



ROOM A | 130 6TH STREET WEST
COLUMBIA FALLS, MT 59912

PHONE (406) 892-4391
FAX (406) 892-4413

AGENDA
PLANNING BOARD/ZONING COMMISSION REGULAR MEETING
TUESDAY, SEPTEMBER 12, 2023 BEGINNING AT 6:30 PM
COUNCIL CHAMBERS CITY HALL

Contact City Clerk Barb Staalnd for virtual meeting link by 5:30 pm the day of the meeting by calling (406) 892-4391 or via email: staalndb@cityofcolumbiafalls.com

CALL TO ORDER AND ROLL CALL

APPROVAL OF MINUTES:

1. Approval of April 11, 2023 Regular Meeting Minutes

VISITOR OR PUBLIC COMMENT: (An opportunity for the Public to comment on any items not on tonight's agenda)

PUBLIC HEARINGS AND ACTION:

2. Public Hearing - Rocky Top Cabins Subdivision - A two-Lot Subdivision:

Rocky Top Cabins Subdivision – A Two Lot Subdivision: A request by Herbert Enterprises LLC to create a two-lot subdivision. The property is 8.11 acres in size and the property is zoned CR-1 which allows a minimum lot size of one acre. The property is located at 269 Rocky Lane, Columbia Falls, and is described as Assessor's Tract 1 (Parcel A of COS 21669) located in Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County.

- A. Adopt Staff Report CPP-23-02 as Findings of Fact
- B. Recommend Approval of Rocky Top Cabins Subdivision to City Council with Conditions

ADJOURNMENT

Next Regular Planning Board Meeting – TBD (Tentative October 10, 2023 - See City Website/Calendar for confirmation)

**CITY OF COLUMBIA FALLS
PLANNING BOARD AND ZONING COMMISSION MEETING MINUTES
HELD APRIL 11, 2023**

REGULAR MEETING – 6:30 PM.

Chairman Vukonich called Meeting to order at 6:31 PM

PRESENT: Vukonich, Nelson, Smith, Lundgren, Byrd-Rinck, Singer, Kavanagh, Shepard (Zoom)

ABSENT: Duffy

Also present: City Manager Susan Nicosia, Contract Planner Eric Mulcahy, City Attorney Justin Breck (Zoom), Public Works Clerk Caleb Sobczak

APPROVAL OF MINUTES:

Approval of March 14th, 2023, Regular Meeting Minutes

Motion made by Lundgren to approve the March 14th, 2023, minutes as presented, Seconded by Nelson. Motion carried with all present voting AYE.

VISITOR OR PUBLIC COMMENT: (An opportunity for the Public to comment on any items not on tonight's agenda)

No public comment was presented.

PUBLIC HEARINGS AND ACTION:

Chairman Vukonich read the notice of hearing and asked for the staff report presentation:

Zoning Map Amendment – Christianson: A request by Eric S Christianson to amend the zoning map from the current zoning of CSAG-5 (Suburban Agricultural 5-acre minimum lot size) to CSAG-10 (Suburban Agricultural 10-acre minimum lot size). The property is located at 270 Jorgenson Trail, Columbia Falls, and is described as Assessor's Tract 1E (Parcel G of COS 10557) located in Section 19, Township 30 North, Range 20 West, P.M.M., Flathead County.

Contract Planner Eric Mulcahy presented staff report CZC #23-02. The reason for this request is the applicant wishes to operate a commercial stable which is not allowed in the CSAG-5 zone. With this zone change the applicant would not be able to subdivide his property since the CSAG-10 zone has a 10-acre minimum and the total property area is 13 acres. The impacts of reducing the zoning offsets any commercial impacts such as congestion in the street. Staff reviewed the findings of facts and recommend approval of this request and welcomes any questions from the Planning Board.

Singer wondered if there is a maximum number of livestock allowed per acre? Mulcahy answered that in this zone there is not a limit since it is an agricultural zone, not a residential zone.

Kavanagh sought clarification on the zoning regulations for CSAG-5 since with a conditional use permit it would allow a riding academy or a rodeo arena. Mulcahy said that the distinction is the stable and the applicant is seeking to run a public stable where he can have some monetary gain from boarding horses not just a riding or rodeo arena. Kavanagh had a further question about the second access that the applicant uses and acts as the primary access. Mulcahy answered that when the parcel was created under the certificate of survey the primary access was Jorgensen Trail. The applicant secured an easement from a previous property owner for a second access to the south, but Mulcahy said he would not be the arbitrator over whether that access is legal or not.

Vukonich wondered if there would need to be an additional permit obtained to operate a live event such as a rodeo. Mulcahy said that under the current zoning a conditional use permit would be required but with the zone change no additional permit would be needed. Mulcahy noted that this would not be a very appropriate place for a rodeo. There

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are many arenas all over this valley but they are very low-key operations which is what the applicant is looking to do. Vukonich stated for clarification that the zoning stays with the property not the owner. Mulcahy answered in the affirmative and stated that there are CSAG-10 zoned properties adjacent to this property.

Applicant presentation began at 6:53. Olaf "Olie" Ervin from OC Irvin Land Surveying represented the applicant. Ervin noted that the applicant does not have much more to present, they agree with the staff report and appreciate the work that was put into it. Ervin stated as a land surveyor he can speak a little bit on the second access easement to the south onto Waters Edge Way. The easement was granted by the previous owners of the property and is an access and utility easement. As a land surveyor his opinion is that Christianson will have to use Jorgenson Trail to access this property with livestock trailers since it will overburden the secondary access, but it provides emergency egress if necessary. In regard to why the zone change is being presented is that the property is already being used for horse husbandry and the applicant would like to get a little monetary gain from commercial boarding or riding lessons which is not available with the current zoning. In his opinion, the CSAG-10 zoning is harmonious with the area.

Vukonich remarked that he has been on Kokanee Bend Drive and there are sections that are rugged and the County only does the minimum upkeep required on that road, so commercial traffic could exacerbate that problem. Ervin replied that there are already people boarding their horses at this property for no charge, so there would not be an increase in traffic, the applicant is just seeking the ability to be compensated for the boarding that is already present.

Singer inquired if additional buildings would be constructed, and Ervin replied that there would not be any additional buildings. She then asked how many horses are there currently. Eric Christianson, the applicant, replied there are 7 horses of his own and 3 horses owned by friends that just pay for hay.

Smith asked if Jorgenson Trail would be the primary access since the Board received a written public comment that said that Mr. Christianson uses the access off Waters Edge Way as his primary access. Ervin replied the easement was acquired for personal use and it is nice to have emergency egress but Jorgenson Trail would be the primary access.

Lundgren remarked that in the comment letter it is stated that there are 5 residents on Waters Edge way that are responsible for the maintenance of the road and asked the applicant if he would be willing to communicate with those people and come up with a solution? Ervin answered that when the easement was granted there was an opportunity to include Mr. Christianson in the road maintenance agreement and it was not taken and while it is harder to go back and change that it can be done.

Eric Christianson, 270 Jorgenson Trail, stepped up to the podium further remarking on the road maintenance by saying that he has maintained that road for many years when he used to live on Waters Edge Way. After he moved to his current property, he did not maintain the road until he obtained the easement. He stated last weekend he ripped the whole road down, graded it, brought in gravel, and filled the potholes himself. One neighbor approached him and asked if he was willing to maintain the road and Christianson said yes. He went on to say that he does not have the facilities to accommodate a rodeo such as bleachers and he is not planning on having any rodeos there. He is just seeking legal compensation for the horse facility he has built as a secondary income for his family. He is involved closely with the rodeo and teaches kids to ride horses so there will be the occasional practice at this property. He stated he would like to build a nicer hay barn regarding the question posed by Singer about additional structures. He is aware of other horse boarding facilities that are overrun, and he is not looking to do that here. Sometimes he will hold horses for horse shippers until they are shipped out and some people have sought riding lessons from him as well. Also, he has taken in starving horses before and since he has chutes people with young or untouched horses have sought to use them. He has a lot of money and time into this facility and wants a little compensation for his work.

Kavanagh wondered if he could forecast how much stock he anticipates? Christianson replied that he does not know but he is not trying to get huge, he has a full-time job. He would probably want to board 5 or 6 horses; he has some leased pasture that he moves his horses onto in the summer and this property is primarily used in the winter. He is seeking to board to friends since horse people can be rather needy and he will be picky on whose horse he boards.

Public comment was opened at 7:04 PM.

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Tracy Ammerman, 1030 Waters Edge Way, Columbia Falls, via Zoom. She does not object to the current personal use of the property for horse husbandry. She is concerned about the commercial use of the area and the increased density and use included with that. Her property is the property with the easement that was granted before they purchased the property. The easement was granted but the road itself is a private road. The use is not just for emergency egress there is extensive use of the road by non-residents and Mr. Christianson himself. The increased use of Waters Edge Way is to the extent that there is a mailbox at the end of Mr. Christianson's driveway on that road. One other point is that at the top of page 8 of the Staff Report regarding the properties to the north, south, west, and east there are actually three properties that border Mr. Christianson's property to the west.

Scott Allen, 1030 Waters Edge Way, Columbia Falls, via Zoom. The use of Waters Edge Way has increased since Mr. Christianson put the road in. The traffic has increased to the extent that it is more than all the other residents combined. Additionally, Mr. Christianson had told him that he is not able to make turns with horse trailers on Jorgenson Trail so he needs that easement to get trailers out. There is not enough room to make the turn on this road without driving on their property and there is a big rut where the cars coming out of the Christianson property drive onto their property. There has also been some tree damage adjacent to their property where Christianson plows and trailers catch tree branches. He is not sure of the legality of the road since it has punched through onto a private road. Stating that this is an emergency egress for him is a misrepresentation, he uses this as his primary access. He understands that Christianson has stated that he does not want to do a rodeo but there is a difference between what he does not want to do and what he can do and what people can do is what should be talked about. He is already building the facilities to have a rodeo. The increased use would disrupt the quietness of the neighborhood.

Public comment was closed at 7:13

A motion was made by Byrd-Rinck to Adopt Staff Report CZC-#23-02 as Findings of Fact. Seconded by Kavanagh.

Shepard asked a question of Mulcahy regarding the private roads asking him to address that. Mulcahy answered that most of the roads are private; Jorgenson Trail is private, Hellman Lane he believes is public, Kokanee Bend Drive is privately maintained. So, the neighbors maintain all those roads. The applicant has legal access through the certificate of survey that created the parcel. It is not Mulcahy's place to determine legal access on a private road, which is usually determined by those two parties going to a judge, so we will not decide that here tonight; he added that the legal access is Jorgenson Trail. Vukonich sought clarification that it is not part of the Board's consideration to question the use of this secondary access. Mulcahy answered that is correct.

Kavanagh commented that based on the applicant's desire for the property and the current use moving to a less dense zone makes sense and he is with Mulcahy that the question of legality of the secondary access is not the Planning Board's purview.

A roll call vote was performed to adopt Staff Report CZC # 23-02 as Findings of Fact. AYES: Vukonich, Nelson, Smith, Lundgren, Byrd-Rinck, Singer, Kavanagh, Shepard NAYS: None. Motion passes.

A motion was made by Kavanagh to recommend approval of the Zoning Map Amendment to City Council. Seconded by Byrd-Rinck. A roll call vote was performed. AYES: Vukonich, Nelson, Smith, Lundgren, Byrd-Rinck, Singer, Kavanagh, Shepard NAYS: None. Motion passes.

A motion was made to adjourn by Nelson. Seconded by Singer with all present voting AYE.

ADJOURNMENT – Meeting duly adjourned at 7:20 PM

Chairman

Attest:

Public Works Clerk

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CITY OF COLUMBIA FALLS
NOTICE OF PUBLIC HEARINGS

The Columbia Falls City-County Planning Board will hold a public hearing for the following item at their regular meeting on Tuesday, September 12, 2023, at 6:30 p.m. in the Council Chambers of City Hall, 130 6th Street West, Columbia Falls, Montana. The Columbia Falls City Council will hold a subsequent hearing on October 16, 2023, starting at 7:00 p.m. in the same location.

Rocky Top Cabins Subdivision – A Two Lot Subdivision: A request by Herbert Enterprises LLC to create a two-lot subdivision. The property is 8.11 acres in size and the property is zoned CR-1 which allows a minimum lot size of one acre. The property is located at 269 Rocky Lane, Columbia Falls, and is described as Assessor's Tract 1 (Parcel A of COS 21669) located in Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County.

Persons may testify at the hearings or submit written comments prior to the meetings. Written comments may be sent to Columbia Falls City Hall, Attention: Barb Staaland, City Clerk, 130 6th Street West, Room A, Columbia Falls, MT 59912. For more information call Eric Mulcahy, Columbia Falls City Planner at 755-6481.

DATED this 22nd day of August 2023.

s/Susan Nicosia, CPA, MPA, City Manager/Zoning Administrator

Publish: Daily Interlake: August 27, 2023

**SUBDIVISION REPORT #CPP-23-2
ROCKY TOP CABINS SUBDIVISION
COLUMBIA FALLS PLANNING OFFICE
August 30, 2023**

A report to the Columbia Falls City-County Planning Board regarding a request for a preliminary plat called Rocky Top Cabins, a two-lot subdivision located on 8.11 acres. A public hearing is scheduled before the Columbia Falls City-County Planning Board and Zoning Commission on September 12, 2023, at 6:30 PM in the Council Chambers and a subsequent public hearing is scheduled for the Columbia Falls City Council for October 16, 2023, at 7:00 PM in the City Council Chambers.

I. BACKGROUND INFORMATION

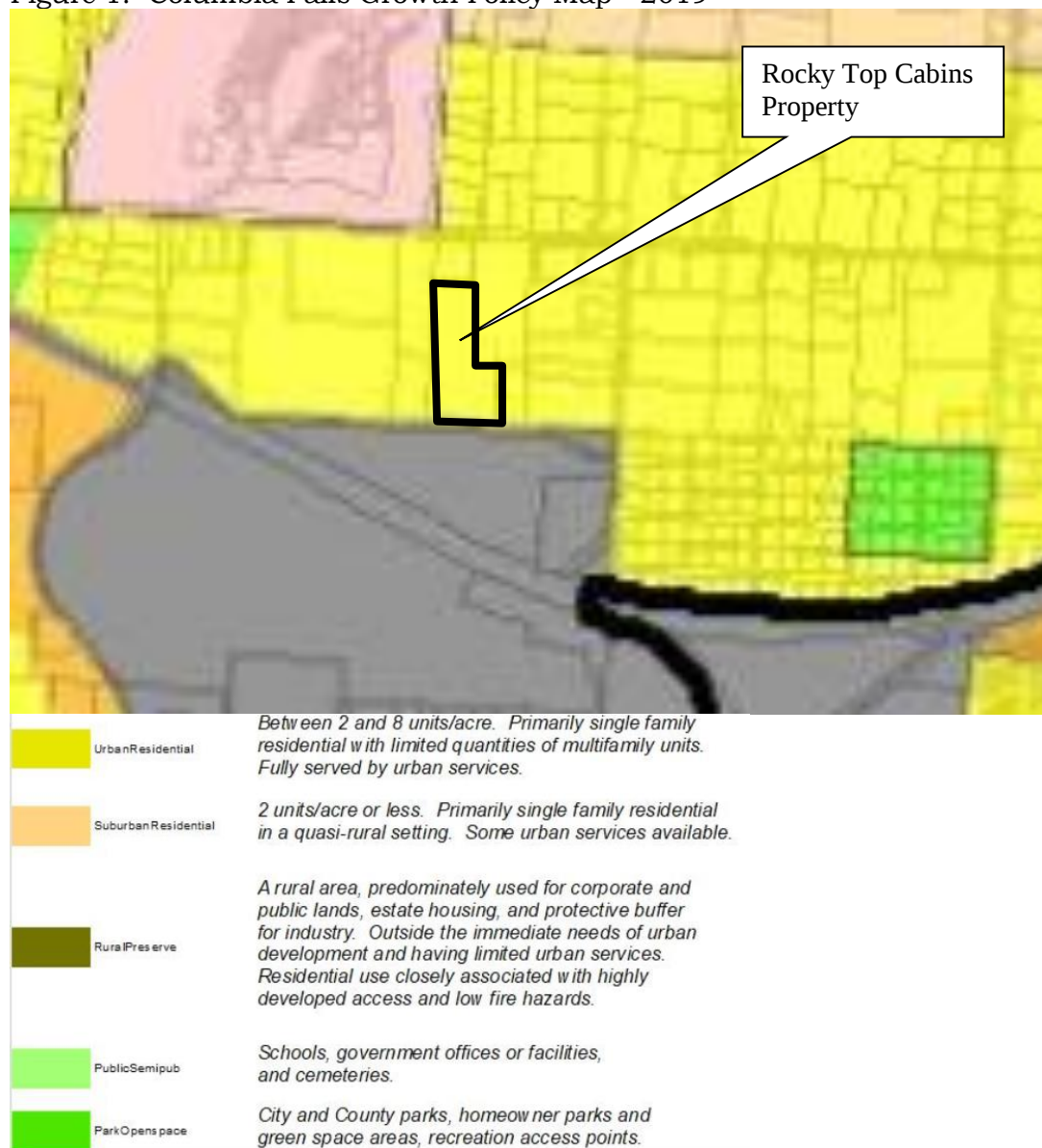
Owner/Applicant: Herbert Enterprises, LLC
P.O. Box 357
Columbia Falls, MT 59912

Technical Assistance: Breckenridge Surveying
2302 Highway 2 East #6
Columbia Falls, MT 59912

WET
102 Corporative Way #100
Kalispell, MT 59901

- a. Location: The property is located at 269 Rocky Lane in the extra territorial planning jurisdiction of Columbia Falls. The property is described as Parcel A of COS 21669 in the NE1/4NE1/4 in Section 7; T30N; R20W.
- b. Size: The proposed subdivision contains 8.11 acres. Lot will be 3.56 acres in size and Lot 2 will be 4.55 acres in size.
- c. Existing Land Use: This 8.11 acre property currently has two cabins located on the northern end of the property.
- d. Adjacent Land Uses:
North: Large Lot/tract residential
South: Weyerhaeuser Mill, Industrial use
East: Large Lot/tract residential.
West: Large Lot/tract residential.
- e. Relation to Growth Policy: The Columbia Falls Growth Policy Map designates the subject property for "Urban Residential" (Figure 1). Urban Residential is defined as: "2 to 8 units/acre Primarily single family residential with limited quantities of multi-family residential." The existing CR-1 does comply with the Urban Residential Growth Policy designation particularly with a lack of Public Sewer and Water.

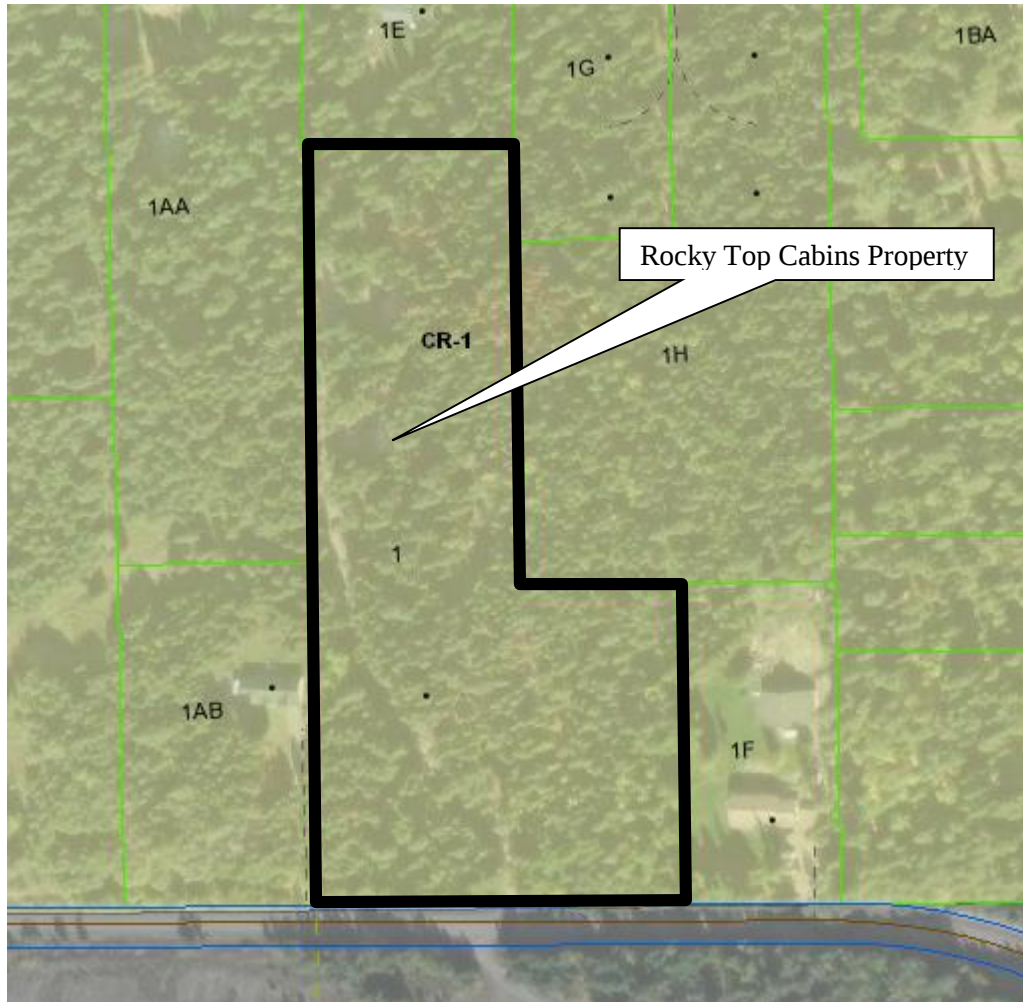
Figure 1. Columbia Falls Growth Policy Map - 2019



- f. **Zoning:** The subject property is CR-1 Suburban Residential (one-acre minimum lot sizes)
- g. **Utilities & Services:** The property is not within City limits, and is outside the current municipal water and sewer service areas. Following is a list of services that are available for this site:

Sewer: On-site individual wastewater
 Water: On-site individual water
 Refuse: Private Hauler Home Pick-up
 Police: Flathead County Sheriff Department with support from CFPD
 Fire: Columbia Falls Rural Fire District
 Street Maintenance: Flathead County Road Department
 Electric: Flathead Electric

Figure 2



Source: Flathead County GIS

II. REVIEW AND FINDINGS OF FACT

This subdivision is considered to be a subsequent major subdivision, and therefore goes before the Planning Board and the City Council. The subdivision is reviewed under Chapter 17.18, Design Standards for Areas not Annexed to the City.

A. Effects on Public Health and Safety:

The subdivision is located on Rocky Lane north of the BNSF tracks and Weyerhaeuser. The Columbia Falls Fire Hall is the closest Fire Hall and it is located approximately 1.5 road miles from the subdivision. Access for fire is good. The property is not located within any floodplain.

B. Effects on Wildlife and Wildlife Habitat:

The property is in a suburban area between the city limits of Columbia Falls and Meadow Lake Resort. The property is rolling forest land. Because of bears frequenting the northern parts of Columbia Falls, Refuse should be stored indoors except for the day of pick up.

C. Effects on the Natural Environment:

1. Groundwater: According to test hole data provided in the applications, the groundwater appears to be greater than eight feet in the general area. The property is not within the Columbia Falls groundwater protection zone. Groundwater data appears to be adequate for on-site septic systems. Previous Nitrate and Phosphorous analysis provided in the application for the original lot, shows that the subdivision can meet standards required by the MDEQ. The new lot will be subject to review by DEQ for compliance with their standards.

2. Natural Vegetation: The property is forested with defensible space around the existing cabins. With the proposed additional lot, there should be plenty of vegetation remaining.



3. Surface Water: There are no surface waters associated with the property.
4. Topographical Features: The site is gently rolling with the greatest topographic change at the south end of the property.
5. Soils Types: The test hole data provided in the application indicates the soils are a gravelly silt loam. These soils are typical of the area and support both buildings and on-site septic.

D. Effects on Local Services:

1. Police: The Flathead County Sheriff Department is responsible for patrolling and responding to this area and the proposed subdivision. Generally, the Flathead County Sheriff's Office has had a standard response to subdivision impacts and that is they will address the needs of the County but response time may be slow depending on the location of the officers on duty at the time.
2. Fire: The proposed subdivision is located within the Columbia Falls Rural Fire District and is approximately 1.5 miles from the Columbia Falls Downtown Fire Station. The property is mapped in the Wildland Urban Interface (WUI) per the Flathead County GIS map and according to the application, the property owner will use defensible space standards to reduce fire risk.
3. Water and Sewer: No impacts to municipal services are anticipated, as the two lots will be served by individual, on-site septic and shared well.
4. Schools: Using County wide average of 0.35 school aged children per residence, (There were 17,446 students recorded with the Flathead County Superintendent of Schools Office including public, private, and home-schooled children at the beginning of the 2022 school year. The US Census Bureau 2020 counted 49,531 housing units in Flathead County – 17,446 students / 49,531 housing units = 0.352 students per unit), the one new residential lot would generate maybe one (1) student to the K – 12 school system.
5. Recreation/Parkland: The Montana Statutes and the City subdivision standards exempt subdivisions creating a single new lot from parkland dedication.
6. Transportation and Circulation: The subdivision fronts on Rocky Lane in Columbia Falls. Since the proposed Lot 1 will not abut a standard street, the applicant will be required to construct the driveway to Columbia Falls Rural Road Standards through Lot 2 to touch Lot 1 and end in a turn-around approved by the Columbia Falls Fire Chief. The minimum travel surface for a rural standard road not eligible for annexation is a 20-foot paved surface.

The new subdivision road is splitting Lot 2 and Chapter 17.14.090.B states that no lot shall be divided by a street, road, alley right-of-way or access easement. The applicant is requesting a subdivision variance from this section.

E. Effects on Agriculture:

The property has never been in agricultural use. The property at some point of time had been logged at least once but has not been in corporate or active silviculture for many years. There will be no impacts on agricultural uses and very limited impact on silviculture.

F. Compliance with Subdivision Design Standards and Regulations:

The proposed subdivision complies with the Columbia Falls Subdivision design standards with the exception of the requested variance to the proposed road splitting Lot 2. The applicant is requesting a variance to Chapter 17.14.090.B.

Variance criteria:

What hardship would be created with strict compliance of subdivision regulations?

The applicant located the subdivision road in its current position because that is where the existing County Road approach is located. In addition, the applicant is showing a future drain field site on the west side of the road where this rule would require the road to go.

1. *Will the granting of the variance be detrimental to the public health, safety, or general welfare or injurious to other adjoining properties?*

Granting the variance will not be detrimental to public health and welfare as it only effects Lot 2. The only reason for this rule is to avoid future lot owners wanting to subdivide off the segregated area even if it does not meet minimum lot sizes. However, in this case with the drain field located west of the road it would not make a good lot anyway.

2. *Will the variance cause a substantial increase in public costs?*

The variance will not increase any cost to the public. It is simply a design element meant to head off bad decisions. In this case, the drain field would preclude the west side being split from the east side of Lot 2.

3. *Will the variance affect, in any manner, the provisions of any adopted zoning regulations or Growth Policy?*

The proposed variance has no bearing on the Columbia Falls Zoning Regulations.

4. *Are there special circumstances related to the physical characteristics of the site (topography, shape, etc.) that create the hardship?*

The physical issues related to the requested variance is that the approach exists for the property and the proposed subdivision shows a drain field on the west side of the proposed road.

5. *What other conditions are unique to this property that creates the need for a variance?*

Other than what has been stated no other unique conditions are applicable.

Based on the variance criteria, staff is recommending that the Planning Board and City Council grant the variance for the subdivision road to divide Lot 2.

III. SUMMARY COMMENTS

The application for preliminary plat approval is in conformance with the Growth Policy, subdivision review criteria, and the Columbia Falls Subdivision Standards.

