be maintained in a healthy, neat, and orderly condition as follows:
1. Landscaped areas shall be free of weeds and litter;

(Supp. 1, Update 9)

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2. Landscape structures (e.g. walls, fences) shall be repaired or replaced in a structurally sound condition consistent with original appearance; and
 3. The City may require that any dead trees, shrubs and plants be replaced within the current or next planting season.

(Ord. 2004-15, 6-17-2004)

Sec. 10-32-~~98~~. Substitute plant materials.

The Zoning Administrator may approve installation of comparable substitute plant materials to satisfy the requirements of an approved landscape plan when approved materials are unavailable or when other unforeseen conditions prevent the use of materials shown on an approved landscaping plan. Any significant change to approved landscaping plans shall be reviewed and approved by the Planning Commission.

(Ord. 2011-11, 12-15-2011)

Sec. 10-32-~~109~~. Temporary suspension of landscaping installation.

During periods of adverse weather conditions or when plants and landscape materials are not available, the Zoning Administrator may issue a temporary certificate of occupancy, provided the landowner enters into an agreement with the City that requires the installation of required landscaping within a reasonable time.

(Ord. 2011-11, 12-15-2011)

Sec. 10-32-~~110~~. Site feature buffering and screening.

The following site features shall be screened as provided below:

- A. *Trash receptacles.* Trash receptacles in a multiple-family residential, commercial, public facility, business/manufacturing park, or professional office zone shall be screened from view by a wall or fence which:
 1. Is at least six feet in height;
 2. Provides complete visual screening of the receptacle; and
 3. Is compatible in material and color with the main building on the lot.
- B. *Permitted outdoor storage.* Outdoor storage areas permitted by this title shall be screened from view by an opaque fence or wall. Nonopaque fencing, such as powder or vinyl coated chainlink, may be used to satisfy this requirement in industrial zones if vinyl slats are inserted into the fence.
- C. *Ground mounted utility boxes, meters, and mechanical equipment.* Ground mounted utility boxes, meters, and mechanical equipment shall be screened from view by landscaping or architectural elements compatible in material and color with the primary structure(s) on the premises. This requirement shall not apply to:
 1. Rear and rear side yard locations adjacent to other service or mechanical areas not adjacent to a public street; and
 2. Development in agricultural and single-family residential zones.

(Ord. 2004-15, 6-17-2004)

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(Supp. 1, Update 9)

Sec. 10-32-121. Water conservation.

- A. Scope and Applicability. The standards of this section shall apply to all new construction and new development as set forth herein. ~~The standards of this section shall not apply to residential development in areas historically serviced by the Hurricane Canal Company and connected to a sSecondary Irrigation System. This section shall not apply to any new or existing agricultural uses in any zone.~~
- B. Commercial, industrial, and civic development. All new construction and new development in all commercial, industrial, and civic development in any zone, shall meet the landscape design standards and irrigation design standards of this section. ~~This section shall not apply to any new or existing agricultural uses in any zone.~~
1. Grass is not permitted outside of an active-Active Rrecreation Aarea. In addition, grass is prohibited in all Landscape Aareas less than eight feet wide and on any slope that exceeds 15 percent.
 2. Landscape and irrigation installers shall follow the plans that have been signed and approved by the cityCity.
 3. Each project shall propose and follow an approved Planting Plan of a Landscaped Aarea with water-efficient shade trees and bushes adequate in number and configuration to visually enhance the project, prevent heat islands, and prevent soil erosion. Planting Pplans shall meet the minimum standards within this section.
 4. If City-provided Ssecondary Irrigation Wwater is available, each project shall connect to the system for all outdoor water use. The Planning Commission may make minor exceptions, allowing use of treated water for outdoor plantings in small beautification areas, in its sole discretion.
 5. Park strips. Grass is prohibited in all Park Sstrips. Parks Sstrips shall be maintained by the adjacent property owner unless otherwise maintained by an owners association. Park Sstrips widths and landscaping shall count towards commercial and industrial landscaping frontage requirements.
- B. Residential development. All new residential construction and new development in residential-development ~~in any zone, shall meet the following landscape design standards and irrigation design standards: of this section.~~
1. Common areas. If the development has a common area jointly owned and maintained by a homeowners association, grass in a common area is not permitted outside of an active recreation area.
 2. Park strips. Grass is prohibited in all park strips.
 3. Controllers. Water-smart irrigation controllers are required.
 1. 4. Grass limitations for single family or two-familytwo-family dwellings.- Lawn area for single family or two-family dwellings mustshall not exceed eight percent (8%) of the lot square footage, up to a maximum of two thousand five hundred (2,500) square feet of lawn area in new residential development.
- ~~For all single-family dwellings and multiple family dwelling projects that contain private yards attached to a dwelling unit, the total grass area of each private yard associated with each lot shall not exceed the following:~~

Lot size	Maximum grass
Up to 6,000 sf	1,500 sf
Up to 12,000 sf	2,000 sf
Up to 18,000 sf	2,500 sf
Up to 24,000 sf	3,000 sf

More than 24,000 sf	4,000 sf
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C. Other Regulations and Restrictions

1. All new carwash projects shall utilize a water recirculation system
2. New exterior, decorative water features in common areas are limited to five features per subdivision or site. Each feature shall utilize a recirculation pump system.
3. New golf courses and expansions of existing golf courses that result increased water use are prohibited.
4. The cCreation of artificial ponds, lakes, or Water Parks as part of new commercial, resort, or residential development using any water supplied by the City, the Washington County Water Conservancy District, or a canal or irrigation company is prohibited.
 - a. The City may approve a Water Park in a Recreation Resort development only by consolidating multiple pools or other recreation amenities to meet requirements in Hurricane City Code 10-26.
 - b. Improvements related to civic, stormwater facilities, and agriculture and livestock use are exempt from these provisions.

(Ord. No. 2022-11 , 7-7-2022)

From: Karry Rathje Karry@wcwcd.org 
Subject: Meeting follow up
Date: December 19, 2022 at 3:23 PM
To: Nanette Billings billings@cityofhurricane.com
Cc: Zach Renstrom Zach@wcwcd.org



Mayor Billings,

Thanks, again, for taking the time to meet with us today. We're so grateful for our well-established partnership with Hurricane.

As requested, we have 94 connections on the Kolob water system, 91 on standby. There are also some small water systems, dry parcels and parcels with their own wells in Kolob that are not currently connected to our system. In the Hurricane Valley Water system, we have 195 connections, 22 on standby.

We're happy to hear that your city council will be reconsidering your ordinance to meet the qualifications to participate in the Water Efficient Landscape Rebate. I'm attaching a copy of the board resolution that notes the ordinance must include the following:

- Prohibit non-functional grass in new commercial, institutional and industrial developments; and
- Limit grass to 8% of the lot size with a maximum allowance of up to 2,500 square feet in new residential developments

I have also mentioned to Mindy that you would appreciate receiving the agenda/board info prior to the meetings.

Please let us know if you'd like to take us up on our offer to meet with your staff and/or city council to discuss any desired topic related to water – we're happy to do this whenever desired.

Thanks,
Karry



Karry Rathje

Communications & Government Affairs Manager
Washington County Water Conservancy District
P: 435.673.3617 | C: 435.668.5622 | wcvcd.org



2022-12-7 A
RESOL...AM.pdf

**WASHINGTON COUNTY WATER CONSERVANCY DISTRICT
A RESOLUTION ESTABLISHING CRITERIA FOR PARTICIPATION IN THE
WATER EFFICIENT LANDSCAPE REBATE PROGRAM**

WHEREAS, the Washington County Water Conservancy District is charged with conserving, developing, managing and stabilizing water supplies within the county in an ongoing effort to provide a safe, sustainable water supply for current and future generations;

WHEREAS, water conservation is an important mechanism for ensuring a sustainable water supply and is increasingly more important as undeveloped water sources are increasingly more scarce and expensive to develop;

WHEREAS, community landscape ordinances that adequately restrict outdoor irrigation are needed to help conserve water, and an establishment of criteria for such ordinances will help promote the district's water conservation objectives;

WHEREAS, the district is implementing a Water Efficient Landscape Rebate Program whereby it will rebate property owners for each square foot of grass removed and replaced with water efficient landscaping;

NOW THEREFORE, the Board of Trustees of the Washington County Water Conservancy District hereby resolves that:

- 1) Participation in the Water Efficient Landscape Rebate Program is limited to applications for properties in communities that have adopted landscape ordinances that meet the following criteria:
 - a) The landscape ordinance must prohibit non-functional grass in new commercial, institutional and industrial developments; and
 - b) The landscape ordinance must limit grass to 8% of the lot size with a maximum allowance of up to 2,500 square feet in new residential developments;
- 2) At present, the following communities have adopted landscape ordinances that conform with these criteria:
 - a) Ivins City
 - b) La Verkin City
 - c) Santa Clara City
 - d) St. George City
 - e) Washington City
- 3) When other communities adopt landscape ordinances that conform with these criteria, the general manager is authorized to accept applications for properties in those communities for participation in the Water Efficient Landscape Rebate Program; and
- 4) The general manager is authorized to establish other requirements for participating in the Water Efficient Landscape Rebate Program.

DATED this 7th day of December, 2022.

WASHINGTON COUNTY
WATER CONSERVANCY DISTRICT:



Ed Bowler, Chairman of the Board

ATTEST:



Mindy Mees, Secretary

VOTING:

Ed Bowler	Yea ☒	No ☐
Adam Bowler	Yea ☒	No ☐
Chris Hart	Yea ☒	No ☐
Victor Iverson	Yea ☒	No ☐
Michele Randall	Yea ☒	No ☐
Kress Staheli	Yea ☒	No ☐
Kevin Tervort	Yea ☒	No ☐

To Washington County, Utah:

Mayors, City Council Members, City Managers, County Commissioners, Washington County Water Conservancy District, & SUHBA Members

SUHBA Position Paper: Water Issues in Washington County

The Southern Utah Homebuilders Association (“SUHBA”) has produced this position paper in response to the recent flurry of new and proposed water measures. Below is a relatively broad outline of our stance on the three main components of local water policy, as well as our comments on two specific items that are working their way toward adoption by some or all of the cities that are municipal customers of the Washington County Water Conservancy District (“WCWCD”). We do not comment herein on the several water bills being considered in this year’s state legislative session.

Issue 1: Allocation of the Existing Water Supply

1) *Policy Position.*

We wish to see the creation of a fair, intentional and orderly system for the prioritization of new water connections.

2) *Priorities.*

- a) Establish a common understanding of the **available supply of water** by clarifying the total amount of water reliably available from existing and readily developable sources, and the **amount of water currently being used in aggregate and per equivalent residential unit (“ERU”)**.
- b) **Create a system for tracking the development pipeline across municipalities** to bring greater clarity to the match (or mismatch) between available water and prospective development.
- c) **Institute an orderly process for the allocation of the existing water supply**, including a fair and predictable procedure for the vesting of water service.
 - i) The method and timing of vesting should be based upon the expectation that **any reserved water service is utilized in a timely manner. The hoarding of water connections by way of a vesting “race to the bottom” must be prevented.**
 - ii) Variables that should be considered include: **the relative water usage of various competing land uses; the role and value of smaller projects and builders; and the feasibility and timing of prospective development.**

Issue 2: Conservation

1) *Policy Position.*

We welcome the new emphasis on conservation. There are numerous measures that can be adopted or improved, however, individual tactics will yield widely varying results. **Focus should be placed on measures where water savings will be greatest.**

2) *Priorities.*

- a) Implement conservation best practices in all new development. See elsewhere herein for additional comments on this subject, including on the draft ordinance currently in the process of adoption.
- b) Regulation should apply the Pareto Principle (the 80/20 rule). **Focus policy on the relatively few measures that will yield the greatest water savings.** Avoid cluttering regulation with minutiae that create a significant administrative burden while providing little or no water savings.
- c) **Emphasize a normative approach geared toward improving freely made decisions rather than a prescriptive approach based on coercion and compliance.** Create more and better pricing feedback loops.
 - i) **Both at the time of its allocation and on an ongoing basis, the price of water should better reflect its marginal value.** Building types that use relatively more water should pay a higher impact fee than those that use less. Water rates should increase in a nonlinear manner, i.e. if the cost of X gallons of water is Y , then the price of $2X$ should be greater than $2Y$.
 - ii) **Improve the transparency and usefulness of information available** to individual water users so they better understand the variables in their behavior that most affect water use. Accelerate the adoption of Advanced Metering Infrastructure.
- d) Conservation-oriented policies currently being considered by the WCWCD which we support include:
 - i) Tiered impact fees based upon typical water usage by a range of common building types.
 - ii) Creating a “conservation easement” opportunity by which a consumer can opt into a reduced (0.55 AF) water allocation with a punitive surcharge on water use in excess of the stipulated allotment.
 - iii) Rebate programs designed to encourage the widespread, voluntary conversion of ornamental lawn to xeriscape.

Issue 3: New Sources

1) *Policy Position.*

We continue to support the Lake Powell Pipeline as an expansion of Washington County's water supply and an alternative to relying solely on water sources from the Virgin River basin. **We also encourage the ongoing development of additional water capacity from sources over which we have greater local control.**

2) *Priorities.*

- a) Expand and accelerate the **development of the secondary water system** (sources and distribution) in order to reduce the use of potable water for irrigation.
- b) Take the next steps in **exploring technological solutions** with the potential to significantly increase the amount of usable water available from the Virgin River.

The Water Conservation Ordinance Applicable to New Construction

General Conditions

We attended the Water Summit in November 2021 and provided comments at that time in response to the conservation measures being considered. As we said then, we generally accept additional conservation-oriented regulation of new construction. We wish to be clear in our support of wise water management.

In fact, new residential construction already uses considerably less water across the board than was typical even a decade ago. New homes utilize indoor water very efficiently; beautiful, drip-irrigated xeriscaping has become commonplace; and smaller lots and multifamily homes comprise a larger share of new residential development than before. The cumulative impact is remarkable. Total countywide water consumption has remained relatively stable in recent years despite continued growth in tourism and permanent population. **The state of the art in new home construction has helped bend the demand curve for water and will continue to do so going forward.**

Unfortunately, while we accept additional regulation, the proposed ordinance is constructed in exactly the fashion we oppose: **rather than being focused on the few remaining areas that will yield large water savings, it is laden with minutiae that significantly increase administrative costs while providing little or no conservation benefit.**

We have also found the process lacking in transparency and stakeholder inclusion. As far as we can tell, the ordinance has been in the active drafting process for months, but we were not involved in

those deliberations at all. Instead, we were only provided a document once the language was substantially set in stone and its adoption set in motion.

Specific Policies

We support the installation of hot water recirculation systems, and the exclusive use of water-efficient fixtures and appliances. We support the use of smart irrigation controllers. We support landscaping standards that emphasize shade trees and drought-tolerant plant species. We support ending the practice of placing turf in planter strips and on steep slopes. **We support a turf maximum on new residential construction,** however, we recommend indexing the allowance to lot or yard size (with a reasonable upper limit). We support applying conservation standards uniformly, including in HOAs and areas served by secondary irrigation water. We support accelerating the development of a secondary irrigation water system where feasible. We request that common sense be applied in the implementation of this strategy so that secondary distribution lines and meters are not required in locations that are not realistic candidates for connection to a secondary water system.

We oppose conservation standards that are more stringent on multifamily building forms than single family. This includes requiring the individual metering of multifamily homes. We oppose the mandatory landscaping of an entire yard prior to the issuance of a certificate of occupancy. We oppose a requirement of automatic pool covers. **(We strongly support efforts to make evaporation an educational point of emphasis so that pool owners are equipped to make better decisions as they design new pools and mitigate water loss from existing pools.)** In each case, our opposition is predicated on an assessment that the benefits fall well short of justifying the cost.

In analyzing the proposed ordinance, we searched for comparable regulations in Arizona and Nevada, and mostly came up empty. A notable exception was Las Vegas, which has adopted strict water regulations and makes them easy to find. Yet even compared with Las Vegas, the Washington County ordinance proposes several more stringent elements as applied to new residential construction. The landscaping standard for single family homes in Las Vegas allows up to 50% of the side and rear yard area to be turf with a cap of 5,000 square feet, which would equate to around 12-17% of the total lot size. We think that percentage range is about right, but the 5,000 square foot cap is too high. Las Vegas does not micromanage tree size or drip-irrigation design nor require automatic pool covers as part of their conservation mission.

City Disclaimer of Water Availability for Pending Development Applications

Last week, St. George City adopted a temporary ordinance requiring that new development applications include a disclaimer of water availability. We understand the intent of the ordinance is to clarify the status quo as it pertains to the vesting of water availability: while land use vests earlier, there is currently no “guarantee” of water service until the impact fee is paid and a building permit is issued.

As discussed at greater length above, we endorse an intentional approach to the reservation of water connections so that all participants in the development process have sufficient predictability to make sound decisions relative to development activities which will span many years and entail the investment of many millions of dollars.

Closing Statement

We desire to be good community partners and a willing resource. We believe in the power of working together across institutional lines to address current and future growth-related issues.

Sincerely,

2022 Southern Utah Home Builders Association Board of Directors
February 9, 2022

CHAPTER 3: SINGLE FAMILY AND MULTIPLE FAMILY RESIDENTIAL WATER EFFICIENCY STANDARDS

These provisions are applicable to all new construction, and new development in any residential zone, or for any single family or multiple family residential development in any zone.

-3-1: Construction Standards

- A. New single family or multiple family residential dwellings 1,000 square feet or greater shall install hot water recirculation systems, unless hot water delivery can be demonstrated to occur without first displacing more than 0.6 gallons of system water.
- B. New single family or multiple family residential dwellings shall install WaterSense labeled fixtures, including, but not limited to faucets, showerheads, toilets, and urinals.
- C. New single family or multiple family residential dwellings shall install Energy Star qualified appliances.
- D. All multiple family units with ground floor square footage or individually platted, shall be separately metered, submetered, or equipped with alternative technology capable of tracking the water use of the individual unit, and the information shall be made available to the resident of each unit. Individually platted condominium units are excepted if a property owners association owns and maintains the water lines and meters. All multiple family projects require separate water meters for all outdoor water usage, including landscaping.

-3-2: Landscape Standards

- A. For all new residential construction or development, the landscaping shall meet the following requirements:
 - 1. Single Family Dwellings, and Multiple Family Dwelling Projects with Ten Units or Less:
 - a. The total grass area shall not exceed the following:

Lot size	Maximum grass
Up to 6,000 sf	750 sf
Up to 12,000 sf	1,000 sf
Up to 18,000 sf	1,250 sf
Up to 24,000 sf	1,500 sf
More than 24,000 sf	2,000 sf
 - b. In addition, grass is prohibited in park strips, all landscape areas less than eight feet wide, and on any slope that exceeds 15%; and

- 205 c. Each single dwelling shall have a minimum of two water-efficient shade trees
206 with a minimum one-and-one-half-inch (1½") caliper trunk. Each multiple
207 family development with ten units or less shall follow city approved landscape
208 plans for number of shade trees.
209

- 210 2. Multiple Family Dwelling Projects with More than Ten Units: Comply with the
211 Landscape Standards in __-4-2, below.
212

213 **__-3-3: Restrictive Covenants in Conflict with Water Efficiency Standards**

214 Any homeowners or property owners association governing documents, such as bylaws, operating
215 rules, covenants, conditions, and restrictions that govern the operation of a common interest
216 development, recorded after passage of this ordinance, are void and unenforceable if they conflict
217 with the water efficiency standards in this ordinance, or if they have the effect of prohibiting or
218 restricting compliance with this ordinance.
219

220
221 **CHAPTER 4: NONRESIDENTIAL ZONES AND DEVELOPMENT WATER**
222 **EFFICIENCY STANDARDS**
223

224 These provisions are applicable to all new construction and new development in all nonresidential
225 zones, and nonresidential development in any zone.
226

227 **__-4-1: Construction Standards**
228

- 229 A. Hot water recirculation systems shall be installed, unless hot water delivery can be
230 demonstrated to occur without first displacing more than 0.6 gallons of system water.
231
232 B. WaterSense labeled fixtures shall be installed, including, but not limited to faucets,
233 showerheads toilets, and urinals.
234
235 C. Energy Star qualified appliances shall be installed.
236
237 D. All shell units with ground floor square footage, or individually platted, shall be
238 separately metered, submetered, or equipped with alternative technology capable of
239 tracking the water use of the individual unit, and the information shall be made available
240 to the individual unit. Individually platted condominium units are excepted if a property
241 owners association owns and maintains the water lines and meters. All nonresidential
242 projects require separate water meters for all outdoor water usage, including landscaping.
243
244 E. All carwash projects shall recirculate and limit the maximum amount of water to 35
245 gallons per vehicle washed.
246

247 F. Exterior, decorative water features are prohibited, except up to five decorative water
248 features with 50 gallon or less capacity and maintained recirculating pumps.
249

250 G. All golf courses using water district or municipal water supplies shall irrigate with
251 secondary irrigation water and shall have separate water meters for the golf course.
252 Irrigation with potable water is prohibited. Each golf course development shall submit
253 and follow a water budget with the Landscape Documentation Packet and identify water
254 conservation measures for city approval.
255

256 H. Outside misting systems shall only operate during the May through August time period
257 where the daily high temperature is 90 degrees Fahrenheit or greater.
258

259 **-4-2: Landscape Standards**

260

261 A. All new construction and new development in all nonresidential zones, and nonresidential
262 development in any zone, shall meet the Landscape Design Standards and Irrigation
263 Design Standards of this ordinance.
264

265 1. Grass is not permitted outside of an active recreation area. In addition, grass is
266 prohibited in park strips, all landscape areas less than eight feet wide, and on any
267 slope that exceeds 15%. Note 15% is about a 4 to 1 slope
268

269 2. Landscape and irrigation installers shall follow the plans that have been signed
270 and approved by the city.
271

272 3. Each project shall propose and follow an approved Planting Plan that has a
273 minimum of 40% vegetative cover of a landscaped area with water-efficient
274 shade trees and bushes adequate in number and configuration to visually enhance
275 the project, prevent heat islands, and prevent soil erosion. The configuration of
276 the vegetation in the Planting Plan is in the sole discretion of the city.
277

278 4. If secondary irrigation water is available, each project shall connect to the system
279 for all outdoor water use. A city may make minor exceptions, allowing use of
280 treated water for outdoor plantings in small beautification areas, in its sole
281 discretion.
282

283 **B. Required Documentation**

284

285 1. **Landscape Documentation Package:** A copy of a Landscape Documentation
286 Package shall be submitted to and approved by the city prior to the issue of any
287 building permit. A copy of the approved Landscape Documentation Package shall
288 be provided to the property owner or site manager. The Landscape
289 Documentation Package shall be prepared by a professional landscape architect
290 (PLA) and shall consist of the following items:

Proposed WCWCD landscape ordinance

Waterboards opinion of items chapter 3 CONSTRUCTION STANDARDS.

Please use the commonsense parts of the proposed landscape ordinance. Possible examples.

3- 1A Hot water recirculation systems make sense.

3-1 B Water sense fixture requirement, fixtures can easily be replaced after occupancy. Why not keep suggesting water saving devices and keep offering grants.

3-1 C Continue to offer grants based on energy star rating.

3-1-D Encourage outside water meters where feasible not mandated. One size does not fit all.

3.2: LANDSCAPE STANDARDS

3-2 A. Ease up on lawn restrictions, encourage lawn irrigation recirculation systems, the only loss is consumptive use and evaporation, made up by harvesting rainwater.

Encourage use of low water consumption grass varieties

3-2 B encourage low consumption water park strips

3-2 C Do not mandate types of plants and trees. Encourage low water use varieties using rebate grants. For the use of listed varieties.

3-3: RESTRICTIVE COVENANTS IN CONFLICT WITH WATER EFFICENCY STANDARDS

The board wanted to make sure existing homeowners association rules can be grandfathered or recognized. (Example the next phase of an existing development.)

CHAPTER 4: NON-RESIDENTIAL ZONES AND DEVELOPMENT WATER EFFICENCY STANDARD

Most of this chapter seems to mirror the residential standards. Waterboards concerns were forcing owners to hire a landscape architect for design.

can the district create several designs, (Encourage use of recommended design using water savings data)?

Pressure regulation on landscape should be encouraged depending on water quality concerns. If secondary water is not clean it will plug pressure reducing valves.

Water sense labeled smart controllers irrigation controllers make sense, offer rebates

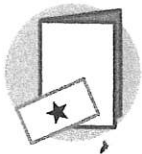
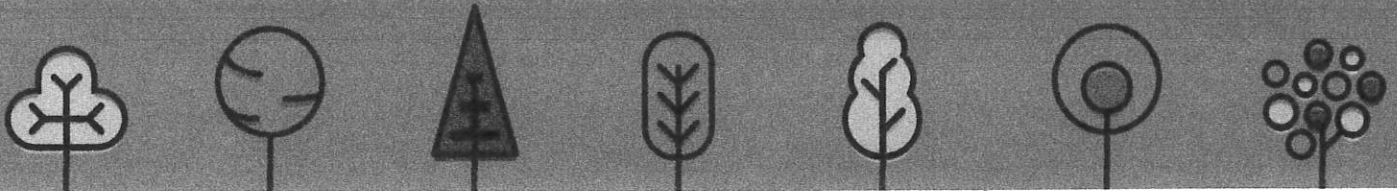
Encourage low flow volume irrigation equipment.

? should a standardized landscape ordinance include urbanized farming? What about Agriculture related residential zoning?

If all the shall references were removed from the ordinance there would be a good place to start.

NOTE: The districts draft ordinance is kind of like the ten commandments. The waterboard recommendations are kind of like the 10 suggestions. Hopefully there can be some common ground that does not appear we are dictating. If the landscape draft is approved as written, the cities will need to staff new departments to enforce all the new regulations.

RECEIVE UP TO \$30 OFF ON SELECT TREES



Secure your coupon and information packet today by emailing your name and address to julie@wcwcd.org.

QUALIFICATIONS

- Valid for the purchase of one (1) tree per property.
- Property must be located in Washington County.
- Tree must be purchased from a participating retailer between February 15 through May 1 or September 1 through December 1.
- The redemption value is \$30 (or less if the purchase price is less than \$30).
- Coupon only valid on select trees. Review the list of qualifying trees prior to purchasing.
- Trees must be 5-gallon or larger (15 gallon sizes are recommended).
- Coupon does not cover sales tax.
- Coupon is not transferable or redeemable for cash.
- Offer not valid on prior purchases.

PARTICIPATING RETAILERS

Star Nursery

1145 W. Sunset Blvd.
St. George, UT 84770

385 W. Telegraph Road
Washington, UT 84780

1335 S. Dixie Drive
St. George, UT 84770

Ballard's Nursery

691 N State St
Hurricane, UT 84737

Elim Valley Nursery

1825 South Flora Tech Rd
Hurricane, UT 84737

Sandia Nursery

4234 S Washington Fields Rd
Washington, UT 84780

Big Trees Nursery

240 N 100 E
Kanarrville, UT 84742



This program is funded by the Washington County Water Conservancy District and Utah Community Forestry Council. This program's funding period ends May 1, 2022.

