

Weber County Planning Division

Synopsis

Application Information					
Application Request:	Consideration and action on Final approval of Asgard Heights Subdivision consisting of 6 lots.				
Type of Decision:	Administrative				
Agenda Date:	Tuesday, August 24, 2021				
Applicant:	Dan Mabey, Owner				
File Number:	UVA070821				
Property Information					
Approximate Address:	3460 Nordic Valley Rd., Liberty, UT				
Project Area:	18.96 acres				
Zoning:	Forest Valley 3 (FV-3) & Agricultural Valley 3 (AV-3)				
Existing Land Use:	Vacant				
Proposed Land Use:	Residential				
Parcel ID:	22-023-0016				
Township, Range, Section:	T5N, R1E, Section 29 SE				
Adjacent Land Use					
North: Residential	South: Residential				
East: Residential	West: Residential				
Staff Information					
Report Presenter:	Scott Perkes sperkes@co.weber.ut.us 801-399-8772				
Report Reviewer:	SB				

Applicable Land Use Codes

- Weber County Land Use Code Title 106 (Subdivisions)
- Weber County Land Use Code Title 104 (Zones) Chapter 2 (Agricultural Zones AV-3)
- Weber County Land Use Code Title 104 (Zones) Chapter 14 (Forest Valley Zone FV-3)

Background and Summary

The applicant is requesting final approval of Asgard Heights Subdivision consisting of six residential lots (See **Exhibit A**). This subdivision is proposed as a connectivity-incentivized subdivision with lot areas ranging from 2.72 acres to 3.33 acres and dedicated roadway extending Nordic Meadows Drive eastwards to connect with Carrol Street in an alignment requested by county staff (see **Exhibit B**). The proposed subdivision and lot configuration are in conformance with the applicable zoning and subdivision requirements as required by the Uniform Land Use Code of Weber County (LUC). The following is a brief synopsis of the review criteria and conformance with LUC.

Analysis

<u>General Plan</u>: The proposal conforms to the Ogden Valley General Plan by maintaining the existing density provided by the current zoning and existing approvals (2016 Ogden Valley General Plan, Land Use Principle 1.1). It also fulfills the transportation vision of enhancing mobility and connectivity, reduces congestion, and meets air quality standards without disturbing existing land uses (Transportation Goal 1, Pg. 41).

Zoning: The subject property is primarily located in the FV-3 Zone with a small portion of the northern tip in the AV-3 Zone. Single-family dwellings are a permitted use in both the FV-3 and AV-3 Zones.

Lot area, frontage/width and vard regulations: LUC § 104-2 (AV-3 Zone) & 104-14 (FV-3 Zone), require a minimum lot area of 3 acres for a single family dwelling and a minimum lot width of 150 feet.

As part of the subdivision process, the proposal has been reviewed for compliance with the current subdivision ordinance in the LUC § 106, and the AV-3 and FV-3 zone standards found in LUC § 104-2 and 104-14. With exception to Lots 1 and 2, the proposed subdivision utilizes traditional subdivision requirements to create 3-acre lots as required in both the FV-3 and AV-3 zones. County staff have agreed to allow Lots 1 and 2, consisting of 2.73 and 2.72 acres, to be substandard to

the 3-acre lot minimum in order to incentivize the dedication and connection of Nordic Meadows Drive to Carrol Street. Newly adopted language in the subdivision ordinance (Sec. 106-2-4.30) allows for lots in the FV-3 and AV-3 zones to be reduced up to 50% of the zone's minimum lot size in order to allow desired connectivity to occur. At the request of County Planning staff, the applicant has agreed to dedicate and improve the Nordic Meadows Drive extension at the time of subdivision, thereby allowing the applicant to utilize the Flexible Lot Standards of Sec. 106-2-4.30.

<u>Culinary water and Secondary Water</u>: The applicant has entered into a Water Service Agreement with Nordic Mountain Water Inc. for culinary water services for 6 lots (see **Exhibit C**). This letter indicates that each lot may utilize their culinary water for up to 5,000 sq. ft. of landscape watering until such time as secondary water may become available. Nordic Mountain Water has also submitted a Capacity Assessment Letter as required by LUC Sec. 106-4-2.1(c) verifying that their system is capable of providing, and has the capacity to provide, culinary water to the project once completion of the water line extension and connection to the existing service line on the West boundary of the subdivision have been made (see **Exhibit D**).

Per LUC. Sec. 106-4-2.1(b)(2)c. (Secondary Water Exemption), "A subdivision lot that is completely covered by pre-existing native wildland vegetation, and will remain so, is exempt from the secondary water requirements of this section as long as the pre-existing native wildland vegetation remains undisturbed in perpetuity, and is well-established in a manner that makes it relatively unlikely for noxious weed propagation." Per this section, the applicant may utilize this secondary water exemption so long as the lot areas outside of the home sites and 5,000 sq. ft. landscaped areas served by Nordic Mountain Water's culinary service remain as native wildland vegetation.

<u>Sanitary Sewage Disposal</u>: Each of the 6 lots in the proposed subdivision will be served by on-site waste water systems (septic). The Weber-Morgan Health Department have issued a Septic Feasibility Letter detailing the feasibility of on-site water disposal systems for each of the 6 lots (see **Exhibit E)**.

<u>Floodplain:</u> The subject property contains a seasonal stream corridor that traverses from the Northeast towards the Southwest. This corridor requires that base flood elevations (BFEs) be calculated and depicted on a final plat in order to determine safe finished floor elevations for future homes.

BFE calculations have been submitted to the Weber County Engineering Department for review and approval by the County Engineering Department (see **Exhibit F**). The proposed final plat depicts these BFEs along the stream corridor, as required by LUC sec. 106-1-8.20(c), to allow the areas adjacent to be developable for residential structures.

This stream corridor is also depicted as a seasonal stream on the Ogden Valley Sensitive Lands Map. Per LUC Sec. 104-28-2(b)(1)c. (Ogden Valley Sensitive Lands Overlay Zone) the corridor requires a minimum 50-foot setback from high water mark for any future buildings. This setback has been depicted on the final plat. Of note, the 50-foot setbacks from high water marks far exceed the base flood elevations that have been calculated. This ensures that all new structures placed outside of the 50-foot setback are also well outside of the anticipated 1% Annual Chance Floodplain Elevation.

Additionally, the applicant is currently working through FEMA's Letter of Map Amendment (LOMA) to more accurately delineate the floodplain areas that encumber the property through the submittal of the calculated BFEs. This process is anticipated to be completed following the subdivision's recording and will help future lot owners to reduce their flood insurance requirements.