VI. RECOMMENDATION

After reviewing the findings of fact, staff recommends that the Columbia Falls Planning Board and City Council adopt Staff Report #CPP-23-02 as findings-of-fact, grant the variance to the road dividing Lot 2 (Condition #13), and grant conditional approval for the preliminary plat of Rocky Top Cabins Subdivision. Recommended conditions of approval are as follows:

- 1 The applicant shall receive physical addresses in accordance with Flathead County Resolution #1626C. All road names shall appear on the final plat. Street addressing shall be approved by Flathead County:
- 2 The applicant shall comply with all reasonable fire suppression and access requirements of the Columbia Falls Rural Fire District. A letter from the fire chief stating the plat meets the applicable requirements of the District shall be submitted with the application for final plat.
- 3 The internal subdivision road shall be built to a minimum 20-foot paved surface through lot 2 and abutting Lot 1 (CFSR 17.18.090 Table 1). The turn-around shall be approved by the Columbia Falls Fire Chief.
4. The applicant shall provide an updated Flathead County Road Approach permit for the new paved approach.
- 5 All area disturbed during development of the subdivision shall be re-vegetated in accordance with an approved Weed Control Plan and a letter from the County Weed Supervisor stating that the Weed Control Plan has been approved and implemented shall be submitted with the final plat.
- 6 With the application for final plat, the developer shall provide a compliant Road Users' Agreement per Covenants, Conditions, and Restrictions document which requires each property owner to bear his or her pro-rata share for maintenance of the roads within the subdivision and for any integral access roads lying outside the subdivision.
- 7 The proposed water, wastewater treatment, and stormwater drainage systems for the subdivision shall be reviewed, as applicable, by the Flathead City-County Health Department and approved by the Montana Department of Environmental Quality.
- 8 The mail delivery site(s) shall be provided with the design and location approved by the local Postmaster of the US Postal Service. A letter from the Postmaster stating that the applicant has met their requirements shall be included with the application for final plat.

9. The following statements shall be placed on the face of the final plat applicable to all lots:
 - a. All addresses shall be assigned by the Flathead County Address Coordinator and be clearly visible from the road, either at the driveway entrance or on the house. Address numbers shall be at least four inches in height per number.
 - b. All utilities shall be placed underground.
 - c. Lot owners are bound by the soil disturbance and weed management plan to which the developer and the Flathead County Weed Department agreed.
 - d. Utilize living with wildlife standards provided by Fish Wildlife and Parks
10. All required improvements shall be completed in place or a Subdivision Improvement Agreement shall be provided by the subdivider prior to final approval by the City Council.
11. The final plat shall be in substantial compliance with the plat and plans submitted for review, except as modified by these conditions.
12. Preliminary plat approval is valid for three (3) years. The final plat shall be filed prior to the expiration of the three years. Extension requests to the preliminary plat approval shall be made in accordance with the applicable regulations and the following associated timeline(s).
13. The applicants shall provide Columbia Falls Public Works Department an ArcGIS compatible file of the subdivision at final plat.
14. The applicant is not subject to a parkland dedication fee in accordance with 17.14.080.D.d which exempts subdivisions creating only one additional lot.
15. Granting of the requested variance to the Columbia Falls Subdivision Regulations for the subdivision road dividing Lot 2.



Planning Department

Item No.2.

130 6TH STREET WEST
ROOM A
COLUMBIA FALLS, MT 59912

PHONE (406) 892-4391

FAX (406) 892-4413

MAJOR SUBDIVISION PRELIMINARY PLAT APPLICATION

FEE ATTACHED _____

Base Fee: \$1000 First 20 lots: \$80/lot
Each lot over 20: \$40/lot

Letters to Adjoining Property Owners: \$5 per address

SUBDIVISION NAME: Rocking ROCKY TOP SUBDIVISION

OWNER(S) OF RECORD:

Name HERBERT ENTERPRISES LLC Phone 406.261.0874
Mailing Address PO BOX 357
City COLUMBIA FALLS State MT Zip 59912

TECHNICAL/PROFESSIONAL PARTICIPANTS (Surveyor/Designer/Engineer, etc):

Name & Address BRECKENRIDGE SURVEYING, 2302 HWY 2 EAST #6, KALISPELL
Name & Address WET ENVIRONMENTAL, KALISPELL, MT
Name & Address _____

LEGAL DESCRIPTION OF PROPERTY:

Property Address 269 ROCKY LN
Assessor's Tract No(s) 0451456 Lot No(s) 2
1/4 Sec NE4NE4 Section 7 Township 30 N Range 20 W

GENERAL DESCRIPTION OF SUBDIVISION:

Number of Lots or Rental Spaces	<u>2</u>	Total Acreage in Subdivision	<u>8.11 acres</u>
Total Acreage in Lots	<u>8.11</u>	Minimum Size of Lots or Spaces	<u>2.34</u>
Total Acreage in Streets or Roads	<u>0.25</u>	Maximum Size of Lots or Spaces	<u>5.76</u>
Total Acreage in Parks, Open Spaces and/or Common Areas			<u>0.00</u>

PROPOSED USE(S) AND NUMBER OF ASSOCIATED LOTS/SPACES:

Single Family	<u>w/ Guest House</u>	Townhouse	_____	Mobile Home Park	_____
Duplex	_____	Apartment	_____	Recreational Vehicle Park	_____
Commercial	_____	Industrial	_____	Planned Unit Development	_____
Condominium	_____	Multi-Family	_____	Other	_____

07/01/16

ESTIMATE OF MARKET VALUE BEFORE IMPROVEMENTS \$650,000

IMPROVEMENTS TO BE PROVIDED:

Roads: Gravel ☒ Paved _____ Curb _____ Gutter _____ Sidewalks _____ Alleys _____ Other _____
Water System: Individual _____ Multiple User ☒ Neighborhood _____ Public _____ Other _____
Sewer System: Individual ☒ Multiple User _____ Neighborhood _____ Public _____ Other _____
Other Utilities: Cable TV _____ Telephone ☒ Electric ☒ Gas ☒ Other _____
Solid Waste: Home Pick Up _____ Central Storage _____ Contract Hauler _____ Owner Haul ☒
Mail Delivery: Central _____ Individual ☒ School District: SD 6
Fire Protection: Hydrants _____ Tanker Recharge _____ Fire District: COLUMBIA FALLS RURAL
Drainage System: _____

PROPOSED EROSION/SEDIMENTATION CONTROL: BMPs for all new construction.
 Driveway is built to both lots and accessed off of Rocky Top Drive, a paved county road.

ESTIMATE OF IMPACTS:

Provide an estimate of the type and amount of impact the subdivision will have on the following categories of the natural and operating environment:

A. Impacts on agriculture

Agriculture is defined as all aspects of farming or ranching including the cultivation or tilling of soil; dairying; the production, cultivation, growing, harvesting of agricultural or horticultural commodities; raising of livestock, bees, fur-bearing animals or poultry; and any practices including, forestry or lumbering operations, including preparation for market or delivery to storage, to market, or to carriers for transportation to market.

According to the Montana Dept. of Revenue Property Report Card, there are no agricultural facilities on this property. The soils survey shows grades up to 12% for this property.

B. Impact on agricultural water user facilities

Agricultural water user facilities are defined as those facilities which provide water for irrigation or stock watering to agricultural lands for the production of agricultural products. These facilities include, but are not limited to, ditches, head gates, pipes, and other water conveying facilities.

There are no irrigation facilities that are appurtenant to this property. There are no impacts.

C. Impact on local services

Local services are defined as any and all services that local governments, public or private utilities are authorized to provide for the benefit of their citizens.

The property is partially developed with two cabins on the north western part of the property. The addition of one additional lot with a guest house should not impact the services already servicing the the property. Gas, electric and a paved road are adjacent. The zoning calls for a higher density than is proposed.

APPLICATION CONTENTS:

The subdivider shall submit a complete application addressing items below to the Columbia Falls Planning Department at least thirty five (35) days **prior** to the date of the Planning Board meeting at which it will be heard.

1. Preliminary plat application;
2. All information required in **Appendix A** and **B** of the Columbia Falls Title 17 Subdivision Regulations;
3. Two copies of the preliminary plat not less than 24 in. x 36 in.;
4. One reduced copy of the preliminary plat, each sheet not to exceed 11 in. by 17 in., nor less than 8½ in. by 11 in., in a size appropriate to the detail and scope of the development, and printed on a medium suitable for photocopier use;
5. One reproducible set of supplemental information (See Appendix A of this title);
6. Application fee as established by the City;
7. Adjoining Property Owners List (see example below and attached notice from County Plat Room):

<u>Assessor#</u>	<u>Sec-Twn-Rng</u>	<u>Lot/Tract No</u>	<u>Property Owner & Mailing Address</u>
------------------	--------------------	---------------------	---

I hereby certify under penalty of perjury and the laws of the State of Montana that the information submitted herein, on all other submitted forms, documents, plans or any other information submitted as a part of this application, to be true, complete, and accurate to the best of my knowledge. Should any information or representation submitted in connection with this application be untrue, I understand that any approval based thereon may be rescinded, and other appropriate action taken. The signing of this application signifies approval for the Columbia Falls Planning staff to be present on the property for routine monitoring and inspection during the approval and development process.

(Applicant)

4-20-23
(Date)

Part 1 – Application Supplements

- a.) A fee simple property deed or other instrument showing title of ownership for property being subdivided. No subdivision application is allowed on a parcel or tract of land which is not recorded or recognized by the county assessor.**



Debbie Pierson, Flathead County MT by AW

202100007030

Page: 1 of 1

Print: 67.00

3/2/2021 10:17 AM

Item No.2.

Return To and Taxes:
Chaemous Herbert
715 N Hilltop Rd
Columbia Falls, MT 59912

Alliance Title & Escrow, LLC Order No.: 534254

Approved 03/02/2021 sc 0451456 ptn

WARRANTY DEED

For Value Received

Jesse T. Johnston

The grantor(s), do(es) hereby grant, bargain, sell and convey unto

Chaemous Herbert

Whose current address is 715 N Hilltop Rd, Columbia Falls, MT 59912

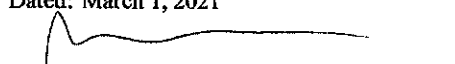
The grantee(s), the following described premises, in Flathead County, Montana, TO WIT:

Parcel A of Certificate of Survey No. 21669, located in the Northeast Quarter of the Northeast Quarter of Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County, Montana.

TO HAVE AND TO HOLD the said premises, with their appurtenances unto the said Grantee, heirs and assigns forever. And the said Grantor does hereby covenant to and with the said Grantee(s), that he/she/they is/are the owner(s) in fee simple of said premises; that they are free from all encumbrances Except: Current Year Taxes, conditions, covenants, restrictions, reservations, easements, rights and rights of way of record.

And that he/she/they will warrant and defend the same from all lawful claims whatsoever.

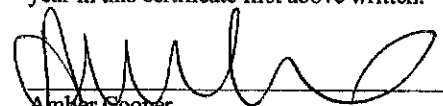
Dated: March 1, 2021

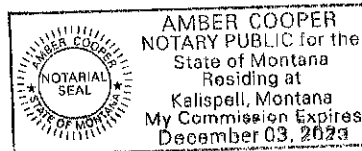

Jesse T. Johnston

State of Montana } ss
County of Flathead }

On this 2nd day of March, 2021, before me, Amber Cooper, a Notary Public in and for said state, personally appeared Jesse T. Johnston, known or identified to me to be the person(s) whose name(s) is/are subscribed to the within Instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.


Amber Cooper
Notary Public for the State of Montana
Residing at: Kalispell
Commission Expires: December 03, 2023



Return To:
~~Chameous Herbert~~

ORDER NO.: 552551

Herbert Enterprises
P.O. Box 357
Columbia Falls, MT 59912

QUITCLAIM DEED

FOR VALUE RECEIVED,
~~Chameous Herbert~~
Chameous Herbert

do(es) hereby convey, release, remise and forever quitclaim unto

Herbert Enterprises LLC

whose current address is: PO Box 357 Columbia Falls, MT 59912

the following described premises:

Parcel A of Certificate of Survey No. 21669, located in the Northeast Quarter of the Northeast Quarter of Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County, Montana.

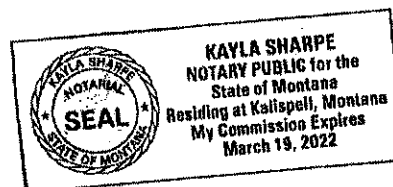
TO HAVE AND TO HOLD the said premises, unto the said grantees, heirs and assigns forever.

Dated: April 13, 2021

Chameous Herbert
Chameous
State of MT } ss
County of Flathead

On this 20 day of April, 2021, before me, KAYLA SHARPE, a Notary Public in and for said state, personally appeared Chameous Herbert, known or identified to me to be the person(s) whose name(s) is/are subscribed to the within Instrument. IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Kayla Sharpe
Notary Public for the State of MT
Residing at: Kalispell
Commission Expires: 3/19/2022



Property Record Card

Summary

Primary Information

Property Category: RP
Geocode: 07-4186-07-1-03-15-0000
Primary Owner:
 HERBERT ENTERPRISES LLC
 PO BOX 357
 COLUMBIA FALLS, MT 59912-0357
Subcategory: Residential Property
Assessment Code: 0000451456
PropertyAddress: 269 ROCKY LN
 COLUMBIA FALLS, MT 59912
COS Parcel: N/A

NOTE: See the Owner tab for all owner information

Certificate of Survey: 15461-A

Subdivision:

Legal Description:

S07, T30 N, R20 W, ACRES 8.11, CS 21669-A, TR 1 IN NE4NE4

Last Modified: 7/14/2022 4:23:18 AM

General Property Information

Neighborhood: 207.360.0
Living Units: 0
Zoning:
Linked Property:

Property Type: VAC_R - Vacant Land - Rural

Levy District: 07-131217-06 - GX

Ownership %: 100

No linked properties exist for this property

Exemptions:

No exemptions exist for this property

Condo Ownership:

General: 0

Limited: 0

Property Factors

Topography:

Fronting:

Utilities:

Parking Type:

Access:

Parking Quantity:

Location:

Parking Proximity:

Land Summary

<u>Land Type</u>	<u>Acres</u>	<u>Value</u>
Grazing	0.000	00.00
Fallow	0.000	00.00
Irrigated	0.000	00.00
Continuous Crop	0.000	00.00
Wild Hay	0.000	00.00
Farmsite	0.000	00.00
ROW	0.000	00.00
NonQual Land	0.000	00.00
Total Ag Land	0.000	00.00
Total Forest Land	0.000	00.00
Total Market Land	8.110	137,724.00

Deed Information:

Deed Date	Book	Page	Recorded Date	Document Number	Document Type
4/20/2021			5/3/2021	202100015412	Quit Claim Deed
3/1/2021			3/2/2021	202100007030	Warranty Deed
2/24/2020			2/27/2020	202000005216	Warranty Deed

7/19/2011		7/19/2011	201100014729	Quit Claim Deed
10/23/2009		10/23/2009	200900029989	Grant

Owners

Party #1

Default Information: HERBERT ENTERPRISES LLC
PO BOX 357

Ownership %: 100

Primary Owner: "Yes"

Interest Type: Conversion

Last Modified: 11/29/2021 2:55:25 PM

Other Names

Other Addresses

Name

Type

Appraisals**Appraisal History**

Tax Year	Land Value	Building Value	Total Value	Method
2022	137724	0	137724	COST
2021	15441	0	15441	COST
2020	11614	0	11614	COST

Market Land

Market Land Item #1

Method: Acre**Type:** Primary Site**Width:****Depth:****Square Feet:** 00**Acres:** 8.11

Valuation

Class Code: 2101**Value:** 137724**Dwellings****Existing Dwellings**

No dwellings exist for this parcel

Other Buildings/Improvements

Outbuilding/Yard Improvements

No other buildings or yard improvements exist for this parcel

Commercial**Existing Commercial Buildings**

No commercial buildings exist for this parcel

Ag/Forest Land

Ag/Forest Land

No ag/forest land exists for this parcel

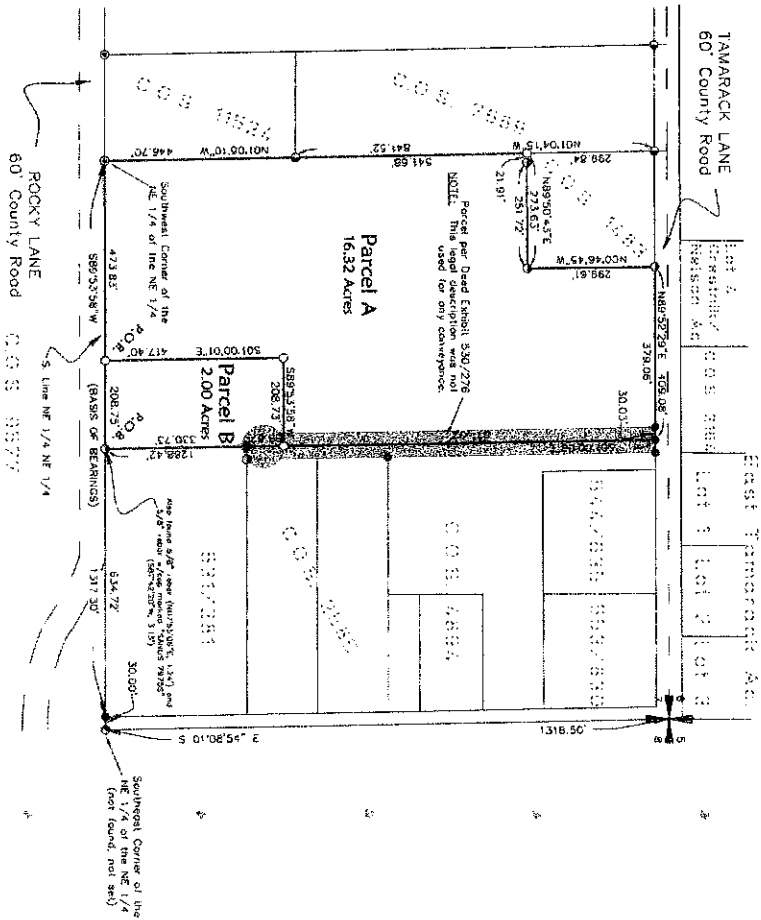
Part 1 – Application Supplements

- b.) A copy of each COS or Subdivision plat(s) pertaining to the subject parcel or recorded since July 1, 1973.**

OWNERS:	Philip E. Nizer
PURPOSE:	Normal Transfer
DATE:	July 26, 2002

Certificate of Survey
NE1/4 NE1/4 Section 7, T 30 N R 20 W, P.M., M.
Flathead County, Montana

TR 1-0451456



- LEGRAND
- Found Brass Cap For Section Corner
 - 1/16 Corner
 - Found 5/8" Ruler
 - Found 1/2" Ruler
 - Found 5/16" Ruler With Plastic Cap Marked "HCLP 47785"
 - Found 5/8" Ruler with Plastic Cap Marked "HAWKER 23445"
 - Set 5/16" x 3/4" Ruler with Plastic Cap Marked "HAWKER 23445"

22

Parcel A:
 The portion of the Northeast 1/4 of the Northeast 1/4, Section 7, Township 30 North,
 Range 30 West, P.4M., M., Fishback County, North Dakota, containing 1/4 of the
 Northeast 1/4 of the Northeast 1/4 of the Northeast 1/4 of the Northeast 1/4
 South 89°53'58" West 873.47 feet to the Point of Beginning;
 There continuing along the South line of the Northeast 1/4 of the Northeast 1/4
 South 89°53'58" West 473.83 feet;
 Thence North 01°00'41" West 446.70 feet;
 Thence North 01°00'41" West 341.68 feet;
 Thence North 00°46'45" West 299.61 feet to the South line of Tarmack Larpac;
 Thence along the South line of Tarmack Larpac North 89°52'20" East 400.00 feet;
 Thence South 01°00'04" West 871.02 feet;
 Thence South 88°53'58" West 208.73 feet;
 Thence South 01°00'01" East 417.40 feet to the Point of Beginning;
 containing 16.53 acres of land all as shown hereon.
 Subject to easements of record.

The portion of the Northeast ¼, Section 7 Township 30 North Range 2D West, P.M., Flathead County, Montana described as follows:
Commencing at the Southeast corner of the Northeast ¼ of the Northeast ¼ of the South line of the Northeast ¼ of the Northeast ¼
Thence along the South line of the Northeast ¼ of the Northeast ¼ of the Northeast ¼ of the South line of the Northeast ¼ of the Northeast ¼
Thence containing along the South line of the Northeast ¼ of the Northeast ¼ of the Northeast ¼ of the South line of the Northeast ¼ of the Northeast ¼
Thence North 69°00'00"E West 417.40 feet;
Thence South 81°00'00"E East 417.40 feet to the Point of Beginning,
containing 2.00 acres of land all as shown hereon.
Subject to easements of record.

Owner Certification
I hereby certify that the purpose of this division of land is to transfer Parcel B as shown on this Certificate of Survey to Rudianne M. Meier, my daughter. Furthermore, I certify that I am entitled to use this exemption and am in compliance with all conditions imposed by law and regulation on the use of this exemption. Therefore, this division of land is exempt from review as a subdivision pursuant to Section 76-2-207(1)(b), MCA.

PHILLIP E. KISER
 County of Alameda : ss.
 This instrument was acknowledged before me on June 16, 2003, by PHILLIP E. KISER.

Approved: 1/13 2005
 Examining Land Surveyor
 Registration No. 64285

CERTIFICATE OF SURVEYOR
 DAWN MARQUARDT
 Registration No. 73285

STATE OF MONTANA
County of Flathead
Filed for the 17th day of June, 2003 A.D. at 4:33 o'clock P.
Paul Peterson
County Clerk and Recorder
By: Shantelney

Instrument Record No. 900301916330
 CERTIFICATE OF SURVEY NO. 16410

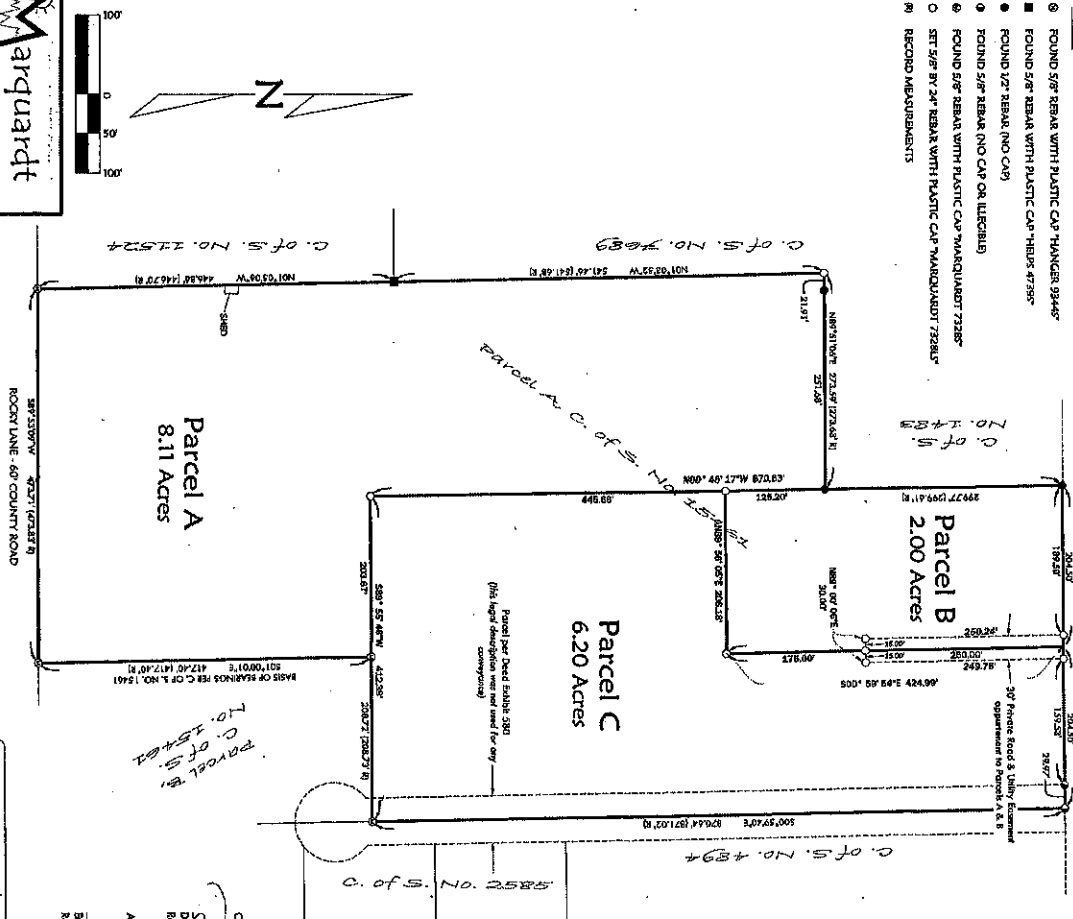
Date: April 1, 2002	Field Crew:
Project Name: Kiser Phil	Revision Date: n/a
File Name: working	Project Number: 02-008
	Drawn By: JLC

CERTIFICATE OF SURVEY
NE1/4 NE1/4, Section 7, T30N R20W, P.M., M.
Flathead County, Montana

TAMARACK LANE - 60' COUNTY ROAD

LEGEND

- ⑤ ROUND 5/8" REBAR WITH PLASTIC CAP "HANGERS" 99465"
 - FOUND 5/8" REBAR WITH PLASTIC CAP "HELPS" 47355"
 - FOUND 5/8" REBAR (NO CAP)
 - FOUND 5/8" REBAR (NO CAP OR USABLE)
 - FOUND 5/8" REBAR WITH PLASTIC CAP "MARKING" 77285"
 - SET 5/8" IV CAP REBAR WITH PLASTIC CAP "MARKING" 77285"
- RECORD MEASUREMENTS



 Marquardt
Surveying
201 3rd Ave West (406) 755-6285

NOTE
NO SEARCH HAS BEEN MADE FOR EASEMENTS AFFECTING THIS PROPERTY AND
THIS SURVEY DOES NOT PURPORT TO SHOW ALL APPURTENANT EASEMENTS.

7/19/2010

Field Cnwr: BP R3	Revels Dolie: n/a
Project Name: Johnston	Project Number: 20-042
Date: March 26, 2020	Drawn By: A

Lead Description, Parcel A: Parcel A is a Certificate of Survey No. 214641, lying in the Northeast ¼ of the Northeast ¼ of Section 7, Township 30 North, Range 20 West, P.M.A., Platted County, Montana, containing 1.2371 acres of land as shown hereon. Subject to and together with easements of record.	Lead Description, Parcel B: Parcel B is shown on Certificate of Survey No. 214642, lying in the Northeast ¼ of the Northeast ¼ of Section 7, Township 30 North, Range 20 West, P.M.A., Platted County, Montana, containing 8.171 acres of land as shown hereon. Subject to and together with easements of record.
Lead Description, Parcel C: Parcel C is shown on Certificate of Survey No. 214643, lying in the Northeast ¼ of the Northeast ¼ of Section 7, Township 30 North, Range 20 West, P.M.A., Platted County, Montana, containing a 30 foot wide private road and utility easement as shown on Certificate of Survey No. 214643. Subject to and together with easements of record.	Lead Description, Parcel D: Parcel D is shown on Certificate of Survey No. 214644, lying in the Northeast ¼ of the Northeast ¼ of Section 7, Township 30 North, Range 20 West, P.M.A., Platted County, Montana, containing a 30 foot wide private road and utility easement as shown on Certificate of Survey No. 214644. Subject to and together with easements of record.

I hereby certify that the purpose of this division of land is to transfer, Parcel 3 as shown on this Certificate of Survey to **MARIE JOHNSON**, my Mother and Parcel C as shown on this Certificate of Survey to **MARIEA JOHNSON**, my Mother. I am willing to use this exception and am in compliance with all conditions imposed by law and regulations on the use of this exception. Therefore, this division of land is exempt from review as a subdivision pursuant to Sections 76-5-307(1)(b), MCA.