QUALIFYING TREES:

Common Name	Scientific Name	Size (HxW)	Type
Podless Sweet Acacia	<i>Acacia farnesiana</i> 'Sierra Sweet'	20'x20'	Deciduous
Sensation Boxelder	<i>Acer negundo</i> 'Sensation'	30'x25'	Deciduous
Apple Serviceberry	<i>Amelanchier x grandiflora</i>	25'x20'	Deciduous
Common Hackberry	<i>Celtis occidentalis</i>	60'x60'	Deciduous
Netleaf Hackberry	<i>Celtis reticulata</i>	30'x30'	Deciduous
Western Redbud	<i>Cercis occidentalis</i>	15'x10'	Deciduous
Desert Willow	<i>Chilopsis linearis</i>	25'x15'	Deciduous
Cockspur Hawthorn	<i>Crataegus crusgallii</i>	35'x35'	Deciduous
Arizona Cypress	<i>Cupressus arizonica</i>	40'x20'	Deciduous
New Mexico Olive/Privet	<i>Forestiera neomexicana</i>	18'x12'	Deciduous
Kentucky Coffee Tree	<i>Gymnocladus dioicus</i>	80'x55'	Deciduous
Golden Raintree	<i>Koelreuteria paniculata</i>	40'x40'	Deciduous
Crabapple	<i>Malus</i> spp.	20'x20'	Deciduous
Texas Umbrella Tree	<i>Melia azedarach</i>	40'x40'	Deciduous
Wilson Olive	<i>Olea europaea</i> 'Wilson'	25'x20'	Evergreen
Pinyon Pine	<i>Pinus edulis</i>	36'x20'	Evergreen
Alleppo Pine	<i>Pinus halepensis</i>	40'x70'	Evergreen
Stone Pine	<i>Pinus pinea</i>	40'x60'	Evergreen
Japanese Black Pine	<i>Pinus thunbergii</i>	20'x60'	Evergreen
Arizona Sycamore	<i>Platanus wrightii</i>	50'x50'	Deciduous
Texas Honey Mesquites	<i>Prosopis glandulosa</i>	40'x35'	Deciduous
Screwbean Mesquite	<i>Prosopis pubescens</i>	15'x20'	Deciduous
Arizona Velvet Mesquite	<i>Prosopis velutina</i>	30'x30'	Semi-Deciduous
Western Honey Mesquite	<i>Prosopis glandulosa torreyana</i>	30'x20'	Deciduous
Texas Red Oak	<i>Quercus buckleyi</i>	50'x50'	Deciduous
Holly Oak	<i>Quercus ilex</i>	60'x60'	Evergreen
Burr Oak	<i>Quercus macrocarpa</i>	80'x80'	Deciduous
Shumard Oak	<i>Quercus shumardii</i>	40'x60'	Deciduous
Cork Oak	<i>Quercus suber</i>	70'x70'	Evergreen
Lacebark Elm	<i>Ulmus parvifolia</i>	40'x50'	Deciduous
Arizona Rosewood	<i>Vauquelinia californica</i>	15'x20'	Evergreen
Japanese Zelkova	<i>Zelkova serrata</i>	50'x50'	Deciduous

Year	Residential	Growth	Commercial	Growth	Industrial	Growth
2021	3,835.00	0%	1,122.94	13%	126.03	6%
2020	3,826.81	19%	993.44	40%	119.17	14%
2019	3,224.54	0%	711.12	36%	104.7	4%
2018	3,234.62	5%	522.31	34%	100.44	-32%
2017	3,087.16	9%	390.64	13%	147.49	100%
2016	2,835.11	9%	346.09	17%	73.65	74%
2015	2,598.82		295.5		42.4	
Average Growth Rate			7%		25%	28%

Institutional	Growth	Total (ACFT)	Growth	Population	
453.31	-8%	5,537.27	2%	22307.9	8%
492.71	3%	5,432.13	20%	20582.6	8%
479.61	-3%	4,519.98	4%	19038.2	6%
495.93	2%	4,353.31	6%	18002.9	6%
484.66	10%	4,109.94	11%	16987.9	8%
440.15	32%	3,695.00	13%	15755.4	7%
333.32		3,270.04		14694	
		6%		9%	7%



Recommended Ordinances to Extend Limited Water Supplies

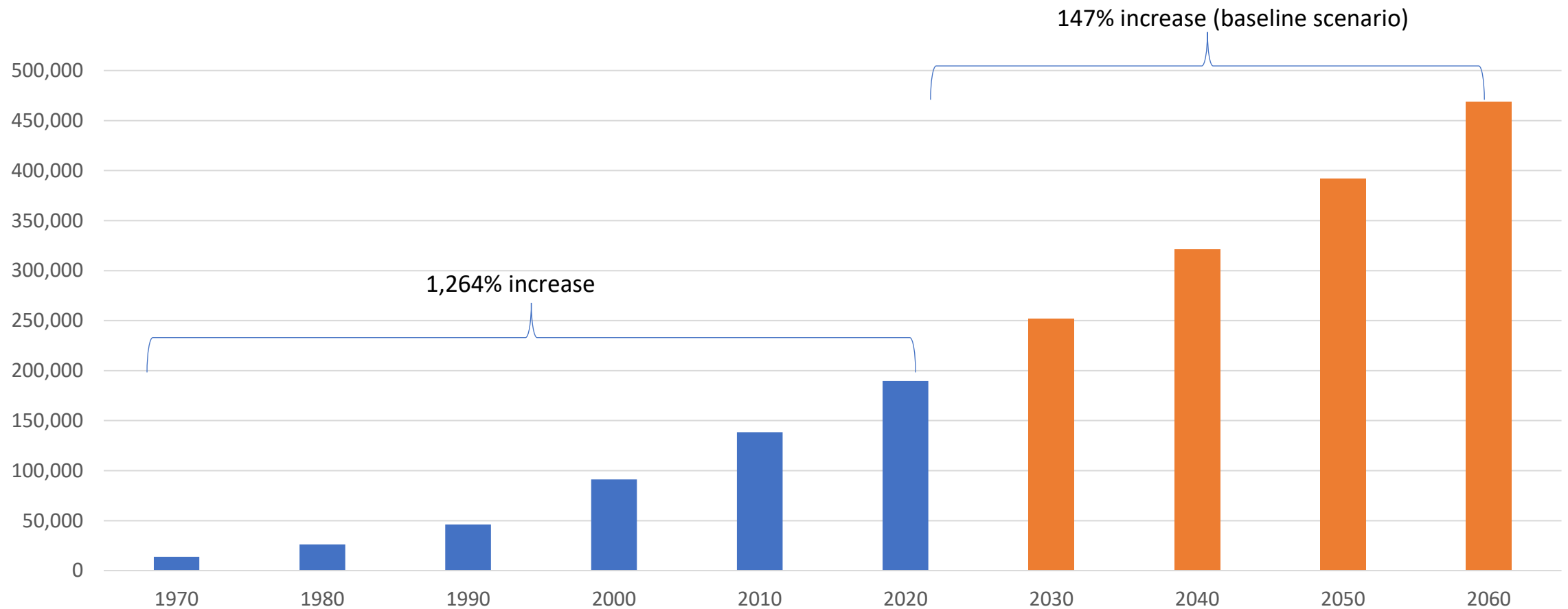
Zach Renstrom | City Council Meetings | September 2021

Water Supply

Washington County's major population centers are 100% dependent on the Virgin River basin, which is closed to further appropriations.



Population Growth





Water Conservation

- Washington County has decreased its water use by more than 30% since 2000
- First county to meet the statewide water conservation goal
- More than \$70 million invested in recent conservation efforts



District Recommendations

- Time-of-day watering ordinance
- Water waste ordinance
- Water efficiency standards for all new construction



Water Efficiency Standards

- Ongoing collaboration with all our municipal partners to ensure standards are consistent throughout the county
- Standards would apply to all **new** construction, including all homeowner association areas and those served by secondary irrigation water



Residential Standards

Applies to all new residential
construction, including single
and multi-family housing



Two options:

Traditional
Conservation

WaterSense
Certified

Residential Standards: Traditional

- Indoor requirements
 - Hot water recirculation system
 - WaterSense labeled fixtures
 - Energy Star appliances
 - Multi-family housing individually metered with the capability of tracking/reporting unit specific use





Residential Standards: Traditional

- Outdoor requirements
 - Limit irrigated landscape area to 2,500 square feet, lawn to 750 square feet
 - Pools, spas and other water features count toward 750 square feet unless covered
 - Install landscape specific meters at each property
 - Use a minimum number of approved water-efficient trees and shrubs; irrigate with a drip system
 - Install water-smart irrigation controllers
 - Avoid lawn on park strips, slopes greater than 25% and areas less than 8 ft wide
 - Require pool covers
 - Secure city verification

Residential Standards: Traditional Cost

Conservation Measure	Average Cost	Anticipated Water Savings (per gallon/year/home)
Hot water recirculation system	\$550	10,600
WaterSense toilet	\$0	1,900
WaterSense faucet	\$0	3,700
WaterSense showerhead	\$0	2,800
Energy Star dishwasher	\$100	400
Landscape modifications (separate meter, smart controller and more efficient landscape on 10,000 sq ft lot)	\$3,250	28,700
Pool cover	\$10,000	10,000

Residential Standards: Traditional Concept



Examples



10,300 sf lot



9,040 sf lot

Large Lot Examples



18,500 sq ft lot



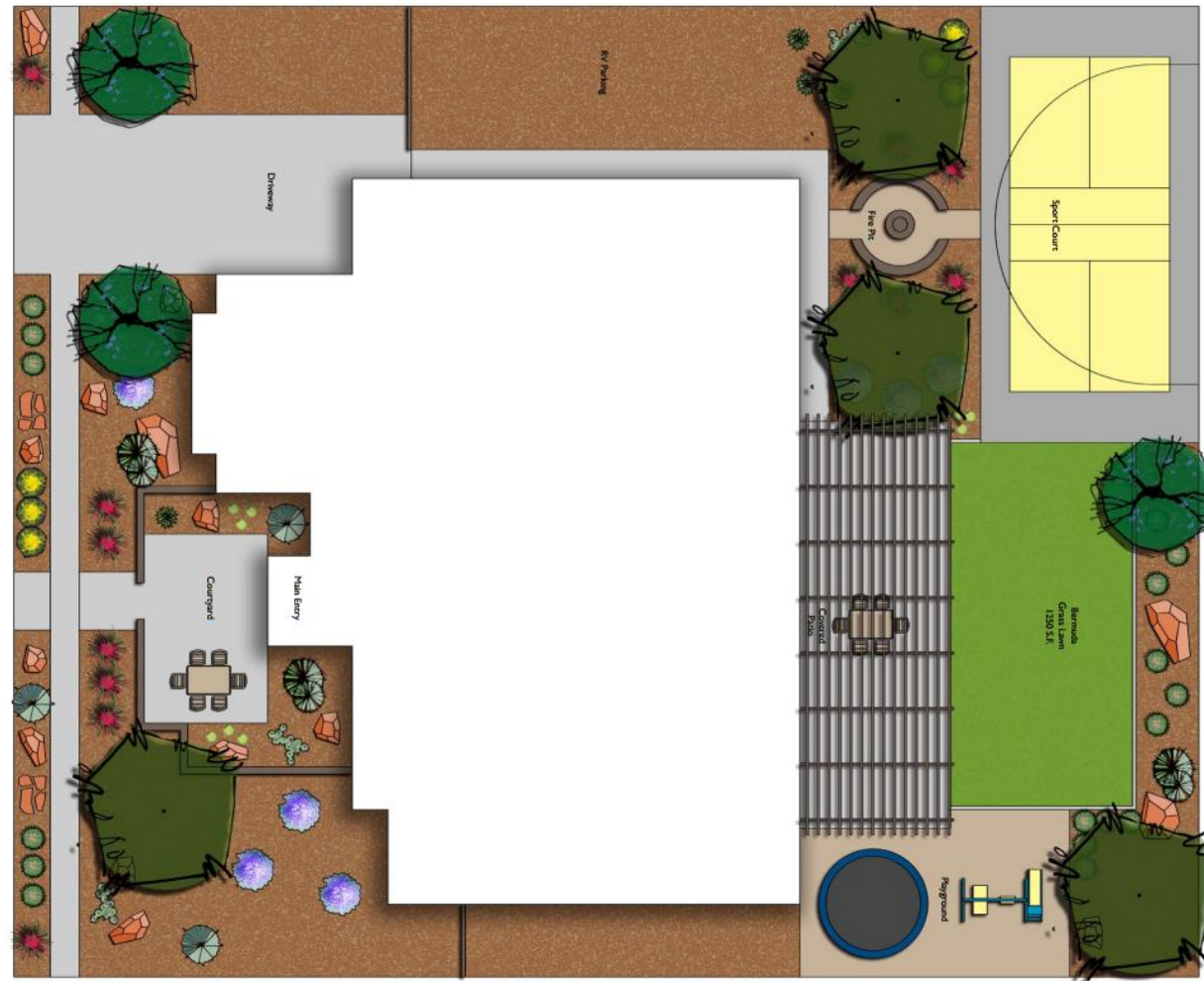
18,700 sq ft lot



Residential Standards: Certified

- Allows for greater flexibility
- Certification by approved verifier
- Additional costs

Residential Standards: Certified Concept



22,000 sq ft lot

Examples Requiring Certification



10,900 sq ft lot



18,200 sq ft lot



Commercial, Institutional and Industrial Standards

- Indoor requirements
 - Hot water recirculation system
 - WaterSense labeled fixtures
 - Energy Star appliances
 - Submeter all units
 - Recycle pumps at carwash facilities

Commercial, Institutional and Industrial Standards

- Outdoor requirements
 - Lawn prohibited unless a waiver is granted demonstrating a functional purpose
 - Install landscape specific meters at each property
 - Use only approved water-efficient trees and shrubs; irrigate via drip system
 - Install water-smart irrigation controllers
 - Enforce water budget and require use of secondary irrigation at golf courses
 - Prohibit decorative water features
 - Limit commercial misting systems for use from May – August
 - Secure city verification

Feedback, Q&A

wcwcd.org
info@wcwcd.org

Conserving water and lowering overall temperature through landscaping

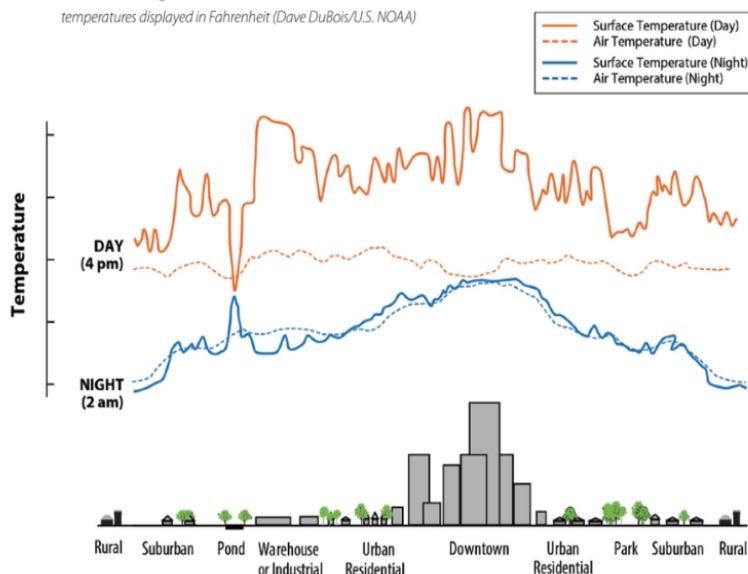
Landscaping in our community is necessary and vital to our communities overall quality of living. There is a large benefit to having trees and less of a need to push for grass to conserve water. Trees conserve more water and help our community more than just rock by lowering the overall temperature and working to keep humidity and moisture in our area.

Tree Basics

- Absorb rainwater
- Absorb tailpipe emissions
- Provide UV protection
- Help reduce the effects of wind
- Increase property value
- Shown to slow down traffic
- Reduce the ambient temperature in hot weather



Figure 2.15. Thermal image (right) taken in Las Cruces, New Mexico, showing hotter areas in brighter colors with cooler areas in darker colors, with temperatures displayed in Fahrenheit (Dave DuBois/U.S. NOAA)



112
gal per year

VS

96
gal per year
per sq ft



Now What?

City Tree Booklet by WCWCD



Localscapes.com

StrongTowns.org

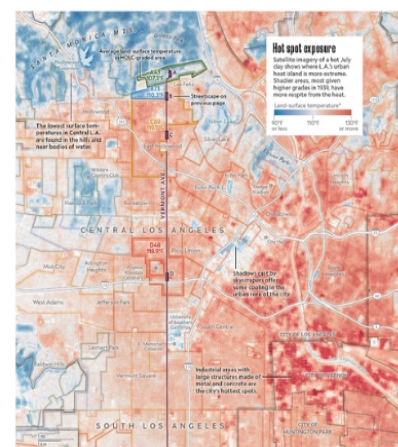


American Planning Association



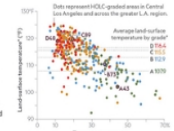
AN URBAN CANOPY CAN HELP COOL A CITY

An effective urban forest has a variety of climate-related benefits. Trees, with large canopies and dense foliage, can help cool a city by up to 10°F.



BUT SHADE CAN BE HARD TO FIND IN MUCH OF L.A.

As Los Angeles experiences more extreme hot days because of climate change, the urban canopy's capacity to lower temperatures can be a lifesaver. Today, however, L.A.'s tree canopy is mostly developed in areas where residents are more likely to be white and rich, in poorer neighborhoods that were redlined and neglected—and where there are still more people of color—this protection from deadly heat is missing.



Lot Size	Lawn Area 8%	Lawn Area 15%
6,000	480	900
8,000	640	1,200
10,000	800	1,500
15,000	1,200	2,250
20,000	1,600	3,000
30,000	2,400	4,500
40,000	2,500	6,000

UTAH GROWING WATER SMART

The Water-Land Use Integration Guidebook

Ensuring a Prosperous Future and Healthy
Watersheds Through the Integration of Water
Resources and Land Use Planning

ACKNOWLEDGEMENTS

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Cover Photo Credit

Wayne Wurtsbaugh, Professor Emeritus, Utah State University

PREFACE

Utah Growing Water Smart

The Utah Growing Water Smart workshop brings key community staff and decision-makers on water and land use planning together to collaborate to help build a more resilient and sustainable water future. The workshop uses a range of public engagement, planning, communication, and policy implementation tools to help community teams realize their water efficiency, smart growth, watershed health, and water resiliency goals.

About the Utah Growing Water Smart partner organizations:

Utah Division of Water Resources

The Utah Division of Water Resources is one of the seven divisions housed within the Department of Natural Resources. Tasked with Planning, Conserving, Developing and Protecting Utah's water resources, the Division earnestly strives to be Utah's water steward. It is our belief that we will meet the future water needs through a combination of multi-faceted solutions that include conservation, efficiency, optimization, agriculture conversion and water development. Such an approach will help us prepare, plan and sustain Utah's water future.

Babbitt Center for Land and Water Policy

The Babbitt Center for Land and Water Policy, a center of the Lincoln Institute of Land Policy, seeks to advance the integration of land and water management to meet the current and future water needs of communities, economies, and the environment. The Babbitt Center develops tools and best practices to guide decisions through research, training, and partnerships for management of land and water resources. We recognize that water is the lifeblood of the American West and land use decisions are made every day that shape our water future. Coordination of these land and water use decisions is critical for ensuring resilient and sustainable communities.

Western Resource Advocates

Western Resource Advocates (WRA) fights climate change and its impacts in order to sustain the environment, economy, and people of the West. Our team of policy experts, scientists, economists, and attorneys has a 30-year history of working where decisions are made, sweating the details, creating evidence-based solutions, and holding decision-makers accountable. This on-the-ground work advances clean energy, protects air, land, water, and wildlife—and sustains the lives and livelihoods of the West. WRA brings a unique set of skills, knowledge, relationships, and leadership to solving conservation issues in the West.

Utah State University's Center for Water Efficient Landscaping

The Center for Water Efficient Landscaping (CWEL) at Utah State University is a research and outreach center designed to improve and optimize the efficient use of water for landscape irrigation. Our team conducts research in the areas of irrigation technology and management, plant water use and drought, water wise and native plants, sustainable turfgrass management, and urban water conservation. The Center also delivers Utah's Qualified Water Efficient Landscaper (QWEL) certificate training program, hosts a monthly "Water Well with CWEL" webinar, and is the home of the Water Check and WaterMAPS™ programs. The Center's overall mission is to promote water conservation through environmentally, socially, and economically sound landscape management practices.





MESSAGE FROM UTAH GOVERNOR SPENCER J. COX

“Welcome, Growing Water Smart Workshop participants! Thank you for dedicating your time and energy to address such an important topic for our state. As you all know, Utah is facing immense challenges with our water resources. The extreme drought is causing us to think hard about where and how we can best use and conserve water. We also know that water conservation requires all Utahns to do their part, including all of you - who represent our growing towns, cities, and counties. Your participation in this workshop is essential to making our state more resilient by identifying ways to integrate water and land use planning—two vital and connected efforts in one of the fastest growing states in the country. These next few days will be a lot of work, but I have no doubt that the action plans you develop will put your communities on the path to a more sustainable water future.”

Wayne Wurtsbaugh, Utah State University, 2013



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Introduction

Utah faces a formidable challenge. We have the distinction of being among the driest states in the nation *and* one of the fastest growing. At the convergence of these two realities lies the challenge of providing a secure water supply for our growing population – projected to reach 6 million by 2065¹ – while maintaining the environment, the economy, and agricultural production.

The fragility of a secure water supply is evident today. In the summer of 2022, the [U.S. Drought Monitor](#) showed most of Utah in either the “Exceptional Drought” (most severe) category or “Extreme Drought” (second most severe) category for extended periods of time, with drought conditions persisting through the fall. The eastern and southwestern part of Utah lie in the Colorado River Basin, which is in crisis with reservoir levels declining and mandatory water shortages affecting users in the Lower Basin states. Most of the western and northern part of Utah lies in the Great Basin, where the Great Salt Lake has reached historic low elevation levels. This has led to fears over ecosystem, economic, and public health risks from the Lake’s decline. The exposure of large expanses of lakebed to wind storms can disperse toxic dust throughout the watershed and region.

While these conditions represent only a snapshot in time, Utah and other western states are experiencing the most persistent and driest conditions in recorded history. Nevertheless, many people remain optimistic that droughts will be short-lived, and that snowpack, rain, and soil moisture will return to “normal.” However, as we face a changing climate coupled with population and economic growth, we must build resiliency into our water and land use planning by taking immediate steps to adjust habits that contribute to growing water scarcity. We must also implement measures to support responsible and sustainable growth.

There is broad consensus that optimizing water use and reducing demand for municipal, commercial, institutional, industrial (M&I), and agricultural water is critical to ensure that Utah’s limited water supply can equitably meet the needs of people, agriculture, the economy, and the environment. However, the pathway to achieving substantial water conservation includes many challenges as well as opportunities.

One significant opportunity for reducing water consumption lies with integrating water use into land use planning. Too often, land use planning is undertaken independently of water use planning efforts, even though the two can and should inform one another. Traditionally, responsibilities for water resource management and land use planning have been siloed in different levels of government, departments, and management entities. The way that new development occurs, however, can have a major impact on municipal water demand, as well as the health of the communities and watersheds in which it happens. Land use planning that incorporates water use considerations can lead to a more sustainable urban design in terms of the built environment, urban ecology, and lifestyle patterns of cities and towns.

¹ Hollingshaus, M., M. Hogue, E. Harris, M. Bateman, M. Backlund, and E. Albers. 2022. Utah Long-Term Planning Projections: A Baseline Scenario of Population and Employment Change in Utah and its Counties. Kem C. Gardner Policy Institute. University of Utah.

Another significant opportunity lies in integrating land use considerations into water planning. This opportunity recognizes that the earth’s water cycle is a closed loop that circulates water between oceans, the atmosphere, and land via precipitation, drainage, and evaporation. Just as the natural environment treats water as a cycle, it is important that communities view their water supply, including wastewater and storm water, as interconnected and part of their larger watershed. Integrated Water Resource Management (IWRM) coordinates the development and management of water, land, and related resources, while maximizing economic and social benefits, and minimizing impacts on the environment. A key step in this process is to change institutional structures to strengthen the coordination and collaboration between water supply and wastewater managers, land use planners, economic development managers, and other community and regional officials.

National organizations of water and land professionals recognize the urgent need to integrate water and land use planning, policies, and management.² In 2021, the American Water Resources Association along with the Babbitt Center for Land and Water Policy, the American Planning Association’s Water and Planning Network, and the American Water Works Association issued a Findings Statement and Call to Action resulting from the Specialty Conference on Connecting Land and Water for Healthy Communities. The findings synthesize observations from conference participants about the reasons for and consequences of fragmentation between water and land planning. The call to action includes a set of guiding principles to aid land-water integration efforts.

For additional information on the call to action: https://www.awra.org/Members/Publications/Policy_Statements/Connecting_Land_and_Water.aspx

Notable key stakeholder processes, authorities, and studies have advocated for the integration of land use and water planning in Utah, including, but not limited to the:

- Recommended State Water Strategy (2017)
- [Water Resources Plan \(2021\)](#)
- [Utah’s Coordinated Action Plan for Water \(2022\)](#)
- Utah’s Division of Water Resources [Conservation Programs](#) and [Integration of Water and Land Planning](#),
- Utah’s Division of Water Quality [Watershed Programs](#),
- [Great Salt Lake HCR10 Steering Group Recommendations to help maintain adequate flows to Great Salt Lake \(2020\)](#), and
- [Reports and studies](#) commissioned by the Great Salt Lake Advisory Committee.

This guidebook provides resources to bring water resource management and land use planning in line with one another. By doing so, Utah’s communities—regardless of their size or geographic location—can shift their focus from supply- to demand-side water management, promote

² Endter-Wada, J. L., Sternlieb, F., Church, S. P., & Stoker, P. 2022. Featured Collection Introduction: “Connecting Land and Water for Healthy Communities.” Journal of the American Water Resources Association, 58(3):313-318. <https://doi.org/10.1111/1752-1688.13042>

cooperation to enhance watershed health, and seek opportunities to implement integrated water and land use planning.

FOCUSING ON DEMAND-SIDE WATER MANAGEMENT

Instead of making costly investments to increase water supply, communities increasingly are reducing demand for water by using existing supplies more efficiently. A growing population can escalate the costs of operating local utilities, the need for enhanced and expanded infrastructure, and if the water supply is constrained, the cost of acquiring new sources. In the past, water resource managers and water providers turned to supply side management to meet growing demand by investing in water acquisition, treatment, and storage and distribution projects. However, these options come with a significant price tag and can be time and resource intensive. Recent and projected warming throughout the region also makes the availability and reliability of new supplies less predictable. An alternative to these costly investments is more efficient use of existing supplies. Increasingly, communities are turning to demand side management—an approach that seeks to reduce the demand for water. A demand side approach generally includes:

- **Water Conservation:** Encouraging water users to reduce how much water they use.
- **Water Efficiency:** Encouraging or requiring the use of technology, building, or site designs that use less water.
- **Water Reuse:** Treating or converting gray and black water to replace or augment water supply.

One particularly impactful demand side management strategy is the integration of water conservation, efficiency, and reuse into land use planning. Communities throughout the West have found that by increasing development density, utilizing technological efficiencies, and enacting aggressive conservation programs, they have been able to continue to grow without acquiring new water supplies. Water-smart land use planning can reduce the negative financial impacts of increased water demand through efficiency and conservation measures implemented prior to, during, and after building construction. The demand side management approach to water resources is also good for the triple bottom line of financial, social, and environmental outcomes. It increases the cost-benefit ratio of capital investments by using the same amount of water and infrastructure to serve more people per dollar spent, benefits the environment by balancing ecosystem and human needs, and ensures a more sustainable future for our communities through a more resilient and long-lasting water supply.

PROMOTING WATERSHED COOPERATION

Every community lives within a watershed—a land area that channels rainfall and snowmelt to creeks, streams, rivers, and underlying groundwater aquifers. The amount and quality of water in rivers, streams, and groundwater aquifers depend on activities in the land areas upstream from those sources. Water and land are connected through the geography and hydrology of watersheds, as are the people who use the water and land and share in the benefits and risks that their collective actions have on watershed health. For instance, the dwindling Great Salt Lake



Wayne Wurtsbaugh, Utah State University, 2022

lies at the bottom of its large watershed; cooperation within and between upstream communities is required to help secure its future.

Watersheds integrate natural terrestrial and aquatic ecosystems with human water and land uses. Tensions often exist between preserving the natural environment and developing land for residential, commercial, or industrial uses to house a growing population and promote economic growth. While degradation of land within a watershed comes with societal and environmental costs, careful management yields significant benefits. Holistically managed watersheds can store water supplies; reduce erosion and channel incision; increase infiltration into local floodplains and regional aquifers; reduce water treatment costs; and provide habitat, biodiversity, recreation, and aesthetic values. Healthy watersheds and resilient natural systems can also help communities cope with increasingly extreme weather events such as droughts, high temperatures, and severe wildfires.

Fortunately, many measures can be taken to maintain and improve watershed health, both for existing and future development. Factors such as residential lot size, housing density, water conservation measures, vegetation management and habitat protection, and storm water management all influence the health of a watershed and impact water quality and stream flows. However, to realize the benefits of such measures, communities located within the same watershed must cooperate and work together toward shared goals.

WATER AND LAND USE INTEGRATION OPPORTUNITIES

Utah communities are faced with the challenge of accommodating growing populations, supporting economic development, and maintaining or enhancing quality of life, all while managing increasingly variable and scarce water supplies, infrastructure challenges related to growth, and the impacts of land and habitat degradation.

Regionally shared risks of extreme weather and wildfires also make understanding the interconnectedness of water and land particularly urgent. Across Utah, communities have experienced record heat, devastating fires, dry soils, ongoing drought, and damaging floods, alongside recent health and economic impacts associated with the COVID-19 pandemic which, in some places, were exacerbated by limited access to safe and reliable water. These conditions have highlighted the need to act now to build community, economic, and environmental resiliency within communities and across regions and watersheds.

At the community level, each planning and regulatory mechanism guiding how and where a community develops provides an opportunity to consider how to better integrate water and land use with a view toward reducing future risks and strengthening resiliency. Potential points

of intervention to enhance land-water integration are described in Table 1. Determining how and where to intervene will depend on a community’s political motivation and capacity, the demand side management initiatives that have been implemented to date, and their water-saving goals. The vision and goals defined in general and master plans will guide opportunities in other elements of a local government’s water and land use policies and programs.

Table 1. Intervention points, tools, and their purpose for strengthening integration between water and land use.

Point of Intervention	Tool	Purpose
Planning & Goal Setting	- General Plans - Water Conservation Plans - Storm Water Management Plans - Capital Improvement Plans - Hazard Mitigation, Response, & Recovery Plans	Evaluates local water supplies, current and future demands, and related community and economic values. Establishes goals and objectives for managing the intersection of natural resources and the built environment.
Development Policies	- Zoning Ordinances, Subdivision Regulations, & Planned Development Policies - Water Budgets - Demand Offset Programs - Building and Design Codes - Water Efficient Landscaping	Links new development to water supply planning. Determines the requirements applied to new development for water resource management, conservation, and efficiency.
Watershed Resilience & Water Smart Infrastructure	- Watershed Planning for Resilience - Green Infrastructure and Low Impact Development	An integrated water resource management approach helps mitigate the factors that can degrade ground and surface water quality and quantity. Green infrastructure can support these efforts.
Water Conservation and Efficiency Tools	- Conservation Rate Structuring - Post-Occupancy Incentives and Educational Programs - Consumer Educational Messaging	Empowers and incentivizes landowners and renters to reduce water consumption. Links community-wide programs to water supply planning.

THE INTEGRATION OF WATER AND LAND USE PLANNING GUIDEBOOK

This workshop guidebook is intended to help your community identify the most appropriate actions related directly to land use that will help you achieve your community’s water resource management goals. It is divided into four sections.

Section 1: Planning and Goal Setting

Summarizes opportunities provided by integrating water and land use during planning processes for new and existing areas.

Section 2: Water Smart Land Use and Development Policies

Provides a review of policies and requirements that can make a community’s development pattern water smart.

Section 3: Watershed Resilience and Water Smart Infrastructure

Describes water smart infrastructure approaches that can protect watersheds, support vegetation and wildlife, recharge local floodplains, and provide community amenities and open space.

Section 4: Water Conservation & Efficiency Tools

Summarizes water conservation and efficiency tools for managing existing community water demands.

Each section includes:

1. An overview case statement that provides justification for each approach and the water saving impacts that can be expected.
2. Toolboxes of specific policy or management actions a community can take to achieve water conservation and efficiency outcomes for each approach.
3. Case studies that illustrate how Utah communities and institutions have implemented one or more of these tools to integrate their water and land use planning efforts.
4. Approaches and strategies for implementation of the tools and model policies.