<u>Review Agencies:</u> To-date, Planning, Engineering, Fire, Surveying, and the Weber-Morgan Health Department have reviewed this project. All review agency requirements must be addressed and completed prior to the final subdivision plat being recorded with the Weber County Recorder's Office.

<u>Tax Clearance:</u> There are no outstanding tax payments related to the parent parcel. The 2021 property taxes are not considered due at this time.

<u>Public Notice</u>: Public notice was mailed not less than seven calendar days before preliminary approval to all property owners of record within 500 feet of the subject property per the noticing requirements that were previously outlined in LUC § 106-1-6.

Staff Recommendation

Staff recommends final approval of Asgard Heights Subdivision consisting of 6 lots, located at approximately 3460 Nordic Valley Rd. in Liberty. This recommendation is subject to all review agency requirements, and the following conditions:

- 1. Engineering review of the estimated base flood elevations will need to be finalized and approved by the Weber County Engineer. Once approved, these BFEs will need to be depicted on the final plat mylar prior to recording.
- 2. Civil plans and cost estimates for the Nordic Meadows Drive extension will need to be submitted and approved by the Engineering Division prior to the project being submitted to the County Commission for escrow and improvement agreement approval.

- 3. A signature block on the final mylar or submittal of a final approval letter will be needed for/from Nordic Mountain Water prior to the final mylar being recorded.
- 4. A deferral agreement for curb, gutter, and sidewalks for the project's frontages along Nordic Meadows Road and Nordic Meadows Drive will need to be executed and recorded simultaneously with the final plat.
- 5. A restrictive covenant pertaining to the amount of culinary water available for secondary purposes shall be executed and recorded. This covenant's recording number, book, and page shall be notated on the final plat's mylar prior to recording.
- 6. An Onsite Wastewater Disposal Systems Deed Covenant and Restriction shall be recorded simultaneously with the final plat.

This recommendation is based on the following findings:

- 1. The proposed subdivision conforms to the 2016 Ogden Valley General Plan
- 2. The proposed subdivision complies with applicable county ordinances

Exhibits

- A. Subdivision Application
- B. Proposed Final Plat
- C. Culinary Water Service Agreement
- D. Culinary Water Capacity Assessment Letter
- E. Updated Septic Feasibility letter
- F. Base Flood Elevation Estimation

Area Map



	Webe	r County Su	ubdiv	ision	Appl	licatio	n	
All subdivisions submitt	als will be acce	pted by appointment o	only. (801)	399-8791.	2380 Wa	shington Blv	rd. Suite 240, Ogden, UT 84401	
Date Submitted / Completed 7-1-2021	Fees (Office	e Use)	Rece	Receipt Number (Office Use)		e)	File Number (Office Use)	
Subdivision and Property	Information							
ubdivision Name Asgard	1						Number of Lots	
pproximate Address				Serial Num	iber(s)			
i460 Nordic Valley Road, Liberty U urrent Zoning /IV#	Total Acre 19.56	age	- 224	22-023-0016 vider Wastewater Septic				
ulinary Water Provider Jordic Valley Water	19,30	Secondary Water Pro Weber Water	ovider				Treatment	
Property Owner Contact I	nformation							
lame of Property Owner(s) liberty Land and Livestock			171	Mailing Address of Property Owner(s) 1715 Canyon Circle				
%one 301-414-6163	Fax		Fam	Farmington, UT 84025				
mail Address Soldrim@gmail.com,				Preferred Method of Written Correspondence				
Authorized Representativ	e Contact In	formation						
Name of Person Authorized to Represent the Property Owner(s) Dan Mabey		171	Mailing Address of Authorized Person 1715 Canyon Circle Farmington, UT 84025					
'hone 801-414-6163	Fax	1						
Email Address Goldrim@gmail.com			the second se	erred Metho C Email	d of Writ	tten Correspondence Mail		
Surveyor/Engineer Conta	ct Informatio	on	10					
Name or Company of Surveyor/Engineer Gardner Engeneering		968	Mailing Address of Surveyor/Engineer 968 Chambers Street					
hone 01-476-0202	Fax		090	Ogden, UT 84403				
imail Address ogan@gecivil.com			1000	Preferred Method of Written Correspondence				
Property Owner Affidavit			1-6	<u>a</u>				
my (our) knowledge. (Reperty Owner) Subscribed and sworn to me this	L. borty	formation provided in the		plans and a			he property identified in this application I respects true and correct to the best o	
	OMMISSION	# 713242		-	110	1-1-0	(Notary	

Authorized Representative Affidavit (our) representative(s), Dan Mabey ______, the owner(s) of the real property described in the attached application, do authorized as my (our) representative(s), Dan Mabey ______, to represent me (us) regarding the attached application and to appear on my (our) behalf before any administrative or legislative body in the County considering this application and to act in all respects as our agent in matters pertaining to the attached application. (We), Liberty Land and Livestock luhery (Property Owner) (Pro Dated this ______day of ______ 20 21___, personally appeared before me _______ the MICHAEL H. BROWN (Notary) NOTARY PUBLIC-STATE OF UTAH COMMISSION# 713242 COMM. EXP. 08-05-2024