JESSE T. JOHNSON

STATE OF MT
County of Flathead ss.
This Instrument was signed on _____
by JESSE T. JOHNSTON.

me on January 20th 21
 11/18/21
 11/18/21

CERTIFICATE OF SURVEYOR
DAVIN MARQUARDT
Registration No. 738018

PROF. LICENSED SURVEYOR
DAVIN MARQUARDT
No. 738018
MONTANA
State

Approved: Mr. B. 2022
[Signature]
 Issuing Land Service
 Registration No. 1472915

County Clerk's Office
 By: [Signature]
 Deputy

Washington Record No. 263100001263
 COS# 21865
 20210001263 Fees: \$34.50 By: DO
 CHD
 Date 4/11/2021
 Time 3:49 PM
 Deble Platoon, Flatted County Montana

\$37.50

COS# 21669

Instrument Record No. 26200001263

Date 1/11/2021 **Time** 3:49 PM

by MARQUARDT ENG/

Fees: \$34.50 **by:** DD

0000100001263

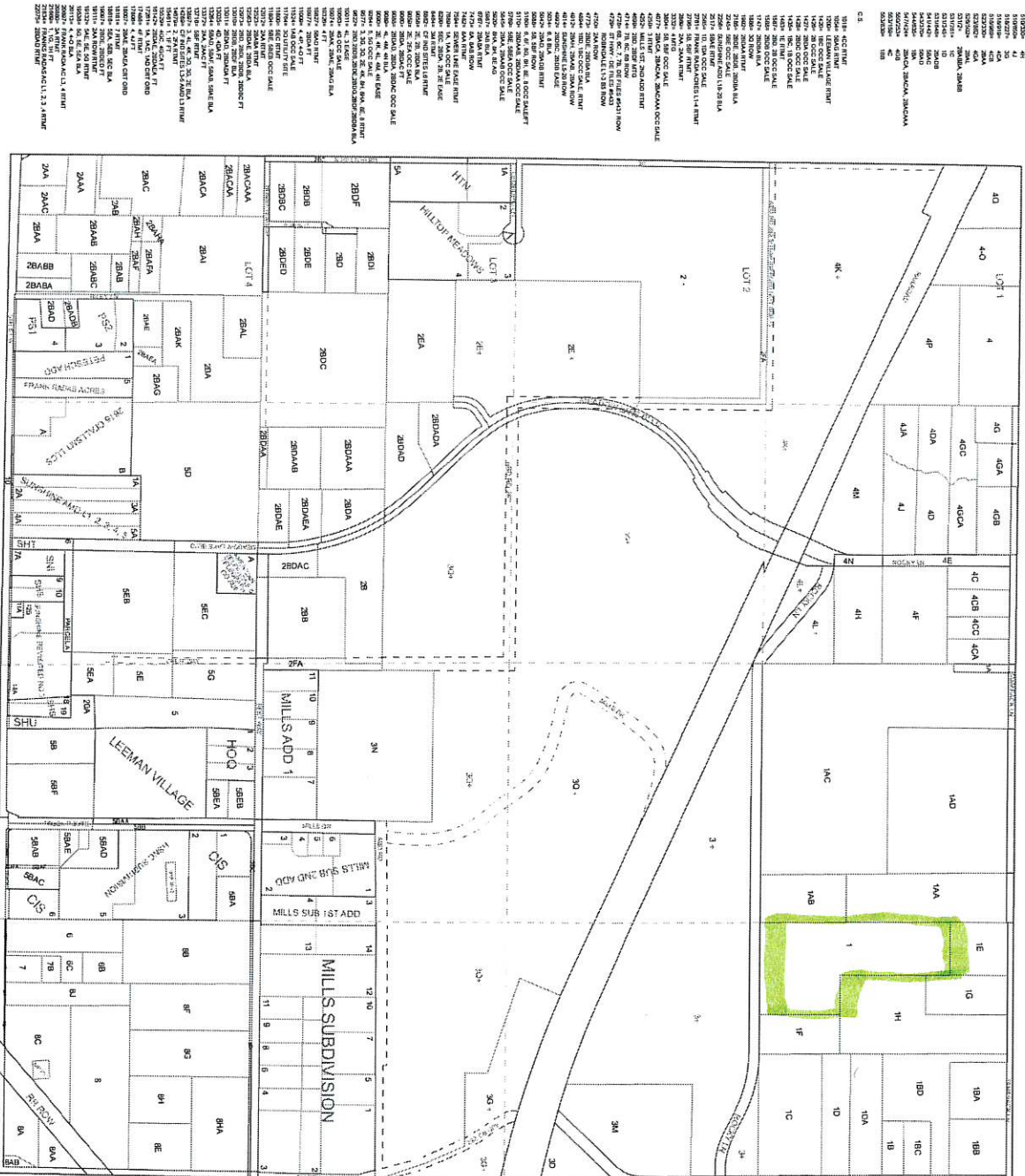
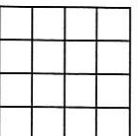
able Pierson, Flathead County Montana

Capacity

73020

SCALE 1" = 400'

THIS MAP IS PREPARED ONLY FOR THE ADMINISTRATIVE USE OF FLATHEAD COUNTY AND IS NOT NECESSARILY AN ACCURATE REPRESENTATION OF THE LOCATION OR EXISTENCE OF TRACTS OF RECORD, THEIR BOUNDARIES OR EASEMENTS AND ROADWAYS.



4/28/23

Part 1 – Application Supplements

- c.) Environmental Assessment which meets the requirements of Appendix C.

Part 1 – Application Supplements

- d.) If the subdivision is a first minor subdivision a summary of probable impacts, Appendix D (First Minor Subdivision Impact Criteria), including any mitigation of impacts;

Not Applicable

Part 1 – Application Supplements

- e.) A Fire Prevention Control and Fuels Reduction Plan for subs. In a Wildland Urban Interface.

BRECKENRIDGE SURVEYING AND MAPPING, INC.

Item No.2.

OFFICE LOCATION & MAILING: 2302 Highway 2 East #6, Kalispell, MT 59901
Phone: (406) 261-7758 Email: rbreck77@yahoo.com

SURVEYING • MAPPING • GEODETIC CONSULTING

Fire Prevention, Control and Fuels Reduction Plan

Rocky Top Cabin Subdivision

In Section 7, T. 30 N., R. 20 W.

269 Rocky Top Lane

3. Number of lots and average size (In acres).

2 lots. One existing. One created. 4 acres average.

4. Length of primary access road.

The primary access road is approximately 485 feet. It is currently a driveway that will have to be improved for the subdivision.

5. Name of road the primary access connects with.

Rocky Lane.

6. An analysis of the wildfire hazards on the site and in the vicinity of the property, as influenced by existing vegetation, fuel types, topography, fire history, land uses and other factors.

From Photo 1, the two lots are heavily wooded and will need clearing around the existing structures as part of a fuel reduction program. The topography is a low, flat land with residential development around the perimeter of the property. There is a drainage to the west that bisects the project that shows intermittent flows based on the Stream Stats model. The existing vegetation is fir, spruce and birch. There are no grass fuel accumulating as this and the surrounding parcels are heavily timbered. There will be fuel reduction measures once the roads are widened and improved and two more houses are built and the land utilized to its' fullest capacity. Selective areas of fire reduction necessary for this property but the intermittent water source should be protected with setbacks. According to the National Wetlands Inventory, there are no wetlands on this property.

7. A map showing the areas that are to be cleared and/or thinned of wildland vegetation to reduce fuel loading, provide for safe ingress and egress and/or provide fire breaks, open, maintained parkland and/or areas that may provide on or more safe zones.

This is a subdivision where there is not any parkland dedication. The proposal is to reduce the trees within 20' of the existing houses and clear the area around the proposed cabins within 20' of the foundation. Also, to clear the right of way of trees, 30' each side of the centerline and 16' of the centerline of the driveways. This will create a fire break to the adjoining properties as well as reduce fuels on this project. The house will also need fire resistant roofing and metal roofing would be preferable. The fuels are recent growth so there is no laddering effect from tight fir or spruce growth. In 50 years, this could change and so maintaining the area is important as well.

BRECKENRIDGE SURVEYING AND MAPPING, INC.

Item No.2.

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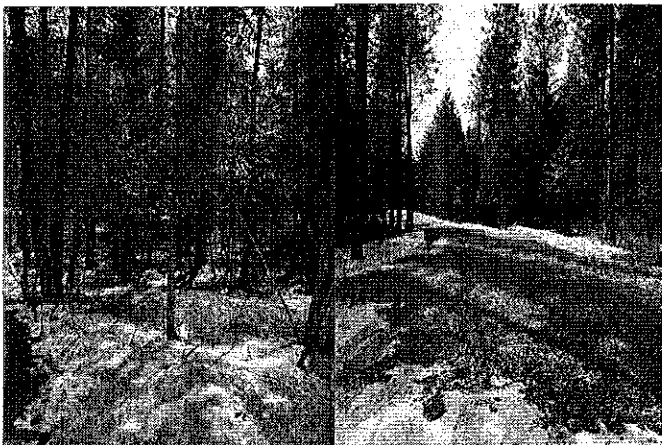
SURVEYING • MAPPING • GEODETIC CONSULTING



Cabin on Lot 2



Lot 1 Cabin



Vegetation

Main driveway from cul-de-sac

8. An identification of roads, driveways, secondary access routes and drainage crossings that may be used for fire suppression activities along with proposed specifications (width, grade, construction standards, etc.)

The property is bounded by a county road on the south boundary and by residential development on the entirety of the north, east and west adjoining lands. The photo that shows the driveway from the northerly lot, will make a good firebreak once it is brought up to city standards and the fuel is removed within the right of way. There is no secondary access. StreamStats shows an intermittent stream just to the right of the driveway. I saw no evidence although there was still snow on the ground when I did this analysis.

9. A discussion of the existing and proposed resources available to fight fire within the subdivision including water supply, equipment, facilities, and personnel. This discussion must evaluate the potential impacts of the proposed subdivision on the resources of the local fire protection authority, and discuss measures proposed by the subdivider to mitigate potential impacts.

OFFICE LOCATION & MAILING: 2302 Highway 2 East #6, Kalispell, MT 59901
Phone: (406) 261-7758 Email: rbreck77@yahoo.com

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*A **wildland fire** is any non-structure fire that occurs in areas of vegetation or natural fuels and can be either prescribed fire or wildfire. Wildland fire occurs when vegetation, or "fuel," such as grass, leaf litter, trees, or shrubs, is exposed to an ignition source and the conditions for combustion are met, resulting in fire growth and spread through adjacent combustible material. This project is in the WUI boundary but it does not fit the wildland fire hazards definition.*

The Smith Valley Volunteer Fire Department fire station is within a mile of this project. The density of the subdivision is one dwelling per 30 acres with only one additional dwelling. The resources of the current station is more than capable of handling any call in this area as there is plenty of accessible water including Ashley Creek at the bridge crosses on Smith Lake Road to recharge fire suppression tankers if needed..

An evaluation of the potential impacts must have a risk assessment before those impacts can be identified and mitigated. Generally, wildfire risk is assessed through combining the following:

- *Ignition probability*
- *Fire behavior potential*
- *Vulnerability of the values at risk to direct fire impingement (convective and radiant heat from the fire front) and indirect ignition (airborne embers transported ahead of the fire perimeter)*

All of these risk assessment factors are minimal in this area of the Smith Lake/Ashley Creek drainage. There are no trees to transport heat from the fire front; grasses create minimal airborne embers and there are no overhead high voltage electrical lines to consider. A fire event could occur during haying operations because there is low humidity and very dry conditions needed to put up good hay. Lot 2 will have approximately 18 acres of hay ground and Lot 1 will be about the same. Long haying hours will most likely not be a part of this agriculture operations.

10. Information sources used in the preparation of the plan and the preparer's qualifications

The Montana Department of Natural Resources has a WUI risk assessment portal. The url for this project is located at:

<https://apps.intterra.com/sa/?group=MtState&#/WildfireRisk/AddLayer/48.1448/-114.4306/16>

All of these parameters have been entered into the portal. The results are attached.

Item No.2.

SURVEYING • MAPPING • GEODETIC CONSULTING



BRECKENRIDGE SURVEYING AND MAPPING, INC.

Item No.2.

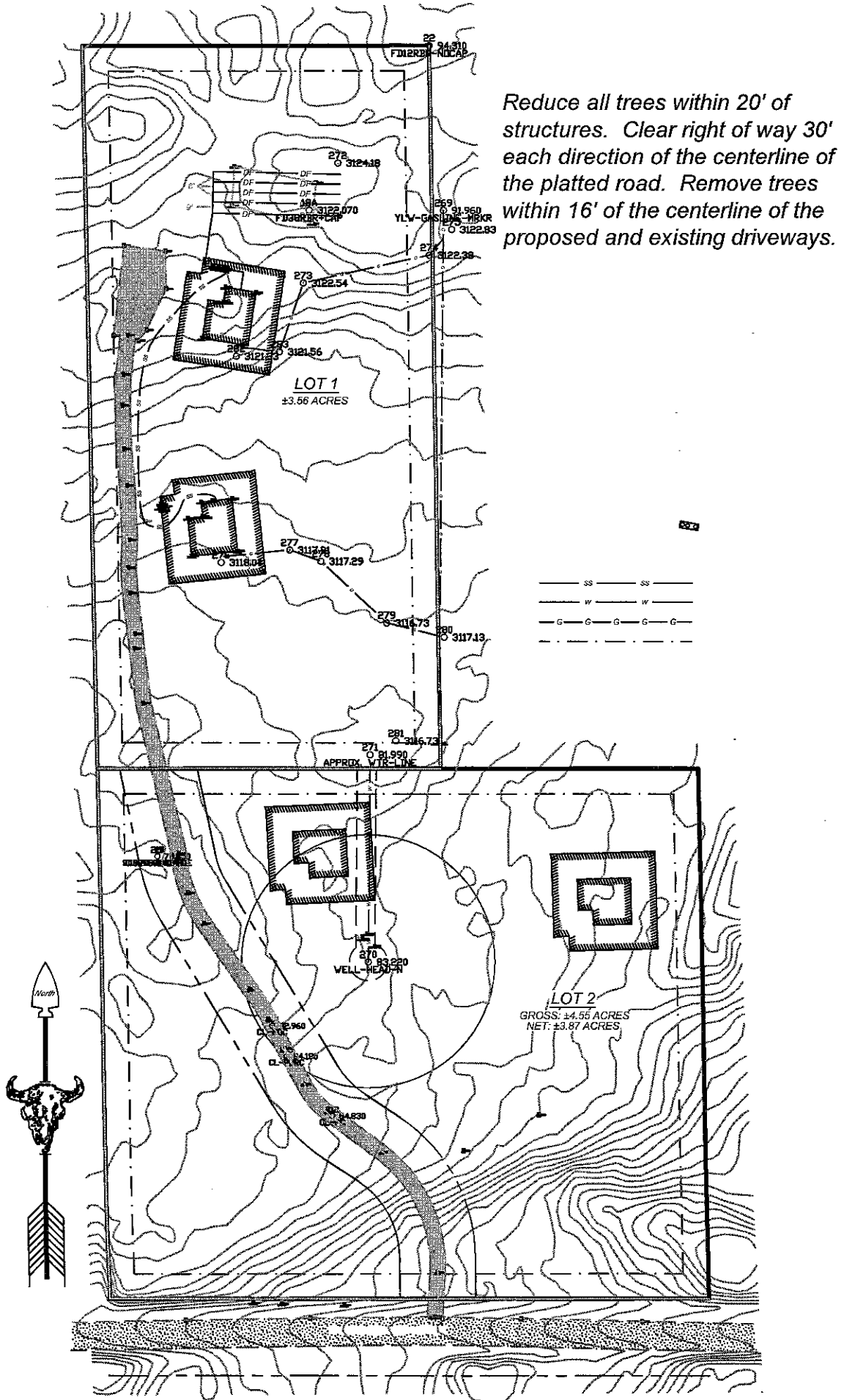
OFFICE LOCATION & MAILING: 2302 Highway 2 East #6, Kalispell, MT 59901
Phone: (406) 261-7758 Email: rbreck77@yahoo.com

SURVEYING • MAPPING • GEODETIC CONSULTING

Evaluation and plan was prepared by Rick Breckenridge, PLS and with the onsite assistance by the Department of Natural Resources fire reduction specialist.

EXHIBIT

Fuel Reduction Plan



BY: BRECKENRIDGE SURVEYING & MAPPING, PLLC
2302 US HIGHWAY 2 EAST, STE 6
KALISPELL, MT 59901
(406) 752-3539

Part 1 – Application Supplements

f.) A Flood Hazard Evaluation

National Flood Hazard Layer FIRMette



122°W 48°23'N

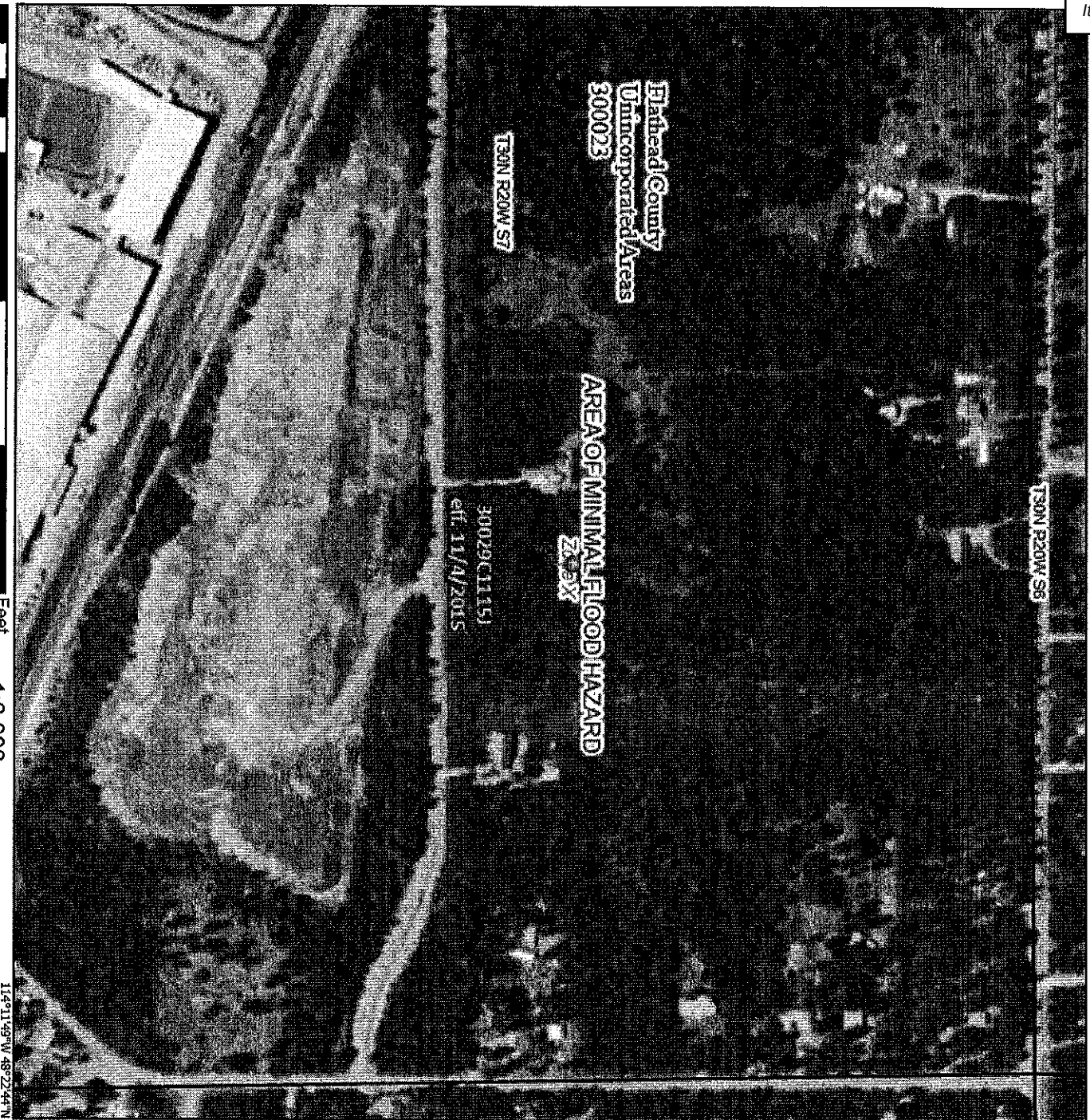
T30N R20W S8

Blathed County
Unincorporated Areas
300023

T30N R20W S7

AREA OF MINIMAL FLOOD HAZARD
Zone X

300029C11115
etl. 11/4/2015



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Base map: USGS National Map: Orthoimagery: Data refreshed October, 2020

114°11'49"W 48°22'44"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone X With BFE or Depth Zone AE, AO, AH, VE, AR Regulatory Floodway
----------------------------	--

OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee, See Notes, Zone X Area with Flood Risk due to Levee Zone B
-----------------------------	---

OTHER AREAS GENERAL STRUCTURES	NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs Area of Undetermined Flood Hazard Zone B Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall
--------------------------------	--

OTHER FEATURES	20.2 17.5 8 17.5 20.2 Limit of Study Jurisdiction Boundary Coastal Transsect Baseline Profile Baseline Hydrographic Feature
----------------	--

MAP PANELS	☐ Digital Data Available ☐ No Digital Data Available ☒ Unmapped
------------	---

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/4/2023 at 2:10 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Part 1 – Application Supplements

g.) A conceptual storm water drainage plan

STORM DRAIN REPORT PER DEQ 8 **JOHNSTON FAMILY TRANSFER**

General information:

A. Johnston Family Transfer

Owner: Jesse Johnston
7210 Hwy 2 E
Columbia Falls MT 59912

B. NA

C (1-4). The subject building areas are 2-3% slope to the south south west, with steeper slopes up to 8% toward the south half of the property. The geomorphology of the area is typical glacial till with linear moraines forming gentle bench topography. The property is a thinned conifer forest with typical native shrubs and grasses. The general stormwater flow will be by overland sheet flow through the native vegetation. The property surrounding this is primarily large to moderate parcel size residential development.

A. Initial Stormwater Facility:

Parcel A: rooftop/drive = 479 (ISFV), 2YR = 755 (based on pre development)

Parcel B & C: rooftop/drive = 271 (ISFV), 2YR = 393

E. The overland flow will be directed by driveway ditches that will convey stormwater to retention swale(s) to retain the 2YR event. The driveway ditches are noted to terminate driveway ends before County roads directed to the retention swales. Since the development is up gradient of the ditches and will convey stormwater to the retention swales the driveway, building sites or drainfields will not be inundated during the 100YR storm event. The 10 YR is shown to not overtop the driveways.

F. This property is a large near level bench where existing slopes go south south west through the property. There are no pass through stormwater flows as any higher ground is part of Meadowlake Golf course and is bordered by Tamarack Lane of which is a County road (with road side ditches to retain stormwater on the north side of the road).

G. Enclosed

STORM WATER DESIGN

DEQ 8

PROJECT NAME: Johnston ET

TRACT/LOT/PARCEL# A, B, and C

2YR 24HR**PARCEL A:****VOLUME: ROOFTOP/DRIVE**755 = cu ft of water generated by buildings**AREA: ROOFTOP/DRIVE**64ft long X 12ft wide X 2ft deep = Retention swale size, as shown.SPLIT IN 2 SWALES EITHER SIDE OF DRIVE: 2-32ft long X 12ft wide X 2ft deep = Retention swale size, as shown**AREA: DRIVE**

Full length of 3ft wide X 1.0 ft deep with 3:1 slopes ditch along both sides of driveway/parking area as shown.

PARCELS B AND C:**VOLUME: ROOFTOP/DRIVE**393 = cu ft of water generated by buildings**AREA: ROOFTOP/DRIVE**33ft long X 12ft wide X 2ft deep = Retention swale size, as shown**AREA: DRIVE**

Full length of 3ft wide X 1.0 ft deep with 3:1 slopes ditch along both sides of driveway/parking area as shown.

SEE CONSTRUCTION DETAIL

Appendix G: Standard Storm Drainage Plan

Subdivision Name: Johnston
 SDC: 1
 County: Flathead
 Location:
 Lot/Area No. A:

Rational Method Co-Efficients (C)	
0.9	Paved/hard surfaces
0.8	Gravel surfaces
0.5	Lawn/landscaping
0.2	Unimproved areas

Intensity Values	
2-year, T _c	Inches/hour
2-year, 24-hour	1.45
10-year, T _c	Inches/hour
10-year, 24-hour	2.1
100-year, T _c	Inches/hour
100-year, 24-hour	3.14

10-year = 479.4 cfs
 24-hr = 755.4 cfs

Total Area/Lot Size: 352836 ft²
 Initial Stormwater Facility Volume (0.5" x Impervious Area) = 479.17 ft³

Pre-Development Characteristics		2-year, T _c (flow rate)	2-year, 24-hour (volume)	10-year, T _c (flow rate)	10-year, 24-hour (volume)	100-year, T _c (flow rate)	100-year, 24-hour (volume)
Paved/House Area	0 acres	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³
Gravel Area	0 acres	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³
Lawn/Landscaping	0 acres	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³
Unimproved Area	8.1 acres	Q = 0.000 ft ³ /sec	V = 352836 ft ³	Q = 0.000 ft ³ /sec	V = 352836 ft ³	Q = 0.000 ft ³ /sec	V = 352836 ft ³
Total	8.1 acres	Q _{total} = 0.000 ft ³ /sec	V _{total} = 352836 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 352836 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 352836 ft ³

Post-Development Characteristics		2-year, T _c (flow rate)	2-year, 24-hour (volume)	10-year, T _c (flow rate)	10-year, 24-hour (volume)	100-year, T _c (flow rate)	100-year, 24-hour (volume)
Paved/House Area	0.080348944 acres	Q = 0.000 ft ³ /sec	V = 380.625 ft ³	Q = 0.000 ft ³ /sec	V = 551.250 ft ³	Q = 0.000 ft ³ /sec	V = 824.250 ft ³
Gravel Area	0.183654729 acres	Q = 0.000 ft ³ /sec	V = 778.393 ft ³	Q = 0.000 ft ³ /sec	V = 175.000 ft ³	Q = 0.000 ft ³ /sec	V = 261.667 ft ³
Lawn/Landscaping	0.229508411 acres	Q = 0.000 ft ³ /sec	V = 120.833 ft ³	Q = 0.000 ft ³ /sec	V = 175.000 ft ³	Q = 0.000 ft ³ /sec	V = 261.667 ft ³
Unimproved Area	7.606477916 acres	Q = 0.000 ft ³ /sec	V = 8007.287 ft ³	Q = 0.000 ft ³ /sec	V = 8007.287 ft ³	Q = 0.000 ft ³ /sec	V = 8007.287 ft ³
Total	8.1 acres	Q _{total} = 0.000 ft ³ /sec	V _{total} = 9287.078 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 8007.287 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 8007.287 ft ³

Required Minimum Facility Volume: 755.21 ft³

= Input Field

24-hr = 755 cfs / 12 cfs/ft = 63 ft x 12 ft x 2 ft

2 - sinks split on drive: 32 ft x 12 ft x 2 ft (see layout)

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Flow Data for DEQ 8

Parcel A

1. Total Drainage Area Size

Drainage Area Size (sq. ft.)	352,836.00
------------------------------	------------

2. Pre-development Drainage Area Characteristics:

Surface Type	Square Footage	Acres
Paved Areas	0.00	0.00
Structures		0.00
Graveled Area		0.00
Landscape		0.00
Unimproved	352,836.00	8.10
Total lot size	352,836.00	8.10

3. Post-development Drainage Area Characteristics:

Surface Type	Square Footage	Acres
Paved Areas	0.00	0.00
Structures	3,500.00	0.08
Graveled Area	8,000.00	0.18
Landscape	10,000.00	0.23
Unimproved	331,336.00	7.61
Total lot size	352,836.00	8.10

4. Required Initial Stormwater Facility Volume (Retained on Site)

	Cubic Feet	Acre-Feet
Retained First 0.5 Inch runoff volume	479.17	0.01

5. Weighted Coefficient

Surface Type	Pre-Development	Post-Development
Paved Areas	0.00	0.00
Structures	0.00	0.07
Graveled Area	0.00	0.15
Landscape	0.00	0.02
Unimproved	1.62	1.52
Total Weighted Coef.	1.62	1.76
Cw	0.20	0.218

6. Flow Calculation (cfs)

Frequency of Storm Event	Pre-Development	Post-Development	Change (Post-Pre)
2-year	0.69	0.71	0.01
10-year	1.23	1.24	
100-year	1.99	2.02	

7. Volume Calculation (cf)

Frequency of Storm Event	Pre-Development	Post-Development	Change (Post-Pre)
2-year	2,500.23	2,540.29	40.06
10-year	4,419.87	4,480.30	60.43
100-year	7,166.26	7,255.84	89.58

8. Final Required Volume

DEQ 8 Final Minimum Pond Size (cf)	479.17
Simplified Storm Water Plan Minimum Pond Size (cf)	1,743.29

A

attorney	487.36
longitudinal	.1102
distance to closest station (mi)	0.71
closest meteorological station	COLUMBIA FALLS 4 WIND
1-hour, 24-hour precipitation (in)	1.44

73 Foxglove Bay, 19th Avenue Park

21; Harris at Long Hightstown) and listed their party (24 before starting county)

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Total Time of Concentration (min)	65.46
Rainfall Intensity (in/hr), 3 Year	0.61
Rainfall Intensity (in/hr), 10 Year	0.71
Rainfall Intensity (in/hr), 100 Year	1.14



Appendix G: Standard Storm Drainage Plan

Subdivision Name	Jointstown
EQ#	
County	Flathead
Location	
Lot/Area No.	B

Intensity Values	
2-year, T _e	Inches/hour
2-year, 24-hour	Inches
10-year, T _e	Inches/hour
10-year, 24-hour	Inches
100-year, T _e	Inches/hour
100-year, 24-hour	Inches

Total Area/Lot Size = 2 acres = 87120 ft²

Initial Stormwater Facility Volume (0.5' x Impervious Area) = 270.83 ft³

Rational Method Co-efficients (C)	
0.9	Paved/hard surfaces
0.8	Gravel surfaces
0.1	Lawn/landscaping
0.2	Unimproved areas