The Growing Water Smart Resource Appendix at the end of the Guidebook provides resources for more information and will be updated as more resources become available.



Section 1: **PLANNING AND GOAL SETTING**

OVERVIEW

Traditionally, water planning and land use planning processes have been conducted in separate departments or agencies with different mandates and responsibilities. Land use planners have focused on how much and what type of growth may take place in their communities, while water resource managers have focused on ensuring adequate water availability.

Comprehensive land use planning, water planning, and capital improvement planning are all interrelated, however, and integrating them requires breaking down traditional planning and operational silos. Done successfully, an integrated water resource and land use management plan can ensure the following:

- A community’s vision for the future considers water and growth together.
- Plans for water resource management, community health, capital improvement, and economic development are consistent with both the community’s vision for future land use and its goals for sustainability and resilience.
- Development occurs in a way that protects watersheds, including ecological functions, and the quality and quantity of water supplies

Planning is a continuous process and includes developing and adopting written plans as well as a series of actions to implement, monitor and review, and update those plans. Current best practices in planning encourage collaboration among staff in various departments within a jurisdiction, partnerships with other jurisdictions, and robust engagement of all segments of a community to gather input from residents, community organizations, and private sector and non-profit groups and to build public support for the plans and their implementation.

Goal setting is an important purpose and component of a comprehensive planning process. A community’s future goals are generally shaped by its historical context, affected by current trends and issues that need to be addressed, and guided by its shared values and aspirations. A variety of collaborative processes can be used to create a future vision, define guiding principles, and set goals that will direct and guide community actions toward integrated water and land planning. Tools such as scenario planning are particularly useful for imaging and choosing between different community futures, offering communities pathways toward more sustainable alternatives in how they use and integrate water and land.

TOOLBOX: GENERAL PLANS

General plans, sometimes referred to as master plans, are required of municipalities in Utah and guide how a community will manage future land use and its implications for a wide variety

of functions, including transportation networks, parks and open space, natural resources, housing, economic development, and future infrastructure needs ([Utah Code § 10-9a-401](#)). *One of the greatest values of a general planning process is that it provides opportunities for a communitywide dialogue about the future.*

In 2022, the state legislature passed [Senate Bill \(S.B.\) 110](#), which amended the municipal and county Land Use, Development, and Management Acts to require municipalities (but not cities of the fifth class or towns) to include a water use and preservation element in their general plans by December 31, 2025. The legislation includes specific requirements on what the water use and preservation element must address and requires general plans to account for the effect of land use on water demand and to coordinate the general plan’s land use and water use elements.

S.B. 110 also directs planning commissions to consult with relevant public water systems and to consider regional water conservation goals, applicable municipal water conservation plans, and principles of sustainable landscaping. The planning commission must also make numerous water conservation-related recommendations to the municipal or county legislative body.

Through S.B. 110 in 2022, Utah joined several other states whose statutes require water as an element in comprehensive/general plans (Rugland 2022:19). Integrating water-related goals into one holistic plan or across plan elements ensures that the complex interrelationships between water systems, human systems, and ecological processes are considered together in relation to the land. General plans also offer an excellent educational opportunity for helping a community understand:

- Projections for future population and drivers of growth.
- The type and location of development occurring in the community.
- The source, capacity, and conditions of a community’s water supply, distribution systems, and water-related infrastructure.
- Adequacy, sustainability, and vulnerability of the water supply.
- Health conditions of the watershed in which the community is located.
- Current community programs and projects.
- Tradeoffs that may be involved in achieving the community’s long-term goals.

A general plan can also help a community identify opportunities to integrate water into traditionally land use-focused general plans by including goals for:

- Water supply and demand management.
- Wastewater treatment and disposal.
- Watershed processes and health.
- Floodplain and storm water management.
- Interagency coordination and collaboration.

Water-related goals and policies may arise in a variety of ways in different general plan elements. The most obvious is through inclusion of a water resources element. Examples of water resource elements include: (1) the known legally and physically available surface water,

groundwater and effluent supplies; (2) the total demand for water that likely will result from future growth projected in the general plan in addition to existing uses; and (3) an analysis of how projected future demand for water will be served by the identified water supplies or plans to obtain additional necessary water supplies.

Water resource elements leave significant room for exploring various approaches to securing and preserving community water supplies outside of the state’s regulatory roles (e.g., administering water rights and allowable uses, and permitting wells). A water resource plan element could, for example:

- Address concerns about sustainability of the water resource as part of the discussion of necessary water supplies.
- Evaluate conservation as a planning factor in demand modeling, among other things.
- Identify goals and approaches for coordinating and consulting among departments and with other relevant entities to secure and preserve community water supplies through a variety of approaches and authorities.

Water-related goals and policies may also arise in other plan elements, depending on the planning and development concerns and priorities of the community or municipality. Water resources considerations may also influence policies developed for environmental planning, cost of development, and other elements.

TOOLBOX: WATER CONSERVATION PLANS

Separate from general plans, the state requires water providers with more than 500 connections to submit a water conservation plan to the [Division of Water Resources](#) to comply with the state’s Water Conservation Act ([Utah Code § 73-10-32](#)). Providers with fewer than 500 connections may also submit plans for review, although they are not required. These plans describe existing and proposed water conservation measures that outline how water providers and the end users of culinary water will conserve water so that adequate supplies are available for future needs. The plans also describe measures that will enable the water provider to meet the state’s Regional Water Conservation Goals.

TOOLBOX: STORM WATER MANAGEMENT PLANS

The state’s [Division of Water Quality](#) also requires storm water management plans from communities to meet the requirements of the [Utah Pollutant Discharge Elimination System](#) (UPDES) permit system which is mandated by the U.S. Environmental Protection Agency’s [Clean Water Act](#). Utah’s Storm Water Program regulates storm water discharges from municipal storm sewer systems (MS4s), as well as industrial and construction activities, and operators of these systems may be required to obtain a UPDES permit before they can discharge storm water runoff that has the potential for delivering harmful pollutants into local surface waters such as streams, rivers, or lakes. This is an important mechanism for protecting water resources in the state because water sources with impaired quality may no longer be available for beneficial uses, effectively reducing available water supplies.

TOOLBOX: CAPITAL IMPROVEMENT PLANS

Capital Improvement Plans (CIPs) forecast and match a community’s projected revenues and its capital needs over a multi-year period. Planning departments, parks, public works, and water and wastewater utilities often rely on grants and bonds to invest in green and gray infrastructure improvements or new construction. By creating a long-term investment strategy for the infrastructure improvements identified in a general plan or water conservation plan, a CIP ensures that financial resources match community priorities and further water infrastructure that is resilient to climate change and other future scenarios.

TOOLBOX: HAZARD MITIGATION, RESPONSE, & RECOVERY PLANS

Hazard mitigation plans identify specific hazards likely to impact a community, including acute shocks such as wildfire or flooding, as well as long-term stressors such as drought. These plans identify pre-disaster risk reduction as well as post-disaster response activities. Planning should include determination of how hazards can impact water infrastructure and plans for reducing vulnerability and risks.

TOOLBOX: SETTING THE FOUNDATION FOR STRONG PLANS

Planning provides the roadmap for a community’s policies, programs, and regulations. Processes such as visioning, information sharing, data alignment, public education and engagement, and regional partnerships serve as the foundation for creating scientifically sound, publicly understood, and community-supported plans.

Land use and water departments often use different data sets and analysis methods in their decision-making processes, such as growth rates to inform future land use or water demand projections. Identifying the discrepancies and understanding the implications of different projection methods can help communities estimate the extent of uncertainty and error in results. Coordinating around these issues, sharing information, and looking for ways to align data sets and methods will promote consistency and mutual understanding across departments and lead to better decision-making.

COMMUNITY ENGAGEMENT AND EDUCATION

The support of community members and organizations is critical for integrated water and land use planning and implementation. Engaging in planning and goal setting provides people with opportunities to provide important feedback, learn from information provided during the process, and build a common understanding of how climate change and land use patterns are impacting water availability and quality. Education or training programs for staff, elected officials, and public stakeholders strengthen support for perspectives and strategies that incorporate water-saving measures into land use.

Case Study: Salt Lake City Department of Public Utilities - Civic Engagement

Contributors: Laura Briefer, Director and Stephanie Duer, Water Conservation Program Manager, Salt Lake City Department of Public Utilities

Salt Lake City is committed to and actively encourages civic engagement. Community outreach and equity and inclusion are high priorities of [Mayor Erin Mendenhall](#). The city has a [Civic Engagement Team](#) that facilitates best practices for public participation and works with city departments to build their civic engagement capacity. The city uses a variety of means for people to [get involved](#) (e.g., community councils, community action teams, boards, commission, internships, and community programs). Its [community outreach](#) efforts include Community Office Hours where people can talk to one of Mayor Mendenhall’s liaison team out in the community, translation of community documents and communications into different languages, community outreach newsletters, and many more informal means of engagement.

This city-wide platform for Civic Engagement is utilized by departments throughout the city. The [Salt Lake City Department of Public Utilities](#) (SLCDPU) is especially active and responsive in interacting with its customers, including residential, commercial, industrial, and institutional entities in Salt Lake City, eight other municipalities, and unincorporated areas of Salt Lake County. The city provides drinking water, manages flood control and storm water, and collects and treats wastewater. It engages with the communities and people it serves in the processes of planning, policy development, program delivery, and project implementation in all of these water service areas.

Laura Briefer, the Director of the Department, stresses the importance of public engagement. She establishes personal connections with the mayors and key staff in the communities they serve, and coordinates with them about activities like land planning and establishing rate structures. She also coordinates with a wide range of constituencies on state-level water issues such as drought management and the Great Salt Lake. As a result of integrating public engagement into their operations and capital improvement activities, the utility spent a long time working with the public to implement an ordinance prohibiting new commercial or industrial land use that consumes more than 200,000 gallons per day, the rebuild of the sewer treatment plant, and reconstruction of the Fourth Avenue Well in Memory Grove. Public engagement is invaluable in these processes and helps them to better serve their member cities.

SLCPU’s public engagement was critical during development of its [2020 Water Conservation Master Plan](#). Stephanie Duer, Salt Lake City’s Water Conservation Program Manager, organized a suite of public engagement activities that included giving presentations about the plan in various municipalities, utilizing social media, and soliciting public feedback in person and through an online survey. After this public engagement, the utility’s plan exceeded the state’s basic requirements for a water conservation master plan. It provides a good example of issue framing, articulation of conservation goals, data analysis, identification of conservation programs and practices to implement, and includes an ongoing public outreach and communication plan.

REGIONAL COLLABORATION AND PARTNERSHIPS

Some goals are attainable within a single governmental jurisdiction while others may require engaging in collaboration between jurisdictions and partnerships with regional organizations, the private sector and non-profit organizations. Adding partners and coordinating across jurisdictions can identify shared interests, expand resources, and result in coordinated action strategies with larger impact. Regional committees and partnerships can provide an opportunity for cross-jurisdictional planning around shared water resources. They offer a way for county, municipal, water district staff, and stakeholders to collaboratively study local and regional issues, define desired future conditions, evaluate potential paths forward, and partner on implementation.

Approaches for Setting Strong Foundations for Integrated Land-Water Planning

- Link water supply and demand to projected land use patterns in both general plans as well as water conservation plans for a more granular understanding of water use by land use type.
- Reference general plan goals and strategies in the establishment or update of associated land use policies.
- Meaningfully address water throughout the community’s general plan elements, as well as thoroughly in the water resources element.
- Link water supply and demand, conservation, and recharge priorities and policies across related plans—including storm water management plans—to address common resource concerns through a variety of approaches and authorities.
- Set aside land for water-related infrastructure, such as recharge basins and treatment and recovery wells, in future land use maps.
- Use capital improvement plans to ensure investments are made in the physical infrastructure needed for water management, such as treatment facilities and water reuse infrastructure, or in projects that manage storm water through green infrastructure, infill development, hazard risk reduction, and watershed restoration.
- Increase the strength of your plans with consistency requirements, which require that future plans and zoning codes be consistent with the comprehensive plan.
- Look for confusing or conflicting language, goals, policies, processes, or regulations and take steps to clarify and align them.

Section 2: WATER SMART LAND USE AND DEVELOPMENT POLICIES

OVERVIEW

Urban water demand is both a function of household size, income, and lifestyle habits, as well as how we plan, design, and maintain our communities, including their commercial, industrial and institutional sectors. When it comes to saving water, where and how we grow and build truly matters.

Efficiencies may be found in cluster development patterns and in the design of buildings, sites, and infrastructure systems, especially for urban irrigation systems and landscaping. We also know that:

- Higher density and cluster developments consume less water than other development patterns.
- Some residential land use types consume less water than others.
- High-performing, water-efficient plumbing and building standards contribute to community water savings.
- Newer appliances and plumbing fixtures are more efficient than older ones.
- Water-saving and climate-appropriate plantings, landscaping standards, and maintenance practices consume less and conserve more water.
- Households that conserve water save money for themselves and their water provider, while conserving water for other people and nature.

To use less water, the best development policy is to make water smart development the easiest and most incentivized type of development to build by:

- Promoting higher density and cluster development, especially where infrastructure already exists.
- Promote high efficiency, water efficient plumbing and building standards.
- Promote water saving and climate appropriate landscaping standards and maintenance practices.

TOOLBOX: ZONING ORDINANCES, OVERLAY ZONES, AND CLUSTER DEVELOPMENT

Zoning ordinances are often the cornerstone of local land-use planning and are effective tools that municipalities and counties have to conserve and promote public health, safety, convenience, and general welfare.

OVERLAY DISTRICTS/ZONES

Overlay districts are special zoning districts that modify the regulations applicable in an underlying zoning district. Overlay districts may overlay one or more underlying zones. They cannot be used to require a use permit that would otherwise be allowable in the underlying district, but they may be used to apply additional requirements for uses permitted on a conditional basis in the underlying zone.

Overlay zones add an additional “layer” that increases or modifies regulations to the existing zoning of a [particular geographic area](#). Though typically used to guide development in specific areas like central business and historic districts, overlay zones are also effective tools for [natural resource protection](#) and the preservation of other critical areas. For example, overlay zones may be used to protect [working farms and ranches](#), ridgelines, riparian areas, and groundwater recharge areas, to name a few.

Some notable overlay zones in Utah include the following examples from Lehi City:

Lehi City Jordan River Protection Overlay Zone: www.lehi-ut.gov/wp-content/uploads/2013/09/Chapter-36-B-Jordan-River-Protection-Overlay-Zone.pdf

Lehi City Utah Lake Shoreline Protection Overlay Zone: www.lehi-ut.gov/wp-content/uploads/2018/11/Chapter-36-Utah-Lake-Shoreline-Protection.pdf

CLUSTER/CONSERVATION DEVELOPMENT

While most water conservation and efficiency efforts related to land use have focused on outdoor watering and indoor plumbing fixtures, there are considerable benefits to encouraging more clustered development patterns. Water usage studies have consistently demonstrated that in urban areas, the largest consumption of water is by large-lot, single- family homes where most of the water consumed is used outdoors during spring and summer. Alternatively, higher density development can result in reduced water consumption. Research has demonstrated that developments between 3-8 units per acre achieve the most water reductions and that even small adjustments to development density can yield large water savings for [cities](#).

Promoting water-efficient land use patterns provides many benefits in addition to saving water. It can also support the more efficient use of existing infrastructure, protect other natural resources, promote walkability, control flooding, and enhance neighborhood or community vibrancy. Another significant benefit to clustered development is the preservation of larger tracts of agricultural lands and open space through easement, covenant, or deed restrictions.

STRATEGIES FOR PROMOTING CLUSTER DEVELOPMENT

- At pre-development review, make rezoning, annexations, and Planned Unit Development (PUD) applications conditional on meeting water conservation standards. For PUDs, this can

include requiring a meter at each connection within the development and that standards within PUDs are the same as the requirements for the public utility distribution system.

[Planned unit development](#) is a distinct category of conditional use that is intended to promote the efficient use of land and resources, promoting greater efficiency in public and utility services, preservation of open space, efficient use of alternative transportation and encouraging innovation in the planning and building of all types of development.

- Develop future land use plans that establish designated future growth areas, both infill and greenfield, where adequate infrastructure exists for accommodating growth at higher and/or more urban densities.

Infill describes the construction of buildings on urban lands. Usually, these lands have not previously been built upon. Greenfield development occurs on land that has not been previously developed for any purpose.

- Change the zoning code to permit smaller lot sizes and higher densities by right in designated districts.

Zoning code is considered “by right” if the approvals process is simplified and projects receive approval without a discretionary review process, having met required zoning standards.

- Reduce or remove development standard barriers to cluster development, such as parking requirements, minimum lot sizes, and lot setbacks.
- Add height limitations to limit cooling towers and the associated water demand increases.
- Change zoning code to permit multiple types of residential development (e.g., multiplex, townhomes, apartments, accessory dwelling units) by right in designated growth areas to provide a diversity of housing options.

Accessory dwelling units are smaller, independent residential housing units located on the same size lot as single-family residences.

- Change zoning code to permit cluster and mixed-use development by right in designated growth areas.
- In exurban and rural areas, change zoning code to permit and incentivize cluster and conservation development by right.
- Manage commercial uses by making water-intensive uses, such as canning and bottling plants, data centers, etc., conditional instead of by right. Issue permits based on standards to meet water conservation and efficiency standards such as water recycling.

By code, Salt Lake City prohibits commercial and industrial uses of water that exceed 200,000 gallons per day ([Salt Lake City § 21A.33.010](#)). The ordinance was developed in response to ongoing drought conditions and the potential for water-intensive industries such as bottling plants and data centers relocating to the city.

- Provide incentives for increased densities using development or utility fee reductions/ waivers and density bonuses for developers.

TOOLBOX: WATER BUDGETS

A foundational element of water supply planning is the development of a water budget—an estimation of water flows into and out of a system. Water budgets can be applied at various scales: to a single home, to a development, to a single water provider, or to a local government with multiple water providers. At development planning stages, calculating a water budget for buildout can allow a community to carefully craft a vision within the constraints of its anticipated water supplies.

Like financial budgeting, every line item of water supply and demand should be accounted for in water budgeting, and tradeoffs and opportunity costs should be carefully considered in planning for and managing water resources. For instance, such a budget provides guidance for evaluating water demand at the development or site scale. A community that adds water budgets to development review processes and site plans optimizes site performance, conformance with the community’s vision, and stewardship of the overall water budget for buildout.

APPROACHES FOR DEVELOPING A WATER BUDGET

- Examine and tailor calculation methodology. The state has developed a [water budget model](#) to estimate water budgets at the state and basin level for planning purposes and basin level budgets may be used by counties for planning purposes. The information is used to formulate plans for conservation, demand reduction, repurposing of water use, inter-basin transfers and other planning activities and may provide a basis for smaller-scale water budgeting.
- Align methodologies and data sources across departments and communities. Different departments or water providers may use disparate data sources or methodologies. Communities that compare and coordinate data and information build a mutual understanding, improve communication, and reduce uncertainty in their projections.
- Connect water billing and actual land use data using GIS. Granularity and accuracy of estimations inform rate structuring and advance efficiency programs. This approach helps communities better understand how a rezoning proposal could impact water demand. It also helps them understand and compare the water use patterns and trends of different land uses and densities.
- Shift units of demand measurement to account for density. Moving from a *per-acre* scale to a *per-unit* or *per-square-foot-of-building-area* scale can help account for increasing density in residential and commercial developments.
- Utilize water budgeting to set maximum amounts for use on outdoor landscaping. A landscaping allocation allows a developer to select plant materials that require watering in amounts at or below the total amount of water budgeted.



(Water Feature) is by Todd Stonely 2022

TOOLBOX: DEMAND OFFSET PROGRAMS

Water demand offset programs require new development to offset projected water demand either through water conservation in existing development or transfer of water rights. The goal is to have all new development, including the expansion of existing homes or businesses, be “water neutral” in the water supply system. Some communities provide an in-lieu fee alternative. This concept can also apply to offsetting energy, wastewater, air quality, historic preservation, or watershed health impacts.

APPROACHES FOR MANAGING A WATER DEMAND OFFSET PROGRAM

- Establish an authority to monitor and administer the program.
- Determine the offset ratio. A ratio of 1:1 will maintain the current water supply and demand balance, and a 2:1 mitigation ratio will reduce the ratio of demand relative to supply. Wastewater reclamation projects are more reliable and are given a 1:1 offset value, and supplies created through demand management are considered temporary and are given a 2:1 ratio.
- If fee-based, ensure the charge reflects the costs of implementing the offset as well as administrative costs. Costs of developing new supplies are borne by the entity needing to offset demand. Fee schedules can be a flat rate or based on a percentage.
- Require verification of sufficient water supplies and water budgets. Work completed by developers must include documentation and verification by local program administrators.
- Consider the timing of the offset fee payment to allow enough time to procure supplies with those fees by the time the new demand is created by the development.
- Promote infill development by giving priority access for new water supplies to new demands within the existing service area boundary. Consider maximizing development opportunities within the target area before approving development in new regions.

Case Study: Water Demand Offset Program, Santa Fe, NM

Case study reprinted from the Sonoran Institute’s Growing Water Smart: The Water-Land Use Guidebook for Colorado (2021).

The City of Santa Fe, New Mexico began a Water Conservation Program in 1997 that has contributed to a per capita water use reduction of more than 50% since 1995 bringing demand down to 56 gallons per capita per day (GPCD).

A 2002 drought caused the City’s demand to exceed supply. The City took aggressive action initiating a rate structure increase, a rebate program, and a water demand offset program. Their water demand offset program gained national recognition demonstrating its effectiveness as a way to meet future demand. The program set requirements for all new development to offset water demand either through conservation in existing development or transfer of water rights to the City. The requirements are:

- For residential development requiring under 10 acre feet/yr and commercial development requiring under 5 acre feet/yr, the water demand offset could be met through conservation;
- For new development requiring greater than this demand, water rights would be required to offset new demand. To help developers offset demand, the City developed a toilet retrofits program.

The program connected willing homeowners who desired a retrofit to developers who could either buy credits from a qualified broker or do it themselves.

This program was so successful that the City nearly maximized its conservation potential. In response, the City updated its water demand offset program. The program includes the creation of a water bank to hold conservation credits for future development and a Water Conservation Credit Program. This program includes:

- The addition of rebates for more types of water use efficient appliances or retrofits of older ones and for outdoor watering equipment;
- A water budget program where a water user enters into an agreement to use less water and the City monitors the usage and pays the customer for the reduction in use; and
- A “free stuff” program including low-flow faucet and shower heads.

The water demand offset program applies to commercial projects that require 5 acre-feet per year (AFY) or more, residential projects that require 10 AFY or more, and mixed use projects that require 7.5 AFY or more.

TOOLBOX: BUILDING AND DESIGN CODES (PLUMBING, BUILDING EFFICIENCY, & GRAYWATER STANDARDS)

Reducing indoor water use in residences and businesses can be accomplished through water efficiency standards for indoor plumbing fixtures. These standards are important for managing long-term water demand because fixtures installed today will likely last 20-30 years and have the potential to require higher water use during that time. Utah’s maximum flow rates for indoor plumbing fixtures are comparable to federal standards in some instances, but higher

than Environmental Protection Agency (EPA) WaterSense product standards. Currently, WaterSense labeled products are not legally required to be installed by new development in Utah. However, local jurisdictions may incentivize water-efficient plumbing in local ordinances and in retrofit programs.

Table 2. Water efficiency standards comparison.

	Utah Statutes	Federal Standards	E.P.A. WaterSense Products
Residential Toilets	1.6 gallons/flush	1.6 gallons/flush	1.28 gallons/flush
Bathroom Faucets	2.2 gallons/minute @ 60 psi*	3.0 gallons/minute	1.5 gallons/minute
Showerheads	2.5 gallons/minute @ 80 psi	2.5 gallons/minute	2.5 gallons/minute

STRATEGIES FOR PLUMBING FIXTURES AND BUILDING EFFICIENCY STANDARDS

- Use green plumbing codes as a guide or adopt a green plumbing code requiring high-efficiency faucets, showerheads, and toilets in the plumbing code.

Green plumbing codes supplement the [Uniform Plumbing Code](#) or the [International Plumbing Code](#) in an effort to encourage sustainable construction practices. There are currently two organizations leading the development of green plumbing codes, the [International Code Council](#) and the [International Association of Plumbing and Mechanical Officials](#).

- Adopt building code standards that permit the use of water recycling systems.
- Adopt building code standards for the submetering of multifamily units.
- Incentivize the replacement of less-efficient toilet and faucet technologies with water efficient ones through rebates or replacement fixture programs.
- Create incentives for developers to receive lower impact fees for meeting water efficiency standards that go beyond requirements of the building code.
- Link impact fees to water budgets to guarantee that the low demands projected when impact fees are paid will be realized over time.

In response to drought, the Utah Water Quality Board adopted a graywater rule in 2004. However, the initial rule was very restrictive and was revised in 2020 to allow simple gravity-fed systems and expanded application to include multi-family and commercial properties. [Utah Code § R317-401](#) defines graywater and places authority for administration with local health departments that may or may not permit graywater systems and use. Where permitted, systems must be designed by a certified professional.

TOOLBOX: DEVELOPMENT REVIEW PROCESSES

The development review process encompasses all the procedures necessary to ensure development applications meet a community’s land use regulations. Communities’ development review processes vary slightly but engaging water providers in the process is an important strategy for integrating water and land and can support water resilient outcomes.

APPROACHES FOR INTEGRATED DEVELOPMENT REVIEW

- Document the development review process. Identify opportunities to add water conservation managers and include other sustainability or resilience experts to the land review process to identify and resolve water-related challenges or opportunities.
- Promote collaboration and build relationships between water and land professionals through regular meetings that maintain a shared understanding of the community’s strategic vision and priorities.
- Ensure that water-related compliance challenges are addressed and alternative approaches are considered early by involving water managers at pre-application and preliminary plat review meetings.
- Seek review and agreement from water resource departments on final approval of land use decisions.
- Ensure that a development is built, operated, and maintained as stated in the proposal by training site inspectors to recognize and enforce compliance on water-efficient design elements.
- Shape development agreements or planned unit developments (PUDs) to include water efficiency standards, alternative water use, and watershed protection efforts.
- Integrate low-impact development design recommendations into the site planning review.
- Use connection charges, such as impact and other fees, as incentives to guide development to areas with existing or planned infrastructure. Connection charges can reflect water budgets and allocation policies.
- Promote voluntary, incentive-based programs to implement creative plat designs with open space, water-use offsets, and water efficient plumbing, landscaping, and rainwater harvesting systems (in new builds and/or retrofits). Incentives may encourage developers to exceed the required water efficiency standards.
- Develop guidance to help residents and builders understand and comply with building and design codes and to learn about alternative codes being developed to promote sustainability innovations.

TOOLBOX: WATER EFFICIENT LANDSCAPING

In Utah, landscape irrigation accounts for 50-70% of per capita water use and represents a significant water conservation opportunity ([Utah Water Resources Plan, 2021](#)). Related, the legislature enacted [Utah Code § 10-91-536](#) in 2022 which defined water wise landscaping for the first time in the state’s history.

This Utah code broadly defined water wise landscapes as being suited to the microclimate and soil conditions of a given location, having the ability to remain healthy with minimum amount of irrigation once established, and using proper and efficient irrigation system design. In addition, the code prohibited municipalities from enacting or enforcing “an ordinance, resolution, or policy that prohibits, or has the effect of prohibiting, a property owner from incorporating water wise landscaping on the property owner’s property.”

Municipalities may still require property owners to comply with review processes before installing water wise landscaping, to maintain plant material in a healthy condition, or to follow water wise design requirements adopted by the municipality. Importantly, the code states that a municipality may no longer require a property owner to install or keep in place lawn or turfgrass in areas less than 8 feet wide (enabling property owners to change landscaping in parking strips, which are hard to water efficiently).

The legislature also addressed water efficient landscaping by homeowners’ associations (HOAs) in 2022 by enacting [Utah Code § 57-8a-218](#). This code requires HOAs to adopt rules that support water efficient landscaping, including allowances for reducing irrigation to lawns during drought conditions (making grass dormancy acceptable). It also prevents HOAs from prohibiting or restricting the conversion of existing water-intensive park strips to water efficient landscaping.

Communities working to make landscaping water smart should integrate tools to reduce water demand at the time of new construction. Many such tools that integrate [best practices](#) into development codes for water conservation and efficiency are available to local governments. These best practices may include requirements for:

- Plant materials that are best suited for the local climate and soil conditions.
- Grouping of plants into hydrozones.

Hydrozones are areas of the landscape where plants with similar water requirements are grouped.

- Limited use of turfgrasses to practical and functional applications.
- Low-flow and efficient irrigation technologies, including drip irrigation, smart irrigation controllers, and pressure-regulating irrigation valves and sprinkler heads.
- Water efficiency standards for landscapes.
- Rain sensors with a shutoff mechanism to prevent irrigation during natural rainfall events.
- Soil enhancements and mulching to optimize moisture holding capacity.
- Training for landscape contractors and professionals on water-efficient landscaping



techniques and irrigation water budgeting, like the [Qualified Water Efficient Landscaper \(QWEL\)](#) training program.

- Model [maintenance standards](#) and agreements for HOAs and others to use in contracting landscape services.
- A total amount of landscaped area permitted based on lot size percentage or square footage.
- A water budget for outdoor water use, ideally tied to tiered water rate structuring, that sends a price signal to ratepayers.

Since mandatory requirements significantly increase water savings, the goal of a community committed to water conservation should be to require all new developments and retrofits to meet robust water efficiency standards.