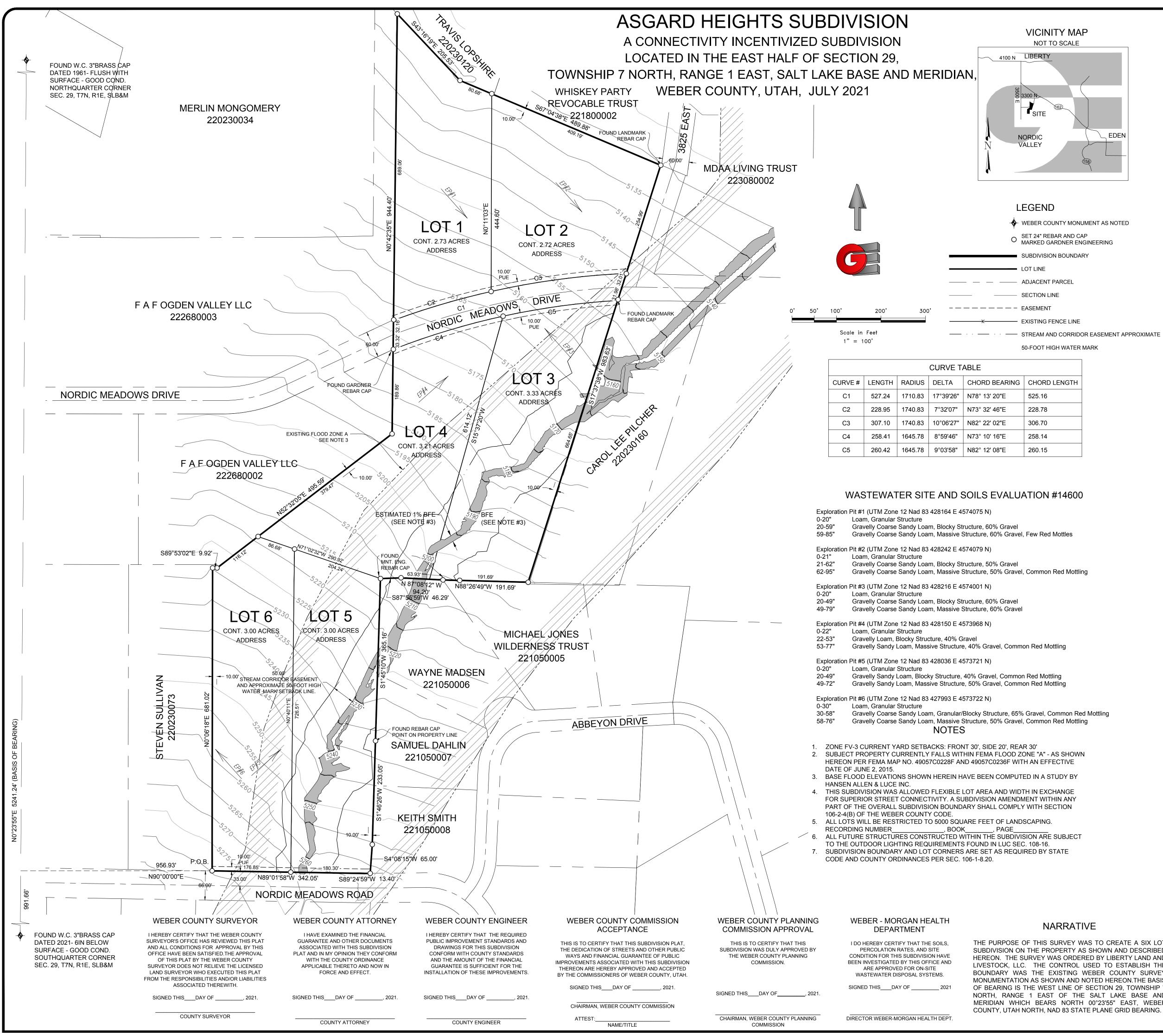


Exhibit B BOUNDARY DESCRIPTION

A PART OF THE EAST HALF OF SECTION 29, TOWNSHIP 7 NORTH, RANGE 1 EAST OF THE SALT LAKE BASE AND MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTH RIGHT-OF-WAY LINE OF NORDIC MEADOWS ROAD BEING LOCATED NORTH 00°23'55" EAST 991.66 FEET ALONG THE WEST LINE OF THE EAST HALF OF SAID SECTION AND NORT 90°00'00" EAST 956.93 FEET FROM THE SOUTH QUARTER CORNER OF SAID SECTION: RUNNING THENCE 06'16" EAST 681.02 FEET TO THE COMMON BOUNDARY WITH NORDIC MEADOWS SUBDIVISION PHASE 2 HENCE ALONG SAID COMMON BOUNDARY THE FOLLOWING TWO (2) COURSES: (1) SOUTH 89°53'02" EAST 9.92 FEET; (2) NORTH 52°32'05" EAST 495.59 FEET; (3) NORTH 00°42'35" EAST 944.40 FEET THENCE SOUTH 43°16'19" EAST 205.53 FEET; THENCE SOUTH 56°04'38" EAST 489.88 FEET 17°37'38" W 983 63 FEET TO THE COMMON BOUNDARY WITH ABBEYTON ESTATES NO SAID COMMON BOUNDARY THE FOLLOWING FIVE (5) COURSES: (1)NORTH 88°26'49" WEST 191.69 FEET; (2) NORTH 87 208'12" WEST 94.20 FEET; (3) SOUTH 87°55'59" WEST 46.29 FEET; (4) SOUTH 01°45'10" WEST 365.2 FEET: (5) SOUTH 01°46'26" WEST 233.05 FEET: (6) SOUTH 04°08'15" WEST 65.00 FEET TO THE NORTH RIGHT-OF-WAY LINE OF NORDIC MEADOWS ROAD: THENCE ALONG SAID RIGHT-OF-WAY THE FOLLOWING TWO (2) COURSES: (1) SOUTH 89°24'59" WEST 13.40 FEET; (2) NORTH 89°01'58" WEST 342.05 FEET TO THE POINT OF BEGINNING. CONTAINING 815,500 SQ.FT. OR 18,72 AC, MORE OR LESS.