Q=CFA

13.74 = 271.54
24.2 = 393.4

Pre-Development Characteristics		2-year, T _e (flow rate)	2-year, 24-hour (volume)	10-year, T _e (flow rate)	10-year, 24-hour (volume)	100-year, T _e (flow rate)	100-year, 24-hour (volume)
Paved/House Area	0 acres	Q= 0.000 ft ³ /sec	V= 0.000 ft ³	Q= 0.000 ft ³ /sec	V= 0.000 ft ³	Q= 0.000 ft ³ /sec	V= 0.000 ft ³
Gravel Area	0 acres	Q= 0.000 ft ³ /sec	V= 0.000 ft ³	Q= 0.000 ft ³ /sec	V= 0.000 ft ³	Q= 0.000 ft ³ /sec	V= 0.000 ft ³
Lawn/Landscaping	0 acres	Q= 0.000 ft ³ /sec	V= 0.000 ft ³	Q= 0.000 ft ³ /sec	V= 0.000 ft ³	Q= 0.000 ft ³ /sec	V= 0.000 ft ³
Unimproved Area	2 acres	Q= 0.000 ft ³ /sec	V= 2105.400 ft ³	Q= 0.000 ft ³ /sec	V= 8888.888 ft ³	Q= 0.000 ft ³ /sec	V= 4559.280 ft ³
Total	2 acres	Q _{total} = 0.000 ft ³ /sec	V _{total} = 2105.400 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 8888.888 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 4559.280 ft ³

Post-Development Characteristics		2-year, T _e (flow rate)	2-year, 24-hour (volume)	10-year, T _e (flow rate)	10-year, 24-hour (volume)	100-year, T _e (flow rate)	100-year, 24-hour (volume)
Paved/House Area	0.060348944 acres	Q= 0.000 ft ³ /sec	V= 380.625 ft ³	Q= 0.000 ft ³ /sec	V= 551.250 ft ³	Q= 0.000 ft ³ /sec	V= 824.250 ft ³
Gravel Area	0.068870523 acres	Q= 0.000 ft ³ /sec	V= 290.000 ft ³	Q= 0.000 ft ³ /sec	V= 420.000 ft ³	Q= 0.000 ft ³ /sec	V= 628.000 ft ³
Lawn/Landscaping	0.229584411 acres	Q= 0.000 ft ³ /sec	V= 120.833 ft ³	Q= 0.000 ft ³ /sec	V= 175.000 ft ³	Q= 0.000 ft ³ /sec	V= 261.667 ft ³
Unimproved Area	1.621212121 acres	Q= 0.000 ft ³ /sec	V= 2706.660 ft ³	Q= 0.000 ft ³ /sec	V= 8888.888 ft ³	Q= 0.000 ft ³ /sec	V= 4559.280 ft ³
Total	2 acres	Q _{total} = 0.000 ft ³ /sec	V _{total} = 2498.108 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 8888.888 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 5009.697 ft ³

Runoff Flow/Volume Change	ΔQ= 0.000 ft ³ /sec	ΔV= 392.708 ft ³	ΔQ= 0.000 ft ³ /sec	ΔV= 568.750 ft ³	ΔQ= 0.000 ft ³ /sec	ΔV= 856.437 ft ³
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Required Minimum Facility Volume: 392.71 ft³

= input field

$$24.2 = 393.4 / 12.56 / 46 = 33.66 \times 12.56 \times 2.46 = 1016.66$$

Flow Data for DEQ 8

Parcel 8

1. Total Drainage Area Size

Drainage Area Size (sq. ft.)	87,120.00
------------------------------	-----------

2. Pre-development Drainage Area Characteristics:

Surface Type	Square Footage	Acres
Paved Areas	0.00	0.00
Structures		0.00
Graveled Area		0.00
Landscape		0.00
Unimproved	87,120.00	2.00
Total lot size	87,120.00	2.00

3. Post-development Drainage Area Characteristics:

Surface Type	Square Footage	Acres
Paved Areas	0.00	0.00
Structures	3,500.00	0.08
Graveled Area	3,000.00	0.07
Landscape	10,000.00	0.23
Unimproved	70,620.00	1.62
Total lot size	87,120.00	2.00

4. Required Initial Stormwater Facility Volume (Retained on Site)

	Cubic Feet	Acre-Feet
Retained First 0.5 inch runoff volume	270.83	0.01

5. Weighted Coefficient

Surface Type	Pre-Development	Post-Development
Paved Areas	0.00	0.00
Structures	0.00	0.07
Graveled Area	0.00	0.06
Landscape	0.00	0.02
Unimproved	0.40	0.32
Total Weighted Coef.	0.40	0.47
CW	0.20	0.237

6. Flow Calculation (cfs)

Frequency of Storm Event	Pre-Development	Post-Development	Change (Post-Pre)
2-year	0.17	0.19	0.02
10-year	0.29	0.33	
100-year	0.47	0.54	

7. Volume Calculation (cf)

Frequency of Storm Event	Pre-Development	Post-Development	Change (Post-Pre)
2-year	596.82	676.84	80.02
10-year	1,052.29	1,190.93	138.64
100-year	1,703.92	1,926.42	222.50

8. Final Required Volume

DEQ 8 Final Minimum Pond Size (cf)	270.83
Simplified Storm Water Plan Minimum Pond Size (cf)	845.31

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2.5.5. *Stigmaphyllon* *Stigmaphyllon* *Stigmaphyllon*

Fig. 6. Hydrophobic layer in epoxy- β -ketone.

1. *Introduction*

05 Q	Total Time of Concentration (min)
06 Q	Required Intensity for 1 Year
07 Q	Required Intensity for 10 Year
08 Q	Required Intensity for 100 Year
09 Q	
10 Q	

Rate of Polymerization (R_p) $\times 10^4$

Concentration of Initiator (C_i) $\times 10^2$

— Benzene — Benzene + 10% Styrene

Latitude:	28.33
Longitude:	-174.3
Distance to nearest station (km)	0.75
Coast meteorological station	HAAGA STATION
2-hour, 24-hour precipitation (mm)	2.44

Latitude:	28.33
Longitude:	-174.3
Distance to nearest station (km)	0.75
Coast meteorological station	HAAGA STATION
2-hour, 24-hour precipitation (mm)	2.44

[illegible][illegible]

Flow Type	Spillway Description	Flow Length (ft)	Chord Slope (H/V)	Spillway Diameter (ft)	Depth of Flow in Channel (ft)	Channel - Top Width (ft)	Channel - Bottom Width (ft)	Cross Sectional Flow Area (ft ²)	Worst Penetration (ft)	R	Average Velocity (ft/s)	T (s)	T (min)
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.									

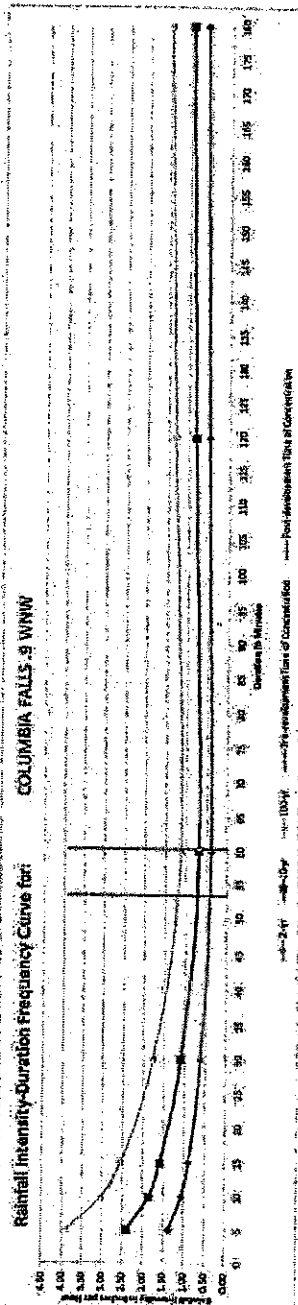
Flow Type	Spillway Description	Flow Length (ft)	Chord Slope (H/V)	Spillway Diameter (ft)	Depth of Flow in Channel (ft)	Channel - Top Width (ft)	Channel - Bottom Width (ft)	Cross Sectional Flow Area (ft ²)	Worst Penetration (ft)	R	Average Velocity (ft/s)	T (min)	T (sec)
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Gate Spillway	400	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Gate Spillway	Gate Spillway	300	0.5	0.5									

total Time of concentration (min)	
initial intensity (in/hr)	0.43
initial intensity (in/hr), 30 Year	0.73
initial intensity (in/hr), 100 Year	1.10

total Time of concentration (min)	
initial intensity (in/hr)	0.43
initial intensity (in/hr), 30 Year	0.73
initial intensity (in/hr), 100 Year	1.10

Initial Time of Concentration (min)	00:37
Initial Intensity (a.u.)	0.40
Initial Intensity (a.u.)	0.70
Initial Intensity (a.u.)	1.28

Initial Time of Concentration (min)	00:37
Initial Intensity (a.u.)	0.40
Initial Intensity (a.u.)	0.70
Initial Intensity (a.u.)	1.28



Appendix G: Standard Storm Drainage Plan

Subdivision Name	Johnston
EQ#	
County	Flathead
Location	Columbia Falls
Lot/Area No.	C

Rational Method Co-efficients (C)	
0.9	Paved/hard surfaces
0.8	Gravel surfaces
0.1	Lawn/landscaping
0.2	Unimproved areas

Intensity Values	
	Inches/hour
2-year, T _r	1.45
2-year, 24-hour	1.45
10-year, T _r	2.3
10-year, 24-hour	2.3
100-year, T _r	3.14
100-year, 24-hour	3.14

15FV = 2710P
24K = 3930A

Total Area/Lot Size = 270072 ft²

Initial Stormwater Facility Volume (0.5" x (Impervious Area)) = 270033 ft³

Pre-Development Characteristics		2-year, T _r (flow rate)	2-year, 24-hour (volume)	10-year, T _r (flow rate)	10-year, 24-hour (volume)	100-year, T _r (flow rate)	100-year, 24-hour (volume)
Paved/House Area	0 acres	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³
Gravel Area	0 acres	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³
Lawn/Landscaping	0 acres	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³	Q = 0.000 ft ³ /sec	V = 0.000 ft ³
Unimproved Area	6.2 acres	Q = 0.000 ft ³ /sec	V = 6526.740 ft ³	Q = 0.000 ft ³ /sec	V = 6526.740 ft ³	Q = 0.000 ft ³ /sec	V = 6526.740 ft ³
Total	6.2 acres	Q _{total} = 0.000 ft ³ /sec	V _{total} = 6526.740 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 6526.740 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 6526.740 ft ³

Post-Development Characteristics		2-year, T _r (flow rate)	2-year, 24-hour (volume)	10-year, T _r (flow rate)	10-year, 24-hour (volume)	100-year, T _r (flow rate)	100-year, 24-hour (volume)
Paved/House Area	0.080345944 acres	Q = 0.000 ft ³ /sec	V = 380.625 ft ³	Q = 0.000 ft ³ /sec	V = 551.250 ft ³	Q = 0.000 ft ³ /sec	V = 824.250 ft ³
Gravel Area	0.068870523 acres	Q = 0.000 ft ³ /sec	V = 290.000 ft ³	Q = 0.000 ft ³ /sec	V = 420.000 ft ³	Q = 0.000 ft ³ /sec	V = 528.000 ft ³
Lawn/Landscaping	0.228568411 acres	Q = 0.000 ft ³ /sec	V = 120.833 ft ³	Q = 0.000 ft ³ /sec	V = 375.000 ft ³	Q = 0.000 ft ³ /sec	V = 263.857 ft ³
Unimproved Area	5.821237171 acres	Q = 0.000 ft ³ /sec	V = 6127.990 ft ³	Q = 0.000 ft ³ /sec	V = 6127.990 ft ³	Q = 0.000 ft ³ /sec	V = 6127.990 ft ³
Total	6.2 acres	Q _{total} = 0.000 ft ³ /sec	V _{total} = 6919.448 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 6919.448 ft ³	Q _{total} = 0.000 ft ³ /sec	V _{total} = 6919.448 ft ³

Runoff Flow/Volume Change	ΔQ = 0.000 ft ³ /sec	ΔV = 392.708 ft ³
---------------------------	---------------------------------	------------------------------

Required Minimum Facility Volume: 392.71 ft³

= Input field

24K 3930A 1244 ft = 334 ft x 1244 ft (verified)

Flow Data for DEQ 8

Parcel C

1. Total Drainage Area Size

Drainage Area Size (sq. ft.)	270,072.00
------------------------------	------------

2. Pre-development Drainage Area Characteristics:

Surface Type	Square Footage	Acres
Paved Areas	0.00	0.00
Structures		0.00
Graveled Area		0.00
Landscape		0.00
Unimproved	270,072.00	6.20
Total lot size	270,072.00	6.20

3. Post-development Drainage Area Characteristics:

Surface Type	Square Footage	Acres
Paved Areas	0.00	0.00
Structures	3,500.00	0.08
Graveled Area	3,000.00	0.07
Landscape	10,000.00	0.23
Unimproved	253,572.00	5.82
Total lot size	270,072.00	6.20

4. Required Initial Stormwater Facility Volume (Retained on Site)

	Cubic Feet	Acres-Feet
Retained First 0.5 inch runoff volume	270.83	0.01

5. Weighted Coefficient

Surface Type	Pre-Development	Post-Development
Paved Areas	0.00	0.00
Structures	0.00	0.07
Graveled Area	0.00	0.06
Landscape	0.00	0.02
Unimproved	1.24	1.16
Total Weighted Coef.	1.24	1.31
Cw	6.20	0.212

6. Flow Calculation (cfs)

Frequency of Storm Event	Pre-Development	Post-Development	Change (Post-Pre)
2-year	0.51	0.52	0.01
10-year	0.91	0.92	
100-year	1.47	1.48	

7. Volume Calculation (cf)

Frequency of Storm Event	Pre-Development	Post-Development	Change (Post-Pre)
2-year	1,850.14	1,874.77	24.63
10-year	3,262.10	3,298.72	36.62
100-year	5,282.17	5,335.94	53.78

8. Final Required Volume

DEQ 8 Final Minimum Pond Size (cf)	270.83
Simplified Storm Water Plan Minimum Pond Size (cf)	845.91

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 & SUBDIVISION

3

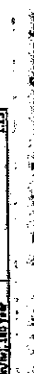
7. *Ca. wrightii* (Lam.)

2. The above is a summary of the information received from the various sources mentioned above. It is not intended to be a complete and exhaustive statement of the facts, but rather a summary of the information received from the various sources mentioned above.

Y. P. K. de Vries, H. J. de Vries, H. J. de Vries

THESE BOOKS BELONG TO THE UNIVERSITY OF MICHIGAN LIBRARY

2011-12-15 15:00:00



Latitude:	48.385
Longitude:	-120.2
Distance to closest station (km)	0.73
Closest meteorological station	CDLUMPIA-44.15 S 100 W
a hour, 24-hour precipitation (in)	1.64

Dr. Fouad-Elavagimant Abdelnour Pasha

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Procedural development path	
Total Time at Concentration (min)	00:37
Rainfall intensity (in/hr), 2 Year	0.40
Rainfall intensity (in/hr), 10 Year	0.70
Rainfall intensity (in/hr), 100 Year	1.13



DITCH CAPACITY FOR 10YR STORM EVENT-Johnston FTParcel A-

IDF GENERATED 66 MIN. DURATION = .71 IN/HR (10YR)

$$Q = .21 * .71 \text{ IN/HR} * 1 \text{ HR/3600SEC} * 8.1 * 43560 \text{ SF/1 AC} * 1 \text{ FT/12 INCHES} = 1.22 \text{ CFS}$$

CHEZY-MANNING EQUATION

$$\frac{3094' - 3084'}{200'} = .05$$

$$S = .05$$

$$A = .75 \text{ FT}$$

$$R = 3.04 \text{ FT}$$

$$Q = 1.486/n * A * R^{2/3} * S^{1/2} =$$

$$Q = 1.486/.05 * .75 \text{ SF} * .49 \text{ FT}^{2/3} * 0.06^{.5}$$

$$= 29.72 * .75 * .62 * .25 = 3.4 \text{ CFS}$$

CAPACITY OF THE DRIVEWAY DITCH IS 3.4 CFS > 1.2 CFS

THEREFORE THE DRIVEWAY DITCH IS SIZED SUFFICIENTLY TO NOT OVERTOP DURING 10HR STORM EVENT

Parcel B

IDF GENERATED 60 MIN. DURATION = .70 IN/HR (10YR)

$$Q = .21 * .70 \text{ IN/HR} * 1 \text{ HR/3600SEC} * 2.0 * 43560 \text{ SF/1 AC} * 1 \text{ FT/12 INCHES} = .30 \text{ CFS}$$

CHEZY-MANNING EQUATION

$$\frac{3121' - 3117'}{200'} = .02$$

$$S = .05$$

$$A = .75 \text{ FT}$$

$$R = 3.04 \text{ FT}$$

$$Q = 1.486/n * A * R^{2/3} * S^{1/2} =$$

$$Q = 1.486/.05 * .75 \text{ SF} * .49 \text{ FT}^{2/3} * 0.02^{.5}$$

$$= 29.72 * .75 * .62 * .14 = 1.95 \text{ CFS}$$

35

CAPACITY OF THE DRIVEWAY DITCH IS 1.95 CFS > .3 CFS

THEREFORE THE DRIVEWAY DITCH IS SIZED SUFFICIENTLY TO NOT OVERTOP DURING 10HR STORM EVENT

Parcel C

IDF GENERATED 60 MIN. DURATION = .70 IN/HR (10YR)

$$Q = .21 * .70 \text{ IN/HR} * 1 \text{ HR/3600SEC} * 6.2 * 43560 \text{ SF/1 AC} * 1 \text{ FT/12 INCHES} = .93 \text{ CFS}$$

CHEZY-MANNING EQUATION

$$\frac{3121' - 3117'}{200'} = .02$$

$$S = .05$$

$$A = .75 \text{ FT}$$

$$R = 3.04 \text{ FT}$$

$$Q = 1.486/n * A * R^{2/3} * S^{1/2} =$$

$$Q = 1.486/.05 * .75 \text{ SF} * .49 \text{ FT}^{2/3} * 0.02^{1/2} =$$

$$= 29.72 * .75 * .62 * .14 = 1.95 \text{ CFS}$$

CAPACITY OF THE DRIVEWAY DITCH IS 1.95 CFS > .93 CFS

THEREFORE THE DRIVEWAY DITCH IS SIZED SUFFICIENTLY TO NOT OVERTOP DURING 10HR STORM EVENT

RECEIVED

OCT 15 2020
26
MT DEO PUBLIC WATER
& SUBDIVISIONS

STORM DRAIN MAINTENANCE PLAN

(JOHNSTON FT)

- 1) A storm drain plan has been prepared as part of the plan for the above referenced project by Jere Johnson, R.S. The storm drain plan consists of on site swales and driveway/roadside ditches. No internal subdivision road will exist.
- 2) It shall be required each lot owners responsibility to maintain the drainage retention facilities in the condition as planned and shown on the DEQ site plan for the above noted project. All costs to maintain the drainage structures shall be paid for at the expense of each lot owner.
- 3) Maintenance shall be ongoing at a minimum shall include : a) Inspect the facilities each year on the fall of the year, b) re grade if required to remove any sloughing of back slopes to maintain the swales in the condition shown on the plans, c) clearing of road culverts of any debris d) 10000 sf of landscaping.
- 4) The Parcel owner shall inspect the drainage facilities on an ongoing basis and are responsible for any problems or corrections required to keep the drainage facilities functioning as planned. Maintenance includes, but is not limited to regrading of said facilities.

37

Part 1 – Application Supplements

- h.) A Dust Control Plan identifying reasonable precautions intended to mitigate dust.

Dust Control Plan

Introduction

Air quality in Flathead County is an important consideration when contemplating subdivision and/or development. Human caused dust, particulate matter and other sources of air pollution will degrade the visibility and possibly create public health concerns for residents and visitors. The Dust Control Plan is intended to identify possible sources of dust and means to mitigate potential dust related to subdivision activities. The focus of the plan is unpaved roads, but may also apply to other soil disturbing construction related activities. Please provide the information requested below and identify the measures taken to mitigate potential sources of dust.

Subdivision:

Rocky Top Cabin Subdivision

Location:

269 Rocky Lane, Columbia Falls, MT

Primary Road Access and Length (from nearest County paved road):

The current driveway will be upgraded to city standards. It is approximately 385 feet long and is accessed off Rocky Lane.

Identify Long Term Dust Control on Unpaved Roadways*:

*Note: Pavement of roadways, soil binding or dust control palliatives on roadways, watering, grass plantings, etc. represents reasonable precautions and should be considered for effective dust control measures and mitigation.

List Measures Intended During Construction Activities:

For roadways (both internal and external to the subdivision):

The main access will be upgraded. Driveways to the additional cabins will be constructed. Power is to each lot. Standard BMPs will be used to mitigate dust during construction.

For utilities: All utilities are installed underground in trench using Flathead Electric minimum requirements;

For other construction:

Silt fencing as needed.

Signature of subdivider: _____

Part 1 – Application Supplements

- i.) Copies of easements or proposed easements to provide legal primary, and secondary if required, access to the subdivision.

Access of Public Road,

N/A

Part 1 – Application Supplements

j.) Copies of any existing Road Approach Permits

Application Supplements

- k.) When the subdivider owns adjacent property, the subdivider may be required to provide a plan of development indicating intent for the development of the other property;

N/A

Part 1 – Application Supplements

- 1.) A copy of any existing covenants or restrictions on any lands to be subdivided.



Debbie Pierson, Flathead County MT by AW

202100007029

Page: 1 of 3

Fee: \$21.00

3/2/2021 10:27 AM

0451456 ptn sc



**DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS
PARCELS A, B & C OF COS # 21669.**

SECTION ONE – Property

- A. COS # 21669, plat on file and of record in the office of the Clerk and Recorder of Flathead County; Montana. Specifically Parcels A, B, & C, located in NE ¼ of NE ¼ of Section 7, T30N R20W.

SECTION TWO – Purpose

- A. The Purpose of this Declaration is to insure the best use of the property and the most appropriate development and improvement of each Lot within the property; to protect the Owners against such improper use of surrounding Lots that would depreciate the value of their Lot; to preserve so far as is practical the natural rural beauty of the property; to prevent the construction of inappropriate structures; to insure the highest and best development of the property; to secure and maintain adequate setbacks and free space between structures; and in general to provide adequately for a high quality of improvements on the property and thereby to enhance the values of improvements made by Owners.

SECTION THREE – Use and activities

- A. No business or commercial activity may be conducted on the premises except home occupations as defined by CR-1 zoning. This shall not preclude the operation of short term rentals permitted in conjunction with CR-1 zoning.
- B. No house trailer or mobile home shall be placed on property. A maintained outhouse is allowed during construction. All construction, including driveways, shall be completed within one year from date construction begins.
- C. No building and their attachments shall be located closer than 30 feet from any boundary line. Parcel owners to keep and maintain all trees within 20 feet of property boundaries except in cases of dead or dying trees which may be removed or when erecting a fence along a property boundary.
- D. All structures shall be sided in natural wood or muted earth tones. No vinyl siding is allowed. Galvanized or bright colored roofing is prohibited.



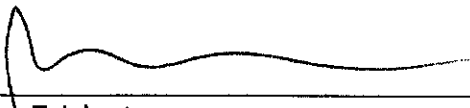
- E. All owners are responsible to maintain their properties including eradicating noxious weeds as needed.
- F. All pets are to be leashed or confined to the property with a fence not to exceed 6 feet in height and not permitted to run at large. Horses and chickens are permitted, no roosters or pigs. No white vinyl fences are permitted.
- G. Rubbish and trash are not to be stored on property except in concealed indoor garage containers.

SECTION FOUR – General Provisions

- A. These covenants are to run with the land, and shall be binding on all parties, and all persons claiming them, in perpetuity unless and an instrument signed by all three parcel owners has been recorded agreeing to changes.
- B. The grantor and every person hereinafter receiving any right, title or interest in any parcel shall have the right to prevent or stop the violation of any of the restrictions by injunction or other lawful procedure, in law or in equity, against the person or persons violating or threatening to violate these restrictive covenants. Any person who shall prosecute an action successfully may recover any damages resulting from such violation.

IN WITNESS WHEREOF, before me, the undersigned Notary Public, the undersigned owners personally appeared to execute this instrument.

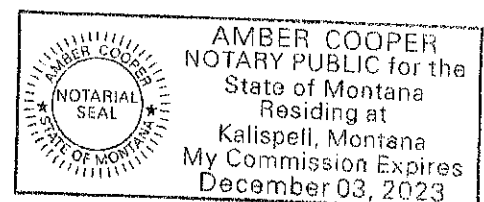
Dated this 2 day of March 2021



Jesse T. Johnston

Notarized by Amber Cooper Notary public for State of MT, Flathead
County. My commission expires 12/03/2023
~~acknowledged~~





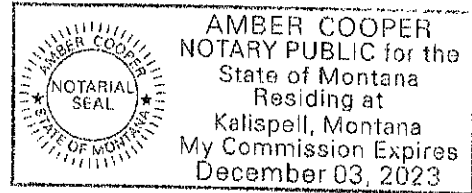


Dated this 2nd ~~1st~~ day of March ~~2nd~~ 2021


Jessica L. Johnston

Notarized by Amber Cooper Notary public for State of MT, Flathead
County. My commission expires 12/03/2023





STATE OF MONTANA
County of Flathead

RECORDED AT THE REQUEST OF _____

THIS _____ DAY OF _____, 20 _____ AT _____

O'CLOCK AND RECORDED IN THE RECORDS OF FLATHEAD COUNTY, STATE OF MONTANA.

FEE \$ _____ PD.

(Flathead County Clerk and Recorder)

RECEPTION NO. _____

(Deputy Clerk)

RETURN TO _____

Part 1 – Application Supplements

- m.) If common property is to be deeded to a property owners assc., a draft of the covenants and restrictions or Home Owners Agreement which will govern the common property.

N/A

Part 1 – Application Supplements

n.) Drafts of proposed covenants and restrictions.

N/A

Part 1 – Application Supplements

- o.) A draft Road User's Agreement or CC&R's addressing road maintenance.

ROAD MAINTENANCE AGREEMENT

AND FORMATION OF

Rocky Top Cabins Subdivision

ROAD USERS' ASSOCIATION

1. The Declarant(s) are (is) the owner(s) of property known as Rocky Top Cabins Subdivision, Flathead County Records lying, situate and being in the Section 34, Township 27N, Range 19W, Principal Meridian, Flathead County, Montana.

2. The above-described declarant(s) are desirous of forming a road users association to own, control, and effectively maintain and improve the roadway for Rocky Top Cabins Subdivision. The subject roads and utility right-of-way is shown on the recorded plat of Rocky Top Cabins Subdivision and is named "Rocky Top Lane".

NOW THEREFORE, the Declarant(s) having established a general plan for the improvement and development of said property, do hereby establish the conditions, principles and restrictions upon which this association shall be formed and operated.

ARTICLE I - PROPERTY SUBJECT TO THIS AGREEMENT & ROAD USERS ASSOCIATION

The real property which is and shall be subject to the conditions, principles and restrictions hereinafter set forth, is located in Flathead County, Montana, and is more particularly described as follows to wit:

Rocky Top Cabins Subdivision, a map or plat on file in the office of the Flathead County Clerk and Recorder. Situate, lying and being in the NE¼ of Section 7, Township 30N, Range 20W, Principal Meridian, Flathead County, Montana.

ARTICLE II - DEFINITIONS

Section 1: "Association" shall mean and refer to the Rocky Top Cabins Subdivision Road Users Association, which shall consist of all the property owners and lot owners as described above under Article I.

Section 2: "Lot" shall mean any one of the Lots in Rocky Top Cabins Subdivision.

Section 3: "Member" shall mean and refer to every person or entity who is a record owner of a fee, or undivided fee, interest in any Lot. Record owners who have sold any Lot under contract for deed shall not be considered owners but the purchasers of any Lot who are purchasing any Lot under a contract for deed shall be considered the owner for all purposes herein.

Section 3. Voting: Association members shall have the following voting rights:

Class A: Class A members shall be entitled to one (1) vote for each lot in which they hold interest required for membership. When more than one person holds such interest in any Lot the vote for such lot shall be exercised as such persons among themselves determine but in no event shall more than one (1) class A vote be cast with respect to any Lot. All lots subject to this agreement shall be Class A.

Section 4. Declarant Easement/Future Users: Declarant specifically reserves unto itself and its successors an irrevocable easement over said road and easement, as shown on said Rocky Top Cabins Subdivision for vehicle and utility access. Future division of the lots of said Rocky Top Cabins Subdivision is allowed Provided it is approved by a 2/3 vote of the lot owners of Rocky Top Cabins Subdivision. If and when a lot is further divided, the newly created lot(s) and their owner(s) shall automatically become part of this agreement and have an irrevocable easement over said road and easement as shown on said Rocky Top Cabins Subdivision Plat for vehicle and utility access.