STRATEGIES FOR PROMOTING WATER EFFICIENT LANDSCAPING

- Develop landscaping guidelines that provide specific recommendations to individuals and developers on water-efficient plant materials, soil enhancement, mulching, and irrigation scheduling appropriate for local climates.
- Promote and/or incentivize the use of individual household rainwater harvesting for outdoor irrigation.
- Adopt [community water efficiency standards](#) that allow residents to take advantage of [rebate programs](#) offered by the state.
- Provide incentives for developers to install water-efficient landscapes through reduction of impact fees.
- Change subdivision codes to include residential, commercial, and public landscaping standards that reduce the use of water for irrigation by regulating:
 - Irrigated system efficiency and irrigated area;
 - Plant materials;
 - Rain sensors and/or smart irrigation controllers that adjust irrigation in accordance with local weather conditions;
 - Irrigation scheduling (frequency and depth);
 - Soil amendments;
 - Water loss limits.
- Non-regulatory options include changing property owner behavior through conservation and education programs implemented by the water provider, such as:
 - Rebate programs for water-efficient plumbing fixtures such as low-flow toilets and showerheads, and water-efficient washing machines;
 - Rebate programs for the replacement of water-intensive landscapes with water efficient landscaping;
 - Education about water efficient landscaping and efficient irrigation systems;
 - Irrigation audits/evaluations that educate homeowners and landscape managers on landscape irrigation efficiency.

Case Study: Herriman City Water Efficiency Standards

Contributor: Justun Edwards, Director of Public Works, Herriman City

Herriman City, a fast-growing city in southwestern Salt Lake County, receives 65% of its water from Jordan Valley Water Conservancy District (JVWCD). City officials estimate that Herriman's population will double by 2040. Beginning in 2019, Jordan Valley Water Conservancy District developed [Water Efficiency Standards](#) in order to help their member agencies use water more efficiently. JVWCD requires member agencies to adopt the standards when updating their water contracts. The standards include specific criteria for landscapes in new commercial and residential developments that use significantly less water than prior development. Setting water efficiency standards for landscapes is an effective tool to ensure efficient outdoor water use in new developments or redevelopments. Water providers want to make sure water is used efficiently and city planning departments want to make sure they have sufficient water supplies to continue to grow, ensure future water security, and protect their watersheds.

As part of the renegotiation of its contract with JVWCD, Herriman City decided to become the first of JVWCD's member agencies to adopt its new Water Efficiency Standards in [December 2020](#). The standards include setting a limit on the amount of turf allowed in landscapes, and requiring drip irrigation and 3-4 inches of mulch in planting beds. All new developments need to follow the standards in order to be approved. To mitigate conflicting code, Herriman changed part of its land use code in order to adopt the standards. They implemented a plan review and inspection process, and hired a full-time conservation staff member to ensure compliance. New landscapes are inspected by the city after installation to ensure that the water efficiency standards have been followed.

To ensure landscapes for new residential and commercial developments meet the intent and requirements of the Water Efficiency Standards, Herriman implemented a landscape review and inspection process. Builders and developers must submit a detailed landscape plan to be reviewed for compliance. As part of the plan submittal, they must complete a table that identifies lot size, impervious area, and landscape areas listing the total sod area which cannot exceed 35% for residential lots and 20% in commercial developments. Once the landscapes are installed an inspection must be performed to ensure compliance with the approved plan.

The reaction of developers to the standards has been generally positive. Herriman City initially wanted to keep a 75% living plant cover requirement, but reduced that standard to meet the Jordan Valley Water Efficiency Standards of 50% living plant cover to eliminate confusion, address developer cost concerns, and to further reduce water consumption. However, some issues have arisen during the implementation of the Water Efficiency Standards. Developers are finding that it is costlier to install water efficient landscapes than to install a traditional turf grass landscape. There has also been some pushback against the standards by developers with neighborhoods that were partially built-out when the new standards came into effect creating landscape inconsistency throughout the development. The homes built before the standards were implemented have a more traditional landscaping style; now the developers will have to navigate building new homes with the updated standards in those neighborhoods.

Case Study Continued

Herriman City was the first of the Jordan Valley Conservancy District’s member agencies to adopt their Water Efficiency Standards and has since been approached by other member agencies for advice on adopting the standards, and by cities in other parts of Utah who are looking to develop their own standards. Herriman City has approved a handful of commercial projects that follow the standards, and are beginning to see residential projects follow the standards in 2022. They will have more data available on the program’s progress in 2023. Beyond implementing the efficiency standards, Herriman City has initiated a process to consider how to implement the requirements of [SB 110](#), which was passed by the state legislature in 2022. This bill requires that water use and preservation elements be integrated into a city’s General Plan. Herriman City has taken an important first step on the path to a more water efficient future, and is making plans to do even more to achieve it.



Jake Powell, Utah State University, 2022

Case Study: Cedar City Water Wise Demonstration Street

Contributors: Candace Schaible, Extension Assistant Professor of Horticulture and Water Wise Landscaping and Jake Powell, Extension Landscape Architecture and Environmental Planning Specialist, Utah State University

Cedar City is the largest city in Iron County, Utah. Located 250 miles south of the state capital, it is the home of Southern Utah University, the Utah Shakespeare Festival, and the Utah Summer Games. The city has a population of approximately 36,000 and encompasses roughly 20 square miles on the western edge of the Markagunt Plateau in the Cedar Valley. Although the Cedar Valley rests on top of a natural aquifer, the city does not have access to sufficient water supplies at current levels of use.

Rural communities are often physically distanced from the water conservation and demonstration gardens located along the Wasatch Front. However, these demonstration gardens provide tangible examples of how water wise landscapes can look and feel and provide an opportunity for homeowners to gather landscape ideas and inspiration. In 2019, Iron County Extension Assistant Professor, Candace Schaible, wanted to make access to such demonstrations easier for Cedar City residents by installing water wise landscapes in a new suburban neighborhood.

To make this goal a reality, she collaborated with Utah State University Landscape Architecture and Environmental Planning Specialist, Jake Powell, on an Extension Water Initiative grant to help design, fund, and install a water-wise demonstration street in the city. The two brought the idea to the Iron County Home Builders Association and one builder volunteered to take on the project.

Working with local real estate developer, [Alex Meisner Construction](#), the team created a series of front yard designs showcasing water-wise landscape design principles and techniques and these designs were then installed at nine model home sites. Demonstrating water wise landscape design principles at the model homes has worked to provide homebuyers with an immediate connection to water wise landscape construction ideas and principles that they may then apply on their own properties.

The nine home landscapes are a tangible focus for the partnership that is helping to change the vernacular landscape of Cedar City and more water wise landscapes continue to be installed in the neighborhood. The project includes a [website](#) that details the landscape designs and will also share water use data from the demonstration landscapes over time. A series of associated courses and resources teaching and reinforcing the principles displayed at the homes is also planned.

Case Study: Utah Department of Facilities Construction and Maintenance

Contributor: Andy Marr, Assistant Director of Facilities, Utah Department of Facilities Construction Management

The mission of the Utah Department of Facilities Construction and Management (DFCM) is to provide professional services to assist State entities in meeting their facility needs for the benefit of the public. This includes jurisdiction over nearly 4000 properties and landscapes across the state such as universities, community and technical colleges, the Utah State Fair Park, and other state agencies.

In 2021, in response to the ongoing drought, Governor Spencer Cox issued [Executive Order 2021-10](#) requiring state agencies to follow the Utah Division of Water Resources’ [weekly lawn watering guide](#). All DFCM facilities complied with the executive order, but the public still saw sprinklers running and green grass on state facilities, which presented a public relations challenge. In 2022, the state legislature passed [H.B. 121](#), adding more robust guidance to the executive order to require turfgrass dormancy to help conserve water. To meet the requirements of the new legislation, Andrew Marr, Assistant Director of Facilities, DFCM, consulted with Utah State University’s [Center for Water Efficient Landscaping](#).

Quantitative guidelines for irrigation of state facilities were developed, including only allowing ½ inch of irrigation water applied weekly during shoulder seasons and 1 inch applied during the hottest weeks of the summer. Slightly higher irrigation amounts were allowed in southern Utah to accommodate a longer growing season and higher temperatures. These guidelines were brought to the Governor’s cabinet and received their approval, and the new requirements were issued to all delegated facilities falling under DFCM jurisdiction. In addition to the new irrigation requirements, all grounds supervisory staff of DFCM were required to complete training through the [Qualified Water Efficient Landscaper](#) program to learn how to install and maintain their landscapes and irrigation systems for water efficiency.

DFCM has also implemented other processes to facilitate the success of their response to the Governor’s executive order and H.B. 121. A database is now maintained for all managers to indicate their compliance with the reporting requirements of H.B. 121 and any factors that may prevent that compliance (e.g., local city or water district requirements). Monthly meetings provide an opportunity for managers and stakeholders to discuss questions regarding the new irrigation practices and to request funding for water meters, smart irrigation control technologies, rezoning of irrigation systems, and water efficient landscaping to bring facilities into compliance.

Andrew Marr describes DFCM’s efforts as an ongoing progression of learning and implementation that is just beginning. “It’s time to figure out our process and in the coming seasons our managers will know what to do,” he says. “It’s more about the buy-in, the common goal and common mission. It’s hard to turn the ship around but (by) providing incentives and recognition...we’re getting there.”

Section 3: **WATERSHED RESILIENCE & WATER SMART INFRASTRUCTURE**

OVERVIEW

How we manage all forms of water, from storm water to wastewater, impacts both the built and natural environment. Approaches that incorporate an [Integrated Water Resource Management](#) (IWRM) methodology into building, site, subdivision, and infrastructure standards can protect ecosystems, enhance watershed resilience, and harness the utility of all forms of water. An IWRM approach can help to mitigate the factors that can degrade ground and surface water quality and quantity including:

- Pollution from urban and agricultural runoff and natural disasters like floods and wildfires;
- Sedimentation due to soil disturbances, vegetation loss, and erosion from road construction and new development;
- Destruction of riparian areas due to development and changes in climate;
- Increased amounts of storm water due to increases in impervious surface area from development;
- Decreased or lost water infiltration resulting from increases in impervious surface area and more rapid runoff; and,
- Variability in water supplies caused by periodic droughts.

Municipal and county governments are also tasked with providing necessary public services within their jurisdictions, which may involve community-scale water, wastewater, sewer, and other infrastructure and improvements. Such infrastructure development usually occurs over many years and depends on local goals, development and buildout needs, and sufficient revenue and financing. Water smart approaches like green infrastructure can provide several additional benefits to traditional ‘gray’ infrastructure, like recharging local floodplains, supporting vegetation and wildlife, providing community amenities and open space, mitigating urban heat island effects, and protecting watershed health and resilience.

Green infrastructure describes a range of measures that use permeable surfaces, plants, and soils to keep storm water onsite, thereby reducing flows into community sewer systems or to nearby surface waters.

Gray infrastructure describes systems designed to move storm water away from the built environment.

TOOLBOX: WATERSHED PLANNING FOR RESILIENCE

Landscape scale changes resulting from both human and natural forces have a significant impact on natural ecosystems and water resource availability. Safeguarding available water resources through watershed protection standards and policies is an important but often overlooked goal in Western communities. Watershed planning and protection has often been considered a function of collaboratives and nonprofits working with local, state, and federal agencies to restore ecological processes and functions. However, the way communities develop and redevelop can either escalate the threat to our watersheds or nurture nature and enhance the returns.

Watershed planning for resilience focuses on minimizing negative impacts as new development occurs. Watershed protection goals are included in a wide variety of community plans, such as comprehensive plans, emergency management plans, watershed plans, water resource management plans, and open space plans. Converting these goals into concrete policy in development code is essential to prevent watershed degradation and enhance community resilience.

APPROACHES FOR ENHANCING WATERSHED RESILIENCE

- Map all sensitive areas including wetlands, riparian corridors, infiltration zones, water supply watersheds, groundwater basins, and natural disaster-prone areas, such as flood, drought, and wildfire areas.
- Adopt plans for wildfire mitigation, watershed management, storm water management, and floodplain management that designate sensitive areas and goals for mitigation. These plans should reference other plans so that priorities and objectives build on and reinforce each other and the environment is viewed holistically.
- Limit development in sensitive areas by clustering homes within a smaller geographic zone, incentivizing infill development in less sensitive areas, and providing low impact design standards/guidelines.
- Create zoning districts with lower densities and/or cluster development to protect surface and groundwater sensitive areas.
- Adopt development standards for stream buffers and setbacks to protect water quality. Adopt vegetation protection standards that minimize disturbance to vegetation within the riparian corridor.
- Adopt storm water management and site design standards that utilize best practices for low impact design reducing storm event runoff and increasing water infiltration.
- Adopt site level soil erosion mitigation standards for new development to reducesedimentation and run-off and protect water quality from land disturbance.

- Adopt surface and/or groundwater districts with standards to minimize contamination of streams and shallow aquifers that will protect existing and potential sources of drinking water supplies.
- Participate in collaborative efforts to restore watershed functions through watershed restoration projects.

Communities should identify the top multi-benefit and integrated strategies and projects, then implement these projects ahead of less integrated proposals (unless crucial urgency demands otherwise). Policies, plans, programs, and projects should be monitored and evaluated to determine if the expected results are achieved, and to improve future practices.

TOOLBOX: GREEN INFRASTRUCTURE & LOW-IMPACT DEVELOPMENT

Green infrastructure uses the natural ability of permeable surfaces to absorb storm water. Low-impact development (LID) is the retention or restoration of natural hydrologic patterns by using landscape and site design to keep as much rainwater as possible from leaving the site. Instead of designing a site or streetscape to funnel storm water off-site as fast as possible, green infrastructure and LID approaches use vegetation, porous materials, rain gardens, and detention basins to reduce storm water runoff and encourage the onsite infiltration of storm water.

Common Water Smart Infrastructure Techniques	
Application	Description
Bioretention basins, storm water harvesting basins and rain gardens	Small to large scale planting areas within the hardscape containing shrubs, trees and grasses.
Bioswales	Shallow and uncovered channels that induce meandering and are placed inline within a drainage channel.
Curb extensions and chicanes	Traffic calming measures which widen the sidewalk and/or narrow the street for a short distance.
Curb openings	Drainage inlets that divert storm water into bioretention basins.
Detention ponds	Basins that provide flow control by collecting storm water runoff.
Permeable pavement, gravel, or pavers	Methods of paving that allow infiltration and can be used in low to moderately trafficked areas like sidewalks and parking lots.

Benefits of green infrastructure include:

- Reducing the need for outdoor irrigation; native and adapted plants may be used to revegetate channels and basins and survive with naturally occurring rainfall once established.
- Storm water that is not used by plants is cleaned as it recharges into the ground, thus reducing peak flooding, reducing pollutant loads downstream, and lowering the risk of sewer overflow.
- Additional vegetated areas in a community can help to mitigate heat impacts by providing shade, sequestering carbon, and absorbing solar radiation in urban neighborhoods.
- Relative to other types of traditional or gray infrastructure for storm water management, green infrastructure is more affordable to install and maintain.
- Particularly in shallow groundwater areas or near riparian areas, increased storm water infiltration can improve water quality and restore watershed health and other natural hydrologic functions in urban areas.
- Indirect benefits include:
 - Increased public safety due to reduced flooding, improved emergency vehicle access, and reduced property damage;
 - Expanded landscaped areas that produce more oxygen, cool neighborhoods, and reduce energy consumption;
 - More attractive neighborhoods that foster pedestrian and cycling activity, reduce traffic speeds, and enhance feelings of safety;
 - Job creation through installation and maintenance of LID and, indirectly, landscape industry jobs (plant production and sales).

STRATEGIES FOR IMPLEMENTING WATER SMART INFRASTRUCTURE

- Map all sensitive areas including wetlands, riparian corridors, infiltration zones, water supply watersheds, groundwater basins, and natural disaster-prone areas, such as flood, drought, and wildfire prone areas.
- Limit development in sensitive areas by clustering homes within a smaller geographic zone, incentivizing infill development in less sensitive areas, and providing LID standards or guidelines.
- Preserve regional open space by clustering development, maximizing unpaved areas for storm water retention.

- Consider the potential to use storm water recapture for a centralized urban natural open space. Conveying this water to a common area or neighborhood park may enhance the vision of your community or neighborhood.
- Incorporate water holding areas into the landscape, such as creek beds, recessed athletic fields, ponds, cisterns, and other features.
- Adopt development standards for stream buffers and setbacks to protect water quality.
- Design all aspects of landscaping—from the selection of plants to soil preparation and installation of irrigation systems—to reduce water demand, retain runoff, decrease flooding, and recharge groundwater.
- Use permeable surfaces for hardscapes whenever possible.
- Work with transportation and civil engineers to update development standards and to map streets and areas that have the highest flood potential, as well as the widest setbacks where there will be room for tree plantings.
- Use green infrastructure for traffic calming, beautification, and placemaking. Consider placing green infrastructure along areas where vehicle speeds need reducing or where bicycle and pedestrian traffic is more concentrated.

Placemaking is the participatory process of creating places where people want to live, work, play, and learn.

- Adopt plans for wildfire mitigation, watershed management, storm water management, and floodplain management that designate sensitive areas and goals for mitigation. These plans should reference other plans so that priorities and objectives build on each other and the environment is viewed holistically.
- Connect infrastructure and improvements in the capital improvement plan with relevant goals and policies adopted in the general plan.



(Succulents) is by Shelby Ericksen 2020.

Case Study: Green Infrastructure at Our Village Community Center in Moab

Contributor: Jeff Adams, Founder and Principal, [TerraSophia LLC](#)

On August 20, 2022, Moab, Utah experienced an unprecedented rainstorm that led to a 100-year flood. The total amount of rainfall attributed to the storm ranged from 1 to 1.5 inches, but close to 1 inch of that amount fell within a 20-minute span that evening. The rain fell southeast of town, draining county and Bureau of Land Management land into Mill Creek, a typically small creek that originates in the nearby La Sal Mountains and meanders through the heart of town.

Moab was unprepared for the amount of destruction and property damage that a storm of this magnitude would cause. In some cases, detention ponds that had been designed to blow out under previously approved plans and flood neighbors did so and in other cases, detention ponds that had been designed to retain storm water blew out and flooded neighboring properties.. A wall of water rushed down Main Street, flooding businesses, resulting in desperate clean-up efforts as Labor Day and the busiest tourism weekend of the year quickly approached. A lack of integrated land and water use planning was on display.

Though many neighborhoods and businesses were devastated by the flood, others not only survived the storm, but did so without any damage. One of these was Moab’s [Our Village Community Center](#). The Center, a local non-profit located on a 5.5 acre farm in the heart of town, runs a pre-school and childcare center as well as many other community-focused programs.

In the spring of 2020, Annie Thomas, director of the Center, reached out to Jeff Adams, founder and principal of TerraSophia LLC, to address a legacy of storm water runoff from an adjacent property, a tourism-related business. Drainage from that business’s roofs and parking lot had often flooded the farm buildings now occupied by the Center. The Center had recently completed an extensive remodeling project to bring its facilities up to code to be used as a daycare center and the continued flooding put its mission and goals at risk.

Annie and Jeff developed a project to intercept the sheet flow of storm water using three basins and swales that intercepted that flow and then poured from one basin into the next. A shallow rolling dip in the Center’s access road allowed overflow from the basins to cross the road and enter another series of basins on the other side, ultimately draining to one of the farm’s fields.

Backhoe work finished two days before the Covid pandemic shut the project down, putting plans to involve the community in the project on hold. TerraSophia staff were able to return to complete the rock work and volunteers transplanted plants salvaged from the local middle school renovation. In all, the project required 3 or 4 days of machine work, 5 or 6 days of rock work, and hours of planting, mulching, and irrigation work. [Bee-Inspired gardens](#) and shrubs were also installed to add beauty and privacy.

The Center’s green infrastructure system has served its purpose well, even during the August 20, 2022 flood. Storm water has been redirected to soak into the Center’s grounds, and most

of the donated plants are still thriving. Ongoing maintenance is the new focus; some puddling that has started to occur on the access road will be addressed by the addition of gravel and cobblestones.

In the spring of 2022, a second phase of the project installed gentle earthworks around a new heritage tree orchard on the property. Now, when one of the city’s nearby storm ditches overflows and floods the property, the water is directed around the orchard, successfully joining with the initial green infrastructure project to move excess water offsite.

One month after the 100-year flood shocked the Town of Moab, there were still large debris piles and layers of sand and mud in some areas. However, the Moab community rallied, and the city and state have worked effectively together to support the citizens and businesses affected by this historic event.

Though catastrophic, the storm in August 2022 highlighted weak areas in the city’s planning processes and a lack of water and land use integration. The county has since begun reviewing storm water management codes, specifically maintenance practices, to ensure that storm water infrastructure is appropriately sized, built and maintained, and that existing code is enforced.



Section 4: WATER CONSERVATION AND EFFICIENCY TOOLS

OVERVIEW

Establishing water conservation, efficiency, and reuse in new development enables a community to grow water-smart from the start. Programs that incentivize or assist consumers in reducing water demand also serve an important role in retrofitting existing development and promoting a continued focus on wise water use.

Incentive programs and conservation rate structures can promote efficient water use by:

- Sending a price signal to encourage water conservation.
- Helping consumers invest in and manage efficient fixtures, appliances, and irrigation systems.
- Monitoring and communicating data about water usage to consumers.

TOOLBOX: CONSERVATION RATE STRUCTURING

Water providers set rates to collect the revenue they need for operations, invest in infrastructure, and protect public health. With a revenue goal identified, providers can develop a rate structure to meet additional objectives, including water conservation and acquisition of supplies. The state legislature also codified support for conservation rate structures ([Utah Code § 73-10-32.5](#)) in 2016 by requiring water retailers to establish increasing block rates for water as use increases. Prioritizing conservation and mitigating water demand can reduce water provider expenses by sizing water supply acquisition or storage to the lower level of demand.

Water rates are determined by two factors: fixed and variable costs. The fixed costs of water are determined by the costs of water acquisitions and the costs to establish, operate, and maintain the infrastructure to convey the water. The variable costs are based on the amount of water that consumers use.

Common goals for adopting water conservation rate structures include:

- Reducing daily peak usage.
- Reducing seasonal peak usage.
- Reducing total system demand.

Consumer water conservation does not create financial strain for a utility if the offset demand

allows new customers to be added to the system while maintaining overall water use with existing supplies. If it is possible that customer conservation may exceed the point where it would present a revenue challenge with the current price of water, consider having a public dialogue to design solutions and rate structures that reflect the community’s values and needs. Keep in mind that less demand pressure can result in considerable cost savings over time by reducing strain on water system infrastructure, thus delaying the need for maintenance, retrofitting, or expanding infrastructure.

There are a variety of conservation-oriented rate structuring options:

- Drought demand pricing: rates are higher during drought periods;
- Excess use: rates are higher for above-average water use;
- Inclining block: rate per block increases as water use increases;
- Indoor/outdoor: with separate meters, rates for indoor use are lower than rates for outdoor use;
- Penalties: customers are charged for exceeding allowable water usage limits;
- Scarcity pricing: the costs of developing new supplies is added to bills;
- Seasonal pricing: water rates are higher during the season with the most demand;
- Sliding scale: the unit price increases based on an average consumption;
- Spatial pricing: water rates are determined by the actual costs to supply water to specific locations;
- Time-of-use: water rates are higher during peak days or specific hours of the week;
- Water Budget: block rate is defined for each individual customer based on efficiency projections/expectations for that customer.

APPROACHES TO CONSERVATION RATE STRUCTURES

- Develop a utility water conservation plan to clarify water conservation goals.
- Conduct a rate assessment to determine options for rate structuring.
- Develop a rate structuring plan and conduct community education and outreach to minimize opposition to potential rate increases.
- Adopt a conservation rate structuring strategy.

TOOLBOX: POST-OCCUPANCY INCENTIVES AND EDUCATIONAL PROGRAMS

Both land use planning programs and water providers can engage consumers and provide incentives and education on the benefits of using water efficiently in their homes and businesses. Using technology like advanced water meters and sub-metering helps tailor these post-occupancy interventions.

CONSERVATION REBATE PROGRAMS

Incentive programs can be a useful way to reduce current water demands for both residential and commercial properties/water users. They can serve as a complementary way to involve current residents/post-occupancy developments in implementing water smart building and design features. Providing rebates for homeowners and businesses to remove water-intensive landscaping and retrofit water-smart plumbing fixtures is a well-tested tool that can generate meaningful water savings.

APPROACHES FOR CONSERVATION REBATE PROGRAMS

- Offer rebates to residents for installation of low flow plumbing fixtures such as toilets and showerheads, appliances such as high efficiency washing machines, and “smart” home water monitors to reduce indoor water use.
- Offer rebates to residents and commercial customers for “smart” irrigation controllers and other elements of water efficient landscaping to reduce outdoor water use.
- Use rebates or grants to incentivize HOAs to install water efficient landscapes, irrigation systems, and controllers.
- Establish a rebate program for multi-family residential buildings that have cooling towers to upgrade their conductivity controllers.

Cooling tower conductivity controllers monitor the electrical conductivity of the water in the tower. If the water’s conductivity exceeds a set point, a “blowdown” process is activated and water is released. Carefully controlling the quantity of blowdown water provides a significant opportunity for water conservation in these systems.

WATER METERING, AUDITS, & LEAK DETECTION

Water customers, including commercial, industrial, and residential users, may not be aware that water leaks and inefficient fixtures may be unnecessarily increasing their water use. While water providers may perform their own system-wide water loss audits, they can also support and incentivize customers to do the same.

Water metering is a method of measuring water consumption. Advanced metering technology, also known as “smart metering,” eases the data collection process and increases the specificity and frequency of the data. This increased granularity of information creates the opportunity for easily justifiable rate structures, rapid leak detection, and customized demand management programs. Utilities that pair metering and commodity rate structures report a 15% to 30% reduction in water consumption.

[Privately purchased metering devices](#) are also growing in popularity because they connect consumers to their water data in real time. In the absence of utility-wide advanced metering infrastructure (AMI), encouraging consumers to purchase their own meters may achieve similar water demand reductions at individual properties.

Furthermore, sub-metering multi-family, commercial, and outdoor uses can provide data granularity to empower refinement and optimization of water policies, rates, and fees. The value of this information may be worth more than the cost of installing extra meters.

Metering and the corresponding audits and interpretation can identify opportunities to modify water-consumptive behaviors. They can also detect leaks in the system and signal when infrastructural updates are necessary to mitigate water loss.

APPROACHES FOR WATER METERING, AUDITS, & LEAK DETECTION

- Deploy leak detection equipment, such as specialized meters temporarily attached to the main meter, in scenarios where low staff capacity limits on-site visits.
- Offer landscape audits that recommend watering schedules, infrastructure upgrades, and drought-tolerant plants.
- Offer audits at no cost to customers or pair it with an incentive, like a free fixture.
- Encourage community participation by providing water audit results of public buildings as examples that demonstrate potential water saving outcomes.
- Use the aggregated analysis of audit results to identify potential code and policy changes.
- Update your codes to allow individuals to install privately purchased metering devices on the utility meter and provide guidance on how to attach them in a way that avoids disturbance to utility operations.



Case Study: Secondary Water Metering: Finding New Water Supplies Through Waste Reduction

Contributors: Darren Hess, Assistant General Manager for Operations and Jon Parry, Assistant General Manager for Strategic Initiatives, Weber Basin Water Conservancy District

In 2022, the Utah Legislature passed H.B. 242 which requires water meters be installed by 2030 on all new and existing pressurized secondary water systems. They also appropriated \$250 million for grants to help operators of those systems comply. The Legislature took this action based on documented success of water savings from metering secondary water.

Utah has approximately 260,000 locations statewide that use secondary, untreated (non-potable) water for irrigation of lawns, gardens, parks and landscapes. In many areas, this secondary water is attached to urban properties that previously were agricultural land. In the land transition process, treated culinary water was provided for indoor use, but untreated irrigation water was provided through secondary systems for use on outdoor landscapes, primarily as a cost saving measure to the providers and users. In Utah, secondary water often comes from Bureau of Reclamation storage projects. Properties receiving secondary water have water allotments for the amount they can use and property owners are assessed fees for these allotments on their property bills. Approximately 85% of all locations with access to secondary water were unmetered in 2022.

The success of secondary metering as a water conservation strategy was originally demonstrated by [Weber Basin Water Conservancy District](#) (WBWCD), which has the largest contiguous secondary water system in the United States. Many areas with secondary water had piped and pressurized delivery systems for years, but the district's challenge was finding the right technology to meter "raw" (untreated) water. When meters that could work became available in 2009, WBWCD planned and implemented their first retrofit projects, installing approximately 1,100 meters between 2011-2013 in three neighborhoods where they retail secondary water. The aim of WBWCD was to determine if water use was within the property allocations, educate users on how much they were using, educate users on the water needs and efficient application of the needed water for their landscapes, and eventually charge people for water use including a tiered water rate structure to incentivize conservation. By 2022, the district had metered approximately 14,000 locations and had documented reductions in use of approximately 20-30% compared to unmetered areas and compared to use when meters were first installed, according to Jon Parry, WBWCD's Assistant General Manager for Strategic Initiatives.

The key to WBWCD's conservation success in metering secondary systems is its approach to sharing meter information with users through [secondary water use reports](#) and near real time access to their water usage via the District's Customer Portal. Developed in conjunction with the [WaterMAPS™](#) program in the Center for Water Efficient Landscaping at Utah State University, the reports use a landscape water budgeting approach to show water users how much water they are applying to their landscapes in comparison to how much water their

landscapes need. This information, individualized to each property, informs water users of their ability to reduce overuse or waste, which has been a powerful educational motivator for landscape water conservation. WBWCD provides these reports monthly from May-October to help users track the efficiency of their water use and conservation success.

"We learned you can't just meter the water, you have to educate the consumer, and we are seeing some significant water savings as a result," said Darren Hess, WBWCD's Assistant General Manager for Operations. He noted, "This is really the largest water supply project we have. Every gallon we save is another gallon that can be stored in our existing reservoirs for the next season, which helps with future uncertainty in water supply." Saved secondary water has also helped WBWCD delay additional water supply projects and provide water for environmental flows to Great Salt Lake.