SURVEYOR'S CERTIFICATE

	I, KLINT H. WHITNEY, DO HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR IN THE STATE OF UTAH AND THAT I HOLD CERTIFICATE NO. 8227228 IN ACCORDANCE WITH TITLE 58, CHAPTER 22, OF THE PROFESSIONAL ENGINEERS AND LAND SURVEYORS ACT; I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS I HAVE COMPLETED A SURVEY OF THE PROPERTY AS SHOWN AND DESCRIBED ON THIS PLAT, AND HAVE SUBDIVIDED SAID PROPERTY INTO LOTS AND STREETS, TOGETHER WITH EASEMENTS, HEREAFTER TO BE KNOWN AS <u>ASGARD HEIGHTS</u> <u>SUBDIVISION</u> IN ACCORDANCE WITH SECTION 17-23-17 AND HAVE VERIFIED ALL MEASUREMENTS; THAT THE REFERENCE MONUMENTS SHOWN HEREON ARE LOCATED AS INDICATED AND ARE SUFFICIENT TO RETRACE OR REESTABLISH THIS SURVEY; THAT ALL LOTS MEET THE REQUIREMENTS OF THE LAND USE CODE; AND THAT THE INFORMATION SHOWN HEREIN IS SUFFICIENT TO ACCURATELY ESTABLISH THE LATERAL BOUNDARIES OF THE HEREIN DESCRIBED TRACT OF REAL PROPERTY.
	SUFFICIENT TO RETRACE OR REESTABLISH THIS SURVEY; THAT ALL LOTS MEET THE REQUIREMENTS OF THE LAND USE CODE; AND THAT THE INFORMATION SHOWN HEREIN IS SUFFICIENT TO ACCURATELY ESTABLISH THE LATERAL BOUNDARIES OF THE HEREIN DESCRIBED TRACT OF REAL PROPERTY. SIGNED THIS DAY OF, 2021.
	Whitney
	KEINT H. WHITNEY, PLS NO. 8227228
	\bigcirc
	OWNER'S DEDICATION
	I THE UNDERSIGNED OWNER OF THE HEREON DESCRIBED TRACT OF LAND, HEREBY SET APART AND SUBDIVIDE THE SAME INTO LOTS, PARCELS AND STREETS AS SHOWN ON THIS PLAT AND NAME SAID TRACT:
	ASGARD HEIGHTS SUBDIVISION
	AND HEREBY DEDICATE, GRANT AND CONVEY TO WEBER COUNTY, UTAH ALL THOSE PARTS OR PORTIONS OF SAID TRACT OF LAND DESIGNATED AS STREETS, THE SAME TO BE USED AS PUBLIC THOROUGHFARES FOREVER, AND ALSO GRANT AND DEDICATE A PERPETUAL EASEMENT OVER, UPON AND UNDER THE LANDS DESIGNATED ON THE PLAT AS PUBLIC UTILITY, THE SAME TO BE USED FOR THE INSTALLATION, MAINTENANCE AND OPERATION OF PUBLIC UTILITY SERVICE LINES, STORM DRAINAGE FACILITIES OR FOR THE PERPETUAL PRESERVATION OF WATER DRAINAGE CHANNELS IN THEIR NATURAL STATE WHICHEVER IS APPLICABLE AS MAY BE AUTHORIZED BY WEBER COUNTY, UTAH, WITH NO BUILDINGS OR STRUCTURES BEING ERECTED WITHIN SUCH EASEMENTS.
	SIGNED THIS DAY OF 2021.
	BY:
	ACKNOWLEDGEMENT
	STATE OF UTAH)
	On thisday of2021, personally appeared before me, whose identity is personally known to me (or proven on the basis of satisfactory evidence) and who by me duly sworn/affirmed, did say that he/she is the of <u>LIBERTY LAND AND LIVESTOCK, LLC</u> , and that said document was signed by him/her in behalf of said Corporation by Authority of its Bylaws, or (Resolution of its Board of Directors), and said acknowledged to me that said Corporation executed the same.
	STAMP NOTARY PUBLIC
	DEVELOPER: LIBERTY LAND AND LIVESTOCK LLC S1 COUNTY RECORDER
	DAN MABYE 1715 CANYON CIRCLE
T	FARMINGTON UTAH FILED FOR AND RECORDED,
D ID IE	
Y	GARDNER RECORDS, PAGE RECORDED
7 D R	ENGINEERING

MUNICIPAL · LAND SURVEYING

5150 SOUTH 375 EAST OGDEN, UT OFFICE: 801.476.0202 FAX: 801.476.0066

Exhibit C - Culinary Water Service Agreement

Nordic Mountain Water Inc.

Mr. Dan Maybe 1715 Canyon Circle, Farmington, Utah 84025 Asgard Subdivision-6 Single Family Home Sites, Liberty, Utah

Ref: Reservation of Service Agreement

July 2, 2021

Nordic Mountain Water Inc. (NMWI) agrees to provide culinary water service to the Asgard Subdivision, a subdivision containing 6 Single Family Home Sites hereafter referred to as lots, under the following Terms and Conditions:

- A 10% non-refundable deposit is required on the total number of metered connections rounded to the next whole lot multiplied by the Infrastructure Fee currently in effect.
 - a. Reservation of Service remains valid for one year from date this service agreement is signed by legal representatives of both parties and the full deposit has been made as outlined in this document.
 - Outstanding balance is due within one year from date this document is signed or when project is completed – whichever date is earliest.
 - Each lot will be assessed our normal monthly fee at time subdivision is completed.
 - Each lot will be assessed a one-time membership fee as required at time subdivision is completed.
- 2. Options after one year if subdivision is not completed:
 - Pay Outstanding balance each lot will be assessed our normal monthly fee and onetime membership fee.
 - b. Service Agreement is nullified, deposit is forfeited.
 - c. Renew this Reservation of Service Agreement for an additional year at the discretion of NMWI as outlined in paragraph 1 above and at fee rates in effect at time of renewal.
- 3. Details
 - a. Our current fee rates are:
 - i. Current Infrastructure fee: \$8,600/lot.
 - ii. Current One-time membership fee: \$300/lot.
 - Current Monthly fee for water: \$75/lot for up to 20,000 gal. Cost increases per 1000 gals above the monthly allotment of 20,000 gal.
 - b. 6 lots at one (1) residential ¼" Connection per lot.
 - c. Total Infrastructure fee is 6 lots X \$8,600/lot = \$51,600.
 - d. Non-refundable deposit due at signing of this document is \$8,600 based on 6 lots X 10% rounded to whole lot multiplied by infrastructure fee/lot.
 - e. Deposit(s) are credited towards the original balance identified in 3c.
 - f. Final payment of original balance (3c) less deposit(s) is due not later than one year from date this agreement is signed or upon completion of subdivision – whichever date is earliest.
 - g. Monthly water fee charge per lot at completion:
 - Each lot will be assessed a monthly fee and water allocation in effect at date of completion (3a.iii).
 - Each lot will be assessed a one-time membership fee, at the current rate in affect at date of completion as required by NMWI for water service (3a.ii)

- 4. General Restrictions:
 - a. No Home Owner's Association (HOA) organized by Asgard Subdivision or its residents can include any culinary water provided by NMWI.
 - b. No extensions to the water system developed for the Asgard Subdivision that includes water provided by NMWI will be allowed beyond the initial 6 lots.
 - c. Asgard Subdivision cannot resale, manage, restrict, or charge any additional fees for water provided by NMWI under any circumstance.
 - d. All water provided by NMWI shall be used for culinary purposes only. Minimal residential landscape watering will be allowed up to 5000 sq. feet until such time as secondary water may become available. Allocations are subject to change.
- 5. Costs to the Developer
 - a. Developer pays all costs including required modifications to existing NMWI infrastructure necessary to provide NMWI water to the Asgard Subdivision as identified by NMWI or its approved agent.
 - b. Necessary modifications to existing NMWI infrastructure as well as all water line extension design and associated construction is subject to the following:
 - Must meet all State, County, and County Fire District Specifications and Requirements
 - Must meet Water System Specifications as provided by NMWI and agreed upon, by signed agreement, at a pre-construction meeting.
 - iii. All Waterline construction must be inspected and approved by NMWI or its identified Agent during all water system construction and/or modifications at the expense of the developer. Frequency of inspection will be determined during the pre-construction meeting and/or as specified in NMWI Standards and Specifications document.
 - iv. NMWI will take possession of new and modified portion of the water system at time of completion and Developer will warranty the full installation and modifications for a period of at least 1 year from completion date at discretion of NMWI.
- NMWI uses a gravity-flow distributions system. Since an engineering study has not been completed for the proposed subdivision, NMWI will not guarantee adequate water pressure.
- This agreement is subject to change contingent upon legal review by an NMWI legal representative.