At such a time as a lot is further divided, the total number of lots in the Association shall increase accordingly with each new lot paying an equal assessment as all the other lots already included in the Association. The assessment shall be prorated for the portion of the year that the new lot existed in the year it is created.

ARTICLE IV - ROADWAY ASSESSMENTS

Section 1. Roadway: An easement 60 feet in width for ingress, egress and for utilities over, under and across "Rocky Top Lane" as shown on said Rocky Top Cabins Subdivision plat is hereby reserved and retained by the Declarant for locating, installing, erecting, and constructing, maintaining a roadway and electric lines and other utilities. The Declarant hereby declares that the roadway described on said documents is private in all respects and the easement here reserved and retained shall be conveyed by the Declarant to the Association and is intended to be dedicated for the use of the owners of the lots. The Association shall thereafter have control over the roadway described and depicted on said Rocky Top Cabins Subdivision plat after the completed filing of all phases.

Section 2. Duty and Powers: The Association is authorized and directed to determine annually at its regular meeting the amount necessary to maintain and improve the roadway, to provide services (for example, snow plowing and/or garbage collection) and facilities to the owners that it may determine appropriate, and to assess each lot owner accordingly. The Association shall equitably apportion the cost of providing such services among those that are residing on the properties as compared to those that have not yet built on their lots. The intention here is to fairly weigh the cost of maintenance, services and improvement to owners who are actually using the roadway and services. The regular meeting shall be held once a year in January.

Section 3. Uniform Rate of Annual Assessment: Annual assessments shall be fixed at a uniform rate for all Lots, incorporating the distinction in Section 2 above, and may be collected on a monthly, quarterly, annual or other basis as determined by the members. However, where one owner is utilizing more than one lot as a single home site and has commenced or completed construction of a dwelling thereon, the directors may in their discretion elect to treat such owner the same as a single lot owner for assessment purposes.

Section 4. Special Assessments: In addition to the annual assessment authorized above, the Association, through its members at the regular annual meeting or at any special meeting called for that purpose, may levy in any year, a special assessment applicable to that year only, which shall be in addition to the annual assessment. Such special assessment shall be exercised and levied only for the purpose of defraying in whole or in part the cost of any installation, construction, improvement or reconstruction repair or replacement of a portion or all of the roadway or of enforcing this Agreement through legal proceedings, provided that before any such special assessment may be levied, it shall have the assent of two-thirds (2/3) of the total votes of members who are voting in person or by proxy at a meeting duly called for that purpose. In the event of a special meeting, written notice to each of the Lot owners included in this agreement must be given not less than 20 nor more than 30 days prior to said meeting. Presence of two or more lot owners in person or by proxy at any meeting called for the purpose of establishing any regular or special assessment shall constitute a quorum at said meeting. A majority of said quorum shall control except for a special assessment which shall require the assent of two-thirds of those voting on the special assessment.

Section 5. Commencement of Assessments: The first year for which regular annual assessments shall be established and collected shall be the calendar year 2024. The members shall fix the amount of each annual and special assessment against each lot at least (30) days in advance of each annual assessment period. Written notice of the assessments shall be sent to every owner of record at that time. The due dates shall be established by the members. If the assessment (special) is such as requires a vote of the members, this shall be done before the assessment becomes effective. The Association shall upon demand at any time furnish a certificate in writing signed by the president of the Association setting forth whether the assessment on a specific Lot have been paid and if not paid the amount owing thereof.

Upon an owner purchasing a lot, his liability for regular and special assessments shall be prorated on a monthly basis to the extent of the number of months remaining from the date of purchase in any assessment period.

Section 6. Nonpayment Assessments: Any assessments or installment payments on assessments which are not paid when due shall be delinquent. If the amount is not paid within thirty (30) days after the due date, the amount shall bear interest from the date of delinquency at the rate of 10% per annum. The Association may bring an action at law on the basis of an account due to collect the amount of the assessment together with interest, court costs and reasonable attorneys' fees for such action. No owner subject to assessment may waive or otherwise escape liability for the assessment herein provided by non use of the roadway. In addition to the provisions for suit and collection as herein above set forth,

the Association may suspend a delinquent owner's voting rights at Association meetings, and/or the right to use, enjoy and have the benefit of the roadway.

Section 7. Subordination of Assessment Lien: The lien of any assessment provided herein shall be subordinate to any purchase money security interest for a lot acquired herein or construction lien for the construction of a residence herein when said lien secures the owners obligation to pay for said acquisition or construction. In the event, however, of foreclosure of said lien, the Association shall not be required or under any obligation to provide any of the benefits of the roadway to any subsequent purchaser until all past obligations owed are paid in full. The provisions of the paragraph may be modified or waived in their entirety at the discretion of the members of the Association.

ARTICLE V - UTILITIES

Reservation of Utility Easements: Rights of ingress and egress over, under, across, to, and from the Lots for purposes of locating, installing, constructing, maintaining or using electric lines, telephone lines and other utilities are retained by the Declarant and hereby transferred to the Association. All costs for extension of utilities and telephone lines from individual service boxes will be borne by the lot owners, and all such utilities shall be underground. Any lot owner who shall place any building, improvement, shrub, hedge or tree on any easement shall be required without notice at the request of any other affected lot owner or utility company to remove such structure, improvements or vegetation if such removal shall facilitate, repair or maintenance of utilities within said easement.

ARTICLE VI - ENFORCEMENT AND TERM

Section 1. Attorneys Fees and Cost: If the Association or a member of the Association commences legal proceedings in court to enforce any provisions of this Agreement, the prevailing party in such action shall be entitled to recover from the other party reasonable attorney's fees and costs of said action.

Section 2. Severability: Invalidation of or restriction by judgement or court order of any part of the Agreement shall in no way affect the remaining provisions Which shall remain in force and effect.

Section 3. Construction and Binding Effect: This Agreement shall be construed pursuant to the laws of the State of Montana and shall be binding upon the heirs, successors and assigns of the parties hereto. Time is of the essence in complying with this agreement.

IN WITNESS THEREOF to this Agreement, the undersigned hereunto set their hands this date first above written.

Rocky Top Cabins Subdivision
Chaemous Herbert

STATE OF Montana, County of Flathead. On this ____ day of _____,
_____, before me a Notary Public for the above named state personally
appeared _____, known to me to be the persons
whose names are subscribed to the within instrument, and acknowledged to
me that they executed the same.

NOTARY PUBLIC for the state of Montana

Residing at: _____

My Commission Expires: _____

Part 1 – Application Supplements

p.) A “Will Serve Letter” from sewer and water provider.

N/A

Part 1 – Application Supplements

q.) A description and map of the proposed subdivision's water supply systems, solid waste disposal systems, and wastewater treatment systems, including whether the water supply and wastewater treatment systems are individual, shared, multiple user, or public as those systems are defined in rules published by the Montana Department of Environmental Quality. The map must show the location, within 100 feet outside of the exterior property line of the subdivision and on the proposed lots the following:

i. 100-Year flood plains;

ii.	Surface water features, including lakes, streams and rivers, springs and irrigation ditches;
-----	--

iii.	Existing, previously approved, and, for parcels less than 20 acres, proposed water wells and wastewater systems;
------	--

iv.	Location, within 500 feet outside the of the exterior property line of subdivision,	th e
of public water and sewer facilities.		

s,t,u.) DEQ Approval

CERTIFICATE OF SURVEY

RECEPTION # 200301716330 DATE 1/17/03COS # 15461 COS DATE 1/13/03FEES \$ 600 SURVEYOR DAWN MARQUARDTPURPOSE FAMILY TRANS.ACRES 16.32 2.00OWNER (S) Phillip E. Kiser.FOR RUBIANNA M MASA.DESCRIPTION NENE 7-30-20.ASSESSOR # 0451456

2003017 16330

STATE OF MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF SUBDIVISION APPROVAL
(Section 76-4-101 through 76-4-131, MCA, 1995)

To: Clerk and Recorder
Flathead County
Kalispell, MT

E.Q.#03-1824

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as KISER COS located in the NE1/4, Section 7, T30N, R20W, Flathead County, Montana,

See Exhibit A for metes and bounds description (Parcel A only)

consisting of two parcels have been reviewed by personnel of the Permitting and Compliance Division, and,

THAT the documents and data required by ARM Chapter 17, Section 36, have been submitted and found to be in compliance therewith, and,

THAT approval of the COS is made with the understanding that the following conditions shall be met:

THAT the parcel size as indicated on the COS to be filed with the County Clerk and Recorder will not be further altered without approval, and,

THAT each parcel shall be used for one single family dwelling, and,

THAT the individual water system for Parcel A will consist of a well drilled to a minimum depth of 25 feet constructed in accordance with the criteria established in Title 17, Chapter 36, Sub-chapters 1, 3 & 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT data provided indicates an acceptable water source at a depth of approximately feet, and,

THAT the individual sewage treatment system for Parcel A will consist of a septic tank and subsurface drainfield of such size and description as will comply with Flathead City-County Regulations for Sewage Treatment Systems and Title 17, Chapter 36, Sub-chapters 1, 3 & 6 ARM before construction is started, and,

THAT the subsurface drainfield shall have an absorption area of sufficient size to provide 220 square feet per bedroom, and,

THAT when the existing water supply on Parcel B is in need of extensive repairs or replacement, it shall be replaced by a well drilled to a minimum depth of 25 feet constructed in accordance with the criteria established in Title 17, Chapter 36, Sub-chapters 1, 3 & 6 ARM and the most current standards of the Department of Environmental Quality, and,

Page 2 of 2
Kiser FT
Flathead County
E.Q.#03-1824

200301716330

THAT when the existing sewage treatment system on Parcel B is in need of extensive repairs or replacement, it shall be replaced by a septic tank and subsurface drainfield of such size and description as will comply with Flathead City-County Regulations for Sewage Treatment Systems and Title 17, Chapter 36, Sub-chapters 1, 3 & 6 ARM before construction is started, and,

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum high water level of a 100 year flood of any stream, lake, watercourse or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT the water supply and sewage treatment systems will be located as shown on the approved plans, and,

THAT all sanitary facilities must be located as shown on the attached lot layout, and,

THAT the developer and/or owner of record shall provide any purchaser of the property with a copy of the COS, approved location of water supply and sewage treatment system and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3 & 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval is grounds for injunction by the Department of Environmental Quality.

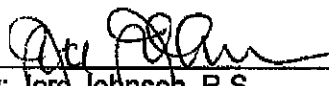
Pursuant to Section 76-4-122(2)(a), MCA, a person must obtain the approval of both the reviewing authority under Title 76, Chapter 4, MCA, and local Health Officer having jurisdiction, before filing a subdivision plat with the County Clerk and Recorder.

YOU ARE REQUESTED to record this certificate by attaching it to the COS filed in your office as required by law.

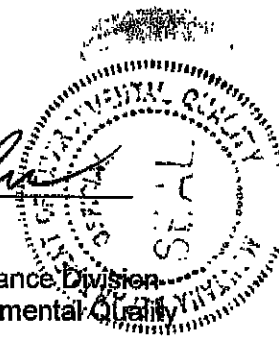
DATED this 23rd day of December, 2002

Flathead City-County Health Officer

Jan P. Sensibaugh, Director


By: Jere Johnson, R.S.
Environmental Health Specialist


By: Bonnie Lovelace, Chief
Water Protection Bureau
Permitting and Compliance Division
Department of Environmental Quality



Co. No. 02/240
Owner's Name: Phillip Kiser

RECEIVED

DEC 24 2002

MT DEPT. OF ENV QUALITY
PERMITTING & COMPLIANCE DIV.

200301716330

EXHIBIT A

KISER FT

E.Q.#03-1824

Parcel A

That portion of the Northeast 1/4 of the Northeast 1/4, Section 7, Township 30 North, Range 20 West, P.M., M., Flathead County, Montana described as follows:

Commencing at the Southeast corner of the Northeast 1/4 of the Northeast 1/4;

Thence along the South line of the Northeast 1/4 of the Northeast 1/4 South 89°53'58" West 873.47 feet to the Point of Beginning;

Thence continuing along the South line of the Northeast 1/4 of the Northeast 1/4 South 89°53'58" West 473.83 feet;

Thence North 01°05'10" West 446.70 feet;

Thence North 01°04'05" West 541.68 feet;

Thence North 89°50'43" East 273.61 feet;

Thence North 00°46'45" West 299.61 feet to the South line of Tamarack Lane;

Thence along the South line of Tamarack Lane North 89°52'29" East 439.15 feet;

Thence South 00°59'40" East 881.93 feet;

Thence South 89°56'06" West 238.69 feet;

*Thence South 01°00'01" West 406.65 feet to the Point of Beginning containing 16.98 acres of land all as shown hereon.
Subject to easements of record.*

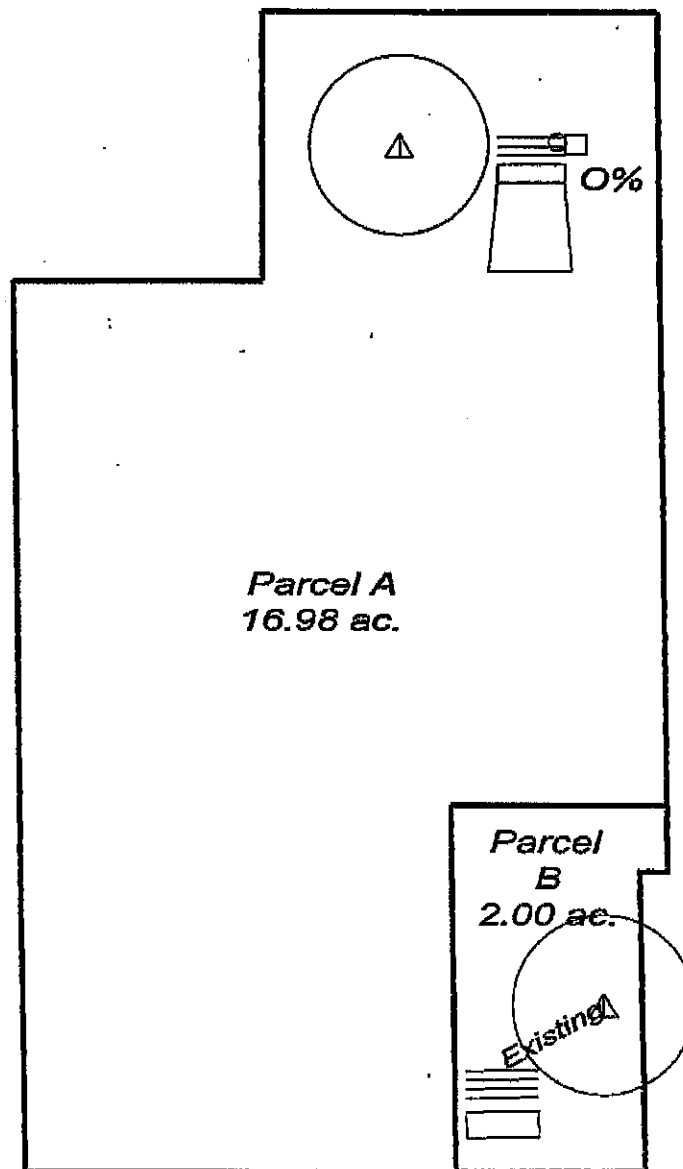
**Marquardt &
Marquardt
Surveying**
Kalispell, Mt

2003017 16330

name-Kiser Family Transfer
county-Flathead
location- NE 1/4 sec. 7-T30N-R20W
drawn by-Brian S. Launius
E.Q.# 03-1824

RECEIVED**DEC 24 2002**

MT DEPT. OF ENV QUALITY
PERMITTING & COMPLIANCE DIV.



- Legend**
- perc test
 - test hole
 - ⊙ well site w/100' isolation zone
 - ▨ drainfield site
 - ▧ replacement area
 - ▽ mixing zone

Reviewed by the Local Reviewing Authority
Under contract with the
Department of Environmental Quality/ PCD

Local Reviewer

Date

12/23/02

Accepted under contract

MAS
DEQ Representative

Date

1-8-03

SCALE- 1"= 200'

200301716330

Plat Room
Flathead County, Montana
800 S. Main St.
Kalispell, MT 59901
(406) 758-5510

Updated
1-15-03
JF

This Form Is for Certificate of Surveys Only

TAX SEARCH FOR CERTIFICATE OF SURVEYS:

BY: Marquardt

PR # 5520

FOR: Kiser

DATE 8-23-02

DESCP: 1 in 7-30-20

PURPOSE FT

YEARS

ASSESSOR #

1993 THRU 2001
2002

0451456
0451456

_____ & TO DATE

I hereby certify that there are no outstanding taxes on the property assigned the assessor numbers listed above, for the years indicated for each assessor number.

Ganon
Deputy Treasurer
(seal)

JAN



200301716330

Health Department Checklist for Survey AttachmentsOwner Kiser Surveyor MargiLegal description NE4 NE4 7-30-20

The following document must accompany this survey as required by the Montana Sanitation in Subdivisions Act.

☒ Parcels/Lots A-B subject to review. Montana Department of Environmental Quality (MDEQ) Certificate of Subdivision Approval is required.

☐ Municipal Facilities Exclusion Certification from MDEQ indicating that this subdivision is in compliance with the requirements of the Sanitation in Subdivision Act is required.

☐ Boundary Line Adjustment Parcel(s) _____ subject to review. MDEQ Certificate of Subdivision Approval is required.

☐ County Health Department memorandum only required.

☐ Agricultural Use Covenant Documentation from the owner and the County Commissioners indicating the covenant has been removed.

☐ No Health Department documents are required.

Signed Shen Gray Date 12/6/02

200301716330

RESOLUTION 509D
LANDOWNER STATEMENT

1. EXEMPTION CLAIMED: ET

2. The original tract is the tract existing twenty (20) calendar years ago, from which the proposed tract would be divided or of which the proposed tract was a part twenty (20) calendar years ago. The number of exemptions previously used or claimed on the original tract regardless of ownership 0. Please list each COS and Exemption claimed.

COS	_____	Exemption Claimed	_____
COS	_____	Exemption Claimed	_____
COS	_____	Exemption Claimed	_____
COS	_____	Exemption Claimed	_____
COS	_____	Exemption Claimed	_____

Has this parcel been subject to or part of an application for subdivision plat approval within the last five years: NO.

3. I certify as follows:

a) if gift or sale to member of immediate family: that the proposed transfer is to a member of my immediate family, for the benefit of the grantee and not for the purpose of speculation or resale by me, is the first such transfer to this family member, and that the grantee is not one of the grantors;

b) if security for construction financing: that the property division upon foreclosure will not create more than one new parcel, that I will retain possession of the remainder and the mortgagee will obtain possession of the exempted parcel, and there exists no prior agreement to default or to purchase only a portion of the original tract;

c) that the use of the claimed exemption is not for the purpose to evade subdivision review of the Montana Subdivision and Platting Act and meets the Flathead County criteria for determination of evasion of the Act.

DATE: 12-02-02

hiser
Landowner

[Signature]
Landowner's Agent
State Relationship: L.S.

3/1/92
Revised 8/19/93
Revised 11/05/93
Revised 5/3/94



202100001263

Page: 1 of 9

Fees: \$24.50

1/11/2021 3:49 PM

Debbie Pierson, Flathead County MT by DD

CERTIFICATE OF SURVEY DATA SHEET

Reception Number	<u>202100001263</u>			Date	<u>01/11/21</u>
COS #	<u>21669</u>	Survey Date	<u>12/18/20</u>	No of Pages	<u>9</u>
Fees	<u>\$ 34.50</u>	Surveyor	<u>MARQUARDT DAWN</u>		
Purpose	<u>FAMILY TRANS</u>				
Acres	<u>8.11AC</u>	<u>2.00AC</u>	<u>6.20AC</u>		
Owner(s)	<u>JESSE T JOHNSTON</u>				
	<u>MARIE JOHNSTON</u>				
	<u>JESSICA JOHNSTON</u>				
For	<u></u>				
	<u></u>				
	<u></u>				
Legal Description	<u>NE4NE4 7-30-20</u>				
Assessor	<u>0451456</u>				
	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
	<u></u>	<u></u>	<u></u>	<u></u>	<u></u>

OK 6/10/20 by City

Item No.2.



Planning Department

130 6TH STREET WEST
ROOM A
COLUMBIA FALLS, MT 59912

PHONE (406) 892-4391
FAX (406) 892-4413

May 18, 2020

Re: Advisement of Completion of Exemption Review

Dear Flathead County Clerk:

Please be advised, that as the City Manager, acting in accordance with Columbia Falls Municipal Ordinance 17.04.080 - Review of Exemption Claim, I have reviewed an application for an exemption from the Montana Subdivision and Platting Act described as:

- *** Exemption As A Gift Or Sale To A Member Of The Immediate Family [76-3-207(1)(b), MCA]
- Exemption To Provide Security For Construction Mortgages, Liens, Or Trust Indentures [76-3-201(1)(b), MCA]
- Exemption For Agricultural Purposes [76-3-207(1)(c), MCA]
- Relocation Of Common Boundary (Aggregation)[76-3-207(1)(a), MCA]

For the below referenced property:

OWNER (S) OF RECORD:

Name: Jesse T. Johnston
Mailing Address: 7210 Hwy 2 East
Columbia Falls, MT 59912

LEGAL DESCRIPTION OF PROPERTY:

City/County: Flathead:

Street Address(es): N/A not assigned

Assessor # 0451456, COS 15461-A in NE1/4 NE 1/4 Sec 7, T30 N, R 20 W, P.M.M., Flathead County, Montana

I have found that the requested exemption does comply with the required statute and laws governing the City of Columbia Falls Planning Jurisdiction. All parcels are subject to the Columbia Falls Chapter 18.322 CR-1 Suburban Residential Zoning Regulations.

Sincerely,

Susan M. Nicosia
City Manager/Planning & Zoning Administrator



202100001263
Page: 2 of 9
Fees: \$34.50
1/11/2021 3:49 PM

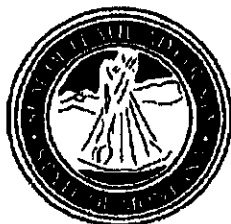
F.T. / Johnston

PR# 10432



202100001263
Page: 3 of 9
Fees: \$34.50
1/11/2021 3:49 PM

Item No.2.



Plat Room
Flathead County, Montana
800 S. Main St.
Kalispell, MT 59901
(406)758-5510

This Form is for Certificate of Surveys Only

TAX SEARCH FOR CERTIFICATE OF SURVEYS:

BY : MARQUARDT

PR # 10432

FOR : JOHNSTON

DATE 01/08/2021

DESCP : TR 1 IN 7-30-20

PURPOSE F.T.

YEARS

ASSESSOR #

2018 THUR 2020

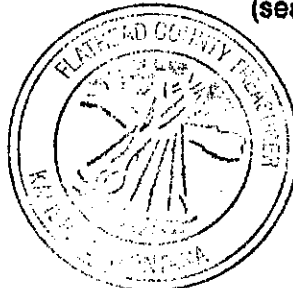
0451456

I hereby certify that there are no outstanding taxes on the property assigned the assessor numbers listed above, for the years indicated for each assessor number.

JAN 08 2021

Workman

Deputy Treasurer
(seal)





December 10, 2020

Jere Johnson
Environmental Health Consulting
4572 Whitefish Stage Road
Whitefish MT 59937

RE: Johnston Family Transfer
Flathead County
E.Q. #20-1377

Dear Mr Johnson:

The plans and supplemental information relating to the water supply, sewage, solid waste disposal, and storm drainage (if any) for the above referenced division of land have been reviewed as required by ARM Title 17 Chapter 36(101-805) and have been found to be in compliance with those rules.

Two copies of the Certificate of Subdivision Plat Approval are enclosed. The original is to be filed at the office of the county clerk and recorder. The duplicate is for your personal records.

Development of the approved subdivision may require coverage under the Department's General Permit for Storm Water Discharges Associated with Construction Activity if your development has construction-related disturbance of one or more acre. If so, please contact the Storm Water Program at (406) 444-3080 for more information or visit the Department's storm water construction website at <http://www.deq.state.mt.us/wqinfo/MPDES/StormwaterConstruction.asp>. Failure to obtain this permit (if required) prior to development can result in significant penalties.

In addition, your project may be subject to Federal regulations relating to Class V injection wells. Please contact the United States Environmental Protection Agency regarding specific rules that may apply.

Your copy is to inform you of the conditions of the approval. Please note that you have specific responsibilities according to the plat approval statement primarily with regard to informing any new owner as to any conditions that have been imposed.

If you have any questions, please contact this office.

Sincerely,


Ashley Kroon, Supervisor
Subdivision Review Section

AK/le

cc: County Sanitarian
County Planning Board (e-mail)
Owner



Page 2
Johnston Family Transfer
Flathead County
E.Q. #21-1377

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

That the approved proposed locations of the shared drinking water supply wells, shared wastewater treatment system primary disposal and shared replacement areas shall be staked by the engineer or site evaluator prior to any construction on the lots, and,

THAT the stormwater design for each parcel requires the installation of a minimum of 10,000 square feet of lawn and landscaped area, site grading, ditches along both sides of the driveways and access roads, a retention pond or swales with the following minimum volume be constructed and located on each parcel in accordance with the approved plans:

Parcel A	755 cubic feet,
Parcel B	393 cubic feet,
Parcel C,	393 cubic feet, and,

THAT the operation and maintenance of water supply, sewage treatment system, and stormwater facilities shall be the responsibility of each lot owner, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100 year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT all sanitary facilities must be located as shown on the attached lot layout, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the COS, approved location of water supply and sewage treatment system as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.



Page 3
Johnston Family Transfer
Flathead County
E.Q. #21-1377

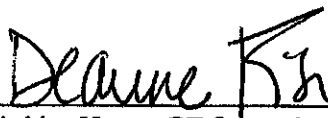
THAT pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the reviewing authority under Title 76, Chapter 4, MCA, and local board of health officer having jurisdiction, before filing a subdivision plat with the county clerk and recorder.

YOU ARE REQUESTED to record this certificate by attaching it to the COS filed in your office as required by law.

DATED this 9th day of December, 2020.

SHAUN MCGRATH
DIRECTOR

By:


Ashley Kroon, PE Supervisor
Engineering Bureau
Water Quality Division
Department of Environmental Quality



Owner's Name: Jesse Johnston

EQ# 21-1377

JOHNSTON FAMILY TRANSFER WATER, SEWER, STORMWATER

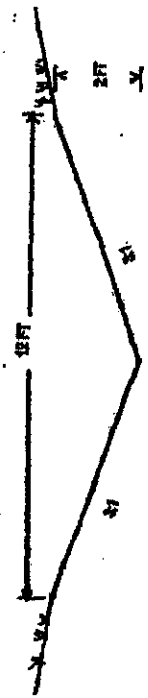
LOT LAYOUT
SECTION 7-T30N-R20W
FLATHEAD COUNTY

GROUNDWATER FLOW
DIRECTION
↓

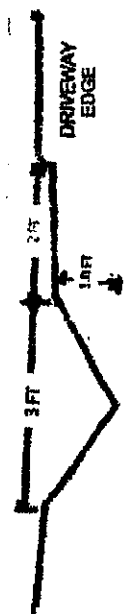


202100001263
Page: 7 of 9
Fees: \$34.50
1/11/2021 3:49 PM

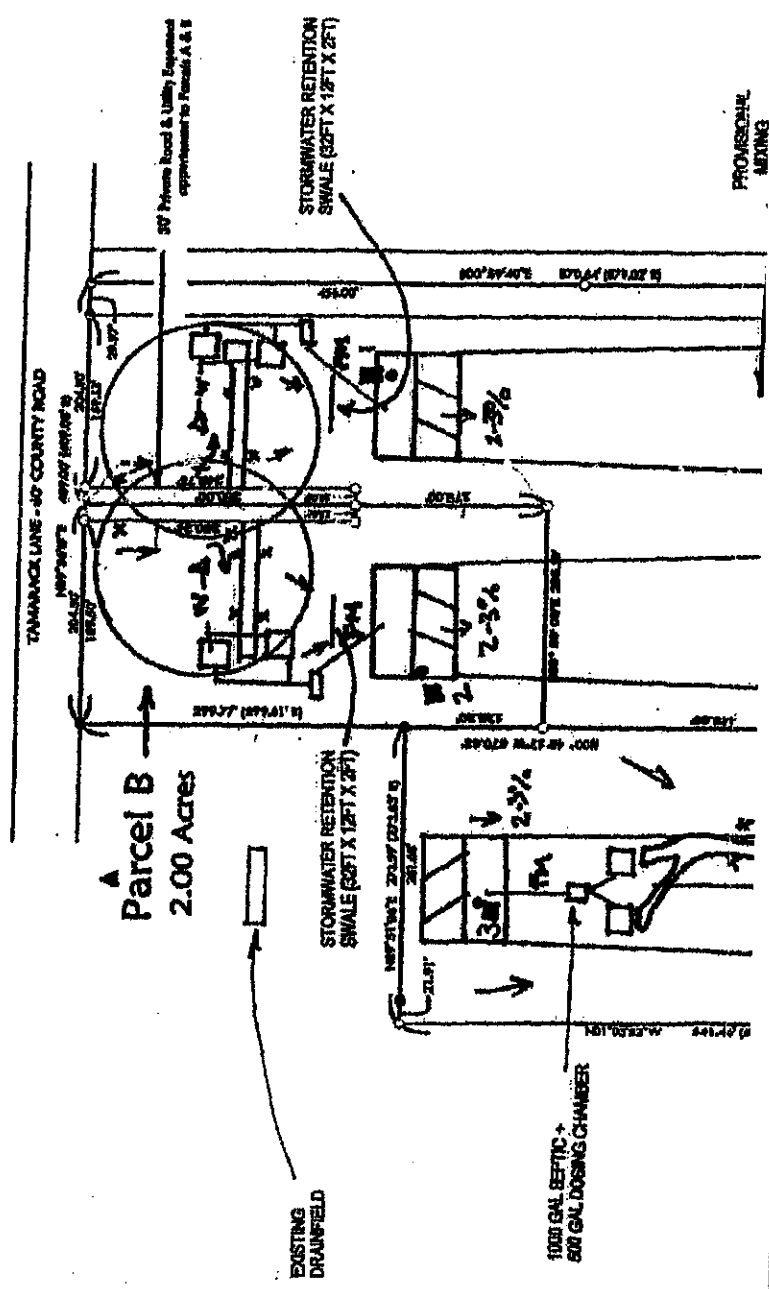
Item No.2.