Other cities in Utah that implemented secondary metering prior to the recent legislation and availability of grant funding showed similar success in reducing water use. Saratoga Springs implemented secondary metering to address overwatering of landscapes serious enough to cause flooded basements and damages to homes, as well as to be fiscally responsible in avoiding costs of other more expensive water supply infrastructure. Saratoga Springs, Spanish Fork, and Santaquin have seen water savings of 25-50% through metering. They provided implementation advice to other communities undertaking metering in a spring 2022 Utah League of Cities and Towns [training](#) session.

WBWCD is realizing additional conservation programming benefits from secondary metering. Programs for indoor and outdoor water efficiency are somewhat distinct, and metering on dual systems helps them determine an appropriate amount for each type of use and refine the delivery and assessment of their water conservation programs. The secondary meters also enable WBWCD to monitor for leaks and use of seasonal allocations and alert customers, provide flexibility in implementing watering restrictions, and open up opportunities to financially incentivize customers to use less than their full allocations. WBWCD is promoting low water landscape alternatives on new development throughout the District's secondary retail service area, which would result in lesser allocation volumes being contracted and lower annual assessments for that water. In West Haven City, WBWCD is incentivizing developers to adopt low water landscapes by reducing the amount of water they have to turn over to be served through secondary systems.

In response to its first call for applications, the Utah Board of Water Resources on August 4, 2022 approved \$190 million in grants to about 70 water conservancy districts, irrigation companies, municipalities and other water users for up to 70% of the costs of secondary metering projects.

TOOLBOX: CONSUMER EDUCATIONAL MESSAGING

There are many ways for planners and water providers to reach consumers with conservation messaging. Utility bills often include an educational insert or other content to inform the reader about policy changes and to encourage water savings with tips and tricks. Some may include warnings and fear-inducing messages designed to curb water use. However, these messages often miss the mark because people tend to defend themselves from fear or negative self-images by ignoring these messages or rationalizing why the new information does not apply to them. Instead, studies show that messaging techniques that promote a sense of control, offer social incentives, provide immediate rewards, and are framed positively are more effective in changing behavior.

APPROACHES FOR COMPELLING CONSERVATION MESSAGING

- Help your customers feel they have control or influence. Provide tangible acts or decisions they can make to “move the needle” toward a goal.
- People generally want to be either the same or better than their peers. Offer comparisons or share high compliance figures (e.g., “Nine out of ten residents follow these irrigation best practices to save water.”).
- Near-term rewards make people feel good. This reward structure can even motivate behavior changes that relate to long-term goals or outcomes that are not immediately visible. The reward can be external or intrinsic.
- People are more likely to believe and act on positive rather than negative information. So, when given an opportunity to describe a trend, note progress toward goals.



Case Study: Slow the Flow Consumer Messaging

Contributor: Shelby Ericksen, Water Conservation Manager, Utah Division of Water Resources

In the early 2000’s, Utah Governor Mike Leavitt brought together a water conservation team composed of the state’s Division of Water Resources and the five largest water conservancy districts in the state. Each member of the team contributed funding to create the state’s first water conservation consumer messaging campaign, “Slow the Flow. Save H₂O”. Now commonly known as “Slow the Flow”, this consumer messaging campaign has a permanent home on the internet at slowtheflow.org and serves as a “one stop shop” for water conservation and drought resources for any community (or individual) in the state.

The Slow the Flow website displays several consumer messages that are also displayed on billboards across the state. These messages change over time and include:

- “Save for the future, water less today,”
- “Utah is in a drought, use less water,”
- “Rain delay, don’t water,”
- “Protect tomorrow, water less today,” and
- “Cooler temps=less watering.”

In addition, the website provides simple water conservation tips for consumers for both indoor and outdoor use, drought actions that consumers can take, and a list of tools and resources including links to [rebate programs](#), the Division of Water Resource’s [Weekly Lawn Watering Guide](#), the [Water Check program](#), water wise plant lists and gardens, and more. [Printable materials](#) are also available on the site and include fliers as well as lawn signs.

The Slow the Flow consumer messaging campaign also utilizes social media to get messages out including [Facebook](#), Instagram (@slowtheflowutah), and [YouTube](#) and encourages communities to follow and share their water conservation messaging across the state.

If you have consumer messaging needs (infographics, educational materials), contact the Slow the Flow campaign at waterwise@utah.gov.

Conclusion

The toolboxes outlined in this workbook highlight some of the most effective strategies communities can employ to manage local water demand. By implementing these tools and strategies, Utah communities can help meet the state’s need for clean and affordable water “to sustain thriving communities and businesses, robust agriculture, ample recreation, and a healthy and resilient natural environment” as our population grows and we face an uncertain climate future. Of course, measuring and tracking progress toward integrating water and land use will help to ensure your community’s success.

Measuring and Tracking Progress

Measuring and tracking the results of water and land use integration is vital to determining whether your community’s plans and goals are being met. [Growing Water Smart Metrics: Tracking the Integration of Water and Land Use Planning](#) offers a set of indicators that can be assessed for year-over-year trends to demonstrate achievement of water savings through land use planning. Ten *progress* metrics track whether: the community’s land use plan integrates water efficiency and its water plan integrates land use strategies; conservation-oriented system development charges and pricing structures are being used; indoor and outdoor water efficiency measures are being utilized; and collaboration around development proposals is occurring. Fourteen *impact* metrics measure increasing or decreasing trends in water demand and use and trends in development patterns and land use.



Wayne Wurtsbaugh, Utah State University, 2021

Additional Resources

Water Supply & Demand, Planning

Title	Theme	Source	Type of Resource
State Water Plan (2021)	Water Supply and Demand	Utah Division of Water Resources	Plan
Utah’s Regional M&I Conservation Goals	Water Supply and Demand	Utah Division of Water Resources	Report
Public Water Supplier 40 Year Water Requirement Plan Standards	Water Supply and Demand Planning	State of Utah, Division of Water Rights	Policy Document
City of Orem Water Master Plan (2017)	Water Supply and Demand Planning	City of Orem	Plan
Salt Lake City Water Conservation Master Plan	Water Supply and Demand Planning	Salt Lake City Department of Public Utilities	Plan
Salt Lake City’s Storm Water Management Plan	Water Supply and Demand Planning	Salt Lake City Department of Public Utilities	Plan
South Jordan Water Conservation Plan	Water Supply and Demand Planning	South Jordan City	Plan
Genoa Water Conservation Plan	Water Supply and Demand Planning	Town of Genoa	Plan
Salt Lake City Water Shortage Contingency Plan	Water Supply and Demand Planning	Salt Lake City Department of Public Utilities	Plan
Park City’s Storm Water Management Program	Storm Water Planning	Park City Public Utilities	Plan
City of Logan Drinking Water System Master Plan (2016)	Water Supply and Demand Planning	City of Logan	Plan
Community Solutions for Voluntary Long-Term Storm Water Planning	Storm Water Planning	U.S. Environmental Protection Agency	Guide, Toolkit, Technical Assistance
Millcreek Community Wildfire Preparedness Plan	Wildfire Planning	State of Utah	Plan

Title	Theme	Source	Type of Resource
WRA Water System Development Charge Guidebook	Water Supply and Demand	Western Resource Advocates	Guidebook
Net Blue: Water-Neutral Growth	Water Supply and Demand	Alliance for Water Efficiency	User Guide, Model Ordinance, Offset Methodology
Conservation Plan Resources	Water Supply and Demand, Water Conservation	Utah Division of Water Resources	Website
Great Salt Lake Integrated Model (2019)	Water Supply and Demand, Water Conservation	Great Salt Lake Advisory Council	Report

Land Use-Water Integration

Title	Theme	Source	Type of Resource
Integrating Water Efficiency into Land Use Planning in the Interior West: A Guidebook for Local Planners	Water Conservation, Land Use-Water Integration	Western Resource Advocates	Guidebook
Great Salt Lake Advisory Council Conservation Impacts Assessment	Water Conservation, Land Use-Water Integration	Northern Utah	Study
Incorporating Water into Comprehensive Planning	Land Use-Water Integration	Lincoln Institute of Land Policy	Manual
Incorporating Water into Comprehensive Plans in Utah	Land Use-Water Integration	Western Resource Advocates	Website - Webinars
Guiding Principles for Equitable Management in Coordinated Planning	Land Use-Water Integration	Local Government Commission	Guiding Principles
Salt Lake City Sustainability Plan	Land Use-Water Integration	Salt Lake City	Plan
City of Bluffdale Floodplain Management Plan	Land Use-Water Integration	City of Bluffdale	Plan

Title	Theme	Source	Type of Resource
Assured Water Supplies in Western States	Land Use-Water Integration	Colorado Natural Resources, Energy & Environmental Review	Legal research
Growing Water Smart: The Water-Land Use Guidebook (Arizona)	Land Use-Water Integration	Babbitt Center for Land and Water Policy and Sonoran Institute	Arizona Growing Water Smart Guidebook
Growing Water Smart: The Water-Land Use Nexus Guidebook (Colorado)	Land Use-Water Integration	Babbitt Center for Land and Water Policy and Sonoran Institute	Colorado Growing Water Smart Guidebook
A Guide to Low Impact Development within Utah	Land Use-Water Integration	Utah Department of Environmental Quality, Division of Water Quality	Guidebook
Model Landscape Ordinance	Land Use-Water Integration	South Metro Water Supply Authority, Colorado	Website - Model Code
Water Efficient Landscape Design and Development Standards	Land Use-Water Integration	Salt Lake County, UT	Website - Code
Model Water Efficient Landscape Ordinance	Land Use-Water Integration	California Department of Water Resources	Website - Model Code
Landscaping Standards	Land Use-Water Integration	Sandy City	Website - Code
Water Efficiency Standards	Land Use-Water Integration	Herriman City	Website - Code
Rule R317-401-Graywater Systems	Land Use-Water Integration	State of Utah	Website - Code
Ch. 13.04.260 Waste Prohibited	Land Use-Water Integration	South Jordan City	Website - Code
Strengthening Collaboration	Land Use-Water Integration	Sonoran Institute	Video

Water Conservation

Title	Theme	Source	Type of Resource
Conserviewater.utah.gov	Water Conservation	Utah Division of Water Resources	Website

Title	Theme	Source	Type of Resource
Drought Management Toolkit for Public Water Suppliers	Water Conservation	Utah Department of Environmental Quality/Division of Drinking Water	Toolkit
Conservation Tracking Tool	Water Conservation	Alliance for Water Efficiency	Excel-Based Model
Water & Energy Efficiency Grants and Small-Scale Water Efficiency Grants	Water Conservation	Bureau of Reclamation	Federal Grants Program
Utah Water Savers	Water Conservation	Utah Division of Water Resources	Website - Programs and Rebates
Central Utah Water Conservancy District Rebates	Water Conservation	Central Utah Water Conservancy District	Website - Programs and Rebates
Water Smart So Jo	Water Conservation	South Jordan City	Website - Programs and Rebates
Tap Into Resilience	Water Conservation	Spanish Fork in partnership with Water Now Alliance	Website - Case Studies
Slow the Flow	Water Conservation	Utah DWR	Website - Guide, Rebates, and Monitoring
Preparing for Drought in the Home	Water Conservation	Utah State University Extension	Website - Guide
H2OATH	Water Conservation	Utah Division of Water Resources	Pledge
Home Water Works Calculator	Water Conservation	Alliance for Water Efficiency	Home Water Use Calculator
EPA WaterSense Water Budget Tool	Water Conservation	U.S. Environmental Protection Agency	Excel-Based Tool
Rain Barrels in Utah	Water Conservation	Utah State University Extension	Factsheet
Water Amendments	Water Conservation	State of Utah	Website - Law
A Guide to Municipal Water Conservation Pricing in Utah	Water Conservation	Utah State University Extension	Guidebook
Water Rate Structures in Utah	Water Conservation	Western Resource Advocates	Guidebook

Title	Theme	Source	Type of Resource
Financing Sustainable Water	Water Conservation	Alliance for Water Efficiency	Handbook and Model
Sandy City Water Conservation Rate Structure	Water Conservation	Sandy City	Website
Summit County Graywater Administration and Permitting	Water Conservation	Summit County	Website-Permitting and Information
Gray Water Use and Regulations in Utah (Webinar)	Water Conservation	Utah State University's Center for Water Efficient Landscaping	Webinar
Gray Water Systems Permitting, Moab	Water Conservation	Moab City	Website-City Regulations

Landscape Water Conservation

Title	Theme	Source	Type of Resource
Center for Water Efficient Landscaping	Landscape Water Conservation	Utah State University Extension	Website, Fact Sheets, Reports, Publications, Webinars
Preparing for Drought in the Landscape	Landscape Water Conservation	Utah State University Extension	Website - Guide
Localscapes	Landscape Water Conservation	Jordan Valley Water Conservancy District	Guides, Landscape Designs, Classes
Water Wise Plants for Utah Landscapes	Landscape Water Conservation	Utah State University's Center for Water Efficient Landscaping	Water Wise Plant List
Gardenwise SLC	Landscape Water Conservation	Salt Lake City Department of Public Utilities	Water Wise Plant List, Management Guidelines, Plant Watering Guidelines
Sego Lily Gardens Plant Guide	Landscape Water Conservation	Sandy City	Water Wise Plant List
Native Plants for the Intermountain West	Landscape Water Conservation	Utah State University's Center for Water Efficient Landscaping	Intermountain West Native Plant List

Title	Theme	Source	Type of Resource
Conservation Garden Park Plant Database	Landscape Water Conservation	Jordan Valley Water Conservancy District	Water Wise Plant List
Utah State University Tree Browser	Landscape Water Conservation	Utah State University Extension	Online Tool for Tree Selection
USU Botanical Garden Water Wise Plant List	Landscape Water Conservation	Utah State University Extension	Water Wise Plant List
Weber Basin's Water Conservation Learning Garden Plant Database	Landscape Water Conservation	Weber Basin Water Conservancy District	Water Wise Plant List
Red Hills Desert Garden Plant List	Landscape Water Conservation	Washington County Water Conservancy District, St. George City, Virgin River Project	Water Wise Plant List for Desert Landscapes
Firewise Landscaping	Landscaping for the Wildland Urban Interface	Utah State University Extension	Guidebook
Weekly Lawn Watering Guide	Landscape Water Conservation	Utah Division of Water Resources	Website - Guide
Smart Controller Project	Landscape Water Conservation	Spanish Fork	Website
Learning Landscapes: Outdoor Water Efficiency and Conservation Lessons	Landscape Water Conservation	Alliance for Water Efficiency	Educator Resource (Grades 3-8)
Landscape Transformation: Assessment of Water Utility Programs and Market Readiness Evaluation	Landscape Water Conservation	Alliance for Water Efficiency	Report
Utah Public Garden Network	Landscape Water Conservation	Utah State University Extension	Website
Design 4 Everyone: Advanced Landscape Design Process	Landscape Water Conservation	Utah State University Extension	Online Course
How to Have a Water Efficient Landscape	Landscape Water Conservation	Utah State University Extension	Online Course

Climate Resources

Title	Theme	Source	Type of Resource
Salt Lake City Climate Plan	Climate	Salt Lake City	Website, Plan, Video
UT DWR Climate Change, Water Resources, and Potential Adaptation Strategies in Utah	Climate	State of Utah	Report
Utah Climate Data	Climate	Utah Climate Center	Website
Western Regional Climate Center	Climate	Western Regional Climate Center	Website
U.S. Climate Resilience Toolkit-Southwest	Climate	U.S. Climate Resilience Toolkit	Website
Climate Change Science Essentials	Climate Science	Utah State University Extension	Online Course

water.utah.gov/integrated-water-land-planning



Stephen Nelson

From: Cindy Beteag
Sent: Wednesday, January 25, 2023 3:17 PM
To: Council; Stephen Nelson; Brienna Spencer
Subject: FW: WCWCD Lawn Replacement Initiative

All- below is more public comments regarding the landscape ordinance.

Stephen – Brienna, could you please get them to the Planning Commissioners?

Thanks,

Cindy Beteag



HURRICANE CITY
UTAH

Cindy Beteag
City Recorder
Hurricane City
Office 435-635-2811 x 106

From: Bob and Terri Slone <terribob6520@gmail.com>
Sent: Wednesday, January 25, 2023 1:53 PM
To: Cindy Beteag <cindy@cityofhurricane.com>
Subject: WCWCD Lawn Replacement Initiative

Cindy--

We understand you are the point of contact for registering support of the City Council signing off on the WCWCD proposal for rebating part of the cost of replacing sod with desert scaping.

We prefer having a lawn. Washington County is getting plenty of snow in the upper elevations and rain in the lower as we write this. But we need to face reality. Washington County will be dry again by mid-summer. It's time for the City and County to help implement water-use reduction incentives for existing homes, new development, golf courses, alfalfa growers, and truck farms still using flood irrigation.

We are anxious to re-landscape and take advantage of the WCWCD rebate program.

Thank you,

Bob & Terri Slone
2468 W 770 N
Hurricane, Utah

Stephen Nelson

From: Brienna Spencer
Sent: Friday, January 27, 2023 9:50 AM
To: Stephen Nelson
Subject: FW: Water efficient landscape rebate program

Brienna Spencer
Planning Technician
Planning Department
Phone : 435.635.2811 ext. 112
Email : brienna@cityofhurricane.com
147 N. 870 W. Hurricane UT, 84737
www.cityofhurricane.com

-----Original Message-----

From: Cindy Beteag <cindy@cityofhurricane.com>
Sent: Tuesday, January 24, 2023 8:54 AM
To: Council <council@cityofhurricane.com>
Cc: Stephen Nelson <stephen@cityofhurricane.com>; Brienna Spencer <brienna@cityofhurricane.com>
Subject: FW: Water efficient landscape rebate program

Council and Planning Commission,

This gentleman below came in yesterday expressing his desire to be able to qualify for the rebate program on water efficiency.

Stephen or Brienna, can you please send his comments to the Planning Commissioners?

Thanks,

Cindy Beteag

Cindy Beteag
City Recorder
Hurricane City
Office 435-635-2811 x 106

-----Original Message-----

From: Doug Webb <dougwebb@webbland.com>
Sent: Monday, January 23, 2023 9:40 PM
To: Cindy Beteag <cindy@cityofhurricane.com>
Subject: Water efficient landscape rebate program

Hello Cindy

Thanks for your time today, much appreciate your input. This communication is to express our desire for saving water at our property location 918 N. 2360 W. In Sky Mountain. The front grass lawn is approximately 450 sq ft, we would remove and replace with artificial turf. We spoke with Jeff regarding possible grass use on the Golf Course.

Thank you
Doug Webb

Sent from my iPad

**CITY OF SANTA CLARA
ORDINANCE NO. 2022-05**

**AN ORDINANCE ADOPTING AND IMPLEMENTING REGULATIONS FOR
LANDSCAPING AND WATER CONSERVATION FOR NEW DEVELOPMENT IN
SANTA CLARA CITY, UTAH**

WHEREAS, Washington County is one of the most arid and fastest growing regions in Utah with all its major population centers dependent on a single water resource that is prone to drought, so it is essential that additional water conservation initiatives are enacted to protect the county's population, economy and quality of life;

WHEREAS, Santa Clara City, in partnership with Washington County and the Washington County Water Conservancy District, want to establish uniform standards for water efficient new development, to address limited water supplies, drought conditions, and the sustainability of future water resources;

WHEREAS, Santa Clara City, Washington County, and the Washington County Water Conservancy District want to ensure that the City and its residents continue to have a reliable, resilient, and sustainable water supply;

WHEREAS, establishing standards for all new construction including single family residential, multi-family residential, and commercial development will help sustain a reliable and resilient water supply to all residents;

WHEREAS, it is in the public interest to conserve the public's water resources and to promote water efficient construction and landscaping to protect and enhance the community's environmental, economic, recreational, and aesthetic resources by promoting efficient use of water in our community's buildings and landscapes, reduce water waste, and establish a structure for designing, installing, and maintaining water efficient buildings and landscapes throughout the City;

WHEREAS, establishing standards for the use of water for outdoor landscaping and irrigation will help sustain a reliable and resilient water supply to all residents;

WHEREAS, carefully managing the county's water resources is of great importance to our community for the protection of present and future citizens;

WHEREAS, this proposed ordinance is necessary and proper for the safety, peace and good order of the City and its citizens; and

WHEREAS, this proposed ordinance is necessary for the preservation and longevity of these lands.

NOW THEREFORE, BE IT ORDAINED by the City Council of Santa Clara, Utah that the attached standards and regulations are adopted, and shall be incorporated into the ordinances of the City, as Title 17, Chapter 92. This Ordinance shall become effective on the date executed below and upon posting as required by law.

APPROVED AND ADOPTED by a duly constituted quorum of the Santa Clara City Council this 23rd day of February, 2022.

IN WITNESS THERETO:

Rick Rosenberg, Mayor

ATTEST:

Chris Shelley, City Recorder

CHAPTER 17.92

WATER EFFICIENT LANDSCAPING & CONSERVATION STANDARDS

SECTION:

17.92.010: APPLICABILITY

17.92.020: DEFINITIONS

17.92.030: SINGLE FAMILY & MULTIPLE FAMILY RESIDENTIAL WATER EFFICIENCY STANDARDS

17.92.040: NONRESIDENTIAL WATER EFFICIENCY STANDARDS

17.92.050: LANDSCAPE AND IRRIGATION DESIGN AND OPERATION STANDARDS

17.92.060: RESTRICTIVE COVENANTS IN CONFLICT WITH WATER EFFICIENCY STANDARDS

17.92.010: APPLICABILITY

The provisions of this title are applicable to all new construction, development (including redevelopment), and landscape improvements in the city, except for (a) permitted uses in the Open Space zone; (b) permitted agricultural, horticultural, and gardening uses (including fruit trees) in any zone; (c) public parks or playgrounds, or public or school-owned active recreation areas, in any zone; however, all new uses which fall under (c) must be required to be served by secondary and not culinary municipal water. Landscape improvements to be irrigated solely with private, non-municipal water may be exempt from certain provisions of this chapter as noted.

The provisions of this chapter are severable and if any provision, clause, sentence, word, or part thereof is held illegal, invalid, unconstitutional, or inapplicable to any person or circumstances, such illegality, invalidity, unconstitutionality, or inapplicability must not affect or impair any of the remaining provisions, clauses, sentences, sections, words, or parts of this ordinance or their applicability to other persons or circumstances.

17.92.020: DEFINITIONS

Active Recreation Area: An area that is dedicated to active play where lawn may be used as the playing surface. Examples of active recreation areas include sports fields, play areas, and other similar uses designated for physical activity.

Controller: A device used in irrigation systems to automatically control when and how long sprinklers or drip irrigation systems operate.

Drip Irrigation: An irrigation system that delivers water by adding water at the plant's base and root zone, usually measured in gallons per hour. Drip irrigation exhibits a droplet, trickle, umbrella or short stream pattern, to reduce evaporation, overspray, and water use, and improving water conservation.

Drip Emitter: A drip irrigation fitting that delivers water slowly at the root zone of the plant, usually measured in gallons per hour.

Grading Plan: The grading plan shows all finish grades, spot elevations, drainage as necessary, and new and existing contours with the developed landscaped area.

Ground Cover: Material planted in such a way as to form a continuous cover over ground that can be maintained at a height no more than twelve inches (12”).

Hardscape: Elements of landscape constructed from non-living materials such as concrete, boulders, brick, blacktop, and lumber. Includes patios, decks, and paths, but does not include driveways and sidewalks.

Hydrozone: Portion of landscape area having plants with similar water needs and rooting depth. A hydrozone may be irrigated or non-irrigated.

Irrigation Plan: A plan that shows the components of the irrigation system with water meter size, backflow prevention, precipitation rates, flow rate, and operating pressure for each irrigation circuit, and identification of all irrigation equipment.

Irrigation Runoff: Irrigation water that is not absorbed by the soil or landscape area to which it is applied, and that flows onto other areas.

Landscape Architect: A person who holds a professional license to practice landscape architecture in the state of Utah. Pursuant to Utah Code, licensed landscape architects, licensed architects, licensed land surveyors, and licensed engineers can professionally stamp plans that fall under the practice of landscape architecture. This includes commercial landscape and irrigation plans.

Landscape Area: Area of a Lot not including any building footprints, driveways, sidewalks, and patios; also not including areas of agricultural, horticultural, or gardening uses which are permitted by applicable zoning.

Landscape Designer: A person who may or may not hold professional certificates for landscape design/architecture, and who generally focuses on residential design and horticultural needs of home landscapes. Landscape designers may assist developers and property owners with landscape design but may not submit landscape plans for multifamily residential or nonresidential properties and projects under this ordinance unless certified by a landscape architect.

Landscape Documentation Package: The documentation of graphic and written criteria, specifications, and detailed plans to arrange and modify the effects of natural features to comply with the provisions of this ordinance. The Landscape Documentation Package must include a project data sheet, a site plan, a planting plan, an irrigation plan, construction details, and a grading plan.

Landscape or Landscaping: Any combination of berms; living plants, such as trees, shrubs, vines, ground cover, annuals, perennials, ornamental grass, or seeding; natural features such as rock, stone, or bark chips; and structural features, including but not limited to, fountains, reflecting pools, outdoor artwork, screen walls, fences, or benches that create an attractive and pleasing environment.

Landscape or Landscaping Maintenance: Maintaining or keeping any landscaping, or any area required to be landscaped:

A. In a live and thriving condition, with consideration for normal growth and water needs; and

B. Fertilized, mowed, trimmed, edged, mulched and free from weeds, dead plants, litter, refuse, or debris in compliance with regionally accepted horticultural practice and city ordinances.

Landscape Plan: A plan that clearly and accurately identifies the location and species of new and existing trees, shrubs, ground cover, and other plants on a site, and any other landscape element, and includes an irrigation plan.

Lawn: A surface layer of earth containing mowed grass with its roots; includes grass turf.

Mulch: Any organic material such as leaves, bark, wood chips, straw; inorganic material such as crushed stone or gravel; other materials left loose and applied to the soil surface for the beneficial purpose of controlling weeds and conserving soil moisture.

Multifamily: Any residential use comprised of a dwelling or dwellings designed for occupation by more than one family in any zone, but for purposes of this Chapter, excludes single-family dwellings, two-family dwellings, dwellings containing an approved internal accessory dwelling unit, or dwellings which are an approved accessory dwelling unit to a primary dwelling.

Park Strip: A typically narrow landscaped area located between the back-of-curb and sidewalk.

Planting Plan: A planting plan that clearly and accurately identifies the type, size, and locations for new and existing trees, shrubs, planting beds, ground cover, lawn areas, driveways, sidewalks, hardscape features, and fences.

Precipitation Rate: The depth of water applied to a given area, usually measured in inches per hour.

Pressure Regulating Valve: A valve installed in an irrigation mainline that reduces a higher supply pressure at the inlet down to a regulated lower pressure at the outlet.

Rehabilitated Landscape: Landscape area in which over fifty percent (50%) of existing landscaping is removed and replaced. Includes all landscaping funded in part, or completely, by Washington County Water Conservancy District's landscape conversion program.

Secondary Irrigation Water: Non-potable water that is untreated and used for irrigation of outdoor landscaping.

Single Family: Any residential use comprised of a dwelling designed for occupation by only one family in any zone, and for purposes of this Chapter includes primary dwellings, dwellings containing an approved internal accessory dwelling unit, and approved accessory dwelling units.

Slope: A vertical rise in feet measured over a horizontal distance, expressed as a percentage, measured generally at right angles to contour lines.

Two-Family: Any residential use comprised of a dwelling designed for occupation by two families in any zone, but for purposes of this Chapter excludes dwellings containing an approved internal accessory dwelling unit, or dwellings which are an approved accessory dwelling unit to a primary dwelling.

Water-Conserving Plant: A plant that can generally survive with available rainfall once established, with possible supplemental irrigation needed or desirable during spring and summer months or during drought periods.

17.92.030: SINGLE FAMILY AND TWO-FAMILY RESIDENTIAL WATER EFFICIENCY STANDARDS

The provisions of this section are applicable to all new single family or two-family residential development or redevelopment in any zone.

A. Construction Standards:

1. New single family or two-family dwellings, including accessory dwelling units, having at least one thousand (1,000) square feet of living space must have installed a hot water recirculation system or systems, unless hot water delivery can be demonstrated to occur without first displacing more than 0.5 gallons of system water.
2. New single family or two-family residential dwellings, including accessory dwelling units, must use WaterSense labeled fixtures, including but not limited to faucets, showerheads, toilets, and urinals.

B. Landscape Standards: For all residential construction and development which is subject to this section, except where landscaping will be irrigated solely with a

private, non-municipal water source, landscaping must meet the following requirements:

1. The total irrigated landscape area must not exceed sixteen percent (16%) of the lot square footage. Lawn area must not exceed eight percent (8%) of the lot square footage, up to a maximum of two thousand five hundred (2,500) square feet of lawn area.
2. Lawn is prohibited in park strips, in all landscape areas less than eight feet wide, and on any slope that exceeds twenty percent (20%).
3. Any lot in any zone which is larger than one-half (1/2) acre must use secondary irrigation to irrigate any agricultural, horticultural, or gardening uses which are permitted in the applicable zone.

17.92.040: MULTIFAMILY RESIDENTIAL AND NONRESIDENTIAL WATER EFFICIENCY STANDARDS

The provisions of this section are applicable to all new multifamily residential and nonresidential development or redevelopment in any zone.

A. Construction Standards:

1. Hot water recirculation systems must be installed, unless hot water delivery can be demonstrated to occur without first displacing more than 0.5 gallons of system water.
2. WaterSense labeled fixtures must be installed, including but not limited to faucets, showerheads, toilets, and urinals.
3. All units located partially or completely on a ground floor, and which are individually subdivided, must be separately metered, sub metered, or equipped with alternative technology capable of tracking the water use of the individual unit, and the information must be made available to the resident of each unit. Individually platted condominium units are excepted if a condominium owners' association owns and maintains the water lines and meters. All nonresidential projects require separate water meters for all outdoor water usage, including landscaping.