If these conditions are acceptable, please submit the appropriate deposit and sign this agreement. If you have any questions, please feel free to contact Bill Green at (801)791-3976 anytime or through our NMWI office. This unsigned document remains valid for 7 days from original document date.

Sincerely,

Agreement of Terms:

Date: 7-6-2021 Date: 7/10/202/

Bill D. Green President Board of Directors Nordic Mountain Water, Inc.

Signature Date: NMWI Representative

Exhibit D – Culinary Water Capacity Assessment Letter

Perkes, Scott

From:	Bill Green <bill.green@digis.net></bill.green@digis.net>
Sent:	Tuesday, August 17, 2021 8:11 AM
To:	Perkes, Scott
Cc:	'Nordic Mountain Water'; 'Bill Green'
Subject:	[EXTERNAL] Water Service Availability

CAUTION: This email originated from outside Weber County. Do not click links or open attachments unless you know the sender and are expecting the link or attachment. Think Before You Click!

To: Weber County Planning and Zoning Date: August 16, 2021 From: Nordic Mountain Water, Inc.

Re: Water Service Capability for Asgard Heights Subdivision

Nordic Mountain Water Inc. is currently capable of providing and has the capacity to provide the culinary water to Asgard Heights subdivision as agreed to and described in the terms of the joint agreement dated July 2, 2021 and on file with the Weber County Planning and Zoning Office.

This service will be available upon the completion of the extension and connection to our existing service on the West boundary of the Asgard Heights Subdivision.

Bill D. Green President. Board of Directors Nordic Mountain Water, Inc. BRIAN COWAN, MPH, LEHS Health Officer/Executive Director

August 12, 2021



Weber County Planning Commission 2380 Washington Blvd. Ogden, UT 84401

RE: Preliminary Subdivision Determination Asgard Heights Subdivision, 6 lots Parcel #22-023-0016 Soil log #14600

Gentlemen:

The soil and percolation information for the above-referenced lot have been reviewed. Culinary water will be provided by Nordic Mountain Water Company, an approved public water system. A letter from the water supplier is required prior to issuance of a permit.

DESIGN REQUIREMENTS

Lots 1-6: Documented ground water tables not to exceed 12 inches and slopes exceeding 4%, fall within the range of acceptability for the utilization of a Wisconsin Mound Treatment System or a Packed Bed Media Treatment System followed by a Drip Irrigation absorption area, as a means of wastewater disposal. Maximum absorption area depth is limited to 0 inches. The absorption area is to be designed using a maximum loading rate of 0.25 gal/ft²/day for a Wisconsin Mound absorption area, or 0.5 gal/ft²/day for a Drip Irrigation absorption area so the loam, granular structure soil horizon.

ENGINEERING CONSIDERATIONS

The soil exploration pits associated with lots 3 and 5 do not currently fall within the property lines of their respective lots, but they are both located less than 50 feet from the property lines of their respective lots. Due to the close proximity of these soil exploration pits to their respective lots and the consistency of suitable soils observed throughout the subdivision, it has been determined that these soil exploration pits may be considered as valid for the placement of absorption areas on these lots. Absorption areas designed for lots 3 and 5 should be designed for placement on the portions of these lots that are in close proximity to their respective soil exploration pits. Absorption areas designed in areas that are significantly farther than 50 feet from their original soil exploration pits may be subject to additional site and soil evaluations and percolation testing.

Plans for the construction of any wastewater disposal system are to be prepared by a Utah State certified individual and submitted to this office for review prior to the issuance of a Wastewater Disposal permit.

The following items are required for a formal subdivision review; application, receipt of the appropriate fee, and a full sized copy of the subdivision plats showing the location of exploration pits and percolation tests as well as the documented soil horizons and percolation rates. A subdivision review will not occur until all items are submitted. Mylars submitted for signature without this information will be returned

Each on-site individual wastewater disposal system must be installed in accordance with R317-4, Utah Administrative Code, Individual Wastewater Disposal Systems and Weber-Morgan District Health Department Rules. Final approval will be given only after an on-site inspection of the completed project and prior to the accomplishment of any backfilling.

Please be advised that the conditions of this letter are valid for a period of 18 months. At that time the site will be re-evaluated in relation to rules in effect at that time.

Sincerely,

Ryan Klinge Environmental Health Division 801-399-7160

EDUCATE | ENGAGE | EMPOWER

phone: 801-399-7100 | fax: 801-399-7110 | 477 23rd Street, Ogden, UT 84401 | www.webermorganhealth.org

MEMORANDUM

DATE:	July 27, 2021	10NAL FA
TO:	Dan Mavey 1715 Canyon Circle Farmington, UT 84025	07/27/2021 11624818-2202 DANIEL JONES
FROM:	Daniel Jones, P.E., CFM Hansen, Allen & Luce, Inc. (HAL) 859 West So. Jordan Pkwy – Suite 200 South Jordan, Utah 84095	TE OF UT PODO
SUBJECT:	Base Flood Elevation Estimation for Libe	erty property
PROJECT NO.:	344.249.100	

BACKGROUND

HANSEI

ENGINEER

Mr. Dan Mavey (CLIENT), owner of the property shown in Exhibit 1, located Liberty, Utah desires to improve six lots. FEMA's effective flood insurance rate maps (FIRMs) for the area, map panels No. 49057C0236F and 49057C0228F (dated June 2 2015), show the subject property somewhat encumbered to the 1% Annual Chance (AC) floodplain (Zone 'A') of Pine Creek, as shown in Exhibit 1. However, the floodplain is over-mapped in this area as evidenced by the receiving waters (Zone AE), which are several times narrower than the Zone A mapping which encumbers the subject property. CLIENT desires to pursue a Letter of Map Amendment, which requires an estimate of the Base Flood Elevation (BFE). The BFE is defined as the 1% AC floodplain elevation, and is also commonly referred to as the "100-year" floodplain elevation.

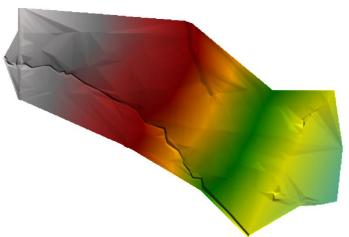
As an estimate of the BFE is required prior to acquiring a LOMA or improving each lot, CLIENT has requested that HAL perform this service. This memorandum is issued to document the methodology used to generate BFEs.