STORMWATER RETENTION SWALE
GRASS/GRAVEL TRIANGULAR CHANNEL
CROSS SECTION TRIANGULAR CHANNEL
1:1 SLOPE

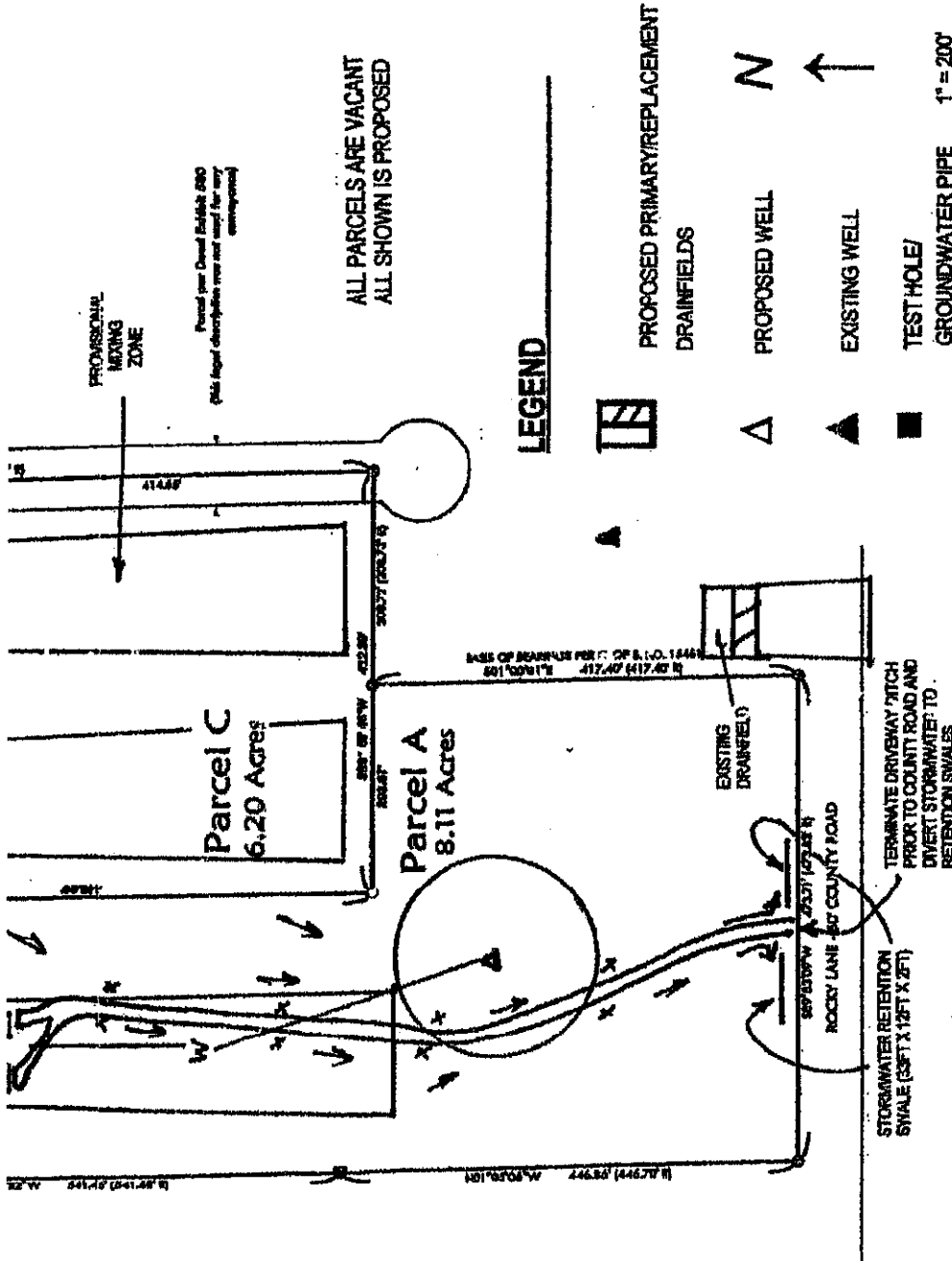


DRIVEWAY/ACCESS ROAD STORMWATER DITCH
GRASS/GRAVEL ROADSIDE DITCH
CROSS SECTION TRIANGULAR CHANNEL



NOV 30 2009
FEDERAL BUREAU OF INVESTIGATION
U.S. DEPARTMENT OF JUSTICE

40



NOTES

THE WELL SHALL BE CONSTRUCTED IN ACCORDANCE WITH ARM TITLE 38, CHAPTER 21

10,000sf OF LANDSCAPE TO BE PROVIDED FOR STORMWATER INFILTRATION

ALL STORM WATER SHALL BE RETAINED ON THE PROPERTY DRIVEWAY AND BUILDING CONSTRUCTION MUST BE COMPLETED SUCH THAT RUNOFF SHALL NOT FLOW OFF PROPERTY

STORM WATER MAINTENANCE AND REPAIRS SHALL BE CONDUCTED BY PROPERTY OWNERS

**NO DRAINFIELD WELL SHAPROVALS (100-F)
OTHER THAN SHOWN**

NO SOURCES OF CONTAMINATES 500 FT GROUNDWATER

PRESSURE DISTRIBUTION SYSTEMS MUST BE FIELD TESTED TO VERIFY THAT THE PRESSURE ACROSS THE ENTIRE ABSORPTION FIELD DOES NOT VARY BY GREATER THAN 10%.

APPROVED _____ Date _____
Montana Department of _____
Environmental Quality _____
[Signature] 12.9.20
Reviewer _____

Jess Johnson, R/S
4572 Whitefish Stage Road
Whitefish MT 59937



Environmental Health Checklist for New COS/Plat

Owner JOHNSTON

Surveyor MARQUARDT

Legal Description NE₄NE₄ SEC 7, T30N, R30N

The following document must accompany this survey as required by the Montana Sanitation in Subdivisions Act.

☒ Parcels/Lots A, B, C subject to review. Montana Department of Environmental Quality (MDEQ) Certificate of Subdivision Approval is required.

☐ Municipal Facilities Exclusion Certification from MDEQ indicating that this subdivision is in compliance with the requirements of the Sanitation in Subdivision Act is required.

☐ Agricultural Use Covenant Documentation from the owner and the County Commissioners indicating that the covenant has been removed.

☐ No Health Department documents are required.

☐ Environmental Health review unable to be completed due to complexity of research or more information required.

Signed Wendy Jacobs RS Date 9/23/20



Planning Department

130 6TH STREET WEST
ROOM A
COLUMBIA FALLS, MT 59912

PHONE (406) 892-4391

FAX (406) 892-4413



Debbie Pierson, Flathead County MT by DD

202100007767
Page: 1 of 9
Fees: \$5.00
3/8/2021 10:20 AM

May 18, 2020

Re: Advisement of Completion of Exemption Review

Dear Flathead County Clerk:

Please be advised, that as the City Manager, acting in accordance with Columbia Falls Municipal Ordinance 17.04.080 - Review of Exemption Claim, I have reviewed an application for an exemption from the Montana Subdivision and Platting Act described as:

*** Exemption As A Gift Or Sale To A Member Of The Immediate Family [76-3-207(1)(b), MCA]
Exemption To Provide Security For Construction Mortgages, Liens, Or Trust Indentures [76-3-201(1)(b), MCA]
Exemption For Agricultural Purposes [76-3-207(1)(c), MCA]
Relocation Of Common Boundary (Aggregation)[76-3-207(1)(a), MCA]

For the below referenced property:

OWNER (S) OF RECORD:

Name: Jesse T. Johnston

Mailing Address: 7210 Hwy 2 East

Columbia Falls, MT 59912

LEGAL DESCRIPTION OF PROPERTY:

City/County: Flathead:

Street Address(es): N/A not assigned

Assessor # 0451456, COS 15461-A in NE1/4 NE 1/4 Sec 7, T30 N, R 20 W, P.M.M., Flathead County, Montana

I have found that the requested exemption does comply with the required statute and laws governing the City of Columbia Falls Planning Jurisdiction. All parcels are subject to the Columbia Falls Chapter 18.322 CR-1 Suburban Residential Zoning Regulations.

Sincerely,

Susan M. Nicosia

City Manager/Planning & Zoning Administrator



202100001263
Page: 2 of 9
Fees: \$34.50
1/11/2021 3:49 PM

Item No.2.

OS# 21667

F.T. Johnston

P. R# 10432



202100007767
Page: 2 of 9
Fees: \$5.00
3/8/2021 10:20 AM

202100001263
Page: 3 of 9
Fees: \$34.50
1/11/2021 3:49 PM



Plat Room
Flathead County, Montana
800 S. Main St.
Kalispell, MT 59901
(406)758-5510

This Form is for Certificate of Surveys Only

TAX SEARCH FOR CERTIFICATE OF SURVEYS:

BY : MARQUARDT

PR # 10432

FOR : JOHNSTON

DATE 01/08/2021

DESCP : TR 1 IN 7-30-20

PURPOSE F.T.

YEARS

ASSESSOR #

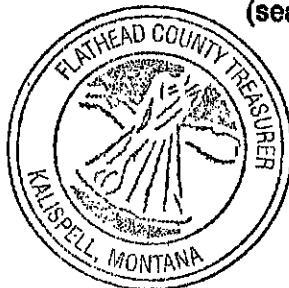
2018 THUR 2020

0451456

I hereby certify that there are no outstanding taxes on the property assigned the assessor numbers listed above, for the years indicated for each assessor number.

JAN 08 2021

J. Workman
Deputy Treasurer
(seal)





202100001283
Page: 4 of 9
Fees: \$34.50
1/11/2021 3:49 PM

202100007767
Page: 3 of 9
Fees: \$5.00
3/8/2021 10:20 AM

December 10, 2020

Jere Johnson
Environmental Health Consulting
4572 Whitefish Stage Road
Whitefish MT 59937

RE: Johnston Family Transfer
Flathead County
E.Q. #20-1377

Dear Mr Johnson:

The plans and supplemental information relating to the water supply, sewage, solid waste disposal, and storm drainage (if any) for the above referenced division of land have been reviewed as required by ARM Title 17 Chapter 36(101-805) and have been found to be in compliance with those rules.

Two copies of the Certificate of Subdivision Plat Approval are enclosed. The original is to be filed at the office of the county clerk and recorder. The duplicate is for your personal records.

Development of the approved subdivision may require coverage under the Department's General Permit for Storm Water Discharges Associated with Construction Activity, if your development has construction-related disturbance of one or more acre. If so, please contact the Storm Water Program at (406) 444-3080 for more information or visit the Department's storm water construction website at <http://www.deq.state.mt.us/wqinfo/MPDES/StormwaterConstruction.asp>. Failure to obtain this permit (if required) prior to development can result in significant penalties.

In addition, your project may be subject to Federal regulations relating to Class V injection wells. Please contact the United States Environmental Protection Agency regarding specific rules that may apply.

Your copy is to inform you of the conditions of the approval. Please note that you have specific responsibilities according to the plat approval statement primarily with regard to informing any new owner as to any conditions that have been imposed.

If you have any questions, please contact this office.

Sincerely,

Ashley Kroon

Ashley Kroon/Supervisor
Subdivision Review Section

AK/le

cc: County Sanitarian
County Planning Board (e-mail)
Owner



202100007767

Page: 4 of 9

Fees: \$5.00

3/8/2021 10:20 AM

STATE OF MONTANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
CERTIFICATE OF SUBDIVISION APPROVAL
(Section 76-4-101 et seq., MCA)

TO: County Clerk and Recorder
Flathead County
Kalispell, Montana

E.Q. #21-1377

THIS IS TO CERTIFY THAT the plans and supplemental information relating to the subdivision known as **Johnston Family Transfer**

Located in the NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 7, T.30N., R.20W., P.M.,M., Flathead County, Montana,

consisting of three parcels have been reviewed by personnel of the Water Quality Division, and,

THAT the documents and data required by ARM Chapter 17 Section 36 have been submitted and found to be in compliance therewith, and,

THAT the approval of the COS is made with the understanding that the following conditions shall be met:

THAT the parcel sizes as indicated on the COS to be filed with the county clerk and recorder will not be further altered without approval, and,

THAT Parcels A, B, and C shall each be used for an individual living unit and one 1 bedroom guest house, and,

THAT the proposed shared water systems serving the two living units on each lot will consist of a well drilled to a minimum depth of 25 feet constructed in accordance with the criteria established in Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM and the most current standards of the Department of Environmental Quality, and,

THAT data provided indicates an acceptable water source at a depth of approximately 160-200 feet, and,

THAT each proposed shared sewage treatment system will consist of a septic tank, effluent filter, dose tank/chamber, effluent pump and pressure dosed subsurface drainfield of such size and description as will comply with Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM, and the most current Flathead County Regulations for Sewage Treatment Systems, and,

THAT each shared subsurface drainfield shall have an absorption area of sufficient size to provide for an application rate of 0.4 gpd/sf, and,

THAT the replacement drainfield area shall be sized without reduction, and,

202100001263
Page: 5 of 9
Fees: \$34.50
1/11/2021 3:49 PM

Page 2
Johnston Family Transfer
Flathead County
E.Q. #21-1377



202100007767
Page: 5 of 9
Fees: \$5.00
3/8/2021 10:20 AM

THAT the bottom of the drainfield shall be at least four feet above the water table, and,

That the approved proposed locations of the shared drinking water supply wells, shared wastewater treatment system primary disposal and shared replacement areas shall be staked by the engineer or site evaluator prior to any construction on the lots, and,

THAT the stormwater design for each parcel requires the installation of a minimum of 10,000 square feet of lawn and landscaped area, site grading, ditches along both sides of the driveways and access roads, a retention pond or swales with the following minimum volume be constructed and located on each parcel in accordance with the approved plans:

Parcel A	755 cubic feet,
Parcel B	393 cubic feet,
Parcel C,	393 cubic feet, and,

THAT the operation and maintenance of water supply, sewage treatment system, and stormwater facilities shall be the responsibility of each lot owner, and,

THAT no sewage treatment system shall be constructed within 100 feet of the maximum highwater level of a 100 year flood of any stream, lake, watercourse, or irrigation ditch, nor within 100 feet of any domestic water supply source, and,

THAT water supply systems, sewage treatment systems and storm drainage systems will be located as shown on the approved plans, and,

THAT all sanitary facilities must be located as shown on the attached lot layout, and,

THAT the developer and/or owner of record shall provide each purchaser of property with a copy of the COS, approved location of water supply and sewage treatment system as shown on the attached lot layout, and a copy of this document, and,

THAT instruments of transfer for this property shall contain reference to these conditions, and,

THAT plans and specifications for any proposed sewage treatment systems will be reviewed and approved by the county health department and will comply with local regulations and ARM, Title 17, Chapter 36, Subchapters 3 and 9, before construction is started.

THAT departure from any criteria set forth in the approved plans and specifications and Title 17, Chapter 36, Sub-Chapters 1, 3, and 6 ARM when erecting a structure and appurtenant facilities in said subdivision without Department approval, is grounds for injunction by the Department of Environmental Quality.

202100001263
Page: 6 of 9
Fees: \$34.50
1/11/2021 3:49 PM

Page 3
Johnston Family Transfer
Flathead County
E.Q. #21-1377

202100007767
Page: 6 of 9
Fees: \$5.00
3/8/2021 10:20 AM

THAT pursuant to Section 76-4-122 (2)(a), MCA, a person must obtain the approval of both the reviewing authority under Title 76, Chapter 4, MCA, and local board of health officer having jurisdiction, before filing a subdivision plat with the county clerk and recorder.

YOU ARE REQUESTED to record this certificate by attaching it to the COS filed in your office as required by law.

DATED this 9th day of December, 2020.

SHAUN MCGRATH
DIRECTOR

By:

Deanne Kroon
Ashley Kroon, PE Supervisor
Engineering Bureau
Water Quality Division
Department of Environmental Quality



Owner's Name: Jesse Johnston

202100001263
Page: 7 of 9
Fees: \$34.50
1/11/2021 3:49 PM



202100001263
Page: 9 of 9
Fees: \$34.50
1/11/2021 3:49 PM

Item No.2.

202100007767
Page: 9 of 9
Fees: \$5.00
3/8/2021 10:20 AM

Environmental Health Checklist for New COS/Plat

Owner JOHNSTON

Surveyor MARQUARDT

Legal Description NE_{1/4} NE_{1/4} SEC 7, T30N, R30N

The following document must accompany this survey as required by the Montana Sanitation in Subdivisions Act.

☒ Parcels/Lots A, B, C subject to review. Montana Department of Environmental Quality (MDEQ) Certificate of Subdivision Approval is required.

☐ Municipal Facilities Exclusion Certification from MDEQ indicating that this subdivision is in compliance with the requirements of the Sanitation in Subdivision Act is required.

☐ Agricultural Use Covenant Documentation from the owner and the County Commissioners indicating that the covenant has been removed.

☐ No Health Department documents are required.

☐ Environmental Health review unable to be completed due to complexity of research or more information required.

Signed Wanda Juarez RS Date 9/23/20



U.S. Fish and Wildlife Service
National Wetlands Inventory

Rocky Top Cabins Subdivision



This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

- Lake
- Other
- Riverine

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

May 1, 2023

Wetlands

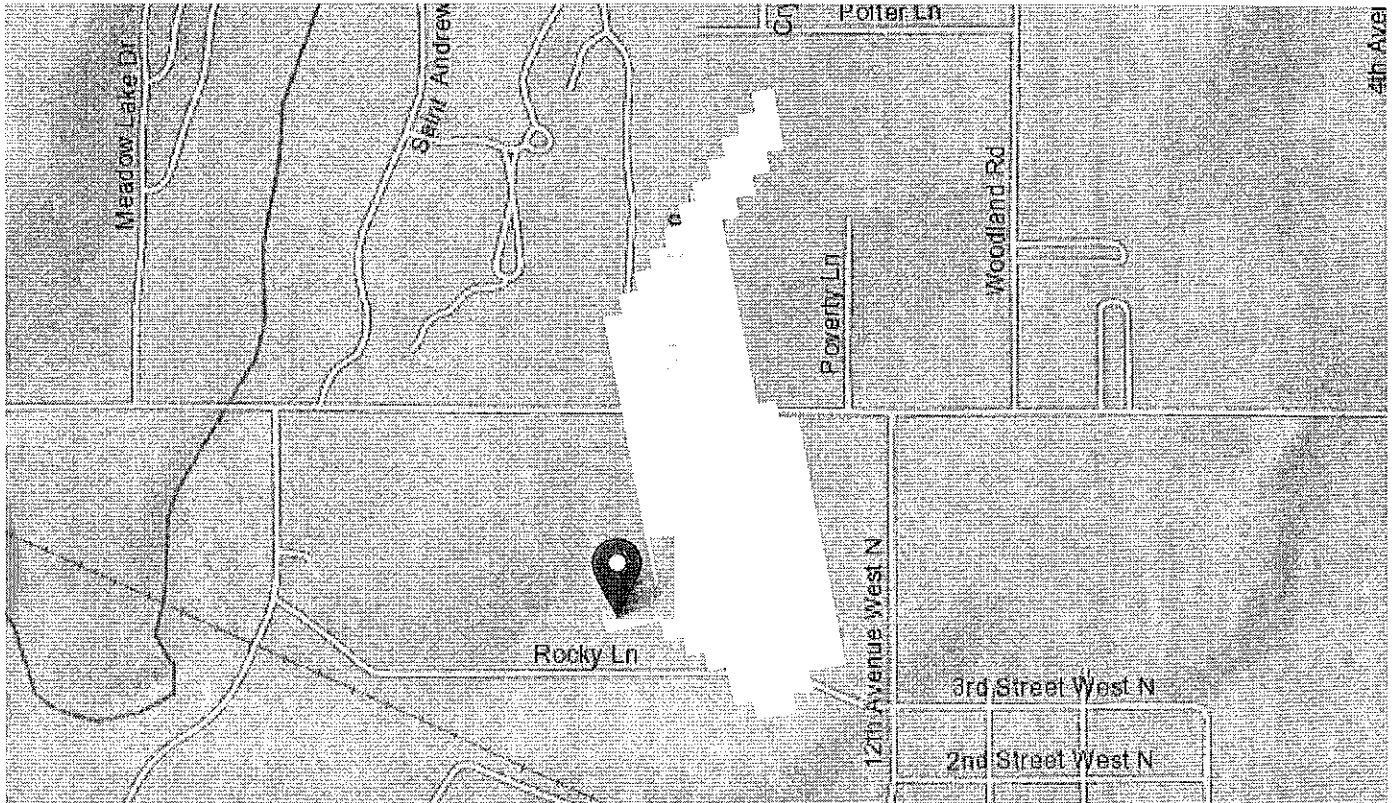
StreamStats Report Rocky Top Cabins

Region ID: MT

Workspace ID: MT20230501172628550000

Clicked Point (Latitude, Longitude): 48.38228, -114.20344

Time: 2023-05-01 11:26:52 -0600



+ Collapse All

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CONTDA	Area that contributes flow to a point on a stream	0.1	square miles
SLOP50_30M	Percent area with slopes greater than 50 percent from 30-meter DEM.	0	percent

➤ Seasonal Flow Statistics

Seasonal Flow Statistics Parameters [W Region LowFlow GLS 2015 5019G]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
CONTD	Contributing Drainage Area	0.1	square miles	6.4	2520
SLOP50_30M	Slopes_gt_50pct_from_30m_DEM	0	percent	1.87	67.5

Seasonal Flow Statistics Disclaimers [W Region LowFlow GLS 2015 5019G]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Seasonal Flow Statistics Flow Report [W Region LowFlow GLS 2015 5019G]

Statistic	Value	Unit
Jul_to_Oct_14_Day_5_Yr_Low_Flow	0.00484	ft ³ /s

Seasonal Flow Statistics Citations

McCarthy, P.M., Sando, Roy, Sando, S.K., and Dutton, D.M., 2016, Methods for estimating streamflow characteristics at ungaged sites in western Montana based on data through water year 2009: U.S. Geological Survey Scientific Investigations Report 2015-5019-G, 19 p. (<https://doi.org/10.3133/sir20155019>)

➤ Channel-width Methods Weighting

No method weighting results returned.

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

USGS Software Disclaimer: This software has been approved for release by the U.S. Geological Survey (USGS). Although the software has been subjected to rigorous review, the USGS reserves the right to update the software as needed pursuant to further analysis and review. No warranty, expressed or implied, is made by the USGS or the U.S. Government as to the

functionality of the software and related material nor shall the fact of release constitute any such warranty. Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.14.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

Part 1 – Application Supplements

r.) Evidence of suitability for new onsite wastewater treatment systems which include:

- i. Soil profile description(s) from a representative drain field site or sites identified on the vicinity map that complies with standards published by the Montana Department of Environmental Quality;
- ii. Demonstration that each soil profile contains a minimum of four feet of vertical separation distance between the bottom of the permeable surface of the proposed wastewater treatment system and a limiting layer;
- iii. In cases in which the soil profile or other information indicates that ground water is within five feet of the natural ground surface, evidence that the ground water will not exceed the minimum vertical separation distance.

GROUNDWATER MONITORING MEASUREMENT INSTRUCTIONS AND LOG

Item No.2.

Year 2020

JOHNSTON PROPERTY

Zone 3
Pre Subdivision X
Previously monitored
Yes No X

Septic Application

Date Registered		Date Returned											
Initial	Date	Site # 1			Site # 2			Site # 3			Site #		
	MM/DD/YY	A	B	A-B	A	B	A-B	A	B	A-B	A	B	A-B
JJ	4-3-20	120	22	98"	120	24	96"	120	24	96"			
JJ	4-10-20	120	22	98"	120	24	96"	120	24	96"			
JJ	4-17-20												
JJ	4-24-20												
JJ	5-3-20												
JJ	5-10-20												
JJ	5-17-20												
JJ	5-24-20												
JJ	6-1-20												
JJ	6-7-20												
JJ	6-14-20												
JJ	6-21-20												
JJ	6-28-20												
		DRY	98"		DRY	96"		DRY	96"				

SEE REVERSE SIDE FOR MONITORING PIPE INSTALLATION AND MONITORING GUIDELINES

A measurement must be taken weekly (at least one measurement every 7 days). Less frequent monitoring may void monitoring for the current period and result in monitoring the site through the next groundwater monitoring season. I hereby certify that the above monitoring measurements and information are true, complete and correct to the best of my knowledge.

GWM February 2020

RECEIVED
OCT 15 2020
MT DEPT OF PUBLIC WATER
& SUBDIVISION

GROUNDWATER MONITORING RESULTS

Kiser, Phillip

LEGAL DESCRIPTION Tr 1 Sec. 1 Twn. 50 Rng. 40

[illegible]

SEE REVERSE FOR MONITORING PIPE INSTALLATION AND MONITORING GUIDELINES

Monitoring for this parcel shall be conducted from Mar 27 through June 30.
The following monitoring schedule will be required: Preferably once each week but no less often than once every 10 days. Less frequent monitoring may void monitoring conducted and result in monitoring the site through the next groundwater monitoring season.

I hereby certify that the above monitoring measurements and information are true, complete and correct to the best of my knowledge.

Owner Signature (sign upon completion of monitoring)

Date _____

TEST HOLE-SOILS LOG

PROJECT/OWNERS NAME JohnstonLEGAL DESCRIPTION 7-30-20PERFORMED BY Jere Johnson, R.S.TRACT/PARCEL/LOT# 1

DEPTH (FT)	TEST PIT	DESCRIPTION	COMMENTS
0	0- 6" Topsoil/ silt loam		
1			
2	Gravelly silt loam 0.4	Subangular, med brown with gray interbeds, few stones	No sign of groundwater or bedrock ✓
3			
4			
5			
6			
7			
8			
8	96"		Bottom of test hole
9			
10			
11			
12			

16

TEST HOLE-SOILS LOG

PROJECT/ OWNERS NAME JohnstonLEGAL DESCRIPTION 7-30-20PERFORMED BY Jere Johnson, R.STRACT/PARCEL/LOT# B

DEPTH (FT)	TEST PIT	DESCRIPTION	COMMENTS
0	0- 4" Topsoil/ silt loam		
1			
2	Gravelly silt loam 0.4	Subangular, med brown, few stones	No sign of groundwater or bedrock ✓
3			
4			
5			
6			
7			
8	96"		Bottom of test hole
9			
10			
11			
12			

17

TEST HOLE-SOILS LOG

PROJECT/ OWNERS NAME JohnstonLEGAL DESCRIPTION 7-30-20PERFORMED BY Jere Johnson, R.STRACT/PARCEL/LOT# 3

DEPTH (FT)	TEST PIT	DESCRIPTION	COMMENTS
0	0- 8" Topsoil/ silt loam		
1			
2	Gravelly silt loam	Subangular, med brown	No sign of groundwater or bedrock
3			
4	OK		
5			
6			
7			
8	96"		Bottom of test hole
9			
10			
11			
12			

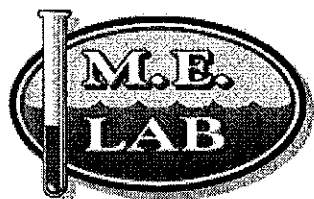
Part 1 – Application Supplements

s.) For new water supply systems, unless storage tanks are proposed, evidence of adequate water availability which includes information from:

Montana

- i. Well logs or testing of onsite or nearby wells;
- ii. Published hydro-geological reports;

iii.	As otherwise specified by rules adopted by the Montana Department of Environmental Quality.
------	---



ANALYTICAL REPORT

Item No.2.