4. All commercial car washes must utilize a wastewater recirculation system and limit water use to a maximum amount of thirty-five (35) gallons per vehicle washed.
 5. Exterior, decorative water features in any project must be limited to an aggregate capacity of fifty (50) gallons or less for all features in the project, and recirculating pumps are required in each feature.
 6. All golf courses using water district or municipal water supplies must irrigate with secondary irrigation water and must have separate water meters for the golf course. Irrigation with potable water is prohibited. Each golf course development must submit and follow a water budget with the Landscape Documentation Package and identify water conservation measures for city approval.
 7. Outdoor misting systems may only be operated during the May through September time period where the daily high temperature is ninety degrees (90°) Fahrenheit or greater.
- B. Landscape Standards: For all multifamily residential and nonresidential development subject to this section, except where landscaping will be irrigated solely with a private, non-municipal water source, landscaping must meet the following requirements:
1. Lawn is not permitted outside of an active recreation area. Lawn is prohibited in park strips, all landscape areas less than eight feet wide, and on any slope that exceeds twenty percent (20%).
 2. Landscape and irrigation installers must follow plans that have been signed and approved by the city.
 3. Each project must propose and comply with an approved planting plan that has a minimum of forty percent (40%) vegetative cover of a landscaped area with water-efficient shade trees and bushes adequate in number and configuration to visually enhance the project, prevent heat islands, and prevent soil erosion. The city has sole discretion to approve or require adjustments to the configuration of vegetation in the planting plan.
 4. If secondary irrigation water is available, each project shall connect to the system for all outdoor water use. The city may make minor exceptions,

allowing use of treated water for outdoor plantings in small beautification areas, in its sole discretion.

C. Required Documentation:

1. Landscape Documentation Package: A copy of a Landscape Documentation Package must be submitted to and approved by the city prior to the issue of any building permit. A copy of the approved Landscape Documentation Package must be provided to the property owner or site manager. The Landscape Documentation Package must be prepared by a professional landscape architect (PLA) and must consist of the following items:
 - a. Project Data Sheet containing the following:
 - i. Project name and address;
 - ii. Applicant or applicant agent's name, address, phone number, and email address;
 - iii. Landscape architect's name, address, phone number, and email address; and
 - iv. Landscape contractor's name, address, phone number and email address, if available currently.
 - b. Planting Plan. A detailed planting plan must be drawn at a scale that clearly identifies the following:
 - i. Location of all plant materials, a legend with common and botanical names, and size of plant materials;
 - ii. Property lines and street names;
 - iii. Existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements;
 - iv. Existing trees and plant materials to be removed or retained;
 - v. Scale: graphic and written;
 - vi. Date of design;
 - vii. Designation of hydrozones; and

- viii. Details and specifications for tree staking, soil preparation, and other planting work.
 - c. Irrigation Plan. A detailed irrigation plan must be drawn at the same scale as the planting plan and contain the following information:
 - i. Layout of the irrigation system and a legend summarizing the type and size of all components of the system, including manufacturer name and model numbers;
 - ii. Static water pressure in pounds per square inch (psi) at the point of connection to the public water supply;
 - iii. Flow rate in gallons per minute and design operating pressure in psi for each valve and precipitation rate in inches per hour for each valve with irrigation equipment (i.e., sprinklers, drip emitters, bubblers, etc.); and
 - iv. Installation details for irrigation components.
 - d. Grading Plan. A grading plan must be drawn at the same scale as the planting plan and must contain the following information:
 - i. Property lines and street names, existing and proposed buildings, walls, fences, utilities, paved areas, and other site improvements; and
 - ii. Existing and finished contour lines and spot elevations as necessary for the proposed site improvements, as well as drainage.
2. Plan Review, Construction Inspection, and Post-Construction Monitoring:
- a. As part of the building permit approval process, a copy of the Landscape Documentation Package must be submitted with a city provided pre-submittal checklist completed for the city to initiate a review and approval process before construction begins.
 - b. All installers and designers must meet state and local license, insurance, and bonding requirements, and be able to show proof of such.
 - c. During construction, site inspection of the landscaping may be performed by the Building Department or other city official tasked with such inspections.

- d. Following construction and prior to issuing an occupancy permit, an inspection must be scheduled with the Building Department or other city official tasked with such inspections to verify compliance with the approved landscape plans. The Certificate of Substantial Completion must be completed by the property owner, developer, contractor, or landscape architect and submitted to the city. The Certificate of Substantial Completion must be accompanied by a certification from the landscape architect that the landscaping, irrigation, and related improvements have been installed consistent with the approved Landscape Documentation Package.
- e. The Building Department or other city official tasked with such inspections reserves the right to perform site inspections at any time before, during, or after the irrigation system and landscape installation, and to require corrective measures if requirements of this ordinance are not satisfied.

17.92.050: LANDSCAPE AND IRRIGATION DESIGN AND OPERATION STANDARDS

The provisions of this section shall apply to all new landscaping and irrigation in the City which is subject to this chapter, except where landscaping will solely be irrigated with a private, non-municipal source of water. Any landscape area to be converted from private, non-municipal to municipal water, whether culinary or secondary, must first be brought into compliance with this section.

- A. Plants must be well-suited to the microclimate and soil conditions at the project site. Native, locally adaptable, and environmentally sustainable plants are acceptable. See the Washington County Water Conservancy District's recommended plant list on <https://wcwcd.org>. Plants with similar water needs must be grouped together as much as possible into hydrozones for efficient irrigation. Invasive plant species as identified by Washington County must not be planted.
 - 1. Areas with slopes greater than twenty percent (20%) slope must be landscaped with deep-rooting, water-conserving plants that do not include lawn.
 - 2. Park strips and other landscaped areas less than eight feet (8') wide must be landscaped with water-conserving plants and/or mulch that do not include lawn.
- B. Tree species must be selected based on growth characteristics and site conditions, including available space, overhead clearance, soil conditions, exposure, and desired color and appearance. Trees should be suited for water-efficient landscapes; however,

fruit trees are allowed where permitted by zoning. Trees must be selected and planted in accordance with the following city guidance:

1. Broad canopy trees may be selected where shade or screening of tall objects is desired.
2. Low-growing trees must be selected for spaces under utility wires.
3. Select trees from which lower branches will be trimmed to maintain a healthy growth habit where visual clearance and natural surveillance is a concern.
4. Narrow or columnar trees are recommended for small spaces, or where awnings or other building features limit growth, or where greater visibility is desired between buildings and the street for natural surveillance.
5. Tree placement must provide canopy cover (shade) and avoid conflicts with existing trees, retaining walls, above and below ground utilities, lighting, and other obstructions.

C. Irrigation Design Standards:

1. Pressure Regulation. A pressure regulating valve must be installed by the builder or developer, and maintained by the owner, if the static service pressure exceeds ninety (90) pounds per square inch (psi). The pressure regulating valve must be located between the meter and the first point of water use, or first point of division in the pipe, and must be set at the manufacturer's recommended pressure for the sprinklers.
2. Irrigation Controller. It is required that landscaped areas use a WaterSense labeled smart irrigation controller, which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions. All controllers must be equipped with automatic rain delay or rain shut-off capabilities. All controllers must have memory retention capability to retained pre-programmed irrigation schedules. Sites are not exempt from water waste prohibitions.
3. Low-volume irrigation equipment (i.e., drip emitters, bubblers) must be provided for each tree.
4. Drip irrigation must be used to irrigate plants in non-lawn areas.
5. High conservation efficiency spray nozzles are required for sprinkler applications.
6. Sprinkler heads must have matched precipitation rates with each control valve circuit.

7. Filters and end-flush valves must be provided for drip irrigation lines.

D. Irrigation Operation Standards:

1. Landscape watering with potable (treated) water is prohibited from 10 a.m. to 8 p.m., from June 1 to October 1, to maximize irrigation efficiency.
2. Water waste is prohibited. Waste includes overwatering, irrigating during a precipitation event, water that sprays or flows off your property, failure to comply with drought restrictions and/or a failure to repair irrigation system leaks and/or malfunctions in a timely manner.
3. Overwatering can be avoided by following the water district's recommended irrigation schedule and practices as noted on wcwcd.org. The generally recommended schedule is:
 - a. Winter (Nov - Feb) - sprinkler and drip irrigation up to 1 day a week. Irrigation is typically not needed in December and January
 - b. Spring (Mar - April) - sprinkler irrigation up to 3 days a week and drip irrigation up to 2 days a week
 - c. Summer (May - Aug) - sprinkler irrigation up to 4 days a week and drip irrigation up to 3 days a week
 - d. Fall (Sept - Oct) - sprinkler irrigation up to 3 days a week and drip irrigation up to 2 days a week
4. Program valves for multiple repeat cycles are required to reduce runoff on slopes and for soils with slow infiltration rates.

17.92.060: RESTRICTIVE COVENANTS IN CONFLICT WITH WATER EFFICIENCY STANDARDS

Any homeowners', condominium owners', or property owners' association governing documents, such as bylaws, operating rules, covenants, conditions, and restrictions that govern the operation of a common interest development, recorded after passage of this ordinance, are void and unenforceable if they conflict with the water efficiency standards in this ordinance, or if they have the effect of prohibiting or restricting compliance with this ordinance.

ORDINANCE NO. 2022-22

**AN ORDINANCE ADOPTING AND IMPLEMENTING REGULATIONS FOR
LANDSCAPING AND WATER CONSERVATION FOR DEVELOPING LAND
IN WASHINGTON CITY, UTAH**

WHEREAS, Washington City is located in Washington County, which area is one of the most arid and fastest growing regions in Utah with all its major population centers dependent on a water resource that is subject to natural conditions, including drought, so it is essential that water conservation initiatives be enacted to protect residents of Washington City and Washington County;

WHEREAS, establishing standards for new construction will help sustain a reliable and resilient water supply to all residents of Washington City and Washington County;

WHEREAS, it is in the interest of residents of Washington City and in the public interest to protect and enhance the community's environmental, economic, recreational, and aesthetic resources by promoting efficient use of water in our community's buildings and landscapes, reduce water waste, and establish standards for designing, installing, and maintaining water efficient buildings and landscapes throughout the City;

WHEREAS, establishing standards for the use of water for outdoor landscaping and irrigation will help sustain a reliable and resilient water supply to all residents;

WHEREAS, carefully managing water resources is of great importance to our community for the protection of present and future citizens;

WHEREAS, the Washington City Mayor, Council, and Staff respect the individual decision-making of city residents and trust that they will act in the best interest of the long-term viability and security of the community when it comes to water conservation;

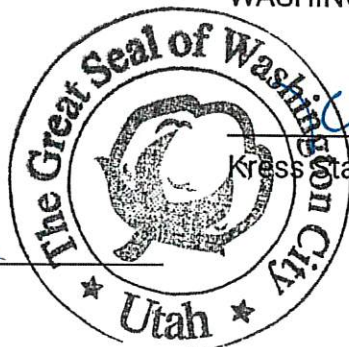
NOW THEREFORE, be it ordained by the City Council of Washington City, Utah that the attached standards and regulations are adopted, and shall be incorporated into the ordinances of the City, as Title 8, Chapter 9, Sections 1 through 5. This Ordinance shall become effective on the date executed below and upon posting as required by law.

PASSED AND ORDERED POSTED on this 11th day of May, 2022.

WASHINGTON CITY

ATTEST:


Tara Pentz, City Recorder




Kress Staheli, Mayor

TITLE 8, CHAPTER 9

SECTION 1: GENERAL PROVISIONS

8-9-1: APPLICABILITY

The provisions of this ordinance are severable and if any provision, clause, sentence, word, or part thereof is held illegal, invalid, unconstitutional, or inapplicable to any person or circumstances, such illegality, invalidity, unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, sections, words or parts thereof of this ordinance or their applicability to other persons or circumstances.

SECTION 2: DEFINITIONS

8-9-2: DEFINITIONS

The following definitions shall apply to this ordinance:

Active Recreation Area: An area that is dedicated to active play where grass may be used as the playing surface. Examples of active recreation areas include sports fields, play areas, and other similar uses designated for physical activity. plan

Grass: A surface layer of earth containing irrigated grass with its roots.

Hardscape: Elements of landscape constructed from non-living materials such as concrete, boulders, brick, blacktop, and lumber. Hardscape includes patios, decks, and paths, but does

Landscape Area: Area within a lot or parcel that is not the home footprint, driveway, or sidewalk.

Landscape or Landscaping: Any combination of berms; living plants, such as trees, shrubs, vines, ground covers, annuals, perennials, ornamental grass, or seeding; natural features such as rock, stone, or bark chips; and structural features, including but not limited to outdoor artwork, screen walls, fences, Hardscape, Pool, or benches that create an attractive and pleasing environment.

Park Strip: A typically narrow landscaped area located between the back-of-curb and sidewalk.

Rehabilitated Landscaping: Landscape area in which over 75% percent of existing landscaping is removed and replaced. Includes all landscaping funded in part, or completely, by Washington County Water Conservancy District's landscape conversion program.

Secondary Irrigation Water: Non-potable water that is untreated and used for irrigation of outdoor landscaping.

Slope: A vertical rise in feet measured over a horizontal distance, expressed as a percentage, measured generally at right angles to contour lines.

SECTION 3: WATER EFFICIENCY STANDARDS FOR SINGLE FAMILY AND MULTIPLE FAMILY RESIDENTIAL ZONES

These provisions are applicable to all new construction and new development in any residential zone, or for any single family or multiple family residential development in any zone.

8-9-3(i): Construction Standards

- A. New single family or multiple family residential dwellings 1,400 square feet or greater shall install hot water recirculation systems.
- B. All multiple family units with ground floor square footage or individually platted, shall be separately metered, submetered, or equipped with alternative technology capable of tracking the water use of the individual unit, and the information shall be made available to the resident of each unit. Individually platted condominium units are exempted from the provision of this Paragraph D if a property owners association owns and maintains the water lines and meters. All multiple family projects require separate water meters for all outdoor water usage, including landscaping. Nothing herein shall be interpreted to require individual and separate landscape water meters for each and every unit of a multiple family project.

Nothing in this paragraph nor this Chapter 9 of Title 8 is intended to influence or modify the calculation and assessment of impact fees under Washington City Code

8-9-3(ii): Landscape Standards

- A. For all new residential construction, Rehabilitated Landscaping, residential development, and new landscape improvements, the landscaping shall meet the following requirements:

1. Single Family Dwellings, and Multiple Family Dwelling Projects with Ten Units or Less:
 - a. Irrigated Lawn area must not exceed eight percent (8%) of the lot square footage, up to a maximum of one thousand five hundred (1,500) square feet of grass (irrigated lawn area). No lot, regardless of its size, may install grass areas that exceed 1,500 square feet of surface area on the lot. Applicants will identify the size of the building lot in square feet, the amount of irrigated lawn proposed in square feet, and calculate the percentage of the lot to be installed with irrigated lawn at the time of building application. Following construction, the City will verify the installed irrigated lawn area does not exceed the maximum allowed.
 - b. Grass is prohibited in park strips, in any landscape area that measures less than eight feet in width, and on any slope that exceeds 15%; and
2. Multiple Family Dwelling Projects with More than Ten Units: Comply with the Landscape Standards in 8-9-4(ii), below.

8-9-3(iii): Restrictive Covenants in Conflict with Water Efficiency Standards

Any homeowners or property owners association governing documents, such as bylaws, operating rules, covenants, conditions, and restrictions that govern the operation of a common interest development, and that are recorded after passage of this ordinance, are preempted by this ordinance and unenforceable by the owners or association contrary to Washington City Code if they conflict with the standards in this ordinance, or if they have the effect of prohibiting or restricting compliance with this ordinance.

SECTION 4: WATER EFFICIENCY STANDARDS FOR NONRESIDENTIAL ZONES AND NONRESIDENTIAL DEVELOPMENTS

These provisions are applicable to all new construction and new development in all nonresidential zones and nonresidential developments in any zone.

8-9-4(i): Construction Standards

- A. Hot water recirculation systems shall be installed, unless hot water delivery can be demonstrated to occur without first displacing more than 0.6 gallons of system water.
- B. All shell units with ground floor square footage, or individually platted, shall be separately metered, submetered, or equipped with alternative technology capable

of tracking the water use of the individual unit, and the information shall be made available to the individual unit. Individually platted condominium units are exempted if a property owners association owns and maintains the water lines and meters. All nonresidential projects require separate water meters for all outdoor water usage, including landscaping.

- C. All commercial car wash projects shall be built and operated to limit the maximum amount of new consumed water from the utility for car washes to 20 gallons per vehicle washed. Washington City shall have the right to review, inspect, and audit on recurring review cycles carwash project compliance with quantity maximums per vehicle washed.
- D. All golf courses using water district or municipal water supplies shall irrigate with secondary irrigation water and shall have separate water meters for the golf course. Irrigation with potable water at golf courses is prohibited to promote conservation of available drinking water. Each golf course development shall submit and follow a water budget with the Landscape Documentation Packet and identify water conservation measures for city review and approval.
- E. Outdoor or exterior Pools, fountains, or decorative water features that do not use secondary water are prohibited as part of any non-residential Landscape Plan, except as considered by the City Council for consumptive effect on potable (treated) water supplies and if approved by the City Council as a permitted exception.

8-9-4(ii): Landscape Standards

- A. For all new construction, Rehabilitated Landscaping, new development, and new landscape improvements in all nonresidential zones, and nonresidential development in any zone, the landscaping shall meet the following requirements:
 - 1. Grass is prohibited outside of an active recreation area. Grass is prohibited in park strips, in all landscape areas that measure less than eight feet in width, and on any slope that exceeds 15%.
 - 2. If secondary irrigation water is available, each project shall connect to the secondary irrigation water system for all outdoor water use. Washington City may make minor case-by-case permitted exceptions by approval of the City Council, allowing use of treated water for outdoor plantings that have secondary irrigation water available, subject to review and approval at the sole discretion of the city. An example of such a permitted exception would be for a small beautification planting of flowers or foliage that may be sensitive to secondary irrigation water quality.

CHAPTER 8

CONSERVATION LANDSCAPE REQUIREMENTS

SECTION:

8-8-1: General Provisions

8-8-1-1: Short Title

8-8-1-2: Conflict

8-8-1-3: Applicability

8-8-1-4: Severability

8-8-2: Definitions

8-8-3: Single-Family And Multiple-Family Residential Water Efficiency Standards

8-8-3-1: Construction Standards

8-8-3-2: Landscape Standards

8-8-3-3: Restrictive Covenants In Conflict With Water Efficiency Standards

8-8-4: Nonresidential Zones And Development Water Efficiency Standards

8-8-4-1: Construction Standards

8-8-4-2: Landscaped Standards

8-8-4-3: Irrigation Design Standards

8-8-5: Relief From Application Of Provisions Of Chapter

8-8-1: GENERAL PROVISIONS:

8-8-1-1: SHORT TITLE:

This Chapter shall be known as "Conservation Landscape Requirements". (Ord. 2022-08, 9-7-2022)

8-8-1-2: CONFLICT:

The terms and requirements of this Chapter and those of the currently-adopted Building Related Codes identified in Chapter 1 of Title 9 shall be read and applied together. Any conflict between the terms and requirements of this Chapter and those of the Building Related Codes shall be resolved in favor of the latter. (Ord. 2022-08, 9-7-2022)

8-8-1-3: APPLICABILITY:

The provisions of this Chapter are applicable to all new construction, development and major landscape improvements (a) on the Top Side and (b) in the residential areas within the main land area of the City that are not connected to or reasonably able to connect to and be served by the City's secondary water system. (Ord. 2022-08, 9-7-2022)

8-8-1-4: SEVERABILITY:

The provisions of this chapter are severable and if any provision, clause, sentence, word, or part thereof is held illegal, invalid, unconstitutional, or inapplicable to any person or circumstances, such illegality, invalidity, unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, sections, words or parts thereof of this chapter or their applicability to other persons or circumstances. (Ord. 2022-08, 9-7-2022)

8-8-2: DEFINITIONS:

The following definitions shall apply to this chapter:

ACTIVE RECREATION AREA:	An area that is dedicated to active play where grass may be used as the playing surface. Examples of active recreation areas include sports fields, play areas, and other similar uses designated for physical activity.
CHECK VALVE:	A device used in sprinkler heads or pipe to prevent water from draining out of the pipe through gravity flow.
CONTROLLER:	A device used in irrigation systems to automatically control when and how long sprinklers or drip irrigation systems operate.
DRIP EMITTER:	A drip irrigation fitting that delivers water slowly at the root zone of the plant, usually measured in gallons per hour.
DRIP IRRIGATION:	An irrigation system that delivers water by adding water at the plant's base and root zone, usually measured in gallons per hour. Drip irrigation exhibits a droplet, trickle, umbrella or short stream pattern, to reduce evaporation, overspray, and water use, and improving water conservation.

GRADING PLAN:	The grading plan shows all finish grades, spot elevations, drainage as necessary, and new and existing contours with the developed landscaped area.
GRASS:	A surface layer of earth containing mowed grass with its roots.
GROUND COVER:	Material planted in such a way as to form a continuous cover over ground that can be maintained at a height no more than twelve (12) inches.
HARDSCAPE:	Elements of landscape constructed from non-living materials such as concrete, boulders, brick, blacktop, and lumber. It includes patios, decks, and paths, but does not include driveways and sidewalks.
HYDROZONE:	Portion of landscape area having plants with similar water needs and rooting depth. A hydrozone may be irrigated or non-irrigated.
IRRIGATION PLAN:	A plan that shows the components of the irrigation system with water meter size, backflow prevention, precipitation rates, flow rate, and operating pressure for each irrigation circuit, and identification of all irrigation equipment.
IRRIGATION RUNOFF:	Irrigation water that is not absorbed by the soil or landscape area to which it is applied, and that flows onto other areas.
LANDSCAPE ARCHITECT:	A person who holds a professional license to practice landscape architecture in the state of Utah. Per State Code, licensed landscape architects, licensed architects, licensed land surveyors, and licensed engineers can professionally stamp plans that fall under the practice of landscape architecture. This includes commercial landscape and irrigation plans.
LANDSCAPE AREA:	Area within a lot or parcel that is not the home footprint, driveway, sidewalk or patio.
LANDSCAPE DESIGNER:	A person who may or may not hold professional certificates for landscape design/architecture, and who generally focuses on residential design and horticultural needs of home landscapes. Landscape designers cannot legally create commercial landscape plans.
LANDSCAPE DOCUMENTATION PACKAGE:	The documentation of graphic and written criteria, specifications, and detailed plans to arrange and modify the effects of natural features to comply with the provisions of this chapter. The Landscape Documentation Package shall include a project data sheet, a site plan, a planting plan, an irrigation plan, construction details, and a grading plan.
LANDSCAPE OR LANDSCAPING:	Any combination of berms; living plants, such as trees, shrubs, vines, ground covers, annuals, perennials, ornamental grass, or seeding; natural features such as rock, stone, or bark chips; and structural features, including but not limited to outdoor artwork, screen walls, fences or benches that create an attractive and pleasing environment.
LANDSCAPE OR LANDSCAPING MAINTENANCE:	Maintaining or keeping any landscaping, or any area required to be landscaped:
	A. In a live and thriving condition, with consideration for normal growth and water needs; and B. Fertilized, mowed, trimmed, edged, mulched and free from weeds, dead plants, litter, refuse, or debris in compliance with regionally accepted horticultural practice and city ordinances.
LANDSCAPE PLAN:	A plan that clearly and accurately identifies the location and species of new and existing trees, shrubs, ground covers, and other plants on a site, and any other landscape element, and includes an irrigation plan.
MULCH:	Any organic material such as leaves, bark, wood chips, straw; inorganic material such as crushed stone or gravel; other materials left loose and applied to the soil surface for the beneficial purpose of controlling weeds and conserving soil moisture.
PARK STRIP:	A typically narrow landscaped area located between the back-of-curb and sidewalk.
PLANT LIST:	A list of locally adaptable and environmentally sustainable plants for compliant Planting Plans as provided by the Washington County Water Conservancy District (see current version of the Washington County, Utah, Plant Guide, or successor thereof, available at the Washington County Water Conservancy District, or online at www.wcwcd.org).

PLANTING PLAN:	A Planting Plan that clearly and accurately identifies the type, size, and locations for new and existing trees, shrubs, planting beds, ground covers, grass areas, driveways, sidewalks, hardscape features, and fences.
PRECIPITATION RATE:	The depth of water applied to a given area, usually measured in inches per hour.
PRESSURE COMPENSATING:	A drip irrigation system that compensates for fluctuating water pressure by only allowing a fixed volume of water through drip emitters.
PRESSURE REGULATING VALVE:	A valve installed in an irrigation mainline that reduces a higher supply pressure at the inlet down to a regulated lower pressure at the outlet.
REHABILITATED LANDSCAPING:	Landscape area in which over 50% percent of existing landscaping is removed and replaced. Includes all landscaping funded in part, or completely, by Washington County Water Conservancy District's landscape conversion program.
SECONDARY IRRIGATION WATER:	Non-potable water that is untreated and used for irrigation of outdoor landscaping.
SLOPE:	A vertical rise in feet measured over a horizontal distance, expressed as a percentage, measured generally at right angles to contour lines.
TOP SIDE:	the area of the city situated atop the cliffs that line the easterly portions of the City, designated as "Top side / East Bench" in the City's General Plan.
WATER-CONSERVING PLANT:	A plant that can generally survive with available rainfall once established, with possible supplemental irrigation needed or desirable during spring and summer months or during drought periods. (Ord. 2022-08, 9-7-2022)

8-8-3: SINGLE-FAMILY AND MULTIPLE-FAMILY RESIDENTIAL WATER EFFICIENCY STANDARDS:

These provisions are applicable to all new construction, and new development in any residential zone, or for any single family or multiple family residential development in any zone located in the areas identified in Section 8-8-1-3 above. (Ord. 2022-08, 9-7-2022)

8-8-3-1: CONSTRUCTION STANDARDS:

A. The following shall be installed in new single-family and multiple-family dwellings of 1,000 square feet or greater: tankless water heater (unless hot water delivery can be demonstrated to occur without first displacing more than 0.6 gallons of system water).

B. The following shall be installed in all new single-family and multiple-family dwellings:

1. Water Sense labeled fixtures, including, but not limited to faucets, showerheads, toilets, and urinals.
2. Energy Star qualified appliances.

C. All multiple-family units shall be separately metered, sub-metered, or equipped with alternative technology capable of tracking the water use of the individual unit; and the information related thereto shall be made available to the resident of each unit.

D. All multiple-family projects shall be equipped with separate water meters for all outdoor water usage, including landscaping. (Ord. 2022-08, 9-7-2022)

8-8-3-2: LANDSCAPE STANDARDS:

A. For all new residential construction or development, landscaping shall meet the following requirements:

1. Single-Family Dwellings, and Multiple-Family Dwelling Projects with Ten Units or Less:

- a. The total grass area shall not exceed the following:

Lot size	Maximum grass
Up to 10,000 sf	800 sf
10,000+ to 25,000 sf	8% of lot sf
25,000+ sf	2,000 sf

- b. Grass is prohibited in park strips, in landscape areas less than eight feet wide, and on any slope that exceeds 15%; and

c. Each single-family dwelling shall have a minimum of two water-efficient shade trees with a minimum one-and-one-half-inch (1½") caliper trunk. Each multiple-family development with ten units or less shall follow city approved landscape planting plans for number of shade trees.

2. Multiple-Family Dwelling Projects with More than Ten Units: Comply with the Landscape Standards in 8-8-4-2, below.

B. The Plant List, as defined in Section 8-8-2, shall be consulted in determining appropriate, adaptable and environmentally

sustainable trees, shrubs, and other plants to be planted and maintained. (Ord. 2022-08, 9-7-2022)

8-8-3-3: RESTRICTIVE COVENANTS IN CONFLICT WITH WATER EFFICIENCY STANDARDS:

To the extent permitted by applicable law, any homeowners or property owners' association governing documents, such as bylaws, operating rules, covenants, conditions, and restrictions, that govern the operation of a common interest development, recorded after adoption of this Chapter, are deemed void and unenforceable if they conflict with the water efficiency standards in this Chapter, or if they have the effect of prohibiting or restricting compliance with this Chapter. (Ord. 2022-08, 9-7-2022)

8-8-4: NONRESIDENTIAL ZONES AND DEVELOPMENT WATER EFFICIENCY STANDARDS:

These provisions are applicable to all new construction and new development in all nonresidential zones, and nonresidential development in any zone located in the areas identified in Section 8-8-1-3 above. (Ord. 2022-08, 9-7-2022)

8-8-4-1: CONSTRUCTION STANDARDS:

A. Tankless water heaters shall be installed, unless hot water delivery can be demonstrated to occur without first displacing more than 0.6 gallons of system water.

B. Water Sense labeled fixtures shall be installed, including, but not limited to faucets, showerheads toilets, and urinals.

C. Energy Star qualified appliances shall be installed.

D. All shell units with ground floor square footage, or which are individually platted, shall be separately metered, sub-metered, or equipped with alternative technology capable of tracking the water use of the individual unit,; and the information related thereto shall be made available to the individual unit.

1. Individually-platted condominium units are excepted if a property owners association owns and maintains the water lines and meters.

2. All nonresidential projects require separate water meters for all outdoor water usage, including landscaping.

E. All carwash projects shall recirculate and limit the maximum amount of water to 35 gallons per vehicle washed.

F. Exterior, decorative water features are prohibited, except up to five decorative water features with 50 gallon or less capacity and maintained recirculating pumps.

G. All golf courses using water district or municipal water supplies shall irrigate with secondary irrigation water and shall have separate water meters for the golf course. Irrigation with potable water is prohibited. Each golf course development shall submit and follow a water budget with the Landscape Documentation Packet and identify water conservation measures for city approval.

H. Outside misting systems shall only operate during the May through August time period where the daily high temperature is 90 degrees Fahrenheit or greater. (Ord. 2022-08, 9-7-2022)

8-8-4-2: LANDSCAPED STANDARDS:

A. All new construction and new development shall meet the Landscape Design Standards and Irrigation Design Standards of this Chapter.