HYDROLOGY

As no detailed hydrology exists for this area, the flows from StreamStats (Exhibit 2) were used in the hydraulic model. The 1% AC flow as reported by StreamStats for this area is 71.7 cfs.

HYDRAULIC MODEL DEVELOPMENT

Gardner Engineering created a surface which was provided by CLIENT. HAL used this to create a two-dimensional model of the site. A visual representation of this elevation data can be found below.



VISUAL REPRESENTATION OF SURVEYED ELEVATION DATA (NORTH IS RIGHT)

The perimeter of the model grid was placed using the US Army Corps of Engineers hydraulics software HEC-RAS 6.0. The perimeter was further refined to ensure water would not pond on any border cell of the model. The 2D mesh was established on 10 foot grid spacing. A uniform Manning's n roughness coefficient of 0.045 was established based on pictures provided by CLIENT (a predominant cover of weeds with low sparse sagebrush) and with reference to Guide for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains Water-Supply Paper 2339 by the United States Geological Survey (1989) and values suggested in Open Channel Hydraulics by Ven Te Chow (1959). Breaklines were drawn on the road centerlines and creek banks to prevent cell leakage. A constant inflow boundary condition was established just below Nordic Valley Road at 71.7 cfs. The downstream boundary condition was established based on the simulation was run for 10 minutes to provide a pseudo steady state result.



PREDOMINANT COVER OF WEEDS AND SPARSE SAGEBRUSH

The result of the model can be seen below in plan and profile. The two-dimensional model based on survey shows that the floodplain is considerably less wide than shown on the effective FIRM map for the subject property. This is a result of the greater hydrologic and hydraulic detail.

Please feel free to contact me should you have any questions.

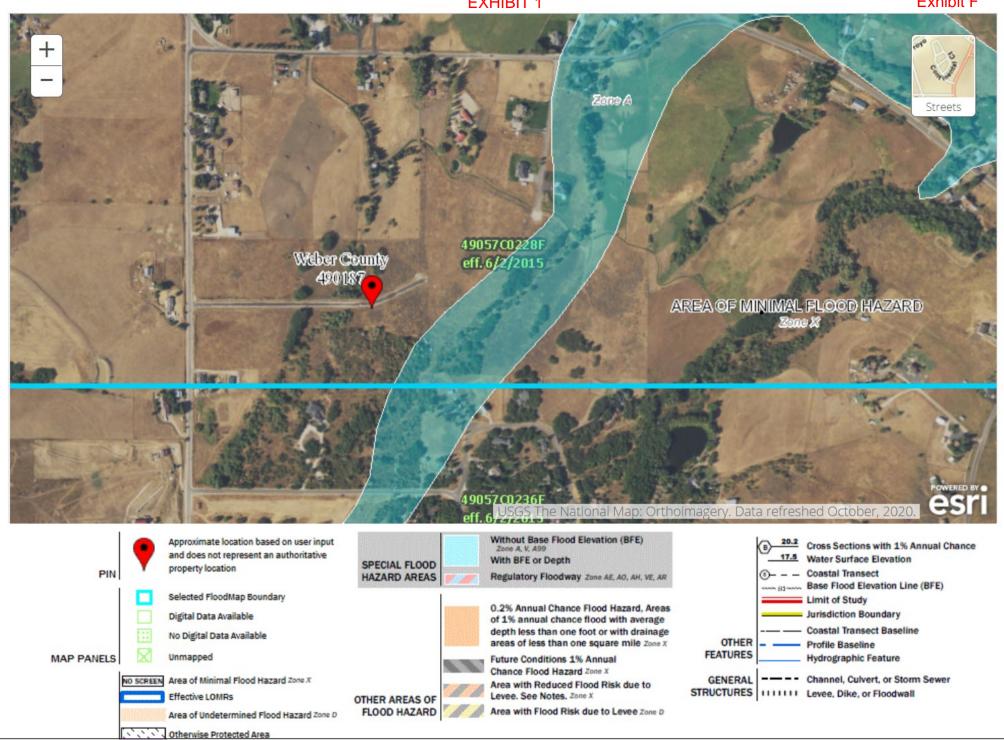
Sincerely,

Daniel Jones

Daniel Jones

Enclosures Exhibit 1 – Effective FIRM Exhibit 2 – StreamStats Report Exhibit 3 – Topographic Surface Exhibit 4 – BFE Estimate Map along Pine Creek Exhibit 5 – Pine Creek 1% AC Profile RAS 6.0 Model

Exhibit F



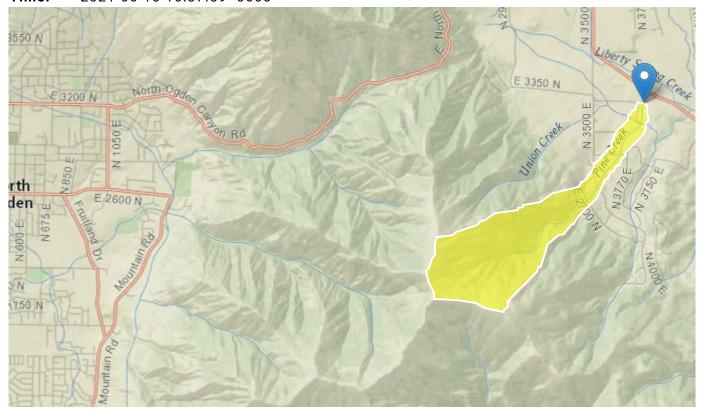
StreamStats Report

 Region ID:
 UT

 Workspace ID:
 UT20210610163756605000

 Clicked Point (Latitude, Longitude):
 41.31746, -111.85537

 Time:
 2021-06-10 10:37:59 -0600



Basin Characteristics			
Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.99	square miles
PRECIP	Mean Annual Precipitation	42.3	inches

Peak-Flow Statistics Parameters [Region 2]					
Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.99	square miles	2.14	84.1