Montana Environmental Laboratory LLC

1170 N. Meridian Rd., P.O. Box 8900, Kalispell, MT 59904-1900

Phone: 406-755-2131 Fax: 406-257-5359 www.melab.us

Buck Breckenridge
Breckenridge Surveying & Mapping, PLLC
2302 Hwy 2 East, Ste #6
Kalispell, MT 59901

PWS ID:

Project: 269 Rocky Cliff Ln, Columbia Falls

Client Sample ID: Sink

Matrix: DRINKING WATER

Collected: 04/03/2023 11:38

Lab ID: 2302737-01

Received: 04/03/2023 13:30

Analyses

	<u>Result</u>	<u>Units</u>	<u>RL</u>	<u>MCL</u>	<u>Method</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>
Nitrate + Nitrite, Total	1.59	mg/L	0.01	10	E353.2		04/04/2023 13:14	NB

Coliform

	<u>Result</u>	<u>Units</u>	<u>RL</u>	<u>MCL</u>	<u>Method</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>
Coliform Bacteria	Absent	P/A	1	1	SM9223B	04/03/2023 14:00	04/04/2023 9:00	BSB
Coliform, Escherichia - P/A	Absent	P/A	1	1	SM9223B	04/03/2023 14:00	04/04/2023 9:00	BSB

Other Options

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 View scanned well log (8/7/2009 1:07:49 PM)

MT DEQ PUBLIC WATER
& SUBDIVISIONS

Part 1 – Application Supplements

t.) Evidence of sufficient water quality in accordance with rules adopted by the Montana Department of Environmental Quality;



ANALYTICAL REPORT

Montana Environmental Laboratory LLC
 1170 N. Meridian Rd., P.O. Box 8900, Kalispell, MT 59904-1900
 Phone: 406-755-2131 Fax: 406-257-5359 www.melab.us

Jere Johnson
 Environmental Health Consulting
 jdj@bresnan.net

PWS ID:
 Project Rocky Ln.

Client Sample ID: Well	Lab ID: 2008272-01
Matrix: DRINKING WATER	Received: 09/10/2020 12:00
Collected: 09/10/2020 9:00	

Analyte	Result	Units	MDL	MCL	Method	Prepared	Analyzed	Analyst
Conductivity	494	umho/cm	0.1		SM2610B		09/17/2020 18:45	BLW
Nitrate + Nitrite, Total	0.34	mg/L	0.01	10	E353.2		09/17/2020 9:14	GDM

MCL = Maximum Contaminant Limit ND = Not Detected
 RL = Reporting Limit

MEL REVIEW:

Page 1 of 3

Other Options

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[View hydrograph for this site](#)
[View field visits for this site](#)

Section 7: Well Test Data

Total Depth: 157
Static Water Level: 110
Water Temperature:

Bailer Test *

18 gpm with feet of drawdown after 2 hours.
Time of recovery hours.
Recovery water level feet.
Pumping water level 133 feet.

Township	Range	Section	Quarter Sections
30N	20W	7	NE¼ NE¼ NE¼ NE¼
County	Geocode		

Latitude	Longitude	Geomethod	Datum
48.3844	-114.1975	MAP	NAD27

3119 DEM NAVD88 8/12/2015

Addition	Block	Lot
----------	-------	-----

* During the well test the discharge rate shall be as uniform as possible. This rate may or may not be the sustainable yield of the well. Sustainable yield does not include the reservoir of the well casing.

Section 8: Remarks

PUMP CYCLING. GOT PWL AT END OF CYCLE SAMPLING PT-
FAUCET ON BACK OF HOUSE

Section 9: Well Log

Geologic Source

112DRFT - GLACIAL DRIFT

Section 3: Proposed Use of Water

DOMESTIC (1)

Section 4: Type of Work

Drilling Method: CABLE

Status: NEW WELL

Section 5: Well Completion Date

Date well completed: Tuesday, April 12, 1977

Section 6: Well Construction Details

There are no borehole dimensions assigned to this well.

Casing

From	To	Diameter	Wall Thickness	Pressure Rating	Joint	Type
0	157	6				STEEL

Completion (Perf/Screen)

From	To	Diameter	# of Openings	Size of Openings	Description
157	157.6				OPEN BOTTOM

Annular Space (Seal/Grout/Packer)

There are no annular space records assigned to this well.

Driller Certification

All work performed and reported in this well log is in compliance with the Montana well construction standards. This report is true to the best of my knowledge.

Name:

Company: WEBER

License No: WWC-181

Date 02/06/2022

Completed:

Part 1 – Application Supplements

u.) A preliminary analysis of potential impacts to ground water quality from new wastewater treatment systems, using as guidance rules adopted by the Board of Environmental Review pursuant to 75-5-301 and 75-5-303, MCA related to standard mixing zones for ground water, source specific mixing zones, and non-significant changes in water quality. The preliminary analysis may be based on currently available information and must consider the effects of overlapping mixing zones from proposed and existing wastewater treatment systems within and directly adjacent to the subdivision. The subdivider may perform a complete nondegradation analysis in the same manner as is required for an application that is reviewed by the Department of Environmental Quality;

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

NITRATE SENSITIVITY ANALYSIS

Model Updated 01/24/96

SITE NAME: Kiser
COUNTY: Flathead
LOT #: Parcel A
NOTES:

<u>VARIABLES</u>	<u>DESCRIPTION</u>	<u>VALUE</u>	<u>UNITS</u>
K	Hydraulic Conductivity	434.0	ft/day
I	Hydraulic Gradient	0.003	ft/ft
D	Depth of Aquifer (usually constant)	16.4	ft
L	Mixing Zone Length (see ARM 17.30.517(1)(d)(viii))	100	ft
Y	Width of Drainfield Perpendicular to Ground Water Flow	75	ft
Ng	Background Nitrate (as Nitrogen)	1.10	mg/L
Nr	Nitrate (as Nitrogen) in Precipitation (usually constant)	1.0	mg/L
Ne	Nitrates in Effluent (50 for conventional; 24 for level II)	50	mg/L
#I	Number of Single Family Homes on the Drainfield	1.0	
QI	Quantity of Effluent per Single Family Home (constant)	26.70	ft ³ /day
P	Precipitation	16.6	in/year
V	Percent of Precipitation Recharging Ground Water (usually constant)	0.20	

EQUATIONS

W	Width of Mixing Zone Perpendicular to Ground Water Flow = (0.175)(L)+(Y)	92.50	ft
Am	Cross Sectional Area of Aquifer Mixing Zone = (D)(W)	1517.00	ft ²
As	Surface Area of Mixing Zone = (L)(W)	9250.00	ft ²
Qg	Ground Water Flow Rate = (K)(I)(Am)	1975.13	ft ³ /day
Qr	Recharge Flow Rate = (As)(P/12/365)(V)	7.00	ft ³ /day
Qe	Effluent Flow Rate = (#I)(QI)	26.70	ft ³ /day

SOLUTION

Nt	Nitrate (as Nitrogen) Concentration at End of Mixing Zone = ((Ng)(Qg)+(Nr)(Qr)+(Ne)(Qe)) / ((Qg)+(Qr)+(Qe))	1.75	mg/L
----	--	------	------

BY: Rebecca Weaver
 DATE: September 5, 2002

G:\WPB\SUBDIV\WORKSPAC\WDEGWSA.XLS

REV. 12/98

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY

PHOSPHOROUS BREAKTHROUGH ANALYSIS

SITE NAME: Kiser
COUNTY: Flathead
LOT #: Parcel B
NOTES: no nearby surface water

<u>VARIABLES</u>	<u>DESCRIPTION</u>	<u>VALUE</u>	<u>UNITS</u>
Lg	Length of Primary Drainfield as Measured Perpendicular to Ground Water Flow	75.0	ft
L	Length of Primary Drainfield's Long Axis	75.0	ft
W	Width of Primary Drainfield's Short Axis	20.0	ft
B	Depth to Limiting Layer from Bottom of Drainfield Laterals*	5.0	ft
D	Distance from Drainfield to Surface Water	2000.0	ft
T	Phosphorous Mixing Depth in Ground Water (0.5 ft for coarse soils, 1.0 ft for fine soils)**	0.5	ft
Ne			
Sw	Soil Weight (usually constant)	100.0	lb/ft3
Pa	Phosphorous Adsorption Capacity of Soil (usually constant)	200.0	ppm
#l	Number of Single Family Homes on the Drainfield	1.0	
<u>CONSTANTS</u>			
Pl	Phosphorous Load per Single Family Home (constant)	6.44	lbs/yr
X	Conversion Factor for ppm to percentage (constant)	1.0E+06	
<u>EQUATIONS</u>			
Pt	Total Phosphorous Load = (Pl)(#l)	6.44	lbs/yr
W1	Soil Weight under Drainfield = (L)(W)(B)(Sw)	750000.0	lbs
W2	Soil Weight from Drainfield to Surface Water = [(Lg)(D) + (0.0875)(D)(D)] (T)(Sw)	25000000.0	lbs
P	Total Phosphorous Adsorption by Soils = (W1 + W2)[(Pa)/(X)]	5150.0	lbs
<u>SOLUTION</u>			
BT	Breakthrough Time to Surface Water = P / Pt	799.7	years

BY:
DATE: September 5, 2002

NOTES: * Depth to limiting layer is typically based on depth to water in a test pit or bottom of a dry test pit minus two feet to account for burial depth of standard drainfield laterals.
** Material type is usually based on test pit. A soil that contains more than 35% silt and clay sized particles is considered fine grained.

REV. 04/2000

Part 1 – Application Supplements

v.) A drawing of the conceptual lot layout at a scale no smaller than 1" to 200'.



XXXXXXXXXX

PUMP DE

Item No.2.

Owner: Johnston
 Address: Tamarack
 Legal: A, B and C

Designer: Jere Johnson
 Tel: 270-3635
 Installer: _____
 Tel: _____

3 bed main 350
 2 bed guest 275

Design Data Required

0.12 inch (minimum 1/8th inch)
5 ft on centers (maximum 5 feet)
6 ft (> 2.3 ft for 3/16 in. or larger orifices, > 5 ft for orifices < 3/16 in.)
0.47 gal/min (from orifice flow chart)

Orifice Dia
 Orifice Spa
 Pressure h
 Orifice Disc
 Length of F
 Diameter of
 Pump Char
 Elevation o
 Daily Sewa
 Allowable S

LFM 70 ft.
 DFM 2 inches
 E1 0 ft.
 E2 10 ft.
 QS/ 625 gal / day
 QL 0.4 gpd/sq.ft.

Level Two treatment

x for yes ☐

Trench type:
 Trench width

ROCK (x for yes)
 select 2

x
3

CHAMBER
 Effec

*Infiltrator = 2.20 ft.

*ADS = 2.20 ft.

Design calculations

Required inf
 Total length

(sq.ft.) Rock 1563 Chamber 1172
521

Number of
 Total Disch
 Forcemain Friction Factor
 Forcemain
 Elevation H
 Total Dynar

NO = LL/OS 108
 Qt = QO x NO 50 gal/min
 F 5.45 ft/100 ft
 (F x LFM/1) 3.81 ft.
 HG = E2-E1 10 ft.
19.81

18 each lateral

Required Pump

Capable of p

50 gal/min against a h
 Pump n Myers Model ME 50 20 feet

Actual Drainfield Design:

Numt

	L1	L2	L3	L4	L5
<u>6</u> Length e	<u>87</u>	<u>87</u>	<u>87</u>	<u>87</u>	<u>87</u>
Lateral elevation					
	L7	L8	L9	L10	L11
Length					
Elevation					

Control Flr

Dose Volu

Laterals-

Pipe type/class SCH 40 Int. Dia. 1.38 in. Pipe Vol. 0.0776994 gal/ ft 1.25
 Total length of l: 522 ft. 1.5
 Total vol in laterals (VL) 40.56 2

Forcemain

Pipe type/class SCH 40 Int. Dia. 2.067 in. Pipe Vol. 0.1743174 gal/ ft
 Total length forc 70 ft

Total vol. in l

12.20 gal, (VFM)

(5x VL) + v

203 + 12 = 215 gal

Pump Cham

264 gal / ft

Minimum Do

215 gal

Upper (pum)

0.81 ft (D/V)

= 10 in. above "pump off" float

Control & Al

Rhombus

PLEASE PROVIDE A SKETCH OF SYSTEM LAYOUT AND PROFILE ON BACK OF THIS SHEET

file: Pump hyd design wksht 5-5-08-computer.xls

DESIGN WORKSHEET - 5/5/08

XXXXXXXXXX

Owner: Johnston
 Address: Tamarack
 Legal: A. B and C

Designer Jere Johnson
 Tel: 270-3635
 Installer
 Tel:

Design Data Required

Orifice Diameter (OD) 5/32 inch (minimum 1/8th inch)
 Orifice Spacing (OS) 5 ft on centers (maximum 5 feet)
 Pressure head, first orifice (HO) 6 ft (> 2.3 ft for 3/16 in. or larger orifices, > 5 ft for orifices < 3/16 in.)
 Orifice Discharge Rate (QO) 0.73 gal/min (from orifice flow chart)
 Length of Force Main (LFM) 70 ft.
 Diameter of Force Main 2 inches
 Pump Chamber Low-Level (pump "off") elevation E1 0 ft.
 Elevation of Upper Lateral E2 10 ft.
 Daily Sewage Volume QS/ 550 gal / day Level Two treatment
 Allowable Soil Loading Rate QL 0.4 gpd/sq.ft. x for yes ☐
 Trench type: ROCK (x for yes) x CHAMBER
 Trench width: select 2 or 3 ft 3 Effective width* *Infiltrator = 2.20 ft.
 *ADS = 2.20 ft.

Design calculations

Required Infiltration Area (sq.ft.) Rock 1375 Chamber 1031
 Total length of laterals 458 #DIV/0!
 =
 Number of Orifices NO = LL/OS 90 18 each lateral
 Total Discharge Rate Qt = QO x NO 66 gal/min
 Forcemain Friction Factor F 8.87 ft/100 ft
 Forcemain Headloss (F x LFM/100) 6.21 ft.
 Elevation Head (gravity) HG = E2-E1 10 ft.
 Total Dynamic Head (HG + HFM + HO), 22.21

Required Pump

Capable of pumping at least 66 gal/min against a head of 22 feet
 Pump make Myers Model ME 50

Actual Drainfield Design:

	L1	L2	L3	L4	L5	L6
Number of Laterals <u>5</u> Length each Lateral	<u>92</u>	<u>92</u>	<u>92</u>	<u>92</u>	<u>92</u>	
Lateral elevation						
	L7	L8	L9	L10	L11	L12
Length						
Elevation						

Control Float Settings

Dose Volume
 Laterals-
 Pipe type/clas SCH 40 Int. Dia. 1.38 in. Pipe Vol. 0.0777 gal/ ft 1.25 1.38
 Total length of laterals (L) 460 ft. 1.5 1.61
 Total vol in laterals (VL) 35.74 2 2.067
 Forcemain
 Pipe type/clas SCH 40 Int. Dia. 2.067 in. Pipe Vol. 0.17432 gal/ ft
 Total length forcemain 70 ft
 Total vol. in forcemain 12.20 gal, (VFM)
 (5x VL) + VFM = 179 + 12 = 191 gal
 Pump Chamber Volume (V) 132 gal / ft
 Minimum Dose Volume (D) 191 gal
 Upper (pump on) float should be 1.45 ft (D/V) = 17 in. above "pump off" float
 Control & Alarm (make & model) Rhombus

PLEASE PROVIDE A SKETCH OF SYSTEM LAYOUT AND PROFILE ON BACK OF THIS SHEET

JOHNSTON FTPUMP CYCLEDuration

$$191 \text{ gal}/66 \text{ gpm} = 2.9 \text{ min} < 15 \text{ min, OK}$$

VARIATION ACROSS LATERALS

$$66 \text{ gpm} / 10 \text{ lat} = 6.6 \text{ gpm (center manifold)}$$

Hazen-Williams

$$H_f = 10.44 (L) \frac{(\text{gpm})^{1.85}}{(C)^{1.85} (d \text{ in})^{4.865}}$$

$$H_f = 10.44 (46) \frac{(6.6 \text{ gpm})^{1.85}}{(130)^{1.85} (1.25)^{4.865}}$$

$$H_f = 480 \frac{33}{24103} = .653 \text{ ft}$$

VARIATION ORIFICE FLOW

$$V = C_v \sqrt{2(g)(h)} = 0.6 \sqrt{2(32.2)(6)} = 11.79 \text{ f/s}$$

$$Q = VA \quad A = (1/8/2/12)^2 \quad A = 0.000027 \text{ sf}$$

$$Q = 11.79 \text{ f/s} (0.000027 \text{ sf}) = .00032 \text{ cf/s}$$

$$.00032 \text{ cf/s} \times 448.83 = 0.142 \text{ gpm}$$

$$V = 0.6 \sqrt{2(32.2)(6-.653)} = 11.13 \text{ f/s}$$

$$Q = 11.13 \text{ f/s} (0.000027 \text{ sf}) = .0003 \text{ cf/s}$$

$$.0003 \text{ cf/s} \times 448.83 = 0.134 \text{ gpm}$$

$$\% \text{ loss} = (0.142 - 0.134)/0.134 = .059 (5.9\%) < 10\%, \text{ OK}$$

3 BEDROOM SFR + 1 BEDROOM GUESTHOUSE

Use 2000 gallon septic tank with 500 gallon pump chamber (DEQ specifications)

25% TANK RESERVE CAPACITY DETERMINATION

132 gallons; in 500 gallon pump chamber
Design volume is 550 gallons
The float "on" switch is set at 15" and "off" is
17" above on switch) from bottom of tank

26% of 550 gallons = 138 gallons 254 gallons ÷ 11 = 52.2 or 7"
The high water alarm is set at 35'. 35' + 7" = 42" in a 500 gallon
dosing tank provides a 25% reserve capacity. (MAX CAPACITY IS

NOTE

श्री

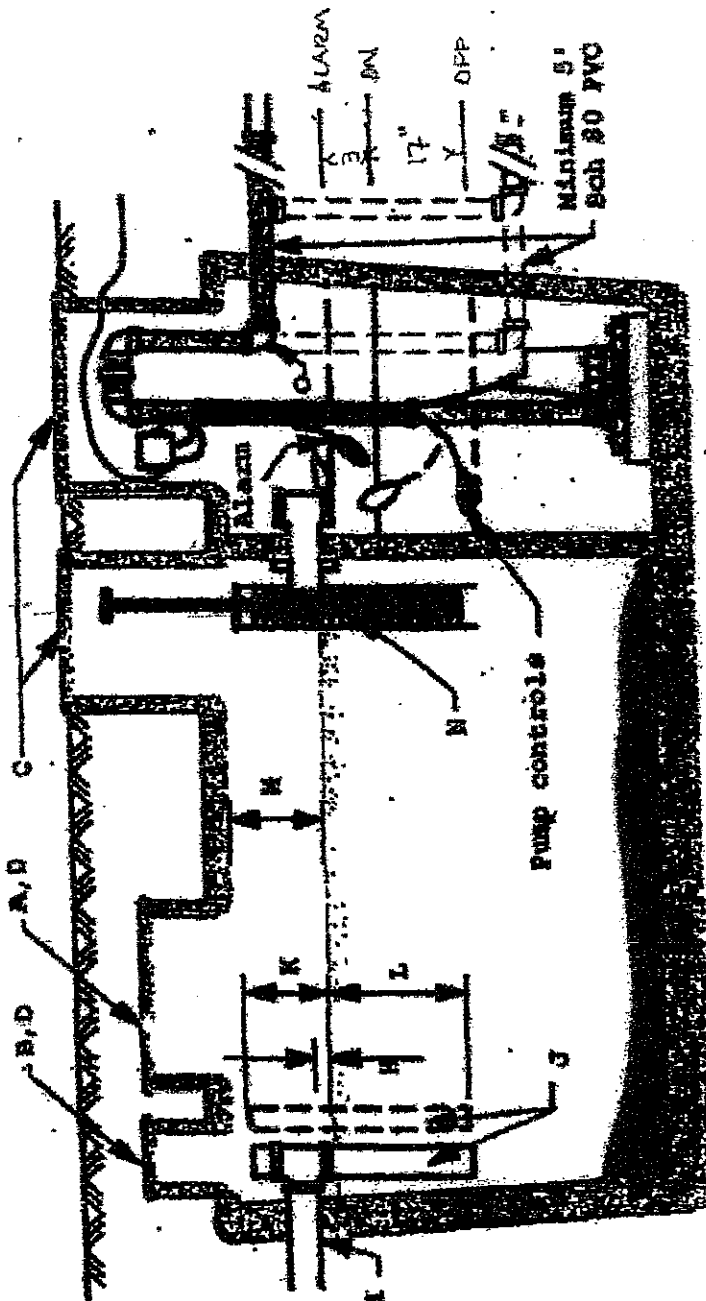
ORENCO BIOTUBE FT SERIES, OR EQUAL

CONTROLS:

ORENCO MVP SIMPLEX, OR EQUAL

ALARM:

ORENCO 9-VDC LIQUID LEVEL ALARM, OR EQUAL

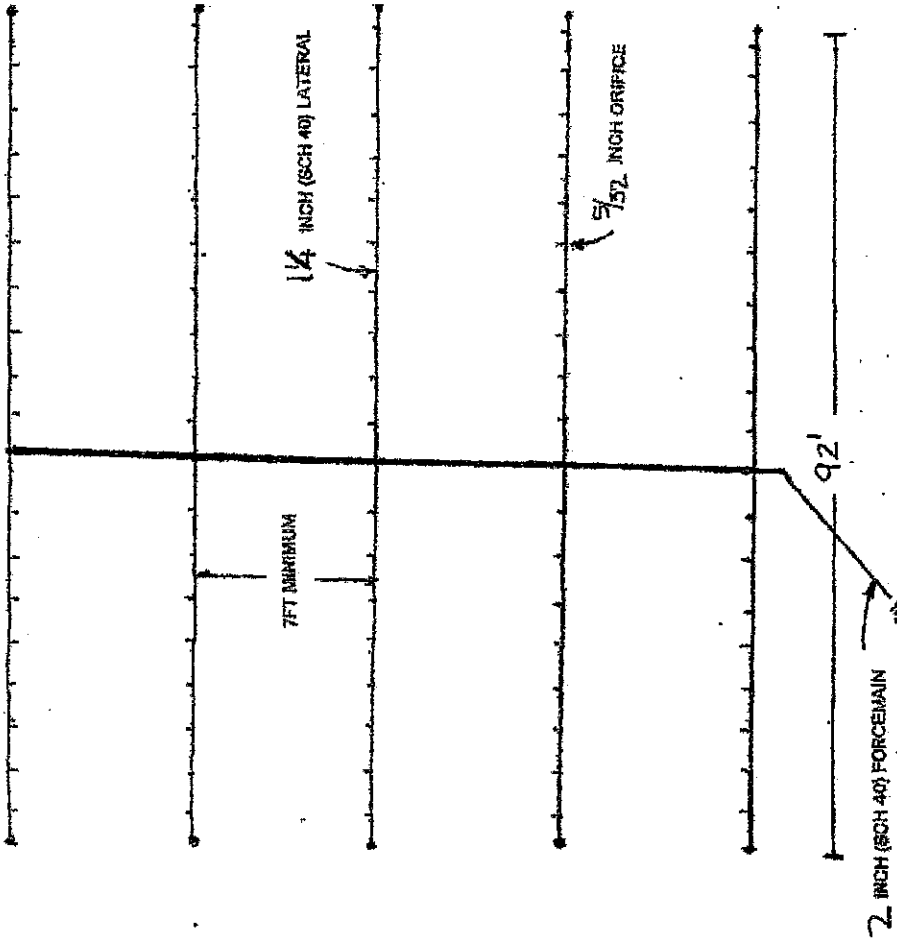


● 廣東省城

- NOTES:
- A - A minimum 1.75 sq.ft. access shall be provided into each compartment of the tank.
 - B - Access ports at least 6" in diameter must be located over inlets.
 - C - Access ports over pumps & filters must be large enough for maintenance and the riser must extend to the surface
 - D - Risers must extend to within 8" of the finished ground surface.
 - E - If access lids are concrete, they must be at least 2" thick.
 - F - Tank top must be reinforced concrete at least 3" thick.
 - G - Tank walls & bottom must be 3" reinforced or 6" unreinforced concrete.
 - H - Inlet invert must be at least 3" above outlet invert.
 - I - The inlet must be at least 4" diameter.
 - J - Optional concrete or PVC man baffle.
 - K - PVC man or baffle must extend at least 7" above liquid level.
 - L - Bottom of man or baffle must extend to below the 90% full tank liquid level.
 - M - Air space above the liquid level must be at least 15% of the tank liquid capacity.
 - N - All final effluent must pass through an approved filter.
 - O - 3/16" drain/vent hole

DRAINFIELD LATERAL DETAIL

no scale



TO DOSING CHAMBER

+ 90 5/32 ORIFICES (18 EACH LATERAL)

+ TWO END ORIFICES TO BE DRILLED ON TOP OF PIPE WITH SHIELD

+ SEE DETAIL FOR LATERAL END TERMINATION

Jere Johnson, R.S.
Environmental Health Consulting
4572 Whitefish Stage Road
Whitefish MT 59957

TANK/DOSING CHAMBER SIZE: 1000gal + 500gal
PUMP: 1/2 HP 50
CONTROL SETTINGS: 17'
ORIFICE SPACING: 5 FT. CENTERS
NUMBER OF ORIFICES EACH (FULL) LATERAL LENGTH: 18

JOHNSON

Part 1 – Application Supplements

w.) Info regarding the disposition of water rights.

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

Water Resources Division - Kalispell Regional Office

STEVE BULLOCK, GOVERNOR



STATE OF MONTANA

PHONE: (406) 752-1775
FAX: (406) 752-2643

655 TIMBERWOLF PARKWAY, SUITE 1
KALISPELL, MT 59901

September 30, 2020

Jere Johnson
Environmental Health Consulting
4572 Whitefish Stage Road
Whitefish, MT 59937

Re: KRO 20-194 DNRC Water Right Review of Johnston Family Transfer on Parcel A COS 15461 (2003)

Dear Jere:

The purpose of this letter is to respond to your request for DNRC review of water right permit exceptions under MCA 85-2-306 3 (iii) for the referenced project in accordance with ARM 17.36.103(1)(s). Individual wells are proposed on three parcels. DNRC has no record of a water right on the property being divided.

The Applicant estimates 1.185 AF/year will be needed at a pumping rate not to exceed 35 GPM for 2 households and ¼ acre of lawn and garden on each parcel. Unallocated volumes available for additional future appropriations under the water right permit exceptions of MCA 85-2-306 3 (iii) are shown below.

	Description - Parcel, Lot or Tract	Filed Existing Groundwater Certificate	MCA 85-2-306 3 (iii) 10 AF/yr Allocation	Annual Volume Acre-Feet/year				Total Volume
				Domestic	Lawn & Garden	Total	Remaining Available	
Proposed Use	Parcel A		2	0.560	0.625	1.185	0.815	10.00
Proposed Use	Parcel B		2	0.560	0.625	1.185	0.815	
Proposed Use	Parcel C		6	0.560	0.625	1.185	4.815	
			Total	3.556		6.445	10.00	

Based on the information provided in your letter requesting DNRC review of water rights received on 9/23/2020, the parcels and proposed well locations shown on the provided map do fit the current rules and laws pertaining to the filing of a water right using a DNRC Form 602, Notice of Completion of Groundwater Development. As noted on form 602, the pump rate must not exceed 35 gpm and the annual volume of water pumped must not exceed 10 acre-feet per well. If either a well's flow rate exceeds 35 gpm or the annual volume pumped exceeds 10 acre-feet then a water right permit must be applied for on DNRC form 600, prior to placing the water to a beneficial use. DNRC form 602, Notice of Completion of Groundwater Development, are to be filed within 60 days of the water being put to beneficial use.