1. Grass is not permitted outside of an active recreation area.

2. Grass is prohibited in park strips, in landscape areas less than eight feet wide, and on any slope that exceeds fifteen percent (15%).

3. Landscape and irrigation installers shall follow the plans that have been signed and approved by the city.

4. Each project shall propose and follow an approved Planting Plan. At least forty percent (40%) of the project's proposed (and installed) landscaped area shall contain vegetative cover consisting of water-efficient shade trees and/or bushes adequate in number and configuration to visually enhance the project, prevent heat islands, and prevent soil erosion. The configuration of the vegetation in the Planting Plan is in the sole discretion of the city.

5. If secondary irrigation water is reasonably available, each project shall connect to the system for all outdoor water use. A city may make minor exceptions, allowing use of treated water for outdoor plantings in small beautification areas, in its sole discretion.

B. The Plant List, as defined in Section 8-8-2, shall be consulted in determining appropriate, adaptable and environmentally sustainable trees, shrubs, and other plants to be planted and maintained.

C. Required Documentation

1. Landscape Documentation Package: A copy of a Landscape Documentation Package shall be submitted to and approved by the city prior to the issue of any building permit. A copy of the approved Landscape Documentation Package shall be provided to the property owner or site manager. The Landscape Documentation Package shall be prepared by a professional landscape architect (PLA) and shall consist of the following items:

a. Project Data Sheet containing the following:

(1) Project name and address;

(2) Applicant or applicant agent's name, address, phone number, and email address;

(3) Landscape architect's name, address, phone number, and email address; and

(4) Landscape contractor's name, address, phone number and email address, if available at this time.

b. Planting Plan. A detailed Planting Plan shall be drawn at a scale that clearly identifies the following:

- (1) Location of all plant materials, a legend with common and botanical names, and size of plant materials;
- (2) Property lines and street names;
- (3) Existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements;
- (4) Existing trees and plant materials to be removed or retained;
- (5) Scale: graphic and written.;
- (6) Date of design;
- (7) Designation of hydrozones; and
- (8) Details and specifications for tree staking, soil preparation, and other planting work.

c. Irrigation Plan. A detailed irrigation plan shall be drawn at the same scale as the Planting Plan and shall contain the following information:

- (1) Layout of the irrigation system and a legend summarizing the type and size of all components of the system, including manufacturer name and model numbers;
- (2) Static water pressure in pounds per square inch (psi) at the point of connection to the public water supply;
- (3) Flow rate in gallons per minute and design operating pressure in psi for each valve and precipitation rate in inches per hour for each valve with irrigation equipment (i.e., sprinklers, drip emitters, bubblers, etc.); and
- (4) Installation details for irrigation components.

d. Grading Plan. A grading plan shall be drawn at the same scale as the Planting Plan and shall contain the following information:

- (1) Property lines and street names, existing and proposed buildings, walls, fences, utilities, paved areas and other site improvements; and
- (2) Existing and finished contour lines and spot elevations as necessary for the proposed site improvements, as well as drainage.

2. Plan Review, Construction Inspection, and Post-Construction Monitoring.

a. As part of the building permit approval process, a copy of the Landscape Documentation Package shall be submitted with a city-provided pre-submittal checklist completed to initiate a review and approval process before construction begins.

b. All installers and designers shall meet state and local license, insurance, and bonding requirements, and shall be able to show proof of such.

c. During construction, site inspection of the landscaping may be performed by the city Building Inspection Department or another entity tasked with approvals.

d. Following construction, and prior to issuance of an occupancy permit, an inspection shall be scheduled with the Building Inspection Department or other appointed entity to verify compliance with the approved landscape plans. The Certificate of Substantial Completion shall be completed by the property owner, developer, contractor or landscape architect, and submitted to the city.

e. The city or other appointed entity reserves the right to perform site inspections at any time before, during or after the irrigation system and landscape installation, and to require corrective measures if requirements of this Chapter are not satisfied. (Ord. 2022-08, 9-7-2022)

8-8-4-3: IRRIGATION DESIGN STANDARDS:

A. Pressure Regulation. A pressure regulating valve shall be installed by the builder or developer, and maintained by the owner, if the static service pressure exceeds 90 pounds per square inch (psi). The pressure-regulating valve shall be located between the meter and the first point of water use, or first point of division in the pipe, and shall be set at the manufacturer's recommended pressure for the sprinklers.

B. Irrigation Controller. It is required that landscaped areas use a Water Sense labeled smart irrigation controller, which automatically adjusts the frequency and/or duration of irrigation events in response to changing weather conditions. All controllers shall be equipped with automatic rain delay or rain shut-off capabilities and shall have memory retention capability to retain pre-programmed irrigation schedules. Sites are not exempt from water waste prohibitions.

C. Each valve shall irrigate a landscape with a similar site, slope and soil conditions, and plant materials with similar watering needs. Grass, trees and non-grass areas shall be irrigated on separate valves. Drip emitters and sprinklers shall be placed on separate valves.

D. Low-volume irrigation equipment (i.e., drip emitters, bubblers) shall be provided for each tree.

E. Drip irrigation shall be used to irrigate plants in non-grass areas. Spray head to drip conversion for rehabilitated landscape sites may be acceptable with city approval of Irrigation Plans.

F. High conservation efficiency spray nozzles are required for sprinkler applications.

G. Sprinkler heads shall have matched precipitation rates with each control valve circuit.

- H. Sprinkler heads shall be attached to rigid lateral lines with flexible material (swing joints) to reduce potential for breakage.
- I. Check valves are required. Pressure compensating valves and sprinklers are required where a significant variation in water pressure occurs within the irrigation system due to elevation differences.
- J. Filters and end-flush valves shall be provided for drip irrigation lines.
- K. Landscape watering with potable (treated) water is prohibited from 10:00 a.m. to 6:00 p.m., June 1 to September 1, to maximize irrigation efficiency; and it should be limited to the hours of 6:00 p.m. to 10:00 a.m. during times of low wind, year-round, to avoid excessive loss of water through evapotranspiration, with treated or untreated (secondary) water. (c.f., Section 8-6-6)
- L. Water waste is prohibited.
 - 1. Waste includes overwatering, irrigating during a precipitation event, water that sprays or flows off your property, failure to comply with drought restrictions and/or a failure to repair irrigation system leaks and/or malfunctions in a timely manner. [See Section 8-1-17.]
 - 2. Overwatering can be avoided by following the water district's recommended irrigation schedule and practices as noted on wcwcd.org. The generally recommended schedule is:
 - a. Winter (Nov - Feb) - sprinkler and drip irrigation up to 1 day a week. Irrigation is typically not needed in December and January
 - b. Spring (Mar - April) - sprinkler irrigation up to 3 days a week and drip irrigation up to 2 days a week
 - c. Summer (May - Aug) - sprinkler irrigation up to 4 days a week and drip irrigation up to 3 days a week
 - d. Fall (Sept - Oct) - sprinkler irrigation up to 3 days a week and drip irrigation up to 2 days a week
- M. Program valves for multiple repeat cycles are required to reduce runoff on slopes and for soils with slow infiltration rates. (Ord. 2022-08, 9-7-2022)

8-8-5: RELIEF FROM APPLICATION OF PROVISIONS OF CHAPTER:

Any landowner or developer of property located within the main land area of the City-for which new construction, development and/or major landscape improvements are desired, but which the landowner or developer asserts is not connected and cannot reasonably connect to and be served by the City's secondary water system-may submit a written request for relief to the City Administrator, who shall review the request within ten (10) business days and grant such relief as he or she deems necessary and proper, and in accordance with application state and local law. If aggrieved by the decision of the City Administrator, such landowner or developer may make application to appear before the City Council to request relief. (Ord. 2022-08, 9-7-2022)



STAFF COMMENTS

Discussion and possible direction to staff on whether to **proceed with the purchase of a natural gas generator** -Scott Hughes

Discussion:

The Power Department has the space for one additional generator in the current building. They have been in discussions with Power Board regarding the purchase of one (1) additional generator for quite some time. They have been working on the approval on an adjusted air permit with Utah Department of Air Quality and have received approval for that permit. On January 11th, 2023, Power Board recommended the approval of the purchase of that one generator. If approved by City Council, the Power Department will be looking to finance that generator through UAMPS. The total price quoted is \$3,077,022.20.

Findings:

Recommendation:

Attachments:

None



STAFF COMMENTS

Consideration and possible approval of an **updated policy governing power generation by customers connected to the City's power grid.** -Scott Hughes

Discussion:

The proposed, updated policy governs the relationship between the City and customers that wish to generate power on their property through either solar panels or generators. As solar becomes more sophisticated and common, the Power Department had made an effort to update its policy accordingly and to better protect the power grid and existing residents. As part of its analysis, the Power Board created a sub-committee to focus on this specific issue and advise the Power Board. The proposed, updated policy simplifies the previous version by combining what is currently several different policies into one document. The proposed policy seeks to strike the balance between risks to the City's power grid imposed by self-generation and the benefits to the community that self-generation provides.

Findings:

Recommendation:

The Power Board and the Power Department recommend approval of the updated policy. The City Attorney approves of the form of the policy.

Attachments:

1. 230125 Combined Solar Policy (Clean)

Grid-Tied Distribution Generation Policy

This Grid-Tied Distribution Generation Policy (“Policy”) applies to all grid-tied distribution generation systems (“Systems”) within the City of Hurricane (“City”) operated by customers (“Customers”) of Hurricane City Power (“HCP”) in which the system is located on the Customer’s side of the City’s electric meter.

The City reserves all rights to refuse or deny an application that does not comply with any of the terms and conditions of this policy.

Application Procedures:

Applicants requesting approval of a grid-tied distribution generation facility must obtain an application from HCP and complete all requirements, including the Grid-Tied Distribution Generation Application Checklist.

Interconnection Review:

The City will review an application to interconnect a System after the Customer has met the following criteria:

1. Customer has submitted a complete application and paid the applicable fees.
2. Customer has contacted and listed a prequalified solar installer on the application.

System Limits:

The City will allow a limited number of HCP Customers to install Systems, subject to all requirements and conditions of this Policy. The number of Customers’ Systems allowed will be limited by the capacity of each distribution circuit, as determined by HCP.

The aggregate generation capacity on the distribution circuit to which the System will interconnect, including the capacity of the System, shall not contribute more than 10% to the distribution circuit’s maximum fault current at the point on the high voltage (primary) level that is nearest the proposed point of common coupling as determined by HCP.

A System’s point of common coupling shall not be on a transmission line or a spot network.

If a System is to be connected to a radial distribution circuit, the aggregate generation capacity connected to the circuit, including that of the System, shall not exceed 15% of the circuit’s total annual peak load, as most recently measured at the substation.

If a single-phase System is to be connected to a transformer center tap neutral of a 240-volt service or a three phase transformer, the addition of the System shall not create an imbalance between the two sides of the 240 volt service or an imbalance of the three phase transformer of more than 20% of nameplate rating of the service transformer.

Circuit/Distribution System Study:

A circuit/distribution system study may be needed to ensure any System installation is not detrimental to the City’s power grid. Whether a circuit/distribution system study is required shall be determined by HCP at its sole discretion. The study will be completed by an engineer contracted by HCP, the cost of which shall be paid by Customer prior to the study being authorized by the City and prior to any approval or acceptance of the Customer’s System. System installations that would be detrimental to the City’s power grid are not permitted.

Installation, Compliance, Energy Credits, and Meter Reading:

Systems shall be installed in accordance with all HCP and City codes, rules, regulations, and specification standards. HCP and the City’s Building Department shall inspect the System prior to any power generation to ensure it complies.

The City will be the owner of the renewable attributes also known as Renewable Energy Credits (REC) of the electricity that are generated on or after the Customer-generating facility is installed and working.

HCP shall replace its normal metering equipment with bi-directional metering equipment on the meter base at the cost of the Customer. The bi-directional meter will measure energy that flows from the City's power grid to the Customer as well as the energy that flows from the Customer to the City's power grid. HCP will read the Customer's meter on the City's normal meter reading schedule.

HCP will apply a credit to the Customer's monthly bill for energy the customer delivers to the City's power grid during that billing cycle. The rate at which HCP will credit the energy delivered by the Customer is \$.04/kWh. See HCP Rate Schedule. This rate schedule may be eliminated or adjusted at any time by the Hurricane City Council. Credits accrued each month are not eligible to be applied to the electric base rate or any other utility/City rates or fees. Monthly credits may only be applied to electric kWh usage. Credits may roll over month to month until July 1 of each year, at this time all credits will be reset to zero.

Meters must be accessible to HCP and the City Meter Reader and shall not be hindered by animals, landscape, fences, or other obstacles or potential obstacles. HCP may, at its discretion, regularly inspect the System and shall be given unlimited access by the Customer to all Customer-owned generation and metering equipment.

Ground-Mounted Solar Arrays:

Ground-mounted solar arrays on residential lots shall be located behind the front setback line or behind the front plane of the home, whichever is furthest from the fronting public roadway.

The solar array shall not infringe on any easement or sight distance requirements and shall not violate any City Ordinance. Customers are responsible to ensure that the System is in compliance with any subdivision CC&R's or similar deed restrictions or covenants.

Maximum height for a solar arrays, measured from ground level to the highest point on the array, shall not exceed fifteen (15) feet.

Solar arrays shall be limited as set forth below in Chart A in the paragraph labeled "System Size Limitations – Base Rates".

The following size limits shall also apply:

Lot Size:	Maximum array surface area:
Less than 1 acre	200 square feet
1 - 2.5 acres	400 square feet
Greater than 2.5 acres	1200 square feet

Solar arrays shall be located to maximize unobstructed line of sight.

System Size* Limitations - Base Rates:

The City limits Systems and charges base rates for Grid-Tied Distribution Generation as described in the following chart:

Chart A

System Type	Photovoltaic (PV) System Size*	Maximum Power Export Setting	Export Credit Rate	Monthly Base Rate
1 Phase System				
1P BASIC System	Up to 8.1 kW DC / 6 kW AC	6 kW AC	\$.04/kWh	\$30
1P LARGE System	Up to 16 kW DC / 12 kW AC	6 kW AC	\$.04/kWh	\$40
3 Phase System				
3P BASIC System (400A and below)	Up to 16 kW DC / 12 kW AC	12 kW AC	\$.04kwh	\$90
3P LARGE System (Over 400A)	Determined by Study	Determined by Study	**PPA	**PPA

*"System Size" is defined as the largest nameplate rating of any of the components, total panel array, total micro-inverter array, export limiter, or inverter.

**"PPA" is defined as Power Purchase Agreement.

1P Systems capable of more than 16 KW DC /12 KW of AC output with a 6 KW AC limiter will be considered by HCP staff on a case-by-case basis. If approved, a monthly incremental base rate increase will replace the 1P BASIC System base rate.

3P Systems will be required to conduct a study by an electrical engineer chosen by HCP for the connected circuit. The designs will be reviewed and approved by said electrical engineer. All costs will be at the expense of the applicant. 3 Phase systems under 400A (3P BASIC) means the main service size to the building is 400 amps or less. 3 Phase system over 400A (3P LARGE) means the main service size to the building is 400 amps or larger and is CT metered.

Export rates, base rates, and fees are subject to change upon approval of Hurricane City Council at any given time.

Ineligible Properties:

Properties with meters located in back yards are not eligible for a grid-tied System. Properties consisting of multi-unit buildings are not eligible for a grid-tied System.

Standards:

The following standards apply to all Systems:

- (a) IEEE 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems, as amended and supplemented, which is incorporated by reference herein. IEE Standard 1547 can be obtained through the IEE website at www.ieee.org; **and**
- (b) UL 1741, Inverters, Converters, and Controllers for use in Independent Power Systems (January 2001), as amended and supplemented, which is incorporated by reference herein. UL Standards can be obtained through the Underwriters Laboratories website at www.ul.com.

Certification of customer-generator facilities:

Equipment packages shall be certified for interconnected operation. An equipment package shall be considered certified for interconnected operation if it has been submitted by a manufacturer to a nationally recognized testing and certification laboratory and has been tested and listed by the laboratory for continuous interactive operation with an electric distribution system in compliance with the applicable codes and standards as set forth in IEEE 1547, listed above.

System Operation and Responsibility:

Systems shall be installed, operated, and maintained by the Customer at the Customer's sole expense. The Customer will be responsible for an application review fee for each review and a one-time cost of the bi-directional meter in amounts established by HCP. HCP will install the meter onto the Customer's meter base and read and maintain the meter consistent with Hurricane City's Standard Operating Procedure at the City's expense.

Neither the City nor HCP shall be liable for, and Customer shall indemnify and defend the City and HCP, for all damages, claims, liabilities, losses, injuries, or deaths resulting from or relating to (1) the City permitting or continuing to allow an attachment of a grid-tied System to the City's power grid; (2) the Customer's System; (3) the Customer's generation of power; and (4) the acts or omissions of the Customer in generating power.

Customer and City Requirements

(a) Once a metering interconnection has been approved, the City will not require a Customer to test or perform maintenance on its facility except for the following:

1. An annual test in which the Customer-Generating Facility is disconnected from the City's distribution equipment to ensure that the inverter stops delivering power to the grid.
2. Any manufacturer-recommended testing or maintenance.
3. Any post-installation testing necessary to ensure compliance with IEEE 1547 or to ensure safety.
4. Documentation is required for testing done yearly and needs to be submitted to the City.

(b) The City shall have the right to inspect a Customer-Generating Facility after interconnection approval is granted, at reasonable hours and with reasonable prior notice to the Customer. If the City discovers that the Customer-Generating Facility is not in compliance with the requirements of this subchapter, and the noncompliance adversely affects the safety or reliability of the electric distribution system, the City may require the Customer to disconnect the Customer-Generating Facility until compliance is achieved.

(c) The City shall have the right to disconnect the Customer-Generating Facility in the event it causes system problems. The Customer will have the option to correct the problem, at which time the system will be re-inspected before beginning operation again.

(d) The Customer shall be required to install a manual disconnect located within five feet of the meter.

Signature verifying acceptance of above terms required before start of project:

Customer _____ Date _____



STAFF COMMENTS

Consideration and possible approval of a **MOU with the Utah Department of Workforce Services** regarding the Five County HEAT program

Discussion:

The City currently participates in an MOU with the Department of Workforce Services for the Five County HEAT program. This program helps residents that are having difficulty paying their power bill. There is also a program to help residents with their water bill. Hurricane is not currently part of the agreement, but if this is approved then our residents could qualify to get help with their water bill. Funding for the water portion is only available until September 2023 unless the government extends it. Staff is still working with the Workforce Office on all the details of the agreement but should have a recommendation by next week.

Findings:

Recommendation:

Attachments:

1. Water Provider Agreement No Portal FULL
2. Water Provider- Portal Access FULL



MEMORANDUM OF UNDERSTANDING
BETWEEN THE
UTAH DEPARTMENT OF WORKFORCE SERVICES
AND

This Agreement is entered into between Utah Department of Workforce Services, hereinafter referred to as the Department or DWS, and the organization listed below, hereinafter referred to as Contractor, collectively referenced as PARTIES:

Organization

Address

City

State

Zip

Now therefore, the PARTIES agree as follows:

I. Purpose

DWS and the Contractor shall enter into an Agreement for the purpose of DWS providing water assistance benefits directly to the Water Provider for eligible low-income households.

II. Period of Performance

This Agreement is effective October 1, 2021 through September 30, 2023 unless terminated sooner in accordance with the terms and conditions herein.

III. Termination

DWS may terminate this Agreement without prior notice if deemed necessary because of a requirement of law or policy, failure of the Contractor to comply with the terms of this Agreement, established procedures, or legal requirements. This agreement may be terminated without cause, in writing, with the mutual consent of the PARTIES.

IV. Renegotiation or Modification

This Agreement may be amended, modified, or supplemented only by written amendment to the Agreement, executed by the PARTIES hereto, and attached to the original signed copy of the Agreement.

V. Attachments

The Contractor agrees to comply with the terms of the following attachment(s).

Attachment A: Non-Disclosure Agreement

Attachment B: Water Type Agreement

Attachment C: Water Assistance Program [Policy Manual](#)

VI. Monitoring

PARTIES shall permit each other the right of a compliance review to ensure that the provisions of the Agreement are upheld and will maintain a process sufficient to allow an audit of its compliance.

VII. Imposition of Fees

The Contractor will not impose any fees upon clients for services provided under this Agreement except as authorized by DWS.

VIII. Confidentiality and Disclosure

Checks will be sent to the water provider in the mail. The check stub will contain the account numbers for the accounts to which the check should be applied. The Contractor agrees not to use or disclose information other than as permitted under Section I above or required by law. The Contractor acknowledges that § 35A-4-312(7) imposes privacy and confidentiality requirements on information. Penalties, including criminal penalties under § 76-8-1301(4) Utah Code annotated, may be imposed for misuse or improper disclosure of such information.

- A. Information obtained under this Agreement shall only be used to support the valid administrative needs of the Contractor and shall not be disclosed for any purpose other than those specifically authorized by this Agreement. The Contractor's employees and volunteers must sign the "Department of Workforce Services Non-disclosure Agreement" (Attachment A).
- B. The Contractor shall have sufficient safeguards in place to ensure the information obtained is used only for the purpose disclosed.
- C. At the request of DWS, the Contractor shall identify all personnel, by position, authorized to request and receive information.

IX. Equal Opportunity and Non-Discrimination

The Contractor shall comply with Section 188 of the Workforce Innovation and Opportunity Act, and Title VI of the Civil Rights Act, to the extent they apply to the subject matter of this contract.

X. Protection and Use of Client Records

The use or disclosure by any party, of any information concerning a client for any purpose not directly connected with the administration of the PARTIES' responsibilities under the terms of this Agreement is prohibited except on written consent of the client, their attorney, or responsible parent or guardian.

XI. Indemnity

IF THE WATER PROVIDER IS A GOVERNMENTAL AGENCY: Both PARTIES to this Agreement are governmental entities as defined in the Utah Governmental Immunity Act (Utah Code Ann. 63G-7-101 et. seq.). Nothing in this Contract shall be construed as a waiver by either or both PARTIES of any rights, limits, protections or defenses provided by the Act. Nor shall this Contract be construed, with respect to third PARTIES, as a waiver of any governmental immunity to which a party to this Contract is otherwise entitled. Subject to and consistent with the Act, each party will

be responsible for its own actions or negligence and will defend against any claims or lawsuit brought against it. There are no indemnity obligations between these PARTIES.

IF THE WATER PROVIDER IS A NON-GOVERNMENTAL ENTITY: The Contractor agrees to indemnify, save harmless, and release the State of Utah, and all its officers, agents, volunteers, and employees from and against any and all loss, damages, injury, liability, suits, and proceedings arising out of the performance of this Agreement which are caused in whole or in part by the negligence of the Contractor's officers, agents, volunteers, or employees, but not for claims arising from the State's sole negligence.

XII. Contract Jurisdiction, Choice of Law and Venue

The provisions of this Agreement shall be governed by the laws of the State of Utah. The PARTIES will submit to the jurisdiction of the courts of the State of Utah for any dispute arising out of this Agreement or the breach thereof. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake County.

XIII. Separability Clause

A declaration by any court, or any other binding legal source, that any provision of this Agreement is unenforceable shall not affect the legality and enforceability of any other provision of this Agreement, unless the provisions are mutually dependent.

XIV. Additional Requirements

Provisions incorporated into this Agreement by reference but not attached hereto include all other governmental laws, rules, regulations, or actions applicable to services provided herein.

Contact Information

Department of Workforce Services

Name: Lori Page

Position: Water Assistance Vendor

Specialist Phone: 801-526-9930

Email: loripage@utah.gov

Water Provider

Name:

Position:

Phone:

Email:

This MOU and all documents incorporated by reference constitute the entire Agreement between the PARTIES and supersede all prior negotiations, representations, or Agreements, either written or oral between the PARTIES relating to the subject matter of this MOU.

Signatures and Acknowledgement

By signing below, the following officials acknowledge that they understand and agree to all of the terms and responsibilities set forth herein and cause this Agreement to be executed.

APPROVED FOR CONTRACTOR:

Signature Date

Print Name/Title

APPROVED FOR DWS:

Casey Cameron, Executive Director Date

ATTACHMENT A

NON-DISCLOSURE AGREEMENT

Each **Contractor/Grantee** employee or volunteer and each **Sub-Contractor/Grantee** employee or volunteer who has access to Customer personal information must sign this Non-Disclosure Agreement at the beginning of the grant or upon hire. A signed copy of this Agreement must be in each employee's/volunteer's file subject to inspection and review by the Department of Workforce Services (DWS).

The **Contractor/Grantee** and its employees and volunteers will comply with the following measures to protect the privacy of the information released under this agreement against unauthorized access or disclosure.

1. The information shall be used only to the extent necessary to assist in the purposes identified within this Agreement and shall not be re-disclosed for any purposes not specifically authorized in this contract.
2. The information shall be stored in a place physically secure from access by unauthorized persons.
3. Information in electronic format shall be stored and processed in such a way that unauthorized persons cannot retrieve the information by computer, remote terminal or any other means.
4. Precautions shall be taken to ensure that only authorized personnel are given access to on-line files.
5. The Contractor/Grantee has provided me instruction regarding the private nature of the information and I understand I am subject to State and Federal law penalties for unauthorized disclosure of information.

Signature

Date

Print Name

ATTACHMENT B: WATER TYPE AGREEMENT

I. Water Type(s) provided (please check all that apply):

- ☐ Drinking Water
- ☐ Wastewater
- ☐ Stormwater
- ☐ Ground-water

PURPOSE OF ATTACHMENT:

On December 27, 2020, the Consolidated Appropriations Act, 2021 was signed into law. This authorizing legislation included funding in emergency spending to assist low-income households with water and wastewater bills. On March 11, 2021, additional funding was appropriated in the American Rescue Plan Act (ARP) of 2021 in emergency spending to assist low-income households with water and wastewater bills. Eligible households are defined as those meeting the criteria set forth in the Water Assistance Policy Manual (incorporated by reference as *Attachment D*), issued by the Utah DWS Department of Workforce Services, Water Assistance Program. This contract incorporates the requirements that must be met by WATER PROVIDERS as payments are made directly by DWS to WATER PROVIDERS.

SCOPE:

A. DWS will make payments directly to a WATER PROVIDER provided that:

1. WATER PROVIDER charges the household in WATER PROVIDER'S normal billing process.
2. WATER PROVIDER bills the household no more than the cost of the water/wastewater minus the cost of the payments received or expected from DWS.
3. WATER PROVIDER does not discriminate against or treat adversely any eligible household for any reason in relation to terms and conditions of service, sale, credit, delivery, or price, including service charges, reconnection charges and payment plan arrangements due to their participation in the water assistance program.

4. WATER PROVIDER agrees not to discontinue water service for at least 30 days after receiving verification of payment from DWS. Examples of valid water payment verifications will be available upon request from DWS.
 5. WATER PROVIDER agrees to waive any security deposit billed to households approved for the Water Program. This does not apply to service initiation fees routinely charged by a WATER PROVIDER to both renters and owners alike as a condition of service.
 6. WATER PROVIDER agrees to reconnect the client within 24 hours upon receiving verbal or written commitment of payment from DWS.
 7. If a WATER PROVIDER is a utility regulated by the Public Service Commission of Utah, a WATER PROVIDER will supply Water accordance with provisions of Utah residential Utility Service Regulation R746-200, as adopted by the Public Service Commission of Utah.
 8. A WATER PROVIDER will ensure that payment by DWS is credited toward the household's water and wastewater costs.
 9. If the water assistance benefit was paid in error or if fraud is determined, upon request, the WATER PROVIDER agrees to return the Water Assistance Benefit to DWS.
- B. DWS will include a list of eligible households and amounts paid on behalf of households with each warrant paid to a WATER PROVIDER. Those providers accessing the portal will use the portal to help determine to which accounts the funds from the warrant should be applied

C. CREDIT BALANCES

1. If a household discontinues service with a WATER PROVIDER, the WATER PROVIDER must return any water benefit credit remaining on the account to DWS with the Return Funds to State Form.
 - a. If the household opens a new water utility account for a Utah address, the WATER PROVIDER may transfer the remaining credit

balance directly to the new WATER PROVIDER without notifying DWS.

- b. a WATER PROVIDER may not return credit balances directly to the client.

D. In the event a WATER PROVIDER erroneously returns funds to DWS, DWS shall remit such funds to the WATER PROVIDER within 30 days after a determination that such return was in error.

E. RELEASE OF INFORMATION:

1. The WATER PROVIDER named above is a Retail Water Provider who represents and warrants that it is authorized to receive payment from DWS on behalf of a customer determined by DWS under the Water Assistance Guidelines to be an eligible Water Assistance applicant. A WATER PROVIDER will, with reference to an eligible Water Assistance applicant:

- a. Upon verbal or written request from DWS, provide at no cost to DWS the eligible Water Assistance applicant's billing and usage history for the previous twelve (12) months. A WATER PROVIDER will transmit such billing history via electronic mail or facsimile by requested date each year.
- b. WATER PROVIDER agrees to provide relevant account information including account balance, utility number, and a copy of recent utility bills when requested by DWS.



MEMORANDUM OF UNDERSTANDING
FOR DWS SYSTEM ACCESS
BETWEEN THE
UTAH DEPARTMENT OF WORKFORCE SERVICES
AND
WATER PROVIDER

This Agreement is entered into between Utah Department of Workforce Services, hereinafter referred to as the Department or DWS, and the organization listed below, hereinafter referred to as Water Provider, collectively referenced as PARTIES:

Organization

Address

City State Zip

Now therefore, the PARTIES agree as follows:

- I. Purpose
DWS and the Water Provider enter into this Agreement to govern access and use of the Water Assistance Vendor Portal (System) for the purpose of DWS providing water assistance benefits directly to the Water Provider for eligible low-income households.
- II. Period of Performance
This Agreement is effective October 1, 2021 through September 30, 2023 unless terminated sooner in accordance with the terms and conditions herein.
- III. Information Sharing
The Water Provider shall utilize the Water Assistance Vendor Portal to verify water benefits paid by DWS directly to the Water Provider for water assistance to eligible households.
 - A. The Water Provider will be given System access to conduct a Benefit Issuance search for water assistance clients by check number or date range.
 - B. The System search results will provide residential and account information for the water assistance benefits the client has received.
 - C. The Water Provider will have access to the specific data elements listed below for the sole purpose of processing water assistance checks:
 1. Reports tab specific to Assigned Vendor Number
 2. Home tab to upload Annual Usage Reports for water assistance eligible households
- IV. Water Provider Requirements
 - A. The Water Provider will provide DWS with a Customer Usage Data Report annually by the requested deadline.