6/10/202 ⁻	1		EXHIBIT 2 (CONT)	StreamStat	s		Exhibit F
	Parameter Code	Parameter Nam	· · · · ·	Value	Units	Min Limit	Max Limit
	PRECIP	Mean Annual P	recipitation	42.3	inches	16.5	53.7
	Peak-Flow Statistics I	Disclaimers [Region	12]				
	One or more of the unknown errors	e parameters is out	side the sugge	sted rang	e. Estimates were	extrapolated	with
	Peak-Flow Statistics Flow Report [Region 2]						
	Statistic				Value	Unit	
	50-percent AEP fl	ood			11.9	ft^3/:	6
	20-percent AEP fl	ood			24.1	ft^3/:	3
	10-percent AEP fl	ood			34.4	ft^3/:	3
	4-percent AEP flo	od			44.9	ft^3/:	3
	2-percent AEP flo	od			60.2	ft^3/:	3
	1-percent AEP flo	od			71.7	ft^3/:	3
	0.5-percent AEP f	lood			84.1	ft^3/:	3
	0.2-percent AEP f	lood			110	ft^3/s	3

Peak-Flow Statistics Citations

Kenney, T.A., Wilkowske, C.D., and Wright, S.J.,2007, Methods for Estimating Magnitude and Frequency of Peak Flows for Natural Streams in Utah: U.S. Geological Survey Scientific Investigations Report 2007-5158, 28 p. (http://pubs.usgs.gov/sir/2007/5158/)

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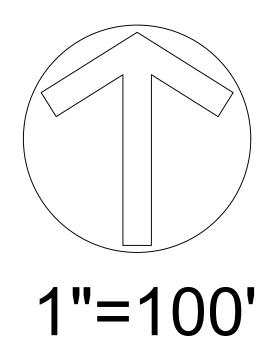
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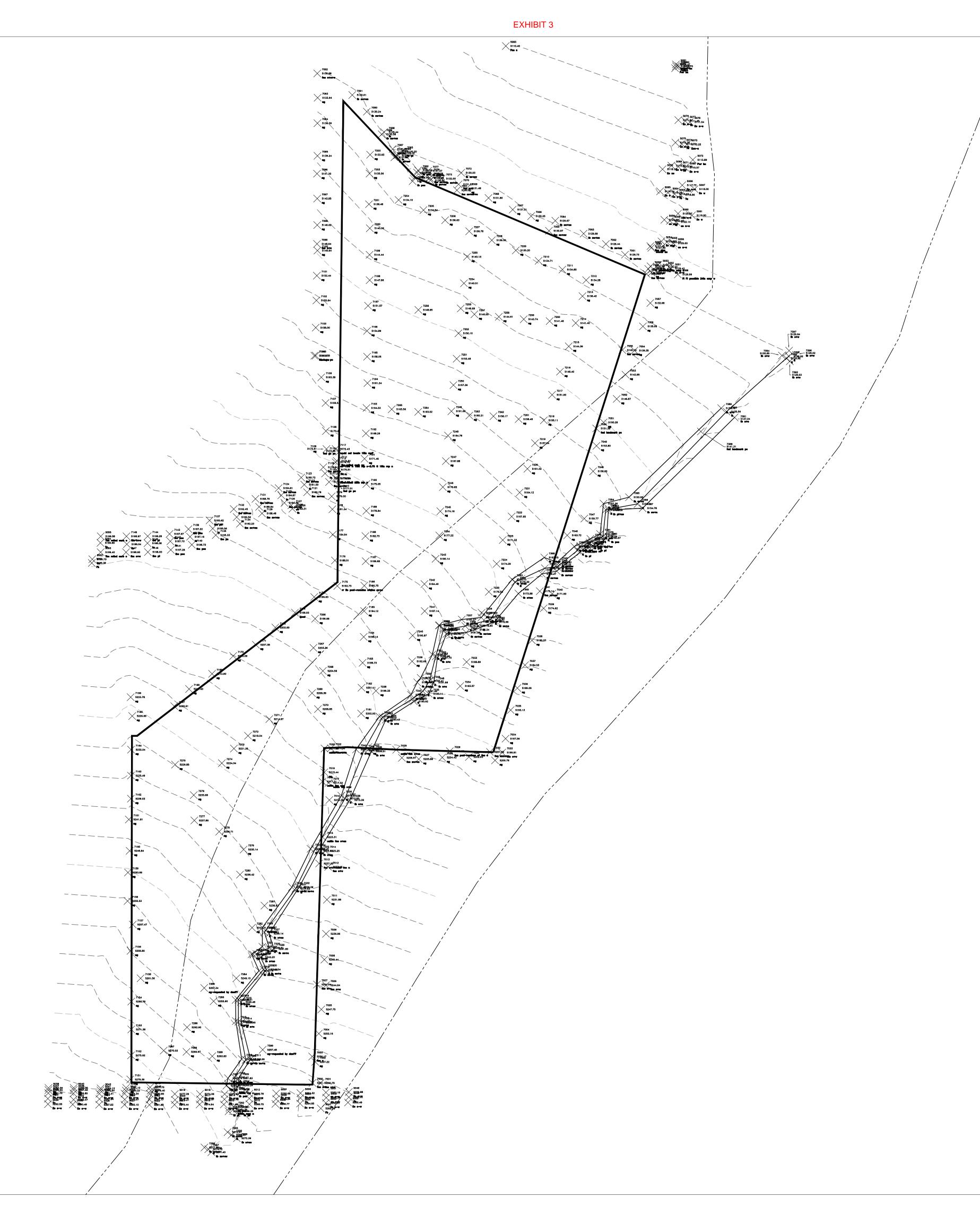
EXHIBIT 2_{StreamStats} (CONT)

Exhibit F

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Application Version: 4.5.3 StreamStats Services Version: 1.2.22 NSS Services Version: 2.1.2