RECEIVED

OCT 15 2020

MT DEPT OF NATURAL RESOURCES
KALISPELL
44003

In Clark Fork Coalition, et. al. v. DNRC, et. al., 2016 MT 229, 384 Mont. 503, 380 P.3d 771, the Montana Supreme Court concluded that the definition of "combined appropriation" in Admin. R. Mont. 36.12.101(13) was invalid. The Court reinstated the Department's 1987 Rule defining "combined appropriation" as: "An appropriation of water from the same source aquifer by means of two or more groundwater developments, the purpose of which, in the department's judgment, could have been accomplished by a single appropriation. Groundwater developments need not be physically connected nor have a common distribution system to be considered a "combined appropriation." They can be separate developed springs or wells to separate parts of a project or development. Such wells and springs need not be developed simultaneously. They can be developed gradually or in increments. The amount of water appropriated from the entire project or development from these groundwater developments in the same source aquifer is the "combined appropriation."

Under this Rule, the Department interprets subdivisions that are pending before the Department of Environmental Quality for approval on October 17, 2014 or filed after that date to be a single project that can be accomplished by a single appropriation. Consequently, all wells in such a subdivision will be considered a "combined appropriation" for the purposes of Mont. Code Ann. 85-2-306. The only exception to this interpretation is that a subdivision which has received preliminary plat approval prior to October 17, 2014 will not be considered a project under the "combined appropriation" 1987 Rule; individual lots will still be evaluated under the 1987 Rule at the time of an application to the Department. 2015 Mont. Laws § 1, Ch. 221.

This letter does not serve as a pre-approval for a water right. The information above is based upon the information provided in your request. Prior to issuance of any water right, the owner must first make an application or notice to the DNRC for a water right. Applications are processed on a first-come, first-served basis. To ensure timely processing of your water right, please contact DNRC at your earliest convenience to discuss filing requirements.

A copy of this letter and your request for DNRC review will be provided to DEQ and Flathead County.

Sincerely,

Marc Pitman, P.E, CFM
Regional Engineer

cc: DEQ, Leata English – via email only
Flathead County, Wendee Jacobs – via email only
Flathead County, Kate Cassidy – via email only

Part 1 – Application Supplements

x.) An adjoiners list of all tracts, lots, or land parcels adjoining the proposed subdivision.

Part 1 – Application Supplements

y.) A draft Late Comers Agreement

Part 1 – Application Supplements

z.) Driving Directions.

**130 6th St W
to 269 Rocky Ln**

5 min
1.5 miles

IRS reimbursement: **\$0.85**



Head toward 2nd Ave W on 6th St W. Go for 157 ft.

Then 0.03 miles



Turn right onto 2nd Ave W. Go for 0.4 mi.

Then 0.44 miles



Turn left onto 1st Street West N. Go for 0.3 mi.

Then 0.32 miles



Turn slightly right onto 9th Avenue West N. Go for 0.1 mi.

Then 0.14 miles



Turn slightly left onto 3rd Street West N. Go for 0.3 mi.

Then 0.31 miles

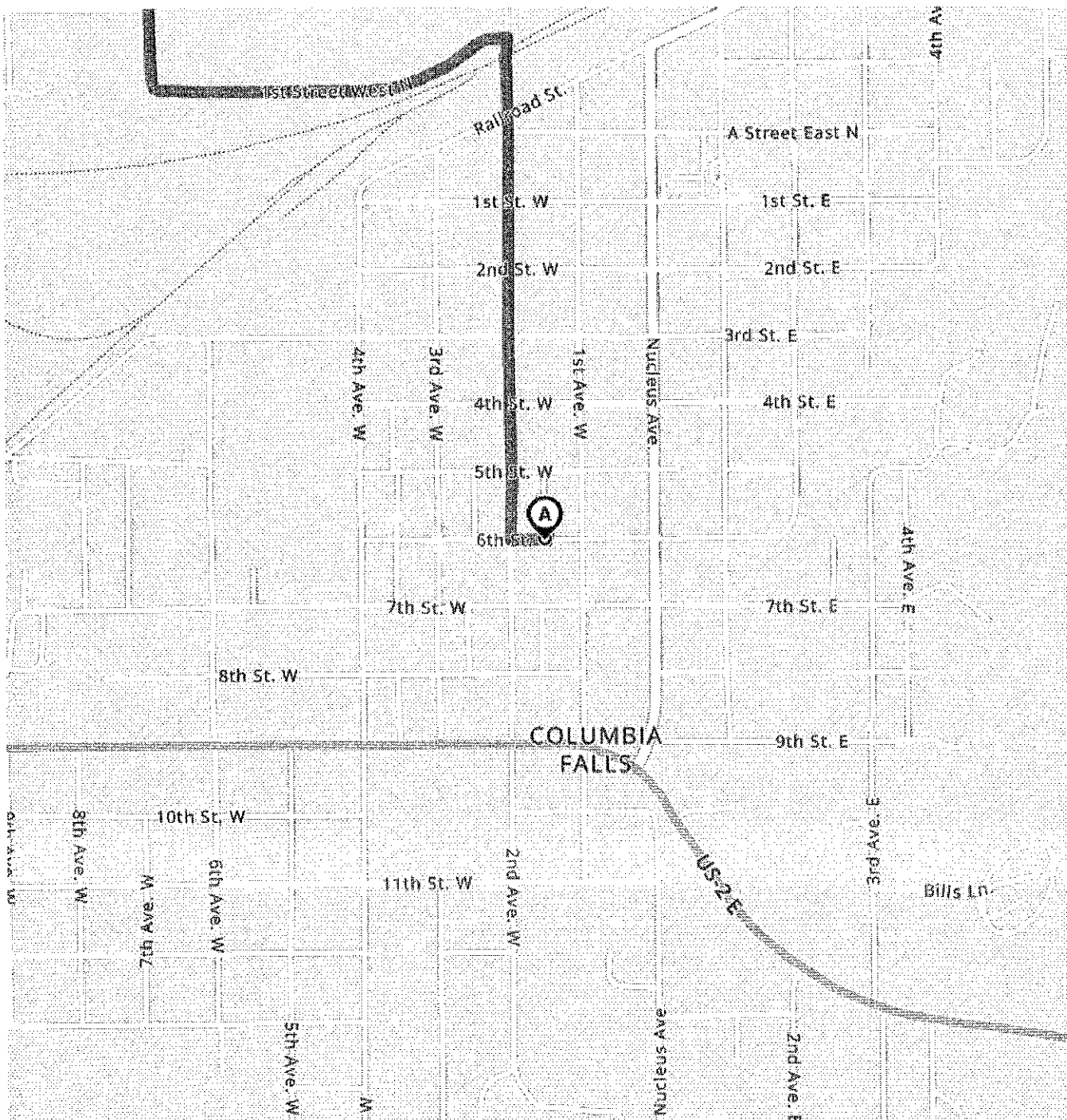


Continue on Rocky Ln. Go for 0.2 mi.

Then 0.23 miles



269 Rocky Ln
Columbia Falls, MT 59912-8820



Part 1 – Application Supplements

aa.) One or more site location maps on 11X17 paper.

Part 1 – Application Supplements

bb.) Description of any existing or proposed stream bank or shore line alterations

Part 1 – Application Supplements

cc.) Description of easements or R/W's for utilities, or other purposes on or adjacent to proposed sub.

Part 1 – Application Supplements

dd.) A request for any/all variance(s) to these Regs.

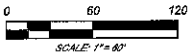
Part 1 – Application Supplements

Part 1 – Application Supplements

BY: BRECKENRIDGE SURVEYING AND MAPPING, PLLC
2302 US HIGHWAY 2 EAST, STE 6
KALISPELL, MT 59901
(406) 752-3539
WM. BRECKENRIDGE, PLS
DARREN R. BRECKENRIDGE, PLS
LUCAS BRECKENRIDGE, PLS

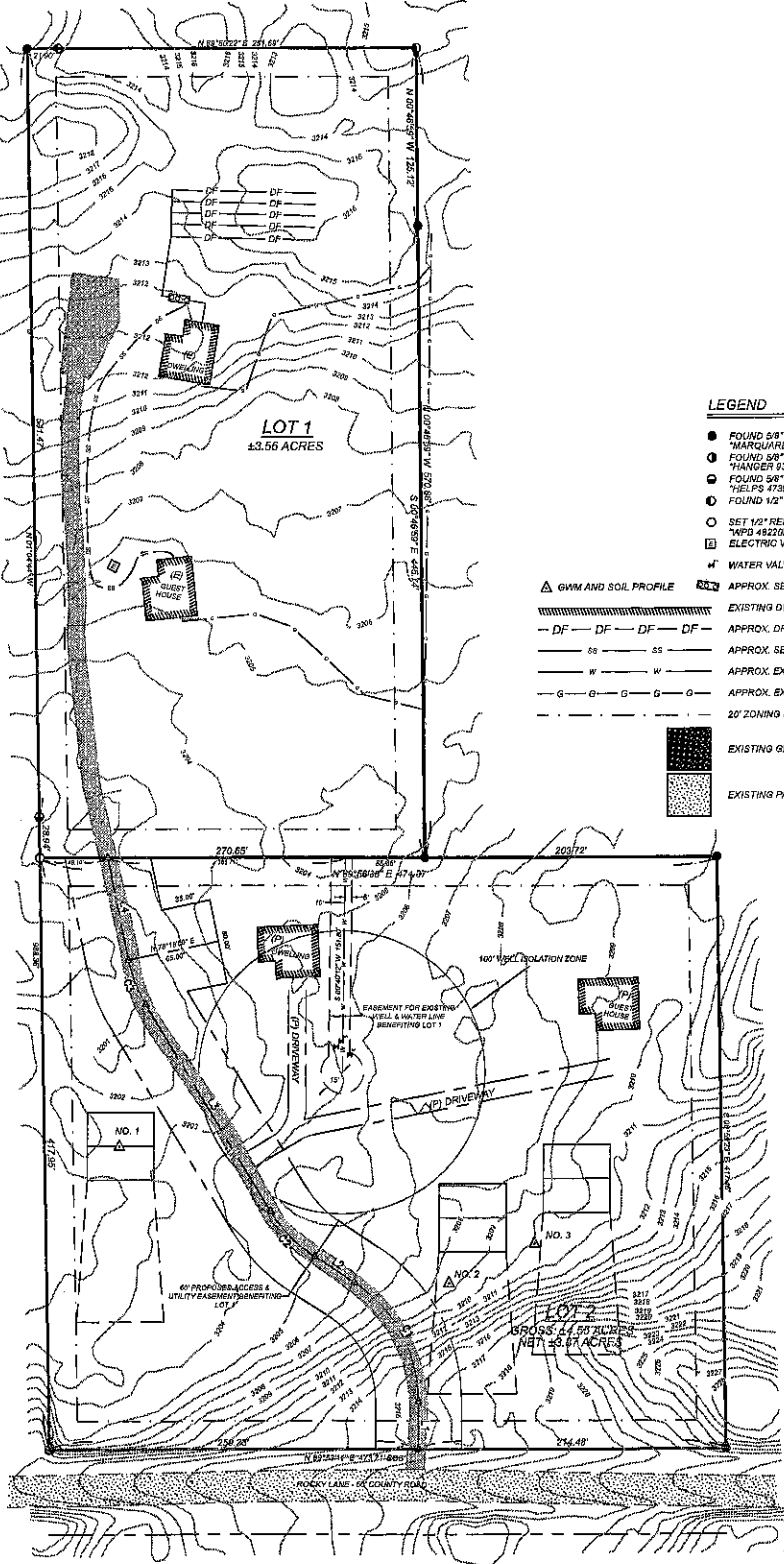
SEC. 7

THE PRELIMINARY PLAT OF
ROCKY TOP CABINS SUBDIVISION
IN THE NE 1/4 OF THE NE 1/4 SECTION 7, T. 30 N., R. 20 W.,
PRINCIPAL MERIDIAN, FLATHEAD COUNTY, MONTANA

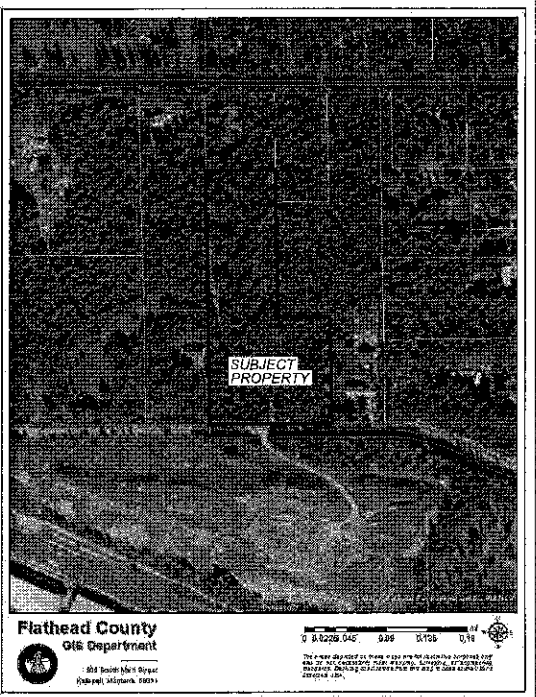
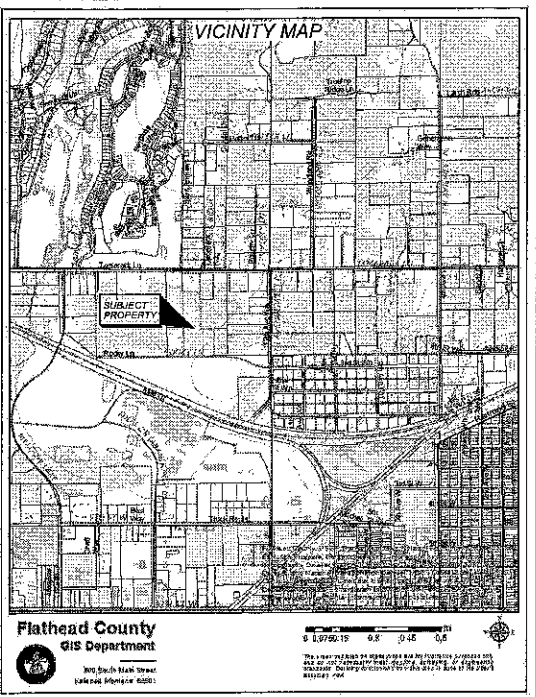


LEGAL DESCRIPTION

Perimeter:
A tract of land located in the NE 1/4 of the NE 1/4 Sec. 7, T. 30N., R. 20 W., Principal Meridian, Flathead County, Montana; more particularly described as follows:
Parcel A of CDS 21669, records of Flathead County, Montana; containing 8.11 acres, more or less; subject to and together with any existing easements, covenants, conditions, restrictions, or agreements.



- LEGEND**
- FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "MARGUARDT 73283"
 - FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "HANGER 13445"
 - FOUND 5/8" REBAR WITH PLASTIC CAP STAMPED "HELPS 47385"
 - FOUND 1/2" REBAR (NO CAP)
 - SET 1/2" REBAR WITH PLASTIC CAP STAMPED "4879 48220LS"
 - ELECTRIC VAULT
 - W WATER VALVE
 - △ GWM AND SOIL PROFILE
 - APPROX. SEPTIC TANK PER PERMIT #21-1083-N
 - EXISTING DWELLING
 - DF — DF — DF — DF — APPROX. DRAIN FIELD PER PERMIT #21-1083-N
 - SS — SS — SS — SS — APPROX. SEWER LINE PER PERMIT #21-1083-N
 - W — W — W — W — APPROX. EXISTING WATERLINE
 - G — G — G — G — APPROX. EXISTING WATERLINE
 - 20' ZONING SETBACK
 - EXISTING GRAVEL SURFACE
 - EXISTING PAVED SURFACE



LINE	BEARING	ANGLE	DISTANCE
1	N 00°05'46" W	14.10	
2	S 66°30'54" E	33.44	
3	N 31°08'54" W	170.28	
4	S 11°51'10" E	74.07	

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	100.00	98.70	34.73	N 28°23'52" W	55°33'04"
C2	100.00	44.49	44.49	S 43°53'27" W	25°32'58"
C3	100.00	33.81	33.75	S 21°24'02" E	18°26'45"



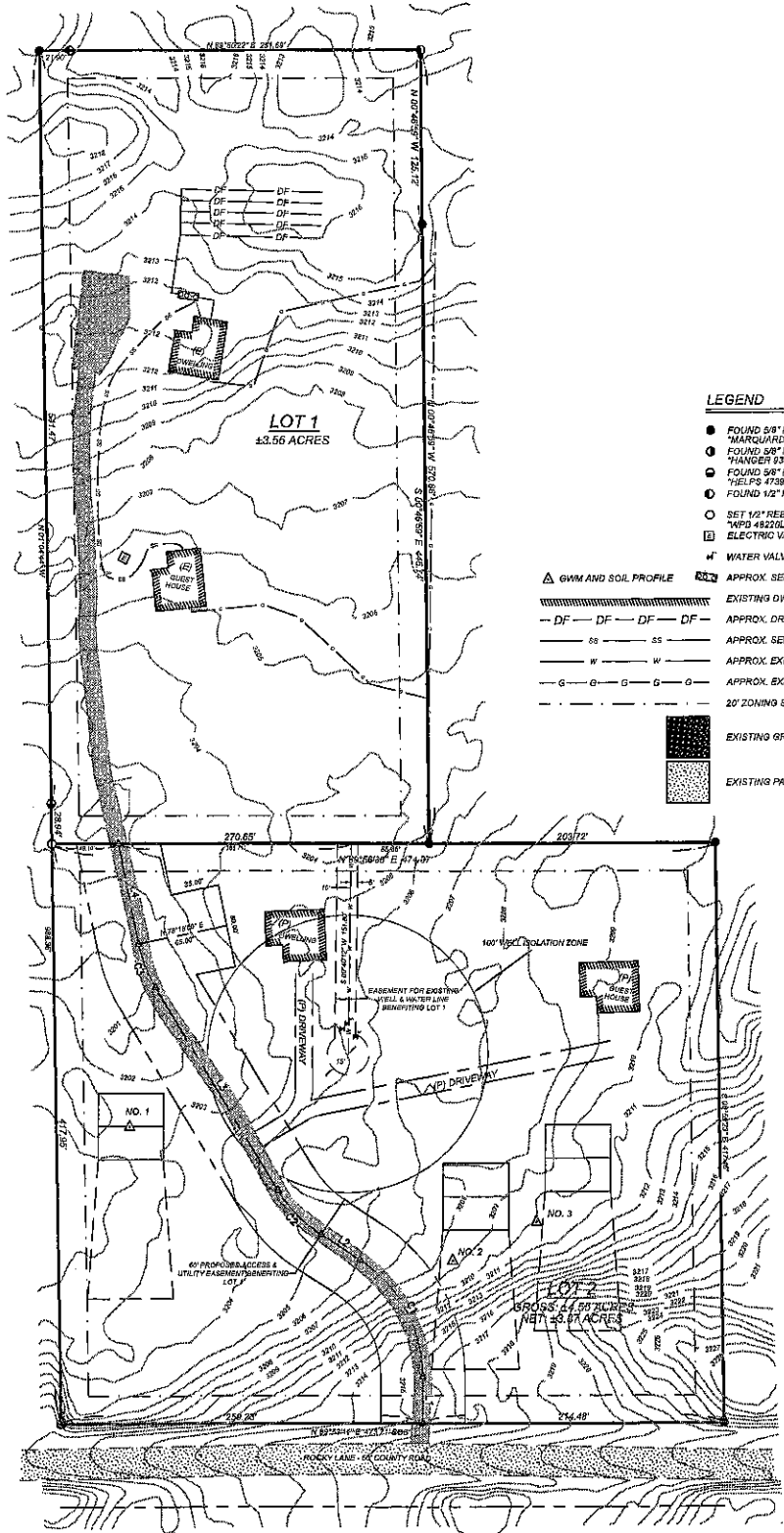
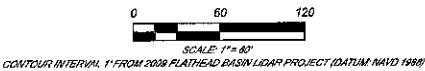
CERTIFICATE OF SURVEYOR
LICENSE NUMBER 48220LS

FOR OWNERS: HERBERT ENTERPRISES LLC.
DATE: JANUARY, 2023
DRAFTED BY: TGH
FILE: E:\B\SM\HERBERT\DWG\221116-HERBERT-BLA.DWG

BY: BRECKENRIDGE SURVEYING AND MAPPING, PLLC
2302 US HIGHWAY 2 EAST, STE 6
KALISPELL, MT 59901
(406) 752-3539
WM. BRECKENRIDGE, PLS
DARREN R. BRECKENRIDGE, PLS
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SEC. 7

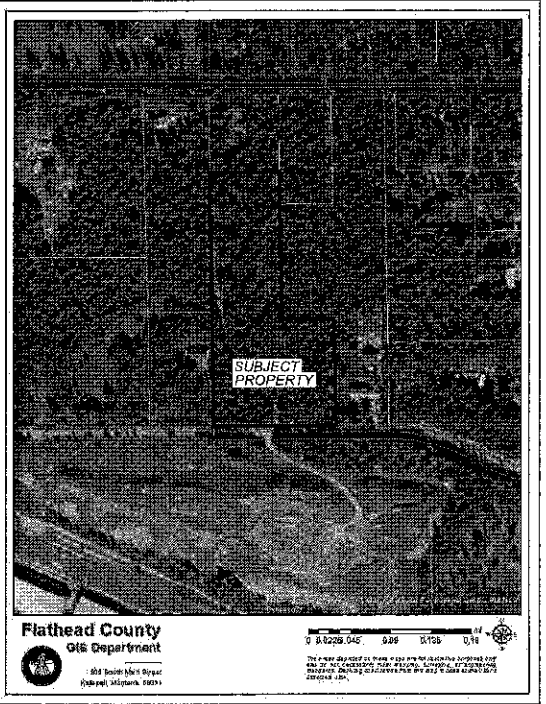
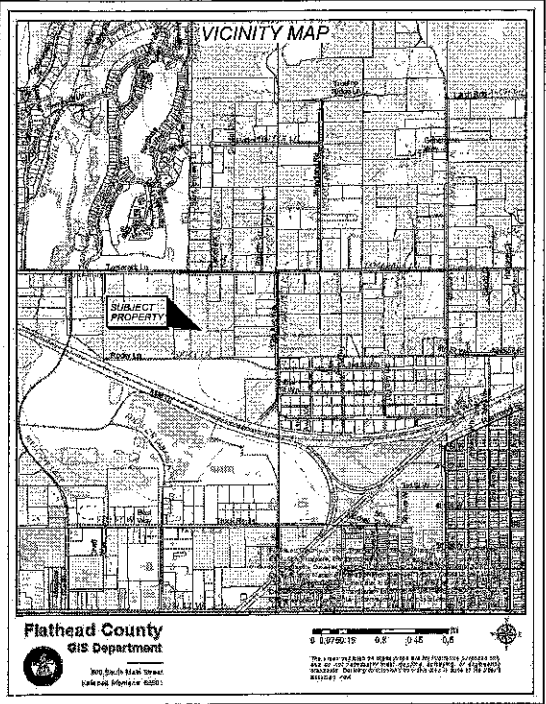
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FOR OWNERS: HERBERT ENTERPRISES LLC.
DATE: JANUARY, 2023
DRAFTED BY: TGH
FILE: E:\B\SM\HERBERT\DWG\221116-HERBERT-BLA.DWG

CITY OF COLUMBIA FALLS

Item No.2.

NOTICE OF PUBLIC HEARINGS

The Columbia Falls City-County Planning Board will hold a public hearing for the following item at their regular meeting on Tuesday, September 12, 2023, at 6:30 p.m. in the Council Chambers of City Hall, 130 6th Street West, Columbia Falls, Montana. The Columbia Falls City Council will hold a subsequent hearing on October 16, 2023, starting at 7:00 p.m. in the same location.

Rocky Top Cabins Subdivision – A Two Lot Subdivision: A request by Herbert Enterprises LLC to create a two-lot subdivision. The property is 8.11 acres in size and the property is zoned CR-1 which allows a minimum lot size of one acre. The property is located at 269 Rocky Lane, Columbia Falls, and is described as Assessor's Tract 1 (Parcel A of COS 21669) located in Section 7, Township 30 North, Range 20 West, P.M.M., Flathead County.

Persons may testify at the hearings or submit written comments prior to the meetings. Written comments may be sent to Columbia Falls City Hall, Attention: Barb Staaland, City Clerk, 130 6th Street West, Room A, Columbia Falls, MT 59912. For more information call Eric Mulcahy, Columbia Falls City Planner at 755-6481.

DATED this 22 nd day of August 2023.

s/Susan Nicosia, CPA, MPA, City Manager/Zoning Administrator

August 27, 2023
MNAXLP

STATE OF MONTANA

FLATHEAD COUNTY

AFFIDAVIT OF PUBLICATION

MARY BOOTH BEING DULY

SWORN, DEPOSES AND SAYS: THAT SHE IS THE LEGAL CLERK OF THE **DAILY INTER LAKE** A DAILY NEWSPAPER OF GENERAL CIRCULATION, PRINTED AND PUBLISHED IN THE CITY OF KALISPELL, IN THE COUNTY OF FLATHEAD, STATE OF MONTANA, AND THAT **NO. 29696**

LEGAL ADVERTISEMENT WAS PRINTED AND PUBLISHED IN THE REGULAR AND ENTIRE ISSUE OF SAID PAPER, AND IN EACH AND EVERY COPY THEREOF ON THE DATES OF AUGUST 27, 2023

AND THE RATE CHARGED FOR THE ABOVE PRINTING DOES NOT EXCEED THE MINIMUM GOING RATE CHARGED TO ANY OTHER ADVERTISER FOR THE SAME PUBLICATION, SET IN THE SAME SIZE TYPE AND PUBLISHED FOR THE SAME NUMBER OF INSERTIONS.

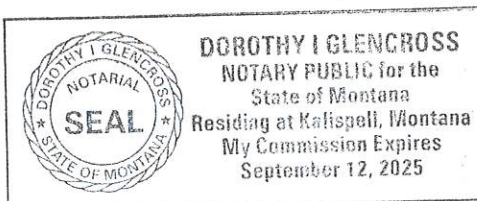
Mary Booth

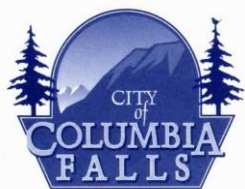
Subscribed and sworn to
Before me this, August 27, 2023

Dorothy I. Glencross

Dorothy I. Glencross

Notary Public for the State of Montana
Residing in Kalispell
My commission expires 9/12/2025





130 6TH STREET WEST
ROOM A
COLUMBIA FALLS, MT 59912

Planning Department

PHONE (406) 892-4391

FAX (406) 892-4413

Item No.2.

August 22, 2023

Re: Public hearing notice for a two-lot subdivision called Rocky Top Cabins.

Dear Adjacent Property Owner:

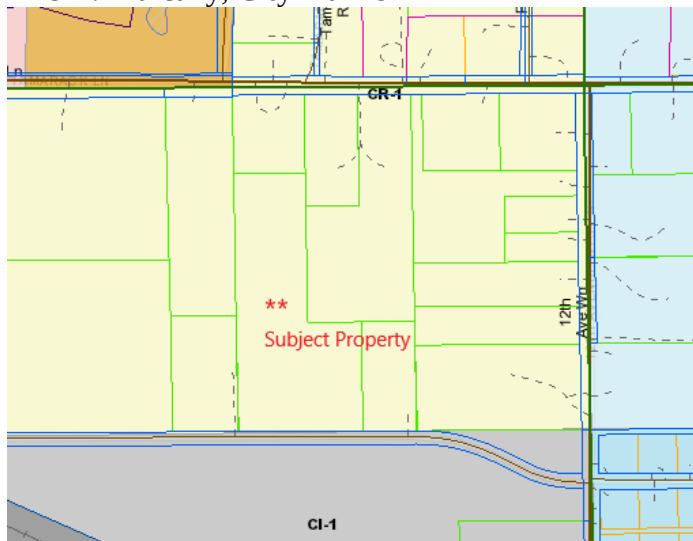
Our records indicate that you are the owner of property within 150 feet of the proposed project.

As the Planning Staff for the Columbia Falls Planning Jurisdiction, I am writing to provide you with notice of a public hearing that involves a request by Herbert Enterprises LLC to subdivide their property into two lots. A description of the property is included in the hearing notice attached to this letter.

If you have questions or comments concerning this matter, please call, visit, or write to me at City Hall. For written comment to be included in the Planning Board packet, it needs to be submitted to the City Clerk, 130 6th Street West, Columbia Falls, MT 59912 no later than Thursday September 7th, 2023 or by email: staalandb@cityofcolumbiafalls.com. Written or emailed comments may be provided up to 5:00 pm on the day of the hearing, it will just be passed out at the hearing. You are also invited to present verbal or written testimony during the public hearing on September 12, 2023.

Sincerely,

Eric H. Mulcahy, City Planner



CITY OF COLUMBIA FALLS
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**NO PUBLIC COMMENT RECEIVED PRIOR TO PACKET PREPARATION ON
SEPTEMBER 7, 2023**