B. The Water Provider will comply with *Attachment B - Water Type Agreement* and *Attachment C - Water Assistance Program Policy Manual* as incorporated by reference.

V. Termination

DWS may terminate this Agreement without prior notice if deemed necessary because of a requirement of law or policy, upon determination by DWS that there has been a breach of system integrity or security by the Water Provider, or a failure of the Water Provider to comply with the terms of this Agreement, established procedures, or legal requirements. This Agreement may be terminated, by either party, without cause, in writing, with the mutual consent of the PARTIES.

VI. Renegotiation or Modification

This Agreement may be amended, modified, or supplemented only by written amendment to the Agreement, executed by the PARTIES hereto, and attached to the original signed copy of the Agreement.

VII. Attachments

The Water Provider agrees to comply with the terms of the following attachment(s).

Attachment A: Department of Workforce Services Non-Disclosure Agreement

Attachment B: Water Type Agreement

Attachment C: Water Assistance Program [Policy Manual](#)

VIII. Legal Authority

DWS will enter into Agreements concerning the exchange of private information with federal, state, and local agencies as required or permitted under provisions of the Utah Governmental Records Access and Management Act, the Utah Employment Security Act, or other applicable law and the rules adopted pursuant thereto.

A. Government Records Access and Management Act (GRAMA) located in the Utah Code Annotated § 63G-2-206(2)(a) Sharing Records states: "A governmental entity may provide a private, controlled, or protected record or record series to another governmental entity, a political subdivision, a government-managed corporation, the federal government, or another state if the requesting entity provides written assurance: (i) that the record or record series is necessary to the performance of the governmental entity's duties and functions; (ii) that the record or record series will be used for a purpose similar to the purpose for which the information in the record or record series was collected or obtained; and (iii) that the use of the record or record series produces a public benefit that is greater than or equal to the individual privacy right that protects the record or record series."

B. Utah Administrative Code R986-100-110(4)(b), (c), (g).

C. The Privacy Act of 1974, (5 U.S.C. § 552a, as amended); the Social Security Administration Privacy Act Regulations (20 C.F.R. § 401.150, as amended); and the Social Security Act's disclosure of information in possession of any Water Provider provisions (42 U.S.C. 1306, as amended).

IX. Disclosure and Confidentiality Requirements

- A. All Water Providers shall send the name(s) and contact information for authorized employees who access the portal to DWS by email. Changes to the authorized user(s) shall be submitted to DWS by email.
- B. Water Provider shall immediately notify the DWS Data Security Specialist (see "Contacts," below) when previously authorized employees are no longer authorized access to the system. Information obtained under this Agreement shall only be used to support the valid administrative needs of the Water Provider and shall not be disclosed for any purpose other than those specifically authorized by this Agreement. Water Provider's employees must sign the Department of Workforce Services Non-Disclosure Agreement (see Attachment A).
- C. Water Provider's employees shall only query information for individuals who are applying for or participating in Water Provider's programmed services.
- D. The Water Provider shall have sufficient safeguards in place to ensure the personal information obtained from DWS Clients is used only for the purpose disclosed. Information in electronic format shall be stored and processed in such a way that unauthorized persons cannot retrieve the information by computer, remote terminal, or any other means.
- E. The information shall not be stored on any server accessible from the Internet or by unauthorized Water Provider personnel.
- F. At the request of DWS, the Water Provider shall identify all personnel, by position, authorized to request and receive information.
- G. Water Provider shall instruct all authorized personnel regarding the private nature of the information and sanctions specified in Utah State law against unauthorized disclosure. Section 35A-4-312(7) of the Utah Employment Security Act provides penalties for unauthorized disclosure in the form of a fine, imprisonment or both.

Section 63G-2-801(a) of the Government Records Access and Management Act provides that "A public employee or other person who has lawful access to any private, controlled, or protected record under this chapter, and who intentionally discloses, provides a copy of, or improperly uses a private, controlled, or protected record knowing that the disclosure or use is prohibited under this chapter, is, except as provided in Subsection 53-5-708(1)(c), is guilty of a Class B misdemeanor."

Furthermore, Subsection (2) (a) of Section 63G-2-801 provides penalties against any person who by false pretenses, bribery, or theft gains access to or obtains a copy of any private, controlled or protected record to which he is not legally entitled, and classifies such acts as Class B misdemeanors.

- H. The Water Provider shall follow the confidentiality protection provisions of Utah Code Title 63G-Chapter 02, Government Records Access Management Act, for public record confidentiality.
- I. Re-disclosure of public assistance record information is limited to public officials who may receive the information under Utah Code, Subsection 63G-2-206(2) or to private entities on the basis of informed consent of the individual to whom the information pertains.
- J. Water Provider employees are not allowed to access their own information or the information of family members or close acquaintances.

X. Background Review

The Water Provider shall ensure that it has thoroughly investigated the employees who are given access to the system. The Water Provider will not grant access to employees whose background suggests they will be unable to meet the data security requirements of this Agreement. Specifically, employees whose background checks reveal fraud, identity theft, or substance abuse shall not be allowed to access this data. DUI convictions for all substances other than alcohol shall disqualify an employee from access.

XI. Data Security

- A. DWS reserves the right to implement a multi factor authentication process for access to the water assistance Vendor Portal during the term of this contract. DWS will coordinate with the vendor to set up multi factor tokens when appropriate.
- B. The Water Provider shall control access based on need to know. Water Provider shall limit access to data in electronic or hardcopy format to authorized individuals only. DWS reserves the right to disapprove access to selected individuals or groups of individuals.
- C. DWS will maintain a query log containing the user identification, the date/time of each query. The query log may be used to monitor Water Provider compliance with the terms of this Agreement.
- D. Water Provider shall store or process information either in electronic format such as magnetic tapes or discs or in hardcopy paper format in such a manner that unauthorized access is avoided. The Water Provider shall secure information in a manner to protect confidential files.
- E. DWS and Water Provider agree to train users accessing, disclosing, or receiving information under this Agreement, including Water Providers and contract providers, on relevant statutes prescribing confidentiality and safeguarding requirements, re-disclosure prohibitions, and penalties for unauthorized access or disclosure.
- F. The Water Provider shall comply with all applicable laws that require the notification of individuals in the event of a Data Breach or other security incident that may impact DWS systems or data within 24 hours of the occurrence. It is within DWS's discretion to determine whether any attempted unauthorized access is a Security Incident or a Data Breach.
- G. The Water Provider shall comply with all applicable laws that require the notification of individuals in the event of a Data Breach or other events requiring notification in accordance with *DTS Policy 5000-0002 Enterprise Information Security Policy*. In the event of a Data Breach or other event requiring notification under applicable law (Utah Code § 13-44-101 thru 301 et al), Water Provider shall: (a) cooperate with DWS by sharing information relevant to the Data Breach; (b) promptly implement necessary remedial measures, if necessary; and (c) document responsive actions taken related to the Data Breach, including any post-incident review of events and actions taken to make changes in business practices in relation to the Data Breach. If the Data Breach requires public notification, all communication shall be coordinated with DWS. The Water Provider is responsible for all notification and remedial costs and damages.

H. The Water Provider shall comply with the following measures to prevent security breaches. Failure to meet the requirements will result in liability against the Water Provider. All workstation updates must be installed within 72 hours of the patch/software/service pack release dates. All server patches/software updates/service packs must be installed within two weeks of release date or within a reasonable time frame, based on professional information technology industry standards and best practices:

1. Water Provider will have whole disk encryption on laptops and devices that are used to access the system.
2. Install the most recent OS service pack.
3. Install the most recent OS security updates.
4. Install most recent patches for applications including, but not limited to, Adobe (Acrobat, PDF, Reader, Flash), Java, Quick-Time, and Microsoft Office.
5. Install, run and maintain anti-virus software with the latest signature which includes, but is not limited to, protection from computer viruses, worms, Trojan horses, malicious rootkits, backdoors, spyware, botnets, keystroke loggers, data-stealing malware, dishonest adware, crimeware and other malicious software.
6. Maintain secure configurations for hardware and software on laptops, workstations, and servers.
7. Maintain secure configurations on network devices such as firewalls, routers, and switches.
8. Install and maintain adequate boundary defense. Run and maintain a host-based firewall on all devices.
9. Educate and encourage computer users to put in place strong authentication credentials and passwords.
10. Control wireless devices used to access, transmit, or store DWS data. This includes but is not limited to the use of:
 - a) enterprise management tools (vs. tools for home use)
 - b) network vulnerability scanning tools
 - c) deactivation of unauthorized ports
 - d) disabling peer-to-peer network capability
11. Maintain controlled use of administrative privileges.
12. Continually assess vulnerability and remediate.
13. Limit and control network ports, protocols, and services.
14. Prevent data loss through the use of appropriate measures, including but not limited to: encryption software, network monitoring tools, monitoring, and an adequate Data Security Plan and employee training on such plans.

XII. Client Informed Consent

The Water Provider may only request/query information for individuals who are applying for or participating in the Water Provider's program. DWS shall include language in the Water Assistance Application expressly informing the applicant that DWS will share information with Water Provider concerning the applicant's participation in the identified programs for the purpose of determining eligibility and that by proceeding with the application, the applicant consents to such disclosure and authorizes DWS to share the information with Water Provider.

XIII. Monitoring

The Water Provider shall permit DWS the right of compliance reviews that consist of reviewing third-party access and non-disclosure forms for all employees with access to the portal, and if applicable, onsite inspections to ensure that the requirements of this Agreement are being met. The Water Provider will maintain a process sufficient to allow an audit of its compliance.

XIV. Imposition of Fees

The Water Provider will not impose any fees upon clients for services provided under this Agreement except as authorized by DWS.

XV. Equal Opportunity and Non-Discrimination

The Water Provider shall comply with Section 188 of the Workforce Innovation and Opportunity Act, and Title VI of the Civil Rights Act, to the extent they apply to the subject matter of this contract.

XVI. Indemnity

IF THE WATER PROVIDER IS A GOVERNMENTAL AGENCY: Both PARTIES to this Agreement are governmental entities as defined in the Utah Governmental Immunity Act (Utah Code Ann. 63G-7-101 et. seq.). Nothing in this Contract shall be construed as a waiver by either or both PARTIES of any rights, limits, protections or defenses provided by the Act. Nor shall this Contract be construed, with respect to third PARTIES, as a waiver of any governmental immunity to which a party to this Contract is otherwise entitled. Subject to and consistent with the Act, each party will be responsible for its own actions or negligence and will defend against any claims or lawsuit brought against it. There are no indemnity obligations between these PARTIES.

IF THE WATER PROVIDER IS A NON-GOVERNMENTAL ENTITY: The Water Provider agrees to indemnify, save harmless, and release the State of Utah, and all its officers, agents, volunteers, and employees from and against any and all loss, damages, injury, liability, suits, and proceedings arising out of the performance of this Agreement which are caused in whole or in part by the negligence of the Water Provider's officers, agents, volunteers, or employees, but not for claims arising from the State's sole negligence.

XVII. Contract Jurisdiction, Choice of Law and Venue

The provisions of this Agreement shall be governed by the laws of the State of Utah. The PARTIES will submit to the jurisdiction of the courts of the State of Utah for any dispute arising out of this Agreement or the breach thereof. Venue shall be in Salt Lake City, in the Third Judicial District Court for Salt Lake County.

XVIII. Separability Clause

A declaration by any court, or any other binding legal source, that any provision of this Agreement is unenforceable shall not affect the legality and enforceability of any other provision of this Agreement, unless the provisions are mutually dependent.

XIX. Additional Requirements

Provisions incorporated into this Agreement by reference but not attached hereto include all other governmental laws, rules, regulations, or actions applicable to services provided herein.

Contact Information

Department of Workforce Services	Water Provider
Name: Lori Page	Name:
Position: Water Assistance Vendor Specialist	Position:
Phone: 801-526-9930	Phone:
Email: loripage@utah.gov	Email:

This Agreement and all documents incorporated by reference constitute the entire Agreement between the PARTIES and supersede all prior negotiations, representations, or Agreements, either written or oral between the PARTIES relating to the subject matter of this Agreement.

Signatures and Acknowledgement

By signing below, the following officials acknowledge that they understand and agree to all of the terms and responsibilities set forth herein and cause this Agreement to be executed.

APPROVED FOR Water Provider:

_____ Signature	_____ Date
--------------------	---------------

Print Name /Title

APPROVED FOR DWS:

_____ Casey Cameron, Executive Director	_____ Date
--	---------------

ATTACHMENT A

NON-DISCLOSURE AGREEMENT

Each **Contractor/Grantee** employee or volunteer and each **Sub-Contractor/Grantee** employee or volunteer who has access to Customer personal information must sign this Non-Disclosure Agreement at the beginning of the grant or upon hire. A signed copy of this Agreement must be in each employee's/volunteer's file subject to inspection and review by the Department of Workforce Services (DWS).

The **Contractor/Grantee** and its employees and volunteers will comply with the following measures to protect the privacy of the information released under this agreement against unauthorized access or disclosure.

1. The information shall be used only to the extent necessary to assist in the purposes identified within this Agreement and shall not be re-disclosed for any purposes not specifically authorized in this contract.
2. The information shall be stored in a place physically secure from access by unauthorized persons.
3. Information in electronic format shall be stored and processed in such a way that unauthorized persons cannot retrieve the information by computer, remote terminal or any other means.
4. Precautions shall be taken to ensure that only authorized personnel are given access to on-line files.
5. The Contractor/Grantee has provided me instruction regarding the private nature of the information and I understand I am subject to State and Federal law penalties for unauthorized disclosure of information.

Signature

Date

Print Name

ATTACHMENT B: WATER TYPE AGREEMENT

I. Water Type(s) provided (please check all that apply):

- ☐ Drinking Water
- ☐ Wastewater
- ☐ Stormwater
- ☐ Ground-water

PURPOSE OF ATTACHMENT:

On December 27, 2020, the Consolidated Appropriations Act, 2021 was signed into law. This authorizing legislation included funding in emergency spending to assist low-income households with water and wastewater bills. On March 11, 2021, additional funding was appropriated in the American Rescue Plan Act (ARP) of 2021 in emergency spending to assist low-income households with water and wastewater bills. Eligible households are defined as those meeting the criteria set forth in the Water Assistance Policy Manual (incorporated by reference as *Attachment D*), issued by the Utah DWS Department of Workforce Services, Water Assistance Program. This contract incorporates the requirements that must be met by WATER PROVIDERS as payments are made directly by DWS to WATER PROVIDERS.

SCOPE:

A. DWS will make payments directly to a WATER PROVIDER provided that:

1. WATER PROVIDER charges the household in WATER PROVIDER'S normal billing process.
2. WATER PROVIDER bills the household no more than the cost of the water/wastewater minus the cost of the payments received or expected from DWS.
3. WATER PROVIDER does not discriminate against or treat adversely any eligible household for any reason in relation to terms and conditions of service, sale, credit, delivery, or price, including service charges, reconnection charges and payment plan arrangements due to their participation in the water assistance program.

4. WATER PROVIDER agrees not to discontinue water service for at least 30 days after receiving verification of payment from DWS. Examples of valid water payment verifications will be available upon request from DWS.
 5. WATER PROVIDER agrees to waive any security deposit billed to households approved for the Water Program. This does not apply to service initiation fees routinely charged by a WATER PROVIDER to both renters and owners alike as a condition of service.
 6. WATER PROVIDER agrees to reconnect the client within 24 hours upon receiving verbal or written commitment of payment from DWS.
 7. If a WATER PROVIDER is a utility regulated by the Public Service Commission of Utah, a WATER PROVIDER will supply Water accordance with provisions of Utah residential Utility Service Regulation R746-200, as adopted by the Public Service Commission of Utah.
 8. A WATER PROVIDER will ensure that payment by DWS is credited toward the household's water and wastewater costs.
 9. If the water assistance benefit was paid in error or if fraud is determined, upon request, the WATER PROVIDER agrees to return the Water Assistance Benefit to DWS.
- B. DWS will include a list of eligible households and amounts paid on behalf of households with each warrant paid to a WATER PROVIDER. Those providers accessing the portal will use the portal to help determine to which accounts the funds from the warrant should be applied

C. CREDIT BALANCES

1. If a household discontinues service with a WATER PROVIDER, the WATER PROVIDER must return any water benefit credit remaining on the account to DWS with the Return Funds to State Form.
 - a. If the household opens a new water utility account for a Utah address, the WATER PROVIDER may transfer the remaining credit

balance directly to the new WATER PROVIDER without notifying DWS.

- b. a WATER PROVIDER may not return credit balances directly to the client.

D. In the event a WATER PROVIDER erroneously returns funds to DWS, DWS shall remit such funds to the WATER PROVIDER within 30 days after a determination that such return was in error.

E. RELEASE OF INFORMATION:

1. The WATER PROVIDER named above is a Retail Water Provider who represents and warrants that it is authorized to receive payment from DWS on behalf of a customer determined by DWS under the Water Assistance Guidelines to be an eligible Water Assistance applicant. A WATER PROVIDER will, with reference to an eligible Water Assistance applicant:

- a. Upon verbal or written request from DWS, provide at no cost to DWS the eligible Water Assistance applicant's billing and usage history for the previous twelve (12) months. A WATER PROVIDER will transmit such billing history via electronic mail or facsimile by requested date each year.
- b. WATER PROVIDER agrees to provide relevant account information including account balance, utility number, and a copy of recent utility bills when requested by DWS.



STAFF COMMENTS

Consideration and possible approval of a **Cost Sharing and Reimbursement Agreement with DAF Development and Richardson Brothers** for 2800 West. -Mike Vercimak

Discussion:

The City is in the process of constructing 2800 West Street between State Street and 600 North. DAF Development and Richardson Brothers Development own land adjacent to 2800 West and will be obligated to make certain improvements when they develop the property. Instead of requiring these developers to make the improvements to the right-of-way after 2800 West is already constructed, it is proposed that the City's contractor make some of the improvements during construction, which will be reimbursed by the developers. This approach will avoid the issues that occur when improvements are made to a new roadway after it is constructed. The proposed contract is attached and includes the cost breakdown showing the amounts that will be owed by the developers.

Findings:

Recommendation:

Staff recommends that the City Council approve the proposed contract. The City Attorney approves the form of the proposed contract.

Attachments:

1. 230124 Cost Sharing and Reimbursement Agreement (DAF) (v. 3) (includes attachment)

COST SHARING AND REIMBURSEMENT AGREEMENT

This Cost Sharing and Reimbursement Agreement ("Agreement") is entered into this ____ day of February, 2023, between Hurricane City, a Utah municipal corporation (the "City") and DAF Development, LLC, a Utah limited liability company, and Richardson Brothers Development, LLC, a Utah limited liability company (referred to collectively as the "Developer").

Recitals

- a. The City is in the process of constructing a roadway known as 2800 West between State Route 9 and 600 North in Hurricane, Utah.
- b. The Developer owns property adjacent to the new roadway, which property is identified by the Washington County Assessor's Office as parcel numbers H-3-1-31-1104 and H-3-1-31-1108 ("Developer's Property").
- c. To develop Developer's Property, Developer is obligated to make certain road improvements.
- d. For convenience and efficiency, the parties have agreed that the City will include some road improvements in its 2800 West project that are the Developer's responsibility, on the condition that the Developer reimburse the City for these costs.
- e. The parties have agreed to the document attached hereto as **Exhibit A**, labeled as a "Cost Breakdown: Changes to 2800 W Roadway Construction Project to Accommodate Sky View Development."

NOW, THEREFORE, the parties agree as follows:

1. The above recitals are incorporated herein by reference.
2. The City agrees to include in its 2800 West project the items described as "Description of Changes" in Exhibit A.
3. The City agrees to be responsible for the items identified as the responsibility of the "CITY" in Exhibit A. Developer agrees to be responsible for the items identified as the responsibility of "DAF" in Exhibit A. The City and Developer agree to splitting equally the cost of the items identified as the responsibility of "CITY / DAF" in Exhibit A.
4. Developer shall reimburse City in the amount of \$206,980.00 for the improvements identified in Exhibit A. Upon receiving a request for payment or an invoice from its contractor for some or all of the items identified in Exhibit A, City shall notify Developer. Developer shall pay to City the Developer's portion of the requested or invoiced amount within 30 days after notification by the City.
5. Beginning 30 days after City notifies Developer of the requested or invoiced amount, interest shall accrue at a rate of 10% on unpaid amounts. Developer hereby consents to a lien being recorded by the City against Developer's Property for unpaid amounts due under this Agreement if Developer fails to pay amounts due for more than 30 days after City notifies Developer of requested or invoiced amounts. No land use application on Developer's Property will be approved until Developers have satisfied its obligations

under this Agreement. DAF Development, LLC, a Utah limited liability company and Richardson Brothers Development, LLC shall be jointly and severally liable for amounts owed under this Agreement. The City shall be reimbursed for attorney's fees and court costs if enforcement of this Agreement is undertaken by the City after a breach of this Agreement by Developer.

6. This Agreement and any liens recorded pursuant to this Agreement shall run with the land and be binding on Developer's successors and assigns.

HURRICANE CITY

DAF Development, LLC

By:

Its:

By:

Its:

RICHARDSON BROTHERS DEVELOPMENT, LLC

By:

Its:

Exhibit A

Cost Breakdown

COST BREAKDOWN: CHANGES TO 2800 W ROADWAY CONSTRUCTION PROJECT TO ACCOMMODATE SKY VIEW DEVELOPMENT

Item No.	Description of Changes	Change in Qty	Unit	Unit Cost	Change in Contract Price	Responsibility	Notes
6	Roadway Excavation (Plan Quantity)	3,831	CY	\$ 11.00	\$ 42,141.00	DAF	BLASTING AND EXCAVATING FOR EAST AND WEST ACCESSES BEYOND R/W
7	Untreated Base Course (Plan Quantity)	314	CY	\$ 32.00	\$ 10,048.00	DAF	WEST SIDE WIDENING, TRAIL, AND GRAVEL ACCESS
7	Untreated Base Course (Plan Quantity)	56	CY	\$ 32.00	\$ 1,792.00	CITY	EAST SIDE WIDENING AND GRAVEL ACCESS
8	Hot Mix Asphalt 1/2 Inch, AC-30	150	TON	\$ 90.00	\$ 13,500.00	DAF	WEST SIDE WIDENING
8	Hot Mix Asphalt 1/2 Inch, AC-30	44	TON	\$ 90.00	\$ 3,960.00	CITY	EAST SIDE WIDENING
9	Voidless Hot Mix Asphalt 1/2 Inch, AC-30	128	TON	\$ 95.00	\$ 12,160.00	DAF	WEST SIDE TRAIL
10A	Standard Curb & Gutter Type HB30-7 W/ Base (Sky View)	1,126	LF	\$ 25.00	\$ 28,150.00	DAF	WEST SIDE CURB AND GUTTER
11A	Standard Corner Pedestrian Ramp W/ Base (Sky View)	3	EA	\$ 3,350.00	\$ 10,050.00	DAF	WEST SIDE PEDESTRIAN RAMPS
11A	Standard Corner Pedestrian Ramp W/ Base (Sky View)	2	EA	\$ 3,350.00	\$ 6,700.00	CITY	EAST SIDE PEDESTRIAN RAMPS
12A	Standard Concrete Sidewalk W/ Base (Sky View)	980	SF	\$ 8.75	\$ 8,575.00	DAF	WEST SIDE SIDEWALK
14A	18" HP Drainage Pipe (Sky View)	181	61	\$ 64.00	\$ 11,584.00	DAF	WEST SIDE DRAINAGE INFRASTRUCTURE
15A	24" HP Drainage Pipe (Sky View)	79	54	\$ 88.00	\$ 6,952.00		
21A	3'X2' Concrete Drainage Structure W/Grate/Inlet (Sky View)	4	EA	\$ 4,500.00	\$ 18,000.00		
22	4'X4' Concrete Drainage Structure W/Grate/Inlet	1	EA	\$ 9,100.00	\$ 9,100.00		
28A	8" PVC C-900 Waterline w/ Blasting	130	LF	\$ 81.00	\$ 10,530.00	CITY / DAF	UTILITY LATERALS 50/50 SPLIT BETWEEN CITY AND DAF
41	Pavement Message Paint	14	EA	\$ 70.00	\$ 980.00	DAF	STRIPING CHANGES TO ACCOMMODATE INTERSECTION
45A	8" Purple C-900 PVC Irrigation Line	130	LF	\$ 75.00	\$ 9,750.00	CITY / DAF	UTILITY LATERALS 50/50 SPLIT BETWEEN CITY AND DAF
46	8" Gate Valve	8	EA	\$ 4,900.00	\$ 39,200.00	CITY / DAF	UTILITY LATERALS 50/50 SPLIT BETWEEN CITY AND DAF
49	4" Conduit & 2.5" Conduit	100	LF	\$ 60.00	\$ 6,000.00	DAF	POWER CONDUIT AT SKY VIEW INTERSECTION
SUBTOTAL (DAF RESPONSIBILITY)					\$ 206,980.00		
SUBTOTAL (CITY RESPONSIBILITY)					\$ 42,192.00		



STAFF COMMENTS

Consideration and possible approval of **Resolution 2023-09 authorizing and directing the retention of an outside engineering firm** to perform development plan reviews. -Mayor Billings

Discussion:

Mayor Billings is proposing a resolution that authorizes and directs the hiring of an outside engineering firm as an option for plan review. The proposed resolution states that after a 14-day period for outside review, the City has 5 business days to review it and return it to the developer.

Findings:

Recommendation:

Attachments:

1. Resolution 2023-09 Authorizing retention of outside engineer for plan review

RESOLUTION

**A RESOLUTION OF THE CITY COUNCIL OF HURRICANE, UTAH,
AUTHORIZING AND DIRECTING THE RETENTION OF AN OUTSIDE
ENGINEERING FIRM TO PERFORM DEVELOPMENT PLAN REVIEWS**

WHEREAS, Hurricane City has authority to adopt and enforce land use standards pursuant to Utah Code Title 10, Chapter 8 and Section 10-9a-104; and

WHEREAS, the City Council is authorized to establish personnel policies and guidelines by resolution pursuant to Utah Code Section 10-3-717; and

WHEREAS, the City Council desires to provide land developers an alternative route for review of development plans, which will be performed by an outside engineering firm; and

WHEREAS, the term “Development Plans” as used in this Resolution is intended to include any proposed site plans, plats, or construction drawings typically reviewed by the City’s Engineering Department; and

WHEREAS, the City Council finds that providing such an alternative route, at the cost of land developers, is in the interest of the health, welfare, and safety of the general public; and

WHEREAS, the City Engineer shall remain the custodian of all drawings and documents related to public improvements and engineering affairs of the City pursuant to Utah Code Section 10-3-903.

BE IT HEREBY RESOLVED by the City Council of Hurricane, Utah that an alternative route for review of Development Plans is hereby established, consistent with the following terms, parameters, and requirements:

1. The City will request proposals from outside engineering firms to provide the service of reviewing Development Plans submitted by land developers, which firm(s) shall be selected by the City Council in accordance with the City’s procurement code.
2. Review of Development Plans by an approved outside engineering firm (“Firm”) shall be made only upon request by a land developer.
3. When requested, the City’s Engineering Department will coordinate the referral of Development Plans to a Firm for review.
4. The requesting land developer shall bear the entire cost of review by a Firm. No Development Plans shall be referred to a Firm for review until a land developer has prepaid to the City the established fee charged by the Firm for the review.
5. All Development Plans shall be first reviewed by the Joint Utility Committee in

the normal course. At the request of a land developer, a reviewing Firm shall perform the second review and shall review and redline Development Plans in accordance with all applicable City Master Plans, Manuals, Standards, Designs, and Ordinances. The Firm shall complete the second review within 14 days and shall return the redlined Development Plans to the City's Engineering Department.

6. The City's Engineering Department shall review and revise as necessary the Firm's comments and redlines and shall return the Development Plans to the land developer within 5 business days.
7. A Firm may not provide review Development Plans submitted by the Firm.
8. The City Engineer is the final arbiter of the interpretation and application of City standards as they relate to Development Plans.

PASSED AND APPROVED THIS ____ day of February, 2023.

Nanette Billings, Mayor

ATTEST:

Cindy Beteag, Recorder

The foregoing Resolution was presented at a regular meeting of the Hurricane City Council held at the Hurricane City Office Building on the ____ day of February, 2023. Whereupon a motion to adopt and approve said Resolution was made by _____ and seconded by _____. A roll call vote was then taken with the following results:

	Yea	Nay	Abstain	Absent
Joseph Prete	____	____	____	____
Dave Sanders	____	____	____	____
David Hirschi	____	____	____	____
Kevin Thomas	____	____	____	____
Doug Heideman	____	____	____	____

Cindy Beteag, Recorder



STAFF COMMENTS

Discussion and possible decision regarding the **maintenance of the park area behind the LDS Stake Center** at 677 S 700 West

Discussion:

David Stirland, on behalf of the School District, reached out to David Hirschi regarding the grass/park area behind the LDS Stake Center at 677 S 700 West. The school district no longer wants to water or maintain that grass so they are asking the City to take it over. Staff would like direction from the Council on whether to pursue this endeavor.

Findings:

Recommendation:

Attachments:

None



STAFF COMMENTS

Closed Meeting held pursuant to Utah Code section 52-4-205, upon request

Discussion:

Findings:

Recommendation:

Attachments:

None