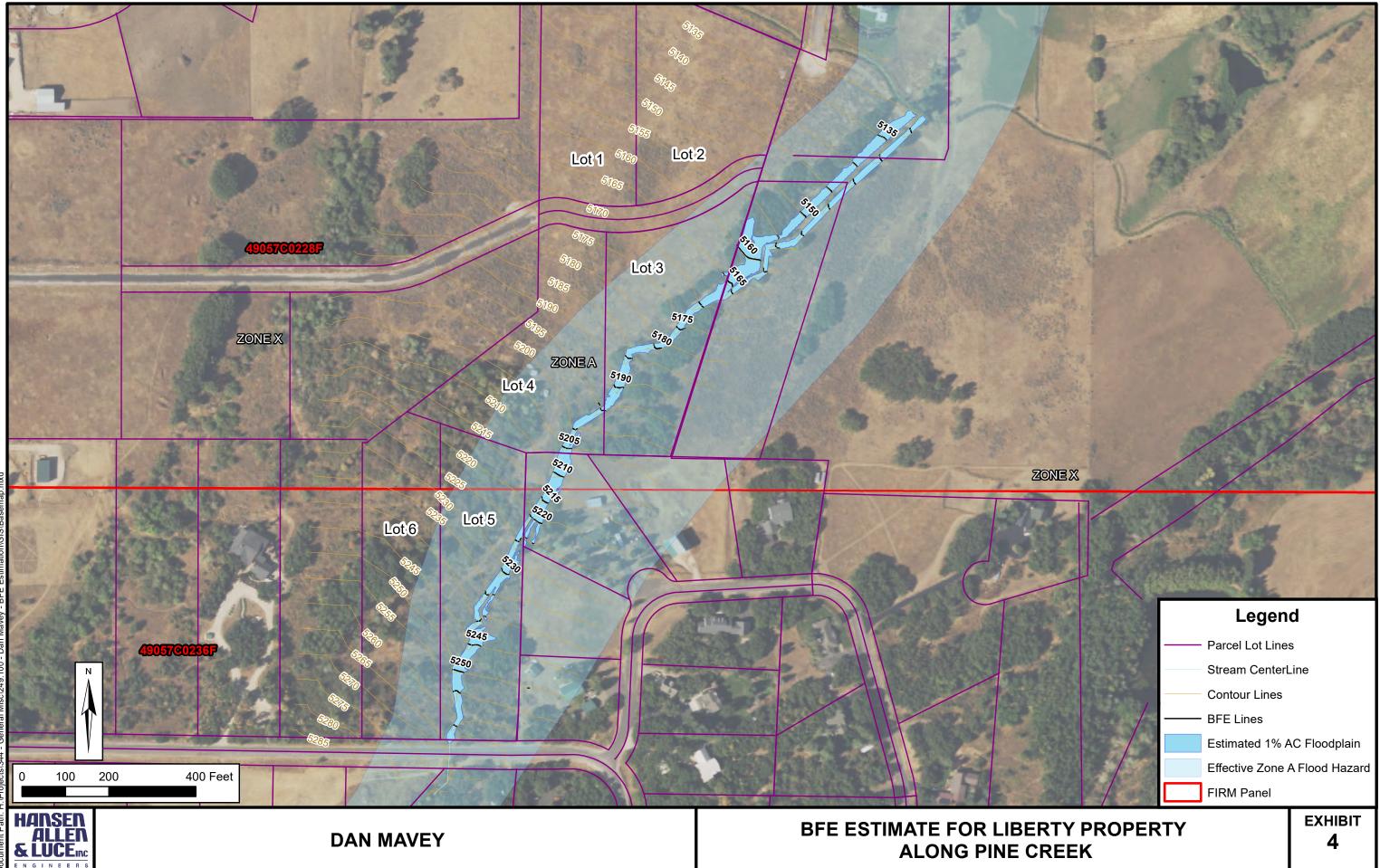


Exhibit F

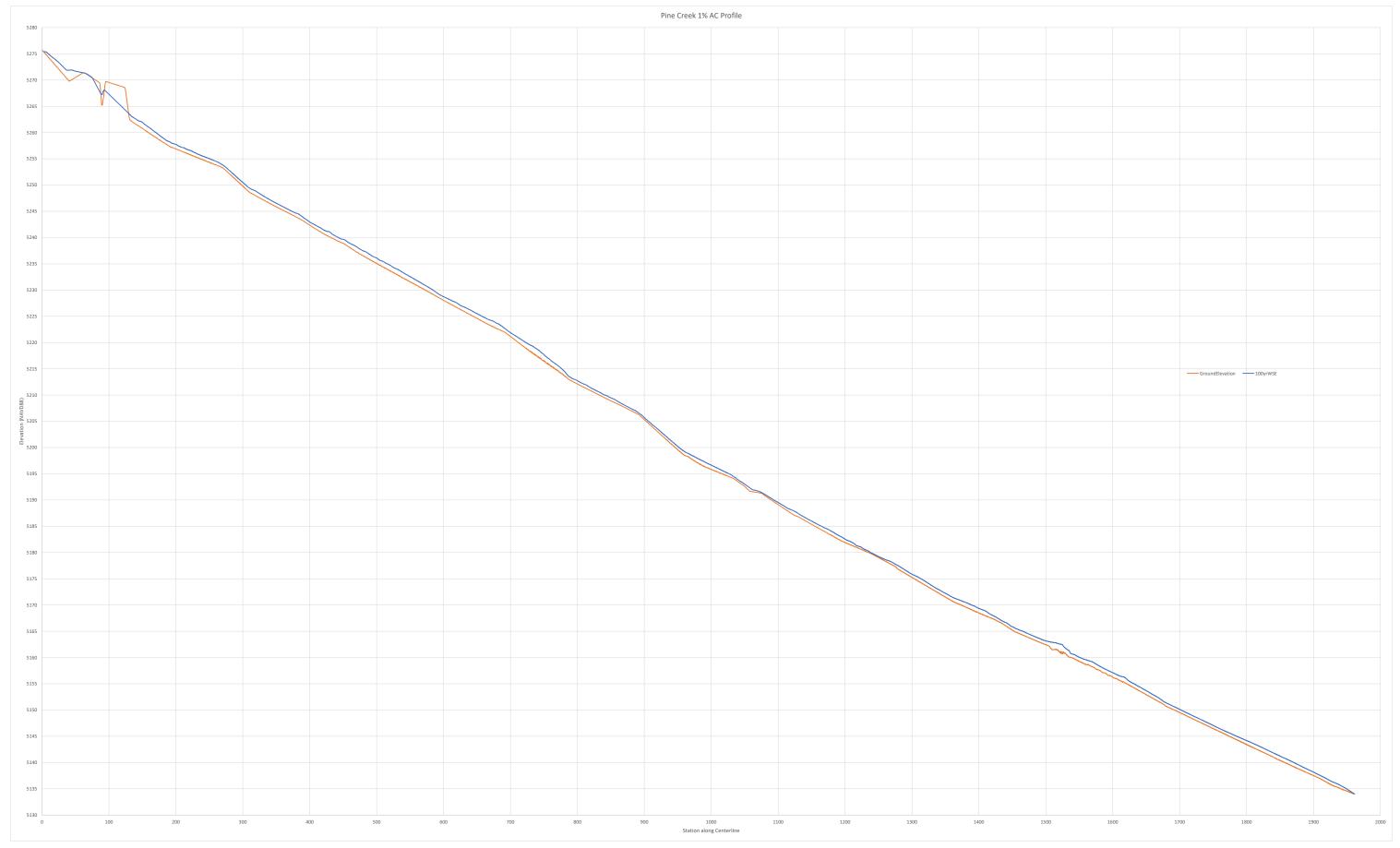


Exhibit F